



Water Resources Data Wisconsin Water Year 1984



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WI-84-1
Prepared in cooperation with the State of Wisconsin
and with other agencies

CALENDAR FOR WATER YEAR 1984

1983

OCTOBER

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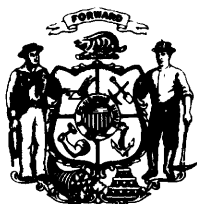
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Water Resources Data Wisconsin

Water Year 1984

by B.K. Holmstrom, P.A. Kammerer, Jr., and R.M. Erickson



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WI-84-1
Prepared in cooperation with the State of Wisconsin
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, SECRETARY

GEOLOGICAL SURVEY

DALLAS L. PECK, DIRECTOR

Prepared in cooperation with

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Wisconsin Department of Transportation
The University of Wisconsin-Extension, Geological and
Natural History Survey
Dane County Department of Public Works
Dane County Regional Planning Commission
Southeastern Wisconsin Regional Planning Commission
City of Middleton
City of Madison
Madison Metropolitan Sewerage District
Madison Water Utility
Milwaukee Metropolitan Sewerage District
Menominee Indian Tribe of Wisconsin
Delavan Lake Sanitary District
Green Lake Sanitary District
Village of Slinger
Lac La Belle Management District
Okauchee Lake Management District
Mt. Morris Lake Management District
Wolf Lake Management District
Town of Norway Management District

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PREFACE

This volume of the annual hydrologic data report of Wisconsin is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines. Most of the data was collected, computed and processed from area field offices. Technicians-in-charge of the field offices are:

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James W. George, Merrill, northeast
Josef Habale, Madison, southwest
Fredren E. Warner, Wales, subdistrict office.

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This report was prepared in cooperation with the State of Wisconsin and with other agencies under the general supervision of Warren A. Gebert, Hydrologic Systems and Data Section Chief, and Vernon W. Norman, District Chief, Wisconsin.

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CONTENTS

	Page
Preface.....	III
List of illustrations.....	VI
List of gaging stations in downstream order, for which records are published.....	VII
Introduction.....	1
Cooperation.....	1
Special networks and programs.....	2
Downstream order and station number.....	3
Numbering system for ground-water data sites.....	3
Explanation of surface-water records.....	3
Collection and computation of data.....	3
Accuracy of field data and computed results.....	6
Other data available.....	6
Explanation of water-quality records.....	6
Collection and examination of data.....	6
Water analysis.....	6
Sediment.....	7
Explanation of ground-water level records.....	8
Collection of the data.....	8
Access of WATSTORE data.....	8
Noteworthy hydrologic events of 1984.....	9
Streamflow.....	9
Water quality.....	12
Ground-water levels.....	12
Surface-water records.....	16
Gaging station records.....	16
Discharge at partial-record stations and miscellaneous sites.....	245
Crest-stage partial-record stations.....	245
Measurements at miscellaneous sites.....	253
Water-quality partial-record stations.....	254
Ground-water records.....	265
Ground-water levels.....	267
Quality of ground water.....	297
Acid deposition records.....	301
Discontinued gaging stations.....	358
Definition of terms.....	361
Publications on techniques of water-resources investigations.....	367
Index.....	370

ILLUSTRATIONS

		Page
Figure	1. 1984 runoff as percent of long-term average runoff.....	10
	2. Comparison of discharge at representative gaging stations during 1984 water year with discharge for 1916-84.....	11
	3. Relation of seasonal water-table levels to long-term means.....	13
	4. Major surface-water drainage basins and index of hydrologic records.....	14
	Lake Superior basin location map.....	15
	Menominee-Oconto-Peshtigo River basin location map.....	28
	Fox-Wolf River basin location map.....	41
	Lake Michigan basin location map.....	66
	St. Croix River basin location map.....	106
	Chippewa River basin location map.....	111
	Trempealeau-Black River basin location map.....	126
	Upper Wisconsin River basin location map.....	141
	Central Wisconsin River basin location map.....	146
	Lower Wisconsin River basin location map.....	155
	Pecatonica-Sugar River basin location map.....	165
	Rock-Fox River basin location map.....	171
	5. Location of observation wells and ground-water-quality sites in Wisconsin.....	266
	6. Location of acid deposition sites in Wisconsin.....	302
	7. Location of data-collection stations at acid deposition sites in Wisconsin.....	303

GAGING STATIONS IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

[Letters after station name designate type of data
(c) chemical, (d) discharge, (g) gage height, (m) microbiological,
(r) radiochemical, (s) sediment, (t) water temperature]

	Page
ST. LAWRENCE RIVER BASIN	
STREAMS TRIBUTARY TO LAKE SUPERIOR	
Lake Superior basin location map.....	15
Nemadji River near South Superior (d,c,m,s).....	16
Bois Brule River near Brule(d).....	19
Sand River near Red Cliff (c,s).....	20
Raspberry River near Sand Bay (c,s).....	21
Red Cliff Creek near Red Cliff (c,s).....	22
Bad River near Odanah (d).....	23
White River near Ashland (d).....	24
Bad River at Odanah (c,m,s).....	25
Middle Branch Ontonagon River:	
West Branch Ontonagon River:	
Cisco Branch Ontonagon River at Cisco Lake Outlet, MI (d).....	27
STREAMS TRIBUTARY TO LAKE MICHIGAN	
Menominee-Oconto-Peshtigo River basin location map.....	28
Brule River near Florence (d).....	29
Menominee River near Florence (d).....	30
Pine River:	
Popple River near Fence (d,c,m,s,r).....	31
Menominee River below Pemene Creek near Pembine (d).....	34
Menominee River near McAllister (d,c,m,s).....	35
Peshtigo River at Peshtigo (d).....	38
Oconto River near Gillett (d).....	39
Pensaukee River near Pensaukee (d).....	40
Fox-Wolf River basin location map.....	41
Fox River:	
Puchyan River:	
White Creek at Forest Glen beach near Green Lake (d,c,s).....	42
Fox River at Berlin (d).....	49
Wolf River:	
Swamp Creek below Rice Lake at Mole Lake (d).....	50
Wolf River at Langlade (d).....	51
Wolf River at Keshena Falls (d).....	52
Embarrass River near Embarrass (d).....	53
Wolf River at New London (d).....	54
Little Wolf River at Royalton (d).....	55
Waupaca River near Waupaca (d).....	56
Pine River:	
Hills Lake near Wild Rose (c,g).....	57
Willow Creek:	
Lake Morris near Mount Morris (g).....	59
Lake Winnebago at Oshkosh (g).....	61
Lake Winnebago near Stockbridge (g).....	62
Fox River at Rapide Croche Dam, near Wrightstown (d).....	63
Fox River at Wrightstown (c,m,s).....	64
Lake Michigan basin location map.....	66

GAGING STATIONS IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

	Page
Kewaunee River near Kewaunee (d).....	67
East Twin River at Mishicot (d).....	68
Manitowoc River at Manitowoc (d,c,m,t,s).....	69
Wolf Lake near Mt. Calvary (c,g).....	72
Sheboygan River at Sheboygan (d).....	74
Milwaukee River:	
Cedar Creek:	
Mud Lake outlet channel near Decker Corner (d).....	75
Cedar Creek near Cedarburg (d).....	76
Milwaukee River near Cedarburg (d,s).....	78
Milwaukee River at Milwaukee (d,c,m,s).....	81
Milwaukee River above North Avenue Dam at Milwaukee (d,s).....	85
Menomonee River at Menomonee Falls (d,s).....	88
Underwood Creek at Wauwatosa (d).....	91
Menomonee River at Wauwatosa (d,s).....	92
Menomonee River at Milwaukee (d).....	95
Menomonee River at Falk Corporation at Milwaukee (s).....	96
Kinnickinnic River at South 11th Street at Milwaukee (d,s).....	98
Oak Creek at South Milwaukee (d).....	101
Root River near Franklin (d).....	102
Root River Canal near Franklin (d).....	103
Root River at Racine (d).....	104
Pike River near Racine (d).....	105
UPPER MISSISSIPPI RIVER BASIN	
ST. CROIX RIVER BASIN	
St. Croix River Basin location map.....	106
St. Croix River at St. Croix Falls (d,c,m,s).....	107
Mississippi River at Prescott (d).....	110
CHIPPEWA RIVER BASIN	
Chippewa River basin location map.....	111
Chippewa River at Bishops Bridge, near Winter (d).....	112
Chippewa River near Bruce (d).....	113
Flambeau River near Bruce (d).....	114
Jump River at Sheldon (d).....	115
Red Cedar River:	
Hay River at Wheeler (d).....	116
Red Cedar River at Menomonie (d).....	117
Chippewa River at Durand (d,c,m,s,r).....	118
Eau Galle River at Spring Valley (d,c,t).....	121
TREMPEALEAU RIVER BASIN	
Trempealeau-Black River basin location map.....	126
Mississippi River at Winona, MN (c,d,m,t,s).....	127
Trempealeau River at Dodge, (d).....	132
BLACK RIVER BASIN	
Black River at Neillsville (d).....	133
Black River near Galesville (d,c,m,s).....	134
Mississippi River at McGregor, IA (d,c,t,s).....	137
WISCONSIN RIVER BASIN	
Upper Wisconsin River basin location map.....	141
Wisconsin River at Rainbow Lake, near Lake Tomahawk (d).....	142

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

	Page
Spirit River at Spirit Falls (d).....	143
Prairie River near Merrill (d).....	144
Wisconsin River at Merrill (d).....	145
Central Wisconsin River basin location map.....	146
Eau Claire River at Kelly (d).....	147
Wisconsin River at Rothschild (d).....	148
Big Eau Pleine River near Stratford (d).....	149
Little Plover River at Plover (d).....	150
Wisconsin River at Wisconsin Rapids (d).....	151
Yellow River at Babcock (d).....	152
Lemonweir River at New Lisbon (d).....	153
Wisconsin River near Wisconsin Dells (d).....	154
Lower Wisconsin River basin location map.....	155
Baraboo River near Baraboo (d).....	156
Blue Mound Creek:	
Black Earth Creek at Black Earth (d).....	157
Wisconsin River at Muscoda (d,c,m,s).....	158
Kickapoo River at La Farge (d).....	161
Kickapoo River at Steuben (d).....	162
Reservoirs in the Wisconsin River basin.....	163
GRANT RIVER BASIN	
Pecatonica-Sugar River basin location map.....	165
Grant River at Burton (d,s).....	166
PLATTE RIVER BASIN	
Platte River near Rockville (d).....	169
GALENA RIVER BASIN	
Galena River at Buncombe (d).....	170
ROCK RIVER BASIN	
Rock-Fox River basin location map.....	171
Rock River at Hustisford (d).....	172
Okauchee Lake at Okauchee (c,g).....	173
Oconomowoc River at Oconomowoc Lake Outlet-Oconomowoc (c).....	175
Center of Fowler Lake at Oconomowoc (c).....	177
Lac La Belle at Oconomowoc (c,g).....	180
Rock River at Watertown (d).....	182
Crawfish River at Milford (d).....	183
Rock River at Jefferson (d).....	184
Bark River near Rome (d).....	185
Rock River at Indianford (d).....	186
Yahara River:	
Pheasant Branch at Middleton (d,s,c).....	187
Spring Harbor storm sewer at Madison (d,s).....	193
Lake Mendota at Madison (g).....	195
Lake Monona at Madison (g).....	196
Yahara River near McFarland (d).....	197
Badfish Creek near Cooksville (d).....	198
Yahara River near Fulton (d).....	199
Rock River at Afton (d).....	200

GAGING STATIONS IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

	Page
Turtle Creek:	
Jackson Creek at Petrie Road near Elkhorn (d,c,s).....	201
Jackson Creek Tributary near Elkhorn (d,c,s).....	206
Jackson Creek at Mounds Rd near Elkhorn (c,s).....	212
Delavan Lake Inlet at US Hwy 50 at Lake Lawn (c,s).....	213
Delavan Lake Tributary at South Shore Drive at Delavan Lake (d,c,s).....	214
Delavan Lake at sw end near Delavan Lake (c,g).....	219
Delavan Lake at center near Delavan Lake (c,g).....	222
Delavan Lake at north end near Lake Lawn (c, g).....	226
Delavan Lake Outlet at Borg Road near Delavan (d,c,s).....	229
Turtle Creek at Carvers Rock Road near Clinton (d).....	233
Pecatonica River at Darlington (d).....	234
East Branch Pecatonica River near Blanchardville (d).....	235
Pecatonica River at Martintown (d).....	236
Sugar River near Brodhead (c,d,s).....	237
Rock River at Rockton, IL (d).....	240
ILLINOIS RIVER BASIN	
Kankakee River (head of Illinois River):	
Des Plaines River at Russell, IL (d).....	241
Illinois River:	
Fox River at Waukesha (d).....	242
Mukwonago River at Mukwonago (d).....	243
Fox River at Wilmot (d).....	244

WATER RESOURCES DATA FOR WISCONSIN, 1984

INTRODUCTION

Water-resources data for Wisconsin for the 1984 water year include records of streamflow at gaging stations, partial-record stations, and miscellaneous sites; chemical, physical, and biological characteristics of surface and ground water; and water levels in observation wells. Records from several stations in bordering states are also included. Data collection is part of the National Water Data System operated in Wisconsin by the U.S. Geological Survey and cooperating local, State and Federal agencies.

Records of stream discharges and of water levels in lakes and reservoirs were published annually through 1960 and then for the 5-year periods 1961-65 and 1966-70 in the series "Surface-Water Supply of the United States". Chemical-quality, water-temperature, and suspended-sediment data were published annually, from 1941 to 1970, in the series "Quality of Surface Waters of the United States". Records of ground-water levels were published annually from 1935 to 1974, in the series "Ground-Water Levels in the United States".

The Survey began releasing preliminary streamflow data for each State from the 1961 water year on, preliminary water-quality data from the 1964 water year on, and preliminary ground-water data from the 1971 water year. Final data were then published in the series mentioned above. Beginning with the 1975 water year, streamflow, water-quality, and ground-water data for each State were published in an annual report 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 1955 collecting water-quality data, and since 1964 collecting ground-water level 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 S. W. Woods, chief bridge engineer.

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

Dane County Department of Public Works, Kenneth J. Koscik,
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.

Milwaukee Metropolitan Sewerage District, Harold Cahill, Jr., executive director.

Menominee Indian Tribe of Wisconsin, Lucille B. Chapman, chairperson.

Delavan Lake Sanitary District, Kevin L. MacKinnon.

Green Lake Sanitary District, Daniel R. Simonson.

Village of Slinger.

Lac La Belle Management District.

Okauchee Lake Management District.

Mt. Morris Lake Management District.

Wolf Lake Management District.

Town of Norway Management District.

Funding for the collection of streamflow and/or water-quality data was provided by the Corps of Engineers, U.S. Army, the National Park Service, and the Bureau of Indian Affairs.

The following organizations aided in collecting streamflow 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.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Program provides data for river basins where hydrologic conditions are relatively unaffected by man's activities and are expected to remain unaffected within the foreseeable future.

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.

Radiochemical Surveillance 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 surface-water quality station is identified by a number containing 8 to 9 digits. Records in this report are in Part 4 (St. Lawrence River basin) and Part 5 (Upper Mississippi River basin).

NUMBERING SYSTEM FOR GROUND-WATER AND LAKE DATA SITES

Wells, springs, and sites on lakes where data are collected periodically are identified by a unique 15-digit number that is a concatenation of the site's latitude, longitude, and a two-digit sequence number. The sequence number is used to distinguish between sites located at the same latitude-longitude designation. The site identification number is permanently assigned to the site; actual latitude and longitude of the site are subject to update and are stored separately. Each ground-water site is also 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 relationships, weather records, and other information supplement the basic data used to determine daily flow. Records of stage are obtained by reading a non-recording gage, from a continuous graph, or from 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 Papers 888 and 2175, 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 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.

The slope method is used to compute discharge at stream-gaging stations where backwater from lakes or reservoirs, tributary streams, or other sources affect the stage-discharge relationship. The rate of change of stage is used in computing discharge at stations where the stage-discharge relationship is affected by rapid changes in stage. 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 gaging stations where gage-height records are faulty or non-existent for some 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.

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

The description of the gaging station includes the location, drainage area, period of record, reference to revisions in previously published records, the type and history of gages, general remarks, average discharge, and extremes of discharge or contents. River mileage is determined by the Corps of Engineers or other agencies. Previously published records for current stations are noted under "PERIOD OF RECORD". Previously published revisions of streamflow records found in error on the basis of subsequent data are noted under "REVISED RECORDS". All reports in which revisions have been published are listed therein, together with the water years for which figures are revised. Revisions involving only the instantaneous maximum and minimum, and supplementary peak discharges are indicated by "(M)", "(m)", or "(P)", respectively. 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 of 1929; and a history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE."

Information about the accuracy of discharge records and conditions that affect the natural flow at the gaging station is given under "REMARKS".

The average discharge for the period of record is given under "AVERAGE DISCHARGE". Average discharge is not given for stations having fewer than 5 complete years of record or where water development during the period of record has altered the significance of the figure. Extremes of discharge for the period of record are given under "EXTREMES FOR PERIOD OF RECORD", discharge information available outside the period of record are given under "EXTREMES OUTSIDE OF PERIOD OF RECORD", and discharge for the current year are given under "EXTREMES FOR CURRENT YEAR". 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 unless otherwise qualified. 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. Independent peak discharges above a selected base and annual maximum discharges, times of occurrence, and corresponding gage heights are listed with "EXTREMES FOR THE CURRENT YEAR" for some stations. The base discharge is selected 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 follow "EXTREMES FOR CURRENT YEAR" and allow for an approximation of daily gage heights from daily discharges. The tables also indicate the range in stage resulting from any given range in discharge. The daily table for stream-gaging stations gives the daily mean discharges and monthly and yearly summaries. In the monthly summary "TOTAL" is the sum of the daily figures; "MEAN" is the average monthly flow in cubic feet per second (ft^3/s). "MAX" and "MIN" are the maximum and minimum daily discharges, respectively, for the month. The monthly discharge is also expressed in cubic feet per second per square mile ("CFSM"), in inches ("IN"), and in acre-feet ("AC-FT"). CFSM and IN are omitted if there is extensive regulation or diversion, if the drainage area encompasses large noncontributing areas, or if average annual precipitation 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 indicate periods for which discharge is computed or estimated by special methods because of the absence of gage-height records, backwater from various sources, or other unusual conditions; periods of no gage-height record 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 are indicated only if they last for a month or more, thus affecting the accuracy of the discharge records.

The data presented for most gaging stations on lakes include a description of the station and a monthly summary table of stage.

Data collected at crest-stage partial-record stations are given in a table of annual maximum stages and discharges. 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. Miscellaneous measurements follow the tables for partial-record stations.

Accuracy of field data and computed results

Accurate streamflow data depend primarily on the stability of the stage-discharge relation or the frequency of discharge measurements, where the control is unstable; and 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.

Other data available

For most gaging stations more detailed information including records available in computer-usable form and statistical analyses is on file in the District Office.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Water samples from streams are usually collected at or near gaging stations. Water samples from lakes are collected at locations identified by latitude and longitude; the depth at which the sample was collected is given with each analysis. The water-quality records appear after the discharge or lake stage records for these gaging stations and lakes.

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, geologic unit, date of sampling, and other pertinent data are given in the table containing the chemical analyses.

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 from a stream can define adequately the water quality at a given time if the mixture of materials throughout the stream cross section is homogeneous. However, because the constituent concentrations at different locations in the cross section usually differ, most streams must be sampled using depth-integrating samplers at several verticals in a cross section to obtain a representative sample. Water quality in lakes may differ with depth and laterally at a particular depth depending on thermal stratification and other physical and biological factors.

The water-quality data published in this report represent conditions at the time of sampling. The concentrations of some constituents are given as less than some value; that value is the detection limit for the analytical method used. Occasionally these values differ or an actual concentration is given that is less than a higher detection limit indicated for a constituent in another analysis. These differences or apparent discrepancies are due to differences in analytical methods.

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. At stations where once-daily measurements are taken manually the measurements are usually taken at about the same time each day.

Sediment

Suspended-sediment concentrations are determined on samples collected with depth-integrating samplers from one or more verticals in the cross section, or a single sample taken manually at a fixed point, or with pumping samplers. Coefficients are applied to correct for differences between fixed point and flow-integrated samples.

Sediment samples may be collected more frequently during periods of rapidly changing flow or concentration, . 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 suspended-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.

Samples collected periodically may represent conditions only at the time of observation. However, they are useful for determining seasonal relationships between water quality and streamflow, and for predicting long-term suspended-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 are published.

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

Collection of the data

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

These data represent water-table and artesian conditions in the principal aquifers of the State, except in the 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. Precipitation is the major climatic factor affecting ground-water levels. The water table is usually highest in spring.

Water levels in artesian wells in the State are sensitive to major earthquakes. Response to earthquakes worldwide 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 are obtained from direct measurements with a steel tape or 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 the National Geodetic Vertical Datum of 1929 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). Water levels are normally 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.

Access of WATSTORE Data

The National WATER Data STORAGE and RETRIEVAL System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from the District Office.

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

NOTEWORTHY HYDROLOGICAL EVENTS OF 1984

STREAMFLOW

Runoff was above normal during the 1984 water year for most of the State. This is the seventh straight year that streamflow has been above normal. Streamflow has not been normal or below normal since the drought of 1976-77. Even though flow was above normal, only a minimum of extreme events occurred. Recorded flood peaks of note occurred in the central and lower part of the Wisconsin River basin (3-year recurrence interval) in early May, on the White River (5-year recurrence interval) and the St. Croix River (7-year recurrence interval) in northwestern Wisconsin in early June, and on the Upper Kickapoo River (3-year recurrence interval) basin in southwestern Wisconsin in mid-June. High base flows occurred for most streams during the 1984 water year and low-flow discharges generally were greater than the 2-year low-flow discharge.

Streamflow was considerably higher than normal throughout the State in the fall; flows were up to three times greater than normal in the Black River basin in west central Wisconsin. Sustained high base flows in January along with higher than normal runoff in February resulted in above average flows in the winter months for most of the State, except in southwestern Wisconsin where flows were below normal. Most of the snow was gone by April except for extreme northwest and north-central Wisconsin, resulting in below normal discharge for most of northern Wisconsin in the spring. Streamflow was at or above normal for southern and central Wisconsin in the spring as a result of above normal precipitation for this period. Summer flows were below normal in the north central and northeast portions of the State and at or above normal for the remainder of the State.

Average runoff for the year ranged from approximately 94 to 164 percent of the long-term average (fig. 1). The area of lowest runoff, 94 percent, occurred in the Upper Wolf and Popple River basins in northeastern Wisconsin and highest runoff, 164 percent, occurred in the St. Croix River basin in north-western Wisconsin. The comparison of the monthly and annual mean discharge for the 1984 water year to a 69-year base period at three gaging stations is shown in figure 2.

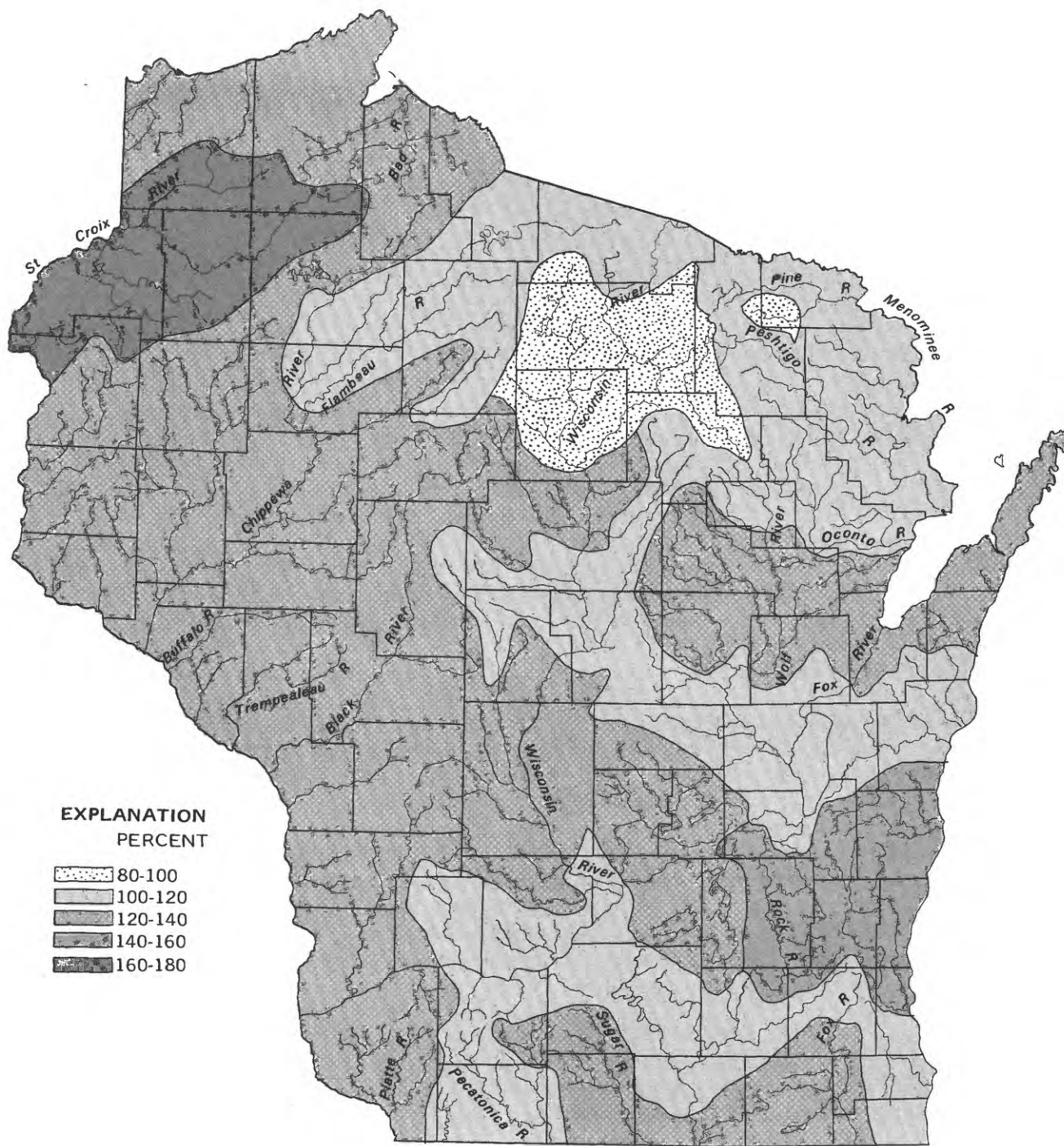


Figure 1. 1984 runoff as percent of long-term average runoff.

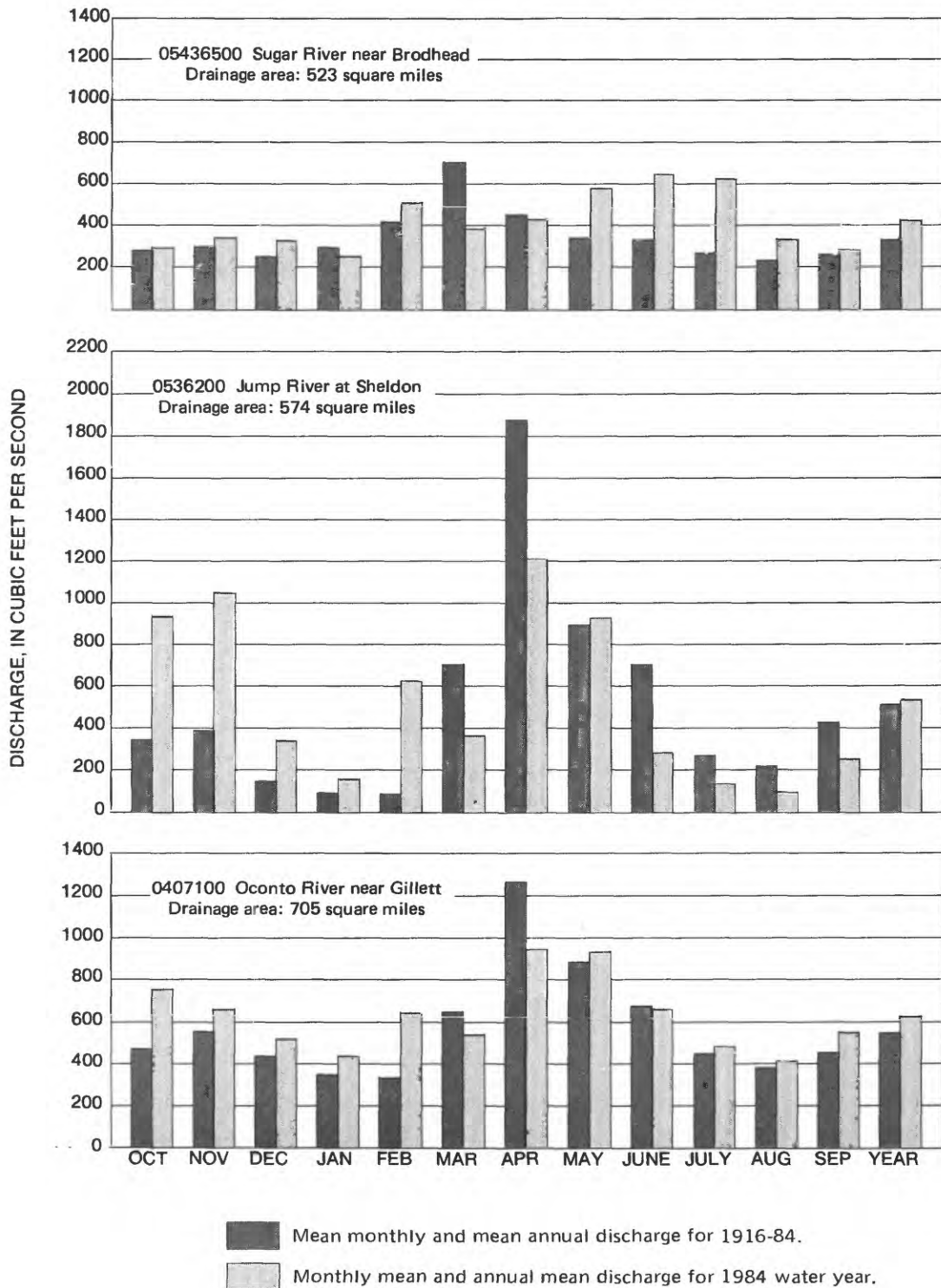


Figure 2. Comparison of discharge at representative gaging stations during 1984 water year with discharge for 1916-84.

WATER QUALITY

Water-quality data were collected as part of interpretive projects and special purpose monitoring networks throughout the State. Data collected bi-monthly or quarterly at ten National Stream-Quality Accounting Network stations and one Hydrologic Benchmark station include physical properties and concentrations of common inorganic constituents, trace constituents, nutrients, suspended sediment, and bacteria. Water-quality monitoring on lakes has been expanded; data collected generally include field measurements of lake stage, transparency, temperature, and dissolved oxygen concentrations, and laboratory analyses for concentrations of nutrients, algal pigments, and other inorganic constituents. Ground-water quality monitoring at irrigated sites in Portage and Adams Counties continued to show considerable areal differences in the concentrations of nitrogen species and other inorganic constituents.

Water quality data collected as part of cooperative studies of acid precipitation in Wisconsin are tabulated in a separate section of this report. These data include field measurements and chemical analyses of precipitation, ground water, and surface water from lakes and streams.

Data for water-quality partial-record stations includes field measurements of water temperature and specific conductance made at gaging stations, and other miscellaneous water-quality data.

GROUND-WATER LEVELS

Ground-water levels were above normal in most of Wisconsin during 1984. Maps that show seasonal trends for the year (fig. 3) are based on water-level data for 29 shallow-aquifer wells. Each of the 29 wells has at least 15 years of record.

The months included in each season are grouped so that SPRING includes the months of March, April, and May when ground-water recharge is highest. The seasons are: FALL, September to November; WINTER, December to February; SPRING, March to May; and SUMMER, June to August. Seasonal water levels for 1984 were compared to long-term seasonal averages. The 1984 water level was considered normal if it was within one-half the standard deviation of the long-term mean.

Ground-water levels in 15 of the 29 wells were above normal in each quarter and six of these were more than one standard deviation above the long-term mean for the year. Levels were generally above normal statewide, except in eastern and central Wisconsin. Several wells along Lake Michigan had water levels in the normal and below-normal range. Below-normal levels persisted in wells in Kewaunee and Kenosha Counties; these levels were probably the result of pumping from the deep-confined aquifer in the Green Bay and the southeast Wisconsin-northeast Illinois areas. Levels in the Kewaunee well were below normal all of 1984. The levels in three wells in Adams, Jackson, and Juneau Counties in central Wisconsin hovered around normal all year.

No significant seasonal trends were observed this year. Water levels were rather consistent areally and generally remained above or below normal, or normal through the four seasons.

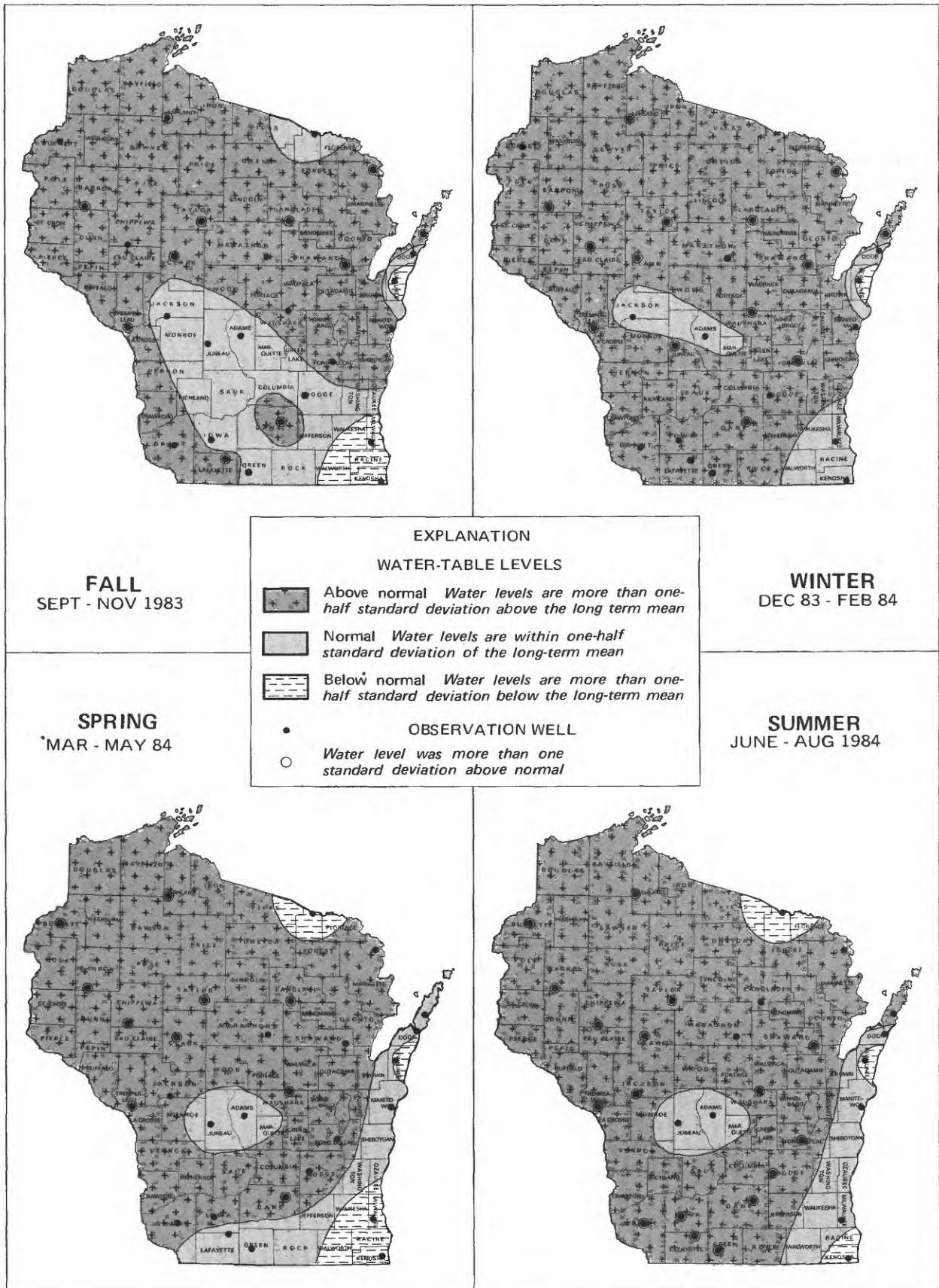


Figure 3. Relation of seasonal water-table levels to long-term means.

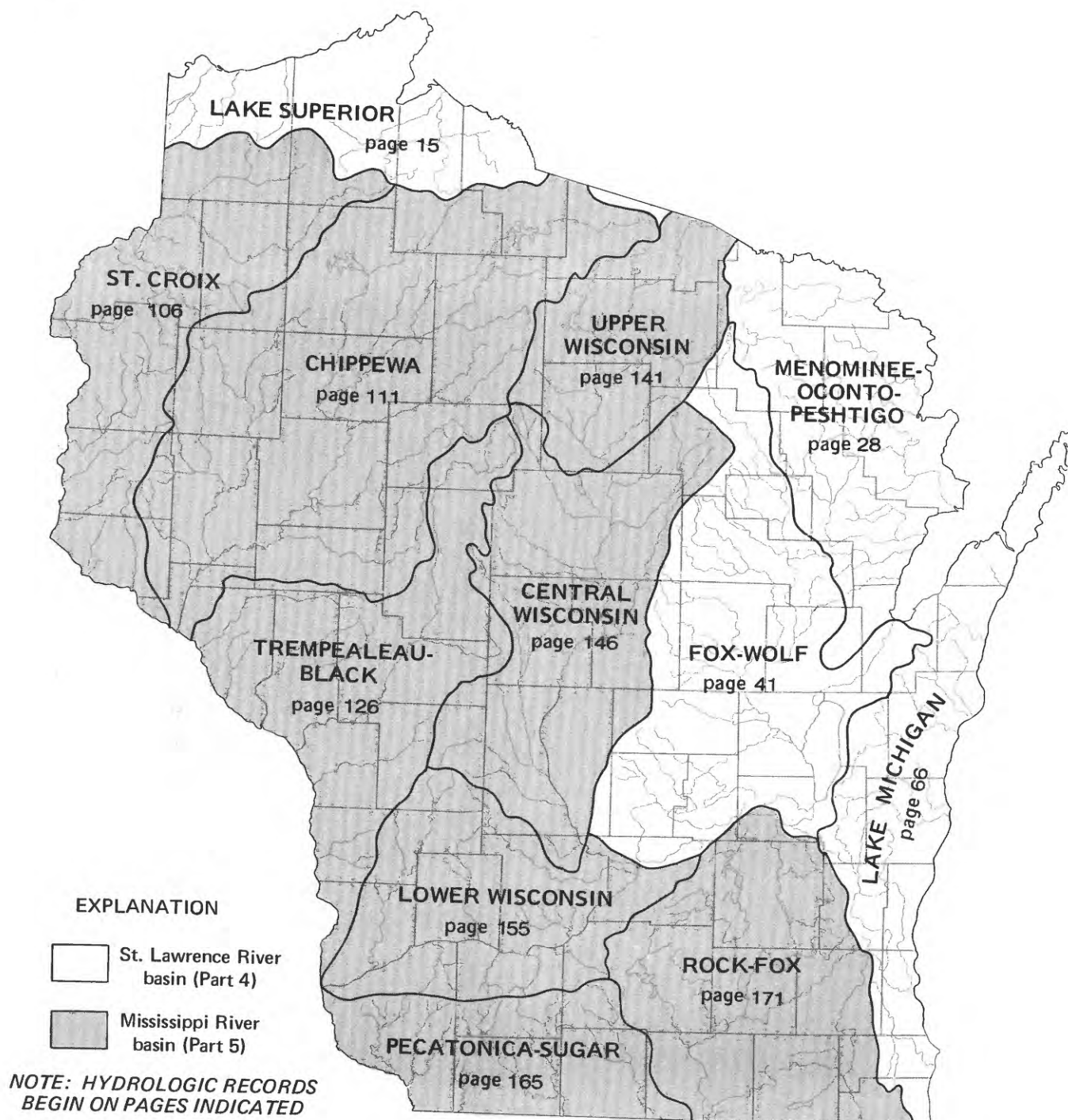
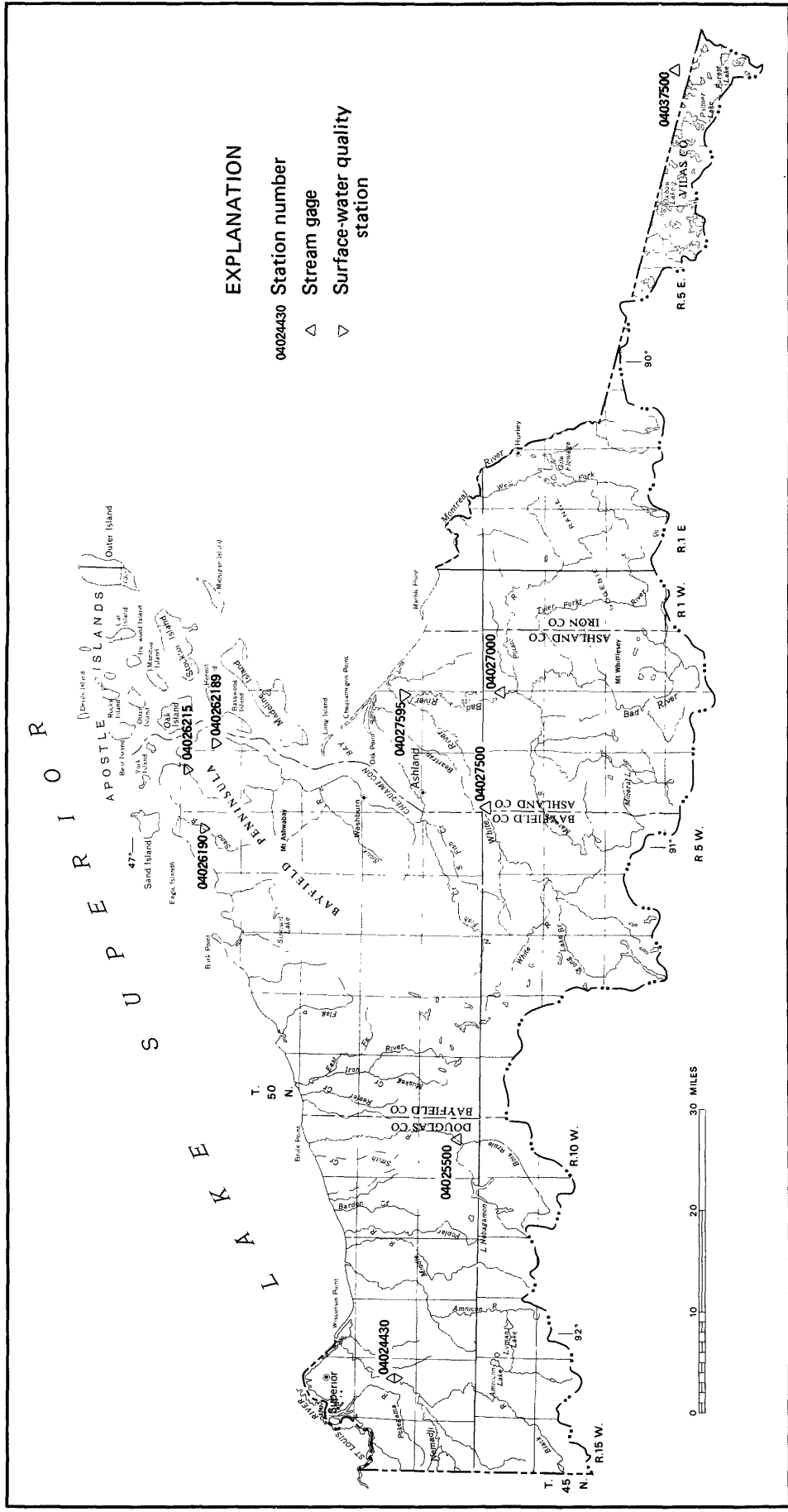


Figure 4. Major surface-water drainage basins and index of hydrologic records.



LAKE SUPERIOR BASIN

Base from U.S. Geological Survey
State base map, 1968

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 south of South Superior and 7.8 mi downstream from Black River.

DRAINAGE AREA.--420 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR WI-75-1: 1974(M). WDR WI-82-1: Drainage area and 1981.

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

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

AVERAGE DISCHARGE.--10 years, 395 ft³/s, 12.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s May 10, 1979, gage height, 22.83 ft; minimum daily, 16 ft³/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.--Peak discharges above base of 2,000 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Nov. 20	2400	2,980	16.53	June 8	1800	4,200	18.66
Apr. 6	0800	3,680	17.27	June 11	1300	*6,060	*20.62
Apr. 28	0400	3,830	18.15	Sept.24	2200	3,050	16.67

minimum discharge, 56 ft³/s Aug. 31, Sept. 1, 23, gage height, 3.78 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Apr. 4-23; stage-discharge relation affected by ice Nov. 12-13, Nov. 24 to Apr. 3.)

Oct. 1 to June 7				June 8 to Sept. 30			
4.3	118	15.0	2,400	3.7	49	15.0	2,400
5.0	202	17.0	3,200	4.5	131	17.0	3,200
7.0	505	18.0	3,730	6.0	323	19.0	4,460
11.0	1,320			8.0	644	21.0	6,520
				11.0	1,280		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	563	217	500	200	140	290	980	1750	213	267	75	56
2	632	211	470	200	140	260	1400	1570	225	257	82	66
3	542	208	450	200	140	240	2100	1310	254	702	77	79
4	462	211	430	210	140	230	2600	1080	213	583	74	85
5	423	207	410	210	140	210	3120	869	390	365	77	82
6	383	196	390	220	130	200	3200	803	686	609	105	76
7	339	187	370	220	130	190	2710	737	1020	423	110	73
8	341	182	350	210	130	180	2340	946	3250	293	98	71
9	357	198	340	210	130	170	1960	833	2770	240	122	71
10	309	265	330	200	130	160	1920	720	2650	218	99	71
11	575	274	310	200	140	160	1810	621	5500	201	81	68
12	840	230	290	190	140	150	1820	547	3400	184	74	74
13	605	220	280	190	150	140	2150	492	3530	167	85	97
14	504	235	270	180	200	130	2000	586	2250	153	120	105
15	453	238	260	180	350	130	1740	509	1340	143	99	93
16	1130	272	250	170	560	130	1530	429	1300	134	82	82
17	988	299	240	170	560	120	1260	527	1020	137	72	74
18	722	281	240	170	540	120	1020	523	817	137	68	70
19	595	285	230	160	540	120	831	430	649	129	65	65
20	569	2280	230	160	560	120	707	365	559	119	63	62
21	547	2370	230	160	560	130	612	343	493	110	63	60
22	464	1300	230	160	600	140	527	1470	942	96	64	58
23	411	938	230	160	660	150	459	1120	966	98	62	58
24	368	840	230	150	740	190	402	734	660	93	61	1640
25	336	760	220	150	560	240	348	577	480	89	61	2320
26	309	700	220	150	470	280	348	472	420	85	64	1350
27	289	640	220	140	400	340	1880	398	636	81	65	836
28	273	580	220	140	350	390	3270	337	485	79	66	602
29	253	560	220	140	320	450	1700	293	363	76	64	476
30	233	520	210	140	---	540	1480	262	305	74	60	397
31	221	---	210	140	---	680	---	233	---	72	57	---
TOTAL	15036	15904	9080	5480	9750	6980	48224	21886	37786	6414	2415	9317
MEAN	485	530	293	177	336	225	1607	706	1260	207	77.9	311
MAX	1130	2370	500	220	740	680	3270	1750	5500	702	122	2320
MIN	221	182	210	140	130	120	348	233	213	72	57	56
CFSM	1.16	1.26	.70	.42	.80	.54	3.83	1.68	3.00	.49	.19	.74
IN.	1.33	1.41	.80	.49	.86	.62	4.27	1.94	3.35	.57	.21	.83
CAL YR 1983	TOTAL	186473	MEAN	511	MAX	4900	MIN	90	CFSM	1.22	IN	16.52
WTR YR 1984	TOTAL	188272	MEAN	514	MAX	5500	MIN	56	CFSM	1.22	IN	16.68

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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	DYS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC- CI, FECAL, KF AGAR PER (COLS. 100 ML) (31673)
OCT , 1983												
10...	1200	307	148	7.7	--	8.0	15	10.8	748	93	35	240
DEC												
27...	1415	226	182	7.3	--	.0	14	12.4	742	87	25	180
FEB , 1984												
27...	1145	400	186	7.4	-10.0	.0	33	13.5	755	93	K14	420
APR												
11...	1615	1770	105	7.6	3.5	3.0	95	13.1	741	100	K7	60
JUN												
20...	1020	543	150	7.6	17.0	15.5	50	8.7	754	88	55	110
AUG												
14...	1345	117	238	8.0	25.0	24.0	55	8.1	750	98	K890	K1700

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CAC02) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT , 1983												
10...	73	9	19	6.3	2.8	8	.1	1.0	65	2.5	12	3.6
DEC												
27...	88	9	23	7.5	3.3	7	.2	.80	79	7.7	14	3.1
FEB , 1984												
27...	82	12	21	7.2	3.5	8	.2	1.3	70	5.4	13	4.2
APR												
11...	47	0	13	3.5	1.6	7	.1	.90	49	2.4	8.1	1.5
JUN												
20...	74	3	20	5.9	2.1	6	.1	.60	71	3.4	9.8	2.7
AUG												
14...	110	7	29	9.2	4.5	8	.2	1.4	104	2.0	12	3.8

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SI02) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT , 1983											
10...	<.10	12	135	97	112	<.10	.090	.80	.040	.010	<.010
DEC											
27...	<.10	13	134	110	82	.18	.190	.90	.070	.080	.050
FEB , 1984											
27...	<.10	12	130	110	140	.22	.150	.70	.040	<.010	<.010
APR											
11...	<.10	8.5	93	67	444	.10	.130	1.2	.040	<.010	<.010
JUN											
20...	.10	7.4	132	91	194	.10	<.010	1.3	.040	<.010	<.010
AUG											
14...	.10	11	158	130	50	<.10	<.010	.60	.080	<.010	<.010

K RESULTS BASED ON COUNT OUTSIDE OF 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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT , 1983											
10...	1200	307	110	1	46	<.5	<1	4	<3	2	790
FEB , 1984											
27...	1145	400	160	1	36	<.5	<1	<1	<3	3	430
APR											
11...	1615	1770	160	1	24	<.5	<1	5	<3	2	410
AUG											
14...	1345	117	40	1	47	<.5	<1	--	<3	5	250

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT , 1983											
10...	1	<4	12	.1	<10	2	<1	<1	48	<6	4
FEB , 1984											
27...	3	5	17	.2	<10	1	<1	<1	47	<6	18
APR											
11...	3	<4	18	.4	<10	1	<1	<1	26	<6	4
AUG											
14...	2	7	19	.1	<10	2	<1	--	74	<6	<3

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT , 1983							
04...	1420	471	143	12.0	--	--	--
10...	1200	307	148	8.0	37	31	77
NOV							
21...	1310	2260	95	3.5	--	--	--
DEC							
27...	1415	226	182	.0	15	9.2	95
JAN , 1984							
30...	1350	136	115	.0	--	--	--
FEB							
27...	1145	400	186	.0	12	13	97
MAR							
19...	1230	120	209	.0	--	--	--
APR							
03...	1000	2100	145	.5	--	--	--
09...	1345	1960	102	2.0	--	--	--
11...	0830	1860	105	3.0	--	--	--
11...	1615	1770	105	3.0	253	1210	75
MAY							
30...	1410	257	162	15.5	--	--	--
JUN							
20...	1020	543	150	15.5	153	224	82
JUL							
09...	1300	236	165	19.0	--	--	--
AUG							
14...	1345	117	238	24.0	57	18	97
28...	1320	66	286	25.5	--	--	--
SEP							
13...	1510	99	260	15.5	--	--	--

STREAMS TRIBUTARY TO LAKE SUPERIOR

04025500 BOIS BRULE RIVER NEAR 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 southwest of Brule Post Office, 1.4 mi downstream from Nebagamon Creek, and 1.7 mi upstream from Little Bois Brule River.

DRAINAGE AREA.--120 mi².

PERIOD OF RECORD.--October 1942 to September 1981, January to September 1984. 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 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.--39 years (water years 1943-81), 171 ft³/s, 19.35 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s and maximum (*) during period January to September:

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Apr. 13	0400	406	2.85	June 12	1500	406	2.85
May 9	1700	*580	*3.44	Sept. 24	2300	500	3.20
May 22	0400	355	2.70				

minimum daily discharge, 137 ft³/s, Mar. 19, Sept. 21-22.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Jan. 1 to Feb. 12, Mar. 5-14.)

1.3	98	3.0	443
1.5	125	4.0	770
2.0	214		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				160	150	159	169	366	190	193	180	139
2				160	150	157	185	375	216	186	176	155
3				160	140	156	199	406	214	249	162	156
4				160	140	152	215	398	199	238	152	152
5				170	140	150	238	379	215	224	185	145
6				180	140	150	264	353	210	224	200	142
7				180	140	150	286	353	219	208	187	139
8				180	140	150	308	385	279	199	188	146
9				180	140	150	319	558	249	193	173	145
10				180	140	150	341	481	335	190	175	145
11				170	140	140	363	417	358	186	168	141
12				170	150	140	390	371	378	178	163	157
13				170	178	140	395	350	365	174	158	168
14				170	172	140	372	326	323	170	156	162
15				170	167	146	353	303	306	167	157	156
16				170	167	141	335	289	314	164	156	149
17				170	169	138	315	279	287	167	156	144
18				170	168	140	293	263	268	160	166	141
19				160	169	137	277	248	251	157	152	140
20				160	168	138	263	236	242	153	147	138
21				160	167	142	250	254	233	150	148	137
22				160	169	141	240	344	249	149	146	137
23				160	173	140	231	313	237	147	144	144
24				160	174	141	224	295	224	144	141	420
25				160	172	143	217	276	212	142	139	469
26				150	167	147	232	260	226	141	141	393
27				150	166	152	338	238	248	140	151	343
28				150	164	155	337	222	225	139	150	312
29				150	162	154	318	211	211	139	145	285
30				150	---	155	356	203	200	138	141	265
31				150	---	159	---	196	---	140	139	---
TOTAL				5090	4582	4553	8623	9948	7683	5349	4942	5865
MEAN				164	158	147	287	321	256	173	159	196
MAX				180	178	159	395	558	378	249	200	469
MIN				150	140	137	169	196	190	138	139	137
CFSM				1.37	1.32	1.23	2.39	2.68	2.13	1.44	1.33	1.63
IN.				1.58	1.42	1.41	2.67	3.08	2.38	1.66	1.53	1.82

STREAMS TRIBUTARY TO LAKE SUPERIOR

04026190 SAND RIVER NEAR RED CLIFF, WI

LOCATION.--Lat 46°54'00", long 90°57'20", in SW 1/4 NE 1/4 sec 14, T.51 N., R.5 W., Bayfield County,
Hydrologic Unit 04010301, at bridge on State Highway 13, 8.5 mi northwest of Red Cliff.

DRAINAGE AREA.--28.2 mi².

PERIOD OF RECORD.--Water years 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00301)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)
APR , 1984										
10...	1430	206	--	--	--	--	--	--	--	--
JUN										
08...	1155	528	78	8.2	16.5	--	--	--	44	0
JUL										
16...	1335	5.1	223	7.9	15.5	9.7	744	100	100	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
APR , 1984										
10...	--	--	--	--	--	--	--	--	--	--
JUN										
08...	14	2.2	.70	3	.0	1.4	--	72	.9	<.2
JUL										
16...	27	8.5	3.1	6	.1	1.2	106	107	2.6	9.6

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
APR , 1984									
10...	--	--	--	--	--	--	--	--	--
JUN									
08...	1.2	<.10	5.3	96	--	.13	137	.16	.010
JUL									
16...	1.2	<.10	11	126	130	.17	1.7	--	<.010

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80155)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80155)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80155)
APR , 1984										
10...	--	--	--	--	--	--	220	122	29	
JUN										
08...	.17	.050	1.7	1.7	.130	.020	1960	2790	15	
JUL										
16...	<.10	<.010	--	<.10	.020	<.010	7	.10	19	

STREAMS TRIBUTARY TO LAKE SUPERIOR

04026215 RASPBERRY RIVER NEAR SAND BAY. WI

LOCATION.--Lat 46°55'25", long 90°49'50", in NE 1/4 SW 1/4 sec.2, T.51 N., R.4 W., Bayfield County, Hydrologic Unit 04010301, at bridge on gravel road, about 5 mi northwest of Red Cliff.

DRAINAGE AREA.--13.9 mi².

PERIOD OF RECORD.--October 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (CAC03) (00301)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)
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JUN , 1984										
08...	1400	116	55	7.2	17.0	--	--	--	26	4
JUL										
16...	1440	.99	218	7.5	17.5	7.5	744	80	100	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION PERCENT SODIUM (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LILITY FIELD (MG/L AS CAC03) (00410)	ALKA- LILITY LAB (MG/L AS CAC03) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
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[illegible][illegible]

JUN , 1984									
08...	1.7	<.10	6.0	86	--	.12	.27	.13	.010
JUL									
16...	1.6	.10	11	120	120	.16	.32	--	<.010

[illegible]

JUN , 1984									
08...	.14	.160	1.1	1.3	.080	<.010	182	57	35
JUL									
16...	<.10	<.010	--	.20	.020	.010	8	.02	25

STREAMS TRIBUTARY TO LAKE SUPERIOR

040262189 RED CLIFF CREEK NEAR RED CLIFF, WI

LOCATION.--Lat 45°53'14", long 90°47'18", in NW 1/4 NE 1/4 sec.19, T.51 N., R.3 W., Bayfield County, Hydrologic Unit 04010301, at bridge on gravel road about 2 mi north of Red Cliff.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)
JUN , 1984										
08...	1232	48	72	7.3	16.5	--	--	--	34	2
JUL										
16...	1545	.30	215	7.9	19.5	8.7	744	97	97	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LILITY FIELD AS (MG/L CAC03) (00410)	ALKA- LILITY LAB AS (MG/L CAC03) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS N) (00405)
JUN , 1984									
08...	9.6	2.4	1.7	9	.1	1.4	--	32	3.1
JUL									
16...	27	7.1	3.6	7	.2	1.9	99	98	2.4

DATE	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00618)
JUN , 1984									
08...	<.2	2.2	<.10	7.3	94	--	.13	12	.16
JUL									
16...	11	4.5	<.10	6.6	133	120	.18	.11	--

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L (T/DAY) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN , 1984									
08...	.020	.18	<.010	2.8	.080	<.010	565	73	69
JUL									
16...	<.010	<.10	<.010	.20	.020	<.010	7	.00	14

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 downstream from Potato River, 8.5 mi south of Odanah, and 23 mi from mouth.

DRAINAGE AREA.--597 mi².

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 1337: 1922. WDR Wi-82-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 668.30 ft 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 downstream at different datum.

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

AVERAGE DISCHARGE.--44 years (1915-22, 1949-84), 625 ft³/s, 14.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,700 ft³/s Apr. 24, 1960, gage height, 21.7 ft from flood-marks and from rating curve extended above 12,000 ft³/s and a comparison with contracted-opening measurement of peak flow 45,600 ft³/s at Odanah, drainage area 990 mi²; minimum, 34 ft³/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, top of downstream bridge submerged, information from Indian Service.

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Nov. 24	1100	5,880	10.06	May 9	1700	*6,350	*10.49
Apr. 13	2200	*6,350	*10.49	June 8	1600	3,440	7.61
Apr. 28	0200	3,870	8.06	June 12	2400	5,700	9.90
May 4	0700	4,800	8.99				

minimum discharge, 122 ft³/s July 31, gage height, 2.35 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge affected by ice Nov. 26 to Apr. 8.)

2.2	81	4.0	782
2.5	162	6.0	2,100
3.0	324	10.0	5,810
		11.0	6,960

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	229	275	860	300	220	440	660	2730	385	336	147	177
2	226	273	800	290	220	330	900	3040	413	292	297	208
3	226	273	780	290	230	300	1200	4150	431	342	275	412
4	232	268	760	300	230	290	1500	4520	361	500	256	511
5	241	259	720	300	230	270	2100	4430	453	433	222	468
6	244	256	680	310	230	260	2000	3750	663	430	226	384
7	231	251	620	310	230	260	1900	3300	585	455	221	313
8	261	249	580	300	230	260	2200	4590	2450	398	279	281
9	322	268	540	290	240	260	2550	5900	1930	341	426	273
10	322	395	500	280	250	260	3280	5480	1970	318	336	266
11	373	410	490	270	270	260	3660	4010	2360	319	268	246
12	808	365	480	260	280	260	5170	2800	3930	299	226	246
13	835	350	480	260	430	260	6090	2180	4440	278	200	570
14	779	346	470	260	560	260	6000	1800	2720	267	186	632
15	842	438	470	260	1000	260	5050	1450	1770	243	171	545
16	988	704	460	260	1400	270	4030	1210	1250	222	159	447
17	960	732	440	260	1600	270	3040	1150	973	212	150	366
18	802	635	420	250	1700	270	2340	1080	818	219	165	310
19	694	588	400	250	1500	280	1890	950	687	222	198	275
20	641	1440	370	250	1300	290	1590	831	574	206	170	245
21	575	2300	350	240	1000	300	1380	745	504	190	161	216
22	516	1910	340	240	1000	310	1240	1920	449	178	178	197
23	469	2350	330	240	1700	340	1090	1920	407	172	187	194
24	426	5470	330	230	1300	380	961	1340	372	162	174	581
25	393	3360	320	230	900	410	866	1050	326	153	162	1680
26	371	2500	320	230	740	470	802	854	311	153	152	1500
27	345	2000	320	230	660	520	1860	723	607	145	170	1170
28	339	1600	320	230	540	600	3280	620	629	137	231	877
29	315	1200	320	230	480	700	2380	531	502	133	242	693
30	289	1000	310	230	---	600	2580	476	396	127	215	569
31	282	---	300	220	---	540	---	421	---	124	189	---
TOTAL	14576	32465	14880	8100	20670	10780	73589	69951	33666	8006	6639	14852
MEAN	470	1082	480	261	713	348	2453	2256	1122	258	214	495
MAX	988	5470	860	310	1700	700	6090	5900	4440	500	426	1680
MIN	226	249	300	220	220	260	660	421	311	124	147	177
CFSM	.79	1.81	.80	.44	1.19	.58	4.11	3.78	1.88	.43	.36	.83
IN.	.91	2.02	.93	.50	1.29	.67	4.59	4.36	2.10	.50	.41	.93
CAL YR 1983 TOTAL	286701		MEAN 785	MAX 6280	MIN 107	CFSM 1.32	IN 17.86					
WTR YR 1984 TOTAL	308174		MEAN 842	MAX 6090	MIN 124	CFSM 1.41	IN 19.20					

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 downstream from bridge on State Highway 112 over dam, and 4.5 mi south of Ashland city limits.

DRAINAGE AREA.--301 mi².

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

REVISED RECORDS.--WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 660.15 ft 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 are good. Diurnal fluctuation caused by hydroelectric plant at gage.

AVERAGE DISCHARGE.--36 years, 283 ft³/s, 12.77 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,840 ft³/s June 8, gage height, 5.43 ft; minimum daily, 140 ft³/s Mar. 8.

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

1.0	113	2.5	769
1.5	263	3.0	1,120
2.0	485	4.0	2,050

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212	172	337	230	170	223	364	824	255	274	208	211
2	186	197	271	230	170	210	588	962	277	235	214	212
3	214	199	207	250	170	210	674	868	288	253	216	215
4	214	212	234	240	180	220	681	731	281	295	216	227
5	213	187	239	280	170	210	823	709	331	306	220	246
6	213	198	250	220	180	180	908	760	364	270	220	213
7	213	197	260	240	190	150	872	658	362	289	254	211
8	177	197	230	200	180	140	810	578	1670	277	246	212
9	215	204	210	210	190	150	766	538	762	255	213	206
10	212	235	200	160	210	160	760	509	1130	272	194	223
11	261	274	180	150	201	150	699	499	832	239	199	212
12	222	242	200	150	215	150	720	464	1000	265	190	219
13	271	243	210	150	327	160	684	442	852	266	205	239
14	256	224	220	160	343	170	666	367	853	236	208	283
15	244	210	230	170	406	180	645	333	765	233	185	249
16	280	289	240	180	458	170	565	319	618	231	209	257
17	285	295	240	160	490	170	511	317	494	219	212	216
18	287	250	250	210	534	180	405	318	405	201	219	213
19	294	269	250	230	540	190	366	276	371	225	215	213
20	242	376	250	250	457	190	324	278	337	219	213	212
21	262	457	240	170	416	200	302	308	324	191	213	190
22	222	459	240	200	403	200	282	1140	278	190	217	200
23	252	1060	250	160	461	210	253	513	280	212	214	350
24	212	1010	250	190	481	220	242	591	300	188	211	900
25	204	581	240	210	444	220	231	573	273	187	183	1200
26	223	585	230	210	357	230	234	463	278	186	212	800
27	212	638	230	200	295	230	776	377	274	186	214	500
28	199	512	230	190	304	284	677	315	284	185	220	400
29	197	419	230	190	279	267	681	254	315	185	238	340
30	196	369	230	180	---	245	824	267	285	186	220	320
31	194	---	240	170	---	262	---	259	---	185	196	---
TOTAL	7084	10760	7318	6140	9221	6131	17333	15810	15138	7141	6594	9689
MEAN	229	359	236	198	318	198	578	510	505	230	213	323
MAX	294	1060	337	280	540	284	908	1140	1670	306	254	1200
MIN	177	172	180	150	170	140	231	254	255	185	183	190
CFSM	.76	1.19	.78	.66	1.06	.66	1.92	1.69	1.68	.76	.71	1.07
IN.	.88	1.33	.90	.76	1.14	.76	2.14	1.95	1.87	.88	.81	1.20
CAL YR 1983	TOTAL	116677	MEAN 320	MAX 1060	MIN 135	CFSM 1.06	IN 14.42					
WTR YR 1984	TOTAL	118359	MEAN 323	MAX 1670	MIN 140	CFSM 1.07	IN 14.63					

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.--990 mi².

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT , 1983												
11...	1420	534	145	7.8	--	9.5	3.7	10.6	742	95	45	K250
DEC												
28...	1020	550	144	7.2	--	.0	5.1	10.6	741	75	20	150
FEB , 1984												
28...	1215	955	132	7.2	-2.0	.0	16	12.9	756	89	24	310
APR												
12...	0850	4360	70	7.3	10.0	3.5	110	12.5	740	97	K10	K31
JUN												
20...	1515	1060	129	7.4	17.5	18.5	15	8.0	755	86	K21	140
AUG												
15...	0800	394	153	7.7	22.0	23.0	9.0	7.8	750	93	59	150

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY LAB (MG/L AS CAC03) (00410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT , 1983												
11...	70	2	19	5.5	2.9	8	.2	.80	68	2.1	10	2.6
DEC												
28...	67	0	18	5.3	2.9	9	.2	.80	66	8.1	8.7	2.4
FEB , 1984												
28...	49	3	13	4.1	2.7	10	.2	1.1	46	5.6	6.6	3.5
APR												
12...	30	0	8.2	2.2	1.5	10	.1	.80	29	2.8	4.0	2.6
JUN												
20...	58	4	16	4.5	2.2	7	.1	.70	55	4.2	.7	2.1
AUG												
15...	76	1	21	5.7	2.9	8	.2	.80	75	2.9	8.1	2.2

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT , 1983											
11...	<.10	12	107	94	154	<.10	.020	.40	.020	.010	<.010
DEC											
28...	.10	13	108	91	160	.19	.040	.90	.030	.030	<.010
FEB , 1984											
28...	<.10	12	92	71	237	.20	.060	.20	.030	<.010	<.010
APR											
12...	<.10	8.1	26	46	306	.14	.140	8.0	.050	.010	<.010
JUN											
20...	.10	8.9	79	68	226	<.10	.050	.60	.030	.010	.020
AUG											
15...	<.10	10	109	96	116	<.10	<.010	.90	.040	<.010	<.010

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

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT , 1983											
11...	1420	534	40	1	46	<.5	<1	<1	<3	<1	350
FEB , 1984											
28...	1215	955	110	1	26	<.5	<1	<1	<3	1	360
APR											
12...	0850	4360	200	1	22	<.5	<1	5	<3	2	360
AUG											
15...	0800	394	30	1	37	<.5	1	1	<3	4	280

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT , 1983											
11...	1	<4	14	<.1	<10	<1	<1	<1	43	<6	<3
FEB , 1984											
28...	2	<4	18	.1	<10	2	<1	<1	31	<6	16
APR											
12...	2	<4	27	.2	<10	1	<1	<1	20	<6	8
AUG											
15...	2	5	15	.1	<10	3	<1	<1	48	<6	<3

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT , 1983						
11...	1420	534	145	9.5	9	13
DEC						
28...	1020	550	144	.0	4	5.9
FEB , 1984						
28...	1215	955	132	.0	108	278
APR						
12...	0850	4360	70	3.5	697	8210
JUN						
20...	1515	1060	129	18.5	20	57
AUG						
15...	0800	394	153	23.0	13	14

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 downstream from Cisco Lake Dam, 2.5 mi upstream from Langford Creek, 5.0 mi upstream from U.S. Highway 2, and 13 mi west of Watersmeet.

DRAINAGE AREA.--50.7 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1968, nonrecording gage at same site and at datum 4.00 ft higher.

REMARKS.--Records good except those below 10.0 ft³/s, which are poor. Flow completely regulated by Cisco Lake, usable capacity, 15,600 acre-ft. Several observations of water temperature were made during the year.

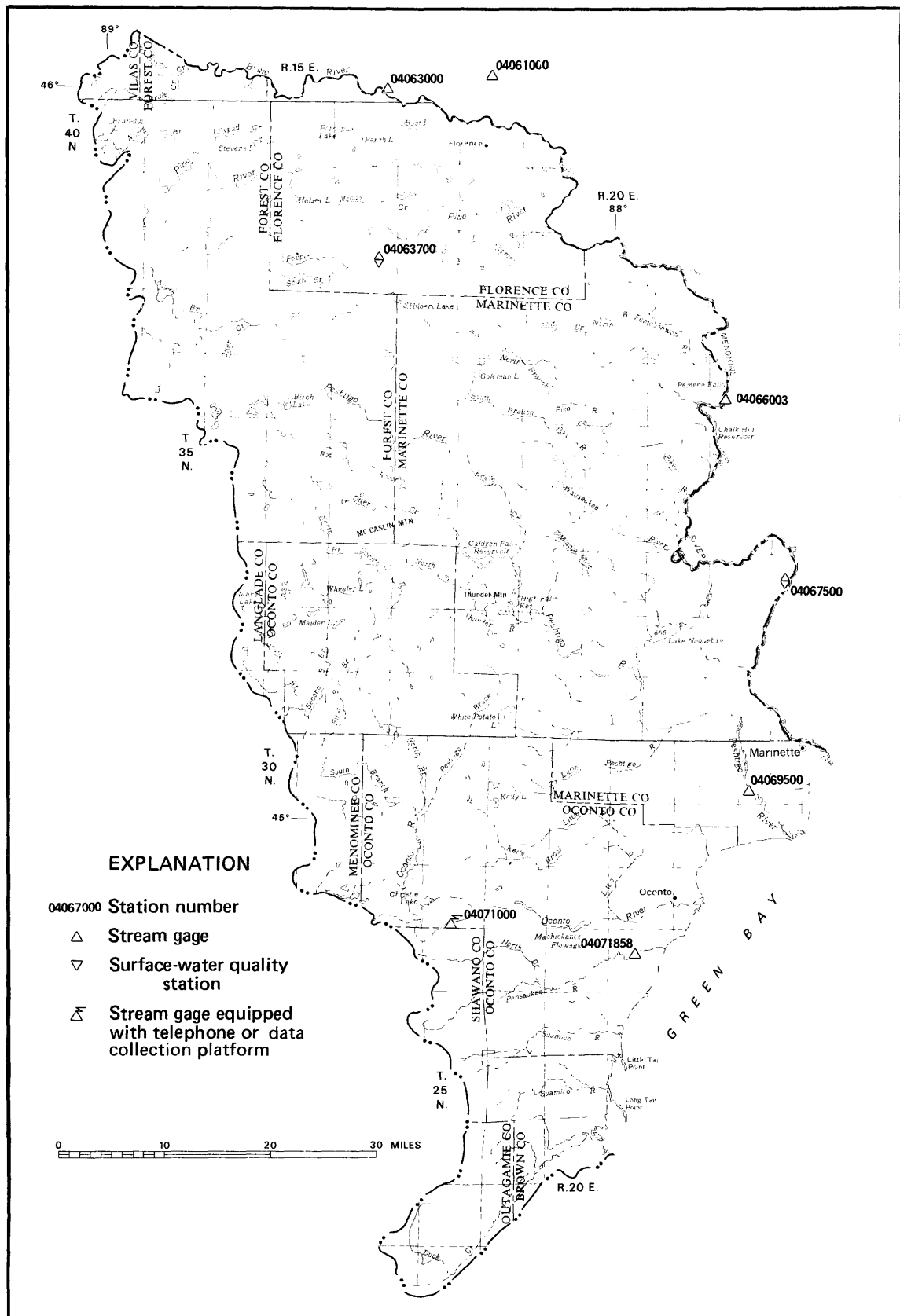
AVERAGE DISCHARGE.--40 years, 47.6 ft³/s, 12.75 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 178 ft³/s Oct. 12, gage height, 5.55 ft; minimum daily, 0.16 ft³/s July 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	101	72	33	12	48	51	3.9	.42	.56	.19	.24
2	1.4	98	71	33	12	48	51	3.6	.36	.70	15	.32
3	1.2	95	71	33	13	48	51	3.0	.35	19	28	.38
4	.64	93	70	33	14	48	51	2.5	.36	29	28	74
5	.65	91	70	34	15	48	51	2.3	.71	28	31	135
6	.63	88	69	34	15	49	51	2.1	17	27	44	132
7	41	86	69	34	32	50	50	2.3	30	26	74	130
8	76	84	82	34	59	49	50	2.5	53	27	97	125
9	75	84	100	35	65	48	51	3.2	73	26	121	119
10	104	84	98	35	66	49	51	3.1	72	26	98	45
11	126	83	97	44	65	49	53	2.9	70	20	68	.69
12	155	83	96	52	68	49	72	2.3	72	13	66	.69
13	173	82	95	53	70	49	87	2.0	69	14	25	.40
14	167	80	94	53	78	49	89	1.8	68	14	.78	.29
15	167	64	95	53	83	49	91	1.5	67	13	16	.26
16	163	51	94	53	83	49	90	.64	66	5.6	31	.25
17	157	51	93	53	82	49	90	27	64	.30	32	.25
18	152	51	92	52	80	48	89	60	33	.31	31	.25
19	148	51	90	50	81	48	89	67	.89	.31	31	.25
20	143	54	87	51	80	48	86	67	.46	.29	44	.25
21	139	55	86	51	80	49	72	66	.38	.30	55	.26
22	134	56	86	51	65	52	70	66	.34	.34	54	21
23	129	62	84	50	49	52	74	65	.34	.28	53	39
24	121	66	83	49	49	52	73	65	.34	.24	52	79
25	120	67	83	49	49	52	68	63	.34	.22	51	107
26	120	67	78	49	49	52	28	36	.36	.19	51	105
27	118	67	53	49	49	52	1.4	1.5	.54	.19	53	104
28	111	69	53	48	48	51	1.2	.95	.44	.19	52	100
29	109	72	53	48	48	51	1.2	.68	.47	.19	51	98
30	107	72	53	41	---	51	3.6	.58	.60	.16	24	95
31	104	---	43	20	---	51	---	.42	---	.16	.28	---
TOTAL	3165.02	2207	2460	1357	1559	1537	1736.4	625.77	761.70	292.53	1377.25	1512.78
MEAN	102	73.6	79.4	43.8	53.8	49.6	57.9	20.2	25.4	9.44	44.4	50.4
MAX	173	101	100	53	83	52	91	67	73	29	121	135
MIN	.63	51	43	20	12	48	1.2	.42	.34	.16	.19	.24
CAL YR 1983	TOTAL	20859.55	MEAN	57.1	MAX	188	MIN	.25				
WTR YR 1984	TOTAL	18591.45	MEAN	50.8	MAX	173	MIN	.16				



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 upstream from highway bridge, 1.0 mi upstream from Paint River, 2.5 mi north of Florence, and 5.0 mi upstream from confluence with Michigamme River.

DRAINAGE AREA.--389 mi².

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 National Geodetic Vertical Datum of 1929 (levels by Owen Ayres Associates). Prior to Aug. 29, 1944, nonrecording gage at bridge 40 ft downstream at same datum.

REMARKS.--Records excellent 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.--41 years (water years 1915, 1945-84), 364 ft³/s, 12.71 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,700 ft³/s July 2, 1953, gage height, 6.57 ft; maximum gage height, 8.60 ft Dec. 20, 1983, backwater from ice; minimum discharge, 118 ft³/s Dec. 2, 1963 (discharge measurement); minimum gage height, 1.79 ft July 24, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,160 ft³/s May 1, gage height, 3.54 ft; maximum gage height, 8.60 ft Dec. 20, backwater from ice; minimum discharge, 244 ft³/s July 31, Aug. 1, 26; minimum gage height, 2.09 ft July 25, 26, 27, 31, Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	321	350	500	360	325	350	400	1150	322	295	267	286
2	335	343	480	370	325	350	430	1060	328	278	363	562
3	365	339	460	370	325	340	470	868	330	273	387	769
4	348	331	450	370	315	340	500	773	326	288	339	595
5	341	326	440	370	325	330	538	687	327	288	321	469
6	338	326	430	370	325	320	631	616	346	285	317	393
7	345	331	420	370	325	310	663	594	336	279	326	349
8	470	332	410	360	325	310	691	629	443	272	424	330
9	461	357	410	360	325	300	713	630	480	276	344	341
10	410	417	400	350	325	300	741	638	422	278	317	319
11	392	412	400	350	330	300	775	574	391	295	291	295
12	668	370	400	350	340	300	812	530	414	304	275	332
13	818	365	400	350	580	300	889	517	438	330	263	497
14	722	376	400	350	580	300	964	526	393	304	263	450
15	626	396	400	350	570	310	938	479	369	353	408	376
16	605	423	400	340	550	320	843	442	367	326	387	335
17	575	433	400	340	530	330	752	428	348	368	326	315
18	507	407	400	330	500	330	646	418	332	377	330	287
19	457	403	400	320	460	320	583	408	305	344	291	267
20	429	572	390	320	460	320	552	421	291	368	267	257
21	400	816	390	310	460	320	529	426	294	317	263	257
22	382	760	390	310	440	320	490	413	286	283	275	254
23	378	733	380	310	430	330	466	399	286	271	267	258
24	385	983	370	320	420	340	452	379	291	259	259	307
25	413	1020	360	330	400	350	451	372	281	251	251	441
26	382	857	350	330	390	360	449	363	289	251	248	459
27	365	725	350	330	375	370	446	351	456	251	295	396
28	356	700	350	330	370	370	492	342	449	295	308	344
29	346	560	350	330	360	370	477	331	371	271	279	327
30	336	520	350	330	---	380	825	324	322	255	298	357
31	333	---	350	330	---	390	---	322	---	244	275	---
TOTAL	13609	15283	12380	10610	11785	10280	18608	16410	10633	9129	9524	11224
MEAN	439	509	399	342	406	332	620	529	354	294	307	374
MAX	818	1020	500	370	580	390	964	1150	480	377	424	769
MIN	321	326	350	310	315	300	400	322	281	244	248	254
CFSM	1.13	1.31	1.03	.88	1.04	.85	1.59	1.36	.91	.76	.79	.96
IN.	1.30	1.46	1.18	1.01	1.13	.98	1.78	1.57	1.02	.87	.91	1.07
CAL YR 1983	TOTAL	174206	MEAN 477	MAX 1560	MIN 268	CFSM 1.23	IN 16.66					
WTR YR 1984	TOTAL	149475	MEAN 408	MAX 1150	MIN 244	CFSM 1.05	IN 14.29					

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 downstream from confluence of Brule and Michigamme Rivers, 3.5 mi northeast of Florence, and at mile 117.

DRAINAGE AREA.--1,780 mi².

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 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 downstream.

REMARKS.--Records excellent except those for period Jan. 7 to Feb. 13, which are good. 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, and Peavy Pond, capacity, 33,860 acre-ft, on Michigamme River, and by many smaller reservoirs above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--70 years, 1,820 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,120 ft³/s Nov. 25, gage height, 6.93 ft; minimum, 290 ft³/s Oct. 6, Mar. 15, gage height, 2.05 ft; minimum daily, 682 ft³/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	1640	3130	1850	1900	3360	1980	3690	1630	928	1290	1280
2	1120	1610	3100	2340	1850	3370	2040	4050	1560	688	1360	1430
3	1210	1990	2660	2080	1900	3280	2010	3790	1380	986	1300	1900
4	1160	1710	2040	2230	1900	3190	1990	3520	1350	902	1110	1850
5	1050	1580	2510	2140	1900	3200	1990	3510	1320	1000	1230	1780
6	1220	1450	2480	1850	1850	2700	1780	3710	1210	1320	1360	1740
7	1510	1550	3000	2100	1750	2400	1550	3730	1270	1410	1380	1750
8	1490	1540	2870	2100	1850	1470	1510	3790	1390	1330	1280	1380
9	1430	1660	2840	1860	1950	1740	1860	3770	1350	1520	1490	1360
10	1550	1910	2760	1950	1850	1590	1810	3760	1420	1870	1620	1540
11	1300	2090	2740	1820	1750	1550	1850	3790	1760	2080	1560	1560
12	2470	1670	2960	1820	1850	1690	2440	3800	1730	2130	1560	1580
13	3470	2240	2980	1930	2100	1440	3240	3730	1680	2330	1370	1770
14	3230	2120	2910	1650	2060	1440	4160	3640	1510	2040	1400	1430
15	2900	1850	2730	2000	2010	1600	4250	3120	1340	1720	1420	1510
16	2640	2260	2730	1720	2180	1530	4230	2900	1190	1180	1410	1320
17	2700	2250	2740	2100	2870	1720	3700	2530	1060	1150	1390	1660
18	2890	2100	2770	1950	3010	1270	3210	2610	1440	1390	1320	1580
19	2700	2050	2910	1850	3060	1570	2920	1790	1450	1190	1310	1520
20	2550	2320	2750	1750	3020	1490	2640	2040	1350	1400	1390	1460
21	2360	3340	2650	1800	3310	1560	2580	2250	1480	1200	1450	1430
22	2510	3900	2130	1850	3250	1830	1840	2010	1480	1220	1390	682
23	2030	4090	2400	1630	3420	1900	1860	1830	1080	1520	1310	980
24	1950	4390	2440	1500	3250	1930	1500	1690	713	1330	1360	1540
25	1960	5100	2590	1690	3320	1660	1450	1660	1320	1290	1240	1590
26	1200	4660	2290	1840	3420	2100	1530	1550	1370	1170	1360	1630
27	1820	3980	2430	1900	3450	1390	1860	1560	1930	1450	1220	1450
28	1910	3650	2400	2020	3450	2090	1820	1400	1960	1330	1180	1640
29	1820	3210	2430	1720	3420	2150	1610	1560	1500	1350	1430	1690
30	1660	3040	2380	1850	---	1960	2650	1760	935	1390	1040	1810
31	1770	---	2090	1850	---	2080	---	1390	---	1410	1300	---
TOTAL	61390	76950	81840	58740	72900	62250	69860	85930	42158	43224	41830	45842
MEAN	1980	2565	2640	1895	2514	2008	2329	2772	1405	1394	1349	1528
MAX	3470	5100	3130	2340	3450	3370	4250	4050	1960	2330	1620	1900
MIN	1050	1450	2040	1500	1750	1270	1450	1390	713	688	1040	682
CAL YR 1983	TOTAL	898720	MEAN	2462	MAX	8090	MIN	1020				
WTR YR 1984	TOTAL	742914	MEAN	2030	MAX	5100	MIN	682				

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 upstream from bridge on U. S. Forest Service Road 2159, 1.8 mi downstream from Mud Creek, 2.6 mi northwest of Fence, and 11.5 mi upstream from mouth.

DRAINAGE AREA.--139 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR WI-76-1: 1972(M). WDR WI-80-1: Drainage area. WDR WI-81-1: 1965 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,406.16 ft 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.--21 years, 125 ft³/s, 12.21 in/yr.

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

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Oct. 14	1000	385	2.52	Apr. 15	2000	394	2.54
Nov. 24	2300	335	2.41	May 2	1700	*497	*2.74

minimum discharge, 28 ft³/s all or part of each day July 30, 31, Aug. 1, gage height, 1.17 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 12-13, Nov. 25 to Dec. 8,
Dec. 16 to Mar. 12, Mar. 15-17, and Mar. 26 to Apr. 4.)

1.1	23	2.0	185
1.2	30	2.4	331
1.4	53	2.8	530
1.6	86		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	75	180	68	54	86	90	433	57	59	35	60
2	83	74	170	70	54	80	110	487	66	51	47	106
3	90	72	160	70	56	74	130	488	71	49	54	180
4	96	71	140	72	56	70	130	461	68	51	49	211
5	98	67	130	70	54	66	145	423	65	49	44	203
6	93	66	120	68	52	62	176	385	65	50	43	183
7	105	65	110	68	52	60	196	354	73	48	45	164
8	167	67	96	68	52	58	206	330	113	44	72	148
9	192	74	88	68	52	56	216	308	134	43	80	133
10	184	101	84	66	54	54	237	277	133	44	71	115
11	183	109	82	68	56	54	254	252	124	53	57	101
12	272	96	83	66	64	54	270	232	128	53	47	109
13	344	92	84	66	130	54	330	239	162	46	41	144
14	381	89	84	66	180	54	378	243	159	42	38	164
15	365	95	82	64	190	56	389	231	135	45	40	160
16	352	109	80	64	180	60	389	214	111	44	41	142
17	329	115	80	64	170	58	375	192	100	50	38	124
18	301	112	78	64	160	58	349	167	94	52	36	105
19	271	113	78	62	150	56	318	147	83	50	34	90
20	243	171	78	60	140	54	286	131	72	47	32	78
21	217	241	76	60	140	54	252	120	64	47	33	69
22	188	267	76	60	140	54	221	113	58	43	41	62
23	163	286	76	62	140	55	196	105	53	41	46	56
24	138	324	74	64	150	58	177	96	49	37	44	68
25	121	290	74	64	150	65	163	91	45	35	37	102
26	112	270	74	64	120	72	159	86	45	32	34	126
27	102	250	74	60	110	74	161	82	81	32	36	131
28	94	230	72	60	100	74	172	77	95	31	42	125
29	90	220	72	58	92	76	173	71	87	30	50	113
30	81	200	74	56	---	76	356	65	72	29	72	100
31	76	---	72	54	---	76	---	61	---	28	67	---
TOTAL	5622	4411	2901	1994	3098	1958	7004	6961	2662	1355	1446	3672
MEAN	181	147	93.6	64.3	107	63.2	233	225	88.7	43.7	46.6	122
MAX	381	324	180	72	190	96	389	488	162	59	80	211
MIN	76	65	72	54	52	54	90	61	45	28	32	56
CFSM	1.30	1.06	.67	.46	.77	.46	1.68	1.62	.64	.31	.34	.88
IN.	1.50	1.18	.78	.53	.83	.52	1.87	1.86	.71	.36	.39	.98
CAL YR 1983	TOTAL	56022	MEAN 153	MAX 672	MIN 35	CFSM 1.10	IN 14.99					
WTR YR 1984	TOTAL	43084	MEAN 118	MAX 488	MIN 28	CFSM .85	IN 11.53					

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00361)	COLI- FORM, FECAL, 0.7 UM-MF (GOLS./ 100 ML) (21625)	STREP- TOCOCCI FECAL, BT AGAP (COLS. PER 100 ML) (31673)
NOV , 1983												
21...	1450	248	120	7.1	1.5	2.5	1.5	11.9	718	93	21	280
FEB , 1984												
08...	1230	51	198	6.8	--	.0	2.4	11.6	735	82	K21	32
MAY												
01...	1340	456	85	7.4	3.5	4.0	1.0	11.7	726	94	87	83
SEP												
05...	1215	204	140	7.5	17.0	14.0	.50	9.2	738	92	64	160

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY LAB (MG/L AS CACO3) (90410)	CARRON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV , 1983												
21...	59	10	13	6.5	1.3	4	.0	.70	49	7.5	11	2.1
FEB , 1984												
08...	110	6	23	13	1.7	3	.0	.80	105	32	8.8	1.9
MAY												
01...	40	7	8.6	4.4	.90	5	.0	.70	33	2.5	3.3	1.5
SEP												
05...	70	7	15	8.0	1.3	4	.0	.70	63	3.9	3.8	1.8

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV , 1983											
21...	.10	9.5	99	74	66	.22	.060	.60	.030	.010	<.010
FEB , 1984											
08...	<.10	13	143	130	20	.18	.130	.70	.020	.010	<.010
MAY											
01...	<.10	5.0	74	45	91	.15	.090	3.0	.020	<.010	<.010
SEP											
05...	<.10	10	113	78	62	.15	.070	.80	.020	<.010	<.010

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

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV , 1983											
21...	1450	248	20	<1	22	<.5	<1	<1	<3	<1	270
MAY , 1984											
01...	1340	456	20	1	11	<.5	<1	<1	<3	<1	220

DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV , 1983												
21...	5	<4	23	<.1	<10	<1	<1	<1	<1	15	<6	<3
MAY , 1984												
01...	5	<4	31	<.1	<10	1	<1	<1	<1	12	<6	12

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	GROSS ALPHA, DIS- SOLVED (UG/L U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90) (80060)	RADIUM 226, DIS- SOLVED (PCI/L AS SR/ METHOD (09511)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
NOV , 1983										
21...	1450	248	<1.8	<.5	1.9	<.7	1.7	<.6	.04	.21
MAY , 1984										
01...	1340	456	2.5	<.4	2.4	<.4	2.1	<.4	.08	.26

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT , 1983							
12...	1600	284	110	8.5	--	--	--
NOV							
17...	1210	119	155	1.5	--	--	--
21...	1450	248	120	2.5	3	2.0	77
FEB , 1984							
08...	1230	51	198	.0	2	.28	89
MAY							
01...	1340	456	85	4.0	12	15	76
JUN							
07...	1105	62	180	22.0	--	--	--
25...	1510	44	190	19.0	--	--	--
JUL							
10...	1425	42	190	20.5	--	--	--
16...	1800	44	190	23.5	--	--	--
SEP							
05...	1215	204	140	14.0	5	2.8	82

STREAMS TRIBUTARY TO LAKE MICHIGAN

04066003 MENOMINEE RIVER BELOW PEMENE CREEK NEAR PEMBINE, WI

LOCATION.--Lat 45°34'46", long 87°47'13", in NE 1/4, sec.29, T. 37 N., R.28 W., Michigan Meridian, Menominee County, MI, Hydrologic Unit 04030108, on left bank 40 ft downstream from County Trunk Z bridge, 0.9 mi downstream from Pemene Creek, 3.9 mi west of Nathan, MI, 10.6 mi southeast of Pembine, and at mile 64.3. Prior to August 1982, at site 1.5 mi upstream.

DRAINAGE AREA.--3,140 mi².

PERIOD OF RECORD.--October 1949 to current year. Published as "near Pembine" prior to August 1982. Monthly discharges only for some periods, published in WSP 1307.

GAGE.--Water-stage recorder. Altitude of gage is 740 ft, from topographic map. October 1949 to Oct. 27, 1972, water-stage recorder at site 1.0 mi upstream at different datum, and Oct. 28, 1972, to August 1982, water-stage recorder at site 1.5 mi upstream at different datum.

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

AVERAGE DISCHARGE.--35 years, 3,015 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,900 ft³/s May 8, 1960, gage height, 13.90 ft site and datum then in use; minimum, 694 ft³/s Sept. 3, 1969, gage height, 1.66 ft site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,990 ft³/s Nov. 26, gage height, 11.16 ft; maximum gage height, 17.36 ft Dec. 20, backwater from ice; minimum daily, 1,340 ft³/s July 4.

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

7.2	1,220	9.0	3,820
7.5	1,620	10.0	5,610
8.0	2,310	12.0	9,850

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1990	2480	4300	3000	2500	4300	2900	7080	2100	1940	1690	1600
2	1910	2430	3700	3000	2400	4100	3250	7550	2180	1760	1700	1970
3	1830	2420	3400	2800	2400	4100	3370	7280	2190	1480	1680	3150
4	1930	2380	3400	2800	2400	3600	3470	6900	2030	1340	1790	3390
5	2060	2450	3700	2900	2500	3500	3610	5950	1900	1620	1540	3470
6	1850	2460	3400	2900	2600	3500	3830	5470	1990	1660	1800	3060
7	1690	2220	3500	2800	2600	3500	3700	6330	2170	1870	1940	3470
8	2550	2270	3600	2800	2500	2500	3670	5790	2520	1890	1900	2640
9	2770	2330	3600	2900	2500	2200	3750	5720	2720	1960	1740	2390
10	3270	2600	3600	2900	2500	2000	3610	5710	2760	2140	2050	2270
11	2400	3270	3300	2600	2600	2200	3690	5510	2840	2440	2330	2300
12	4120	3240	4000	2500	3000	2400	3900	5530	2960	2480	1900	2520
13	6760	3080	4000	2400	3800	2400	5480	5450	3000	2540	1820	3410
14	7070	2930	3500	2400	4000	2500	6400	5460	3120	2560	1850	3170
15	6640	3140	3500	2600	3800	2600	6700	4820	2620	2670	1880	2970
16	5680	3330	3600	2500	4500	2600	7110	4630	2320	1930	1780	2720
17	5400	3330	3600	2500	4500	2200	6750	4200	2300	1860	1760	2590
18	5590	3340	3400	2400	5000	2500	5350	3720	2110	1700	1780	2620
19	5110	3430	3400	2300	4800	2400	5090	3480	2280	2000	1550	2500
20	4430	3660	3600	2300	4900	2400	4950	3040	2450	2330	1670	2170
21	4040	5140	3600	2300	4900	2500	4360	3120	2070	2250	1720	2190
22	4180	6690	3400	2300	5000	2600	3830	3060	1940	1910	1790	2000
23	3510	6620	3300	2500	5000	2600	3300	2840	2060	1770	1650	1360
24	3400	6560	3200	2400	5200	2600	2820	2620	1500	1900	1670	1570
25	2820	7240	3200	2100	5200	3100	2990	2360	1600	1810	1720	2620
26	3070	7920	3300	2100	5200	4000	2660	2440	1710	1700	1650	2540
27	3080	6430	3300	2300	5000	3400	3120	2190	2830	1800	1560	2440
28	2720	5060	3200	2400	4700	3000	3240	2270	3250	1790	1630	2450
29	3090	5610	3000	2400	4500	3500	2740	2160	3060	1570	1590	2670
30	2300	4950	3000	2400	---	3100	4170	2200	2620	1610	1700	2360
31	2520	---	3000	2400	---	2900	---	2140	---	1660	1680	---
TOTAL	109780	119010	107600	78900	110500	90800	123810	137020	71200	59940	54510	76580
MEAN	3541	3967	3471	2545	3810	2929	4127	4420	2373	1934	1758	2553
MAX	7070	7920	4300	3000	5200	4300	7110	7550	3250	2670	2330	3470
MIN	1690	2220	3000	2100	2400	2000	2660	2140	1500	1340	1540	1360
CAL YR 1983	TOTAL	1377700	MEAN	3775	MAX	11200	MIN	1690				
WTR YR 1984	TOTAL	1139650	MEAN	3114	MAX	7920	MIN	1340				

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 downstream from bridge on County Highway JJ, 2.9 mi downstream from Grand Rapids Dam, 2.6 mi east of McAllister, 1.9 mi downstream from Little Cedar River, and at mile 22.6.

DRAINAGE AREA.--3,930 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR WI-80-1: Drainage area.

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

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

AVERAGE DISCHARGE.--21 years (water years 1946-61, 1980-84), 3,524 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,550 ft³/s May 3, gage height, 13.62 ft; maximum gage height, 14.22 ft, Dec. 31 (backwater from ice); minimum daily, 1,580 ft³/s July 5.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 6-7, Dec. 17 to Mar. 25.)

8.8	1,510	11.0	4,600
9.0	1,740	12.0	6,400
9.5	2,360	13.0	8,300
10.0	3,040	14.0	10,500

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2640	2920	6060	3800	3000	6000	4280	6790	2410	2640	2060	1980
2	2640	2920	5340	3800	3100	5400	4570	9000	2540	2150	2110	1990
3	2400	2910	4630	3700	3000	5200	4900	9510	2660	2130	1970	3070
4	2460	2870	4070	3500	3000	5200	4640	9220	2480	1890	2010	3980
5	2380	3050	4130	3600	3000	4500	4620	8220	2530	1580	1940	4030
6	2570	2850	4500	3700	3100	4400	5130	7450	2290	2010	2010	3690
7	2450	2850	4200	3600	3200	4400	5580	6800	2550	1870	2290	3390
8	3060	2620	4520	3500	3200	4000	5540	7530	3000	2390	2320	3320
9	3530	2920	4630	3500	3100	3000	5600	7360	3560	2530	2300	2910
10	4230	3020	4630	3600	3200	2700	5520	7020	3540	2900	2190	2730
11	4110	3580	4340	3500	3200	2300	4810	6630	3450	3050	2420	2620
12	3800	4190	4020	3100	3200	2800	5150	6680	3460	3110	2360	2630
13	6500	4250	4990	3000	3700	2700	5370	6780	4140	2900	2160	3520
14	5880	4010	5020	2900	4800	2800	7400	6640	3680	2880	2280	3980
15	8940	3910	4320	3000	4900	2900	8030	6650	3640	2530	2130	3750
16	8450	3570	4350	3300	4700	3000	8160	6070	3040	2160	2160	3550
17	7000	4130	4600	3200	5600	3000	8800	5210	3020	2390	2180	3200
18	6620	3930	4500	3200	5600	2600	8110	5150	2940	2110	2110	3090
19	6660	3880	4200	3000	6400	2900	6600	4520	2910	1970	2070	3010
20	6270	4460	4200	2900	6000	2800	5960	4160	2840	2340	1950	2950
21	5010	5310	4500	2900	6200	2800	6210	3850	2900	2810	1850	2610
22	4860	7140	4500	2900	6200	3000	5790	3750	2550	2530	2100	2530
23	4980	8050	4200	2900	6400	3100	4640	3630	2110	2430	2120	2160
24	4050	8210	4100	3200	6400	3100	4030	3500	2450	2110	1840	1760
25	4050	8060	4000	3000	6600	3200	3750	3040	1730	2390	1820	2460
26	3480	8170	4000	2600	6600	4200	3800	2980	2160	2040	2030	3630
27	3550	8600	4100	2600	6600	4870	3670	2930	2760	1960	1890	2840
28	3660	7180	4100	2900	6400	4300	4270	2650	3410	2150	1910	2920
29	3260	5940	4000	3000	6200	3640	3760	2930	3490	1920	2070	3020
30	3520	6450	3800	3000	---	4420	4960	2560	3340	1750	2030	3170
31	2980	---	3800	3100	---	4550	---	2760	---	2040	1810	---
TOTAL	138690	141950	136350	99500	136600	113780	163650	171970	87580	71660	64490	90490
MEAN	4474	4732	4398	3210	4710	3670	5455	5547	2919	2312	2080	3016
MAX	8940	8600	6060	3800	6600	6000	8800	9510	4140	3110	2420	4030
MIN	2380	2620	3800	2600	3000	2300	3670	2560	1730	1580	1810	1760
CAL YR 1983	TOTAL	1709360	MEAN	4683	MAX	14100	MIN	1830				
WTR YR 1984	TOTAL	1416710	MEAN	3871	MAX	9510	MIN	1580				

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML) (31673)
NOV , 1983												
22...	0945	6490	220	7.9	2.5	3.5	1.5	13.0	749	100	52	140
JAN , 1984												
05...	1250	3600	240	7.4	29.0	.0	1.6	13.6	735	97	21	50
FEB												
07...	1500	3200	198	8.0	2.5	.0	1.7	12.0	758	83	23	K14
MAY												
02...	1315	9220	184	8.1	11.0	9.5	1.5	11.2	748	100	90	31
JUL												
18...	1000	1860	205	8.3	23.0	22.0	1.4	7.8	749	91	K5	35
SEP												
06...	1030	3650	225	8.1	18.0	18.0	1.4	9.8	756	104	29	73

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV , 1983												
22...	110	13	25	11	2.3	4	.0	1.0	95	2.3	15	3.4
JAN , 1984												
05...	110	13	24	11	2.4	5	.1	.90	92	7.1	16	3.0
FEB												
07...	110	11	24	12	2.5	5	.1	1.0	99	1.9	15	3.5
MAY												
02...	91	11	21	9.4	1.9	4	.0	.80	80	1.2	11	2.8
JUL												
18...	110	10	24	11	2.6	5	.1	.80	95	.9	12	2.8
SEP												
06...	120	13	27	12	2.5	4	.1	1.0	104	1.6	11	2.9

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV , 1983											
22...	.30	8.5	146	120	2560	.13	.060	.50	.020	.010	<.010
JAN , 1984											
05...	<.10	9.8	133	120	1290	.23	.230	.80	.030	.020	<.010
FEB											
07...	.10	10	148	130	1280	.25	.860	1.2	.010	.010	<.010
MAY											
02...	<.10	5.7	143	100	3560	.13	.040	2.0	.010	<.010	<.010
JUL											
18...	<.10	5.9	129	120	648	<.10	.020	.30	.020	<.010	<.010
SEP											
06...	<.10	7.8	135	130	1330	<.10	.030	.90	<.010	.010	<.010

K RESULTS BASED ON COUNT OUTSIDE OF 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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV , 1983											
22...	0945	6490	10	1	25	<.5	1	<1	<3	2	120
JAN , 1984											
05...	1250	3600	--	<1	29	<.5	<1	--	<3	1	150
FEB											
07...	1500	3200	<10	1	15	<.5	<1	<1	<3	2	140
MAY											
02...	1315	9220	<10	1	14	<.5	2	<1	<3	7	110
SEP											
06...	1030	3650	20	1	16	<.5	<1	<1	<3	3	31

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV , 1983											
22...	3	<4	10	<.1	<10	1	<1	<1	39	<6	5
JAN , 1984											
05...	6	<4	16	<.1	<10	2	<1	--	38	<6	8
FEB											
07...	<1	4	10	.1	<10	2	<1	<1	40	<6	22
MAY											
02...	12	<4	19	<.1	<10	2	<1	<1	32	<6	16
SEP											
06...	4	4	15	<.1	<10	2	<1	<1	46	<6	15

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT , 1983							
13...	1500	7030	215	11.0	--	--	--
NOV							
22...	0945	6490	220	3.5	7	123	79
JAN , 1984							
05...	1250	3600	240	.0	2	19	87
FEB							
07...	1500	3200	198	.0	1	8.6	89
MAY							
02...	1315	9220	184	9.5	12	299	88
JUL							
17...	1700	2510	203	23.5	--	--	--
18...	1000	1860	205	22.0	--	--	--
SEP							
06...	1030	3650	225	18.0	7	69	90

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 downstream from Chicago and Northwestern Railway bridge, 0.5 mi downstream from Wisconsin Public Service Corp. Powerplant at Peshtigo, and 11.5 mi upstream from mouth.

DRAINAGE AREA.--1,080 mi².

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

REVISED RECORDS.--WDR WI-80-1: Drainage area.

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

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

AVERAGE DISCHARGE.--31 years, 958 ft³/s, 11.79 in/yr. The figure published in the 1983 report was in error; the correct figure for 1983 was 30 years, 937 ft³/s, 11.78 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,220 ft³/s May 2, gage height, 6.49 ft; minimum daily, 281 ft³/s July 9.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 5, Dec. 8 to Feb. 16, and Mar. 8-14.)

1.5	250	6.0	2,180
2.0	450	7.0	3,580
3.0	970		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	788	1020	557	640	540	1320	1140	2530	653	420	433	366
2	642	935	516	580	580	1200	1100	3060	549	468	480	466
3	848	794	538	540	580	1100	1170	3060	346	466	530	531
4	847	830	556	640	580	916	1390	2700	410	452	627	768
5	726	804	800	680	580	1200	1440	2340	604	379	406	837
6	752	778	893	730	540	928	1400	2260	603	315	480	903
7	826	765	1090	760	580	1090	1350	2280	620	380	735	796
8	1160	749	800	720	580	760	1540	2050	1060	344	669	754
9	1370	575	740	780	620	680	1580	1900	1650	281	674	735
10	1420	832	640	700	560	640	1670	1680	1490	589	761	550
11	1480	936	560	620	620	580	1560	1580	1120	841	765	504
12	1690	908	640	640	560	540	1350	1490	1120	1140	535	651
13	2280	937	720	620	900	540	1520	1480	1580	1080	374	1040
14	2550	899	820	640	1300	640	1700	1710	1640	861	530	1080
15	2590	899	680	580	1700	715	2050	1690	1430	694	489	1150
16	2520	781	800	580	2100	826	2020	1550	1230	604	375	1120
17	2450	783	760	620	2360	808	2050	1440	1290	563	518	1110
18	2260	554	820	520	2470	750	1910	1320	1500	511	411	834
19	2020	551	640	520	2450	550	1790	1190	1760	425	374	791
20	1930	696	660	520	2540	750	1680	912	1360	621	365	764
21	1550	1020	600	560	2420	792	1500	902	1120	705	509	656
22	1080	1120	660	520	2380	787	1130	769	818	727	514	586
23	1090	1030	700	500	2310	743	1370	903	814	501	399	510
24	1070	1560	660	540	2370	792	1220	600	654	523	315	479
25	977	1860	720	540	2320	1000	1100	837	598	471	384	685
26	1020	1600	640	540	2140	894	1070	884	483	498	320	971
27	997	1500	640	500	1820	1130	1080	798	779	496	403	949
28	1180	1500	640	520	1970	1090	1190	708	642	459	508	878
29	1100	953	720	540	1550	1130	1110	648	376	363	510	793
30	1000	712	640	520	---	1250	1660	683	549	309	524	790
31	803	---	700	540	---	1080	---	695	---	463	644	---
TOTAL	43016	28881	21550	18450	42020	27221	43840	46649	28848	16949	15561	23047
MEAN	1388	963	695	595	1449	878	1461	1505	962	547	502	768
MAX	2590	1860	1090	780	2540	1320	2050	3060	1760	1140	765	1150
MIN	642	551	516	500	540	540	1070	600	346	281	315	366
CFSM	1.29	.89	.64	.55	1.34	.81	1.35	1.39	.89	.51	.47	.71
IN.	1.48	.99	.74	.64	1.45	.94	1.51	1.61	.99	.58	.54	.79
CAL YR 1983 TOTAL	432189		MEAN	1184	MAX	4210	MIN	340	CFSM	1.10	IN	14.89
WTR YR 1984 TOTAL	356032		MEAN	973	MAX	3060	MIN	281	CFSM	.90	IN	12.26

STREAMS TRIBUTARY TO LAKE MICHIGAN

04071000 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 upstream from County Trunk Highway BB bridge, 2.0 mi upstream from Christy Brook, 2.0 mi south of Gillett, and at mile 29.

DRAINAGE AREA.--705 mi².

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 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.--73 years (water years 1907-08, 1914-84), 582 ft³/s, 11.21 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft³/s Apr. 10, 1922, gage height, 11.2 ft from flood-marks, caused by a failure of dam at Pulcifer 4 mi above station; minimum, 93 ft³/s Nov. 26, 1941, gage height, 0.13 ft flow retarded by anchor ice above station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,810 ft³/s May 3, gage height, 3.58 ft, no other peak above base of 1,500 ft³/s; maximum gage height, 5.98 ft, Dec. 23, 24, backwater from ice; minimum discharge, 306 ft³/s Aug. 26, 27, gage height, 0.92 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1 to Mar. 28.)

0.9	300	3.0	1,400
1.4	480	4.0	2,100
2.0	780		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	519	514	660	520	400	660	819	1290	479	440	348	352
2	486	504	640	500	400	580	852	1600	444	419	345	366
3	476	493	600	490	400	540	895	1790	428	400	442	404
4	455	483	560	480	400	520	940	1690	419	397	469	468
5	447	478	580	470	400	500	972	1490	410	398	475	462
6	436	473	580	470	400	480	993	1310	402	389	511	441
7	504	467	560	470	400	450	1000	1210	504	377	588	421
8	652	464	540	460	400	440	1010	1130	637	361	756	401
9	708	473	540	460	400	440	1000	1090	741	351	788	386
10	711	542	540	450	400	450	990	1070	812	414	644	375
11	714	622	520	440	400	440	969	1030	726	861	479	344
12	1080	665	520	440	430	440	956	969	667	949	424	427
13	1120	653	520	440	500	440	989	965	758	984	397	708
14	1200	626	520	430	580	440	1010	948	800	937	376	853
15	1290	655	520	430	660	450	1070	952	792	728	353	875
16	1320	686	500	420	700	460	1160	955	731	620	367	788
17	1250	700	500	420	780	460	1230	907	858	573	368	682
18	1150	684	490	420	820	450	1220	817	970	509	356	599
19	1040	670	480	420	860	440	1150	758	993	447	344	531
20	918	722	470	420	900	440	1060	722	1050	435	333	458
21	817	816	470	410	920	450	966	676	1060	422	323	423
22	754	896	470	410	920	460	898	640	919	407	324	409
23	695	969	460	410	940	480	846	590	738	417	334	399
24	660	1020	460	410	960	520	796	560	664	429	332	491
25	642	995	460	410	960	580	744	568	619	398	319	1090
26	628	947	480	410	960	640	688	596	568	374	309	918
27	605	873	490	400	900	720	675	598	520	357	320	801
28	584	782	500	400	760	840	726	590	519	354	331	715
29	559	745	500	400	700	833	782	558	502	356	346	641
30	538	709	500	400	---	837	1180	528	465	367	408	579
31	525	---	500	400	---	821	---	503	---	357	368	---
TOTAL	23483	20326	16130	13510	18650	16701	28586	29100	20195	15227	12877	16807
MEAN	758	678	520	436	643	539	953	939	673	491	415	560
MAX	1320	1020	660	520	960	840	1230	1790	1060	984	788	1090
MIN	436	464	460	400	400	440	675	503	402	351	309	344
CFSM	1.08	.96	.74	.62	.91	.77	1.35	1.33	.96	.70	.59	.79
IN.	1.24	1.07	.85	.71	.98	.88	1.51	1.54	1.07	.80	.68	.89
CAL YR 1983	TOTAL	249586	MEAN 684	MAX 1790	MIN 311	CFSM .97	IN 13.17					
WTR YR 1984	TOTAL	231592	MEAN 633	MAX 1790	MIN 309	CFSM .90	IN 12.22					

STREAMS TRIBUTARY TO LAKE MICHIGAN

04071858 PENSANKEE RIVER NEAR PENSANKEE, 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 downstream from bridge on town road, 2.8 mi downstream from Brookside Creek, 2.6 mi west of Pensaukee, 3.5 mi upstream from mouth.

DRAINAGE AREA.--134 mi².

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

REVISED RECORD.--WDR WI-80-1: Drainage area.

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

REMARKS.--Records good except those for periods of ice effect, which are fair.

AVERAGE DISCHARGE.--12 years, 95.3 ft³/s, 9.66 in/yr.

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

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Oct. 13	2300	946	7.12	June 19	0600	955	7.15
Feb. 18	1800	ice jam	*8.57	Aug. 9	0600	*1,410	8.40
May 1	0100	964	7.18	Sept.26	1100	1,000	7.31

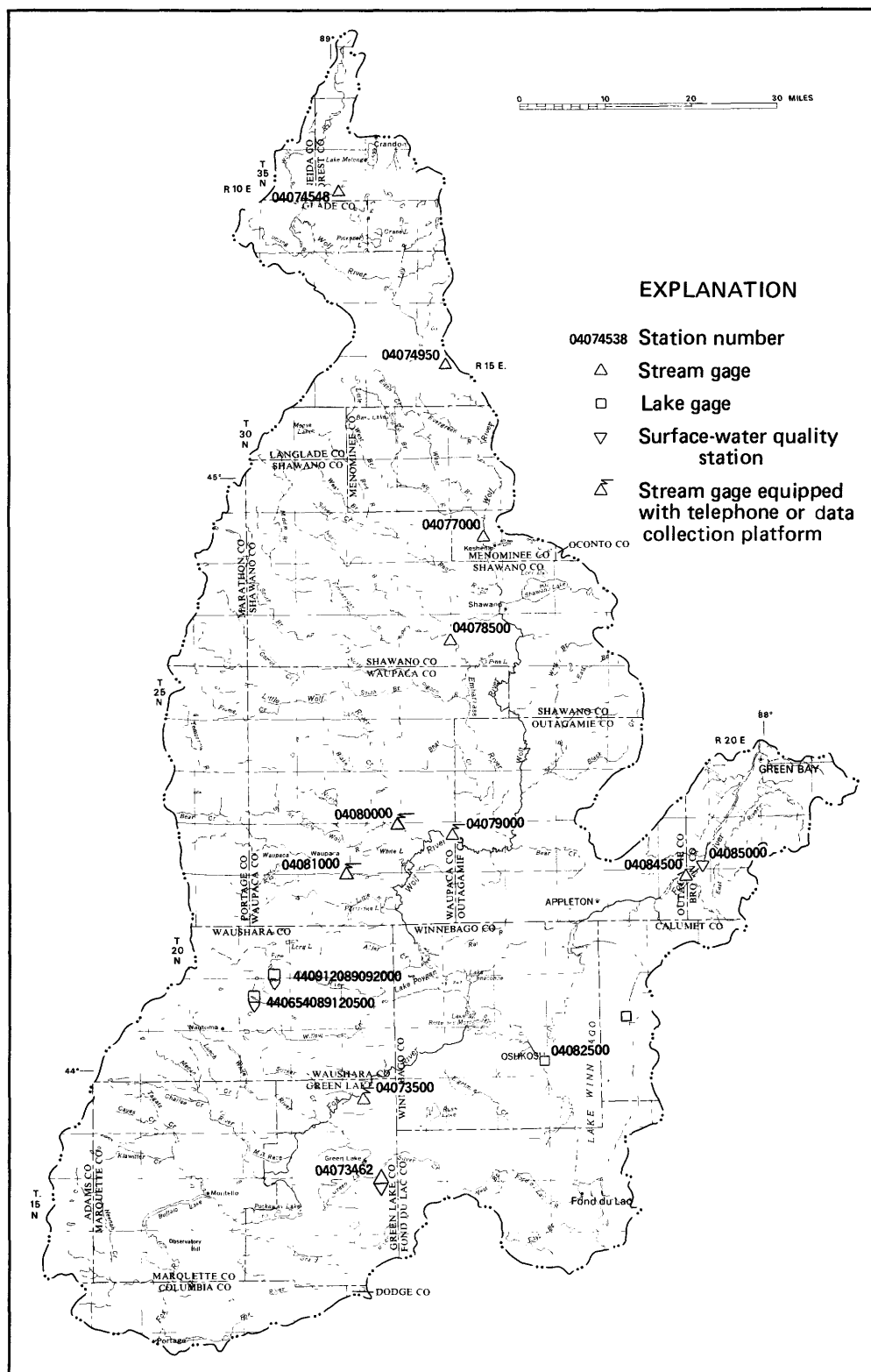
minimum, 12 ft³/s July 31, gage height, 2.34 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 29 to Mar. 30.)

2.3	9.0	5.0	390
2.5	29	6.0	610
3.0	84	7.0	910
4.0	210	8.0	1,250

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	46	94	33	33	120	189	888	32	30	16	77
2	46	41	82	33	34	94	188	504	29	26	15	72
3	43	40	60	33	35	84	190	290	27	24	87	84
4	45	41	52	34	35	58	185	230	25	21	160	76
5	48	39	48	34	34	56	174	220	24	21	105	62
6	48	39	45	35	34	54	161	210	23	19	85	50
7	61	42	45	34	34	48	144	220	28	18	92	43
8	170	40	43	34	34	43	130	250	63	16	782	37
9	222	41	43	34	34	38	118	230	102	16	1180	33
10	181	48	42	33	35	36	106	200	111	19	475	31
11	142	61	42	32	36	35	98	180	108	109	254	29
12	209	75	45	31	50	35	91	190	119	160	148	74
13	763	63	48	32	74	35	115	200	229	119	105	425
14	765	58	50	32	250	35	163	210	233	77	71	421
15	434	79	49	31	440	84	177	190	158	66	55	317
16	291	111	42	30	490	160	180	150	98	48	46	246
17	226	116	37	29	520	140	188	130	274	37	41	181
18	184	102	34	28	560	130	153	120	846	32	37	120
19	147	93	32	28	500	120	127	110	903	28	33	88
20	127	133	32	28	440	110	117	100	533	25	30	66
21	113	272	32	27	420	100	106	100	278	20	28	51
22	101	265	33	27	380	96	93	100	160	18	30	43
23	95	215	32	27	400	120	89	110	116	19	31	39
24	89	248	32	28	480	170	95	130	90	22	28	41
25	80	224	33	29	420	220	89	150	70	23	25	401
26	73	161	33	30	350	280	80	110	56	21	28	924
27	66	127	33	31	220	270	79	86	51	22	32	563
28	63	101	33	31	180	250	105	58	45	31	28	366
29	59	110	33	31	150	230	90	50	38	23	32	234
30	55	110	33	32	---	220	630	46	33	16	157	163
31	49	---	33	33	---	208	---	37	---	13	145	---
TOTAL	5050	3141	1325	964	6702	3679	4450	5799	4902	1139	4381	5357
MEAN	163	105	42.7	31.1	231	119	148	187	163	36.7	141	179
MAX	765	272	94	35	560	280	630	888	903	160	1180	924
MIN	43	39	32	27	33	35	79	37	23	13	15	29
CFSM	1.22	.78	.32	.23	1.72	.89	1.10	1.40	1.22	.27	1.05	1.34
IN.	1.40	.87	.37	.27	1.86	1.02	1.24	1.61	1.36	.32	1.22	1.49
CAL YR 1983	TOTAL	45806.4	MEAN 125	MAX 959	MIN 7.2	CFSM .93	IN 12.72					
WTR YR 1984	TOTAL	46889.0	MEAN 128	MAX 1180	MIN 13	CFSM .96	IN 13.02					



Base from U.S. Geological Survey
State base map, 1968

FOX-WOLF RIVER BASIN

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI

LOCATION.--Lat 43°48'58", long 88°55'42" in SE 1/4 SE 1/4 NW 1/4 sec.34, T.16 N., R.13 E., Green Lake County, Hydrologic Unit 04030201, at culvert on Spring Grove Road at Forest Glen Beach, 2.6 mi southeast of Green Lake.

DRAINAGE AREA.--3.05 mi².

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--December 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 800 ft, from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 222 ft³/s Aug. 17, 1983, gage height, 6.36 ft; minimum daily, 0.52 ft³/s Oct. 4, 30, 31, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 146 ft³/s June 17, gage height, 5.97 ft; minimum daily, 1.5 ft³/s Sept. 21-23.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Jan. 20, 21.)

4.1	1.0	4.5	8.3
4.2	2.0	4.6	12
4.3	3.5	4.8	21
4.4	5.6	5.0	33

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	5.2	3.7	3.2	2.0	8.2	4.8	4.8	3.7	7.0	3.2	5.4
2	2.0	4.9	3.8	3.2	2.0	7.9	4.5	4.7	3.5	6.8	3.1	4.8
3	2.1	4.9	3.9	3.2	2.0	7.6	4.4	5.1	3.5	6.6	3.0	2.9
4	2.1	4.8	4.3	3.2	1.9	7.5	4.2	5.1	3.4	6.3	2.9	2.6
5	2.3	4.7	4.3	3.0	1.9	7.2	4.2	4.9	3.4	5.9	2.8	2.4
6	2.3	4.6	4.4	2.9	1.8	6.9	3.9	4.9	3.4	5.9	2.8	2.3
7	2.7	4.5	4.3	2.8	1.8	6.6	3.7	5.2	3.4	5.5	2.7	2.3
8	2.4	4.3	4.3	2.8	1.8	6.4	3.5	5.2	3.0	5.4	4.1	2.1
9	2.3	4.2	4.3	2.7	1.8	6.1	3.5	5.2	4.2	5.8	2.6	2.1
10	2.2	4.4	4.3	2.7	1.8	5.9	3.4	5.2	8.4	10	2.5	2.3
11	8.2	4.1	4.9	2.7	1.7	5.5	3.3	5.0	5.4	6.8	2.4	2.1
12	10	3.9	4.7	2.7	5.1	5.4	3.7	4.9	4.9	5.6	2.4	2.9
13	9.0	3.8	4.7	2.8	23	5.1	3.6	5.4	4.7	5.3	2.4	2.1
14	8.6	3.8	4.7	2.7	19	4.7	3.4	4.8	4.5	5.2	2.5	2.0
15	8.3	3.7	4.6	2.7	18	7.9	3.4	4.7	4.3	5.0	2.4	1.9
16	8.2	3.5	4.4	2.7	16	5.3	3.4	4.7	4.3	5.1	2.4	1.8
17	7.7	3.4	4.2	2.5	14	4.9	3.3	4.5	29	4.8	2.3	1.8
18	7.5	3.4	3.9	2.5	16	4.7	3.1	4.5	16	4.5	2.3	1.8
19	7.5	3.7	3.9	2.5	20	4.5	3.0	4.5	10	4.4	2.3	1.8
20	7.5	4.0	3.9	2.4	16	4.8	3.0	4.5	9.4	4.3	2.1	1.7
21	7.3	3.5	3.9	2.4	14	5.1	2.9	4.3	9.0	4.1	2.3	1.5
22	7.2	3.2	3.8	2.3	13	4.3	3.1	4.3	11	4.0	2.2	1.5
23	6.7	3.4	3.7	2.3	13	4.4	3.5	4.3	9.7	7.7	2.1	1.5
24	6.5	3.2	3.7	2.3	12	14	3.3	4.0	9.1	4.5	2.1	1.7
25	6.4	3.2	3.8	2.2	11	14	3.1	4.6	8.6	4.1	2.1	5.8
26	6.3	3.2	3.7	2.1	11	7.5	3.0	4.1	8.5	5.2	2.0	2.2
27	6.1	3.1	3.7	2.1	9.8	6.4	3.0	3.9	8.1	4.1	2.1	2.0
28	5.9	4.3	3.6	2.1	9.2	5.7	2.8	3.9	7.7	3.8	2.0	1.9
29	5.6	3.7	3.5	2.0	8.7	5.6	4.2	3.7	7.6	3.5	7.1	1.8
30	5.6	3.5	3.4	2.1	---	5.2	6.0	3.7	7.4	3.4	2.9	1.7
31	5.3	---	3.4	2.0	---	5.2	---	3.7	---	3.3	2.2	---
TOTAL	173.6	118.1	125.7	79.8	269.3	200.5	108.2	142.3	221.1	163.9	82.3	70.7
MEAN	5.60	3.94	4.05	2.57	9.29	6.47	3.61	4.59	7.37	5.29	2.65	2.36
MAX	10	5.2	4.9	3.2	23	14	6.0	5.4	29	10	7.1	5.8
MIN	1.8	3.1	3.4	2.0	1.7	4.3	2.8	3.7	3.4	3.3	2.0	1.5
CFSM	1.84	1.29	1.33	.84	3.05	2.12	1.18	1.51	2.42	1.73	.87	.77
IN	2.12	1.44	1.53	.97	3.28	2.44	1.32	1.74	2.70	2.00	1.00	.86
CAL YR 1983	TOTAL	2127.9	MEAN 5.83	MAX 29	MIN 1.8	CFSM 1.91	IN 25.94					
WTR YR 1984	TOTAL	1755.5	MEAN 4.80	MAX 29	MIN 1.5	CFSM 1.57	IN 21.40					

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1981 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1981 to current year.

TOTAL AMMONIA-NITROGEN DISCHARGE: October 1981 to current year.

TOTAL-PHOSPHORUS DISCHARGE: October 1981 to current year.

INSTRUMENTATION.--Automatic pumping sampler since December 1981.

REMARKS.--Records good.

COOPERATION.--Observer furnished by the Green Lake Sanitary District.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,420 tons Apr. 3, 1982; minimum daily, 0 ton Sept. 11-18, 24-30, 1982.

TOTAL AMMONIA-NITROGEN DISCHARGE.--Maximum daily, 490 lb Apr. 3, 1982; minimum daily, 0.10 lb Aug. 19 to Nov 9, 1982.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 976 lb Apr. 3, 1982; minimum daily, 0.10 lb Sept. 26 to Nov. 8, 1982.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 500 tons June 17; minimum daily, 0.01 ton Oct. 1-5, Sept. 22-23.

TOTAL AMMONIA-NITROGEN DISCHARGE: Maximum daily, 29 lb Feb. 13; minimum daily, 0.10 lb on many days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 90 lb June 17; minimum daily, 0.40 lb on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)
OCT , 1983				
05...	1453	2.3	725	13.5
28...	1025	5.9	780	10.0
NOV				
23...	1312	3.5	710	10.0
JAN , 1984				
04...	1525	3.2	670	7.0
FEB				
07...	1500	1.8	540	4.0
15...	1315	16	480	7.5
APR				
03...	1405	4.3	655	8.5
27...	1148	3.0	--	15.5
MAY				
16...	1430	4.9	680	14.0
JUN				
22...	1620	12	450	12.0
AUG				
09...	1305	2.7	680	14.5

STREAMS TRIBUTARY TO LAKE MICHIGAN
04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT , 1983						FEB , 1984					
04...	0800	2.1	--	--	4	15...	1805	19	--	--	293
05...	1600	2.4	.020	.050	6	16...	0205	16	--	--	181
11...	2010	3.4	--	--	626	16...	0305	16	.040	.220	--
11...	2020	3.5	.260	.620	--	16...	1305	15	.040	.130	--
11...	2030	12	--	--	14700	16...	1410	15	.100	.130	107
11...	2040	31	.260	.910	--	16...	1705	15	--	--	130
11...	2050	85	--	--	11100	16...	1805	15	.180	.140	--
11...	2100	80	.310	.730	--	16...	1905	15	--	--	130
11...	2110	73	--	--	9290	17...	0105	15	--	--	116
11...	2121	69	.300	.610	--	17...	1005	14	<.010	.090	--
11...	2130	64	--	--	8830	17...	1006	14	<.010	.090	79
11...	2150	66	--	--	6510	17...	1545	14	--	--	104
11...	2200	52	.300	.670	--	17...	1735	14	--	--	104
11...	2210	48	--	--	4580	17...	2335	14	--	--	99
11...	2240	34	--	--	3540	18...	0035	14	<.010	.080	--
11...	2300	29	.130	.540	--	18...	0235	14	--	--	100
11...	2320	23	--	--	2280	18...	1535	13	--	--	81
11...	2340	21	--	--	2430	18...	1650	13	--	--	94
12...	0020	17	--	--	1920	18...	1900	15	--	--	85
12...	0040	16	.200	.520	--	18...	1910	16	<.010	.130	--
12...	0925	9.9	.050	.330	196	18...	1940	19	--	--	368
12...	1520	9.6	--	--	111	18...	2000	19	--	--	693
14...	1440	8.0	--	--	95	18...	2040	21	--	--	927
20...	1020	7.5	--	--	36	18...	2050	21	.050	.710	723
28...	0930	5.9	.130	.030	37	18...	2150	21	--	--	743
NOV						18...	2240	21	--	--	--
03...	1510	4.9	--	--	12	18...	2250	21	.080	.390	--
10...	1520	4.3	--	--	9	18...	2300	22	--	--	805
15...	1545	3.7	--	--	9	18...	2320	22	--	--	942
22...	1510	3.2	--	--	13	18...	2330	23	.140	.350	--
23...	1315	3.5	.030	.090	--	19...	1000	20	--	--	209
DEC						19...	1150	19	.040	.230	--
02...	1550	3.9	--	--	15	19...	1250	19	--	--	213
09...	1430	4.3	--	--	12	19...	2350	16	--	--	131
16...	1315	4.3	--	--	16	20...	1250	15	--	--	88
22...	1335	3.9	--	--	12	20...	1350	15	.010	.090	--
27...	1405	3.7	--	--	14	20...	1630	15	--	--	75
JAN , 1984						20...	1840	15	.020	.070	--
04...	1530	3.2	.050	.050	26	20...	1940	15	--	--	96
09...	1340	2.7	--	--	15	21...	0340	14	--	--	86
17...	1330	2.5	--	--	22	21...	1340	14	--	--	66
26...	1525	2.1	--	--	14	21...	1430	14	.020	.040	52
30...	1400	2.1	--	--	14	21...	1615	14	<.010	.040	--
FEB						21...	1715	14	--	--	63
07...	1510	1.8	.070	.040	19	22...	0215	13	--	--	73
12...	1450	4.1	--	--	49	22...	1315	13	--	--	57
12...	1535	4.3	--	--	140	22...	1415	13	.020	.030	--
12...	1615	4.5	.180	.310	--	22...	1445	13	--	--	46
12...	1655	4.5	--	--	111	22...	2400	13	--	--	68
12...	1855	8.0	--	--	593	23...	1200	12	<.010	.040	--
12...	2055	10	--	--	537	23...	1300	12	--	--	52
12...	2135	11	.290	.390	--	23...	1410	12	--	--	41
12...	2215	11	--	--	1480	24...	0010	12	--	--	54
12...	2335	23	--	--	1520	24...	1610	12	--	--	35
13...	0055	26	--	--	1630	25...	0915	11	<.010	.020	33
13...	0135	31	.370	.730	--	25...	1500	11	--	--	32
13...	0215	29	--	--	1570	25...	2100	11	<.010	.030	--
13...	0335	31	--	--	1150	25...	2300	11	--	--	53
13...	0735	24	--	--	764	27...	1100	9.9	--	--	.30
13...	0815	23	.340	.510	--	27...	1300	9.6	<.010	.020	--
13...	0940	21	.170	.340	464	28...	1040	9.6	--	--	20
13...	1040	21	--	--	512	29...	1040	8.6	.020	.020	--
13...	1140	20	.120	.270	--	29...	1240	9.3	--	--	27
13...	1240	20	--	--	445	MAR					
13...	1510	21	--	--	440	08...	1335	5.9	--	--	10
13...	1710	21	.180	.320	--	13...	1340	4.9	--	--	7
13...	2310	19	--	--	399	26...	1210	7.5	.220	.160	--
14...	0510	18	--	--	260	26...	1240	7.5	--	--	125
14...	0710	18	.050	.190	--	26...	1310	8.6	<.010	.130	--
14...	1110	17	--	--	266	26...	1340	8.6	--	--	142
14...	1510	19	--	--	240	26...	2400	6.9	--	--	87
14...	1610	20	.070	.240	--	27...	0800	6.4	--	--	35
14...	1910	21	--	--	529	27...	0900	6.4	<.010	.060	--
15...	0110	19	--	--	238	27...	1805	6.4	--	--	37
15...	0210	19	.040	.230	--	27...	1905	6.4	.160	.060	--
15...	0710	18	--	--	187	27...	2005	6.4	--	--	43
15...	1310	16	.050	.170	--	28...	0305	5.9	--	--	53
15...	1315	16	.020	.170	139	28...	1405	5.6	--	--	24
15...	1605	18	--	--	265	28...	1505	5.6	<.010	.040	--
15...	1705	19	.060	.320	--						

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
APR , 1984						JUN , 1984					
03...	1330	4.3	.020	.030	10	17...	1755	15	--	--	525
06...	1350	3.9	--	--	10	17...	1900	16	--	--	1300
11...	1515	3.2	--	--	13	17...	1920	16	.020	.180	--
12...	1400	4.9	.190	.110	86	17...	1940	16	--	--	428
12...	1420	5.4	--	--	178	17...	2300	17	--	--	1620
12...	1430	5.4	.070	.170	--	17...	2320	17	.040	.260	--
12...	1440	5.4	--	--	105	17...	2340	17	--	--	1650
12...	1540	4.9	--	--	32	18...	0340	18	--	--	530
18...	1400	3.2	--	--	8	18...	0400	18	<.010	.170	--
27...	1115	3.0	.050	.040	14	18...	1530	16	.050	.080	157
29...	1925	5.4	.080	.270	--	19...	1110	11	--	--	81
29...	2025	5.9	--	--	124	19...	1235	9.9	--	--	106
29...	2045	5.6	.060	.190	--	19...	1515	9.9	--	--	85
29...	2105	5.9	--	--	154	19...	1635	9.9	<.010	.070	--
29...	2145	14	--	--	5400	19...	1755	9.6	--	--	97
29...	2205	14	.230	1.30	--	19...	2115	9.6	--	--	88
29...	2305	14	--	--	4490	20...	1610	9.3	--	--	64
29...	2345	10	--	--	3770	22...	1015	11	--	--	658
30...	0005	10	.350	1.10	--	22...	1025	11	--	--	593
30...	0025	11	--	--	3520	22...	1045	12	.030	.260	--
30...	0045	13	.290	1.10	--	22...	1105	13	--	--	418
30...	0105	12	--	--	3090	22...	1125	14	--	--	444
30...	0225	9.3	--	--	2260	22...	1205	14	<.010	.120	--
30...	0345	7.5	--	--	706	22...	1225	14	--	--	1240
30...	0405	7.2	.110	.490	--	22...	1305	14	--	--	2270
30...	1155	5.2	.100	.480	260	22...	1325	14	.050	.320	--
MAY						22...	1345	14	--	--	3640
04...	1440	5.2	--	--	19	22...	1425	13	--	--	3250
13...	0550	6.4	.090	.130	--	22...	1500	12	--	--	2520
13...	0610	6.6	--	--	91	22...	1525	12	--	--	2380
16...	1450	4.9	<.010	.070	--	22...	1555	12	--	--	1950
21...	1054	4.5	--	--	8	22...	1625	12	.020	.280	1610
25...	0725	7.2	--	--	176	22...	1630	12	.020	.290	1550
25...	0805	7.2	--	--	113	22...	1835	11	--	--	831
25...	0825	6.9	.080	.170	--	22...	2035	10	--	--	358
25...	0845	6.6	--	--	67	22...	2135	10	.020	.140	--
25...	1045	5.2	--	--	21	23...	0635	9.9	--	--	88
30...	1355	3.7	--	--	11	23...	0735	9.9	.020	.070	--
JUN						23...	1935	9.6	--	--	82
07...	0715	3.4	--	--	9	24...	0035	9.3	--	--	84
08...	0310	7.7	--	--	328	24...	0535	9.3	.190	.080	--
08...	0330	8.3	.140	.190	--	24...	0635	9.3	--	--	67
08...	0350	21	--	--	3950	JUL					
08...	0410	25	2.20	3.60	10600	09...	0625	11	--	--	555
08...	0450	12	--	--	5320	09...	0635	9.9	--	--	593
08...	0550	8.0	--	--	2810	09...	0900	6.1	--	--	163
08...	0610	7.2	.490	.820	--	09...	1145	5.6	--	--	54
08...	0900	4.1	--	--	495	10...	1810	22	--	--	1500
09...	2305	7.7	--	--	478	10...	1820	80	.860	.970	37600
09...	2325	20	.170	.350	1950	10...	1830	99	--	--	30000
09...	2345	38	--	--	13400	10...	1840	99	.720	.730	--
10...	0005	29	.710	.880	--	10...	1850	91	--	--	11700
10...	0025	26	--	--	6380	10...	1900	62	.630	.890	--
10...	0105	18	--	--	3480	10...	1910	43	--	--	8710
10...	0205	14	.170	.330	--	10...	1920	33	.510	.850	--
10...	0225	14	--	--	2070	10...	1930	26	--	--	5130
10...	0425	9.6	--	--	2230	10...	1950	19	--	--	3340
10...	0725	8.6	.100	.390	--	10...	2020	15	.450	.660	--
10...	0745	8.3	--	--	1820	10...	2030	15	--	--	2240
10...	1140	6.6	--	--	45	10...	2130	14	--	--	1300
11...	1140	5.4	.100	.110	--	10...	2230	12	--	--	1420
17...	0130	18	--	--	549	10...	2240	12	.100	.460	--
17...	0210	70	--	--	12100	11...	1450	6.1	<.010	.170	66
17...	0230	146	--	--	9950	16...	2200	12	--	--	2410
17...	0250	128	--	--	6460	16...	2210	12	--	--	2120
17...	0310	110	--	--	4580	16...	2220	11	--	--	2100
17...	0320	20	.100	.240	--	17...	0955	4.7	--	--	6
17...	0330	94	--	--	22200	23...	1515	15	--	--	1110
17...	0350	84	--	--	29100	23...	1525	40	.490	.750	19700
17...	0400	146	.450	.880	--	23...	1530	43	--	--	19500
17...	0440	110	.270	.640	--	23...	1535	50	--	--	15900
17...	0450	65	--	--	7200	23...	1536	50	--	--	16100
17...	0600	70	.240	.850	--	23...	1545	64	.360	1.10	--
17...	0610	46	--	--	3210	23...	1546	64	.350	.810	--
17...	0650	38	--	--	2720	23...	1550	64	--	--	8740
17...	0750	28	--	--	2910	23...	1551	64	--	--	8070
17...	0840	34	.100	.570	--	23...	1555	59	.190	.860	--
17...	1010	19	--	--	3310	23...	1600	49	--	--	6950
17...	1200	18	.090	.670	--	23...	1640	20	--	--	4270

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
JUL , 1984						SEP , 1984					
23...	1710	15	.030	.880	--	01...	2020	3.2	--	--	234
23...	1740	13	--	--	1320	01...	2030	8.0	.120	.300	303
23...	1940	9.6	--	--	527	01...	2040	14	--	--	6820
23...	2010	8.3	.010	.460	--	01...	2050	13	.210	.690	4380
24...	1515	4.5	<.010	.160	18	01...	2100	12	--	--	2420
26...	1830	5.2	--	--	448	01...	2110	11	.110	.200	--
26...	1840	9.9	--	--	11100	01...	2130	8.6	--	--	1720
26...	1850	19	--	--	10200	01...	2140	9.9	--	--	1850
26...	1900	21	--	--	8740	01...	2150	12	.240	.490	--
26...	1920	17	--	--	4280	01...	2200	16	--	--	3390
26...	1950	9.9	--	--	1910	01...	2210	39	.580	.750	11000
AUG						01...	2220	47	--	--	13900
08...	0500	10	--	--	561	01...	2230	48	.530	1.70	12400
08...	0510	18	.190	.370	8190	01...	2300	38	--	--	5030
08...	0520	20	--	--	6410	01...	2310	33	.260	.580	--
08...	0530	23	.130	.420	5430	01...	2350	20	--	--	2260
08...	0540	20	--	--	3720	02...	0040	13	--	--	1200
08...	0610	20	.150	.680	--	02...	0050	13	.340	1.30	--
08...	0620	7.7	--	--	1700	02...	1345	3.7	--	--	47
08...	1345	2.8	<.010	.130	11	03...	1100	3.0	--	--	6
09...	1310	2.7	<.010	.060	8	12...	0845	3.0	--	--	48
14...	1400	2.4	--	--	7	12...	0915	2.8	--	--	16
21...	1810	3.4	--	--	97	12...	1015	6.4	--	--	339
21...	1820	3.7	--	--	231	12...	1040	10	--	--	1170
21...	1830	3.5	--	--	110	12...	1045	10	--	--	1290
21...	1900	2.8	--	--	49	12...	1145	5.6	--	--	1130
21...	2020	2.5	--	--	41	12...	1345	3.2	--	--	260
22...	1430	2.1	--	--	7	12...	1410	3.0	--	--	153
29...	1925	3.4	--	--	482	24...	2250	2.7	--	--	211
29...	1930	3.9	.210	.170	--	24...	2310	3.5	.130	.280	--
29...	1940	29	--	--	20800	24...	2330	5.9	--	--	1240
29...	1950	63	.710	.490	--	25...	0050	3.0	--	--	208
29...	2000	67	--	--	9630	25...	0200	3.0	.180	.330	--
29...	2010	71	.520	.590	5600	25...	0220	3.5	--	--	464
29...	2020	57	--	--	6610	25...	0240	4.9	.270	.450	--
29...	2040	63	--	--	8020	25...	0300	14	--	--	2300
29...	2050	51	.680	.720	--	25...	0320	58	.590	.780	10400
29...	2130	29	--	--	3860	25...	0340	46	--	--	6450
29...	2210	16	.370	.810	--	25...	0420	21	--	--	2960
29...	2220	14	--	--	1930	25...	0520	9.0	.500	.980	--
29...	2340	8.3	--	--	741	25...	0540	8.3	--	--	1500
29...	2350	8.3	.200	.530	--	25...	0820	4.1	--	--	328
30...	1540	2.4	.110	.150	28	25...	0840	3.5	.160	.400	--
						25...	1135	2.8	.130	.250	75

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI---CONTINUED

NITROGEN, AMMONIA, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	2.90	.70	.80	.70	.80	.40	2.40	.30	.60	.20	7.10
2	.20	2.60	.70	.80	.70	.70	.40	2.30	.30	.50	.20	3.00
3	.20	2.40	.70	.80	.70	.70	.50	2.30	.30	.50	.20	.20
4	.20	2.20	.80	.80	.70	.70	.40	2.20	.20	.40	.20	.10
5	.20	2.10	.80	.80	.70	.60	.40	2.00	.20	.40	.20	.10
6	.20	1.90	.80	.80	.70	.60	.30	1.90	.20	.40	.20	.10
7	.30	1.80	.80	.80	.70	.60	.30	1.90	.20	.30	.20	.10
8	.30	1.60	.80	.80	.70	.60	.30	1.80	14.00	.30	1.50	.10
9	.20	1.50	.80	.80	.70	.50	.20	1.70	2.50	.30	.10	.10
10	.20	1.50	.90	.80	.70	.50	.20	1.60	20.00	17.00	.10	.10
11	9.00	1.30	1.00	.80	.60	.50	.20	1.50	2.80	1.70	.10	.10
12	4.60	1.20	1.00	.80	6.80	.50	.80	1.40	1.80	.30	.10	1.80
13	2.60	1.10	1.00	.80	29.00	.40	1.20	2.10	1.10	.30	.10	.10
14	2.60	1.00	1.00	.80	6.20	.40	1.10	1.00	.70	.30	.10	.10
15	2.70	.90	1.00	.80	3.60	.70	1.10	.50	.40	.30	.10	.10
16	2.80	.80	.90	.80	6.10	.40	1.10	.30	.30	.40	.10	.10
17	2.80	.80	.90	.80	1.40	.40	1.00	.20	21.00	.30	.10	.10
18	2.90	.70	.90	.80	2.30	.40	1.00	.20	2.50	.20	.10	.10
19	3.10	.80	.90	.80	9.00	.40	.90	.20	.80	.20	.10	.10
20	3.30	1.00	.90	.80	1.40	.40	.90	.20	.50	.20	.10	.10
21	3.40	.70	.90	.80	1.30	.40	.80	.20	.50	.20	.10	.10
22	3.60	.60	.90	.70	1.20	.40	.90	.20	1.10	.20	.10	.10
23	3.50	.60	.90	.80	.80	.40	1.00	.20	1.00	3.50	.10	.10
24	3.60	.50	.90	.80	.60	1.80	.90	.20	.90	.20	.10	.30
25	3.80	.50	.90	.70	.60	1.50	.90	.80	.80	.20	.10	11.00
26	3.90	.50	.90	.70	.60	.40	.80	.60	.80	.40	.10	.10
27	4.10	.50	.90	.70	.60	.40	.80	.50	.70	.20	.10	.10
28	4.10	1.30	.90	.70	.70	.30	.80	.50	.70	.20	.10	.10
29	3.70	.80	.90	.70	.90	.30	3.10	.40	.60	.20	16.00	.10
30	3.50	.60	.90	.70	---	.40	4.40	.40	.60	.20	2.20	.10
31	3.10	---	.90	.70	---	.40	---	.40	---	.20	.70	---
TOTAL	78.90	36.70	27.20	24.00	80.70	17.50	27.10	32.10	77.80	30.60	23.80	26.50
MEAN	2.60	1.20	.88	.77	2.80	.56	.90	1.00	2.60	.99	.77	.88
WTR YR 1984	TOTAL	482.90	MEAN	1.30								

PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	1.00	1.60	.90	.40	.90	.90	3.20	1.40	2.40	2.10	17.00
2	.50	1.00	1.60	.90	.40	.80	.80	2.40	1.30	2.30	2.00	9.20
3	.60	1.00	1.60	.90	.40	.80	.70	2.40	1.20	2.10	1.90	1.50
4	.60	1.00	1.80	.80	.40	.80	.60	2.30	1.10	2.00	1.80	1.20
5	.60	1.10	1.80	.80	.40	.80	.60	2.10	1.00	1.80	1.60	1.00
6	.60	1.10	1.80	.80	.40	.70	.60	2.00	1.00	1.70	1.60	1.00
7	.70	1.10	1.70	.70	.40	.70	.50	2.00	.90	1.60	1.50	.90
8	.60	1.10	1.70	.70	.40	.70	.40	1.80	19.00	1.50	6.00	.70
9	.60	1.10	1.70	.70	.40	.70	.40	1.70	4.10	2.70	1.00	.70
10	.60	1.20	1.60	.70	.40	.60	.40	1.60	14.00	26.00	.80	1.50
11	23.00	1.20	1.80	.70	.40	.60	.40	1.50	3.40	7.80	.80	1.30
12	17.00	1.20	1.80	.70	9.80	.60	1.20	1.40	2.50	2.80	.80	2.40
13	4.70	1.20	1.70	.70	54.00	.60	1.00	2.90	2.10	2.30	.70	1.10
14	4.10	1.30	1.70	.70	22.00	.50	.90	2.30	1.80	2.00	.80	1.00
15	3.70	1.30	1.60	.70	22.00	18.00	.90	2.00	1.40	1.60	.70	.90
16	3.40	1.30	1.50	.70	13.00	10.00	.90	1.80	1.20	2.60	.70	.80
17	2.90	1.30	1.40	.60	7.10	1.00	.80	1.70	90.00	3.00	.70	.70
18	2.60	1.30	1.30	.60	15.00	.80	.80	1.60	11.00	2.20	.70	.70
19	2.40	1.50	1.30	.60	26.00	.70	.70	1.50	3.90	1.90	.70	.70
20	2.20	1.70	1.30	.60	8.70	.60	.70	1.50	3.20	1.60	.60	.60
21	2.00	1.50	1.30	.60	3.40	3.10	.70	1.40	2.70	1.40	1.00	.50
22	1.80	1.50	1.20	.60	2.30	2.00	.70	1.30	9.30	1.20	.70	.50
23	1.60	1.70	1.20	.60	2.70	1.60	.80	1.20	4.20	20.00	.60	.40
24	1.40	1.60	1.20	.60	1.80	35.00	.70	1.10	3.90	4.70	.60	.90
25	1.30	1.50	1.20	.50	1.50	35.00	.70	2.50	3.60	3.50	.60	21.00
26	1.20	1.50	1.10	.50	1.50	5.90	.70	2.10	3.40	10.00	.60	1.10
27	1.10	1.40	1.10	.50	1.10	2.20	.60	1.90	3.20	3.20	.60	.90
28	1.00	3.40	1.10	.50	1.00	1.40	.60	1.80	2.90	2.90	.50	.70
29	1.00	2.20	1.00	.50	.90	1.20	9.50	1.60	2.80	2.60	20.00	.60
30	1.00	1.50	1.00	.50	---	1.00	17.00	1.60	2.60	2.40	4.40	.50
31	1.00	---	1.00	.40	---	1.00	---	1.50	---	2.30	1.50	---
TOTAL	86.30	41.80	44.70	20.30	198.20	130.30	46.20	57.70	204.10	126.10	58.60	72.00
MEAN	2.78	1.39	1.44	.65	6.83	4.20	1.54	1.86	6.80	4.07	1.89	2.40
WTR YR 1984	TOTAL	1086.30	MEAN	2.97								

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073462 WHITE CREEK AT FOREST GLEN BEACH NEAR GREEN LAKE, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.25	.15	.18	.08	.53	.18	.56	.10	.86	.13	62
2	.02	.20	.15	.19	.08	.45	.14	.43	.09	.79	.12	5.1
3	.02	.16	.15	.21	.09	.38	.12	.35	.09	.73	.11	.07
4	.02	.15	.16	.22	.09	.33	.11	.28	.09	.66	.10	.04
5	.02	.14	.16	.19	.09	.27	.11	.25	.08	.59	.09	.04
6	.04	.14	.15	.17	.09	.23	.11	.24	.08	.55	.08	.04
7	.04	.13	.15	.14	.09	.20	.11	.25	.07	.49	.08	.03
8	.03	.12	.14	.13	.09	.17	.10	.24	.28	.46	.12	.03
9	.03	.12	.14	.11	.08	.15	.11	.23	.21	1.7	.06	.03
10	.03	.21	.14	.12	.08	.13	.11	.22	.39	.191	.05	.04
11	121	.20	.17	.12	.07	.11	.11	.21	.27	4.5	.05	.03
12	13	.16	.17	.13	9.2	.11	.23	.20	.22	.82	.05	2.7
13	2.5	.13	.18	.14	46	.09	.13	.37	.19	.62	.04	.07
14	2.1	.11	.19	.14	16	.07	.11	.24	.16	.48	.05	.05
15	1.6	.09	.19	.15	10	.28	.10	.21	.14	.37	.05	.05
16	1.2	.09	.19	.15	5.7	.10	.09	.19	.12	2.5	.04	.04
17	.87	.09	.17	.15	3.8	.09	.08	.16	500	.11	.04	.04
18	.78	.10	.15	.14	12	.08	.07	.14	16	.07	.04	.04
19	.76	.11	.15	.14	24	.07	.07	.13	2.6	.07	.04	.03
20	.73	.13	.14	.15	4.1	.08	.07	.11	1.8	.06	.03	.03
21	.71	.11	.13	.14	2.7	.09	.08	.10	1.4	.06	.12	.03
22	.70	.11	.12	.11	2.2	.05	.09	.09	24	.05	.07	.02
23	.65	.12	.12	.10	1.8	.05	.10	.08	2.7	.71	.04	.02
24	.64	.11	.13	.10	1.3	3.0	.10	.06	1.7	.77	.04	.52
25	.64	.12	.14	.09	1.1	3.0	.10	.39	1.5	.12	.03	45
26	.63	.12	.14	.08	1.3	1.8	.11	.20	1.4	15	.03	.17
27	.61	.12	.14	.08	.78	.79	.11	.17	1.2	.21	.03	.13
28	.57	.16	.15	.08	.54	.51	.09	.15	1.1	.19	.03	.11
29	.46	.14	.15	.08	.60	.32	16	.13	1.0	.16	.98	.09
30	.38	.14	.16	.08	---	.26	14	.11	.96	.15	1.0	.07
31	.30	---	.17	.08	---	.22	---	.11	---	.14	.15	---
TOTAL	151.10	4.08	4.74	4.09	144.05	14.01	33.04	6.60	647.06	295.28	112.79	116.66
MEAN	4.9	.14	.15	.13	5.0	.45	1.1	.21	22	9.5	3.6	3.9
WTR YR 1984	TOTAL	1533.50	MEAN	4.2								

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073500 FOX RIVER AT BERLIN, WI

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

DRAINAGE AREA.--1,340 mi².

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

REVISED RECORDS.--WSP 1337: 1910. WDR WI-80-1: Drainage area.

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

REMARKS.--Records good except those for periods of ice effect, Dec. 2 to Feb. 20 and Mar. 12-16, which are fair. Usually less than about 20 ft³/s was diverted into the basin from the Wisconsin River at Portage Canal throughout the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--86 years, 1,109 ft³/s, 11.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,900 ft³/s Mar. 17, 18, 1946, gage height, 15.5 ft; minimum observed, 248 ft³/s Sept. 16, 1948, gage height, 6.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,540 ft³/s Feb. 22, gage height, 13.18 ft; minimum daily discharge, 563 ft³/s Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	1170	1460	900	820	2640	1600	2020	1580	2230	1070	742
2	1050	1160	1400	900	820	2560	1600	2090	1540	2210	1000	824
3	1050	1150	1400	900	820	2500	1580	2150	1480	2180	973	908
4	1030	1100	1400	900	820	2450	1570	2230	1420	2160	956	927
5	1010	1090	1400	900	800	2400	1540	2280	1380	2130	950	937
6	999	1100	1400	900	800	2320	1530	2310	1340	2110	947	946
7	995	1120	1300	900	800	2240	1510	2330	1300	2070	919	1030
8	1020	1090	1200	880	800	2160	1500	2320	1350	2030	944	1080
9	1010	1080	1200	880	800	2090	1480	2300	1380	1990	965	1050
10	1010	1080	1200	860	800	2030	1470	2260	1570	1980	933	1020
11	1020	1060	1200	860	800	2000	1440	2220	1660	1970	883	1050
12	1110	1060	1300	860	820	1900	1430	2170	1730	1930	838	1120
13	1190	1100	1300	860	820	1900	1450	2160	1760	1900	823	1200
14	1260	1140	1400	860	840	1900	1480	2150	1760	1860	801	1220
15	1320	1170	1400	860	900	1800	1520	2120	1740	1840	790	1220
16	1350	1170	1400	860	1100	1800	1560	2080	1720	1790	787	1220
17	1370	1170	1300	860	1300	1790	1590	2040	1800	1760	761	1220
18	1370	1180	1300	860	1800	1720	1620	2010	1920	1710	739	1210
19	1390	1220	1200	860	2500	1650	1650	1970	2010	1660	718	1200
20	1380	1270	1100	840	3000	1610	1680	1930	2080	1620	700	1180
21	1350	1340	1100	840	3520	1570	1690	1890	2130	1570	702	1130
22	1330	1380	1000	840	3530	1520	1690	1840	2190	1520	641	1090
23	1310	1410	1000	840	3390	1470	1700	1790	2240	1480	563	1060
24	1300	1440	940	840	3190	1490	1700	1740	2250	1440	583	1030
25	1290	1470	940	840	3040	1540	1720	1750	2250	1400	607	1070
26	1280	1490	940	840	2950	1580	1750	1760	2250	1370	610	1120
27	1260	1490	940	840	2880	1600	1770	1730	2260	1310	655	1140
28	1260	1510	920	840	2800	1620	1790	1710	2260	1250	663	1150
29	1230	1510	920	840	2700	1610	1800	1680	2250	1210	655	1140
30	1210	1510	920	840	---	1610	1940	1650	2240	1180	694	1120
31	1190	---	900	820	---	1600	---	1620	---	1140	737	---
TOTAL	37034	37230	36780	26720	49960	58670	48350	62300	54840	54000	24607	32354
MEAN	1195	1241	1186	862	1723	1893	1612	2010	1828	1742	794	1078
MAX	1390	1510	1460	900	3530	2640	1940	2330	2260	2230	1070	1220
MIN	995	1060	900	820	800	1470	1430	1620	1300	1140	563	742
CFSM	.89	.93	.89	.64	1.29	1.41	1.20	1.50	1.36	1.30	.59	.80
IN.	1.03	1.03	1.02	.74	1.39	1.63	1.34	1.73	1.52	1.50	.68	.90
CAL YR 1983	TOTAL	510646	MEAN	1399	MAX	2700	MIN	635	CFSM	1.04	IN	14.18
WTR YR 1984	TOTAL	522845	MEAN	1429	MAX	3530	MIN	563	CFSM	1.07	IN	14.51

STREAMS TRIBUTARY TO LAKE MICHIGAN

04074548 SWAMP CREEK BELOW RICE LAKE AT MOLE LAKE, WI

LOCATION.--Lat 45°28'46", long 88°59'52", in NE 1/4 NW 1/4 sec.33, T.35 N., R.12 E., Forest County, Hydrologic Unit 04030202, on left bank, approximately 100 ft downstream from bridge on County Trunk Highway M, 0.9 mi west of Mole Lake.

DRAINAGE AREA.--56.8 mi².

PERIOD OF RECORD.--August 1977 to September 1979, April 1982 to current year.

REVISED RECORD: WDR WI-83-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,540 ft, from topographic map.

REMARKS.--Records are fair. Gage in backwater for entire water year due to beaver activity.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210 ft³/s Apr. 21, 1979, gage height, 3.20 ft; minimum discharge, 15 ft³/s Oct. 27, 1978, Aug. 18-23, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 132 ft³/s May 1, gage height, 2.24 ft; maximum gage height, 2.32 ft Oct. 13, 14 (backwater from beaver dam); minimum daily discharge, 17 ft³/s Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	39	43	38	33	49	42	126	34	33	17	25
2	49	39	43	38	34	46	44	121	34	30	18	31
3	56	40	43	38	35	44	46	94	35	28	23	37
4	62	39	43	38	36	42	49	81	33	27	23	38
5	64	40	43	37	37	40	51	73	32	27	23	37
6	66	40	43	37	38	40	54	70	32	26	25	35
7	71	40	42	37	39	37	58	69	33	25	24	32
8	93	40	41	37	39	36	59	72	44	24	24	31
9	99	43	41	36	39	35	58	72	54	24	23	31
10	93	47	41	36	40	34	58	70	52	24	23	30
11	87	48	41	35	41	33	59	65	52	30	22	29
12	103	45	41	34	45	31	60	62	58	32	23	34
13	115	43	41	34	52	32	71	62	64	32	24	45
14	114	43	42	34	61	34	80	66	62	30	26	50
15	102	43	42	34	70	36	81	62	56	30	27	50
16	92	46	42	34	74	38	79	56	51	33	28	47
17	85	46	42	34	72	39	72	52	51	38	27	43
18	76	45	42	34	66	39	67	50	51	39	26	39
19	67	44	41	33	63	38	63	51	47	35	24	35
20	61	46	41	33	57	38	61	49	41	31	23	32
21	55	52	41	32	57	39	59	45	36	28	23	32
22	51	58	41	32	56	40	57	45	34	26	24	31
23	50	61	41	32	55	41	55	45	34	25	23	31
24	48	68	41	32	54	41	52	40	33	24	23	32
25	47	90	39	32	57	43	50	42	30	23	23	39
26	46	66	39	32	56	42	50	41	29	21	22	41
27	44	54	39	32	55	44	52	40	32	21	24	39
28	43	48	39	32	58	43	54	41	31	20	25	36
29	41	46	39	33	54	43	63	41	31	20	25	34
30	41	45	38	33	---	43	89	37	33	20	25	32
31	40	---	38	33	---	42	---	35	---	18	24	---
TOTAL	2103	1444	1273	1066	1473	1222	1793	1875	1241	844	734	1078
MEAN	67.8	48.1	41.1	34.4	50.8	39.4	59.8	60.5	41.4	27.2	23.7	35.9
MAX	115	90	43	38	74	49	89	126	64	39	28	50
MIN	40	39	38	32	33	31	42	35	29	18	17	25
CFSM	1.19	.85	.72	.61	.89	.69	1.05	1.07	.73	.48	.42	.63
IN.	1.38	.95	.83	.70	.96	.80	1.17	1.23	.81	.55	.48	.71
CAL YR 1983	TOTAL	18765	MEAN 51.4	MAX 199	MIN 22	CFSM .91	IN 12.29					
WTR YR 1984	TOTAL	16146	MEAN 44.1	MAX 126	MIN 17	CFSM .78	IN 10.57					

STREAMS TRIBUTARY TO LAKE MICHIGAN

04074950 WOLF RIVER AT LANGLADE, WI

LOCATION.--Lat 45°11'24", long 88°44'00", between secs. 3 and 10, T.31 N., R.14 E., Langlade County, Hydrologic Unit 04030202, on left bank, upstream of bridge on State Highway 64 at Langlade, 1.5 mi east of White Lake, 3.0 mi upstream from White Lake Creek, and at about mile 170 above mouth.

DRAINAGE AREA.--463 mi².

PERIOD OF RECORD.--March 1966 to September 1979, October 1980 to current year.

REVISED RECORDS.--WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,240 ft, from topographic map. Prior to Oct. 1, 1976, nonrecording gage 50 ft downstream at same altitude.

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

AVERAGE DISCHARGE.--17 years (water years 1967-79, 1981-84), 459 ft³/s, 13.46 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 2,200 ft³/s Mar. 15, 1973, gage height, 9.48 ft; maximum gage height, 10.06 ft Dec. 20, 21, 24, 1984, backwater from ice; minimum discharge, 119 ft³/s Nov. 8, 1976, gage height, 7.24 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft³/s Apr. 30, gage height, 9.08 ft, maximum gage height, 10.06 ft, Dec. 20, 21, 24, backwater from ice; minimum discharge, 217 ft³/s July 31, Aug. 1, gage height, 7.53 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 26 to Mar. 30.)

7.5	207	9.0	1,000
8.0	390	9.5	1,460
8.5	640		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	368	336	420	320	300	520	400	1050	331	300	219	271
2	350	335	400	320	310	490	415	1020	325	291	241	308
3	345	333	380	320	320	470	434	1040	326	282	256	343
4	350	329	400	330	320	470	436	1040	319	283	274	350
5	350	327	400	320	320	410	452	996	320	272	276	351
6	369	326	380	330	310	360	484	944	343	270	277	348
7	476	318	380	320	300	350	506	912	351	266	270	335
8	623	318	370	310	300	360	512	901	410	239	272	326
9	634	355	370	300	290	360	561	859	432	244	274	324
10	606	423	370	300	280	350	617	813	423	320	262	317
11	630	415	390	300	280	340	645	773	420	519	249	307
12	895	395	380	300	310	330	646	750	436	475	248	333
13	982	396	370	290	400	340	756	776	512	380	242	420
14	921	389	390	290	560	360	900	788	546	338	246	451
15	866	411	380	290	680	380	896	733	564	335	267	470
16	833	420	370	290	640	400	849	689	570	315	261	479
17	805	417	360	280	620	390	816	655	606	317	255	456
18	756	408	360	280	600	380	781	611	607	314	254	428
19	724	409	340	280	620	390	741	477	535	293	246	409
20	696	483	320	280	580	400	704	414	487	293	236	387
21	663	573	330	280	580	420	664	404	463	291	237	330
22	630	533	340	280	580	440	630	397	446	278	264	286
23	596	552	320	280	600	430	599	393	447	269	262	280
24	573	723	340	280	680	430	577	373	433	264	249	298
25	552	772	330	290	740	450	557	369	415	251	242	382
26	532	700	320	300	700	450	541	370	343	253	242	351
27	512	620	320	300	640	470	540	366	337	246	258	323
28	496	540	320	300	580	440	564	368	339	239	267	314
29	474	480	320	290	540	420	463	353	317	231	266	314
30	374	440	320	290	---	400	844	343	310	223	271	303
31	340	---	320	290	---	383	---	343	---	218	266	---
TOTAL	18321	13476	11110	9230	13980	12583	18530	20320	12713	9109	7949	10594
MEAN	591	449	358	298	482	406	618	655	424	294	256	353
MAX	982	772	420	330	740	520	900	1050	607	519	277	479
MIN	340	318	320	280	280	330	400	343	310	218	219	271
CFSM	1.28	.97	.77	.64	1.04	.88	1.34	1.42	.92	.64	.55	.76
IN.	1.47	1.08	.89	.74	1.12	1.01	1.49	1.63	1.02	.73	.64	.85
CAL YR 1983	TOTAL	177118	MEAN 485	MAX 1240	MIN 230	CFSM 1.05	IN 14.23					
WTR YR 1984	TOTAL	157915	MEAN 431	MAX 1050	MIN 218	CFSM .93	IN 12.69					

STREAMS TRIBUTARY TO LAKE MICHIGAN

04077000 WOLF RIVER AT KESHENA FALLS NEAR KESHENA, 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 downstream from Keshena Falls, 1.7 mi upstream from Keshena, 3.1 mi downstream from West Branch Wolf River, and at mile 136.4.

DRAINAGE AREA.--788 mi².

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. Published as "at Keshena Falls" April 1928 to September 1981.

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. WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 820.0 ft 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 downstream at datum 4.03 ft lower.

REMARKS.--Records good except those for winter period, which are fair. No gage-height record Dec. 1 to Feb. 16 and Feb. 26 to Mar. 22.

AVERAGE DISCHARGE.--75 years (1907-8, 1910-84), 761 ft³/s, 13.11 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge 5,200 ft³/s Mar. 15, 1973; maximum gage height, 15.59 ft Dec. 2, 1983, from high-water mark in well (backwater from ice); minimum discharge, 91 ft³/s Dec. 22, 1939, gage height, 4.67 ft, result of ice storage.

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Oct. 13	2200	1,870	7.13	Apr. 14	2100	1,600	6.84
Dec. 2	--	ice jam	*15.59	May 1	1600	*2,240	7.49

minimum discharge, 431 ft³/s July 31-Aug. 1, gage height, 5.40 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 26 to Apr. 12.)

5.0	229	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 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	676	636	860	560	520	920	720	2130	673	579	440	493
2	653	630	800	560	540	880	760	2030	655	566	444	535
3	626	627	760	540	560	820	780	1790	645	561	564	589
4	621	625	720	540	560	780	800	1730	631	571	606	610
5	639	615	680	540	560	700	840	1630	616	560	602	602
6	634	614	640	540	540	640	880	1550	612	550	679	591
7	731	612	620	540	520	620	900	1510	676	537	609	579
8	1110	608	600	540	520	660	920	1410	934	527	629	560
9	1210	656	580	540	500	660	1000	1360	898	422	607	548
10	1110	821	580	540	490	640	1100	1320	813	587	536	537
11	1060	875	580	540	500	620	1200	1350	755	1290	520	523
12	1450	799	600	540	600	600	1300	1290	839	1370	495	663
13	1810	735	600	540	780	600	1330	1340	1030	1060	486	1090
14	1790	770	600	540	1000	620	1350	1410	1020	806	482	1070
15	1600	824	620	520	1300	660	1560	1350	947	757	550	972
16	1500	840	620	520	1300	700	1480	1240	917	693	557	873
17	1420	823	600	520	1200	680	1370	1170	1220	640	526	811
18	1340	793	600	500	1100	660	1290	1120	1410	622	503	758
19	1260	785	580	500	1200	680	1220	1030	1270	597	485	717
20	1200	957	580	500	1200	700	1150	845	1010	560	467	675
21	1140	1210	580	490	1100	740	1080	770	842	548	454	630
22	1080	1200	560	490	1100	780	1010	758	794	533	476	562
23	1040	1080	560	490	1100	760	974	745	772	526	492	505
24	993	1170	560	490	1200	720	1050	731	722	513	484	564
25	959	1270	560	520	1400	760	846	752	667	494	465	953
26	923	1200	560	540	1300	780	833	777	632	479	455	1070
27	889	1100	560	520	1100	840	883	753	641	486	474	892
28	860	1000	560	520	1000	800	957	726	653	461	491	734
29	835	940	560	500	960	760	948	704	629	461	498	662
30	783	900	560	500	---	720	1520	678	593	448	535	623
31	661	---	560	500	---	700	---	674	---	439	499	---
TOTAL	32603	25715	19000	16220	25750	22200	32251	36673	24516	19313	16130	20991
MEAN	1052	857	613	523	888	716	1075	1183	817	623	520	700
MAX	1810	1270	860	560	1400	920	1560	2130	1410	1370	679	1090
MIN	621	608	560	490	600	720	674	593	439	440	440	493
CFSM	1.34	1.09	.78	.66	1.13	.91	1.36	1.50	1.04	.79	.66	.89
IN.	1.54	1.21	.90	.77	1.22	1.05	1.52	1.73	1.16	.91	.76	.99
CAL YR 1983	TOTAL	321653	MEAN 881	MAX 2180	MIN 488	CFSM 1.12	IN 15.18					
WTR YR 1984	TOTAL	291362	MEAN 796	MAX 2130	MIN 439	CFSM 1.01	IN 13.75					

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 right bank 40 ft downstream from bridge on county road, 1.3 mi downstream from Mill Creek, and 4.0 mi northwest of Embarrass.

DRAINAGE AREA.--384 mi².

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. WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 803.95 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 23, 1938, nonrecording gage at same site and datum. Aug. 23, 1938 to May 8, 1984, at site 40 ft upstream at same datum.

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

AVERAGE DISCHARGE.--65 years, 296 ft³/s, 10.47 in/yr.

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

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Oct. 13	2400	1,550	5.70	June 19	0900	1,660	5.88
May 1	2100	*2,350	*7.03				

minimum discharge, 135 ft³/s July 28, gage height, 2.84 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 27 to Mar. 19.)

2.8	125	5.0	1,130
3.0	180	6.0	1,730
3.5	365	7.0	2,330
4.0	590		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	261	272	490	230	220	440	564	2150	285	218	162	198
2	236	271	430	220	240	420	614	2130	265	208	165	206
3	234	274	360	220	250	390	687	1740	262	188	174	215
4	235	270	380	220	250	370	740	1200	250	191	216	219
5	232	262	400	220	240	350	755	898	242	190	300	219
6	234	257	380	220	230	330	784	628	234	199	365	219
7	248	255	340	220	230	300	803	605	244	191	403	211
8	428	254	300	220	230	290	779	668	401	185	484	203
9	644	262	310	220	230	280	723	730	498	183	480	192
10	664	351	320	220	230	260	657	680	414	208	434	187
11	588	520	340	220	240	240	619	590	326	527	349	184
12	747	542	330	220	250	240	601	500	331	939	278	232
13	1340	465	320	220	290	250	767	500	519	976	239	568
14	1500	390	320	220	350	260	1110	620	616	827	227	778
15	1350	411	300	220	420	310	1240	670	565	562	234	787
16	1090	485	280	210	460	320	1170	610	442	375	256	693
17	861	487	260	200	480	310	984	490	550	335	233	494
18	721	446	240	200	500	300	788	400	1130	293	220	353
19	591	405	230	200	520	280	608	380	1570	266	204	305
20	490	470	230	190	540	272	543	360	1390	245	194	232
21	442	674	240	190	560	276	459	340	952	222	180	228
22	408	780	250	190	580	277	434	320	643	210	178	215
23	379	760	250	200	600	285	415	299	533	216	176	211
24	359	700	240	210	580	297	404	289	538	221	182	251
25	325	680	230	220	540	376	369	297	442	226	182	1030
26	322	740	230	230	520	476	358	363	356	213	174	1350
27	304	660	230	220	490	551	378	461	322	201	191	1230
28	302	580	220	220	480	588	505	446	296	194	251	1040
29	293	540	220	220	470	642	567	376	242	176	260	799
30	281	520	220	210	---	654	1300	327	247	170	244	567
31	274	---	230	210	---	593	---	298	---	162	212	---
TOTAL	16383	13983	9120	6630	11220	11227	20725	20365	15105	9517	7847	13616
MEAN	528	466	294	214	387	362	691	657	504	307	253	454
MAX	1500	780	490	230	600	654	1300	2150	1570	976	484	1350
MIN	232	254	220	190	220	240	358	289	234	162	162	184
CFSM	1.38	1.21	.77	.56	1.01	.94	1.80	1.71	1.31	.80	.66	1.18
IN.	1.59	1.35	.88	.64	1.09	1.09	2.01	1.97	1.46	.92	.76	1.32

CAL YR 1983	TOTAL	153397	MEAN	420	MAX	2190	MIN	127	CFSM	1.09	IN	14.86
WTR YR 1984	TOTAL	155738	MEAN	426	MAX	2150	MIN	162	CFSM	1.11	IN	15.09

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 downstream from Pearl Street bridge in New London, 0.2 mi downstream from Embarrass River, and at mile 56.3.

DRAINAGE AREA.--2,260 mi².

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. WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 747.94 ft 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 and data-collection platform at station.

AVERAGE DISCHARGE.--88 years, 1,750 ft³/s, 10.52 in/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,080 ft³/s May 7, gage height, 8.09 ft; minimum discharge, 996 ft³/s Aug. 24, gage height, 2.04 ft.

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

2.0	980	6.0	2,800
3.0	1,380	7.0	3,440
4.0	1,780	8.0	4,900
5.0	2,280	9.0	7,200

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3710	2580	2700	1200	1300	2600	2960	3220	1850	2500	1150	1500
2	3370	2470	2600	1200	1300	2600	2960	3440	1710	2260	1110	1600
3	3160	2340	2500	1200	1300	2700	2960	3700	1590	2000	1100	1640
4	3000	2200	2400	1200	1300	2700	2960	4030	1500	1750	1160	1660
5	2810	2060	2300	1200	1300	2600	2970	4510	1400	1560	1230	1640
6	2630	1930	2200	1200	1300	2400	2980	4860	1310	1510	1490	1580
7	2480	1840	2100	1200	1300	2200	2980	5030	1280	1440	1720	1520
8	2450	1780	2000	1200	1300	2000	2970	4930	1520	1370	1920	1470
9	2460	1730	1900	1200	1400	1800	2960	4700	1860	1330	2050	1410
10	2500	1730	1800	1200	1400	1600	2960	4370	2140	1320	2050	1370
11	2560	1770	1700	1200	1400	1400	2930	4080	2320	1740	1950	1330
12	2720	1880	1600	1200	1400	1300	2910	3820	2410	2140	1820	1400
13	2930	2020	1600	1200	1500	1200	2950	3670	2450	2340	1710	1870
14	3120	2120	1500	1100	1500	1200	3000	3540	2490	2450	1580	2260
15	3270	2200	1500	1100	1600	1200	3050	3410	2510	2500	1440	2490
16	3410	2240	1400	1100	1800	1300	3110	3300	2490	2510	1350	2610
17	3540	2260	1400	1100	2000	1400	3150	3220	2550	2530	1310	2650
18	3730	2270	1300	1100	2200	1500	3190	3140	2730	2520	1300	2650
19	3930	2300	1300	1100	2300	1600	3250	3050	2910	2410	1250	2610
20	4110	2370	1300	1100	2600	1700	3290	2970	3030	2210	1210	2530
21	4170	2480	1300	1100	2700	1800	3300	2860	3140	1930	1170	2330
22	4120	2580	1300	1100	2900	1800	3300	2750	3250	1700	1140	2060
23	3940	2650	1200	1100	3000	1800	3290	2620	3370	1550	1060	1830
24	3760	2740	1200	1200	3100	1900	3210	2480	3510	1440	1010	1680
25	3560	2780	1200	1200	3100	1900	3110	2350	3550	1400	1010	1640
26	3310	2810	1200	1200	3100	2100	3010	2250	3500	1400	1020	1820
27	3220	2830	1200	1200	3000	2300	2910	2210	3380	1390	1090	2100
28	3090	2860	1200	1200	2800	2400	2840	2140	3210	1380	1220	2350
29	2960	2870	1200	1200	2700	2600	2790	2120	3000	1330	1360	2480
30	2830	2810	1200	1200	---	2800	3000	2070	2740	1280	1530	2540
31	2700	---	1200	1200	---	2950	---	1990	---	1210	1560	---
TOTAL	99550	69500	50500	36200	58100	61350	91250	102830	74700	56400	43070	58620
MEAN	3211	2317	1629	1168	2003	1979	3042	3317	2490	1819	1389	1954
MAX	4170	2870	2700	1200	3100	2950	3300	5030	3550	2530	2050	2650
MIN	2450	1730	1200	1100	1300	1200	2790	1990	1280	1210	1010	1330
CFSM	1.42	1.03	.72	.52	.89	.88	1.35	1.47	1.10	.81	.62	.87
IN.	1.64	1.14	.83	.60	.96	1.01	1.50	1.69	1.23	.93	.71	.96
CAL YR 1983	TOTAL	854359	MEAN	2341	MAX	6170	MIN	912	CFSM	1.04	IN	14.06
WTR YR 1984	TOTAL	802070	MEAN	2191	MAX	5030	MIN	1010	CFSM	.97	IN	13.20

STREAMS TRIBUTARY TO LAKE MICHIGAN

04080000 LITTLE WOLF RIVER AT ROYALTON, WI

LOCATION.--Lat 44°24'47", long 88°51'55", in SE 1/4 NE 1/4 sec.1, T.22 N., R.13 E., Waupaca County, Hydrologic Unit 04030202, on right bank 50 ft upstream from highway bridge in Royalton and 6.0 mi upstream from mouth.

DRAINAGE AREA.--507 mi².

PERIOD OF RECORD.--January 1914 to September 1970, October 1982 to current year.

REVISED RECORD.--WSP 1337: 1914-16 (M), 1918-19 (M), 1921-25 (M), 1927 (M), 1928-37, 1939 (M), 1940, 1945-46 (M), 1948 (M), 1950 (M). WSP 1507: 1943. WDR WI-83-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 774.00 ft, National Geodetic Vertical Datum of 1929. Prior to Aug. 20, 1915, non-recording gage at highway bridge at datum 0.75 ft lower. Aug. 20, 1915, to Apr. 23, 1934, non-recording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are fair. Occasional fluctuation caused by recreational dam 6 mi upstream. Data-collection platform at station.

AVERAGE DISCHARGE.--58 years (water years 1915-70, 1983-84), 401 ft³/s, 10.74 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,950 ft³/s Mar. 30, 1943, gage height, 8.00 ft, from rating curve extended above 3,500 ft³/s; maximum gage height, 11.95 ft Mar. 28, 1950 (backwater from ice); minimum, 52 ft³/s Nov. 26, 1958, gage height, 0.75 ft, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
May 2	0845	*2,280	*4.05	June 18	1715	1,610	3.37

minimum, 273 ft³/s Aug. 26, gage height, 1.31 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1 to Feb. 28 and Mar. 8-12.)

1.3	270	3.0	1,310
1.5	340	3.5	1,730
2.0	570	4.0	2,230
2.5	910		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	399	382	420	320	300	503	710	1630	377	376	289	326
2	364	382	430	320	300	491	704	2090	359	353	289	333
3	408	381	420	330	290	458	703	1790	348	348	302	339
4	429	378	400	340	290	438	743	1420	331	340	336	346
5	371	373	400	340	290	417	791	1070	325	340	353	347
6	373	371	400	340	280	413	796	848	325	365	611	338
7	399	370	400	330	280	374	770	736	380	360	617	331
8	505	372	400	310	280	330	749	679	866	339	670	323
9	536	376	380	310	280	320	724	662	840	326	594	312
10	589	417	360	310	280	320	690	703	717	355	517	310
11	556	495	360	310	290	330	534	656	609	711	410	308
12	605	547	350	300	300	350	598	542	490	751	367	403
13	806	531	340	300	400	380	762	569	510	877	351	768
14	970	514	340	300	480	355	920	631	632	739	335	991
15	1080	517	340	300	540	463	1110	647	573	515	315	978
16	960	530	330	300	600	637	1050	663	386	441	316	894
17	776	535	330	300	640	583	1030	587	735	426	324	648
18	761	524	320	290	680	559	890	472	1240	412	318	481
19	703	516	310	280	720	468	747	451	1330	392	306	407
20	552	587	320	280	760	438	518	510	1460	342	293	399
21	530	749	330	280	760	441	514	425	1380	314	286	376
22	462	824	330	280	760	445	552	403	1130	315	288	348
23	425	756	320	290	760	447	517	390	1120	309	291	325
24	432	792	320	290	780	488	486	392	999	311	288	322
25	454	705	320	290	800	589	478	418	779	314	282	390
26	463	648	320	280	780	748	477	532	655	324	276	683
27	422	596	320	290	740	751	495	538	572	340	303	674
28	395	542	320	300	680	790	528	488	529	325	371	876
29	392	456	320	310	613	855	613	436	437	305	507	547
30	388	435	320	300	---	833	1570	418	426	296	522	433
31	385	---	320	290	---	782	---	402	---	290	398	---
TOTAL	16890	15601	10890	9410	14953	15796	21769	22198	20860	12551	11725	14556
MEAN	545	520	351	304	516	510	726	716	695	405	378	485
MAX	1080	824	430	340	800	855	1570	2090	1460	877	670	991
MIN	364	370	310	280	280	320	477	390	325	290	276	308
CFSM	1.08	1.03	.69	.60	1.02	1.01	1.43	1.41	1.37	.80	.75	.96
IN.	1.24	1.14	.80	.69	1.10	1.16	1.60	1.63	1.53	.92	.86	1.07
CAL YR 1983	TOTAL	192868	MEAN 528	MAX 2320	MIN 166	CFSM 1.04	IN 14.15					
WTR YR 1984	TOTAL	187199	MEAN 511	MAX 2090	MIN 276	CFSM 1.01	IN 13.74					

STREAMS TRIBUTARY TO LAKE MICHIGAN

04081000 WAUPACA RIVER NEAR WAUPACA, WI

LOCATION.--Lat 44°19'50", long 88°59'45", in NW 1/4 NW 1/4 sec.1, T.21 N., R.12 E., Waupaca County, Hydrologic Unit 04030202, on right bank 10 ft downstream from Harrington Road bridge, 4 mi upstream from Weyauwega Lake Dam, 4.5 mi southeast of Waupaca, and about 5 mi downstream from Crystal River.

DRAINAGE AREA.--265 mi².

PERIOD OF RECORD.--June 1916 to September 1966 (no winter records for 1964 and 1965 water years). Operated as crest-stage gage from October 1966 to September 1970 and low-flow partial-record station from October 1966 to September 1977. October 1982 to current year. Published as "near Weyauwega" June 1916 to October 1917.

REVISED RECORDS.--WDR WI-83-1: Drainage area.

GAGE.--Water-stage recorder. Altitude is 780 ft (from survey level line along railroad). Prior to Oct. 19, 1917, chain gage at site 1 mi downstream at different datum. Oct. 19, 1917, to Nov. 23, 1938, chain gage on bridge at present site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--50 years (1916-63, 1966, 1983-84), 238 ft³/s, 12.20 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,520 ft³/s Mar. 20, 1948, gage height, 6.90 ft; maximum gage height, 8.06 ft Mar. 28, 1950 (backwater from ice); minimum discharge, 38 ft³/s June 7, 1947; minimum daily, 50 ft³/s Jan. 22, 28, 1926.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 670 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Mar. 9	1530	ice jam	*4.32	Aug. 7	0630	*890	3.50
Apr. 30	0500	850	3.41				

minimum daily discharge, 190 ft³/s, June 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	247	235	318	250	240	268	276	632	207	229	195	266
2	243	240	330	250	240	262	275	526	201	221	203	276
3	247	238	320	260	240	252	273	412	201	214	206	275
4	254	239	310	260	240	240	275	372	196	209	257	262
5	248	237	300	260	240	230	271	327	195	210	296	247
6	240	237	300	260	230	230	268	299	190	220	686	239
7	249	235	310	260	230	230	263	298	226	218	838	237
8	273	237	300	250	230	230	257	306	290	211	602	224
9	272	242	290	250	230	230	251	288	286	213	511	229
10	262	269	280	240	230	230	247	274	280	236	402	234
11	256	277	280	240	240	240	241	261	254	421	328	241
12	306	267	280	250	250	250	255	253	245	410	299	324
13	352	256	270	260	250	260	328	272	254	328	281	436
14	332	258	280	260	270	270	368	284	254	277	262	460
15	302	281	270	250	300	280	342	274	236	272	256	389
16	298	275	260	240	330	300	316	256	226	257	255	328
17	298	266	260	240	370	289	299	245	275	256	251	301
18	283	260	250	230	360	254	281	241	413	248	247	274
19	272	265	240	220	414	241	267	237	449	224	237	263
20	267	302	250	220	407	237	257	228	395	218	229	248
21	260	326	250	220	380	241	247	223	304	209	228	238
22	256	316	250	230	353	248	242	226	334	203	231	230
23	253	306	250	230	365	245	259	224	466	213	231	222
24	251	311	240	240	380	250	266	218	424	216	220	224
25	250	299	240	250	365	275	256	238	348	211	214	248
26	246	289	240	250	332	312	248	259	303	214	213	280
27	244	279	250	240	304	323	264	247	309	206	239	271
28	238	284	250	240	285	316	281	235	284	203	241	266
29	234	286	250	240	275	305	283	225	261	202	253	258
30	236	296	240	240	---	295	732	217	244	200	304	257
31	238	---	240	240	---	282	---	210	---	195	294	---
TOTAL	8207	8108	8398	7570	8580	8115	8688	8807	8550	7364	9509	8247
MEAN	265	270	271	244	296	262	290	284	285	238	307	275
MAX	352	326	330	260	414	323	732	632	466	421	838	460
MIN	234	235	240	220	230	230	241	210	190	195	195	222
CFSM	1.00	1.02	1.02	.92	1.12	.99	1.09	1.07	1.08	.90	1.16	1.04
IN.	1.15	1.14	1.18	1.06	1.20	1.14	1.22	1.07	1.20	1.03	1.33	1.16
CAL YR 1983	TOTAL	97121	MEAN 266	MAX 709	MIN 178	CFSM 1.00	IN 13.63					
WTR YR 1984	TOTAL	100143	MEAN 274	MAX 838	MIN 190	CFSM 1.03	IN 14.06					

STREAMS TRIBUTARY TO LAKE MICHIGAN

44091208909200 HILLS LAKE NEAR WILD ROSE, WI

LOCATION.--Lat 44°09'12", long 89°09'20", in SW 1/4 NE 1/4 Sec.2, T.19 N., R.11 E., Waushara County, Hydrologic Unit 04030202, 4.6 mi southeast of Wild Rose.

DRAINAGE AREA.--0.78 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--June 1983 to current year.

REMARKS.--Lake stages read on north side of lake by Tom Erickson.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage observed, 5.95 ft Sept. 20, 1984; minimum observed, 4.62 ft Aug. 13, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum stage observed during year, 5.95 ft Sept. 20; minimum observed, 4.98 ft Oct. 2.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---				---		---	---	---	---	---	---
2	4.98				---		---	---	---	---	---	---
3	---				---		---	---	---	---	---	---
4	---				---		---	---	---	---	---	---
5	---				---		---	---	---	---	---	---
6	---				---		---	---	---	---	---	---
7	---				---		---	---	---	---	---	---
8	5.06				---		---	---	5.65	---	---	---
9	---				---		---	---	---	---	---	---
10	---				---		---	---	---	---	---	---
11	---				---		---	---	5.73	5.61	---	---
12	---				---		---	5.69	---	---	5.90	---
13	---				---		---	---	---	---	---	---
14	---				---		---	---	---	---	---	---
15	---				---		---	---	---	---	---	---
16	5.10				---		---	---	---	---	---	---
17	---				---		---	---	---	---	---	---
18	---				---		---	---	---	---	---	---
19	---				---		---	---	---	---	---	---
20	---				5.47		---	---	---	---	---	5.95
21	5.05				---		---	---	5.61	---	---	---
22	---				---		---	---	---	---	---	---
23	---				---		---	---	5.83	---	5.70	---
24	---				---		---	---	---	5.88	---	---
25	---				---		5.60	---	---	---	---	---
26	---				---		---	---	---	---	---	---
27	---				---		---	---	---	---	---	---
28	---				---		---	---	---	---	---	---
29	---				---		---	---	---	---	---	---
30	---				---		5.74	---	---	---	---	---
31	5.02				---		---	---	---	---	---	---

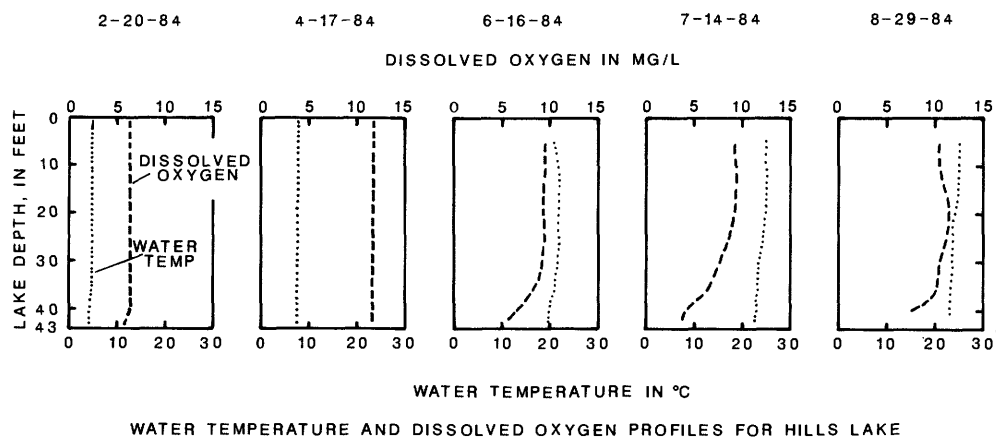
STREAMS TRIBUTARY TO LAKE MICHIGAN
44091208909200 HILLS LAKE NEAR WILD ROSE, WI--CONTINUED
WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1983 to current year.

REMARKS.--Lake sampled at east end at a depth of 22 feet. Complete depth profiles for specific conductance and pH are available in District office files.

WATER QUALITY DATA, FEBRUARY 20 TO AUGUST 29, 1984
(Milligrams per liter unless otherwise indicated)

	Feb. 20		Apr. 17		June 16		July 14		Aug. 29	
Depth of sample (ft)	3	19	3	19	3	19	3	19	3	19
Specific conductance (umhos)	150	162	193	194	162	163	198	199	190	196
pH	7.8	7.9	8.3	8.4	8.6	8.2	8.1	7.8	8.7	8.5
Water temperature (°C)	4.6	4.5	7.5	7.5	21.9	20.9	24.8	23.1	25.3	23.5
Color (Pt-Co. scale)	--	--	10	20	--	--	--	--	--	--
Turbidity (NTU)	--	--	<1.0	<1.0	--	--	--	--	--	--
Secchi-disc (meters)	--	--	--	5.6	--	3.1	--	3.6	--	2.1
Dissolved oxygen	6.3	6.2	11.7	11.6	9.5	8.2	9.2	5.5	10.6	10.2
Hardness, as CaCO ₃	--	--	100	100	--	--	--	--	--	--
Calcium, dissolved (Ca)	--	--	21	21	--	--	--	--	--	--
Magnesium, dissolved (Mg)	--	--	12	12	--	--	--	--	--	--
Sodium, dissolved (Na)	--	--	1.5	1.5	--	--	--	--	--	--
Potassium, dissolved (K)	--	--	.5	.5	--	--	--	--	--	--
Alkalinity as CaCO ₃	--	--	94	94	--	--	--	--	--	--
Sulfate, dissolved (SO ₄)	--	--	10	10	--	--	--	--	--	--
Chloride, dissolved (Cl)	--	--	3.5	2.8	--	--	--	--	--	--
Silica, dissolved (SiO ₂)	--	--	0.28	0.29	--	--	--	--	--	--
Solids, dissolved, at 180°C	--	--	119	120	--	--	--	--	--	--
Nitrogen, nitrate, total (as N)	--	--	.09	.09	--	--	--	--	--	--
Nitrogen, nitrite, total (as N)	--	--	<.01	<.01	--	--	--	--	--	--
Nitrogen, ammonia, total (as N)	--	--	.82	.79	--	--	--	--	--	--
Nitrogen, organic, total (as N)	--	--	.68	.81	--	--	--	--	--	--
Total phosphorus (as P)	--	--	<.01	.01	.035	.021	.006	.008	.005	.055
Phosphorus, ortho, diss. (as P)	--	--	<.01	<.01	--	--	--	--	--	--
Iron, dissolved (Fe) ug/L	--	--	3	4	--	--	--	--	--	--
Manganese, dissolved (Mn) ug/L	--	--	<1	<1	--	--	--	--	--	--
Chlorophyll <i>a</i> , phyto. (ug/L)	--	--	2.0	--	1.6	--	2.2	--	3.4	--
Chlorophyll <i>b</i> , phyto. (ug/L)	--	--	<.1	--	<.1	--	<.1	--	<.1	--



STREAMS TRIBUTARY TO LAKE MICHIGAN

440654089120500 LAKE MORRIS AT MOUNT MORRIS, WI

LOCATION.--Lat 44°06'54", long 89°12'05", in SE 1/4 SE 1/4 Sec.16, T.19 N., R.11 E., Waushara County, Hydrologic Unit 04030202, at Mount Morris.

DRAINAGE AREA.--8.94 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--June 1983 to current year.

REMARKS.--Lake stages read at dam outlet by Henry Pagenkopf.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage observed, 5.82 ft May 1, 1984; minimum observed, 4.98 ft Oct. 1, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum stage observed during year, 5.82 ft May 1; minimum observed, 4.98 ft Oct. 1.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.98				---		5.10	5.82	5.20	5.34	5.35	5.48
2	---				---		5.09	5.68	5.27	5.32	5.33	---
3	---				---		5.08	5.54	5.28	5.30	5.34	5.25
4	---				---		---	5.48	5.34	5.30	---	5.22
5	---				---		5.07	5.38	5.38	5.29	---	5.20
6	---				---		5.06	5.32	5.32	5.28	5.52	5.16
7	---				---		5.05	5.28	5.32	5.29	5.50	5.36
8	---				---		5.02	5.28	5.36	5.28	5.56	5.32
9	---				---		5.00	5.26	5.38	5.28	5.50	5.32
10	---				---		5.00	5.16	5.38	5.31	5.52	5.31
11	---				---		4.99	5.12	5.38	5.34	5.32	5.30
12	---				---		5.05	5.10	5.38	5.31	5.22	---
13	---				---		5.08	5.14	5.36	5.30	5.18	---
14	---				---		5.16	5.16	5.34	5.30	5.10	---
15	---				---		5.22	5.12	5.32	5.33	5.10	5.40
16	---				---		5.23	5.10	5.30	5.34	5.10	5.41
17	---				---		5.20	5.08	5.46	5.40	5.16	5.38
18	---				---		5.17	5.08	5.46	5.40	5.24	5.34
19	---				---		5.14	5.07	---	5.38	---	5.31
20	---				5.30		5.10	5.07	5.45	5.37	5.26	5.30
21	---				---		5.06	5.06	5.40	5.37	5.28	5.28
22	---				---		5.05	5.06	5.48	5.38	5.38	5.26
23	---				---		5.15	---	5.56	5.38	5.38	5.25
24	---				---		5.15	5.07	5.58	5.37	5.38	5.23
25	---				---		5.15	5.12	5.50	5.37	5.36	5.52
26	---				---		5.15	5.14	---	5.38	5.34	5.38
27	---				---		5.21	---	---	5.38	---	5.28
28	---				---		5.21	---	---	---	---	5.22
29	---				---		5.21	5.09	---	5.37	5.38	5.16
30	---				---		5.70	5.09	5.38	5.36	---	5.08
31	---				---		---	5.12	---	5.36	5.50	---

STREAMS TRIBUTARY TO LAKE MICHIGAN
440654089120500 LAKE MORRIS AT MOUNT MORRIS, WI--CONTINUED

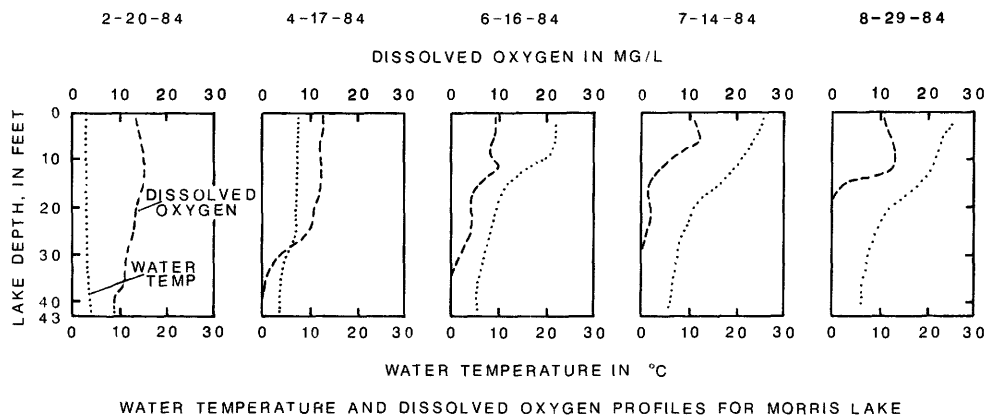
WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1983 to current year.

REMARKS.--Lake sampled near center at a depth of 43 feet. Complete depth profiles for specific conductance and pH are available in District office files.

WATER QUALITY DATA, FEBRUARY 20 TO AUGUST 29, 1984
(Milligrams per liter unless otherwise indicated)

	Feb. 20		Apr. 17		June 16		July 14		Aug. 29	
Depth of sample (ft)	3	40	3	40	3	40	3	40	3	40
Specific conductance (umhos)	310	350	326	378	303	360	309	367	320	375
pH	8.3	7.4	8.4	7.5	8.5	7.5	8.8	7.2	8.6	7.3
Water temperature (°C)	3.2	3.9	7.7	4.0	22.1	5.6	25.1	5.9	24.9	6.1
Color (Pt-Co. scale)	--	--	25	20	--	--	--	--	--	--
Turbidity (NTU)	--	--	1.0	1.0	--	--	--	--	--	--
Secchi-disc (meters)	--	--	--	2.4	--	2.4	--	2.8	--	3.0
Dissolved oxygen	13.5	9.1	12.3	0.2	8.8	0.1	11.6	0	11.3	0
Hardness, as CaCO ₃	--	--	180	200	--	--	--	--	--	--
Calcium, dissolved (Ca)	--	--	39	43	--	--	--	--	--	--
Magnesium, dissolved (Mg)	--	--	21	22	--	--	--	--	--	--
Sodium, dissolved (Na)	--	--	2.3	2.0	--	--	--	--	--	--
Potassium, dissolved (K)	--	--	1.1	1.2	--	--	--	--	--	--
Alkalinity as CaCO ₃	--	--	168	190	--	--	--	--	--	--
Sulfate, dissolved (SO ₄)	--	--	13	14	--	--	--	--	--	--
Chloride, dissolved (Cl)	--	--	3.2	3.1	--	--	--	--	--	--
Silica, dissolved (SiO ₂)	--	--	8.2	15	--	--	--	--	--	--
Solids, dissolved, at 180°C	--	--	219	235	--	--	--	--	--	--
Nitrogen, nitrate, total (as N)	--	--	.58	.57	--	--	--	--	--	--
Nitrogen, nitrite, total (as N)	--	--	.02	0.3	--	--	--	--	--	--
Nitrogen, ammonia, total (as N)	--	--	.06	.24	--	--	--	--	--	--
Nitrogen, organic, total (as N)	--	--	.94	1.06	--	--	--	--	--	--
Total phosphorus (as P)	--	--	.02	.01	.021	.139	.028	.29	.013	.329
Phosphorus, ortho, diss. (as P)	--	--	.03	.01	--	--	--	--	--	--
Iron, dissolved (Fe) ug/L	--	--	34	31	--	--	--	--	--	--
Manganese, dissolved (Mn) ug/L	--	--	9	230	--	--	--	--	--	--
Chlorophyll a, phyto. (ug/L)	--	--	11	--	2.0	--	3.7	--	2.3	--
Chlorophyll b, phyto. (ug/L)	--	--	0.1	--	<.1	--	<.1	--	<.1	--



STREAMS TRIBUTARY TO LAKE MICHIGAN

04084255 LAKE WINNEBAGO NEAR STOCKBRIDGE, WI

LOCATION.--Lat 44°04'17", long 88°19'52", Stockbridge Indian Reservation, Calumet County, Hydrologic Unit 04030203, on east shore of Lake Winnebago, 300 ft south of County Highway E and 1.6 mi west of Stockbridge.

DRAINAGE AREA.--5,880 mi², at lake outlet at Menasha Dam. Area of Lake Winnebago, 215 mi².

PERIOD OF RECORD.--November 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 745.05 ft, mean tide of New York City (levels by Corps of Engineers).

REMARKS.--Records good. 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. Present limits of regulation are from 21 1/4 in. above the crest of Menasha dam to crest during navigation season, plus additional 18 in. below crest during winter. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 3.61 ft Aug. 29, 1984, local condition due to seiche. Minimum observed, 0.74 ft Feb. 11, 12, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.61 ft Aug. 29, local condition due to seiche; minimum, 0.74 ft Feb. 11, 12.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.87	2.82	2.89	1.93	1.01	1.69	1.56	3.06	2.92	3.00	2.80	2.89
2	2.87	2.80	2.82	1.90	.98	1.71	1.57	2.99	2.91	2.99	2.80	2.96
3	2.88	2.66	2.79	1.86	.96	1.72	1.53	2.95	2.92	2.97	2.79	2.98
4	2.90	2.70	2.77	1.83	.93	1.72	1.54	3.00	2.87	2.94	2.81	3.00
5	2.95	2.70	2.75	1.80	.90	1.74	1.59	3.03	2.83	2.92	2.84	2.99
6	2.97	2.68	2.75	1.77	.88	1.74	1.62	3.05	2.83	2.91	2.90	2.98
7	2.90	2.65	2.73	1.74	.85	1.72	1.62	3.14	2.83	2.87	2.92	2.97
8	2.85	2.63	2.69	1.71	.83	1.70	1.59	3.24	2.94	2.83	3.01	2.98
9	2.84	2.53	2.65	1.68	.81	1.67	1.56	3.19	2.84	2.78	3.02	2.96
10	2.82	2.42	2.61	1.65	.80	1.65	1.59	3.14	3.04	2.80	2.99	2.97
11	2.80	2.54	2.60	1.62	.78	1.62	1.63	3.12	3.02	2.86	2.94	2.96
12	2.92	2.63	2.61	1.59	.78	1.55	1.62	3.12	3.02	2.88	2.94	2.93
13	2.95	2.64	2.56	1.56	.83	1.51	1.70	3.10	3.05	2.89	2.94	2.98
14	3.03	2.62	2.54	1.53	.86	1.47	1.76	3.12	3.00	2.90	2.95	2.98
15	2.85	2.61	2.54	1.49	.87	1.49	1.83	3.08	2.96	2.94	2.98	3.01
16	2.87	2.66	2.51	1.46	.90	1.49	1.87	3.05	2.97	2.96	2.95	3.02
17	2.85	2.68	2.47	1.44	.94	1.45	1.97	3.03	3.12	2.96	2.94	3.01
18	2.82	2.68	2.44	1.40	.98	1.44	2.03	3.02	3.23	2.91	2.94	2.97
19	2.76	2.69	2.39	1.37	1.07	1.44	2.11	3.02	3.22	2.93	2.90	2.93
20	2.70	2.89	2.35	1.34	1.14	1.46	2.17	2.98	3.16	2.87	2.92	2.92
21	2.71	2.98	2.31	1.30	1.18	1.49	2.11	2.96	3.14	2.86	2.92	2.85
22	2.70	2.83	2.29	1.27	1.21	1.56	2.07	2.98	3.10	2.87	2.97	2.88
23	2.72	2.89	2.25	1.24	1.27	1.53	2.25	3.00	3.14	2.88	2.89	2.86
24	2.78	3.01	2.21	1.21	1.33	1.50	2.39	3.00	3.21	2.87	2.89	2.87
25	2.82	2.94	2.18	1.19	1.40	1.49	2.47	3.02	3.17	2.83	2.89	3.03
26	2.80	2.81	2.14	1.18	1.47	1.49	2.49	3.03	3.17	2.86	2.89	2.95
27	2.84	2.69	2.10	1.16	1.55	1.48	2.56	3.02	3.19	2.84	2.90	2.85
28	2.85	2.79	2.08	1.13	1.62	1.46	2.77	2.89	3.10	2.83	2.91	2.80
29	2.84	3.01	2.05	1.10	1.67	1.49	2.64	2.94	3.03	2.82	2.92	2.77
30	2.85	2.98	2.00	1.07	---	1.54	3.07	2.97	3.00	2.81	3.01	2.74
31	2.84	---	1.96	1.04	---	1.55	---	2.97	---	2.81	2.98	---
MEAN	2.84	2.74	2.45	1.47	1.06	1.57	1.98	3.04	3.03	2.88	2.92	2.93
MAX	3.03	3.01	2.89	1.93	1.67	1.74	3.07	3.24	3.23	3.00	3.02	3.03
MIN	2.70	2.42	1.96	1.04	.78	1.44	1.53	2.89	2.83	2.78	2.79	2.74
CAL YR 1983	MEAN	2.46	MAX 3.22	MIN 1.01								
WTR YR 1984	MEAN	2.41	MAX 3.24	MIN .78								

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 upstream from Wrightstown, and 18 mi upstream from mouth.

DRAINAGE AREA.--6,010 mi².

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

REVISED RECORD.--WDR WI-80-1: Drainage area. WDR WI-81-1: 1980.

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 and 04084255). Daily discharge determined from records of flow through turbines, head, gate openings, and lockages through navigation canal. Usually less than about 5 ft³/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.--88 years, 4,209 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge during year, 10,200 ft³/s May 10; minimum daily, 1,700 ft³/s Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6420	7380	5870	5230	4510	7690	3940	5380	6040	7700	2090	2950
2	5880	6630	7450	5500	4040	7510	4320	7380	6100	7510	1850	3720
3	5380	6570	7570	5820	4070	7520	4540	7770	5610	7520	1870	2660
4	5010	6350	6710	5940	3980	7570	4590	7260	5740	7390	1700	2810
5	5850	6900	7410	5870	4000	7230	4570	6710	5770	5510	1910	3080
6	6190	6700	6100	5410	4080	6340	4540	7540	5620	4740	2130	3420
7	7260	6180	6920	4700	3810	6590	4620	9820	5480	4860	2230	4400
8	5860	4660	8440	4980	3520	7820	4670	8640	4680	5200	2890	4860
9	6370	4560	8320	5010	3340	6800	4670	8850	4080	4980	2750	4600
10	6320	3060	8580	4900	3690	6620	4070	10200	5960	3660	3490	4630
11	6780	2660	9380	5310	3740	6440	2450	8620	4560	3490	3900	4550
12	6030	3480	8820	5110	3690	7300	2900	9810	6480	3660	3380	5190
13	5910	3560	8820	5030	4500	5800	3100	8950	6210	3950	2880	4960
14	5440	3880	8550	5050	4370	6600	3080	9330	5830	4190	2250	4790
15	7180	3330	8670	5060	4940	5520	3080	8820	5800	3930	2380	5600
16	6550	3220	8310	4860	5210	4960	3060	9620	5750	3870	2060	4300
17	7170	3140	6080	4910	5260	4820	3010	8920	6510	3980	2320	7400
18	6760	3060	10100	4920	4670	4750	3070	7970	7250	3850	2040	7180
19	7060	3210	8430	5810	5140	4840	2820	8120	7420	3840	2020	6620
20	6640	3650	5490	4500	4680	4650	2820	8040	8260	3810	2090	5750
21	6660	4480	5430	4430	4550	3950	2790	6250	7760	3810	2250	5390
22	6060	5310	3850	4430	4580	3910	2790	7070	7640	3940	2070	5090
23	6840	5960	4700	4760	4560	4030	2750	6260	7510	4070	1820	4920
24	6170	6700	4760	4620	4530	4850	3170	7750	8420	4080	2000	4860
25	6040	5910	5280	4270	4530	5040	3180	7180	7480	3900	2060	6260
26	5800	5980	3950	5320	4560	4840	3050	6060	9260	3920	2160	8090
27	5370	5390	3650	3950	4770	5080	3200	6060	9320	2980	2240	8330
28	2970	5780	2660	3950	4820	4680	4060	5970	7890	3220	2110	7420
29	3600	7720	2300	3940	5400	3850	3560	5210	7530	3270	2390	6230
30	3670	7060	4710	4250	---	3720	6220	5540	7680	3200	2710	6290
31	5020	---	5200	4340	---	3780	---	5920	---	2300	2470	---
TOTAL	184260	152470	202510	152180	127540	175100	108690	237020	199640	136330	72510	156350
MEAN	5944	5082	6533	4909	4398	5648	3623	7646	6655	4398	2339	5212
MAX	7260	7720	10100	5940	5400	7820	6220	10200	9320	7700	3900	8330
MIN	2970	2660	2300	3940	3340	3720	2450	5210	4080	2300	1700	2660
CAL YR 1983	TOTAL	2099200	MEAN	5751	MAX	12700	MIN	1120				
WTR YR 1984	TOTAL	1904600	MEAN	5204	MAX	10200	MIN	1700				

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085000 FOX RIVER AT WRIGHTSTOWN, WI
(NATIONAL STREAM QUALITY ACCOUNTING 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.--6,050 mi², approximately.

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

REMARKS.--Records of discharge used are for 04084500 Fox River at Rapide Croche Dam near Wrightstown.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCHI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS (MG/L AS CAC03) (00900)
DEC , 1983												
21...	0900	5430	395	8.0	.0	6.5	14.2	--	--	K350	490	190
MAR , 1984												
28...	0930	4680	400	8.5	5.0	5.4	10.9	750	87	K340	42	190
JUN												
19...	1420	7420	390	8.2	23.5	16	8.5	770	99	--	--	180
SEP												
21...	0900	5390	320	8.7	18.0	8.2	7.2	--	--	K67	190	170

DATE	HARD-NESS, NONCAR-BONATE (MG/L AS CAC03) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CAC03) (90410)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
DEC , 1983											
21...	27	40	22	9.2	9	.3	2.7	164	3.2	25	16
MAR , 1984											
28...	25	38	22	9.4	10	.3	2.6	161	1.0	22	16
JUN											
19...	33	40	20	8.4	9	.3	2.9	150	1.8	28	15
SEP											
21...	25	32	21	8.9	10	.3	2.3	142	.5	21	13

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)
DEC , 1983											
21...	.20	6.7	238	220	3490	.49	.340	1.4	.100	.070	.060
MAR , 1984											
28...	.20	6.8	234	210	2960	.36	.070	1.2	.040	<.010	<.010
JUN											
19...	.10	4.8	261	210	5230	.77	.170	1.9	.140	.090	.080
SEP											
21...	.20	.1	203	180	2950	<.10	<.010	1.9	.110	.040	.010

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

STREAMS TRIBUTARY TO LAKE MICHIGAN

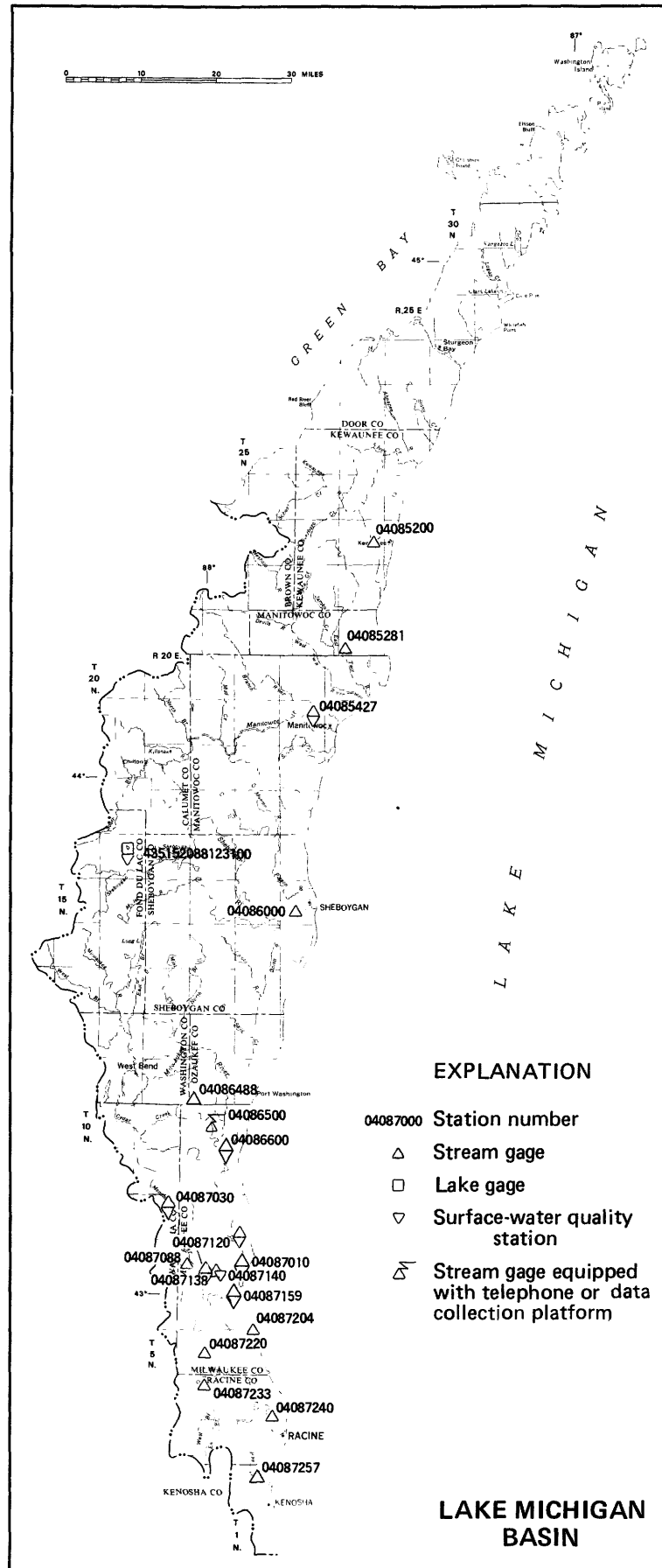
04085000 FOX RIVER AT WRIGHTSTOWN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DEC , 1983											
21...	0900	5430	10	2	38	<.5	1	2	<3	3	11
MAR , 1984											
28...	0930	4680	<10	1	26	<.5	<1	<1	<3	1	17
JUN											
19...	1420	7420	30	1	31	<.5	4	<1	<3	3	24
SEP											
21...	0900	5390	30	2	24	<.5	2	<1	<3	1	8

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
DEC , 1983											
21...	1	<4	5	<.1	<10	2	<1	<1	120	<6	22
MAR , 1984											
28...	1	7	5	.2	<10	3	<1	<1	120	<6	11
JUN											
19...	6	10	6	<.1	<10	2	<1	<1	130	<6	35
SEP											
21...	3	4	2	.2	<10	<1	<1	1	140	<6	7

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC , 1983							
21...	0900	5430	395	.0	13	191	87
JUN , 1984							
19...	1420	7420	390	23.5	54	1080	70
SEP							
21...	0900	5390	320	18.0	32	466	95



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 west of Kewaunee, and about 7.0 mi upstream from mouth.

DRAINAGE AREA.--127 mi².

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. Datum of gage is 579.64 ft National Geodetic Vertical Datum of 1929 (Wisconsin State Highway Commission benchmark). 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.--18 years, 80.4 ft³/s, 8.60 in/yr.

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

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Feb. 14	1330	Unknown	A*14.69	Apr. 30	2400	946	11.41
Feb. 16	--	B About *1,600	--				

minimum discharge, 5.1 ft³/s Mar. 11, gage height, 8.00 ft, result of freezeup.

A Ice jam

B Backwater from ice

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 9-12, Dec. 16 to Feb. 18, and Mar. 2-14.)

8.2	11	9.5	175
8.3	15	10.0	307
8.5	28	11.0	722
8.7	47	12.0	1,360
9.0	85		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	23	61	15	13	94	102	659	37	33	23	33
2	22	23	55	15	13	86	99	303	35	30	24	64
3	22	23	53	15	14	72	98	189	33	29	148	78
4	24	23	39	16	15	60	94	138	31	31	359	63
5	23	23	37	17	15	52	91	110	30	30	297	51
6	23	23	33	17	14	45	87	96	29	29	160	38
7	27	23	35	16	13	40	80	90	30	27	91	33
8	54	22	32	15	13	38	72	89	36	25	101	29
9	61	23	30	15	13	37	67	89	36	24	131	28
10	51	28	29	15	13	36	64	95	198	27	112	28
11	40	33	29	14	15	35	60	87	246	72	83	29
12	48	33	33	14	30	36	59	75	158	85	56	96
13	66	30	39	14	200	37	82	89	149	75	44	281
14	64	27	41	14	1000	38	100	111	103	49	36	273
15	50	30	42	14	1200	100	124	97	75	37	32	197
16	43	33	30	14	1300	214	138	81	56	32	30	153
17	37	32	25	14	1000	116	127	68	116	28	28	115
18	33	30	22	13	600	87	109	64	521	26	27	80
19	31	31	21	13	712	70	96	61	482	24	25	61
20	28	61	20	13	696	79	91	56	263	23	24	50
21	27	128	19	13	404	129	82	52	142	22	23	43
22	27	103	18	13	301	129	75	48	91	21	24	39
23	27	86	17	13	335	88	111	46	71	21	24	36
24	27	86	17	13	357	117	178	44	60	23	22	71
25	27	72	16	13	270	311	141	61	52	23	21	147
26	26	56	16	13	187	490	104	81	46	31	21	201
27	25	48	16	13	141	349	88	68	47	28	25	165
28	25	57	15	13	106	224	94	57	43	26	29	113
29	24	71	15	13	108	169	89	49	38	23	26	81
30	23	65	15	13	---	136	541	43	35	21	31	66
31	23	---	15	13	---	114	---	40	---	20	28	---
TOTAL	1050	1346	885	436	9098	3628	3343	3236	3289	995	2105	2742
MEAN	33.9	44.9	28.5	14.1	314	117	111	104	110	32.1	67.9	91.4
MAX	66	128	61	17	1300	490	541	659	521	85	359	281
MIN	22	22	15	13	13	35	59	40	29	20	21	28
CFSM	.27	.35	.22	.11	2.47	.92	.87	.82	.87	.25	.54	.72
IN.	.31	.39	.26	.13	2.66	1.06	.98	.95	.96	.29	.62	.80

CAL YR 1983 TOTAL 33837.5 MEAN 92.7 MAX 944 MIN 9.5 CFSM .73 IN 9.91
WTR YR 1984 TOTAL 32153.0 MEAN 87.8 MAX 1300 MIN 13 CFSM .69 IN 9.42

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 downstream from bridge on State Highway 147, at Mishicot, 0.8 mi upstream from Johnson Creek, and 9.8 mi upstream from mouth.

DRAINAGE AREA.--110 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods, which are fair. Occasional regulation caused by recreation dam 0.3 mi upstream.

AVERAGE DISCHARGE.--12 years, 74.0 ft³/s, 9.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,210 ft³/s Mar. 31, 1979, gage height, 13.75 ft; minimum, 1.7 ft³/s July 20, 1979, gage height, 3.69 ft.

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Feb. 16	1945	*1,010	*9.30	Feb. 20	0145	970	9.14

minimum discharge, 7.8 ft³/s Aug. 26, gage height, 4.00 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used June 5-7, June 29 to July 9; stage-discharge relation affected by ice Dec. 8-12, Dec. 16 to Feb. 15, and Mar. 8-14.)

Oct. 1 to Feb. 12				Feb. 13 to July 10(1115)				July 10(1130) to Sept. 30			
4.0	11	5.0	95	4.0	15	6.0	268	4.1	13	5.0	86
4.2	21	5.5	159	4.2	25	7.0	466	4.3	25	6.0	220
4.5	43			4.5	48	8.0	690	4.5	40	7.0	394
				5.0	107	10.0	1,190				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	19	82	19	13	114	116	435	46	22	13	76
2	15	19	69	19	14	91	113	370	41	20	16	342
3	16	19	54	19	15	78	114	243	36	19	31	265
4	17	19	47	20	15	62	112	165	33	18	141	188
5	17	19	43	21	14	58	121	130	29	17	140	116
6	17	19	40	22	13	54	117	114	28	17	80	75
7	19	19	35	21	13	73	106	108	26	17	43	60
8	44	19	33	20	13	52	95	104	32	17	42	53
9	45	19	31	19	13	45	87	98	38	16	58	51
10	36	26	29	18	13	40	83	92	60	18	53	72
11	29	32	29	17	13	36	79	85	67	39	34	73
12	33	32	35	17	16	33	77	76	80	45	27	70
13	46	29	45	17	200	29	114	102	89	35	23	184
14	44	27	46	16	600	29	136	134	79	25	21	207
15	37	33	49	16	800	59	185	119	56	22	21	241
16	31	35	35	16	962	104	224	95	44	20	18	165
17	27	34	29	15	905	92	217	78	151	17	17	114
18	25	31	25	15	746	70	188	69	300	16	17	85
19	25	31	23	15	844	57	156	64	267	15	15	69
20	23	60	22	15	854	64	138	57	167	14	14	59
21	23	117	22	15	665	116	122	51	97	13	15	52
22	23	102	21	14	506	122	114	49	64	13	17	47
23	23	87	21	14	387	116	199	45	52	13	17	45
24	23	91	21	14	346	143	267	44	44	18	16	89
25	23	78	21	14	298	223	225	125	37	19	14	253
26	23	64	20	14	222	252	169	192	33	20	13	264
27	21	53	20	14	164	248	135	139	34	21	27	224
28	20	66	20	14	125	202	119	98	32	19	34	160
29	20	135	20	13	125	163	109	73	27	16	34	108
30	20	106	19	13	---	114	327	60	24	14	132	84
31	19	---	19	13	---	124	---	52	---	13	89	---
TOTAL	799	1440	1025	509	8914	3063	4364	3666	2113	608	1232	3891
MEAN	25.8	48.0	33.1	16.4	307	98.8	145	118	70.4	19.6	39.7	130
MAX	46	135	82	22	962	252	327	435	300	45	141	342
MIN	15	19	19	13	13	29	77	44	24	13	13	45
CFSM	.24	.44	.30	.15	2.79	.90	1.32	1.07	.64	.18	.36	1.18
IN.	.27	.49	.35	.17	3.01	1.04	1.48	1.24	.71	.21	.42	1.32
CAL YR 1983	TOTAL	29953.9	MEAN 82.1	MAX 736	MIN 9.9	CFSM .75	IN 10.13					
WTR YR 1984	TOTAL	31624.0	MEAN 86.4	MAX 962	MIN 13	CFSM .79	IN 10.69					

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 upstream from bridge on County Trunk Highway JJ, just west of the Manitowoc city limits and 6.6 mi upstream from mouth.

DRAINAGE AREA.--526 mi².

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 National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--12 years, 320 ft³/s, 8.26 in/yr.

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

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Feb. 19	--	about *3,200	--	May 1	1930	1,200	7.40
Feb. 22	1330	ice jam	*11.16				

minimum discharge, 31 ft³/s Aug. 21, gage height, 3.95 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 2 to Feb. 23 and Feb. 28 to Mar. 14.)

3.9	28	6.0	540
4.1	51	7.0	980
4.5	114	8.0	1,600
5.0	224	9.0	2,410
		10.0	3,460

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	85	303	47	38	1100	652	1100	331	282	54	75
2	73	84	250	47	38	1100	628	1090	291	245	52	159
3	73	83	230	48	39	1100	502	958	260	212	51	163
4	70	82	210	50	40	1100	557	945	244	184	51	188
5	67	82	200	54	41	880	538	938	214	160	50	193
6	64	82	190	54	40	800	522	902	195	144	54	180
7	70	81	180	52	39	740	491	860	188	134	55	180
8	84	79	170	50	38	670	449	849	188	124	61	180
9	82	78	160	48	38	560	414	826	197	116	65	190
10	82	80	140	47	39	490	387	768	221	121	63	210
11	84	97	130	46	41	430	372	705	234	132	59	210
12	100	121	140	45	60	390	359	668	232	133	55	200
13	160	116	150	44	700	340	377	664	263	135	49	170
14	160	119	160	44	1300	300	391	649	269	132	44	160
15	160	128	160	43	1900	402	439	615	258	131	43	170
16	150	135	130	43	2500	391	490	571	235	131	40	160
17	150	146	110	42	2400	292	521	533	390	120	38	160
18	150	146	100	42	2300	297	535	493	752	108	36	150
19	145	148	88	42	2800	313	532	455	601	99	34	140
20	134	188	76	41	2600	319	525	409	540	93	33	130
21	127	262	70	41	2400	349	491	365	526	81	32	120
22	127	286	64	41	2100	280	481	330	516	75	36	120
23	127	282	60	40	1800	305	637	307	506	75	37	110
24	127	303	56	40	1740	381	666	287	501	76	39	100
25	127	315	54	40	1690	485	656	392	482	73	37	160
26	124	283	52	39	1620	537	640	476	453	83	35	210
27	113	289	50	39	1510	587	598	451	428	76	42	220
28	109	328	49	39	1200	663	585	435	396	67	42	210
29	105	385	48	39	960	671	599	420	356	63	48	190
30	96	332	48	38	---	687	869	396	319	60	63	190
31	88	---	47	38	---	677	---	366	---	58	61	---
TOTAL	3405	5225	3875	1363	32011	17286	15993	19223	10595	3723	1459	4998
MEAN	110	174	125	44.0	1104	558	533	620	353	120	47.1	167
MAX	160	385	303	54	2800	1100	869	1100	752	282	65	220
MIN	64	78	47	38	38	280	359	287	188	58	32	75
CFSM	.21	.33	.24	.08	2.10	1.06	1.01	1.18	.67	.23	.09	.32
IN.	.24	.37	.27	.10	2.26	1.22	1.13	1.36	.75	.26	.10	.35

CAL YR 1983 TOTAL 133752 MEAN 366 MAX 1700 MIN 33 CFSM .70 IN 9.46
WTR YR 1984 TOTAL 119156 MEAN 326 MAX 2800 MIN 32 CFSM .62 IN 8.43

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, PER- CENT SATUR- ATION (001625)	STRPP- TOCOCCT FEC/L, KF AGAR (COLS. PER 100 ML) (001673)	FABD- NESS (MG/L AS AC03) (000900)
DEC , 1983												
20...	1530	76	925	8.1	.0	33	14.9	--	--	F32	300	440
MAR , 1984												
27...	1400	588	525	8.3	5.0	7.2	13.8	745	111	F42	240	250
JUN												
19...	1130	601	568	8.2	23.0	21	8.1	770	91	--	--	280
SEP												
20...	1445	130	650	8.4	20.0	7.4	10.7	--	--	--	--	340

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00030)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAW (MG/L AS CAC03) (00410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00605)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RINE, DIS- SOLVED (MG/L AS CL) (00940)
DEC , 1983											
20...	81	95	50	21	0	.4	6.0	363	5.6	84	48
MAR , 1984											
27...	55	55	27	13	10	.4	5.7	194	1.9	44	26
JUN											
19...	54	62	30	9.4	7	.3	4.8	225	2.7	34	24
SEP											
20...	62	72	38	21	12	.5	5.9	275	2.1	41	40

DATE	ILUO- FIDIN, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, FESIDIN, AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHOC- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)
DEC , 1983											
20...	.10	13	582	540	119	2.1	.160	1.7	.200	.160	.160
MAR , 1984											
27...	.10	6.0	334	290	530	1.6	.180	1.4	.140	.090	.070
JUN											
19...	.10	11	404	310	656	2.9	.140	2.6	.210	.170	.150
SEP											
20...	.10	12	438	400	154	<.10	.030	1.5	.170	.120	.020

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

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085427 MANITOWOC RIVER AT MANITOWOC, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DEC , 1983											
20...	1530	76	10	1	49	<.5	3	7	<3	8	74
MAR , 1984											
27...	1400	588	<10	1	29	<.5	<1	<1	<3	3	110
JUN											
19...	1130	601	30	1	39	<.5	2	<1	<3	2	110
SEP											
20...	1445	130	<10	2	38	<.5	1	<1	<3	4	41

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
DEC , 1983											
20...	1	<4	18	.1	<10	14	<1	<1	260	<6	94
MAR , 1984											
27...	1	6	35	.1	<10	5	<1	<1	110	<6	12
JUN											
19...	7	7	15	.1	<10	3	<1	<1	140	<6	15
SEP											
20...	1	4	18	.1	<10	2	<1	<1	210	<6	5

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT , 1983							
18...	1535	149	725	12.0	--	--	--
DEC							
06...	1600	158	425	.5	--	--	--
20...	1530	76	925	.0	158	32	73
MAR , 1984							
07...	1306	698	500	.5	--	--	--
27...	1400	588	525	5.0	16	25	83
APR							
10...	1530	371	515	12.0	--	--	--
MAY							
21...	1543	332	605	22.0	--	--	--
JUN							
19...	1130	601	568	23.0	57	92	93
JUL							
10...	1352	112	650	23.5	--	--	--
SEP							
06...	1000	178	510	15.0	--	--	--
20...	1445	130	650	20.0	25	8.8	68

STREAMS TRIBUTARY TO LAKE MICHIGAN

435152088123100 WOLF LAKE NEAR MT. CALVARY, WI

LOCATION.--Lat 43°51'52", long 88°12'31", in SW 1/4 SE 1/4 Sec.10, T.16 N., R.19 E., Fond du Lac County,
Hydrologic Unit 04030101, 3.2 miles northeast of Mt. Calvary.

DRAINAGE AREA.--3.43 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--November 17, 1983 to September 30, 1984.

REMARKS.--Lake stages read on west side of lake by William Krupp.

EXTREMES FOR CURRENT YEAR.--Maximum stage observed during year, 5.92 ft Feb. 19; minimum observed 4.83 ft
Aug. 21.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	5.27		5.22	---	---	5.49	5.06	5.05	5.06	5.07
2		---	5.23		---	---	---	5.49	5.04	5.04	5.05	5.12
3		---	5.21		---	---	---	5.51	5.04	5.02	5.03	5.11
4		---	5.19		---	---	---	5.53	5.03	5.02	5.02	5.12
5		---	5.19		---	---	---	5.49	5.02	5.00	5.01	5.11
6		---	5.17		---	---	---	5.47	5.04	4.98	5.01	5.09
7		---	5.17		---	---	5.40	5.45	5.03	4.97	5.00	5.08
8		---	5.14		---	---	---	5.41	5.03	4.97	5.04	5.05
9		---	5.13		---	---	---	5.36	5.02	4.99	5.02	5.03
10		---	5.11		---	---	---	5.32	5.16	5.01	5.01	5.09
11		---	5.10		---	---	---	5.31	5.14	5.24	4.99	5.12
12		---	5.13		---	---	---	5.31	5.12	5.25	4.96	5.11
13		---	5.16		---	---	5.17	5.31	5.09	5.24	4.95	5.10
14		---	5.19		---	---	---	5.29	5.02	5.24	4.93	5.14
15		---	5.21		---	---	---	5.25	5.05	5.22	4.92	5.12
16		---	5.21		---	---	5.16	5.22	5.02	5.21	4.91	5.11
17		5.05	5.19		---	---	---	5.19	5.18	5.19	4.89	5.10
18		5.03	5.17		---	---	---	5.17	5.20	5.17	4.88	5.09
19		5.15	5.18		5.92	---	5.14	5.14	5.21	5.15	4.86	5.07
20		5.19	5.18		5.90	---	---	5.13	5.21	5.13	4.84	5.05
21		5.18	5.17		---	---	---	5.11	5.20	5.13	4.83	5.04
22		5.18	5.17		5.86	---	---	5.08	5.19	5.13	5.00	5.01
23		5.19	5.17		---	---	---	5.06	5.17	5.12	4.98	4.99
24		5.22	5.18		---	---	5.22	5.06	5.15	5.12	4.96	5.09
25		5.21	---		---	5.18	---	5.12	5.13	5.09	4.95	5.21
26		5.19	5.18		---	---	---	5.13	5.10	5.13	5.07	5.19
27		5.19	5.18		---	---	5.26	5.12	5.10	5.12	5.08	5.13
28		5.24	5.17		---	---	---	5.11	5.10	5.11	5.05	5.09
29		5.26	5.17		---	---	---	5.11	5.08	5.10	5.10	5.05
30		5.28	5.17		---	---	5.46	5.09	5.07	5.09	5.09	5.00
31		---	5.21		---	5.36	---	5.08	---	5.07	5.08	---
MEAN		---	---		---	---	---	5.26	5.10	5.11	4.99	5.09
MAX		---	---		---	---	---	5.53	5.21	5.25	5.10	5.21
MIN		---	---		---	---	---	5.06	5.02	4.97	4.83	4.99

STREAMS TRIBUTARY TO LAKE MICHIGAN

435152088123100 WOLF LAKE NEAR MT. CALVARY, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 20 to August 28, 1984.

REMARKS.--Lake sampled near center at a depth of 47 feet. Complete depth profiles for specific conductance and pH are available in District office files.

WATER QUALITY DATA, FEBRUARY 20 TO AUGUST 28, 1984
(Milligrams per liter unless otherwise indicated)

	Feb. 20		Apr. 16		June 17		July 13		Aug. 28	
Depth of sample (ft)	3	44	3	44	3	44	3	44	3	44
Specific conductance (umhos)	500	570	516	519	540	570	501	542	495	560
pH	8.1	7.6	8.4	8.4	8.5	7.8	8.7	7.4	8.5	7.5
Water temperature (°C)	2.5	3.6	6.4	6.4	21.2	9.0	25.6	9.2	24.2	9.0
Color (Pt-Co. scale)	--	--	35	45	--	--	--	--	--	--
Turbidity (NTU)	--	--	1.5	1.0	--	--	--	--	--	--
Secchi-disc (meters)	--	--	--	1.9	--	2.6	--	2.1	--	3.1
Dissolved oxygen	10.3	0.5	13.9	13.4	8.0	0	9.9	0	9.3	0
Hardness, as CaCO ₃	--	--	280	280	--	--	--	--	--	--
Calcium, dissolved (Ca)	--	--	53	53	--	--	--	--	--	--
Magnesium, dissolved (Mg)	--	--	35	36	--	--	--	--	--	--
Sodium, dissolved (Na)	--	--	5.2	5.3	--	--	--	--	--	--
Potassium, dissolved (K)	--	--	2.8	2.9	--	--	--	--	--	--
Alkalinity as CaCO ₃	--	--	235	233	--	--	--	--	--	--
Sulfate, dissolved (SO ₄)	--	--	41	42	--	--	--	--	--	--
Chloride, dissolved (Cl)	--	--	18	18	--	--	--	--	--	--
Silica, dissolved (SiO ₂)	--	--	6.9	7.0	--	--	--	--	--	--
Solids, dissolved, at 180°C	--	--	374	384	--	--	--	--	--	--
Nitrogen, nitrate, total (as N)	--	--	.19	.19	--	--	--	--	--	--
Nitrogen, nitrite, total (as N)	--	--	<.01	<.01	--	--	--	--	--	--
Nitrogen, ammonia, total (as N)	--	--	.25	.04	--	--	--	--	--	--
Nitrogen, organic, total (as N)	--	--	2.5	.96	--	--	--	--	--	--
Total phosphorus (as P)	--	--	.04	.03	.02	.06	.02	.17	<.01	.02
Phosphorus, ortho, diss. (as P)	--	--	<.01	<.01	--	--	--	--	--	--
Iron, dissolved (Fe) ug/L	--	--	8	7	--	--	--	--	--	--
Manganese, dissolved (Mn) ug/L	--	--	4	4	--	--	--	--	--	--
Chlorophyll a, phyto. (ug/L)	--	--	60	--	1.3	--	3.2	--	1.5	--
Chlorophyll b, phyto. (ug/L)	--	--	<.1	--	<.1	--	<.1	--	<.1	--

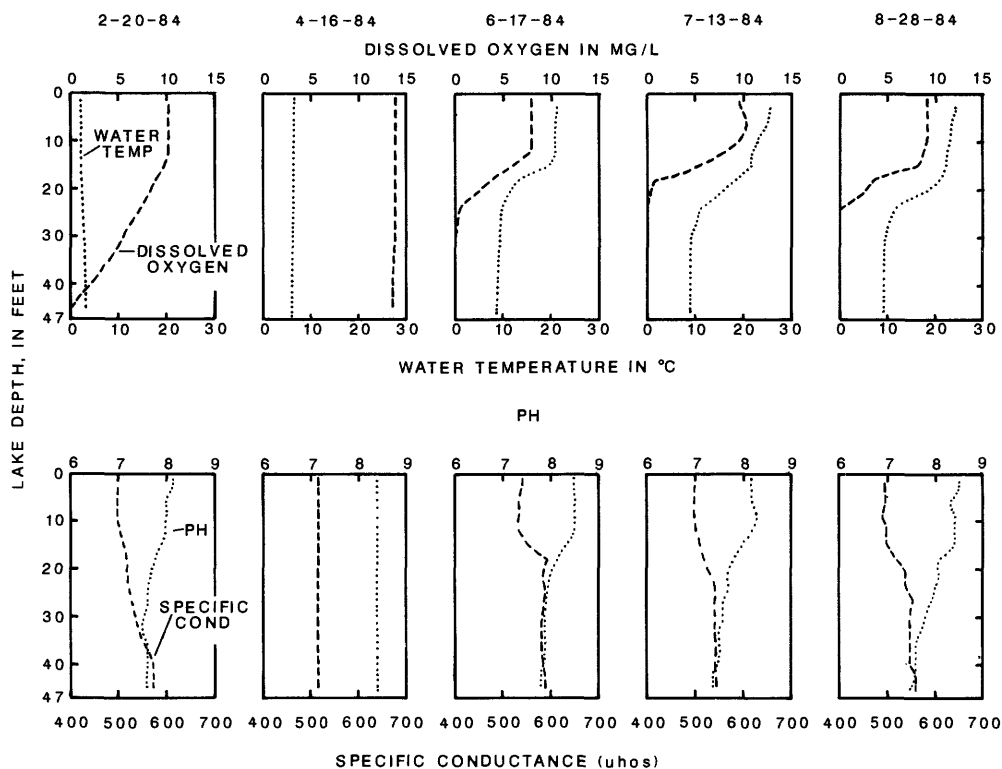


FIGURE 1. DISSOLVED OXYGEN, WATER TEMPERATURE, PH., AND SPECIFIC CONDUCTANCE DEPTH PROFILES FOR WOLF LAKE NEAR CALVARY, WIS.

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 upstream from bridge on State Highway 141, near west city limits of Sheboygan, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--418 mi².

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 National Geodetic Vertical Datum of 1929. June 1916 to June 1924, nonrecording gage at site 0.7 mi downstream at different datum. November 1950 to June 1951, nonrecording gage at site 0.3 mi downstream at datum 3.15 ft lower.

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

AVERAGE DISCHARGE.--42 years (1916-24, 1950-84), 249 ft³/s, 8.09 in/yr.

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

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Feb. 15	0600	About 3,000	A*9.84	June 17	0945	2,480	7.09
June 10	1045	2,780	7.47				

minimum discharge, 55 ft³/s Aug. 20, 21, gage height, 1.86 ft.

A Ice jam

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 8 to Feb. 20, Mar. 1-13.)

1.8	48	4.0	620
2.0	74	5.0	1,080
2.5	163	7.0	2,360
3.0	280		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	177	158	526	120	100	540	426	1130	351	389	75	107
2	165	157	452	120	100	520	444	948	310	361	76	177
3	177	152	344	130	110	450	526	868	287	304	76	181
4	185	143	394	130	110	350	509	1020	259	184	76	168
5	175	135	342	130	100	250	418	930	217	212	76	153
6	159	133	292	130	100	200	347	824	217	223	78	136
7	152	134	237	130	98	150	270	749	267	226	79	143
8	203	133	200	130	98	140	271	665	285	214	91	148
9	212	134	190	120	100	130	277	612	284	211	93	144
10	190	144	180	120	100	130	276	550	2150	221	89	169
11	177	166	190	120	110	120	270	475	1550	271	77	170
12	196	166	210	120	120	120	283	446	1290	322	72	142
13	250	161	240	120	700	110	378	515	865	290	70	123
14	245	165	230	120	1700	194	423	589	543	246	69	122
15	238	187	200	120	2100	302	501	524	447	217	67	126
16	228	199	180	120	2000	452	726	464	405	190	66	131
17	230	198	160	120	1800	366	734	430	1970	164	66	125
18	228	192	150	110	1900	275	669	421	2210	160	59	110
19	232	215	140	110	2000	213	588	403	1910	155	58	111
20	232	318	130	110	1900	262	546	371	1450	140	57	118
21	227	469	130	110	1800	371	489	343	973	131	59	109
22	225	401	120	110	1700	333	468	300	743	121	70	97
23	226	362	120	110	1500	302	916	225	719	112	92	94
24	220	399	120	110	1300	433	1160	225	702	106	89	98
25	212	395	120	110	1100	608	870	364	647	95	81	147
26	205	346	120	110	940	558	683	628	588	100	74	175
27	192	318	120	110	820	483	582	512	574	101	109	168
28	187	625	120	100	630	457	540	442	534	102	112	155
29	183	1010	120	100	595	444	523	413	473	93	96	147
30	165	738	120	100	---	421	1080	384	436	83	141	150
31	160	---	120	100	---	410	---	319	---	79	131	---
TOTAL	6253	8453	6317	3600	25731	10094	16193	17089	23656	5823	2524	4144
MEAN	202	282	204	116	887	326	540	551	789	188	81.4	138
MAX	250	1010	526	130	2100	608	1160	1130	2210	389	141	181
MIN	152	133	120	100	98	110	270	225	217	79	57	94
CFSM	.48	.68	.49	.28	2.12	.78	1.29	1.32	1.89	.45	.70	.33
IN.	.56	.75	.56	.32	2.29	.90	1.44	1.52	2.11	.52	.22	.37
CAL YR 1983	TOTAL	138461	MEAN	379	MAX	2490	MIN	59	CFSM	.91	IN	12.32
WTR YR 1984	TOTAL	129877	MEAN	355	MAX	2210	MIN	57	CFSM	.85	IN	11.56

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086488 MUD LAKE OUTLET CHANNEL NEAR DECKER CORNER, WI

LOCATION.--Lat 43°22'38", long 88°02'08", in NW 1/4 SW 1/4 sec. 31, T.11 N., R.21 E., Ozaukee County, Hydrologic Unit 04040003, on culvert deck of abandoned private road, 0.25 mi east of County Trunk Y, 1.7 mi northeast of Decker Corner, and 0.40 mi downstream of Mud Lake.

DRAINAGE AREA.--7.36 mi².

PERIOD OF RECORD.--October 1982 to present.

GAGE.--Water-stage recorder. Altitude of gage is 860 ft, from topographic map.

REMARKS.--Records fair except for winter period, Dec. 5 to Feb. 7, end period of no gage-height record, Apr. 29 to June 19, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52 ft³/s Apr. 9-11, 1983, gage height, 2.31 ft; minimum, 0.10 ft³/s Oct. 30-31, 1982, gage height, 0.38 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19 ft³/s Apr. 24-26, gage height, 1.59 ft, but may have been greater during the period of no gage-height record, maximum gage height, 1.92 ft July 10, backwater from weeds; minimum daily, 0.26 ft³/s Feb. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	2.1	9.9	2.8	.38	12	7.5	10	2.6	13	4.9	1.5
2	.46	2.2	10	2.7	.36	10	8.4	9.0	2.1	12	4.5	1.9
3	.69	2.2	10	2.5	.35	9.1	9.2	8.0	1.8	11	4.0	2.1
4	.73	2.2	10	2.3	.32	8.2	9.6	7.4	1.6	11	4.0	2.1
5	.60	2.0	9.3	2.1	.29	7.4	10	6.6	1.5	9.9	3.9	2.2
6	.52	1.8	9.0	2.0	.26	6.4	10	5.4	2.3	9.5	3.4	1.4
7	.80	1.9	8.8	1.9	.33	5.7	10	4.4	3.3	8.7	3.2	1.4
8	1.3	1.9	8.6	1.8	.63	5.0	10	3.5	3.5	8.1	4.3	1.5
9	1.1	2.0	8.4	1.6	.69	5.6	11	3.3	3.2	11	4.2	1.4
10	1.1	2.1	8.0	1.5	.45	3.8	10	3.2	8.6	13	3.6	1.4
11	1.1	1.9	7.6	1.4	.35	4.4	9.0	3.0	12	18	3.2	1.5
12	1.7	2.0	7.0	1.4	1.9	2.7	7.0	3.1	11	18	2.8	1.6
13	1.7	1.9	6.6	1.3	8.0	2.6	9.8	3.5	8.0	17	2.3	1.5
14	1.6	2.0	6.2	1.2	3.1	2.4	9.8	3.8	3.5	17	2.1	1.4
15	1.7	2.4	5.7	1.1	3.0	2.9	11	3.2	2.7	16	1.9	1.4
16	1.9	2.1	5.2	1.0	3.1	3.4	12	2.7	3.5	15	1.8	1.4
17	1.7	2.0	4.9	.98	3.3	3.1	13	2.3	5.3	14	1.8	1.3
18	1.7	1.9	4.7	.90	4.6	2.7	13	2.0	8.0	13	1.7	1.3
19	1.7	2.4	4.5	.84	9.5	2.6	12	1.9	6.4	12	1.7	1.3
20	1.9	3.2	4.2	.78	13	2.7	13	1.9	10	11	1.6	1.2
21	2.0	2.9	4.1	.74	16	2.8	9.2	1.8	17	11	1.6	1.2
22	2.3	3.3	4.0	.70	17	3.0	9.5	1.7	17	9.9	1.6	1.2
23	2.7	4.5	3.8	.66	18	2.9	12	1.9	16	9.3	1.5	1.2
24	2.5	3.7	3.6	.62	18	2.9	15	2.4	16	9.2	1.5	1.2
25	2.5	4.0	3.5	.58	18	3.0	13	4.2	15	8.6	1.5	1.6
26	2.5	4.3	3.4	.54	17	3.1	13	6.0	14	8.1	1.5	2.4
27	2.4	4.6	3.2	.50	16	3.3	12	5.2	15	7.8	1.5	2.0
28	2.0	8.9	3.1	.46	14	3.9	6.1	5.1	14	7.1	1.5	1.7
29	2.0	8.7	3.8	.43	13	4.7	5.9	5.3	14	6.5	1.5	1.6
30	2.1	9.8	2.9	.42	---	5.5	9.0	4.6	13	5.9	1.5	1.4
31	2.0	---	2.8	.40	---	6.5	---	3.5	---	5.5	1.5	---
TOTAL	49.53	96.9	186.8	38.15	200.91	144.3	310.0	129.9	251.9	347.1	77.6	46.3
MEAN	1.60	3.23	6.03	1.23	6.93	4.65	10.3	4.19	8.40	11.2	2.50	1.54
MAX	2.7	9.8	10	2.8	18	12	15	10	17	18	4.9	2.4
MIN	.46	1.8	2.8	.40	.26	2.4	5.9	1.7	1.5	5.5	1.5	1.2
CFSM	.22	.44	.82	.17	.94	.63	1.40	.57	1.14	1.52	.34	.21
IN.	.25	.49	.94	.19	1.02	.73	1.57	.66	1.27	1.75	.39	.23

CAL YR 1983 TOTAL 2411.58 MEAN 6.61 MAX 52 MIN .16 CFSM .90 IN 12.19
WTR YR 1984 TOTAL 1879.39 MEAN 5.13 MAX 18 MIN .26 CFSM .70 IN 9.50

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 upstream from bridge on State Highway 60, 1.9 mi north of Cedarburg and 6.6 mi upstream from mouth.

DRAINAGE AREA.--120 mi².

PERIOD OF RECORD.--August 1930 to September 1970, July 1973 to September 1981, August 1983 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 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, which are fair.

AVERAGE DISCHARGE.--49 years, 68.3 ft³/s, 7.73 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, about 3,600 ft³/s Mar. 30, 1960, gage height, 12.25 ft, from graph based on gage readings, backwater from ice; minimum observed, 0.20 ft³/s Aug. 9-12, 1936.

EXTREMES FOR CURRENT PERIOD.--August to September 1983: Maximum discharge, 152 ft³/s Aug. 18, gage height, 6.11 ft; minimum daily, 13 ft³/s Aug. 10, 15, 16.

Water year 1984: Peak discharges above base of 400 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Feb. 16	0200	about *1,000	A*9.48	June 19	1145	539	7.41
June 11	1600	510	7.33	July 10	2315	882	8.23

minimum daily discharge, 17 ft³/s Aug. 17-21.

A Affected by ice.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation effected by ice Nov. 30 to Feb. 19 and Mar. 1-14.)

5.2	15	6.5	246
5.4	34	7.0	395
5.7	74	8.0	778
6.0	128	9.0	1,270

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

[illegible]

STREAMS TRIBUTARY TO LAKE MICHIGAN
04086500 CEDAR CREEK NEAR CEDARBURG, WI--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	47	240	49	30	120	107	382	110	85	26	25
2	37	49	170	50	31	100	104	352	90	79	25	35
3	37	52	130	52	32	86	103	298	77	71	24	39
4	46	52	100	54	33	74	101	286	68	64	23	35
5	49	50	98	56	32	68	99	272	63	60	26	30
6	45	49	94	56	31	66	97	221	59	59	26	26
7	41	48	90	54	29	64	91	172	118	59	24	26
8	66	48	84	54	28	62	87	140	157	53	34	26
9	85	48	80	52	28	60	84	121	114	154	54	26
10	70	48	78	50	27	60	80	121	369	390	37	26
11	60	51	80	49	27	58	78	115	483	701	27	29
12	63	51	110	48	40	56	82	105	466	743	24	27
13	105	49	120	47	360	54	133	113	343	696	23	26
14	93	48	90	45	500	54	144	144	212	517	21	25
15	75	50	76	44	800	73	159	124	128	362	20	28
16	66	55	70	42	900	143	230	108	104	232	18	30
17	58	55	66	41	700	135	241	98	209	130	17	29
18	54	54	64	40	580	91	211	91	461	102	17	27
19	50	57	62	39	480	90	174	85	529	84	17	25
20	48	111	58	38	462	83	149	83	490	71	17	23
21	48	168	56	37	424	111	128	78	374	63	17	21
22	48	140	56	36	359	107	117	77	269	56	20	22
23	63	124	54	35	308	103	203	75	252	51	21	21
24	76	146	54	34	267	147	279	69	264	49	20	20
25	69	128	52	34	229	166	287	135	221	47	20	47
26	63	102	52	33	186	158	248	256	154	45	20	83
27	56	91	52	32	151	143	200	240	188	46	21	52
28	57	276	50	32	146	132	199	202	186	45	24	42
29	53	364	50	31	129	125	188	226	123	39	23	37
30	48	320	49	31	---	120	345	204	101	34	27	34
31	47	---	49	30	---	111	---	147	---	29	30	---
TOTAL	1816	2931	2534	1325	7349	3020	4748	5140	6782	5216	743	942
MEAN	58.6	97.7	81.7	42.7	253	97.4	158	166	226	168	24.0	31.4
MAX	105	364	240	56	900	166	345	382	529	743	54	83
MIN	37	47	49	30	27	54	78	69	59	29	17	20
CFSM	.49	.81	.68	.36	2.11	.81	1.32	1.38	1.88	1.40	.20	.26
IN.	.56	.91	.79	.41	2.28	.94	1.47	1.59	2.10	1.62	.23	.29
WTR YR 1984	TOTAL	42546	MEAN	116	MAX	900	MIN	17	CFSM	.97	IN	13.19

STREAMS TRIBUTARY TO LAKE MICHIGAN
04086600 MILWAUKEE RIVER NEAR CEDARBURG, WI

LOCATION.--Lat 43°16'49", long 87°56'30", in NW 1/4 NW 1/4 sec.6, T.9 N., R.22 E., Ozaukee County, Hydrologic Unit 04040003, on right bank 60 ft downstream from Pioneer Road bridge, 2.6 mi southeast of Cedarburg, 1.0 mi west of I-43, and 26.25 mi upstream from mouth.

DRAINAGE AREA.--607 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 653.558 ft, National Geodetic Vertical Datum of 1929 (Southeastern Wisconsin Regional Planning Commission bench mark).

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,140 ft³/s Apr. 3, 1982, gage height, 11.18 ft; maximum gage height, 11.71 ft Mar. 18, 1982 (backwater from ice); minimum daily, 88 ft³/s Aug. 28, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,910 ft³/s June 19, gage height, 9.89 ft; minimum daily, 120 ft³/s Aug. 16.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1, 2, June 18-21, and Aug. 14-26; stage-discharge relation affected by ice Dec. 7-11, Dec. 16 to Feb. 23, and Mar. 1-19.)

5.4	96	7.0	928
5.7	212	8.0	1,596
6.0	356	10.0	3,120

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	226	947	210	180	540	636	1350	570	459	182	305
2	197	237	834	210	190	490	583	1270	447	428	173	349
3	201	243	640	230	190	440	552	1190	413	398	165	254
4	209	240	669	240	190	400	552	1250	393	338	162	273
5	248	233	568	260	180	380	542	1190	383	345	209	263
6	240	224	483	250	180	350	530	1080	360	329	155	245
7	249	226	400	250	180	340	509	956	516	332	178	240
8	302	225	340	240	170	330	486	823	687	302	243	229
9	348	222	290	230	180	320	468	743	534	476	288	210
10	332	228	320	230	180	310	435	708	1300	979	235	218
11	305	242	500	220	200	290	425	636	2070	1580	192	238
12	321	268	584	210	380	290	453	580	2020	1470	171	231
13	402	277	642	210	1400	300	592	619	1800	1300	156	228
14	495	282	651	210	1700	300	648	673	1520	1000	147	230
15	431	286	642	210	1900	330	754	629	1280	778	140	233
16	394	295	520	210	2100	500	1030	607	1070	634	120	242
17	372	300	390	210	2100	520	1040	579	1590	479	126	230
18	341	296	280	210	2000	540	989	555	2590	404	129	218
19	322	327	250	210	2100	470	896	465	2860	365	129	206
20	299	454	240	210	2000	465	828	426	2650	335	125	190
21	282	574	230	200	1900	503	740	416	2190	303	124	300
22	303	571	220	200	1700	539	706	411	1850	243	131	233
23	332	600	220	200	1600	547	909	390	1690	263	131	165
24	356	674	210	200	1400	642	1100	365	1350	263	134	168
25	338	541	210	210	1210	702	1090	567	1150	297	131	251
26	320	503	210	200	1080	730	1050	945	925	219	132	351
27	306	476	210	190	925	781	951	749	799	261	162	324
28	281	933	210	190	752	790	916	904	786	265	148	286
29	250	1160	210	190	656	778	860	914	612	238	153	188
30	243	1100	210	180	---	734	1210	795	551	216	222	158
31	231	---	210	180	---	675	---	678	---	198	276	---
TOTAL	9461	12463	12540	6600	28923	15326	22480	23463	36956	15497	5169	7256
MEAN	305	415	405	213	997	494	749	757	1232	500	167	242
MAX	495	1160	947	260	2100	790	1210	1350	2860	1580	288	351
MIN	197	222	210	180	170	290	425	365	360	198	120	158
CFSM	.50	.68	.67	.35	1.64	.81	1.23	1.25	2.03	.82	.28	.40
IN.	.58	.76	.77	.40	1.77	.94	1.38	1.44	2.26	.95	.32	.44
CAL YR 1983	TOTAL	191047	MEAN 523	MAX 2930	MIN 99	CFSM .86	IN 11.71					
WTR YR 1984	TOTAL	196134	MEAN 536	MAX 2860	MIN 120	CFSM .88	IN 12.02					

STREAMS TRIBUTARY TO LAKE MICHIGAN
04086600 MILWAUKEE RIVER NEAR CEDARBURG, WI--CONTINUED
WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1982 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: July 1982 to current year.

INSTRUMENTATION.--Automatic pumping sampler since July 1, 1982.

REMARKS.--Sediment records are fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 174 mg/l July 11, 1984; minimum daily mean, 1 mg/l Oct. 25, 26, 1982. Maximum observed, 334 mg/l July 11, 1984; minimum observed, 1 mg/l on several days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 864 tons, June 18, 1984; minimum daily, 1.7 tons Oct. 25, 26, 1982.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 174 mg/l July 11; minimum daily mean, 6 mg/l Oct. 23-25, JAN. 6-14. Maximum observed, 334 mg/l July 11; minimum observed, 5 mg/l Oct. 14.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 864 tons, June 18; minimum daily, 3.4 tons Jan. 12-14.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	5.7	8	5.0	22	56	7	4.0	9	4.4	14	20
2	10	5.3	9	5.8	14	32	7	4.0	9	4.6	14	19
3	10	5.4	9	5.9	17	29	7	4.3	9	4.6	15	18
4	10	5.6	10	6.3	34	61	7	4.5	9	4.6	15	16
5	10	6.7	10	6.3	62	95	7	4.9	9	4.4	16	16
6	10	6.5	10	6.4	51	66	6	4.0	9	4.4	16	15
7	10	6.7	11	6.8	36	45	6	4.0	9	4.4	16	15
8	11	9.2	13	7.7	25	34	6	3.9	9	4.1	17	15
9	13	12	15	8.8	18	35	6	3.7	10	4.9	17	15
10	16	14	17	10	23	46	6	3.7	10	4.9	18	15
11	19	15	18	12	27	42	6	3.6	10	5.4	18	14
12	19	16	15	11	41	69	6	3.4	14	14	19	15
13	16	17	12	9.1	100	173	6	3.4	38	144	19	15
14	10	13	10	7.8	53	94	6	3.4	46	211	20	16
15	12	14	11	8.4	29	50	7	3.9	55	282	25	22
16	13	14	12	9.2	17	24	7	3.9	43	244	39	52
17	10	9.7	12	10	12	13	7	3.9	33	187	45	63
18	9	8.3	13	11	10	7.6	7	3.9	28	151	37	54
19	9	7.8	14	13	10	6.8	7	3.9	24	136	31	39
20	9	7.3	32	41	9	5.8	7	3.9	21	113	27	34
21	9	6.9	26	39	9	5.6	7	3.8	18	105	23	31
22	8	6.9	18	27	9	5.3	7	3.8	16	79	19	28
23	6	5.6	15	25	9	5.3	7	3.8	14	60	16	24
24	6	5.8	13	24	9	4.5	8	3.8	12	45	25	45
25	6	5.5	12	17	8	4.5	8	4.5	12	39	40	76
26	7	5.6	10	14	8	4.5	8	4.3	13	38	40	79
27	7	5.8	11	14	8	4.5	8	4.1	13	32	39	82
28	7	5.3	48	123	8	4.5	8	4.1	13	26	38	81
29	7	4.8	57	179	8	4.5	8	4.1	14	25	37	77
30	8	5.2	38	114	8	4.5	8	3.9	---	---	36	71
31	8	5.0	---	---	7	4.0	8	3.9	---	---	35	64
TOTAL	---	261.6	---	777.5	---	1035.9	---	122.3	---	1981.7	---	1146

STREAMS TRIBUTARY TO LAKE MICHIGAN
04086600 MILWAUKEE RIVER NEAR CEDARBURG, WI--CONTINUED

SUSPENDED-SEDIMENT. WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	34	58	61	224	17	26	25	31	48	23	65	53
2	33	52	62	211	9	11	24	28	48	23	64	60
3	32	48	60	192	9	11	30	32	49	22	64	44
4	31	46	57	193	17	18	31	29	50	22	63	46
5	30	44	55	177	21	22	24	23	50	28	63	45
6	30	42	53	154	17	16	19	17	58	24	62	41
7	29	40	52	135	37	54	20	18	71	34	56	36
8	28	37	41	92	28	53	20	16	68	46	56	35
9	27	34	31	63	21	31	88	126	53	42	52	29
10	26	31	38	72	83	367	123	332	68	44	52	31
11	26	30	47	81	116	644	174	735	44	23	48	31
12	25	31	55	86	60	326	79	316	30	14	46	29
13	39	64	63	106	51	245	48	171	34	14	42	26
14	45	78	70	126	60	245	31	85	31	12	42	26
15	33	69	62	106	71	244	30	64	31	12	36	23
16	46	126	54	89	90	261	39	67	31	10	36	24
17	38	106	45	71	120	566	39	50	31	11	36	22
18	34	92	29	44	125	864	39	43	31	11	30	18
19	32	76	21	26	63	486	40	39	31	11	30	17
20	29	65	33	38	47	336	40	36	31	10	25	13
21	26	53	53	60	43	256	41	34	30	10	69	59
22	24	46	39	43	42	212	41	27	30	11	54	35
23	21	52	24	25	35	157	42	30	30	11	35	16
24	15	45	14	14	29	105	43	30	30	11	30	14
25	16	48	61	106	30	94	43	35	30	11	38	26
26	18	51	60	152	41	101	44	26	30	11	37	36
27	15	39	26	53	58	124	44	31	58	27	38	33
28	12	30	37	91	59	126	45	32	53	21	35	27
29	14	32	45	111	36	60	46	29	40	17	31	16
30	49	163	35	75	29	43	46	27	65	41	25	11
31	---	---	25	46	---	---	47	25	57	43	---	---
TOTAL	---	1728	---	3062	---	6104	---	2584	---	650	---	922
TOTAL LOAD FOR YEAR:		20375.0 TONS.										

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 downstream from Port Washington Road bridge and 6.6 mi upstream from mouth.

DRAINAGE AREA.--696 mi².

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 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 upstream at different datum.

REMARKS.--Records good except those for winter periods, which are fair. Occasional regulation caused by recreation dam approximately 1,200 ft upstream.

AVERAGE DISCHARGE.--70 years, 414 ft³/s, 8.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft³/s Mar. 20, 1918, Aug. 6, 1924, gage height, 9.00 ft 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 3,000 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Nov. 7	1030	3,050	4.95	July 10	2045	*5,880	*6.57
June 22	1530	3,280	5.10				

minimum discharge, 140 ft³/s June 9, gage height, 1.96 ft, result of regulation.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 7-10, Dec. 17 to Feb. 12, and Mar. 2-6, 9-11.)

1.9	117	3.0	756
2.0	156	4.0	1,770
2.5	412	5.0	3,120

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	294	980	240	210	604	679	1530	707	533	242	494
2	240	306	874	240	230	560	650	1430	568	461	230	332
3	232	293	745	250	220	520	595	1350	483	443	284	313
4	254	284	721	270	210	440	594	1340	440	402	213	293
5	265	279	709	280	210	430	586	1290	403	348	225	298
6	284	268	586	280	210	400	572	1180	380	479	226	283
7	298	420	450	280	200	380	555	1050	527	355	211	302
8	436	263	380	270	200	364	530	942	660	335	420	268
9	384	264	340	270	210	350	511	836	375	880	411	255
10	397	266	420	270	220	340	493	785	953	1820	314	266
11	381	267	765	270	220	330	451	747	1830	2170	250	260
12	505	287	1000	260	390	325	576	657	1910	1770	222	272
13	448	302	889	260	1410	338	643	741	1780	1470	208	264
14	534	318	970	260	1870	361	733	744	1540	1190	201	268
15	542	346	953	250	1940	483	984	741	1300	960	193	268
16	460	332	779	250	2260	576	1250	699	1110	704	187	265
17	446	337	500	250	2420	590	1250	673	1390	612	168	264
18	416	336	340	240	2300	607	1140	656	2530	493	171	254
19	384	474	300	240	2430	518	1020	622	2730	423	167	246
20	366	550	280	240	2260	583	922	516	2650	400	164	228
21	347	646	270	230	2150	575	838	510	2280	366	175	232
22	587	664	260	230	1930	636	940	519	2240	314	200	336
23	420	844	260	230	1800	638	1220	480	1830	335	159	211
24	412	758	250	240	1480	695	1250	445	1520	329	159	192
25	406	721	250	230	1320	784	1200	1090	1250	329	152	475
26	393	575	250	230	1160	788	1140	1040	1020	316	150	334
27	368	634	240	220	1040	816	1080	1000	914	286	363	379
28	339	1570	240	220	851	843	1050	1200	841	303	189	335
29	318	1520	240	220	659	822	1080	1230	702	286	171	266
30	294	1310	240	210	---	792	1770	1000	605	266	372	195
31	278	---	240	210	---	735	---	829	---	252	231	---
TOTAL	11694	15728	15721	7640	32010	17223	26302	27872	37468	19630	7028	8648
MEAN	377	524	507	246	1104	556	877	899	1249	633	227	288
MAX	587	1570	1000	280	2430	843	1770	1530	2730	2170	420	494
MIN	232	263	240	210	200	325	451	445	375	252	150	192
CFSM	.54	.75	.73	.35	1.59	.80	1.26	1.29	1.80	.91	.33	.41
IN.	.63	.84	.84	.41	1.71	.92	1.41	1.49	2.00	1.05	.38	.46
CAL YR 1983	TOTAL	220693	MEAN 605	MAX 3440	MIN 115	CFSM .87	IN 11.80					
WTR YR 1984	TOTAL	226964	MEAN 620	MAX 2730	MIN 150	CFSM .89	IN 12.13					

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.--

SUSPENDED-SEDIMENT DISCHARGE: July 1982 to current year.

REMARKS.--Sediment records are good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 471 mg/l Feb. 16, 1984; minimum daily mean, 3 mg/l Jan. 9, 1984. Maximum observed, 930 mg/l June 19, 1984; minimum observed, 3 mg/l Oct. 25, 1982, Jan. 9, 1984.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 3,200 tons June 19, 1984; minimum daily, 2.1 tons Jan. 12, 13, 1984.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 471 mg/l Feb. 16; minimum daily mean, 3 mg/l Jan. 8-13. Maximum observed, 930 mg/l June 19; minimum observed, 3 mg/l Jan. 9.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 3,200 tons June 19; minimum daily, 2.1 tons Jan. 12, 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCGI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)
DEC , 1983												
20...	1115	280	855	7.8	.0	4.0	14.6	--	--	530	130	380
MAR , 1984												
27...	1040	815	630	8.5	5.0	4.5	12.8	745	103	K16	26	270
JUN												
19...	0800	2740	439	8.0	21.5	32	7.5	769	84	--	--	200
SEP												
20...	1045	219	645	8.5	19.5	13	10.3	--	--	--	--	320

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L CAC03) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
DEC , 1983											
20...	52	84	42	29	14	.7	3.0	331	10	55	60
MAR , 1984											
27...	45	60	30	26	17	.7	3.6	229	1.4	34	47
JUN											
19...	29	47	21	9.4	9	.3	3.3	175	3.4	22	19
SEP											
20...	50	66	38	25	14	.6	2.9	272	1.6	34	46

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L SI02) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
DEC , 1983											
20...	.20	11	521	480	394	2.4	.230	1.2	.110	.090	.110
MAR , 1984											
27...	.10	6.1	372	340	819	1.8	.290	1.0	.120	.080	.050
JUN											
19...	.10	11	300	270	2220	1.6	.110	1.9	.180	.150	.140
SEP											
20...	.20	9.1	411	380	243	.96	<.010	1.2	.090	.050	.040

K RESULTS BASED ON COUNT OUTSIDE OF 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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DEC , 1983											
20...	1115	280	20	2	51	<.5	1	20	<3	5	43
MAR , 1984											
27...	1040	815	<10	3	39	<.5	1	<1	<3	3	37
JUN											
19...	0800	2740	10	2	37	<.5	5	<1	<3	5	83
SEP											
20...	1045	219	<10	3	40	<.5	1	<1	<3	3	10

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
DEC , 1983											
20...	1	<4	12	.4	<10	2	<1	<1	260	<6	120
MAR , 1984											
27...	1	8	12	.1	<10	2	<1	<1	210	<6	12
JUN											
19...	2	<4	7	.3	<10	4	<1	<1	140	<6	33
SEP											
20...	1	10	5	<.1	<10	1	<1	<1	330	<6	9

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC , 1983							
20...	1115	280	855	.0	52	39	55
MAR , 1984							
27...	1040	815	630	5.0	22	48	67

STREAMS TRIBUTARY TO LAKE MICHIGAN
04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--CONTINUED
SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)
	(MG/L)		(MG/L)		(MG/L)		(MG/L)		(MG/L)		(MG/L)	
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	29	20	12	9.5	57	150	7	4.5	7	4.0	22	36
2	28	18	11	9.1	49	116	6	3.9	7	4.2	22	33
3	27	17	11	8.7	43	86	6	4.9	7	4.2	21	29
4	26	18	11	8.4	37	72	5	5.3	8	4.5	21	25
5	25	18	11	7.9	32	62	5	3.8	8	4.5	21	24
6	25	19	10	7.2	28	45	4	3.0	8	4.5	20	22
7	24	19	115	298	24	32	4	3.0	8	4.3	20	21
8	26	32	77	54	21	25	3	2.2	9	4.9	20	19
9	23	24	65	46	19	23	3	2.2	9	5.1	20	18
10	22	23	58	41	16	22	3	2.2	9	5.3	19	17
11	21	21	51	37	81	221	3	2.2	10	6.5	19	17
12	20	27	45	35	101	282	3	2.1	52	55	19	17
13	13	16	40	33	57	136	3	2.1	155	586	18	16
14	13	18	36	31	56	151	4	2.8	98	494	18	18
15	10	14	32	30	60	156	4	2.7	225	1180	18	23
16	11	13	28	25	37	79	4	2.7	471	2890	18	28
17	12	14	25	22	32	43	4	2.7	411	2680	17	27
18	11	12	22	20	29	27	4	2.6	314	1950	17	28
19	10	11	127	219	26	21	4	2.6	204	1340	17	24
20	10	9.6	102	166	23	17	4	2.6	123	749	17	27
21	10	9.2	76	132	21	15	5	3.1	82	478	16	25
22	19	35	34	61	19	13	5	3.1	55	289	16	27
23	26	30	76	187	17	12	5	3.1	37	181	16	28
24	20	23	31	64	15	10	5	3.2	26	103	16	30
25	19	20	25	49	14	9.4	5	3.1	24	85	15	32
26	17	18	20	31	13	8.8	5	3.1	23	72	15	32
27	16	16	41	88	11	7.1	6	3.6	23	65	15	33
28	15	14	181	765	10	6.5	6	3.6	23	53	15	34
29	14	12	109	452	9	6.1	6	3.6	22	39	11	24
30	13	10	65	230	8	5.2	6	3.4	---	---	11	24
31	12	9.0	---	---	8	5.2	7	4.0	---	---	10	20
TOTAL	---	559.8	---	3166.8	---	1864.3	---	97.0	---	13341.1	---	778

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	10	18	59	245	36	69	26	38	32	21	118	208
2	10	18	45	175	27	42	25	31	31	19	60	54
3	10	16	34	126	27	35	28	33	43	39	74	63
4	9	14	31	111	28	33	32	34	47	27	72	57
5	9	14	32	111	28	31	29	27	34	21	70	56
6	11	17	33	106	31	33	42	52	25	15	68	52
7	12	18	35	98	53	84	39	38	28	16	66	54
8	12	17	36	92	60	116	26	24	50	59	64	46
9	12	17	38	85	36	40	143	402	55	61	63	43
10	12	16	39	83	85	290	182	1600	43	37	61	44
11	20	24	41	82	129	632	257	1570	31	21	59	41
12	50	93	42	75	67	346	122	589	38	23	57	42
13	62	108	44	89	52	249	69	274	37	21	56	40
14	56	111	45	91	41	171	56	181	34	19	54	39
15	59	156	43	86	32	112	57	146	32	17	53	38
16	59	197	40	75	24	74	55	104	30	15	51	37
17	46	156	38	69	40	165	53	88	27	12	50	36
18	35	108	36	64	115	785	51	68	26	12	49	33
19	25	68	35	59	432	3200	50	57	24	11	47	31
20	20	50	33	46	338	2440	48	52	22	9.8	45	28
21	20	45	47	65	111	695	46	46	24	12	46	29
22	32	90	50	70	37	217	45	38	40	22	56	52
23	41	137	37	48	22	107	43	39	29	13	35	20
24	29	98	25	31	26	105	42	37	28	12	20	11
25	27	88	98	350	30	103	41	36	27	11	182	309
26	25	77	49	137	35	97	39	34	26	10	73	65
27	23	69	29	80	35	86	38	29	112	252	56	57
28	22	62	85	311	33	76	37	30	49	25	34	31
29	30	99	64	218	31	59	36	28	32	15	25	18
30	82	399	34	91	28	46	34	25	129	168	18	9.4
31	---	---	29	64	---	---	33	23	55	34	---	---
TOTAL	---	2400	---	3433	---	10538	---	5773	---	1049.8	---	1643.4
TOTAL LOAD FOR YEAR:			44644.2 TONS.									

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087010 MILWAUKEE RIVER ABOVE NORTH AVENUE DAM AT MILWAUKEE, WI

LOCATION.--Lat 43°03'32", long 87°53'43", in NW 1/4 NE 1/4 sec.21, T.7 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, located 200 ft upstream from North Avenue dam on the right bank and 500 ft downstream from North Avenue bridge, and about 3.1 mi upstream from mouth.

DRAINAGE AREA.--702 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 14, 1982, to current year. Partial record June 29, 1979, to Dec. 5, 1979.

GAGE.--Water-stage recorder. Altitude of gage is 590 ft, from topographic map.

REMARKS.--Records are good for discharge greater than 800 ft³/s, fair for discharges between 800 ft³/s and 500 ft³/s, and poor for discharges less than 500 ft³/s. Occasional regulation caused by recreational dam 4.0 mi upstream and North Avenue dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,380 ft³/s July 10, 1984, gage height, 5.34 ft; minimum daily discharge, 114 ft³/s Aug. 23, 1983.

EXTREMES FOR CURRENT YEAR: Maximum discharge, 6,380 ft³/s July 10, gage height, 5.34 ft; minimum daily discharge, 146 ft³/s Aug. 17.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 18 to Feb. 11 and Mar. 2-14;
stage-discharge relation does not apply during the period Apr. 9-11 due to
manipulation of gates on North Avenue dam.)

2.2	127	3.0	994
2.4	273	4.0	2,860
2.7	590	5.0	5,390

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	286	997	240	220	583	683	1630	711	536	211	499
2	228	302	882	240	230	560	642	1500	554	443	192	294
3	218	273	720	250	230	520	574	1410	453	423	249	288
4	243	269	722	270	220	440	574	1380	402	379	180	251
5	242	266	726	280	220	430	573	1350	364	311	174	262
6	255	258	578	280	220	400	557	1240	356	482	191	253
7	265	505	450	280	220	380	548	1100	516	310	179	271
8	437	244	380	270	210	370	518	978	638	290	432	235
9	345	222	340	270	210	350	520	857	363	886	404	233
10	377	216	420	270	220	340	500	804	896	2080	298	238
11	362	219	798	270	220	330	450	762	1890	2360	226	232
12	521	241	1090	270	390	330	557	663	2010	1830	199	244
13	439	260	923	260	1400	340	624	738	1890	1500	187	243
14	532	279	1000	260	1900	360	706	737	1600	1210	173	237
15	576	316	1010	250	2010	480	958	727	1330	976	167	242
16	492	300	771	250	2350	580	1250	668	1130	698	162	232
17	464	304	513	250	2580	590	1270	642	1390	602	146	232
18	433	316	330	250	2450	610	1170	612	2670	473	152	229
19	396	488	310	240	2610	520	1060	587	2880	404	149	219
20	363	557	290	240	2450	553	946	460	2810	365	149	206
21	350	660	280	240	2250	551	839	442	2400	328	170	195
22	655	692	270	230	2020	610	949	463	2410	288	200	312
23	438	903	260	230	1860	608	1290	425	1930	305	160	195
24	395	772	250	240	1530	661	1280	379	1580	307	160	168
25	407	746	250	240	1340	763	1250	1150	1260	297	150	511
26	383	569	250	230	1180	781	1170	979	1030	300	150	262
27	350	634	250	220	1050	793	1120	1010	926	257	370	319
28	327	1680	240	220	848	826	1090	1210	833	270	190	290
29	304	1590	240	220	673	814	1140	1260	707	262	170	227
30	275	1360	240	220	---	799	1920	1020	602	235	364	155
31	263	---	240	210	---	749	---	839	---	222	240	---
TOTAL	11579	15727	16020	7690	33311	17021	26728	28022	38531	19629	6544	7774
MEAN	374	524	517	248	1149	549	891	904	1284	633	211	259
MAX	655	1680	1090	280	2610	826	1920	1630	2880	2360	432	511
MIN	218	216	240	210	210	330	450	379	356	222	146	155
CFSM	.53	.75	.74	.35	1.64	.78	1.27	1.29	1.83	.90	.30	.37
IN.	.61	.83	.85	.41	1.77	.90	1.42	1.48	2.04	1.04	.35	.41
CAL YR 1983	TOTAL	222562	MEAN 610	MAX 3490	MIN 100	CFSM .87	IN 11.79					
WTR YR 1984	TOTAL	228576	MEAN 625	MAX 2880	MIN 146	CFSM .89	IN 12.11					

STREAMS TRIBUTARY TO LAKE MICHIGAN
04087010 MILWAUKEE RIVER ABOVE NORTH AVENUE DAM AT MILWAUKEE, WI--CONTINUED
WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1982 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: June 1982 to current year.

INSTRUMENTATION.--Automatic pumping sampler since July 1982.

REMARKS.--Sediment records are fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 230 mg/l Feb. 13, 1984; minimum daily mean, 1 mg/l Nov. 27, 1982. Maximum observed, 801 mg/l July 10, 1984; minimum observed, 1 mg/l Nov. 27, 1982.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,960 tons July 10, 1984; minimum daily, 1.2 tons Nov. 27, 1983.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 230 mg/l Feb. 13; minimum daily mean, 8 mg/l Oct. 31, Nov. 1. Maximum observed, 801 mg/l July 10; minimum observed, 5 mg/l Nov. 27.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,960 tons July 10; minimum daily, 5.7 tons Oct. 31.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	76	50	8	6.2	82	219	12	7.8	13	8.4	31	48
2	63	39	9	7.1	92	220	12	7.8	13	8.1	36	62
3	52	31	9	6.6	105	203	12	6.8	13	8.1	32	52
4	43	29	9	6.5	118	232	12	8.7	13	7.7	26	31
5	36	24	9	6.6	122	239	10	7.6	14	8.3	22	25
6	30	21	10	7.0	77	123	10	7.6	14	8.3	19	22
7	27	19	44	111	46	49	10	7.6	14	8.3	17	16
8	28	32	32	21	27	24	10	7.3	14	8.0	17	13
9	28	26	36	22	34	38	9	6.6	14	8.0	16	13
10	28	28	41	24	23	26	9	6.6	15	8.9	17	15
11	28	27	46	27	35	96	9	6.6	15	8.9	31	28
12	31	44	52	34	42	130	9	6.6	24	24	61	54
13	26	30	58	41	14	35	10	7.0	230	803	101	94
14	18	26	62	47	17	47	10	7.0	186	956	71	69
15	18	28	52	45	24	67	10	6.8	128	692	115	163
16	31	41	43	35	24	49	10	6.8	197	1270	99	153
17	40	50	35	29	23	31	10	6.8	118	824	29	46
18	40	46	29	25	22	20	10	6.8	94	622	17	27
19	38	41	42	60	21	18	10	6.5	165	1160	16	21
20	37	36	45	68	20	16	10	6.5	73	486	15	22
21	40	38	39	69	19	14	10	6.5	47	283	15	22
22	23	42	37	69	19	14	10	6.2	37	201	14	23
23	21	25	40	97	16	11	10	6.2	29	149	14	23
24	21	23	30	63	16	11	11	7.1	24	98	14	25
25	18	20	21	42	16	11	11	7.1	21	76	13	27
26	16	16	14	22	16	11	12	7.4	19	60	14	29
27	14	13	9	15	14	9.4	12	7.1	18	50	18	38
28	12	11	92	429	14	9.1	12	7.1	21	47	21	48
29	10	8.6	102	442	14	9.0	12	7.1	25	46	18	40
30	9	6.8	72	264	14	9.1	12	7.1	---	---	21	45
31	8	5.7	---	---	14	9.1	13	7.4	---	---	24	48
TOTAL	---	877.1	---	2141.0	---	1999.7	---	218.1	---	7938.0	---	1342

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087030 MENOMONEE RIVER AT MENOMONEE 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 upstream from Pilgrim Road (County Trunk Highway YY) bridge in Menomonee Falls, at mile 21.1.

DRAINAGE AREA.--34.7 mi².

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929 (University of Wisconsin bench mark).

REMARKS.--Records good except those for ice periods, which are fair. Occasional regulation caused by dam in Menomonee Falls, about 1.0 mi upstream.

AVERAGE DISCHARGE.--7 years (1976-77, 1980-84) 28.0 ft³/s, 10.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,010 ft³/s July 13, 1981, gage height, 6.57 ft; maximum gage height, 7.86 ft Feb. 13, 1984, backwater from ice; minimum discharge, 0.85 ft³/s July 29, 30, and Aug. 13, 1982, gage height, 2.55 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 380 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Feb. 13	1525	ice jam	*7.86	July 10	1940	*727	5.90

minimum, 4.7 ft³/s Aug. 26, gage height, 2.82 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 5-11, Dec. 16 to Feb. 13, Mar. 1, and Mar. 7-14.)

2.8	4.2	3.7	69
2.9	7.0	4.0	112
3.0	11	4.5	213
3.2	22	5.0	355
3.4	38	5.5	542

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	92	9.0	11	27	34	166	41	19	9.1	41
2	9.9	17	54	9.4	13	25	35	110	33	17	8.5	23
3	10	16	44	11	14	21	35	87	27	16	16	16
4	12	14	34	12	13	20	34	83	26	15	10	13
5	12	13	26	13	11	21	34	68	25	14	8.8	11
6	11	12	23	12	10	22	32	54	29	23	8.2	9.8
7	13	13	20	12	10	20	29	45	59	17	8.8	11
8	19	13	18	11	10	18	25	39	61	15	39	9.2
9	17	13	16	11	12	17	24	37	42	61	24	8.4
10	15	14	15	11	14	16	21	34	57	174	16	8.8
11	14	14	40	11	20	15	19	31	59	238	12	9.1
12	23	13	74	11	72	15	31	28	36	262	9.9	8.3
13	25	12	74	10	400	14	46	42	33	215	9.0	8.0
14	21	15	67	10	363	14	41	42	27	114	8.7	8.6
15	17	19	66	10	292	31	56	35	21	44	8.1	9.2
16	16	18	60	10	235	43	82	30	19	29	7.6	7.8
17	15	17	40	9.8	165	29	73	25	64	27	7.1	7.0
18	14	17	27	9.8	122	23	61	24	121	22	6.5	7.1
19	12	33	18	9.6	136	24	52	24	128	17	5.9	7.2
20	12	54	12	9.6	129	32	47	23	101	15	5.4	6.5
21	13	56	11	9.6	98	38	39	22	58	15	5.9	6.1
22	17	42	10	9.6	74	35	51	25	72	13	6.2	6.3
23	18	54	9.2	9.6	67	37	112	23	100	17	5.9	6.2
24	18	57	9.0	10	57	48	125	22	88	14	5.6	6.1
25	17	46	8.8	10	49	51	95	84	51	12	5.6	32
26	15	35	8.8	10	42	48	65	117	35	16	5.2	19
27	14	42	8.8	10	35	45	58	93	39	14	20	14
28	13	119	8.8	10	31	42	117	104	34	13	11	11
29	12	136	8.8	10	30	39	108	116	27	11	8.8	9.5
30	11	116	8.8	10	---	37	169	88	23	9.6	24	8.2
31	10	---	9.0	10	---	35	---	55	---	9.3	12	---
TOTAL	457.9	1052	921.0	321.0	2535	902	1750	1776	1536	1497.9	338.8	348.4
MEAN	14.8	35.1	29.7	10.4	87.4	29.1	58.3	57.3	51.2	48.3	10.9	11.6
MAX	25	136	92	13	400	51	169	166	128	262	39	41
MIN	9.9	12	8.8	9.0	10	14	19	22	19	9.3	5.2	6.1
CFSM	.43	1.01	.86	.30	2.52	.84	1.68	1.65	1.48	1.39	.31	.33
IN.	.49	1.13	.99	.34	2.72	.97	1.88	1.90	1.65	1.61	.36	.37
CAL YR 1983	TOTAL	13931.5	MEAN	38.2	MAX	453	MIN	2.5	CFSM	1.10	IN	14.93
WTR YR 1984	TOTAL	13436.0	MEAN	36.7	MAX	400	MIN	5.2	CFSM	1.06	IN	14.40

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087030 MEMOMONEE RIVER AT MEMOMONEE FALLS, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to September 1977, June 1982 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: March 1975 to September 1977, June 1982 to current year.

INSTRUMENTATION.--Sediment pumping sampler since March 1, 1975, to September 1977, June 1982 to current year.

REMARKS.--Sediment records are good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 436 mg/l July 24, 1975; minimum daily mean, 1 mg/l on several days. Maximum observed, 856 mg/l Aug. 13, 1977; minimum observed, 1 mg/l on many days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 139 tons Mar. 22, 1975; minimum daily, 0 ton Oct. 1-3, 1976.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 127 mg/l Feb. 13; minimum daily mean, 3 mg/l Oct. 4, 5, Dec. 4. Maximum observed, 375 mg/l July 6; minimum observed, 1 mg/l Oct. 5.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 117 tons Feb. 13; minimum daily 0.08 ton Aug. 26.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	9	.28	20	.66	10	2.5	14	.34	10	.30	15	1.8
2	9	.24	21	.93	4	.63	14	.36	10	.35	30	2.1
3	8	.22	35	1.6	7	.89	20	.59	10	.38	23	1.3
4	3	.11	37	1.4	3	.28	20	.65	12	.42	19	1.0
5	3	.10	37	1.3	8	.73	20	.70	12	.36	19	1.1
6	5	.16	41	1.3	11	1.0	18	.58	12	.32	30	1.8
7	10	.48	49	1.7	19	2.6	18	.58	12	.32	43	2.3
8	21	1.2	65	2.3	33	5.0	16	.48	12	.32	59	3.0
9	22	1.0	81	2.8	28	2.2	16	.48	12	.39	37	1.7
10	15	.61	54	2.1	22	2.2	14	.42	16	.60	27	1.2
11	9	.32	34	1.2	39	5.5	14	.42	30	1.6	18	.73
12	16	1.0	30	1.0	44	8.6	14	.42	60	11	21	.85
13	20	1.3	29	.94	15	2.9	14	.38	127	117	24	.91
14	15	.84	29	1.2	14	2.5	14	.38	53	52	25	.94
15	15	.67	32	1.6	15	2.7	12	.32	48	38	46	4.2
16	14	.60	29	1.4	15	2.4	12	.32	37	24	30	3.5
17	14	.58	27	1.2	15	1.6	12	.32	14	6.3	21	1.7
18	17	.67	27	1.2	15	1.1	12	.32	11	3.6	15	.95
19	22	.74	26	2.8	15	.73	12	.31	12	4.4	14	.97
20	28	.93	54	8.9	14	.45	12	.31	11	4.0	21	1.9
21	31	1.1	25	3.9	14	.42	12	.31	12	3.3	18	1.8
22	20	.96	18	2.0	14	.38	12	.31	17	3.4	15	1.4
23	10	.51	14	2.1	14	.35	12	.32	8	1.4	21	2.1
24	7	.34	25	3.8	14	.34	10	.27	13	1.9	21	2.7
25	9	.41	42	5.2	14	.33	10	.27	17	2.2	10	1.4
26	13	.53	37	3.5	14	.33	10	.27	18	2.0	9	1.1
27	23	.88	30	3.5	14	.33	10	.27	9	.87	13	1.6
28	44	1.5	41	13	14	.33	10	.27	8	.69	19	2.2
29	74	2.4	29	11	14	.33	10	.27	16	1.5	16	1.7
30	74	2.2	13	4.2	14	.33	10	.27	---	---	13	1.3
31	62	1.8	---	---	14	.33	10	.27	---	---	15	1.4
TOTAL	---	24.68	---	89.73	---	50.31	---	11.78	---	282.92	---	52.65

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087030 MENOMONEE RIVER AT MENOMONEE FALLS, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)						
	LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)						
APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER		
1	18	1.7	14	6.4	8	.87	55	2.9	11	.27	60	7.2					
2	15	1.4	8	2.3	8	.74	41	1.9	11	.24	18	1.2					
3	12	1.1	6	1.5	9	.67	38	1.6	23	1.7	10	.43					
4	10	.91	6	1.3	10	.70	35	1.4	23	.63	10	.34					
5	8	.75	18	3.2	10	.69	37	1.4	14	.34	10	.29					
6	9	.73	16	2.3	21	2.4	39	2.9	9	.19	10	.26					
7	10	.75	11	1.4	52	8.3	28	1.2	5	.13	10	.29					
8	15	.98	18	1.9	29	4.8	19	.74	44	6.5	10	.25					
9	20	1.3	27	2.8	19	2.2	41	7.4	20	1.4	10	.23					
10	13	.75	38	3.5	24	3.8	81	46	18	.79	10	.24					
11	21	1.1	31	2.6	25	4.0	57	37	9	.29	10	.25					
12	31	2.6	30	2.2	17	1.7	41	29	13	.36	10	.22					
13	10	1.3	51	6.0	20	1.8	41	24	22	.34	10	.21					
14	6	.66	45	5.1	25	1.7	42	13	21	.50	9	.21					
15	5	.75	49	4.6	44	2.5	43	5.2	19	.42	9	.22					
16	4	.99	56	4.5	22	1.1	44	3.4	17	.35	9	.19					
17	21	4.3	64	4.3	47	9.5	43	3.2	15	.29	9	.17					
18	7	1.1	73	4.7	35	11	27	1.7	14	.24	9	.17					
19	11	1.6	83	5.3	20	7.0	22	1.0	12	.19	9	.17					
20	10	1.3	95	5.8	29	7.9	19	.77	11	.16	9	.16					
21	7	.71	74	4.5	22	3.5	15	.60	10	.15	8	.13					
22	22	3.7	39	2.7	35	9.2	13	.44	9	.14	8	.14					
23	9	2.6	28	1.8	25	6.5	25	1.9	8	.12	8	.13					
24	17	5.6	21	1.3	18	4.5	33	1.2	7	.11	8	.13					
25	19	5.2	79		14	2.0	21	.69	6	.09	40	4.8					
26	5	.97	38	12	11	1.3	18	.83	5	.08	14	.77					
27	15	3.0	21	5.4	62	6.6	15	.57	33	3.0	10	.37					
28	26	8.1	12	3.2	36	3.4	14	.48	17	.53	10	.31					
29	25	8.1	7	2.1	48	3.5	13	.37	12	.29	10	.26					
30	28	13	6	1.5	68	4.2	12	.32	44	3.6	10	.22					
31	---	---	7	1.0	---	---	12	.30	37	1.1	---	---					
TOTAL	---	77.05	---	128.2	---	118.07	---	193.41	---	24.74	---	19.96					
TOTAL LOAD FOR YEAR:			1073.50	TONS.													

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087088 UNDERWOOD CREEK AT WAUWATOSA, WI

LOCATION.--Lat 43°03'17", long 88°02'46", in SW 1/4 NW 1/4 sec.20, T.7 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, at U.S. Highway 45, on right bank, just downstream of the Chicago, Milwaukee, St. Paul and Pacific Railroad bridge, on Milwaukee County Park Commission property, at Wauwatosa, and 0.8 mi upstream from mouth.

DRAINAGE AREA.--18.2 mi².

PERIOD OF RECORD.--December 1974 to November 1979, July 1980 to current year.

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

GAGE.--Water-stage recorder and steel plate weir. Altitude of gage is 690 ft, from topographic map.

REMARKS.--Records are good, except those for discharges greater than 600 ft³/s which are fair to poor, and the periods of ice effect, which are fair.

AVERAGE DISCHARGE.--8 years (1976-79, 1981-84), 12.1 ft³/s, 9.03 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s July 13, 1981, gage height, 5.55 ft; maximum gage height, 6.58 ft Feb. 29, 1984, backwater from ice; no flow on all or part of many days during 1977 winter period.

EXTREMES FOR CURRENT PERIOD.--Maximum recorded discharge, 812 ft³/s June 22, gage height, 5.09 ft, maximum gage height, 6.58 ft Feb. 29 (ice jam); minimum, 1.4 ft³/s Oct. 1, 7, gage height, 2.60 ft, and Sept. 29, 30, gage height, 2.05 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 18 to Feb. 12 and Feb. 27 to Mar. 14.)

Oct. 1 to Feb. 11				Feb. 12 to Sept. 30			
2.6	1.4	3.1	28	2.0	0	2.6	41
2.7	3.7	3.4	64	2.1	3.4	3.0	104
2.8	7.3	3.7	142	2.2	8.6	3.5	217
2.9	12			2.4	21		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	8.6	10	3.0	3.5	6.6	7.3	38	15	4.6	3.4	19
2	3.0	7.6	9.1	3.0	4.9	5.4	6.8	28	13	4.3	3.2	6.6
3	5.0	3.7	7.9	3.4	4.4	4.5	6.8	46	10	4.4	15	5.1
4	10	3.0	8.1	3.9	3.9	4.9	7.0	39	9.8	4.0	25	5.0
5	3.1	2.9	8.5	4.3	3.4	5.6	6.7	23	8.9	4.2	5.7	4.5
6	3.0	3.1	8.2	3.9	3.2	5.4	6.0	19	14	11	4.3	4.5
7	4.2	3.0	7.2	3.7	3.2	5.2	5.7	17	37	3.5	4.1	10
8	25	3.1	6.3	3.6	3.3	5.0	5.1	15	11	3.0	88	7.2
9	4.7	3.1	5.8	3.4	4.3	4.9	5.1	13	8.8	8.2	8.6	5.6
10	3.8	2.7	5.2	3.3	4.9	4.9	5.3	12	9.3	120	5.2	7.0
11	8.1	2.5	62	3.3	6.6	4.9	5.2	12	6.5	54	4.4	5.6
12	29	2.2	52	3.2	60	4.9	34	11	5.7	17	4.0	4.7
13	8.9	2.4	25	3.2	118	5.4	23	27	9.1	9.8	3.9	4.5
14	5.3	4.0	36	3.1	59	4.5	14	12	6.8	6.8	4.2	7.2
15	4.2	5.4	27	3.1	32	53	71	9.8	5.7	11	4.8	4.7
16	4.4	3.9	17	3.1	26	21	53	9.3	5.4	5.5	5.3	3.3
17	4.5	2.9	13	3.1	22	13	36	8.5	29	6.8	5.3	2.7
18	4.0	2.7	8.8	3.1	32	7.9	26	16	43	5.5	5.0	2.7
19	3.0	25	6.0	3.0	46	9.3	19	11	8.8	4.2	4.4	2.7
20	4.6	29	4.3	3.0	28	25	16	7.9	6.6	4.4	4.4	2.5
21	5.6	12	3.8	3.0	22	21	13	6.6	6.1	4.2	5.9	2.4
22	38	7.0	3.5	3.0	19	20	90	15	115	3.8	15	2.3
23	14	43	3.2	3.1	19	19	88	8.9	25	4.0	4.5	2.2
24	7.5	14	3.1	3.8	17	17	38	10	12	3.9	4.0	2.7
25	6.0	8.9	3.0	3.6	16	15	24	157	8.7	3.7	3.8	57
26	5.9	7.2	3.0	3.4	15	12	21	37	14	5.5	3.9	5.7
27	5.7	24	3.0	3.5	11	12	28	19	20	3.9	14	2.7
28	4.7	73	3.0	3.4	10	10	20	131	6.9	3.8	5.0	1.9
29	4.0	25	3.0	3.3	8.0	8.4	75	63	5.8	3.4	4.5	1.7
30	4.0	14	3.0	3.2	---	8.0	138	28	4.8	3.2	25	1.6
31	4.0	---	3.0	3.1	---	7.9	---	19	---	3.5	4.8	---
TOTAL	240.8	348.9	362.0	103.1	605.6	351.6	894.0	869.0	481.7	335.1	298.6	195.3
MEAN	7.77	11.6	11.7	3.33	20.9	11.3	29.8	28.0	16.1	10.8	9.63	6.51
MAX	38	73	62	4.3	118	53	138	157	115	120	88	57
MIN	3.0	2.2	3.0	3.0	3.2	4.5	5.1	6.6	4.8	3.0	3.2	1.6
CFSM	.43	.64	.64	.18	1.15	.62	1.64	1.54	.89	.59	.53	.36
IN.	.49	.71	.74	.21	1.24	.72	1.83	1.78	.98	.68	.61	.40
CAL YR 1983	TOTAL	5319.1	MEAN	14.6	MAX	283	MIN	2.2	CFSM	.80	IN	10.87
WTR YR 1984	TOTAL	5085.7	MEAN	13.9	MAX	157	MIN	1.6	CFSM	.76	IN	10.39

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 downstream from Honey Creek, and at mile 6.2.

DRAINAGE AREA.--123 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 630.86 ft 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.--23 years, 93.0 ft³/s, 10.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft³/s Apr. 21, 1973, gage height, 13.92 ft from rating curve extended above 6,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 2.8 ft³/s Jan. 18, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (revised) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
May 25	0845	2,000	5.48	July 10	2115	2,280	5.85
July 10	0210	2,480	6.10				

minimum daily discharge, 14 ft³/s Sept. 22, 23.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 19 to Feb. 11, Mar. 8-10, and 12.)

Oct. 1 to Feb. 12				Feb. 13 to Sept. 30			
0.9	19	2.5	290	0.7	10	2.0	185
1.2	36	3.0	459	0.9	17	2.5	340
1.5	69	4.0	925	1.1	29	3.0	545
2.0	160			1.3	48	4.0	1,060
				1.5	83	5.0	1,660

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	45	203	30	33	68	68	407	141	42	21	270
2	29	47	147	31	43	60	66	305	112	36	20	87
3	36	35	99	36	45	51	65	327	88	34	73	43
4	51	31	85	38	38	45	65	295	73	32	139	31
5	27	28	80	42	34	47	62	210	63	30	28	26
6	26	27	76	38	32	43	58	165	109	142	20	24
7	32	27	63	36	31	38	52	141	274	35	20	55
8	175	28	61	35	31	37	46	121	131	26	397	29
9	39	27	56	35	40	37	43	112	99	165	132	22
10	32	30	53	34	46	37	44	101	91	816	71	30
11	47	29	381	33	62	36	42	94	103	1010	35	24
12	198	26	472	33	400	35	181	84	80	555	28	20
13	68	26	247	32	1100	44	177	179	84	408	25	19
14	48	34	295	32	740	32	131	119	53	272	24	27
15	39	57	254	31	550	231	359	100	41	173	24	27
16	34	42	173	31	474	159	360	83	35	89	24	18
17	31	34	113	31	374	83	271	75	199	100	24	17
18	29	31	80	30	334	58	204	110	407	68	22	16
19	27	193	50	30	442	66	158	79	237	45	19	16
20	31	230	40	30	337	151	134	61	188	38	18	15
21	33	139	35	29	256	149	113	58	137	34	29	15
22	224	95	32	29	200	156	360	104	516	30	71	14
23	101	333	29	30	170	142	555	71	385	39	22	14
24	49	162	28	37	150	156	379	70	216	67	19	15
25	40	109	27	34	130	146	271	730	146	31	18	318
26	36	81	27	33	110	129	208	352	116	43	16	56
27	33	171	27	34	96	117	205	228	152	34	146	31
28	30	745	28	33	88	106	232	617	87	27	44	24
29	28	436	28	32	80	95	397	480	64	23	27	20
30	26	275	29	31	---	84	810	279	51	22	181	17
31	26	---	29	30	---	75	---	188	---	22	39	---
TOTAL	1657	3573	3347	1020	6466	2713	6116	6345	4478	4488	1776	1340
MEAN	53.5	119	108	32.9	223	87.5	204	205	149	145	57.3	44.7
MAX	224	745	472	42	1100	231	810	730	516	1010	397	318
MIN	26	26	27	29	31	32	42	58	35	22	16	14
CFSM	.44	.97	.88	.27	1.81	.71	1.66	1.67	1.21	1.18	.47	.36
IN.	.50	1.08	1.01	.31	1.96	.82	1.85	1.92	1.35	1.36	.54	.41
CAL YR 1983	TOTAL	43432	MEAN 119	MAX 2280	MIN 14	CFSM .97	IN 13.14					
WTR YR 1984	TOTAL	43319	MEAN 118	MAX 1100	MIN 14	CFSM .96	IN 13.10					

STREAMS TRIBUTARY TO LAKE MICHIGAN
04087120 MENOMONEE RIVER AT WAUWATOSA, WI--CONTINUED
WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1966 to September 1977, June 1982 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: January 1975 to September 1977, June 1982 to current year.

INSTRUMENTATION.--Sediment pumping sampler Jan. 1, 1975, to September 1977, June 1982 to current year.

REMARKS.--Sediment records are good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 580 mg/l June 11, 1977; minimum daily mean, 2 mg/l on several days. Maximum observed, 1,370 mg/l Oct. 9, 1982; minimum observed, 1 mg/l on several days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,500 tons Mar. 22, 1975; minimum daily, 0.16 ton Jan. 19-21, 1977.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 376 mg/l July 10; minimum daily mean, 2 mg/l Oct. 26, Feb. 9. Maximum observed, 816 mg/l July 10; minimum observed, 2 mg/l Oct. 3, 26, 30, Feb. 9.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 929 tons July 10; minimum daily 0.22 ton Oct. 26, Feb. 9.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	3	.29	17	2.2	15	8.0	12	.97	18	1.6	14	2.6
2	3	.23	7	.91	15	5.9	12	1.0	26	3.0	16	2.6
3	5	1.1	5	.47	13	3.4	12	1.2	34	4.1	19	2.6
4	25	5.1	4	.35	26	6.0	14	1.4	31	3.2	22	2.6
5	8	.61	4	.30	32	6.9	15	1.7	26	2.4	25	3.1
6	6	.44	3	.25	23	4.8	17	1.7	21	1.8	26	3.1
7	16	2.9	5	.33	18	3.0	19	1.8	10	.84	18	1.8
8	72	73	6	.45	21	3.6	22	2.1	3	.25	18	1.8
9	14	1.5	7	.53	27	4.1	23	2.2	2	.22	19	1.9
10	8	.74	6	.51	33	4.8	17	1.6	3	.37	18	1.8
11	11	2.4	6	.47	49	61	12	1.1	15	2.5	18	1.7
12	59	35	7	.51	30	42	10	.89	50	54	20	1.9
13	25	4.9	10	.66	10	6.8	14	1.2	220	653	25	2.9
14	12	1.6	20	2.2	6	5.3	20	1.7	52	105	21	1.9
15	13	1.4	27	4.1	8	5.6	29	2.4	41	67	110	88
16	16	1.4	13	1.5	6	2.9	30	2.5	30	39	57	27
17	17	1.5	10	.91	6	1.7	30	2.5	19	20	29	6.6
18	13	1.1	9	.72	10	2.2	29	2.3	16	15	23	3.6
19	10	.73	50	39	10	1.4	25	2.0	23	28	27	6.8
20	12	1.1	46	33	10	1.1	22	1.8	12	11	44	18
21	15	1.5	20	8.0	10	.94	19	1.5	9	6.1	22	9.1
22	53	38	14	3.7	10	.86	16	1.3	14	7.6	26	11
23	20	6.1	56	55	11	.86	14	1.1	11	5.0	22	8.6
24	10	1.3	28	13	11	.83	18	1.8	23	9.3	23	9.7
25	5	.51	15	4.5	11	.80	21	1.9	24	8.4	14	5.6
26	2	.22	13	2.9	11	.80	21	1.9	22	6.5	11	3.9
27	3	.26	37	37	11	.80	18	1.6	14	3.6	18	5.6
28	3	.24	75	153	11	.83	18	1.6	10	2.4	19	5.4
29	3	.21	29	37	11	.83	18	1.6	11	2.4	19	4.9
30	3	.19	17	12	12	.94	18	1.5	---	---	20	4.5
31	8	.53	---	---	12	.94	18	1.5	---	---	20	4.1
TOTAL	---	186.10	---	415.47	---	189.93	---	51.36	---	1063.58	---	254.7

STREAMS TRIBUTARY TO LAKE MICHIGAN

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	3.2	30	34	16	6.3	70	7.9	22	1.3	138	137	
2	16	2.8	26	21	9	2.7	64	6.3	22	1.2	62	15	
3	26	4.5	21	19	4	1.0	60	5.5	79	53	41	4.8	
4	38	6.8	14	11	4		61	5.2	101	82	28	2.4	
5	25	4.2	11	6.2	86	14	61	5.1	72	5.6	19	1.4	
6	16	2.5	11	4.9	53	32	152	70	37	2.1	13	.88	
7	14	2.0	11	4.2	105	95	46	4.5	19	1.0	22	4.2	
8	15	1.9	11	3.6	48	17	37	2.6	111	208	18	1.5	
9	32	3.7	11	3.3	54	15	226	124	80	44	16	.96	
10	35	4.2	11	3.0	62	15	376	929	93	22	15	1.2	
11	22	2.4	11	2.8	66	18	215	601	31	3.0	14	.89	
12	67	57	11	2.5	50	11	100	151	28	2.1	13	.71	
13	32	16	40	19	52	12	88	98	26	1.7	12	.63	
14	16	5.6	13	4.2	48	6.8	70	51	23	1.5	18	1.6	
15	50	61	13	3.5	56	6.2	48	22	21	1.3	18	1.4	
16	46	45	18	4.0	58	5.6	40	9.6	19	1.2	11	.54	
17	15	11	11	2.2	138	124	44	12	17	1.1	11	.50	
18	8	4.5	34	10	162	193	42	7.7	15	.94	11	.48	
19	7	3.1	26	5.6	102	66	38	4.6	14	.72	11	.47	
20	10	3.8	23	3.9	96	49	34	3.5	13	.63	11	.46	
21	12	3.7	18	2.8	78	29	30	2.7	15	2.4	11	.45	
22	54	80	63	18	179	381	26	2.1	29	7.0	11	.42	
23	69	104	63	8.2	145	165	31	4.2	16	.92	11	.42	
24	47	48	36	6.8	93	55	52	12	14	.75	11	.44	
25	31	23	273	671	80	32	22	1.8	13	.61	155	206	
26	17	9.9	53	52	85	27	35	4.6	12	.51	36	5.9	
27	33	26	69	42	90	41	32	3.0	92	76	20	1.7	
28	52	33	107	186	80	19	22	1.6	43	5.4	17	1.1	
29	64	95	90	131	78	13	22	1.4	20	1.5	14	.77	
30	136	348	18	14	75	10	22	1.3	136	112	12	.56	
31	---	---	19	9.6	---	---	22	1.3	37	4.0	---	---	
TOTAL	---	1015.8	---	1309.3	---	1462.42	---	2156.5	---	645.48	---	394.78	
TOTAL LOAD FOR YEAR:		9145.42		TONS.									

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087138 MENOMONEE RIVER AT MILWAUKEE, WI

LOCATION.--Lat 43°01'28", long 87°57'36", in SE 1/4 NW 1/4 sec.36, T.7 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, on left bank 10 ft downstream from pedestrian walkway over the Menomonee River, 0.1 mi upstream from bridge at 35th Street, at Milwaukee.

DRAINAGE AREA.--134 mi².

PERIOD OF RECORD.--December 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 576.23 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records are poor except for the periods Oct. 8, 12, 22, 23, Nov. 18 to Dec. 16, Jan. 8 to Feb. 29, Mar. 1-22, Apr. 12-20, 23-25, Apr. 28 to May 5, May 25 and 28, which are fair. Stage-discharge relation affected by seiche from Lake Michigan.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,240 ft³/s Aug. 17, 1983, gage height, 14.66 ft, from rating curve extended above 1,500 ft³/s on basis of four step-backwater determinations for Q10, Q50, Q100, Q500 obtained from City of Milwaukee Flood Insurance Study; minimum daily discharge, 14 ft³/s (seiche affected), Oct. 3-5, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--High water of July 13, 1981, reached a stage of 13.16 ft, present datum, from high-water marks; discharge, 5,910 ft³/s, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,950 ft³/s July 10, gage height, 9.35 ft, from rating curve extended as explained above; minimum daily, 15 ft³/s (seiche affected), Sept. 22-23, determined by applying drainage area ratio to the corresponding daily discharge for 04087120 Menomonee River at Wauwatosa.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	49	240	33	37	89	74	444	154	46	23	294
2	32	51	183	34	48	77	72	332	122	39	22	95
3	39	38	130	38	51	64	71	342	96	37	80	47
4	56	34	114	41	44	59	71	302	80	35	152	34
5	29	31	111	46	38	62	68	214	69	33	31	28
6	28	29	107	41	35	59	63	180	119	155	22	26
7	35	29	86	41	34	57	57	154	299	38	22	60
8	249	31	82	45	34	50	50	132	143	28	433	32
9	43	29	78	45	44	47	47	122	108	180	144	24
10	35	33	69	42	50	46	48	110	99	973	77	33
11	51	32	447	41	67	41	46	102	112	1100	38	26
12	272	28	461	43	435	40	229	92	87	605	31	22
13	74	28	273	42	1150	48	202	195	92	445	27	21
14	52	37	337	40	793	46	143	130	58	296	26	29
15	43	62	284	37	589	280	388	109	45	189	26	29
16	37	46	203	38	510	171	377	90	38	97	26	20
17	34	37	123	37	386	87	290	82	217	109	26	19
18	32	34	87	35	359	68	223	120	444	74	24	17
19	29	264	54	34	452	78	171	86	258	49	21	17
20	34	290	44	33	355	163	146	66	205	41	20	16
21	36	179	38	30	284	160	123	63	149	37	32	16
22	320	131	35	30	229	164	392	113	562	33	77	15
23	159	403	32	32	196	155	586	77	420	43	24	15
24	84	204	31	40	172	170	397	76	235	73	21	16
25	69	145	29	40	149	159	295	835	159	34	20	347
26	39	113	29	41	127	141	227	384	126	47	17	61
27	36	226	29	40	110	128	223	249	166	37	159	34
28	33	775	31	38	96	116	262	674	95	29	48	26
29	31	453	31	38	87	104	484	523	70	25	29	22
30	28	307	32	36	---	92	855	304	56	24	197	19
31	28	---	32	35	---	82	---	205	---	24	43	---
TOTAL	2102	4148	3885	1186	6961	3103	6680	6907	4883	4975	1938	1460
MEAN	67.8	138	125	38.3	240	100	223	223	163	160	62.5	48.7
MAX	320	775	484	46	1150	280	855	835	562	1100	433	347
MIN	28	28	29	30	34	40	46	63	38	24	17	15
CFSM	.51	1.03	.93	.29	1.79	.75	1.66	1.66	1.22	1.19	.47	.36
IN.	.58	1.15	1.08	.33	1.93	.86	1.85	1.92	1.36	1.38	.54	.41

CAL YR 1983 TOTAL 47720 MEAN 131 MAX 2390 MIN 15 CFSM .98 IN 13.25
WTR YR 1984 TOTAL 48228 MEAN 132 MAX 1150 MIN 15 CFSM .99 IN 13.39

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087140 MENOMONEE RIVER AT FALK CORP. AT 32ND STREET AT MILWAUKEE, WI

LOCATION.--LAT 43°01'35", long 87°57'14", in SW 1/4 sec.36, T.7 N., R.9 E., Milwaukee County, Hydrologic Unit 04040003, at Southwest corner Falk Corporation Property at 32nd Street, Milwaukee, and at Mile 0.40.

DRAINAGE AREA.--134 mi².

PERIOD OF RECORD.--December 1974 to July 1977, June 1982 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: March 1975 to June 1977, June 1982 to current year.

INSTRUMENTATION.--Automatic pumping sampler since Mar. 1, 1975, to June 1977, June 1982 to current year.

REMARKS.--Sediment records are fair. Mean suspended-sediment concentrations for more than 10 percent of the year are estimated. Stream discharge was estimated from measurements at this station and gage height record for 04087138 Menomonee River at Milwaukee and 04087120 Menomonee River at Wauwatosa.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 596 mg/l June 16, 1975; minimum daily mean, 1 mg/l on several days. Maximum observed, 1,170 mg/l July 10, 1984; minimum observed, 1 mg/l on several days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,890 tons Apr. 2, 1983; minimum daily, 0.03 ton Sept. 26, 1976.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 308 mg/l July 10; minimum daily mean, 5 mg/l Feb. 9. Maximum observed, 1,170 mg/l July 10; minimum observed, 1 mg/l Feb. 23, May 14, 24, Sept. 12.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,050 tons July 10; minimum daily 0.41 ton Sept. 23.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	8	.73	18	2.7	17	11	10	.89	36	3.6	17	4.2
2	6	.47	12	1.9	13	6.3	12	1.1	42	5.4	20	4.2
3	9	2.1	6	.65	13	4.6	12	1.2	33	4.6	24	4.2
4	34	12	5	.49	18	5.6	13	1.4	23	2.7	28	4.5
5	8	.62	7	.59	17	5.2	10	1.2	16	1.7	33	5.6
6	7	.53	10	.76	22	6.5	10	1.1	12	1.1	39	6.1
7	14	1.5	9	.71	31	7.1	13	1.4	8	.74	41	6.4
8	73	92	10	.82	32	6.9	21	2.6	6	.52	27	3.6
9	12	2.3	12	.95	32	6.7	26	3.2	5	.59	26	3.3
10	6	.59	17	1.5	36	6.8	34	3.8	11	1.6	28	3.5
11	16	3.4	24	2.1	69	106	44	4.9	24	4.4	27	3.0
12	58	47	31	2.4	38	54	54	6.2	180	339	26	2.8
13	18	4.0	40	3.0	30	22	50	5.7	218	699	28	3.7
14	13	1.7	60	6.5	33	30	45	4.9	76	162	15	1.8
15	15	1.9	59	10	19	15	43	4.4	42	67	96	99
16	10	1.0	26	3.3	9	5.1	41	4.1	34	43	62	32
17	10	.86	14	1.4	21	7.0	32	3.2	20	22	20	4.8
18	13	1.1	8	.70	25	5.9	26	2.4	14	15	17	3.1
19	16	1.3	44	44	24	3.5	26	2.4	21	26	22	6.1
20	8	.81	44	38	23	2.7	26	2.3	10	9.7	34	15
21	9	.99	27	13	22	1.2	27	2.2	10	7.7	23	11
22	47	47	18	6.4	21	2.0	28	2.2	10	6.2	19	8.7
23	22	10	50	59	21	1.8	28	2.4	10	5.3	20	8.2
24	9	2.1	32	18	20	1.7	30	3.3	10	4.6	21	9.3
25	10	1.9	23	9.2	16	1.3	38	4.1	10	4.0	10	4.1
26	12	1.3	19	5.8	16	1.3	47	5.3	10	3.5	6	2.2
27	9	.83	34	37	14	1.1	51	5.5	9	2.6	7	2.1
28	7	.62	82	177	14	1.2	50	5.1	10	2.7	9	2.7
29	13	1.0	38	48	14	1.2	35	3.6	15	3.5	9	2.3
30	17	1.3	25	21	12	1.0	27	2.6	---	---	11	2.6
31	8	.62	---	---	12	1.0	30	2.9	---	---	10	2.4
TOTAL	---	243.57	---	516.87	---	332.7	---	97.59	---	1449.75	---	272.5

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087140 MENOMONEE RIVER AT FALK CORP. AT 32ND STREET AT MILWAUKEE, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

	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)
DAY												
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11	2.4	39	42	9	4.0	37	4.6	20	1.2	142	151
2	10	2.1	19	16	4	1.5	35	3.7	9	.56	47	13
3	26	5.2	19	18	7	1.9	36	3.6	69	50	21	2.6
4	19	3.9	19	16	18	4.4	42	3.9	134	94	23	2.2
5	9	1.8	28	16	32	5.9	50	4.6	42	3.7	26	2.0
6	7	1.4	51	24	53	35	104	65	16	.97	28	2.0
7	6	1.1	44	18	102	119	30	3.0	15	.85	33	6.6
8	8	1.3	41	14	42	18	45	3.5	107	253	22	2.0
9	10	1.6	47	14	38	12	174	118	65	35	18	1.2
10	11	1.9	51	15	34	11	308	1050	119	30	23	2.2
11	10	1.6	42	12	33	9.9	159	419	16	1.7	18	1.3
12	95	128	38	9.4	47	11	69	93	11	.89	16	1.0
13	31	18	26	18	33	8.1	68	68	11	.81	14	.80
14	10	3.9	3	.88	25	3.9	65	46	11	.76	12	.94
15	44	56	16	4.2	23	2.8	91	48	11	.77	10	.79
16	38	39	14	3.2	21	2.2	39	12	11	.75	10	.54
17	18	14	17	3.7	112	126	30	7.0	10	.72	10	.49
18	8	4.7	44	20	151	196	27	8.1	10	.66	10	.48
19	10	4.4	12	3.0	89	59	24	3.3	10	.55	10	.47
20	14	5.4	8	1.7	75	43	22	2.4	10	.54	10	.46
21	42	15	34	6.5	63	28	19	2.0	13	1.7	10	.45
22	53	87	48	20	185	461	17	1.5	37	13	10	.42
23	52	85	6	1.7	137	150	24	3.8	14	.93	10	.41
24	36	38	12	6.0	91	55	52	13	13	.75	10	.44
25	43	34	220	640	95	43	20	1.9	12	.62	169	254
26	47	31	46	.46	107	44	32	4.7	11	.52	43	7.5
27	67	44	18	11	74	41	29	2.9	107	88	31	2.8
28	34	24	183	421	54	15	20	1.6	49	7.0	22	1.6
29	77	203	95	142	51	9.5	21	1.4	23	1.8	16	.97
30	163	488	18	13	54	8.2	23	1.5	111	106	12	.61
31	---	---	16	8.4	---	---	31	2.0	24	2.8	---	---
TOTAL	---	1346.7	---	1584.68	---	1529.3	---	2003.0	---	700.55	---	461.27
TOTAL LOAD FOR YEAR:			10538.48		TONS.							

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087159 KINNICKINNIC RIVER AT SOUTH 11TH STREET AT MILWAUKEE, WI

LOCATION.--Lat 42°59'51", long 87°55'35", in SW 1/4 NW 1/4 sec.8, T.6 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, on left bank 150 ft upstream from footbridge on South 11th Street, 3.2 mi upstream from mouth, at Milwaukee.

DRAINAGE AREA.--20.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to current year. Low-flow records equivalent to records for Kinnickinnic River at Milwaukee, WI (04087160) September 1976 to January 1983 (discontinued). Discontinued gage was located 0.3 mi downstream from present gage.

GAGE.--Water-stage recorder and steel plate weir. Altitude of gage is 590 ft from river-profile map.

REMARKS.--Records are good except for the winter period and period when control was removed, Mar. 12 to May 14, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,430 ft³/s Dec. 2, 1982, gage height, 12.37 ft; minimum discharge, 5.0 ft³/s Jan. 15, 1983, gage height, 6.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,550 ft³/s May 25, gage height, 10.28 ft; minimum daily discharge, 5.8 ft³/s Oct. 30 and Nov. 6.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 2, 3, 6-9, Dec. 18 to Jan. 26, Jan. 31, Feb. 1, 6-8, and Mar. 5-11. Ratings not in effect Mar. 12 to May 14 when the control was removed.)

Oct. 1 to Mar. 12				May 14 to Sept. 30			
6.0	5.0	6.9	58	6.0	5.2	7.0	78
6.2	9.8	7.3	116	6.1	7.6	7.5	168
6.4	17	8.0	274	6.2	11	8.0	300
6.6	29			6.4	19	8.5	478
				6.7	42		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	25	10	7.8	7.0	9.1	13	30	15	8.8	11	75
2	6.5	15	9.6	8.0	12	8.2	12	22	13	9.5	9.4	11
3	15	7.9	8.6	8.0	10	8.0	12	34	11	10	13	8.4
4	26	7.2	8.8	9.0	9.3	7.1	13	40	11	10	29	9.1
5	8.4	7.0	11	12	7.6	8.0	12	21	12	12	11	8.9
6	7.4	5.8	10	9.4	6.8	7.4	12	17	63	33	13	8.6
7	10	6.6	9.2	8.0	6.4	6.8	11	14	116	8.7	14	25
8	70	7.5	9.0	7.8	6.8	6.6	10	13	21	8.3	156	18
9	7.7	7.2	8.8	7.6	10	6.4	9.2	12	13	45	15	37
10	7.7	8.0	8.6	7.0	11	6.2	9.2	11	12	321	12	28
11	8.0	10	159	6.6	18	6.6	9.0	10	10	101	9.9	9.9
12	66	6.4	66	6.6	127	7.0	84	9.8	11	19	9.5	8.6
13	11	6.0	19	6.8	178	8.0	40	39	19	15	9.6	9.1
14	8.7	10	81	6.8	30	10	30	15	10	14	9.5	10
15	7.4	23	36	6.8	18	110	96	9.5	9.6	23	12	8.9
16	6.6	9.2	17	6.6	15	32	47	9.7	9.1	12	11	6.5
17	7.3	7.3	11	6.4	15	18	38	9.6	115	13	12	7.3
18	7.3	7.5	9.6	6.2	34	12	30	50	142	11	12	7.9
19	7.1	88	8.6	6.2	39	15	25	19	15	10	9.8	8.5
20	13	52	8.4	6.0	17	46	22	11	12	11	11	9.2
21	14	12	8.6	6.0	13	32	20	10	12	10	19	8.6
22	102	9.2	8.4	6.0	13	25	140	42	226	10	36	8.6
23	15	127	7.8	6.6	13	30	76	14	34	11	9.8	8.8
24	9.1	15	7.4	9.6	12	29	40	14	17	11	9.5	9.4
25	8.5	9.9	7.6	8.8	10	26	25	321	13	10	9.0	154
26	8.1	8.9	7.8	8.0	9.6	24	17	23	20	16	10	11
27	7.9	53	8.0	7.8	9.3	20	25	14	40	13	32	8.4
28	7.9	145	8.0	8.8	9.3	18	19	228	12	17	12	7.7
29	6.3	20	8.0	7.7	9.8	16	110	44	11	19	12	7.2
30	5.8	13	7.8	7.2	---	14	150	21	9.3	10	153	7.1
31	6.6	---	7.8	6.8	---	14	---	17	---	9.1	9.5	---
TOTAL	499.4	729.6	596.4	232.9	676.9	586.4	1156.4	1144.6	1034.0	831.4	701.5	545.7
MEAN	16.1	24.3	19.2	7.51	23.3	18.9	38.5	36.9	34.5	26.8	22.6	18.2
MAX	102	145	159	12	178	110	150	321	226	321	156	154
MIN	5.8	5.8	7.4	6.0	6.4	6.2	9.0	9.5	9.1	8.3	9.0	6.5
CAL YR 1983	TOTAL	8442.7	MEAN	23.1	MAX	525	MIN	5.8				
WTR YR 1984	TOTAL	8735.2	MEAN	23.9	MAX	321	MIN	5.8				

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087159 KINNICKINNIC RIVER AT SOUTH 11TH STREET AT MILWAUKEE, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1982 to current year.

INSTRUMENTATION.--Automatic pumping sampler since Oct. 1, 1982.

REMARKS.--Sediment records are good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 685 mg/l May 25, 1984; minimum daily mean, 1 mg/l on several days. Maximum observed, 3,270 mg/l June 17, 1984; minimum observed, 1 mg/l on several days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,550 tons May 25, 1984; minimum daily, 0.03 ton on several days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 685 mg/l May 25; minimum daily mean, 1 mg/l Feb. 22, 23. Maximum observed, 3,270 mg/l June 17; minimum observed, 1 mg/l on several days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,550 tons May 25; minimum daily, 0.03 ton Oct. 29, 30, Feb. 23.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	.12	35	3.8	20	.55	28	.59	8	.17	6	.14
2	6	.11	17	.77	24	.71	27	.58	13	.42	5	.11
3	23	3.3	6	.13	30	.72	27	.58	14	.38	5	.11
4	46	7.4	2	.04	36	.87	34	.83	10	.25	5	.10
5	11	.25	3	.05	36	.97	31	1.0	10	.21	9	.25
6	4	.08	4	.07	19	.95	22	.56	10	.18	15	.35
7	3	.38	6	.10	11	.28	20	.45	10	.17	16	.44
8	74	36	7	.14	13	.32	15	.32	10	.18	17	.36
9	13	.27	8	.15	15	.38	12	.24	12	.39	17	.34
10	22	.45	10	.25	15	.36	15	.28	10	.30	18	.33
11	24	.51	18	.53	111	70	12	.21	30	2.0	18	.36
12	43	11	12	.21	99	19	11	.20	133	63	19	.36
13	4	.12	8	.14	62	3.2	10	.18	186	164	20	.43
14	4	.09	10	.34	51	13	9	.16	26	2.3	25	.68
15	6	.12	34	3.0	18	1.9	8	.15	5	.27	318	166
16	24	.43	12	.30	24	1.1	7	.12	8	.41	108	20
17	13	.26	10	.20	42	1.3	6	.10	17	.76	46	2.2
18	6	.13	9	.19	40	1.0	6	.10	73	16	28	.91
19	6	.11	87	51	40	.93	6	.10	67	11	25	1.0
20	14	.74	48	12	36	.82	6	.10	10	.48	23	3.6
21	21	1.6	41	1.3	36	.84	6	.10	3	.11	28	4.8
22	58	20	36	.90	36	.82	6	.10	1	.04	27	4.0
23	16	.76	143	78	36	.76	6	.11	1	.03	22	3.1
24	3	.07	26	1.1	32	.64	7	.18	2	.06	22	1.7
25	2	.05	19	.52	32	.66	7	.17	2	.06	20	1.4
26	2	.04	14	.34	31	.65	7	.15	3	.07	18	1.2
27	2	.04	41	16	30	.65	7	.15	3	.08	18	.97
28	2	.04	128	75	30	.65	7	.17	5	.12	18	.87
29	2	.03	17	.99	29	.63	7	.15	10	.28	16	.69
30	2	.03	16	.56	29	.61	7	.14	---	---	16	.60
31	19	.35	---	---	28	.59	8	.15	---	---	13	.49
TOTAL	---	84.88	---	248.12	---	125.86	---	8.42	---	263.72	---	217.89

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087159 KINNICKINNIC RIVER AT SOUTH 11TH STREET AT MILWAUKEE, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12	.42	50	4.0	16	.62	3	.07	15	.43	89	42
2	12	.39	28	1.7	7	.25	4	.10	13	.32	14	.41
3	10	.32	49	7.4	4	.11	3	.07	20	1.0	13	.30
4	10	.35	45	6.9	8	.24	2	.05	47	13	12	.30
5	10	.32	36	2.0	24	.76	12	.61	20	.57	11	.27
6	10	.32	36	1.6	251	70	80	19	8	.27	10	.24
7	10	.30	34	1.3	143	75	48	1.1	13	.60	26	2.6
8	10	.27	34	1.2	27	1.7	149	3.4	145	210	14	.82
9	10	.25	32	1.0	24	.83	67	16	30	1.4	22	2.1
10	10	.25	32	.95	11	.36	519	1090	96	2.7	15	1.1
11	10	.24	30	.81	5	.14	170	49	3	.08	14	.38
12	217	126	30	.79	4	.12	61	3.2	5	.13	14	.33
13	68	9.7	57	10	20	1.4	27	1.1	6	.16	14	.34
14	42	3.4	26	.64	15	.43	17	.68	7	.19	13	.36
15	111	34	19	.49	8	.20	33	2.8	9	.29	13	.31
16	76	11	14	.36	4	.10	27	.87	17	.53	13	.22
17	66	6.8	12	.31	306	239	25	.87	46	1.5	12	.24
18	62	5.0	134	58	326	376	25	.74	120	4.0	12	.26
19	62	4.2	19	1.1	7	.31	22	.59	91	2.4	12	.27
20	60	3.6	19	.56	4	.15	20	.59	36	1.1	11	.27
21	60	3.2	17	.47	5	.16	18	.49	23	2.5	11	.26
22	180	109	49	9.7	178	276	16	.43	50	8.4	11	.25
23	45	10	17	.62	105	9.8	16	.48	18	.49	10	.24
24	32	3.4	15	.75	70	3.2	14	.42	16	.41	10	.25
25	30	2.0	685	1550	50	1.8	14	.38	13	.32	183	155
26	30	1.4	47	3.2	38	3.1	25	1.1	11	.32	14	.42
27	35	50	20	.79	59	19	16	.56	38	6.0	10	.23
28	30	1.5	228	213	4	.13	30	1.4	17	.54	10	.21
29	468	217	45	6.5	2	.06	38	1.9	12	.39	10	.20
30	222	179	25	1.4	3	.06	18	.49	170	348	10	.19
31	---	---	22	.96	---	---	12	.29	12	.31	---	---
TOTAL	---	783.63	---	1888.50	---	1081.03	---	1198.78	---	608.35	---	210.37
TOTAL LOAD FOR YEAR:		6719.55 TONS.										

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 downstream from 15th Avenue bridge in South Milwaukee and 2.8 mi upstream from mouth.

DRAINAGE AREA.--25.0 mi².

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

REVISED RECORDS.--WDR WI-80-1: 1979 (average discharge).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 631.40 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for period of missing record, Dec. 1-28, and ice-affected periods, which are fair. Low flows may occasionally be affected by construction and activity at gravel pit upstream.

AVERAGE DISCHARGE.--21 years, 21.8 ft³/s, 11.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft³/s Sept. 13, 1978, gage height, 8.19 ft; maximum gage height, 8.23 ft 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 350 ft³/s (revised) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Feb. 13	0245	392	6.79	Apr. 30	0745	*450	*7.09

minimum daily, 1.1 ft³/s Sept. 20-23.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 29 to Jan. 3, Jan. 8-30, Feb. 6, and Mar. 5-14.)

2.25	1.0	3.0	37
2.3	1.6	4.0	101
2.35	2.7	5.0	181
2.4	4.6	6.0	290
2.5	8.7	7.0	450
2.6	14		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	9.1	30	6.4	1.8	7.5	11	100	22	7.0	1.3	15
2	5.4	14	18	6.2	2.5	6.1	11	48	17	6.3	1.3	8.7
3	7.3	10	15	6.4	2.8	5.3	10	41	15	5.9	1.4	2.9
4	11	7.9	16	7.3	3.0	4.6	11	71	15	5.8	1.4	2.0
5	7.6	7.5	21	6.7	2.8	4.3	11	40	14	5.2	1.9	1.9
6	6.4	7.2	18	6.3	2.7	3.9	9.1	23	26	6.4	1.7	1.7
7	5.9	7.0	15	4.9	2.7	3.6	7.6	17	103	5.3	1.3	5.1
8	20	7.0	14	4.4	1.9	3.0	6.3	13	41	4.2	4.5	3.6
9	11	7.0	12	4.2	2.2	2.7	5.9	12	19	6.8	12	2.0
10	6.9	7.9	11	4.0	2.6	2.4	5.9	12	14	6.9	4.5	1.8
11	6.4	9.9	150	3.8	4.4	2.1	6.3	11	11	147	2.4	1.7
12	30	8.9	110	3.6	88	1.9	27	10	9.5	31	1.8	1.6
13	21	8.0	45	3.3	351	1.8	60	15	12	14	1.5	1.7
14	8.6	7.8	60	3.1	172	2.1	32	13	9.6	9.2	1.4	1.9
15	7.3	13	45	2.9	90	50	70	10	7.6	9.6	1.7	2.1
16	6.8	16	30	2.8	57	83	131	9.0	7.0	6.8	1.8	1.7
17	6.1	11	21	2.8	48	14	88	8.7	20	5.4	1.6	1.4
18	6.0	9.0	18	2.7	42	11	59	12	79	4.7	1.6	1.3
19	5.9	47	16	2.6	82	9.1	35	15	29	3.7	1.5	1.2
20	6.8	62	14	2.6	49	45	22	12	12	3.1	1.4	1.1
21	9.1	39	12	2.5	29	53	15	10	8.7	2.8	9.7	1.1
22	53	17	11	2.5	21	38	110	18	60	2.4	24	1.1
23	32	127	9.8	2.4	19	48	264	20	130	2.1	5.5	1.1
24	13	73	9.2	2.7	16	69	109	12	36	2.0	2.3	1.6
25	9.8	26	8.6	3.2	13	51	56	175	18	2.0	1.8	39
26	8.4	19	8.0	3.0	11	31	35	110	15	3.0	1.5	19
27	7.5	29	7.6	2.5	10	22	27	41	26	2.9	11	3.5
28	7.1	201	7.4	2.1	8.4	16	40	171	14	2.1	7.7	1.9
29	6.8	92	7.0	1.8	8.6	14	47	197	9.1	1.7	2.5	1.5
30	6.5	42	6.8	1.7	---	13	339	69	8.2	1.6	22	1.2
31	6.3	---	6.6	1.6	---	12	---	36	---	1.5	9.0	---
TOTAL	351.2	942.2	773.0	113.0	1144.4	630.4	1661.1	1351.7	807.7	380.5	197.2	131.4
MEAN	11.3	31.4	24.9	3.65	39.5	20.3	55.4	43.6	26.9	12.3	6.36	4.38
MAX	53	201	150	7.3	351	83	339	197	130	147	45	39
MIN	5.3	7.0	6.6	1.6	1.8	1.8	5.9	8.7	7.0	1.5	1.3	1.1
CFSM	.45	1.26	1.00	.15	1.58	.81	2.22	1.74	1.08	.49	.25	.18
IN.	.52	1.40	1.15	.17	1.70	.94	2.47	2.01	1.20	.57	.29	.20
CAL YR 1983	TOTAL	10192.4	MEAN	27.9	MAX	532	MIN	1.0	CFSM	1.12	IN	15.17
WTR YR 1984	TOTAL	8483.8	MEAN	23.2	MAX	351	MIN	1.1	CFSM	.93	IN	12.62

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 upstream from State Highway 100, 2.1 mi upstream from Root River Canal, 2.4 mi southeast of Franklin, 5.5 mi southeast of Hales Corners, and about 24 mi upstream from mouth.

DRAINAGE AREA.--49.2 mi².

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

REVISED RECORD.--WDR WI-81-1: Drainage area. WDR WI-83-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 674.5 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow affected by urbanization in the drainage basin.

AVERAGE DISCHARGE.--21 years, 44.3 ft³/s, 12.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft³/s Apr. 21, 1973, gage height, 9.31 ft; minimum, 0.38 ft³/s Aug. 10, 1971, gage height, 1.45 ft.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Mar. 30, 1960, reached a stage of 9.57 ft, discharge, 5,130 ft³/s, from rating curve extended above 2,000 ft³/s on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Feb. 13	1500	*About 550	*A7.69	May 29	0730	468	7.13
Apr. 23	1000	397	6.78	June 23	0800	525	7.34
Apr. 30	1500	457	7.07	July 11	1530	362	6.59
May 26	0245	415	6.88				

minimum daily discharge, 4.2 ft³/s Sept. 19 and 22.

A Backwater from ice

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 3 to Feb. 15 and Feb. 29 to Mar. 14.)

1.7	3.5	4.0	112
1.8	5.5	5.0	169
1.9	8.5	6.0	270
2.0	12	7.0	444
2.5	47	8.0	740
3.0	69		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	12	48	16	7.0	22	24	197	56	22	6.9	15
2	6.4	30	29	15	7.8	19	23	88	43	18	6.8	16
3	6.5	15	27	16	8.2	17	22	87	34	16	6.9	7.3
4	14	10	19	16	8.4	15	23	118	27	16	11	6.2
5	9.5	9.6	18	15	8.2	14	22	83	24	15	7.0	6.7
6	6.5	9.2	17	14	7.8	13	20	61	21	22	6.5	6.3
7	6.6	8.8	17	13	7.4	11	17	49	129	15	8.4	8.7
8	37	8.5	16	13	7.2	9.8	16	41	115	12	42	8.6
9	18	9.1	16	12	7.2	9.0	15	36	48	14	34	7.4
10	8.6	8.8	15	11	8.0	8.4	15	31	33	93	13	7.2
11	7.7	9.5	45	10	20	8.0	14	29	24	326	11	7.1
12	25	9.8	180	9.8	60	7.6	23	28	20	114	8.1	5.8
13	39	9.1	280	9.4	500	7.4	79	37	19	44	7.3	4.9
14	12	8.9	240	9.0	400	9.0	55	38	18	30	7.7	4.8
15	9.1	18	170	8.8	155	60	96	28	15	27	6.8	7.2
16	8.1	35	100	8.6	103	150	198	23	13	22	6.5	7.1
17	7.7	12	70	8.4	88	90	133	20	26	16	6.0	5.4
18	7.2	9.5	52	8.0	75	40	100	21	182	15	6.5	4.3
19	7.8	53	45	7.6	139	22	78	44	84	13	5.7	4.2
20	8.4	98	40	7.4	106	80	62	28	34	12	5.8	4.4
21	11	88	36	7.2	75	76	49	24	23	11	6.4	4.3
22	65	48	33	7.2	63	73	128	27	195	10	18	4.2
23	56	115	31	7.2	57	78	354	41	474	9.3	10	5.2
24	19	99	28	7.2	50	94	162	25	155	9.6	6.4	5.6
25	14	49	26	7.0	43	81	96	205	69	9.1	5.8	4.4
26	11	31	23	7.0	36	64	73	278	47	8.4	5.4	39
27	10	25	21	7.0	31	56	60	88	62	9.9	7.4	11
28	10	203	20	7.0	27	48	64	198	40	8.6	11	8.0
29	10	139	19	6.8	24	39	66	411	30	8.1	7.6	7.0
30	10	65	18	6.8	---	32	408	145	26	7.7	30	6.0
31	10	---	17	6.8	---	28	---	82	---	7.4	13	---
TOTAL	477.5	1245.8	1716	305.2	2129.2	1281.2	2495	2611	2086	961.1	334.9	278.9
MEAN	15.4	41.5	55.4	9.85	73.4	41.3	83.2	84.2	69.5	31.0	10.8	9.30
MAX	65	203	280	16	500	150	408	411	474	326	42	44
MIN	6.4	8.5	15	6.8	7.0	7.4	14	20	13	7.4	5.4	4.2
CFSM	.31	.84	1.13	.20	1.49	.84	1.69	1.71	1.41	.63	.22	.19
IN.	.36	.94	1.30	.23	1.61	.97	1.89	1.97	1.58	.73	.25	.21
CAL YR 1983	TOTAL	16999.1	MEAN	46.6	MAX	869	MIN	4.3	CFSM	.95	IN	12.85
WTR YR 1984	TOTAL	15921.8	MEAN	43.5	MAX	500	MIN	4.2	CFSM	.88	IN	12.04

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 downstream from highway bridge 3.5 mi upstream from mouth, 5.5 mi southeast of intersection U.S. 45 and State Highway 100 in Franklin, and 8.7 mi southeast of Hales Corners.

DRAINAGE AREA.--57.0 mi².

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

REVISED RECORD.--WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 670 ft, from topographic map.

REMARKS.--Records good except for periods of ice effect, which are fair.

AVERAGE DISCHARGE.--21 years, 46.5 ft³/s, 11.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,440 ft³/s Mar. 4, 1974, gage height, 9.88 ft; minimum daily, 0.40 ft³/s Dec. 19, 1963, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 500 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Feb. 14	1330	About 570	A*8.93	May 29	0900	527	8.21
Apr. 24	0400	*583	8.45				

minimum discharge, 0.83 ft³/s Aug. 24, gage height, 1.83 ft.

A Backwater from ice

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1 to Nov. 22; stage-discharge relation affected by ice Dec. 5-9, Dec. 18 to Feb. 15, and Mar. 3-14.)

1.9	1.3	5.0	180
2.0	2.6	6.0	250
2.1	4.9	7.0	337
2.4	18	8.0	485
3.0	50	9.0	730
4.0	114		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.5	52	14	4.5	38	42	351	111	17	1.6	2.5
2	2.6	3.7	37	13	4.8	30	39	175	81	13	3.1	2.8
3	2.6	4.1	29	14	5.2	26	37	124	60	12	2.7	1.8
4	4.0	3.2	26	15	5.0	23	42	122	47	11	2.8	1.7
5	5.5	2.9	23	15	4.9	20	43	101	39	9.3	3.2	1.9
6	6.3	2.4	21	14	4.8	18	38	80	33	8.4	2.8	1.8
7	8.6	2.3	19	13	4.7	16	32	66	109	7.0	13	3.4
8	15	2.5	18	11	4.5	14	29	53	75	5.7	31	3.3
9	13	2.3	17	10	4.5	13	27	46	47	5.5	17	2.9
10	8.0	2.4	16	9.4	5.0	12	25	40	38	7.3	8.1	2.9
11	6.6	2.7	39	9.0	5.4	11	24	37	29	54	4.4	2.8
12	13	2.4	272	8.6	30	11	29	32	26	32	3.0	2.8
13	19	1.9	232	8.4	350	11	81	32	25	19	2.3	3.1
14	9.0	1.8	171	8.0	560	12	76	30	22	13	2.0	2.7
15	5.8	2.3	201	7.6	490	27	108	26	18	9.5	1.8	3.1
16	5.2	4.8	133	7.4	304	103	251	24	17	6.4	1.7	3.0
17	5.8	3.5	86	7.2	212	45	242	22	17	5.5	1.6	2.6
18	6.1	2.6	66	7.0	173	34	176	23	37	4.6	1.8	3.5
19	6.3	6.4	50	6.6	246	27	127	31	30	4.2	1.6	3.2
20	6.7	17	42	6.6	204	69	95	26	21	3.5	2.3	3.1
21	8.2	22	36	6.2	147	115	74	22	17	3.3	1.5	3.3
22	21	10	30	6.0	125	93	165	25	88	2.8	2.8	3.0
23	26	70	27	5.8	111	103	487	30	187	2.4	2.0	3.6
24	12	109	24	5.6	93	162	569	24	95	2.5	2.8	4.0
25	6.9	51	22	5.6	76	128	396	238	55	2.4	2.1	17
26	4.9	33	21	5.6	63	103	203	377	39	2.6	1.7	16
27	3.5	27	20	5.4	52	89	139	191	40	3.0	1.9	10
28	3.4	170	18	5.0	43	77	117	272	30	2.3	2.0	7.4
29	3.4	186	18	4.9	47	63	100	504	24	2.1	1.6	6.9
30	2.7	91	17	4.8	---	53	430	313	20	1.7	4.5	8.0
31	2.3	---	16	4.6	---	46	---	162	---	2.3	3.2	---
TOTAL	245.9	842.7	1799	264.3	3379.3	1592	4243	3599	1477	275.3	133.9	134.1
MEAN	7.93	28.1	58.0	8.53	117	51.4	141	116	49.2	8.88	4.32	4.47
MAX	26	186	272	15	560	162	569	504	187	54	31	17
MIN	2.3	1.8	16	4.6	4.5	11	24	22	17	1.7	1.5	1.7
CFSM	.14	.49	1.02	.15	2.05	.90	2.47	2.04	.86	.16	.08	.08
IN.	.16	.55	1.17	.17	2.21	1.04	2.77	2.35	.96	.18	.09	.09

CAL YR 1983 TOTAL 20006.16 MEAN 54.8 MAX 1120 MIN .81 CFSM .96 IN 13.06
WTR YR 1984 TOTAL 17985.50 MEAN 49.1 MAX 569 MIN 1.5 CFSM .96 IN 13.06

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 downstream from State Highway 38 bridge in Racine, 350 ft downstream from Horlick Dam, and 5.2 mi upstream from mouth.

DRAINAGE AREA.--190 mi², of which 1.24 mi² is probably noncontributing.

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

REVISED RECORD.--WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 610 ft, from topographic map. Prior to Feb. 5, 1964, nonrecording gage on bridge 30 ft upstream.

REMARKS.--Records good except for ice-affected periods, which are fair.

AVERAGE DISCHARGE.--21 years, 152 ft³/s, 11.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s Mar. 5, 1974, gage height, 8.54 ft; minimum, 0.90 ft³/s Jan. 17, 1977; minimum daily, 1.0 ft³/s July 17, 1977.

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Dec. 14	2300	843	4.39	May 1	2230	1,090	4.72
Feb. 15	2300	*1,580	*5.34	May 30	2015	1,170	4.82
Apr. 17	1545	745	4.25	June 24	1715	780	4.30
Apr. 24	1630	1,180	4.84				

minimum daily, 5.0 ft³/s Sept. 21, 22.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 6-9, Dec. 20 to Jan. 22, Jan. 26 to Feb. 8, and Mar. 7-14.)

2.2	3.0	3.0	124
2.3	7.0	3.5	305
2.4	16	4.0	575
2.7	62	6.0	2,130

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	14	255	48	16	117	145	976	617	88	11	33
2	8.1	14	159	46	18	112	135	978	342	75	11	19
3	6.9	18	121	48	20	96	129	598	247	65	9.7	28
4	6.7	26	111	47	20	92	130	430	192	58	8.8	15
5	6.6	27	99	47	20	84	136	413	157	53	9.1	11
6	12	23	88	43	20	76	130	321	135	49	9.7	9.0
7	13	19	78	40	19	58	116	251	228	48	15	9.6
8	13	17	76	39	19	54	104	206	363	44	39	9.7
9	13	15	72	37	19	50	96	175	271	37	89	9.7
10	30	15	69	35	19	47	92	155	168	46	69	11
11	30	15	142	33	20	44	89	142	130	194	36	11
12	28	13	513	31	94	42	96	131	108	355	25	11
13	27	12	649	29	678	41	195	125	102	244	18	11
14	56	12	753	28	998	45	271	134	93	106	14	9.0
15	39	13	696	27	1460	68	254	127	85	76	13	8.0
16	28	15	573	26	1390	237	539	112	76	64	12	6.4
17	20	23	351	25	938	306	720	104	73	53	11	5.8
18	14	29	204	24	645	163	711	105	108	42	8.9	5.9
19	11	31	146	22	594	122	540	118	253	38	8.6	6.1
20	9.0	70	130	21	629	160	367	144	165	33	8.7	5.5
21	7.8	130	110	20	584	331	271	123	102	28	9.6	5.0
22	19	115	100	18	426	331	372	116	98	25	9.6	5.0
23	87	135	94	17	353	294	943	133	391	24	9.6	5.8
24	99	290	84	17	304	419	1120	146	710	22	15	6.4
25	63	258	80	17	256	445	1110	499	647	17	12	8.6
26	43	142	72	17	215	355	870	761	276	17	10	36
27	32	110	68	17	182	288	572	892	182	17	8.4	71
28	28	309	64	17	150	250	387	899	173	17	8.6	34
29	23	476	60	16	120	215	328	978	125	15	10	21
30	21	460	56	16	---	184	713	1080	101	13	13	17
31	16	---	50	16	---	161	---	1040	---	13	25	---
TOTAL	821.1	2846	6123	884	10226	5287	11681	12412	6718	1976	557.3	444.5
MEAN	26.5	94.9	198	28.5	353	171	389	400	224	63.7	18.0	14.8
MAX	99	476	753	48	1460	445	1120	1080	710	355	89	71
MIN	6.6	12	50	16	16	41	89	104	73	13	8.4	5.0
CFSM	.14	.50	1.04	.15	1.86	.90	2.05	2.11	1.18	.34	.10	.08
IN.	.16	.56	1.20	.17	2.00	1.04	2.29	2.43	1.32	.39	.11	.09
CAL YR 1983	TOTAL	64503.0	MEAN 177	MAX 3300	MIN 2.9	CFSM .93	IN 12.63					
WTR YR 1984	TOTAL	59975.9	MEAN 164	MAX 1460	MIN 5.0	CFSM .86	IN 11.74					

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 downstream from Pike Creek, 6.8 mi southwest of Racine Post Office and 9.0 mi upstream from mouth.

DRAINAGE AREA.--38.5 mi².

PERIOD OF RECORD.--October 1971 to current year.

REVISED RECORDS.--WDR WI-76-1: 1975. WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 620.09 ft above mean sea level (Southeastern Wisconsin Regional Planning Commission).

REMARKS.--Records good except those for winter periods and period of missing record, June 24 to July 26, 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 upstream.

AVERAGE DISCHARGE.--13 years, 36.1 ft³/s, 12.73 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,480 ft³/s Mar. 4, 1976, gage height, 8.15 ft; minimum daily, 0.35 ft³/s Sept. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 695 ft³/s Feb. 13, gage height, 6.40 ft; minimum discharge, 2.8 ft³/s, gage height, 1.71 ft Sept. 4.

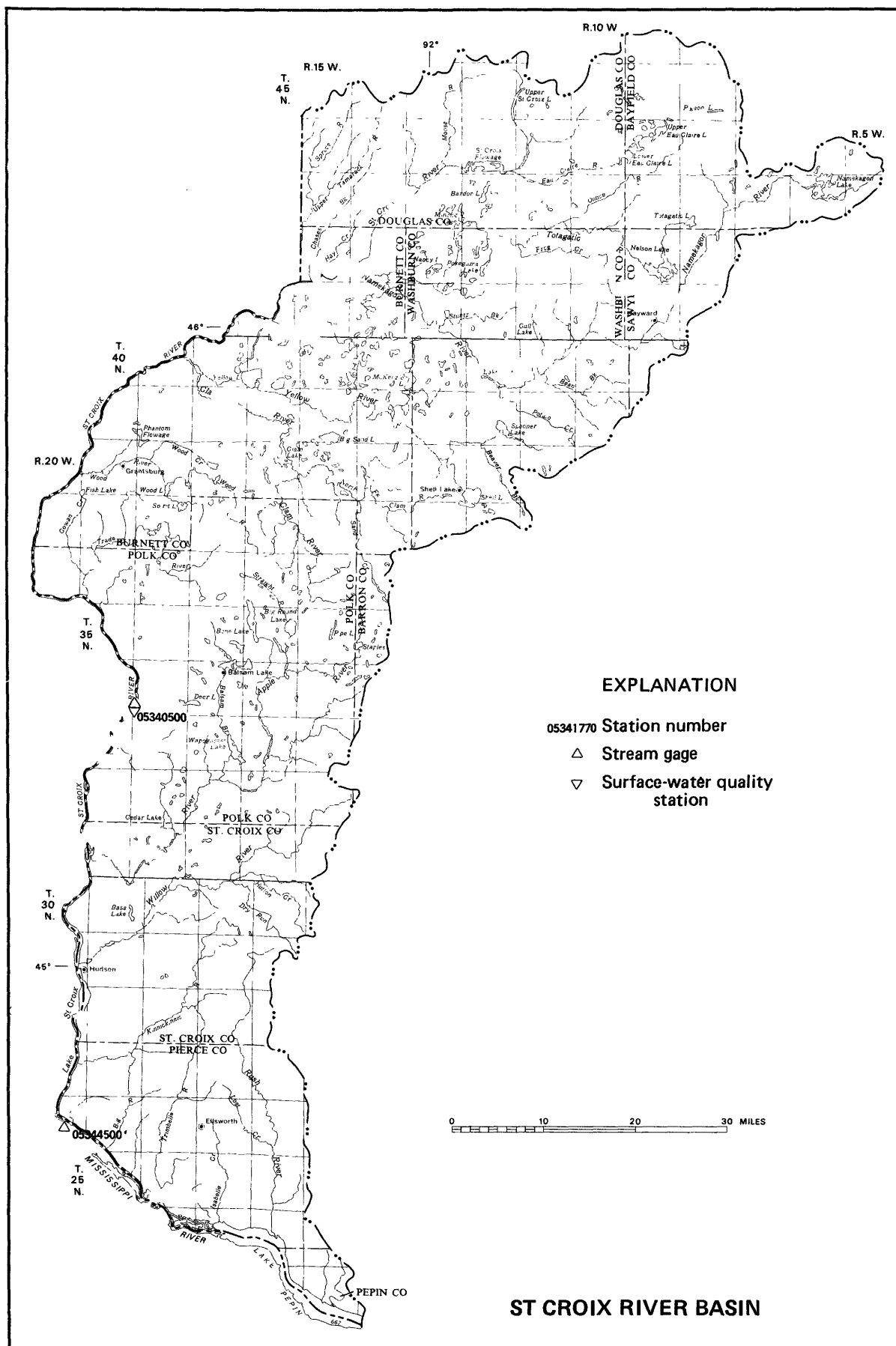
RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 6-9, Dec. 18 to Feb. 12, and Mar. 5-14.)

1.7	2.0	3.0	86
1.8	3.6	3.5	145
1.9	7.0	4.0	214
2.0	11	5.0	379
2.3	27	6.0	594
2.6	49		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	12	59	13	6.4	25	29	85	49	17	7.4	7.9
2	3.4	14	45	12	7.6	22	29	59	37	15	7.3	7.6
3	9.0	13	36	13	8.4	19	28	48	29	14	6.8	5.2
4	24	11	32	13	8.2	16	33	53	26	12	5.2	3.6
5	10	8.5	31	14	8.0	14	33	43	24	11	3.9	5.3
6	9.5	6.8	25	12	7.8	13	28	37	22	12	5.8	5.6
7	10	7.0	23	11	7.8	12	24	35	49	10	32	6.7
8	19	9.2	21	10	7.6	11	20	32	28	9.2	58	7.0
9	4.9	9.7	20	9.6	7.6	10	20	29	19	8.2	19	6.8
10	6.3	9.4	21	9.0	9.0	9.6	19	27	16	12	19	5.6
11	11	17	103	8.8	15	9.2	18	26	14	88	13	5.8
12	58	11	313	8.6	60	9.0	31	22	14	62	11	6.0
13	24	6.8	155	8.2	495	8.8	55	24	17	44	7.5	6.0
14	11	9.1	194	8.0	226	10	46	22	14	33	7.4	6.0
15	5.8	17	217	7.8	138	40	57	20	12	30	7.4	5.5
16	4.5	20	110	7.6	101	101	147	19	11	25	7.4	4.4
17	7.5	17	69	7.4	85	32	139	19	10	21	7.4	3.4
18	11	16	50	7.2	76	24	96	23	22	19	6.1	3.9
19	9.4	34	36	7.0	168	22	65	24	16	17	4.4	4.4
20	14	44	31	7.0	103	107	50	19	13	15	4.9	4.6
21	14	41	28	6.8	77	103	40	19	12	13	6.4	4.6
22	90	29	24	6.8	64	85	229	25	45	12	7.8	4.6
23	54	178	21	6.8	58	92	399	28	130	11	7.6	4.6
24	25	121	19	7.2	52	99	236	20	94	11	7.0	5.0
25	17	62	18	7.4	44	71	142	99	54	10	5.1	36
26	14	42	17	7.4	37	58	94	81	38	15	3.5	12
27	12	39	16	7.2	35	53	70	39	40	12	5.6	7.2
28	11	316	16	7.0	31	47	50	173	29	8.0	7.2	7.2
29	8.1	160	16	6.8	29	41	45	212	23	6.1	6.5	6.4
30	6.1	88	15	6.6	---	37	152	112	20	5.8	8.8	3.8
31	6.8	---	14	6.4	---	32	---	68	---	7.0	8.1	---
TOTAL	515.6	1368.5	1795	270.6	1972.4	1232.6	2424	1542	927	585.3	314.5	202.7
MEAN	16.6	45.6	57.9	8.73	68.0	39.8	80.8	49.7	30.9	18.9	10.1	6.76
MAX	90	316	313	14	495	107	399	212	130	88	58	36
MIN	3.4	6.8	14	6.4	6.4	8.8	18	19	10	5.8	3.5	3.4
CFSM	.43	1.18	1.50	.23	1.77	1.03	2.10	1.29	.80	.49	.26	.18
IN.	.50	1.32	1.73	.26	1.91	1.19	2.34	1.49	.90	.57	.30	.20

CAL YR 1983 TOTAL 14101.1 MEAN 38.6 MAX 624 MIN 2.3 CFSM 1.00 IN 13.62
WTR YR 1984 TOTAL 13150.2 MEAN 35.9 MAX 495 MIN 3.4 CFSM .93 IN 12.71



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 downstream from powerplant of Northern States Power Co., in St. Croix Falls, and at mile 52.2.

DRAINAGE AREA.--6,240 mi².

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. WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 689.94 ft 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 downstream at same datum.

REMARKS.--Records are good except for period of no gage-height record, June 21 to July 31, which is fair. Diurnal fluctuation caused by St. Croix Falls Powerplant 1,500 ft upstream.

AVERAGE DISCHARGE.--82 years, 4,268 ft³/s, 9.29 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,900 ft³/s May 8, 1950, gage height, 25.19 ft; minimum daily, 75 ft³/s July 17, 1910.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,400 ft³/s June 13, gage height, 16.45 ft; minimum daily, 2,460 ft³/s Aug. 14, 23.

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

3.0	2,350	9.0	18,200
4.0	4,950	12.0	25,400
6.0	10,700	14.0	29,900
		16.0	34,400

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4870	5190	7440	5140	3790	8160	9830	16400	5720	6150	3430	2710
2	5380	4980	7290	5080	3880	7640	11000	16800	5300	6080	2920	2880
3	5480	4700	6090	4630	3490	7240	12100	16500	4650	6060	3290	2650
4	5930	4690	5630	5110	3450	6920	13700	15900	4780	6250	2660	3030
5	5410	4670	6300	4340	3440	6510	14900	15400	4620	6190	2770	3010
6	5410	4670	6720	4790	3660	5850	15500	14100	4840	6130	3670	2650
7	5420	4350	6520	4650	3450	5430	16100	13800	6800	6090	4410	3000
8	4970	4420	6200	4420	3670	4990	16400	15100	9880	5740	4390	2610
9	4900	4610	6100	4730	3370	4360	16200	14800	12500	5480	4100	2670
10	4930	4660	5480	4870	3640	4600	15500	14400	15000	4880	3880	2850
11	5820	5110	5620	4670	3350	4050	14700	13500	18000	5640	3600	2890
12	7290	5090	4770	4320	3880	3540	13800	12700	26200	5690	3070	3140
13	8690	5340	4690	4230	4080	4000	13300	12400	34200	5440	3140	3190
14	9320	5000	4640	4150	4360	4150	12600	11400	32100	5560	2460	4150
15	8680	4730	5070	4230	4910	4080	12300	10700	30400	4640	3760	4170
16	8590	5140	5250	4130	5780	4300	11700	9770	28500	4600	2720	3870
17	8970	5210	5640	4320	5960	3790	11100	9280	26400	4620	2790	3280
18	9440	5220	6230	4310	6870	4060	10400	9570	23800	4470	2780	3260
19	9820	5110	5500	4550	7620	4360	9240	9410	21100	4110	2620	3490
20	9770	5350	5740	3970	7800	3990	8410	8340	18800	4040	3220	2900
21	9290	7180	5760	4180	8010	4100	7830	7830	16400	4030	2880	3020
22	8870	9820	5930	3970	8690	4140	7470	9560	14000	3560	2830	2900
23	8140	10900	6280	4100	9300	4420	6600	11300	12400	3350	2460	2550
24	7720	9320	5590	3650	9730	4000	6570	12100	11400	3650	2850	3710
25	7390	6620	6500	3900	10100	4740	6220	11900	12800	3390	2750	4380
26	6870	6150	6330	3540	10000	5930	5700	10400	9900	3520	3210	6450
27	7070	6360	5110	3820	9470	6470	5630	9020	8500	2960	2720	8020
28	6200	7590	5420	3650	9600	7240	9250	7880	7500	2980	3010	8230
29	6160	7230	5290	3770	9270	7980	12600	7210	5750	3200	2720	7370
30	5700	7250	5840	3680	---	8990	15500	6370	6440	2860	2980	6730
31	5270	---	5470	3760	---	9750	---	6110	---	2960	2820	---
TOTAL	217770	176660	180440	132660	174620	169780	342150	359950	438680	144320	96910	115760
MEAN	7025	5889	5821	4279	6021	5477	11410	11610	14620	4655	3126	3859
MAX	9820	10900	7440	5140	10100	9750	16400	16800	34200	6250	4410	8230
MIN	4870	4350	4640	3540	3350	3540	5630	6110	4620	2860	2460	2550
CFSM	1.13	.94	.93	.69	.97	.88	1.83	1.86	2.34	.75	.50	.62
IN.	1.30	1.05	1.08	.79	1.04	1.01	2.04	2.15	2.62	.86	.58	.69

CAL YR 1983 TOTAL 2339650 MEAN 6410 MAX 23300 MIN 2510 CFSM 1.03 IN 13.95
WTR YR 1984 TOTAL 2549700 MEAN 6966 MAX 34200 MIN 2460 CFSM 1.12 IN 15.20

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT , 1983												
04... , 1984	1010	6420	137	7.7	--	16.0	3.1	8.0	740	84	36	210
18... , 1984	1235	5360	188	7.3	22.0	.0	2.9	9.6	750	67	K13	58
APR 11...	1115	14500	98	7.4	11.5	6.0	2.8	11.8	741	97	K4	K8
JUN 14...	1250	32200	82	7.4	23.0	19.0	14	8.2	750	90	280	200
AUG 06...	1310	5540	168	8.0	32.0	24.5	1.3	7.4	742	91	30	130

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT , 1983												
04... , 1984	67	1	18	5.4	2.1	6	.1	1.1	66	2.5	9.1	3.1
18... , 1984	87	6	23	7.2	3.4	8	.2	.90	81	7.9	10	3.5
APR 11...	43	4	11	3.7	1.9	9	.1	.90	39	3.0	4.1	3.3
JUN 14...	45	6	12	3.7	1.6	7	.1	1.1	39	3.0	12	2.3
AUG 06...	84	4	22	7.0	2.9	7	.1	.70	80	1.5	4.2	3.0

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS ST02) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00663)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT , 1983											
04... , 1984	<.10	12	99	91	1720	.15	.220	.50	.040	.020	<.010
18... , 1984	<.10	15	131	110	1900	.68	.110	1.9	.040	.030	<.010
APR 11...	<.10	9.1	52	58	2040	<.10	.060	3.2	.020	<.010	<.010
JUN 14...	<.10	6.4	82	63	7130	.21	.040	.90	.190	.020	<.010
AUG 06...	<.10	12	115	100	1720	.11	.020	1.1	.040	<.010	.020

K RESULTS BASED ON COUNT OUTSIDE OF 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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT , 1983											
04...	1010	6420	30	2	24	<.5	<1	<1	<3	<1	390
JAN , 1984											
18...	1235	5360	20	1	32	<.5	<1	1	<3	2	640
APR											
11...	1115	14500	10	1	20	<.5	<1	4	<3	1	390
JUN											
14...	1250	32200	70	1	28	<.5	<1	<1	<3	4	450
AUG											
06...	1310	5540	<10	1	26	<.5	<1	4	<3	3	160

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT , 1983											
04...	<1	<4	16	.6	10	<1	<1	<1	37	<6	<3
JAN , 1984											
18...	1	<4	22	<.1	<10	1	<1	<1	42	<6	15
APR											
11...	2	<4	20	.1	<10	<1	<1	<1	24	<6	5
JUN											
14...	<1	<4	76	2.5	<10	2	<1	<1	28	<6	13
AUG											
06...	3	<4	29	1.6	<10	<1	<1	<1	46	<6	7

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT , 1983							
03...	1140	6450	145	17.5	--	--	--
04...	1010	6420	137	16.0	10	173	89
NOV							
25...	1140	6480	118	.5	--	--	--
JAN , 1984							
18...	1235	5360	188	.0	2	29	100
FEB							
23...	1220	9110	140	1.0	--	--	--
MAR							
19...	1100	6480	193	.5	--	--	--
APR							
04...	1240	13400	120	4.5	--	--	--
11...	1115	14500	98	6.0	9	352	87
MAY							
01...	1345	16500	111	7.0	--	--	--
JUN							
13...	1400	34500	78	20.0	--	--	--
14...	1250	32200	82	19.0	37	3220	85
JUL							
31...	1200	3910	227	23.0	--	--	--
AUG							
06...	1310	5540	168	24.5	8	120	85

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 downstream from St. Croix River, 300 ft south of Chicago, Burlington & Quincy Railroad bridge, 800 ft south of bridge on U.S. Highway 10, and at mile 811.4 upstream from Ohio River.

DRAINAGE AREA.--44,800 mi², 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 National Geodetic Vertical Datum of 1929. Prior to Aug. 2, 1932, nonrecording gage at railroad bridge 300 ft upstream at following datums: June 3, 1928, to Sept. 30, 1929, 19.27 ft higher; Oct. 1, 1929, to Sept. 30, 1930, 17.68 ft higher; Oct. 1, 1930, to Aug. 1, 1932, 19.28 ft higher. Aug. 2, 1932, to Oct. 30, 1938, water-stage recorder at present site at datum 19.28 ft higher; Nov. 1, 1938, to Sept. 7, 1971, water-stage recorder at present site at datum 50.00 ft lower. Auxiliary water-stage recorder 10.7 mi 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.--56 years, 16,830 ft³/s, 5.10 in/yr; median of yearly mean discharges, 15,300 ft³/s, 4.64 in/yr.

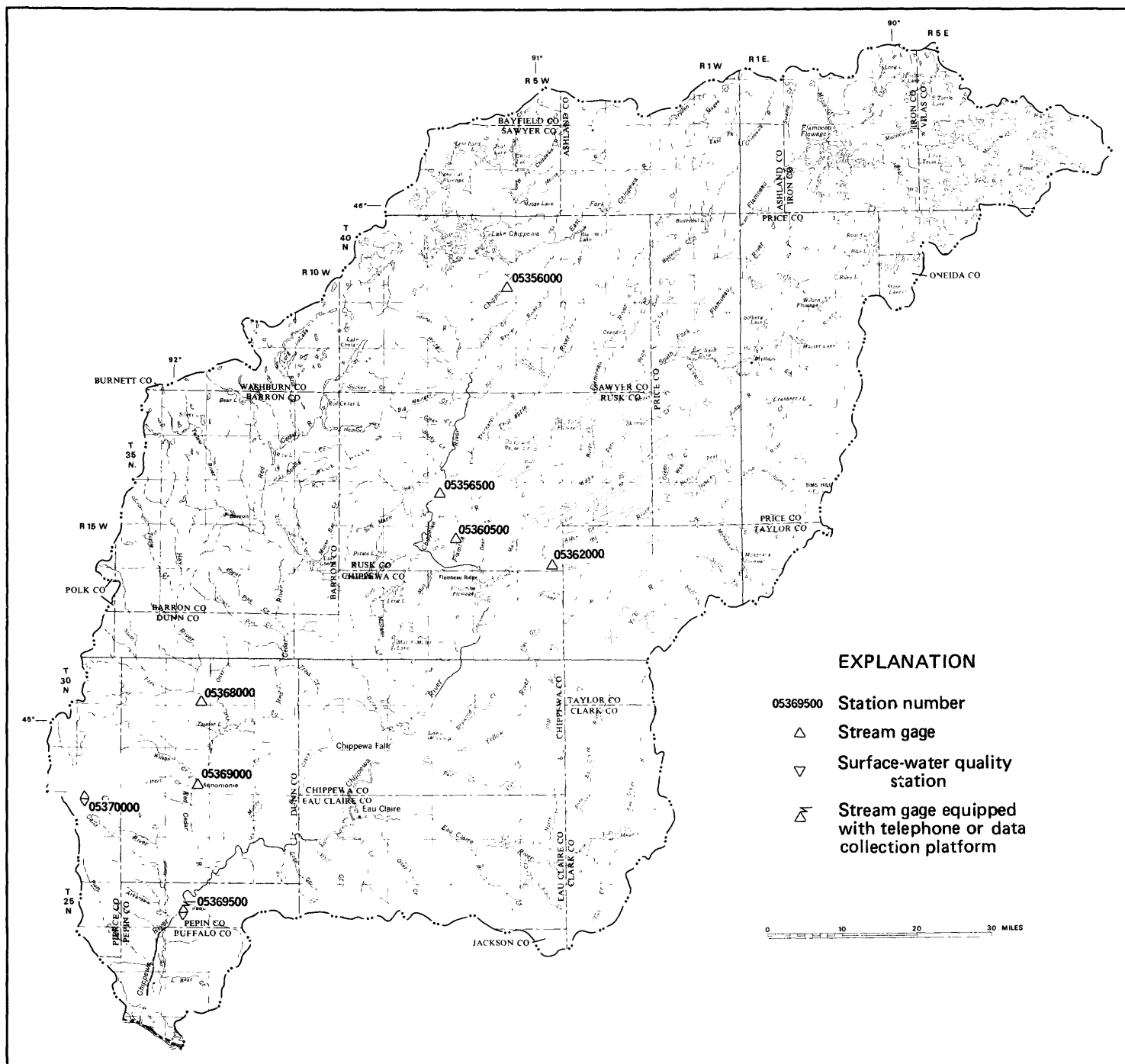
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 228,000 ft³/s Apr. 18, 1965, gage height, 43.11 ft; minimum daily, 1,380 ft³/s July 13, 1940; minimum gage height, 15.08 ft Aug. 29, 1934, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 90,900 ft³/s June 17, gage height, 34.69 ft; minimum daily, 7,940 ft³/s Sept. 25; minimum gage height, 24.70 ft Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12500	17700	20500	16800	12500	38800	46500	52200	28300	78300	15600	8700
2	12300	18000	20300	16500	12400	37900	49600	54600	26800	75000	15700	8200
3	13000	17500	19200	16300	12800	37400	54400	56000	25100	71400	15100	8840
4	13300	16800	18200	15500	12500	36500	60100	56400	24400	67000	15000	8600
5	13900	16500	17800	15900	12200	36500	64400	57200	24800	62800	14800	8910
6	13500	16200	19000	14800	11500	35700	67800	57500	24700	58200	14 00	8850
7	13600	15800	19400	15600	11100	31100	70800	58500	24700	52800	14 00	8250
8	13000	15400	20300	14600	11300	27600	71400	59500	28900	49100	17 00	8720
9	13300	15800	18800	14900	11600	25000	71800	61400	32500	45800	18 00	8020
10	13500	16100	18400	14600	10200	24600	71500	64100	36000	43100	19300	8200
11	12300	15400	18200	14800	11000	24100	70100	65800	41000	41700	18300	8490
12	13200	16400	18200	14000	11600	24400	68100	65000	49900	39600	16600	8270
13	16300	16600	19100	14200	11800	23800	66800	63400	64800	37900	15300	8610
14	18100	16800	17700	14200	12300	23800	64900	62900	78000	36800	14500	8310
15	20000	16200	18200	14500	13800	23700	63900	61100	84600	35300	14300	10500
16	19100	16600	18700	13900	14700	24000	62900	59300	88600	33300	14100	9940
17	20400	16400	17300	13800	16300	23100	62400	57400	90700	32900	12900	10200
18	20300	17000	16800	13600	17000	22700	62000	54700	90500	31200	12300	12100
19	22100	16900	17000	13100	18700	22600	62000	52800	89500	30100	11600	11600
20	21800	16800	16400	13900	21500	22700	61900	50400	88700	29200	11400	9720
21	22500	16400	17100	13400	22600	22300	61100	47100	88200	27600	10 00	9360
22	22400	19000	18000	13300	25300	22700	60200	45300	88500	25900	10100	8860
23	22600	24400	18400	13400	28100	22100	58300	43800	89800	25300	10400	8190
24	21300	26500	18200	14000	30900	22100	55100	42000	89200	23400	9920	8240
25	20900	26700	17400	12900	32800	23500	52000	41900	88800	21700	9730	7940
26	21200	23200	18300	13200	34900	26100	49300	40500	87800	21200	9330	9230
27	20700	21300	18600	12400	35600	29200	47400	37800	85900	19400	9450	12700
28	20500	21000	17200	13000	36100	32600	46800	35100	84200	17900	9180	14400
29	19900	21600	17200	12500	37700	35400	46700	32800	81600	17500	9710	15400
30	20000	22700	16600	12600	---	38200	50200	30800	80000	16900	9850	15600
31	18600	---	17200	12300	---	42400	---	29100	---	15800	9590	---
TOTAL	546100	553700	563700	438500	550800	882600	1800400	1596400	1906500	1184100	410760	293950
MEAN	17620	18460	18180	14150	18990	28470	60010	51500	63550	38200	13250	9798
MAX	22600	26700	20500	16800	37700	42400	71800	65800	90700	78300	19300	15600
MIN	12300	15400	16400	12300	10200	22100	46500	29100	24400	15800	9180	7940
CFSM	.39	.41	.41	.32	.42	.64	1.34	1.15	1.42	.85	.30	.22
IN.	.45	.46	.47	.36	.46	.73	1.49	1.33	1.58	.98	.34	.24

CAL YR 1983 TOTAL 10085900 MEAN 27630 MAX 84000 MIN 10600 CFSM .62 IN 8.37
WTR YR 1984 TOTAL 10727510 MEAN 29310 MAX 90700 MIN 7940 CFSM .65 IN 8.91



Base from U.S. Geological Survey
State base map, 1968

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 upstream from highway bridge on County Trunk Highway G, 3.2 mi downstream from Lake Chippewa Dam, and 3.7 mi northwest of Winter.

DRAINAGE AREA.--790 mi².

PERIOD OF RECORD.--February 1912 to current year. December to April 1913, monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 1438: 1913(M), 1915-18(M), 1919, 1920-23(M), 1924, 1925(M), 1927(M), 1928, 1929-30(M), 1939(M). WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,256.78 ft 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.

AVERAGE DISCHARGE.--72 years, 720 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,520 ft³/s Sept. 4, 5, 1941, gage height, 11.05 ft; minimum, 14 ft³/s Apr. 17-20, 1925, gage height, 3.25 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,190 ft³/s June 12, gage height, 7.68 ft; minimum discharge, 31 ft³/s Aug. 29, gage height 3.48 ft.

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

4.1	164	5.0	660
4.3	248	6.0	1,430
4.6	399	7.0	2,400
		8.0	3,600

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	849	1340	1660	1460	253	213	249	671	464	438	502
2	1090	848	1460	1660	1460	246	222	263	575	464	467	508
3	1080	849	1460	1650	1460	240	229	279	488	467	464	505
4	1080	848	1320	1630	1450	188	236	250	487	464	463	458
5	1080	847	1310	1630	1440	187	239	238	492	463	473	434
6	1080	681	1310	1620	1430	211	212	231	491	463	472	413
7	1100	555	1320	1620	1430	225	221	418	514	459	465	404
8	1090	555	1310	1610	1420	211	218	1340	904	462	455	457
9	1090	560	1360	1610	1410	229	217	2790	1090	464	416	455
10	1090	559	1480	1600	1400	239	217	2150	1480	467	462	419
11	1120	557	1470	1600	1390	245	214	1930	2030	464	464	398
12	1110	557	1470	1590	1390	231	215	1920	2200	425	462	482
13	1090	557	1560	1590	1390	187	221	1930	3160	430	364	493
14	1090	559	1730	1580	1380	188	218	2170	3130	431	498	529
15	1090	562	1730	1580	1380	187	214	2440	3120	431	498	530
16	1090	561	1730	1580	1370	186	209	2440	3110	432	474	531
17	1090	560	1730	1570	1370	188	203	2440	2540	435	474	472
18	1090	557	1730	1570	1370	188	201	2430	2040	433	475	495
19	1420	742	1720	1560	1360	187	201	2130	1070	431	474	509
20	1620	1310	1720	1550	1360	188	199	1930	1050	430	452	551
21	1620	1310	1710	1540	832	188	199	1630	830	432	486	550
22	1620	1300	1710	1530	194	187	199	1250	831	434	396	687
23	1610	1360	1710	1530	196	191	199	1090	829	430	420	685
24	1620	1400	1700	1520	196	191	200	934	824	429	410	711
25	1570	1330	1700	1520	196	192	200	824	817	431	488	847
26	1240	1320	1690	1510	258	196	202	821	820	430	489	688
27	1110	1310	1680	1510	248	198	255	819	814	430	338	802
28	1100	1320	1680	1500	191	201	242	817	813	431	333	1160
29	960	1320	1680	1490	264	202	222	743	785	431	354	1370
30	849	1320	1680	1480	---	201	258	672	675	431	383	1370
31	849	---	1670	1470	---	205	---	672	---	431	500	---
TOTAL	36828	26963	48870	48660	30695	6356	6495	40240	38680	13719	13807	18415
MEAN	1188	899	1576	1570	1058	205	217	1298	1289	443	445	614
MAX	1620	1400	1730	1660	1460	253	258	2790	3160	467	500	1370
MIN	849	555	1310	1470	191	186	199	231	487	425	333	398
CAL YR 1983	TOTAL	334596	MEAN 917	MAX 2000	MIN 184							
WTR YR 1984	TOTAL	329728	MEAN 901	MAX 3160	MIN 186							

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 east of Bruce and 1.0 mi downstream from Thornapple River.

DRAINAGE AREA.--1,650 mi².

PERIOD OF RECORD.--December 1913 to current year.

REVISED RECORDS.--WSP 875: 1936-38. WSP 1308: 1922, 1937(M). WSP 1508: 1914-26(M), 1927, 1928-31(M), 1932, 1933(M), 1934-36, 1938. WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,059.62 ft National Geodetic Vertical Datum of 1929. Prior to May 28, 1935, nonrecording gage at railroad bridge 0.8 mi upstream at datum 2.30 ft higher.

REMARKS.--Records good except those for period of no gage-height record, Nov. 17 to Jan. 13 and those for winter period, which are fair. Flow from 48 percent of the drainage area regulated by Moose Lake and Lake Chippewa.

AVERAGE DISCHARGE.--70 years, 1,473 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,800 ft³/s Sept. 1, 1941, gage height, 20.46 ft, from floodmarks, from rating curve extended above 20,000 ft³/s; minimum, 155 ft³/s June 10, 1932, gage height, 0.9 ft, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,970 ft³/s June 13, gage height, 8.27 ft; minimum, 558 ft³/s Mar. 12, but may have been less on other days of ice effect.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 28 to Mar. 31.)

1.5	390	6.0	4,300
2.0	740	8.0	6,620
4.0	2,320		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1670	1310	2000	2300	2000	800	1710	3890	1160	1060	840	840
2	1620	1360	2000	2300	1900	760	2170	3740	1150	877	893	877
3	1540	1310	2200	2300	1900	740	2730	3690	1010	939	931	946
4	1490	1360	2100	2300	1900	700	2910	3430	942	943	977	963
5	1520	1300	2000	2200	1900	660	3020	2920	970	937	980	908
6	1490	1290	2000	2200	1900	640	3190	2400	1030	961	1010	831
7	1540	1170	2000	2200	1900	620	3090	2230	1020	959	1040	771
8	1960	968	1900	2200	1900	620	2880	3110	3290	960	998	736
9	2030	1100	2000	2200	1900	640	2290	4340	5060	930	1160	849
10	1870	1270	2100	2200	1900	600	1960	4900	3340	974	1010	821
11	2270	1260	2100	2100	2000	580	1870	3880	3340	1030	908	770
12	3720	1190	2200	2100	2100	580	1700	3510	4090	937	879	907
13	3650	1130	2200	2100	2200	580	1950	3610	6400	920	907	1300
14	3090	1080	2300	2100	2300	600	2100	3690	6130	892	736	1480
15	2560	1200	2400	2100	2400	620	1860	3850	4930	886	863	1360
16	2300	1290	2500	2100	2500	620	1680	3740	4430	879	886	1140
17	2220	1300	2500	2100	2500	640	1560	3610	4200	933	874	1110
18	2080	1400	2400	2100	2500	640	1340	3510	3220	938	821	980
19	2050	1500	2400	2100	2500	640	1180	3380	2610	917	800	947
20	2570	1700	2400	2100	2500	640	1080	2830	1760	903	798	924
21	2560	2300	2400	2100	2500	660	928	2690	1670	871	840	931
22	2480	2300	2400	2100	1800	680	856	2440	1470	830	894	946
23	2390	2700	2400	2000	1500	720	826	2360	1430	842	861	1060
24	2340	3300	2400	2000	1400	840	799	2070	1380	846	820	1260
25	2290	4200	2300	2000	1400	920	834	1730	1340	836	763	1760
26	2100	4000	2300	2000	1300	1000	770	1600	1310	827	804	1860
27	1730	3400	2300	2000	1200	1100	1210	1480	1320	816	848	1480
28	1640	3000	2300	2000	1100	1200	3060	1430	1320	816	743	1540
29	1610	2500	2300	2000	900	1300	2690	1380	1270	793	687	1820
30	1430	2200	2300	2000	---	1400	2780	1240	1220	773	686	1860
31	1340	---	2300	2000	---	1400	---	1200	---	816	684	---
TOTAL	65150	55388	69400	65600	55700	24140	57023	89880	73817	27841	26941	33977
MEAN	2102	1846	2239	2116	1921	779	1901	2899	2460	898	869	1133
MAX	3720	4200	2500	2300	2500	1400	3190	4900	6400	1060	1160	1860
MIN	1340	968	1900	2000	900	580	770	1700	942	773	684	736

CAL YR 1983 TOTAL 671120 MEAN 1839 MAX 12500 MIN 801
WTR YR 1984 TOTAL 644852 MEAN 1762 MAX 6400 MIN 580

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 downstream from Thornapple Powerplant, 6.0 mi upstream from mouth, and 7.0 mi southeast of Bruce.

DRAINAGE AREA.--1,860 mi².

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

REVISED RECORDS.--WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,056.34 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by several powerplants above station and by Rest Lake and Flambeau Flowage Reservoirs.

AVERAGE DISCHARGE.--33 years, 1,850 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,400 ft³/s May 1, 1954, gage height, 10.90 ft; minimum, about 100 ft³/s Aug. 7, 9, 1957, gage height, 2.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,200 ft³/s Nov. 24, gage height, 7.25 ft; minimum, 368 ft³/s Nov. 18, gage height, 2.33 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 5 to Mar. 25.)

2.5	471	5.0	3,480
3.0	840	7.0	7,610
4.0	1,940		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2100	1580	2560	1600	1300	1900	2060	4300	1230	993	799	956
2	1900	1610	2330	1600	1300	1800	2660	4380	1270	825	911	1020
3	1600	1520	1970	1600	1400	1500	2730	4370	1270	783	1020	1080
4	1700	1400	1680	1700	1300	1400	3130	4300	1200	908	1220	1400
5	1700	1330	2400	1700	1300	1500	2980	3660	1050	985	1040	2570
6	1700	1380	2500	1500	1300	1600	3720	3090	1210	1020	965	2660
7	1600	1350	2400	1800	1400	1500	3030	2880	1140	781	1020	2770
8	2030	1400	2300	1700	1400	1400	4210	3110	1620	880	1180	2700
9	2520	1570	2100	1800	1300	1300	3190	3530	1810	849	1060	2270
10	2550	1800	1900	1800	1300	1400	3890	3410	2700	801	1050	3000
11	2460	1560	1700	1700	1300	1300	3010	3300	2940	955	1030	3200
12	4350	1750	1900	1800	1400	1300	2740	2860	1440	950	790	2820
13	5120	1530	1800	1500	1600	1300	2780	3500	1110	989	799	2760
14	4930	2120	2000	1600	1800	1200	2590	3310	1390	1020	804	3200
15	4200	1610	2300	1700	1700	1100	2510	2480	1660	924	905	3170
16	3440	1860	2500	1500	2000	1300	2990	2230	1620	799	869	2290
17	3040	1770	1700	1800	2100	1400	2880	2350	1530	937	920	2360
18	3070	1320	1600	1600	2400	1400	2270	2130	1710	908	853	1270
19	3120	1780	1600	1400	3100	1400	2120	2070	1580	861	793	1450
20	2630	2100	1700	1500	2400	1300	1780	1930	1660	721	803	1290
21	2560	3540	1600	1300	1900	1400	1470	1670	1190	638	885	1030
22	2560	3530	1800	1400	2300	1400	1580	1790	1360	778	1010	941
23	2000	4650	1700	1500	2200	1500	1660	2060	857	1150	963	1280
24	2200	6960	1800	1400	2200	2200	1310	2100	732	977	989	1260
25	2100	6160	1700	1400	2100	1600	1450	2510	719	810	857	1500
26	1660	4720	1600	1500	2100	1320	1540	2010	752	781	806	2030
27	1720	4540	1600	1400	2300	1890	1960	1830	756	517	727	1900
28	1820	4770	1800	1200	2100	2070	2070	1650	787	785	1040	2000
29	1650	3810	1700	1400	1900	2080	2920	1590	1120	782	857	1870
30	1490	2790	1700	1300	---	1730	3580	1300	1030	637	786	1460
31	1570	---	1600	1400	---	1920	---	1350	---	696	948	---
TOTAL	77090	77810	59540	48100	52200	47410	76810	83050	40443	26440	28699	59507
MEAN	2487	2594	1921	1552	1800	1529	2560	2679	1348	853	926	1984
MAX	5120	6960	2560	1800	3100	2200	4210	4380	2940	1150	1220	3200
MIN	1490	1320	1600	1200	1300	1100	1310	1300	719	517	727	941
CAL YR 1983	TOTAL	822051	MEAN	2252	MAX	11500	MIN	868				
WTR YR 1984	TOTAL	677099	MEAN	1850	MAX	6960	MIN	517				

CHIPPEWA RIVER BASIN

05362000 JUMP RIVER AT SHELDON, 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 upstream from Shoulder Creek and 11 mi upstream from mouth.

DRAINAGE AREA.--576 mi².

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 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 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. Data-collection platform at station.

AVERAGE DISCHARGE.--69 years, 519 ft³/s, 12.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 46,000 ft³/s Aug. 31, 1941, gage height, 18.8 ft from floodmark, from rating curve extended above 13,000 ft³/s on basis of contracted-opening measurement of peak flow; minimum observed, 11 ft³/s Dec. 18, 1943, gage height, 3.99 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Oct. 12	2400	4,230	8.61	May 1	1200	3,550	8.15
Nov. 24	1800	*4,990	*9.08				

minimum discharge, 56 ft³/s Aug. 20, 21, gage height 3.12 ft.

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

3.1	52	5.0	685
3.5	126	6.0	1,300
4.0	252	7.0	2,180
4.5	443	9.0	4,850

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	298	273	720	190	160	580	1360	3470	157	141	63	88
2	269	275	620	190	160	490	1670	3140	151	123	70	99
3	255	266	580	190	160	410	2050	2470	152	111	71	160
4	249	256	600	190	160	320	2120	1840	157	103	71	202
5	236	247	560	180	160	260	2200	1360	153	99	93	181
6	233	233	520	180	160	220	2250	1070	181	97	115	153
7	257	229	490	180	160	200	2170	924	202	92	145	135
8	623	221	450	180	160	180	1930	1030	228	88	162	125
9	911	256	410	180	160	160	1640	1090	406	85	180	116
10	788	446	380	180	170	150	1400	1040	382	87	138	115
11	958	581	360	180	170	130	1220	889	306	95	113	112
12	3410	511	340	170	200	130	1100	776	290	105	94	127
13	4050	441	320	170	290	120	1170	995	556	118	82	197
14	3220	413	300	170	430	120	1330	1490	664	112	76	296
15	2270	491	290	170	600	130	1320	1210	494	109	71	268
16	1680	633	280	170	820	130	1150	896	373	207	68	227
17	1400	727	270	160	1000	140	940	711	337	271	65	194
18	1140	718	260	160	1200	150	773	601	374	306	64	172
19	950	686	250	150	1400	150	667	513	330	321	61	153
20	839	1100	240	140	1300	160	587	436	264	246	57	136
21	749	1990	240	130	1300	190	534	377	224	190	64	121
22	651	2010	230	120	1300	210	471	377	238	156	72	109
23	571	2570	220	120	1200	240	423	410	252	139	84	108
24	509	4670	220	120	1100	270	382	372	262	124	98	231
25	459	4000	210	130	1000	320	343	323	221	107	88	869
26	415	2600	210	140	880	400	322	284	193	98	83	961
27	376	1800	200	140	800	540	449	244	179	88	92	779
28	346	1200	200	150	720	780	1010	216	180	80	102	570
29	331	1000	200	150	660	1100	1100	192	172	73	101	413
30	312	840	190	150	---	1580	2220	175	156	68	97	316
31	287	---	190	150	---	1500	---	163	---	66	90	---
TOTAL	29042	31683	10550	4980	17980	11460	36301	29084	8234	4105	2830	7733
MEAN	937	1056	340	161	620	370	1210	938	274	132	91.3	258
MAX	4050	4670	720	190	1400	1580	2250	3470	664	321	180	961
MIN	233	221	190	120	160	120	322	163	151	66	57	88
CFSM	1.63	1.83	.59	.28	1.08	.64	2.10	1.63	.48	.23	.16	.45
IN.	1.88	2.05	.68	.32	1.16	.74	2.34	1.88	.53	.27	.18	.50
CAL YR 1983	TOTAL	245879	MEAN 674	MAX 10200	MIN 64	CFSM 1.17	IN 15.88					
WTR YR 1984	TOTAL	193982	MEAN 530	MAX 4670	MIN 57	CFSM .92	IN 12.53					

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 downstream from highway bridge in Wheeler, 1.8 mi upstream from Otter Creek, and 2.4 mi downstream from South Fork Hay River.

DRAINAGE AREA.--418 mi².

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 889.30 ft National Geodetic Vertical Datum of 1929. Prior to Mar. 25, 1951, nonrecording gage.

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

AVERAGE DISCHARGE.--34 years, 307 ft³/s, 9.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s Mar. 31, 1967, gage height, 15.04 ft, from rating curve extended above 9,000 ft³/s; minimum, 55 ft³/s Mar. 13, 1954, gage height, 2.32 ft, result of freezeup.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Maximum stage since 1915, 16.6 ft April 1934, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,480 ft³/s June 9, gage height, 7.20 ft, no peak above base of 1,500 ft³/s; minimum discharge, 241 ft³/s Aug. 21, Sept. 22, gage height, 3.38 ft, 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. 3 to Feb. 13 and Mar. 8-15.)

3.3	226	5.0	630
3.5	263	6.0	970
4.0	369	7.0	1,380

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	271	265	336	290	260	384	699	842	322	327	269	253
2	271	265	298	290	260	372	811	954	322	321	276	255
3	273	264	300	290	260	352	904	990	314	322	283	256
4	273	261	300	290	260	364	871	749	306	324	268	256
5	272	260	310	290	250	348	787	646	331	319	266	251
6	265	258	310	290	250	327	741	605	402	331	278	246
7	271	258	320	290	250	311	661	600	364	317	269	246
8	319	256	320	280	250	300	574	696	686	310	278	260
9	294	288	310	280	250	290	513	618	1370	309	275	261
10	276	378	310	270	270	290	472	552	1070	369	259	252
11	335	340	310	270	300	280	447	499	689	395	252	249
12	519	305	310	260	340	280	452	459	613	336	249	291
13	430	288	310	260	380	270	653	493	1030	315	263	372
14	366	287	310	250	403	270	714	536	984	308	316	302
15	331	310	300	250	383	300	631	483	778	313	273	286
16	314	317	300	250	407	301	533	448	594	306	261	278
17	304	307	300	250	473	287	468	449	527	347	252	270
18	292	298	290	250	578	288	429	475	494	329	248	260
19	289	301	290	250	683	286	404	444	459	304	246	252
20	298	361	290	250	712	297	387	416	432	296	246	248
21	301	443	280	250	638	304	374	400	413	293	254	244
22	292	377	280	250	569	299	359	448	404	289	285	243
23	285	395	280	250	566	298	355	453	412	292	259	245
24	279	518	280	250	589	300	351	409	399	303	251	274
25	276	448	280	260	573	320	345	398	380	284	247	361
26	277	388	280	260	533	383	346	379	370	294	247	308
27	279	372	280	260	468	497	530	363	359	285	377	295
28	277	354	280	260	439	598	839	352	353	265	438	286
29	271	349	290	260	401	704	572	338	341	262	295	272
30	268	336	290	260	---	664	634	330	332	261	270	260
31	266	---	290	260	---	621	---	326	---	263	258	---
TOTAL	9334	9847	9234	8220	11995	11185	16856	16150	15850	9589	8508	8132
MEAN	301	328	298	265	414	361	562	521	528	309	274	271
MAX	519	518	336	290	712	704	904	990	1370	395	438	372
MIN	265	256	280	250	250	270	345	326	306	261	246	243
CFSM	.72	.79	.71	.63	.99	.86	1.34	1.25	1.26	.74	.66	.65
IN.	.83	.88	.82	.73	1.07	1.00	1.50	1.44	1.41	.85	.76	.72
CAL YR 1983	TOTAL	149093	MEAN 408	MAX 3840	MIN 230	CFSM .98	IN 13.27					
WTR YR 1984	TOTAL	134900	MEAN 369	MAX 1370	MIN 243	CFSM .88	IN 12.01					

NOTE.--No gage-height record Dec. 3 to Jan. 5.

CHIPPEWA RIVER BASIN

117

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 downstream from powerplant of Northern States Power Co., and 1,000 ft downstream from Wilson Creek.

DRAINAGE AREA.--1,770 mi².

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.--WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 780 ft National Geodetic Vertical Datum of 1929 (Northern States Power Co. bench mark). Prior to Sept. 3, 1908, nonrecording gage at site 1 mi downstream at different datum. May 9, 1913, to Sept. 30, 1923, water-stage recorder at same site at datum 0.42 ft lower than present datum.

REMARKS.--Records good. Flow regulated by powerplants at Menomonie and Cedar Falls.

AVERAGE DISCHARGE.--72 years, 1,270 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s Apr. 4, 1934, gage height, 16.0 ft, from floodmarks, from rating curve extended above 27,000 ft³/s on basis of computed flow over Cedar Falls Dam 6 mi upstream; minimum, 17 ft³/s Sept. 15, 1983, gage height, 0.63 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,300 ft³/s Apr. 30, gage height, 4.50 ft; minimum, 67 ft³/s Nov. 18, gage height, 0.80 ft; minimum daily, 910 ft³/s Sept. 3.

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

2.0	865	3.0	2,340
2.5	1,540	4.0	4,190
		5.0	6,600

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1410	1480	1570	1490	1260	1650	2330	3390	1270	1150	1150	1040
2	1430	1400	1690	1190	1230	1630	2410	3580	1200	1460	1280	994
3	1240	1300	1600	1380	1200	1580	2310	3620	1170	1140	1440	910
4	1520	1430	1100	1430	1220	1600	2570	3610	1160	1290	1110	1200
5	1250	1270	1600	1400	1220	1680	2550	3270	1170	1370	971	1110
6	1330	1240	1600	1440	1190	1460	2380	2800	1400	1190	1130	938
7	1360	1350	1620	1410	1140	1240	2290	3200	1420	1140	1120	1210
8	1380	1320	1440	1530	1070	1280	2300	2880	1710	1110	1210	1010
9	1530	1560	1370	1350	1210	1430	2200	2940	2770	1230	1030	934
10	1490	1590	1360	1260	1260	997	2070	2710	3660	1600	1070	1080
11	1500	1780	1540	1270	1100	1050	2020	2720	3190	1700	1220	1020
12	1990	1560	1450	1260	1660	1060	1970	2550	3950	1270	1030	1410
13	2030	1570	1610	1250	1520	1350	2380	2580	3580	1380	1130	1540
14	1810	1570	1620	1240	1760	1490	2430	2460	4250	1310	1140	1450
15	1700	1450	1540	1270	2110	1550	2550	2310	4460	1390	1040	1440
16	1560	1590	1560	1350	2190	1720	2440	2290	3790	1320	1070	1260
17	1540	1630	1220	1220	2300	1590	1870	2140	3420	1160	1150	1240
18	1550	1670	1100	1160	2500	1340	1840	2560	3090	1400	1090	1050
19	1790	1900	1160	1120	3030	1610	1770	2270	2570	1210	1190	1180
20	1570	1910	1250	1220	2740	1590	1670	2110	2320	1290	1330	1100
21	1520	2190	1190	1090	3100	1490	1550	1990	1950	1140	1370	1060
22	1520	2140	1490	1010	2740	1340	1590	1950	1840	1100	1240	1140
23	1490	1940	1270	1250	2620	1480	1420	1970	1840	1300	1220	1090
24	1380	2370	1180	1080	2510	1380	1540	1880	1690	1100	1090	1550
25	1570	2050	1180	1280	2480	1510	1370	1470	1440	1140	969	1400
26	1380	2190	1350	1170	2360	1880	1600	1770	1590	1180	1060	1850
27	1490	2120	1360	1270	2220	2460	1940	1820	1470	1130	1350	1420
28	1510	2020	1130	1140	2000	2400	2540	1600	1470	1040	1410	1200
29	1410	1590	1430	1220	1990	2320	3040	1610	1530	1000	1100	1300
30	1400	1640	1300	1270	---	2320	3520	1410	1390	1090	1070	1120
31	1250	---	1200	1160	---	2350	---	1420	---	919	937	---
TOTAL	46900	50820	43080	39180	54930	49827	64460	74880	67760	38249	35717	36246
MEAN	1513	1694	1390	1264	1894	1607	2149	2415	2259	1234	1152	1208
MAX	2030	2370	1690	1530	3100	2460	3520	3620	4460	1700	1440	1850
MIN	1240	1240	1100	1010	1070	997	1370	1410	1160	919	937	910
CAL YR 1983	TOTAL	646326	MEAN	1771	MAX	10300	MIN	911				
WTR YR 1984	TOTAL	602049	MEAN	1645	MAX	4460	MIN	910				

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 downstream from bridge on U.S. Highway 10, and 9.5 mi downstream from Red Cedar River.

DRAINAGE AREA.--9,010 mi².

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. WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder. Detum of gage is 694.59 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 9, 1930, nonrecording gage at bridge 400 ft downstream at same detum.

REMARKS.--Records good except those for winter period and periods of missing record (Nov. 25-26, Feb. 20-23), which are fair. Flow regulated by powerplants, Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota on Chippewa and Flambeau Rivers. Gage-height telemeter at station.

AVERAGE DISCHARGE.--56 years, 7,653 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 123,000 ft³/s Apr. 2, 1967, gage height, 16.93 ft; minimum observed, 1,020 ft³/s Nov. 24, 1950, gage height, 0.12 ft.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--A stage of 18.4 ft, from flood marks (levels by Corps of Engineers) occurred Sept. 12, 1884, and has not been exceeded since.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32,100 ft³/s Nov. 25, gage height, 9.62 ft; maximum gage height, 13.51 ft Feb 23, backwater from ice; minimum discharge, 2,510 ft³/s July 30, gage height, 0.91 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used May 16 to June 2; stage-discharge relation affected by ice Dec. 1 to Feb. 28.)

Oct. 1 to June 2				June 3 to Sept. 30			
2.0	4,790	7.0	19,700	1.0	2,650	4.0	9,150
4.0	9,820	10.0	34,300	2.0	4,360	6.0	15,100

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8490	7340	11000	8200	7800	12300	12800	20400	5810	4380	4050	3110
2	6720	7010	10000	8800	7800	11500	12800	27100	5280	4220	5220	4130
3	7220	6870	8800	9200	7600	9810	12200	27800	5270	6510	5240	3970
4	7830	6800	8000	9400	6800	7550	12900	23900	5030	4580	5820	4240
5	7440	6710	7200	9200	5600	7120	13200	20000	6100	3680	5890	5310
6	6250	5320	8000	9000	7000	8010	12900	18100	6260	4760	5010	6080
7	6460	5630	8800	9000	7600	8160	13300	13200	5460	4800	6440	5820
8	8110	6040	8800	8800	7600	7610	13000	17100	6630	4050	6450	5070
9	7140	6560	8600	8800	7600	6800	12200	16800	7330	3620	5950	5680
10	9960	8520	7800	8800	7800	6730	12900	16400	10400	5700	5320	5680
11	10500	8260	7400	8800	7600	5060	12800	14600	12500	7370	4230	5860
12	13700	8570	7000	8200	7800	4960	12900	13500	11800	8000	5400	6870
13	17200	8850	7800	8600	8200	6490	12400	13800	12100	7490	5040	8750
14	20700	8490	8000	8800	9200	7370	11900	14000	12000	7090	5060	7210
15	21300	8290	8000	8200	11000	7760	11400	15800	14200	5970	4670	7540
16	19600	8710	8200	7400	12000	7310	9760	14100	13700	5820	3730	7850
17	14100	8920	8000	8000	12000	6530	12500	13300	12300	6480	4190	6210
18	11800	10400	7800	8400	13000	4810	12700	12500	11300	5830	3330	6310
19	11800	9760	8000	8000	14000	4800	10200	11000	10600	5790	3830	5650
20	12500	8130	7800	7800	15000	7590	9530	11000	10700	5940	3650	5440
21	11400	11200	7600	7400	17000	7940	8560	9860	8930	5680	4970	5190
22	9320	16400	8000	6000	19000	7290	7710	10300	7540	4790	5020	5090
23	10300	18200	8800	5800	20000	7620	7120	9720	7330	3530	4450	3770
24	9190	20100	9200	7400	18000	7560	7480	9980	5700	5330	5210	4690
25	9720	30000	9000	7800	15000	5600	6080	9630	6160	5230	4480	8280
26	10300	31200	8600	7800	14000	7140	7140	8730	5950	5120	3620	9120
27	9180	23700	9000	8600	13000	10300	8150	8280	5520	4910	3350	7960
28	6520	21900	9200	8400	12000	12300	10400	7990	6350	4580	5340	8130
29	7420	19300	9400	8000	12600	13100	12300	7560	6030	3320	5020	7860
30	6510	14800	9000	7400	---	13300	15400	7050	5640	2980	4570	6780
31	6600	---	8400	7600	---	13300	---	6210	---	4150	4290	---
TOTAL	325280	361980	261200	253600	323600	253720	334630	429710	249920	161700	148840	183650
MEAN	10490	12070	8426	8181	11160	8185	11150	13860	8331	5216	4801	6122
MAX	21300	31200	11000	9400	20000	13300	15400	27800	14200	8000	6450	9120
MIN	6250	5320	7000	5800	5600	4800	6080	6210	5030	2980	3330	3110
CAL YR 1983	TOTAL	3715880	MEAN	10180	MAX	71500	MIN	3660				
WTR YR 1984	TOTAL	3287830	MEAN	8983	MAX	31200	MIN	2980				

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED
(NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATION)
(NATIONAL RADIOCHEMICAL SURVEILLANCE STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967, 1973 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT , 1983												
04... 1984	1530	7980	120	7.7	--	15.5	3.5	9.2	741	95	K320	K2300
03... 1984	1250	9390	140	7.2	1.0	.0	2.6	11.9	--	--	49	K1600
FEB												
07...	1340	8140	142	7.1	-8.0	.0	3.5	12.0	756	83	80	190
APR												
09...	1250	11600	116	7.4	14.0	5.0	3.0	12.4	747	99	K990	K15
JUN												
18...	1140	11700	110	7.6	24.0	21.5	2.5	7.8	744	91	330	92
AUG												
07...	1440	6480	120	7.9	27.0	25.5	.80	8.4	743	105	170	K2800

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT , 1983												
04... 1984	54	5	14	4.7	2.3	8	.1	1.4	49	1.9	9.0	4.8
03... 1984	60	8	15	5.5	3.2	10	.2	1.1	52	6.4	13	4.8
FEB												
07...	56	9	14	5.1	3.6	12	.2	.90	47	7.2	8.4	5.2
APR												
09...	50	9	13	4.3	2.6	10	.2	1.3	41	3.2	7.1	4.8
JUN												
18...	47	4	12	4.1	2.4	10	.2	1.2	43	2.1	6.5	4.0
AUG												
07...	52	6	13	4.8	3.0	11	.2	1.2	46	1.1	5.7	4.6

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT , 1983											
04... 1984	<.10	11	92	77	1980	.49	.030	.60	.100	.060	<.010
03... 1984	<.10	12	113	86	2860	.84	.070	.50	.080	.060	.040
FEB											
07...	<.10	13	90	79	1980	.84	.170	.80	.110	.060	.050
APR											
09...	<.10	9.4	67	68	2100	.50	.140	2.6	.040	.020	.010
JUN											
18...	.10	5.7	87	62	2750	.45	.170	.80	.100	.090	.090
AUG											
07...	<.10	7.2	89	67	1560	.30	<.010	.70	.110	.020	.040

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

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT , 1983											
04...	1530	7980	30	2	21	<.5	<1	<1	3	2	210
FEB , 1984											
07...	1340	8140	20	1	25	<.5	1	<1	<3	2	380
APR											
09...	1250	11600	10	1	20	.5	<1	4	<3	1	330
AUG											
07...	1440	6480	<10	1	18	<.5	<1	5	<3	2	110

DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT , 1983												
04...	1	<4	5	.7	10	<1	<1	<1	31	<6	<3	
FEB , 1984												
07...	2	7	28	.2	<10	2	<1	<1	31	<6	25	
APR												
09...	1	<4	16	<.1	<10	<1	<1	<1	27	<6	8	
AUG												
07...	4	<4	2	1.3	<10	1	<1	<1	34	<6	4	

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90) (80060)	RADIUM 226, DIS- SOLVED (PCI/L AS SR/METHOD) (09511)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
JAN , 1984										
03...	1250	9390	<2.0	<.4	2.8	<.5	2.4	<.5	.05	.04
JUN										
18...	1140	11700	<1.6	.4	1.8	<.4	1.5	<.4	.05	.20

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT , 1983							
04...	1530	7980	120	15.5	17	366	33
NOV							
21...	1400	12200	125	5.0	--	--	--
JAN , 1984							
03...	1250	9390	140	.0	4	101	65
FEB							
07...	1340	8140	142	.0	8	176	69
23...	1445	20300	165	.5	--	--	--
MAR							
01...	1325	11600	140	1.5	--	--	--
21...	1000	9110	150	2.5	--	--	--
APR							
09...	1250	11600	116	5.0	30	940	12
MAY							
07...	1250	13300	125	10.5	--	--	--
JUN							
18...	1140	11700	110	21.5	124	3920	10
AUG							
07...	1440	6480	120	25.5	15	262	67
SEP							
17...	1800	6180	160	17.5	--	--	--

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 downstream from flood control dam, 1,500 ft upstream from Mines Creek, at Spring Valley.

DRAINAGE AREA.--64.1 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR WI-67-1: 1966. WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder and v-notch sharp-crested weir. Datum of gage is 900.00 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 31, 1957, nonrecording gage at site 850 ft downstream at datum of 912.45 ft National Geodetic Vertical Datum of 1929. Aug. 1, 1957, to June 6, 1966, nonrecording gage at downstream site at datum of 910.45 ft National Geodetic Vertical Datum of 1929. June 7, 1966, to Oct. 31, 1968, nonrecording gage at downstream site at datum of 909.45 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Low flow slightly regulated and high flow completely regulated by flood-control dam 770 ft upstream.

AVERAGE DISCHARGE.--16 years (1969-84), 33.8 ft³/s, since operation of flood-control reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,000 ft³/s Apr. 15, 1954, gage height, 12.50 ft, datum then in use; no flow Aug. 11-15, 1971, flow shut off at flood-control dam upstream due to request by Wisconsin Department of Natural Resources for eradication of rough fish to improve sport fishing; minimum observed prior to dam construction period, 5.8 ft³/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, with datum at 909.45 ft National Geodetic Vertical Datum of 1929, from floodmarks, discharge, 33,000 ft³/s estimated by Corps of Engineers on basis of slope-area measurement by Geological Survey of peak discharge of 39,000 ft³/s at Elmwood, drainage area, 91.9 mi².

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 640 ft³/s May 2, gage height, 15.95 ft; minimum discharge, 2.9 ft³/s Oct. 13, gage height, 12.55 ft.

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

13.2	9.4	14.4	90
13.5	14	14.8	183
13.8	23	15.3	373
14.1	44	16.0	660

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	22	18	18	30	208	160	24	19	20	16
2	17	16	22	18	18	27	245	402	22	19	23	17
3	18	16	21	18	18	26	247	168	21	19	27	17
4	17	16	21	19	18	26	137	88	21	19	22	17
5	17	15	21	19	16	26	136	59	22	19	21	16
6	16	15	21	19	16	24	104	50	23	19	21	16
7	16	15	20	19	16	22	72	48	24	19	22	16
8	17	15	20	18	16	22	51	64	28	19	24	19
9	17	18	20	19	16	21	43	46	39	19	21	18
10	16	19	19	18	16	21	39	40	35	28	19	18
11	32	19	19	18	16	21	36	36	29	29	18	17
12	50	19	19	19	20	21	57	33	27	24	18	23
13	26	18	19	19	21	21	199	33	28	23	18	22
14	13	18	20	19	20	21	149	32	57	24	18	19
15	13	18	20	18	24	21	86	31	42	35	18	17
16	14	22	19	18	68	21	51	30	26	29	18	17
17	14	23	19	18	143	21	39	30	25	28	18	17
18	14	23	18	18	161	21	35	30	24	25	18	17
19	14	22	18	17	149	21	33	29	22	25	18	17
20	14	28	18	17	122	21	32	27	21	25	17	17
21	15	38	19	17	106	23	30	27	21	26	19	16
22	16	33	19	17	81	21	29	28	21	26	21	16
23	16	33	18	17	79	21	28	28	21	27	19	17
24	16	39	18	18	85	21	29	28	20	25	18	21
25	17	40	18	18	78	22	29	28	19	22	18	20
26	17	33	18	18	62	26	27	27	20	27	18	18
27	17	27	18	18	44	62	144	25	19	25	18	17
28	17	28	18	19	37	100	130	25	19	23	18	17
29	15	25	18	19	33	148	60	25	19	22	18	16
30	15	23	18	18	---	121	60	24	19	21	17	16
31	16	---	18	18	---	148	---	24	---	21	16	---
TOTAL	549	690	596	563	1517	1168	2565	1725	758	731	599	527
MEAN	17.7	23.0	19.2	18.2	52.3	37.7	85.5	55.6	25.3	23.6	19.3	17.6
MAX	50	40	22	19	161	148	247	402	57	35	27	23
MIN	13	15	18	17	16	21	27	24	19	19	16	16

CAL YR 1983 TOTAL 14469 MEAN 39.6 MAX 701 MIN 13
WTR YR 1984 TOTAL 11988 MEAN 32.8 MAX 402 MIN 13

CHIPPEWA RIVER BASIN

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	358	286	320	351	306	323	304	270	282
2	---	---	---	354	297	331	321	287	302	272	232	248
3	---	---	---	357	310	339	311	266	286	271	229	245
4	---	---	---	366	321	345	289	259	276	256	237	244
5	---	---	---	357	294	335	286	259	272	262	236	244
6	---	---	---	360	319	342	290	256	274	259	240	248
7	---	---	---	373	320	352	299	265	283	267	252	257
8	---	---	---	393	320	352	308	279	292	308	252	260
9	426	351	385	368	316	352	319	270	296	266	251	259
10	437	352	397	374	323	357	318	272	290	270	249	258
11	429	363	395	388	331	368	330	278	309	288	248	265
12	431	364	391	424	314	374	332	285	310	291	245	266
13	434	367	397	378	343	363	317	275	297	274	259	267
14	438	365	404	392	321	357	301	273	287	274	256	265
15	449	378	413	395	328	369	302	271	284	296	254	272
16	444	376	410	413	324	372	311	279	297	300	269	280
17	452	317	353	456	322	376	317	279	296	285	267	278
18	335	276	307	423	385	403	319	283	301	292	274	279
19	297	252	269	428	361	393	343	291	312	277	251	265
20	295	250	269	514	325	423	335	274	305	273	240	258
21	287	254	271	540	404	460	337	290	307	275	244	261
22	294	240	268	532	416	467	326	281	313	267	247	259
23	294	247	273	500	410	462	327	301	311	264	250	257
24	306	251	279	489	399	455	332	287	309	263	252	257
25	300	265	283	494	405	446	328	278	303	264	247	256
26	313	257	289	461	386	425	335	287	310	262	239	251
27	316	280	299	438	387	417	315	289	299	268	249	257
28	336	267	301	432	360	401	321	279	293	276	258	268
29	341	279	311	418	345	375	309	281	292	286	254	273
30	---	---	---	376	311	343	300	267	284	284	263	275
31	---	---	---	358	307	336	---	---	---	301	269	287
MONTH	452	240	332	540	286	381	351	256	297	308	229	263
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	306	280	294	337	332	334	343	338	341	408	343	374
2	313	290	300	338	328	334	344	309	332	353	335	344
3	301	283	292	343	332	335	333	318	323	359	328	345
4	301	285	293	336	327	332	339	330	334	361	327	347
5	314	294	302	337	327	332	341	334	337	361	343	353
6	320	305	312	333	325	330	342	331	338	365	343	356
7	319	302	313	344	332	337	342	329	334	362	335	350
8	316	293	307	345	336	342	341	326	332	371	353	361
9	313	298	305	346	332	337	346	334	340	365	353	358
10	312	297	307	338	294	314	361	343	349	369	353	362
11	321	304	312	323	301	310	369	345	356	386	349	362
12	319	307	314	327	318	323	373	346	358	361	344	353
13	324	304	315	329	324	326	376	353	361	359	332	348
14	318	295	309	331	317	326	368	346	357	378	339	351
15	315	298	306	318	303	309	377	347	359	381	347	362
16	322	312	316	330	319	326	368	347	357	387	352	364
17	325	319	321	330	311	324	376	345	357	402	350	374
18	328	313	321	334	328	331	394	342	359	393	343	363
19	350	310	330	339	332	336	385	352	368	390	348	365
20	326	319	323	342	332	336	410	356	377	401	337	368
21	330	320	323	341	334	338	405	347	374	389	345	366
22	328	316	322	341	332	337	371	336	353	396	355	376
23	327	317	321	339	319	330	390	340	364	383	338	362
24	334	325	328	334	328	330	389	348	374	388	329	351
25	390	334	360	337	331	334	398	336	367	354	319	329
26	389	332	362	331	320	324	397	336	366	341	318	325
27	344	328	333	336	327	331	377	325	354	353	331	338
28	345	334	341	343	334	338	368	326	352	345	323	329
29	345	333	341	345	336	341	375	344	358	361	330	340
30	344	331	339	352	338	343	382	344	362	383	327	350
31	---	---	---	354	339	345	415	349	375	---	---	---
MONTH	390	280	319	354	294	331	415	309	354	408	318	354

CHIPPEWA RIVER BASIN

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

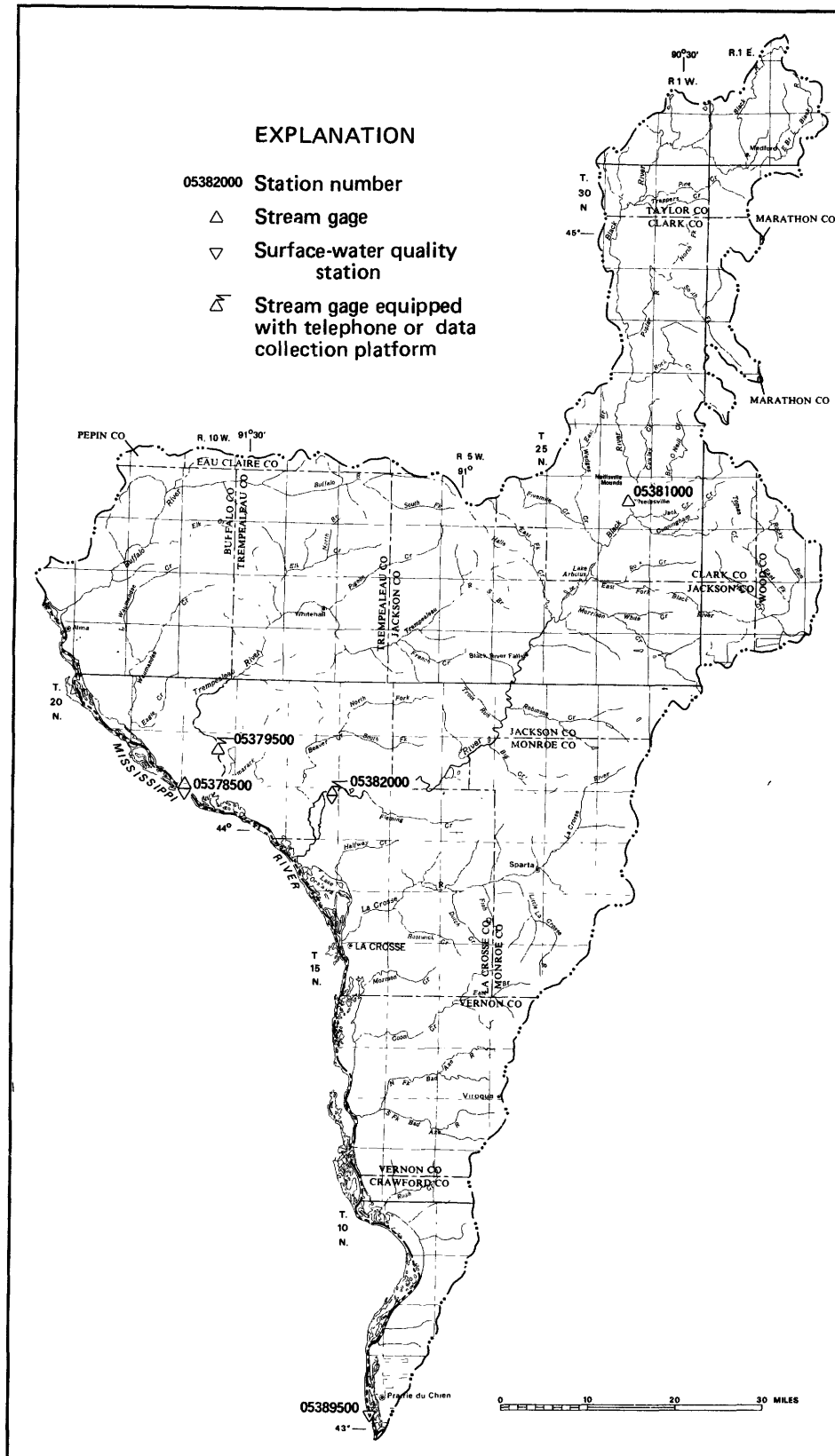
CHIPPEWA RIVER BASIN

125

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	17.5	14.5	16.0	24.5	18.5	21.0	21.0	19.5	20.0	19.5	18.0	18.5
2	18.5	15.0	17.0	24.0	19.5	21.0	21.0	19.5	20.5	19.0	17.5	18.0
3	19.0	13.0	16.0	24.0	20.0	21.0	22.5	21.0	21.5	21.0	17.0	18.5
4	17.0	15.0	16.0	24.5	19.5	21.5	22.5	20.5	21.0	20.0	17.0	18.0
5	19.5	16.0	17.5	23.5	19.5	21.0	22.0	20.5	21.0	19.5	16.5	17.5
6	19.5	17.0	18.0	22.0	19.0	20.0	22.5	20.5	21.5	17.5	16.5	17.0
7	21.0	17.0	18.5	23.0	18.5	20.0	22.5	21.0	21.5	18.5	16.0	17.0
8	22.0	17.0	19.0	21.0	18.5	19.5	23.5	21.0	22.0	17.5	16.0	16.5
9	22.0	18.5	20.0	21.5	18.5	20.0	23.0	20.0	21.5	17.0	16.0	16.5
10	21.5	18.5	19.5	21.5	19.0	20.0	22.0	20.0	21.0	17.0	16.0	16.5
11	20.0	17.5	18.5	23.5	19.5	21.0	22.0	19.5	20.5	18.0	15.5	16.5
12	22.0	17.5	19.0	23.5	19.5	21.5	22.0	19.5	20.5	17.5	16.0	16.5
13	23.5	18.5	20.5	23.0	20.0	21.0	21.0	19.5	20.0	19.5	16.0	17.0
14	23.5	18.0	21.0	22.0	20.0	20.5	22.5	19.5	20.5	16.5	15.5	16.0
15	22.5	19.5	21.5	23.5	20.5	21.5	22.5	20.0	21.0	17.0	15.0	16.0
16	19.5	19.0	19.5	22.0	19.0	20.5	23.5	20.0	21.0	17.0	14.5	15.5
17	20.5	19.0	19.5	21.0	18.5	19.5	22.0	20.0	21.0	16.5	14.0	15.5
18	23.5	19.0	21.0	22.0	18.0	19.5	22.5	20.0	21.0	17.5	14.5	16.0
19	23.0	17.5	20.0	22.0	18.5	20.0	22.5	19.5	21.0	17.5	14.5	16.0
20	21.0	18.5	19.5	22.0	18.5	20.0	22.5	19.0	20.5	17.5	15.0	16.0
21	22.5	18.0	20.0	22.0	19.0	20.0	22.0	19.5	20.5	17.0	14.5	16.0
22	23.0	19.0	20.5	22.0	19.5	20.5	21.5	19.5	20.5	16.5	15.5	16.0
23	23.0	19.0	21.0	21.5	20.0	20.5	22.0	18.5	20.0	17.5	15.5	16.0
24	23.0	18.0	20.0	22.5	20.0	21.0	21.5	18.0	19.5	16.5	15.5	16.0
25	23.5	17.5	20.0	22.5	19.5	20.5	21.0	18.5	19.5	16.0	13.0	15.0
26	23.5	19.0	21.0	23.0	20.0	21.5	21.0	18.5	19.0	16.5	12.0	13.5
27	23.0	18.0	20.5	22.5	20.0	21.0	22.5	19.0	20.5	15.0	12.0	13.0
28	23.5	18.0	20.5	22.5	19.0	20.5	22.5	19.5	21.0	15.0	11.0	12.5
29	23.0	18.0	20.5	21.5	19.0	20.0	21.5	19.0	20.5	15.5	10.5	12.0
30	23.5	18.0	20.5	21.5	18.5	20.0	21.5	18.0	19.5	15.0	10.0	11.5
31	---	---	---	21.0	19.0	19.5	20.5	17.5	19.0	---	---	---
MONTH	23.5	13.0	19.5	24.5	18.0	20.5	23.5	17.5	20.5	21.0	10.0	16.0



TREMPEALEAU-BLACK RIVER BASIN

MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN

LOCATION.--Lat 44°03'21", long 91°38'16", 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 upstream from Trempealeau River, and at mile 725.7 upstream from the Ohio River.

DRAINAGE AREA.--59,200 mi², 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 National Geodetic Vertical Datum of 1929. June 10, 1928, to Apr. 15, 1931, nonrecording gage at site 800 ft upstream. Prior to Oct. 1, 1929, at datum 0.20 ft higher and Oct. 1, 1929, to Apr. 15, 1931, at datum 0.12 ft 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 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.--56 years, 27,200 ft³/s, 6.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 268,000 ft³/s Apr. 19, 1965, gage height, 20.77 ft, from floodmark; minimum, 1,940 ft³/s Dec. 12, 1980, gage height, 3.96 ft result of ice jam; minimum gage height, -3.38 ft Aug. 31, 1934 (prior to dam construction in 1936); minimum gage height since 1938, after completion of dam, 1.95 ft Jan. 27, 1944.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of June 18, 1880, reached an elevation of 657.14 ft, discharge, 172,000 ft³/s, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 106,000 ft³/s June 21-23; maximum gage height, 12.10 ft; June 22; minimum discharge, 10,800 ft³/s Aug. 22, gage height, 5.11 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27600	30900	45700	28000	21600	56800	61300	72600	48500	94200	23700	17600
2	27400	30500	41500	28000	20700	58000	63500	74800	46800	91900	21700	15600
3	25800	30200	39500	28800	20500	58800	67300	79100	44000	89200	25300	14700
4	23700	29400	35200	29600	20800	58500	70200	85900	40200	87700	28500	14900
5	24300	28400	34300	29600	21500	56800	72200	91500	39600	86400	25700	14700
6	24900	27900	33800	29600	21600	52400	75900	92800	38600	82100	24700	15500
7	26400	28100	34000	29600	21500	48400	80400	91800	38500	77500	24800	15600
8	27400	27600	31600	29500	21400	47000	83500	89700	42500	73700	27500	17200
9	26800	27700	27600	29100	21300	47300	86600	86700	43400	67900	32200	18100
10	25800	27500	24000	29100	21300	44500	88800	85100	43500	67400	32500	18400
11	26400	27700	22000	28100	21200	34600	90400	84700	46300	67800	29800	18400
12	29500	28600	23900	27500	22000	34200	91900	85700	53600	67400	27300	20900
13	33000	28300	28900	26800	24400	36700	93000	87600	59400	64800	26200	22000
14	37100	28900	32600	26500	26000	39200	93200	87900	60400	59100	25500	23300
15	40000	30200	36600	26600	29200	41300	92000	87600	66400	59000	24100	22700
16	40600	30900	39800	25600	33400	40400	90100	86600	77100	56100	22700	21800
17	42200	31100	38500	25000	38400	38800	87200	85400	88600	53700	21800	20500
18	42800	30900	26000	25000	41000	37000	84200	83900	97400	52500	20200	20200
19	41300	30800	21500	23900	43100	33400	83300	81600	103000	49700	20700	20700
20	40600	32100	26700	23200	42500	31900	82600	78400	105000	46800	18900	21100
21	41300	32400	31100	23200	41000	32400	81100	76600	106000	46300	13900	20600
22	41000	32500	31500	23000	61700	32400	80500	73700	106000	43300	11100	17600
23	41200	34300	30700	23000	62000	31700	78600	71900	106000	40800	14700	14600
24	41000	41600	29800	23000	61000	32700	77000	69000	104000	39200	16600	13400
25	40200	47500	29400	22900	58500	35300	74600	65900	103000	36200	18300	14400
26	37600	51100	28600	22900	56000	36100	72400	64100	101000	35200	18600	17700
27	36700	54400	28100	22900	57200	36400	70400	63200	100000	34000	19300	21700
28	36300	59700	25400	22900	55800	41500	70700	61400	99000	32900	19300	26100
29	35700	57600	25800	22900	54600	50300	71100	58800	97400	31200	18100	26200
30	33600	53400	26900	23000	---	55800	71600	52000	96000	27700	18100	25200
31	32000	---	27600	22100	---	60200	---	50300	---	25000	17900	---
TOTAL	1050200	1052200	958600	800900	1041200	1340800	2385600	2406300	2201200	1786700	689700	571400
MEAN	33880	35070	30920	25840	35900	43250	79520	77620	73370	57640	22250	19050
MAX	42800	59700	45700	29600	62000	60200	93200	92800	106000	94200	32500	26200
MIN	23700	27500	21500	22100	20500	31700	61300	50300	38500	25000	11100	13400
CFSM	.57	.59	.52	.44	.61	.73	1.34	1.31	1.24	.97	.38	.32
IN.	.66	.66	.60	.50	.65	.84	1.50	1.51	1.38	1.12	.43	.36
CAL YR 1983	TOTAL	16262600	MEAN	44560	MAX	137000	MIN	17700	CFSM	.75	IN	10.22
WTR YR 1984	TOTAL	16284800	MEAN	44490	MAX	106000	MIN	11100	CFSM	.75	IN	10.23

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.--

SPECIFIC CONDUCTANCE: May 1980 to current year

WATER TEMPERATURES: October 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: September 1975 to current year.

REMARKS.--For the winter period, daily sediment loads were estimated on the basis of water records and weekly sediment samples. Sediment concentrations less than 0.5 mg/L were published as 0 mg/L but the actual value (rounded to the nearest tenth) was used to compute sediment loads. Water temperature and specific conductance were obtained once daily during most of the open water period and weekly during the winter period.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 550 micromhos July 17, 1984; minimum daily, 180 micromhos Sept. 24, 1980, May 9, 1981.

WATER TEMPERATURES: Maximum daily, 29.0°C July 10, 1976, Aug. 7, 1984; minimum daily, 0.0°C many days each year.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 393 mg/L July 2, 1978; minimum daily mean, 1 mg/L many days during several years.

SEDIMENT LOADS: Maximum daily 65,300 tons July 2, 1978; minimum daily, 17 tons Feb. 1, 2, 1984.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 550 micromhos July 17; minimum daily, 260 micromhos Oct. 16, 17.

WATER TEMPERATURES: Maximum daily, 29.0°C Aug. 7; minimum daily, 0.0°C on many days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 78 mg/L Apr. 29; minimum daily mean, 0 mg/L Jan. 19 to Feb. 3.

SEDIMENT LOADS: Maximum daily, 15,000 tons Apr. 29; minimum daily, 17 tons Feb. 1, 2.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT , 1983										
24...	1400	--	40300	380	8.0	11.5	8.0	5.6	10.4	746
JAN , 1984										
17...	1230	25000	--	350	7.8	-20.0	.5	2.4	11.5	755
APR										
24...	1300	--	E77300	585	8.2	17.0	10.5	5.0	12.6	733
JUL										
17...	1430	--	54500	515	8.1	25.0	22.5	12	--	738

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC- CI KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CA) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)
OCT , 1983									
24...	90	75	190	160	25	41	15	9.2	11
JAN , 1984									
17...	81	49	45	190	34	48	18	9.5	10
APR									
24...	118	--	K24	230	80	58	21	8.1	7
JUL									
17...	--	320	650	240	76	60	23	9.2	7

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINIT- LAB (MG/L AS CAC03) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT , 1983									
24...	.3	2.2	139	2.7	23	14	.20	12	210
JAN , 1984									
17...	.3	2.1	160	4.9	29	15	.30	14	263
APR									
24...	.2	2.7	152	1.8	68	14	.20	11	321
JUL									
17...	.3	3.2	169	2.6	77	13	.20	15	369

E ESTIMATED.

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

MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

		SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)			
		OCT , 1983 24...	200	22900	1.2	.250	.30	.140	.100	.080		
		JAN , 1984 17...	230	17800	1.7	.390	4.2	.110	.080	.110		
		APR 24...	270	--	3.3	.070	.90	.100	.040	.030		
		JUL 17...	300	54300	2.1	<.010	2.0	.140	.140	.100		
DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT , 1983 24...	1400	--	40300	20	1	58	<.5	<1	<1	<3	3	67
JAN , 1984 17...	1230	25000	--	10	1	56	<.5	<1	<1	<3	2	170
APR 24...	1300	--	E77300	<10	1	58	<.5	<1	<1	<3	1	25
JUL 17...	1430	--	54500	10	2	72	<.5	<1	<1	<3	2	10
DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT , 1983 24...	1	7	10	<.1	<10	2	<1	<1	88	<6	14	
JAN , 1984 17...	3	9	86	.2	<10	2	<1	<1	100	<6	9	
APR 24...	3	16	4	.1	<10	1	1	<1	160	<6	9	
JUL 17...	2	25	8	.1	<10	1	1	<1	180	<6	30	
DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)					
OCT , 1983 24...	1400	--	40300	8.0	17	1850	86					
JAN , 1984 17...	1230	25000	--	.5	2	135	100					
APR 24...	1300	--	E77300	10.5	17	--	83					
JUL 17...	1430	--	54500	22.5	36	5300	98					
AUG 23...	0900	--	16000	23.0	14	605	88					
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	
AUG , 1984 23...	0900	16000	4	0	3	37	73	88	95	99	100	

E. ESTIMATED.

E ESTIMATED.

MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	300	320	300	---	---	380	440	480	450	460	520	400
2	300	320	320	---	400	---	470	470	450	490	320	400
3	300	320	330	---	---	380	490	470	450	500	520	400
4	300	320	330	---	---	380	480	440	440	510	320	410
5	310	320	340	400	---	---	450	450	440	520	520	410
6	310	320	340	---	---	420	440	450	440	520	520	410
7	310	320	350	---	---	415	430	440	430	520	500	410
8	310	320	350	---	---	420	420	440	420	520	500	400
9	310	330	350	---	380	420	420	420	430	520	480	---
10	300	340	340	---	---	420	430	400	440	520	480	---
11	300	330	340	---	---	---	420	400	420	530	500	300
12	320	320	330	400	---	430	440	410	420	530	500	310
13	290	320	330	---	---	430	430	410	440	530	500	310
14	280	320	360	---	---	420	430	410	450	530	500	310
15	270	320	360	---	---	420	430	420	470	530	500	---
16	260	320	---	---	350	420	440	410	460	540	500	300
17	260	330	---	350	---	410	450	410	450	550	500	300
18	280	330	---	---	---	410	460	420	400	540	500	300
19	300	330	---	400	---	430	450	430	390	540	500	360
20	300	330	---	---	---	430	450	420	350	540	450	310
21	310	340	---	---	---	440	450	420	330	540	450	310
22	310	340	400	---	---	440	450	420	330	540	450	310
23	310	330	---	---	330	430	460	430	330	530	470	310
24	380	300	---	---	---	440	460	440	330	530	440	380
25	330	290	---	---	---	440	470	430	350	540	420	380
26	320	300	---	400	---	470	480	430	370	540	420	380
27	320	290	---	---	---	480	480	430	390	540	400	400
28	310	280	---	---	---	470	490	450	400	530	400	360
29	310	280	400	---	---	465	490	450	420	530	410	320
30	310	280	---	---	---	450	480	450	440	530	420	340
31	320	---	---	---	---	450	---	460	---	520	410	---
MEAN	305	317	345	390	365	429	453	433	411	526	475	353

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	10.0	.5	---	---	1.5	4.0	8.0	19.0	23.0	26.0	21.0
2	18.0	11.0	.5	---	.0	---	5.0	9.0	19.0	23.0	27.0	21.0
3	17.0	10.0	.0	---	---	1.5	5.0	10.0	19.0	23.0	27.0	20.0
4	15.0	8.5	.0	---	---	1.5	5.0	11.0	20.0	23.0	26.0	19.0
5	15.0	8.0	1.0	.0	---	---	5.0	11.0	20.0	23.0	26.0	19.0
6	14.0	8.0	1.0	---	---	1.0	6.0	11.0	22.0	22.0	27.0	19.0
7	13.0	9.0	.0	---	---	1.0	6.0	11.0	22.0	21.0	29.0	20.0
8	13.0	10.0	.0	---	---	1.0	7.0	10.0	22.0	21.0	26.0	20.0
9	13.0	9.0	.5	---	---	1.0	7.0	10.0	20.0	22.0	26.0	---
10	13.5	8.0	.5	---	---	.5	7.0	11.0	20.0	23.0	26.0	---
11	13.0	6.0	1.0	---	---	---	8.0	12.0	20.0	22.0	25.0	19.0
12	11.0	5.0	1.0	.0	---	.0	8.0	12.0	21.0	23.5	25.0	18.5
13	11.0	5.0	.5	---	---	.0	8.0	13.0	22.0	24.0	25.0	19.0
14	10.0	5.0	.5	---	---	1.0	8.0	13.0	22.0	24.0	25.0	19.0
15	10.0	5.0	.5	---	---	1.0	8.0	14.0	20.0	25.0	25.0	---
16	10.0	5.0	---	---	1.5	1.5	8.0	14.0	20.0	25.0	25.0	17.0
17	10.0	4.0	---	.5	---	1.0	9.0	14.0	21.0	22.5	25.0	17.0
18	10.0	5.0	---	---	---	1.0	9.0	15.0	21.0	21.0	25.0	17.0
19	11.0	5.0	---	.0	---	1.5	9.0	16.0	22.0	23.0	25.0	18.0
20	10.0	5.0	---	---	---	2.0	9.0	17.0	22.0	24.0	24.0	19.0
21	10.0	4.0	---	---	---	2.0	9.0	17.0	21.5	25.0	24.0	19.0
22	10.0	4.0	.0	---	---	2.0	10.0	17.5	22.0	25.0	23.0	19.0
23	10.0	4.0	---	---	2.0	3.0	10.0	17.0	22.0	25.0	23.0	19.0
24	8.0	2.5	---	---	---	3.0	10.5	17.0	22.0	25.0	21.0	19.0
25	9.0	2.0	---	---	---	4.0	11.0	17.0	22.0	25.0	21.0	17.0
26	10.0	2.0	---	.0	---	4.0	13.0	17.0	22.0	24.5	21.0	15.5
27	10.0	1.0	---	---	---	4.0	14.5	16.0	22.0	24.5	21.0	15.5
28	11.0	1.0	---	---	---	4.0	14.5	16.0	22.0	24.0	23.0	15.5
29	10.0	.5	.0	---	---	4.0	9.0	16.0	22.0	24.0	24.0	15.5
30	9.0	.5	---	---	---	3.0	8.0	17.0	23.0	24.0	24.0	15.5
31	10.0	---	---	---	---	3.0	---	18.0	---	24.0	22.5	---
MEAN	11.5	5.5	.5	.0	1.0	2.0	8.5	14.0	21.0	23.5	24.5	18.5

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	3310	45	8820	17	2230	27	6870	14	896	11	523
2	21	3600	33	6660	21	2650	24	5960	12	703	10	421
3	24	4360	29	6190	19	2260	23	5540	22	1500	8	318
4	23	4360	32	7420	17	1850	25	5920	19	1460	11	443
5	25	4870	28	6920	18	1920	21	4900	12	833	12	476
6	29	5940	29	7270	18	1880	21	4660	10	667	10	418
7	31	6730	35	8680	18	1870	23	4810	9	603	11	463
8	27	6090	45	10900	22	2520	23	4580	13	965	10	464
9	24	5610	34	7960	26	3050	24	4400	12	1040	12	586
10	24	5750	23	5280	25	2940	27	4910	14	1230	13	646
11	28	6830	22	5030	24	3000	43	7870	14	1130	14	696
12	31	7690	23	5320	27	3910	70	12700	12	885	15	846
13	28	7030	23	5440	28	4490	43	7520	11	778	15	891
14	22	5540	20	4750	28	4570	31	4950	13	895	15	944
15	23	5710	19	4490	28	5020	29	4620	12	781	14	858
16	31	7540	20	4680	30	6250	39	5910	11	674	13	765
17	23	5420	24	5530	31	7420	36	5220	12	706	11	609
18	23	5230	22	4980	33	8680	30	4250	12	654	11	600
19	17	3820	18	3970	33	9180	24	3220	8	447	10	559
20	19	4240	19	4020	30	8500	20	2530	9	459	10	570
21	17	3720	18	3720	32	9160	18	2250	10	375	11	612
22	19	4130	18	3580	29	8300	18	2100	9	270	11	523
23	18	3820	20	3880	35	10000	16	1760	11	437	11	434
24	17	3530	21	3910	32	8990	17	1800	12	538	12	434
25	19	3830	23	4090	34	9460	15	1470	11	544	11	428
26	23	4500	26	4500	31	8450	15	1430	17	854	11	526
27	50	9500	24	4100	35	9450	13	1190	13	677	13	762
28	65	12400	18	2980	33	8820	16	1420	21	1090	14	987
29	78	15000	21	3330	27	7100	17	1430	11	538	13	920
30	64	12400	21	2950	26	6740	13	972	11	538	13	885
31	---	---	17	2310	---	---	15	1010	10	483	---	---
TOTAL	---	182500	---	163660	---	170660	---	128172	---	23650	---	18607
TOTAL LOAD FOR YEAR:			818615	TONS.								

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 upstream from mouth.

DRAINAGE AREA.--643 mi².

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 and crest-stage gage. Datum of gage is 661.42 ft 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 higher.

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

AVERAGE DISCHARGE.--55 years (1915-19, 1935-84), 424 ft³/s, 8.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,400 ft³/s Apr. 4, 1956, gage height, 10.35 ft; minimum daily, 98 ft³/s Jan. 10, 1938.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,300 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Nov. 25	1700	1,410	6.61	May 2	1000	1,340	6.59
Feb. 18	1100	ice jam	*8.98	July 13	1200	*1,570	7.11
Feb. 21	0100	1,530	6.79				

minimum discharge, 367 ft³/s Aug. 31, gage height, 3.65 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1 to Nov. 23, Apr. 11 to May 1; stage-discharge relation affected by ice Nov. 29 to Feb. 20 and Mar. 2-15.)

Oct. 1 to May 1				May 2 to Sept. 30			
3.6	410	6.0	1,200	3.6	355	6.0	1,090
4.0	530	7.0	1,630	4.0	452	7.0	1,520
5.0	850			5.0	735		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	515	516	700	500	460	712	674	1200	465	442	425	400
2	509	514	680	500	460	680	661	1310	460	433	446	419
3	503	511	660	500	450	640	654	1150	450	434	498	408
4	512	503	640	520	450	620	644	885	438	457	482	397
5	505	495	640	540	450	600	629	715	451	470	465	391
6	490	490	620	560	450	580	613	649	469	525	467	386
7	461	489	620	580	440	580	604	681	476	490	477	386
8	466	489	620	580	440	560	587	757	966	464	608	393
9	467	559	620	560	440	560	569	714	1100	450	648	404
10	454	855	600	560	440	580	562	645	913	589	538	403
11	537	885	600	540	450	600	558	592	711	1120	482	406
12	991	746	600	520	460	620	584	565	917	1360	452	613
13	1060	654	580	500	480	660	771	616	953	1500	442	805
14	922	620	580	500	500	760	962	700	773	1090	438	679
15	819	691	560	490	540	1000	957	660	626	850	427	550
16	714	737	560	480	580	877	849	588	559	888	418	480
17	693	686	500	470	640	749	719	551	658	891	412	451
18	648	627	480	460	800	653	626	553	802	784	411	432
19	626	626	450	450	1100	603	593	549	956	674	406	421
20	902	759	440	450	1300	592	570	530	783	602	397	412
21	983	815	540	440	1440	589	566	512	639	551	396	402
22	872	737	560	440	1230	575	536	521	655	521	412	395
23	744	898	560	450	1160	598	535	542	839	502	413	391
24	658	1260	540	460	1140	713	547	521	762	494	404	396
25	617	1390	520	470	1090	834	534	657	636	478	394	405
26	591	1180	520	480	999	936	517	687	553	473	391	401
27	571	902	520	480	889	948	554	616	518	465	387	389
28	556	800	500	470	808	871	669	547	487	454	384	389
29	540	740	500	470	752	808	636	506	466	441	385	393
30	527	720	500	470	---	740	957	486	450	432	383	392
31	518	---	500	460	---	694	---	471	---	426	371	---
TOTAL	19971	21894	17510	15350	20838	21552	19437	20676	19931	19750	13659	13189
MEAN	644	730	565	495	719	695	648	667	664	637	461	440
MAX	1060	1390	700	580	1440	1000	962	1310	1100	1500	648	805
MIN	454	489	440	440	440	560	517	471	438	426	371	386
CFSM	1.00	1.14	.88	.77	1.12	1.08	1.01	1.04	1.03	.99	.69	.68
IN.	1.16	1.27	1.01	.89	1.21	1.25	1.12	1.20	1.15	1.14	.79	.76
CAL YR 1983	TOTAL	240453	MEAN 659	MAX 2800	MIN 308	CFSM 1.03	IN 13.91					
WTR YR 1984	TOTAL	223757	MEAN 611	MAX 1500	MIN 371	CFSM .95	IN 12.95					

BLACK RIVER BASIN

133

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 downstream from O'Neill Creek, and 2.6 mi upstream from Cunningham Creek.

DRAINAGE AREA.--749 mi².

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 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. WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 962.34 ft 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 downstream at datum 1.58 ft lower.

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

AVERAGE DISCHARGE.--74 years (1906-8, 1914-84), 595 ft³/s, 10.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,800 ft³/s Sept. 10, 1938, gage height, 23.8 ft; minimum, 0.6 ft³/s Aug. 15, 1936, gage height, 1.84 ft.

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Oct. 12	0800	6,280	10.18	June 22	1400	5,250	9.36
Nov. 23	2400	7,380	10.83	July 11	0200	*12,600	*13.29
Apr. 30	1100	6,420	10.12				

minimum, 85 ft³/s Aug. 25, 26.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30 to Feb. 19 and Mar. 3-22.)

Oct. 1 to Apr. 29				Apr. 30 to Sept. 30			
3.0	104	6.0	1,470	2.8	70	6.0	1,500
3.5	224	7.0	2,250	3.0	104	7.0	2,370
4.0	392	9.0	4,510	3.5	224	9.0	4,740
5.0	850	11.0	7,680	4.0	392	11.0	7,940
				5.0	850		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284	254	580	180	140	641	1580	5230	156	292	124	133
2	248	249	470	180	140	509	1580	3610	145	231	146	120
3	227	242	430	200	140	400	1660	2390	135	226	296	107
4	227	239	390	220	140	340	1630	1610	125	219	244	99
5	241	238	370	230	140	290	1510	1110	129	185	281	97
6	245	226	350	230	140	250	1390	820	133	172	261	97
7	258	222	330	220	140	220	1280	951	156	152	276	96
8	445	220	320	220	140	210	1160	1040	695	134	304	91
9	973	497	310	210	140	200	1030	1120	377	135	270	92
10	952	1630	300	200	140	190	897	1100	340	1930	212	98
11	1370	1610	290	200	150	180	776	898	331	7670	178	95
12	5530	1220	280	190	250	170	890	697	712	3130	154	282
13	4950	853	270	180	900	170	1980	898	492	1400	138	443
14	3650	788	260	170	1500	160	2400	938	448	850	125	402
15	2410	1170	250	170	2100	190	2160	1050	476	921	115	380
16	1910	1130	240	160	2600	400	1590	940	409	862	107	316
17	1490	1080	240	160	3000	380	1140	720	1710	829	112	260
18	1170	940	230	150	3300	340	854	567	2220	662	108	219
19	921	805	220	150	3600	290	671	470	775	506	99	187
20	772	1500	220	140	3290	260	558	402	518	396	93	160
21	660	2280	220	130	2700	240	487	346	377	315	99	139
22	581	2020	210	130	2450	230	436	319	2590	261	97	122
23	511	5250	210	120	2640	303	395	298	1750	223	90	112
24	451	6450	210	120	2330	436	355	286	1410	194	90	104
25	409	4310	200	120	2150	745	320	360	872	180	85	107
26	364	2790	200	130	1630	1410	300	336	591	171	93	432
27	343	1810	190	130	1300	2000	646	263	606	176	103	605
28	325	1280	190	130	1040	2210	922	235	626	148	204	547
29	301	910	190	130	753	2310	1280	208	531	137	242	438
30	280	700	180	130	---	2000	5520	184	391	125	206	333
31	262	---	180	130	---	1780	---	168	---	117	160	---
TOTAL	32760	42913	8530	5160	39083	19454	37397	29564	20226	22949	5112	6713
MEAN	1057	1430	275	166	1348	628	1247	954	674	740	165	224
MAX	5530	6450	580	230	3600	2310	5520	5230	2590	7670	304	605
MIN	227	220	180	120	140	160	300	168	125	117	85	91
CFSM	1.41	1.91	.37	.22	1.80	.84	1.67	1.27	.90	.99	.22	.30
IN.	1.63	2.13	.42	.26	1.94	.97	1.86	1.47	1.00	1.14	.25	.33

CAL YR 1983 TOTAL 298960 MEAN 819 MAX 16700 MIN 49 CFSM 1.09 IN 14.85
WTR YR 1984 TOTAL 269861 MEAN 737 MAX 7670 MIN 85 CFSM .98 IN 13.40

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 upstream from bridge on U.S. Highway 53, 4.5 mi southeast of Galesville, and 4.8 mi downstream from Fleming Creek.

DRAINAGE AREA.--2,080 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1931 to current year.

REVISED RECORDS.--WSP 1438: 1932-34, 1935-36(M). WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 658.43 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 2, 1941, nonrecording gage on bridge 1,000 ft downstream at same datum. Apr. 3, 1941, to Oct. 1, 1971, water-stage recorder at site 1,100 ft downstream at same datum.

REMARKS.--Records good except those for winter periods, which are fair. Flow partly regulated by Hetfield Dam Powerplant where drainage area is 1,290 mi² and storage capacity is 272,000,000 ft³. Water diverted periodically from basin into Lemonweir River basin for cranberry culture. Gage-height telemeter at station.

AVERAGE DISCHARGE.--52 years, 1,740 ft³/s, 11.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,500 ft³/s Apr. 1, 1967, gage height, 14.63 ft; maximum gage height, 15.46 ft Sept. 23, 1980; minimum observed, 180 ft³/s Dec. 20, 1931

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,500 ft³/s May 3, gage height, 11.50 ft (no other peaks above base of 12,500 ft³/s); minimum discharge, 625 ft³/s Sept. 11, gage height, 2.29 ft.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 2 to Feb. 18.)

Oct. 1 to Feb. 27(1000)				Feb. 27(1100) to May 3(2100)				May 3(2200) to Sept. 30			
2.0	760	7.0	5,300	3.0	1,260	2.3	630	8.0	6,500		
3.0	1,520	8.0	6,500	4.0	2,030	3.0	1,040	10.0	9,700		
4.0	2,400	9.0	8,000	6.0	4,020	4.0	1,840	12.0	15,100		
5.0	3,300	10.0	9,700	8.0	6,670	6.0	3,900				
6.0	4,300	11.0	12,100	10.0	9,880						
				12.0	15,300						

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1740	923	3050	1100	1100	2820	4090	4830	1040	1710	1200	844
2	1260	1230	2700	1000	900	2340	3660	9750	1010	1600	1200	823
3	1100	1290	2400	1000	920	2190	3310	13000	928	1530	1200	699
4	950	1260	2200	1100	920	2050	2990	10000	755	1200	1200	671
5	1100	1250	2100	1200	900	1930	2980	6870	804	1210	1200	682
6	1070	1050	2000	1100	900	1880	2970	4520	943	1090	1100	726
7	1030	903	1900	1100	900	1770	2870	3310	920	1080	1100	726
8	1010	820	1900	1100	900	1720	2610	3360	1500	1140	1200	710
9	884	1010	1800	1100	900	1540	2510	3730	2080	1050	1260	712
10	764	1300	1800	1100	920	1480	2290	3360	2990	1190	1300	655
11	1490	2730	1600	1000	960	1400	2220	3190	2380	1690	1220	652
12	2270	3770	1400	1000	1000	1400	2050	2840	2460	4820	1140	870
13	4170	3460	1200	1100	1200	1400	2320	2490	2240	9320	1030	988
14	6060	2840	1400	1100	1700	1300	3620	2550	2640	9390	1040	1100
15	7550	2660	1500	1000	2200	1300	4750	3170	1910	5410	986	1340
16	6710	3310	1400	980	3500	1300	5430	2690	1820	3750	888	1180
17	5340	3620	1300	960	5000	1400	5310	2590	2220	3590	869	1090
18	4340	3150	1300	940	6000	1730	4330	2270	2970	3250	893	953
19	3520	2940	1200	920	8030	1610	3030	2160	4570	2970	989	929
20	3230	2940	1300	940	8700	1590	2510	1990	5840	2550	789	921
21	2660	3010	1300	940	9060	1580	2200	1890	5080	2130	791	877
22	2560	3970	1300	940	9130	1540	2090	1820	4200	1910	825	831
23	2410	4600	1300	920	8230	1460	2030	1680	3720	1790	831	778
24	2210	4940	1200	900	6970	1480	1930	1480	5130	1520	836	653
25	2060	6880	1200	900	6660	1550	1890	1450	4960	1280	792	716
26	1950	10600	1200	1000	6100	1850	1810	1430	3420	1140	690	892
27	1890	9600	1200	940	5510	2170	1590	1640	2470	1080	667	806
28	1810	7240	1200	920	4040	3360	2050	1430	2120	1100	697	755
29	1730	5340	1200	900	3010	3870	2590	1320	1920	1200	749	885
30	1210	4410	1200	900	---	4140	2820	1260	1800	900	762	1120
31	1020	---	1100	960	---	4380	---	1220	---	900	777	---
TOTAL	77098	103046	48850	31060	106260	61530	86850	105290	76840	74490	30221	25584
MEAN	2487	3435	1576	1002	3664	1985	2895	3396	2561	2403	975	853
MAX	7550	10600	3050	1200	9130	4380	5430	13000	5840	9390	1300	1340
MIN	764	820	1100	900	900	1300	1590	1220	755	900	667	652
CFSM	1.20	1.65	.76	.48	1.76	.95	1.39	1.63	1.23	1.16	.47	.41
IN.	1.38	1.84	.87	.56	1.90	1.10	1.55	1.88	1.37	1.33	.54	.46

CAL YR 1983 TOTAL 865996 MEAN 2373 MAX 33100 MIN 414 CFSM 1.14 IN 15.49
WTR YR 1984 TOTAL 827119 MEAN 2260 MAX 13000 MIN 652 CFSM 1.09 IN 14.79

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT , 1983												
05...	1510	1110	125	7.5	--	14.5	4.0	9.1	741	92	K380	780
JAN , 1984												
04...	1230	1080	140	7.0	2.0	.0	4.0	10.6	--	--	26	570
FEB												
08...	1250	899	150	7.0	-7.0	.0	4.9	11.7	750	81	K16	170
APR												
10...	1130	2220	98	7.3	15.0	7.0	3.5	11.9	748	100	K10	69
JUN												
19...	0730	4420	80	7.3	22.0	21.0	18	7.5	749	86	K3000	K4000
AUG												
08...	1430	1230	120	8.4	27.0	25.0	4.3	9.7	744	120	K2500	K2500

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT , 1983												
05...	55	11	13	5.5	2.6	9	.2	2.1	44	2.7	10	4.9
JAN , 1984												
04...	55	10	13	5.4	3.2	11	.2	1.7	45	8.7	10	5.1
FEB												
08...	56	10	13	5.7	3.5	12	.2	1.7	46	8.9	12	5.5
APR												
10...	36	8	8.7	3.5	2.5	12	.2	1.9	28	2.7	8.2	4.8
JUN												
19...	30	6	7.4	2.9	2.4	14	.2	2.0	24	2.3	6.4	4.4
AUG												
08...	51	7	12	5.2	2.5	9	.2	2.1	44	.3	9.0	5.0

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SI02) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT , 1983											
05...	<.10	11	85	76	255	.60	.180	.30	.150	.110	<.010
JAN , 1984											
04...	<.10	12	94	78	274	.88	.240	.50	.090	.060	.050
FEB											
08...	<.10	13	113	83	274	1.0	.180	1.0	.110	.060	.060
APR											
10...	<.10	7.0	77	54	462	.35	.060	2.0	.060	.040	.030
JUN											
19...	.10	4.7	79	45	943	.42	.090	1.3	.240	.090	.120
AUG											
08...	<.10	7.5	88	71	292	.31	<.010	1.2	.200	.060	.070

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

BLACK RIVER BASIN

05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT , 1983											
05...	1510	1110	30	2	28	<.5	<1	<1	<3	2	380
FEB , 1984											
08...	1250	899	50	1	33	<.5	<1	<1	<3	3	560
APR											
10...	1130	2220	20	1	22	<.5	<1	4	<3	2	290
AUG											
08...	1430	1230	30	1	23	1.0	<1	4	<3	2	480

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT , 1983											
05...	2	<4	29	.6	10	1	<1	<1	33	<6	<3
FEB , 1984											
08...	<1	<4	60	<.1	<10	3	<1	<1	34	<6	25
APR											
10...	1	<4	11	.3	<10	2	<1	<1	26	<6	8
AUG											
08...	3	<4	11	1.4	<10	1	<1	<1	36	<6	55

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT , 1983							
05...	1510	1110	125	14.5	16	48	84
NOV							
22...	1120	4050	105	3.5	--	--	--
JAN , 1984							
04...	1230	1080	140	.0	7	20	87
FEB							
08...	1250	899	150	.0	3	7.3	100
MAR							
07...	1500	1750	118	.5	--	--	--
APR							
10...	1130	2220	98	7.0	23	138	43
MAY							
08...	1430	3500	80	10.0	--	--	--
JUN							
05...	1020	737	148	19.0	--	--	--
19...	0730	4420	80	21.0	119	1420	67
AUG							
08...	1430	1230	120	25.0	52	173	85
SEP							
19...	1020	878	140	16.0	--	--	--

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 upstream from Wisconsin River, 4.3 mi downstream from Yellow River, and at mile 633.4 upstream from Ohio River.

DRAINAGE AREA.--67,500 mi², 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 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 upstream in tailwater of dam 9, at datum 5.30 ft 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.--48 years, 34,810 ft³/s, 7.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 276,000 ft³/s Apr. 24, 1965; maximum gage height, 25.38 ft Apr. 24, 1965; minimum daily discharge, 6,200 ft³/s Dec. 9, 1936; minimum gage height, -0.86 ft 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, 117,000 ft³/s June 25; maximum gage height, 15.59 ft May 8; minimum daily discharge, 15,100 ft³/s Aug. 24; minimum gage height, 6.12 ft Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36400	39300	74700	30900	25700	88000	67500	88600	64800	108000	32700	23100
2	33500	38200	71200	30900	25700	84300	72100	90200	62000	106000	28900	21500
3	31600	36700	62300	30900	25200	80200	74200	92200	56100	104000	25800	20700
4	30600	35600	51500	32000	24900	76600	76400	93900	49600	104000	27600	19800
5	29500	34500	45600	31500	24800	73200	78600	97700	47000	103000	29800	19000
6	29200	33800	42500	31800	24500	67000	81800	99200	45200	102000	32400	19300
7	28900	33400	38000	32400	24400	63000	80600	104000	43400	98000	33000	20400
8	29000	33200	34400	32800	23500	58500	85200	107000	43300	94500	35200	19600
9	31500	33200	32200	33000	23800	54000	88600	107000	46900	90000	35200	21600
10	32400	32600	28000	33200	23900	51400	92100	106000	52500	86000	35100	24100
11	33500	33300	27800	33500	23900	46100	95200	104000	54000	83500	35800	26600
12	36600	33600	29900	32600	24000	45400	97300	102000	53500	81300	36300	27500
13	38500	33800	31900	32300	25200	42100	100000	101000	59000	79700	34700	30400
14	41200	36100	31700	30600	27900	41300	103000	101000	64000	78800	31400	32400
15	42900	39400	35500	29700	29600	43800	104000	100000	69500	78400	28500	32200
16	45700	41300	38600	29700	34000	50800	106000	99200	75000	78500	27200	31000
17	50500	41400	36500	27600	41400	55400	104000	99400	82000	78400	27800	28800
18	54600	40600	36300	27700	49000	55500	103000	99300	90000	76300	26400	26600
19	55400	40200	35600	27500	75200	51700	101000	98700	99500	72500	27100	24200
20	55800	40900	29800	27500	77600	49200	100000	97200	104000	67900	27100	24600
21	55200	41100	27500	25800	81200	45800	98400	95000	109000	64400	22800	25100
22	54000	41500	27500	26100	79900	42400	96900	93300	111000	59300	20000	24000
23	51700	43200	29900	26100	80000	41300	94400	91000	114000	53200	16800	23200
24	51400	45900	31500	25000	81500	41900	93000	84500	116000	49200	15100	20900
25	50700	50300	33300	25200	85100	43000	91800	84200	117000	44800	16400	19200
26	48700	58200	34500	25200	83600	44100	90100	84700	116000	42200	21400	18100
27	46100	64300	34400	25200	85400	45800	88700	78300	115000	40900	24600	20000
28	44400	70100	33900	25500	87900	49300	87900	78400	114000	38300	27100	26000
29	42900	74700	33000	25600	88800	52500	85400	74200	113000	37200	25700	30500
30	40700	74700	32400	25700	---	56100	88400	71600	111000	35200	25000	32100
31	39500	---	30500	25700	---	61100	---	68600	---	34500	24000	---
TOTAL	1292600	1295100	1162400	899200	1407600	1700800	2725600	2891400	2397300	2270000	856900	732500
MEAN	41700	43170	37500	29010	48540	54860	90850	93270	79910	73230	27640	24420
MAX	55800	74700	74700	33500	88800	88000	106000	107000	117000	108000	36300	32400
MIN	28900	22600	27500	25000	23500	41300	67500	68600	43300	34500	15100	18100
CFSM	.62	.64	.56	.43	.72	.81	1.35	1.38	1.18	1.09	.41	.36
IN.	.71	.71	.64	.50	.78	.94	1.50	1.59	1.32	1.25	.47	.40
CAL YR 1983	TOTAL	19651400	MEAN	53840	MAX	145000	MIN	21000	CFSM	.80	IN	10.83
WTR YR 1984	TOTAL	19631400	MEAN	53640	MAX	117000	MIN	15100	CFSM	.80	IN	10.82

MISSISSIPPI RIVER MAIN STEM

05389500 MISSISSIPPI RIVER AT MCGREGOR, IOWA--CONTINUED

WATER-QUALITY RECORDS

LOCATION.--Samples collected from boat 1.5 mi downstream from discharge station. Prior to April 1981, at Bridge on U.S. Highway 18, 1.2 mi upatream 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 suspended-sediment samples at time of analysis.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 882 mg/l Mar. 21, 1982; minimum daily mean, 1 mg/l Dec. 23-25, 1976, Dec. 20, 28, 1977.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 166,000 tons Mar. 31, 1979; minimum daily, 31 tons Dec. 25, 1976.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 215 mg/l June 10; minimum daily mean, 2 mg/l Dec. 16-18, Jan. 28, 29.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 43,600 tons April 29; minimum daily, 138 tons Jan. 28, 29.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	TEMPERATURE (DEG C) (00010)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV , 1983							
02...	1030	41600	370	11.0	--	--	--
APR , 1984							
18...	0830	105000	440	9.0	--	--	--
MAY							
31...	1230	57600	--	--	57	8860	96
31...	1330	57600	460	17.5	--	--	--
JUL							
10...	1500	82100	505	23.5	--	--	--

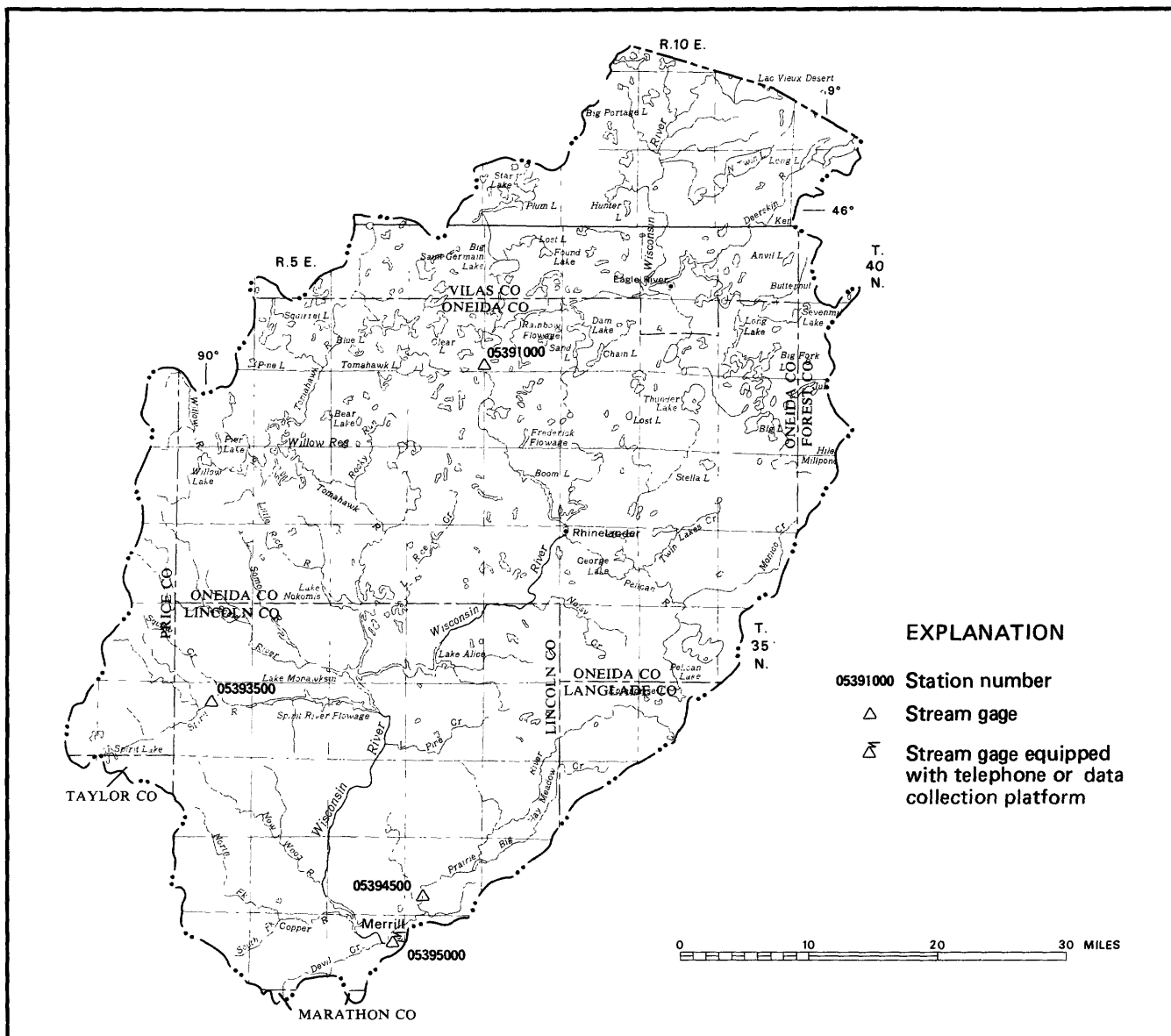
DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	NUMBER OF SAMPLING POINTS (00063)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)
APR , 1984												
17...	1615	108000	6	2	3	13	66	90	97	99	99	100

MISSISSIPPI RIVER MAIN STEM

05389500 MISSISSIPPI RIVER AT MCGREGOR, IOWA--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE, (DEG C) (00010)	DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE, (DEG C) (00010)
OCT , 1983				APR , 1984			
04...	30600	350	14.0	11...	95200	480	--
08...	29000	340	14.0	15...	104000	460	--
12...	36600	340	10.0	17...	104000	420	8.0
16...	45700	355	11.0	19...	101000	440	8.0
18...	54600	310	10.0	23...	94400	440	8.0
21...	55200	330	9.0	26...	90100	--	10.0
27...	46100	325	9.0	30...	88400	420	10.0
31...	39500	380	6.0	MAY			
NOV				03...	92200	--	10.0
03...	36700	380	8.0	07...	104000	--	12.0
06...	33800	380	6.0	10...	106000	430	12.0
09...	33200	370	6.0	14...	101000	425	14.0
13...	33800	370	4.0	17...	99400	420	23.0
16...	41300	380	4.0	22...	93300	--	17.0
19...	40200	390	4.0	25...	84200	--	18.0
21...	41100	360	4.0	31...	68600	455	14.5
24...	45900	365	2.0	JUN			
28...	70100	380	2.0	01...	64800	480	18.0
DEC				04...	49600	--	22.0
02...	71200	390	--	06...	46900	470	24.0
06...	42500	400	--	13...	59000	450	24.0
09...	32200	400	--	17...	82000	440	22.0
12...	29900	410	--	19...	99500	440	25.0
15...	35500	410	--	23...	114000	390	24.0
19...	35600	470	--	28...	114000	350	26.0
23...	29900	470	--	30...	111000	360	24.0
31...	30500	440	--	JUL			
JAN , 1984				01...	108000	405	--
03...	30900	460	--	02...	106000	--	24.0
07...	32400	440	--	06...	102000	440	26.0
11...	33500	450	--	09...	90000	480	24.0
20...	27500	440	--	13...	79700	460	26.5
24...	25000	460	--	19...	72500	480	27.0
28...	25500	460	--	21...	64400	--	26.5
FEB				26...	42200	480	27.0
01...	25700	440	--	29...	37200	--	27.0
05...	24800	440	--	AUG			
09...	23800	440	--	01...	32700	--	27.0
12...	24000	420	--	03...	25800	480	26.0
16...	34000	460	--	08...	35200	--	29.0
19...	75200	470	--	11...	35800	--	26.0
23...	80000	430	--	14...	31400	450	27.0
26...	83600	380	--	17...	27800	440	28.0
29...	88800	380	--	20...	27100	440	26.0
MAR				22...	20000	460	27.0
04...	76600	420	--	24...	15100	480	26.0
08...	58500	420	--	29...	25700	485	26.5
11...	46100	440	--	31...	24000	480	24.0
15...	43800	400	--	SEP			
18...	55500	410	--	07...	20400	450	22.0
21...	45800	420	--	09...	21600	460	24.0
25...	43000	410	--	13...	30400	445	24.0
28...	49300	440	--	16...	31000	440	18.0
31...	61100	510	--	20...	24600	425	24.0
APR				22...	24000	435	22.0
04...	76400	480	--	27...	20000	420	10.0
07...	80600	500	--				



Base from U.S. Geological Survey
State base map, 1968

UPPER WISCONSIN RIVER BASIN

WISCONSIN RIVER BASIN

05391000 WISCONSIN RIVER AT RAINBOW LAKE, NEAR LAKE TOMAHAWK, WI

LOCATION.--Lat 45°49'50", long 89°33'08", in NE 1/4 NE 1/4 sec.36, T.39 N., R.7 E., Oneida County, Hydrologic Unit 07070001, on right bank 500 ft downstream from Gilmore Creek, 0.4 mi downstream from Rainbow Lake, and 2.3 mi northeast of Lake Tomahawk.

DRAINAGE AREA.--757 mi².

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-83-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,569.05 ft, 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.

AVERAGE DISCHARGE.--48 years, 704 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,570 ft³/s Sept. 5, 1941, gage height, 7.59 ft; minimum, 17 ft³/s Oct. 10-12, 1940; minimum daily, 35 ft³/s Apr. 6, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft³/s Oct. 18, gage height, 4.55; minimum daily, 241 ft³/s May 7.

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

0.7	224	3.0	923
1.3	340	4.0	1,400
2.0	545	5.0	1,960

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	750	994	1270	1100	1110	684	646	272	680	680	500	526
2	743	998	1280	1090	1100	683	645	254	680	680	470	380
3	742	997	1280	1090	1090	683	643	255	680	640	470	270
4	740	993	1260	1090	1080	677	639	277	680	600	470	330
5	738	984	1260	1090	1070	807	478	286	660	580	470	400
6	738	983	1260	1070	1070	907	373	252	540	580	470	470
7	744	983	1180	1060	1060	901	316	241	520	620	450	470
8	753	1000	1120	1070	1060	895	283	246	20	620	390	410
9	748	945	1120	1090	1090	886	263	244	30	600	420	450
10	748	915	1120	1130	1110	875	245	294	20	560	480	490
11	752	914	1120	1120	1100	866	271	424	20	520	483	500
12	974	910	1120	1120	1090	832	342	519	540	540	485	420
13	1090	910	1120	1120	1100	901	366	532	580	620	514	400
14	1140	916	1120	1120	953	927	366	629	580	640	530	450
15	1290	912	1120	1120	732	917	308	712	540	560	494	500
16	1360	910	1120	1110	652	902	275	709	520	540	475	500
17	1470	912	1120	1110	655	896	283	710	490	540	493	500
18	1690	913	1120	1100	658	886	353	714	470	500	496	500
19	1590	920	1120	1100	661	872	403	716	520	600	497	520
20	1470	932	1120	1100	667	861	403	717	680	620	499	500
21	1430	930	1110	1100	674	848	397	793	680	620	499	520
22	1370	992	1100	1090	681	836	389	840	600	620	429	560
23	1290	1360	1100	1070	683	832	387	815	580	520	375	560
24	1120	1620	1100	1060	684	820	376	760	640	620	416	400
25	946	1560	1100	1090	686	810	389	720	680	580	571	320
26	900	1510	1100	1140	688	801	412	700	700	560	540	400
27	904	1430	1100	1130	688	790	472	700	720	560	418	620
28	969	1380	1100	1130	684	779	497	680	700	560	434	500
29	1010	1320	1100	1120	685	706	487	680	680	560	470	560
30	1010	1270	1100	1120	---	652	367	680	680	560	475	580
31	1000	---	1100	1120	---	647	---	680	---	580	504	---
TOTAL	32219	32313	35460	34170	25261	25409	12074	17051	18110	18280	14687	14006
MEAN	1039	1077	1144	1102	871	820	402	550	604	590	474	467
MAX	1690	1620	1280	1140	1110	927	646	840	720	680	571	620
MIN	738	910	1100	1060	652	647	245	241	420	500	375	270

CAL YR 1983 TOTAL 323640 MEAN 887 MAX 1690 MIN 349
WTR YR 1984 TOTAL 279040 MEAN 762 MAX 1690 MIN 241

NOTE.--No gage-height record May 24 to Aug. 10 and Sept. 2-30.

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, on right bank 40 ft downstream of bridge 0.2 mi south of Spirit Falls, 0.6 mi upstream from Squaw Creek, and 2.0 mi downstream from Richie Creek.

DRAINAGE AREA.--81.6 mi².

PERIOD OF RECORD.--April 1942 to current year.

REVISED RECORDS.--WSP 1308: 1943(M), 1948-50(M). WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,461.63 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 4, 1982, nonrecording gage 40 ft upstream at same datum.

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

AVERAGE DISCHARGE.--42 years, 86.0 ft³/s, 14.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,180 ft³/s Sept. 18, 1942, gage height, 10.00 ft, from rating curve extended above 2,500 ft³/s; minimum observed, 1.0 ft³/s Aug. 11, 1964, gage height, 0.85 ft.

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Nov. 24	Unknown	*1,140	*5.53	May 1	0100	808	4.87

minimum discharge, 7.5 ft³/s Aug. 5, gage height, 1.20 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 27 to Mar. 30.)

1.2	6.9	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 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	37	160	33	25	47	212	712	20	18	9.4	11
2	37	36	140	32	25	42	295	491	26	16	10	26
3	39	35	130	32	25	39	374	380	25	14	8.7	33
4	37	33	120	32	26	37	337	281	20	14	8.2	24
5	35	31	110	34	26	35	399	206	33	13	9.5	21
6	33	31	100	36	25	35	456	161	45	15	20	17
7	49	31	96	35	25	35	422	173	39	12	18	14
8	156	32	90	35	24	35	357	217	79	11	17	14
9	117	46	86	33	24	35	294	212	75	10	15	16
10	87	78	80	31	25	35	265	174	55	12	13	14
11	127	73	76	29	26	35	240	145	45	19	11	13
12	440	64	72	28	30	35	216	122	57	16	10	26
13	488	59	70	28	60	35	291	176	114	13	9.7	60
14	301	54	66	27	110	37	343	215	96	15	9.5	48
15	207	61	64	26	130	39	301	157	67	39	9.2	36
16	195	77	62	25	140	48	232	117	55	28	8.8	32
17	180	85	58	24	130	47	180	101	68	50	16	25
18	144	80	56	23	120	44	142	91	63	48	14	20
19	118	88	52	22	130	41	116	79	49	33	10	18
20	108	282	50	21	130	40	102	67	39	40	9.0	16
21	95	512	48	20	120	40	92	58	33	24	8.8	15
22	84	392	48	20	110	40	80	59	31	17	12	12
23	76	425	45	20	100	38	71	56	38	15	12	13
24	69	1000	43	21	98	41	63	47	33	14	10	79
25	63	615	40	23	84	47	57	43	28	13	9.0	192
26	58	429	39	23	76	54	59	38	24	13	8.1	136
27	53	300	38	23	66	70	149	33	28	12	10	97
28	49	240	38	23	54	84	365	29	26	11	10	80
29	44	200	35	24	50	110	268	25	22	10	9.4	65
30	40	170	34	24	---	140	530	23	20	9.5	8.7	52
31	38	---	33	25	---	173	---	21	---	9.2	9.9	---
TOTAL	3606	5596	2179	832	2024	1613	7308	4709	1353	583.7	343.9	1225
MEAN	116	187	70.3	26.8	69.8	52.0	244	152	45.1	18.8	11.1	40.8
MAX	488	1000	160	36	140	173	530	712	114	50	20	192
MIN	33	31	33	20	24	35	57	21	20	9.2	8.1	11
CFSM	1.42	2.29	.86	.33	.86	.64	2.99	1.86	.55	.23	.14	.50
IN.	1.64	2.55	.99	.38	.92	.74	3.33	2.15	.62	.27	.16	.56
CAL YR 1983	TOTAL	39029.5	MEAN	107	MAX	1800	MIN	7.1	CFSM	1.31	IN	17.79
WTR YR 1984	TOTAL	31372.6	MEAN	85.7	MAX	1000	MIN	8.1	CFSM	1.05	IN	14.30

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 upstream from bridge on County Trunk Highway C, 1.5 mi upstream from Meadow Creek, 4.5 mi northeast of Merrill, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--184 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 9, 1968, nonrecording gage 40 ft downstream at same datum.

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

AVERAGE DISCHARGE.--62 years (1914-31, 1939-84), 180 ft³/s, 13.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,800 ft³/s Aug. 31, 1941, gage height, 9.45 ft, from flood marks, based on rating curve extended above 2,200 ft³/s; minimum observed, 34 ft³/s Oct. 26, 1947, gage height, 1.39 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 710 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Nov. 24	1200	738	4.27	Apr. 30	2400	*1,070	*5.00

minimum daily, 81 ft³/s Aug. 31.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 4 to Mar. 25.)

2.0	75	4.0	630
2.1	90	5.0	1,070
2.4	141		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	122	227	120	100	130	234	1010	103	98	85	83
2	93	122	212	120	100	130	298	850	104	95	89	101
3	108	123	194	120	100	120	349	661	106	97	93	124
4	116	125	190	120	100	120	351	513	103	103	95	124
5	114	124	180	120	98	120	372	418	113	100	98	123
6	113	120	170	120	96	110	435	342	132	96	100	116
7	153	117	160	120	98	100	452	312	149	92	95	111
8	255	122	150	120	100	100	443	326	276	89	103	104
9	262	139	150	120	100	100	419	332	345	89	127	103
10	232	192	149	110	100	100	386	300	301	110	112	99
11	255	190	150	110	100	100	366	271	249	159	101	96
12	474	161	150	110	110	100	360	229	258	138	97	132
13	573	152	150	110	130	100	450	296	300	122	94	181
14	549	143	150	110	160	110	527	337	260	118	97	183
15	441	157	150	100	190	130	493	298	203	130	95	167
16	373	175	140	100	220	120	437	264	174	126	93	147
17	320	179	140	100	260	110	374	228	224	138	92	130
18	265	170	140	98	250	110	317	210	233	163	91	122
19	228	163	140	98	230	100	280	187	196	149	87	113
20	204	227	140	96	210	110	253	177	165	126	86	105
21	186	359	140	98	200	110	228	157	143	111	90	96
22	171	350	130	98	190	100	209	154	132	103	100	92
23	162	504	130	100	180	100	195	146	134	101	96	90
24	154	719	120	100	190	110	179	139	127	101	91	121
25	143	653	120	100	180	120	177	134	115	98	88	149
26	139	522	130	100	170	143	175	127	110	93	87	142
27	135	426	130	100	160	167	187	120	116	93	90	143
28	140	310	130	100	140	199	199	116	114	95	90	134
29	129	272	130	100	130	219	201	112	106	88	86	127
30	125	241	130	100	---	207	775	107	101	86	83	107
31	122	---	130	100	---	202	---	105	---	84	81	---
TOTAL	6827	7379	4652	3318	4392	3897	10121	8978	5192	3391	2912	3665
MEAN	220	246	150	107	151	126	337	290	173	109	93.9	122
MAX	573	719	227	120	260	219	775	1010	345	163	127	183
MIN	93	117	120	96	96	100	175	105	101	84	81	83
CFSM	1.20	1.34	.82	.58	.82	.69	1.83	1.58	.94	.59	.51	.66
IN.	1.38	1.49	.94	.67	.89	.79	2.05	1.82	1.05	.69	.59	.74

CAL YR 1983	TOTAL	72650	MEAN 199	MAX 1410	MIN 80	CFSM 1.08	IN 14.69
WTR YR 1984	TOTAL	64724	MEAN 177	MAX 1010	MIN 81	CFSM .96	IN 13.09

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 downstream from U.S. Highway 51 bridge at east end of Merrill, and 0.5 mi downstream from Prairie River.

DRAINAGE AREA.--2,760 mi².

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 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 and 9 powerplants above station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--81 years, 2,681 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,400 ft³/s Aug. 31, 1941, gage height, 18.26 ft from rating curve extended above 20,000 ft³/s; minimum, about 90 ft³/s Sept. 26, 1908, gage height, 2.45 ft.

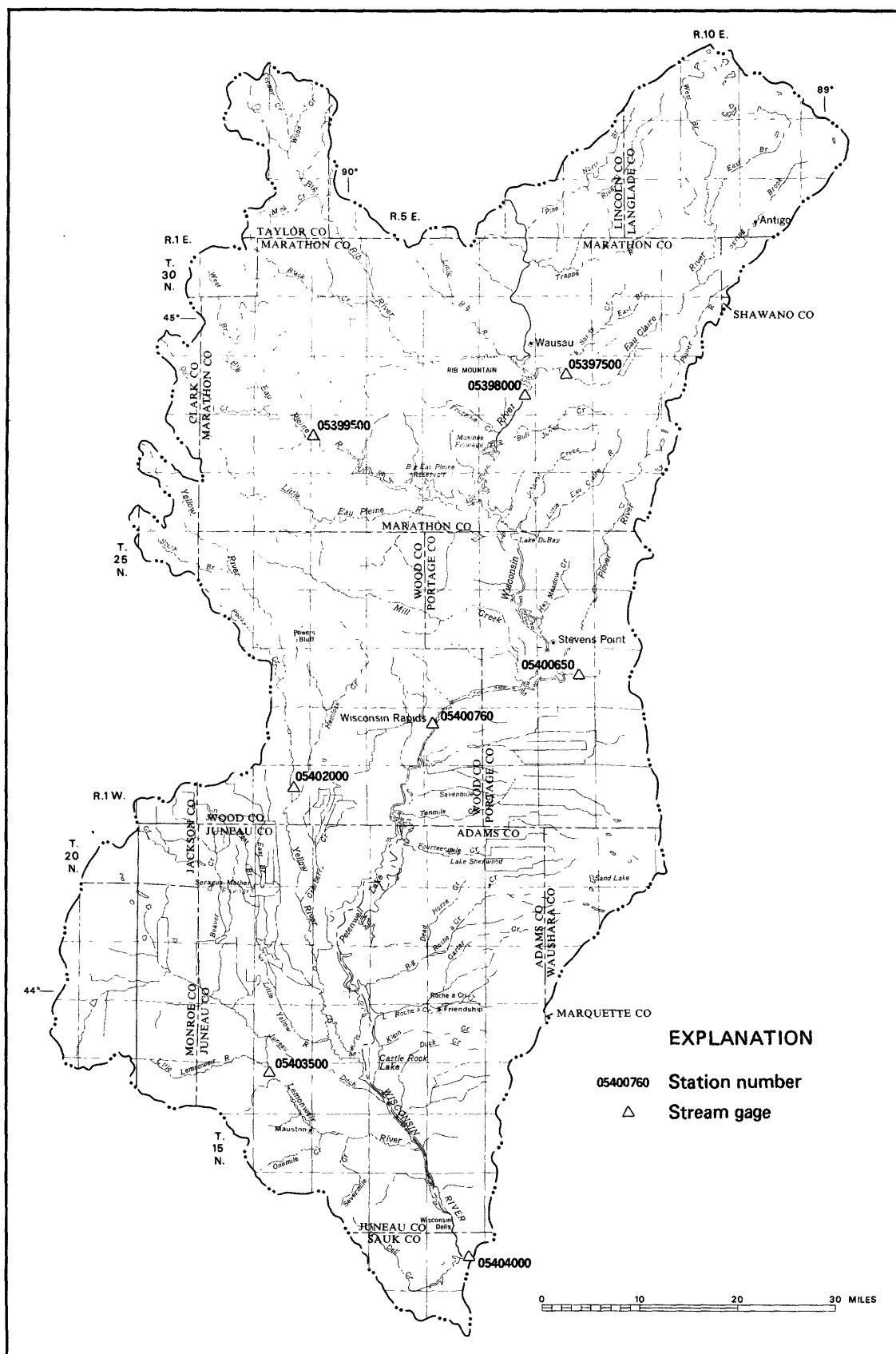
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft³/s Nov. 24, gage height, 9.58 ft; minimum daily, 1,240 ft³/s Sept. 9.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 7 to Feb. 23.)

4.2	1,240	8.0	7,640
5.0	2,120	10.0	12,900
6.0	3,640		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2200	2500	4370	3000	2800	2610	2540	10200	1900	1890	1650	1520
2	1670	2670	3880	2900	2800	2690	3150	7510	1930	1920	1640	1810
3	1780	2470	3390	2900	2700	2630	3730	5430	1730	1670	1600	1760
4	1840	2070	3850	3100	2700	2270	4180	4640	1680	1710	1710	2030
5	1420	2120	3800	3000	2800	2070	4640	4190	1960	1450	1760	1770
6	1810	2010	3490	3100	2600	2730	4540	3670	1860	1470	1990	1590
7	2140	1930	3830	3000	2600	2400	4630	3590	1930	1490	2060	1650
8	3080	2150	3600	3000	2700	2750	4370	3780	2520	1530	1870	1760
9	2650	2380	3500	2900	2700	2440	4280	3410	2560	1690	1660	1240
10	2690	3300	3600	3000	2900	2470	3320	3570	2570	1750	1510	1580
11	2740	3110	3600	3100	2700	2420	3110	3260	1880	2100	1670	2000
12	4950	2340	3500	2900	3000	2380	3000	2920	2240	1640	1680	2060
13	5100	2100	3400	2800	3300	2500	2960	3070	2490	1650	1760	2530
14	5070	2690	3200	3000	3600	2630	4440	3470	2530	1940	1490	2140
15	4750	3020	3100	2900	3600	2570	3480	3560	1940	1770	1770	2020
16	3940	2470	3400	3000	3600	2790	4040	3360	1840	1540	1780	1450
17	4300	3160	3200	3000	3400	3140	2980	3000	2070	2050	1660	1700
18	4400	3060	3000	2900	3600	2840	2410	2360	2240	1890	1850	1700
19	4040	2980	2800	2700	3300	2420	2490	2360	1960	1890	1520	1680
20	4340	3900	2900	2900	3000	2490	2160	2320	1860	1890	1510	1870
21	3510	5450	2900	2900	2900	2430	2180	1910	1880	1990	1540	1650
22	3550	5260	2800	2800	2800	2600	1810	2320	1970	1570	1990	1680
23	3020	7030	3100	2900	2700	2400	1980	2210	1860	1880	1600	1620
24	3190	9800	3000	2900	2950	2390	2150	2300	1930	2430	1540	2110
25	3090	8810	2900	2700	3230	2240	2190	2400	1780	2100	1630	2330
26	2620	7380	3000	2700	2510	2810	2010	2100	1620	1830	1480	2180
27	2550	5840	3100	2800	2680	2780	2360	1800	1800	1800	1800	1910
28	2360	5720	3100	2700	2560	2960	2760	1900	1900	1950	1720	2360
29	2380	4360	3000	2700	2800	2970	2570	1800	1900	1760	1600	2210
30	2370	4840	2800	2800	---	2870	6750	2100	1700	1680	1510	2020
31	2480	---	3000	2800	---	2450	---	2300	---	1540	1340	---
TOTAL	95830	116920	102110	89800	85530	80140	97210	102810	60030	55460	51890	55930
MEAN	3091	3897	3294	2897	2949	2585	3240	3316	2001	1789	1674	1864
MAX	5100	9800	4370	3100	3600	3140	6750	10200	2570	2430	2060	2530
MIN	1420	1930	2800	2700	2510	2070	1810	1800	1620	1450	1340	1240
CAL YR 1983 TOTAL	1157040		MEAN	3170	MAX	15700	MIN	1380				
WTR YR 1984 TOTAL	993660		MEAN	2715	MAX	10200	MIN	1240				



CENTRAL WISCONSIN RIVER BASIN

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 downstream from County Highway SS bridge, 0.7 mi northeast of Kelly, 1.3 mi upstream from Big Sandy Creek, 4.5 mi upstream from mouth, and 5.0 mi southeast of Wausau.

DRAINAGE AREA.--375 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Sept. 17, 1953, nonrecording gage at same site at datum 1.00 ft higher.

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

AVERAGE DISCHARGE.--57 years, 251 ft³/s, 9.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,300 ft³/s Aug. 21, 1926, gage height, 8.4 ft from graph based on gage readings, from rating curve extended above 6,000 ft³/s; maximum gage height, 9.45 ft Mar. 24, 1979, ice jam; minimum observed, 8.0 ft³/s July 17, 1944, gage height, 0.17 ft, probably result of temporary regulation.

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Apr. 30	1800	2,400	5.30	Sept. 25	0700	*2,530	*5.50
July 11	0700	2,000	4.70				

minimum daily discharge, 76 ft³/s Aug. 21.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 28 to Mar. 30.)

0.9	65	2.0	395
1.0	82	3.0	930
1.2	127	4.0	1,540
1.5	216	5.0	2,200

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	167	360	120	110	140	515	2140	127	121	88	83
2	126	167	330	120	110	140	625	2200	124	114	87	90
3	121	161	310	120	120	130	758	1290	119	115	102	95
4	120	155	300	120	110	140	794	760	116	116	106	99
5	164	149	280	130	110	130	752	527	118	109	104	97
6	147	152	260	130	100	130	743	416	127	106	147	91
7	159	149	250	130	100	120	745	412	152	102	121	87
8	359	147	240	130	110	130	676	512	202	98	138	84
9	317	175	230	120	110	130	590	513	247	135	137	85
10	276	330	220	120	120	140	510	463	241	340	106	85
11	279	340	210	120	120	140	464	400	214	1360	94	84
12	1080	294	200	110	130	140	445	342	296	483	87	193
13	1130	260	190	110	150	150	691	443	365	318	83	341
14	1010	240	190	110	290	160	960	586	349	238	82	250
15	868	268	180	100	360	170	883	492	274	271	83	205
16	645	288	170	100	430	200	735	377	227	234	83	170
17	518	282	160	98	440	190	561	314	528	192	83	146
18	434	274	160	96	470	160	440	284	790	187	82	127
19	361	269	150	96	450	150	367	263	492	193	79	112
20	323	345	150	94	360	140	335	240	305	233	77	103
21	292	591	140	94	330	140	311	219	234	176	76	96
22	270	568	140	96	340	140	282	207	208	137	86	91
23	252	642	140	96	350	150	262	195	212	127	89	87
24	237	991	130	98	260	150	247	183	197	129	86	129
25	222	872	130	100	210	180	229	204	180	119	80	1450
26	212	733	130	100	180	270	227	209	156	115	78	384
27	198	533	130	100	160	330	256	203	151	110	106	244
28	191	500	120	100	160	390	300	188	151	100	101	200
29	184	440	120	110	150	450	361	175	143	96	89	175
30	177	390	120	110	---	540	1890	151	129	91	87	158
31	171	---	120	110	---	504	---	141	---	88	86	---
TOTAL	10974	10872	5960	3388	6440	6174	16954	15049	7174	6353	2933	5641
MEAN	354	362	192	109	222	199	565	485	239	205	94.6	188
MAX	1130	991	360	130	470	540	1890	2200	790	1360	147	1450
MIN	120	147	120	94	100	120	227	141	116	88	76	83
CFSM	.94	.97	.51	.29	.59	.53	1.51	1.29	.64	.55	.25	.50
IN.	1.09	1.08	.59	.34	.64	.61	1.68	1.49	.71	.63	.29	.56
CAL YR 1983	TOTAL	109265	MEAN 299	MAX 3450	MIN 86	CFSM .80	IN 10.84					
WTR YR 1984	TOTAL	97912	MEAN 268	MAX 2200	MIN 76	CFSM .72	IN 9.71					

WISCONSIN RIVER BASIN

05398000 WISCONSIN RIVER AT ROTHSCILD, 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 downstream from Rothschild Dam, 1.7 mi north of bridge on U.S. Highway 51, 2.0 mi downstream from Eau Claire River, and 5.0 mi upstream from Black Creek.

DRAINAGE AREA.--4,020 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1975, at datum 10.00 ft higher. Auxiliary water-stage recorder in Mosinee Pond 8 mi downstream. Prior to July 23, 1964, nonrecording auxiliary gage at same site and datum, read hourly.

REMARKS.--Records good. Flow regulated by 20 reservoirs and 12 powerplants above station.

AVERAGE DISCHARGE.--40 years, 3,522 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,200 ft³/s Apr. 12, 1965, Mar. 31, 1967, gage height, 18.46 ft, datum then in use; minimum daily, 670 ft³/s Dec. 9, 1976.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Flood of Sept. 1, 1941, reached stage of 22.3 ft, datum then in use, from tailwater data at Rothschild dam, discharge, 75,000 ft³/s from rating curve extended above 45,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,000 ft³/s May 1, gage height, 22.66 ft, from highwater mark in well; minimum daily, 1,310 ft³/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2360	3320	5600	3000	3000	3520	6100	22500	2500	2100	1400	1310
2	2630	3340	5200	3100	2900	3250	6500	16200	2410	2210	1780	1630
3	2260	3090	4900	3100	2800	3280	7470	10200	2350	2190	2040	2250
4	2130	3010	4900	3200	2900	3030	8110	7790	1950	2370	2200	2160
5	2190	2490	5200	3100	3000	2890	7670	6830	2550	1930	2060	2340
6	1810	2600	4500	3000	2800	2740	8310	6140	2620	1680	2180	1770
7	2550	2500	4400	3300	2500	2960	7910	6030	2470	1530	2500	1450
8	4890	2520	4200	3200	2700	2780	7370	6640	4300	1570	2430	2050
9	4540	2990	4200	3200	2700	2700	7070	6090	4860	2130	2190	1860
10	3910	5440	4000	3100	2800	2960	6230	5900	3660	5100	1960	1490
11	4310	5220	4000	3100	2900	2980	5350	5130	3110	8570	1510	1950
12	10900	4160	4000	3100	3500	2500	4970	4810	3520	4700	1890	2590
13	12800	3210	4000	3100	4100	2670	6400	5370	5240	3200	1880	4330
14	9940	3380	3800	2900	4800	2670	8450	6990	4120	3030	1800	3090
15	8110	4450	3400	3000	5200	3290	7280	6220	3390	3400	1880	3190
16	6810	4450	3500	3000	5800	2920	7060	5570	2740	2850	2270	2210
17	7010	4330	3600	3100	6200	3400	5700	4650	4500	2560	1860	1890
18	6610	4800	3300	3000	6800	3000	4450	3950	6140	2960	1680	2180
19	5710	4160	3000	2900	5800	2500	3940	3450	4260	2610	1720	1880
20	6020	5700	3000	2800	5000	2700	3740	3460	3310	2820	1550	1950
21	5040	9090	3200	2800	4700	2500	3380	2840	2840	2820	1480	1670
22	4820	8680	2900	2600	4600	2600	3320	2950	2880	2380	2000	1880
23	4520	10700	3200	2800	4800	2400	2700	3280	2960	2060	2130	2000
24	4020	18100	3000	2900	4800	2800	3050	2860	2830	2290	1880	2280
25	4360	16200	3000	2900	5000	2930	3010	3230	2520	2150	1530	6450
26	3510	12000	3000	2800	4000	4480	3040	2890	2380	2030	1640	4170
27	3400	9170	3100	2900	3600	5220	3110	2340	2560	1930	2270	3170
28	3310	7470	3200	3000	4040	5950	4500	2560	2400	1770	2820	2690
29	2990	6800	3200	2800	3750	6480	4340	2270	2480	1730	2220	2900
30	3050	6200	3000	2800	---	6380	14300	2760	2340	1620	1730	2580
31	2970	---	2900	2900	---	5040	---	2740	---	1560	1640	---
TOTAL	149480	179570	116400	92500	117490	105520	174830	174640	96190	81850	60120	73360
MEAN	4822	5986	3755	2984	4051	3404	5828	5634	3206	2640	1939	2445
MAX	12800	18100	5600	3300	6800	6480	14300	22500	6140	8570	2820	6450
MIN	1810	2490	2900	2600	2500	2400	2700	2270	1950	1530	1400	1310
CAL YR 1983	TOTAL	1659390	MEAN	4546	MAX	38200	MIN	1520				
WTR YR 1984	TOTAL	1421950	MEAN	3885	MAX	22500	MIN	1310				

WISCONSIN RIVER BASIN

149

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 upstream from bridge on State Highway 97, 1.0 mi north of Stratford, and 1.4 mi downstream from small tributary.

DRAINAGE AREA.--224 mi².

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 National Geodetic Vertical Datum of 1929. July 24, 1914, to Dec. 31, 1925, nonrecording gage at site 0.5 mi 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 period, which are fair.

AVERAGE DISCHARGE.--58 years (1914-25, 1937-84), 176 ft³/s, 10.67 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,000 ft³/s Sept. 9, 1938, gage height, 24.5 ft, from floodmarks, based on rating curve extended above 24,000 ft³/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, from floodmarks; discharge, 40,000 ft³/s, former site and datum.

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Oct. 12	1100	3,780	11.10	Apr. 30	1245	4,740	12.09
Nov. 23	2145	5,310	12.63	July 11	0230	*7,040	*14.06

minimum discharge, 5.1 ft³/s, part of each day Aug. 20, 21.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Rate of change in stage used as factor Oct. 11, 13, 14, Nov. 9, 11, 20-25,
Apr. 12, 15, 29, May 1, 2, June 18, 22, 23, July 10-12, and Aug. 3; stage-
discharge relation affected by ice Nov. 29 to Mar. 29.)

2.4	3.8	5.0	383
2.5	7.7	6.0	670
2.7	18	8.0	1,540
3.0	41	10.0	2,840
3.5	93	12.0	4,630
4.0	165		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	29	88	35	35	90	679	1610	16	35	11	29
2	22	29	78	36	36	70	747	639	14	27	27	22
3	20	29	70	36	36	62	709	364	12	24	590	18
4	19	27	64	37	35	54	528	220	10	23	94	15
5	18	25	60	38	34	48	411	151	11	19	49	13
6	17	25	56	40	33	42	386	116	11	18	42	11
7	32	25	52	40	32	39	305	240	18	16	33	10
8	416	25	50	38	33	37	235	397	141	15	52	9.7
9	247	113	48	38	36	35	191	302	110	30	41	9.8
10	121	965	46	37	42	34	162	224	65	1540	27	8.6
11	702	449	47	36	50	33	137	171	54	3530	20	8.1
12	3170	250	50	35	70	33	264	133	233	519	16	146
13	1280	152	54	34	160	34	1140	245	253	215	14	220
14	537	147	56	33	450	36	1370	281	115	160	14	111
15	320	384	60	33	660	43	642	173	61	309	13	68
16	404	391	54	32	900	60	377	123	58	157	11	49
17	340	282	49	31	1100	100	227	92	1030	117	9.5	35
18	198	204	44	31	1200	94	151	75	430	89	9.0	26
19	139	163	40	30	1100	80	116	63	160	63	7.5	21
20	114	1120	37	30	840	76	99	54	80	47	5.9	18
21	100	1150	37	30	720	72	87	45	53	37	7.2	15
22	84	540	39	30	680	70	75	42	485	31	31	14
23	71	3400	38	31	720	66	66	40	666	26	25	12
24	61	3000	37	33	560	120	58	35	202	57	23	17
25	54	825	36	34	400	360	51	52	90	53	14	126
26	48	492	35	34	300	900	51	47	60	23	8.4	105
27	43	272	34	33	230	1400	71	36	284	19	32	58
28	40	163	34	32	170	1100	368	30	188	16	159	43
29	36	130	33	33	120	900	302	24	82	15	114	33
30	33	100	33	34	---	760	3660	20	49	12	65	27
31	31	---	34	35	---	628	---	18	---	10	41	---
TOTAL	8743	14906	1493	1059	10782	7476	13665	6062	5041	7252	1605.5	1298.2
MEAN	282	497	48.2	34.2	372	241	456	196	168	234	51.8	43.3
MAX	3170	3400	88	40	1200	1400	3660	1610	1030	3530	590	220
MIN	17	25	33	30	32	33	51	18	10	10	5.9	8.1
CFSM	1.26	2.22	.22	.15	1.66	1.08	2.04	.88	.75	1.05	.23	.19
IN.	1.45	2.48	.25	.18	1.79	1.24	2.27	1.01	.84	1.20	.27	.22
CAL YR 1983	TOTAL	80647.5	MEAN 221	MAX 9660	MIN 3.7	CFSM .99	IN 13.39					
WTR YR 1984	TOTAL	79382.7	MEAN 217	MAX 3660	MIN 5.9	CFSM .97	IN 13.18					

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 northeast of Plover and 1.2 mi upstream from mouth.

DRAINAGE AREA.--19.0 mi², of which 7.33 mi² 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 National Geodetic Vertical Datum of 1929. Prior to May 1960, nonrecording gage at same site and datum 0.88 ft lower.

REMARKS.--Records good.

AVERAGE DISCHARGE.--25 years, 10.3 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 99 ft³/s Mar. 7, 1973; minimum, 1.4 ft³/s Nov. 16, 1974, gage height, 0.28 ft, result of temporary dam at flume entrance.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 22 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Jan. 20	0530	ice jam	*2.21	July 11	0430	28	1.84
Apr. 30	1245	*32	2.00	Aug. 6	0715	30	1.91
June 18	Unknown	25	1.72	Sept. 12	2130	30	1.94

minimum, 5.9 ft³/s Dec. 25, gage height, 0.70 ft (result of freeze-up).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 22-23 and Jan. 18-20.)

0.7	5.9	1.5	20
1.0	10	2.0	32
		2.5	54

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	11	9.3	9.0	12	12	20	12	12	10	12
2	11	11	11	9.8	8.9	12	12	17	12	12	9.9	12
3	11	11	11	10	9.0	12	12	16	11	12	12	13
4	11	11	11	10	8.8	12	12	16	11	12	13	12
5	11	11	11	9.9	8.5	12	13	15	11	12	15	12
6	10	11	11	9.9	8.3	11	12	15	11	12	25	12
7	11	11	11	9.6	8.5	11	12	16	11	12	16	12
8	12	11	10	9.6	8.5	11	12	15	13	11	18	12
9	11	11	10	9.4	8.8	10	12	15	11	12	15	12
10	11	12	10	8.5	8.7	10	12	14	11	14	14	12
11	13	11	11	8.9	8.8	10	12	14	11	21	13	12
12	17	11	11	9.2	11	10	14	13	12	15	13	21
13	14	11	11	9.3	14	10	16	16	11	14	12	22
14	13	11	11	9.1	13	10	15	15	11	13	13	16
15	13	11	11	8.8	13	13	14	14	11	14	15	15
16	14	11	11	9.4	14	13	13	13	12	13	18	15
17	13	11	9.9	8.9	15	11	13	13	16	13	15	14
18	13	11	10	8.6	15	11	13	13	21	13	14	14
19	12	11	9.3	8.2	16	11	13	13	16	12	14	14
20	12	12	9.6	7.8	15	11	12	13	14	12	13	13
21	12	12	10	7.4	14	11	12	13	14	11	13	13
22	12	11	10	8.0	14	11	12	13	17	11	13	13
23	12	12	8.6	8.3	15	11	13	12	17	11	13	13
24	12	12	7.2	8.5	15	11	13	13	15	11	12	13
25	12	11	7.9	8.9	15	12	12	14	14	11	12	16
26	11	11	9.1	9.0	13	14	12	13	14	11	12	14
27	11	11	9.2	9.0	13	13	13	13	15	11	13	14
28	12	11	9.8	9.2	13	13	13	12	14	11	12	14
29	11	11	9.6	9.1	12	13	13	12	13	11	12	13
30	11	11	9.2	8.8	---	12	29	12	13	10	13	13
31	11	---	9.0	8.7	---	12	---	12	---	9.9	12	---
TOTAL	371	335	311.4	279.1	345.8	356	398	435	395	379.9	424.9	413
MEAN	12.0	11.2	10.0	9.00	11.9	11.5	13.3	14.0	13.2	12.3	13.7	13.8
MAX	17	12	11	10	16	14	29	20	21	21	25	22
MIN	10	11	7.2	7.4	8.3	10	12	12	11	9.9	9.9	12
CAL YR 1983	TOTAL	4261.4	MEAN 11.7	MAX 37	MIN 6.1							
WTR YR 1984	TOTAL	4444.1	MEAN 12.1	MAX 29	MIN 7.2							

05400760 WISCONSIN RIVER AT WISCONSIN RAPIDS, WI

LOCATION.--Lat 44°23'41", long 89°49'31", in SW 1/4 sec.8, T.22 N., R.6 E., Wood County, Hydrologic Unit 07070003, at Consolidated Water Power Company, 0.2 mi upstream from U.S. Highway 13 bridge in Wisconsin Rapids.

DRAINAGE AREA.--5,420 mi².

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 1,010 ft and datum of powerplant gages is 0.00 ft National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.). May 1914 to March 1950, at site 9.6 mi downstream at different datum. March 1950 to Sept. 30, 1981, at Centralia Powerplant at Nekoosa Papers, Inc., 2.6 mi downstream. March 1950 to Dec. 31, 1973, datum was 887.83 ft National Geodetic Vertical Datum. Jan. 1, 1974, changed to present datum.

REMARKS.--Records good. Discharge computed from powerplant records on basis of load-discharge rating of hydroelectric units as developed by manufacturer and tainter-gate ratings based on theoretical formulas. Flow regulated by 20 reservoirs and many powerplants above station. Water diverted periodically from pond of Wisconsin Rapids powerplant into Cranberry Creek, a tributary of Yellow River, for cranberry culture. These diversions, in cubic feet per second, for water year October 1983 to September 1984, were as follows:

Sept. 5	35	Sept. 9	100	Sept. 13	100	Sept. 17	100	Sept. 21	100
6	49	10	100	14	100	18	100	22	100
7	95	11	100	15	100	19	100	23	100
8	100	12	100	16	100	20	100	24	100
								25	98

AVERAGE DISCHARGE.--62 years (1914-50, 1957-84), 4,979 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,400 ft³/s Sept. 12, 1938, gage height, 19.10 ft, from rating curve extended above 58,000 ft³/s; minimum, 26 ft³/s Sept. 7, 1942; minimum daily, 165 ft³/s Aug. 12, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39,500 ft³/s May 1; minimum daily, 2,320 ft³/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3050	3330	6970	3810	3900	5060	7210	36300	3240	3480	2690	2830
2	3090	3360	7020	3830	3900	5020	6850	28700	3190	2910	2680	2840
3	3080	3300	6210	3770	3780	4490	8200	18000	3190	2530	2420	2600
4	3030	3370	6090	4180	3790	4080	4280	12100	3180	2620	2430	2700
5	3130	3410	5520	4110	3780	3940	12100	10200	3410	3270	2530	2750
6	2870	3390	4570	4060	3930	3940	11200	9960	3460	3190	2720	2670
7	2700	3320	4870	4180	3990	3880	10300	8520	3340	2850	3270	2600
8	4180	3380	4640	4150	4180	3950	9220	8290	4040	2700	3360	2580
9	5440	3650	4240	4220	4240	3900	8610	7610	5830	2660	3060	2420
10	4490	6000	4090	4250	4000	3810	8260	8060	5150	6970	2810	2460
11	5080	2610	4180	4260	4020	3630	7950	7550	4540	19000	2730	2520
12	11900	5980	5140	4200	4140	3710	7230	6420	4780	16400	2420	2930
13	14800	4060	5500	4270	4850	3880	6870	7310	6430	5460	2680	4310
14	12700	3990	5290	4250	5370	3850	10000	10200	6910	4920	2690	4840
15	10800	5120	4770	4100	6660	4150	11900	8260	4360	6770	2770	4170
16	9710	6100	4460	4020	8160	4260	10700	7140	4230	5160	2980	3410
17	7910	5540	4310	4030	10900	4170	8520	6030	9080	4620	2620	2860
18	7900	5230	3690	4050	11500	4220	6860	5510	14300	4010	2790	2800
19	8220	6020	3910	4020	12100	4260	5500	5120	10800	3820	2530	2860
20	6720	7000	4130	4050	9610	4250	5150	4690	7730	3620	2480	2750
21	5060	12700	4040	4140	8900	4350	5120	4390	5270	3900	2410	2560
22	4720	11900	4120	4110	8200	4340	3600	4290	4940	3500	2450	2550
23	4890	16800	4150	3950	8320	4120	4480	4180	5760	3400	2530	2320
24	4790	25300	3970	3690	8350	3950	4490	3380	6060	3230	2670	2490
25	4520	21200	4000	3780	8370	3890	4150	3300	5620	3060	2830	6220
26	4240	18400	3840	3700	8350	4940	3810	3510	4330	3300	2540	5350
27	3930	14000	3830	3790	6950	6430	4190	3580	4280	3230	2650	4280
28	3470	9200	3930	3730	5700	7760	4290	3410	4030	3190	3360	3360
29	3430	6980	3900	3820	4740	7680	5660	3360	3410	3140	3350	2800
30	3280	6180	3780	3770	---	9170	23500	3150	3420	3090	3280	2680
31	3370	---	3790	3840	---	8710	---	3150	---	2940	2800	---
TOTAL	176500	230820	142950	124130	184680	147790	230200	255670	158310	142940	85530	94510
MEAN	5694	7694	4611	4004	6368	4767	7673	8247	5277	4611	2759	3150
MAX	14800	25300	7020	4270	12100	9170	23500	36300	14300	19000	3360	6220
MIN	2700	2610	3690	3690	3780	3630	3600	3150	3180	2530	2410	2320
CAL YR 1983	TOTAL	2132150	MEAN	5842	MAX	55600	MIN	2070				
WTR YR 1984	TOTAL	1974030	MEAN	5394	MAX	36300	MIN	2320				

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 upstream from Hemlock Creek.

DRAINAGE AREA.--215 mi².

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. WDR WI-82-1: 1981 (P).

GAGE.--Water-stage recorder. Datum of gage is 954.75 National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1948, nonrecording gage at same site and datum.

REMARKS.--Records fair. There is a large recreation dam about 5.0 mi upstream.

AVERAGE DISCHARGE.--40 years, 156 ft³/s, 9.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s Apr. 2, 1952, gage height, 17.38 ft; minimum observed, 1.0 ft³/s Oct. 1, 1948, gage height, 1.22 ft.

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Oct. 13	1315	1,600	9.42	May 1	1445	*4,260	*13.10
Nov. 25	0030	2,680	11.22	June 18	2115	4,170	13.02
Apr. 15	0030	1,310	8.72	June 24	1430	1,240	8.49
				July 11	1715	3,600	12.35

minimum daily discharge, 9.0 ft³/s Sept. 8-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	46	150	37	34	140	636	3990	35	64	36	33
2	55	44	130	37	34	110	587	1870	32	69	38	24
3	52	44	110	38	34	90	595	991	29	87	32	19
4	49	41	92	39	34	80	583	461	24	77	29	14
5	46	38	86	41	34	72	511	345	23	69	25	11
6	44	36	78	41	33	68	422	223	23	64	18	10
7	41	36	72	40	33	62	350	182	25	62	17	9.3
8	42	36	66	39	33	58	285	224	40	64	19	9.0
9	42	40	62	39	33	54	232	310	439	68	16	9.0
10	47	84	60	38	34	50	193	281	258	70	16	9.9
11	67	441	56	37	35	46	165	201	218	1840	19	11
12	367	495	58	36	40	44	155	144	166	1950	16	19
13	1460	383	58	36	56	42	560	128	344	1490	13	52
14	1250	246	58	35	100	40	1150	216	418	768	13	85
15	719	237	54	34	300	39	1220	290	312	490	15	70
16	495	441	52	34	450	60	777	220	197	389	15	52
17	410	420	48	33	700	140	490	146	320	291	13	43
18	327	335	46	32	900	160	334	109	2320	230	12	36
19	242	251	44	31	1100	130	215	85	3120	186	11	30
20	188	227	42	30	1000	110	161	67	1480	140	10	25
21	153	715	41	29	800	98	128	54	805	104	12	22
22	130	819	41	29	620	88	105	46	453	82	18	18
23	110	934	40	30	580	80	93	41	932	68	27	16
24	94	2280	39	30	580	83	81	36	1160	58	21	15
25	80	2000	39	31	600	108	72	38	950	49	15	21
26	71	936	39	31	400	284	65	54	545	45	9.8	24
27	66	719	39	32	250	722	65	64	358	39	22	17
28	48	481	39	32	200	936	75	56	204	34	40	15
29	52	260	39	32	170	1010	116	47	97	31	74	16
30	48	180	38	33	---	958	1530	41	73	28	56	15
31	47	---	37	33	---	757	---	38	---	28	43	---
TOTAL	6901	13245	1853	1069	9217	6719	11951	10998	15400	9034	720.8	750.2
MEAN	223	442	59.8	34.5	318	217	398	355	513	291	23.3	25.0
MAX	1460	2280	150	41	1100	1010	1530	3990	3120	1950	74	85
MIN	41	36	37	29	33	39	65	36	23	28	9.8	9.0
CFSM	1.04	2.06	.28	.16	1.48	1.01	1.85	1.65	2.39	1.35	.11	.12
IN.	1.19	2.29	.32	.18	1.59	1.16	2.07	1.90	2.66	1.56	.12	.13
CAL YR 1983	TOTAL	84061.7	MEAN 230	MAX 7200	MIN 2.2	CFSM 1.07	IN 14.54					
WTR YR 1984	TOTAL	87858.0	MEAN 240	MAX 3990	MIN 9.0	CFSM 1.12	IN 15.20					

WISCONSIN RIVER BASIN

153

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 downstream from recreation dam and 1.2 mi upstream from Webster Creek.

DRAINAGE AREA.--507 mi².

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 National Geodetic Vertical Datum of 1929. Prior to May 5, 1948, nonrecording gage at site 100 ft downstream at same datum.

REMARKS.--Records good except those for winter periods, which are fair. Occasional regulation by dam 200 ft upstream. Water diverted periodically into the basin from the Yellow and Black River basins for cranberry culture.

AVERAGE DISCHARGE.--40 years, 374 ft³/s, 10.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,880 ft³/s May 8, 1960, gage height, 12.94 ft from graph based on gage readings; minimum observed, 29 ft³/s June 9, 1976, gage height, 0.47 ft during period of dam repair.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,000 ft³/s May 3, gage height, 9.21 ft; minimum daily, 116 ft³/s Aug. 31.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 18 to Feb. 15 and Mar. 9-15.)

Oct. 1 to Feb. 20				Feb. 21 to Sept. 30			
2.3	160	6.0	680	1.6	111	6.0	728
3.0	228	7.0	900	2.0	137	7.0	1,030
4.0	346	8.0	1,240	3.0	232	8.0	1,420
5.0	494	9.0	1,740	4.0	362	9.0	1,870
				5.0	526	10.0	2,530

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	354	370	589	250	200	842	582	1510	268	373	160	124
2	332	368	557	250	210	726	555	1860	254	325	154	144
3	320	364	532	260	210	616	535	1990	222	278	148	152
4	313	354	551	260	210	494	540	1860	202	233	143	152
5	312	354	560	270	200	410	551	1630	192	206	140	134
6	309	357	541	270	190	380	515	1450	182	213	140	124
7	313	353	494	260	190	381	477	1280	180	207	140	122
8	320	352	454	250	190	365	468	1140	212	195	149	119
9	330	352	443	250	200	310	461	1060	232	209	163	117
10	352	382	446	240	200	300	436	958	256	222	206	121
11	368	399	430	230	210	300	407	866	249	268	227	125
12	481	416	448	220	220	290	410	776	215	339	223	194
13	577	443	456	220	230	290	544	750	212	359	199	304
14	680	472	465	220	290	290	662	733	213	370	178	388
15	752	510	472	220	370	330	757	693	206	388	165	436
16	840	530	475	210	560	469	842	642	197	339	155	419
17	872	537	444	210	688	562	881	572	614	376	150	380
18	845	541	400	200	855	549	851	522	944	375	152	335
19	800	557	300	200	1060	540	786	477	842	372	161	273
20	768	610	280	190	1260	515	724	432	640	346	158	216
21	752	710	270	190	1580	484	658	402	574	312	146	188
22	835	772	260	190	1590	468	592	388	574	280	140	172
23	915	776	260	190	1540	468	568	365	622	266	138	164
24	880	790	250	190	1490	501	555	292	622	270	138	156
25	815	784	250	200	1410	548	530	324	624	256	132	167
26	746	774	250	200	1320	576	501	391	666	240	127	171
27	652	764	250	200	1230	606	490	373	662	230	124	183
28	559	760	250	200	1110	634	495	340	557	220	124	204
29	492	722	240	200	966	650	504	322	408	203	122	218
30	440	668	240	200	---	648	1070	297	389	182	120	219
31	391	---	240	200	---	618	---	282	---	167	116	---
TOTAL	17715	16141	12097	6840	19979	15160	17947	24977	12230	8619	4738	6221
MEAN	571	538	390	221	689	489	598	806	408	278	153	207
MAX	915	790	589	270	1590	842	1070	1990	944	388	227	436
MIN	309	352	240	190	190	290	407	282	180	167	116	117
CFSM	1.13	1.06	.77	.44	1.36	.96	1.18	1.59	.81	.55	.30	.41
IN.	1.30	1.18	.89	.50	1.47	1.11	1.32	1.83	.90	.63	.35	.46
CAL YR 1983	TOTAL	191398	MEAN 524	MAX 3460	MIN 75	CFSM 1.03	IN 14.04					
WTR YR 1984	TOTAL	162664	MEAN 444	MAX 1990	MIN 116	CFSM .88	IN 11.94					

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 downstream from Dell Creek and 1.8 mi southeast of Wisconsin Dells.

DRAINAGE AREA.--8,090 mi².

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 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 higher.

REMARKS.--Records good, except those for the winter period which are fair. Flow regulated by 24 reservoirs above station. In 1938, when the maximum of record occurred, there were 22 reservoirs above station, the two large reservoirs, Petenwell and Cestle Rock, were not in existence. Diurnal fluctuation is caused by powerplant of Wisconsin Power and Light Co. at Wisconsin Dells.

AVERAGE DISCHARGE.--50 years, 6,828 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,200 ft³/s Sept. 14, 1938, gage height, 23.83 ft, present datum; minimum daily, 1,060 ft³/s Aug. 19, 1936.

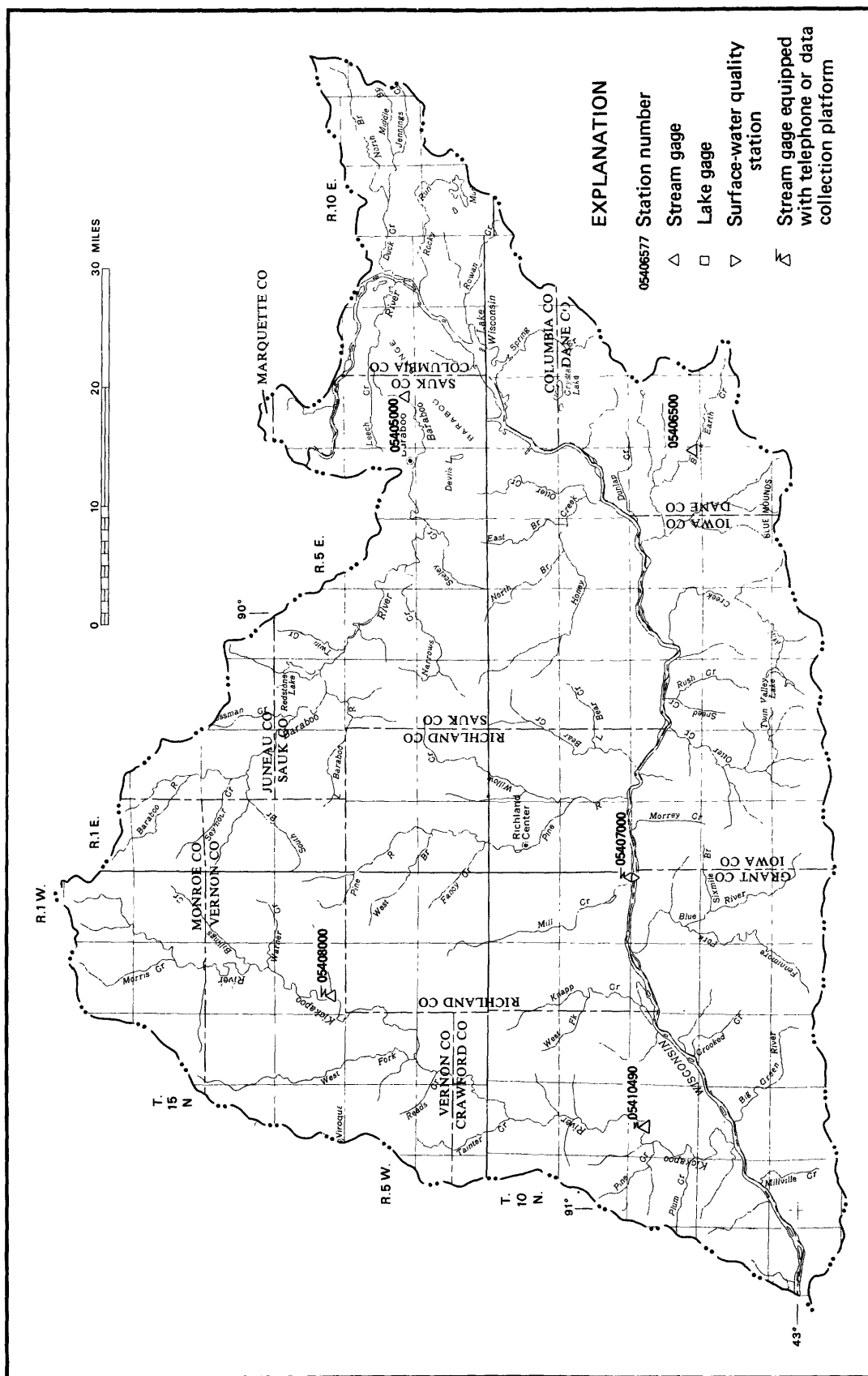
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,600 ft³/s May 2, gage height, 15.03 ft; minimum daily, 3,230 ft³/s Aug. 25.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used July 13 to Aug. 1; stage-discharge relation affected by ice Dec. 17 to Feb. 17.)

Oct. 1 to May 2				May 2 to Sept. 30			
4.8	4,290	11.0	21,000	4.1	3,140	11.0	21,800
5.0	4,710	13.0	28,500	5.0	4,920	13.0	29,600
7.0	9,270	15.0	36,800	7.0	9,530	15.0	38,400
9.0	14,500			9.0	15,100		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6130	5080	10300	6600	7000	9410	6560	23100	5000	6880	4110	4120
2	5150	5310	9910	6200	7400	7770	6780	35400	5140	4650	4150	4500
3	5120	5570	10100	6000	6800	8100	6260	36800	4940	4440	4310	4550
4	5220	5700	10400	5800	6600	8190	5990	28000	4940	4380	4280	4500
5	5150	5730	10300	5600	6600	7120	7020	20100	5000	4370	4280	4480
6	4740	5770	10200	5600	6400	6590	7920	17400	4990	4750	4430	4380
7	4430	5750	10100	5400	6200	6360	7970	15300	4980	4840	4030	4070
8	4670	5780	9280	5400	6600	6340	8020	13800	5290	4680	4060	3600
9	5230	5840	8880	5200	7000	6520	7830	12800	5750	4510	4290	3570
10	5560	6030	8780	5200	7000	6810	7760	12500	7620	4520	4880	3380
11	5670	7310	9310	5200	7000	6700	7630	11700	6190	7970	4420	3540
12	8480	7800	9630	5600	6800	6730	7430	11400	6520	16900	4230	3940
13	12300	8000	9630	5600	6600	6710	8000	10500	7910	13400	4240	5480
14	15000	7570	9350	6400	6400	7100	9070	9440	9710	8940	4130	7610
15	14900	7380	9150	6400	7000	7160	9590	9730	10800	7530	4360	6600
16	15700	8570	8840	6400	7400	7050	10800	10300	8530	9990	3800	6250
17	13200	8900	8600	6600	8000	7070	10600	10200	9350	10700	3890	5500
18	10200	8530	8400	6200	12200	6780	9730	9750	12600	9630	3780	5090
19	11500	8490	8000	6200	13800	6770	9380	9600	19100	7460	3940	4640
20	12100	8860	7800	6400	14400	6780	9100	8950	15900	6760	4120	4200
21	11300	9240	7600	6600	15000	6660	8770	7120	10300	6470	4000	4370
22	9390	12500	7400	6600	15000	5790	8480	6790	10400	5930	3600	4360
23	8490	16100	7200	6400	14600	5530	6240	6710	13300	5820	3730	4060
24	8640	20500	7000	6200	14200	5400	6980	6650	11100	5770	3640	3950
25	7160	23500	7000	6000	14000	5190	6770	6540	9220	5230	3230	4900
26	6620	24100	7000	6000	13800	5150	6210	6380	8940	4790	3280	6790
27	6610	24100	7000	6000	12400	5140	6230	5670	9420	5210	3310	7840
28	6280	21100	7200	6000	11600	5540	6070	5580	11000	4430	3610	6640
29	5600	15400	7400	6200	11000	5950	6240	5720	8840	4650	4000	5320
30	5590	12700	7200	6400	---	5550	9660	5260	7390	4850	4000	4150
31	4980	---	7000	6600	---	6340	---	5020	---	4370	3960	---
TOTAL	251110	317210	265980	187000	278800	204300	235090	384210	260170	204820	124090	146380
MEAN	8100	10570	8580	6032	9614	6590	7836	12390	8672	6607	4003	4879
MAX	15700	24100	10400	6600	15000	9410	10800	36800	19100	16900	4880	7840
MIN	4430	5080	7000	5200	6200	5140	5990	5020	4940	4370	3230	3380
CAL YR 1983	TOTAL	3143150	MEAN	8611	MAX	49000	MIN	3480				
WTR YR 1984	TOTAL	2859160	MEAN	7812	MAX	36800	MIN	3230				



Base from U.S. Geological Survey
State base map, 1968

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 downstream from highway bridge, 0.3 mi downstream from Rowley Creek and 5.3 mi east of Baraboo.

DRAINAGE AREA.--609 mi².

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 National Geodetic Vertical Datum of 1929. Dec. 18, 1913, to Mar. 31, 1922, nonrecording gage at bridge 2.3 mi upstream at datum 7.6 ft 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.

AVERAGE DISCHARGE.--49 (water years 1915-21, 1943-84), 374 ft³/s, 8.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 7,900 ft³/s Mar. 26, 1917, gage height, 17.5 ft, estimated, site and datum then in use, from rating curve extended above 6,000 ft³/s; minimum observed, 9.0 ft³/s Feb. 17, 1944, gage height, 5.08 ft; minimum daily, 26 ft³/s Oct. 6, 1950.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Flood of Aug. 6, 1935, reached a stage of 15.8 ft from floodmarks, site and datum in use in 1922, discharge, 5,100 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,230 ft³/s June 24, gage height, 14.86 ft; minimum, 214 ft³/s Aug. 31 and Sept. 1, gage height, 6.94 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Nov. 6 to Dec. 8, Apr. 30 to May 7, and June 10, 11, 19-27; stage-discharge relation affected by ice Dec. 9 to Feb. 13.)

7.0	216	11.0	1,240
8.0	460	13.0	1,760
9.0	720	15.0	2,360

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	246	273	536	260	260	458	391	1870	384	391	245	217
2	239	274	434	260	260	407	371	1600	349	350	238	268
3	248	269	397	270	260	375	361	1530	330	331	239	287
4	250	267	377	270	250	356	362	1690	312	319	240	362
5	292	263	388	280	230	343	363	1690	300	307	240	345
6	298	260	355	280	220	327	356	1470	292	334	241	286
7	320	252	297	270	220	300	346	1140	285	377	238	257
8	308	247	272	260	220	280	343	856	675	406	372	242
9	303	249	260	250	230	260	331	729	674	366	481	239
10	297	290	260	250	230	250	320	686	1200	350	403	251
11	287	400	290	240	230	240	312	618	1070	423	354	256
12	357	453	350	240	260	240	341	524	768	438	288	280
13	419	440	430	240	450	250	512	538	524	435	254	339
14	546	372	470	240	752	260	695	566	450	388	243	477
15	593	339	460	240	909	310	806	557	397	342	239	585
16	559	369	400	240	1090	378	846	537	366	310	234	609
17	464	414	350	240	1200	524	799	483	486	357	230	458
18	492	413	300	230	1260	641	670	423	833	452	229	316
19	492	402	280	230	1600	658	532	406	1010	414	228	274
20	416	539	270	220	1690	497	452	409	1190	376	232	258
21	367	701	270	220	1540	418	416	409	1610	318	238	251
22	371	739	270	230	1440	431	419	402	2010	285	237	248
23	418	732	270	230	1380	469	472	379	2170	275	226	243
24	424	723	260	230	1260	591	580	364	2170	280	228	245
25	382	690	260	240	1080	676	683	470	1810	291	238	419
26	340	620	260	240	928	703	668	669	1420	294	235	534
27	317	555	260	240	783	691	599	745	1070	303	222	523
28	302	587	260	240	644	606	529	744	711	283	218	501
29	289	651	250	240	529	516	553	668	528	267	220	396
30	284	644	250	240	---	456	1520	535	452	257	223	311
31	273	---	260	250	---	416	---	441	---	249	216	---
TOTAL	11193	13427	10046	7610	21405	13327	15948	24148	25846	10568	7969	10277
MEAN	361	448	324	245	738	430	532	779	862	341	257	343
MAX	593	739	536	280	1690	703	1520	1870	452	481	609	609
MIN	239	247	250	220	220	240	312	364	285	249	216	217
CFSM	.59	.74	.53	.40	1.21	.71	.87	1.28	1.42	.56	.42	.56
IN.	.68	.82	.61	.46	1.31	.81	.97	1.48	1.58	.65	.49	.63
CAL YR 1983	TOTAL	163353	MEAN	448	MAX	1830	MIN	184	CFSM	.74	IN	9.98
WTR YR 1984	TOTAL	171764	MEAN	469	MAX	2170	MIN	216	CFSM	.77	IN	10.49

WISCONSIN RIVER BASIN

157

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 east of Black Earth and 2.1 mi upstream from Vermont Creek.

DRAINAGE AREA.--45.6 mi², of which 2.8 mi² 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 National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--30 years, 32.2 ft³/s, 9.59 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft³ July 3, 1954, gage height, 6.58 ft; minimum, 4.8 ft³/s Nov. 29, 1958, gage height, 1.39 ft, result of freezeup.

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

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Apr. 30	0700	250	3.35	June 22	2300	267	4.47
June 10	0800	*342	*4.98				

minimum, 22 ft³/s Dec. 29.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1 to Dec. 18, Dec. 20-22, Apr. 30, May 3,
Sept. 11-30; stage-discharge relation affected by ice Dec. 19, 23-27.)

Oct. 1 to June 8(0100)

June 8(0200) to Sept. 30

1.8	26	2.5	96	2.2	29	3.5	145
2.0	43	3.0	169	2.5	50	4.0	204
				3.0	93	4.5	271

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	28	39	28	28	37	33	74	40	43	34	31
2	27	29	37	28	29	35	31	62	44	45	34	29
3	31	28	35	29	29	33	35	92	42	45	31	30
4	29	28	35	32	30	32	34	85	39	44	30	33
5	29	29	34	33	30	34	33	65	42	44	35	37
6	32	28	34	33	30	33	32	58	42	43	31	37
7	31	28	33	33	28	33	32	54	40	41	34	34
8	30	28	32	32	28	35	31	52	66	40	40	34
9	28	28	32	32	29	34	31	50	76	40	35	35
10	28	32	32	30	29	33	31	49	229	87	35	35
11	29	32	38	30	30	34	31	48	83	71	34	32
12	53	30	43	29	44	32	39	48	65	55	32	29
13	42	30	39	28	74	32	42	50	61	49	32	34
14	36	31	39	29	69	32	41	48	54	47	37	33
15	32	31	39	29	63	37	44	46	52	47	36	32
16	32	28	37	28	56	34	40	45	51	45	33	31
17	32	27	35	28	51	31	38	45	57	45	37	32
18	32	30	35	29	50	31	37	45	83	43	37	32
19	32	35	34	28	72	32	36	45	60	42	35	32
20	32	41	33	28	57	38	35	44	53	41	33	34
21	32	38	32	28	49	39	33	43	49	40	34	33
22	32	35	32	28	47	40	36	43	136	40	35	36
23	34	39	32	28	45	44	44	42	119	39	33	36
24	33	40	32	31	43	45	49	42	66	39	33	38
25	32	36	32	31	41	41	47	54	56	38	32	53
26	31	35	32	29	41	39	42	50	52	38	32	43
27	30	36	31	28	42	37	40	46	99	37	32	41
28	29	62	31	28	40	36	38	52	58	37	31	40
29	28	53	29	28	38	35	43	49	48	35	29	40
30	28	43	30	29	---	34	157	46	44	35	30	39
31	28	---	29	28	---	35	---	44	---	34	34	---
TOTAL	981	1018	1057	912	1242	1097	1235	1616	2006	1369	1040	1055
MEAN	31.6	33.9	34.1	29.4	42.8	35.4	41.2	52.1	66.9	44.2	33.5	35.2
MAX	53	62	43	33	74	45	157	92	229	87	40	53
MIN	27	27	29	28	28	31	31	42	39	34	29	29
CFSM	.69	.74	.75	.65	.94	.78	.90	1.14	1.47	.97	.74	.77
IN.	.80	.83	.86	.74	1.01	.89	1.01	1.32	1.64	1.12	.85	.86
CAL YR 1983	TOTAL	12926	MEAN 35.4	MAX 101	MIN 25	CFSM .78	IN 10.54					
WTR YR 1984	TOTAL	14628	MEAN 40.0	MAX 229	MIN 27	CFSM .88	IN 11.93					

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 upstream from Eagle Mill Creek and 1.0 mi north of Muscoda.

DRAINAGE AREA.--10,400 mi².

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 666.77 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1929, nonrecording gage on bridge 200 ft 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 period, which is fair. Flow regulated by 23 reservoirs and many powerplants above station. In 1938 when the maximum of record occurred, there were 21 reservoirs above station, the two large reservoirs, Petenwell and Castle Rock were not yet in existence. Usually less than 20 ft³/s was diverted out of basin through Portage Canal to Fox River throughout the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--71 years (1914-84), 8,679 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,800 ft³/s Sept. 16, 1938, gage height, 11.48 ft; minimum daily, 2,000 ft³/s Feb. 11, 1918.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39,300 ft³/s May 5 and 6, gage height, 7.91 ft; minimum discharge, 3,630 ft³/s Aug. 27, gage height, 0.79 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 5 to Feb. 23.)

0.8	3,650	4.0	15,300
1.0	4,180	6.0	26,100
2.0	7,260	8.0	40,000

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9660	7510	20400	8400	7000	13900	7490	12300	7590	11400	6170	4910
2	9110	7160	16100	8200	7200	13600	8450	15600	7340	9770	5540	5030
3	7780	7140	12700	8200	8000	11900	9320	22600	7380	8660	5410	5300
4	7350	7300	11800	8200	8800	10300	9400	30500	6000	6610	5440	6290
5	7520	7620	11000	8000	7800	11200	8160	38200	7300	6920	5410	5500
6	7000	7410	10000	8000	7800	10500	7760	36900	6800	6710	5250	5740
7	6880	7410	9600	8000	7800	9670	9830	28900	7030	6420	5500	5900
8	6310	7470	9400	8000	7800	8830	9760	22200	8290	6690	6150	5340
9	6830	7530	9600	8000	7600	8480	10400	19500	9620	6910	6340	5450
10	6280	7910	9600	7200	7000	8870	9560	16800	11000	8140	5270	4540
11	6610	8670	9600	7200	8600	9080	10200	15600	10800	8400	5620	4620
12	7690	8530	9400	7200	9000	9070	9620	14600	13000	5090	6230	4770
13	8470	8510	8000	7800	9000	8430	10300	14900	9730	12500	5640	4870
14	11500	9620	6200	8000	8800	8170	10100	14300	11100	15500	5200	5130
15	13700	10600	8000	8400	8600	9790	11200	13900	11600	14700	5260	6940
16	16200	10400	8600	8200	10000	11500	12600	12200	11800	10700	5230	8510
17	16500	10400	8000	7800	12000	10800	13000	12200	12700	10400	5490	8150
18	17000	9330	7400	7200	12000	8940	12900	12400	12500	12900	4860	7820
19	15200	11600	7000	7800	12000	9060	12700	13000	13600	12200	4550	6800
20	14200	12000	7800	7600	12000	9850	11800	12100	14000	10400	5260	6670
21	12300	10500	8200	7000	13000	9770	11800	11500	18700	9370	4980	6040
22	14400	12000	8400	7600	17000	9290	11900	10800	17300	8180	4670	5730
23	13100	12400	8400	7600	20000	9500	11100	9520	15600	7780	4970	5180
24	11700	16300	8400	7600	20900	8550	10300	9030	15100	7430	4870	5640
25	10300	18900	8600	7600	21700	8070	9180	9490	17400	8390	4580	6440
26	10800	20000	8600	7600	18400	7980	10200	10600	15000	7050	4470	7580
27	9650	23000	8400	7600	17300	7860	8980	9520	13800	6670	3780	7170
28	8520	26300	8400	7000	16800	7990	9010	9530	13200	6230	4320	8960
29	8520	27000	8400	7400	15000	7820	8610	9000	12800	6420	4630	9240
30	8370	24200	8400	7600	---	7900	11700	8080	13400	5860	4520	8200
31	7500	---	8400	7000	---	8970	---	8300	---	5930	5030	---
TOTAL	316950	364720	292800	239000	338900	295640	307330	484070	354190	274330	160640	188460
MEAN	10220	12160	9445	7710	11690	9537	10240	15620	11810	8849	5182	6282
MAX	17000	27000	20400	8400	21700	13900	13000	38200	18700	15500	6340	9240
MIN	6280	7140	6200	7000	7000	7820	7490	8080	6900	5860	3780	4540
CAL YR 1983 TOTAL	3899560			MEAN 10680	MAX 50400	MIN 4150						
WTR YR 1984 TOTAL	3617030			MEAN 9883	MAX 38200	MIN 3780						

WISCONSIN RIVER BASIN

159

05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED
(NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1971, 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE OF (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF ACAR (COLS. PER 100 ML) (31673)
NOV , 1983												
08...	1230	7240	235	8.0	13.0	10.0	3.4	10.4	30	3330	K14	47
JAN , 1984												
12...	1200	7210	200	7.6	-7.0	.0	5.4	--	748	--	5	6
MAR												
26...	1115	22200	242	8.3	--	6.0	7.5	11.2	745	92	K2	K16
MAY												
08...	1100	21700	190	7.7	--	11.0	5.7	10.0	745	93	K8	22
AUG												
27...	1300	3700	256	8.8	32.0	24.5	5.6	10.0	736	124	97	K23

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV , 1983												
08...	110	19	26	11	7.4	13	.3	1.8	91	1.8	17	12
JAN , 1984												
12...	110	19	25	11	6.2	11	.3	2.0	89	4.3	17	11
MAR												
26...	99	16	23	10	6.2	12	.3	2.2	83	.8	13	11
MAY												
08...	76	16	18	7.6	6.2	15	.3	2.2	60	2.3	16	11
AUG												
27...	120	11	27	13	6.2	10	.3	1.8	110	.3	13	11

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 130 DEG C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)
NOV , 1983											
08...	.10	2.6	144	130	2810	.56	.230	.80	.070	.020	.010
JAN , 1984											
12...	<.10	10	154	140	3000	.94	.160	.70	.080	.060	<.010
MAR											
26...	.10	9.6	151	130	9050	.97	.100	.40	.050	.030	.010
MAY											
08...	.10	3.6	132	100	7730	.40	.070	.80	.100	.030	.020
AUG											
27...	.10	5.8	153	140	1530	.12	.050	1.1	.070	.040	<.010

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

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC, DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM, DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV , 1983											
08...	1230	7240	<10	1	37	<.5	2	<1	<3	4	210
MAR , 1984											
26...	1115	22200	<10	1	31	<.5	2	<1	<3	3	380
MAY											
08...	1100	21700	10	1	27	<.5	3	10	<3	8	360
AUG											
27...	1300	3700	20	1	23	<.5	<1	<1	<3	5	22

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM, DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY, DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV , 1983											
08...	4	4	7	<.1	<10	1	<1	<1	42	<6	11
MAR , 1984											
26...	1	<4	11	.1	<10	2	<1	<1	40	<6	14
MAY											
08...	2	<4	8	.3	<10	6	<1	<1	34	<6	23
AUG											
27...	1	<4	6	.6	<10	<1	<1	<1	46	<6	54

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV , 1983						
08...	1230	7240	235	10.0	19	47
JAN , 1984						
12...	1200	7210	200	.0	5	85
MAR						
26...	1115	22200	242	6.0	10	65
MAY						
08...	1100	21700	190	11.0	47	40
AUG						
27...	1300	3700	256	24.5	3	85

WISCONSIN RIVER BASIN

161

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 upstream from bridge on State Highway 82, in La Farge, 0.3 mi upstream from Otter Creek, and 1.3 mi downstream from powerplant.

DRAINAGE AREA.--266 mi².

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 and crest-stage gage. Datum of gage is 781.54 ft 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.--46 years, 176 ft³/s, 8.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft³/s July 1, 1978, gage height, 14.92 ft; minimum, 1.8 ft³/s Mar. 24, 1951; minimum daily, 36 ft³/s Nov. 3, 1939.

EXTREMES FOR CURRENT YEAR.--Peak discharges, above base of 1,700 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Apr. 30	1930	1,740	9.88	June 17	1800	*3,710	*12.69

minimum daily discharge, 117 ft³/s Aug. 31.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used May 2-7, Aug. 17 to Sept. 30; stage-discharge relation effected by ice Dec. 1-4, 8-12, Dec. 15 to Feb. 16, end Mar. 6-13.)

2.4	114	8.0	1,200
4.0	355	10.0	1,780
6.0	743	12.0	2,920

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	190	200	170	170	211	203	776	193	205	159	127
2	194	192	190	180	180	204	204	466	190	201	164	242
3	209	189	180	190	180	190	204	410	182	198	157	156
4	226	180	200	200	180	195	203	385	179	203	155	136
5	201	179	196	200	170	195	203	337	189	197	154	129
6	190	181	190	200	160	180	200	305	186	215	164	125
7	192	182	175	190	160	180	195	335	198	196	172	128
8	197	182	180	180	160	180	189	315	235	186	340	127
9	184	185	180	180	160	180	187	276	194	192	197	127
10	179	231	180	170	170	180	188	255	211	224	162	202
11	207	201	200	170	180	180	187	246	190	328	152	162
12	656	184	230	170	250	180	212	233	179	215	150	626
13	338	181	206	170	450	180	354	267	190	193	146	648
14	261	194	204	170	430	185	329	269	180	188	144	211
15	240	248	200	170	410	355	305	227	170	203	141	186
16	310	208	180	160	390	592	261	215	173	192	139	168
17	252	194	180	160	374	262	232	213	2430	338	173	156
18	228	191	180	160	382	210	217	219	1880	214	268	150
19	221	221	170	150	604	209	210	224	466	189	160	147
20	266	321	170	150	485	205	215	212	353	183	145	145
21	305	290	170	150	347	208	202	202	309	176	141	140
22	251	228	170	150	315	210	198	202	383	172	165	138
23	238	237	160	150	375	252	251	202	370	171	146	136
24	226	306	160	160	311	371	240	193	292	225	137	140
25	220	236	160	160	278	392	215	323	261	181	133	323
26	214	218	170	160	255	310	204	300	252	172	133	213
27	208	209	170	160	235	262	238	224	248	172	132	164
28	207	231	170	160	225	235	301	222	231	165	130	157
29	198	242	170	160	207	227	242	210	218	161	127	156
30	191	215	170	160	---	214	1430	199	211	159	124	151
31	190	---	170	160	---	207	---	195	---	157	117	---
TOTAL	7392	6446	5631	5220	8193	7341	8019	8657	10943	6171	4927	5816
MEAN	238	215	182	168	263	237	267	279	365	199	159	194
MAX	656	321	230	200	604	592	1430	776	2430	338	340	648
MIN	179	179	160	150	160	180	187	193	170	157	117	125
CFSM	.90	.81	.68	.63	1.06	.89	1.00	1.05	1.37	.75	.60	.73
IN.	1.03	.90	.79	.73	1.15	1.03	1.12	1.21	1.53	.86	.69	.81
CAL YR 1983	TOTAL	87214	MEAN	239	MAX	1720	MIN	137	CFSM	.90	IN	2.20
WTR YR 1984	TOTAL	84756	MEAN	232	MAX	2430	MIN	117	CFSM	.87	IN	11.85

WISCONSIN RIVER BASIN

05410490 KICKAPOO RIVER AT STEUBEN, WI

LOCATION.--Lat 43°10'58", long 90°51'30", in NE 1/4 SW 1/4 sec.9, T.8 N., R.4 W., Crawford County, Hydrologic Unit 07070006, on right bank at upstream corner of town road bridge at Steuben and 18.6 mi upstream from mouth.

DRAINAGE AREA.--687 mi².

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

REVISED RECORDS.--WSP 855: Drainage area. WSP 1438: 1933-38. WDR WI-79-1: 1978(M).

GAGE.--Water-stage recorder. Datum of gage is 657.00 ft National Geodetic Vertical Datum of 1929. May 1933 to Oct. 19, 1938, nonrecording gage at same site at datum 1.7 ft higher. Oct. 20, 1938 to September 1982, recording gage at site 1.2 mi downstream at datum 0.36 ft higher.

REMARKS.--Records good except for period of ice effect, which are fair. Gage-height telemeter at station.

AVERAGE DISCHARGE.--51 years, 480 ft³/s, 9.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s July 3, 1978, gage height, 14.81 ft; minimum observed, 161 ft³/s Aug. 9, 1936, gage height, 0.76 ft site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,420 ft³/s June 20, gage height, 12.85 ft, no other peaks above base of 1,900 ft³/s; minimum daily, 430 ft³/s Jan. 18-22.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 27 to Nov. 20; stage-discharge relation affected by ice Dec. 5 to Feb. 16 and Mar. 5-14.)

6.5	430	10.0	1,120
7.0	511	11.0	1,400
8.0	690	12.0	1,890
9.0	882	12.6	2,790

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	600	598	712	520	450	640	611	1410	649	611	497	450
2	594	596	668	520	460	623	604	1470	632	605	497	500
3	605	593	645	520	460	613	602	1540	614	602	501	560
4	626	583	620	540	460	596	600	1570	605	598	496	520
5	644	571	600	540	450	580	596	1280	605	609	489	480
6	623	566	580	540	440	560	591	996	605	596	489	470
7	599	567	560	520	440	540	582	911	614	589	497	460
8	599	567	560	500	440	520	575	882	645	584	625	460
9	597	568	560	490	440	500	564	851	668	569	712	470
10	591	602	560	480	450	490	559	785	647	600	672	490
11	592	621	580	470	460	490	557	753	627	690	548	560
12	749	622	620	470	480	490	577	733	613	717	516	600
13	992	584	640	470	540	490	647	739	616	654	504	742
14	1080	578	640	470	660	520	789	742	607	589	502	1030
15	839	607	620	460	780	593	828	744	580	582	497	880
16	788	637	580	450	860	803	787	686	593	580	492	636
17	787	639	560	440	1020	1040	728	672	890	587	533	584
18	779	606	540	430	1030	813	672	683	1280	685	595	555
19	714	621	520	430	1120	658	638	697	1430	674	634	540
20	711	675	520	430	1190	629	622	690	2540	578	584	532
21	742	768	520	430	1240	625	611	663	2630	555	518	523
22	790	820	520	430	1080	629	609	643	1700	542	513	514
23	765	749	520	440	898	672	638	631	1190	530	520	510
24	715	729	520	450	860	760	674	640	917	523	521	509
25	692	770	520	450	849	834	672	842	777	530	497	572
26	671	753	520	450	773	849	636	919	717	557	491	715
27	658	698	520	440	726	785	631	900	690	528	486	738
28	648	713	520	440	692	724	641	794	668	521	484	611
29	634	743	520	440	659	676	911	731	645	513	482	571
30	617	747	520	440	---	649	1340	697	625	504	473	559
31	604	---	520	440	---	629	---	668	---	499	450	---
TOTAL	21645	19491	17605	14540	20407	20020	20092	26962	26619	18101	16315	17341
MEAN	698	650	568	469	704	646	670	870	887	584	526	578
MAX	1080	820	712	540	1240	1040	1340	1570	2630	717	712	1030
MIN	591	566	520	430	440	490	557	631	580	499	450	450
CFSM	1.02	.95	.83	.68	1.03	.94	.98	1.27	1.29	.85	.77	.84
IN.	1.17	1.06	.95	.79	1.11	1.08	1.09	1.46	1.44	.98	.88	.94

CAL YR 1983 TOTAL 242627 MEAN 665 MAX 1700 MIN 430 CFSM .97 IN 13.14
WTR YR 1984 TOTAL 239138 MEAN 653 MAX 2630 MIN 430 CFSM .95 IN 12.95

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 northwest of Phelps, used as a reservoir since 1908, has a usable capacity of 652,000,000 ft³. Drainage area, 34.4 mi².
- 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, 3.0 mi southwest of Phelps, used as a reservoir since 1908, has a usable capacity of 313,000,000 ft³. Drainage area, 26 mi².
- 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 southwest of Conover, used as a reservoir since 1908, has a usable capacity of 130,000,000 ft³. Drainage area, 16.9 mi².
- 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 southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 93,000,000 ft³. Drainage area, 12.1 mi².
- 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, 6.8 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 121,000,000 ft³. Drainage area, 28.8 mi².
- 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 southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 779,000,000 ft³. This reservoir includes 18 lakes controlled by the same dam. Drainage area, 142 mi².
- 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 southeast of Phelps, used as a reservoir since 1908, has a usable capacity of 400,000,000 ft³. Drainage area, 22.9 mi².
- 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 northeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 22,000,000 ft³. Drainage area, 2.47 mi².
- 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 southwest of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 471,000,000 ft³. Drainage area, 48.4 mi².
- 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 west of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 79,000,000 ft³. Drainage area, 19 mi².
- 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 south of Saxner, used as a reservoir since 1908, has a usable capacity of 202,000,000 ft³. Drainage area, 73.1 mi².
- 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 northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 338,000,000 ft³. Drainage area, 86.2 mi².
- 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 upstream from U.S. Geological Survey river gaging station, 2.7 mi northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 2,181,000,000 ft³. Drainage area, 744 mi².
- 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 northwest of town of Pelican Lake, used as a reservoir since 1909, has a usable capacity of 305,000,000 ft³. Drainage area, 19.8 mi².
- 05391300 North Pelican Lake (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 below Twin Lakes Creek and 8.0 mi east of Rhinelander city limits, used as a reservoir since 1908, has a usable capacity of 218,000,000 ft³. Drainage area, 95 mi².
- 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 west of Minocqua, used as a reservoir since 1910, has a usable capacity of 628,000,000 ft³. Drainage area, 72.5 mi².
- 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 west of Minocqua, used as a reservoir since 1908, has a usable capacity of 182,000,000 ft³. Drainage area, 15.2 mi².
- 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 southwest of Hazelhurst, used as a reservoir since 1927, has a usable capacity of 3,302,000,000 ft³. Drainage area, 310 mi².
- 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 east of Bradley, used as a reservoir since 1912, has a usable capacity of 1,808,000,000 ft³. Drainage area, 544 mi².
- 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 south of Tomahawk, used as a reservoir since 1923, has a usable capacity of 756,000,000 ft³. Drainage area, 158 mi².

WISCONSIN RIVER BASIN

RESERVOIRS IN WISCONSIN RIVER BASIN--CONTINUED

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 northeast of Dancy, used as a reservoir since 1937, has a capacity of 4,457,000,000 ft³. Drainage area, 363 mi².

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 downstream of Little Eau Pleine River and 10.5 mi northwest of Stevens Point, has a usable capacity of 2,117,000,000 ft³. Drainage area, 4,900 mi².

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 upstream from Roche a Cri Creek, 2.4 mi west of Strong's Prairie, and 3.5 mi northeast of Necedah, used as a reservoir since 1950, has a total capacity of 19,880,000,000 ft³. Drainage area, 5,970 mi².

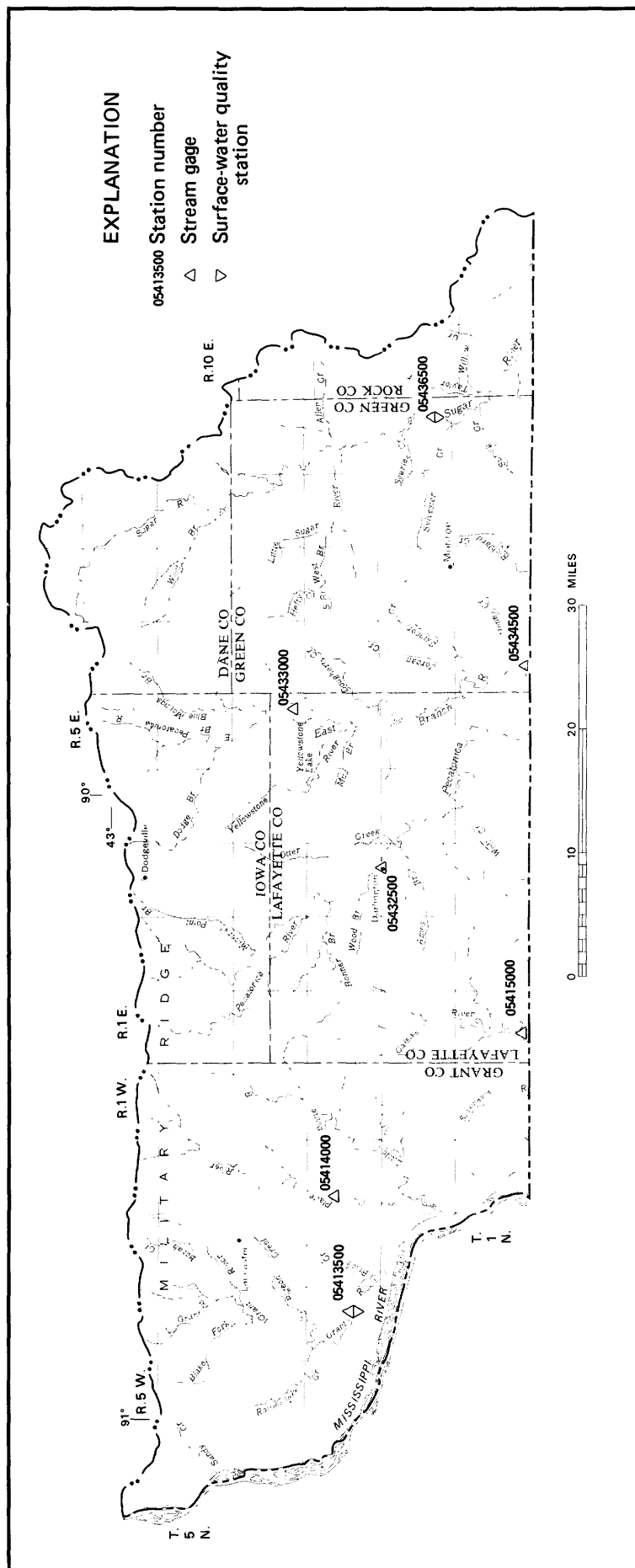
05403200 Castle Rock Flowage on Wisconsin River, lat 43°51'48", long 89°57'38", in sec.13, T.16 N., R.4 E., Adams County, 4.5 mi upstream from Duck Creek, and 2.0 mi south of Germantown, and 7.0 mi northeast of Mauston, used as a reservoir since 1950, has a total capacity of 7,630,000,000 ft³. Drainage area, 7,056 mi².

MONTH-END CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1983 to SEPTEMBER 1984

	LAC VIEUX DESERT	TWIN LAKES	BUCKATABON LAKE	SEVENMILE LAKE	LOWER NINEMILE LAKE	BURNT ROLLWAYS RESERVOIR	LONG LAKE	DEERSKIN LAKE
SEPT. 30.....	406	274	115	64	103	565	254	18
OCT. 31.....	322	261	115	63	102	558	231	13
NOV. 30.....	260	229	96	47	90	505	229	11
DEC. 31.....	179	140	53	26	12	304	133	9
JAN. 31.....	102	87	27	7	20	15	52	9
FEB. 29.....	77	17	22	11	39	0	40	9
MAR. 31.....	96	52	40	28	76	122	40	9
APR. 30.....	216	131	92	43	101	575	194	16
MAY 31.....	277	168	116	59	102	536	240	14
JUNE 30.....	307	190	122	57	103	549	235	14
JULY 31.....	285	176	115	52	103	530	220	14
AUG. 31.....	317	195	116	57	103	568	231	16
SEPT. 30.....	326	226	115	66	104	562	238	14

	SUGAR CAMP RESERVOIR	LITTLE ST. GERMAIN LAKE	BIG ST. GERMAIN LAKE	PICKEREL LAKE	RAINBOW LAKE	SOUTH PELICAN LAKE	NORTH PELICAN LAKE	MINOQUA LAKE
SEPT. 30.....	416	71	158	265	1,915	264	124	556
OCT. 31.....	406	71	155	267	2,052	292	133	556
NOV. 30.....	411	67	121	254	2,132	269	123	451
DEC. 31.....	319	46	86	226	1,963	208	56	307
JAN. 31.....	73	30	36	184	1,388	133	40	125
FEB. 29.....	47	10	36	185	1,388	106	80	22
MAR. 31.....	143	28	30	165	550	109	49	82
APR. 30.....	352	58	107	264	1,092	188	136	280
MAY 31.....	402	69	153	261	1,986	246	134	370
JUNE 30.....	399	72	157	271	1,635	213	127	488
JULY 31.....	391	67	160	260	1,001	267	124	508
AUG. 31.....	414	72	158	270	789	274	129	511
SEPT. 30.....	415	72	159	268	1,456	292	134	493

	SQUIRREL LAKE	WILLOW RESERVOIR	LAKE NOKOMIS	SPIRIT RIVER FLOWAGE	BIG EAU PLEINE RESERVOIR	LAKE DUBAY	PETENWELL FLOWAGE	CASTLE ROCK FLOWAGE
SEPT. 30.....	170	2,197	1,457	542	3,445	4,204	17,738	5,818
OCT. 31.....	170	2,888	1,685	699	4,265	4,201	17,703	5,863
NOV. 30.....	131	3,286	1,707	704	4,388	4,175	16,646	5,748
DEC. 31.....	91	2,669	1,426	612	4,244	4,147	11,901	5,850
JAN. 31.....	45	1,897	959	358	2,928	4,082	11,708	5,381
FEB. 29.....	10	1,751	1,309	428	3,725	3,918	11,708	5,375
MAR. 31.....	53	1,645	827	335	3,639	4,132	14,218	4,758
APR. 30.....	117	2,557	1,589	688	4,322	4,608	17,536	6,330
MAY 31.....	154	2,918	1,590	619	4,016	4,504	17,861	6,282
JUNE 30.....	166	2,694	1,397	639	4,388	4,169	17,562	5,722
JULY 31.....	160	1,945	1,313	475	4,022	3,972	17,615	5,716
AUG. 31.....	166	1,256	1,103	304	3,312	4,229	17,729	5,909
SEPT. 30.....	172	1,453	1,205	444	2,762	4,085	17,597	5,716



PECATONICA-SUGAR RIVER BASIN

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 northwest of Potosi and 9.5 mi upstream from mouth.

DRAINAGE AREA.--269 mi².

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 National Geodetic Vertical Datum of 1929. Oct. 17, 1934, to Sept. 30, 1947, nonrecording gage at site 6 mi upstream at datum 33.18 ft higher. Mar. 18, 1947, to July 27, 1949, nonrecording gage at present site and datum.

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

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

AVERAGE DISCHARGE.--50 years, 168 ft³/s, 8.48 in/y^m.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s July 16, 1950, gage height, 24.82 ft, from rating curve extended above 18,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 21 ft³/s Mar. 4, 1954, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,680 ft³/s June 10, gage height, 17.63 ft, no other peaks above base of 2,400 ft³/s; minimum discharge, 132 ft³/s Mar. 10, gage height, 5.33 ft, result of freezeup.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Nov. 8-10; stage-discharge relation affected by ice Dec. 8 to Feb. 17 and Mar. 5-13.)

Oct. 1 to June 10				June 10 (1600) to Sept. 30			
5.4	138	10.0	776	5.6	155	10.0	721
6.0	202	12.0	1,100	6.0	187	12.0	1,040
7.0	322	14.0	1,420	7.0	278	14.0	1,420
8.0	456	16.0	1,930	8.0	421		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	177	216	150	150	209	183	42.	221	252	195	171
2	155	175	210	150	160	202	180	343	215	247	193	170
3	166	168	199	160	170	191	183	372	205	246	192	168
4	193	162	196	170	160	192	204	434	200	258	191	166
5	163	162	193	170	150	190	190	345	205	247	190	168
6	157	164	187	160	140	180	180	313	199	244	188	165
7	155	165	163	160	140	170	174	304	196	234	201	168
8	157	166	160	150	140	160	170	281	752	231	299	165
9	152	167	150	150	160	160	172	265	383	239	220	166
10	151	240	160	140	180	160	171	253	1720	285	193	166
11	159	200	200	140	220	160	168	249	576	261	188	168
12	212	174	250	150	300	160	184	238	419	233	185	165
13	184	170	230	150	700	170	242	247	758	227	182	162
14	166	174	190	150	500	170	253	238	454	227	181	160
15	172	186	180	150	400	448	237	216	378	257	179	160
16	318	172	160	150	380	500	215	210	363	231	179	159
17	204	166	160	150	350	231	205	209	388	255	181	158
18	180	165	150	140	326	206	196	210	1300	231	200	158
19	175	239	150	140	914	199	192	213	540	219	185	160
20	188	278	150	140	484	203	190	211	422	218	178	160
21	200	219	150	140	360	201	181	203	374	215	176	157
22	183	194	140	140	316	230	193	202	364	211	180	157
23	179	197	140	140	295	498	227	204	342	208	173	157
24	174	215	140	150	272	396	220	190	310	205	171	160
25	172	185	140	160	252	248	200	265	288	203	170	220
26	170	182	150	160	239	221	198	264	282	209	170	186
27	169	188	160	160	226	214	196	203	281	207	170	164
28	169	308	160	150	216	208	188	318	268	202	170	163
29	165	313	150	150	203	197	191	320	260	198	170	161
30	161	234	150	150	---	191	762	244	256	196	167	162
31	163	---	150	150	---	184	---	230	---	196	164	---
TOTAL	5466	5905	5284	4670	8503	7049	6445	8221	12919	7092	5781	4970
MEAN	176	197	170	151	293	227	215	265	431	229	186	166
MAX	318	313	250	170	914	500	762	434	1720	285	299	220
MIN	151	162	140	140	140	160	168	190	196	196	164	157
CFSM	.65	.73	.63	.56	1.09	.84	.80	.99	1.60	.85	.69	.62
IN.	.76	.82	.73	.65	1.18	.97	.89	1.14	1.79	.98	.80	.69
CAL YR 1983	TOTAL	80582	MEAN 221	MAX 1260	MIN 140	CFSM .82	IN 11.14					
WTR YR 1984	TOTAL	82305	MEAN 225	MAX 1720	MIN 140	CFSM .84	IN 11.38					

GRANT RIVER BASIN

167

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: Water years 1977-82, October 1983 to current year.

REMARKS.--Sediment records are good.

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 June 17, 1978; minimum daily, 1.5 tons Mar. 1, 2, 1978.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,590 mg/l June 18, minimum daily mean, 8 mg/l Nov. 4. Maximum observed, 6,600 mg/l Apr. 30; minimum observed, 7 mg/l Nov. 4, Mar. 1.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 14,400 tons June 18; minimum daily, 3.4 tons Nov. 4.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)
NOV , 1983				
09...	1520	165	610	11.0
DEC				
27...	1615	163	460	.0
JAN , 1984				
23...	1545	144	530	.0
FEB				
28...	1638	222	550	2.5
APR				
18...	1604	204	595	10.5
MAY				
31...	1630	226	650	18.0
JUN				
14...	1215	436	590	--
JUL				
17...	1810	264	600	21.5
AUG				
27...	1715	174	600	24.0

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	40	17	20	9.3	55	32	40	16	28	11	28	16
2	25	10	15	7.0	52	29	40	16	27	12	31	17
3	18	8.1	10	4.7	49	26	40	17	26	12	39	20
4	17	8.6	8	3.4	46	24	40	18	25	11	38	20
5	24	11	10	4.5	44	23	40	18	25	10	37	19
6	36	15	16	7.0	41	21	40	17	24	9.1	35	17
7	51	21	24	11	39	17	40	17	23	8.7	33	15
8	49	21	30	14	37	16	40	16	22	8.3	31	13
9	43	18	37	17	34	14	40	16	22	9.5	30	13
10	37	15	41	26	33	14	40	15	21	10	28	12
11	32	14	36	19	31	17	38	14	20	13	26	11
12	48	29	30	14	29	20	38	15	314	517	25	11
13	50	25	25	11	27	19	38	15	1420	4580	23	11
14	34	15	21	9.7	26	14	38	15	289	556	22	10
15	34	16	17	8.7	27	13	38	15	334	647	552	1180
16	130	115	14	6.7	30	13	38	15	369	763	643	990
17	85	47	12	5.4	34	15	38	15	218	215	217	137
18	62	30	10	4.6	35	14	38	14	186	168	109	61
19	51	24	61	48	35	14	38	14	1620	4240	57	31
20	42	21	75	58	35	14	38	14	490	684	47	26
21	35	19	41	25	35	14	37	14	257	251	45	24
22	33	16	33	17	35	13	37	14	197	168	111	110
23	32	15	39	21	35	13	37	14	150	120	535	809
24	31	15	46	27	35	13	36	15	115	84	365	443
25	30	14	38	19	35	13	35	14	86	58	98	66
26	29	13	24	12	35	14	34	15	64	41	51	31
27	28	13	27	14	35	15	33	14	49	30	37	21
28	26	12	117	107	35	15	32	13	50	29	31	18
29	24	11	98	85	38	15	31	13	27	15	27	15
30	23	9.9	58	37	38	15	30	12	---	---	24	12
31	21	9.4	---	---	38	15	29	12	---	---	24	12
TOTAL	---	628.0	---	653.0	---	524	---	462	---	13280.6	---	4191

	MEAN CONCENTRATION (MG/L)				MEAN CONCENTRATION (T/DAY)				MEAN CONCENTRATION (MG/L)				MEAN CONCENTRATION (T/DAY)				MEAN CONCENTRATION (MG/L)				MEAN CONCENTRATION (T/DAY)																																																							
DAY	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)																																																							
APRIL						MAY						JUNE						JULY						AUGUST						SEPTEMBER																																														
1	25	13	928	1120	212	127	144	98	101	53	67	31	2	27	13	232	218	231	134	126	84	91	47	74	3	31	15	157	168	252	140	109	73	84	44	83	38	4	36	20	298	359	264	143	95	66	93	48	86	39	5	37	19	204	190	243	134	83	56	104	54	70	32													
6	26	13	170	144	221	119	83	54	114	58	57	25	7	17	8.2	143	117	203	107	85	54	113	61	58	26	8	12	5.6	128	98	2210	5220	87	54	281	264	61	27	9	16	7.3	118	84	729	895	92	59	221	135	64	29	10	23	11	108	74	3400	16900	111	86	117	61	66	30												
11	35	16	99	67	778	1280	136	95	117	59	63	28	12	51	26	86	55	308	353	167	105	126	63	59	26	13	62	41	73	49	1880	4200	198	121	129	63	55	24	14	59	41	63	41	525	659	202	124	106	52	56	24	15	57	37	65	38	289	296	202	141	85	41	56	24												
16	37	21	73	41	187	183	203	127	133	64	57	24	17	24	13	81	46	162	170	204	140	157	77	58	25	18	24	13	90	51	3590	14400	164	102	167	90	59	25	19	25	13	94	54	1050	1590	131	77	143	71	60	26	20	21	11	97	55	642	734	139	82	113	54	60	26												
21	21	10	100	55	438	444	149	86	91	43	64	27	22	22	12	104	57	306	300	160	91	83	40	79	33	23	24	15	109	60	280	258	168	94	79	37	99	42	24	24	14	109	56	275	230	161	89	84	39	124	54	25	23	12	189	150	271	211	154	85	92	42	154	92												
26	23	12	234	173	260	198	148	83	101	47	78	40	27	22	12	148	81	234	177	142	79	105	48	55	24	28	21	11	303	292	210	152	137	74	87	40	46	20	29	68	41	286	257	187	131	131	70	71	33	39	17	30	2450	5750	183	121	164	114	125	66	58	26	33	31	---	---	174	108	---	---	113	60	60	27	---	---
TOTAL	---	6246.1	---	4479	---	49999	---	2675	---	1881	---	926																																																																
TOTAL LOAD FOR YEAR:			85944.7 TONS.																																																																									

PLATTE RIVER BASIN

169

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 upstream from Blakely Branch, 2.2 mi east of Rockville, 4.5 mi northeast of Potosi, and 15.2 mi upstream from mouth.

DRAINAGE AREA.--142 mi².

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 and crest-stage gage. Datum of gage is 642.50 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1941, nonrecording gage at site 1.3 mi upstream at datum 12.55 ft higher. Oct. 1, 1941, to June 29, 1949, nonrecording gage at present site and datum.

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

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

AVERAGE DISCHARGE.--50 years, 99.9 ft³/s, 9.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,500 ft³/s July 16, 1950, gage height, 17.26 ft, from rating curve extended above 7,000 ft³/s on basis of slope-area measurement of peak flow; no flow Nov. 24, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,200 ft³/s June 8, gage height, 9.38 ft, no other peak above base of 2,100 ft³/s; minimum discharge, 44 ft³/s Feb. 6, gage height, 3.43 ft, result of freezeup.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 7 to Feb. 18 and Mar. 5-13.)

Oct. 1 to June 10				June 10 to Sept. 30			
3.6	68	5.0	370	3.9	78	5.0	354
4.0	140	6.0	650	4.0	94	6.0	686
		7.0	1,000	4.5	213	7.0	1,070

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	101	131	80	70	128	110	235	130	147	109	91
2	94	100	124	80	72	124	109	199	126	145	108	90
3	111	95	118	80	74	118	110	230	121	143	108	89
4	111	92	116	82	74	119	114	239	119	149	107	91
5	100	92	114	84	70	110	112	214	121	144	106	88
6	97	93	112	84	68	110	108	195	119	147	111	86
7	95	93	100	82	68	100	105	184	118	137	116	88
8	95	91	98	80	68	98	103	169	958	133	146	86
9	92	92	98	80	70	96	103	161	304	136	113	86
10	92	115	96	78	72	96	103	154	892	223	106	86
11	94	102	110	76	76	96	101	151	377	223	103	88
12	107	93	120	76	150	96	112	146	291	154	102	85
13	101	92	110	76	260	98	129	151	450	141	100	84
14	95	96	110	76	200	102	129	143	276	165	100	83
15	99	100	100	76	180	134	122	137	239	231	99	83
16	128	95	90	76	170	146	116	133	224	147	98	83
17	104	93	82	76	170	118	113	132	238	160	107	83
18	98	92	80	74	200	113	110	132	483	140	122	83
19	96	129	80	74	341	111	106	134	265	134	104	83
20	100	139	80	72	254	113	105	134	233	131	99	83
21	100	123	80	72	214	114	101	130	215	127	98	81
22	97	113	80	72	192	123	109	129	221	125	100	80
23	97	121	78	74	178	186	120	126	199	123	95	81
24	99	133	78	74	164	174	120	120	183	120	94	83
25	97	115	80	74	153	138	113	167	172	117	94	186
26	96	112	82	74	144	129	114	138	167	120	93	108
27	96	118	84	72	137	124	113	121	169	118	93	92
28	95	168	86	72	131	121	108	179	161	115	92	90
29	94	161	82	72	125	117	127	156	153	112	91	88
30	92	136	80	70	---	114	375	139	151	111	90	88
31	92	---	80	70	---	112	---	132	---	109	87	---
TOTAL	3059	3295	2959	2358	4145	3678	3620	4910	7875	4427	3191	2696
MEAN	98.7	110	95.5	76.1	143	119	121	158	263	143	103	89.9
MAX	128	168	131	84	341	186	375	239	958	231	146	186
MIN	92	91	78	70	68	96	101	120	118	109	87	80
CFSM	.70	.78	.67	.54	1.01	.84	.85	1.11	1.85	1.01	.73	.63
IN.	.80	.86	.78	.62	1.09	.96	.95	1.29	2.06	1.16	.84	.71
CAL YR 1983 TOTAL	48986		MEAN 134	MAX 620	MIN 78	CFSM .94	IN 12.83					
WTR YR 1984 TOTAL	46213		MEAN 126	MAX 958	MIN 68	CFSM .89	IN 12.11					

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 upstream from Coon Branch, 1.5 mi upstream from Scrabble Branch, 2.0 mi upstream from Wisconsin-Illinois State line, and 3.5 mi southeast of Hazel Green.

DRAINAGE AREA.--125 mi².

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 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.--45 years, 77.8 ft³/s, 8.45 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,700 ft³/s June 29, 1969, gage height, 19.57 ft from rating curve extended above 8,100 ft³/s on basis of slope-area measurements at gage heights 15.68 ft and 19.57 ft; minimum discharge, 0.8 ft³/s Mar. 3, 1954.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of February 1937 reached a stage of about 17.1 ft, from information by local resident, discharge, 18,000 ft³/s.

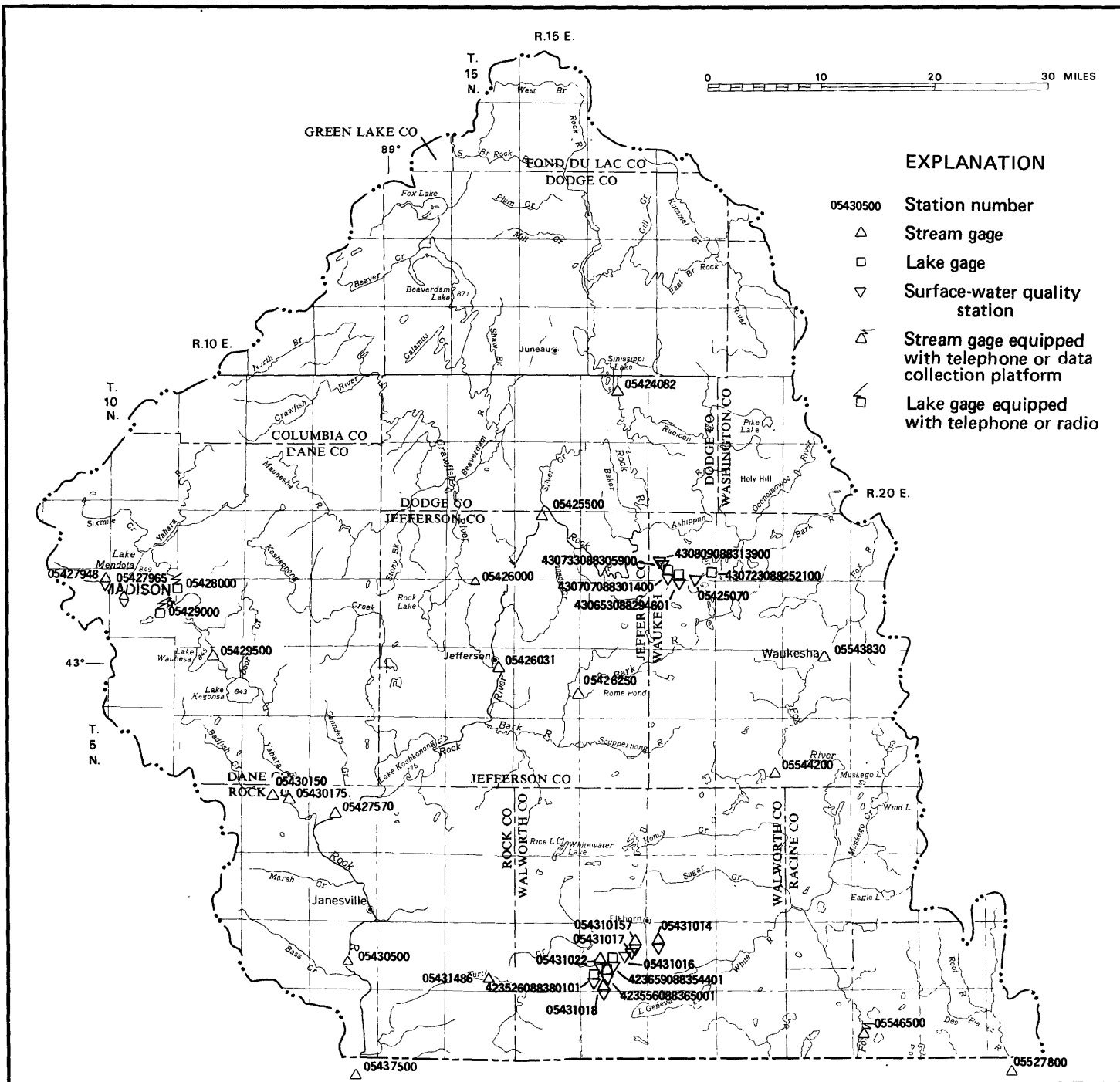
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,640 ft³/s July 15, gage height, 7.82 ft; no peaks above base of 3,000 ft³/s; minimum, 34 ft³/s Mar. 8, gage height, 2.64 ft, result of freezeup.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30, Dec. 1, 3, 6-10, Dec. 16 to Feb. 16, and Mar. 6-13.)

2.7	39	4.5	332
3.0	69	5.0	456
3.5	144	6.0	796
4.0	234		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	58	74	50	49	87	71	143	80	80	69	55
2	61	58	71	50	49	82	70	120	77	79	68	56
3	61	59	70	50	49	76	71	130	75	97	67	55
4	61	59	68	52	48	78	75	132	74	96	67	55
5	61	57	66	54	47	79	72	112	76	81	66	56
6	60	57	64	54	46	74	69	102	77	78	65	54
7	59	57	64	52	46	72	56	98	84	74	65	55
8	60	56	62	50	46	70	65	91	93	74	117	55
9	57	57	60	50	48	70	66	88	102	76	73	56
10	58	67	60	49	49	68	64	85	429	303	67	57
11	60	62	73	49	52	68	62	85	129	144	64	58
12	74	57	91	48	90	66	71	81	108	95	63	55
13	66	57	74	48	250	66	85	82	303	87	61	54
14	61	59	76	48	210	68	84	78	142	83	61	53
15	60	59	74	48	190	73	78	74	115	498	60	53
16	60	56	70	47	180	92	75	72	109	128	59	52
17	58	55	66	47	175	73	73	71	127	139	63	52
18	57	56	62	47	163	73	69	73	557	106	69	52
19	58	74	58	47	271	71	70	81	167	95	64	53
20	60	82	56	46	175	73	69	79	135	90	60	53
21	60	71	56	46	147	75	67	75	121	86	59	51
22	61	63	54	47	132	77	78	73	120	83	61	52
23	60	82	52	48	123	180	87	73	109	80	58	53
24	59	84	50	48	113	170	85	69	100	77	57	59
25	58	68	50	50	105	99	78	93	94	75	57	163
26	57	65	50	52	98	89	75	87	92	77	56	78
27	56	72	50	50	91	88	74	74	90	76	59	61
28	57	142	50	49	83	83	68	115	86	73	57	58
29	55	101	50	49	90	78	82	112	84	70	56	57
30	54	78	50	49	---	75	297	86	82	69	56	56
31	55	---	50	49	---	72	---	82	---	69	53	---
TOTAL	1845	2028	1921	1523	3215	2565	2416	2816	4037	3338	1977	1777
MEAN	59.5	67.6	62.0	49.1	111	82.7	80.5	90.8	135	108	63.8	59.2
MAX	74	142	91	54	271	180	297	143	557	498	117	163
MIN	54	55	50	46	46	66	62	69	74	69	53	51
CFSM	.48	.54	.50	.39	.89	.66	.64	.73	1.08	.86	.51	.47
IN.	.55	.60	.57	.45	.96	.76	.72	.84	1.20	.99	.59	.53
CAL YR 1983	TOTAL	35716	MEAN	97.9	MAX	595	MIN	50	CFSM	.78	IN	10.63
WTR YR 1984	TOTAL	29458	MEAN	80.5	MAX	557	MIN	46	CFSM	.64	IN	8.77



Base from U.S. Geological Survey
State base map, 1968

ROCK-FOX RIVER BASIN

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 downstream from State Highway 106 bridge, 40 ft downstream from the Hustisford dam, at Hustisford.

DRAINAGE AREA.--511 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 845.67 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for June 10 to July 24 and Aug. 5-17, which are poor. Some regulation caused by manipulation of gates at dams on Horicon Marsh and Lake Sinissippi.

AVERAGE DISCHARGE.--6 years, 381 ft³/s, 10.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,550 ft³/s Apr. 4, 1979, gage height, 6.80 ft; minimum daily, no flow Aug. 24-26, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,880 ft³/s June 24, gage height, 5.05 ft; minimum daily, no flow Aug. 24-26.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 25 to Nov. 21 and June 11 to July 23.)

Oct. 1 to Mar. 27 (0845)

Mar. 27 (0900) to Sept. 30

2.7	40	4.0	375	1.3	0	2.2	26	3.5	270
3.0	73	4.5	650	1.4	1.0	2.4	41	4.0	522
3.3	131	5.0	1,020	1.6	3.9	2.6	64	4.5	935
3.6	216	5.2	1,200	1.8	8.4	2.8	92	5.0	1,570
				2.0	15	3.0	133	5.2	1,910

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	168	409	79	101	936	805	928	294	1130	47	4.5
2	41	95	368	85	98	892	670	930	278	855	47	17
3	49	54	380	87	97	805	675	1010	267	774	43	30
4	59	61	402	91	97	731	859	1060	256	798	33	26
5	57	66	403	93	97	586	953	1100	252	808	32	21
6	59	71	400	96	97	516	1050	1090	262	932	31	14
7	56	72	394	97	99	511	775	1030	282	918	30	7.8
8	72	73	373	98	102	444	529	1070	295	846	28	23
9	62	81	344	100	104	338	384	1050	317	782	27	52
10	57	154	333	102	105	328	310	972	720	790	26	88
11	60	234	324	104	105	251	305	779	1060	846	25	262
12	97	238	323	106	110	202	296	766	1140	911	24	417
13	188	215	313	107	222	203	306	798	1370	1050	21	457
14	234	199	308	109	412	203	314	810	1450	1050	20	440
15	224	208	251	110	497	210	349	802	1390	1060	18	425
16	224	205	210	109	604	222	373	767	1340	1040	15	398
17	219	186	210	109	650	223	479	610	1570	1020	13	280
18	207	104	210	109	652	226	535	544	1760	1000	16	217
19	202	60	212	109	674	230	599	508	1760	851	13	215
20	200	92	212	107	791	235	656	422	1720	807	8.6	223
21	195	115	210	96	830	299	673	185	1660	779	223	217
22	196	213	210	91	824	437	691	117	1650	724	319	210
23	206	324	209	89	845	475	976	222	1740	486	213	203
24	197	345	200	98	950	475	1030	264	1800	117	.00	82
25	194	427	194	101	1000	489	813	271	1780	14	.00	55
26	180	463	189	101	1070	524	751	276	1550	33	.00	59
27	169	451	133	101	1120	787	849	267	1330	320	5.2	51
28	181	456	55	102	1110	1050	866	278	1290	439	2.6	63
29	178	530	60	103	1040	1120	820	287	1250	425	4.5	64
30	170	542	65	103	---	1100	898	303	1190	398	7.4	62
31	168	---	74	101	---	1050	---	310	---	204	2.5	---
TOTAL	4445	6502	7978	3093	14503	16098	19589	19826	33023	22207	1294.80	4683.3
MEAN	143	217	257	99.8	500	519	653	640	1101	716	41.8	156
MAX	234	542	409	110	1120	1120	1050	1100	1800	1130	319	457
MIN	41	54	55	79	97	202	296	117	252	14	.00	4.5
CFSM	.28	.43	.50	.20	.98	1.02	1.28	1.25	2.16	1.40	.08	.31
IN.	.32	.47	.58	.23	1.06	1.17	1.43	1.44	2.40	1.62	.09	.34
CAL YR 1983	TOTAL	117806.17	MEAN	323	MAX	1100	MIN	.10	CFSM	.63	IN	8.58
WTR YR 1984	TOTAL	153242.10	MEAN	419	MAX	1800	MIN	.00	CFSM	.82	IN	11.16

ROCK RIVER BASIN

173

430723088252100 OKAUCHEE LAKE AT OKAUCHEE, WI

LOCATION.--Lat 43°07'23", long 88°25'21", in NE 1/4 NE 1/4 sec. 36, T. 8 N., R. 17 E., Waukesha County, at Okauchee.

DRAINAGE AREA.--80.7 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--February to September 1984.

GAGE.--Lake stage read at dam outlet by Tom Gukich. Datum of gage, 869 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Lake levels controlled at dam outlet by Town of Oconomowoc. The Oconomowoc River flows through the lake.

EXTREMES FOR CURRENT YEAR.--Maximum stage observed during year, 4.99 ft July 13; minimum observed, 4.41 ft Feb. 22.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---		---	4.85	---	---	---	---
2					---		---	---	---	---	---	---
3					---		---	---	---	---	---	---
4					---		---	4.82	4.76	4.64	---	---
5					---		---	---	---	---	---	---
6					---		---	---	4.68	---	---	4.76
7					---		---	---	---	---	---	---
8					---		---	---	---	---	---	---
9					---		---	---	---	---	---	---
10					---		---	4.62	---	---	---	---
11					---		---	---	---	---	---	---
12					---		---	---	4.78	---	---	4.80
13					---		---	---	---	4.99	---	---
14					---		---	4.64	4.90	---	---	---
15					---		---	---	---	---	---	---
16					---		---	---	---	4.84	---	---
17					---		---	---	---	---	---	---
18					---		---	---	4.90	---	---	4.68
19					---		4.75	---	---	4.72	---	---
20					---		---	---	4.88	---	4.72	---
21					---		---	4.72	4.84	---	---	4.64
22					4.41		---	---	---	---	---	---
23					---		4.90	---	4.96	---	---	---
24					---		---	---	---	---	4.66	---
25					---		4.84	---	---	---	---	---
26					---		---	---	---	4.80	---	---
27					---		---	---	---	---	---	---
28					---		---	---	4.86	---	4.72	4.80
29					---		---	---	---	---	---	---
30					---		---	4.87	---	---	---	---
31					---		---	---	---	---	---	---

ROCK RIVER BASIN

430723088252100 OKAUCHEE LAKE AT OKAUCHEE, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 15 to August 20, 1984.

REMARKS.--A detailed water quality management plan has been developed for Okauchee Lake by Southeastern Wisconsin Regional Planning Commission; previous water-quality data are available in this report.

Lake sampled near center at a depth of 93 feet. Complete depth profiles for specific conductance and pH are available in District office files.

WATER-QUALITY DATA, FEBRUARY 15 TO AUGUST 20, 1984
(Milligrams per liter unless otherwise indicated)

	Feb. 15		Apr. 19		June 20		July 13		Aug. 20	
Depth of sample (ft)	3	89	3	89	3	89	3	89	3	89
Specific conductance (umhos)	525	562	464	517	521	550	475	518	475	518
pH	9.0	8.4	8.5	8.5	8.8	7.8	8.4	7.4	8.4	7.4
Water temperature (°C)	2.0	2.7	5.4	5.3	23.6	7.4	25.0	7.8	25.0	7.8
Color (Pt-Co. scale)	--	--	20	--	--	--	--	--	--	--
Turbidity (NTU)	--	--	<1.0	--	--	--	--	--	--	--
Secchi-disc (meters)	--	--	4.2	--	--	--	--	--	--	--
Dissolved oxygen	11.7	6.5	12.6	12.3	8.8	.6	9.7	0	9.7	0
Hardness, as CaCO ₃	--	--	260	260	--	--	--	--	--	--
Calcium, dissolved (Ca)	--	--	51	51	--	--	--	--	--	--
Magnesium, dissolved (Mg)	--	--	32	32	--	--	--	--	--	--
Dissolved sodium (Na)	--	--	7.8	7.7	--	--	--	--	--	--
Potassium, dissolved (K)	--	--	2.0	2.0	--	--	--	--	--	--
Alkalinity as CaCO ₃	--	--	223	223	--	--	--	--	--	--
Sulfate, dissolved (SO ₄)	--	--	32	32	--	--	--	--	--	--
Chloride, dissolved (Cl)	--	--	19	19	--	--	--	--	--	--
Silica, dissolved (SiO ₂)	--	--	4.3	4.3	--	--	--	--	--	--
Solids, dissolved, at 180°C	--	--	332	329	--	--	--	--	--	--
Nitrogen, nitrate, total (as N)	--	--	.39	.47	--	--	--	--	--	--
Nitrogen, nitrite, total (as N)	--	--	<.01	.03	--	--	--	--	--	--
Nitrogen, ammonia, total (as N)	--	--	.04	.05	--	--	--	--	--	--
Nitrogen, organic, total (as N)	--	--	.76	.55	--	--	--	--	--	--
Total phosphorus (as P)	--	--	.01	<.01	<.01	.04	.01	.09	.012	.078
Phosphorus, ortho, diss (as P)	--	--	<.01	<.01	--	--	--	--	--	--
Arsenic, total (As) ug/L	--	--	--	--	--	--	--	--	--	7
Iron, dissolved (Fe) ug/L	--	--	11	8	--	--	--	--	--	--
Manganese, dissolved (Mn) ug/L	--	--	1	<1	--	--	--	--	--	--
Chlorophyll a, phyto. (ug/L)	--	--	4.1	--	<.1	--	<.1	--	1.7	--
Chlorophyll b, phyto. (ug/L)	--	--	.1	--	--	--	--	--	--	--

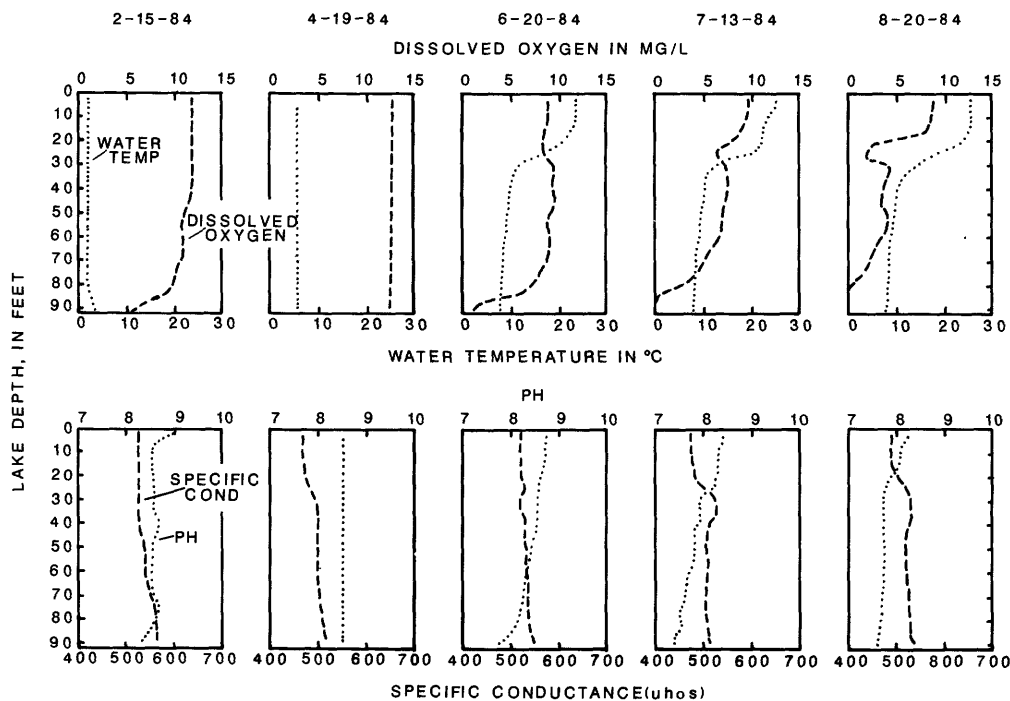


FIGURE 1. DISSOLVED OXYGEN, WATER TEMPERATURE, PH AND SPECIFIC CONDUCTANCE DEPTH PROFILES FOR OKAUCHEE LAKE AT OKAUCHEE, WIS.

ROCK RIVER BASIN

175

05425070 OCONOMOWOC RIVER AT OCONOMOWOC LAKE OUTLET-OCONOMOWOC, WI

LOCATION.--Lat 43°06'17", long 88°28'09", in NW 1/4 NE 1/4 sec. 3, T.7 N., R.17 E., Waukesha County, Hydrologic Unit 07120006, on Oconomowoc River 250 ft downstream from outlet of Oconomowoc Lake.

PERIOD OF RECORD.--January 1984 to November 1984 (discontinued).

REMARKS.--Stream flow data available at district office for portion of the year.

WATER-QUALITY DATA, JANUARY 1984 TO NOVEMBER 1984

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS NONCAR- BONATE (MG/L CAC03) (00902)	
APR , 1984													
10...	1157	9.9	507	8.8	9.5	25	1.0	12.5	800	104	240	38	
		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS RESIDUE AT 180 DEG. C DIS- SOLVED AS (MG/L) (70300)
DATE													
APR , 1984													
10...	45	31	8.5	7	.2	1.8	202	.6	32	20	2.9	287	
		SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L AS P) (70301)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	
DATE													
APR , 1984													
10...	260	.19	.010	.20	.110	.39	.50	.70	.030	14	2		
		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)				
DATE	TIME												
JAN , 1984													
25...	1340	--	--	8.3	--	--	758	--	--				
FEB													
15...	1550	61	500	8.5	2.5	13.0	758	95	--				
MAR													
14...	1050	41	511	9.1	3.0	13.3	770	98	--				
APR													
10...	1157	9.9	507	8.8	9.5	12.5	800	104	.19				
26...	0840	106	500	8.5	8.0	12.0	755	102	--				
MAY													
10...	0925	115	496	8.8	10.0	11.7	758	104	--				
24...	0905	15	510	8.7	17.0	10.8	759	112	--				
JUN													
06...	1010	97	508	8.7	21.0	9.9	757	112	.29				
20...	0945	130	502	8.7	23.5	8.4	766	99	--				
JUL													
03...	0910	134	498	8.8	24.0	8.6	755	103	.09				
19...	1245	143	460	8.6	24.5	9.9	760	119	.59				
AUG													
02...	0910	50	462	8.7	25.0	9.1	765	110	--				
16...	1215	22	478	8.5	27.0	11.2	764	140	--				
30...	0950	42	468	8.6	24.5	9.4	760	113	--				
SEP													
13...	0950	27	491	8.7	22.0	7.3	763	84	--				
26...	1900	48	498	9.2	18.5	12.1	773	127	--				
OCT													
06...	1700	--	--	--	--	--	--	--	--				
11...	0920	--	508	8.3	15.5	11.8	771	117	.18				
24...	1336	--	448	8.3	11.0	8.6	771	77	--				
NOV													
08...	1210	--	467	8.5	8.5	10.8	760	93	--				

ROCK RIVER BASIN

05425070 OCONOMOWOC RIVER AT OCONOMOWOC LAKE-OCONOMOWOC, WI--CONTINUED

WATER-QUALITY DATA, JANUARY 1984 TO NOVEMBER 1984

DATE	NITRO- GEN, NITRITE (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 (MG/L AS N) (00630)	NITRO- GEN, AMMONIA (MG/L AS N) (00610)	NITRO- GEN, ORGANIC (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC (MG/L AS N) (00625)	NITRO- GEN, (MG/L AS N) (00600)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
JAN , 1984								
25...	--	--	--	--	--	--	<.010	--
FEB								
15...	--	--	--	--	--	--	<.010	--
MAR								
14...	--	--	--	--	--	--	.050	--
APR								
10...	.010	.20	.110	.39	.50	.70	--	.030
26...	<.010	.20	.110	.39	.50	.70	--	<.010
MAY								
10...	<.010	.30	.340	3.9	4.2	4.5	--	<.010
24...	<.010	.20	.060	1.7	1.8	2.0	--	<.010
JUN								
06...	.010	.30	.050	.45	.50	.80	--	<.010
20...	<.010	.10	<.010	--	1.0	1.1	--	.020
JUL								
03...	.010	.10	.030	.97	1.0	1.1	--	.030
19...	.010	.60	.030	.47	.50	1.1	--	<.010
AUG								
02...	.010	<.10	.010	.69	.70	--	--	.010
16...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
SEP								
13...	.010	<.10	.040	.56	.60	--	--	.010
26...	.030	<.10	.050	.55	.60	--	--	<.010
OCT								
06...	.020	<.10	<.010	--	.90	--	--	--
11...	.020	.20	.060	.74	.80	1.0	--	<.010
24...	.040	.20	.200	--	.60	--	--	--
NOV								
08...	.020	.20	.340	--	1.0	--	--	<.010

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
JAN , 1984				JUL , 1984			
25...	1340	--	.010	19...	1245	143	<.010
FEB				20...	1630	135	<.010
15...	1550	61	.020	24...	1745	103	.020
MAR				27...	1630	82	<.010
14...	1050	41	.020	30...	1730	5.8	<.010
APR				AUG			
10...	1157	9.9	.010	02...	0910	50	<.010
24...	1115	106	.010	02...	1930	51	<.010
26...	0840	106	<.010	07...	1745	50	.020
27...	1400	105	.050	11...	1315	46	<.010
28...	1400	104	.050	14...	1730	45	<.010
29...	1900	105	.100	16...	1215	22	<.010
30...	1800	104	.070	17...	1700	20	<.010
MAY				20...	1730	23	.020
02...	1000	104	<.010	24...	1800	43	<.010
03...	1800	109	<.010	28...	1800	42	.020
05...	1500	112	<.010	30...	0950	42	<.010
07...	1800	114	.030	SEP			
09...	1500	115	.020	01...	1700	40	.010
10...	0925	115	<.010	04...	1715	30	<.010
11...	1200	114	.010	07...	1630	28	<.010
12...	1700	81	<.010	13...	0950	27	<.010
14...	1730	80	.010	17...	1730	28	.020
16...	1700	66	.020	19...	1600	40	.020
18...	1545	69	.040	22...	1930	48	.060
19...	1715	68	.040	24...	1745	47	<.010
21...	1730	70	.040	25...	1715	51	<.010
23...	1715	14	.030	26...	1730	48	<.010
24...	0905	15	<.010	26...	1900	48	.010
25...	1720	56	<.010	30...	1500	48	<.010
28...	1045	77	<.010	OCT			
29...	1850	92	.050	03...	1930	--	<.010
30...	1620	96	.010	06...	1700	--	<.010
JUN				09...	1730	--	.010
01...	1700	96	.020	11...	0920	--	<.010
06...	1010	97	.020	12...	1545	--	<.010
07...	1730	99	.020	18...	1800	--	.030
09...	1800	93	.030	19...	1645	--	<.010
13...	1845	80	.010	20...	1300	--	.010
17...	1600	79	.010	21...	1330	--	.010
20...	0945	130	<.010	22...	1730	--	.020
20...	1730	131	.110	23...	1730	--	.020
22...	1900	147	<.010	24...	1336	--	.010
25...	2015	148	<.010	25...	1715	--	.020
27...	1500	149	<.010	27...	1600	--	.030
30...	1400	146	.020	29...	1715	--	.020
JUL				31...	1630	--	.020
03...	0910	134	<.010	NOV			
03...	1900	116	.020	01...	1730	--	.020
07...	1945	86	.010	03...	1715	--	.010
10...	1730	127	.020	04...	1545	--	.010
13...	1645	132	.030	05...	1730	--	.020
17...	1745	145	<.010	08...	1210	--	<.010

ROCK RIVER BASIN

177

430653088294601 CENTER OF FOWLER LAKE AT OCONOMOWOC, WI

LOCATION.--Lat 43°06'54", long 88°29'45", in SE 1/4 NW 1/4 sec. 33, T.84 ,R.17 E., Waukesha County,
Hydrologic Unit 07120006, within city of Oconomowoc at center of Fowler Lake.

PERIOD OF RECORD.--January 1984 to November 1984 (discontinued).

WATER-QUALITY DATA, JANUARY 1984 TO NOVEMBER 1984

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	STAGE (FT ABOVE DATUM) (00065)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)
JAN , 1984											
25...	1300	6.00	--	482	8.3	3.0	9.7	758	72	--	--
25...	1310	51.0	--	495	7.9	3.5	.4	758	3	--	--
FEB											
15...	1520	7.00	--	533	8.1	3.0	9.9	768	73	--	--
15...	1525	48.0	--	540	7.9	3.5	.8	758	6	--	--
MAR											
14...	0954	25.0	--	523	8.1	3.5	8.8	770	66	--	--
14...	0955	3.00	--	510	8.5	3.0	12.8	770	94	--	--
14...	0958	49.0	--	595	7.5	3.5	.1	770	0	--	--
APR											
04...	1100	48.0	8.74	510	8.4	6.0	10.5	800	80	--	--
10...	1058	1.00	8.74	504	8.5	6.5	11.5	800	89	.19	.010
10...	1100	48.0	8.74	510	8.4	6.0	10.5	800	80	.27	.030
11...	1100	48.0	8.74	510	8.4	6.0	10.5	800	80	--	--
19...	1120	22.0	9.26	509	8.1	11.5	8.7	760	80	.59	.010
26...	1015	1.00	9.13	520	8.6	9.0	12.3	755	108	.19	.010
26...	1020	16.0	9.13	503	8.6	7.5	12.7	755	107	--	<.010
26...	1025	48.0	9.13	495	8.6	5.5	12.2	755	98	--	<.010
MAY											
10...	1110	3.00	9.15	495	8.6	11.0	11.5	758	105	--	<.010
10...	1115	30.0	9.15	491	8.5	9.0	10.8	758	94	--	<.010
10...	1120	48.0	9.15	493	8.2	7.5	7.0	758	59	--	<.010
24...	1140	3.00	8.68	487	8.5	19.0	9.2	759	100	--	<.010
24...	1145	20.0	8.68	496	8.4	11.0	11.1	759	101	.27	.030
24...	1150	47.0	8.68	500	8.0	8.0	5.4	759	46	.16	.040
JUN											
06...	1230	3.00	9.10	518	8.7	22.0	9.5	757	110	.19	.010
06...	1235	15.0	9.10	494	8.6	13.5	11.5	757	111	.18	.020
06...	1240	47.0	9.10	516	8.0	7.5	1.8	757	15	--	<.010
20...	1225	3.00	9.16	507	8.2	23.5	7.2	766	84	--	<.010
20...	1230	20.0	9.16	535	8.4	11.5	10.4	766	95	--	<.010
20...	1235	46.0	9.16	530	7.9	7.5	.8	766	7	--	.040
JUL											
03...	1040	3.00	9.24	500	8.4	24.5	7.7	755	93	--	<.010
03...	1045	20.0	9.24	557	8.4	12.5	9.1	755	86	--	<.010
03...	1050	47.0	9.24	526	7.7	7.5	.3	755	3	--	.010
19...	1115	3.00	9.26	468	8.3	23.5	12.7	760	150	.58	.020
19...	1125	47.0	9.26	505	7.7	7.5	.8	760	7	--	<.010
AUG											
02...	1145	3.00	8.85	478	8.6	25.5	9.6	765	117	--	<.010
02...	1150	18.0	8.85	512	8.2	16.0	8.7	765	88	--	.010
02...	1155	47.0	8.85	511	7.6	7.5	.0	765	0	--	.010
16...	1107	3.00	8.76	472	8.5	27.5	11.6	764	147	--	<.010
16...	1110	24.0	8.76	549	8.0	12.0	6.6	764	61	.08	.020
16...	1112	49.0	8.76	551	7.3	7.5	.2	764	2	--	<.010
30...	1135	3.00	8.82	446	8.6	25.5	10.7	760	131	--	<.010
30...	1140	20.0	8.82	508	8.2	16.5	8.8	760	90	--	<.010
30...	1145	47.0	8.82	511	7.6	8.0	.0	760	0	--	.010
SEP											
13...	1120	3.00	8.76	477	8.8	21.5	8.0	763	91	--	<.010
13...	1125	20.0	8.76	502	8.3	17.5	6.4	763	67	--	.010
13...	1130	47.0	8.76	538	7.5	7.5	.1	763	1	--	.010
26...	1140	3.00	8.86	478	9.0	17.5	9.6	773	99	--	<.010
26...	1145	25.0	8.86	525	7.9	13.0	2.2	773	21	--	<.010
26...	1150	47.0	8.86	550	7.5	7.5	1.5	773	12	--	<.010
OCT											
11...	1110	3.00	8.87	489	9.1	16.0	10.2	771	102	--	<.010
11...	1115	30.0	8.87	540	7.9	10.5	2.6	771	23	--	<.010
11...	1120	47.0	8.87	551	7.4	7.0	1.7	771	14	--	.010
24...	1216	3.00	--	--	--	--	--	--	--	--	<.010
24...	1218	36.0	9.08	474	7.8	9.5	3.6	771	31	--	.020
24...	1220	46.0	9.08	496	7.3	7.5	.0	771	0	--	.010
NOV											
08...	1340	5.00	9.26	474	8.2	7.0	10.2	760	84	--	--
08...	1342	25.0	9.26	477	8.2	7.0	10.1	760	84	--	<.010
08...	1346	48.0	9.26	477	8.2	7.0	10.1	760	84	--	.050

ROCK RIVER BASIN

430653088294601 CENTER OF FOWLER LAKE AT OCONOMOWOC, WI--CONTINUED

WATER-QUALITY DATA, JANUARY 1984 TO NOVEMBER 1984

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)
JAN , 1984										
25...	--	--	--	--	--	.020	.050	--	--	--
25...	--	--	--	--	--	.040	.030	--	--	--
FEB										
15...	--	--	--	--	--	<.010	<.010	--	--	--
15...	--	--	--	--	--	<.010	<.010	--	--	--
MAR										
14...	--	--	--	--	--	<.010	<.010	--	--	--
14...	--	--	--	--	--	.040	.020	--	--	--
14...	--	--	--	--	--	.020	.020	--	--	--
APR										
04...	--	--	--	--	--	<.010	--	--	--	--
10...	.20	.060	.34	.40	.60	.010	--	<.010	2.60	<.100
10...	.30	.110	.49	.60	.90	.010	--	<.010	--	--
11...	--	--	--	--	--	.230	--	--	--	--
19...	.60	.050	.45	.50	1.1	.010	--	<.010	--	--
26...	.20	.130	.67	.80	1.0	<.010	--	<.010	2.70	<.100
26...	.20	.140	.56	.70	.90	<.010	--	<.010	--	--
26...	.20	.100	.60	.70	.90	<.010	<.010	<.010	--	--
MAY										
10...	.20	.250	2.5	2.7	2.9	<.010	--	<.010	<.100	<.100
10...	.20	.440	1.7	2.1	2.3	<.010	--	<.010	--	--
10...	.20	.660	1.5	2.2	2.4	<.010	--	<.010	--	--
24...	.20	.120	.88	1.0	1.2	.080	--	.040	<.100	<.100
24...	.30	.190	.41	.60	.90	.020	--	<.010	--	--
24...	.20	.350	.25	.60	.80	.010	--	<.010	--	--
JUN										
06...	.20	.040	.86	.90	1.1	.010	--	.010	<.100	<.100
06...	.20	.030	1.5	1.5	1.7	.010	--	<.010	--	--
06...	.20	.410	.99	1.4	1.6	.020	--	<.010	--	--
20...	.10	<.010	--	.90	1.0	.020	--	<.010	<.100	<.100
20...	.20	<.010	--	1.1	1.3	<.010	<.010	<.010	--	--
20...	<.10	.490	.91	1.4	--	<.010	--	<.010	--	--
JUL										
03...	<.10	<.010	--	.40	--	<.010	--	<.010	<.100	<.100
03...	.20	.160	.54	.70	.90	.010	--	<.010	--	--
03...	<.10	.610	1.5	2.1	--	.040	--	<.010	--	--
19...	.60	.030	.37	.40	1.0	.010	--	<.010	<.100	<.100
19...	.80	.030	.87	.90	1.7	.030	--	<.010	--	--
AUG										
02...	<.10	<.010	--	.80	--	<.010	--	<.010	<.100	<.100
02...	<.10	.020	.68	.70	--	<.010	--	<.010	--	--
02...	<.10	.870	.83	1.7	--	.030	--	.020	--	--
16...	<.10	.010	.79	.80	--	<.010	--	<.010	<.100	<.100
16...	.10	.040	.66	.70	.80	<.010	--	<.010	--	--
16...	<.10	1.20	.40	1.6	--	.020	--	.020	--	--
30...	<.10	.050	.45	.50	--	<.010	--	<.010	1.10	<.100
30...	<.10	.020	.48	.50	--	.020	--	<.010	--	--
30...	<.10	1.20	.70	1.9	--	.020	--	<.010	--	--
SEP										
13...	<.10	.010	.49	.50	--	<.010	--	.010	<.100	<.100
13...	<.10	.030	.57	.60	--	<.010	--	<.010	--	--
13...	<.10	1.20	.90	2.1	--	.050	--	.060	--	--
26...	<.10	.040	.56	.60	--	.010	--	.020	<.100	<.100
26...	<.10	.040	.36	.40	--	.060	--	<.010	--	--
26...	.10	.870	.63	1.5	1.6	.040	--	<.010	--	--
OCT										
11...	<.10	.030	.87	.90	--	<.010	--	<.010	1.60	<.100
11...	<.10	.240	.56	.80	--	<.010	--	<.010	--	--
11...	<.10	1.70	1.4	3.1	--	.050	--	.060	--	--
24...	<.10	.110	1.6	1.7	--	.010	--	--	1.30	<.100
24...	<.10	.240	.56	.80	--	<.010	--	<.010	--	--
24...	<.10	1.40	.80	2.2	--	.040	--	.020	--	--
NOV										
08...	--	--	--	--	--	--	--	<.010	--	--
08...	<.10	<.010	--	.50	--	.020	--	<.010	--	--
08...	.20	.270	.43	.70	--	<.010	--	.020	--	--

ROCK RIVER BASIN

179

430653088294601 CENTER OF FOWLER LAKE AT OCONOMOWOC, WI--CONTINUED

WATER-QUALITY DATA, JANUARY 1984 TO NOVEMBER 1984

		SAM- PLING DEPTH (FEET) (00003)	STAGE (FT ABOVE DATUM) (00065)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	
APR , 1984											
10...	1058	1.00	8.74	504	8.5	6.5	20	.60	11.5	800	
10...	1100	48.0	8.74	510	8.4	6.0	30	.70	10.5	800	
		OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L AS CACO3) (90410)
APR , 1984											
10...	89	240	36	45	32	9.6	8	.3	1.9	208	
10...	80	240	36	45	32	9.4	8	.3	1.9	208	
		CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
APR , 1984											
10...	1.3	33	22	3.6	293	270	.40	.19	.010	.20	
10...	1.6	33	22	3.8	277	270	.38	.27	.030	.30	
		NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)
APR , 1984											
10...	.060	.34	.40	.60	.010	<.010	5	2	2.60	<.100	
10...	.110	.49	.60	.90	.010	<.010	5	3	--	--	

ROCK RIVER BASIN

430733088305900 LAC LA BELLE AT OCONOMOWOC, WI

LOCATION.--Lat 43°07'33", long 88°30'59", IN NW 1/4 SW 1/4 SEC.29, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Oconomowoc.

DRAINAGE AREA.--99.6 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--February to September 30, 1984.

GAGE.--Staff gage read at Lac LaBelle inlet at State Highway 67 to Aug. 23 by Lisa Conley . After Aug. 23, staff gage read by Charles Kilander III near Lac LaBelle outlet.

REMARKS.--Lake levels controlled by town of Oconomowoc, Public Works Department. The Oconomowoc River flows through the lake.

EXTREMES FOR CURRENT YEAR.--Maximum stage observed during year, 1.68 ft May 2 and July 1; minimum observed 0.76 ft Apr. 11.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---		---	---		1.68	1.18	1.36
2					---		---	1.68		1.66	---	1.37
3					---		---	---		1.64	---	1.37
4					---		---	---		1.60	---	1.38
5					---		---	---		1.48	---	1.38
6					---		---	1.48		1.40	1.38	1.38
7					---		---	1.44		1.28	1.38	1.38
8					---		---	1.38		1.16	---	1.39
9					---		---	1.36		1.30	---	1.40
10					---		---	1.34		1.44	1.40	1.43
11					---		.76	1.36		1.50	1.40	1.40
12					---		---	1.34		1.57	---	---
13					---		---	1.34		1.58	---	1.30
14					---		---	1.34		1.54	1.38	1.28
15					---		---	1.34		1.50	1.38	1.27
16					---		---	1.34		---	---	1.26
17					---		---	1.34		---	1.32	1.26
18					---		---	1.32	1.44	1.50	---	1.26
19					---		---	1.32	---	1.50	---	1.26
20					---		---	1.34	---	1.48	---	1.28
21					---		---	1.34	---	1.44	1.26	1.29
22					.93		---	1.34	---	1.42	---	1.30
23					---		---	1.32	---	1.42	1.26	1.38
24					---		---	1.32	---	1.48	1.26	1.48
25					---		---	1.38	---	1.45	1.26	1.62
26					---		---	1.38	---	---	1.28	1.58
27					---		---	1.37	---	---	1.30	1.57
28					---		---	1.46	---	1.31	1.36	1.50
29					---		---	1.50	---	1.25	1.36	1.50
30					---		---	1.50	---	1.18	1.36	1.48
31					---		---	1.50	---	1.18	---	---

2-22-84

4-11-84

6-18-84

7-12-84

8-20-84

DISSOLVED OXYGEN IN MG/L

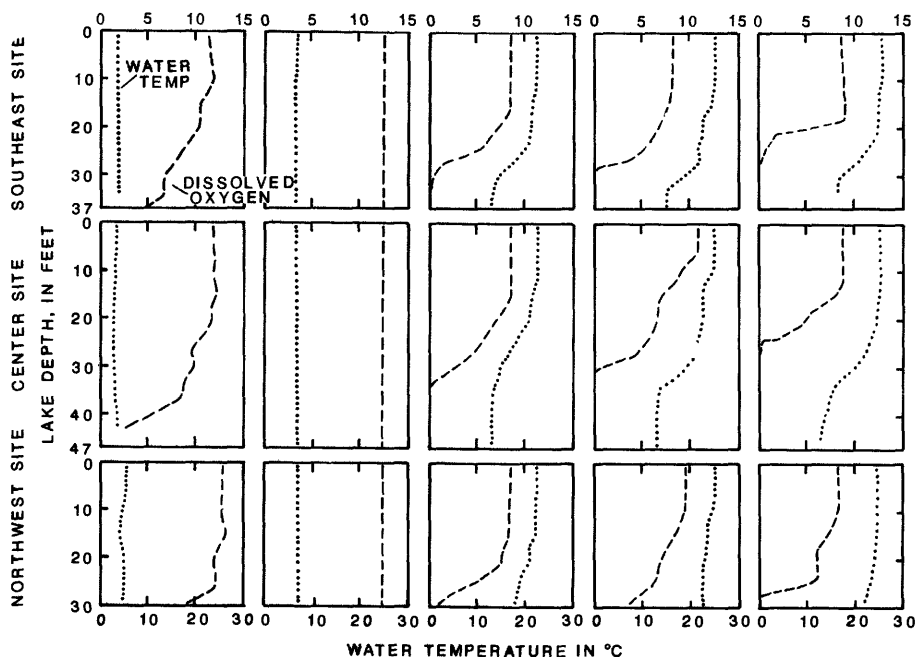


FIGURE 1. DISSOLVED OXYGEN AND WATER TEMPERATURE PROFILES FOR LAC LA BELLE.

ROCK RIVER BASIN

430733088305900 LAC LA BELLE AT OCONOMOWOC, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 22 to August 20, 1984.

REMARKS.--A detailed water-quality management plan has been developed for Lac LaBelle by Southeastern Wisconsin Regional Planning Commission; previous water-quality data are available in that report.

Complete depth profiles for specific conductance and pH available in the District Office files.

Three sites were monitored for water quality: the first site was near the center of the lake at a depth of 47 ft (station number 430733088305900); the second site was at the southeast end of the lake at a depth of 37 ft (station number 430707088301400); the third site was at the northwest end of the lake at a depth of 30 ft (station number 430809088313900).

WATER QUALITY DATA, FEBRUARY 22 TO AUGUST 20, 1984
(Milligrams per liter unless otherwise indicated)

	Feb. 22		Apr. 11		June 18		July 12		Aug. 20	
Depth of sample (ft)	3	44	3	44	3	44	3	44	3	44
Specific conductance (umhos)	520	685	505	517	473	528	448	515	482	583
pH	8.7	8.0	8.9	8.7	8.7	7.6	8.3	7.3	8.7	7.3
Water temperature (°C)	3.6	3.9	6.9	6.6	22.6	13.0	25.1	13.3	25.2	13.5
Color (Pt-Co. scale)	--	--	20	20	--	--	--	--	--	--
Turbidity (NTU)	--	--	1.5	1.4	--	--	--	--	--	--
Secchi-disc (meters)	--	--	--	3.5	--	2.0	--	1.9	--	2.3
Dissolved oxygen	11.9	3.0	12.4	12.2	8.4	0	10.7	0	8.8	0
Hardness, as CaCO ₃	--	--	240	240	--	--	--	--	--	--
Calcium, dissolved (Ca)	--	--	45	45	--	--	--	--	--	--
Magnesium, dissolved (Mg)	--	--	32	32	--	--	--	--	--	--
Sodium, dissolved (Na)	--	--	11	11	--	--	--	--	--	--
Potassium, dissolved (K)	--	--	2.1	2.0	--	--	--	--	--	--
Alkalinity as CaCO ₃	--	--	206	206	--	--	--	--	--	--
Sulfate, dissolved (SO ₄)	--	--	35	33	--	--	--	--	--	--
Chloride, dissolved (Cl)	--	--	27	25	--	--	--	--	--	--
Silica, dissolved (SiO ₂)	--	--	3.7	3.7	--	--	--	--	--	--
Solids, dissolved, at 180°C	--	--	296	274	--	--	--	--	--	--
Nitrogen, nitrate, total (as N)	--	--	.68	.68	--	--	--	--	--	--
Nitrogen, nitrite, total (as N)	--	--	.02	.02	--	--	--	--	--	--
Nitrogen, ammonia, total (as N)	--	--	.10	.12	--	--	--	--	--	--
Nitrogen, organic, total (as N)	--	--	.60	.78	--	--	--	--	--	--
Total phosphorus (as P)	--	--	<.01	<.01	.011	.019	.015	.024	<.001	.018
Phosphorus, ortho, diss (as P)	--	--	<.01	<.01	--	--	--	--	--	--
Arsenic, total (As) ug/L	--	--	--	--	--	--	--	--	--	10
Iron, dissolved (Fe) ug/L	--	--	<4	<3	--	--	--	--	--	--
Manganese, dissolved (Mn) ug/L	--	--	<1	<1	--	--	--	--	--	--
Chlorophyll a, phyto. (ug/L)	--	--	1.8	--	1.1	--	2.1	--	<.1	--
Chlorophyll b, phyto. (ug/L)	--	--	<.1	--	--	--	<.1	--	<.1	--

430809088313900 LAC LA BELLE AT OCONOMOWOC, WI

LOCATION.--Lat 43°08'09", long 88°31'39", in NW 1/4 NE 1/4 sec.30, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Oconomowoc.

PERIOD OF RECORD.--February 22 to August 20, 1984.

REMARKS.--Complete depth profiles of specific conductance and pH available.

WATER QUALITY DATA, FEBRUARY 22 TO AUGUST 20, 1984
(Milligrams per liter unless otherwise indicated)

	Feb. 22		Apr. 11		June 18		July 12		Aug. 20	
Depth of sample (ft)	3	27	3	27	3	27	3	27	3	27
Specific conductance (umhos)	524	601	510	511	472	503	455	466	475	510
pH	8.8	8.3	9.1	8.9	8.3	7.9	8.4	8.3	8.5	7.8
Water temperature (°C)	4.7	4.2	7.3	7.2	22.6	18.5	24.7	22.1	25.2	23.0
Secchi-disc (meters)	--	--	--	3.5	--	2.0	--	1.9	--	2.3
Dissolved oxygen	12.7	11.9	12.4	12.3	8.6	2.4	9.5	4.8	8.3	0.2
Total phosphorus (as P)	--	--	.10	.12	.015	.021	.014	.022	.008	.008
Chlorophyll a, phyto. (ug/L)	--	--	5.1	--	1.4	--	2.5	--	2.7	--
Chlorophyll b, phyto. (ug/L)	--	--	<0.1	--	<0.1	--	<0.1	--	<0.1	--

430707088301400 LAC LA BELLE AT OCONOMOWOC, WI

LOCATION.--Lat 43°07'07", long 88°30'14", in SE 1/4 NE 1/4 sec.32, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Oconomowoc.

PERIOD OF RECORD.--February 22 to August 20, 1984.

REMARKS.--Complete depth profiles of specific conductance and pH available.

WATER QUALITY DATA, FEBRUARY 22 TO AUGUST 20, 1984
(Milligrams per liter unless otherwise indicated)

	Feb. 22		Apr. 11		June 18		July 12		Aug. 20	
Depth of sample (ft)	3	34	3	34	3	34	3	34	3	34
Specific conductance (umhos)	526	578	502	510	477	525	447	517	480	555
pH	8.6	8.0	9.1	8.8	8.5	7.9	8.4	8.0	8.3	7.4
Water temperature (°C)	3.3	3.8	6.8	6.7	22.5	13.9	25.2	15.6	25.0	17.3
Secchi-disc (meters)	--	--	--	3.4	--	2.0	--	2.5	--	2.1
Dissolved oxygen	11.4	6.5	12.5	12.4	8.4	0.1	8.0	0	8.7	0
Total phosphorus (as P)	--	--	.01	.04	.009	.025	.018	.027	.004	.012
Chlorophyll a, phyto. (ug/L)	--	--	--	--	0.9	--	2.0	--	1.8	--
Chlorophyll b, phyto. (ug/L)	--	--	--	--	<.1	--	<.1	--	<.1	--

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 downstream from Milwaukee Street bridge, 1.1 mi downstream from Silver Creek, at Watertown.

DRAINAGE AREA.--969 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Sept. 26, 1933, nonrecording gage at site 700 ft upstream at different datum.

REMARKS.--Records good except those for winter period, 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.--47 years, (water years 1932-70, 1977-84), 449 ft³/s, 6.29 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s Mar. 31, 1979, gage height, 6.19 ft; maximum gage height, 6.32 ft Apr. 4, 1959; minimum daily discharge, 0.9 ft³/s Oct. 15, 1939, Sept. 9, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,990 ft³/s June 26, gage height, 4.02 ft; maximum gage height, 4.18 ft, Dec. 26, backwater from ice; minimum daily, 85 ft³/s Aug. 28.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 3 to Feb. 15 and Feb. 29 to Mar. 12.)

1.2	76	2.5	594
1.5	146	3.0	977
2.0	311	4.0	1,970

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	355	658	280	250	1500	986	1270	709	1860	560	104
2	147	362	618	280	260	1400	1010	1270	683	1830	453	116
3	141	342	640	280	260	1400	1040	1360	633	1790	313	154
4	133	278	660	290	250	1300	1030	1460	575	1760	226	172
5	144	237	640	300	240	1200	991	1450	507	1740	200	167
6	159	217	640	300	240	1200	973	1450	481	1740	181	158
7	183	198	640	300	240	1200	959	1430	465	1680	186	148
8	197	195	620	290	240	1100	937	1440	484	1600	199	130
9	194	204	580	290	250	1100	923	1460	527	1540	206	124
10	205	210	580	290	260	1000	915	1470	918	1610	209	132
11	232	220	560	290	270	1000	870	1460	1100	1810	200	148
12	254	230	560	290	290	1000	782	1440	1040	1760	193	196
13	279	250	560	290	500	1010	684	1460	1040	1670	183	307
14	367	260	540	290	840	847	651	1430	1060	1620	163	401
15	466	270	540	280	980	715	644	1400	1070	1590	155	446
16	490	280	480	280	1090	689	661	1330	1080	1550	149	467
17	481	300	440	280	1200	688	657	1280	1160	1520	137	472
18	463	310	430	280	1160	653	644	1240	1380	1490	122	467
19	461	320	430	280	1280	607	648	1230	1450	1480	117	411
20	449	340	430	270	1360	570	668	1180	1450	1450	112	331
21	452	360	430	260	1470	591	677	1120	1480	1420	100	290
22	468	380	430	260	1730	603	711	1070	1660	1400	107	265
23	448	437	420	250	1810	656	795	980	1920	1380	248	259
24	418	489	410	260	1710	738	869	808	1930	1350	342	257
25	427	541	410	260	1670	834	903	726	1900	1300	274	297
26	426	574	400	260	1650	885	946	783	1900	1240	164	261
27	402	629	340	260	1630	904	976	751	1940	1100	109	270
28	391	745	260	260	1600	920	977	784	1920	850	85	302
29	380	822	270	260	1500	933	1030	853	1900	710	90	262
30	370	823	270	260	---	939	1220	816	1880	632	89	232
31	370	---	280	250	---	962	---	753	---	608	93	---
TOTAL	10158	11178	15166	8570	26230	29144	25777	36954	36242	45080	5965	7746
MEAN	328	373	489	276	904	940	859	1192	1208	1454	192	258
MAX	490	823	660	300	1810	1500	1220	1470	1940	1860	560	472
MIN	133	195	260	250	240	570	644	726	465	608	85	104
CFSM	.34	.39	.51	.29	.93	.97	.89	1.23	1.25	1.50	.20	.27
IN.	.39	.43	.58	.33	1.01	1.12	.99	1.42	1.39	1.73	.23	.30
CAL YR 1983	TOTAL	231251	MEAN 634	MAX 1940	MIN 28	CFSM .65	IN 8.88					
WTR YR 1984	TOTAL	258210	MEAN 705	MAX 1940	MIN 85	CFSM .73	IN 9.91					

ROCK RIVER BASIN

183

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 downstream from Rock Creek and 9.8 mi upstream from mouth.

DRAINAGE AREA.--762 mi².

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 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.--53 years, 375 ft³/s, 6.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,140 ft³/s Apr. 6, 1959, gage height, 11.15 ft; minimum observed, 0.2 ft³/s Sept. 15, 1958, gage height, 1.11 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,250 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Feb. 24	1800	*1,890	*5.87	June 18	1300	1,510	5.01
May 6	0700	1,440	4.86				

minimum daily discharge, 60 ft³/s Sept. 8.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 3 to Feb. 22.)

1.8	58	2.5	282
1.9	81	3.0	510
2.2	171	4.0	1,030
		6.0	1,950

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	196	613	220	210	1410	586	1130	532	1160	246	92
2	121	195	623	220	210	1360	547	1260	507	1090	233	103
3	129	213	560	220	220	1270	520	1390	468	1010	219	121
4	159	192	520	230	210	1180	522	1410	411	955	205	116
5	145	171	480	230	210	1120	524	1420	340	891	183	108
6	148	164	450	240	210	1050	496	1430	302	872	188	98
7	128	152	440	240	210	934	444	1410	310	800	213	73
8	174	144	430	240	210	866	421	1400	272	708	255	60
9	156	163	410	240	210	816	425	1380	357	658	264	103
10	140	248	390	240	220	714	413	1300	625	666	262	120
11	125	232	380	240	240	578	392	1260	884	683	241	121
12	188	170	370	230	270	589	385	1210	1110	670	210	79
13	191	179	370	230	350	504	407	1170	1320	652	187	80
14	217	193	370	230	500	453	488	1110	1440	629	169	105
15	269	255	350	230	700	449	595	1060	1470	628	158	109
16	297	270	340	230	1000	508	652	1010	1460	595	159	102
17	316	243	330	230	1200	473	647	946	1430	581	155	93
18	311	249	320	230	1400	494	644	911	1490	542	149	89
19	294	256	310	230	1500	490	630	860	1490	524	141	94
20	271	250	290	230	1600	477	610	794	1470	518	128	108
21	243	299	280	220	1700	498	571	712	1430	483	112	96
22	248	361	280	220	1700	532	579	660	1410	434	114	86
23	257	358	270	220	1800	489	596	609	1430	427	119	103
24	234	395	260	220	1850	521	629	494	1410	391	107	87
25	238	438	250	220	1850	580	678	541	1390	371	92	167
26	238	454	250	220	1780	618	689	545	1350	362	86	191
27	201	449	240	220	1730	667	638	539	1380	341	80	189
28	220	437	230	220	1710	736	669	605	1340	316	97	209
29	238	481	230	210	1460	713	735	618	1300	299	104	208
30	217	503	230	210	---	665	955	604	1240	274	106	195
31	204	---	220	210	---	624	---	566	---	253	97	---
TOTAL	6462	8310	11086	7020	26460	22378	17087	30354	31368	18783	5079	3505
MEAN	208	277	358	226	912	722	570	979	1046	606	164	117
MAX	316	503	623	240	1850	1410	955	1430	1490	1160	264	209
MIN	121	144	220	210	210	449	385	494	272	253	80	60
CFSM	.27	.36	.47	.30	1.20	.95	.75	1.29	1.37	.80	.22	.15
IN.	.32	.41	.54	.34	1.29	1.09	.83	1.48	1.53	.92	.25	.17
CAL YR 1983	TOTAL	181265	MEAN	497	MAX	1720	MIN	77	CFSM	.65	IN	8.85
WTR YR 1984	TOTAL	187892	MEAN	513	MAX	1850	MIN	60	CFSM	.67	IN	9.17

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 downstream from bridge on State Highway 26, in Jefferson.

DRAINAGE AREA.--1,850 mi².

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

GAGE.--Water-stage recorder. Datum of gage 774.97 ft National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Natural Resources). Auxiliary water-stage recorder 6.9 mi downstream from base gage to provide slope data.

REMARKS.--Records good except those for August, September, and winter period, Nov. 29 to Feb. 28, Mar. 9 to 14, which are poor.

AVERAGE DISCHARGE.--6 years, 1,379 ft³/s, 10.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,300 ft³/s Apr. 1, 1979, gage height, 10.79 ft; maximum gage height, 10.84 ft Apr. 2, 1979; minimum daily discharge, 166 ft³/s July 13, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 3,400 ft³/s Feb. 22, 23 (ice affected), gage height, 6.11 ft Feb. 22, backwater from ice; maximum open-water discharge, 3,280 ft³/s June 24, 27, gage height, 5.50 ft; minimum daily discharge, 259 ft³/s Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	330	561	1200	500	460	2770	1630	2470	1730	2930	840	267
2	330	560	1200	500	500	2800	1610	2570	1570	2820	740	270
3	320	537	1200	500	480	2730	1590	2710	1460	2750	580	275
4	310	487	1200	520	470	2650	1580	2930	1350	2700	480	290
5	290	451	1200	540	450	2580	1580	2970	1170	2620	430	289
6	280	415	1100	540	450	2490	1550	2910	1000	2580	390	298
7	333	397	1100	540	450	2360	1520	2840	1030	2490	390	360
8	351	399	1100	540	450	2200	1500	2780	1070	2400	420	321
9	354	390	1000	540	460	2100	1480	2750	1100	2320	460	317
10	345	402	980	520	470	2000	1450	2700	1200	2460	480	306
11	359	398	960	520	490	1900	1430	2650	1700	2520	460	296
12	411	390	940	520	540	1800	1370	2600	1900	2550	430	330
13	433	413	940	520	720	1700	1400	2540	2200	2520	400	344
14	477	465	920	520	1100	1600	1380	2490	2300	2420	360	415
15	578	540	900	520	1500	1590	1420	2420	2520	2370	340	466
16	677	572	840	500	2000	1480	1460	2370	2520	2280	329	501
17	741	578	800	500	2400	1370	1500	2320	2540	2220	312	530
18	747	580	760	500	2600	1330	1500	2260	2820	2170	293	549
19	731	593	740	500	2900	1290	1450	2200	2870	2130	271	550
20	710	674	740	500	3100	1250	1370	2150	2830	2110	262	511
21	674	745	720	490	3300	1110	1380	2050	2770	2060	269	441
22	668	735	720	480	3400	1090	1360	1940	2850	1980	266	400
23	670	831	700	470	3400	1210	1540	1860	3200	1930	284	384
24	647	942	680	480	3300	1380	1650	1680	3260	1770	362	401
25	634	950	660	480	3200	1530	1710	1690	3240	1700	395	559
26	648	967	660	480	3100	1660	1750	1680	3220	1600	363	558
27	661	1010	600	480	3000	1710	1770	1650	3260	1500	326	480
28	652	1170	520	480	2900	1710	1830	1760	3220	1300	288	487
29	634	1200	500	480	2810	1700	1850	1920	3140	1100	277	486
30	587	1300	500	470	---	1670	2250	1930	3030	980	263	444
31	563	---	500	460	---	1640	---	1870	---	900	259	---
TOTAL	16145	19652	26580	15590	50400	56400	46860	71660	68070	66180	12019	12125
MEAN	521	655	857	503	1738	1819	1562	2312	2269	2135	388	404
MAX	747	1300	1200	540	3400	2800	2250	2970	3260	2930	840	559
MIN	280	390	500	460	450	1090	1360	1650	1000	900	259	267
CFSM	.28	.35	.46	.27	.94	.98	.84	1.25	1.23	1.15	.21	.22
IN.	.32	.40	.53	.31	1.01	1.13	.94	1.44	1.37	1.33	.24	.24
CAL YR 1983	TOTAL	435753	MEAN	1194	MAX	3550	MIN	213	CFSM	.65	IN	8.76
WTR YR 1984	TOTAL	461681	MEAN	1261	MAX	3400	MIN	259	CFSM	.68	IN	9.28

ROCK RIVER BASIN

185

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 southwest of Rome.

DRAINAGE AREA.--122 mi².

PERIOD OF RECORD.--November 1979 to September 1982. October 1982 to September 1983 (fragmentary). October 1983 to present.

GAGE.--Water-stage recorder. Altitude of gage is 810 ft, from topographic map.

REMARKS.--Records good except those for winter period and October, November and September, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 443 ft³/s Apr. 6, 1982, gage height, 2.39 ft; minimum, 12 ft³/s July 7, 8, 11, 1980, July 11, 12, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum recorded discharge, 256 ft³/s May 29, gage height, 1.86 ft; minimum, 27 ft³/s Aug. 14, gage height, 0.72 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 8-10, 17-31, Jan. 1 to Feb. 13, and Mar. 6-14.)

0.7	28	1.5	171
1.0	73	2.0	293

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	65	126	60	48	118	94	126	213	97	63	37
2	55	65	111	58	50	104	71	159	194	103	62	37
3	55	68	93	58	52	97	55	189	184	97	60	36
4	53	62	99	62	52	95	80	174	160	86	52	40
5	53	61	94	64	50	91	80	162	144	82	45	44
6	52	60	88	64	50	88	78	157	124	80	50	45
7	55	61	80	64	49	86	75	145	109	76	50	44
8	61	59	74	62	49	84	78	130	109	74	53	42
9	64	60	72	60	49	82	72	131	88	69	47	40
10	70	60	72	58	52	80	70	134	101	113	58	38
11	68	55	93	58	58	78	66	110	115	147	85	38
12	85	61	108	56	70	76	74	89	106	125	89	41
13	92	61	113	56	90	76	84	100	100	118	70	42
14	99	62	117	56	125	76	103	102	96	114	29	41
15	91	59	122	54	138	84	105	107	92	101	30	39
16	82	57	110	54	167	87	111	102	86	100	32	37
17	74	60	84	52	174	89	109	97	86	122	34	41
18	74	60	80	52	162	86	113	97	109	137	33	39
19	70	72	78	52	163	84	109	108	109	128	33	37
20	71	86	78	50	157	87	104	108	103	122	33	35
21	68	87	76	49	154	89	104	105	98	98	32	35
22	75	96	74	49	150	89	110	103	96	105	35	36
23	74	104	72	48	142	100	111	100	99	88	34	36
24	78	87	72	48	135	102	121	99	96	59	39	37
25	71	98	70	50	132	102	124	145	101	64	44	60
26	69	97	68	50	126	100	124	169	103	62	43	60
27	70	100	66	49	120	108	120	179	106	65	45	56
28	62	132	64	49	92	114	102	205	111	61	44	50
29	65	143	64	48	112	109	116	235	97	57	42	48
30	65	93	62	47	---	105	119	249	97	65	39	45
31	64	---	60	47	---	102	---	228	---	66	36	---
TOTAL	2143	2291	2640	1684	2968	2868	2882	4344	3432	2881	1441	1256
MEAN	69.1	76.4	85.2	54.3	102	92.5	96.1	140	114	92.9	46.5	41.9
MAX	99	143	126	64	174	118	124	249	213	147	89	60
MIN	52	55	60	47	48	76	55	89	86	57	29	35
CFSM	.57	.63	.70	.45	.84	.76	.79	1.15	.93	.76	.38	.34
IN.	.65	.70	.80	.51	.90	.87	.88	1.32	1.05	.88	.44	.38

WTR YR 1984 TOTAL 30830 MEAN 84.2 MAX 249 MIN 29 CFSM .69 IN 9.40

NOTE: No gage-height record Aug. 28 to Sept. 30.

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 upstream from bridge on County Trunk Highways F and M, 250 ft upstream from dam in Indianford, and 1.8 mi upstream from Yahara River.

DRAINAGE AREA.--2,630 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for period March through July, which are fair to poor. Natural flow of stream affected by dam in Indianford. Discharge is adjusted for flow through wicket gates.

AVERAGE DISCHARGE.--9 years, 1,702 ft³/s, 8.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft³/s Apr. 5, 1979, gage height, 16.23 ft; minimum daily, 69 ft³/s May 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,920 ft³/s Feb. 27, gage height, 13.60 ft; maximum gage height, 13.83 ft, Feb. 21; minimum daily discharge, 223 ft³/s Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	637	785	1420	1310	753	4510	2640	3040	3220	4090	1880	396
2	566	796	1490	1300	734	4430	2160	3510	3180	4010	1830	386
3	555	995	1540	1230	732	4320	1760	3730	3100	3960	1690	425
4	610	819	1610	1240	777	4240	2360	3750	2990	3960	1570	396
5	525	744	1680	1220	796	4060	2800	3850	2770	3870	1430	408
6	545	759	1700	1200	761	4030	2710	4040	2600	3830	1350	372
7	500	755	1640	1160	770	3940	2620	3890	2570	3750	1340	223
8	652	741	1680	1140	767	3810	2590	3960	2250	3640	1390	287
9	602	709	1730	1150	783	3610	2440	4080	2510	3610	1340	360
10	543	925	1710	1090	788	3410	2330	4090	2410	3750	1210	408
11	489	711	1760	1060	804	3330	2440	4010	2690	3820	1030	431
12	565	606	1770	1080	836	3250	2480	4010	2660	3730	955	351
13	567	566	1810	1080	950	3120	2380	4070	2920	3680	869	425
14	513	596	1870	1050	1200	3000	2490	3940	3120	3590	737	462
15	646	682	1900	1000	1500	2970	2590	3900	3170	3520	707	467
16	636	691	1930	970	1850	2970	2660	3780	3210	3460	525	468
17	749	682	1900	958	2150	2890	2490	3620	3220	3300	297	458
18	813	634	1810	933	2430	2760	2480	3570	3720	3300	322	648
19	886	677	1760	903	2690	2720	2440	3540	3860	3120	360	766
20	887	496	1750	875	2890	2640	2440	3470	3940	3070	320	793
21	878	680	1760	857	2960	2550	2640	3360	3960	2980	282	804
22	926	843	1610	843	3610	2510	2690	3270	3950	2810	347	693
23	906	662	1560	837	4450	2260	2450	3160	3990	2700	370	718
24	827	696	1510	797	4610	2200	2480	2930	3960	2690	359	647
25	803	934	1490	814	4700	2290	2630	3080	4080	2560	362	814
26	819	1110	1460	811	4760	2350	2670	3130	3990	2430	349	1420
27	723	1340	1450	783	4830	2470	2620	3150	4050	2370	348	1520
28	726	1210	1440	751	4820	2600	2510	3400	4150	2270	400	1410
29	824	1030	1380	765	4600	2550	2970	3260	4200	2140	413	1380
30	801	1270	1350	766	---	2590	2220	3230	4160	1990	391	1300
31	797	---	1320	750	---	2650	---	3190	---	1870	364	---
TOTAL	21516	24144	50790	30723	64301	97030	75180	111010	100600	99870	25137	19636
MEAN	694	805	1638	991	2217	3130	2506	3581	3353	3222	811	655
MAX	926	1340	1930	1310	4830	4510	2970	4090	4200	4090	1880	1520
MIN	489	496	1320	750	732	2200	1760	2930	2250	1870	282	223
CFSM	.26	.31	.62	.38	.84	1.19	.95	1.36	1.28	1.23	.31	.25
IN.	.30	.34	.72	.43	.91	1.37	1.06	1.57	1.42	1.41	.36	.28
CAL YR 1983	TOTAL	655761	MEAN	1797	MAX	5400	MIN	265	CFSM	.68	IN	9.28
WTR YR 1984	TOTAL	719937	MEAN	1967	MAX	4830	MIN	223	CFSM	.75	IN	10.18

ROCK RIVER BASIN

187

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 upstream from Lake Mendota, at Middleton.

DRAINAGE AREA.--18.3 mi², of which 1.22 mi² is noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder, parshall flume, and concrete control. Datum of gage is 901.5 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for October, August, and September, which are fair.

AVERAGE DISCHARGE.--10 years, 4.00 ft³/s, 2.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 516 ft³/s Mar. 21, 1975, gage height, 7.54 ft; maximum gage height, 8.54 ft Mar. 12, 1976; minimum discharge, 0.29 ft³/s Jan. 26, 1978, gage height, 3.56 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
Apr. 30	0345	147	6.14	June 22	1330	175	6.36
June 10	0200	*398	*7.78	July 10	0515	115	5.87

minimum discharge, 0.81 ft³/s Sept. 8, gage height, 3.79 ft, but may have been lower Sept. 14-23 during period of no gage-height record.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by debris in flume Mar. 18 and 19.)

Oct. 1 to Nov. 6				Nov. 7 to Sept. 30			
3.8	.94	4.4	3.8	3.8	.84	4.5	5.3
4.0	1.6	4.5	5.3	4.0	1.4	4.6	9.6
4.2	2.4	4.6	9.6	4.2	2.2	5.0	33
				4.3	2.8	5.5	76
				4.4	3.7	6.0	130

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.4	3.0	1.4	1.1	2.0	1.9	11	2.1	2.2	1.2	1.3
2	1.1	1.5	2.7	1.4	1.1	1.8	1.9	5.4	2.0	2.1	1.2	.97
3	2.3	1.3	2.3	1.4	1.1	1.7	1.9	25	1.9	2.1	1.2	1.0
4	1.6	1.3	2.2	1.4	1.1	1.7	1.9	17	1.8	1.9	1.2	1.1
5	1.3	1.3	2.0	1.4	1.1	1.7	1.9	7.3	2.1	2.0	1.2	.96
6	1.3	1.2	1.9	1.4	.98	1.5	1.8	4.5	2.4	2.0	1.2	.87
7	1.3	1.2	1.8	1.4	1.0	1.5	1.8	3.7	2.0	1.8	1.2	.90
8	1.5	1.2	1.7	1.3	1.0	1.4	1.7	3.3	18	1.7	3.8	.93
9	1.3	1.4	1.7	1.3	1.1	1.4	1.7	2.9	47	1.9	1.4	.95
10	1.3	3.0	1.6	1.2	1.1	1.3	1.7	2.7	127	45	1.2	1.1
11	1.4	1.8	3.1	1.2	1.2	1.2	1.7	2.6	16	11	1.2	1.1
12	7.9	1.5	3.8	1.2	4.4	1.2	4.2	2.4	5.5	3.0	1.2	1.0
13	2.9	1.4	3.1	1.2	21	1.2	3.3	3.2	4.9	2.4	1.2	1.0
14	2.4	1.6	2.9	1.2	15	1.2	3.4	2.3	3.5	2.1	1.2	.96
15	2.1	1.6	2.7	1.1	13	3.8	3.9	2.1	3.0	2.3	1.2	.96
16	1.9	1.5	2.4	1.2	9.8	2.7	3.3	2.0	2.7	1.8	1.2	.94
17	2.4	1.4	2.1	1.1	8.4	1.5	2.9	1.9	17	2.0	1.2	.94
18	1.5	1.4	1.9	1.1	9.3	1.5	2.5	1.9	24	1.8	1.2	.92
19	1.5	3.6	1.7	1.0	19	1.5	2.3	1.9	4.0	1.8	1.2	.90
20	1.5	5.4	1.8	.97	9.0	2.2	2.1	1.9	3.1	1.8	1.2	.94
21	1.5	3.5	1.9	.93	5.2	5.6	2.0	1.8	2.7	1.6	1.1	.90
22	1.5	2.6	1.8	.99	4.7	6.3	2.8	1.8	57	1.6	1.0	1.0
23	2.5	3.6	1.6	1.0	4.5	18	6.4	1.8	13	1.5	.90	.92
24	1.9	3.4	1.2	1.1	4.1	6.8	9.5	1.7	4.7	1.5	.94	4.0
25	1.7	2.5	1.0	1.2	3.1	3.4	6.0	8.1	3.4	1.5	.95	8.0
26	1.7	2.1	1.3	1.1	2.7	2.8	4.5	2.8	4.6	1.5	.95	2.2
27	1.6	2.5	1.6	1.1	2.5	2.7	4.2	2.3	27	1.5	.96	1.7
28	1.6	15	1.6	1.1	2.2	2.5	3.6	3.7	3.2	1.3	.93	1.7
29	1.5	6.6	1.4	1.1	2.1	2.3	10	3.0	2.7	1.2	.95	1.5
30	1.4	3.7	1.4	1.1	---	2.1	53	2.4	2.4	1.2	.90	1.5
31	1.3	---	1.4	1.1	---	2.0	---	2.2	---	1.2	.87	---
TOTAL	57.8	81.5	62.6	36.69	151.88	88.5	149.8	136.6	410.7	108.3	37.25	43.16
MEAN	1.86	2.72	2.02	1.18	5.24	2.85	4.99	4.41	13.7	3.49	1.20	1.44
MAX	7.9	15	3.8	1.4	21	18	53	25	127	45	3.8	8.0
MIN	1.1	1.2	1.0	.93	.98	1.2	1.7	1.8	1.8	1.2	.87	.87
CFSM	.10	.15	.11	.06	.29	.16	.27	.24	.75	.19	.07	.08
IN.	.12	.17	.13	.07	.31	.18	.30	.28	.83	.22	.08	.09
CAL YR 1983	TOTAL	1011.77	MEAN	2.77	MAX	47	MIN	.67	CFSM	.15	IN	2.06
WTR YR 1984	TOTAL	1364.78	MEAN	3.73	MAX	127	MIN	.87	CFSM	.20	IN	2.77

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: October 1977 to current year.

INSTRUMENTATION.--Automatic pumping sampler since December 1977.

REMARKS.--Sediment records are fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,710 mg/l June 10, 1984; minimum daily mean, 4 mg/l Mar. 12, 1979. Maximum observed 15,400 mg/l Apr. 30, 1984; minimum observed, 4 mg/l Mar. 12, 1979.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,870 tons June 10, 1984; minimum daily, 0.02 ton on several days.

EXTREMES FOR 1982 WATER YEAR:

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,710 mg/l Mar. 16; minimum daily mean, 9 mg/l on several days. Maximum observed 5,540 mg/l Mar. 16; minimum observed 99 mg/l Apr. 2.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily 1,090 tons Mar. 16; minimum daily, 0.02 ton on several days.

EXTREMES FOR 1983 WATER YEAR:

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,260 mg/l Dec. 2; minimum daily mean, 9 mg/l on several days. Maximum observed, 2,490 mg/l Dec. 2; minimum observed, 22 mg/l Sept. 16.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 184 tons Dec. 2; minimum daily, 0.02 ton on several days.

EXTREMES FOR 1984 WATER YEAR:

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,710 mg/l June 10; minimum daily mean, 9 mg/l on many days. Maximum observed, 15,400 mg/l Apr. 30; minimum observed, 10 mg/l May 1.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,870 tons June 10; minimum daily 0.02 ton Feb. 6-8.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, NO2+N03 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)
FEB , 1984									
12...	1800	5.3	3.1	3.20	2.2	5.4	8.5	3.50	2.90
13...	0215	3.2	4.4	2.10	1.1	3.2	7.6	1.90	1.60
13...	1000	15	9.0	1.10	2.0	3.1	12	.880	.720
13...	1500	21	9.6	.860	1.7	2.6	12	.660	.530
14...	1200	10	13	1.40	2.3	3.7	17	.980	.770
14...	1830	19	15	1.10	2.6	3.7	19	.800	.610
16...	1430	8.7	18	.790	1.7	2.5	21	.550	.370
APR									
18...	1500	2.5	--	--	--	--	--	.650	--
18...	1515	2.5	--	--	--	--	--	.100	--
29...	1700	5.7	9.1	.770	1.3	2.1	11	.790	.450
29...	1830	22	2.6	4.80	6.2	11	14	7.40	5.50
29...	2030	19	3.9	1.90	3.7	5.6	9.5	4.80	3.40
29...	2330	52	4.4	1.30	3.7	5.0	9.4	5.90	3.60
30...	0200	96	2.6	1.10	13	14	17	3.20	.410
30...	0330	143	3.2	1.10	25	26	29	4.60	.690
30...	0600	97	9.1	2.00	7.5	9.5	19	3.50	.910
30...	0830	55	9.9	.950	7.1	8.0	18	2.30	.880
30...	0843	52	9.7	1.00	6.0	7.0	17	3.00	.890
30...	2100	19	13	.500	4.1	4.6	18	1.40	.720
MAY									
01...	1030	11	15	.460	2.0	2.5	18	.670	.400

ROCK RIVER BASIN

189

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
FEB , 1984					JUN , 1984				
12...	1815	8.3	54	1.2	08...	0200	25	597	40
12...	1945	9.6	39	1.0	08...	0215	53	1140	163
12...	2345	13	38	1.3	08...	0245	58	4690	734
13...	0145	19	34	1.7	08...	0615	37	531	53
13...	0615	19	45	2.3	08...	1030	20	1070	58
13...	1015	15	32	1.3	09...	1930	30	273	22
13...	1445	20	40	2.2	11...	0400	22	116	6.9
14...	0853	11	25	.74	11...	0930	19	83	4.3
14...	1130	10	17	.46	17...	1945	20	372	20
14...	1800	19	41	2.1	17...	2000	45	772	94
14...	2200	17	32	1.5	17...	2200	79	8930	1900
16...	1430	8.7	17	.40	17...	2330	97	8210	2150
APR					18...	0230	54	2300	335
29...	1615	3.6	133	1.3	18...	0900	24	811	53
29...	1730	14	236	8.9	22...	1115	23	548	34
29...	1800	22	244	14	22...	1130	52	198	28
29...	2000	19	297	15	22...	1230	158	6210	2650
29...	2100	22	824	49	22...	1400	168	6520	2960
29...	2200	32	793	69	22...	1500	148	4340	1730
29...	2300	41	2430	269	22...	1600	153	4410	1820
29...	2400	65	1420	249	22...	1830	99	2870	767
30...	0130	78	8930	1880	23...	0030	28	716	54
30...	0230	119	15400	4950	26...	1130	2.8	39	.29
30...	0300	137	13800	5100	JUL				
30...	0400	144	8800	3420	09...	2345	4.2	380	4.3
30...	0530	110	4750	1410	10...	0015	37	1410	141
30...	0700	76	2770	568	10...	0115	74	3720	743
30...	0830	55	876	130	10...	0245	83	6790	1520
30...	0831	55	2250	334	10...	0415	111	5170	1550
30...	1300	32	967	84	10...	0515	115	3480	1080
30...	1315	32	804	69	10...	0815	40	1880	203
30...	1700	25	647	44	10...	0820	38	1670	171
30...	2000	21	518	29	10...	1900	12	566	18
MAY					10...	2015	60	6020	975
01...	1030	11	12	.36	10...	2115	51	5550	765
01...	1031	11	10	.30	10...	2315	64	3800	656
					11...	0345	19	1040	53

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)	
OCTOBER												
1	36	.23	16	.07	33	1.0	18	.06	11	.03	24	.20
2	35	.18	16	.07	33	.80	17	.06	11	.03	23	.18
3	34	.16	16	.07	32	.27	17	.06	11	.03	23	.14
4	33	.18	16	.07	31	.23	17	.04	11	.03	22	.13
5	33	.16	15	.06	30	.19	16	.04	10	.03	22	.12
6	32	.16	15	.06	30	.18	16	.06	10	.03	21	.11
7	31	.14	15	.06	29	.19	16	.06	10	.03	21	.10
8	31	.13	15	.06	29	.22	16	.05	10	.03	20	.10
9	30	.13	15	.06	28	.18	15	.04	10	.03	20	.08
10	29	.13	14	.06	27	.15	15	.03	10	.02	19	.08
11	29	.12	14	.06	27	.13	15	.04	10	.02	19	.09
12	28	.11	14	.05	26	.12	15	.04	10	.02	114	40
13	27	.11	14	.05	26	.12	14	.03	9	.02	827	510
14	48	1.1	14	.05	25	.11	14	.03	9	.02	154	18
15	34	.41	15	.30	25	.12	14	.04	9	.02	59	2.6
16	30	.25	22	.50	24	.10	14	.04	9	.03	1710	1090
17	49	.75	26	.10	24	.09	13	.03	10	.03	201	14
18	47	.88	25	.10	23	.07	13	.04	12	.04	59	1.1
19	26	.24	24	.10	23	.07	13	.04	15	.05	45	.60
20	24	.19	23	.09	22	.07	13	.04	21	.11	229	36
21	22	.15	22	.08	22	.07	13	.04	29	.20	95	5.5
22	20	.13	21	.07	21	.07	13	.04	33	.30	43	.48
23	19	.11	20	.07	21	.07	12	.04	82	3.8	41	.42
24	18	.10	19	.08	21	.07	12	.04	35	.90	40	.40
25	18	.10	18	.07	20	.06	12	.04	27	.40	38	.33
26	17	.09	100	5.4	20	.07	12	.03	26	.30	36	.27
27	17	.08	59	1.1	19	.06	12	.03	25	.25	35	.23
28	17	.08	36	.34	19	.06	12	.03	25	.22	33	.21
29	17	.08	35	.27	19	.06	11	.03	---	---	32	.20
30	17	.08	34	.24	18	.06	11	.03	---	---	30	.30
31	16	.07	---	---	18	.06	11	.03	---	---	29	.26
TOTAL	---	6.83	---	9.76	---	5.12	---	1.25	---	7.02	---	1722.23
APRIL												
1	28	.22	20	.10	21	.13	28	.13	18	.05	55	.83
2	60	1.4	19	.09	20	.11	27	.12	18	.05	35	.25
3	1400	576	19	.09	20	.10	26	.12	18	.05	34	.18
4	118	3.5	18	.08	20	.09	26	.11	17	.07	33	.16
5	36	.44	70	2.5	20	.09	26	.10	17	.05	---	.14
6	35	.38	55	1.5	20	.09	25	.20	17	.06	---	.12
7	34	.33	27	.27	19	.90	25	.50	17	.06	---	.11
8	33	.31	27	.22	19	.40	25	.10	16	.05	29	.13
9	32	.45	26	.19	19	.16	24	.09	16	.05	28	.08
10	32	.80	26	.18	19	.18	24	.30	16	.04	27	.08
11	31	2.0	26	.17	19	.18	24	.70	16	.04	26	.08
12	30	1.5	25	.16	18	.18	23	.20	16	.04	25	.07
13	30	.50	25	.15	18	.18	23	.10	15	.03	24	.07
14	29	.29	25	.14	19	.20	23	.09	15	.03	24	.07
15	28	.26	25	.13	56	2.1	22	.08	15	.03	23	.40
16	28	.26	24	.17	27	.24	22	.08	15	.03	22	.10
17	27	.25	24	.15	26	.17	22	.08	15	.03	21	.12
18	26	.21	24	.15	25	.20	22	.08	14	.03	21	.07
19	26	.21	24	.14	---	.16	21	.07	14	.03	20	.06
20	25	.20	23	.13	---	.14	21	.06	14	.03	19	.05
21	25	.18	23	.14	---	.12	21	.60	14	.03	19	.05
22	24	.16	23	.13	---	.10	21	1.5	14	.03	18	.05
23	24	.16	23	.12	---	.09	20	.35	14	.04	17	.04
24	23	.13	22	.12	---	.08	20	.15	14	1.0	17	.04
25	22	.13	22	.11	20	.11	20	.06	15	.30	16	.04
26	22	.14	22	.12	20	.12	19	.06	16	.15	16	.04
27	21	.12	22	.14	19	.08	19	.06	16	.05	15	.04
28	21	.11	22	.12	18	.08	19	.06	17	.06	15	.03
29	20	.10	21	.50	241	9.6	19	.06	194	9.2	14	.03
30	20	.10	21	.70	33	.19	18	.06	113	2.3	14	.03
31	---	---	21	.35	---	---	18	.75	27	.18	---	---
TOTAL	---	590.84	---	9.26	---	16.57	---	6.32	---	14.19	---	3.56
TOTAL LOAD FOR YEAR:		2392.95 TONS.										

191

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	33	.85	20	.12	14	.09	12	.08	10	.02	16	.05
2	97	6.7	20	.16	14	.08	12	.05	10	.02	14	.04
3	49	2.9	20	.12	14	.08	12	.05	10	.02	12	.03
4	24	.70	20	.11	13	.07	12	.09	10	.02	11	.03
5	24	.34	20	.11	13	.07	12	.05	10	.02	24	.14
6	24	.32	20	.30	13	.07	12	.04	10	.03	73	2.4
7	24	.28	20	.80	13	.06	11	.04	10	.02	29	.16
8	24	.24	20	.40	13	.06	11	.04	10	.02	27	.11
9	23	.28	19	.13	13	.06	11	.04	10	.02	24	.08
10	23	.30	19	.12	13	.05	11	.04	10	.02	22	.08
11	23	.24	19	.11	13	.05	11	.03	10	.02	20	.07
12	23	.23	19	.11	13	.05	11	.03	10	.02	18	.06
13	23	1.0	19	.12	13	.05	11	.03	10	.02	16	.05
14	23	.70	19	.11	13	.05	11	.03	9	.02	15	.04
15	23	.23	19	.10	13	.05	11	.03	9	.02	18	.10
16	22	.20	19	.10	13	.05	11	.03	9	.02	20	.10
17	22	.18	19	.10	13	.05	11	.03	9	.03	19	.08
18	22	.17	18	.10	13	.05	11	.03	9	.10	19	.08
19	22	.16	18	.15	13	.05	11	.03	9	.02	18	.07
20	22	.16	18	.12	12	.05	11	.05	9	.02	18	.08
21	22	.15	18	.11	12	.04	11	.03	9	.03	17	.07
22	22	.15	50	1.2	12	.04	11	.03	9	.02	17	.06
23	21	.14	18	.15	12	.04	11	.03	9	.02	16	.05
24	21	.13	17	.13	12	.04	11	.03	9	.02	16	.05
25	21	.13	17	.12	12	.04	10	.02	37	.51	16	.07
26	21	.13	17	.11	12	.04	10	.02	55	1.1	15	.05
27	21	.13	16	.10	12	.07	10	.02	95	4.3	15	.05
28	21	.12	16	.11	12	.06	10	.02	29	.19	14	.04
29	21	.12	15	.13	12	.04	10	.03	25	.11	14	.04
30	21	.12	15	.10	12	.06	10	.03	22	.08	14	.04
31	---	---	15	.11	---	---	10	.02	19	.06	---	---
TOTAL	---	17.50	---	5.86	---	1.66	---	1.12	---	7.21	---	4.37

TOTAL LOAD FOR YEAR: 426.16 TONS.

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN CONCENTRATION	LOADS	MEAN CONCENTRATION	LOADS	MEAN CONCENTRATION	LOADS	MEAN CONCENTRATION	LOADS	MEAN CONCENTRATION	LOADS	MEAN CONCENTRATION	LOADS
	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13	.04	---	.05	25	.21	19	.07	---	.03	12	.06
2	13	.04	---	.05	24	.17	19	.07	---	.03	12	.06
3	13	.08	---	.05	22	.14	18	.07	---	.03	11	.05
4	13	.06	---	.05	21	.12	18	.07	---	.03	11	.05
5	13	.05	---	.05	20	.11	18	.07	---	.03	11	.05
6	13	.05	---	.04	18	.10	17	.07	---	.02	11	.05
7	13	.04	13	.04	17	.08	17	.06	---	.02	11	.04
8	13	.05	13	.04	16	.07	17	.06	---	.02	11	.04
9	13	.05	13	.05	15	.07	16	.06	9	.03	10	.04
10	13	.04	13	.20	14	.06	16	.05	9	.03	10	.04
11	13	.05	13	.10	15	.35	16	.05	11	.04	10	.03
12	---	1.0	13	.05	22	.50	16	.05	24	.37	10	.03
13	---	.20	13	.05	27	.30	15	.05	42	2.5	10	.03
14	---	.14	13	.05	26	.20	15	.05	28	1.2	10	.03
15	---	.09	---	.06	26	.19	15	.05	26	.91	10	2.0
16	---	.07	---	.05	25	.16	14	.05	19	.52	9	.80
17	---	.15	13	.05	25	.14	14	.04	12	.28	9	.04
18	---	.05	13	.05	24	.13	14	.04	15	.50	9	.04
19	---	.05	14	.13	24	.11	14	.04	31	1.6	9	.04
20	---	.05	15	.60	24	.11	13	.03	15	.37	21	.15
21	---	.05	16	.25	23	.12	13	.03	13	.18	44	.79
22	---	.05	17	.15	23	.11	13	.03	13	.17	74	2.6
23	---	.15	18	.30	22	.09	13	.04	13	.16	342	31
24	---	.07	18	.25	22	.07	---	.04	13	.15	74	2.0
25	---	.06	18	.12	22	.06	---	.04	13	.11	31	.29
26	---	.06	18	.10	21	.07	---	.04	12	.09	26	.20
27	---	.06	18	.12	21	.09	---	.04	12	.08	25	.18
28	---	.06	20	2.0	20	.09	---	.03	12	.07	23	.15
29	---	.05	---	.75	20	.08	---	.03	12	.07	22	.13
30	---	.05	26	.27	20	.08	---	.03	---	---	20	.12
31	---	.05	---	---	19	.07	---	.03	---	---	19	.10
TOTAL	---	3.06	---	6.12	---	4.25	---	1.48	---	9.64	---	41.23

[illegible]

ROCK RIVER BASIN

193

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.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records are good except those for winter periods and flow less than 0.3 ft³/s, which are poor.

AVERAGE DISCHARGE.--8 years (1977-84), 1.41 ft³/s, 5.82 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 706 ft³/s Aug. 31, 1981, gage height, 4.04 ft; no flow many days during period of record.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 650 ft³/s June 9, gage height, 3.90 ft; no flow on many days during current year.

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	34
0.8	6.7	1.3	42

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.3	.00	.00	.00	.00	.00	.36	.00	.00	.00	1.8
2	.00	.02	.01	.00	.08	.04	.00	1.6	.00	.01	.00	.02
3	5.2	.00	.00	.00	.02	.02	.00	15	.00	1.1	.00	.00
4	.01	.00	.03	.00	.00	.02	.00	.56	.00	.06	.00	.06
5	.00	.00	.11	.05	.00	.28	.00	.07	.00	.00	.00	.00
6	.00	.00	.07	.11	.00	.13	.00	.06	7.4	.00	.02	.10
7	.44	.00	.00	.04	.00	.35	.00	.12	.49	.00	2.6	.00
8	.25	.00	.00	.00	.00	.11	.00	.00	15	.00	17	.40
9	.00	.83	.00	.00	.22	.02	.00	.00	28	7.1	.00	.02
10	.00	6.9	.00	.00	.26	.00	.00	.04	23	40	.00	.30
11	18	.02	5.4	.00	1.0	.00	.00	.00	.19	1.0	.00	.01
12	13	.00	.69	.00	16	.00	8.3	.02	.07	.01	.00	.00
13	.11	.00	.17	.00	8.6	.13	1.6	4.2	3.3	.00	.00	.00
14	.00	.66	.14	.00	1.3	.07	.42	.02	.05	.81	.00	.00
15	.00	.23	.14	.00	1.0	16	1.3	.00	.00	2.0	.00	.00
16	.00	.00	.08	.00	.33	.46	.11	.00	.04	1.4	.05	.00
17	.06	.01	.00	.00	.25	.00	.04	.02	22	.55	1.7	.00
18	.06	.00	.00	.00	5.5	.26	.00	.00	11	.00	.01	.00
19	.13	6.5	.00	.00	3.0	.19	.00	.00	.08	.00	.00	.00
20	.72	3.1	.00	.00	.12	3.3	.00	.00	.02	.00	.00	.00
21	.02	.02	.00	.00	.04	1.6	.00	.00	.00	.00	.47	.00
22	1.8	.00	.00	.00	.13	3.8	4.3	.00	20	.00	.31	.10
23	.26	4.4	.00	.00	.11	2.4	6.6	.00	.24	.00	.00	.05
24	.08	.22	.00	.00	.02	.40	1.9	.42	.03	.00	.00	5.0
25	.48	.01	.00	.00	.00	.07	.19	15	.00	.00	.00	20
26	.00	.00	.00	.00	.00	.08	.09	.09	9.1	.83	.00	.06
27	.00	6.6	.00	.00	.20	.06	.07	.13	10	.13	.00	.00
28	.00	11	.00	.00	.06	.06	.01	5.3	.02	.00	.00	.06
29	.00	.25	.00	.00	.04	.06	22	.23	.00	.00	.00	.00
30	.00	.02	.00	.00	---	.05	8.8	.08	.00	.00	.74	.00
31	.03	---	.00	.00	---	.00	---	.00	---	.01	.02	---
TOTAL	40.65	42.09	6.84	.20	38.28	29.96	55.73	43.32	150.03	55.01	22.92	27.98
MEAN	1.31	1.40	.22	.006	1.32	.97	1.86	1.40	5.00	1.77	.74	.93
MAX	18	11	5.4	.11	16	16	22	15	28	40	17	20
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CFSM	.40	.43	.07	.002	.40	.30	.57	.43	1.52	.54	.23	.28
IN.	.46	.48	.08	.00	.43	.34	.63	.49	1.70	.62	.26	.32

CAL YR 1983 TOTAL 360.47 MEAN .99 MAX 22 MIN .00 CFSM .30 IN 4.07
WTR YR 1984 TOTAL 513.01 MEAN 1.40 MAX 40 MIN .00 CFSM .43 IN 5.80

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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
MAY , 1984				
03...	0840	16	189	8.2
03...	0940	42	380	43
03...	1040	49	303	40
03...	1140	64	262	45
03...	1310	38	168	17
03...	1640	9.2	87	2.2
JUN				
06...	1705	18	1110	54
06...	1735	91	1190	292
06...	1835	43	676	78
06...	1905	30	326	26
06...	2005	11	263	7.8
08...	0110	12	331	11
08...	0140	146	1010	398
08...	0210	134	1030	373
08...	0310	56	2670	404
08...	0710	9.1	947	23
09...	1800	9.6	382	9.9
09...	1830	33	383	34
09...	1930	149	685	276
09...	2000	85	1520	349
09...	2030	180	1810	880
09...	2200	141	1440	548
10...	0030	63	948	161
10...	0130	98	761	201
10...	0730	38	539	55
17...	0500	50	1770	239
17...	1105	11	181	5.4
17...	1915	58	495	78
17...	1945	250	124	84
17...	2045	74	2450	490
18...	0045	38	710	73
18...	0245	60	349	57
18...	0445	20	578	31
26...	2205	66	393	70
26...	2220	124	1260	422
26...	2235	161	1170	509
26...	2320	77	2110	439
27...	0005	55	3230	480
JUL				
09...	2305	42	610	69
09...	2320	126	878	299
09...	2335	248	986	660
10...	0005	144	571	222
10...	0035	176	1060	504
10...	0120	87	853	200
10...	0800	35	699	66
10...	0810	35	567	54
10...	1010	31	570	48
10...	1820	17	366	17
10...	1835	103	954	265
10...	1850	119	962	309
10...	1920	85	1200	275
10...	2050	49	1320	175
11...	0005	12	992	32

ROCK RIVER BASIN

195

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. Area of Lake Mendota, 15.2 mi².

PERIOD OF RECORD.--December 1902 to May 1903, January 1916 to current year (incompleta).

REVISED RECORDS.--WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft National Geodetic Vertical Datum of 1929, or 5.60 ft below city of Madison datum. Prior to Oct. 1, 1979, at datum 7.82 ft 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 Apr. 5, 1959; minimum observed, 8.02 ft Feb. 24 to Mar. 10, 1920, current datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 11.28 ft June 27; minimum, 8.90 ft Apr. 1, 2.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.82	9.95	9.66	---	9.37	9.45	8.92	9.68	10.13	11.12	10.55	9.98
2	9.81	9.94	9.65	---	9.37	9.42	8.92	9.70	10.13	11.10	10.53	10.00
3	9.85	9.93	9.63	---	9.37	9.39	8.93	9.80	10.12	11.08	10.52	9.98
4	9.88	9.91	9.62	---	9.38	9.36	8.94	9.88	10.10	11.07	10.50	9.96
5	9.89	9.88	9.61	9.65	9.38	9.33	8.95	9.91	10.08	11.05	10.48	9.94
6	9.88	9.85	9.61	9.65	9.39	9.30	8.95	9.93	10.09	11.04	10.46	9.90
7	9.88	9.83	9.58	9.63	9.39	9.27	8.95	9.95	10.13	10.99	10.44	9.86
8	9.89	9.81	9.56	9.62	9.39	9.26	8.94	9.98	10.26	10.93	10.55	9.86
9	9.87	9.79	9.55	9.62	9.39	9.23	8.95	9.96	10.31	10.93	10.54	9.87
10	9.86	9.84	9.55	9.61	9.39	9.20	8.95	9.96	10.69	11.04	10.51	9.88
11	9.87	9.81	9.58	9.60	9.40	9.17	8.95	9.97	10.83	11.08	10.48	9.87
12	10.03	9.76	9.64	9.59	9.42	9.15	8.99	9.97	10.90	11.06	10.45	9.84
13	10.06	9.73	9.64	9.57	9.50	9.13	9.06	10.00	10.96	11.04	10.42	9.86
14	10.07	9.71	9.67	9.56	9.55	9.10	9.10	10.01	10.95	11.01	10.40	9.84
15	10.06	9.72	9.72	9.55	9.57	9.14	9.15	10.01	10.92	11.02	10.37	9.82
16	10.07	9.70	9.72	9.54	9.60	9.13	9.19	10.00	10.91	10.99	10.35	9.80
17	10.07	9.66	---	9.52	9.60	9.11	9.19	10.00	10.96	10.96	10.33	9.77
18	10.06	9.64	---	9.51	9.60	9.09	9.19	10.01	11.11	10.92	10.31	9.76
19	10.07	9.66	---	9.50	9.65	9.07	9.20	10.02	11.13	10.88	10.27	9.75
20	10.08	9.69	---	9.48	9.66	9.07	9.21	10.02	11.12	10.86	10.23	9.75
21	10.06	9.67	9.76	9.47	9.66	9.08	9.20	10.01	11.09	10.83	10.20	9.72
22	10.08	9.64	---	9.46	9.64	9.07	9.25	10.02	11.12	10.82	10.20	9.70
23	10.08	9.67	---	9.44	9.63	9.03	9.32	10.02	11.19	10.80	10.16	9.68
24	10.07	9.66	---	9.43	9.62	9.01	9.36	10.00	11.21	10.77	10.12	9.65
25	10.06	9.62	---	9.42	9.60	8.99	9.37	10.09	11.18	10.75	10.10	9.81
26	10.04	9.60	---	9.43	9.58	8.97	9.38	10.14	11.15	10.73	10.07	9.77
27	10.01	9.59	---	9.42	9.56	8.98	9.40	10.13	11.22	10.70	10.05	9.72
28	10.01	9.66	9.70	9.41	9.53	8.98	9.41	10.16	11.20	10.67	10.05	9.72
29	9.98	9.70	---	9.41	9.48	8.97	9.42	10.17	11.17	10.64	10.04	9.70
30	9.96	9.69	---	9.39	---	8.96	9.68	10.16	11.14	10.61	10.04	9.69
31	9.94	---	---	9.38	---	8.94	---	10.15	---	10.58	10.00	---
MEAN	9.98	9.74	---	---	9.51	9.14	9.15	9.99	10.78	10.91	10.31	9.82
MAX	10.08	9.95	---	---	9.66	9.45	9.68	10.17	11.22	11.12	10.55	10.00
MIN	9.81	9.59	---	---	9.37	8.94	8.92	9.68	10.08	10.58	10.00	9.65

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. Area of Lake Monona, 5.3 mi².

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, National Geodetic Vertical Datum of 1929, or 5.60 ft below city of Madison datum. Prior to Oct. 1, 1979, datum 3.61 ft higher; prior to Nov. 15, 1971, non-recording 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 4 readings Mar. 12-15. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 7.27 ft July 28, 1929; minimum observed, 3.22 ft Jan. 20, 1965, current datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 6.28 ft June 26, 27; minimum, 4.28 ft Feb. 11.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.86	4.85	5.16	4.59	4.57	4.99	4.86	5.10	5.27	6.17	5.56	5.27
2	4.85	4.86	5.15	4.58	4.53	4.99	4.84	5.12	5.28	6.13	5.54	5.24
3	4.87	4.86	5.12	4.58	4.49	5.00	4.80	5.19	5.28	6.10	5.53	5.20
4	4.86	4.84	5.09	4.60	4.46	5.02	4.73	5.23	5.29	6.09	5.53	5.16
5	4.83	4.86	5.08	4.61	4.43	5.02	4.67	5.21	5.30	6.05	5.51	5.14
6	4.79	4.87	5.06	4.62	4.41	5.01	4.63	5.21	5.33	6.01	5.50	5.12
7	4.78	4.88	5.03	4.63	4.38	5.01	4.62	5.16	5.41	5.96	5.50	5.10
8	4.78	4.90	5.01	4.63	4.36	5.02	4.62	5.09	5.45	5.93	5.73	5.08
9	4.75	4.92	5.00	4.64	4.33	5.02	4.60	5.05	5.51	5.90	5.74	5.05
10	4.74	4.97	4.95	4.64	4.31	5.03	4.58	5.05	5.81	6.06	5.72	5.04
11	4.74	4.96	4.95	4.64	4.29	5.05	4.57	5.02	5.88	6.14	5.70	5.02
12	4.88	4.96	4.96	4.64	4.31	5.00	4.62	5.00	5.90	6.13	5.68	5.01
13	4.88	4.97	4.92	4.63	4.42	5.00	4.68	5.04	5.94	6.12	5.65	4.99
14	4.85	4.99	4.91	4.63	4.46	5.00	4.69	5.04	5.97	6.11	5.63	4.96
15	4.85	4.99	4.91	4.63	4.51	5.01	4.69	5.04	5.96	6.11	5.61	4.92
16	4.84	4.98	4.87	4.62	4.57	5.04	4.69	5.04	5.96	6.06	5.60	4.90
17	4.82	4.98	4.83	4.62	4.65	5.06	4.67	5.03	6.00	6.02	5.58	4.88
18	4.81	4.99	4.80	4.63	4.72	5.07	4.66	5.03	6.15	5.98	5.56	4.85
19	4.82	5.04	4.78	4.63	4.82	5.07	4.65	5.03	6.19	5.94	5.54	4.84
20	4.83	5.07	4.75	4.63	4.86	5.08	4.65	5.04	6.21	5.92	5.51	4.83
21	4.85	5.07	4.74	4.63	4.89	5.09	4.68	5.05	6.21	5.89	5.48	4.82
22	4.87	5.08	4.72	4.63	4.92	5.10	4.72	5.04	6.23	5.86	5.46	4.82
23	4.87	5.10	4.69	4.63	4.95	5.10	4.75	5.02	6.25	5.83	5.43	4.90
24	4.87	5.09	4.67	4.64	4.96	5.11	4.78	5.03	6.22	5.80	5.41	5.02
25	4.86	5.09	4.66	4.63	4.96	5.11	4.80	5.16	6.22	5.77	5.39	5.29
26	4.85	5.09	4.64	4.59	4.98	5.11	4.83	5.17	6.21	5.74	5.38	5.36
27	4.85	5.12	4.64	4.56	4.98	5.06	4.84	5.18	6.26	5.71	5.36	5.40
28	4.84	5.22	4.63	4.57	4.97	5.00	4.80	5.22	6.25	5.68	5.35	5.35
29	4.83	5.21	4.62	4.57	4.97	4.94	4.87	5.22	6.22	5.65	5.34	5.29
30	4.83	5.18	4.61	4.57	---	4.89	5.08	5.23	6.20	5.62	5.30	5.25
31	4.83	---	4.60	4.57	---	4.87	---	5.24	---	5.59	5.26	---
MEAN	4.83	5.00	4.86	4.61	4.64	5.03	4.72	5.11	5.88	5.94	5.52	5.07
MAX	4.88	5.22	5.16	4.64	4.98	5.11	5.08	5.24	6.26	6.17	5.74	5.40
MIN	4.74	4.84	4.60	4.56	4.29	4.87	4.57	5.00	5.27	5.59	5.26	4.82

ROCK RIVER BASIN

197

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 southwest of McFarland.

DRAINAGE AREA.--327 mi².

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 840.00 ft National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Natural Resources). September 1930 to Dec. 22, 1934, nonrecording gage at same site at datum 0.40 ft higher. Dec. 23, 1934 to Sept. 30, 1982, recording gage at same site at datum 0.40 ft higher.

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 ft³/s of effluent into the Badfish Creek basin during 1984 water year. The data were furnished by the Madison Metropolitan Sewerage District. Prior to 1958 the effluent was discharged into the Yahara River above Mc Farland. Gage-height telemeter at station for Lake Waubesa stage.

AVERAGE DISCHARGE.--54 years, 154 ft³/s, 6.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 867 ft³/s Apr. 10, 1959, gage height, 5.82 ft; maximum gage height, 6.33 ft July 23, 24, 1950, backwater from aquatic vegetation; minimum discharge, 1.0 ft³/s Oct. 18, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 325 ft³/s Mar. 25, 26, gage height, 4.70 ft; maximum gage height, 5.97 ft June 23, 24, backwater from aquatic vegetation; minimum, 50 ft³/s Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	137	258	157	185	281	282	228	139	251	194	148
2	94	138	250	155	186	282	271	241	137	251	189	150
3	79	137	247	152	182	284	238	251	148	252	186	147
4	77	151	242	154	179	287	211	261	160	256	184	141
5	78	173	240	155	175	290	210	260	162	256	178	134
6	71	169	240	157	179	290	170	255	161	256	175	127
7	65	170	235	157	170	288	146	246	177	254	176	117
8	62	167	229	157	163	292	141	239	185	249	226	114
9	62	170	229	160	158	288	136	232	187	249	230	120
10	54	181	224	163	152	282	133	220	252	304	225	128
11	59	184	224	164	149	281	128	162	263	320	219	128
12	103	182	231	162	152	279	138	126	256	316	212	123
13	106	179	225	162	173	277	153	127	256	309	206	123
14	93	177	225	162	183	271	154	120	252	301	199	123
15	89	179	228	162	186	281	159	112	235	309	193	122
16	87	182	223	164	195	296	162	106	220	301	186	118
17	87	182	215	165	200	296	161	100	216	296	182	114
18	89	178	213	165	211	298	157	96	244	285	177	108
19	87	189	207	165	232	298	158	95	237	275	169	105
20	130	200	199	167	254	304	133	98	217	268	159	100
21	164	201	194	167	266	311	111	94	203	260	155	96
22	164	199	191	170	269	318	110	91	211	252	159	93
23	167	202	189	172	274	318	123	92	226	246	157	97
24	166	204	189	174	278	320	132	85	234	239	153	109
25	165	201	184	179	275	322	135	103	234	232	150	180
26	159	197	179	181	276	322	133	121	235	228	150	205
27	154	199	172	181	278	319	133	119	250	222	150	210
28	147	220	169	181	280	313	125	133	253	215	156	212
29	144	250	165	181	282	305	141	141	252	210	158	205
30	138	269	163	183	---	297	203	142	252	206	159	197
31	134	---	159	184	---	288	---	138	---	201	150	---
TOTAL	3367	5567	6538	5158	6142	9178	4787	4834	6454	8069	5562	4094
MEAN	109	186	211	166	212	296	160	156	215	260	179	136
MAX	167	269	258	184	282	322	282	261	263	320	230	212
MIN	54	137	159	152	149	271	110	85	137	201	150	93
CFSM	.33	.57	.65	.51	.65	.91	.49	.48	.66	.80	.55	.42
IN.	.38	.63	.74	.59	.70	1.04	.54	.55	.73	.92	.63	.47

CAL YR 1983 TOTAL 63675.1 MEAN 174 MAX 302 MIN 8.6 CFSM .53 IN 7.24
WTR YR 1984 TOTAL 69750.0 MEAN 191 MAX 322 MIN 54 CFSM .58 IN 7.93

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 upstream from bridge on State Highway 59, 2.2 mi east of Cooksville, and 2.2 mi above the mouth.

DRAINAGE AREA.--82.6 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 810 ft, from topographic map.

REMARKS.--Records good. Approximately 51 per cent of flow is effluent from Nine Springs treatment plant. (Data provided by Madison Metropolitan Sewerage District.) Effluent was diverted into Nine Springs above Lake Waubesa outlet from 0600 Sept. 24 to 0830 Sept. 26.

AVERAGE DISCHARGE.--7 years, 99.0 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 870 ft³/s Sept. 1, 1981, gage height, 8.11 ft; minimum daily, 35 ft³/s Aug. 1, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 701 ft³/s July 10, gage height, 7.55 ft; minimum daily, 53 ft³/s Sept. 26.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used June 7 to July 9, July 21 to Aug. 17, and Aug. 29 to Sept. 26; stage-discharge relation affected by ice Dec. 18-21, 23-31, Jan. 1-2, 10, 11, 16, 18-25, 30-31, and Feb. 6.)

4.5	52	7.0	548
5.0	136	7.6	716
6.0	330		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	90	103	92	91	98	97	167	97	110	95	83
2	77	92	107	90	96	98	100	136	93	107	98	75
3	75	91	95	91	100	92	102	155	85	122	97	73
4	84	90	94	91	94	89	104	165	87	125	99	73
5	84	88	96	92	87	93	103	137	90	118	93	75
6	83	85	103	93	84	94	102	122	97	125	91	78
7	84	86	97	91	80	93	97	119	123	115	116	77
8	86	92	96	85	76	93	93	117	110	117	180	76
9	79	93	97	85	77	92	96	114	107	120	124	76
10	77	108	92	86	77	88	97	111	298	600	110	78
11	85	98	107	86	72	86	95	111	145	423	102	79
12	133	90	129	86	108	88	114	104	124	231	92	77
13	100	85	116	87	245	91	138	111	132	197	88	75
14	91	88	115	90	200	92	116	106	121	177	98	75
15	85	96	111	88	170	106	116	105	111	179	100	72
16	80	93	107	86	145	116	120	101	105	158	101	66
17	77	90	101	83	134	95	115	101	122	163	125	64
18	82	90	94	86	130	89	109	101	210	148	93	71
19	85	112	92	94	170	92	106	98	140	141	84	74
20	86	115	92	92	139	103	101	92	120	136	77	75
21	87	106	92	92	126	111	94	92	115	130	87	74
22	94	102	93	84	122	119	102	96	127	121	88	75
23	89	110	92	80	116	141	132	93	132	117	83	77
24	86	108	92	90	113	125	165	91	111	119	83	62
25	86	89	92	98	106	111	145	156	106	114	83	95
26	87	88	88	98	99	111	130	117	111	110	79	53
27	85	92	90	95	99	114	121	93	140	109	80	65
28	87	174	90	96	104	113	109	156	121	105	91	77
29	85	136	92	90	98	109	124	137	118	95	92	75
30	81	109	92	90	---	106	328	112	115	90	91	72
31	82	---	92	90	---	100	---	102	---	101	83	---
TOTAL	2666	2986	3049	2777	3358	3148	3571	3618	3713	4823	3003	2217
MEAN	86.0	99.5	98.4	89.6	116	102	119	117	124	156	96.9	73.9
MAX	133	174	129	98	245	141	328	167	298	600	180	95
MIN	75	85	88	80	72	86	93	91	85	90	77	53
CAL YR 1983	TOTAL	36571	MEAN 100	MAX 351	MIN 62							
WTR YR 1984	TOTAL	38929	MEAN 106	MAX 600	MIN 53							

ROCK RIVER BASIN

199

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 downstream from Badfish Creek, 2,000 ft upstream from bridge on State Highway 59, and 2.8 mi northwest of Fulton.

DRAINAGE AREA.--517 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 792.7 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diurnal fluctuation caused by powerplant at Stebbensville 1.5 mi upstream, and additional regulation from other dams and powerplants upstream.

AVERAGE DISCHARGE.--7 years, 351 ft³/s, 9.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,040 ft³/s Sept. 1, 1981, gage height, 8.36 ft; minimum daily, 60 ft³/s Aug. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,250 ft³/s July 10, gage height, 5.69 ft; maximum gage height, 5.87 ft Jan. 19, backwater from ice; minimum daily, 140 ft³/s Aug. 25.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 18-20, 22-31, Jan. 1-4, 10-12, 15, 16, 18-25, and Feb. 6, 7.)

3.2	130	4.5	563
3.5	206	5.0	840
4.0	365	6.0	1,440

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	339	446	410	318	454	483	560	330	419	296	199
2	169	235	249	400	292	455	445	469	310	396	242	269
3	246	299	270	380	320	471	439	482	311	397	301	261
4	249	248	358	370	310	389	396	550	322	432	307	267
5	236	374	608	342	297	416	361	486	272	426	329	256
6	187	354	618	336	300	434	410	429	377	404	255	253
7	231	335	550	309	310	453	397	465	325	403	281	270
8	251	261	527	311	321	477	288	484	330	393	496	251
9	156	422	507	311	310	467	260	489	334	392	431	249
10	214	367	480	310	283	402	286	499	706	1070	396	190
11	198	338	490	310	321	405	341	471	515	932	334	173
12	310	347	535	310	328	393	351	469	462	634	325	216
13	274	355	525	299	489	372	363	466	506	592	311	261
14	217	350	525	315	465	448	349	417	534	531	325	250
15	184	290	516	330	434	488	375	346	509	528	305	228
16	240	358	484	330	501	490	384	384	509	489	316	219
17	210	293	427	336	478	450	410	398	591	472	333	206
18	224	366	420	340	462	448	390	256	810	506	321	256
19	256	357	420	350	503	451	266	297	662	483	310	238
20	285	403	420	350	482	471	278	273	584	448	294	224
21	213	393	415	350	467	484	287	329	487	457	291	213
22	273	368	420	350	464	494	295	325	467	446	274	239
23	209	376	430	320	451	556	324	253	486	396	232	209
24	301	376	430	300	462	577	297	289	434	396	255	224
25	375	409	430	370	471	551	350	371	433	427	140	282
26	298	385	400	350	455	533	359	414	469	400	268	379
27	198	375	400	288	437	509	353	306	460	237	299	379
28	368	472	410	331	426	497	298	416	442	336	187	399
29	218	441	410	301	376	496	306	481	432	316	267	372
30	273	502	410	318	---	522	733	424	417	303	258	287
31	293	---	410	309	---	507	---	309	---	338	161	---
TOTAL	7505	10788	13940	10336	11533	14560	10874	12607	13826	14399	9140	7719
MEAN	242	360	450	333	398	470	362	407	461	464	295	257
MAX	375	502	618	410	503	577	733	560	810	1070	496	399
MIN	149	235	249	288	283	372	260	253	272	237	140	173
CFSM	.47	.70	.87	.64	.77	.91	.70	.79	.89	.90	.57	.50
IN.	.54	.78	1.00	.74	.83	1.05	.78	.91	.99	1.04	.66	.56
CAL YR 1983	TOTAL	131976	MEAN	362	MAX	836	MIN	116	CFSM	.70	IN	9.50
WTR YR 1984	TOTAL	137227	MEAN	375	MAX	1070	MIN	140	CFSM	.73	IN	9.87

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., Rock County, Hydrologic Unit 07090001, on right bank in Afton, 0.3 mi downstream from highway bridge and 1.1 mi upstream from Bass Creek.

DRAINAGE AREA.--3,340 mi².

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 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 higher.

REMARKS.--Records good except those for winter periods and discharge below 800 ft³/s, which are fair. Diurnal fluctuation caused by powerplants above station.

AVERAGE DISCHARGE.--70 years, 1,809 ft³/s, 7.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s Mar. 23, 24, 1929, gage height, 11.81 ft present datum; maximum gage height observed, 13.05 ft Feb. 5, 1916, present datum (backwater from ice); minimum discharge, 22 ft³/s Sept. 9, 1964; minimum daily, 42 ft³/s Aug. 25, 26, 1934; minimum gage height, 0.09 ft Aug. 26, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,340 ft³/s Feb. 27, gage height, 7.89 ft; minimum daily, 412 ft³/s Sept. 9.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 18 to Feb. 12.)

2.4	364	6.0	3,160
3.0	740	8.0	5,480
4.0	1,440		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1080	1430	2110	1800	1200	4810	2870	3300	3270	4100	2130	684
2	935	1400	2130	1700	1100	4680	2800	3620	3260	4000	2030	709
3	1070	1370	2020	1600	1100	4620	2650	3860	3150	3900	1900	797
4	1160	1470	2110	1600	1100	4470	2780	4010	3040	3900	1820	1260
5	651	1260	2350	1600	1100	4300	3090	4070	2850	3870	1750	985
6	940	1320	2590	1600	1100	4190	2950	4120	2600	3760	1590	772
7	885	1270	2380	1500	1100	4100	2890	4110	2680	3670	1560	674
8	959	1190	2460	1500	1100	4010	2770	4130	2430	3560	1850	418
9	988	1110	2490	1500	1100	3810	2620	4220	2410	3450	1800	412
10	872	1390	2420	1400	1100	3610	2430	4300	2680	4220	1700	816
11	919	1550	2530	1400	1100	3410	2440	4290	2830	4590	1520	794
12	943	1360	2510	1400	1200	3360	2600	4180	2850	4080	1430	529
13	1030	1300	2520	1400	1590	3220	2490	4210	3010	3950	1300	809
14	927	1220	2590	1400	1780	3100	2490	4150	3310	3800	1210	859
15	1060	1250	2650	1400	1950	3190	2620	3980	3440	3750	1150	743
16	947	1230	2630	1300	2300	3140	2720	3840	3470	3660	1140	854
17	1110	1320	2510	1300	2720	3100	2620	3740	3500	3560	867	947
18	1140	1440	2400	1300	2960	2930	2570	3590	4450	3520	812	913
19	1200	1640	2300	1300	3350	2830	2520	3500	4360	3430	860	1090
20	1470	1570	2300	1300	3500	2820	2420	3440	4300	3320	741	1110
21	1570	1360	2300	1300	3730	2710	2470	3350	4240	3290	766	1130
22	1390	1640	2200	1300	4290	2650	2820	3300	4220	3180	853	1210
23	1420	1660	2100	1200	4850	2670	2620	3160	4280	3020	723	1110
24	1370	1390	2000	1200	4990	2630	2530	2940	4160	2960	678	1100
25	1440	1640	2000	1200	5110	2660	2630	3300	4100	2900	669	1380
26	1430	1850	2000	1300	5180	2690	2760	3240	4110	2810	661	1470
27	1310	1980	1900	1300	5230	2780	2730	3170	4110	2720	775	1890
28	1170	2280	1900	1300	5240	2860	2540	3480	4160	2560	854	1790
29	1530	1830	1900	1300	4890	2920	2810	3550	4190	2530	622	1750
30	1350	1800	1800	1300	---	2890	2990	3460	4160	2410	691	1660
31	1400	---	1800	1300	---	2890	---	3360	---	2210	759	---
TOTAL	35666	44520	69900	43300	77060	104050	80240	114970	105620	106680	37211	30665
MEAN	1151	1484	2255	1397	2657	3356	2675	3709	3521	3441	1200	1022
MAX	1570	2280	2650	1800	5240	4810	3090	4300	4450	4590	2130	1890
MIN	651	1110	1800	1200	1100	2630	2420	2940	2410	2210	622	412
CFSM	.35	.44	.68	.42	.80	1.01	.80	1.11	1.05	1.03	.36	.31
IN.	.40	.50	.78	.48	.86	1.16	.89	1.28	1.18	1.19	.41	.34
CAL YR 1983	TOTAL	837913	MEAN	2296	MAX	6130	MIN	193	CFSM	.69	IN	9.33
WTR YR 1984	TOTAL	849882	MEAN	2322	MAX	5240	MIN	412	CFSM	.70	IN	9.47

ROCK RIVER BASIN

201

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI

LOCATION.--Lat 42°31'18", long 88°30'50", in SW 1/4 SW 1/4 sec.8, T.2 N., R.17 E., Walworth County, Hydrologic Unit 07090001, on left bank 5 ft upstream of Petrie Road bridge, 2.5 mi upstream from Delavan Lake inlet at Mounds Road, and 2.5 mi southeast of Elkhorn.

DRAINAGE AREA.--8.06 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to September 1984.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 960 ft, from topographic map.

REMARKS.--Records good except for periods of ice effect, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 177 ft³/s Feb. 13, gage height, 8.29 ft; minimum daily, 0.07 ft³/s, Sept. 22, 23.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 18 to Jan. 1, Jan. 8-23, Jan. 30 to Feb. 1, Feb. 5-8, 28-29, and Mar. 10-11.)

Oct. 1 to May 14				May 15 to Sept. 30			
4.9	.05	6.1	13	4.9	.05	5.9	9.7
5.0	.12	6.3	16	5.0	.12	6.1	13
5.1	.38	6.5	24	5.1	.38	6.3	16
5.2	.80	6.7	36	5.2	.80	6.5	22
5.3	1.6	7.0	50	5.3	1.6	6.7	30
5.5	4.0	7.5	102	5.5	4.0	7.0	46
5.7	6.8	8.0	140	5.7	6.8	7.5	89
5.9	9.7	8.5	198				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.27	4.8	.76	.60	3.6	6.2	13	9.0	2.1	.13	.11
2	.11	.30	4.2	.80	.65	3.2	6.0	9.4	7.2	1.7	.12	.11
3	.11	.28	3.5	.85	.71	2.8	5.5	8.2	5.5	1.4	.11	.11
4	.12	.24	3.3	.89	.68	2.6	6.5	8.2	4.6	1.4	.11	.10
5	.11	.20	2.9	.84	.60	2.8	6.3	7.0	4.2	1.2	.11	.11
6	.11	.21	2.8	.90	.54	2.3	5.3	5.0	3.7	1.1	.13	.11
7	.11	.20	2.2	.86	.56	1.8	4.3	5.2	4.3	.83	.16	.14
8	.17	.21	1.9	.82	.57	1.7	3.0	4.3	3.8	.76	.24	.11
9	.11	.21	1.7	.77	.59	1.5	3.8	4.0	3.1	.76	.17	.09
10	.12	.27	1.4	.73	.60	1.3	3.5	3.4	3.0	.35	.11	.12
11	.13	.27	5.8	.70	.77	1.2	3.4	3.3	2.3	16	.11	.11
12	10	.22	15	.68	41	1.0	4.5	2.8	2.3	5.6	.11	.10
13	1.3	.21	9.7	.67	135	1.2	5.5	3.1	2.2	3.2	.11	.11
14	.70	.24	8.0	.66	58	1.3	5.0	2.5	2.0	2.1	.11	.10
15	.40	.31	7.0	.65	30	6.8	5.3	2.2	1.8	1.6	.11	.09
16	.30	.33	5.6	.64	19	9.1	8.0	2.0	1.8	.97	.11	.11
17	.26	.29	4.7	.60	16	8.4	7.9	1.9	1.8	1.2	.12	.10
18	.24	.28	4.0	.56	15	4.3	6.5	2.0	20	.69	.11	.09
19	.23	1.4	3.3	.54	26	3.9	5.5	2.2	8.6	.52	.11	.08
20	.29	6.0	2.7	.52	16	6.5	4.9	2.0	5.4	.43	.11	.09
21	.35	3.2	2.0	.50	13	8.8	4.4	1.6	4.1	.34	.13	.08
22	.77	1.9	1.4	.52	11	6.6	10	2.5	7.0	.31	.17	.07
23	2.7	8.8	1.1	.54	9.9	7.9	20	2.5	7.9	.28	.11	.07
24	1.7	5.4	.90	.59	8.7	10	20	1.7	4.8	.21	.11	.54
25	.90	3.0	.76	.61	7.5	20	13	36	3.6	.17	.11	2.3
26	.66	2.4	.77	.59	6.6	15	9.9	18	3.1	.19	.11	.78
27	.48	2.8	.78	.64	5.8	12	9.0	10	8.1	.19	.11	.77
28	.41	16	.76	.69	5.0	10	9.8	56	3.9	.18	.10	.22
29	.31	12	.73	.67	4.2	8.6	13	48	2.9	.14	.11	.20
30	.26	6.7	.72	.60	---	7.4	26	10	2.4	.15	.12	.19
31	.27	---	.73	.56	---	6.6	---	12	---	.15	.11	---
TOTAL	23.84	74.14	105.15	20.95	434.57	189.2	242.9	299.9	144.4	49.37	3.79	6.81
MEAN	.77	2.47	3.39	.68	15.0	6.10	8.10	9.67	4.81	1.59	.12	.23
MAX	10	16	15	.90	135	20	26	56	20	16	.24	2.3
MIN	.11	.20	.72	.50	.54	1.0	3.4	1.6	1.8	.14	.10	.07
CFSM	.09	.28	.38	.08	1.67	.68	.90	1.08	.54	.18	.01	.03
IN.	.10	.31	.44	.09	1.80	.79	1.01	1.24	.60	.20	.02	.03

WTR YR 1984 TOTAL 1595.02 MEAN 4.36 MAX 135 MIN .07 CFSM .69 IN 6.62

ROCK RIVER BASIN

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1983 to current year.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: October 1983 to current year.

TOTAL NITRITE PLUS NITRATE DISCHARGE: October 1983 to current year.

TOTAL PHOSPHORUS DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Automatic pumping sampler since October 1983.

REMARKS.--Records good.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 802 mg/l Feb. 13; minimum observed, 1 mg/l Mar. 12.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 117 tons Feb. 13; minimum daily, 0.01 ton on many days.

TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 5.60 mg/l May 9; minimum observed, 0.40 mg/l Oct. 7, 12.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 2,510 lb Feb. 13; minimum daily, 0.18 lb Oct. 7.

TOTAL NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 17 mg/l June 18; minimum observed, 0.01 mg/l on several days.

TOTAL NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 3,150 lb Feb. 13; minimum daily, 0.01 lb on many days.

TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.40 mg/l Feb. 13; minimum observed, 0.03 mg/l Mar. 13 and Aug. 1.

TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 773 lb Feb. 13; minimum daily, 0.02 lb Aug. 1-6.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
OCT , 1983						
07...	1800	.11	<.10	.40	--	.040
12...	1010	--	.10	.40	.50	.080
12...	1315	--	.10	.50	.60	.070
NOV						
02...	1620	.30	1.4	.90	2.3	.040
19...	1215	1.8	1.0	1.5	2.5	.120
19...	1345	2.2	1.1	1.2	2.3	.100
19...	1830	1.9	1.8	1.6	3.4	.110
21...	0815	3.4	4.0	1.3	5.3	.230
21...	1030	3.2	3.9	1.1	5.0	.230
21...	1415	2.8	4.1	1.4	5.5	.190
23...	1345	1.7	3.5	1.2	4.7	.110
23...	0400	4.3	2.8	1.8	4.6	.160
23...	0715	8.7	3.1	1.7	4.8	.530
23...	1000	11	3.2	2.5	5.7	.400
23...	1200	12	3.4	1.3	4.7	.470
23...	1615	11	3.6	1.7	5.3	.420
25...	1200	3.1	4.6	1.0	5.6	.140
28...	2030	15	5.4	2.0	7.4	.430
29...	0945	12	7.2	.70	7.9	.310
DEC						
07...	1740	2.1	4.8	.90	5.7	.110
11...	1530	5.4	4.0	.50	4.5	.090
11...	1730	8.5	4.0	1.1	5.1	.160
11...	2100	15	4.0	2.6	6.6	.470
12...	0030	18	4.6	1.9	6.5	.400
12...	0430	18	4.9	1.5	6.4	.350
12...	1100	15	5.5	.90	6.4	.270
13...	0015	12	5.6	.90	6.5	.190
13...	1215	9.4	5.6	.80	6.4	.170
JAN , 1984						
18...	0945	.56	3.2	1.0	4.2	.050
FEB						
12...	0730	4.3	1.9	3.6	5.5	.570
12...	0750	5.4	2.4	2.1	4.5	.610
12...	1645	24	1.8	3.3	5.1	.530
12...	1845	86	3.0	2.9	5.9	.740
13...	0145	177	3.2	5.5	8.7	1.40
13...	1507	121	4.6	3.8	8.4	.780
13...	1630	121	4.7	4.2	8.9	.780
13...	2330	91	5.7	3.4	9.1	.620
14...	1130	--	4.8	2.1	6.9	.380
14...	1131	--	6.6	2.4	9.0	.510
15...	0830	29	7.7	2.2	9.9	.320
16...	0935	19	7.4	1.7	9.1	.300
17...	1541	15	7.8	1.0	8.8	.220
18...	0755	14	7.9	.80	8.7	.160
19...	0915	27	8.1	1.1	9.2	.280
20...	0925	15	9.2	.70	9.9	.160
21...	1045	12	8.5	.80	9.3	.120
27...	1000	5.7	7.0	.50	7.5	.070
MAR						
13...	1120	1.2	5.2	.50	5.7	.030
15...	1305	9.3	3.7	2.4	6.1	.490
16...	0755	10	4.6	2.6	7.2	.490
19...	0840	3.8	4.3	.80	5.1	.040
APR						
13...	0730	5.5	4.1	1.9	6.0	.130
17...	0935	8.3	5.4	1.7	7.1	.150

ROCK RIVER BASIN

203

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
APR , 1984						
22...	1330	13	4.9	4.6	9.5	.440
22...	1720	16	4.2	1.8	6.0	.310
22...	1730	16	4.3	2.7	7.0	.300
22...	2400	16	5.9	1.1	7.0	.270
23...	0705	15	6.4	2.4	8.8	.160
23...	1500	19	5.8	1.2	7.0	.300
23...	1630	23	5.7	3.2	8.9	.310
23...	1830	27	6.2	1.9	8.1	.370
23...	2100	28	4.8	3.1	7.9	.280
24...	0900	20	7.6	.80	8.4	.150
29...	2015	22	4.9	1.7	6.6	.440
29...	2245	33	4.5	1.2	5.7	.420
30...	0245	40	7.9	1.1	9.0	.390
30...	0515	36	9.6	.80	10	.330
30...	1110	--	9.6	.90	11	.250
MAY						
09...	1300	4.1	8.0	5.6	14	.040
23...	1515	2.3	3.4	.70	4.1	.120
25...	0515	7.4	2.7	1.5	4.2	.070
25...	0715	24	4.6	3.4	8.0	.400
25...	0915	69	5.3	1.9	7.2	.490
25...	1015	79	5.9	2.4	8.3	.590
25...	1145	71	7.6	2.1	9.7	.660
25...	1150	72	7.3	1.4	8.7	.560
25...	1415	54	8.3	1.0	9.3	.360
26...	0515	22	9.7	1.1	11	.160
27...	1915	9.0	8.2	2.7	11	.090
27...	1916	9.0	8.1	1.7	9.8	.090
28...	0916	22	6.9	1.6	8.5	.270
28...	1130	39	5.6	2.2	7.8	.330
28...	1731	132	6.4	1.4	7.8	.500
28...	2001	122	7.5	2.2	9.7	.420
31...	0500	13	9.1	1.1	10	.120
JUN						
06...	1615	3.4	9.0	2.4	11	.070
08...	0805	4.0	8.3	.80	9.1	.090
18...	0430	21	4.8	4.0	8.8	.260
18...	0630	43	9.5	3.9	13	.390
18...	0800	36	12	3.1	15	.490
18...	0845	33	15	2.7	18	.480
18...	1545	19	17	2.0	19	.280
18...	1547	19	17	2.0	19	.300
19...	1340	8.1	15	.60	16	.120
27...	0400	13	6.4	3.6	10	.320
27...	0600	12	6.5	1.7	8.2	.150
27...	1155	8.7	6.3	1.7	8.0	.600
29...	0800	3.0	11	.60	12	.080
JUL						
10...	2300	23	4.7	3.2	7.9	.870
11...	0100	31	4.9	3.5	8.4	.720
11...	0230	30	8.6	1.7	10	.460
11...	1315	12	5.3	4.1	9.4	.620
19...	0925	.55	3.4	.40	3.8	.070
AUG						
01...	0630	.12	< .10	.80	--	.030
08...	0840	.25	.10	.90	1.0	.140
15...	0705	.10	< .10	.90	--	.110
22...	0920	.17	< .10	.80	--	.070
29...	1345	.11	< .10	.50	--	.080
SEP						
13...	1010	.11	< .10	.50	--	.070
25...	1134	3.0	.20	.80	1.0	.190
25...	1135	3.0	.20	.90	1.1	.170
25...	1430	2.9	.30	.90	1.2	.240
25...	2045	2.8	4.4	3.4	7.8	.650
26...	1054	.59	2.5	1.2	3.7	.300

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
NOV , 1983											
02...	1620	.30	730	8.1	12.0	--	--	--	--	--	--
DEC											
07...	1740	2.1	750	--	1.5	--	--	--	--	--	--
MAY , 1984											
23...	1515	2.3	720	--	19.0	--	--	--	--	--	--
JUN											
06...	1615	3.4	724	7.8	23.0	10.6	--	--	--	--	--
18...	0630	43	--	--	--	--	9.1	.430	<.010	<.010	.280

ROCK RIVER BASIN

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT , 1983					APR , 1984				
07...	1800	.11	33	.00	22...	1500	15	35	1.4
12...	1015	--	27	--	22...	1715	16	19	.82
12...	1315	--	28	--	22...	2000	16	15	.65
NOV					23...	0030	16	21	.91
02...	1615	.30	30	.02	23...	0710	15	3	.12
19...	1145	1.7	20	.09	23...	1430	18	16	.78
19...	1200	1.8	31	.15	23...	1700	24	23	1.5
19...	1230	1.9	45	.23	23...	1800	27	29	2.1
19...	1315	2.1	67	.38	24...	0905	20	3	.16
19...	1400	2.2	42	.25	29...	2045	25	67	4.5
19...	1515	2.2	43	.26	29...	2315	34	63	5.8
19...	1715	2.1	83	.47	30...	0145	38	86	8.8
19...	1815	1.9	29	.15	30...	0315	38	81	8.3
21...	0730	3.5	17	.16	30...	0415	37	53	5.3
21...	0745	3.4	15	.14	30...	0545	34	33	3.0
21...	0800	3.4	12	.11	30...	0815	31	27	2.3
21...	0830	3.4	11	.10	30...	1115	--	15	--
21...	1015	3.2	10	.09	MAY				
21...	1138	3.0	9	.07	07...	0855	5.4	24	.35
21...	1315	2.9	10	.08	09...	1300	4.1	44	.49
21...	1400	2.8	6	.05	14...	0750	2.5	32	.22
22...	1345	1.7	39	.18	21...	0845	1.6	41	.18
23...	0315	3.6	40	.39	23...	1515	2.3	66	.41
23...	0330	3.7	22	.22	25...	0545	10	128	3.5
23...	0430	4.8	57	.74	25...	0645	19	277	14
23...	0645	8.1	57	1.2	25...	0815	43	215	25
23...	0945	11	50	1.5	25...	0945	78	363	76
23...	1130	11	101	3.0	25...	1045	78	213	45
23...	1500	12	32	1.0	25...	1155	67	151	27
25...	1200	3.1	20	.17	25...	1315	60	137	22
28...	1330	18	27	1.3	25...	1446	53	104	15
28...	1425	17	26	1.2	25...	1715	42	101	11
28...	1530	17	40	1.8	25...	2115	32	43	3.7
28...	1830	16	63	2.7	26...	0115	26	36	2.5
28...	2330	15	17	.69	26...	0915	20	14	.76
29...	0430	14	10	.38	26...	1715	15	34	1.4
29...	0850	12	7	.23	26...	2315	13	25	.88
29...	0950	12	7	.23	27...	0515	12	21	.68
30...	0950	6.8	16	.29	27...	0915	11	12	.36
DEC					27...	1515	9.6	12	.31
07...	1640	2.1	10	.06	27...	1915	9.0	14	.34
11...	1530	5.4	21	.31	27...	2315	8.5	38	.87
11...	1630	6.7	23	.42	28...	0916	22	121	7.2
11...	1700	7.5	20	.41	28...	1730	132	191	68
11...	1701	7.5	19	.38	28...	2000	122	228	75
11...	1830	11	32	.95	29...	0500	68	17	3.1
11...	1930	13	39	1.4	29...	0600	63	123	21
11...	2130	15	53	2.1	29...	1400	37	36	3.6
11...	2230	16	64	2.8	31...	0800	13	43	1.5
11...	2400	18	36	1.7	JUN				
12...	0200	18	60	2.9	06...	1615	3.4	8	.07
12...	0530	18	20	.97	08...	0805	4.0	94	1.0
12...	0600	18	15	.73	18...	0245	6.8	330	6.1
12...	1135	15	8	.32	18...	0300	7.7	337	7.0
12...	1915	13	15	.53	18...	0330	12	244	7.9
13...	0615	10	5	.14	18...	0400	18	669	33
13...	1115	9.4	3	.08	18...	0500	29	648	51
19...	1015	3.3	7	.06	18...	0530	37	457	46
JAN , 1984					18...	0600	41	519	57
18...	0945	.56	20	.03	18...	0700	41	306	34
FEB					18...	0730	39	206	22
06...	1000	.54	3	.00	18...	0845	33	99	8.8
12...	0725	4.3	29	.34	18...	1545	19	36	1.8
12...	1130	10	42	1.1	19...	1340	8.1	63	1.4
12...	1745	35	100	9.5	27...	0330	13	109	3.8
13...	0045	168	802	364	27...	0430	13	210	7.4
13...	1145	124	102	34	27...	0500	13	191	6.7
13...	1509	121	97	32	27...	0530	13	167	5.9
14...	1130	--	29	--	27...	1155	8.7	47	1.1
15...	0835	29	11	.86	29...	0800	3.0	54	.44
17...	1540	15	5	.20	JUL				
18...	0750	14	2	.08	10...	2230	20	576	31
19...	0910	27	3	.22	10...	2400	29	323	25
20...	0930	15	2	.08	11...	0030	31	239	20
21...	1045	12	3	.10	11...	0200	31	135	11
27...	0755	5.8	29	.45	11...	1315	12	260	8.4
MAR					19...	0925	.55	41	.06
05...	0930	2.9	12	.09	AUG				
12...	0905	1.0	1	.00	01...	0630	.12	75	.02
13...	1115	1.2	2	.00	08...	0840	.25	42	.03
15...	1300	9.3	26	.65	15...	0705	.10	29	.00
16...	0800	10	15	.41	22...	0920	.17	38	.02
18...	1245	4.4	18	.21	29...	1345	.11	64	.02
19...	0835	3.8	4	.04	SEP				
26...	0850	14	23	.87	13...	1010	.11	27	.00
APR					25...	1133	3.0	143	1.2
02...	0910	6.0	21	.34	25...	1145	3.0	39	.32
09...	0945	3.9	41	.43	25...	1330	3.1	34	.28
13...	0735	5.5	18	.27	25...	1530	2.9	36	.28
16...	0955	8.0	2	.04	25...	1845	2.9	47	.37
17...	0930	8.3	3	.07	25...	2145	2.5	47	.32
22...	1300	13	38	1.3	26...	1055	.59	47	.07
22...	1400	14	33	1.2					

SUSPENDED-SEDIMENT. WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	21	.35	16	.56	29	.71	83	.29	73	.03	54	.02			
2	21	.35	17	.44	23	.44	100	.23	68	.02	51	.02			
3	23	.35	18	.41	18	.27	122	.18	63	.02	48	.01			
4	26	.45	20	.44	14	.17	148	.17	58	.02	45	.01			
5	28	.48	21	.40	11	.12	180	.14	53	.02	43	.01			
6	31	.44	23	.36	8	.08	219	.12	49	.02	40	.01			
7	34	.40	25	.36	6	.07	266	.09	45	.02	38	.01			
8	38	.40	33	.38	33	.34	323	.08	42	.03	36	.01			
9	39	.41	42	.46	25	.21	392	.08	40	.02	34	.01			
10	33	.31	41	.38	22	.18	77	2.4	37	.01	32	.01			
11	26	.24	39	.34	20	.12	173	7.3	36	.01	30	.01			
12	21	.25	36	.27	17	.11	65	1.0	34	.01	28	.01			
13	16	.26	34	.28	15	.09	45	.38	32	.01	27	.01			
14	8	.23	32	.22	14	.08	44	.25	30	.01	24	.01			
15	4	.24	33	.20	12	.06	43	.19	29	.01	22	.01			
16	2	.41	35	.18	11	.05	43	.11	30	.01	20	.01			
17	3	.40	36	.18	10	.05	42	.13	32	.01	18	.01			
18	3	.32	37	.20	126	8.7	42	.08	33	.01	17	.01			
19	3	.26	38	.23	57	1.3	41	.06	34	.01	15	.01			
20	3	.22	40	.21	57	.27	43	.05	35	.01	14	.01			
21	3	.19	43	.19	51	.12	45	.04	37	.01	12	.01			
22	13	.47	52	.36	45	.55	47	.04	38	.02	11	.01			
23	14	.88	61	.41	40	.76	50	.04	41	.01	10	.01			
24	5	.31	40	.19	36	.19	52	.03	44	.01	11	.03			
25	3	.10	106	13	32	.09	55	.03	48	.01	30	.21			
26	2	.06	23	1.1	29	.06	57	.03	51	.02	---	.09			
27	2	.05	16	.45	70	.82	60	.03	55	.02	---	.03			
28	2	.05	108	23	51	.53	63	.03	59	.02	---	.02			
29	14	.92	45	6.1	56	.44	66	.02	63	.02	---	.02			
30	28	2.4	36	1.8	68	.35	69	.03	61	.02	---	.02			
31	---	---	36	1.2	---	---	72	.03	57	.02	---	---			
TOTAL	---	12.20	---	54.30	---	17.33	---	13.68	---	0.49	---	0.67			
TOTAL LOAD FOR YEAR:			305.14	TONS.											

ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI

LOCATION.--Lat 42°39'03", long 88°33'03", in NW 1/4 NE 1/4 sec.12, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on left bank 200 ft downstream of State Highway 15, 1.1 mi upstream from Delavan Lake inlet at Mounds Road, and 1.5 mi south of Elkhorn.

DRAINAGE AREA.--4.34 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to September 1984.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 930 ft, from topographic map.

REMARKS.--Records good except for periods of ice effect, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 108 ft³/s Feb. 12, gage height, 8.84 ft; minimum daily, 0.39 ft³/s, Sept. 23.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 19 to Jan. 1, Jan. 9-25,
Jan. 29-31, Feb. 6-9, 27, and Mar. 8-13.)

5.0	.33	6.5	23
5.2	.96	7.0	37
5.4	2.0	7.5	53
5.6	4.1	8.0	72
5.8	7.5	8.5	92
6.0	12	9.0	115

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	1.1	1.7	.86	.69	2.0	3.1	5.1	3.6	1.2	.57	1.1
2	.54	.77	1.6	.89	1.0	1.9	2.6	3.6	2.7	1.2	.59	.65
3	1.3	.60	1.4	1.0	.86	1.7	2.4	3.8	2.2	1.2	.60	.63
4	1.1	.66	1.4	1.1	.78	1.7	3.3	4.1	2.0	1.0	.67	.73
5	.57	.58	1.4	1.0	.68	1.8	2.7	2.9	1.9	1.3	.57	.66
6	.56	.56	1.4	.98	.68	1.6	2.0	2.6	4.4	1.1	1.4	.53
7	.61	.64	1.3	.87	.66	1.5	1.7	2.4	6.9	.88	3.7	.86
8	1.6	.56	1.2	.85	.70	1.3	1.7	2.1	3.4	.85	2.1	.62
9	.54	.58	1.1	.76	.80	1.1	1.8	2.0	2.1	.93	.89	.51
10	.63	.64	1.1	.74	.93	1.1	1.7	1.9	1.8	8.1	.73	.67
11	.61	.57	10	.72	1.4	1.2	1.6	1.9	1.6	4.9	.58	.62
12	7.7	.51	9.4	.74	56	1.2	5.1	1.7	1.5	1.4	.55	.57
13	1.0	.50	3.8	.75	47	1.2	3.5	3.1	1.5	1.1	.65	.61
14	.82	.71	4.0	.76	15	1.3	2.5	1.9	1.2	.97	.64	.58
15	.62	.89	3.5	.71	10	13	4.6	1.6	1.2	1.2	.56	.52
16	.63	.58	2.5	.69	7.4	5.9	6.3	1.5	1.1	1.0	.58	.60
17	.62	.53	1.9	.67	6.7	2.3	4.5	1.5	1.3	2.2	.76	.58
18	.60	.56	1.5	.65	8.6	2.4	3.1	2.3	23	.77	.61	.57
19	.58	5.4	1.1	.64	14	3.0	2.6	2.0	3.4	.69	.58	.50
20	.70	14	1.2	.63	8.0	8.0	2.2	1.6	2.1	.77	.58	.53
21	.80	2.2	1.1	.62	5.8	7.0	2.0	1.5	1.7	.64	2.7	.47
22	2.0	1.3	1.0	.66	5.1	5.3	15	6.7	3.4	.65	2.1	.46
23	1.0	15	.90	.73	4.4	7.7	17	2.7	2.2	.79	.60	.39
24	.80	2.8	.87	.80	4.0	12	13	1.7	1.5	.67	.66	4.9
25	.70	1.5	.86	.79	3.3	10	6.3	39	1.4	.63	.54	17
26	.65	5.2	.85	.78	2.9	7.3	4.4	8.6	1.6	.75	.53	1.1
27	.62	10	.84	.76	2.7	5.7	5.5	4.5	9.4	.64	.69	.65
28	.60	17	.84	.69	2.5	4.6	3.6	47	1.7	.58	.61	.62
29	.58	4.4	.83	.65	2.2	3.5	14	17	1.5	.57	.59	.54
30	.58	2.2	.82	.62	---	3.3	15	7.3	1.3	.66	.67	.54
31	.60	---	.84	.63	---	3.0	---	4.8	---	.65	.70	---
TOTAL	30.81	92.54	62.25	23.74	214.78	124.6	154.8	190.4	94.6	39.99	28.30	39.31
MEAN	.99	3.08	2.01	.77	7.41	4.02	5.16	6.14	3.15	1.29	.91	1.31
MAX	7.7	17	10	1.1	56	13	17	47	23	8.1	3.7	17
MIN	.54	.50	.82	.62	.66	1.1	1.6	1.5	1.1	.57	.53	.39
CFSM	.23	.71	.46	.18	1.71	.93	1.19	1.42	.73	.30	.21	.30
IN.	.26	.79	.53	.20	1.84	1.07	1.33	1.63	.81	.34	.24	.34

WTR YR 1984 TOTAL 1096.12 MEAN 2.99 MAX 56 MIN .39 CFSM .69 IN 9.39

ROCK RIVER BASIN

207

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1983 to current year.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: October 1983 to current year.

TOTAL NITRITE PLUS NITRATE DISCHARGE: October 1983 to current year.

TOTAL PHOSPHORUS DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Automatic pumping sampler since October 1983.

REMARKS.--Records good.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 5,520 mg/l Aug. 7; minimum observed, 1 mg/l on several days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 32 tons Feb. 12; minimum daily, 0.01 ton on many days.

TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 16 mg/l Nov. 19; minimum observed, 0.40 mg/l Nov. 25 and July 19.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 777 lb Feb. 12; minimum daily, 1.39 lb Sept. 23.

TOTAL NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 13 mg/l June 18; minimum observed, 0.10 mg/l June 27.

TOTAL NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 1,489 lb May 28; minimum daily, 0.37 lb Sept. 16.

TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 8.20 mg/l Aug. 7; minimum observed, 0.10 mg/l Feb. 27.

TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 216 lb May 25; minimum daily, 0.65 lb Sept. 23.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
NOV , 1983						
02...	1550	.76	1540	8.1	14.5	--
DEC						
07...	1640	1.3	1400	--	1.5	--
JAN , 1984						
18...	1015	.65	1230	8.0	.0	10.7
MAY						
23...	1432	1.6	910	--	21.0	--
25...	1300	51	--	--	15.0	--
JUN						
06...	1550	1.6	807	8.2	25.5	11.6

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
OCT , 1983						
07...	1745	.65	.40	1.0	1.4	1.30
12...	0945	12	1.9	4.6	6.5	.780
12...	1355	5.9	2.7	4.0	6.7	.840
NOV						
02...	1550	.76	2.3	2.1	4.4	.430
19...	0515	8.3	1.0	3.0	4.0	.950
19...	0615	21	.80	16	17	1.80
19...	0700	20	.80	6.8	7.6	1.00
19...	0915	14	1.6	5.8	7.4	.760
19...	1230	5.5	2.1	3.8	5.9	.650
21...	1415	2.0	3.4	3.1	6.5	.590
21...	1615	1.9	3.4	2.9	6.3	.280
22...	1500	1.4	2.8	2.2	5.0	.260
23...	1045	20	3.4	2.5	5.9	.870
23...	1130	19	3.4	2.2	5.6	.710
23...	1345	16	4.1	1.6	5.7	.560
23...	1346	16	4.0	1.4	5.4	.540
23...	2130	7.3	4.2	1.1	5.3	.370
24...	0700	3.2	3.8	.90	4.7	.210
25...	1315	--	3.4	.40	3.8	.150
28...	1815	10	5.0	2.5	7.5	.410
29...	0545	5.2	4.5	1.5	6.0	.230
29...	0945	4.4	4.7	1.4	6.1	.490
DEC						
07...	1640	1.3	2.0	1.1	3.1	.130
11...	1230	6.7	1.8	1.9	3.7	.510
11...	1500	13	1.6	2.5	4.1	.140
11...	1830	24	2.0	2.0	4.0	.810
12...	1125	8.7	3.4	.80	4.2	.330
13...	1150	3.6	3.9	.70	4.6	.170
14...	1030	4.4	--	--	--	.240
14...	1600	4.9	--	--	--	.410
14...	1900	4.9	--	--	--	.220
JAN , 1984						
18...	1015	.65	2.1	1.1	3.2	.240
FEB						
12...	0630	17	1.8	2.9	4.7	.630
12...	0830	30	2.3	2.3	4.6	.570
12...	0945	40	1.5	1.4	2.9	.460
12...	1230	66	3.8	1.3	5.1	.320
13...	0630	58	3.4	1.4	4.8	.450
13...	1115	39	2.8	.50	3.3	.280

ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
FEB , 1984						
13...	1116	39	4.6	1.0	5.6	.460
13...	2215	24	3.7	1.1	4.8	.410
14...	0715	14	3.8	.70	4.5	.040
15...	0815	9.4	6.5	1.1	7.6	.220
16...	0740	7.5	6.5	.90	7.4	.180
17...	1442	6.9	5.5	1.4	6.9	.250
18...	0745	5.7	5.3	.70	6.0	.150
18...	2000	17	3.6	1.8	5.4	.670
18...	2200	17	4.5	2.0	6.5	.710
19...	0030	18	4.1	1.3	5.4	.470
19...	0215	17	4.2	1.6	5.8	.470
19...	0850	13	4.7	2.6	7.3	.270
21...	0946	5.5	4.3	.60	4.9	.170
27...	0935	2.7	3.4	.60	4.0	.100
28...	0915	4.0	4.5	1.0	5.5	.170
MAR						
13...	1105	1.2	2.2	1.0	3.2	.170
15...	0630	24	1.3	2.9	4.2	1.20
15...	0700	25	1.2	2.4	3.6	.660
15...	0730	23	1.3	2.2	3.5	.800
15...	1000	18	1.6	3.0	4.6	.910
15...	1330	12	1.8	3.6	5.4	1.90
15...	2000	20	1.6	2.9	4.5	1.20
15...	2100	22	1.8	3.2	5.0	1.30
15...	2200	21	2.0	4.3	6.3	1.60
16...	0030	16	1.8	2.4	4.2	1.10
16...	0730	6.0	2.1	1.5	3.6	.480
23...	1945	16	--	--	--	.730
24...	1530	17	--	--	--	.560
24...	1815	22	--	--	--	.520
APR						
12...	1300	19	.90	6.3	7.2	<.010
12...	1345	17	1.1	3.1	4.2	.150
12...	1350	16	1.1	3.6	4.7	.160
13...	0725	3.7	1.0	3.0	4.0	.160
17...	0920	4.6	3.1	1.3	4.4	.260
22...	1020	26	1.2	3.3	4.5	.680
22...	1215	27	1.7	5.0	6.7	1.40
22...	1500	26	1.9	4.9	6.8	.920
22...	1650	22	2.0	2.9	4.9	.780
23...	0645	9.6	1.4	5.0	6.4	.830
23...	1200	17	2.4	2.7	5.1	.390
23...	1245	20	2.0	4.3	6.3	.710
23...	1430	21	2.4	3.1	5.5	.570
23...	1700	24	2.9	3.7	4.0	1.50
23...	1800	24	2.9	5.3	8.2	1.30
23...	1900	24	3.2	5.1	8.3	.890
24...	0200	17	4.1	1.8	5.9	.400
24...	0840	14	4.5	.90	5.4	.330
27...	1000	4.0	.90	4.7	5.6	1.20
27...	1745	21	1.8	5.0	6.8	2.70
29...	1630	33	1.6	5.2	6.8	1.20
30...	0115	32	3.0	4.4	7.4	1.10
30...	0300	25	3.1	4.1	7.2	.870
30...	1246	--	4.2	1.6	5.8	.770
MAY						
09...	1325	2.0	3.4	3.5	6.9	.410
22...	0915	18	1.8	4.4	6.2	6.50
22...	0930	20	1.5	4.0	5.5	7.30
22...	1030	15	2.2	1.7	3.9	2.60
23...	0530	3.1	4.6	1.1	5.7	1.30
23...	0715	1.6	3.8	2.2	6.0	1.30
23...	1432	1.6	4.5	.50	5.0	2.20
25...	0400	26	1.0	3.5	4.5	2.60
25...	0530	50	2.8	3.5	6.3	1.50
25...	0815	95	3.4	1.5	4.9	1.30
25...	0816	95	3.4	2.6	6.0	1.20
25...	0915	99	4.6	4.9	9.5	.980
25...	1300	51	8.7	2.6	11	.920
25...	1301	51	8.2	.60	8.8	.870
25...	1730	24	8.7	.70	9.4	.650
26...	0200	12	9.3	.90	10	.470
28...	1000	38	4.4	.80	5.2	.830
28...	1002	38	4.4	.60	5.0	.880
28...	1145	52	5.1	.90	6.0	.790
28...	1600	100	5.2	2.0	7.2	.490
28...	2030	76	7.6	1.0	8.6	.600
28...	2031	76	6.9	3.9	11	.520
29...	0500	21	10	.70	11	.370
JUN						
06...	1550	1.6	5.2	6.9	12	.370
06...	2200	29	1.4	6.2	7.6	3.00
07...	0045	21	4.9	6.9	12	4.30
07...	1730	5.5	4.7	2.1	6.8	1.80
08...	0600	6.2	4.7	2.2	6.9	1.00
08...	0820	4.2	5.8	1.5	7.3	1.90
18...	0230	60	1.5	5.5	7.0	1.70
18...	0400	79	4.6	5.4	10	2.00
18...	0515	70	5.8	4.5	10	1.40
18...	0830	27	8.9	2.9	12	.840
18...	0925	21	9.6	2.6	12	.910
18...	1630	8.3	13	2.4	15	.490
19...	1320	3.2	9.5	1.0	11	.270

ROCK RIVER BASIN

209

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
JUN , 1984						
	27...	0015	46	.10	9.5	9.6
	27...	0200	34	3.8	6.6	10
	27...	1205	3.8	9.7	1.2	11
	29...	0745	1.5	5.8	1.1	6.9
JUL						
	10...	0315	16	1.4	4.5	5.9
	10...	0500	12	1.8	3.5	5.3
	10...	0600	11	2.9	12	15
	10...	1415	1.8	4.7	6.0	11
	11...	0900	3.7	4.3	3.3	7.6
	17...	0700	1.5	1.0	5.2	6.2
	19...	0945	.76	1.4	.40	1.8
AUG						
	01...	0650	.56	.60	.90	1.5
	07...	0001	1.0	1.1	8.0	9.1
	07...	0002	1.0	2.2	6.5	8.7
	07...	0003	1.0	2.9	4.5	7.4
	08...	0920	4.0	1.5	4.3	5.8
	15...	0715	.54	.90	1.5	2.4
	21...	2015	27	1.5	7.3	8.8
	21...	2030	24	1.1	4.6	5.7
	21...	2130	15	1.3	3.0	4.3
	22...	0530	2.4	5.1	7.2	12
	22...	0920	1.3	2.4	2.9	5.3
	29...	1325	.69	.40	1.3	1.7
SEP						
	13...	1030	1.0	.20	.80	1.0
	24...	2230	45	.80	8.8	9.6
	24...	2315	70	.60	2.5	3.1
	25...	0045	51	1.8	3.6	5.4
	25...	0245	20	3.2	8.0	11
	25...	0330	13	3.3	6.9	10
	25...	1035	28	3.2	6.7	9.9
	25...	1036	29	3.4	6.5	9.9
	25...	1330	25	4.0	7.5	12
	25...	1800	6.4	4.6	5.8	10
	26...	0955	1.0	5.1	2.1	7.2

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT , 1983				
07...	1615	.65	14	.02
12...	1300	7.1	40	.77
NOV				
02...	1550	.76	15	.03
19...	0500	5.2	100	1.4
19...	0530	9.4	1240	31
19...	0545	13	634	22
19...	0600	19	526	27
19...	0630	21	2060	117
19...	0715	20	1250	68
19...	0815	17	354	16
19...	1045	9.4	125	3.2
19...	1215	5.9	104	1.7
21...	1315	2.0	34	.18
21...	1400	2.0	568	3.1
21...	1445	1.9	112	.57
21...	1600	1.9	58	.30
22...	1500	1.4	42	.16
23...	1100	20	40	2.2
23...	1145	19	34	1.7
23...	1300	17	41	1.9
23...	1301	17	27	1.2
23...	1345	16	21	.91
23...	1900	9.6	21	.54
23...	2330	5.9	10	.16
24...	0600	3.4	16	.15
24...	0630	3.2	17	.10
25...	1315	--	17	--
28...	0345	--	24	--
28...	1105	--	43	--
28...	1400	--	21	--
28...	1430	--	39	--
28...	1615	12	31	1.0
28...	1647	12	14	.45
28...	1700	11	25	.74
28...	1945	9.4	23	.58
28...	2345	7.1	24	.46
29...	0515	5.4	33	.48
29...	0945	4.4	8	.10
29...	2345	2.8	24	.18
30...	0935	2.2	75	.45

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
DEC , 1983				
07...	1640	1.3	1	.00
11...	1230	6.7	303	5.5
11...	1500	13	97	3.4
11...	1830	24	78	5.1
12...	1100	8.7	6	.14
13...	1150	3.6	37	.36
14...	1015	4.9	23	.30
14...	1430	4.2	7	.08
14...	1545	4.7	11	.14
14...	1715	4.9	9	.12
14...	1915	4.9	17	.22
19...	1005	1.1	25	.07
JAN , 1984				
18...	1015	.65	63	.11
FEB				
06...	0945	.68	114	.21
12...	0430	3.8	67	.69
12...	0545	11	94	2.8
12...	0700	19	87	4.5
12...	0745	24	78	5.1
12...	0900	33	89	7.9
12...	1100	52	136	19
12...	1730	89	245	59
12...	2030	108	615	179
13...	0230	83	120	27
13...	0530	64	67	12
13...	0830	49	47	6.2
13...	1115	39	42	4.4
13...	1331	35	52	4.9
13...	1815	31	35	2.9
14...	0115	20	11	.59
14...	0415	17	19	.87
14...	0815	14	11	.42
15...	0810	9.4	12	.30
16...	0735	7.5	8	.16
17...	0740	7.1	7	.13
18...	1437	5.5	1	.01
18...	1930	16	82	3.5
18...	1945	17	112	5.1
18...	2045	18	70	3.4
18...	2145	17	46	2.1

ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI---CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
FEB , 1984					MAY , 1984				
18...	2300	17	31	1.4	28...	0730	18	252	12
18...	2400	18	26	1.3	28...	1000	38	187	19
19...	0115	18	18	.87	28...	1045	46	175	22
19...	0200	18	14	.68	28...	1245	53	103	15
19...	0845	13	4	.14	28...	1530	94	260	66
20...	0920	7.5	1	.02	28...	1630	103	401	112
21...	0951	5.5	2	.03	28...	2030	76	112	23
27...	0935	2.7	57	.42	28...	2230	53	56	8.0
MAR					29...	0100	33	34	3.0
05...	0910	1.7	69	.32	29...	0430	21	22	1.2
12...	0920	1.2	13	.04	29...	1545	13	29	1.0
13...	1100	1.2	1	.00	30...	1030	7.7	17	.35
15...	0615	23	1300	81	30...	1730	6.6	25	.45
15...	0645	25	493	33	JUN				
15...	0815	22	127	7.5	06...	1552	1.6	14	.06
15...	0915	20	105	5.7	06...	2130	23	1840	114
15...	1015	17	72	3.3	06...	2145	30	904	73
15...	1115	15	54	2.2	06...	2215	29	274	21
15...	1335	12	46	1.5	06...	2300	24	148	9.6
15...	1945	19	252	13	07...	0030	23	143	8.9
15...	2045	22	148	8.8	07...	0145	15	97	3.9
15...	2145	22	165	9.8	07...	0315	11	73	2.2
15...	2215	21	138	7.8	07...	1700	9.4	96	2.4
15...	2315	19	86	4.4	07...	1745	6.9	46	.86
16...	0015	17	68	3.1	08...	0530	6.4	104	1.8
16...	0045	15	53	2.1	08...	0545	5.2	78	1.3
16...	0735	6.0	20	.32	18...	0145	8.3	1740	39
18...	1220	2.3	8	.05	18...	0200	40	1730	187
19...	1145	2.1	16	.09	18...	0215	54	979	143
23...	1900	16	82	3.5	18...	0230	60	733	119
23...	1930	16	64	2.8	18...	0245	71	497	95
24...	1515	16	61	2.6	18...	0315	76	401	82
24...	1600	19	57	2.9	18...	0330	78	335	71
24...	1630	20	60	3.2	18...	0345	78	384	81
24...	2000	20	35	1.9	18...	0415	79	245	52
26...	0830	6.4	72	1.2	18...	0430	78	191	40
APR					18...	0500	73	147	29
02...	0835	2.8	114	.86	18...	0615	55	101	15
09...	0935	1.9	23	.12	18...	0815	29	75	5.9
12...	1345	17	109	5.0	18...	0925	21	57	3.2
13...	0720	3.6	24	.23	18...	1630	8.3	49	1.1
16...	0945	5.5	3	.04	19...	1320	3.2	33	.29
17...	0915	4.6	6	.07	27...	0030	46	1000	124
22...	0945	24	236	15	27...	0045	46	806	100
22...	1100	27	128	9.3	27...	0100	43	564	65
22...	1230	27	117	8.5	27...	1205	3.8	17	.17
22...	1330	27	81	5.9	29...	0745	1.5	23	.09
22...	1415	26	72	5.1	JUL				
22...	1600	24	55	3.6	10...	0300	18	1550	75
22...	1655	22	36	2.1	10...	0345	11	175	5.2
23...	0640	9.6	7	.18	10...	0415	9.6	114	3.0
23...	1230	20	177	9.6	10...	0515	12	103	3.3
23...	1345	20	99	5.3	10...	0630	8.9	51	1.2
23...	1415	21	76	4.3	10...	1415	1.8	37	.18
23...	1545	23	74	4.6	11...	0900	3.7	49	.49
23...	1630	23	68	4.2	16...	2400	15	913	37
23...	1730	24	57	3.7	17...	0045	10	220	5.9
23...	1915	24	41	2.7	AUG				
23...	2100	23	27	1.7	01...	0650	.56	27	.04
23...	2300	20	11	.59	07...	0845	16	1790	77
24...	0500	15	13	.53	07...	0900	14	5520	209
24...	0845	14	7	.26	07...	0915	11	2510	75
27...	1715	6.9	658	12	07...	1215	11	1330	40
27...	1800	21	577	33	07...	1230	15	382	15
27...	1845	14	279	11	07...	1245	16	254	11
29...	1545	19	368	19	07...	1300	14	185	7.0
30...	0130	32	99	8.6	07...	1315	12	157	5.1
30...	0215	29	237	19	08...	0920	4.0	88	.95
30...	0415	22	179	11	15...	0715	.54	121	.18
30...	0545	19	124	6.4	21...	2000	18	3050	148
30...	1245	--	268	--	21...	2045	19	240	12
MAY					21...	2100	16	141	6.1
07...	0910	2.4	58	.38	21...	2115	16	107	4.6
09...	1320	2.0	72	.39	22...	0115	9.6	208	5.4
14...	0820	1.7	10	.05	22...	0200	6.2	44	.74
21...	0825	1.6	51	.22	22...	0315	4.0	35	.38
22...	0915	18	811	39	22...	0545	2.3	44	.27
22...	0930	20	491	27	22...	0615	2.1	51	.29
22...	0945	19	287	15	22...	0920	1.3	20	.07
22...	1015	16	150	6.5	29...	1325	.69	100	.19
22...	1045	14	77	2.9	SEP				
23...	1430	--	12	--	01...	0145	3.4	156	1.4
25...	0415	29	593	46	01...	0245	2.2	33	.20
25...	0445	48	533	69	13...	1030	1.0	43	.12
25...	0615	51	270	37	24...	2215	20	5050	273
25...	0700	72	389	76	24...	2245	62	730	122
25...	0730	80	358	77	24...	2330	68	247	45
25...	0815	95	617	158	24...	2400	61	301	50
25...	0900	99	675	180	25...	0115	44	217	26
25...	1030	93	437	110	25...	0215	27	134	9.8
25...	1300	51	136	19	25...	0400	10	75	2.0
25...	1600	30	88	7.1	25...	0500	10	89	2.4
25...	1900	19	64	3.3	25...	1030	28	131	9.9
25...	2200	15	60	2.4	25...	1200	30	109	8.8
26...	0230	12	40	1.3	25...	1500	15	92	3.7
26...	1100	8.3	7	.16	25...	2000	3.8	24	.25
27...	1938	4.0	4	.04	25...	2400	2.0	16	.09
28...	0500	8.1	188	4.1	26...	0955	1.0	41	.11

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	108	.90	216	3.0	16	.16	21	.07	26	.04	23	.09
2	108	.78	173	1.7	16	.11	20	.06	24	.04	15	.03
3	88	.57	138	1.4	15	.09	19	.06	21	.03	16	.03
4	70	.62	111	1.2	15	.08	18	.05	19	.03	18	.03
5	56	.40	88	.70	14	.07	17	.06	17	.03	20	.04
6	45	.25	71	.49	46	2.4	16	.05	15	.18	22	.03
7	36	.17	60	.38	33	.86	16	.04	125	3.7	24	.05
8	28	.13	65	.38	16	.17	15	.03	50	.46	26	.04
9	23	.11	68	.36	10	.06	14	.04	16	.04	29	.04
10	19	.09	49	.26	10	.05	97	5.2	23	.05	32	.06
11	16	.07	33	.17	9	.04	73	1.6	33	.05	35	.06
12	24	.53	22	.10	9	.04	38	.15	46	.07	39	.06
13	21	.20	14	.46	8	.03	30	.09	65	.12	42	.07
14	12	.08	11	.05	8	.03	24	.06	92	.16	41	.06
15	6	.40	13	.06	8	.02	19	.07	117	.18	40	.06
16	4	.90	17	.07	7	.02	19	.21	109	.17	38	.06
17	6	.35	21	.08	9	.05	35	.56	100	.21	37	.06
18	5	.04	26	.38	97	10	18	.04	92	.15	35	.05
19	5	.03	33	.35	32	.30	17	.03	84	.13	34	.05
20	4	.02	42	.18	27	.16	17	.04	77	.12	33	.05
21	4	.02	34	.14	22	.10	18	.03	110	2.4	31	.04
22	36	2.3	32	1.1	18	1.3	19	.03	18	.18	30	.04
23	26	1.4	12	.09	14	.23	19	.04	9	.02	29	.03
24	7	.25	9	.04	12	.05	20	.04	14	.02	100	6.6
25	6	.09	134	24	9	.04	21	.04	21	.03	62	4.2
26	4	.05	12	.32	12	.45	22	.04	30	.04	---	.17
27	47	1.5	4	.06	89	6.4	23	.04	45	.08	---	.09
28	40	.40	103	16	20	.09	23	.04	66	.11	---	.07
29	99	8.3	18	.84	23	.09	24	.04	90	.14	---	.05
30	194	6.5	15	.29	22	.07	25	.04	62	.11	---	.04
31	---	---	17	.22	---	---	26	.05	37	.07	---	---
TOTAL	---	27.45	---	54.87	---	23.56	---	8.94	---	9.16	---	12.35
TOTAL LOAD FOR YEAR:			226.58	TONS.								

ROCK RIVER BASIN
05431016 JACKSON CREEK AT MOUNDS RD NEAR ELKHORN, WI--CONTINUED
WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT , 1983												
07...	1400	--	--	--	--	.30	1.6	1.9	.320	.160	.49	--
NOV												
02...	1200	--	--	--	--	--	--	--	--	--	--	30
02...	1410	--	--	--	--	--	--	--	--	--	--	5
02...	1445	--	--	--	--	--	--	--	--	--	--	1
02...	1540	860	7.9	12.5	--	.90	1.0	1.9	.520	.260	.80	--
02...	1550	--	--	--	--	--	--	--	--	--	--	15
02...	1615	--	--	--	--	--	--	--	--	--	--	30
25...	1630	--	--	--	--	3.6	.70	4.3	.180	--	--	37
DEC												
07...	1650	870	--	1.0	--	3.7	.80	4.5	.100	.070	.21	--
JAN , 1984												
18...	1100	1110	8.4	.0	10.5	2.5	.90	3.4	.170	.100	.31	--
18...	1115	--	--	--	--	--	--	--	--	--	--	23
FEB												
17...	1417	--	--	--	--	6.9	1.1	8.0	.190	--	--	--
24...	1110	--	8.6	4.5	12.0	5.0	.20	5.2	.070	.070	.21	--
MAR												
13...	1100	95	8.8	.5	12.2	3.6	.40	4.0	.070	.040	.12	--
APR												
17...	1330	--	--	--	--	4.2	1.5	5.7	.150	.100	.31	--
MAY												
09...	0930	--	--	--	--	5.0	2.6	7.6	.040	.020	.06	--
23...	0830	790	--	19.0	--	3.0	<.10	--	.590	.330	1.0	--
25...	0825	--	--	--	--	4.4	2.3	6.7	.880	--	--	--
JUN												
11...	1020	--	--	--	--	6.8	1.1	7.9	.200	.070	.21	--
29...	1015	--	--	--	--	7.7	.70	8.4	.130	.090	.28	--
JUL												
19...	0955	--	--	--	--	3.1	1.9	5.0	.230	.130	.40	--
AUG												
01...	0700	--	--	--	--	<.10	2.5	--	.410	.080	.25	--
15...	0730	--	--	--	--	<.10	2.4	--	.480	.160	.49	--
28...	1205	--	--	--	--	<.10	2.8	--	.370	.100	.31	--
SEP												
12...	1100	--	--	--	--	<.10	2.2	--	.420	.090	.28	--
25...	1205	--	--	--	--	3.1	5.9	9.0	.770	--	--	--
26...	0720	--	--	--	--	2.7	3.4	6.1	.490	.340	1.0	--
26...	0745	--	--	--	--	2.7	3.2	5.9	.470	.360	1.1	--

ROCK RIVER BASIN

05431017 DELAVAN LAKE INLET AT US HWY 50 AT LAKE LAWN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
OCT , 1983					
07...	0940	<.10	2.3	--	.300
NOV					
02...	0900	<.10	1.4	--	.310
25...	1610	.90	1.8	2.7	.280
DEC					
07...	1610	.50	1.7	2.2	.180
JAN , 1984					
18...	1250	2.1	.90	3.0	.140
FEB					
13...	1700	3.9	3.4	7.3	.650
17...	1345	4.6	1.4	6.0	.160
24...	1145	3.1	.50	3.6	.080
26...	1200	4.8	.80	5.6	.140
MAR					
13...	1450	1.6	1.1	2.7	.100
15...	1355	--	--	--	.120
16...	0925	--	--	--	1.30
17...	1000	--	--	--	.270
18...	1310	--	--	--	.350
19...	1125	--	--	--	.320
APR					
13...	0750	--	--	--	.100
16...	1025	--	--	--	.140
17...	1345	1.7	2.9	4.6	.250
22...	1730	--	--	--	.270
23...	0820	--	--	--	.800
24...	1310	--	--	--	.230
MAY					
02...	0815	--	--	--	.100
03...	0830	--	--	--	.120
09...	0945	1.6	26	28	.140
23...	0915	.30	.20	.50	.390
25...	1045	--	--	--	.160
25...	1430	--	--	--	.200
26...	1105	--	--	--	.280
27...	0905	--	--	--	.270
29...	0815	--	--	--	.270
30...	0801	--	--	--	.300
31...	1145	--	--	--	.190
JUN					
01...	1005	--	--	--	.200
02...	1300	--	--	--	.240
03...	1100	--	--	--	.140
09...	1035	--	--	--	.480
10...	1040	--	--	--	.160
11...	1345	3.3	3.1	6.4	.350
15...	0830	1.1	2.4	3.5	.310
18...	1300	--	--	--	.500
19...	1430	--	--	--	.540
20...	1130	--	--	--	.280
25...	1250	--	--	--	.320
28...	0850	--	--	--	.320
29...	0945	.50	2.3	2.8	.270
JUL					
02...	1410	--	--	--	.380
09...	1100	--	--	--	.180
10...	1445	--	--	--	.490
19...	1105	<.10	2.1	--	.190
AUG					
01...	0745	<.10	3.0	--	.410
04...	0745	--	--	--	.480
15...	0745	<.10	2.5	--	.370
20...	0705	--	--	--	.120
25...	0910	--	--	--	.230
28...	0615	<.10	3.8	--	.290
SEP					
01...	1500	--	--	--	.200
02...	1030	--	--	--	.400
03...	1025	--	--	--	.280
13...	1035	<.10	3.7	--	.460
25...	1317	<.10	4.2	--	.340
27...	0945	--	--	--	.330

DATE	TIME	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
NOV , 1983		
25...	1610	22
JAN , 1984		
18...	1250	20

ROCK RIVER BASIN

05431018 DELAVAN LAKE TRIBUTARY AT SOUTH SHORE DRIVE AT DELAVAN LAKE, WI

LOCATION.--43°35'08", long 88°37'19", in SE 1/4 SE 1/4 sec.32, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on left bank at bridge on South Shore Drive, at Delavan Lake, and 0.3 mi upstream from Delavan Lake.

DRAINAGE AREA.--9.99 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to September 1984.

GAGE.--Water-stage recorder. Altitude of gage is 930 ft, from topographic map.

REMARKS.--Artificial weir. Records excellent except those for period prior to weir installation, Oct. 1 to Dec. 4, and winter periods, which are fair.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 18 ft³/s Feb. 14, gage height, 6.48 ft; minimum daily discharge, 0.23 ft³/s Sept. 22, 23.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 7-9, Dec. 17 to Jan. 3, Jan. 8 to Feb. 9, Mar. 5-13, 18.)

Dec. 4 to Sept. 30

5.69	0.22	6.1	5.0
5.73	.35	6.2	7.6
5.80	.77	6.3	11
5.90	1.7	6.4	14
6.00	3.1	6.5	19

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.88	2.5	.56	.46	1.5	2.5	2.3	5.3	1.0	.38	.32
2	1.3	.83	2.2	.58	.50	1.4	2.3	2.4	4.2	.95	.37	.33
3	1.2	.78	2.1	.60	.48	1.3	2.3	2.6	3.2	.86	.36	.29
4	1.1	.73	1.9	.63	.46	1.2	2.5	2.5	2.5	.84	.35	.28
5	1.0	.87	2.0	.63	.44	1.1	2.4	2.3	2.3	.78	.35	.28
6	.90	.78	1.8	.63	.42	1.0	2.2	2.2	2.1	.73	.34	.28
7	.78	.77	1.6	.63	.40	.95	1.9	1.8	2.0	.63	.34	.28
8	.95	.84	1.4	.60	.50	.88	1.8	1.5	2.1	.57	.70	.30
9	.74	.86	1.3	.58	.70	.80	1.7	1.4	1.9	.60	.53	.29
10	.70	.86	1.4	.56	.84	.72	1.6	1.3	1.9	1.2	.44	.30
11	.66	.92	2.1	.54	.92	.66	1.5	1.3	1.6	1.1	.39	.29
12	.63	.86	3.6	.52	5.3	.60	1.7	1.2	1.6	.73	.36	.29
13	.58	.84	3.5	.50	17	.70	1.8	1.2	1.6	.63	.33	.28
14	1.2	.87	3.5	.49	16	.80	1.8	1.1	1.4	.62	.32	.28
15	1.3	.97	3.6	.48	12	1.7	1.9	1.0	1.3	.60	.31	.28
16	1.1	1.1	3.2	.47	9.1	2.3	2.2	.92	1.2	.51	.31	.28
17	.84	1.2	2.5	.46	7.0	1.5	2.2	.86	1.2	.53	.31	.27
18	.76	.87	2.0	.44	5.7	2.2	2.1	.84	4.6	.45	.32	.26
19	1.0	1.4	1.6	.43	5.6	1.9	1.9	.84	4.2	.42	.31	.26
20	1.6	2.3	1.3	.41	5.2	2.1	1.8	.79	3.6	.45	.30	.25
21	1.5	2.4	1.1	.40	4.4	2.4	1.7	.77	2.8	.41	.38	.24
22	2.4	1.9	.85	.43	4.0	2.6	2.8	1.2	2.5	.40	.48	.23
23	2.3	3.5	.68	.46	3.5	2.9	3.0	1.1	2.3	.40	.31	.23
24	2.1	2.9	.58	.50	3.2	5.5	3.0	1.1	2.0	.40	.29	.52
25	1.8	2.8	.52	.49	2.8	6.2	3.0	5.2	1.8	.40	.30	1.3
26	1.5	2.6	.49	.48	2.5	5.5	2.8	6.1	1.6	.41	.31	.32
27	1.4	2.8	.47	.47	2.2	4.8	2.6	5.2	1.5	.45	.31	.31
28	1.2	4.0	.48	.47	1.7	4.1	2.3	8.3	1.4	.43	.31	.28
29	1.1	3.2	.49	.46	1.6	3.5	2.6	11	1.2	.40	.31	.28
30	1.0	2.9	.52	.45	---	3.0	2.7	9.4	1.1	.42	.31	.28
31	.95	---	.54	.45	---	2.6	---	7.0	---	.40	.27	---
TOTAL	36.99	48.53	51.82	15.80	114.92	68.41	66.6	86.72	68.0	18.72	11.00	9.74
MEAN	1.19	1.62	1.67	.51	3.96	2.21	2.22	2.80	2.27	.60	.35	.32
MAX	2.4	4.0	3.6	.63	17	6.2	3.0	11	5.3	1.2	.70	1.3
MIN	.58	.73	.47	.40	.40	.60	1.5	.77	1.1	.40	.27	.23
CFSM	.12	.16	.17	.05	.40	.22	.22	.28	.23	.06	.04	.03
IN.	.14	.18	.19	.06	.43	.25	.25	.32	.25	.07	.04	.04

WTR YR 1984 TOTAL 597.25 MEAN 1.63 MAX 17 MIN .23 CFSM .16 IN 2.22

05431018 DELAVAN LAKE TRIBUTARY AT SOUTH SHORE DRIVE NEAR DELAVAN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1983 to current year.
 TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: October 1983 to current year.
 TOTAL NITRITE PLUS NITRATE DISCHARGE: October 1983 to current year.
 TOTAL PHOSPHORUS DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Automatic pumping sampler since November 1983.

REMARKS.--Records good.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 4,940 mg/l June 18; minimum observed, 1 mg/l on several days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 11 tons June 18; minimum daily, 0.01 ton on many days.

TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 13 mg/l June 18; minimum observed, 0.30 mg/l May 23.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 495 lb Feb. 13; minimum daily, 0.61 lb Sept. 22-23.

TOTAL NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 3.80 mg/l Aug. 1; minimum observed, 0.20 mg/l May 27.

TOTAL NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 80 lb Feb. 15; minimum daily, 3.03 lb Nov. 18.

TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.87 mg/l June 18; minimum observed, 0.04 mg/l Mar. 13.

TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 64 lb Feb. 13; minimum daily, 0.10 lb Sept. 22-23.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
NOV , 1983						
02...	1420	1.7	640	7.9	11.5	--
DEC						
07...	1445	1.6	420	--	1.0	--
JAN , 1984						
18...	1435	.44	610	8.2	.0	10.0
MAY						
23...	1145	1.1	610	--	15.0	--
25...	1116	4.8	360	--	14.5	--
JUN						
06...	1705	1.9	520	7.7	22.5	5.2

ROCK RIVER BASIN

05431018 DELAVAN LAKE TRIBUTARY AT SOUTH SHORE DR AT DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
OCT , 1983						
07...	1430	.31	3.4	1.1	4.5	.140
12...	1035	.25	1.7	.80	2.5	.230
12...	1335	.25	1.5	.70	2.2	.210
NOV						
02...	1420	1.7	1.3	1.1	2.4	.170
09...	0445	.92	.70	2.0	2.7	.260
22...	1630	2.5	.60	1.5	2.1	.180
23...	0345	3.8	.60	1.5	2.1	.210
23...	1630	4.0	.50	1.7	2.2	.200
24...	0500	3.0	.60	1.0	1.6	.270
25...	1600	2.8	.50	.50	1.0	.150
27...	2045	3.5	.60	1.6	2.2	.150
28...	0645	4.4	.50	1.2	1.7	.160
29...	0001	3.6	.70	1.4	2.1	.160
DEC						
07...	1445	1.6	1.3	2.5	3.8	.090
11...	1600	2.3	1.4	.60	2.0	.070
12...	1010	3.7	1.0	.60	1.6	.120
18...	0730	2.0	--	--	--	.080
18...	0930	2.0	--	--	--	.090
JAN , 1984						
18...	1435	.44	2.4	1.4	3.8	.080
FEB						
12...	0655	1.6	.50	.90	1.4	.110
12...	1815	9.1	1.0	1.4	2.4	.290
12...	2315	15	1.1	5.7	6.8	.790
13...	0815	16	1.1	6.8	7.9	.810
13...	0850	16	1.2	5.3	6.5	.810
13...	1430	17	.60	2.8	3.4	.740
14...	0415	17	.70	2.5	3.2	.400
14...	1115	16	.60	1.6	2.2	.250
14...	1500	15	.60	1.1	1.7	.290
14...	1510	15	.70	2.9	3.6	.290
15...	0930	13	1.2	1.1	2.3	.210
16...	1015	9.4	1.6	1.0	2.6	.170
17...	1035	7.2	1.7	1.2	2.9	.150
18...	0835	5.7	1.6	.60	2.2	.120
19...	0915	5.5	1.5	1.1	2.6	.110
20...	0825	5.2	1.6	.70	2.3	.110
21...	0859	4.4	1.6	1.5	3.1	.080
27...	0810	2.2	.80	.40	1.2	.050
MAR						
13...	0955	.70	2.6	.70	3.3	.040
15...	1425	1.5	1.7	1.3	3.0	.100
18...	1130	2.2	1.1	.70	1.8	.080
19...	0935	1.8	1.1	.60	1.7	.060
APR						
13...	0935	1.8	.90	1.1	2.0	.050
17...	0815	2.2	.90	.90	1.8	.080
22...	1615	3.5	.70	.80	1.5	.100
23...	0605	2.8	.60	.60	1.2	.080
MAY						
09...	1105	1.4	1.0	2.2	3.2	.110
23...	1145	1.1	1.2	.30	1.5	.240
25...	0415	4.0	.60	2.6	3.2	.270
25...	0815	9.7	.40	4.3	4.7	.200
25...	0840	8.1	.30	1.3	1.6	.200
25...	1116	4.8	.50	1.8	2.3	.210
25...	1118	4.8	.40	3.0	3.4	.220
25...	1515	5.3	1.5	1.8	3.3	.290
27...	0430	5.5	.30	1.3	1.6	.230
27...	1630	5.1	.20	.90	1.1	.250
29...	1215	--	.40	1.0	1.4	.280
JUN						
06...	1705	1.9	.80	1.5	2.3	.260
08...	0932	2.1	.80	1.0	1.8	.290
18...	0300	10	1.2	9.5	11	.870
18...	0330	11	.80	4.9	5.7	.380
18...	0400	16	1.4	13	14	.440
18...	1230	2.6	.90	1.6	2.5	.280
19...	1415	4.4	.40	.90	1.3	.400
29...	0905	1.2	1.5	.50	2.0	.200
JUL						
19...	0850	.40	3.0	3.0	6.0	.140
AUG , 1984						
01...	0730	.38	3.8	.70	4.5	.110
08...	0815	.70	2.8	1.4	4.2	.230
15...	0810	.31	3.7	.70	4.4	.140
22...	1150	.45	2.7	.90	3.6	.170
28...	1200	.31	3.6	.70	4.3	.110
SEP						
13...	1000	.28	3.7	.40	4.1	.130
24...	2315	3.5	1.7	2.9	4.6	.660
25...	0115	2.3	1.4	1.7	3.1	.470
25...	0245	2.8	1.5	2.0	3.5	.590
25...	1500	1.0	1.1	.80	1.9	.270
26...	1140	.31	3.3	.70	4.0	.150

ROCK RIVER BASIN

217

05431018 DELAVAN LAKE TRIBUTARY AT SOUTH SHORE DR AT DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT , 1983					APR , 1984				
12...	1045	.25	22	.01	09...	0830	1.8	15	.07
12...	1345	.25	34	.02	13...	0930	1.8	8	.04
NOV					16...	0840	2.2	2	.01
22...	1615	2.5	9	.06	17...	0820	2.2	3	.02
23...	0300	3.6	16	.16	22...	1610	3.5	3	.03
23...	0430	3.8	22	.23	23...	0610	2.8	1	.00
23...	1115	4.0	7	.08	30...	1010	2.5	6	.04
23...	1545	4.0	12	.13	MAY				
23...	2130	3.5	14	.13	07...	1100	1.7	49	.22
25...	1600	2.8	1	.00	09...	0925	1.4	41	.16
27...	1845	3.3	17	.15	14...	0855	1.1	52	.15
27...	2345	3.8	15	.15	21...	0745	.77	91	.19
28...	0045	4.0	10	.11	23...	1145	1.1	97	.29
28...	0645	4.4	13	.15	25...	0415	4.0	130	1.4
28...	1345	4.2	11	.12	25...	0515	6.5	1450	25
29...	0045	3.6	1	.00	25...	0615	6.0	613	9.9
29...	0345	3.5	23	.22	25...	0715	7.3	534	11
29...	0820	3.3	8	.07	25...	0840	8.1	285	6.2
30...	1030	3.0	6	.05	25...	0915	7.0	349	6.6
DEC					25...	1015	6.2	216	3.6
07...	1445	1.6	13	.06	25...	1114	4.8	138	1.8
11...	1600	2.3	32	.20	25...	1115	4.8	142	1.8
11...	1730	2.6	15	.11	25...	1215	4.6	174	2.2
12...	1005	3.6	5	.05	25...	1415	4.8	170	2.2
18...	0630	8.1	5	.11	25...	1605	5.5	62	.92
18...	0830	2.0	4	.02	25...	1830	5.7	52	.80
18...	1030	2.0	7	.04	25...	2230	5.7	51	.78
19...	0900	1.6	13	.06	26...	0230	6.0	42	.68
JAN , 1984					26...	0830	6.2	45	.75
18...	1435	.46	47	.06	26...	1430	6.2	26	.44
FEB					26...	2230	6.0	39	.63
06...	0830	.42	38	.04	27...	0230	5.7	15	.23
12...	0700	1.6	36	.16	27...	0630	5.5	15	.22
12...	1715	6.5	72	1.3	27...	1430	5.1	17	.23
12...	2115	15	114	4.6	28...	0030	4.6	18	.22
13...	0415	16	60	2.6	29...	1400	11	30	.89
13...	0715	16	54	2.3	29...	2130	11	32	.95
13...	0750	16	52	2.2	30...	0930	9.7	18	.47
13...	1315	17	40	1.8	JUN				
13...	2015	17	31	1.4	06...	1707	1.9	23	.12
14...	0315	17	16	.73	08...	0932	2.1	9	.05
14...	1015	18	26	1.3	18...	0215	11	4680	139
14...	1510	15	15	.61	18...	0230	15	4940	200
15...	0935	13	12	.42	18...	0300	10	3120	84
16...	1010	9.4	9	.23	18...	0400	16	1810	78
17...	1030	7.3	7	.14	18...	0500	12	1050	34
18...	0830	5.7	6	.09	18...	1230	2.6	31	.22
19...	0925	5.5	11	.16	19...	1415	4.4	24	.29
20...	0820	5.1	4	.06	29...	0905	1.2	9	.03
21...	0850	4.4	4	.05	AUG				
27...	0815	2.2	24	.14	01...	0730	.38	52	.05
MAR					08...	0815	.70	54	.10
12...	0815	.60	1	.00	15...	0810	.31	56	.05
13...	0950	.70	2	.00	22...	1150	.45	62	.08
15...	1430	1.5	1	.00	28...	1200	.31	82	.07
16...	0820	2.3	6	.04	SEP				
17...	1200	2.2	3	.02	13...	1000	.28	44	.03
18...	1130	2.2	3	.02	24...	2345	3.0	285	2.3
19...	0940	1.7	1	.00	25...	0145	2.8	106	.80
26...	0830	5.5	22	.33	25...	0315	2.5	111	.75
APR					25...	1501	1.0	11	.03
02...	0800	2.3	7	.04	26...	1146	.31	21	.02

05431018 DELAVAN LAKE TRIBUTARY AT SOUTH SHORE DR AT DELAVAN LAKE, WI--CONTINUED

SUSPENDED-SEDIMENT. WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	34	.13	5	.01	7	.05	9	.01	40	.05	12	.05													
2	30	.11	5	.01	7	.04	10	.02	40	.05	9	.03													
3	27	.09	4	.01	8	.05	11	.02	39	.05	7	.03													
4	24	.07	4	.01	9	.05	12	.02	39	.05	6	.02													
5	21	.06	4	.01	10	.06	13	.02	38	.05	5	.01													
6	19	.05	4	.01	12	.06	15	.03	37	.04	4	.01													
7	18	.04	4	.01	13	.06	16	.03	33	.04	3	.01													
8	19	.05	4	.01	10	.04	18	.03	29	.04	2	.01													
9	20	.04	4	.01	8	.03	20	.03	25	.05	2	.01													
10	20	.04	4	.01	6	.02	22	.03	22	.05	2	.01													
11	21	.04	4	.01	11	.07	24	.03	20	.05	1	.01													
12	28	.05	4	.01	6	.06	26	.04	53	1.1	1	.01													
13	31	.05	4	.01	5	.05	29	.04	43	1.9	2	.01													
14	28	.24	4	.01	5	.05	32	.04	17	.71	1	.01													
15	26	.25	4	.01	5	.05	35	.05	12	.38	1	.02													
16	23	.23	4	.02	5	.04	38	.05	9	.22	5	.03													
17	21	.05	4	.02	5	.03	42	.05	7	.13	3	.01													
18	19	.04	5	.01	7	.04	46	.05	7	.10	3	.02													
19	17	.21	6	.03	12	.05	47	.05	9	.13	1	.01													
20	16	.27	7	.06	11	.04	46	.05	4	.06	2	.01													
21	14	.06	8	.06	9	.03	45	.05	4	.05	3	.02													
22	13	.34	9	.05	7	.02	45	.05	6	.06	4	.04													
23	12	.33	12	.11	6	.01	44	.05	8	.07	6	.06													
24	11	.32	6	.05	5	.01	44	.06	10	.09	10	.30													
25	10	.05	1	.01	5	.01	43	.06	14	.11	15	.40													
26	9	.04	2	.01	5	.01	43	.06	19	.13	21	.30													
27	8	.03	7	.06	6	.01	42	.05	22	.13	18	.24													
28	7	.02	12	.13	6	.01	42	.05	19	.08	15	.17													
29	7	.02	10	.09	7	.01	42	.05	15	.06	13	.12													
30	6	.02	6	.05	8	.01	41	.05	---	---	11	.09													
31	6	.02	---	---	8	.01	41	.05	---	---	9	.07													
TOTAL	---	3.36	---	0.91	---	1.08	---	1.27	---	6.03	---	2.14													
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	8	.05	8	.05	18	.26	11	.03	52	.05	70	.06													
2	7	.04	11	.07	19	.21	12	.03	52	.05	67	.06													
3	8	.05	15	.10	20	.17	13	.03	53	.05	65	.05													
4	9	.06	20	.14	21	.14	14	.03	53	.05	62	.05													
5	10	.06	27	.17	22	.13	15	.03	53	.05	60	.05													
6	11	.06	37	.22	22	.12	16	.03	53	.05	58	.04													
7	12	.06	47	.23	15	.08	17	.03	54	.05	55	.05													
8	14	.07	45	.18	9	.05	19	.03	54	.17	53	.04													
9	15	.07	42	.16	8	.04	20	.03	54	.08	51	.04													
10	13	.06	43	.15	8	.04	22	.23	55	.06	49	.04													
11	11	.04	45	.16	7	.03	24	.07	55	.06	47	.04													
12	9	.04	48	.15	7	.03	26	.05	55	.05	46	.04													
13	7	.04	50	.16	6	.03	28	.05	55	.05	44	.03													
14	5	.02	53	.16	6	.02	30	.05	56	.05	42	.03													
15	3	.02	57	.15	5	.02	33	.05	56	.05	40	.03													
16	2	.01	62	.15	5	.02	36	.05	57	.05	38	.03													
17	3	.02	67	.16	5	.02	39	.06	58	.05	37	.03													
18	3	.02	73	.16	387	11	42	.05	59	.05	35	.02													
19	3	.02	79	.18	25	.28	45	.05	59	.05	33	.02													
20	3	.01	85	.18	22	.21	46	.06	60	.05	32	.02													
21	3	.01	91	.19	20	.15	46	.05	61	.06	31	.02													
22	3	.02	94	.30	18	.12	47	.05	62	.08	29	.02													
23	1	.01	94	.29	16	.10	47	.05	65	.05	28	.02													
24	1	.01	81	.24	15	.08	48	.05	68	.05	47	.17													
25	2	.02	183	3.0	13	.06	48	.05	71	.06	42	.21													
26	2	.02	33	.55	12	.05	49	.05	75	.06	19	.02													
27	3	.02	15	.21	11	.04	49	.06	78	.07	---	.02													
28	4	.02	27	.66	10	.04	50	.06	81	.07	---	.01													
29	5	.03	27	.80	9	.03	50	.05	79	.07	---	.01													
30	6	.04	17	.44	10	.03	51	.06	76	.06	---	.01													
31	---	---	17	.32	---	---	52	.06	73	.05	---	---													
TOTAL	---	1.02	---	10.08	---	13.60	---	1.63	---	1.85	---	1.28													
TOTAL LOAD FOR YEAR:			44.25		TONS.																				

ROCK RIVER BASIN

219

423526088380101 DELAVAN LAKE AT SW END NEAR DELAVAN LAKE, WI

LOCATION.--Lat 42°35'26", long 88°38'01", sec. 32, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.2 mi².

PERIOD OF RECORD.--October 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	STAGE (FT ABOVE DATUM) (00065)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	SILICA, DIS- SOLVED AS (MG/L SiO2) (00955)
OCT , 1983									
07...	1254	--	--	--	--	--	1.70	--	--
07...	1300	3.00	--	--	--	17.5	--	6.4	.3
07...	1310	27.0	--	--	--	17.5	--	6.1	.3
NOV									
02...	1128	--	--	--	--	--	3.00	--	--
02...	1140	3.00	--	495	8.3	11.5	--	8.4	.1
02...	1145	30.0	--	500	8.3	11.5	--	7.9	.2
DEC									
07...	1029	--	--	--	--	--	4.8	--	--
07...	1030	3.00	4.38	476	8.9	2.0	--	10.3	.3
07...	1045	28.0	4.38	476	8.9	2.5	--	10.3	.3
JAN , 1984									
17...	1035	3.00	4.22	505	8.4	.5	--	11.8	--
17...	1055	30.0	4.22	515	8.3	1.5	--	11.0	.6
FEB									
24...	1030	3.00	--	--	--	2.0	--	--	.3
MAR									
13...	1015	3.00	4.35	506	9.4	3.5	--	15.5	.4
13...	1020	30.0	4.35	520	9.3	4.0	--	11.4	.7
APR									
17...	0950	--	--	--	--	--	1.50	--	--
17...	1045	3.00	4.50	490	8.5	6.0	--	12.6	.6
17...	1055	30.0	4.50	492	8.5	6.0	--	12.4	.6
MAY									
09...	0911	--	--	--	--	--	1.10	--	--
09...	0940	3.00	4.60	520	8.0	9.5	--	8.8	.5
09...	0945	30.0	4.60	530	8.0	9.5	--	8.8	.5
23...	1039	--	--	--	--	--	5.5	--	--
23...	1105	3.00	4.86	530	8.1	14.5	--	9.8	.7
23...	1110	18.0	4.86	535	8.1	13.0	--	8.7	.8
23...	1115	30.0	4.86	540	8.0	12.0	--	7.0	.7
JUN									
06...	1122	--	--	--	--	--	2.70	--	--
06...	1150	27.0	5.08	520	7.9	16.0	--	7.9	1.1
06...	1155	3.00	5.08	520	8.1	17.0	--	--	.8
29...	1045	--	--	--	--	--	1.20	--	--
29...	1050	3.00	5.06	540	8.4	22.5	--	11.8	.4
29...	1100	27.0	5.06	550	7.8	22.0	--	8.2	.8
JUL									
18...	1105	--	--	--	--	--	.90	--	--
18...	1110	3.00	5.08	460	9.5	24.0	--	13.2	.4
18...	1135	25.0	5.08	470	9.0	23.0	--	11.0	.4
18...	1140	30.0	5.08	520	8.3	21.0	--	.0	1.1
AUG									
02...	1030	--	--	--	--	--	1.20	--	--
02...	1035	27.0	--	480	8.2	23.0	--	2.5	.7
02...	1040	21.0	--	460	8.3	23.5	--	7.8	<.1
02...	1100	3.00	--	460	8.4	24.5	--	10.0	.1
15...	1100	--	--	--	--	--	1.20	--	--
15...	1105	3.00	4.94	470	9.0	26.0	--	--	.2
15...	1120	15.0	4.94	480	8.6	25.5	--	--	.2
15...	1130	21.0	4.94	480	8.3	25.0	--	--	.4
15...	1135	27.0	4.94	500	8.1	23.5	--	--	.7
28...	0820	--	--	--	--	--	1.20	--	--
28...	0825	3.00	4.84	480	8.2	23.0	--	6.7	.3
28...	0835	27.0	4.84	490	8.2	23.0	--	2.5	.6
28...	0845	21.0	4.84	480	8.2	23.0	--	3.9	.5
SEP									
12...	1125	--	--	--	--	--	.70	--	--
12...	1130	3.00	4.76	430	8.6	21.0	--	9.3	.7
12...	1145	15.0	4.76	430	8.5	21.0	--	8.4	.7
12...	1150	30.0	4.76	440	8.1	20.0	--	3.9	.8
26...	1515	--	--	--	--	--	1.10	--	--
26...	1520	3.00	4.92	500	8.3	19.0	--	8.2	.3
26...	1525	15.0	4.92	500	8.2	19.0	--	7.3	.2
26...	1530	30.0	4.92	500	8.2	19.0	--	6.7	.2

423526088380101 DELAVAN LAKE AT SW END NEAR DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)
OCT , 1983									
07...	--	--	--	--	--	--	--	--	--
07...	<.10	--	--	1.4	--	.160	.110	20.0	<.100
07...	<.10	--	--	6.3	--	.170	.110	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
02...	<.10	--	--	1.4	--	.170	.150	4.40	<.100
02...	<.10	--	--	2.3	--	.170	.140	--	--
DEC									
07...	--	--	--	--	--	--	--	--	--
07...	.30	.870	--	.80	1.1	.180	.150	--	--
07...	.20	.880	.72	1.6	1.8	.180	.150	1.40	<.100
JAN , 1984									
17...	--	--	--	--	--	--	--	4.10	<.100
17...	.40	--	--	2.1	2.5	.180	.160	--	--
FEB									
24...	.40	--	--	1.0	1.4	.080	.040	--	--
MAR									
13...	.40	--	--	1.4	1.8	.140	.090	19.0	<.100
13...	.40	--	--	1.2	1.6	.150	.130	--	--
APR									
17...	--	--	--	--	--	--	--	--	--
17...	.50	--	--	1.4	1.9	.160	.060	21.0	6.50
17...	.50	--	--	1.4	1.9	.120	.060	--	--
MAY									
09...	--	--	--	--	--	--	--	--	--
09...	.60	--	--	3.0	3.6	.130	.100	.800	<.100
09...	.60	--	--	1.5	2.1	.150	.110	--	--
23...	--	--	--	--	--	--	--	--	--
23...	.60	--	--	1.8	2.4	.160	.120	2.90	<.100
23...	.60	--	--	1.2	1.8	.190	.110	--	--
23...	.50	--	--	1.0	1.5	3.30	.130	--	--
JUN									
06...	--	--	--	--	--	--	--	--	--
06...	.60	--	--	1.1	1.7	.140	.110	--	--
06...	.60	--	--	1.2	1.8	.140	.090	6.60	<.100
29...	--	--	--	--	--	--	--	--	--
29...	.40	--	--	3.2	3.6	.130	.020	29.0	<.100
29...	.40	--	--	1.6	2.0	.110	.060	--	--
JUL									
18...	--	--	--	--	--	--	--	--	--
18...	<.10	--	--	1.5	--	.060	.010	20.0	<.100
18...	<.10	--	--	1.3	--	.070	.020	--	--
18...	<.10	--	--	1.7	--	.130	.070	--	--
AUG									
02...	--	--	--	--	--	--	--	--	--
02...	<.10	--	--	2.5	--	.130	.040	--	--
02...	<.10	--	--	1.1	--	<.010	<.010	--	--
02...	<.10	--	--	1.7	--	<.010	<.010	22.0	<.100
15...	--	--	--	--	--	--	--	--	--
15...	<.10	--	--	1.1	--	.020	.010	4.40	<.100
15...	<.10	--	--	1.1	--	.050	<.010	--	--
15...	<.10	--	--	1.1	--	.040	<.010	--	--
15...	<.10	--	--	1.0	--	.030	<.010	--	--
28...	--	--	--	--	--	--	--	--	--
28...	<.10	--	--	1.4	--	.070	.020	25.0	<.100
28...	<.10	--	--	1.0	--	.070	.030	--	--
28...	<.10	--	--	1.1	--	.060	.010	--	--
SEP									
12...	--	--	--	--	--	--	--	--	--
12...	<.10	--	--	1.9	--	.060	.050	27.0	<.100
12...	<.10	--	--	2.1	--	.030	.050	--	--
12...	<.10	--	--	1.2	--	.070	.070	--	--
26...	--	--	--	--	--	--	--	--	--
26...	<.10	--	--	1.4	--	.170	.140	14.0	<.100
26...	<.10	--	--	1.7	--	.170	.120	--	--
26...	<.10	--	--	1.5	--	.170	.120	--	--

423526088380101 DELAVAN LAKE AT SW END NEAR DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	STAGE (FT ABOVE DATUM) (00065)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
APR , 1984												
17...	0950	--	--	--	--	--	1.50	--	--	--	--	--
17...	1045	3.00	4.50	490	8.5	6.0	--	12.6	230	50	41	31
17...	1055	30.0	4.50	492	8.5	6.0	--	12.4	230	48	41	31

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
APR , 1984												
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	20	16	.6	2.9	180	1.1	27	45	.10	.6	328	280
17...	19	15	.6	2.9	182	1.1	27	45	.10	.6	316	280

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, TOTAL (MG/L AS P) (71886)	PHOS- PHORUS, ORTH- DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)
APR , 1984											
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.45	.50	1.4	1.9	.160	.49	.060	3	1	21.0	6.50
17...	.43	.50	1.4	1.9	.120	.37	.060	7	1	--	--

ROCK RIVER BASIN

423556088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI

LOCATION.--Lat 42°35'56", long 88°36'50", sec. 28, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.2 mi².

PERIOD OF RECORD.--October 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	STAGE (FT ABOVE DATUM) (00065)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT , 1983												
07...	1130	3.00	--	--	--	17.5	--	7.2	2.1	--	--	<.10
07...	1139	--	--	--	--	--	1.50	--	--	--	--	--
07...	1200	54.0	--	--	--	15.5	--	.0	.3	--	--	<.10
NOV												
02...	1034	--	--	--	--	--	3.2	--	--	--	--	--
02...	1055	53.0	--	500	8.3	11.5	--	7.9	.2	--	--	<.10
02...	1100	3.00	--	490	8.3	11.0	--	8.2	<.1	--	--	.10
DEC												
07...	0929	--	--	--	--	--	4.2	--	--	--	--	--
07...	0930	52.0	4.38	504	8.6	2.5	--	9.8	.3	--	--	.30
07...	0945	2.00	4.38	480	8.4	2.5	--	10.0	.3	--	--	.30
JAN , 1984												
17...	1210	3.00	4.22	458	8.9	.5	--	12.0	--	--	--	--
17...	1300	54.0	4.22	680	7.7	3.5	--	.1	4.1	--	--	.30
MAR												
13...	1215	3.00	4.35	480	10.2	4.5	--	19.2	.5	--	--	.40
13...	1220	42.0	4.35	520	8.7	3.0	--	.9	3.4	--	--	.70
13...	1225	52.0	4.35	765	8.2	4.0	--	.2	4.6	--	--	.40
APR												
17...	1100	--	--	--	--	--	1.50	--	--	--	--	--
17...	1130	3.00	4.50	490	8.4	6.0	--	12.8	.6	--	--	.50
17...	1135	32.0	4.50	490	8.5	6.0	--	12.2	.6	--	--	.50
17...	1140	42.0	4.50	490	8.4	6.0	--	12.1	.6	--	--	.50
17...	1145	50.0	4.50	590	8.5	6.0	--	12.1	.6	--	--	.50
MAY												
09...	1031	--	--	--	--	--	1.40	--	--	--	--	--
09...	1050	3.00	4.60	525	8.0	9.5	--	8.9	.5	--	--	.50
09...	1055	32.0	4.60	530	8.0	9.5	--	8.9	.5	--	--	.60
09...	1057	42.0	4.60	540	8.0	9.5	--	8.8	.5	--	--	.60
09...	1100	52.0	4.60	540	8.0	9.5	--	8.8	.5	--	--	.60
23...	1137	--	--	--	--	--	4.3	--	--	--	--	--
23...	1205	3.00	4.86	530	8.2	15.5	--	10.0	.6	--	--	.60
23...	1210	32.0	4.86	540	8.0	11.5	--	7.6	.1	--	--	.50
23...	1215	42.0	4.86	540	7.9	10.5	--	5.7	.5	--	--	.50
23...	1220	50.0	4.86	550	7.8	10.0	--	3.0	1.3	--	--	.40
JUN												
06...	1039	--	--	--	--	--	2.40	--	--	--	--	--
06...	1040	51.0	5.08	530	7.5	12.0	--	2.1	1.9	--	--	.60
06...	1045	36.0	5.08	520	7.7	14.0	--	6.3	1.3	--	--	.60
06...	1050	3.00	5.08	520	8.3	18.0	--	10.4	.5	--	--	.60
15...	0855	--	--	--	--	--	2.40	--	--	--	--	--
15...	0900	3.00	5.08	530	8.4	20.5	--	10.3	<.1	.56	.040	.60
15...	0903	9.00	5.08	540	8.4	20.5	--	10.3	<.1	.56	.040	.60
15...	0905	15.0	5.08	539	8.3	20.5	--	8.3	<.1	.56	.040	.60
15...	0907	21.0	5.08	540	8.2	19.5	--	7.6	.2	.56	.040	.60
15...	0910	27.0	5.08	550	8.2	19.0	--	6.9	.3	.56	.040	.60
15...	0912	33.0	5.08	550	8.1	18.5	--	6.1	.4	.56	.040	.60
15...	0914	39.0	5.08	550	8.0	17.5	--	5.1	.6	.56	.040	.60
15...	0918	45.0	5.08	560	7.9	17.0	--	4.0	1.2	.46	.040	.50
15...	0920	48.0	5.08	560	7.9	15.0	--	3.8	1.4	.46	.040	.50
15...	0921	51.0	5.08	560	7.5	14.0	--	.1	2.1	.36	.040	.40
15...	0922	53.0	5.08	570	7.5	13.5	--	.1	2.0	.36	.040	.40
29...	1155	--	--	--	--	--	1.50	--	--	--	--	--
29...	1200	3.00	5.06	540	8.3	22.5	--	10.8	.5	--	--	.40
29...	1205	35.0	5.06	560	7.7	19.5	--	2.0	1.2	--	--	.40
29...	1215	42.0	5.06	570	7.3	16.5	--	.0	1.8	--	--	.40
29...	1220	51.0	5.06	580	7.1	15.0	--	.0	2.9	--	--	<.10
JUL												
18...	1330	--	--	--	--	--	.70	--	--	--	--	--
18...	1335	3.00	5.08	450	9.1	24.5	--	13.2	.4	--	<.010	<.10
18...	1340	9.00	5.08	450	9.1	24.5	--	13.2	.3	--	<.010	<.10
18...	1345	15.0	5.08	460	9.0	23.5	--	11.5	.4	--	<.010	<.10
18...	1350	21.0	5.08	470	8.9	23.0	--	10.5	.4	--	<.010	<.10
18...	1355	24.0	5.08	480	8.9	23.0	--	10.3	.4	--	<.010	<.10
18...	1400	27.0	5.08	510	8.3	22.0	--	5.6	.5	--	<.010	<.10
18...	1405	30.0	5.08	520	8.2	21.5	--	.4	1.3	.06	.040	.10
18...	1410	33.0	5.08	530	8.0	20.0	--	.0	1.1	--	.030	<.10
18...	1415	39.0	5.08	550	7.8	18.5	--	.0	1.9	--	.020	<.10
18...	1420	46.0	5.08	560	7.6	17.0	--	.0	3.1	--	<.010	<.10
18...	1425	52.0	5.08	580	7.5	16.0	--	.0	3.5	1.1	.010	1.1

ROCK RIVER BASIN

223

423556088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM- PLING DEPTH (FEET) (000003)	STAGE (FT ABOVE DATUM) (00065)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	
AUG , 1984													
02...	1115	--	--	--	--	--	1.10	--	--	--	--	--	
02...	1120	3.00	--	460	8.5	24.5	--	11.8	<.1	--	--	<.10	
02...	1125	30.0	--	510	7.6	21.5	--	.0	.5	--	--	<.10	
02...	1130	42.0	--	560	7.7	17.0	--	.0	2.9	--	--	<.10	
02...	1135	51.0	--	610	7.4	15.5	--	.0	4.1	--	--	<.10	
15...	1200	--	--	--	--	--	1.10	--	--	--	--	--	
15...	1205	3.00	4.94	460	9.1	26.5	--	9.4	.2	--	<.010	<.10	
15...	1210	24.0	4.94	480	8.2	24.5	--	.0	.4	--	--	<.10	
15...	1215	42.0	4.94	590	7.6	17.5	--	.0	3.6	--	--	<.10	
15...	1220	51.0	4.94	620	7.4	16.5	--	.0	4.8	--	--	<.10	
28...	1025	--	--	--	--	--	1.00	--	--	--	--	--	
28...	1030	3.00	4.84	480	8.4	23.5	--	9.5	.3	--	--	<.10	
28...	1040	36.0	4.84	500	8.1	22.5	--	.1	.6	--	--	<.10	
28...	1045	45.0	4.84	600	7.3	17.5	--	.0	4.0	--	--	<.10	
28...	1050	51.0	4.84	640	7.1	16.0	--	.0	4.6	--	--	<.10	
SEP													
12...	1340	--	--	--	--	--	1.10	--	--	--	--	--	
12...	1345	3.00	4.76	430	8.2	20.5	--	5.7	.8	--	--	<.10	
12...	1350	10.0	4.76	430	8.3	20.5	--	5.7	.8	--	--	<.10	
12...	1355	16.0	4.76	430	8.2	20.5	--	5.3	.8	--	--	<.10	
12...	1400	23.0	4.76	440	8.4	20.0	--	4.1	.8	--	--	<.10	
12...	1405	30.0	4.76	440	8.0	20.0	--	3.2	.8	--	--	<.10	
12...	1415	39.0	4.76	440	7.8	20.0	--	1.2	.9	--	--	<.10	
12...	1420	46.0	4.76	490	7.4	19.0	--	.0	2.3	--	--	<.10	
12...	1425	49.0	4.75	530	7.3	17.5	--	.0	6.4	--	--	<.10	
26...	1605	--	--	--	--	--	1.00	--	--	--	--	--	
26...	1610	3.00	4.92	500	8.2	19.0	--	7.8	.3	--	--	<.10	
26...	1615	26.0	4.92	500	8.2	19.0	--	6.5	.3	--	--	<.10	
26...	1620	51.0	4.92	500	8.1	18.5	--	6.1	.5	--	--	<.10	
DATE		NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTH, DIS- SOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (UG/L AS AS) (01002)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)
OCT , 1983													
07...	--	--	--	3.3	--	.470	.430	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	1.6	--	.160	.110	--	--	--	--	20.0	<.100
NOV													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	1.8	--	.170	.150	--	--	--	--	--	--
02...	--	--	--	1.9	2.0	.170	.150	--	--	--	--	3.40	<.100
DEC													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	1.9	2.2	.170	.150	--	--	--	--	--	--
07...	.890	1.1	2.0	2.3	.170	.150	--	--	--	--	--	2.00	<.100
JAN , 1984													
17...	--	--	--	--	--	--	--	--	--	--	--	3.30	<.100
17...	1.80	1.3	3.1	3.4	.460	.400	--	--	--	--	--	--	--
MAR													
13...	--	--	--	1.6	2.0	.100	.010	--	--	--	--	35.0	8.10
13...	--	--	--	2.4	3.1	.310	.290	--	--	--	--	--	--
13...	--	--	--	3.0	3.4	.410	.410	--	--	--	--	--	--
APR													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	.420	1.1	1.5	2.0	.150	.070	--	--	5	--	--	24.0	<.100
17...	.440	1.6	2.0	2.5	.150	.070	--	--	--	--	--	--	--
17...	.370	1.1	1.5	2.0	.140	.070	--	--	--	--	--	--	--
17...	.430	1.3	1.7	2.2	.160	.070	--	--	--	<3	--	--	--
MAY													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	.590	2.4	3.0	3.5	.140	.110	2	--	--	--	--	.800	<.100
09...	.600	1.6	2.2	2.8	.130	.100	--	--	--	--	--	--	--
09...	.610	4.4	5.0	5.6	.130	.100	--	--	--	--	--	--	--
09...	.600	2.8	3.4	4.0	.140	.100	1	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	.520	.38	.90	1.5	.160	.110	--	--	--	--	--	3.10	<.100
23...	.820	1.7	2.5	3.0	.170	.150	--	--	--	--	--	--	--
23...	.820	.98	1.8	2.3	3.30	.150	--	--	--	--	--	--	--
23...	1.30	.10	1.4	1.8	.220	.190	--	--	--	--	--	--	--
JUN													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	.820	.88	1.7	2.3	.230	.210	--	--	--	--	--	--	--
06...	.480	.62	1.1	1.7	.160	.130	--	--	--	--	--	--	--
06...	.270	1.3	1.6	2.2	.110	.070	--	--	--	--	--	7.40	<.100
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	.090	1.0	1.1	1.7	.100	.040	--	--	--	--	--	13.0	<.100
15...	.080	.82	.90	1.5	.090	.040	--	70	<10	<10	--	--	--
15...	.100	.70	.80	1.4	.090	.080	--	--	--	--	--	--	--
15...	.330	.47	.80	1.4	.110	.070	--	--	--	--	--	--	--
15...	.350	.65	1.0	1.6	.120	.090	--	90	<10	<10	--	--	--
15...	.390	.71	1.1	1.7	.130	.100	--	--	--	--	--	--	--

ROCK RIVER BASIN

423556088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (UG/L AS AS) (01002)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)
JUN , 1984												
15...	.440	.56	1.0	1.6	.150	.120	--	--	--	--	--	--
15...	.600	.70	1.3	1.8	.200	.150	--	70	<10	10	--	--
15...	.720	.58	1.3	1.8	.230	.190	--	60	<10	30	--	--
15...	.970	.63	1.6	2.0	.300	.260	--	80	10	120	--	--
15...	.980	.92	1.9	2.3	.300	.250	--	80	<10	120	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	1.5	1.9	.110	.040	--	--	--	--	17.0	<.100
29...	.580	2.0	2.6	3.0	.290	.150	--	--	--	--	--	--
29...	--	--	1.5	1.9	.280	.250	--	--	--	--	--	--
29...	1.50	1.7	3.2	--	.470	.390	2	--	--	--	--	--
JUL												
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	<.010	--	1.5	--	.060	.020	--	150	10	<10	4.60	<.100
18...	<.010	--	2.3	--	.070	<.010	--	--	--	--	--	--
18...	.050	1.7	1.7	--	.070	<.010	--	--	--	--	--	--
18...	<.010	--	1.8	--	.060	<.010	--	--	--	--	--	--
18...	<.010	--	1.6	--	.060	<.010	--	--	--	--	--	--
18...	.050	2.8	2.8	--	.080	<.020	--	--	--	--	--	--
18...	.170	.73	.90	1.0	.130	.120	--	--	--	--	--	--
18...	.120	.98	1.1	--	.120	.100	--	170	<10	<10	--	--
18...	.970	.63	1.6	--	.240	.190	--	130	10	120	--	--
18...	2.00	1.2	3.2	--	.540	<.500	--	170	20	340	--	--
18...	1.20	4.1	5.3	6.4	.440	.630	--	150	10	370	--	--
AUG												
02...	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	1.2	--	.070	<.010	--	--	--	--	25.0	<.100
02...	--	--	.90	--	.020	.020	--	--	--	--	--	--
02...	--	--	2.9	--	.500	.440	--	--	--	--	--	--
02...	--	--	4.1	--	.680	.620	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	<.010	--	1.6	--	.060	<.010	--	--	--	--	12.0	<.100
15...	--	--	.90	--	.040	.010	--	--	--	--	--	--
15...	--	--	3.2	--	.560	.460	--	--	--	--	--	--
15...	--	--	4.9	--	.760	.630	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	1.4	--	.090	<.010	--	--	--	--	31.0	<.100
28...	--	--	1.4	--	.090	.040	--	--	--	--	--	--
28...	--	--	3.7	--	.630	.560	--	--	--	--	--	--
28...	--	--	6.0	--	.730	.640	2	--	--	--	--	--
SEP												
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	1.1	--	.070	<.010	--	--	--	--	9.40	<.100
12...	--	--	1.2	--	.100	.080	--	--	--	--	--	--
12...	--	--	1.1	--	.100	.100	--	--	--	--	--	--
12...	--	--	1.2	--	.100	.080	--	--	--	--	--	--
12...	--	--	1.1	--	.120	.090	--	180	<10	30	--	--
12...	--	--	1.3	--	.090	.090	--	130	10	30	--	--
12...	--	--	2.7	--	.380	.290	--	190	20	320	--	--
12...	--	--	9.7	--	1.00	1.10	--	250	70	400	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	1.7	--	.170	.110	--	--	--	--	13.0	<.100
26...	--	--	1.6	--	.170	.100	--	--	--	--	--	--
26...	--	--	1.5	--	.170	.120	--	--	--	--	--	--

ROCK RIVER BASIN

225

423556088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM- PLING DEPTH (FEET) (000003)	STAGE (FT ABOVE DATUM) (00065)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
APR , 1984										
17...	1100	--	--	--	--	--	1.50	--	--	--
17...	1130	3.00	4.50	490	8.4	6.0	--	12.8	220	43
17...	1135	32.0	4.50	490	8.5	6.0	--	12.2	--	--
17...	1140	42.0	4.50	490	8.4	6.0	--	12.1	--	--
17...	1145	50.0	4.50	590	8.5	6.0	--	12.1	220	39

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
APR , 1984									
17...	--	--	--	--	--	--	--	--	--
17...	40	30	19	15	.6	3.0	181	1.4	26
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	39	30	18	15	.5	2.9	182	1.1	27

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
APR , 1984									
17...	--	--	--	--	--	--	--	--	--
17...	45	.20	.6	338	270	.46	.50	.420	1.1
17...	--	--	.6	--	--	--	.50	.440	1.6
17...	--	--	.6	--	--	--	.50	.370	1.1
17...	46	.20	.6	342	270	.47	.50	.430	1.3

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS PO4) (71886)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)
APR , 1984									
17...	--	--	--	--	--	--	--	--	--
17...	1.5	2.0	.150	.46	.070	5	1	24.0	<.100
17...	2.0	2.5	.130	.40	.070	--	--	--	--
17...	1.5	2.0	.140	.43	.070	--	--	--	--
17...	1.7	2.2	.160	.49	.070	<3	<1	--	--

ROCK RIVER BASIN

423659088354401 DELAVAN LAKE AT NORTH END NEAR LAKE LAWN, WI

LOCATION.--Lat 42°36'59", long 88°35'44", sec. 22, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.2 mi².

PERIOD OF RECORD.--October 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	STAGE (FT ABOVE DATUM) (00065)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
OCT , 1983									
07...	1005	--	--	--	--	--	2.60	--	--
07...	1030	1.00	--	--	--	17.5	--	7.7	.2
07...	1035	27.0	--	--	--	17.5	--	7.7	.2
NOV									
02...	0840	3.00	--	495	8.3	11.5	--	8.2	.2
02...	0920	--	--	--	--	--	2.70	--	--
02...	0935	30.0	--	500	8.2	11.5	--	7.8	.1
DEC									
07...	1204	--	--	--	--	--	4.0	--	--
07...	1215	3.00	4.38	483	8.8	1.5	--	10.2	.5
07...	1230	28.0	4.38	483	8.8	2.5	--	10.2	.3
JAN , 1984									
17...	1400	3.00	4.22	510	8.6	1.0	--	12.0	.5
17...	1415	27.0	4.22	490	8.5	1.5	--	11.5	.6
FEB									
24...	1100	3.00	--	--	--	--	--	--	.3
MAR									
13...	1325	3.00	4.35	510	--	3.0	--	14.5	.8
13...	1330	29.0	4.35	540	--	3.5	--	12.5	.8
APR									
17...	1245	--	--	--	--	--	1.50	--	--
17...	1310	3.00	4.50	495	8.3	6.0	--	12.7	.7
17...	1315	30.0	4.50	495	8.5	5.5	--	12.1	.7
MAY									
09...	1120	3.00	4.60	530	8.5	10.0	--	9.0	.6
09...	1125	32.0	4.60	540	8.0	10.0	--	8.7	.6
09...	1131	--	--	--	--	--	.60	--	--
23...	1312	--	--	--	--	--	3.00	--	--
23...	1325	3.00	4.86	530	8.1	16.5	--	.0	.6
23...	1330	22.0	4.86	530	8.0	12.5	--	8.7	.8
23...	1335	32.0	4.86	540	7.9	12.0	--	7.5	.9
JUN									
06...	0903	--	--	--	--	--	2.20	--	--
06...	0930	29.0	5.08	520	7.8	15.0	--	3.5	.4
06...	0945	3.00	5.08	510	8.2	19.0	--	10.7	.2
29...	0940	3.00	5.06	540	7.8	22.0	--	10.4	.3
29...	0945	29.0	5.06	560	7.5	20.5	--	4.1	.9
JUL									
18...	0910	3.00	5.08	460	9.1	24.5	--	10.8	.3
18...	1005	25.0	5.08	505	8.5	22.0	--	2.5	.6
18...	1010	30.0	5.08	530	8.3	21.0	--	.0	1.4
AUG									
02...	1004	3.00	--	470	8.6	28.0	--	12.0	<.1
02...	1006	16.0	--	460	8.4	24.0	--	8.9	<.1
02...	1008	21.0	--	480	8.2	23.0	--	1.5	.4
02...	1010	27.0	--	490	7.9	22.0	--	.0	.5
15...	0920	3.00	--	470	9.3	27.0	--	10.6	.1
15...	1015	15.0	--	470	9.2	26.0	--	8.0	.1
15...	1030	23.0	--	480	9.0	25.0	--	2.5	.2
15...	1035	27.0	--	490	8.8	23.5	--	.0	.7
28...	0715	3.00	4.84	480	8.6	23.5	--	8.7	.1
28...	0800	21.0	4.84	470	8.5	23.5	--	8.5	.1
28...	0825	27.0	4.84	480	8.5	23.5	--	8.4	.2
SEP									
12...	1010	3.00	4.76	440	8.6	20.0	--	6.0	.7
12...	1020	30.0	4.76	440	8.3	20.0	--	5.9	.7
12...	1030	15.0	4.76	430	8.3	20.0	--	6.0	.7
26...	1425	3.00	4.92	500	8.5	19.0	--	9.3	.2
26...	1435	15.0	4.92	500	8.4	18.5	--	8.7	.2
26...	1445	30.0	4.92	500	8.6	18.0	--	9.7	.2

ROCK RIVER BASIN

227

423659088354401 DELAVAN LAKE AT NORTH END NEAR LAKE LAWN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)
OCT , 1983									
07...	--	--	--	--	--	--	--	--	--
07...	<.10	--	--	1.5	--	.150	.020	26.0	<.100
07...	<.10	--	--	1.6	--	.170	.110	--	--
NOV									
02...	.20	--	--	2.0	2.2	.160	.130	--	--
02...	--	--	--	--	--	--	--	--	--
02...	.10	--	--	1.8	1.9	.180	.140	7.80	<.100
DEC									
07...	--	--	--	--	--	--	--	--	--
07...	.30	.870	.73	1.6	1.9	.180	.150	--	--
07...	.30	.860	.04	.90	1.2	.170	.150	2.10	<.100
JAN , 1984									
17...	.30	--	--	2.7	3.0	.180	.140	15.0	<.100
17...	.40	--	--	1.8	2.2	.170	.130	--	--
FEB									
24...	.40	--	--	1.6	2.0	.080	.050	--	--
MAR									
13...	.70	--	--	1.8	2.5	.140	.120	23.0	8.10
13...	.70	--	--	1.3	2.0	.120	.120	--	--
APR									
17...	--	--	--	--	--	--	--	--	--
17...	.50	--	--	1.4	1.9	.160	.070	21.0	<.100
17...	.50	--	--	1.8	2.3	.120	.070	--	--
MAY									
09...	.60	--	--	3.8	4.4	.130	.090	.500	<.100
09...	.60	--	--	3.8	4.4	.130	.090	--	--
09...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	.60	--	--	1.3	1.9	2.90	.140	4.00	<.100
23...	.40	--	--	2.1	2.5	.160	.120	--	--
23...	.50	--	--	.90	1.4	.160	.140	--	--
JUN									
06...	--	--	--	--	--	--	--	--	--
06...	.70	--	--	2.5	3.2	.130	.060	--	--
06...	.80	--	--	1.4	2.2	.130	.040	13.0	<.100
29...	.60	--	--	--	--	.080	.030	17.0	<.100
29...	.40	--	--	1.2	1.6	.190	.100	--	--
JUL									
18...	<.10	--	--	.90	--	.060	.010	19.0	<.100
18...	<.10	--	--	1.8	--	.090	.060	--	--
18...	.10	--	--	1.4	1.5	.160	.140	--	--
AUG									
02...	<.10	--	--	1.6	--	<.010	<.010	33.0	<.100
02...	<.10	--	--	1.2	--	<.010	<.010	--	--
02...	<.10	--	--	.90	--	<.010	.010	--	--
02...	<.10	--	--	1.0	--	.010	.020	--	--
15...	<.10	--	--	1.4	--	.070	<.010	14.0	<.100
15...	<.10	--	--	1.1	--	.050	<.010	--	--
15...	<.10	--	--	.80	--	.040	<.010	--	--
15...	<.10	--	--	1.0	--	.090	<.010	--	--
28...	<.10	--	--	1.1	--	.060	<.010	28.0	<.100
28...	<.10	--	--	1.5	--	.060	<.010	--	--
28...	<.10	--	--	1.0	--	.080	<.010	--	--
SEP									
12...	<.10	--	--	1.4	--	.070	.070	16.0	<.100
12...	<.10	--	--	1.2	--	.070	.070	--	--
12...	<.10	--	--	1.4	--	.110	.060	--	--
26...	<.10	--	--	1.5	--	.160	.100	26.0	<.100
26...	<.10	--	--	1.6	--	.160	.090	--	--
26...	<.10	--	--	1.6	--	.160	.090	--	--

ROCK RIVER BASIN

423659088354401 DELAVAN LAKE AT NORTH END NEAR LAKE LAWN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	STAGE (FT ABOVE DATUM) (00065)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
APR , 1984												
17...	1245	--	--	--	--	--	1.50	--	--	--	--	--
17...	1310	3.00	4.50	495	8.3	6.0	--	12.7	230	48	41	31
17...	1315	30.0	4.50	495	8.5	5.5	--	12.1	230	48	41	31

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY LAB AS CAC03) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
APR , 1984												
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	20	16	.6	2.9	182	1.7	27	46	.10	.7	324	280
17...	20	16	.6	2.9	182	1.1	27	45	.10	.7	327	280

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS TOTAL (MG/L AS P04) (71886)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)
APR , 1984											
17...	--	--	--	--	--	--	--	--	--	--	--
17...	.44	.50	1.4	1.9	.160	.49	.070	3	<1	21.0	<.100
17...	.44	.50	1.8	2.3	.120	.37	.070	5	<1	--	--

05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI

LOCATION.--Lat 42°36'53", long 88°37'29", in SW 1/4 SE 1/4 sec.20, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on right bank 25 ft upstream from bridge on Borg Road, 1.4 mi southeast of Delavan, and 0.2 mi downstream from Delavan Lake dam outlet.

DRAINAGE AREA.--42.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to September 1984.

GAGE.--Water-stage recorder. Altitude of gage is 920 ft, from topographic map

REMARKS.--Records good except those for winter periods, which are fair. Delevan Lake is drawn down 0.75 ft in October and then raised 0.75 ft in April end May to original lake level prior to drawdown; this regulation directly affects the discharge at the gage.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 134 ft³/s May 28, gage height, 6.81 ft; minimum daily discharge, 0.41 ft³/s Sept. 15, 16.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 2-5, Dec. 16 to Jan. 4, Jan. 6-26, Jan. 30 to Feb. 2, Feb. 4-10, and Feb. 26 to Mar. 17.)

Oct. 1 to Jan. 23, June 17 (1301) to Sept. 30				Jan. 24 to June 17 (1300)			
5.09	0.38	5.35	5.5	5.09	0.38	5.35	5.5
5.11	.51	5.40	8.0	5.11	.51	5.40	8.2
5.15	.88	5.70	27	5.15	.88	5.70	30
5.20	1.6	6.00	49	5.20	1.6	6.00	55
5.25	2.5	6.50	88	5.25	2.5	7.00	154
5.30	3.8			5.30	3.8		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	1.4	84	12	6.4	20	54	49	119	2.9	2.7	1.2
2	12	1.8	66	12	6.8	17	41	45	113	3.0	1.7	1.2
3	12	2.7	54	12	7.5	16	34	45	53	3.0	1.0	1.0
4	46	1.7	45	12	7.0	15	33	44	4.0	3.0	1.0	1.0
5	62	1.7	39	13	6.4	15	32	43	3.8	3.0	.95	.88
6	59	1.8	34	12	6.0	15	25	45	32	2.9	.85	.92
7	57	1.9	32	12	6.0	14	20	17	79	2.9	.88	1.0
8	56	2.0	32	11	6.0	13	20	3.5	38	2.9	.78	.73
9	52	2.5	31	10	6.6	13	20	3.9	7.2	2.9	.68	.59
10	48	3.6	29	9.4	8.0	13	18	4.4	5.8	5.1	.70	.46
11	47	2.8	31	9.6	15	13	15	1.9	14	18	.64	.46
12	45	2.5	32	9.8	21	13	6.2	.48	26	22	.58	.52
13	47	2.6	33	9.6	49	14	1.7	.44	43	20	1.3	.51
14	43	3.0	34	9.4	69	16	2.2	.45	36	19	1.4	.48
15	44	3.2	35	8.8	80	18	2.5	.49	16	20	1.6	.41
16	41	3.2	32	8.0	87	18	3.2	.47	2.4	19	1.8	.41
17	39	3.3	28	7.0	86	18	3.2	.53	2.4	19	1.9	.50
18	39	3.5	25	6.4	85	20	3.2	.71	37	13	1.8	.55
19	39	4.9	21	6.0	86	28	3.4	.65	60	4.2	1.8	.58
20	39	5.0	21	5.6	84	37	3.7	.66	62	4.5	1.1	.64
21	37	6.2	21	5.4	83	45	4.5	.77	60	4.6	.81	.62
22	37	7.4	20	5.4	81	45	3.3	.67	51	4.1	.89	.61
23	36	24	16	5.6	78	54	18	.55	46	3.7	.79	.52
24	34	35	13	5.8	67	69	33	.65	45	4.1	.85	.62
25	14	35	11	6.2	60	69	51	17	20	3.6	1.0	.68
26	.97	36	11	7.0	50	68	61	26	1.8	3.3	1.2	.50
27	.86	37	12	9.6	35	67	60	31	2.3	3.3	1.2	.83
28	.71	56	12	7.1	24	67	58	101	2.6	3.5	1.4	.90
29	1.0	62	11	6.9	22	61	61	128	2.9	3.2	1.4	.78
30	1.0	63	11	6.3	---	59	54	126	2.8	3.3	1.2	.78
31	1.2	---	11	6.2	---	57	---	122	---	3.2	1.3	---
TOTAL	1002.74	416.7	887	267.1	1228.7	1007	745.1	860.22	988.0	230.2	37.20	20.88
MEAN	32.3	13.9	28.6	8.62	42.4	32.5	24.8	27.7	32.9	7.43	1.20	.70
MAX	62	63	84	13	87	69	61	128	119	22	2.7	1.2
MIN	.71	1.4	11	5.4	6.0	13	1.7	.44	1.8	2.9	.58	.41
CFSM	.77	.33	.68	.21	1.01	.77	.59	.66	.78	.18	.03	.02
IN.	.89	.37	.78	.24	1.09	.89	.66	.76	.87	.20	.03	.02
WTR YR 1984	TOTAL	7690.84	MEAN	21.0	MAX	128	MIN	.41	CFSM	.50	IN	6.80

ROCK RIVER BASIN

05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1983 to current year.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: October 1983 to current year.

TOTAL NITRITE PLUS NITRATE DISCHARGE: October 1983 to current year.

TOTAL PHOSPHORUS DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Automatic pumping sampler from October to December. Observer sampler from January to September.

REMARKS.--Records good.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 229 mg/l Apr. 23; minimum observed, 1 mg/l on many days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 28 tons Apr. 26; minimum daily, 0.01 ton on many days.

TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 5.50 mg/l May 9; minimum observed, 0.50 mg/l May 23.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 1,800 lb Apr. 26; minimum daily, 1.2 lb May 13-14.

TOTAL NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 5.10 mg/l May 25; minimum observed, 0.10 mg/l Oct. 7.

TOTAL NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 967 lb Feb. 16; minimum daily, 0.96 lb Aug. 12.

TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 4.60 mg/l Apr. 22; minimum observed, 0.08 mg/l Aug. 24.

TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 432 lb May 28; minimum daily, 0.24 lb May 13-14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT , 1983					MAY , 1984				
07...	1830	56	13	2.0	03...	0810	45	11	1.3
12...	1335	49	14	1.9	07...	1105	3.0	7	.06
17...	1100	39	11	1.2	09...	1120	3.8	13	.13
NOV					14...	0910	.38	21	.02
02...	1445	1.9	1	.00	21...	0805	.59	22	.04
22...	1350	7.5	15	.30	23...	1640	.68	1	.00
23...	1645	32	35	3.0	25...	1105	24	205	13
23...	2145	34	59	5.4	25...	1450	24	38	2.5
24...	0645	34	32	2.9	26...	1130	26	52	3.7
24...	1945	36	19	1.8	27...	0830	26	45	3.2
24...	2045	36	25	2.4	28...	0830	85	85	20
25...	1500	35	6	.57	28...	2050	127	32	11
25...	1501	35	12	1.1	28...	1215	128	18	6.2
28...	1100	68	31	5.7	30...	0720	126	19	6.5
28...	1500	66	16	2.9	31...	1200	122	44	14
29...	0700	63	17	2.9	JUN				
29...	0905	62	17	2.8	01...	1030	119	82	26
30...	1105	90	27	6.6	02...	1240	113	77	23
DEC					03...	1000	107	52	15
07...	1600	32	2	.17	06...	1646	49	77	10
11...	1345	31	1	.08	08...	0950	5.4	20	.29
11...	1620	32	2	.17	09...	1015	6.9	32	.60
11...	1810	32	6	.52	10...	1020	6.3	40	.68
12...	1030	32	1	.09	18...	1100	51	139	19
14...	1045	34	2	.18	19...	1400	65	64	11
JAN , 1984					20...	1220	62	56	9.4
18...	1350	6.4	5	.09	25...	1230	2.1	29	.16
FEB					27...	1300	2.3	18	.11
06...	0900	6.0	2	.03	28...	0955	2.5	16	.11
12...	0915	15	8	.32	29...	0955	2.8	16	.12
13...	0805	34	10	.92	JUL				
13...	1600	62	8	1.3	02...	1530	3.0	41	.33
14...	1600	70	42	7.9	09...	1100	4.1	24	.27
16...	1045	87	64	15	10...	1510	5.5	19	.28
22...	0830	81	23	5.0	11...	0955	22	48	2.9
MAR					19...	0910	4.1	69	.76
05...	0835	15	4	.16	AUG				
12...	0830	13	1	.04	01...	0715	2.8	36	.27
13...	1035	14	1	.04	08...	1015	.78	31	.07
15...	1415	18	6	.29	15...	0855	1.3	24	.08
16...	0900	18	10	.49	22...	1045	.78	25	.05
APR					23...	0950	.78	32	.07
02...	0810	35	31	2.9	24...	0730	.88	40	.10
09...	0855	20	25	1.4	25...	0840	.88	30	.07
13...	0950	1.6	9	.04	26...	0715	1.3	31	.11
16...	0850	3.3	12	.11	29...	1250	1.6	86	.37
17...	0845	3.0	8	.06	SEP				
22...	1800	3.0	66	.53	01...	1525	1.1	40	.12
23...	0805	21	229	13	02...	1045	1.4	55	.21
30...	1030	48	81	10	03...	1045	1.1	54	.16
MAY					13...	1020	.51	22	.03
01...	1045	44	25	3.0	27...	1105	1.1	8	.02
02...	0805	45	15	1.8					

ROCK RIVER BASIN

231

05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
OCT , 1983						
07...	1830	56	.10	1.4	1.5	.160
12...	1105	50	.20	1.4	1.6	.150
12...	1230	49	.20	1.7	1.9	.140
NOV						
02...	1450	1.9	.50	1.0	1.5	.110
22...	1530	8.1	.30	1.8	2.1	.120
23...	1545	34	.20	2.0	2.2	.160
23...	2245	32	.20	2.7	2.9	.200
24...	1245	34	.30	2.2	2.5	.200
24...	2145	36	.20	1.4	1.6	.190
25...	1500	35	.30	1.9	2.2	.180
25...	1501	35	.30	1.4	1.7	.160
28...	0800	57	.30	2.4	2.7	.270
28...	1800	66	.30	2.4	2.7	.180
29...	1500	61	.30	2.7	3.0	.210
DEC						
07...	1600	32	.40	1.8	2.2	.170
11...	1620	32	.40	2.2	2.6	.340
12...	1025	32	.40	1.5	1.9	.160
JAN , 1984						
18...	1350	6.4	.40	2.2	2.6	.190
FEB						
12...	0920	15	.80	4.1	4.9	.780
13...	0800	34	.50	1.4	1.9	.240
13...	1555	62	.50	1.5	2.0	.210
14...	1600	70	1.8	1.6	3.4	.380
15...	1000	72	2.2	2.6	4.8	.440
16...	1050	87	2.1	2.6	4.7	.430
17...	1320	89	1.7	2.5	4.2	.310
18...	0815	86	1.3	1.7	3.0	.280
19...	0920	86	1.0	2.3	3.3	.380
20...	0845	84	.80	1.5	2.3	.200
21...	0915	82	.90	1.7	2.6	.190
27...	0825	35	.80	1.1	1.9	.150
MAR						
13...	1030	14	.60	1.2	1.8	.100
15...	1410	18	.60	.90	1.5	.130
18...	1300	20	.60	.70	1.3	.100
19...	0915	31	.70	1.0	1.7	.140
APR						
13...	0945	1.6	.90	3.2	4.1	.130
17...	0840	3.0	.20	2.7	2.9	.130
22...	1755	3.0	1.6	23	25	4.60
23...	0800	21	.30	5.0	5.3	.470
30...	1400	52	.80	2.2	3.0	.220
MAY						
01...	1040	44	.60	5.3	5.9	.110
02...	0800	45	.60	4.9	5.5	.100
03...	0815	45	3.4	4.0	7.4	.120
09...	1125	3.8	.80	5.5	6.3	.100
23...	1640	.68	.80	.50	1.3	.100
25...	1100	24	5.1	2.0	7.1	2.80
25...	1445	24	1.0	2.8	3.8	.520
26...	1132	26	<.10	1.0	--	.160
27...	0832	26	<.10	.80	--	.170
28...	0832	82	1.2	4.2	5.4	1.80
28...	2051	127	.40	.80	1.2	.110
29...	1251	128	.60	1.1	1.7	.140
30...	0721	126	.60	1.6	2.2	.130
31...	1205	122	.60	.90	1.5	.120
JUN						
01...	1035	119	.70	1.5	2.2	.170
02...	1240	113	.70	1.5	2.2	.140
03...	1010	107	.80	1.5	2.3	.160
06...	1645	49	.20	2.8	3.0	.220
08...	0950	5.4	.70	1.9	2.6	.150
09...	1015	6.9	.60	1.4	2.0	.150
10...	1020	6.3	.60	1.7	2.3	.140
18...	1100	51	.30	3.2	3.5	.500
19...	1400	65	.40	1.3	1.7	.190
22...	0122	59	.50	.90	1.4	.110
27...	1300	2.3	.60	.90	1.5	.160
28...	0955	2.5	.30	1.1	1.4	.130
29...	0955	2.8	.30	.80	1.1	.150
JUL						
02...	1530	3.0	.30	2.7	3.0	.200
09...	0805	2.8	<.10	4.1	--	.530
10...	1310	4.5	.20	2.5	2.7	.230
11...	0955	22	<.10	2.9	--	.360
19...	0910	4.1	.30	1.9	2.2	.170
AUG						
01...	0715	2.8	.40	2.8	3.2	.220
08...	1015	.78	.90	3.0	3.9	.250
15...	0755	1.3	.60	3.3	3.9	.290
22...	1045	.78	1.1	2.5	3.6	.330
23...	0950	.78	1.3	1.8	3.1	.180
24...	0730	.88	.80	1.5	2.3	.080
25...	0840	.88	1.4	1.8	3.2	.140
29...	1250	1.6	1.4	1.7	3.1	.150
SEP						
01...	1525	1.1	1.7	1.1	2.8	.130
02...	1045	1.4	1.6	1.6	3.2	.130
03...	1045	1.1	1.6	1.5	3.1	.140
13...	1020	.51	1.6	1.2	2.8	.110
27...	1105	1.1	1.1	2.3	3.4	.200

05431022 DELAVAN LAKE OUTLET AT BORG RD NEAR DELAVAN, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	.17	1	.01	19	4.2	3	.11	3	.06	7	.86																		
2	5	.16	1	.01	13	2.8	3	.11	2	.04	6	.45																		
3	5	.16	1	.01	9	1.8	3	.11	2	.04	5	.35																		
4	11	1.7	1	.01	6	1.2	3	.11	2	.04	5	.31																		
5	14	2.4	1	.01	4	.53	4	.14	2	.04	4	.23																		
6	14	2.2	1	.01	3	.28	4	.14	2	.04	3	.14																		
7	13	2.0	2	.01	2	.18	4	.14	2	.04	3	.12																		
8	13	2.0	2	.01	2	.17	4	.14	2	.04	2	.11																		
9	13	1.8	2	.01	1	.11	4	.14	2	.04	2	.12																		
10	14	1.8	2	.02	1	.08	4	.14	7	.28	1	.06																		
11	14	1.8	3	.02	2	.18	4	.14	9	.36	1	.05																		
12	14	1.7	3	.02	1	.12	4	.14	10	.62	1	.05																		
13	13	1.7	3	.02	1	.12	4	.14	11	1.5	1	.05																		
14	13	1.5	3	.03	2	.18	4	.15	30	5.6	3	.12																		
15	12	1.4	4	.03	2	.19	5	.16	39	8.5	6	.29																		
16	12	1.3	4	.04	2	.18	5	.17	59	14	9	.49																		
17	11	1.2	5	.04	2	.18	5	.19	53	12	7	.38																		
18	11	1.1	6	.05	2	.17	5	.22	45	10	5	.29																		
19	11	1.2	7	.09	2	.16	5	.19	38	8.8	4	.34																		
20	11	1.2	9	.12	2	.16	5	.17	32	7.2	10	1.1																		
21	10	1.0	12	.20	2	.16	4	.14	27	6.0	18	2.2																		
22	10	.99	15	.30	2	.16	4	.14	23	4.9	23	2.8																		
23	10	.97	35	2.7	3	.23	4	.10	19	4.1	36	5.6																		
24	10	.92	29	2.7	3	.24	4	.07	17	3.1	48	8.9																		
25	5	.36	9	.89	3	.23	4	.10	15	2.4	46	8.5																		
26	1	.01	5	.51	3	.22	3	.11	13	2.0	43	8.0																		
27	1	.01	7	.73	3	.21	3	.08	11	1.7	41	7.5																		
28	1	.01	17	2.9	3	.15	3	.06	9	1.2	39	7.1																		
29	1	.01	16	2.8	3	.11	3	.00	8	1.0	37	6.2																		
30	1	.01	18	3.8	3	.11	3	.06	---	---	36	5.7																		
31	1	.01	---	---	3	.11	3	.06	---	---	34	5.2																		
TOTAL	---	32.79	---	18.10	---	14.92	---	3.87	---	95.64	---	73.61																		
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	32	4.7	45	6.6	77	25	29	.23	36	.26	43	.14																		
2	31	3.4	15	1.8	74	23	38	.31	35	.16	53	.19																		
3	30	2.8	11	1.4	32	7.8	38	.31	34	.09	53	.15																		
4	29	2.6	11	1.3	10	.11	35	.29	34	.09	49	.13																		
5	28	2.4	10	1.2	10	.10	33	.27	33	.09	45	.11																		
6	27	1.9	10	1.2	37	4.5	30	.24	32	.07	41	.10																		
7	26	1.5	8	.45	68	14	28	.22	32	.08	38	.11																		
8	26	1.4	10	.09	40	5.9	26	.20	31	.06	34	.07																		
9	24	1.3	13	.14	33	.64	24	.19	30	.05	31	.05																		
10	19	.94	14	.17	39	.60	21	.31	29	.05	29	.04																		
11	15	.59	16	.08	43	1.8	41	2.2	28	.05	26	.03																		
12	11	.20	17	.02	49	3.5	47	2.7	27	.04	24	.03																		
13	9	.04	19	.02	60	7.4	46	2.5	26	.09	22	.03																		
14	10	.06	21	.03	48	5.0	44	2.3	25	.10	20	.03																		
15	11	.08	21	.03	24	1.3	43	2.3	24	.10	19	.02																		
16	11	.10	21	.03	8	.05	42	2.1	24	.12	18	.02																		
17	9	.08	21	.03	6	.04	41	2.1	24	.13	16	.02																		
18	13	.11	22	.04	77	10	51	1.5	24	.11	15	.02																		
19	19	.17	22	.04	63	10	68	.78	25	.12	14	.02																		
20	28	.28	22	.04	57	9.5	65	.80	25	.07	13	.02																		
21	41	.50	17	.03	52	8.4	62	.77	25	.05	12	.02																		
22	59	.52	5	.01	49	6.8	59	.65	26	.06	11	.02																		
23	158	9.6	1	.01	46	5.7	56	.56	33	.07	11	.01																		
24	175	16	1	.01	43	5.1	53	.59	37	.09	10	.02																		
25	175	25	66	3.9	33	2.1	51	.49	31	.09	9	.02																		
26	171	28	49	3.4	23	.11	48	.43	34	.11	9	.01																		
27	141	23	47	4.4	18	.11	46	.41	45	.17	8	.02																		
28	117	18	71	18	16	.11	44	.41	62	.24	8	.02																		
29	97	16	21	7.1	17	.13	41	.36	80	.31	7	.02																		
30	88	13	23	7.8	22	.17	39	.35	68	.21	7	.01																		
31	---	---	45	15	---	---	37	.32	53	.19	---	---																		
TOTAL	---	174.27	---	74.37	---	158.97	---	27.19	---	3.52	---	1.50																		
TOTAL LOAD FOR YEAR:			678.75		TONS.																									

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 downstream from bridge on Carvers Rock Road, 3.3 mi northeast of Clinton, 13 mi northeast of Beloit, and 17.8 mi upstream from mouth.

DRAINAGE AREA.--199 mi³.

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

REVISED RECORDS.--WSP 955: 1940. WSP 1308: 1950(M). WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 823 ft, from topographic map. September 1939 to December 1979, water-stage recorder at site 1.8 mi 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.

AVERAGE DISCHARGE.--45 years, 122 ft³/s, 8.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s Apr. 21, 1973, gage height, 12.85 ft, from rating curve extended above 6,500 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 8.0 ft³/s Dec. 29, 1956, gage height, 2.04 ft, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,190 ft³/s Feb. 13, gage height, 7.00 ft; no peak above base of 1,200 ft³/s; minimum discharge, 24 ft³/s Mar. 11, gage height, 3.23 ft, 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. 3, Dec. 7, 8, 10, 11, Dec. 16 to Feb. 12, and Mar. 1, 5-13, 18.)

3.5	50	5.0	374
4.0	134	6.0	726
4.5	246	7.0	1,190

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	93	230	94	84	170	198	255	298	98	66	65
2	87	103	220	94	86	174	193	226	270	95	65	63
3	87	103	210	96	86	148	180	209	255	95	63	65
4	104	96	204	98	86	141	179	211	221	95	65	63
5	123	90	198	100	84	140	185	193	156	94	65	62
6	131	88	182	100	84	130	174	182	131	93	65	62
7	131	88	140	100	84	120	156	174	169	88	79	66
8	142	88	140	98	82	120	145	139	192	86	104	65
9	141	88	138	98	82	120	143	126	185	86	88	68
10	134	99	130	96	82	120	140	124	148	117	75	68
11	132	101	160	96	86	110	134	124	130	165	71	69
12	194	93	284	94	250	110	145	119	126	129	68	70
13	193	90	231	94	1110	110	161	120	133	118	67	64
14	165	89	225	94	715	114	153	116	138	110	67	66
15	148	92	222	92	486	166	150	111	137	108	66	66
16	137	96	190	92	409	233	167	108	129	102	67	65
17	128	94	180	90	370	176	161	106	113	101	67	63
18	122	92	170	90	347	150	147	108	398	97	71	63
19	119	118	160	90	414	143	138	113	271	92	71	63
20	120	239	150	90	369	165	131	114	231	83	65	62
21	128	238	150	90	319	197	125	108	206	79	66	63
22	139	189	150	88	302	212	180	121	190	77	77	63
23	152	242	140	88	289	246	259	134	197	76	71	64
24	143	251	130	88	274	352	253	115	173	76	74	67
25	131	208	130	88	254	372	236	390	157	74	71	215
26	120	184	120	88	233	309	231	427	140	75	69	195
27	98	186	120	86	218	288	224	256	127	77	66	115
28	92	322	110	86	200	261	213	376	117	73	67	93
29	89	299	110	86	178	239	212	752	104	71	67	73
30	87	230	100	86	---	220	303	398	101	69	67	66
31	88	---	96	84	---	204	---	337	---	68	64	---
TOTAL	3891	4389	5120	2854	7663	5760	5416	6392	5343	2867	2174	2312
MEAN	126	146	165	92.1	264	186	181	206	178	92.5	70.1	77.1
MAX	194	322	284	100	1110	372	303	752	398	165	104	215
MIN	86	88	96	84	82	110	125	106	101	68	63	62
CFSM	.63	.73	.83	.46	1.33	.94	.91	1.04	.89	.47	.35	.39
IN.	.73	.82	.96	.53	1.43	1.08	1.01	1.19	1.00	.54	.41	.43
CAL YR 1983	TOTAL	62525	MEAN 171	MAX 898	MIN 72	CFSM .86	IN 11.69					
WTR YR 1984	TOTAL	54181	MEAN 148	MAX 1110	MIN 62	CFSM .74	IN 10.13					

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 downstream from Vinegar Branch, and 3.6 mi upstream from Otter Creek.

DRAINAGE AREA.--273 mi².

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 National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--45 years, 186 ft³/s, 9.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,000 ft³/s July 16, 1950, gage height, 20.71 ft, from rating curve extended above 11,000 ft³/s basis of slope-area determination of peak flow; minimum, 17 ft³/s Nov. 29, 1966, gage height, 2.09 ft, result of freezeup; minimum gage height, 1.07 ft Dec. 6, 1968, result of freezeup.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Feb. 21, 1937, reached a stage of 17.6 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,300 ft³/s June 10, gage height, 10.06 ft; no peaks above base of 1,500 ft³/s; minimum discharge, 108 ft³/s Dec. 7, gage height, 2.21 ft, result of freezeup.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 17 to Nov. 30, Dec. 12-16, May 3 to June 8, Sept. 27-30; stage-discharge relation affected by ice Dec. 1-11, Dec. 17 to Feb. 12, and Mar. 8-14.)

2.1	110	6.0	556
3.0	191	8.0	856
4.0	300	10.0	1,280

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	127	180	120	110	212	176	618	221	244	187	150
2	130	137	170	120	110	201	173	392	212	239	184	151
3	133	130	150	120	110	188	173	378	202	230	181	148
4	172	122	140	130	110	187	185	526	193	242	181	146
5	151	119	140	130	110	187	183	425	201	244	181	145
6	139	120	130	130	110	178	174	377	198	259	176	141
7	134	121	130	120	110	167	165	335	210	241	177	142
8	137	122	130	120	110	160	160	309	404	215	222	142
9	134	122	130	120	110	160	159	284	835	218	209	144
10	130	135	140	120	120	160	158	268	1090	777	179	144
11	133	147	150	120	130	160	153	260	892	836	171	146
12	158	126	206	120	150	160	162	250	457	479	169	142
13	175	121	188	120	403	160	208	247	609	304	165	138
14	147	124	174	120	542	160	222	256	635	279	162	135
15	139	136	179	120	449	173	211	222	429	703	160	134
16	138	133	154	120	458	230	198	209	384	466	159	133
17	139	124	150	120	427	187	189	203	424	382	177	132
18	132	123	140	120	395	166	178	201	945	341	322	131
19	132	143	130	120	524	177	171	202	741	288	194	132
20	136	210	130	110	507	173	168	226	450	268	173	131
21	143	195	130	110	368	183	162	208	393	252	166	128
22	142	159	130	110	327	184	170	194	378	239	168	126
23	142	162	120	110	305	299	209	194	378	229	163	131
24	139	218	120	110	283	449	226	182	338	221	159	135
25	134	176	120	120	260	297	212	227	308	212	156	442
26	131	157	120	120	242	237	198	352	292	213	154	368
27	131	160	120	120	227	217	190	218	290	213	153	167
28	129	268	120	110	211	209	177	275	280	206	153	148
29	128	314	120	110	192	196	178	377	262	199	151	141
30	124	187	120	110	---	187	675	267	253	192	151	138
31	123	---	120	110	---	180	---	237	---	189	146	---
TOTAL	4285	4638	4381	3660	7510	6184	5963	8919	12904	9620	5449	4731
MEAN	138	155	141	118	259	199	199	288	430	310	176	158
MAX	175	314	206	130	542	449	675	618	1090	836	322	442
MIN	123	119	120	110	110	160	153	182	193	189	146	126
CFSM	.51	.57	.52	.43	.95	.73	.73	1.06	1.58	1.14	.65	.58
IN.	.58	.63	.60	.50	1.02	.84	.81	1.22	1.76	1.31	.74	.64
CAL YR 1983	TOTAL	80316	MEAN 220	MAX 1340	MIN 119	CFSM .81	IN 10.94					
WTR YR 1984	TOTAL	78244	MEAN 214	MAX 1090	MIN 110	CFSM .78	IN 10.66					

ROCK RIVER BASIN

235

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 south of Blanchardville and 4.5 mi upstream from Sawmill Creek.

DRAINAGE AREA.--221 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 796.8 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 20, 1939, nonrecording gage at bridge 50 ft upstream at same datum. Auxiliary nonrecording gage 2.7 mi upstream at same datum read during high flows.

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

AVERAGE DISCHARGE.--45 years, 143 ft³/s, 8.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s Feb. 28, 1948, gage height, 15.74 ft; minimum, 18 ft³/s Nov. 29, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
June 10	2100	1,390	11.35	July 11	0900	*2,320	12.75

minimum discharge, 97 ft³/s, Dec. 7, gage height, 3.58 ft, result of freezeup.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 2 to Feb. 12 and Mar. 8-14.)

Oct. 1 to June 11				June 12 to Sept. 30			
3.7	107	7.0	438	4.3	135	9.0	704
4.0	131	8.0	563	5.0	202	10.0	932
5.0	224	9.0	704	6.0	316	11.0	1,250
6.0	324	10.0	932	7.0	436	12.0	1,730
		11.0	1,250	8.0	563	13.0	2,560

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	124	165	120	120	162	143	415	199	218	190	149
2	126	127	150	120	120	157	143	291	193	212	188	152
3	128	122	140	120	120	151	142	310	187	208	184	150
4	146	119	130	130	120	149	149	440	199	254	182	146
5	135	118	130	130	120	152	150	318	218	220	179	141
6	129	119	120	130	110	151	144	284	216	248	178	139
7	128	121	120	120	110	138	137	264	247	213	193	141
8	128	121	140	120	120	130	134	248	302	202	254	141
9	125	120	130	120	120	130	134	236	302	202	220	142
10	124	131	130	120	130	130	135	225	985	863	181	142
11	126	135	150	120	150	130	131	222	720	2030	174	142
12	169	122	180	120	200	130	141	215	342	803	171	141
13	169	120	160	120	274	130	187	217	390	392	170	140
14	140	122	150	120	264	130	178	221	362	318	167	139
15	134	127	150	120	267	144	166	195	269	500	166	139
16	133	124	140	120	265	166	164	187	252	310	164	138
17	129	121	140	120	233	144	158	184	265	320	180	137
18	126	120	140	120	226	140	149	182	584	290	194	137
19	125	138	130	120	344	138	145	189	406	250	170	138
20	125	184	130	110	304	143	144	271	279	240	163	137
21	126	178	130	110	234	153	139	196	261	233	160	135
22	128	143	130	110	218	157	147	185	317	223	163	135
23	132	152	120	110	209	187	184	183	378	218	158	137
24	130	196	120	120	198	208	232	173	270	211	156	139
25	127	153	120	120	187	180	206	260	245	207	155	480
26	126	143	120	120	178	166	185	306	235	206	155	280
27	125	143	120	120	170	161	177	201	393	207	155	156
28	126	274	120	120	165	158	167	279	294	202	155	151
29	123	285	120	120	155	153	167	305	234	197	152	148
30	121	183	120	120	---	149	636	224	225	194	156	147
31	122	---	120	120	---	145	---	208	---	192	151	---
TOTAL	4056	4385	4165	3710	5431	4657	5214	7634	9769	10583	5384	4739
MEAN	131	146	134	120	187	150	174	246	326	341	174	158
MAX	169	285	180	130	344	208	636	440	985	2030	254	480
MIN	121	118	120	110	110	130	131	173	187	192	151	135
CFSM	.59	.66	.61	.54	.85	.68	.79	1.11	1.48	1.54	.79	.72
IN.	.68	.74	.70	.62	.91	.78	.88	1.28	1.64	1.78	.91	.80
CAL YR 1983	TOTAL	64838	MEAN 178	MAX 742	MIN 111	CFSM .81	IN 10.91					
WTR YR 1984	TOTAL	69727	MEAN 191	MAX 2030	MIN 110	CFSM .86	IN 11.74					

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 downstream from highway bridge in Martintown, 0.3 mi upstream from Wisconsin-Illinois State line and 8.8 mi downstream from Skinner Creek.

DRAINAGE AREA.--1,034 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Jan. 6, 1940, nonrecording gage at same site and datum. Auxiliary recording gage 1.2 mi downstream, at same datum, which records stage above 7.4 ft.

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

AVERAGE DISCHARGE.--45 years, 717 ft³/s, 9.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft³/s July 1, 1969, gage height, 21.46 ft; no flow for part of Dec. 14, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,530 ft³/s June 18, gage height, 11.72 ft, no peak above base of 4,000 ft³/s; minimum daily discharge, 460 ft³/s Feb. 4-11.

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

4.2	444	8.0	1,430
5.0	643	10.0	1,990
6.0	896	12.0	2,640

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	586	542	882	500	470	774	710	1610	957	943	766	582
2	574	550	760	500	470	772	694	1770	894	908	754	576
3	565	566	740	500	470	749	687	1560	851	884	741	580
4	577	557	700	500	460	713	689	1380	814	882	729	578
5	600	542	660	500	460	699	701	1440	784	893	718	572
6	623	532	620	500	460	695	702	1380	777	924	709	567
7	600	533	600	500	460	678	679	1240	833	910	699	561
8	586	536	600	500	460	639	653	1140	900	886	765	557
9	587	539	600	500	460	607	638	1070	982	830	854	563
10	586	537	600	500	460	594	631	1010	1700	1250	851	569
11	588	550	620	490	460	567	623	969	1910	2110	745	574
12	721	566	700	490	500	560	635	936	1980	2340	694	571
13	781	546	800	490	800	560	697	915	1940	2440	674	559
14	751	525	760	490	1200	600	763	901	1720	2330	663	548
15	708	526	700	490	1700	657	790	890	1630	1980	652	537
16	672	532	640	490	1800	699	773	838	1390	1840	641	531
17	643	535	620	490	1800	751	748	797	1230	1770	644	528
18	627	522	600	490	1690	715	721	780	2280	1510	704	523
19	625	563	580	480	1510	655	695	792	2300	1320	813	521
20	618	658	580	480	1550	665	670	819	2220	1160	768	522
21	615	748	560	480	1520	689	653	870	1950	1070	681	517
22	618	744	560	480	1310	745	658	830	1640	1010	660	511
23	626	689	540	480	1170	948	736	784	1470	963	647	510
24	622	709	540	480	1090	1070	869	760	1380	924	635	526
25	607	744	540	480	1020	1120	926	831	1250	889	619	816
26	582	711	520	480	960	1030	888	966	1140	866	611	1190
27	563	657	520	480	905	897	835	1050	1070	858	604	1240
28	555	831	520	480	853	829	786	1030	1100	847	600	880
29	554	1040	520	470	806	793	765	1200	1110	825	597	697
30	546	1080	500	470	---	761	1190	1240	997	800	587	641
31	539	---	500	470	---	732	---	1080	---	780	579	---
TOTAL	19045	18910	19182	15130	27274	22963	22205	32878	41199	37942	21404	18647
MEAN	614	630	619	488	940	741	740	1061	1373	1224	690	622
MAX	781	1080	882	500	1800	1120	1190	1770	2300	2440	854	1240
MIN	539	522	500	470	460	560	623	760	777	780	579	510
CFSM	.59	.61	.60	.47	.91	.72	.72	1.03	1.33	1.18	.67	.60
IN.	.69	.68	.69	.54	.98	.83	.80	1.18	1.48	1.37	.77	.67
CAL YR 1983	TOTAL	326874	MEAN 896	MAX 2850	MIN 490	CFSM .87	IN 11.76					
WTR YR 1984	TOTAL	296779	MEAN 811	MAX 2440	MIN 460	CFSM .78	IN 10.68					

ROCK RIVER BASIN

237

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 southwest of Brodhead, and 1.9 mi upstream from Sylvester Creek.

DRAINAGE AREA.--523 mi².

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 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.--70 years, 346 ft³/s, 8.98 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s Sept. 13, 1915, gage height, 11.4 ft from floodmarks, from rating curve extended above 7,500 ft³/s; minimum, 35 ft³/s Sept. 19, 1959, gage height, -0.16 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)	DATE	TIME	DISCHARGE (ft ³ /s)	GAGE HEIGHT (ft)
June 18	1700	1,370	3.99	July 13	1500	*2,160	*5.60

minimum discharge, 160 ft³/s Feb. 29, gage height, 0.31 ft, result of ice jam or regulation.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used May 2 to Aug. 9; stage-discharge relation affected by ice Dec. 7 to Feb. 11 and Mar. 8-14.)

0.7	230	4.0	1,280
1.0	296	6.0	2,320
2.0	572		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	254	267	533	250	240	377	370	951	545	483	354	273
2	249	271	442	250	240	385	362	1180	458	447	347	277
3	246	272	386	260	240	363	362	1070	443	414	345	282
4	245	270	356	260	240	354	362	828	424	409	337	282
5	248	266	339	270	240	352	365	748	411	424	332	278
6	248	266	332	270	230	346	358	731	407	431	327	273
7	247	281	300	270	230	337	345	652	431	416	324	271
8	246	263	290	270	230	320	336	562	454	396	388	269
9	248	268	290	260	240	310	332	507	444	389	425	267
10	248	271	290	260	260	310	329	487	667	613	419	271
11	260	288	310	250	300	300	327	475	846	1150	377	290
12	282	297	370	250	351	300	342	463	996	1480	341	274
13	341	289	410	250	582	300	453	465	1030	2050	329	265
14	467	283	420	250	801	310	492	469	799	1710	327	263
15	379	285	390	250	1150	323	487	460	637	1050	324	261
16	318	284	350	250	1170	351	465	440	533	681	314	267
17	291	281	290	250	909	398	454	424	493	681	348	275
18	281	287	280	250	762	374	426	417	1060	620	342	262
19	275	297	270	250	735	354	397	427	1010	567	336	258
20	283	359	260	250	729	354	374	453	897	514	321	254
21	278	409	260	240	734	370	357	453	782	476	311	253
22	278	407	260	240	672	402	376	416	659	442	314	249
23	284	377	260	240	572	490	435	411	916	435	308	250
24	303	371	250	250	518	568	503	400	686	420	303	260
25	309	393	250	250	488	578	588	450	620	413	300	330
26	284	365	250	260	460	529	584	570	580	400	295	417
27	278	344	250	250	432	474	507	597	528	398	291	475
28	277	419	250	240	405	441	467	613	553	390	286	394
29	264	554	250	240	382	419	437	743	591	379	283	319
30	265	593	250	240	---	402	713	776	549	370	278	301
31	263	---	250	240	---	382	---	670	---	361	272	---
TOTAL	8739	9877	9688	7810	14542	11873	12705	18308	19449	19409	10198	8660
MEAN	282	329	313	252	501	383	424	591	648	626	329	289
MAX	467	593	533	270	1170	578	713	1180	1060	2050	425	475
MIN	245	263	250	240	230	300	327	400	407	361	272	249
CFSM	.54	.63	.60	.48	.96	.73	.81	1.13	1.24	1.20	.63	.55
IN.	.62	.70	.69	.56	1.03	.84	.90	1.30	1.38	1.38	.73	.62
CAL YR 1983	TOTAL	145928	MEAN 400	MAX 1820	MIN 210	CFSM .77	IN 10.38					
WTR YR 1984	TOTAL	151258	MEAN 413	MAX 2050	MIN 230	CFSM .79	IN 10.76					

ROCK RIVER BASIN

05436500 SUGAR RIVER NEAR BRODHEAD, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-67, 1973, 1976, 1979 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water years 1979-82, October 1983 to current year.

REMARKS.--Sediment records are fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 623 mg/l July 11, 1983; minimum daily mean, 1 mg/l

Dec. 20-23, 1979. Maximum observed, 786 mg/l July 10, 1984; minimum observed, 1 mg/l Dec. 20, 30, 1979.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,160 tons July 13, 1984; minimum daily, 0.65 ton Dec. 20, 1979.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 623 mg/l July 11; minimum daily mean, 6 mg/l Mar. 10-

12. Maximum observed, 786 mg/l July 10; minimum observed, 6 mg/l Mar. 10.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,160 tons July 13; minimum daily, 4.7 tons Jan. 24, 25.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)					
NOV , 1983									
08...	1328	263	680	10.0					
JAN , 1984									
03...	1040	255	490	.0					
26...	1310	259	490	.0					
MAR									
01...	1430	356	490	2.5					
APR									
16...	1550	469	505	8.5					
MAY									
29...	1420	747	500	12.5					
JUN									
13...	1305	1050	430	22.5					
JUL									
19...	1555	560	540	24.0					
AUG									
30...	1435	281	570	25.5					
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	
JUN , 1984									
12...	1150	996	92	247	98	99	100	--	
13...	1335	1010	95	259	93	95	98	100	

ROCK RIVER BASIN

239

05436500 SUGAR RIVER NEAR BRODHEAD, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)						
OCTOBER			NOVEMBER			DECEMBER			JANUARY			FEBRUARY			MARCH		
1	34	23	43	31	90	130	16	11	10	6.5	9	9.5					
2	34	23	41	30	88	105	15	10	10	6.5	10	10					
3	30	20	39	29	88	92	14	9.8	10	6.5	10	9.5					
4	30	20	37	27	86	83	14	9.8	10	6.5	9	8.6					
5	30	20	36	26	86	79	13	9.5	10	6.5	9	8.6					
6	30	20	34	25	84	75	13	9.4	10	6.2	8	7.6					
7	30	20	33	25	80	69	12	9.5	10	6.2	8	7.3					
8	28	19	31	22	76	61	12	8.7	10	6.2	7	6.0					
9	28	19	32	23	71	60	12	8.4	12	7.8	7	5.9					
10	28	19	33	24	66	55	11	7.7	20	14	6	5.0					
11	30	21	34	27	62	58	11	7.4	36	29	6	4.9					
12	35	27	35	28	58	62	11	7.4	40	38	6	4.9					
13	82	75	35	27	54	64	10	6.8	46	72	7	5.7					
14	100	126	32	24	51	60	10	6.8	43	90	7	5.9					
15	95	98	32	25	47	53	10	6.8	37	113	7	6.2					
16	90	78	30	23	44	42	9	6.1	34	106	8	8.0					
17	82	64	30	23	42	32	9	6.1	21	53	10	11					
18	60	46	30	23	39	29	9	6.1	16	34	10	11					
19	45	33	32	26	30	22	9	6.1	31	62	11	11					
20	45	34	32	22	24	17	8	5.4	33	65	11	11					
21	40	30	48	53	24	17	8	5.2	34	67	13	13					
22	40	30	48	53	24	17	8	5.2	18	34	19	20					
23	54	41	46	47	24	17	8	5.2	19	30	28	38					
24	70	57	44	44	20	14	7	4.7	17	25	42	64					
25	60	50	44	47	20	14	7	4.7	9	12	43	68					
26	57	44	40	39	20	14	7	4.9	9	11	41	59					
27	54	41	36	33	20	14	8	5.4	8	9.3	40	51					
28	52	39	60	110	20	14	9	5.8	8	9.2	38	45					
29	50	35	74	111	19	13	9	5.8	9	9.3	36	41					
30	47	34	98	156	18	12	10	6.5	---	---	35	38					
31	45	32	---	---	17	11	10	6.5	---	---	32	33					
TOTAL	---	1238	---	1203	---	1405	---	218.7	---	941.7	---	627.6					

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	32	32	96	246	72	105	87	114	80	76	25	18
2	30	29	120	382	80	98	87	105	80	75	23	17
3	29	29	120	347	80	96	86	96	80	75	22	16
4	31	30	110	246	79	91	86	95	80	73	20	16
5	34	33	110	222	79	87	85	97	80	72	19	14
6	36	35	110	217	78	86	85	99	80	71	18	13
7	37	35	110	194	77	90	84	94	91	80	20	14
8	37	34	110	167	78	95	84	89	86	90	20	14
9	37	33	110	150	94	112	119	125	79	91	20	14
10	37	33	111	146	118	213	613	1070	73	83	28	20
11	37	33	106	136	112	254	623	1920	71	72	30	23
12	37	34	101	126	90	242	494	1950	68	63	30	22
13	37	45	95	120	97	268	392	2160	66	59	28	20
14	37	49	90	114	76	164	311	1450	64	57	28	20
15	37	49	86	106	88	151	247	704	62	54	26	18
16	39	49	83	99	91	131	196	362	63	53	25	18
17	41	51	95	109	84	112	155	286	64	60	22	16
18	41	47	111	125	166	554	123	207	65	60	22	16
19	40	43	130	150	197	538	102	156	62	56	22	15
20	39	39	144	176	210	509	81	112	58	50	22	15
21	38	37	129	157	200	422	77	99	54	45	22	15
22	38	38	113	127	172	305	80	95	50	42	22	15
23	37	43	100	111	144	357	82	96	47	39	22	15
24	36	49	96	104	121	226	84	95	44	36	22	15
25	35	56	93	112	99	166	77	86	41	33	42	37
26	35	55	80	123	90	142	70	75	38	30	53	60
27	35	48	68	109	90	128	65	70	35	28	58	74
28	50	63	56	93	89	133	71	75	33	25	50	53
29	77	91	62	124	89	142	81	83	31	24	42	36
30	110	214	100	211	88	130	83	83	29	22	36	29
31	---	---	71	129	---	---	80	78	27	20	---	---
TOTAL	---	1456	---	4978	---	6147	---	12226	---	1714	---	688

TOTAL LOAD FOR YEAR: 32843.0 TONS.

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 downstream from State Highway 75 in Rockton, 1.0 mi downstream from Pecatonica River, and at mile 156.1.

DRAINAGE AREA.--6,363 mi².

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 Pecatonica 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-75-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 707.94 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1906, nonrecording gage at site 800 ft upstream at datum about 1 ft higher. Oct. 1, 1906, to Mar. 31, 1909, nonrecording gage at site 800 ft upstream at datum about 2 ft higher. July 30, 1914, to Apr. 30, 1919, nonrecording gage at site at Rockford about 21 mi downstream, at different datum. Oct. 1, 1939, to Aug. 10, 1973, at site 800 ft upstream at same datum.

REMARKS.--Water-discharge records good except those for winter periods, which are poor. Low flow regulated by powerplant above station.

AVERAGE DISCHARGE.--52 years (water years 1904-5, 1915-19, 1940-84), 3,996 ft³/s, 8.53 in/yr, discharge for site at Rockford adjusted for difference in drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft³/s Mar. 30, 1916, gage height, 13.06 ft, site and datum then in use; minimum daily, 501 ft³/s Sept. 14, 1958.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood in February 1937 reached a stage of 14.6 ft, backwater from ice, from painted floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,940 ft³/s Feb. 19, gage height, 7.25 ft; minimum daily, 1,400 ft³/s Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2780	3100	5030	3800	3180	7660	5610	7150	7500	7140	3730	1610
2	2700	3080	5350	3850	3100	7620	5420	8280	7160	6940	4050	1700
3	2430	3000	5020	3950	3100	7390	5210	8600	6550	6640	3460	1660
4	3140	3050	4720	4050	3120	7220	5220	9000	6240	6570	3430	1870
5	2340	2960	4850	4100	3180	6960	5610	9050	5840	6510	3300	2160
6	2590	2800	5110	3950	3220	6700	5560	8720	5410	6380	3210	1660
7	2510	2860	4740	3850	3220	6560	5340	8440	5410	6200	2930	1700
8	2650	2900	4750	3700	3200	6360	5200	8040	5560	6000	3540	1400
9	2670	2570	4580	3550	3150	5970	5040	7840	5050	5960	3720	1430
10	2590	3300	4290	3400	3000	5830	4670	7660	5480	6780	3520	1560
11	2430	3300	4780	3250	3080	5400	4550	7500	5860	8340	3330	1980
12	2780	2920	5530	3500	3300	5220	4800	7230	6400	8340	3000	1570
13	2950	2970	5670	3620	4200	5090	4860	7160	6760	8300	2880	1640
14	2960	2750	5770	3500	5300	5140	4850	7080	7270	8440	2420	2000
15	2960	3300	5890	3400	6690	5400	5070	6760	7640	8640	2590	1510
16	3190	2610	5720	3300	7310	5860	5330	6600	7780	8720	2100	1710
17	2790	2820	5190	3200	8660	5790	5390	6420	7400	8680	2580	1750
18	3200	3090	4600	3200	8990	5500	5050	6240	8620	8100	2170	1990
19	2930	3330	4200	3200	9770	5220	4950	6130	9300	7500	2230	2060
20	3180	3800	4000	3180	9600	5220	4810	6000	9340	6980	2210	1830
21	3500	3920	4350	3120	9280	5160	4630	5890	9570	6470	1900	2020
22	3440	3740	4650	3100	9420	5170	5130	5960	9750	6150	2200	2120
23	3340	4270	4700	3050	9550	5540	5530	5860	9790	5770	1890	1970
24	3410	3820	4400	3000	9460	6520	5470	5460	9490	5460	1840	1960
25	3280	3880	4000	3000	9220	6940	5470	6420	8830	5320	1680	3040
26	3300	4180	3750	3010	8940	6930	5830	7660	8400	5160	1730	3040
27	3070	4360	3900	3100	8710	6670	5870	6980	7880	4980	1760	3820
28	2870	5070	4120	3150	8550	6450	5660	7120	7540	4790	1920	3930
29	3000	5340	4050	3180	8100	6210	5440	8810	7350	4660	1790	3960
30	3090	4790	3880	3200	---	5920	6510	8420	7270	4450	1590	3690
31	2920	---	3700	3220	---	5720	---	7940	---	4360	1770	---
TOTAL	90990	103880	145290	105680	179600	189340	158080	226420	222440	204730	80470	64340
MEAN	2935	3463	4687	3409	6193	6108	5269	7304	7415	6604	2596	2145
MAX	3500	5340	5890	4100	9770	7660	6510	9050	9790	8720	4050	3960
MIN	2340	2570	3700	3000	3000	5090	4550	5460	5050	4360	1590	1400
CFSM	.46	.54	.74	.54	.97	.96	.83	1.15	1.17	1.04	.41	.34
IN.	.53	.61	.85	.62	1.05	1.11	.92	1.32	1.30	1.20	.47	.38
CAL YR 1983	TOTAL	1935110	MEAN	5302	MAX	14400	MIN	1900	CFSM	.83	IN.	11.31
WTR YR 1984	TOTAL	1771260	MEAN	4840	MAX	9790	MIN	1400	CFSM	.76	IN.	10.36

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 west of Russell, 7.2 mi upstream from Mill Creek, and at mile 109.3.

DRAINAGE AREA.--123 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1961-63, and annual maximum, water years 1962-55. June 1967 to current year.

REVISED RECORDS.--WDR IL-75: Drainage area. WDR IL-76-1: 1960-68(M), 1973(M).

GAGE.--Water-stage recorder. Datum of gage is 662.00 ft 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 higher.

REMARKS.--Water-discharge records fair except those for winter periods and those for period of no stage-height record, Nov. 24 to Jan. 6 and Feb. 13 to Mar. 8, which are poor.

AVERAGE DISCHARGE.--17 years, 98.0 ft³/s, 10.82 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft³/s Mar. 21, 1979, gage height, 9.53 ft; maximum gage height, 10.75 ft Mar. 6, 1976; no flow at times during several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 597 ft³/s Feb. 20, gage height, 7.63 ft; minimum daily, 2.2 ft³/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	21	260	29	17	120	162	355	229	56	8.1	6.1
2	2.3	23	250	28	18	100	151	334	293	42	7.7	4.9
3	3.0	23	240	29	18	84	131	322	260	32	8.6	4.9
4	2.9	21	230	30	18	72	129	315	236	26	8.4	5.6
5	3.0	19	220	29	19	62	136	295	198	26	7.8	5.1
6	4.0	18	200	28	18	52	140	270	149	26	7.3	4.2
7	5.1	16	180	27	18	45	133	243	115	18	30	4.4
8	4.9	15	160	27	17	41	121	214	113	17	125	3.3
9	4.7	14	140	26	18	39	109	181	126	15	166	5.6
10	5.3	14	110	26	18	35	96	147	128	16	175	5.6
11	5.4	14	140	25	20	32	86	119	167	9.2	145	5.2
12	7.5	15	200	25	60	30	82	99	171	19	76	6.1
13	11	15	250	24	220	29	116	85	50	266	32	4.2
14	12	14	280	23	320	28	147	77	50	222	20	4.7
15	11	15	300	23	420	36	163	69	43	215	16	4.6
16	9.6	15	320	22	460	97	184	59	36	177	14	3.0
17	7.9	17	300	22	500	113	211	52	34	106	12	5.6
18	6.6	18	280	21	520	141	236	45	38	49	11	4.5
19	5.7	20	260	20	540	145	255	43	48	30	10	4.7
20	5.4	36	230	20	560	161	263	43	45	22	9.2	3.9
21	5.6	57	200	19	540	189	253	42	33	19	8.1	5.1
22	11	64	170	18	500	221	257	42	68	17	8.7	5.2
23	53	80	130	18	450	245	368	58	189	14	8.3	3.1
24	84	110	94	18	390	258	459	62	220	12	7.6	2.3
25	86	150	70	18	330	268	522	66	223	11	7.1	6.1
26	64	140	52	18	260	272	552	97	209	11	6.7	19
27	51	170	44	18	190	267	547	126	175	13	6.3	22
28	39	200	40	18	160	256	494	159	142	14	6.0	15
29	29	270	37	18	140	241	422	219	108	13	5.9	12
30	23	270	34	18	---	222	393	252	74	11	5.2	7.9
31	19	---	32	18	---	196	---	254	---	9.2	3.4	---
TOTAL	584.3	1874	5453	703	6759	4097	7338	4774	3905	1701.7	954.0	194.8
MEAN	18.8	62.5	176	22.7	233	132	245	154	130	54.9	31.1	6.49
MAX	86	270	320	30	560	272	552	355	299	222	176	23
MIN	2.3	14	32	18	17	28	82	42	33	9.2	3.9	3.0
CFSM	.15	.51	1.43	.18	1.89	1.07	1.99	1.25	1.06	.45	.25	.65
IN.	.18	.57	1.65	.21	2.04	1.24	2.22	1.44	1.13	.51	.29	.06
CAL YR 1983	TOTAL	44216.1	MEAN	121	MAX	1590	MIN	1.9	CFSM	.98	IN.	13.37
WTR YR 1984	TOTAL	38347.3	MEAN	105	MAX	560	MIN	2.3	CFSM	.85	IN.	11.60

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 downstream from Prairie Street bridge in Waukesha, 1.0 mi downstream from dam and 3.2 mi downstream from Pewaukee River.

DRAINAGE AREA.--126 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 793.04 ft National Geodetic Vertical Datum of 1929 (levels by city of Waukesha).

REMARKS.--Records good except for winter period, which are fair. There is occasional regulation from mill dam 1.0 mi upstream.

AVERAGE DISCHARGE.--21 years, 94.4 ft³/s, 10.17 in/vr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,260 ft³/s Apr. 22, 1973, gage height, 7.42 ft; minimum, 3.0 ft³/s Jan. 1, 1964, gage height, 1.52 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 567 ft³/s Feb. 15, gage height, 4.59 ft; minimum, 3.2 ft³/s Aug. 15, 16, gage height, 1.75 ft.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used July 21 to Aug. 5; stage-discharge relation affected by ice Dec. 7-10, 17-20, Dec. 22 to Jan. 4, Jan. 8-24, 28-31, Feb. 1, 2, 7, and Mar. 9-13.)

1.7	4.0	2.4	67
1.8	8.0	3.0	167
1.9	14	4.0	393
2.1	31	5.0	720

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	59	182	58	40	145	113	332	260	108	39	33
2	64	62	161	56	51	133	108	288	223	97	36	36
3	63	63	136	58	51	113	104	276	191	88	35	31
4	63	58	140	60	51	104	104	286	162	83	46	27
5	65	55	133	60	50	99	104	286	136	81	38	24
6	59	54	86	59	47	94	102	260	126	93	33	21
7	62	55	80	58	46	86	89	231	157	96	37	25
8	83	58	76	56	48	82	80	208	160	92	80	25
9	82	55	74	54	49	78	81	190	146	90	71	24
10	69	55	74	54	50	74	78	173	129	213	46	26
11	65	52	116	52	51	70	79	159	112	287	36	26
12	84	50	198	50	124	68	102	145	104	296	28	23
13	96	49	210	48	390	66	151	151	99	269	30	20
14	84	52	200	47	522	66	159	149	94	251	65	26
15	73	56	202	45	554	101	173	135	91	241	23	20
16	66	61	181	44	516	156	219	125	86	215	4.0	20
17	63	60	150	42	446	133	227	99	99	186	20	19
18	60	58	130	41	378	111	216	91	162	157	21	19
19	56	75	100	40	351	107	197	93	170	125	20	21
20	55	132	92	39	337	118	178	87	143	106	21	20
21	56	153	84	38	307	151	160	76	125	98	24	19
22	86	137	80	38	279	149	179	78	199	86	31	17
23	113	155	78	37	259	148	256	81	273	82	25	17
24	102	174	76	37	244	165	274	76	253	77	21	22
25	87	155	74	38	229	172	246	93	227	71	20	59
26	77	131	70	39	207	169	224	211	207	69	21	56
27	68	127	68	40	188	160	223	276	201	68	28	34
28	67	188	66	39	159	152	220	287	177	65	25	29
29	59	227	64	38	149	141	233	356	142	60	20	26
30	55	209	62	37	---	130	298	354	119	56	22	25
31	55	---	60	37	---	122	---	303	---	49	23	---
TOTAL	2204	2875	3503	1439	6173	3663	4977	5955	4773	3955	984.0	790
MEAN	71.1	95.8	113	46.4	213	118	166	192	159	128	31.7	26.3
MAX	113	227	210	60	554	172	298	356	273	296	80	59
MIN	55	49	60	37	40	66	78	76	86	49	4.0	17
CFSM	.56	.76	.90	.37	1.69	.94	1.32	1.52	1.26	1.02	.25	.21
IN.	.65	.85	1.03	.42	1.82	1.08	1.47	1.76	1.41	1.17	.29	.23
CAL YR 1983	TOTAL	44394.0	MEAN 122	MAX	1050	MIN 18	CFSM .97	IN 13.11				
WTR YR 1984	TOTAL	41291.0	MEAN 113	MAX	554	MIN 4.0	CFSM .90	IN 12.19				

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 upstream from bridge on State Highway 83 in Mukwonago, 100 ft downstream from railroad bridge, and 800 ft downstream from dam.

DRAINAGE AREA.--74.1 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 779.23 ft National Geodetic Vertical Datum of 1929 (Southeastern Wisconsin Regional Planning Commission bench mark). Prior to Oct. 19, 1981, at datum 0.85 ft higher.

REMARKS.--Records poor. Discharge affected by manipulation of gates at dams 800 ft and 11.4 mi upstream.

AVERAGE DISCHARGE.--11 years, 58.6 ft³/s, 10.74 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 300 ft³/s Mar. 5, 1976, gage height, 2.50 ft; minimum daily, 1.8 ft³/s Dec. 23, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 145 ft³/s Feb. 17, gage height, 2.77 ft; minimum daily, 16 ft³/s Oct. 8.

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

2.0	15	2.6	103
2.2	34	2.8	153
2.4	64		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	38	42	40	34	76	73	113	93	72	36	33
2	31	38	50	39	34	48	59	60	87	78	35	33
3	57	38	53	39	33	37	54	44	71	74	35	30
4	69	38	54	38	33	37	55	45	41	68	35	32
5	62	39	53	38	33	41	57	52	42	64	34	37
6	56	40	52	38	32	42	57	86	43	62	34	44
7	26	40	49	37	32	42	55	84	49	60	40	40
8	16	40	47	37	32	42	53	84	104	60	45	38
9	18	40	46	37	34	43	52	88	115	58	50	37
10	21	38	46	36	35	45	52	90	110	90	60	35
11	24	40	48	35	34	45	39	76	95	120	90	35
12	31	40	105	34	36	44	30	80	57	110	100	41
13	58	38	119	34	78	44	52	82	43	100	100	44
14	70	37	111	33	100	45	60	74	44	94	80	43
15	64	54	107	33	107	48	63	62	44	92	28	37
16	59	72	101	32	110	67	89	58	44	94	29	36
17	31	48	93	32	132	74	98	56	50	100	31	35
18	21	30	83	32	132	74	67	56	84	110	31	42
19	24	37	55	31	129	73	53	62	110	110	29	37
20	27	55	33	30	113	72	55	60	110	100	29	29
21	59	101	36	29	102	71	54	60	100	72	28	29
22	74	110	38	29	72	74	57	58	74	76	30	30
23	74	107	38	29	55	74	81	82	74	70	32	30
24	74	103	40	28	58	74	94	82	74	50	34	50
25	73	95	41	28	62	74	91	85	80	32	38	96
26	53	90	41	28	64	76	88	108	84	31	38	96
27	29	81	41	28	75	84	86	117	84	31	38	74
28	35	83	40	28	89	89	86	121	90	30	37	85
29	33	88	40	29	81	83	80	108	74	29	35	75
30	33	58	40	30	---	81	105	102	72	36	32	64
31	34	---	40	32	---	76	---	100	---	37	30	---
TOTAL	1368	1756	1782	1023	1961	1895	1995	2435	2242	2210	1323	1367
MEAN	44.1	58.5	57.5	33.0	67.6	61.1	66.5	78.5	74.7	71.3	42.7	45.6
MAX	74	110	119	40	132	89	105	121	115	120	100	96
MIN	16	30	33	28	32	37	30	44	41	29	28	29
CFSM	.60	.79	.78	.45	.91	.83	.90	1.06	1.01	.96	.58	.62
IN.	.69	.88	.89	.51	.98	.95	1.00	1.22	1.13	1.11	.66	.69
CAL YR 1983 TOTAL	19029.9		MEAN 52.1	MAX 165	MIN 7.0	CFSM .70	IN 9.55					
WTR YR 1984 TOTAL	21357.0		MEAN 58.4	MAX 132	MIN 16	CFSM .79	IN 10.72					

NOTE.--No gage-height record Dec. 30 to Feb. 1 and June 19 to Sept. 26.

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 downstream from bridge on County Trunk Highway C, 300 ft upstream from Wilmot Dam, 1.0 mi north of Wisconsin-Illinois State line, and 6.0 mi upstream from Fox Chain of Lakes.

DRAINAGE AREA.--868 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Sept. 1, 1956, nontesting gage and concrete dam.

REMARKS.--Records good, except for winter periods, Dec. 8, 9, Dec. 18 to Jan. 4, and Jan. 8-30, which are fair. Three 6-ft 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.--45 years, 532 ft³/s, 8.32 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,520 ft³/s Mar. 31, 1960, gage height, 9.25 ft, from graph based on gage readings; no flow part of day Oct. 26, 1945; minimum daily discharge, 35 ft³/s Sept. 9, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,400 ft³/s Feb. 18, gage height, 6.98 ft; minimum daily, 182 ft³/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	435	998	520	318	1110	953	1640	1740	755	261	213
2	303	506	926	520	322	1040	893	1680	1450	711	255	213
3	326	497	758	500	330	981	846	1550	1280	620	243	216
4	331	445	768	500	334	934	792	1460	1190	464	238	217
5	341	427	786	511	339	790	782	1420	1130	459	247	223
6	340	418	835	469	325	720	726	1380	1060	448	239	213
7	331	395	634	439	324	711	688	1310	1110	418	255	214
8	340	379	620	410	329	709	656	1220	1140	398	316	213
9	353	385	600	390	331	643	594	1070	1190	318	324	211
10	342	416	602	360	334	620	569	1030	1170	312	316	213
11	325	449	690	330	351	580	501	978	1010	597	308	220
12	361	423	983	350	427	560	505	895	775	735	290	214
13	424	383	1140	340	1040	560	688	814	684	646	268	211
14	422	371	1130	340	1530	560	859	863	664	617	249	206
15	400	384	1170	330	1940	600	923	836	639	617	237	220
16	398	416	1150	330	2100	640	1090	800	610	618	232	220
17	393	427	832	330	2200	660	1190	769	554	590	234	213
18	381	421	800	320	2230	700	1120	750	639	561	224	208
19	357	469	760	320	1980	749	1070	752	913	529	218	203
20	347	597	740	320	2000	777	1030	757	832	496	210	198
21	348	780	700	320	2040	916	980	731	734	496	198	187
22	394	738	680	310	2020	979	999	726	719	577	232	182
23	478	804	660	310	1960	991	1260	760	1050	426	251	185
24	520	971	640	310	1900	1060	1560	753	1160	229	234	186
25	496	920	620	300	1750	1170	1660	877	1120	206	223	327
26	500	854	600	300	1610	1200	1540	1480	1020	327	214	496
27	496	834	600	300	1480	1200	1350	1600	987	288	206	370
28	476	981	580	310	1290	1180	1280	1510	969	235	207	328
29	461	1200	560	310	1180	1150	1260	1750	809	247	211	326
30	443	1150	540	310	---	1090	1400	1990	778	268	232	313
31	423	---	540	310	---	1030	---	1930	---	262	224	---
TOTAL	12110	17875	23642	11319	34314	26610	29764	36081	29126	14470	7596	7159
MEAN	391	596	763	365	1183	858	992	1164	971	467	245	239
MAX	520	1200	1170	520	2230	1200	1660	1990	1740	755	324	496
MIN	260	371	540	300	318	560	501	726	554	206	198	182
CFSM	.45	.69	.88	.42	1.36	.99	1.14	1.34	1.12	.54	.28	.28
IN.	.52	.77	1.01	.49	1.47	1.14	1.28	1.55	1.25	.62	.33	.31
CAL YR 1983	TOTAL	294839	MEAN 808	MAX 3920	MIN 202	CFSM .93	IN 12.64					
WTR YR 1984	TOTAL	250066	MEAN 683	MAX 2230	MIN 182	CFSM .79	IN 10.72					

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 1984							
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							
04024384	LAKE SUPERIOR TRIBUTARY AT SUPERIOR, WI	LAT 46°43'18", LONG 92°04'02", IN SE 1/4 SW 1/4 SEC.13, T.49 N., R.14 W., DOUGLAS COUNTY, AT CULVERT ON U.S. HIGHWAY 2, 1.6 MI NORTH OF 24TH AVENUE, AND 0.5 MI DOWNSTREAM FROM CENTRAL PARK, AT SUPERIOR.	4.90	1982-84	09-24-84	3.67	122
04024400	STONY BROOK NEAR SUPERIOR, WIS.	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 SOUTH OF TOLL BRIDGE ON U.S. HIGHWAYS 2 AND 35 AT ST. LOUIS RIVER AT SUPERIOR.	2.20	1959-84	06-10-84	15.20	210
04025200	PEARSON CREEK NEAR MAPLE, WIS.	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 NORTH OF MAPLE.	4.01	1957-84	06-10-84	13.20	300
04026200	SAND RIVER TRIBUTARY NEAR RED CLIFF, WIS.	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 NORTHWEST OF RED CLIFF.	1.14	1959-84	06-10-84	11.26	115
*04026300	SIoux RIVER NEAR WASHBURN, WIS.	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 WEST OF WASHBURN.	35.2	1959-65 1966# 1967-84	06-10-84	15.99	1,260
04026450	BAD RIVER NEAR MELLE, WIS.	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 DOWNSTREAM FROM BRIDGE ON U.S. FOREST SERVICE ROAD, 4.4 MI SOUTHEAST OF MELLE.	83.4	1971-75# 1976-84	04-12-84	4.62	746
*04027200	PEARL CREEK AT GRANDVIEW, WIS.	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 EAST OF GRANDVIEW.	16.9	1960-84	06-08-84	14.09	385
STREAMS TRIBUTARY TO LAKE MICHIGAN							
*04059900	ALLEN CREEK TRIBUTARY NEAR ALVIN, WIS.	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 SOUTHEAST OF ALVIN.	1.24	1960-84	10-08-83	10.71	12
04063640	NORTH BRANCH PINE RIVER AT WINDSOR DAM NEAR ALVIN, WIS.	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 UPSTREAM FROM CONFLUENCE OF NORTH AND SOUTH FORKS, 4.0 MI SOUTHWEST OF ALVIN.	27.8	1967-68# 1970-84	04-30-84	2.55	68
04063688	SOUTH BRANCH POPPLE RIVER NEAR NEWALD, WIS.	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 EAST OF NEWALD.	9.47	1970-84	10-12-83	11.61	41
*04063800	WOODS CREEK NEAR FENCE, WIS.	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 NORTH OF FENCE.	41.40	1958-84	04-30-84	10.88	160
04064800	LITTLE POPPLE RIVER NEAR AURORA, WIS.	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 WEST OF AURORA.	35.0	1970-84	11-17-83	12.58	305

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1984							
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 MICHIGAN--CONTINUED							
04067760	PESHTIGO RIVER NEAR CAVOUR, WIS.	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 NORTHWEST OF CAVOUR.	150	1970-84	04-30-84	12.59	710
04067800	ARMSTRONG CREEK NEAR ARMSTRONG CREEK, WIS.	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 NORTHWEST OF ARMSTRONG CREEK.	23.2	1958-84	06-27-84	10.04	91
04069700	NORTH BRANCH OCONTO RIVER NEAR WABENO, WIS.	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 EAST OF INTERSECTION WITH STATE HIGHWAY 32 AT WABENO.	34.1	1970-84	04-30-84	11.68	116
04071700	NORTH BRANCH LITTLE RIVER NEAR COLEMAN, WIS.	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 SOUTH OF COLEMAN.	21.4	1958-84	10-12-83	12.43	189
*04071800	PENSAUKEE RIVER NEAR PULASKI, WIS.	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 NORTH OF PULASKI.	41.80	1961-84	07-10-84	12.59	420
04072220	BEAVER DAM CREEK AT GREEN BAY, WI	LAT 44°31'40", LONG 88°04'39", IN SW 1/4 NE 1/4 SEC.28, T.24 N., R.20 E., BROWN COUNTY, UPSTREAM OF BRIDGE ON TAYLOR STREET, AT GREEN BAY.	3.44	1978-84	07-10-84	11.61	295
*04073400	BIRD CREEK AT WAUTOMA, WIS.	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 WEST OF WAUTOMA.	3.59	1959-84	04-30-84	12.11	103
04074300	MUD CREEK NEAR NASHVILLE, WIS.	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 NORTH OF NASHVILLE.	10.0	1970-84	07-15-84	12.79	50
*04074700	HUNTING RIVER NEAR ELCHO, WIS.	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 SOUTH OF ELCHO.	9.00	1958-84	04-30-84	11.84	75
*04074850	LILY RIVER NEAR LILY, WIS.	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 NORTH FROM JUNCTION OF STATE HIGHWAYS 55 AND 52 AT LILY.	52.4	1970-84	04-30-84	9.97	48
*04075200	EVERGREEN CREEK NEAR LANGLADE, WIS.	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 SOUTHWEST OF LANGLADE.	8.00	1959-65 1966-72# 1973-84	04-30-84	10.83	44
*04079700	SPAULDING CREEK NEAR BIG FALLS, WIS.	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 NORTH OF BIG FALLS.	4.90	1959-65 1966# 1967-84	04-30-84	10.96	54
04081900	SAWYER CREEK AT OSHKOSH, WIS.	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 SOUTHWEST OF BRIDGE ON ALGOMA STREET AT FOX RIVER, AT OSHKOSH.	15.3	1961-84	04-30-84	12.45	400
*04085030	APPLE CREEK NEAR KAUKAUNA, WIS.	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 NORTH OF KAUKAUNA.	15.0	1960-84	06-17-84	14.44	950
04085083	FOX RIVER TRIBUTARY AT GREEN BAY, WI	LAT 44°29'56", LONG 88°02'07", IN LAND GRANT NUMBER 11, T.23 N., R.20 E., BROWN COUNTY, AT STORM SEWER AT HALRON OIL COMPANY, 200 FT NORTH OF LIBERTY STREET, AT GREEN BAY.	1.59	1979-84	07-11-84	15.98	290

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1984

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 MICHIGAN--CONTINUED							
04085136	BAIRD CREEK TRIBUTARY AT GREEN BAY, WI	LAT 44°29'08", LONG 87°58'16", IN EAST SIDE OF LAND GRANT NUMBER 6, T.23 N., R.21 E., BROWN COUNTY, ON WEST SIDE OF U.S. HIGHWAY 141, 0.4 MI SOUTHEAST OF JUNCTION WITH CASS STREET, AT GREEN BAY.	0.34	1979-84	09-01-84	16.23	410
04085300	NESHOTA RIVER TRIBUTARY NEAR DENMARK, WIS.	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 NORTHWEST OF DENMARK.	3.08	1959-84	04-29-84	13.29	255
*04085400	KILLSNAKE RIVER NEAR CHILTON, WIS.	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 NORTHEAST OF CHILTON.	29.5	1961-84	02-13-84	11.46	500
*04087050	LITTLE MEMONEE RIVER NEAR FREISTADT, WIS.	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 SOUTH OF FREISTADT.	8.00	1958-84	07-09-84	12.39	270
04087100	HONEY CREEK AT MILWAUKEE, WIS.	LAT 42°58'41", LONG 87°59'52", IN SE 1/4 SEC.15, T.6 N., R.21 E., MILWAUKEE COUNTY, 400 FT UPSTREAM FROM BRIDGE ON S. 68TH STREET, 6.0 MI SOUTHWEST OF MOUTH OF MILWAUKEE RIVER, AT MILWAUKEE.	3.26	1959-84	07-10-84	20.23	395
*04087200	OAK CREEK NEAR SOUTH MILWAUKEE, WIS.	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 SOUTHWEST OF SOUTH MILWAUKEE.	13.8	1958-84	04-29-84	15.48	270
04087230	WEST BRANCH ROOT RIVER CANAL TRIBUTARY NEAR NORTH CAPE, WIS.	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 SOUTHEAST OF NORTH CAPE.	3.92	1962-84	04-30-84	12.36	140
*04087250	PIKE CREEK NEAR KENOSHA, WIS.	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 NORTHWEST OF KENOSHA.	7.25	1960-84	04-30-84	14.27	65
ST. CROIX RIVER BASIN							
*05333100	LITTLE FROG CREEK NEAR MINONG, WIS.	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 EAST OF MINONG.	13.0	1961-84	06-12-84	15.74	410
*05333380	BASHAW BROOK NEAR SHELL LAKE, WIS.	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 NORTHWEST OF SHELL LAKE.	24.9	1959-65 1966# 1967-84	06-12-84	13.65	230
*05340300	TRADE RIVER NEAR FREDERIC, WIS.	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 SOUTHWEST OF FREDERIC.	6.34	1958-84	06-12-84	18.89	1,050
05341900	KINNICKINNIC RIVER TRIBUTARY AT RIVER FALLS, WIS.	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 SOUTHWEST OF RIVER FALLS.	7.26	1959-84	04-30-84	12.72	980
CHIPPEWA RIVER BASIN							
05357360	BEAR RIVER NEAR POWELL, WIS.	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 WEST OF POWELL.	118	1970-84	10-11-83	11.13	235
05357390	WEBER CREEK NEAR MERCER, WIS.	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 NORTHEAST OF MERCER.	5.86	1970-84	04-06-84	10.57	43

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1984

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							
05358100	SMITH CREEK NEAR PARK FALLS, WIS.	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 NORTHWEST OF PARK FALLS.	9.11	1970-84	04-06-84	11.53	90
*05359600	PRICE CREEK NEAR PHILLIPS, WIS.	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 WEST OF PHILLIPS.	16.9	1958-65 1966# 1967-84	04-06-84	12.01	135
*05361400	HAY CREEK NEAR PRENTICE, WIS.	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 WEST OF PRENTICE.	21.9	1961-84	04-06-84	11.57	310
05361420	DOUGLAS CREEK NEAR PRENTICE, WIS.	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 SOUTHEAST OF INTERSECTION WITH STATE HIGHWAY 13 AT PRENTICE.	24.6	1970-84	04-06-84	12.55	380
05361600	NORTH FORK JUMP RIVER NEAR PHILLIPS, WIS.	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 SOUTH OF PHILLIPS.	10.4	1970-84	02-12-84	11.87	113
*05364000	YELLOW RIVER AT CADOTT, WIS.	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# 1962-84	03-23-84	9.79	2,880
05364100	SETH CREEK NEAR CADOTT, WIS.	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 NORTH OF CADOTT.	3.04	1962-84	07-10-84	12.96	212
05364500	DUNCAN CREEK AT BLOOMER, WIS.	LAT 45°07'00", LONG 91°30'00", IN SEC.8, T.30 N., R.9 W., CHIPPEWA COUNTY, 0.2 MI BELOW BLOOMER DAM, AT BLOOMER.	49.2	1945-51# 1958-84	11-23-83	5.22	470
*05365700	GOGGLE-EYE CREEK NEAR THORP, WIS.	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 NORTH OF THORP.	6.70	1958-84	1884	B	<80
*05366500	EAU CLAIRE RIVER NEAR FALL CREEK, WIS.	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 EAST OF COUNTY TRUNK HIGHWAY K, 3.2 MI NORTH OF FALL CREEK.	758	1943-55# 1958-84	07-10-84	6.98	3,450
05367030	WILLOW CREEK NEAR EAU CLAIRE, WIS.	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 SOUTH OF EAU CLAIRE.	4.38	1958-84	1984	B	<60
*05367480	EAST BRANCH PINE CREEK TRIBUTARY NEAR DALLAS, WIS.	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 NORTH OF DALLAS.	3.85	1960-84	06-08-84	12.05	107
05367700	LIGHTNING CREEK AT ALMENA, WIS.	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	1958-84	06-08-84	10.91	405
05370600	ARKANSAW CREEK TRIBUTARY NEAR ARKANSAW, WIS.	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 NORTHWEST OF ARKANSAW.	2.56	1959-84	07-10-84	12.30	200
*05370900	SPRING CREEK NEAR DURAND, WIS.	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 SOUTH OF BRIDGE ON CHIPPEWA RIVER AT DURAND.	6.49	1962-84	07-10-84	12.61	135

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1984							
STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	ANNUAL MAXIMUM GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
BUFFALO RIVER BASIN							
05371800	BUFFALO RIVER TRIBUTARY NEAR OSSEO, WIS.	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 EAST OF OSSEO.	1.44	1960-84	11-23-83	11.38	72
05371920	BUFFALO RIVER NEAR MONDOVI, WIS.	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 SOUTH OF MONDOVI.	280	1974-84	09-12-84	13.50	1,845
WAUMANDEE CREEK BASIN							
*05378200	EAGLE CREEK NEAR FOUNTAIN CITY, WIS.	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 NORTH OF FOUNTAIN CITY.	26.8	1961-84	07-17-84	14.82	1,110
BLACK RIVER BASIN							
05380800	BLACK RIVER TRIBUTARY NEAR WHITTLESEY, WIS.	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 SOUTH OF WHITTLESEY.	2.12	1960-84	04-30-84	10.51	41
*05380900	POPLAR RIVER NEAR OWEN, WIS.	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 SOUTH OF OWEN.	157	1958-65 1966# 1967-84	07-11-84	15.36	4,100
*05380970	CAWLEY CREEK NEAR NEILLSVILLE, WIS.	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 NORTH OF NEILLSVILLE.	38.6	1961-84	07-11-84	16.80	3,000
*05382200	FRENCH CREEK NEAR ETTRICK, WIS.	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 WEST OF ETTRICK.	14.3	1960-84	07-11-84	9.63	123
LA CROSSE RIVER BASIN							
*05382500	LITTLE LA CROSSE RIVER NEAR LEON, WIS.	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 UPSTREAM FROM MOUTH, 1.5 MI NORTHWEST OF LEON.	77.1	1934-61# 1962-84	1984	C	+
MORMON CREEK BASIN							
*05386300	MORMON CREEK NEAR LA CROSSE, WIS.	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 SOUTHEAST OF LA CROSSE.	25.5	1961-84	06-16-84	13.43	1,470
BAD AXE RIVER BASIN							
*05387100	NORTH FORK BAD AXE RIVER NEAR GENOA, WIS.	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 SOUTHEAST OF GENOA.	80.9	1959-65 1966# 1967-84	1984	B	<500
WISCONSIN RIVER BASIN							
*05390140	MUSKRAT CREEK AT CONOVER, WIS.	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 NORTH OF CONOVER.	10.2	1970-84	04-30-84	11.50	49

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1984

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1984						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							
05390240	FOURMILE CREEK NEAR THREE LAKES, WIS.	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 NORTHEAST OF THREE LAKES.	10.3	1970-84	04-29-84	11.06	50
05391260	GUDEGAST CREEK NEAR STARKS, WIS.	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 NORTHWEST OF STARKS.	14.0	1970-84	09-24-84	11.41	46
05391950	SQUAW CREEK NEAR HARRISON, WIS.	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 NORTHEAST OF HARRISON.	3.23	1970-84	04-30-84	11.32	32
*05392150	MISHONAGON CREEK NEAR WOODRUFF, WIS.	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 NORTHWEST OF WOODRUFF.	17.6	1958-84	09-02-84	10.39	70
*05392350	BEARSKIN CREEK NEAR HARSHAW, WIS.	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 SOUTHWEST OF HARSHAW.	31.1	1958-65 1966- 1967-84	04-30-84	9.45	62
05393640	LITTLE PINE CREEK NEAR IRMA, WIS.	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 NORTH OF IRMA.	22.0	1970-84	04-30-84	12.37	88
*05394200	DEVIL CREEK NEAR MERRILL, WIS.	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 SOUTHWEST OF MERRILL.	9.58	1961-84	03-15-84	13.30	295
05395020	LLOYD CREEK NEAR DOERING, WIS.	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 EAST OF DOERING.	7.80	1970-84	04-30-84	13.21	305
05395100	TRAPPE RIVER TRIBUTARY NEAR MERRILL, WIS.	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 SOUTHEAST OF MERRILL.	1.58	1959-84	07-11-84	12.28	105
05396100	PET BROOK TRIBUTARY NEAR EDGAR, WIS.	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 NORTHEAST OF EDGAR.	6.86	1962-84	07-11-84	15.3	800
05396300	WISCONSIN RIVER TRIBUTARY AT WAUSAU, WI	LAT 44°57'28", LONG 89°39'52", IN NE 1/4 NW 1/4 SEC.34, T.29 N., R.7 E., MARATHON COUNTY, ON ROAD RIGHT-OF-WAY OF 24TH AVENUE OPPOSITE THE ACE MOTEL, 300 FT EAST OF U.S. HIGHWAY 51, AT WAUSAU.	1.10	1982-84	09-24-84	8.07	480
05397600	BIG SANDY CREEK NEAR WAUSAU, WIS.	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 NORTHEAST OF WAUSAU.	11.5	1959-84	04-30-84	12.38	465
05400025	JOHNSON CREEK NEAR KNOWLTON, WIS.	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 EAST OF KNOWLTON.	25.1	1973-84	04-30-84	14.89	960
05401800	YELLOW RIVER TRIBUTARY NEAR PITTSVILLE, WIS.	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 NORTH OF PITTSVILLE.	7.23	1959-84	07-11-84	12.82	525
*05403520	WEBSTER CREEK AT NEW LISBON, WIS.	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 SOUTH OF NEW LISBON.	11.8	1961-84	06-17-84	14.31	345

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1984							
STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	ANNUAL MAXIMUM GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /3)
WISCONSIN RIVER BASIN--CONTINUED							
*05403550	ONEMILE CREEK NEAR MAUSTON, WIS.	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 SOUTH OF MAUSTON.	30.2	1958-84	06-17-84	17.18	2,800
05403630	HULBERT CREEK NEAR WISCONSIN DELLS, WIS.	LAT 43°37'37", LONG 89°48'36", IN SE 1/4 SW 1/4 SEC.5, T.13 N., R.6 E., SAUK COUNTY, 1.6 MI UPSTREAM FROM MOUTH, AND 2.0 MI WEST OF WISCONSIN DELLS.	11.2	1971-77# 1978-84	06-22-84	3.98	125
05403700	DELL CREEK NEAR LAKE DELTON, WIS.	LAT 43°33'05", LONG 89°51'55", IN NW 1/4 SEC.2, T.12 N., R.5 E., SAUK COUNTY, ON RIGHT BANK 50 FT UPSTREAM FROM HIGHWAY BRIDGE, 6.0 MI SOUTHWEST OF LAKE DELTON, AND 7.0 MI UPSTREAM FROM MOUTH.	44.9	1957-65# 1966-70 1971-80# 1983-84	06-23-84	6.34	330
*05404200	NARROWS CREEK AT LOGANVILLE, WIS.	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 NORTH OF LOGANVILLE.	40.1	1958-65 1966# 1967-84	06-23-84	14.80	2,300
*05405600	ROWAN CREEK AT POYNETTE, WIS.	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	1961-84	06-09-84	12.87	305
05406800	ROCKY BRANCH NEAR RICHLAND CENTER, WIS.	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 SOUTH OF RICHLAND CENTER.	1.68	1960-84	04-30-84	11.50	80
*05407100	RICHLAND CREEK NEAR PLUGTOWN, WIS.	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 SOUTH OF PLUGTOWN.	19.2	1958-84	04-30-84	16.69	1,400
*05407200	CROOKED CREEK NEAR BOSCOBEL, WIS.	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, 1.6 MI SOUTH OF BOSCOBEL.	12.9	1959-84	07-06-84	9.24	130
GRANT RIVER BASIN							
*05413400	PIGEON CREEK NEAR LANCASTER, WIS.	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 SOUTH OF LANCASTER.	6.93	1960-65 1966# 1967-84	06-10-84	11.91	315
PLATTE RIVER BASIN							
*05414200	BEAR BRANCH NEAR PLATTEVILLE, WIS.	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 NORTHWEST OF PLATTEVILLE.	2.80	1958-84	06-13-84	14.64	495
GALENA RIVER BASIN							
*05414900	PATS CREEK NEAR ELK GROVE, WIS.	LAT 42°40'03", LONG 90°22'40", IN SW 1/4 SEC.4, T.2 N., R.1 E., LAFAYETTE COUNTY, AT BRIDGE ON STATE HIGHWAY 81, 7.0 MI SOUTHEAST OF PLATTEVILLE.	8.49	1960-84	06-13-84	13.22	310
ROCK RIVER BASIN							
*05423800	EAST BRANCH ROCK RIVER TRIBUTARY NEAR SLINGER, WIS.	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 NORTHWEST OF SLINGER.	4.42	1960-84	07-10-84	12.12	190
*05425700	ROBBINS CREEK AT COLUMBUS, WIS.	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	1960-84	06-10-84	12.68	220

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1984

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	ANNUAL MAXIMUM GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
ROCK RIVER BASIN--CONTINUED							
05425827	MAUNESHA RIVER NEAR SUN PRAIRIE, WIS.	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 NORTHEAST OF SUN PRAIRIE.	26.0	1973-84	06-09-84	12.27	440
*05427200	ALLEN CREEK NEAR FORT ATKINSON, WIS.	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 SOUTHWEST OF FORT ATKINSON.	10.2	1958-84	06-18-84	9.35	40
05427800	TOKEN CREEK NEAR MADISON, WIS.	LAT 43°10'52", LONG 89°19'28", IN SW 1/4 SEC.4, T.8 N., R.10 E., DANE COUNTY, AT CULVERT ON U.S. HIGHWAY 51, 8 MI NORTHEAST OF STATE CAPITOL IN MADISON.	24.3	1961-65 1966# 1967-75 1976-81# 1982-84	06-09-84	13.73	480
05430403	FISHER CREEK TRIBUTARY AT JANESVILLE, WI	LAT 42°40'18", LONG 89°03'31", IN SW 1/4 SE 1/4 SEC.34, T.3 N., R.12 E., ROCK COUNTY, AT CULVERT ON ROCKPORT ROAD, 0.4 MI WEST OF SOUTH CROSBY AVENUE, AND 0.6 MI UPSTREAM FROM COUNTY TRUNK HIGHWAY D, AT JANESVILLE.	1.95	1982-84	09-24-84	6.75	410
*05431400	LITTLE TURTLE CREEK AT ALLENS GROVE, WIS.	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 SOUTH OF ALLENS GROVE.	41.8	1962-84	02-12-84	12.55	490
*05432300	ROCK BRANCH NEAR MINERAL POINT, WIS.	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 SOUTH OF MINERAL POINT.	4.83	1959-84	07-10-84	12.79	375
*05433500	YELLOWSTONE RIVER NEAR BLANCHARDVILLE, WIS.	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 UPSTREAM FROM BRIDGE ON COUNTY TRUNK HIGHWAY F, 7.0 MI WEST-SOUTHWEST OF BLANCHARDVILLE.	28.5	1954-65# 1966-84	09-25-84	7.61	800
05435900	SUGAR RIVER TRIBUTARY NEAR PINE BLUFF, WIS.	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 SOUTHEAST OF PINE BLUFF.	7.42	1961-84	07-10-84	15.55	450
*05436200	GILL CREEK NEAR BROOKLYN, WIS.	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 WEST OF BROOKLYN.	3.34	1961-84	04-29-84	13.79	140
*05437200	EAST FORK RACCOON CREEK TRIBUTARY NEAR BELOIT, WIS.	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 WEST OF BELOIT.	4.64	1958-84	05-25-84	12.08	135
ILLINOIS RIVER BASIN							
05545100	SUGAR CREEK AT ELKHORN, WIS.	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 NORTHEAST OF ELKHORN.	6.68	1962-84	04-29-84	11.87	100
05545200	WHITE RIVER TRIBUTARY NEAR BURLINGTON, WIS.	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 WEST OF BURLINGTON.	2.42	1958-84	09-25-84	11.49	85
*05548150	NORTH BRANCH NIPPERSINK CREEK TRIBUTARY NEAR GENOA CITY, WIS.	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 WEST OF GENOA CITY.	13.8	1962-84	09-25-84	11.83	220

+ Discharge not determined.

* Also a low-flow partial-record station.

Operated as a continuous-record station.

B Peak did not reach bottom of gage.

C Gage not operating.

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 1984

Stream	Tributary to	Location	Drainage Area (mi ²)	Measured Previously (Water Years)	Measurements	
					Date	Discharge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE MICHIGAN						
South Branch Oconto River	Oconto River	Lat 45°03'40", long 88°31'50", in SW 1/4 SW 1/4 sec.23, T.30 N., R.16 E., Menominee County, at town road and 4.9 miles west of Breed.	143	1969 1983	7-24-84	142.6
Swamp Creek	Wolf River	Lat 45°30'03", long 88°54'11", in NE 1/4 SE 1/4 sec.19, T.35 N., R.13 E., Forest County, 4.7 mi south of Crandon.	24.2	--	02-15-84	16.5
Evergreen River	Wolf River	Lat 45°04'23", long 88°42'30", in NW 1/4 NW 1/4 sec.20, T.30 N., R.15 E., Menominee County, at County Trunk Highway WW, 8.2 miles south of Langlade.	54.6	1966 1983	07-25-84	72.14
West Branch Wolf River	Wolf River	Lat 45°01'06", long 88°52'27", in SW 1/4 SW 1/4 sec.1, T.29 N., R.13 E., Menominee County, at town road and 3.0 miles northeast of Neopit.	41.8	1982-83	07-23-84	60.4
Little West Branch Wolf River	Wolf River	Lat 44°59'11", long 88°52'49", in SE 1/4 SE 1/4 sec.14, T.29 N., R.13 E., Menominee County, at Wagon Bridge Road, 2.5 miles west of Neopit.	--	1982-83	07-23-84	35.3
Little West Branch Creek	West Branch Wolf River	Lat 45°00'54", long 88°46'11", in NE 1/4 NW 1/4 sec.11, T.29 N., R.14 E., Menominee County, at County Trunk Highway M, 3.8 miles northwest of Neopit.	17.0	1969-70 1982-83	07-25-84	11.15
West Branch Wolf River	Wolf River	Lat 44°56'08", long 88°40'11", in NW 1/4 SW 1/4 sec.3, T.28 N., R.15 E., Menominee County, at town road, 4.2 miles northwest of Keshena.	163	1966 1982-83	07-26-84	164.23
West Branch Red River	Red River	Lat 45°03'41", long 89°06'08", in SE 1/4 SE 1/4 sec.24, T.30 N., R.11 E., Langlade County, at town road and 11.2 miles west of Phlox.	--	1983	07-25-84	8.58

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 1983 TO SEPTEMBER 1984

STREAMS TRIBUTARY TO LAKE SUPERIOR

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)
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04025500 - BOIS BRULE RIVER AT BRULE, WI (LAT 46 32 16 LONG 091 35 43)

JAN , 1984					MAY , 1984				
24...	1415	159	100	.0	30...	1730	202	100	16.0
FEB					JUL				
27...	1605	197	122	2.0	09...	1500	192	108	20.0
APR					AUG				
03...	1330	193	98	6.0	16...	1135	152	120	18.0
09...	1700	318	90	6.0	28...	1500	151	117	20.5
11...	1210	360	85	5.5					

04027000 - BAD RIVER NEAR ODANAH, WI (LAT 46 29 15 LONG 090 41 45)

OCT , 1983					APR , 1984				
05...	1730	238	143	13.0	10...	0915	3240	70	2.0
NOV					12...	1035	4980	75	2.5
22...	1335	1830	100	2.5	MAY				
DEC					31...	1430	421	105	16.5
28...	1405	322	--	.0	JUL				
JAN , 1984					11...	0930	319	80	20.0
31...	1030	223	78	.0	AUG				
MAR					15...	0940	168	154	23.5
08...	1150	258	123	.0					

04027500 - WHITE RIVER NEAR ASHLAND, WI (LAT 46 29 50 LONG 090 54 15)

OCT , 1983					APR , 1984				
05...	1300	324	176	12.0	10...	1750	662	100	.0
NOV					JUN				
22...	1530	460	146	3.5	01...	1100	253	150	17.0
DEC					JUL				
29...	1420	182	190	.5	10...	1220	195	160	18.5
JAN , 1984					19...	1515	194	160	19.0
25...	1300	175	150	.0	AUG				
FEB					15...	1430	190	166	22.0
28...	0850	329	170	.0					

LAKE SUPERIOR

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
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465238090303901 - EAST BASIN OF LAGOON AT W. END OF MICHIGAN IS., WI (LAT 46 52 38 LONG 090 30 39)

AUG , 1984									
24...	1200	.50	6.4	21.0	4.7	31	0	8.7	2.3

465238090304401 - WEST BASIN OF LAGOON AT W. END OF MICHIGAN IS., WI (LAT 46 52 38 LONG 090 30 44)

AUG , 1984									
24...	1130	.50	6.4	19.0	3.5	41	0	12	2.8

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

LAKE SUPERIOR--CONTINUED

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
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465238090303901 - EAST BASIN OF LAGOON AT W. END OF MICHIGAN IS., WI (LAT 46 52 38 LONG 090 30 39)

AUG , 1984									
24...	.50	3	.0	.20	31	24	1.4	.80	<.10

465238090304401 - WEST BASIN OF LAGOON AT W. END OF MICHIGAN IS., WI (LAT 46 52 38 LONG 090 30 44)

AUG , 1984									
24...	.70	4	.0	.20	43	33	1.5	1.1	.10

DATE	SILICA, DIS- SOLVED (MG/L AS (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	SOLIDS, DIS- SOLVED (TONS (70303)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
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465238090303901 - EAST BASIN OF LAGOON AT W. END OF MICHIGAN IS., WI (LAT 46 52 38 LONG 090 30 39)

AUG , 1984								
24...	9.3	59	42	.08	<.10	.70	.010	7.5

465238090304401 - WEST BASIN OF LAGOON AT W. END OF MICHIGAN IS., WI (LAT 46 52 38 LONG 090 30 44)

AUG , 1984								
24...	8.2	67	52	.09	<.10	1.0	.096	7.6

STREAMS TRIBUTARY TO LAKE MICHIGAN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)
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04066003 - MENOMINEE RIVER BELOW PEMENE CREEK NEAR PEMBINE, WI (LAT 45 34 46 LONG 087 47 13)

NOV , 1983					JUN , 1984				
17... 1605	3290	245	3.5		07... 1555	2120	220	20.0	
MAY , 1984					JUL				
04... 1100	6960	163	8.5		17... 1215	1440	207	21.5	

04069500 - PESHTIGO RIVER AT PESHTIGO, WI (LAT 45 02 49 LONG 087 44 40)

NOV , 1983					MAR , 1984				
18... 1230	533	290	4.0		21... 1100	793	330	.5	
JAN , 1984					JUL				
06... 1140	601	260	1.0		18... 1230	453	250	24.0	

04071000 - OCONTO RIVER NEAR GILLET, WI (LAT 44 51 53 LONG 088 18 00)

OCT , 1983					MAY , 1984				
27... 1025	616	265	4.0		30... 0945	532	240	16.0	
JAN , 1984					JUN				
03... 1620	494	--	.0		26... 1120	573	250	17.5	
MAR					AUG				
22... 1430	462	300	.0		21... 1220	321	285	21.5	
APR									
18... 1330	1150	160	7.5						

04071858 - PENSAAKEE RIVER NEAR PENSAAKEE, WI (LAT 44 49 08 LONG 087 57 12)

NOV , 1983					MAY , 1984				
02... 1015	39	--	9.0		29... 1600	51	490	16.0	
DEC					JUL				
28... 1345	33	520	.0		18... 1500	31	215	20.0	
MAR , 1984					AUG				
22... 1230	91	510	1.0		21... 1020	28	480	24.0	
APR									
19... 1015	128	490	6.5						

WATER-QUALITY PARTIAL-RECORD STATIONS

 MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
 STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)
04073500 - FOX RIVER AT BERLIN, WI (LAT 43 57 14 LONG 088 57 08)									
OCT , 1983					APR , 1984				
05... 1115	1000	360	18.5		06... 1640	1530	320	9.0	
NOV 23... 0925	1350	380	5.0		MAY 16... 1120	2080	340	15.5	
JAN , 1984					JUL 18... 1200	1720	350	23.5	
04... 1310	894	380	.0		AUG 28... 1527	668	360	25.0	
FEB 07... 1205	793	380	.0						
04074548 - SWAMP CREEK BELOW RICE LAKE, AT MOLE LAKE, WI (LAT 45 28 46 LONG 088 59 52)									
OCT , 1983					APR , 1984				
11... 1230	83	170	10.0		30... 1400	89	160	5.0	
NOV 02... 1300	39	184	9.5		MAY 17... 1345	51	168	18.0	
16... 1220	46	217	3.0		29... 1505	41	198	17.0	
DEC 07... 1415	42	215	.5		JUN 06... 1305	32	210	25.5	
JAN , 1984					JUL 09... 1425	24	205	20.0	
12... 1545	34	245	.5		AUG 01... 1230	16	224	22.0	
FEB 01... 1330	33	275	.5		23... 1330	23	220	19.5	
29... 1135	58	205	1.0		SEP 04... 1415	38	215	16.5	
MAR 12... 1130	31	268	.0		21... 0900	31	192	15.0	
27... 1150	43	215	3.0						
APR 17... 1430	73	137	8.5						
04074950 - WOLF RIVER AT LANGLADE, WI (LAT 44 11 25 LONG 088 44 00)									
OCT , 1983					JUL , 1984				
14... 1500	929	140	8.5		24... 1300	266	190	25.5	
NOV 16... 1400	438	170	3.5		AUG 02... 1430	232	230	21.5	
FEB , 1984					SEP 21... 1120	328	190	15.0	
07... 1245	302	160	.5						
MAY 02... 1340	1070	110	8.0						
04077000 - WOLF RIVER AT KESHENA FALLS NEAR KESHENA, WI (LAT 44 53 28 LONG 088 39 18)									
DEC , 1983					APR , 1984				
22... 1230	568	--	.0		18... 1105	1280	120	7.5	
04078500 - EMBARRASS RIVER NEAR EMBARRASS, WI (LAT 44 43 29 LONG 088 44 10)									
OCT , 1983					MAY , 1984				
27... 1245	322	375	7.5		23... 0930	308	315	17.0	
JAN , 1984					JUL 17... 1150	350	250	18.0	
03... 1410	223	--	.0		AUG 21... 1500	179	380	23.0	
MAR 23... 1045	281	310	1.5						
04079000 - WOLF RIVER AT NEW LONDON, WI (LAT 44 23 32 LONG 088 44 25)									
OCT , 1983					MAY , 1984				
26... 1700	3320	320	8.5		16... 1040	3330	310	14.0	
JAN , 1984					AUG 20... 1710	1160	300	22.0	
04... 1045	1180	--	.0						
MAR 23... 1340	1770	280	1.0						
04080000 - LITTLE WOLF RIVER AT ROYALTON, WI (LAT 44 24 45 LONG 088 51 55)									
OCT , 1983					MAY , 1984				
26... 1345	447	350	9.0		17... 1200	593	340	14.5	
DEC 16... 1230	360	320	1.0		JUN 28... 1320	556	420	19.0	
FEB , 1984					AUG 20... 1445	291	355	20.5	
02... 1515	304	400	.0						
APR 17... 1400	1050	270	8.5						

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)
04081000 - WAUPACA RIVER NEAR WAUPACA, WI (LAT 44 19 50 LONG 088 59 45)									
OCT , 1983					MAY , 1984				
26...	1140	244	415	6.0	02...	1200	498	290	10.0
DEC					JUN				
16...	1430	325	230	1.0	28...	1120	283	325	21.0
FEB , 1984					AUG				
02...	1340	236	280	.0	20...	1300	226	330	21.0
17...	1245	347	320	2.0					
APR									
17...	1130	309	320	9.0					
04085200 - KEWAUNEE RIVER NEAR KEWAUNEE, WI (LAT 44 27 30 LONG 087 33 23)									
OCT , 1983					MAY , 1984				
18...	1215	32	700	9.5	03...	1625	177	550	9.0
DEC					22...	0935	46	605	17.5
07...	1055	39	745	.5	JUL				
MAR , 1984					09...	1610	24	595	21.0
08...	1025	25	670	.0	SEP				
APR					05...	1020	51	650	15.0
11...	0950	61	605	8.0					
04085281 - EAST TWIN RIVER AT MISHICOT, WI (LAT 44 14 16 LONG 087 38 11)									
OCT , 1983					MAY , 1984				
18...	1350	26	650	10.0	03...	1810	213	490	8.5
DEC					21...	1800	50	575	18.5
07...	0845	31	490	.0	JUL				
MAR , 1984					10...	1155	16	605	21.0
07...	1520	67	600	.5	SEP				
APR					05...	1520	108	505	15.5
10...	1800	81	515	10.0					
04086000 - SHEBOYGAN RIVER AT SHEBOYGAN, WI (LAT 43 44 25 LONG 087 45 35)									
OCT , 1983					APR , 1984				
19...	1230	241	620	11.0	10...	1202	279	545	9.5
DEC					MAY				
06...	1215	301	630	.5	21...	1126	330	590	19.0
JAN , 1984					JUL				
18...	1050	114	--	.0	10...	1622	213	595	24.0
FEB					SEP				
27...	1202	826	490	1.0	06...	1240	143	615	17.5
04086500 - CEDAR CREEK NEAR CEDARBURG, WI (LAT 43 19 23 LONG 087 58 43)									
OCT , 1983					MAR , 1984				
27...	1120	56	640	7.5	15...	1325	69	630	.5
NOV					29...	1210	126	640	4.5
17...	1325	50	725	3.5	APR				
DEC					17...	1215	247	635	5.5
01...	1145	238	635	.5	MAY				
JAN , 1984					17...	1450	97	615	18.5
05...	1410	57	675	.0	JUL				
25...	1350	34	690	.0	18...	1215	104	615	20.5
FEB					AUG				
21...	1155	418	480	.5	28...	1410	25	650	25.0

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

CHIPPEWA RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)
05356000 - CHIPPEWA RIVER AT BISHOPS BRIDGE NEAR WINTER, WI (LAT 45 50 57 LONG 091 04 44)									
OCT , 1983					APR , 1984				
07... 1150	1080	65	13.0		11... 1115	207	65	5.0	
NOV 30... 1145	1320	85	1.0		MAY 29... 1530	673	60	18.0	
JAN , 1984					JUN 15... 1000	3080	60	19.5	
31... 1310	1480	74	2.0		AUG 03... 1340	498	68	25.0	
MAR 08... 1440	187	87	2.5						
05356500 - CHIPPEWA RIVER NEAR BRUCE, WI (LAT 45 27 08 LONG 091 15 39)									
OCT , 1983					MAY , 1984				
06... 1030	1490	85	13.5		08... 1115	2760	70	4.0	
NOV 17... 1515	1320	80	3.0		JUN 11... 1430	3480	56	18.5	
JAN , 1984					15... 1230	4820	54	19.0	
13... 1500	2130	95	.0		AUG 01... 1440	848	94	23.0	
FEB 13... 1215	2180	83	.5		SEP 06... 1225	816	107	17.0	
MAR 20... 1000	640	140	.5						
APR 05... 1520	3010	65	5.0						
05360500 - FLAMBEAU RIVER NEAR BRUCE, WI (LAT 45 22 21 LONG 091 12 34)									
OCT , 1983					APR , 1984				
06... 1300	1620	90	13.0		05... 0940	2120	120	3.0	
NOV 16... 1130	1700	90	5.0		MAY 08... 0745	3660	85	4.0	
JAN , 1984					JUN 11... 0930	1650	82	20.0	
13... 1200	1680	115	.0		AUG 01... 1250	1210	112	24.0	
FEB 13... 0945	1600	109	.5		SEP 06... 1040	3030	122	19.5	
MAR 20... 1020	1400	125	1.0						
05362000 - JUMP RIVER AT SHELDON, WI (LAT 45 18 29 LONG 090 57 23)									
OCT , 1983					APR , 1984				
06... 1200	226	115	13.0		05... 1020	2200	60	4.0	
NOV 17... 1245	697	90	3.0		MAY 01... 1400	3540	56	4.5	
JAN , 1984					JUN 14... 1150	680	91	21.0	
03... 1415	186	180	.0		AUG 01... 1025	64	165	23.0	
27... 1300	143	120	.0		23... 1445	83	170	22.5	
FEB 29... 1235	623	98	.0		SEP 20... 1515	134	160	16.5	
MAR 20... 1115	161	105	.5						
05368000 - HAY RIVER AT WHEELER, WI (LAT 45 02 52 LONG 091 54 39)									
OCT , 1983					MAR , 1984				
05... 0900	275	352	12.0		20... 1435	302	373	3.0	
NOV 22... 1500	369	305	3.5		MAY 02... 1100	966	226	7.0	
JAN , 1984					JUN 13... 1035	1060	177	18.5	
05... 1115	290	335	.0		JUL 31... 1520	262	342	20.0	
17... 1330	245	380	.0		SEP 05... 1130	250	350	13.5	
FEB 08... 1310	251	318	.5						
14... 1045	394	276	2.0						
05369000 - RED CEDAR RIVER AT MENOMONIE, WI (LAT 44 53 02 LONG 091 55 57)									
OCT , 1983					MAY , 1984				
04... 1550	1460	205	16.0		02... 1420	3080	203	9.5	
NOV 22... 1305	2490	212	3.5		JUN 13... 1115	3160	190	19.0	
DEC 28... 1500	865	120	1.0		JUL 31... 1000	489	208	23.0	
FEB , 1984					AUG 07... 1415	2440	221	23.5	
07... 1250	1390	118	.0		SEP 05... 1015	1340	208	19.5	
MAR 20... 1130	2170	246	1.0						

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

TREMPEALEAU RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)
05379500 - TREMPEALEAU RIVER AT DODGE, WI (LAT 44 07 55 LONG 091 33 14)									
OCT , 1983					APR , 1984				
05... 0900		507	280	13.0	10... 0935		562	275	8.5
NOV 22... 0845		733	275	4.5	MAY 08... 1030		787	250	10.0
JAN , 1984					JUN 18... 1710		796	276	22.0
04... 0830		516	305	.0	AUG 08... 1115		590	290	22.0
FEB 08... 1020		445	330	.0	SEP 18... 1550		433	276	17.0
MAR 07... 1425		579	310	.5					

BLACK RIVER BASIN

05381000 - BLACK RIVER AT NEILLSVILLE, WI (LAT 44 33 35 LONG 090 36 54)									
OCT , 1983					MAY , 1984				
24... 1130		456	120	9.0	03... 1130		2440	98	7.0
JAN , 1984					09... 1145		1120	110	10.0
05... 1100		233	186	.0	JUN 19... 1310		742	135	21.5
FEB 09... 1000		137	--	.0	AUG 09... 1050		267	155	25.5
MAR 08... 1150		245	166	.0	SEP 20... 0825		163	160	17.0
APR 06... 1120		1350	85	6.0					

WISCONSIN RIVER BASIN

05393500 - SPIRIT RIVER AT SPIRIT FALLS, WI (LAT 45 26 58 LONG 089 58 47)									
OCT , 1983					MAR , 1984				
04... 1135		36	75	15.0	26... 1540		60	100	.5
DEC 05... 1600		107	60	.5	MAY 03... 1140		398	50	7.5
JAN , 1984					JUN 15... 1355		68	85	17.5
06... 1245		37	60	.0	AUG 08... 1235		17	135	23.0
FEB 02... 1420		25	60	.5					
05394500 - PRAIRIE RIVER NEAR MERRILL, WI (LAT 45 14 09 LONG 089 38 59)									
OCT , 1983					MAY , 1984				
04... 1355		113	165	14.0	02... 1630		823	105	10.0
DEC 02... 1408		229	110	.5	JUN 15... 1200		202	200	17.5
28... 1235		132	105	.5	AUG 08... 1030		90	195	20.5
FEB , 1984									
01... 1605		107	--	.5					
MAR 26... 1235		148	160	4.5					
05397500 - EAU CLAIRE RIVER AT KELLY, WI (LAT 44 55 06 LONG 089 33 00)									
DEC , 1983					MAY , 1984				
27... 1405		129	180	.0	10... 1535		479	110	11.5
JAN , 1984					JUN 14... 1530		345	165	21.5
31... 1415		107	220	.0	AUG 10... 1220		106	230	23.5
MAR 23... 1430		143	220	.5					
05398000 - WISCONSIN RIVER AT ROTHSCHILD, WI (LAT 44 53 09 LONG 089 38 05)									
OCT , 1983					AUG , 1984				
05... 1230		2270	150	16.0	09... 1400		2350	235	25.5
05399500 - BIG EAU PLEINE RIVER NEAR STRATFORD, WI (LAT 44 49 19 LONG 090 04 46)									
OCT , 1983					JUN , 1984				
24... 1540		58	160	9.0	13... 1230		252	310	17.5
DEC 13... 1320		53	205	.5	AUG 08... 1130		58	170	20.5
FEB , 1984					SEP 11... 1440		8.1	160	20.5
03... 1410		36	190	.0					
APR 09... 1415		188	185	4.0					

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

WISCONSIN RIVER BASIN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)
05400650 - LITTLE PLOVER RIVER AT PLOVER, WI (LAT 44 28 26 LONG 089 31 44)									
OCT , 1983					APR , 1984				
28...	1530	12	390	7.0	19...	1645	13	320	9.5
DEC					JUN				
14...	1055	11	360	4.5	18...	1400	23	260	17.5
FEB , 1984					JUL				
17...	1410	14	330	2.5	09...	1400	12	330	13.5
MAR					SEP				
21...	1135	11	340	4.0	28...	1235	14	--	11.0
05402000 - YELLOW RIVER AT BABCOCK, WI (LAT 44 18 05 LONG 090 07 15)									
OCT , 1983					APR , 1984				
28...	1250	46	140	8.5	11...	1540	154	120	4.0
DEC					MAY				
09...	1350	63	150	.5	10...	1430	276	125	12.0
JAN , 1984					JUL				
04...	1455	39	--	.0	09...	1215	68	140	17.5
FEB					SEP				
03...	1120	34	190	.0	05...	1440	10	120	17.5
MAR									
27...	1200	639	150	2.0					
05403500 - LEMONWEIR RIVER AT NEW LISBON, WI (LAT 43 52 47 LONG 090 09 40)									
OCT , 1983					MAY , 1984				
17...	1230	872	120	9.0	04...	1255	1890	85	9.5
NOV					JUN				
21...	1035	692	--	5.0	22...	0945	563	107	21.0
JAN , 1984					JUL				
05...	1450	266	150	.5	31...	1235	162	150	22.0
FEB					SEP				
02...	1335	208	145	.0	11...	1235	127	--	18.0
MAR									
21...	1235	497	96	1.0					
05404000 - WISCONSIN RIVER NEAR WISCONSIN DELLS, WI (LAT 43 36 22 LONG 089 45 25)									
OCT , 1983					MAY , 1984				
18...	1145	10100	190	12.0	03...	1240	37000	140	8.5
NOV					JUN				
21...	1325	9610	170	5.5	21...	1240	9090	140	23.0
MAR , 1984					JUL				
28...	1300	5140	135	6.0	30...	1210	6620	154	25.0
05405000 - BARABOO RIVER NEAR BARABOO, WI (LAT 43 28 51 LONG 089 38 09)									
OCT , 1983					MAY , 1984				
19...	1145	499	375	10.0	02...	1550	1530	215	8.5
NOV					09...	1210	728	280	11.0
17...	1120	415	460	4.5	JUN				
JAN , 1984					21...	1120	1570	148	23.0
04...	1140	273	190	.5	JUL				
FEB					27...	1000	305	360	22.0
01...	1340	252	300	.5	SEP				
MAR					10...	1110	260	--	18.5
27...	1000	701	200	6.0					
05406500 - BLACK EARTH CREEK AT BLACK EARTH, WI (LAT 43 08 03 LONG 089 43 56)									
OCT , 1983					MAY , 1984				
18...	1410	32	600	11.0	01...	0835	78	560	6.5
NOV					02...	1025	63	520	8.5
16...	1420	29	610	8.0	09...	1330	50	550	12.5
JAN , 1984					JUN				
04...	1400	31	300	5.5	11...	1415	75	430	19.0
27...	1245	28	450	3.5	26...	1210	53	570	17.0
FEB					JUL				
15...	1320	59	440	6.5	10...	1103	119	375	18.5
MAR					26...	1515	38	550	18.0
28...	1450	36	400	12.0	AUG				
APR					21...	1300	33	475	17.0
30...	1200	187	430	7.5					

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

WISCONSIN RIVER BASIN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)
05408000 - KICKAPOO RIVER AT LAFARGE, WI (LAT 43 34 27 LONG 090 38 35)									
OCT , 1983					APR , 1984				
14...	1230	259	460	8.5	30...	1240	1580	200	6.5
NOV					MAY				
18...	0930	190	480	4.5	01...	1100	720	290	6.5
JAN , 1984					02...	1100	483	370	8.5
05...	1105	203	360	.0	11...	0915	241	440	11.0
FEB					JUN				
02...	1105	176	340	.5	20...	1155	353	290	20.5
MAR					AUG				
29...	1040	227	350	5.5	01...	1045	152	450	--

05410490 - KICKAPOO RIVER AT STEUBEN, WI (LAT 43 10 58 LONG 090 51 30)									
NOV , 1983					APR , 1984				
09...	1145	552	590	9.5	18...	1250	689	560	10.0
DEC					MAY				
27...	1150	510	400	.0	31...	1115	657	480	14.5
JAN , 1984					JUL				
23...	1212	443	--	.0	17...	1310	574	565	21.5
FEB					AUG				
28...	1156	684	420	3.5	27...	1318	487	510	20.0

PLATTE RIVER BASIN

05414000 - PLATTE RIVER NEAR ROCKVILLE, WI (LAT 42 43 52 LONG 090 38 25)									
NOV , 1983					APR , 1984				
10...	0850	111	600	7.0	19...	0820	106	600	8.0
DEC					MAY				
28...	0938	86	460	.0	31...	1830	133	615	18.5
JAN , 1984					JUL				
23...	1726	75	810	.0	18...	0900	140	650	18.0
FEB					AUG				
29...	0906	127	560	1.0	28...	0850	92	680	21.0

GALENA RIVER BASIN

05415000 - GALENA RIVER AT BUNCOMBE, WI (LAT 42 30 49 LONG 090 22 40)									
NOV , 1983					APR , 1984				
10...	1120	68	780	6.5	19...	1050	70	800	9.5
DEC					JUN				
28...	1300	54	720	.0	01...	1055	77	855	19.0
JAN , 1984					JUL				
24...	0910	47	1100	.0	18...	1240	111	810	22.0
FEB					AUG				
29...	1122	61	720	2.0	28...	1130	59	870	25.0

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

ROCK RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)
05427570 - ROCK RIVER AT INDIANFORD, WI (LAT 42 48 15 LONG 089 05 25)									
OCT , 1983					JUN , 1984				
25...	1115	868	575	9.5	20...	1600	3980	550	26.5
NOV					JUL				
09...	0955	686	595	9.5	10...	1050	3760	480	22.5
JAN , 1984					AUG				
03...	1250	1180	670	1.0	01...	1140	1880	510	24.0
30...	1015	757	710	1.0	21...	1245	259	425	23.5
MAR					SEP				
01...	1120	4490	500	2.5	19...	1215	808	490	17.0
29...	1115	2480	425	2.0					
MAY									
11...	1125	4040	530	12.5					
05429500 - YAHARA RIVER NEAR MC FARLAND, WI (LAT 43 00 32 LONG 089 18 18)									
OCT , 1983					APR , 1984				
19...	0920	85	400	12.5	19...	1002	161	450	8.0
NOV					MAY				
08...	0805	165	425	10.5	10...	0835	223	450	11.5
DEC					JUN				
02...	0925	249	430	1.5	04...	1047	141	445	21.0
20...	1105	200	420	1.5	21...	1620	198	430	26.0
JAN , 1984					JUL				
19...	1030	167	415	1.0	09...	1110	249	420	23.5
FEB					31...	0845	202	400	24.5
14...	1020	181	430	2.5	AUG				
MAR					20...	1105	159	380	24.0
16...	0930	295	400	4.0	SEP				
28...	0820	314	370	4.0	17...	0945	115	410	17.0
05430150 - BADFISH CREEK NEAR COOKSVILLE, WI (LAT 42 50 00 LONG 089 11 48)									
NOV , 1983					JUN , 1984				
09...	1520	83	1160	13.5	20...	1000	125	1070	21.0
DEC					JUL				
21...	1020	93	1120	2.5	10...	1320	673	340	21.0
JAN , 1984					11...	1230	392	570	21.5
19...	1250	98	1140	.5	AUG				
FEB					01...	1350	97	1230	22.5
14...	1230	162	810	6.5	21...	1325	91	1250	21.0
MAR					SEP				
29...	1530	91	980	9.5	17...	1420	73	1220	16.0
MAY					25...	1300	111	725	16.0
11...	1520	95	1250	15.5					
05430175 - YAHARA RIVER NEAR FULTON, WI (LAT 42 49 50 LONG 089 10 09)									
NOV , 1983					MAY , 1984				
09...	1220	306	1060	11.0	11...	1335	441	1120	13.5
DEC					JUN				
21...	1145	407	800	.5	20...	1315	608	820	26.0
JAN , 1984					JUL				
17...	1300	141	1110	1.0	11...	1350	775	420	24.0
FEB					AUG				
15...	1400	436	770	6.5	01...	1325	163	1090	22.5
MAR					SEP				
29...	1350	491	405	6.5	17...	1220	366	640	15.5
05430500 - ROCK RIVER AT AFTON, WI (LAT 42 36 33 LONG 089 04 14)									
NOV , 1983					JUN , 1984				
08...	1340	1210	655	10.5	19...	1150	4310	565	24.5
JAN , 1984					JUL				
03...	1040	1560	640	.5	31...	1345	2260	560	24.0
30...	1340	1300	650	1.0	SEP				
MAR					18...	1245	711	590	16.0
28...	1615	2670	485	6.5					
MAY									
10...	1425	4350	565	13.0					

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

ROCK RIVER BASIN--CONTINUED

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
054310171 - DELAVAN LAKE TRIBUTARY AT PARK NEAR LAKE LAWN, WI							
MAY , 1984							
25...	1014	660	13.0	4.5	.90	5.4	.090

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)
05431486 - TURTLE CREEK AT CARVERS ROCK ROAD NEAR CLINTON, WI (LAT 42 35 50 LONG 088 49 45)									
NOV , 1983					MAY , 1984				
08...	1145	88	715	11.5	10...	1215	120	670	11.5
DEC					JUN				
22...	1055	148	600	.0	21...	1247	201	625	23.5
JAN , 1984					JUL				
17...	0958	86	540	.0	31...	1210	66	695	21.0
FEB					SEP				
15...	1035	454	420	3.0	18...	1006	62	710	12.0
MAR									
28...	1235	262	470	7.0					

05432500 - PECATONICA RIVER AT DARLINGTON, WI (LAT 42 40 40 LONG 090 07 07)									
NOV , 1983					APR , 1984				
07...	1218	121	830	7.5	20...	1215	166	640	10.5
DEC					JUN				
30...	1035	119	590	.0	01...	1331	217	725	18.0
JAN , 1984					JUL				
24...	1132	112	610	.0	20...	1445	258	740	20.5
MAR					AUG				
02...	1333	193	580	3.0	29...	1230	154	690	23.0

05433000 - EAST BRANCH PECATONICA RIVER NEAR BLANCHARDVILLE, WI (LAT 42 47 10 LONG 089 51 40)									
NOV , 1983					APR , 1984				
07...	1000	120	670	7.5	20...	0920	145	540	9.5
DEC					MAY				
30...	1330	120	470	.0	30...	1145	225	700	12.5
JAN , 1984					JUL				
24...	1336	122	480	.0	20...	1105	246	570	19.5
MAR									
02...	0950	157	490	2.0					

05434500 - PECATONICA RIVER AT MARTINTOWN, WI (LAT 42 30 34 LONG 089 47 58)									
NOV , 1983					MAY , 1984				
08...	1032	528	710	8.5	29...	1125	1220	560	12.0
JAN , 1984					JUL				
03...	1355	505	525	.0	19...	1300	1310	600	21.0
26...	1030	477	550	.0	AUG				
MAR					30...	1140	592	605	23.5
01...	1114	760	530	1.5					
APR									
16...	1150	788	565	8.5					

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: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water table well, diameter 1 1/4 in, depth 21 ft, cased to 19 ft, well point 19-21 ft.

DATUM.--Altitude of land-surface is 955 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--September 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.61 ft below land-surface datum. May 29, 1973; lowest water level measured, 18.14 ft below land-surface datum, Mar. 7, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	14.07	DEC 5	14.08	FEB 7	15.17	APR 16	13.99	JUN 12	13.31	AUG 6	14.11
12	13.80	12	14.11	20	14.65	24	13.54	18	13.20	14	14.36
17	13.78	19	14.32	27	14.29	MAY 1	13.21	25	13.12	21	14.33
24	13.80	27	14.34	MAR 5	14.07	7	12.93	JUL 3	13.36	27	14.21
31	13.79	JAN 3	14.53	13	14.31	14	12.94	9	13.38	SEP 3	14.13
NOV 8	13.87	9	14.77	20	14.34	22	13.18	17	13.34	10	14.03
16	14.14	16	14.72	27	13.66	30	13.27	24	13.62	17	13.90
21	13.98	23	14.97	APR 3	14.09	JUN 4	13.44	31	13.97	24	14.07
28	13.86	30	15.20	10	14.30						

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, depth 89 ft.

DATUM.--Altitude of land-surface datum is 1,470 ft 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 below land-surface datum, Mar. 2, 1978; lowest water level measured, 32.4 ft below land-surface datum, Apr. 1, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	26.40	DEC 31	26.90	FEB 29	27.30	APR 21	28.50	JUN 20	28.00	SEP 6	26.60
NOV 30	26.90	JAN 31	27.10	MAR 9	27.20	MAY 20	27.50	JUL 19	26.40		

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, depth 65 ft.

DATUM.--Altitude of land-surface is 1,115 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft above land-surface datum.

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

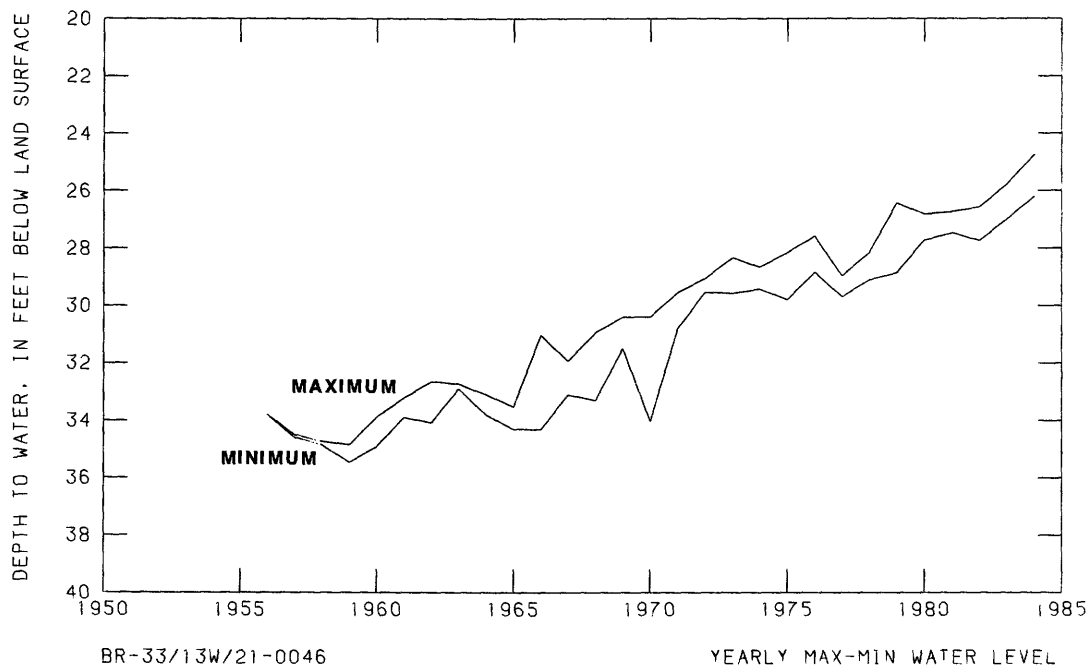
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.77 ft below land-surface datum, June 27, 1984; lowest water level measured, 35.45 ft below land-surface datum, May 13, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	25.98	DEC 9	25.99	FEB 7	26.22	APR 3	25.63	JUN 13	25.12	AUG 17	25.07
21	26.08	16	26.05	14	26.12	11	25.57	22	24.90	24	25.25
24	26.03	27	25.79	23	25.90	19	25.60	27	24.77	29	25.15
31	26.06	JAN 5	25.70	MAR 1	25.85	MAY 1	25.62	JUL 12	24.92	SEP 5	25.35
NOV 11	26.02	9	25.72	7	25.79	7	25.36	30	25.09	14	25.44
16	26.00	18	25.95	15	25.76	15	25.40	AUG 6	25.00	21	25.26
22	26.10	24	25.76	19	25.70	29	25.21	8	25.01	25	25.44
DEC 2	25.99	FEB 1	25.95	29	25.74						

GROUND-WATER LEVELS

BARRON COUNTY



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, depth 500 ft, cased to 150 ft, open end.

DATUM.--Altitude of land-surface is 590 ft National Geodetic Vertical Datum of 1929. Measuring point: top of 3 in pipe, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.24 ft below land-surface datum, May 3, 1961; lowest water level measured, 248.97 ft below land-surface datum, Aug. 30, 1955.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	93.44	DEC 6	80.85	FEB 7	75.16	APR 17	76.70	JUN 5	75.10	AUG 7	82.40
11	91.57	13	80.34	14	74.41	24	76.89	12	75.70	14	83.93
18	89.14	20	79.70	28	73.71	MAY 1	74.90	19	76.79	21	84.91
25	86.83	27	77.98	MAR 6	73.39	8	72.90	26	77.43	28	85.43
NOV 1	85.82	JAN 3	76.72	13	73.18	15	73.76	JUL 3	78.46	SEP 4	86.26
8	84.67	10	76.86	20	72.06	21	73.75	10	79.10	11	86.37
15	83.84	17	76.39	27	71.82	22	74.02	17	79.79	18	86.37
22	83.34	24	75.40	APR 3	72.14	29	75.13	24	80.55	25	85.79
29	82.93	31	75.23	10	72.48						

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, depth 346 ft, cased to 265 ft, open end.

DATUM.--Altitude of land-surface is 930 ft National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 3.50 ft 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 below land-surface datum, Jan. 2, 1961; lowest water level measured, 120.27 ft below land-surface datum, July 30, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	99.30	DEC 5	101.50	FEB 6	105.40	APR 9	109.60	JUN 11	94.70	AUG 6	108.40
10	98.30	12	101.50	13	114.40	16	107.70	19	100.20	13	103.25
17	101.20	19	100.20	17	105.70	23	89.00	25	100.60	20	104.70
24	97.70	27	91.75	27	111.60	30	92.10	JUL 2	102.65	28	111.40
31	98.90	JAN 3	102.20	MAR 5	116.65	MAY 7	93.25	9	99.50	SEP 4	105.90
NOV 7	100.50	9	92.40	12	108.00	14	94.30	16	100.10	10	105.75
14	98.95	16	109.30	19	105.00	21	98.00	23	102.10	17	106.50
21	99.20	23	109.70	26	108.73	29	94.00	30	104.40	24	107.90
28	100.30	30	107.50	APR 2	115.05	JUN 4	96.15				

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, depth 380 ft, cased to 85 ft, open end.

DATUM.--Altitude of land-surface is 870 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.00 ft below land-surface datum, Nov. 24, 1980; lowest water level measured, 32.76 ft below land-surface datum, June 30, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.10	25.10	24.55	24.04	25.08	24.16	23.37	21.16	22.30	21.01	25.85	23.33
10	24.76	24.38	24.40	24.17	25.52	23.72	23.43	22.00	21.29	21.90	24.33	22.42
15	25.11	24.23	23.78	24.38	24.09	23.84	23.14	22.12	20.61	20.72	25.14	24.20
20	24.36	24.55	23.91	24.26	23.70	23.50	23.55	21.08	20.87	23.69	24.95	24.98
25	24.31	24.66	24.36	24.31	24.33	24.49	22.96	22.23	20.38	24.85	24.10	24.99
EOM	24.53	24.15	25.31	24.42	24.15	23.66	22.17	21.04	21.47	25.15	23.72	23.60

WTR YEAR 1984 MAX 20.22 JUN 8 MIN 26.38 AUG 2

DODGE COUNTY

432407088552701. Local number, DG-11/13E/23-0081.

LOCATION.--Lat 43°24'15", long 88°55'26", Hydrologic Unit 07090002. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 125 ft, cased to 57 ft, open end.

DATUM.--Altitude of land-surface is 880 ft National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in side of casing, 1.30 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.10 ft below land-surface datum, July 31, 1984; lowest water level measured, 26.67 ft below land-surface datum, Feb. 3, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	21.95	DEC 28	20.04	FEB 29	18.09	APR 30	17.37	JUN 29	18.50	AUG 31	17.83
NOV 30	20.60	JAN 31	20.16	MAR 30	18.59	MAY 30	18.79	JUL 31	16.10	SEP 28	21.56

GROUND-WATER LEVELS

DOOR COUNTY

455757087151701. Local number, DR-29/27E/30-0007.

LOCATION.--Lat 45°57'57", long 87°15'17", Hydrologic Unit 04030102. Owner: Fred Peterson.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 4 in, depth 111 ft.

DATUM.--Altitude of land-surface is 725 ft National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.00 ft below land-surface datum, Mar. 22, 1979; lowest water level measured, 56.12 ft below land-surface datum, Feb. 21, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	32.79	JAN 25	45.76	APR 24	29.26	JUN 19	20.87	JUL 18	46.29	AUG 21	46.33
NOV 22	24.21	FEB 14	8.21	MAY 22	36.69						

445055087213801. Local number, DR-27/26E/05-0265

LOCATION.--Lat 44°50'55", long 87°21'38", Hydrologic Unit 04030102. Owner: U.S. Geol. Survey.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled observation, diameter 6 in, depth 442 ft, cased to 170 ft, open end.

DATUM.--Altitude of land-surface is 616 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.57 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--September 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.57 ft above land-surface datum, June 18, 1974; lowest water level, 35.33 ft below land-surface datum, Feb. 1, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5		20.16	18.58		27.18	9.46	10.84	6.67	12.63	12.89	18.30	23.53
10		23.08	17.61		28.39	11.31	12.06	6.81	12.40	14.11	20.83	23.90
15		24.33	17.60		14.00	12.33	12.46	8.36	12.12	14.74	20.41	20.09
20	17.88	20.84			8.70	13.06	11.85	9.23	9.40	16.26	24.05	19.26
25	20.45	17.52		25.27	10.07	11.25	11.59	10.13	10.61	18.11	24.02	19.65
EOM	19.74	17.68		26.99	9.86	10.75	9.80	11.26	12.03	18.93	22.97	17.00
WTR YEAR 1984 MAX			3.94	MAY 3	MIN	28.39	FEB 10					

DOUGLAS COUNTY

463217091342801. Local number, DS-47/10W/23-0001.

LOCATION.--Lat 46°32'17", long 91°34'28", Hydrologic Unit 04010301. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in, depth 40 ft, cased to 40 ft, perforated 37-40 ft.

DATUM.--Altitude of land-surface is 980 ft National Geodetic Vertical Datum of 1929. Measuring point: pointer on float gage, 4.33 ft above land-surface datum.

PERIOD OF RECORD.--June 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.81 ft above land-surface datum, Apr. 28, 1978; lowest water level measured, 29.59 ft below land-surface datum, July 29, 1939.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	7.15	DEC 5	2.24	FEB 7	2.49	APR 11	+0.17	JUN 4	1.33	JUL 30	2.72
10	7.55	12	2.08	14	0.65	16	0.13	11	+0.55	AUG 6	3.80
17	7.83	20	2.02	21	0.01	24	0.74	18	+0.38	20	3.32
24	8.18	27	1.95	27	0.25	MAY 1	+0.13	25	0.35	27	3.45
NOV 1	8.52	JAN 3	1.97	MAR 5	0.92	9	+0.24	JUL 2	1.20	SEP 4	3.89
7	8.81	9	2.00	12	1.58	14	0.32	9	1.21	10	4.29
14	9.08	16	1.97	19	1.85	21	1.02	16	1.85	17	4.75
21	9.09	23	2.21	26	2.00	29	1.27	23	2.30	24	+0.13
29	5.67	30	2.35	APR 2	1.19						

GROUND-WATER LEVELS

FOND DU LAC COUNTY

434358088301001. Local number. FL-15/17E/30-0374.

LOCATION.--Lat 43°43'58", long 88°30'46", Hydrologic Unit 04030203. Owner: Wis. Dept. of Transportation.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 120 ft, cased to 63 ft, open end.

DATUM.--Altitude of land-surface is 835 ft National Geodetic Vertical Datum of 1928. Measuring point: bole in pump base, 1.50 ft 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 below land-surface datum, May 23, 1968; lowest water level measured, 34.99 ft below land-surface datum, Mar. 21, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	22.33	JAN 3	17.59	FEB 22	18.53	APR 24	17.90	JUN 14	16.70	JUL 27	19.04
NOV 4	21.93	31	20.73	MAR 20	18.40	MAY 17	16.29	JUL 18	17.89	SEP 25	21.35
16	21.89										

FOREST COUNTY

460156088474901. Local number, FR-41/14E/18-0002.

LOCATION.--Lat 46°01'56", long 88°47'49", Hydrologic Unit 04030106. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in, depth 18 ft, cased to 15 ft, well point 15-18 ft.

DATUM.--Land-surface datum is 1,552 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.70 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.96 ft below land-surface datum, Apr. 29, 1954; lowest water level measured, 11.89 ft below land-surface datum, Aug. 13, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	10.87	JAN 2	10.43	FEB 29	10.79	JUN 4	11.06	AUG 1	11.42	SEP 27	11.01
DEC 2	10.23	31	10.30	APR 2	10.98	JUL 2	11.32	31	11.27		

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.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in, depth 35 ft, cased to 5 ft, open end.

DATUM.--Altitude of land-surface is 980 ft National Geodetic Vertical Datum of 1929. Measuring point: edge of pump base, 0.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

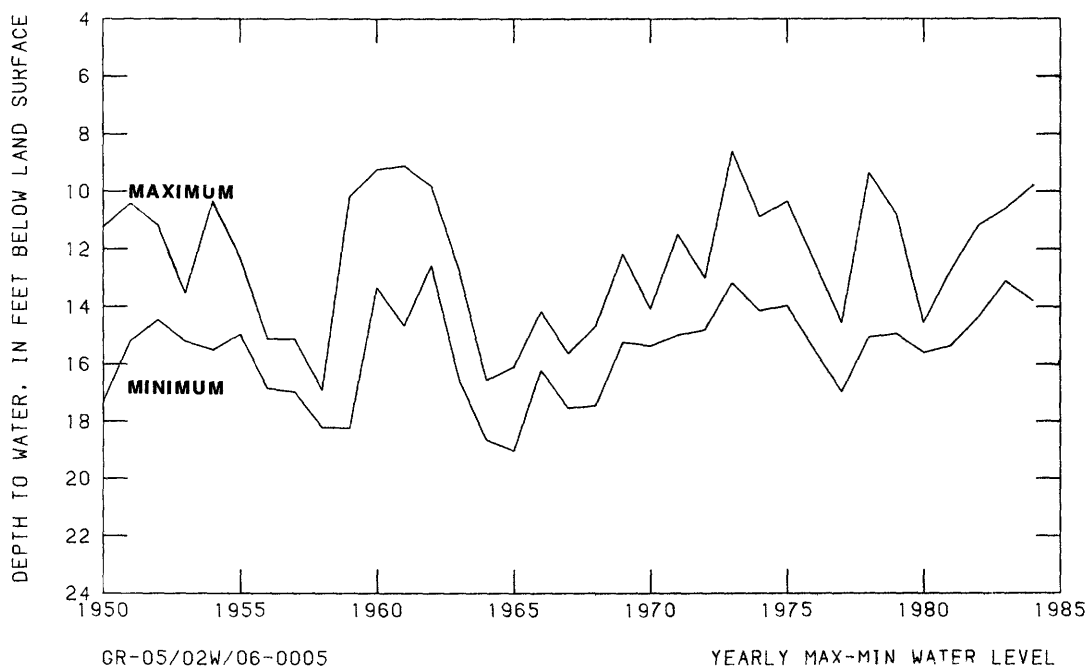
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.60 ft below land-surface datum, May 22, 1973; lowest water level measured, 19.03 ft below land-surface datum, Aug. 17, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	12.67	DEC 12	13.00	FEB 15	12.55	APR 23	12.40	JUN 19	9.89	AUG 24	11.14
NOV 17	13.11	JAN 18	13.79	MAR 14	12.79	MAY 17	11.77	JUL 10	9.80	SEP 20	11.90

GROUND-WATER LEVELS

GRANT COUNTY



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, depth 75 ft.

DATUM.--Altitude of land-surface is 995 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 4.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.96 ft below land-surface datum, Apr. 13, 1966: lowest water level measured, 69.72 ft below land-surface datum, Feb. 17, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 9	59.94	FEB 22	58.29	APR 8	58.34	JUN 11	53.24	JUL 16	51.68	AUG 24	56.35
22	60.35	MAR 5	58.34	17	58.41	18	52.25	23	51.77	SEP 2	57.01
29	59.85	13	58.71	MAY 4	53.30	24	51.89	29	52.94	9	57.43
NOV 8	58.84	18	58.65	12	53.91	JUL 2	52.88	AUG 5	53.36	18	56.77
24	59.92	28	58.29	JUN 3	54.61	8	52.94	16	55.68	23	57.18
FEB 18	58.21	APR 1	57.90								

GROUND-WATER LEVELS

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, depth 92 ft.

DATUM.--Altitude of land-surface is 1,200 ft 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 below land-surface datum, May 17, 1960; lowest water level measured, 68.81 ft below land-surface datum, Aug. 18, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE		WATER LEVEL		DATE		WATER LEVEL		DATE		WATER LEVEL	
OCT 14	57.17	DEC 21	57.56	FEB 15	57.02	APR 11	55.09	JUN 13	52.39	AUG 21	54.66
20	57.49	30	57.84	29	57.71	20	55.94	26	50.90	29	54.97
NOV 7	57.43	JAN 18	57.94	MAR 14	53.86	MAY 16	53.34	JUL 7	51.68	SEP 11	53.43
17	57.76	24	57.40	23	54.89	30	53.24	20	52.76	19	55.87

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, depth 190 ft, cased to 54 ft, open end.

DATUM.--Altitude of land-surface is 845 ft 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 below land-surface datum, May 22, 1973; lowest water level measured, 22.60 ft below land-surface datum, Dec. 19, 1958.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

[illegible]

JUNEAU COUNTY

435515090152901. Local number, JU-17/02E/28-0098.

LOCATION:--Lat 43°55'15", long 90°15'29", Hydrologic Unit 07070003. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 71 ft, cased to 42 ft, open end.

DATUM --Altitude of land-surface is 930 ft National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.86 ft below land-surface datum, May 24, 1973; lowest water level measured, 13.90 ft below land-surface datum, Jan. 10, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

[illegible]

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 unused artesian well, diameter 10 in, depth 1,751 ft, cased to 492 ft, open end.

DATUM.--Altitude of land-surface is 639 ft National Geodetic Vertical Datum of 1929. Measuring point: bottom of breather pipe, 1.35 ft 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 below land-surface datum, Dec. 3, 1947; lowest water level measured, 191.68 ft below land-surface datum, Sept. 30, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 7	194.85	DEC 8	187.83

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, depth 265 ft, cased to 16 ft, open end.

DATUM.--Altitude of land-surface is 1,000 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 3.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.85 ft below land-surface datum, Aug. 8, 1984; lowest water level, 130.99 ft below land-surface datum, Nov. 6, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	45.00	45.34	45.21	45.27	45.70	44.10	43.38		40.90	39.26	39.15	39.75
10	45.34	45.12	45.62	45.92	45.51	44.34	43.61		40.99	39.26	39.25	39.40
15	45.09	45.14	45.40	46.09	45.55	44.05	43.30		40.73	39.28	39.31	39.97
20	45.29	44.78	45.97	46.02	44.97	43.46			40.22	39.18	39.36	39.61
25	45.36	45.08	45.72	45.40	44.50	43.76			39.81	39.40	39.57	40.14
EOM	45.40	45.52	45.76	45.57	44.35	43.89			39.65	39.21	39.48	40.04

WTR YEAR 1984 MAX 38.85 AUG 8 MIN 46.15 JAN 14

424620089590001. Local number, LF-04/04E/35-0078.

LOCATION.--Lat 42°46'20", long 89°58'57", Hydrologic Unit 07090003. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 3/4 in, depth 29 ft, cased to 16 ft, open end.

DATUM.--Altitude of land-surface is 850 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 0.20 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.89 ft below land-surface datum, May 23, 1974; lowest water level measured, 19.81 ft below land-surface datum, Mar. 3, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	14.92	DEC 30	15.65	FEB 29	15.49	APR 20	15.49	JUN 26	11.34	AUG 29	14.97
NOV 7	15.09	JAN 24	15.70	MAR 23	16.03	MAY 30	10.53	JUL 20	12.08	SEP 19	15.40

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, depth 237 ft, cased to 20 ft, open end.

DATUM.--Altitude of land-surface is 1,030 ft National Geodetic Vertical Datum of 1929. Measuring point: top of south side of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.16 ft below land-surface datum, July 27, 1983; lowest water level measured, 78.72 ft below land-surface datum, Apr. 14, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	58.00	NOV 10	58.76	DEC 28	57.79	JAN 24	56.50

LANGLADE COUNTY

450942089085301. Local number, LA-31/11E/20-0118.

LOCATION.--Lat 45°09'42", long 89°08'53", Hydrologic Unit 07070002. Owner: Wis. Public Service Corp.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/2 in, depth 21 ft, cased to 19 ft, well point 19-21 ft.

DATUM.--Land-surface datum is 1,510 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.09 ft below land-surface datum, May 18, 1973; lowest water level measured, 13.84 ft below land-surface datum, Feb. 28, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	9.44	DEC 28	9.76	FEB 28	9.87	APR 30	9.48	JUL 2	9.17	AUG 26	9.86
NOV 28	9.41	JAN 27	10.24	MAR 27	9.78	MAY 29	8.77	JUL 27	9.40	SEP 28	10.13

LINCOLN COUNTY

452318089402501. Local number, LN-34/06E/36-0060.

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, depth 22 ft, cased to 20 ft, well point 20-22 ft.

DATUM.--Altitude of land-surface is 1,435 ft National Geodetic Vertical Datum of 1929. Measuring point: top of pipe, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.38 ft below land-surface datum, May 15, 1960; lowest water level measured, 10.38 ft below land-surface datum, Jan. 17, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	8.69	NOV 23	7.85	JAN 10	8.33	FEB 28	8.18	APR 24	8.10	JUN 27	8.45
11	8.45	27	7.64	17	8.24	MAR 13	8.52	MAY 1	7.85	JUL 13	8.75
19	7.90	6	7.80	24	8.61	20	8.49	9	7.70	AUG 8	9.04
25	8.09	13	8.02	31	8.60	27	8.29	16	7.71	28	9.28
NOV 1	8.20	21	8.14	FEB 7	8.59	APR 3	8.00	22	7.82	SEP 7	9.24
8	8.35	31	8.20	14	8.40	10	8.00	29	8.07	25	8.99
16	8.31	JAN 3	8.55	21	8.20	18	7.80	JUN 5	8.22		

GROUND-WATER LEVELS

MANITOWOC COUNTY

440430087420401. Local number, MN-19/23E/35-0028.

LOCATION.--Lat 44°04'30", long 87°42'04", Hydrologic Unit 04030101. Owner: Wis. Dept. of Transportation.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 147 ft, cased to 133 ft, open end.

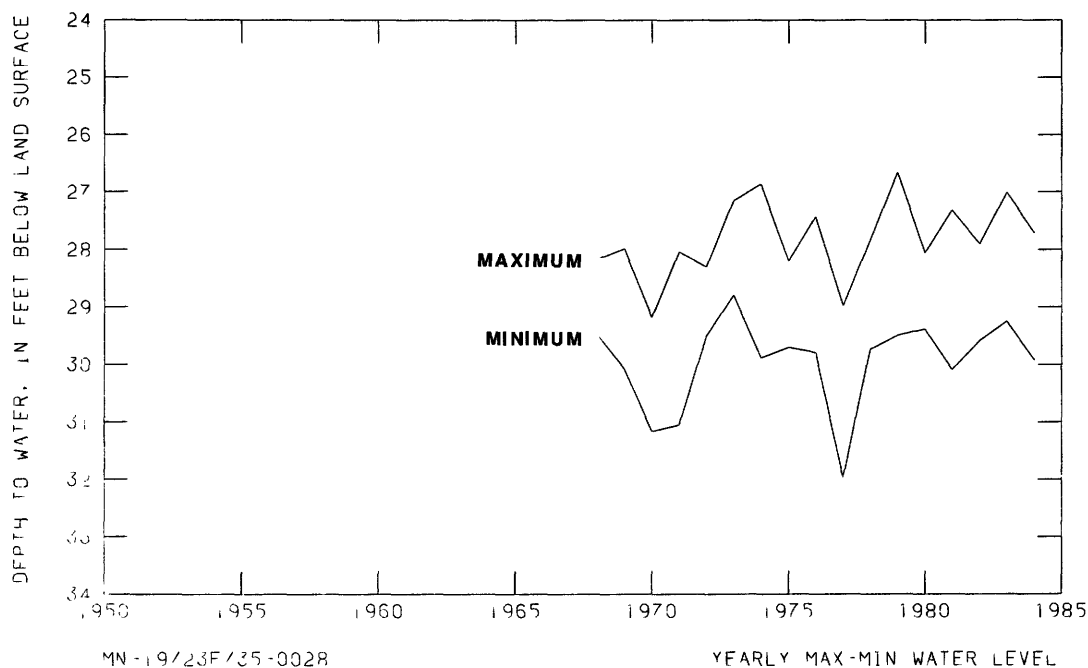
DATUM.--Altitude of land-surface is 670 ft National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in pump base, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.66 ft below land-surface datum, June 11, 1979; lowest water level measured, 31.97 ft below land-surface datum, Jan. 26, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	28.66	NOV 14	28.66	MAY 9	27.75	JUN 26	27.87	JUL 30	28.66	SEP 3	29.84
11	28.58	DEC 6	28.44	16	27.86	JUL 9	28.50	AUG 6	29.25	10	29.84
18	28.84	JAN 18	27.71	25	27.75	10	28.38	20	29.92	17	29.66
24	28.66	MAR 7	28.22	30	27.83	16	28.33	27	29.17	24	29.58
NOV 7	28.75	APR 10	28.50	JUN 6	27.83	23	28.67				



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, depth 49 ft, cased to 30 ft, screened 30-49 ft.

DATUM.--Altitude of land-surface is 1,190 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft 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, 1.16 ft below land-surface datum, Nov. 12, 1982; lowest water level, 38.96 ft below land-surface datum, Jan. 9, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5							5.18	4.66	7.19	6.30	7.53	7.41
10				8.80			5.41	4.87	6.67	6.79	7.46	7.96
15							4.18	5.26	6.25	5.89	7.84	6.87
20					4.30		5.31	6.23	5.67	6.63	6.96	7.18
25							6.02	6.98	5.39	6.95	6.92	7.63
EOM							4.50	7.10	6.13	7.34	6.93	8.30
WTR YEAR 1984 MAX 3.52 APR 30 MIN 19.85 FEB 6												

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, depth 27 ft, cased to 25 ft, well point 25-27 ft.

DATUM.--Altitude of land-surface is 1,229 ft National Geodetic Vertical Datum of 1929. Measuring point: top of pipe, 0.80 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.77 ft below land-surface datum, July 21, 1973; lowest water level measured, 26.09 ft below land-surface datum, Mar. 30, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	17.04	DEC 4	17.40	FEB 5	17.76	APR 8	17.35	JUN 10	17.40	AUG 12	17.30
9	17.10	11	17.45	12	17.78	15	17.29	17	17.29	18	17.33
16	17.10	18	17.47	19	17.18	21	17.39	24	17.28	26	17.33
23	17.15	25	17.51	26	17.20	29	17.28	30	17.33	SEP 2	17.39
30	17.19	JAN 1	17.52	MAR 4	17.22	MAY 6	17.28	JUL 8	17.29	9	17.42
NOV 6	17.25	8	17.54	11	17.45	13	17.27	15	17.25	16	17.47
13	17.31	15	17.57	18	17.35	20	17.28	22	17.19	22	17.49
20	17.34	22	17.57	25	17.29	27	17.29	29	17.26	30	17.51
27	17.39	29	17.75	APR 1	17.19	JUN 3	17.29	AUG 5	17.29		

GROUND-WATER LEVELS

MARINETTE COUNTY

453816087590101. Local number, MT-37/20E/34-0007.

LOCATION.--Lat 45°38'16", long 87°59'01", Hydrologic Unit 04030108. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in, depth 33 ft, cased to 33 ft, open end.

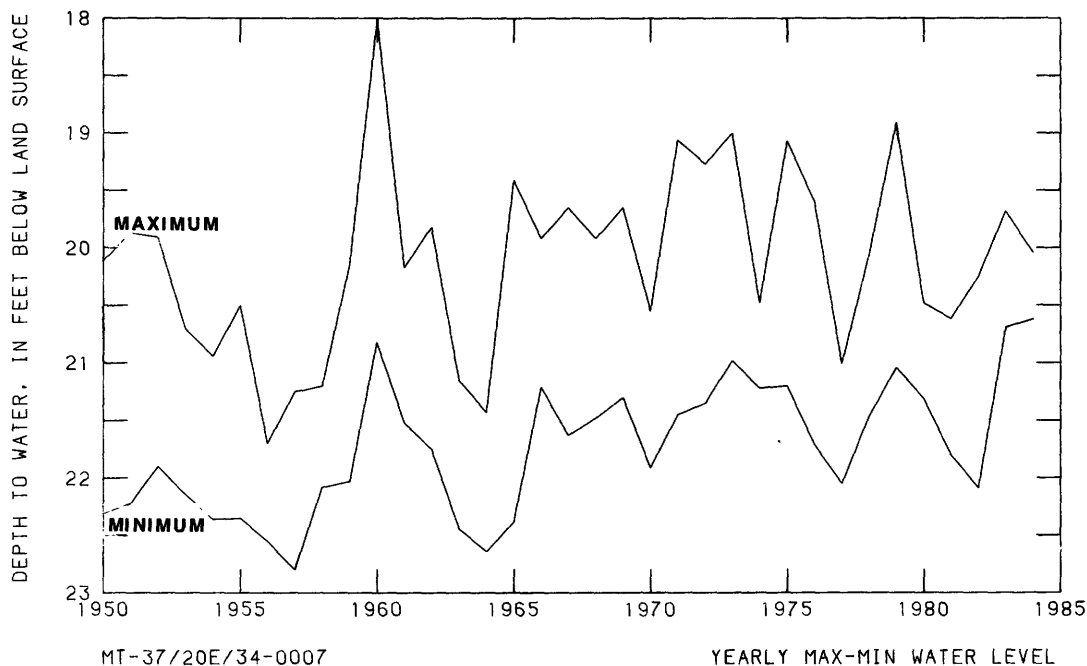
DATUM.--Altitude of land-surface is 980 ft National Geodetic Vertical Datum of 1929. Measuring point: pointer on float gage, 4.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.01 ft below land-surface datum, May 17, 1960; lowest water level measured, 23.26 ft below land-surface datum, Nov. 2, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	20.64	DEC 6	20.18	FEB 7	20.62	APR 10	20.23	JUN 12	20.26	AUG 7	20.33
11	20.45	13	20.24	14	20.60	17	20.20	19	20.22	14	20.40
18	20.23	20	20.32	21	20.39	24	20.21	26	20.33	21	20.43
25	20.15	27	20.35	28	20.35	MAY 1	20.23	JUL 3	20.04	28	20.50
NOV 1	20.22	JAN 3	20.37	MAR 6	20.38	8	20.09	10	20.11	SEP 4	20.44
8	20.27	10	20.43	13	20.44	19	20.05	17	20.20	11	20.34
15	20.34	17	20.51	20	20.45	22	20.05	24	20.15	18	20.26
22	20.26	24	20.54	27	20.42	29	20.18	31	20.27	25	20.24
29	20.15	31	20.58	APR 3	20.33	JUN 5	20.29				



GROUND-WATER LEVELS

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, depth 274 ft.

DATUM.--Altitude of land-surface is 880 ft 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, 13.71 ft below land-surface datum, Jun 22, 1984; lowest water level measured, 18.21 ft below land-surface datum, Feb. 18, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	14.39	JAN 25	14.61	MAR 26	14.38	MAY 22	14.32	JUL 24	14.08	SEP 13	14.05
NOV 22	14.40	FEB 22	14.36	APR 25	14.36	JUN 22	13.71	AUG 22	14.04	26	14.13
DEC 21	14.36										

433956089275601. Local number, MQ-14/09E/30-0026.

LOCATION.--Lat 43°39'56", long 89°27'56", Hydrologic Unit 04030201. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 170 ft, cased to 145 ft, open end.

DATUM.--Altitude of land-surface is 800 ft National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.80 ft below land-surface datum, Apr. 2, 1973; lowest water level measured, 19.22 ft below land-surface datum, Feb. 22, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	16.43	JAN 25	16.42	MAR 26	15.39	MAY 22	15.01	JUL 24	14.98	SEP 13	16.03
NOV 22	16.41	FEB 22	15.76	APR 25	15.34	JUN 22	14.25	AUG 22	16.03	26	15.80
DEC 21	15.88										

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, depth 1,834 ft, cased to 705 ft, open end.

DATUM.--Altitude of land-surface is 705 ft National Geodetic Vertical Datum of 1929. Measuring point: hole in cover on casing, 6.00 ft 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 below land-surface datum, 1938; lowest water level, 288.29 ft below land-surface datum, Oct. 14, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	281.88	281.07	279.51	279.13	277.46	275.83	275.38	276.05	277.00	278.03	278.93	279.89
10	281.82	280.30	279.65	279.17	277.27	276.02	275.85	276.28	277.51	278.19	279.08	279.58
15	281.34	280.05	279.25	279.26	277.15	275.90	275.70	276.85	278.11	278.38	279.28	279.87
20	281.40	279.68	279.90	278.74	276.70	275.51	276.14	276.54	278.10	278.63	279.72	279.65
25	281.16	279.71	279.55	277.95	276.48	275.56	275.83	276.74	278.25	278.81	279.98	
EOM	281.27	279.70	279.60	277.88	276.20	275.68	275.90		278.36	278.90	279.70	

WTR YEAR 1984 MAX 275.01 MAR 22 MIN 282.74 OCT 1

GROUND-WATER LEVELS

MILWAUKEE COUNTY

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, depth 400 ft, cased to 215 ft, open end.

DATUM.--Altitude of land-surface is 685 ft National Geodetic Vertical Datum of 1929. Measuring point: top of concrete, 8.75 ft 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, 58.21 ft below land-surface datum, Apr. 3, 1982;
lowest water level, 107.95 ft below land-surface datum, Feb. 28, 1964.WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	57.64	57.55	57.06	56.97	56.76	56.71	56.58	56.44	56.32	56.68	57.15	57.35
10	58.05	57.07	57.36	57.28	56.96	57.10	56.89	56.45	56.74	56.82	57.15	56.94
15	57.69	57.02	56.84	57.59	57.05	57.03	56.48	56.93	57.15	56.91	57.20	57.29
20	57.87	56.76	57.69	57.38	56.75	56.70	56.85	56.46	56.96	57.00	57.23	56.96
25	57.59	56.93	57.28	56.83	56.86	56.79	56.48	56.45	56.82	57.35	57.40	57.17
EOM	57.64	57.16	57.46	56.93	56.86	56.91	56.40	56.75	56.95	57.19	57.09	57.24

WTR YEAR 1984 MAX 55.98 APR 30 MIN 58.05 OCT 10

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, depth 180 ft, cased to 43 ft, open end.

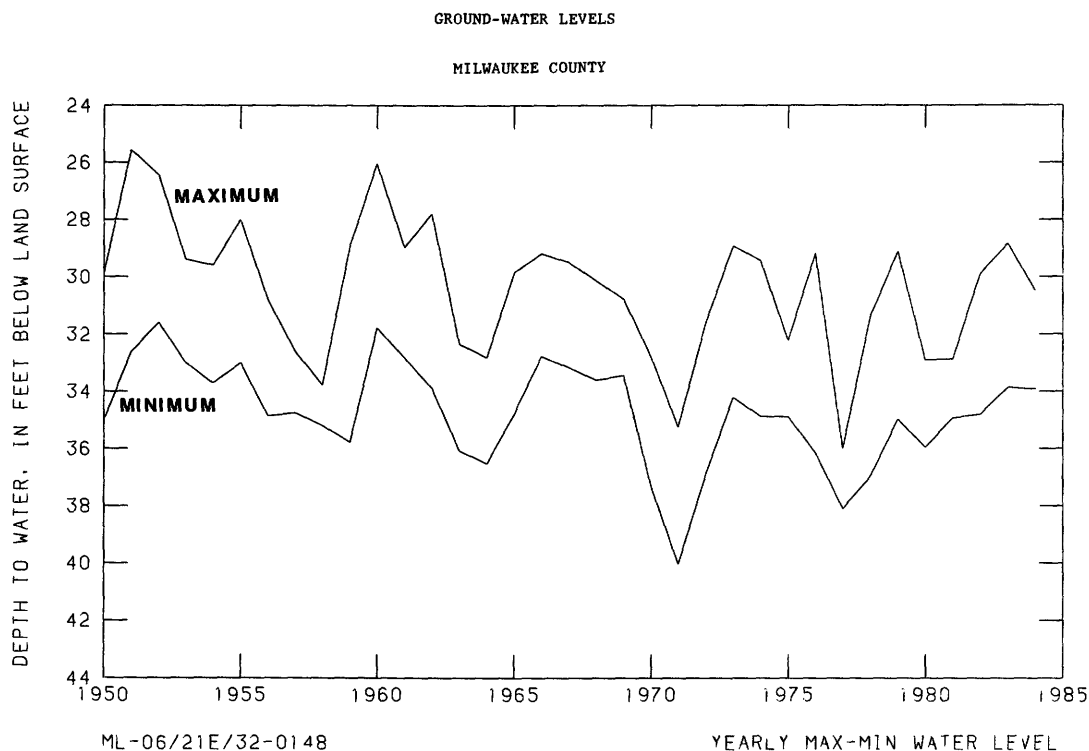
DATUM.--Altitude of land-surface is 774 ft National Geodetic Vertical Datum of 1929. Measuring point: top of 1/4-inch pipe, at land-surface datum.

PERIOD OF RECORD.--September 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.44 ft below land-surface datum, May 3, 1951;
lowest water level measured, 40.03 ft below land-surface datum, Aug. 13, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	33.22	DEC 8	33.08	FEB 2	33.93	APR 2	32.97	JUN 5	30.48	AUG 7	31.67
NOV 1	33.47	JAN 4	33.18	MAR 6	33.08	MAY 2	31.81	JUL 2	30.60	SEP 6	32.58



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, depth 44 ft.

DATUM.--Altitude of land-surface is 1,100 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 0.50 ft above land-surface datum.

REMARKS.--No measurements made in 1981-82 water year.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.70 ft below land-surface datum, Apr. 10, 1976; lowest water level measured, 18.23 ft below land-surface datum, Mar. 27, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 11	6.22	JUN 5	6.20	JUL 17	5.99	SEP 15	6.24	SEP 20	6.30	SEP 30	6.33

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, depth 192 ft, cased to 109 ft, open end.

DATUM.--Altitude of land-surface is 909 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.43 ft below land-surface datum, May 8, 1973; lowest water level, 7.75 ft below land-surface datum, Mar. 2, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.79	5.02	4.80	5.50	6.00	5.13	5.61	4.41	5.15	5.18	5.85	6.50
10	4.91	5.12	4.93	5.59	6.07	5.30	5.65	4.43	5.25	5.29	5.97	6.58
15	4.76	5.20	5.08	5.65	6.01	5.45	5.59	4.60	5.36	5.35	6.10	6.40
20	4.80	5.25	5.17	5.74	5.43	5.50	5.31	4.73	4.74	5.45	6.19	6.49
25	4.80	5.02	5.29	5.78	5.10	5.60	5.26	4.87	4.73	5.60	6.28	6.62
EOM	4.94	4.76	5.32	5.83	5.04	5.62	5.17	5.01	4.98	5.75	6.45	6.71

WTR YEAR 1984 MAX 4.39 APR 7 MIN 6.71 SEP 30

GROUND-WATER LEVELS

OCONTO COUNTY

445054088025201. Local number, OC-27/20E/03-0020.

LOCATION.--Lat 44°50'54", long 88°02'52", Hydrologic Unit 04030104. Owner: Wis. Dept. of Transportation.

AQUIFER.--Prairie du Chien.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 100 ft, cased to 88 ft, open end.

DATUM.--Altitude of land-surface is 640 ft National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in pump base, 2.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.07 ft below land-surface datum, June 20, 1969; lowest water level measured, 13.52 ft below land-surface datum, Aug. 27, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	9.82	JAN 25	10.18	MAY 23	9.82	JUN 29	10.06	AUG 7	10.06	SEP 25	9.77
NOV 10	10.00	31	10.27	30	9.98	JUL 31	10.14	31	10.16	29	9.85
22	10.01	APR 24	9.81								

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.--Jettied unused water-table well, diameter 6 in, depth 27 ft, cased to 27 ft, open end.

DATUM.--Altitude of land-surface is 1,607 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 6.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.29 ft below land-surface datum, May 28, 1973; lowest water level, 19.29 ft below land-surface datum, Apr. 9, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.45	15.31	15.05	14.92	15.31	15.60	15.90	15.49	14.84	15.07	15.56	15.86
10	15.51	15.24	15.01	15.00	15.37	15.66	15.95	15.35	14.83	15.17	15.59	15.86
15	15.44	15.20	14.91	15.05	15.46	15.73	15.94	15.18	14.82	15.23	15.62	15.87
20	15.40	15.14	---	15.09	15.48	15.75	15.89	15.01	14.87	15.29	15.70	15.92
25	15.33	15.17	---	15.10	15.55	15.82	15.74	14.88	14.93	15.40	15.77	15.94
EOM	15.32	15.13	14.98	15.22	15.57	15.88	15.63	14.84	15.01	15.51	15.85	15.95

WTR YEAR 1984 MAX 14.78 JUN 8 MIN 15.96 SEP 23

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, depth 37 ft, cased to 35 ft, well point 35-37 ft.

DATUM.--Altitude of land-surface is 1,529 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.35 ft below land-surface datum, July 22, 1973; lowest water level measured, 33.67 ft below land-surface datum, Apr. 15, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	27.87	DEC 4	28.21	FEB 5	28.37	APR 8	28.82	JUN 10	28.22	AUG 12	28.47
10	28.17	11	28.27	12	28.52	15	28.87	17	28.18	19	28.52
16	28.10	18	28.26	19	28.52	22	28.81	24	28.14	26	28.53
23	28.30	25	28.24	26	28.55	29	28.82	JUL 1	28.14	SEP 3	28.58
30	28.10	JAN 2	28.31	MAR 4	28.65	MAY 6	28.69	8	28.17	9	28.60
NOV 6	28.15	8	28.35	10	28.61	13	28.54	15	28.20	14	28.68
14	28.17	15	28.27	18	29.30	21	28.38	22	28.27	23	28.72
20	28.16	22	28.37	25	28.80	28	28.35	29	28.37	29	28.74
27	28.28	29	28.40	APR 1	28.84	JUN 4	28.25	AUG 5	28.40		

GROUND-WATER LEVELS

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, depth 300 ft.

DATUM.--Altitude of land-surface is 839 ft National Geodetic Vertical Datum of 1929. Measuring point: top of breather hole, 2.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 54.84 ft below land-surface datum, Nov. 24, 1955; lowest water level measured, 64.48 ft below land-surface datum, Dec. 30, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE		WATER LEVEL		DATE		WATER LEVEL		DATE		WATER LEVEL		DATE		WATER LEVEL	
OCT 7	59.26	DEC 2	58.71	FEB 1	61.36	APR 11	58.60	JUN 6	58.57	AUG 1	59.17	NOV 1	59.06	JAN 4	58.66
				MAR 8	59.07	MAY 2	58.13	JUL 2	58.34	SEP 4	59.47				

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, depth 52 ft.

DATUM.--Altitude of land-surface is 1,250 ft 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, 30.14 ft below land-surface datum, Aug. 29, 1984; lowest water level measured, 41.38 ft below land-surface datum, July 22, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
OCT 3	31.94		DEC 29	32.69		FEB 23	33.17		APR 3	33.31		JUN 12	31.39		AUG 29	30.14	
NOV 25	32.24		JAN 18	32.83		MAR 19	33.24		MAY 1	32.90		JUL 30	30.26		SEP 26	30.53	

452352092332001. Local number, PK-34/18W/26-0093.

LOCATION.--Lat 45°23'52", long 92°33'20", Hydrologic Unit 07030005. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in. depth 64 ft. cased to 60 ft. open end.

DATUM.--Altitude of land-surface is 1,140 ft National Geodetic Vertical Datum of 1929. Measuring point:
hole in pump base, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--March 10, 1966 to current year.

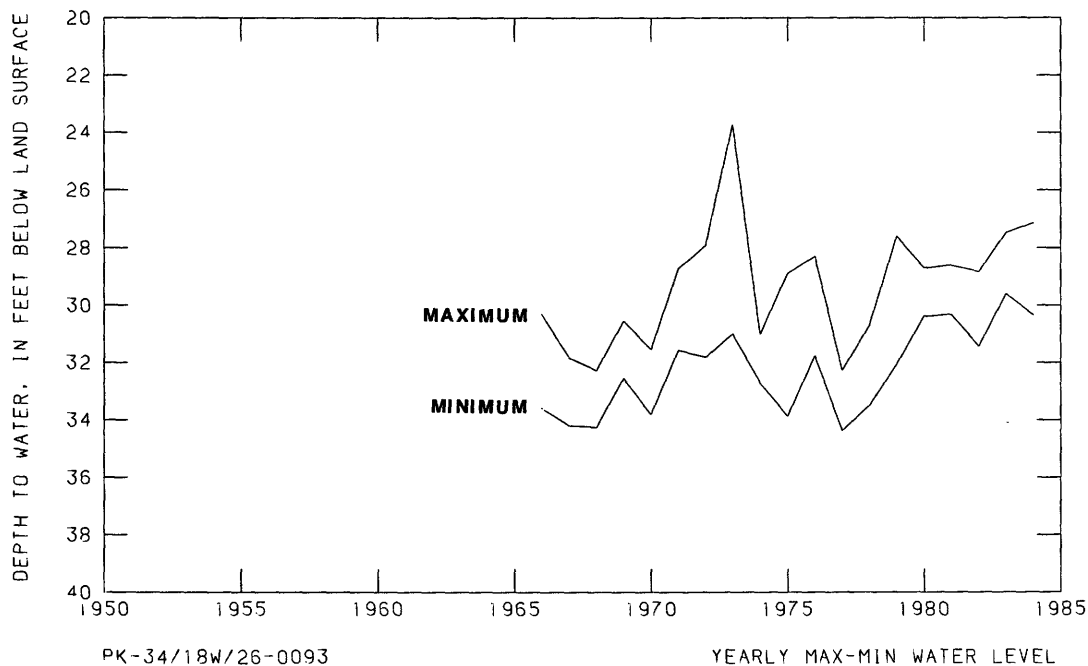
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.72 ft below land-surface datum, June 20, 1973; lowest water level measured, 34.37 ft below land-surface datum, Sept. 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE		WATER LEVEL	DATE		WATER LEVEL	DATE		WATER LEVEL	DATE		WATER LEVEL	DATE		WATER LEVEL									
OCT	5	28.88	NOV	30	29.48	FEB	1	30.15	MAR	21	30.34	JUN	27	27.25	AUG	15	27.39						
	12	28.92		DEC	7		29.52			8	30.25			28		30.30	JUL	3	27.14	22	27.52		
	19	29.01			14		29.55			15	30.31		APR	4		30.17		11	27.19		29	27.56	
	26	29.09			21		29.59			22	30.29			18		29.81		18	27.13		5	27.69	
NOV	2	29.16	JAN	1	29.83	MAR	7	30.29	MAY	20	27.45	JUN	6	28.09	AUG	1	27.21	SEP	5	27.69			
	9	29.21			11		28.89												25	27.26		12	27.69
	16	29.33			18		29.98			14	30.29			15		27.65						19	27.84
	23	29.31			25		30.06												8	27.26		26	28.01

GROUND-WATER LEVELS

POLK COUNTY



PORTAGE COUNTY

443127089174101. Local number, PT-24/10E/28-0015.

LOCATION.--Lat 44°31'27", long 89°17'41", Hydrologic Unit 04030202. Owner: Lawrence Krogwold.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven unused water-table well, diameter 2 in, depth 52 ft, cased to 50 ft, screened 50-52 ft.

DATUM.--Altitude of land-surface is 1,133 ft National Geodetic Vertical Datum of 1929. Measuring point: rim of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.50 ft below land-surface datum, Aug. 4, 1973; lowest water level measured, 38.81 ft below land-surface datum, Nov. 12, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	31.22	DEC 10	31.10	FEB 18	31.15	APR 28	31.02	JUN 23	30.85	AUG 18	30.66
15	31.19	24	31.09	MAR 3	31.12	MAY 12	30.99	JUL 7	30.83	SEP 1	30.60
29	31.17	JAN 7	31.09	17	31.12	MAY 26	30.94	JUL 21	30.76	15	30.55
NOV 12	31.13	21	31.10	31	31.10	JUN 9	30.89	AUG 4	30.70	29	30.55
26	31.11	FEB 4	31.10	APR 14	31.05						

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, depth 36 ft, cased to 34 ft, well point 34-36 ft.

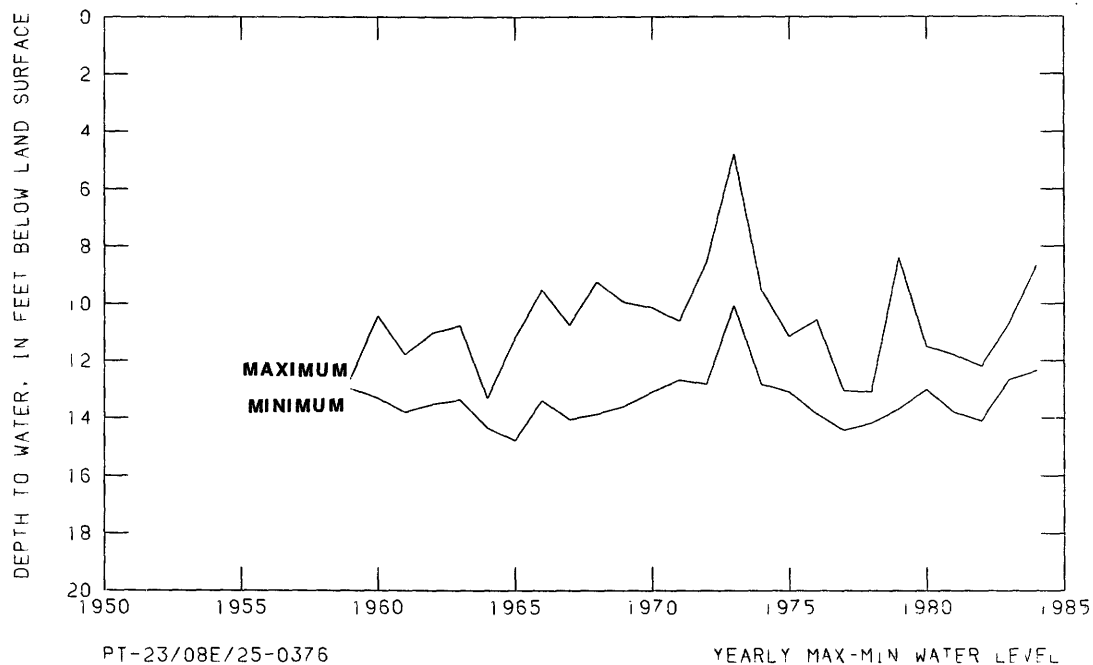
DATUM.--Altitude of land-surface is 1,099 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 4.20 ft above land-surface datum.

PERIOD OF RECORD.--December 1, 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.77 ft below land-surface datum, June 5, 1973; lowest water level measured, 14.78 ft below land-surface datum. Feb. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	11.26	JAN 20	12.35	MAR 28	11.50	MAY 25	10.95	JUL 27	11.16	SEP 14	11.28
NOV 28	11.90	FEB 24	12.10	APR 12	11.44	JUN 26	11.00	AUG 2	11.32	SEP 27	11.28
DEC 31	11.90										



GROUND-WATER LEVELS

PRICE COUNTY

455448090263401. Local number, PR-40/01W/24-0006.

LOCATION.--Lat 45°54'48", long 90°26'34", Hydrologic Unit 07050002. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Jetted unused water-table well, diameter 8 in, depth 13 ft, cased to 13 ft.

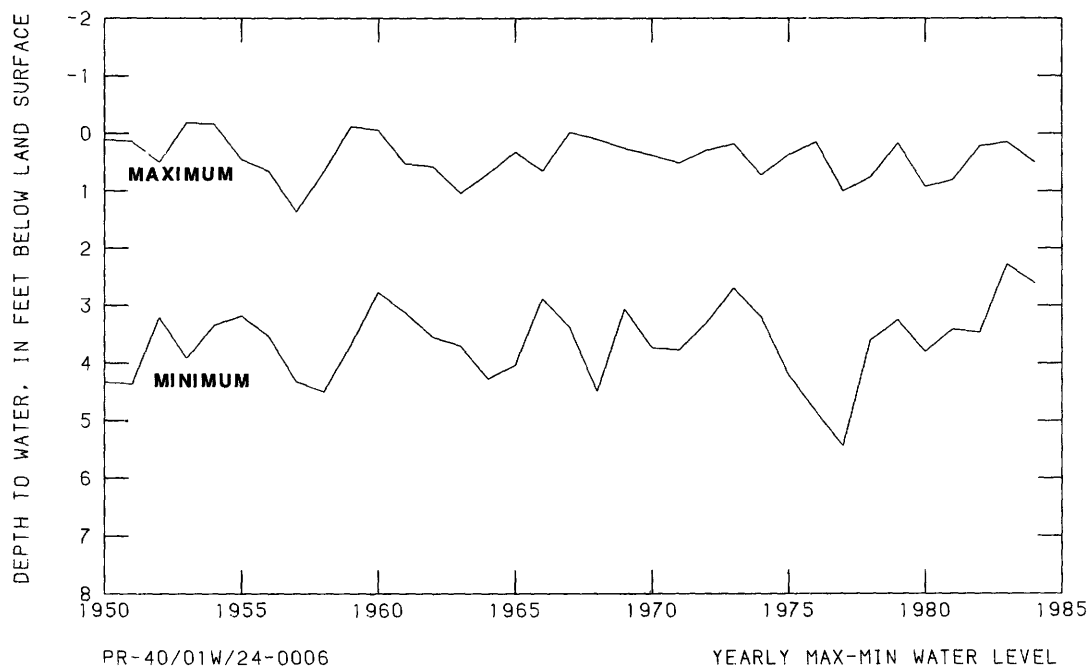
DATUM.--Altitude of land-surface is 1,510 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 5.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.41 ft above land-surface datum, June 29, 1946; lowest water level measured, 5.67 ft below land-surface datum, Oct. 31, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	1.38	DEC 9	1.28	FEB 10	2.37	APR 13	1.00	JUN 7	0.64	AUG 10	2.07
14	1.20	16	1.30	18	2.61	20	1.23	16	0.77	17	2.44
21	1.04	23	1.30	24	0.50	28	1.51	22	1.07	24	2.22
28	1.32	30	1.30	MAR 2	1.40	MAY 4	0.57	29	1.31	31	2.24
NOV 4	1.45	JAN 6	2.02	9	1.66	11	0.56	JUL 6	1.27	SEP 7	1.90
11	1.55	13	2.15	16	1.70	18	0.91	13	1.30	14	1.67
18	1.40	20	2.16	23	1.65	25	0.70	20	1.90	21	1.93
25	0.81	27	2.37	31	0.91	31	1.04	27	1.96	28	1.63
DEC 2	1.17	FEB 3	2.39	APR 6	0.95	JUN 1	1.09	AUG 3	1.91		



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, depth 1,176 ft, cased to 586 ft, 10 in liner 976-1,083 ft.

DATUM.--Altitude of land-surface is 730 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

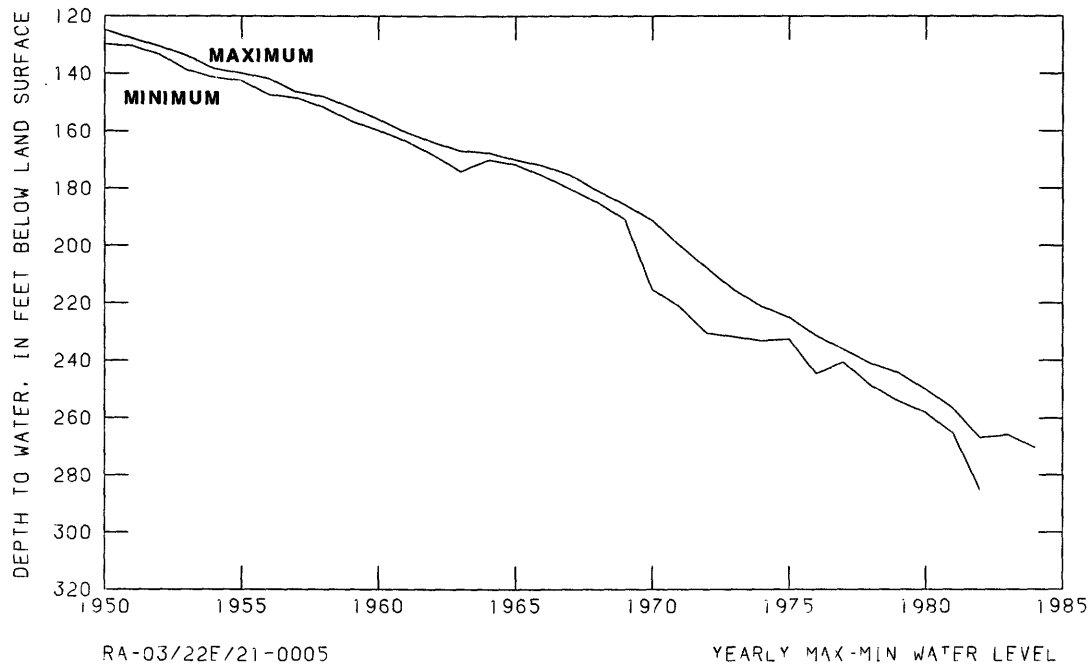
REMARKS.--Water level affected by regional pumping of wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 109.00 ft below land-surface datum, July 29, 1946; lowest water level measured, 277.18 ft below land-surface datum, Nov. 7, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL
NOV 7	277.18



GROUND-WATER LEVELS

RICHLAND COUNTY

431840090203201. Local number, R1-10/01E/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, depth 160 ft, cased to 135 ft, open end.

DATUM.--Altitude of land-surface is 725 ft National Geodetic Vertical Datum of 1929. Measuring point: top of 1 in breather pipe, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.11 ft below land-surface datum, May 22, 1973; lowest water level measured, 15.70 ft below land-surface datum, Dec. 13, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	12.01	DEC 21	12.07	FEB 15	12.05	APR 11	12.59	JUN 13	11.36	AUG 21	12.68
NOV 17	12.13	JAN 18	12.85	MAR 14	12.87	MAY 16	11.99	JUL 17	11.80	SEP 11	13.88

ROCK COUNTY

423956089022301. Local number, R0-02/12E/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, depth 470 ft, cased to 113 ft, open end.

DATUM.--Altitude of land-surface is 824 ft National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole cap of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.75 ft below land-surface datum, June 3, 1983; lowest water level measured, 59.43 ft below land-surface datum, Aug. 5, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	50.92	DEC 7	50.97	FEB 9	51.30	APR 4	50.95	JUN 13	50.82	AUG 8	51.08
13	50.83	14	50.70	15	51.33	18	51.07	20	50.77	15	51.41
18	51.09	21	50.90	22	50.97	25	51.05	27	50.53	22	51.48
26	50.90	28	50.80	29	50.98	MAY 2	51.04	JUL 3	50.57	29	51.32
NOV 2	50.99	JAN 4	50.88	MAR 7	50.97	9	50.91	11	50.64	SEP 5	51.63
9	50.87	11	51.23	15	50.87	16	51.09	18	50.73	12	51.50
17	51.04	18	51.19	22	50.65	23	50.96	25	50.88	19	51.45
23	50.72	25	51.05	28	50.84	JUN 7	50.75	AUG 1	50.91	28	51.40
30	51.05	FEB 1	51.17								

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, depth 25 ft.

DATUM.--Altitude of land-surface is 1,380 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.35 ft below land-surface datum, May 29, 1984; lowest water level measured, 23.50 ft below land-surface datum, Mar. 2, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL
MAY 29	10.35

GROUND-WATER LEVELS

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, depth 73 ft, cased to 63 ft, open end.

DATUM.--Altitude of land-surface is 1,059 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.90 ft above land-surface datum.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.29 ft below land-surface datum, Sept. 24, 1973; lowest water level measured, 36.04 ft below land-surface datum, Sept. 13, 1961.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 14	31.18	MAR 25	30.84	JUN 1	29.98	AUG 17	30.12	AUG 25	30.92	SEP 13	29.56

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, depth 426 ft, cased to 203 ft, open end.

DATUM.--Altitude of land-surface is 865 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.43 ft 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 below land-surface datum, May 20, 1953; lowest water level, 93.25 ft below land-surface datum, June 4, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	68.03	67.47	68.33	70.01	69.76	69.43	69.27	70.86	69.52	69.66	71.25	70.42
10	68.37	67.13	68.64	70.19	69.70	69.48	69.38	71.29	69.40	69.43	70.59	69.97
15	68.15	67.13	68.47	70.10	69.61	70.61	69.14	71.43	69.76	69.65	70.83	70.50
20	67.61	67.03	69.67	70.90	69.45	70.03	69.41	70.65	69.90	69.87	71.00	70.46
25	67.35	67.84	70.91	69.75	69.64	69.89	68.98	70.29	70.07	69.88	70.62	70.09
EOM	67.41	68.21	70.77	69.79	69.56	69.56	69.24	69.39	70.08	70.01	70.88	70.21

WTR YEAR 1984 MAX 66.57 NOV 20 MIN 71.53 MAY 12

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, depth 132 ft.

DATUM.--Altitude of land-surface is 917 ft National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.86 ft below land-surface datum, Apr. 25, 1973; lowest water level measured, 64.60 ft below land-surface datum, Jan. 11, 1956.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	53.02	MAR 28	55.47	MAY 23	55.94	JUN 20	55.54	AUG 7	56.00	SEP 26	56.19
FEB 22	54.75	APR 25	56.22	JUN 19	55.50						

GROUND-WATER LEVELS

TAYLOR COUNTY

450947090483902. 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, depth 26 ft, cased to 16 ft, screened 16-26 ft.

DATUM.--Altitude of land-surface is 1,200 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft 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, 3.93 ft below land-surface datum, Apr. 18, 1982; lowest water level, 13.11 ft below land-surface datum, Oct. 15, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.10	9.31	---	8.95	9.40	---	---	---	---	9.76	9.80	10.04
10	8.61	9.02	---	9.10	9.39	9.30	---	---	---	9.70	9.86	10.10
15	7.24	8.89	---	9.05	7.93	9.51	---	---	---	9.15	10.04	9.72
20	8.21	8.65	---	9.15	7.99	9.55	---	---	9.25	9.37	10.19	9.87
25	8.75	6.84	---	9.32	8.50	---	---	---	9.44	9.68	10.19	9.14
EOM	9.13	7.79	---	9.37	9.01	---	---	---	9.56	9.96	10.05	9.17

WTR YEAR 1984 MAX 6.98 OCT 13 MIN 10.20 AUG 20

450830090215201. Local number, TA-31/01E/28-0006.

LOCATION.--Lat 45°08'30", long 90°21'52", hydrologic unit 07040007. Owner: P. J. Ziehlke.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Dug domestic water table well, diameter 3.00 ft, depth 35 ft, open end.

DATUM.--Altitude of land-surface is 1,460 ft National Geodetic Vertical Datum of 1929. Measuring point: top of curb, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--August 20, 1957 to current year.

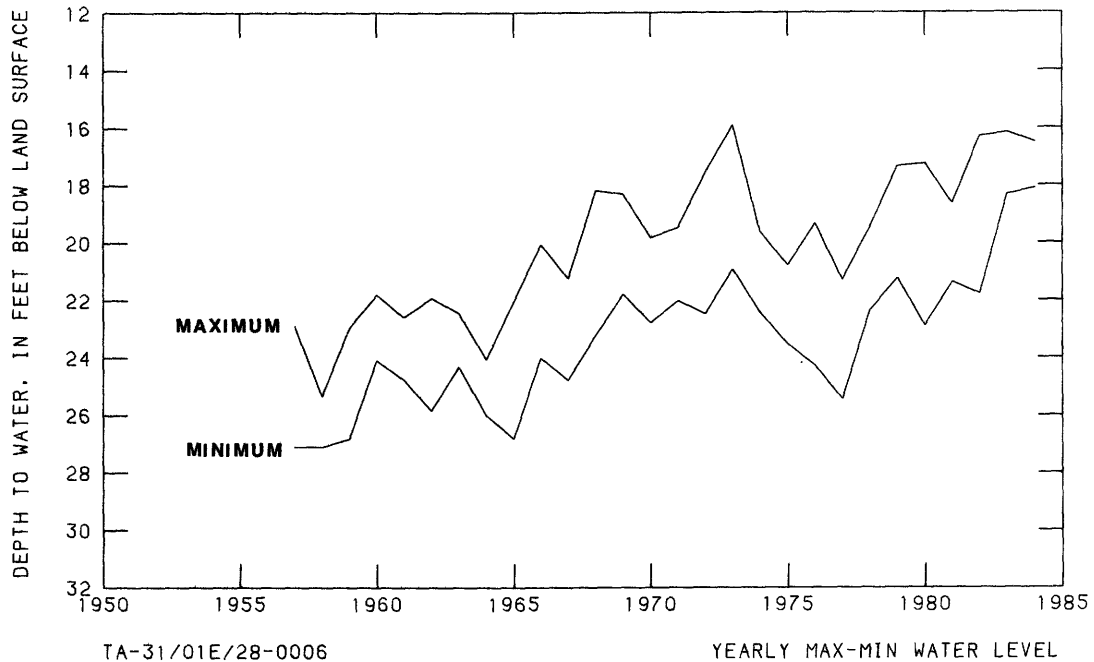
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.91 ft below land-surface datum, May 31, 1973; lowest water level measured, 27.10 ft below land-surface datum, March 13, 1958.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	16.70	JAN 6	17.08	MAR 16	17.75	MAY 18	17.02	JUL 13	16.50	SEP 14	18.10
DEC 6	16.43	FEB 13	17.89	APR 16	17.00	JUN 21	16.50				

GROUND-WATER LEVELS

TAYLOR COUNTY



451919090172401. Local number, TA-33/02E/30-0009.

LOCATION.--Lat 45°19'19", long 90°17'24", Hydrologic Unit 07050005. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 160 ft, cased to 155 ft, open end.

DATUM.--Altitude of land-surface is 1,591 ft National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in pump base, 0.50 ft above land-surface datum.

PERIOD OF RECORD.--December 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.30 ft below land-surface datum, July 19, 1979; lowest water level measured, 35.35 ft below land-surface datum, June 2, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	29.62	JAN 3	30.21	MAR 26	30.85	MAY 18	30.00	JUL 13	31.00	SEP 14	31.20
DEC 6	30.08	FEB 23	30.80	APR 16	32.85	JUN 21	30.15				

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, depth 195 ft.

DATUM.--Altitude of land-surface is 820 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 133.18 ft below land-surface datum, Jan. 13, 1955; lowest water level measured, 144.95 ft below land-surface datum, Oct. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	135.44	DEC 1	134.68	JAN 27	135.46	MAR 26	135.42	MAY 30	135.60	JUL 31	136.00
NOV 1	135.49	23	134.38	FEB 28	135.02	APR 23	135.48	JUN 28	135.70	SEP 4	137.10

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, depth 71 ft, cased to 66 ft, screened 66-71 ft.

DATUM.--Altitude of land-surface is 740 ft 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 below land-surface datum, June 18, 1975; lowest water level measured, 57.11 ft below land-surface datum, Mar. 16, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	46.59	DEC 5	46.48	FEB 9	46.99	APR 6	45.39	JUN 9	45.32	AUG 7	46.01
NOV 8	46.49	JAN 4	46.46	MAR 8	46.01	MAY 7	45.86	JUL 5	45.99	SEP 4	46.32

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, depth 27 ft, cased to 25 ft, well point 25-27 ft.

DATUM.--Altitude of land-surface is 1,640 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.38 ft below land-surface datum, May 21, 1973; lowest water level measured, 16.86 ft below land-surface datum, Mar. 21, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	13.17	DEC 5	13.24	FEB 6	13.29	APR 9	13.68	JUN 11	13.67	AUG 6	13.64
10	13.20	12	13.24	13	13.29	16	13.69	18	13.66	13	13.66
17	13.20	19	13.25	20	13.30	23	13.70	25	13.70	20	13.67
24	13.21	27	13.25	27	13.35	30	13.71	JUL 2	13.76	27	13.68
31	13.21	JAN 2	13.26	MAR 5	13.35	MAY 7	13.71	9	13.76	SEP 4	13.72
NOV 7	13.22	9	13.27	12	13.36	14	13.71	16	13.66	10	13.73
14	13.23	16	13.27	19	13.36	21	13.72	23	13.72	17	13.74
21	13.23	23	13.28	26	13.37	28	13.72	30	13.60	24	13.76
28	13.23	30	13.28	APR 2	13.38	JUN 4	13.69				

GROUND-WATER LEVELS

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, depth 820 ft, cased to 10 in 0-214 ft, 8 in 214-227 ft, open end.

DATUM.--Altitude of land-surface is 860 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 129.48 ft below land-surface datum, Feb. 14, 1962; lowest water level measured, 202.90 ft below land-surface datum, Sept. 28, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	200.10	DEC 16	201.30	FEB 29	199.20	APR 24	198.32	JUN 27	199.22	AUG 16	202.08
NOV 28	199.24	JAN 24	199.54	MAR 30	199.43	MAY 30	198.85	JUL 27	200.93	SEP 28	202.90

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, depth 1,300 ft.

DATUM.--Altitude of land-surface is 875 ft 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 below land-surface datum, July 6, 1947; lowest water level, 469.40 ft below land-surface datum, July 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	454.16	457.20	460.90	---	442.38	457.28	---	---	456.36	---	---	---
10	450.65	456.40	---	---	451.60	456.62	---	---	---	---	---	---
15	450.50	458.30	---	---	455.97	461.40	---	---	---	---	---	---
20	462.96	457.75	---	---	457.70	458.70	---	---	---	---	---	---
25	461.32	453.78	---	---	458.30	464.98	---	---	---	---	---	---
EOM	463.51	455.31	---	---	457.39	462.40	---	---	---	---	---	---

WTR YEAR 1984 MAX 441.12 FEB 5 MIN 469.13 SEP 6

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, depth 508 ft, cased to 434 ft, open end.

DATUM.--Altitude of land-surface is 962 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 126.28 ft below land-surface datum, June 10, 1974; lowest water level, 138.14 ft below land-surface datum, Feb. 2, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	131.16	131.41	131.42	131.38	131.77	131.20	131.13	130.91	130.54	130.33	131.23	131.17
10	131.34	131.36	131.48	131.56	131.78	131.40	131.30	130.86	130.55	130.39	131.23	131.07
15	131.24	131.45	131.39	---	131.74	131.41	131.21	130.91	130.61	130.41	131.18	131.19
20	131.35	131.37	131.50	---	131.43	131.20	---	130.70	130.61	130.59	130.32	131.17
25	131.35	---	---	131.56	131.36	131.31	---	130.63	130.39	130.97	131.15	131.22
EOM	131.48	---	---	131.72	131.26	131.30	131.02	130.52	130.40	130.81	131.24	131.20

WTR YEAR 1984 MAX 130.22 JUN 27 MIN 131.95 FEB 8

GROUND WATER-LEVELS

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, depth 205 ft, cased to 109 ft, open end.

DATUM.--Altitude of land-surface is 764 ft National Geodetic Vertical Datum of 1929. Measuring point: hole in cap, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.65 ft below land-surface datum, Apr. 7, 1979; lowest water level measured, 15.91 ft below land-surface datum, Feb. 23, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	12.83	DEC 3	12.69	FEB 4	13.99	APR 7	13.35	JUN 9	12.96	AUG 11	13.18
8	12.89	10	12.94	11	14.02	14	13.16	16	12.82	18	13.24
15	12.82	17	13.02	18	13.47	21	13.22	23	12.51	25	13.46
22	12.54	24	13.25	25	12.74	28	13.02	30	12.53	SEP 1	13.22
29	12.76	31	13.43	MAR 3	12.48	MAY 5	12.51	JUL 7	13.08	8	13.00
NOV 5	13.02	JAN 7	13.52	10	12.98	12	12.42	14	13.12	15	12.91
12	13.31	14	13.70	17	13.32	19	12.46	21	13.26	22	12.71
19	13.13	21	13.81	24	13.65	26	12.81	28	13.35	29	12.73
26	12.90	28	13.90	31	13.43	JUN 2	12.82	AUG 4	13.42		

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, depth 18 ft, cased to 18 ft.

DATUM.--Altitude of land-surface is 1,080 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.88 ft below land-surface datum, July 5, 1973; lowest water level, 15.71 ft below land-surface datum, June 10, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.20	8.32	8.55	8.71	8.98	8.69	8.65	8.26	7.95	7.93	8.26	8.70
10	8.20	8.34	8.59	8.79	9.03	8.65	8.70	8.10	7.98	7.95	8.27	8.71
15	8.17	8.39	8.55	8.83	9.05	8.62	8.67	8.01	8.19	8.03	8.36	8.64
20	8.21	8.36	8.67	8.87	9.00	8.58	8.70	7.93	8.06	8.08	8.48	8.56
25	8.22	8.48	8.68	8.88	8.83	8.65	8.58	7.93	8.08	8.29	8.59	8.53
EOM	8.29	8.53	8.71	8.94	8.75	8.66	8.52	7.93	7.93	8.49	8.66	8.54

WTR YEAR 1984 MAX 7.93 MAY 31 MIN 9.05 FEB 15

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, depth 177 ft, cased to 172 ft, screened 172-177 ft.

DATUM.--Altitude of land-surface is 923 ft National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.97 ft below land-surface datum, June 26, 1973; lowest water level measured, 40.41 ft below land-surface datum, Mar. 4, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	36.30	JAN 18	35.61	MAR 16	35.05	MAY 20	34.17	AUG 18	34.56	SEP 18	34.57
DEC 16	35.42	FEB 17	35.33	APR 16	34.85	JUL 20	34.51				

GROUND-WATER LEVELS

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, depth 200 ft.

DATUM.--Altitude of land-surface is 765 ft 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 below land-surface datum, Apr. 26, 1979; lowest water level measured, 39.75 ft below land-surface datum, Sept. 1, 1960.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	19.62	MAR 24	18.29	MAY 25	18.27	JUL 26	20.72	AUG 26	20.90	SEP 26	19.90
FEB 28	18.95	APR 28	18.03	JUN 16	18.96						

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

GEOLOGIC UNIT.--110QRNR, rocks of the Quaternary System of the Cenozoic Era.

STATION NUMBER	LOCAL IDENTIFIER	GEOLOGIC UNIT	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE-CIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CaCO3) (00900)
ADAMS									
440146089364401	AD-18/07E/13-0223	110QRNR	84-06-05	70.00	1057.00	420	7.9	10.5	--
440146089364402	AD-18/07E/13-0224	110QRNR	84-06-05	27.70	1057.00	530	7.7	8.5	--
		110QRNR	84-09-04	27.70	1057.00	465	8.0	9.5	--
440151089363001	AD-18/07E/13-0225	110QRNR	84-06-05	70.60	1058.00	235	8.0	10.5	--
		110QRNR	84-09-04	70.60	1058.00	210	7.8	10.5	--
440151089363002	AD-18/07E/13-0226	110QRNR	84-06-05	28.00	1058.00	235	8.2	8.5	--
		110QRNR	84-09-04	28.00	1058.00	225	8.1	9.5	--
440159089370501	AD-18/07E/13-0221	110QRNR	84-06-05	62.70	1049.00	260	8.0	11.0	--
		110QRNR	84-09-04	62.70	1049.00	160	8.6	10.5	--
440159089370502	AD-18/07E/13-0222	110QRNR	84-06-05	28.20	1049.00	420	8.3	9.0	--
		110QRNR	84-09-04	28.20	1049.00	400	8.4	10.0	--
440207089363001	AD-18/07E/13-0227	110QRNR	84-06-05	70.50	1050.00	280	7.9	10.0	--
		110QRNR	84-09-04	70.50	1050.00	240	8.0	11.0	--
440207089363002	AD-18/07E/13-0228	110QRNR	84-06-05	20.60	1050.00	220	8.1	8.0	--
		110QRNR	84-09-04	20.60	1050.00	235	8.5	11.0	--
440211089365101	AD-18/07E/13-0229	110QRNR	84-06-05	70.20	1053.00	265	7.8	11.5	--
		110QRNR	84-09-04	70.20	1053.00	230	8.2	11.5	--
440211089365102	AD-18/07E/13-0230	110QRNR	84-06-05	30.35	1053.00	135	8.4	9.5	--
		110QRNR	84-09-04	30.35	1053.00	115	8.6	10.5	--
450158089364701	AD-18/07E/13-0138	110QRNR	84-06-05	100	1058.00	310	8.1	10.0	150
		110QRNR	84-09-04	100	1058.00	290	8.2	11.0	160
PORTAGE									
441650089305001	PT-21/08E/23-1003	110QRNR	84-06-06	54.70	1096.00	70	6.6	10.0	--
		110QRNR	84-09-05	54.70	1096.00	95	6.7	10.5	--
441650089305002	PT-21/08E/23-1004	110QRNR	84-06-06	20.40	1096.00	155	8.5	7.5	--
		110QRNR	84-09-05	20.40	1096.00	120	8.6	9.5	--
441651089311101	PT-21/08E/23-1001	110QRNR	84-06-05	49.00	1093.00	130	8.6	9.0	--
		110QRNR	84-09-04	49.00	1093.00	122	8.0	9.0	--
441651089311102	PT-21/08E/23-1002	110QRNR	84-06-05	20.60	1093.00	210	8.5	8.0	--
		110QRNR	84-09-04	20.60	1093.00	215	8.1	10.0	--
441702089310401	PT-21/08E/23-0403	110QRNR	84-06-05	85.00	1095.00	425	8.0	10.0	180
		110QRNR	84-09-04	85.00	1095.00	410	8.0	10.0	180
441704089304101	PT-21/08E/23-1009	110QRNR	84-06-06	49.40	1093.00	690	8.2	9.5	--
		110QRNR	84-09-05	49.40	1093.00	720	8.0	10.0	--
441704089304102	PT-21/08E/23-1010	110QRNR	84-06-06	14.80	1093.00	375	7.8	7.5	--
		110QRNR	84-09-05	14.80	1093.00	460	7.6	12.0	--
441706089312301	PT-21/08E/23-1005	110QRNR	84-06-06	49.20	1087.00	235	8.4	9.5	--
		110QRNR	84-09-05	49.20	1087.00	235	8.3	9.5	--
441706089312302	PT-21/08E/23-1006	110QRNR	84-06-06	15.50	1087.00	195	8.8	7.5	--
		110QRNR	84-09-05	15.50	1087.00	165	8.7	12.0	--
441714089310601	PT-21/08E/23-1007	110QRNR	84-06-05	49.90	1090.00	520	8.1	10.0	--
		110QRNR	84-09-04	49.90	1090.00	440	7.3	13.0	--
441714089310602	PT-21/08E/23-1008	110QRNR	84-06-05	20.40	1090.00	730	8.1	8.0	--
		110QRNR	84-09-04	20.40	1090.00	700	8.0	11.0	--
442317089415301	PT-22/07E/17-1024	110QRNR	84-06-06	34.00	--	240	6.9	8.5	--
		110QRNR	84-09-05	34.00	--	278	7.0	8.5	--
442317089415302	PT-22/07E/17-1025	110QRNR	84-06-06	13.10	--	125	5.4	7.0	--
		110QRNR	84-09-05	13.10	--	95	5.7	11.5	--
442318089404401	PT-22/07E/16-1015	110QRNR	84-06-06	39.50	--	115	7.1	8.5	--
		110QRNR	84-09-05	39.50	--	110	7.2	9.0	--
442318089404402	PT-22/07E/16-1016	110QRNR	84-06-06	17.70	--	230	5.4	7.0	--
		110QRNR	84-09-05	17.70	--	185	5.6	10.5	--
442318089411601	PT-22/07E/16-1017	110QRNR	84-06-06	18.40	--	58	5.7	7.5	--
		110QRNR	84-09-05	18.40	--	73	5.7	10.5	--
442329089411801	PT-22/07E/17-1021	110QRNR	84-06-06	42.00	--	150	6.9	8.5	--
		110QRNR	84-09-05	42.00	--	135	6.8	9.0	--
442329089411802	PT-22/07E/17-1022	110QRNR	84-06-06	12.85	--	70	6.3	6.5	--
		110QRNR	84-09-05	12.85	--	95	6.3	13.0	--
442329089415301	PT-22/07E/17-1023	110QRNR	84-06-06	10.00	--	105	5.7	7.5	--
		110QRNR	84-09-05	10.00	--	105	5.8	15.0	--
442330089405801	PT-22/07E/16-1018	110QRNR	84-09-05	64.00	--	215	6.6	9.5	89
442330089413601	PT-22/07E/17-1026	110QRNR	84-06-06	49.00	--	175	6.7	9.5	58
		110QRNR	84-09-05	49.00	--	160	6.7	10.0	57
442342089415101	PT-22/07E/17-1019	110QRNR	84-06-06	35.70	--	195	7.1	8.0	--
		110QRNR	84-09-05	35.70	--	170	7.0	8.0	--
442342089415102	PT-22/07E/17-1020	110QRNR	84-06-06	10.00	--	37	5.4	6.5	--
		110QRNR	84-09-05	10.00	--	47	5.3	11.5	--
442343089404501	PT-22/07E/09-1011	110QRNR	84-06-06	42.20	--	145	7.3	8.0	--
		110QRNR	84-09-05	42.20	--	130	7.4	8.0	--
442343089404502	PT-22/07E/09-1012	110QRNR	84-06-06	19.90	--	52	5.7	6.5	--
		110QRNR	84-09-05	19.90	--	55	5.9	8.0	--
442343089411501	PT-22/07E/09-1013	110QRNR	84-06-06	19.55	--	52	6.0	8.5	--
		110QRNR	84-09-05	19.55	--	45	6.2	9.0	--

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION	NUMBER	DATE OF SAMPLE	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
ADAMS												
440146089364401		84-06-05	--	--	--	1.9	.6	--	--	--	40	--
440146089364402		84-06-05	--	--	--	2.3	.8	--	--	--	21	--
		84-09-04	--	--	--	1.9	.8	--	--	--	40	--
440151089363001		84-06-05	--	--	--	1.3	.4	--	--	--	1.3	--
		84-09-04	--	--	--	--	.3	--	--	--	<.2	--
440151089363002		84-06-05	--	--	--	1.1	.5	--	--	--	1.5	--
		84-09-04	--	--	--	.6	.6	--	--	--	1.3	--
440159089370501		84-06-05	--	--	--	1.4	.5	--	--	--	24	--
		84-09-04	--	--	--	.5	.4	--	--	--	9.5	--
440159089370502		84-06-05	--	--	--	2.0	1.2	--	--	--	41	--
		84-09-04	--	--	--	2.7	1.3	--	--	--	18	--
440207089363001		84-06-05	--	--	--	1.1	.4	--	--	--	1.1	--
		84-09-04	--	--	--	.6	.3	--	--	--	1.1	--
440207089363002		84-06-05	--	--	--	1.5	.7	--	--	--	6.7	--
		84-09-04	--	--	--	1.0	.7	--	--	--	8.1	--
440211089365101		84-06-05	--	--	--	1.1	.5	--	--	--	1.8	--
		84-09-04	--	--	--	.6	.5	--	--	--	1.8	--
440211089365102		84-06-05	--	--	--	.9	.4	--	--	--	.8	--
		84-09-04	--	--	--	.3	.4	--	--	--	.8	--
450158089364701		84-06-05	47	32	16	3.0	.8	99	1.5	18	13	257
		84-09-04	62	37	17	2.5	1.4	101	1.2	18	15	196
PORTAGE												
441650089305001		84-06-06	--	--	--	.8	.5	--	--	--	7.2	--
		84-09-05	--	--	--	.5	.6	--	--	--	1.1	--
441650089305002		84-06-06	--	--	--	1.4	.4	--	--	--	1.4	--
		84-09-05	--	--	--	.9	.4	--	--	--	1.0	--
441651089311101		84-06-05	--	--	--	.7	.5	--	--	--	1.0	--
		84-09-04	--	--	--	.2	.4	--	--	--	1.0	--
441651089311102		84-06-05	--	--	--	2.1	.8	--	--	--	3.2	--
		84-09-04	--	--	--	1.5	.9	--	--	--	4.1	--
441702089310401		84-06-05	120	44	17	2.9	3.8	57	1.1	18	28	300
		84-09-04	120	43	17	2.9	4.1	57	1.1	18	30	338
441704089304101		84-06-06	--	--	--	3.7	.7	--	--	--	75	--
		84-09-05	--	--	--	3.1	.6	--	--	--	80	--
441704089304102		84-06-06	--	--	--	2.7	3.6	--	--	--	28	--
		84-09-05	--	--	--	2.4	4.3	--	--	--	46	--
441706089312301		84-06-06	--	--	--	2.4	.6	--	--	--	5.1	--
		84-09-05	--	--	--	16	.5	--	--	--	12	--
441706089312302		84-06-06	--	--	--	1.9	1.3	--	--	--	9.7	--
		84-09-05	--	--	--	1.3	1.4	--	--	--	7.8	--
441714089310601		84-06-05	--	--	--	3.2	.7	--	--	--	48	--
		84-09-04	--	--	--	2.8	.7	--	--	--	44	--
441714089310602		84-06-05	--	--	--	3.5	22	--	--	--	67	--
		84-09-04	--	--	--	3.0	25	--	--	--	67	--
442317089415301		84-06-06	--	--	--	2.7	.5	--	--	--	27	--
		84-09-05	--	--	--	3.0	.6	--	--	--	45	--
442317089415302		84-06-06	--	--	--	2.4	.9	--	--	--	9.9	--
		84-09-05	--	--	--	2.1	.8	--	--	--	6.6	--
442318089404401		84-06-06	--	--	--	1.6	.4	--	--	--	1.7	--
		84-09-05	--	--	--	1.3	.4	--	--	--	1.4	--
442318089404402		84-06-06	--	--	--	3.5	2.1	--	--	--	<.1	--
		84-09-05	--	--	--	.8	8.3	--	--	--	13	--
442318089411601		84-06-06	--	--	--	.9	1.9	--	--	--	2.4	--
		84-09-05	--	--	--	.1	2.4	--	--	--	5.3	--
442329089411801		84-06-06	--	--	--	2.4	.5	--	--	--	1.7	--
		84-09-05	--	--	--	2.0	.3	--	--	--	1.9	--
442329089411802		84-06-06	--	--	--	.4	4.4	--	--	--	2.3	--
		84-09-05	--	--	--	.6	5.6	--	--	--	2.1	--
442329089415301		84-06-06	--	--	--	3.7	.7	--	--	--	8.2	--
		84-09-05	--	--	--	4.1	.9	--	--	--	8.0	--
442330089405801		84-09-05	46	19	10	2.2	2.7	43	21	22	13	152
442330089413601		84-06-06	28	15	5.0	2.5	1.0	30	12	13	14	123
442342089415101		84-09-05	36	14	5.3	2.5	1.3	21	8.1	14	14	142
		84-06-06	--	--	--	2.6	.7	--	--	--	4.9	--
		84-09-05	--	--	--	2.1	.6	--	--	--	5.3	--
442342089415102		84-06-06	--	--	--	1.3	1.0	--	--	--	1.0	--
		84-09-05	--	--	--	1.5	1.2	--	--	--	1.3	--
442343089404501		84-06-06	--	--	--	1.7	.6	--	--	--	1.7	--
		84-09-05	--	--	--	1.9	.6	--	--	--	1.8	--
442343089404502		84-06-06	--	--	--	1.4	1.0	--	--	--	.9	--
		84-09-05	--	--	--	.9	1.0	--	--	--	.9	--
442343089411501		84-06-06	--	--	--	1.4	.8	--	--	--	1.1	--
		84-09-05	--	--	--	1.2	.7	--	--	--	.7	--

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	DATE OF SAMPLE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS, HYDRO. + ORTHO DIS-SOLVED (MG/L AS P) (00677)	PHOS-PHORUS, ORGANIC DIS-SOLVED (MG/L AS P) (00673)	CARBON ORGANIC DIS-SOLVED (MG/L AS C) (00681)
ADAMS											
440146089364401	84-06-05	5.8	.060	5.9	1.40	.60	--	--	--	--	--
440146089364402	84-06-05	--	<.010	30	<.010	.60	--	--	--	--	--
	84-09-04	23	.010	23	.020	1.1	--	--	--	--	--
440151089363001	84-06-05	.97	.010	.98	.020	.70	--	--	--	--	--
	84-09-04	--	<.010	.54	<.010	.60	--	--	--	--	--
440151089363002	84-06-05	--	<.010	.44	.070	.70	--	--	--	--	--
	84-09-04	--	<.010	1.7	<.010	.20	--	--	--	--	--
440159089370501	84-06-05	--	<.010	8.8	.110	.90	--	--	--	--	--
	84-09-04	--	<.010	4.2	<.010	.70	--	--	--	--	--
440159089370502	84-06-05	--	<.010	13	.030	.80	--	--	--	--	--
	84-09-04	--	<.010	30	<.010	.40	--	--	--	--	--
440207089363001	84-06-05	--	<.010	2.7	<.010	2.7	--	--	--	--	--
	84-09-04	--	<.010	1.9	.090	.50	--	--	--	--	--
440207089363002	84-06-05	--	<.010	8.2	.080	.80	--	--	--	--	--
	84-09-04	--	<.010	9.3	.020	.90	--	--	--	--	--
440211089365101	84-06-05	4.4	.010	4.4	.030	.70	--	--	--	--	--
	84-09-04	3.9	.020	3.9	<.010	.70	--	--	--	--	--
440211089365102	84-06-05	--	<.010	.42	.020	.60	--	--	--	--	--
	84-09-04	--	<.010	.48	<.010	.50	--	--	--	--	--
450158089364701	84-06-05	--	<.010	7.5	.070	.70	.010	.020	.02	.00	--
	84-09-04	--	<.010	9.0	<.010	.60	--	--	--	--	--
PORTAGE											
441650089305001	84-06-06	--	<.010	1.1	<.010	1.3	--	--	--	--	--
	84-09-05	1.2	.030	1.2	.040	.90	--	--	--	--	--
441650089305002	84-06-06	--	<.010	2.6	<.010	1.4	--	--	--	--	--
	84-09-05	--	<.010	2.4	<.010	.40	--	--	--	--	--
441651089311101	84-06-05	--	<.010	.40	<.010	1.0	--	--	--	--	--
	84-09-04	--	<.010	.11	<.010	.40	--	--	--	--	--
441651089311102	84-06-05	4.9	.020	4.9	1.10	1.3	--	--	--	--	--
	84-09-04	--	<.010	10	<.010	.40	--	--	--	--	--
441702089310401	84-06-05	21	.010	21	.150	1.3	.060	.020	.02	.04	.80
	84-09-04	--	<.010	24	<.010	.40	--	--	--	--	--
441704089304101	84-06-06	--	<.010	37	<.010	1.0	--	--	--	--	--
	84-09-05	--	<.010	47	<.010	.40	--	--	--	--	--
441704089304102	84-06-06	--	<.010	17	<.010	2.5	--	--	--	--	--
	84-09-05	--	<.010	32	<.010	.70	--	--	--	--	--
441706089312301	84-06-06	--	<.010	2.9	<.010	1.4	--	--	--	--	--
	84-09-05	--	<.010	5.2	<.010	.40	--	--	--	--	--
441706089312302	84-06-06	6.7	.010	6.7	.040	1.4	--	--	--	--	--
	84-09-05	--	<.010	8.6	<.010	.40	--	--	--	--	--
441714089310601	84-06-05	24	.040	24	<.010	1.1	--	--	--	--	--
	84-09-04	26	.360	26	.090	.30	--	--	--	--	--
441714089310602	84-06-05	--	<.010	44	<.010	1.8	--	--	--	--	--
	84-09-04	--	<.010	47	<.010	.40	--	--	--	--	--
442317089415301	84-06-06	--	<.010	<.10	.120	3.4	--	--	--	--	--
	84-09-05	--	<.010	<.10	.170	.70	--	--	--	--	--
442317089415302	84-06-06	--	<.010	5.2	.140	1.1	--	--	--	--	--
	84-09-05	--	<.010	2.8	<.010	.30	--	--	--	--	--
442318089404401	84-06-06	--	<.010	<.10	.120	1.1	--	--	--	--	--
	84-09-05	--	<.010	<.10	.020	.80	--	--	--	--	--
442318089404402	84-06-06	--	<.010	11	<.010	1.7	--	--	--	--	--
	84-09-05	--	<.010	10	<.010	1.2	--	--	--	--	--
442318089411601	84-06-06	--	<.010	1.4	<.010	.80	--	--	--	--	--
	84-09-05	--	<.010	3.4	<.010	.60	--	--	--	--	--
442329089411801	84-06-06	--	<.010	<.10	.040	1.8	--	--	--	--	--
	84-09-05	--	<.010	.13	.140	1.2	--	--	--	--	--
442329089411802	84-06-06	--	<.010	1.1	.060	1.3	--	--	--	--	--
	84-09-05	1.5	.010	1.5	<.010	.50	--	--	--	--	--
442329089415301	84-06-06	--	<.010	1.1	<.010	1.5	--	--	--	--	--
	84-09-05	--	<.010	1.1	<.010	.50	--	--	--	--	--
442330089405801	84-06-05	5.2	.040	5.2	.090	.70	--	--	--	--	--
442330089413601	84-06-06	--	<.010	1.5	.030	2.2	.050	.020	.05	.00	2.5
	84-09-05	3.7	.010	3.7	.440	.80	--	--	--	--	--
442342089415101	84-06-06	--	<.010	.17	.160	1.3	--	--	--	--	--
	84-09-05	--	<.010	<.10	.120	.60	--	--	--	--	--
442342089415102	84-06-06	--	<.010	<.10	<.010	1.2	--	--	--	--	--
	84-09-05	--	<.010	.38	<.010	.30	--	--	--	--	--
442343089404501	84-06-06	--	<.010	<.10	<.010	1.2	--	--	--	--	--
	84-09-05	.17	.010	.18	.060	.50	--	--	--	--	--
442343089404502	84-06-06	--	<.010	.22	<.010	1.1	--	--	--	--	--
	84-09-05	--	<.010	<.10	<.010	.40	--	--	--	--	--
442343089411501	84-06-06	--	<.010	.15	<.010	1.0	--	--	--	--	--
	84-09-05	--	<.010	<.10	<.010	.20	--	--	--	--	--

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

STATION NUMBER	LOCAL IDENT- I- FIER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)
WALWORTH									
423513088383701	WW-02/16E/31-0849	110QRNR	84-01-07	15.60	928.00	725	7.5	10.0	--
		110QRNR	84-04-24	15.60	928.00	870	--	8.0	--
423522088372201	WW-02/16E/32-0851	110QRNR	84-07-11	15.60	928.00	--	--	--	--
		110QRNR	83-10-15	14.80	927.00	--	--	--	--
		110QRNR	84-01-07	14.80	927.00	320	7.6	8.0	--
423547088375801	WW-02/16E/32-0847	110QRNR	84-04-24	14.80	927.00	700	--	7.0	--
		110QRNR	84-07-11	14.80	927.00	--	--	--	--
		110QRNR	83-10-15	17.00	927.00	--	--	--	1.8
		110QRNR	84-01-07	17.00	927.00	970	7.7	6.0	3.2
		110QRNR	84-04-24	17.00	927.00	950	--	8.0	3.5
423621088354001	WW-02/16E/27-0853	110QRNR	84-07-11	17.00	927.00	--	--	--	--
		110QRNR	83-10-15	18.00	927.00	--	--	--	8.9
		110QRNR	84-01-07	18.00	927.00	800	7.6	9.0	9.3
		110QRNR	84-04-24	18.00	927.00	850	--	9.0	8.5
		110QRNR	84-07-11	18.00	927.00	--	--	--	--
423701088350101	WW-02/16E/22-0841	110QRNR	83-10-15	17.80	927.00	--	--	--	3.9
		110QRNR	84-01-07	17.80	927.00	650	7.7	8.0	3.9
		110QRNR	84-04-24	17.80	927.00	775	--	9.0	4.8
		110QRNR	84-07-11	17.80	927.00	--	--	--	--
423730088353901	WW-02/16E/22-0842	110QRNR	83-10-15	13.80	927.00	--	--	--	--
		110QRNR	84-01-07	13.80	927.00	350	7.7	5.0	--
		110QRNR	84-04-24	13.80	927.00	700	--	6.0	--
		110QRNR	84-07-11	13.80	927.00	--	--	--	--

STATION NUMBER	DATE OF SAMPLE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
----------------	----------------------	--------------------------------------------------------------------------	----------------------------------------------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------------------------------

WALWORTH

423513088383701	84-01-07	<.10	.40	--	<.010
	84-04-24	<.10	1.0	--	<.010
	84-07-11	<.10	.50	<.010	--
423522088372201	83-10-15	<.10	.60	--	<.010
	84-01-07	<.10	.90	--	.020
423547088375801	84-04-24	<.10	.80	--	<.010
	84-07-11	<.10	.40	<.010	--
	83-10-15	1.4	.40	--	<.010
	84-01-07	2.4	.80	--	.030
	84-04-24	2.4	1.1	--	<.010
423621088354001	84-07-11	1.4	.40	.020	--
	83-10-15	8.6	.30	--	<.010
	84-01-07	8.8	.50	--	.010
	84-04-24	7.7	.80	--	<.010
	84-07-11	6.6	.90	.010	--
423701088350101	83-10-15	3.6	.30	--	<.010
	84-01-07	3.4	.50	--	.010
	84-04-24	4.2	.60	--	<.010
	84-07-11	3.8	.50	<.010	--
423730088353901	83-10-15	<.10	1.0	--	.030
	84-01-07	<.10	1.0	--	.180
	84-04-24	<.10	.80	--	.040
	84-07-11	<.10	<.10	.070	--

ACID DEPOSITION RECORDS

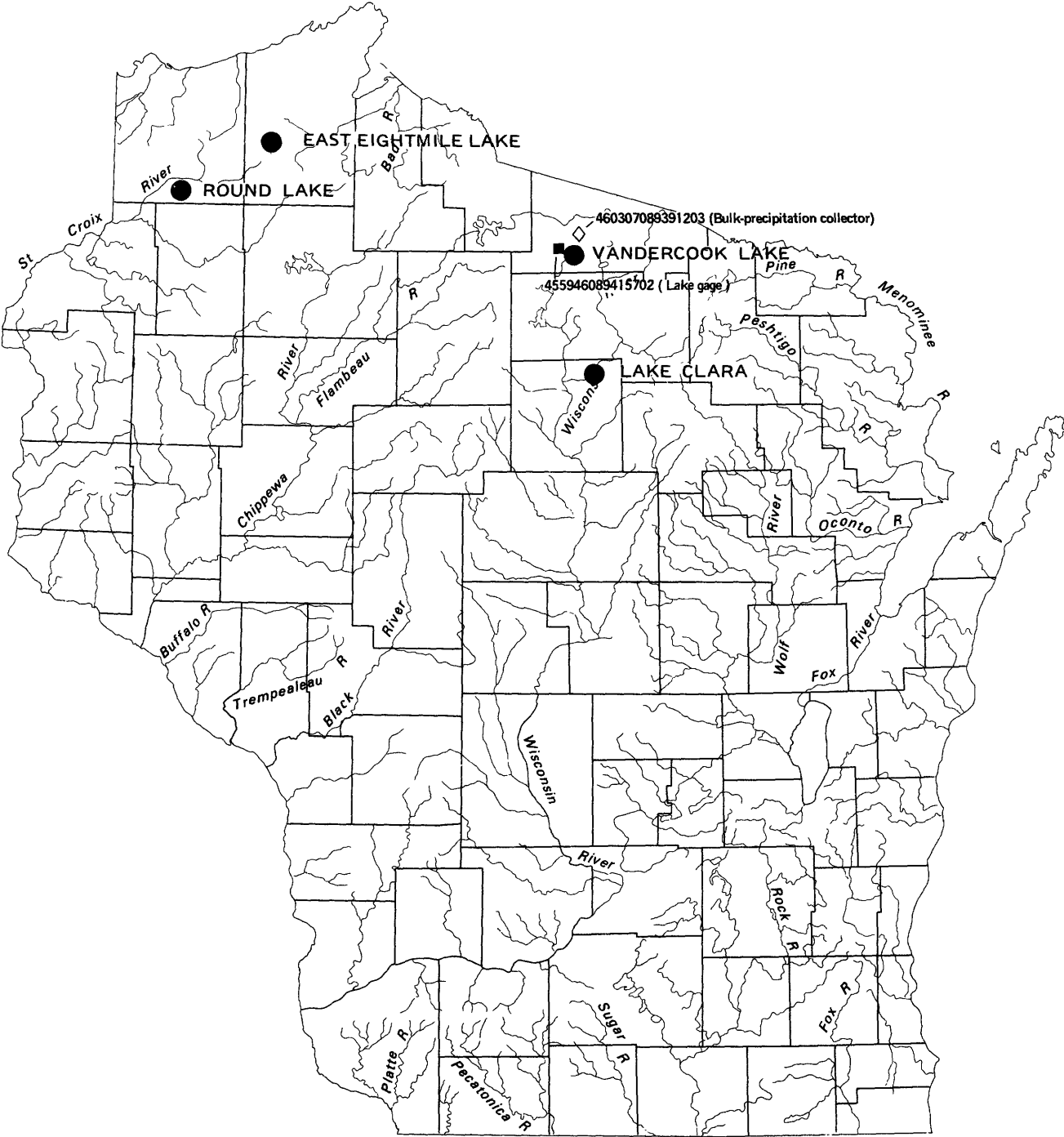


Figure 6. Location of acid deposition sites in Wisconsin.

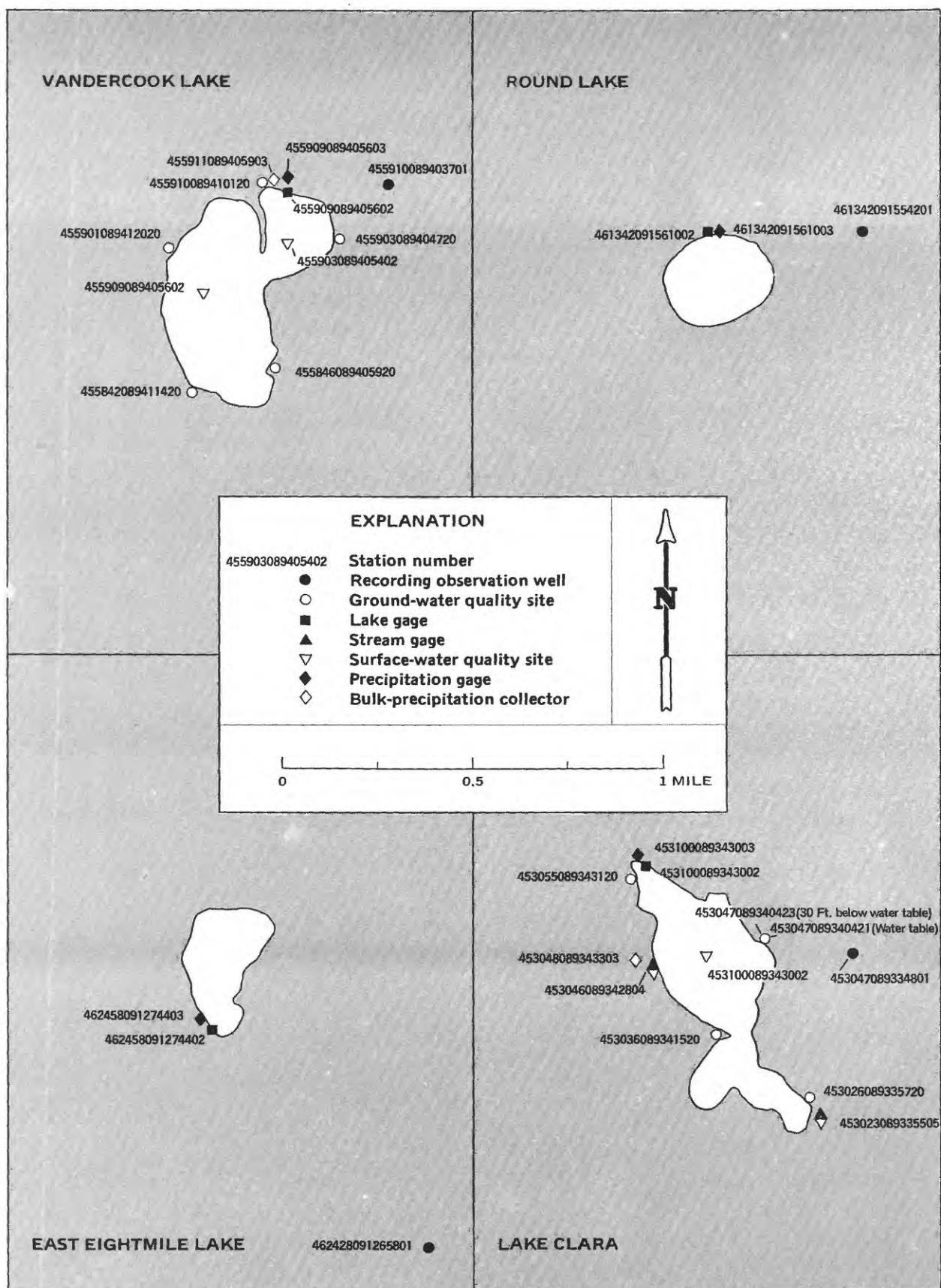


Figure 7. Location of Data-collection sites at Acid deposition sites in Wisconsin.

ACID DEPOSITION RECORDS

Streamflow, lake stages, precipitation quantity, ground-water levels, and water quality for acid deposition investigations in northern Wisconsin. Water quality for September 1981 to October 1983 was published in "Water Resources Data, Wisconsin, Water Year 1983" report.

WATER-DISCHARGE RECORDS

453046089342804 LAKE CLARA TRIBUTARY NEAR TOMAHAWK, WI

LOCATION.--Lat 45°30'46", long 89°34'28", in NE 1/4 SW 1/4 SE 1/4 sec.14, T.35 N., R.7 E., Lincoln County, Hydrologic Unit 07070001, on west side of lake, 8.2 mi east of Tomahawk.

DRAINAGE AREA.--0.03 mi².

PERIOD OF RECORD.--September 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,500.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Tributary is intermittent. Discharge data need to be divided by 100 to obtain correct values.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 0.46 ft³/s, Apr. 30, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 0.46 ft³/s, Apr. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1												---
2												---
3												---
4												---
5												---
6												---
7												---
8												---
9												.00
10												.00
11												.00
12												.00
13												.00
14												.00
15												.00
16												.00
17												.00
18												.00
19												.00
20												.00
21												.00
22												.00
23												.00
24												.00
25												.00
26												.00
27												.00
28												.00
29												.00
30												.72
31												---

NOTE: DIVIDE VALUES IN TABLE BY 100 TO OBTAIN CORRECT VALUES.

ACID DEPOSITION RECORDS

WATER-DISCHARGE RECORDS

453046089342804 LAKE CLARA TRIBUTARY NEAR TOMAHAWK, WI--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13					---	.00	.00	.00	.00	.00	.03
2	.00					---	1.1	.00	.00	.00	.00	.00
3	.00					---	13	.00	.00	.00	.00	.00
4	.87					---	1.8	.00	.00	.00	.00	.00
5	.00					---	.00	6.5	.00	.00	.00	.32
6	.00					---	.00	34	.00	.00	.00	.00
7	.00					---	.00	14	.00	.00	.00	.00
8	.00					---	.00	6.5	.00	.00	.00	.00
9	.00					---	.00	7.5	.00	.00	.00	.00
10	.00					---	.00	13	.00	.08	.00	.00
11	.00					---	---	5.8	.00	.00	.00	.00
12	.00					---	---	4.6	.00	.00	.00	.00
13	.00					---	---	6.8	.00	.00	.00	2.0
14	.00					---	---	4.1	.00	.00	.00	.15
15	.00					---	---	1.6	.00	.59	.00	.00
16	.00					---	---	.73	.00	.00	.00	.00
17	.46					---	---	1.7	.00	.30	.00	.00
18	.00					---	---	3.3	.00	.00	.00	.00
19	.00					---	4.5	.83	.00	.00	.00	.00
20	.00					---	4.4	.00	.00	.00	.00	.00
21	.00					---	7.1	.00	.00	.00	.00	.00
22	.00					---	5.8	.00	.00	.00	.00	.00
23	.00					---	4.2	.00	.00	.00	.00	.04
24	.00					---	3.0	.00	.00	.00	.00	.00
25	.00					---	4.3	.00	.00	.00	.00	.00
26	.00					---	7.3	.00	.00	.00	.47	.00
27	---					---	2.9	.00	.00	.00	.00	.00
28	---					---	.38	.00	.00	.00	.00	.00
29	---					---	.00	.00	.11	.14	.07	.12
30	---					---	.81	.00	.00	.00	.00	.00
31	---					---	.32	.00	---	.00	.00	---
TOTAL	---	---	---	---	---	---	---	110.96	.11	1.11	.54	2.66
MEAN	---	---	---	---	---	---	---	3.58	.004	.036	.017	.089
MAX	---	---	---	---	---	---	---	34	.11	.59	.47	2.0
MIN	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
CFSM	---	---	---	---	---	---	---	119	.13	1.20	.57	2.97
IN.	---	---	---	---	---	---	---	133.15	.13	1.33	.65	3.19

NOTE: DIVIDE VALUES IN TABLE BY 100 TO OBTAIN CORRECT VALUES.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00				---	---	2.1	3.0	4.0	.00	.00
2	.00	.00				---	---	.00	3.8	1.9	.00	.00
3	.02	.00				---	---	.00	5.2	5.7	.10	.00
4	.00	.00				---	---	.00	8.4	4.7	.00	.00
5	.00	.00				---	---	.00	4.5	3.1	.00	.00
6	.52	---				---	3.0	19	3.8	2.1	.00	.00
7	.00	---				---	3.0	7.0	3.2	1.1	.00	.00
8	.00	---				---	---	3.5	3.5	.00	.00	.00
9	.10	---				---	5.1	3.5	2.1	3.2	.00	.00
10	.00	---				---	8.7	3.5	.92	2.8	.10	.00
11	.00	---				---	7.5	4.2	.00	2.2	.00	.00
12	.00	---				---	6.8	5.9	3.1	1.8	.00	.00
13	.00	---				---	---	17	3.1	1.3	.00	.00
14	.00	---				---	---	6.1	1.3	.63	.00	.00
15	.00	---				---	---	3.1	.25	1.1	.00	.00
16	.00	---				---	.00	.00	.00	3.8	.00	.00
17	.00	---				---	.00	.00	3.2	3.1	.00	.10
18	.00	---				---	.00	.00	2.8	3.0	.00	.00
19	2.5	---				---	.00	.03	1.4	2.1	.00	.10
20	.00	---				---	.00	4.6	.13	1.3	.00	.00
21	.00	---				---	.00	14	2.0	1.2	.00	.00
22	.00	---				---	.00	7.1	4.2	2.4	.00	.00
23	.00	---				---	.00	9.0	1.7	2.0	.00	.00
24	.03	---				---	.00	8.6	.00	.85	.00	.00
25	.00	---				---	.00	3.2	.00	.00	.00	.00
26	.00	---				---	.00	---	.00	.00	.00	.00
27	.00	---				---	.00	---	.00	.00	.00	.00
28	.00	---				---	.00	---	.00	.00	.00	.00
29	.00	---				---	.00	---	.00	.00	.00	.00
30	.00	---				---	.00	---	2.6	.00	.00	.00
31	.00	---				---	---	.40	---	.00	.00	---
TOTAL	3.14	---	---	---	---	---	---	---	70.26	38.55	.20	.20
MEAN	.10	---	---	---	---	---	---	---	2.34	1.24	.006	.007
MAX	2.5	---	---	---	---	---	---	---	8.4	5.7	.10	.10
MIN	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
CFSM	3.33	---	---	---	---	---	---	---	78.0	41.3	.20	.23
IN.	3.77	---	---	---	---	---	---	---	84.31	46.26	.24	.24

NOTE: DIVIDE VALUES IN TABLE BY 100 TO OBTAIN CORRECT VALUES.

ACID DEPOSITION RECORDS

WATER-DISCHARGE RECORDS

453046089342804 LAKE CLARA TRIBUTARY NEAR TOMAHAWK, WI--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1.7	8.0	.22	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	1.9	5.0	1.6	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	2.0	3.5	.50	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	2.1	1.5	.00	.00	.00	.00
5	.50	.00	.00	.00	.00	.00	2.1	1.2	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00
7	3.4	.00	.00	.00	.00	.00	1.7	3.6	.63	.00	.49	.00
8	.00	.50	.00	.00	.00	.00	1.5	3.7	1.8	.00	.50	.00
9	.00	3.4	.00	.00	.00	.00	1.2	3.0	.00	.00	.50	.00
10	.00	5.0	.00	.00	.00	.00	1.0	1.9	.41	.52	.50	.00
11	3.8	1.0	.00	.00	.00	.00	9.0	.89	.00	1.5	.50	.00
12	7.0	.00	.00	.00	.00	.00	8.0	.50	.65	1.0	.50	2.6
13	1.5	.00	.00	.00	.00	.00	7.0	3.7	1.0	1.0	.00	.75
14	.00	.00	.00	.00	.00	.00	7.0	2.5	.00	1.1	.00	.00
15	.00	.00	.00	.00	.00	.00	8.0	.94	.00	1.5	.00	.00
16	.00	.00	.00	.00	.00	.00	9.0	1.0	.00	1.0	.00	.00
17	.00	.00	.00	.00	.00	.00	1.0	1.0	.00	2.2	.00	.25
18	.00	.00	.00	.00	.00	.00	1.1	.75	.00	1.8	.00	.00
19	.00	.00	.00	.00	.00	.00	1.3	.50	.00	1.5	.00	.00
20	.00	.00	.00	.00	.00	.00	1.5	.50	.00	1.5	.00	.00
21	.00	.00	.00	.00	.00	.00	1.0	.50	.00	1.5	.22	.00
22	.00	.00	.00	.00	.00	.00	1.5	1.3	.00	1.0	.50	.00
23	.00	.00	.00	.00	.00	.00	1.0	.66	.00	1.0	.25	.00
24	.00	.00	.00	.00	.00	.00	1.0	.50	.00	.50	.00	1.1
25	.00	.00	.00	.00	.00	.00	1.0	.50	.00	1.0	.00	.50
26	.00	.00	.00	.00	.00	.30	1.0	.50	.44	1.0	.00	.00
27	.00	.00	.00	.00	.00	.50	1.9	.50	.50	.50	.00	.00
28	.00	.00	.00	.00	.00	.80	2.5	.00	.01	.50	.00	.00
29	.00	.00	.00	.00	.00	1.0	4.2	.00	.00	.50	.00	.00
30	.00	.00	.00	.00	---	1.2	46	.00	.00	.25	.00	.00
31	.00	---	.00	.00	---	1.4	---	.00	---	.00	.00	---
TOTAL	16.20	9.90	.00	.00	.00	5.20	131.2	48.14	7.76	22.37	3.96	5.20
MEAN	.52	.33	.000	.000	.000	.17	4.37	1.55	.26	.72	.13	.17
MAX	7.0	5.0	.00	.00	.00	1.4	46	8.0	1.8	2.2	.50	2.6
MIN	.00	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00
CFSM	17.3	11.0	.000	.000	.000	5.67	146	51.7	8.67	24.0	4.33	5.67
IN.	19.44	11.88	.00	.00	.00	6.24	157.44	57.77	9.31	26.84	4.75	6.24

WTR YR 1984 TOTAL 249.93 MEAN .68 MAX 46 MIN .00 CFSM 22.7 IN 299.92

NOTE: DIVIDE VALUES IN TABLE BY 100 TO OBTAIN CORRECT VALUES.

ACID DEPOSITION RECORDS

WATER-DISCHARGE RECORDS

453023089335505 LAKE CLARA OUTLET NEAR TOMAHAWK, WI

LOCATION.--Lat 45°30'23", long 89°33'55", in SE 1/4 NW 1/4 NW 1/4 sec.24, T.35 N., R.7 E., Lincoln County,
Hydrologic Unit 07070001, on southeast side of lake, 8.2 mi east of Tomahawk.

DRAINAGE AREA.--0.48 mi². Area of lake, 0.13 mi².

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,500.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Outlet is intermittent.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2.2 ft³/s, May 12, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2.2 ft³/s, May 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.01	.10	.09	---	.00	.04
2	.00	.00	.00	.00	.00	.00	.01	.10	.09	---	.00	.05
3	.00	.00	.00	.00	.00	.00	.01	.11	.09	---	.00	.06
4	.00	.00	.00	.00	.00	.00	.02	.12	.09	---	.00	.06
5	.00	.00	.00	.00	.00	.00	.02	.13	.09	---	.00	.07
6	.00	.00	.00	.00	.00	.00	.02	.14	.09	---	.00	.08
7	.00	.00	.00	.00	.00	.00	.02	.14	.09	---	.00	.08
8	.00	.00	.00	.00	.00	.00	.02	.14	.09	---	.00	.10
9	.00	.00	.00	.00	.00	.00	.02	.14	.09	---	.00	.10
10	.00	.00	.00	.00	.00	.00	.02	.13	.09	---	.00	.10
11	.00	.00	.00	.00	.00	.00	.02	.13	.09	---	.00	.09
12	.00	.00	.00	.00	.00	.00	.02	.12	---	---	.00	.09
13	.00	.00	.00	.00	.00	.00	.02	.11	---	---	.01	.07
14	.00	.00	.00	.00	.00	.00	.02	.10	---	---	.01	.05
15	.00	.00	.00	.00	.00	.00	.06	.10	---	---	.01	.04
16	.00	.00	.00	.00	.00	.00	.09	.09	---	.04	.01	.03
17	.00	.00	.00	.00	.00	.00	.09	.09	---	.03	.01	.02
18	.00	.00	.00	.00	.00	.00	.09	.09	---	.03	.02	.01
19	.00	.00	.00	.00	.00	.00	.09	.09	---	.03	.02	.01
20	.00	.00	.00	.00	.00	.00	.09	.09	---	.03	.02	.00
21	.00	.00	.00	.00	.00	.00	.09	.10	---	.02	.02	.00
22	.00	.00	.00	.00	.00	.00	.09	.10	---	.02	.02	.00
23	.00	.00	.00	.00	.00	.00	.09	.10	---	.02	.02	.00
24	.00	.00	.00	.00	.00	.00	.09	.10	---	.02	.02	.00
25	.00	.00	.00	.00	.00	.01	.09	.10	---	.02	.02	.00
26	.00	.00	.00	.00	.00	.01	.09	.10	---	.01	.02	.00
27	.00	.00	.00	.00	.00	.01	.09	.10	---	.01	.02	.00
28	.00	.00	.00	.00	.00	.01	.09	.10	---	.01	.02	.00
29	.00	.00	.00	.00	---	.01	.09	.09	---	.01	.02	.00
30	.00	.00	.00	.00	---	.01	.10	.09	---	.00	.03	.00
31	.00	---	.00	.00	---	.01	---	.09	---	.00	.04	---
TOTAL	.00	.00	.00	.00	.00	.07	1.67	3.33	---	---	.36	1.15
MEAN	.000	.000	.000	.000	.000	.002	.056	.11	---	---	.012	.038
MAX	.00	.00	.00	.00	.00	.01	.10	.14	---	---	.04	.10
MIN	.00	.00	.00	.00	.00	.00	.01	.09	---	---	.00	.00
CFSM	.000	.000	.000	.000	.000	.004	.12	.24	---	---	.03	.08
IN.	.00	.00	.00	.00	.00	.01	.13	.27	---	---	.03	.09

ACID DEPOSITION RECORDS

WATER-DISCHARGE RECORDS

453023089335505 LAKE CLARA OUTLET NEAR TOMAHAWK, WI--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.03	.00	.00	.00	.00	.20	.62	.00	.02	.01	.00
2	.01	.03	.00	.00	.00	.00	.25	.60	.00	.00	.01	.00
3	.01	.03	.00	.00	.00	.00	.30	.59	.00	.00	.00	.00
4	.01	.03	.00	.00	.00	.00	.29	.58	.00	.00	.00	.00
5	.01	.03	.00	.00	.00	.00	.28	.59	.00	.00	.00	.00
6	.02	.03	.00	.00	.00	.00	.27	.70	.00	.00	.00	.00
7	.02	.03	.00	.00	.00	.00	.27	.80	.00	.00	.00	.00
8	.02	.03	.00	.00	.00	.00	.26	.81	.00	.00	.00	.00
9	.02	.03	.00	.00	.00	.00	.26	.83	.00	.00	.00	.00
10	.02	.02	.00	.00	.00	.00	.27	.83	.00	.00	.00	.00
11	.02	.02	.00	.00	.00	.00	.28	.83	.00	.01	.00	.00
12	.02	.02	.00	.00	.00	.00	.29	.82	.00	.01	.00	.00
13	.02	.02	.00	.00	.00	.00	.30	.81	.00	.02	.00	.01
14	.02	.02	.00	.00	.00	.00	.35	.81	.00	.03	.00	.05
15	.03	.02	.00	.00	.00	.00	.45	.81	.00	.04	.00	.07
16	.04	.02	.00	.00	.00	.00	.60	.80	.00	.06	.00	.06
17	.04	.02	.00	.00	.00	.00	.73	.80	.00	.06	.00	.07
18	.06	.02	.00	.00	.00	.00	.75	.80	.00	.06	.00	.08
19	.06	.01	.00	.00	.00	.00	.76	.79	.00	.05	.00	.08
20	.05	.00	.00	.00	.00	.00	.79	.67	.00	.04	.00	.07
21	.05	.00	.00	.00	.00	.00	.78	.37	.00	.03	.00	.06
22	.05	.00	.00	.00	.00	.00	.77	.00	.00	.02	.00	.05
23	.04	.00	.00	.00	.00	.00	.76	.00	.05	.02	.00	.04
24	.04	.00	.00	.00	.00	.00	.75	.00	.05	.02	.00	.06
25	.04	.00	.00	.00	.00	.00	.74	.00	.06	.02	.00	.05
26	.04	.00	.00	.00	.00	.02	.76	.00	.05	.01	.00	.05
27	.04	.00	.00	.00	.00	.03	.74	.00	.02	.01	.00	.04
28	.04	.00	.00	.00	.00	.04	.66	.00	.00	.01	.00	.04
29	.04	.00	.00	.00	---	.08	.65	.00	.07	.01	.00	.04
30	.03	.00	.00	.00	---	.10	.64	.00	.06	.01	.00	.04
31	.03	---	.00	.00	---	.13	---	.00	---	.01	.00	---
TOTAL	.94	.46	.00	.00	.00	.40	15.20	15.26	.36	.57	.02	.96
MEAN	.030	.015	.000	.000	.000	.013	.51	.49	.012	.018	.001	.032
MAX	.06	.03	.00	.00	.00	.13	.79	.83	.07	.06	.01	.08
MIN	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00
CFSM	.07	.03	.000	.000	.000	.03	1.11	1.07	.03	.04	.002	.07
IN.	.08	.04	.000	.000	.000	.03	1.23	1.23	.03	.05	.00	.08

WTR YR 1982 TOTAL 34.17 MEAN .094 MAX .83 MIN .00 CFSM .20 IN 2.76

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.06	.10	.00	.00	.00	.07	.00	.02	.00	.00	.01
2	.03	.05	.10	.00	.00	.00	.09	.00	.00	.00	.00	.00
3	.04	.05	.12	.00	.00	.00	.11	.00	.00	.00	.00	.00
4	.02	.06	.10	.00	.00	.00	.12	.00	.00	.00	.00	.00
5	.02	.07	.10	.00	.00	.06	.14	.00	.15	.00	.00	.00
6	.06	.04	.12	.00	.00	.16	.16	.00	.00	.00	.00	.00
7	.06	.02	.12	.00	.00	.24	.16	.01	.00	.00	.00	.00
8	.06	.06	.12	.00	.00	.32	.16	.01	.00	.00	.00	.00
9	.02	.02	.10	.00	.00	.35	.15	.00	.54	.00	.00	.00
10	.06	.06	.07	.00	.00	.34	.15	.00	1.6	.00	.26	.00
11	.06	.06	.05	.00	.00	.32	.17	.00	1.4	.00	.13	.00
12	.05	.17	.03	.00	.00	.30	.18	.00	1.2	.00	.00	.00
13	.06	.17	.03	.00	.00	.25	.24	.00	1.0	.00	.00	.00
14	.05	.15	.03	.00	.00	.22	.32	.00	.91	.00	.00	.00
15	.05	.12	.03	.00	.00	.16	.60	.00	.87	.00	.00	.00
16	.04	.11	.00	.00	.00	.10	.60	.00	.82	.00	.00	.00
17	.04	.10	.00	.00	.00	.08	.60	.00	.69	.00	.00	.00
18	.04	.09	.00	.00	.00	.04	.52	.00	.58	.00	.00	.00
19	.04	.09	.00	.00	.00	.02	.46	.00	.42	.00	.00	.00
20	.10	.15	.00	.00	.00	.00	.46	.00	.30	.00	.00	.00
21	.11	.15	.00	.00	.00	.00	.46	.00	.30	.00	.00	.00
22	.10	.15	.00	.00	.00	.00	.40	.00	.01	.00	.00	.00
23	.09	.12	.00	.00	.00	.00	.33	.01	.00	.00	.00	.00
24	.09	.12	.00	.00	.00	.00	.28	.00	.00	.00	.00	.00
25	.08	.11	.00	.00	.00	.00	.25	.00	.01	.00	.00	.00
26	.08	.11	.00	.00	.00	.00	.22	.00	.02	.00	.00	.00
27	.07	.09	.00	.00	.00	.01	.17	.35	.00	.00	.00	.00
28	.06	.09	.00	.00	.00	.02	.17	.00	.00	.00	.00	.00
29	.07	.11	.00	.00	---	.03	.17	.01	.01	.00	.00	.00
30	.07	.11	.00	.00	---	.04	.17	.01	.00	.00	.02	.00
31	.06	---	.00	.00	---	.06	---	.06	---	.00	.04	---
TOTAL	1.81	2.86	1.22	.00	.00	3.12	8.08	.46	10.85	.00	.45	.01
MEAN	.058	.095	.039	.000	.000	.10	.27	.015	.36	.000	.015	.000
MAX	.11	.17	.12	.00	.00	.35	.60	.35	1.6	.00	.26	.01
MIN	.02	.02	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00
CFSM	.13	.21	.09	.000	.000	.22	.59	.03	.78	.000	.03	.000
IN.	.15	.23	.10	.000	.000	.25	.65	.04	.88	.00	.04	.00

CAL YR 1982 TOTAL 38.66 MEAN .11 MAX .83 MIN .00 CFSM .24 IN 3.12
WTR YR 1983 TOTAL 28.86 MEAN .079 MAX 1.6 MIN .00 CFSM .17 IN 2.33

ACID DEPOSITION RECORDS

WATER-DISCHARGE RECORDS

453023089335505 LAKE CLARA OUTLET NEAR TOMAHAWK, WI--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.02	.08	.07	.08	.09	.08	.00	.00	.00	.00	.00
2	.03	.02	.08	.08	.08	.09	.08	.00	.00	.00	.00	.00
3	.03	.02	.08	.08	.08	.08	.07	.00	.00	.00	.00	.00
4	.03	.02	.07	.08	.08	.08	.07	.49	.01	.00	.00	.00
5	.03	.02	.07	.08	.08	.08	.07	.05	.79	.00	.00	.00
6	.03	.02	.08	.08	.08	.09	.06	.02	.80	.00	.00	.00
7	.08	.02	.08	.08	.08	.09	.06	.00	.86	.00	.00	.00
8	.04	.02	.07	.08	.08	.08	.06	.00	.98	.00	.00	.00
9	.04	.02	.07	.08	.08	.08	.06	.00	.00	.00	.00	.00
10	.08	.02	.07	.07	.08	.08	.07	.00	.00	.00	.00	.00
11	.16	.02	.07	.08	.08	.09	.06	.76	.00	.00	.00	.00
12	.06	.02	.07	.08	.08	.09	.06	2.2	.00	.00	.00	.00
13	.05	.02	.08	.08	.08	.09	.07	.09	.00	.00	.00	.00
14	.05	.02	.08	.08	.08	.09	.06	.00	.00	.00	.00	.00
15	.03	.02	.07	.07	.08	.09	.06	.05	.00	.00	.00	.00
16	.03	.02	.07	.08	.08	.10	.10	.01	.00	.00	.00	.00
17	.03	.02	.07	.08	.08	.10	.10	.00	.00	.00	.00	.00
18	.02	.02	.08	.08	.08	.10	.10	.00	.00	.00	.00	.00
19	.01	.02	.08	.08	.08	.10	.01	.00	.00	.00	.00	.00
20	.01	.03	.08	.08	.08	.10	.00	.00	.00	.00	.00	.00
21	.01	.07	.08	.08	.08	.09	.00	.00	.00	.00	.00	.00
22	.01	.08	.08	.08	.08	.08	.00	.00	.01	.00	.00	.00
23	.00	.11	.08	.08	.08	.09	.00	.00	.00	.00	.00	.00
24	.03	.10	.07	.08	.08	.09	.00	.00	.00	.00	.00	.00
25	.03	.10	.08	.08	.08	.09	.00	.00	.00	.00	.00	.00
26	.03	.10	.08	.08	.09	.08	.00	.00	.00	.00	.00	.00
27	.02	.09	.08	.08	.09	.08	.00	.00	.00	.00	.00	.00
28	.02	.09	.08	.08	.09	.08	.00	.00	.00	.00	.00	.00
29	.02	.08	.08	.08	.09	.08	.00	.00	.00	.00	.00	.00
30	.02	.08	.07	.08	---	.08	.00	.00	.00	.00	.00	.00
31	.02	---	.07	.08	---	.08	---	.00	---	.00	.00	---
TOTAL	1.08	1.31	2.35	2.45	2.36	2.71	1.30	3.67	3.45	.00	.00	.00
MEAN	.035	.044	.076	.079	.081	.087	.043	.12	.12	.000	.000	.000
MAX	.16	.11	.08	.08	.09	.10	.10	2.2	.98	.00	.00	.00
MIN	.00	.02	.07	.07	.08	.08	.00	.00	.00	.00	.00	.00
CFSM	.08	.10	.17	.17	.18	.19	.09	.26	.26	.000	.000	.000
IN.	.09	.11	.19	.20	.19	.22	.10	.30	.28	.00	.00	.00

CAL YR 1983	TOTAL 27.71	MEAN .076	MAX 1.6	MIN .00	CFSM .17	IN 2.24
WTR YR 1984	TOTAL 20.68	MEAN .057	MAX 2.2	MIN .00	CFSM .12	IN 1.67

ACID DEPOSITION RECORDS

STAGE RECORDS

453100089343002 LAKE CLARA NEAR TOMAHAWK, WI

LOCATION.--Lat 45°31'00", long 89°34'30", in NE 1/4 NW 1/4 SE 1/4 sec.14, T.35 N., R.7 E., Lincoln County, Hydrologic Unit 07070001, at north end of lake, 8.2 mi east of Tomahawk.

DRAINAGE AREA.--0.48 mi². Area of lake, 0.13 mi².

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,500.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lake has intermittent surface inlet and outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 16.90 ft, June 16 and 17, 1981; minimum observed gage height, 15.50 ft, Aug. 16, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 16.43 ft, May 11; minimum observed gage height, 15.84 ft, Aug. 31.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	15.81	15.80	15.90	15.89	16.05	16.07	16.23	16.21	16.72	16.09	15.87
2	---	15.81	15.80	15.88	15.87	16.05	16.08	16.22	16.20	16.70	16.09	15.87
3	---	15.80	15.80	15.88	15.86	16.05	16.09	16.24	16.20	16.67	16.08	15.86
4	---	15.80	15.81	15.88	15.86	16.05	16.21	16.33	16.19	16.62	16.06	15.86
5	---	15.79	15.81	15.88	15.86	16.05	16.22	16.42	16.18	16.60	15.99	15.85
6	---	15.79	15.81	15.89	15.88	16.04	16.22	16.42	16.16	16.57	15.97	15.84
7	---	15.79	15.81	15.88	15.88	16.04	16.22	16.41	16.14	16.52	15.96	15.84
8	---	15.79	15.83	15.88	15.89	16.05	16.22	16.40	16.14	16.50	15.94	15.84
9	---	15.81	15.82	15.88	15.88	16.05	16.22	16.36	16.13	16.46	15.92	15.82
10	---	15.79	15.82	15.88	15.89	16.04	16.22	16.34	16.12	16.42	15.88	15.82
11	---	15.79	15.82	15.88	15.89	16.04	16.22	16.33	16.13	16.39	15.86	15.81
12	---	15.81	15.82	15.88	15.89	16.05	16.21	16.32	16.14	16.36	15.86	15.79
13	---	15.83	15.82	15.88	15.90	16.03	16.21	16.31	16.14	16.34	15.85	15.79
14	---	15.83	15.82	15.88	15.91	16.03	16.20	16.30	16.50	16.32	15.84	15.78
15	---	15.82	15.82	15.88	15.91	16.02	16.20	16.28	16.90	16.30	15.83	15.75
16	---	15.82	15.82	15.88	15.91	16.02	16.19	16.27	16.90	16.27	15.82	15.73
17	15.81	15.82	15.83	15.89	15.91	16.02	16.19	16.25	16.90	16.25	15.81	15.72
18	15.79	15.82	15.83	15.89	15.92	16.01	16.18	16.23	16.89	16.25	15.81	15.72
19	15.78	15.82	15.82	15.89	15.93	16.04	16.18	16.22	16.89	16.24	15.80	15.70
20	15.78	15.82	15.81	15.89	15.93	16.02	16.17	16.22	16.88	16.24	15.80	15.69
21	15.79	15.82	15.81	15.89	15.93	16.02	16.16	16.21	16.87	16.23	15.80	15.69
22	15.78	15.82	15.84	15.89	15.97	16.02	16.16	16.19	16.87	16.20	15.80	15.67
23	15.79	15.81	15.87	15.89	16.01	16.02	16.20	16.20	16.86	16.19	15.79	15.67
24	15.82	15.81	15.87	15.88	16.04	16.02	16.19	16.24	16.84	16.18	15.79	15.66
25	15.87	15.80	15.87	15.89	16.04	16.00	16.19	16.26	16.83	16.15	15.79	15.66
26	15.86	15.80	15.87	15.88	16.04	16.03	16.19	16.25	16.82	16.14	15.79	15.67
27	15.85	15.80	15.87	15.88	16.04	16.03	16.20	16.25	16.80	16.15	15.80	15.67
28	15.84	15.80	15.87	15.87	16.06	16.03	16.21	16.22	16.78	16.15	15.80	15.65
29	15.83	15.80	15.87	15.87	---	16.04	16.21	16.24	16.76	16.14	15.82	15.66
30	15.83	15.80	15.88	15.86	---	16.04	16.21	16.23	16.74	16.12	15.85	15.71
31	15.81	---	15.89	15.87	---	16.06	---	16.20	---	16.10	15.88	---
MEAN	---	15.81	15.83	15.88	15.93	16.03	16.19	16.28	16.54	16.34	15.88	15.76
MAX	---	15.83	15.89	15.90	16.06	16.06	16.22	16.42	16.90	16.72	16.09	15.87
MIN	---	15.79	15.80	15.86	15.86	16.00	16.07	16.19	16.12	16.10	15.79	15.65

ACID DEPOSITION RECORDS

STAGE RECORDS

453100089343002 LAKE CLARA NEAR TOMAHAWK, WI--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.75	15.80	15.71	15.77	15.87	15.85	15.94	16.14	16.00	15.76	15.78	15.64
2	15.75	15.80	15.73	15.79	15.89	15.84	15.96	16.13	15.97	15.75	15.78	15.64
3	15.77	15.80	15.74	15.80	15.88	15.83	16.07	16.12	15.96	15.75	15.77	15.63
4	15.78	15.79	15.74	15.83	15.87	15.84	16.10	16.11	15.94	15.75	15.76	15.63
5	15.79	15.78	15.74	15.82	15.87	15.84	16.09	16.13	15.94	15.76	15.74	15.63
6	15.81	15.78	15.74	15.82	15.87	15.83	16.08	16.21	15.92	15.75	15.73	15.63
7	15.82	15.78	15.74	15.82	15.88	15.83	16.07	16.26	15.91	15.76	15.73	15.62
8	15.82	15.77	15.73	15.82	15.87	15.83	16.06	16.25	15.90	15.74	15.71	15.62
9	15.80	15.76	15.73	15.81	15.87	15.83	16.05	16.24	15.89	15.73	15.68	15.62
10	15.80	15.74	15.73	15.81	15.87	15.84	16.05	16.26	15.90	15.75	15.66	15.63
11	15.80	15.74	15.73	15.82	15.87	15.84	16.04	16.26	15.88	15.79	15.64	15.63
12	15.80	15.73	15.73	15.81	15.86	15.85	16.05	16.23	15.87	15.80	15.64	15.64
13	15.79	15.73	15.73	15.82	15.86	15.87	16.07	16.24	15.85	15.78	15.62	15.67
14	15.82	15.72	15.74	15.82	15.88	15.87	16.06	16.24	15.85	15.78	15.62	15.86
15	15.82	15.72	15.74	15.81	15.88	15.86	16.08	16.22	15.86	15.79	15.61	15.86
16	15.82	15.72	15.74	15.80	15.86	15.88	16.12	16.20	15.84	15.88	15.61	15.85
17	15.83	15.71	15.74	15.80	15.86	15.89	16.17	16.19	15.84	15.90	15.59	15.85
18	15.86	15.71	15.72	15.81	15.87	15.89	16.19	16.19	15.83	15.90	15.58	15.84
19	15.85	15.72	15.72	15.82	15.86	15.89	16.18	16.17	15.82	15.88	15.58	15.84
20	15.84	15.73	15.73	15.82	15.86	15.89	16.21	16.12	15.82	15.87	15.57	15.84
21	15.83	15.73	15.76	15.83	15.86	15.89	16.20	16.10	15.81	15.84	15.56	15.83
22	15.83	15.73	15.75	15.84	15.85	15.90	16.20	16.09	15.80	15.85	15.54	15.82
23	15.81	15.74	15.74	15.88	15.85	15.90	16.19	16.07	15.80	15.84	15.53	15.82
24	15.81	15.74	15.74	15.87	15.85	15.90	16.18	16.06	15.79	15.81	15.51	15.83
25	15.81	15.72	15.74	15.87	15.85	15.89	16.18	16.06	15.79	15.82	15.51	15.82
26	15.80	15.71	15.74	15.87	15.85	15.88	16.21	16.05	15.78	15.80	15.50	15.81
27	15.79	15.72	15.75	15.87	15.85	15.88	16.20	16.04	15.76	15.80	15.65	15.81
28	15.79	15.72	15.75	15.87	15.85	15.88	16.18	16.03	15.76	15.79	15.65	15.81
29	15.79	15.72	15.74	15.87	---	15.88	16.17	16.03	15.79	15.79	15.64	15.83
30	15.80	15.70	15.75	15.88	---	15.90	16.15	16.03	15.78	15.80	15.64	15.86
31	15.80	---	15.78	15.87	---	15.94	---	16.01	---	15.79	15.64	---
MEAN	15.81	15.74	15.74	15.83	15.86	15.87	16.12	16.14	15.86	15.80	15.64	15.75
MAX	15.86	15.80	15.78	15.88	15.89	15.94	16.21	16.26	16.00	15.90	15.78	15.86
MIN	15.75	15.70	15.71	15.77	15.85	15.83	15.94	16.01	15.76	15.73	15.50	15.62
CAL YR 1981	MEAN 16.01		MAX 16.90		MIN 15.65							
WTR YR 1982	MEAN 15.85		MAX 16.26		MIN 15.50							

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.86	15.92	15.90	15.99	15.90	15.88	15.92	15.94	16.33	16.09	15.97	15.85
2	15.86	15.92	15.91	15.98	15.91	15.88	15.91	15.94	16.33	16.09	15.95	15.84
3	15.87	15.89	15.93	15.97	15.97	15.88	15.92	15.93	16.34	16.11	16.01	15.83
4	15.83	15.88	15.91	15.95	15.96	15.89	15.92	15.93	16.38	16.15	16.03	15.82
5	15.82	15.87	15.92	15.96	15.96	15.91	15.91	15.92	16.38	16.12	16.01	15.82
6	15.89	15.86	15.95	15.95	15.95	15.95	15.91	15.92	16.37	16.10	16.01	15.83
7	15.93	15.85	15.95	15.97	15.94	15.98	15.91	16.02	16.37	16.10	16.00	15.81
8	15.93	15.87	15.94	15.96	15.94	16.00	15.91	16.03	16.36	16.09	15.98	15.81
9	15.91	15.85	15.93	15.94	15.93	16.04	15.91	16.03	16.37	16.07	15.96	15.80
10	15.94	15.88	15.93	15.96	15.93	16.03	15.93	16.03	16.34	16.07	16.01	15.79
11	15.94	15.91	15.91	15.96	15.93	16.02	15.93	16.02	16.31	16.06	16.02	15.77
12	15.93	15.98	15.87	15.95	15.93	16.02	15.93	16.01	16.27	16.04	16.00	15.76
13	15.94	15.97	15.86	15.95	15.93	16.02	15.95	16.00	16.25	16.02	15.99	15.77
14	15.92	15.95	15.86	15.94	15.92	16.02	16.01	16.00	16.22	16.02	15.98	15.76
15	15.90	15.94	15.86	15.95	15.92	16.00	16.04	16.00	16.19	16.00	15.96	15.75
16	15.87	15.93	15.87	15.95	15.92	16.00	16.04	16.00	16.17	15.99	15.96	15.78
17	15.85	15.93	15.85	15.94	15.91	16.00	16.04	15.99	16.14	15.99	15.96	15.79
18	15.85	15.92	15.85	15.93	15.91	16.00	16.03	15.99	16.12	16.08	15.96	15.87
19	15.85	15.92	15.88	15.93	15.90	16.00	16.02	15.99	16.10	16.08	15.96	15.87
20	15.93	15.95	15.88	15.92	15.90	15.99	16.01	15.98	16.08	16.08	15.94	15.99
21	15.94	15.96	15.87	15.92	15.89	15.98	16.01	15.98	16.07	16.08	15.94	15.99
22	15.93	15.95	15.87	15.91	15.89	15.97	16.00	16.07	16.13	16.07	15.95	15.98
23	15.93	15.94	15.87	15.91	15.89	15.96	16.00	16.07	16.12	16.06	15.93	15.98
24	15.92	15.95	15.89	15.90	15.89	15.96	15.99	16.07	16.10	16.04	15.92	15.97
25	15.91	15.93	15.94	15.89	15.88	15.95	15.99	16.16	16.10	16.02	15.91	15.97
26	15.90	15.93	15.96	15.88	15.88	15.94	15.98	16.21	16.09	16.01	15.90	15.97
27	15.89	15.92	15.95	15.87	15.88	15.94	15.97	16.25	16.06	16.00	15.90	15.96
28	15.91	15.90	16.00	15.87	15.88	15.94	15.96	16.28	16.04	16.02	15.87	15.96
29	15.93	15.91	16.01	15.88	---	15.93	15.96	16.29	16.02	16.02	15.87	15.95
30	15.93	15.91	15.98	15.90	---	15.92	15.95	16.31	16.01	16.00	15.87	15.95
31	15.92	---	15.99	15.90	---	15.92	---	16.33	---	15.98	15.86	---
MEAN	15.90	15.92	15.91	15.93	15.92	15.97	15.97	16.05	16.21	16.05	15.95	15.87
MAX	15.94	15.98	16.01	15.99	15.97	16.04	16.04	16.33	16.38	16.15	16.03	15.99
MIN	15.82	15.85	15.85	15.87	15.88	15.88	15.91	15.92	16.01	15.98	15.86	15.75
CAL YR 1982	MEAN 15.88		MAX 16.26		MIN 15.50							
WTR YR 1983	MEAN 15.97		MAX 16.38		MIN 15.75							

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.95	16.10	16.36	16.31	16.26	16.34	16.25	16.37	16.28	16.21	16.00	15.85
2	15.94	16.10	16.35	16.30	16.26	16.33	16.24	16.38	16.29	16.21	16.00	15.90
3	15.95	16.09	16.34	16.30	16.26	16.33	16.24	16.39	16.30	16.19	16.00	15.91
4	15.95	16.07	16.35	16.29	16.27	16.33	16.24	16.39	16.27	16.19	16.00	15.91
5	15.94	16.07	16.35	16.29	16.26	16.32	16.23	16.39	16.28	16.16	16.00	15.91
6	15.95	16.07	16.35	16.29	16.25	16.33	16.22	16.39	16.28	16.15	16.00	15.90
7	15.99	16.07	16.34	16.29	16.26	16.32	16.22	16.40	16.28	16.11	16.01	15.90
8	16.05	16.07	16.33	16.28	16.27	16.32	16.22	16.41	16.35	16.11	16.05	15.90
9	16.04	16.10	16.33	16.28	16.27	16.30	16.22	16.42	16.34	16.11	16.04	15.90
10	16.03	16.14	16.33	16.27	16.27	16.30	16.21	16.42	16.34	16.12	16.02	15.88
11	16.07	16.13	16.33	16.26	16.27	16.29	16.22	16.43	16.34	16.14	16.01	15.88
12	16.15	16.11	16.35	16.27	16.33	16.29	16.21	16.39	16.35	16.15	15.97	15.92
13	16.16	16.11	16.33	16.27	16.37	16.29	16.23	16.38	16.37	16.13	15.97	15.98
14	16.17	16.11	16.34	16.27	16.37	16.29	16.25	16.38	16.36	16.12	15.97	15.98
15	16.16	16.11	16.35	16.26	16.37	16.32	16.24	16.42	16.34	16.14	15.97	15.95
16	16.17	16.13	16.35	16.26	16.37	16.32	16.24	16.40	16.33	16.12	15.97	15.94
17	16.17	16.13	16.34	16.25	16.37	16.31	16.24	16.41	16.33	16.15	15.95	15.93
18	16.17	16.13	16.33	16.25	16.37	16.32	16.23	16.41	16.34	16.15	15.94	15.92
19	16.16	16.14	16.33	16.25	16.39	16.30	16.21	16.41	16.33	16.14	15.92	15.92
20	16.16	16.19	16.32	16.24	16.39	16.30	16.19	16.39	16.31	16.13	15.89	15.90
21	16.16	16.20	16.33	16.24	16.39	16.32	16.18	16.38	16.30	16.12	15.87	15.88
22	16.15	16.19	16.33	16.25	16.38	16.32	16.17	16.38	16.30	16.11	15.89	15.87
23	16.15	16.30	16.32	16.25	16.37	16.30	16.17	16.37	16.30	16.09	15.89	15.88
24	16.14	16.33	16.32	16.26	16.37	16.30	16.17	16.37	16.27	16.09	15.89	15.94
25	16.14	16.32	16.31	16.24	16.37	16.30	16.17	16.36	16.27	16.06	15.88	15.98
26	16.13	16.31	16.32	16.24	16.35	16.29	16.16	16.33	16.25	16.05	15.86	15.95
27	16.13	16.31	16.32	16.25	16.35	16.29	16.19	16.33	16.27	16.03	15.89	15.95
28	16.13	16.33	16.32	16.25	16.34	16.27	16.19	16.31	16.26	16.02	15.88	15.94
29	16.10	16.35	16.31	16.26	16.34	16.25	16.20	16.30	16.25	16.00	15.87	15.94
30	16.10	16.36	16.31	16.26	---	16.26	16.35	16.28	16.24	15.99	15.87	15.93
31	16.10	---	16.30	16.26	---	16.25	---	16.28	---	15.98	15.84	---
MEAN	16.09	16.17	16.33	16.27	16.33	16.30	16.22	16.38	16.30	16.11	15.95	15.92
MAX	16.17	16.36	16.36	16.31	16.39	16.34	16.35	16.43	16.37	16.21	16.05	15.98
MIN	15.94	16.07	16.30	16.24	16.25	16.25	16.16	16.28	16.24	15.98	15.84	15.85
CAL YR 1983	MEAN	16.04	MAX	16.38	MIN	15.75						
WTR YR 1984	MEAN	16.20	MAX	16.43	MIN	15.84						

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

453100089343003 LAKE CLARA RAIN GAGE NEAR TOMAHAWK, WI

LOCATION.--Lat 45°31'00", long 89°34'30", in NE 1/4 NW 1/4 SE 1/4 sec.14, T.35 N., R.7 E., Lincoln County,
Hydrologic Unit 07070001, at north end of lake, 8.2 mi east of Tomahawk.

PERIOD OF RECORD.--March 1981 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 6.49 in., June 14, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.38 in., Oct. 11.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	.10	.02	.00	.00	.17	.00
2						---	.00	.00	.14	.00	.01	.00
3						---	.86	1.14	.02	.00	.09	.00
4						---	.74	.93	.00	.00	.02	.00
5						---	.10	.19	.00	.00	.00	.00
6						---	.01	.00	.00	.00	.14	.00
7						---	.07	.00	.00	.00	.21	.60
8						---	.00	.00	.14	.00	.00	.01
9						---	.02	.00	.16	.00	.05	.00
10						---	.07	.01	.22	.00	.00	.00
11						---	.00	.00	.12	.00	.00	.00
12						---	.00	.00	.15	.04	.00	.00
13						---	.19	.00	.14	.00	.00	.00
14						---	.01	.00	6.49	.74	.03	.00
15						---	.03	.00	.07	.21	.00	.00
16						---	.04	.00	.00	.01	.00	.00
17						---	.02	.00	.00	.38	.00	.00
18						---	.00	.00	.00	.01	.00	.00
19						---	.08	.00	.13	.00	.00	.00
20						---	.03	.00	.00	.23	.00	.00
21						---	.00	.00	.28	.01	.01	.07
22						---	.45	.02	.87	.00	.00	.01
23						---	.14	.36	.06	.00	.00	.04
24						.00	.00	.51	.06	.00	.00	.01
25						.31	.01	.03	.00	.00	.00	.12
26						.00	.01	.00	.00	.00	.21	.21
27						.00	.26	.00	.00	.00	.01	.00
28						.00	.08	.23	.00	.14	.32	.14
29						.18	.00	.00	1.16	.00	.68	.01
30						.07	.26	.00	.00	.02	.01	1.22
31						.20	---	.00	---	.01	.00	---
TOTAL							3.58	3.44	10.21	1.80	1.96	2.44

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

453100089343003 LAKE CLARA RAIN GAGE NEAR TOMAHAWK, WI--CONTINUED

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21						---	.00	.00	.00	.16	.52
2	.01						---	.00	.00	.00	.00	.20
3	.10						---	.00	.00	.21	.09	.00
4	.40						---	.07	.00	.02	.00	.00
5	.20						---	1.11	.00	.00	.00	.69
6	.17						---	.89	.00	.37	.03	.00
7	.01						---	.00	.00	.03	.00	.00
8	.01						---	.01	.00	.00	.04	.00
9	.00						---	.34	.24	.04	.00	.00
10	.05						---	.28	.10	.86	.00	.15
11	.01						---	.00	.00	.38	.00	.00
12	.00						---	.22	.00	.01	.00	.35
13	.00						---	.23	.00	.00	.00	1.89
14	.36						---	.00	.37	.48	.00	.51
15	.01						---	.01	.02	1.26	.00	.40
16	.00						---	.21	.10	.05	.00	.03
17	.51						---	.18	.07	.65	.00	.41
18	.20						---	.13	.00	.04	.00	.00
19	.02						---	.00	.04	.00	.26	.12
20	.00						---	.02	.06	.00	.00	.08
21	.00						---	.00	.09	.23	.00	.00
22	.00						---	.00	.00	.05	.05	.00
23	---						---	.00	.00	.00	.09	.34
24	---						---	.00	.07	.04	.62	.06
25	---						---	.00	.00	.00	.00	.00
26	---						---	.00	.00	.25	1.15	.00
27	---						---	.00	.00	.00	.06	.01
28	---						---	.00	.00	.33	.00	.00
29	---						---	.00	.00	.34	.44	.42
30	---						---	.00	.00	.00	.01	.04
31	---						---	.11	---	.00	.00	---
TOTAL								3.81	1.83	5.44	3.00	6.22

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00					---	.28	.00	.02	.00	.00
2	.23	.03					---	.01	.21	.00	.01	.00
3	.00	.09					---	.00	.65	.82	1.25	.02
4	.00	.08					---	.00	.07	.02	.00	.51
5	.00	.06					---	.00	.01	.00	.00	.42
6	1.03	---					.00	1.27	.00	.00	.01	.11
7	.00	---					.03	.27	.00	.00	.00	.00
8	.00	---					.01	.00	.28	.00	.00	.01
9	.39	---					.04	.00	.00	.00	.00	.05
10	.02	---					.42	.00	.00	.00	1.15	.09
11	.14	---					.00	.00	.00	.00	.01	.04
12	.02	---					.24	.32	.00	.00	.00	.24
13	.02	---					.65	.05	.00	.00	.00	.07
14	.00	---					.18	.00	.05	.00	.00	.00
15	.00	---					.01	.01	.14	.00	.00	.53
16	.00	---					.00	.00	.00	.00	.11	.08
17	.14	---					.00	.00	.04	1.35	.02	.86
18	.01	---					.00	.10	.00	.01	.00	.06
19	.46	---					.00	.08	.00	.18	.13	1.25
20	.65	---					.00	.42	.00	.00	.00	.67
21	.12	---					.00	.08	.94	.26	.28	.03
22	.15	---					.00	.75	.01	.00	.01	.14
23	.00	---					.00	.02	.00	.00	.00	.00
24	.00	---					.00	.94	.00	.00	.00	.00
25	.00	---					.00	.00	.00	.00	.00	.00
26	.00	---					.00	.00	.00	.56	.00	.00
27	.04	---					.00	.00	.00	.40	.00	.00
28	.01	---					.01	.34	.00	.20	.00	.00
29	.15	---					.00	.25	.00	.01	.00	.00
30	.00	---					.00	.14	1.08	.01	.24	.00
31	.00	---					---	.03	---	.00	.00	---
TOTAL	3.58							5.36	3.48	3.84	3.22	5.18

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

453100089343003 LAKE CLARA RAIN GAGE NEAR TOMAHAWK, WI--CONTINUED

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00						---	.10	.52	.00	.36	.70
2	.22						---	.00	.02	.00	.07	.23
3	.03						---	.00	.00	.03	.00	.16
4	.04						.01	.00	.00	.00	.00	.13
5	.44						.00	.07	.34	.01	.16	.00
6	.00						.00	.00	.01	.00	.00	.01
7	1.33						.00	.44	.69	.00	.88	.04
8	.00						.00	.27	.19	.00	.10	.26
9	.00						.00	.07	.01	.03	.00	.00
10	.00						.01	.01	.26	.60	.00	.00
11	1.38						.00	.10	.11	.00	.00	.00
12	.42						.48	.02	.40	.00	.00	1.19
13	.00						.16	.38	.14	.00	.00	.00
14	.04						.04	.00	.01	.56	.03	.04
15	.18						.00	.00	.08	.00	.02	.00
16	.00						.00	.02	.18	.08	.00	.00
17	.00						.00	.04	.05	.58	.00	.00
18	.00						.00	.00	.01	.00	.00	.00
19	.08						.00	.00	.00	.00	.00	.00
20	.00						.00	.00	.06	.00	.00	.00
21	.01						.00	.00	.00	.00	.61	.00
22	.00						.00	.19	.08	.00	.00	.00
23	.00						.00	.00	.00	.00	.90	.01
24	.00						.00	.01	.00	.00	.00	1.28
25	---						.00	.01	.01	.00	.00	.06
26	---						.08	.00	.54	.00	.17	.00
27	---						.64	.00	.00	.00	.31	.00
28	---						.00	.00	.00	.00	.00	.01
29	---						.90	.00	.00	.00	.11	.00
30	---						1.04	.00	.00	.00	.00	.00
31	---						---	.00	---	.04	.05	---
TOTAL								1.73	3.71	1.93	2.87	4.12

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

453047089334801 WELL LN-35/07E/13-0063

LOCATION.--Lat 45°30'47", long 89°33'48", in NW 1/4 SE 1/4 SW 1/4 sec.13, T.35 N., R.7 E., Lincoln County,
Hydrologic Unit 07070001, 0.25 mi east of Lake Clara, 8.2 mi east of Tomahawk.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augured water-table observation well, diameter 3 in., depth 44 ft, cased to 41 ft,
well screened 41-44 ft.

PERIOD OF RECORD.--November 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,500.00 ft, National Geodetic Vertical Datum of 1929.

RFMARKS.-- Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 13.49 ft, June 30, 1983; minimum observed
water level, 11.50 ft, Apr. 4, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum observed water level, 12.87 ft, June 17; minimum observed water level,
12.19 ft, Sept. 26.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	12.47	12.40	12.34	12.02	11.94	12.07	12.50	12.91	13.25	13.01
2		---	12.48	12.40	12.02	11.97	11.91	12.13	12.52	12.99	13.28	12.96
3		---	12.51	12.39	11.95	12.04	12.03	12.18	12.52	13.04	13.27	12.95
4		---	12.58	12.38	11.94	12.03	11.96	12.11	12.45	13.07	13.22	12.94
5		---	12.57	12.38	12.05	11.99	11.82	12.06	12.54	13.05	13.20	12.93
6		12.70	12.54	12.37	12.00	11.93	11.93	12.09	12.51	13.04	13.28	12.95
7		12.61	12.53	12.36	12.07	11.92	12.05	12.18	12.53	13.06	13.28	13.01
8		12.65	12.54	12.36	11.95	11.94	12.00	12.24	12.59	13.10	13.21	12.94
9		12.58	12.52	12.35	11.95	11.97	11.95	12.18	12.51	13.07	13.19	12.96
10		12.45	12.49	12.34	11.97	11.95	12.02	12.15	12.48	13.10	13.17	12.97
11		12.55	12.51	12.34	11.92	11.95	11.98	12.21	12.46	13.16	13.20	12.91
12		12.67	12.61	12.43	11.85	12.00	12.01	12.21	12.49	13.17	13.22	12.87
13		12.64	12.42	12.34	11.92	11.88	12.04	12.25	12.56	13.15	13.17	12.91
14		12.56	12.49	12.30	11.97	11.95	11.94	12.27	12.56	13.15	13.19	12.87
15		12.58	12.54	12.25	12.03	12.00	11.99	12.28	12.56	13.18	13.18	12.85
16		12.59	12.46	12.20	11.98	11.92	12.15	12.23	12.56	13.20	13.10	12.82
17		12.61	12.59	12.32	11.95	11.97	12.13	12.24	12.57	13.21	13.12	12.81
18		12.61	12.43	12.29	11.95	11.97	11.96	12.31	12.67	13.20	13.14	12.87
19		12.62	12.31	12.31	11.94	11.96	12.04	12.36	12.61	13.22	13.13	12.93
20		12.67	12.39	12.22	11.91	11.94	12.02	12.37	12.71	13.26	13.11	12.84
21		12.55	12.46	12.25	11.95	11.89	12.13	12.37	12.74	13.17	13.10	12.80
22		12.64	12.56	12.27	12.06	11.91	12.17	12.40	12.74	13.16	13.11	12.74
23		12.57	12.47	12.26	12.05	11.94	12.16	12.40	12.67	13.22	13.11	12.76
24		12.51	12.31	12.26	11.95	11.92	12.01	12.42	12.84	13.25	13.05	12.80
25		12.55	12.45	12.32	11.90	11.94	12.04	12.40	12.76	13.25	13.05	12.82
26		12.59	12.44	12.22	11.95	11.98	12.08	12.37	12.76	13.21	13.08	12.86
27		12.63	12.44	12.15	12.11	11.87	12.08	12.40	12.87	13.21	13.04	12.78
28		12.68	12.43	12.17	12.06	12.02	12.13	12.46	12.98	13.27	13.02	12.67
29		12.58	12.42	12.08	---	12.03	12.12	12.51	12.91	13.25	13.06	12.75
30		12.58	12.42	12.15	---	11.95	12.09	12.41	12.82	13.24	13.03	12.78
31		---	12.41	12.29	---	11.93	---	12.42	---	13.24	13.03	---
MEAN		---	12.48	12.30	11.99	11.96	12.03	12.28	12.63	13.15	13.15	12.87
MAX		---	12.61	12.43	12.34	12.04	12.17	12.51	12.98	13.27	13.28	13.01
MIN		---	12.31	12.08	11.85	11.87	11.82	12.06	12.45	12.91	13.02	12.67

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

453047089334801 WELL LN-35/07E/13-0063--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.80	12.50	12.52	12.13	11.95	11.86	11.60	11.97	12.38	12.44	12.34	12.17
2	12.65	12.51	12.36	12.20	11.95	11.81	11.73	11.98	12.34	12.48	12.31	12.16
3	12.73	12.53	12.32	12.16	11.93	11.79	11.76	12.00	12.36	12.49	12.33	12.11
4	12.79	12.54	12.29	12.20	11.92	11.85	11.56	12.03	12.42	12.43	12.28	12.11
5	12.72	12.57	12.32	12.15	11.96	11.77	11.66	12.03	12.43	12.44	12.25	12.14
6	12.71	12.51	12.41	12.11	11.98	11.79	11.68	12.05	12.45	12.45	12.26	12.08
7	12.63	12.54	12.38	12.08	11.97	11.76	11.72	12.04	12.48	12.43	12.30	12.12
8	12.66	12.48	12.27	12.16	11.91	11.77	11.78	12.02	12.43	12.37	12.32	12.16
9	12.67	12.44	12.27	12.13	11.93	11.74	11.80	12.04	12.48	12.42	12.27	12.17
10	12.65	12.57	12.31	12.15	11.93	11.82	11.78	12.11	12.47	12.45	12.22	12.19
11	12.61	12.46	12.32	12.13	11.90	11.76	11.76	12.10	12.45	12.44	12.22	12.18
12	12.63	12.48	12.31	12.06	11.86	11.80	11.83	12.08	12.49	12.36	12.23	12.15
13	12.66	12.50	12.30	12.11	11.92	11.78	11.76	12.12	12.47	12.36	12.25	12.15
14	12.67	12.51	12.31	12.12	11.96	11.65	11.74	12.13	12.48	12.38	12.23	12.13
15	12.60	12.51	12.29	12.11	11.90	11.73	11.81	12.14	12.51	12.39	12.21	12.16
16	12.62	12.49	12.27	12.03	11.84	11.77	11.82	12.15	12.45	12.41	12.19	12.17
17	12.76	12.44	12.25	12.07	11.88	11.69	11.79	12.18	12.49	12.42	12.18	12.22
18	12.62	12.46	12.24	12.05	11.88	11.69	11.79	12.24	12.45	12.39	12.20	12.18
19	12.58	12.46	12.25	12.03	11.89	11.71	11.83	12.22	12.49	12.36	12.21	12.21
20	12.59	12.45	12.31	12.00	11.91	11.75	11.83	12.19	12.53	12.37	12.16	12.17
21	12.51	12.42	12.34	12.01	11.83	11.72	11.80	12.22	12.48	12.37	12.15	12.15
22	12.61	12.43	12.24	12.11	11.86	11.68	11.83	12.25	12.43	12.37	12.22	12.18
23	12.57	12.44	12.22	12.15	11.81	11.71	11.90	12.27	12.45	12.36	12.16	12.23
24	12.64	12.40	12.20	11.95	11.82	11.71	11.93	12.28	12.50	12.39	12.14	12.20
25	12.58	12.44	12.20	11.96	11.79	11.70	11.92	12.31	12.47	12.38	12.14	12.15
26	12.56	12.49	12.25	11.98	11.83	11.70	11.88	12.33	12.46	12.34	12.14	12.19
27	12.56	12.35	12.25	12.09	11.83	11.70	11.88	12.34	12.49	12.36	12.11	12.20
28	12.52	12.33	12.16	11.94	11.84	11.69	11.91	12.34	12.50	12.35	12.08	12.19
29	12.56	12.38	12.14	11.96	---	11.69	11.95	12.35	12.46	12.36	12.15	12.19
30	12.55	12.42	12.19	11.98	---	11.76	11.97	12.35	12.42	12.36	12.14	12.18
31	12.50	---	12.27	11.96	---	11.66	---	12.39	---	12.33	12.12	---
MEAN	12.63	12.47	12.28	12.07	11.89	11.74	11.80	12.17	12.46	12.40	12.21	12.17
MAX	12.80	12.57	12.52	12.20	11.98	11.86	11.97	12.39	12.53	12.49	12.34	12.23
MIN	12.50	12.33	12.14	11.94	11.79	11.65	11.56	11.97	12.34	12.33	12.08	12.08
CAL YR 1981	MEAN 12.48			MAX 13.28	MIN 11.82							
WTR YR 1982	MEAN 12.19			MAX 12.80	MIN 11.56							

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.18	12.32	12.44	12.56	12.44	12.34	12.68	12.97	13.20	13.46	13.28	12.97
2	12.23	12.34	12.46	12.51	12.56	12.33	12.68	13.07	13.22	13.41	13.24	12.98
3	12.20	12.33	12.48	12.54	12.51	12.34	12.70	12.99	13.28	13.48	13.29	12.98
4	12.18	12.33	12.44	12.61	12.38	12.31	12.62	13.00	13.29	13.46	13.24	12.98
5	12.19	12.31	12.54	12.57	12.41	12.29	12.61	12.97	13.26	13.34	13.22	12.98
6	12.22	12.31	12.48	12.63	12.44	12.36	12.69	13.02	13.30	13.36	13.23	12.96
7	12.25	12.36	12.37	12.54	12.44	12.41	12.72	13.04	13.31	13.41	13.23	12.90
8	12.20	12.29	12.40	12.50	12.42	12.40	12.67	12.96	13.30	13.44	13.24	12.89
9	12.23	12.28	12.50	12.59	12.38	12.39	12.73	13.02	13.31	13.42	13.18	12.94
10	12.25	12.40	12.61	12.65	12.40	12.41	12.79	13.07	13.27	13.43	13.23	12.92
11	12.23	12.43	12.47	12.54	12.39	12.45	12.70	13.09	13.31	13.46	13.19	12.88
12	12.21	12.41	12.50	12.50	12.39	12.54	12.69	13.11	13.34	13.40	13.15	12.86
13	12.22	12.40	12.58	12.54	12.44	12.60	12.81	13.13	13.35	13.39	13.17	12.83
14	12.29	12.34	12.53	12.56	12.44	12.58	12.84	13.13	13.38	13.41	13.16	12.84
15	12.25	12.37	12.47	12.48	12.38	12.51	12.69	13.11	13.38	13.41	13.15	12.87
16	12.19	12.41	12.44	12.58	12.41	12.52	12.67	13.11	13.34	13.41	13.15	12.90
17	12.24	12.37	12.54	12.52	12.36	12.57	12.72	13.12	13.32	13.39	13.16	12.86
18	12.29	12.37	12.63	12.47	12.38	12.61	12.78	13.15	13.35	13.37	13.12	12.88
19	12.27	12.42	12.52	12.49	12.38	12.61	12.82	13.25	13.37	13.37	13.12	12.82
20	12.29	12.46	12.48	12.50	12.33	12.59	12.82	13.17	13.38	13.38	13.07	12.85
21	12.16	12.34	12.47	12.52	12.32	12.62	12.84	13.18	13.38	13.38	13.09	12.83
22	12.23	12.38	12.53	12.57	12.39	12.59	12.84	13.25	13.39	13.36	13.07	12.81
23	12.26	12.43	12.56	12.58	12.38	12.57	12.84	13.20	13.38	13.38	13.03	12.78
24	12.28	12.40	12.51	12.53	12.34	12.59	12.86	13.19	13.39	13.34	13.02	12.80
25	12.29	12.43	12.54	12.47	12.31	12.62	12.92	13.18	13.44	13.32	13.03	12.83
26	12.29	12.42	12.45	12.45	12.33	12.63	12.94	13.20	13.46	13.32	13.04	12.80
27	12.32	12.41	12.55	12.48	12.36	12.71	12.90	13.23	13.40	13.34	13.03	12.79
28	12.36	12.56	12.67	12.55	12.35	12.63	12.88	13.23	13.40	13.34	13.01	12.78
29	12.36	12.52	12.45	12.52	---	12.57	12.92	13.28	13.42	13.30	13.01	12.77
30	12.28	12.44	12.48	12.49	---	12.66	12.92	13.27	13.49	13.27	13.00	12.77
31	12.28	---	12.57	12.41	---	12.71	---	13.23	---	13.31	12.97	---
MEAN	12.25	12.38	12.51	12.53	12.40	12.52	12.78	13.13	13.35	13.38	13.13	12.87
MAX	12.36	12.56	12.67	12.65	12.56	12.71	12.94	13.28	13.49	13.48	13.29	12.98
MIN	12.16	12.20	12.37	12.41	12.31	12.29	12.61	12.96	13.20	13.27	12.97	12.77
CAL YR 1982	MEAN 12.17			MAX 12.67	MIN 11.56							
WTR YR 1983	MEAN 12.77			MAX 13.49	MIN 12.16							

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

453047089334801 WELL LN-35/07E/13-0063--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.79	12.73	12.66	12.68	12.59	12.49	12.37	12.46	12.81	12.75	12.53	12.31
2	12.81	12.73	12.71	12.71	12.63	12.46	12.37	12.47	12.79	12.75	12.51	12.32
3	12.81	12.67	12.70	12.81	12.63	12.44	12.36	12.54	12.76	12.77	12.50	12.29
4	12.75	12.69	12.76	12.78	12.57	12.47	12.39	12.55	12.78	12.75	12.50	12.29
5	12.74	12.74	12.73	12.79	12.53	12.52	12.40	12.54	12.82	12.74	12.50	12.28
6	12.70	12.76	12.73	12.73	12.50	12.45	12.40	12.52	12.80	12.72	12.50	12.31
7	12.72	12.74	12.73	12.69	12.49	12.42	12.36	12.59	12.80	12.68	12.49	12.37
8	12.67	12.72	12.72	12.67	12.52	12.41	12.36	12.59	12.85	12.69	12.49	12.33
9	12.65	12.69	12.70	12.65	12.56	12.42	12.38	12.58	12.76	12.72	12.48	12.31
10	12.74	12.69	12.68	12.64	12.55	12.48	12.39	12.58	12.80	12.70	12.44	12.29
11	12.80	12.68	12.73	12.67	12.52	12.43	12.42	12.63	12.74	12.68	12.42	12.28
12	12.77	12.68	12.77	12.65	12.53	12.41	12.47	12.58	12.82	12.66	12.42	12.29
13	12.76	12.72	12.75	12.66	12.56	12.43	12.49	12.59	12.81	12.66	12.43	12.31
14	12.75	12.74	12.81	12.61	12.51	12.41	12.42	12.58	12.77	12.65	12.43	12.26
15	12.69	12.69	12.79	12.68	12.46	12.46	12.41	12.59	12.78	12.65	12.43	12.25
16	12.74	12.66	12.68	12.78	12.49	12.36	12.43	12.63	12.82	12.64	12.41	12.25
17	12.71	12.67	12.65	12.69	12.52	12.38	12.46	12.70	12.87	12.66	12.41	12.27
18	12.71	12.71	12.66	12.66	12.51	12.41	12.45	12.72	12.84	12.61	12.42	12.29
19	12.69	12.71	12.67	12.67	12.54	12.43	12.43	12.72	12.78	12.60	12.38	12.30
20	12.70	12.82	12.69	12.62	12.50	12.49	12.42	12.71	12.77	12.60	12.38	12.30
21	12.72	12.70	12.78	12.66	12.50	12.49	12.41	12.72	12.78	12.58	12.39	12.26
22	12.77	12.61	12.82	12.65	12.54	12.41	12.50	12.74	12.81	12.59	12.37	12.27
23	12.77	12.77	12.75	12.66	12.53	12.32	12.56	12.69	12.82	12.59	12.34	12.24
24	12.75	12.73	12.73	12.72	12.49	12.37	12.53	12.75	12.80	12.55	12.35	12.26
25	12.74	12.68	12.73	12.66	12.46	12.37	12.48	12.80	12.78	12.55	12.35	12.27
26	12.77	12.64	12.78	12.62	12.43	12.38	12.48	12.71	12.83	12.57	12.37	12.19
27	12.78	12.63	12.76	12.60	12.45	12.39	12.51	12.68	12.84	12.55	12.39	12.22
28	12.77	12.81	12.75	12.70	12.48	12.37	12.47	12.69	12.76	12.52	12.37	12.24
29	12.62	12.81	12.69	12.64	12.49	12.36	12.44	12.73	12.73	12.52	12.35	12.24
30	12.68	12.69	12.69	12.57	---	12.34	12.63	12.78	12.73	12.53	12.33	12.25
31	12.72	---	12.70	12.57	---	12.34	---	12.81	---	12.54	12.31	---
MEAN	12.74	12.71	12.73	12.67	12.52	12.42	12.44	12.64	12.80	12.64	12.42	12.28
MAX	12.81	12.82	12.82	12.81	12.63	12.52	12.63	12.81	12.87	12.77	12.53	12.37
MIN	12.62	12.61	12.65	12.57	12.43	12.32	12.36	12.46	12.73	12.52	12.31	12.19
CAL YR 1983	MEAN	12.86	MAX	13.49	MIN	12.29						
WTR YR 1984	MEAN	12.58	MAX	12.87	MIN	12.19						

ACID DEPOSITION RECORDS
LAKE CLARA
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
QUALITY OF SURFACE WATER

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ACIDITY (MG/L AS H) (71825)
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453046089342804 - LAKE CLARA TRIBUTARY NEAR TOMAHAWK, WI (LAT 45 30 46 LONG 089 34 28)

APR , 1984								
02...	1320	--	35	6.3	--	--	--	<.1
MAY								
01...	1434	--	36	6.3	5.0	5.0	--	.2

453023089335505 - LAKE CLARA OUTLET NEAR TOMAHAWK, WI (LAT 45 30 23 LONG 089 33 55)

OCT , 1983								
04...	1335	--	34	5.7	--	14.0	--	<.1
APR , 1984								
03...	1443	--	38	5.5	--	--	--	<.1

453100089343002 - LAKE CLARA NEAR TOMAHAWK, WI (LAT 45 31 00 LONG 089 34 30)

OCT , 1983								
04...	0940	3.00	31	6.5	11.5	16.5	8.6	<.1
04...	1000	30.0	34	5.9	11.5	12.0	.2	<.1
NOV								
08...	1540	3.00	35	6.3	6.5	8.0	9.8	<.1
08...	1550	29.0	35	6.3	6.5	8.0	9.8	<.1
JAN , 1984								
09...	1015	3.00	37	6.2	-5.5	2.0	12.2	.1
09...	1025	26.0	38	5.8	-5.5	4.5	3.1	.1
MAR								
05...	1130	3.00	40	6.1	-1.5	3.0	10.7	.1
05...	1140	24.0	38	5.7	-1.5	4.5	2.5	.1
APR								
03...	1245	3.00	34	6.0	--	3.5	9.2	<.1
03...	1255	27.0	36	5.8	--	4.5	1.6	<.1
MAY								
01...	1315	3.00	33	6.4	5.0	7.5	11.7	<.1
01...	1330	27.0	33	6.4	5.0	7.5	11.3	<.1
JUN								
04...	1000	3.00	33	6.5	24.0	18.5	9.3	<.1
04...	1015	30.0	34	5.7	24.0	9.5	1.4	.1
JUL								
02...	1040	3.00	33	6.3	26.0	22.5	8.4	<.1
02...	1050	30.0	35	5.8	26.0	10.0	.2	<.1
AUG								
06...	1000	3.00	33	6.3	27.0	24.0	8.4	<.1
06...	1010	30.0	35	5.7	27.0	9.5	.3	.1
SEP								
04...	1040	3.00	33	6.3	15.5	20.0	8.0	.1
04...	1055	28.0	34	6.0	15.5	13.5	.1	<.1

ACID DEPOSITION RECORDS

LAKE CLARA

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

QUALITY OF SURFACE WATER

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
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453046089342804 - LAKE CLARA TRIBUTARY NEAR TOMAHAWK, WI (LAT 45 30 46 LONG 089 34 28)

APR , 1984									
02...	2.9	.73	1.6	.73	7.0	7.2	1.0	<.01	4.3
MAY									
01...	3.3	.73	1.3	.78	6.0	8.1	.50	.02	5.9

453023089335505 - LAKE CLARA OUTLET NEAR TOMAHAWK, WI (LAT 45 30 23 LONG 089 33 55)

OCT , 1983									
04...	2.2	.74	2.6	.78	9.0	3.6	4.8	<.01	.70
APR , 1984									
03...	2.0	.58	2.6	.80	5.0	4.5	4.2	.05	.10

453100089343002 - LAKE CLARA NEAR TOMAHAWK, WI (LAT 45 31 00 LONG 089 34 30)

OCT , 1983									
04...	2.0	.56	2.7	.70	7.0	4.2	5.6	<.01	.09
04...	2.4	.64	2.7	.73	9.0	3.9	5.5	<.01	.40
NOV									
08...	1.8	.48	2.8	.62	6.0	4.4	5.5	.02	.01
08...	1.8	.51	2.9	.63	7.0	4.5	5.5	<.01	.02
JAN , 1984									
09...	1.9	.59	2.7	.77	7.0	5.0	5.9	<.01	<.01
09...	2.0	.61	2.5	.74	7.0	4.3	5.8	<.01	.30
MAR									
05...	2.1	.62	2.8	.72	3.0	5.2	6.5	.06	<.01
05...	2.0	.58	2.5	.74	4.0	4.5	5.8	.11	.40
APR									
03...	1.9	.61	2.6	.78	3.0	4.8	4.3	<.01	.05
03...	2.3	.69	2.5	.79	4.0	4.6	4.3	<.01	<.01
MAY									
01...	1.8	.54	2.4	.72	3.0	4.3	4.3	.03	.20
01...	1.8	.57	2.4	.60	4.0	4.3	4.3	.04	.20
JUN									
04...	1.7	.54	2.4	.76	3.0	4.7	4.7	.03	.01
04...	1.8	.58	2.4	.75	3.0	4.4	4.4	.02	.20
JUL									
02...	1.6	.53	4.2	.71	3.0	4.7	4.5	.04	.20
02...	2.3	.64	6.0	.29	6.0	3.6	4.4	.05	.40
AUG									
06...	1.8	.57	2.5	.77	3.0	4.6	4.5	.04	.04
06...	2.1	.59	2.5	.75	5.0	3.8	4.3	<.01	.10
SEP									
04...	1.8	.55	2.7	.63	4.0	4.6	4.5	.05	.10
04...	2.0	.59	2.8	.58	4.0	4.5	4.5	.04	.10

ACID DEPOSITION RECORDS

LAKE CLARA

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

QUALITY OF SURFACE WATER

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) (00618)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) (00608)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L) (00671)	ALUM- INUM, DIS- SOLVED (UG/L) (01106)	IRON, DIS- SOLVED (UG/L) (01046)	MANGA- NESE, DIS- SOLVED (UG/L) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L) (00681)
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453046089342804 - LAKE CLARA TRIBUTARY NEAR TOMAHAWK, WI (LAT 45 30 46 LONG 089 34 28)

APR , 1984								
02...	23	<.05	.092	.036	70	26	10	5.9
MAY								
01...	24	<.05	.107	.009	70	26	3	5.7

453023089335505 - LAKE CLARA OUTLET NEAR TOMAHAWK, WI (LAT 45 30 23 LONG 089 33 55)

OCT , 1983								
04...	21	<.05	.055	.002	50	290	32	11
APR , 1984								
03...	18	<.05	.169	.035	20	88	24	4.4

453100089343002 - LAKE CLARA NEAR TOMAHAWK, WI (LAT 45 31 00 LONG 089 34 30)

OCT , 1983								
04...	20	<.05	.032	.001	<10	42	<1	4.4
04...	22	<.05	.009	.001	<10	490	120	3.7
NOV								
08...	20	.25	.008	.007	<10	26	7	4.1
08...	20	<.05	.014	.008	<10	26	7	4.3
JAN , 1984								
09...	--	<.05	.151	.002	10	22	7	4.9
09...	21	<.05	.368	.020	10	58	46	4.1
MAR								
05...	--	.10	.038	.001	<10	19	7	3.9
05...	19	.35	.041	<.001	10	44	54	4.8
APR								
03...	17	.07	.054	.047	30	31	16	4.0
03...	--	.08	.060	.008	50	14	5	4.1
MAY								
01...	16	<.05	.195	.018	<10	23	14	3.3
01...	17	<.05	.122	.008	<10	20	14	3.5
JUN								
04...	17	.46	.130	.006	40	17	4	4.2
04...	17	<.05	.061	<.060	70	36	43	4.1
JUL								
02...	18	<.05	.063	<.001	<10	11	<1	4.2
02...	22	<.05	.070	<.001	<10	97	110	6.4
AUG								
06...	17	<.05	.022	.011	<10	7	2	3.9
06...	17	<.05	.019	.010	20	23	110	3.5
SEP								
04...	18	<.05	.056	.026	<10	16	5	5.1
04...	18	<.05	<.001	.066	10	39	31	6.5

ACID DEPOSITION RECORDS

LAKE CLARA

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

QUALITY OF PRECIPITATION

DATE	PRECIP- ITATION DAILY (IN) (00045)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	ACIDITY (MG/L AS H) (71825)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
453048089343303 - LAKE CLARA BULK PRECIP COLL NR TOMAHAWK, WI (LAT 45 30 48 LONG 089 34 33)										
1983										
SEP 29 - OCT 28	4.25	14	4.7	<.1	.44	.10	.30	.05	4.0	2.2
OCT 28 - NOV 29	4.74	17	4.6	.1	.15	.01	<.20	.06	4.0	1.3
NOV 29 - DEC 31	1.65	16	4.5	.1	.10	.06	<.20	.03	<1.0	.7
1984										
JAN 01 - JAN 31	.76	18	4.5	.1	.33	.06	.30	.09	4.0	1.0
JAN 31 - MAR 01	1.89	27	4.3	.1	.32	.04	.30	.04	<1.0	2.5
MAR 01 - APR 02	1.64	34	4.2	.1	.49	.06	<.20	.04	<1.0	3.1
APR 02 - MAY 01	3.61	10	5.3	.1	.66	.08	<.20	.10	2.0	1.8
MAY 01 - JUN 01	1.28	25	6.2	<.1	1.2	.31	1.1	.73	5.0	4.3
** JUN 01 - JUL 02	3.44	21	6.5	.1	.71	.19	2.3	.39	3.0	3.8
** JUN 01 - JUL 02	3.44	21	6.4	.1	.71	.14	2.2	.36	3.0	3.8
JUL 02 - AUG 06	2.46	17	4.7	.1	.79	.13	.40	.15	2.0	3.1
AUG 06 - SEP 04	3.44	22	4.4	.1	.51	.08	.30	.12	1.0	3.1
SEP 04 - OCT 08	4.24	14	4.8	.2	.69	.09	.30	.10	1.0	2.4

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
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453048089343303 - LAKE CLARA BULK PRECIP COLL NR TOMAHAWK, WI (LAT 45 30 48 LONG 089 34 33)

1983										
SEP 29 - OCT 28	<.20	<.01	.0	.40	.421	<.001	<10	6	3	1.8
OCT 28 - NOV 29	<.20	<.01	<.0	.51	.371	.058	10	7	2	1.9
NOV 29 - DEC 31	<.20	<.01	<.0	.35	.164	.005	20	<3	<1	3.2
1984										
JAN 01 - JAN 31	<.20	<.01	<.0	.53	.171	.003	40	28	3	2.9
JAN 31 - MAR 01	.25	<.01	<.0	.37	.297	<.001	<10	15	2	2.4
MAR 01 - APR 02	<.20	<.01	<.0	.53	.336	.050	40	23	6	2.2
APR 02 - MAY 01	<.20	<.01	.0	.28	.303	<.001	10	5	11	1.6
MAY 01 - JUN 01	.20	<.01	.6	.66	5.30	.086	<10	4	1	4.6
** JUN 01 - JUL 02	.21	.02	.2	.58	1.60	.121	<10	8	2	8.4
** JUN 01 - JUL 02	.23	<.01	.2	.59	1.60	.118	<10	7	2	3.1
JUL 02 - AUG 06	<.20	<.01	.0	.48	.545	<.001	20	8	9	2.0
AUG 06 - SEP 04	<.20	.02	.0	.47	.634	.052	<10	9	7	2.0
SEP 04 - OCT 08	.12	.02	.0	.32	.303	<.010	10	7	7	1.5

** SAMPLES WITH THE SAME DATES ARE REPLICATES.

ACID DEPOSITION RECORDS

LAKE CLARA

WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

QUALITY OF GROUND WATER

STATION	NUMBER	LOCAL IDENT- I- FIER	HYDRO- LOGIC UNIT CODE	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- AR UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	ACIDITY (MG/L AS H) (71825)		
LINCOLN												
453026089335720		LN-35/07E/24-0082	07070001	110QRNR	83-10-04	21.00	47	5.5	9.0	<.1		
			07070001	110QRNR	83-11-15	21.00	51	5.6	8.0	.2		
			07070001	110QRNR	84-01-09**	21.00	49	5.5	8.0	.1		
453036089341520		LN-35/07E/23-0067	07070001	110QRNR	84-01-09**	21.00	49	5.5	8.0	.1		
			07070001	110QRNR	83-10-04	17.00	34	6.0	10.5	<.1		
			07070001	110QRNR	83-11-15	17.00	38	5.9	9.5	<.1		
453047089340421		LN-35/07E/13-0064	07070001	110QRNR	84-01-09	17.00	38	5.8	6.0	.1		
			07070001	110QRNR	83-10-04**	11.00	49	6.0	12.5	<.1		
			07070001	110QRNR	83-10-04**	11.00	51	6.0	12.5	<.1		
			07070001	110QRNR	83-11-15**	11.00	54	5.9	10.5	.1		
			07070001	110QRNR	83-11-15**	11.00	52	5.9	10.5	.1		
			07070001	110QRNR	84-01-09	11.00	50	6.0	6.0	.1		
			07070001	110QRNR	84-03-05	11.00	51	5.8	5.5	.1		
			07070001	110QRNR	84-04-03	11.00	49	5.9	5.5	<.1		
			07070001	110QRNR	84-05-01	11.00	52	5.9	5.0	.3		
			07070001	110QRNR	84-06-04	11.00	54	5.8	8.5	<.1		
			07070001	110QRNR	84-07-02	11.00	56	5.8	11.0	.1		
			07070001	110QRNR	84-08-06	11.00	54	5.6	12.5	.3		
453047089340423		LN-35/07E/13-0091	07070001	110QRNR	84-09-04	11.00	52	5.7	12.5	.2		
			07070001	110QRNR	83-10-04	33.00	63	5.8	10.0	.1		
			07070001	110QRNR	83-11-15	33.00	71	5.8	9.0	.2		
453055089343120		LN-35/07E/14-0066	07070001	110QRNR	84-01-09	33.00	67	5.7	8.0	.1		
			07070001	110QRNR	83-10-04	13.00	151	6.0	8.5	<.1		
			07070001	110QRNR	83-11-15	13.00	166	6.2	10.5	.1		
			07070001	110QRNR	84-01-09	13.00	148	6.2	6.5	.1		
			07070001	110QRNR	84-03-05	13.00	149	5.8	5.0	.1		
			07070001	110QRNR	84-04-03	13.00	141	5.9	5.0	<.1		
			07070001	110QRNR	84-05-01	13.00	157	6.0	5.0	.3		
			07070001	110QRNR	84-06-04	13.00	144	5.9	9.5	<.1		
			07070001	110QRNR	84-07-02	13.00	149	5.8	12.5	.1		
			07070001	110QRNR	84-08-06	13.00	143	5.7	13.0	<.1		
			07070001	110QRNR	84-09-04	13.00	146	5.9	13.5	.2		
STATION	NUMBER	DATE OF SAMPLE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SI02) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
LINCOLN												
453026089335720		83-10-04	2.0	.47	1.3	.70	19	.2	2.3	<.01	8.6	32
		83-11-15	2.0	.44	1.2	.59	20	<.2	2.2	<.01	8.4	--
		84-01-09**	2.0	.48	1.3	.60	18	<.2	2.5	<.01	8.3	--
		84-01-09**	2.0	.51	1.7	.62	19	<.2	2.5	<.01	8.2	--
453036089341520		83-10-04	2.0	.67	2.5	.88	8.0	3.9	5.6	<.01	.6	21
		83-11-15	2.1	.61	2.4	.80	4.0	4.4	5.7	<.01	.5	19
		84-01-09	2.2	.69	2.5	.73	8.0	5.0	5.9	<.01	.4	23
453047089340421		83-10-04**	3.2	1.2	2.9	1.3	16	.5	6.0	<.01	2.1	29
		83-10-04**	3.3	1.3	2.9	1.3	16	<.2	5.9	<.01	2.1	--
		83-11-15**	3.3	1.1	2.7	1.2	18	.5	5.5	<.01	2.0	29
		83-11-15**	3.2	1.2	2.7	1.2	17	.8	5.4	<.01	2.0	28
		84-01-09	3.3	1.2	2.8	.92	16	<.2	5.6	<.01	1.9	--
		84-03-05	3.3	1.2	2.6	.94	15	<.2	5.5	.04	1.8	--
		84-04-03	3.2	1.1	2.6	.98	15	.2	3.7	<.01	1.7	24
		84-05-01	3.4	1.1	2.6	.99	16	.2	3.4	.02	1.7	25
		84-06-04	3.6	1.3	3.0	1.2	17	.6	3.9	.02	1.9	28
		84-07-02	3.8	1.3	3.8	1.2	18	<.2	4.1	.06	2.1	--
		84-08-06	3.6	1.2	3.2	1.2	17	<.2	4.1	<.01	2.1	--
		84-09-04	3.4	1.2	3.0	1.3	16	.5	3.9	.03	2.1	27
453047089340423		83-10-04	3.8	.85	2.4	.39	8.0	3.3	9.0	<.01	12	43
		83-11-15	3.8	.85	2.3	.37	8.0	3.7	11	<.01	12	45
		84-01-09	3.9	.85	2.5	.34	8.0	3.1	8.4	<.01	12	44
453055089343120		83-10-04	12	2.8	11	1.2	18	14	30	.12	19	100
		83-11-15	12	2.7	10	1.1	18	13	27	<.01	18	96
		84-01-09	11	2.7	9.2	.91	18	14	22	.08	16	88
		84-03-05	11	2.7	9.7	.94	17	14	22	.08	16	86
		84-04-03	11	2.6	9.2	.85	17	15	20	<.01	16	85
		84-05-01	11	2.5	9.0	.81	17	16	20	.08	15	84
		84-06-04	11	2.6	9.9	1.1	17	16	21	.05	16	89
		84-07-02	11	2.6	11	.98	17	16	21	.09	17	89
		84-08-06	11	2.5	11	1.2	16	16	21	<.01	18	91
		84-09-04	10	2.4	11	1.3	16	16	24	.10	18	92

** SAMPLES WITH THE SAME DATES ARE REPLICATES.

ACID DEPOSITION RECORDS
LAKE CLARA
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
QUALITY OF GROUND WATER

STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	
LINCOLN										
453026089335720	83-10-04	<.05	3.40	<.001	100	650	16	11		
	83-11-15	<.05	3.40	.019	90	590	16	8.1		
	84-01-09**	<.05	2.30	.040	90	580	15	6.7		
	84-01-09**	<.05	1.90	.035	80	590	15	6.0		
453036089341520	83-10-04	.08	.026	<.001	30	180	11	2.5		
	83-11-15	<.05	.041	<.001	40	180	12	5.3		
	84-01-09	<.05	.146	.003	30	190	12	3.0		
	83-10-04**	<.05	.375	<.001	110	1200	62	4.7		
453047089340421	83-10-04**	<.05	.391	<.001	110	1200	62	4.8		
	83-11-15**	<.05	.371	.007	100	1200	65	5.5		
	83-11-15**	<.05	.358	.002	90	1100	63	5.4		
	84-01-09	<.05	.499	.010	500	1300	66	4.9		
	84-03-05	<.05	.298	.003	90	1300	69	3.2		
	84-04-03	<.05	.285	.017	90	1300	69	5.7		
	84-05-01	<.05	.323	.005	70	1300	69	3.7		
	84-06-04	.06	.349	.003	140	1400	77	6.9		
	84-07-02	<.05	.382	.003	<10	1500	81	4.2		
	84-08-06	.07	.404	.007	90	1300	72	4.8		
	84-09-04	.08	.367	.122	100	1300	71	4.1		
	83-10-04	<.05	.086	<.001	200	6500	42	4.1		
453047089340423	83-11-15	<.05	.182	.019	10	6600	44	4.5		
	84-01-09	<.05	.287	.052	600	6500	44	3.9		
	83-10-04	.32	.004	.008	<10	29	<1	2.2		
	83-11-15	.27	.064	.027	20	10	1	4.6		
	84-01-09	.25	--	<.060	<10	8	1	--		
	84-03-05	.18	<.001	<.001	<10	18	<1	1.4		
	84-04-03	.17	<.001	.007	20	14	<1	1.7		
	84-05-01	.16	.032	.008	<10	9	2	2.2		
	84-06-04	.20	.061	.001	<10	5	1	5.9		
	84-07-02	.08	.047	<.060	<10	7	2	9.9		
	84-08-06	.22	.015	.007	10	5	<1	1.7		
	84-09-04	.20	<.001	.013	<10	5	<1	1.3		

** SAMPLES WITH THE SAME DATES ARE REPLICATES.

ACID DEPOSITION RECORDS

STAGE RECORDS

455909089405602 VANDERCOOK LAKE NEAR WOODRUFF, WI

LOCATION.--Lat 45°59'09", long 89°40'56", in SW 1/4 NE 1/4 SE 1/4 sec.36, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07070001, at north end of lake on dirt road off County Trunk Highway M, 6.1 mi north of Woodruff.

DRAINAGE AREA.--1.11 mi². Area of lake, 0.17 mi².

PERIOD OF RECORD.--November 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,600.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lakes does not have surface inlet or outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 32.07 ft, Feb. 22, 1984; minimum observed gage height, 30.74 ft, Sept. 28 and 29, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 32.07 ft, Feb. 22; minimum observed gage height, 31.44 ft, July 31.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	31.21	31.16	31.05	31.14	31.12	31.18	31.12	31.42	31.17	30.98
2		---	31.19	31.16	31.05	31.13	31.13	31.17	31.11	31.43	31.17	30.96
3		---	31.19	31.14	31.04	31.13	31.13	31.19	31.12	31.47	31.18	30.95
4		---	31.20	31.14	31.04	31.13	31.27	31.26	31.11	31.46	31.22	30.94
5		31.22	31.20	31.12	31.04	31.13	31.28	31.35	31.11	31.44	31.20	30.92
6		31.23	31.20	31.13	31.04	31.13	31.27	31.33	31.09	31.43	31.20	30.91
7		31.23	31.20	31.12	31.04	31.12	31.27	31.32	31.07	31.42	31.23	30.93
8		31.24	31.20	31.11	31.05	31.12	31.27	31.31	31.06	31.41	31.22	30.93
9		31.26	31.20	31.10	31.04	31.12	31.26	31.29	31.04	31.42	31.21	30.92
10		31.25	31.20	31.10	31.05	31.12	31.27	31.28	31.04	31.40	31.20	30.91
11		31.24	31.20	31.09	31.05	31.12	31.26	31.26	31.04	31.39	31.19	30.91
12		31.25	31.20	31.08	31.05	31.12	31.26	31.25	31.04	31.38	31.18	30.90
13		31.27	31.20	31.09	31.04	31.11	31.25	31.24	31.05	31.37	31.17	30.89
14		31.27	31.20	31.09	31.05	31.11	31.25	31.23	31.33	31.36	31.16	30.87
15		31.27	31.20	31.09	31.05	31.10	31.24	31.22	31.39	31.37	31.15	30.86
16		31.27	31.20	31.09	31.05	31.10	31.23	31.20	31.37	31.36	31.12	30.85
17		31.26	31.20	31.09	31.05	31.10	31.22	31.18	31.35	31.35	31.10	30.83
18		31.26	31.20	31.09	31.05	31.09	31.21	31.16	31.33	31.34	31.09	30.83
19		31.26	31.20	31.09	31.06	31.09	31.20	31.16	31.31	31.33	31.08	30.82
20		31.26	31.20	31.08	31.06	31.09	31.19	31.15	31.36	31.33	31.07	30.80
21		31.25	31.20	31.08	31.06	31.09	31.17	31.13	31.37	31.32	31.06	30.79
22		31.25	31.20	31.08	31.08	31.09	31.18	31.12	31.40	31.29	31.05	30.77
23		31.25	31.20	31.09	31.13	31.08	31.23	31.13	31.40	31.28	31.04	30.76
24		31.24	31.19	31.09	31.14	31.07	31.22	31.17	31.41	31.26	31.03	30.76
25		31.23	31.18	31.08	31.14	31.08	31.22	31.17	31.39	31.26	31.03	30.76
26		31.23	31.17	31.08	31.12	31.06	31.22	31.18	31.38	31.24	31.02	30.76
27		31.22	31.16	31.07	31.13	31.07	31.21	31.17	31.37	31.22	31.02	30.75
28		31.22	31.16	31.07	31.14	31.07	31.20	31.16	31.37	31.21	31.00	30.74
29		31.21	31.15	31.06	---	31.09	31.20	31.16	31.45	31.20	31.00	30.74
30		31.21	31.15	31.06	---	31.10	31.19	31.14	31.43	31.18	30.99	30.75
31		---	31.17	31.05	---	31.11	---	31.13	---	31.17	30.99	---
MEAN		---	31.19	31.10	31.07	31.10	31.22	31.21	31.25	31.34	31.11	30.85
MAX		---	31.21	31.16	31.14	31.14	31.28	31.35	31.45	31.47	31.23	30.98
MIN		---	31.15	31.05	31.04	31.06	31.12	31.12	31.04	31.17	30.99	30.74

ACID DEPOSITION RECORDS

STAGE RECORDS

455909089405602 VANDERCOOK LAKE NEAR WOODRUFF, WI--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.82	30.87	30.79	30.86	30.87	30.82	30.84	31.25	31.26	30.91	31.11	30.89
2	30.82	30.87	30.80	30.87	30.88	30.82	30.84	31.25	31.23	30.90	31.10	30.88
3	30.82	30.87	30.81	30.89	30.88	30.81	30.95	31.24	31.21	30.91	31.10	30.87
4	30.83	30.86	30.80	30.88	30.87	30.81	30.99	31.24	31.20	30.93	31.08	30.85
5	30.84	30.86	30.80	30.88	30.87	30.80	30.98	31.27	31.18	30.92	31.07	30.95
6	30.88	30.87	30.80	30.87	30.86	30.80	30.98	31.31	31.16	30.92	31.06	31.00
7	30.87	30.86	30.80	30.86	30.87	30.79	30.98	31.34	31.15	30.92	31.06	30.99
8	30.86	30.85	30.81	30.86	30.86	30.78	31.00	31.33	31.13	30.91	31.05	30.98
9	30.85	30.84	30.81	30.86	30.85	30.79	30.99	31.32	31.12	30.89	31.03	30.97
10	30.86	30.83	30.81	30.85	30.85	30.79	30.99	31.33	31.13	30.98	31.00	30.97
11	30.86	30.82	30.80	30.85	30.85	30.79	30.99	31.34	31.11	31.09	30.98	30.98
12	30.85	30.82	30.80	30.84	30.85	30.79	31.01	31.33	31.09	31.08	30.97	30.98
13	30.85	30.82	30.81	30.84	30.85	30.82	31.04	31.36	31.07	31.07	30.94	31.05
14	30.89	30.81	30.82	30.83	30.85	30.81	31.04	31.37	31.07	31.06	30.94	31.04
15	30.90	30.81	30.81	30.83	30.85	30.81	31.05	31.36	31.08	31.08	30.94	31.05
16	30.89	30.81	30.81	30.82	30.84	30.81	31.13	31.36	31.06	31.22	30.93	31.05
17	30.91	30.80	30.81	30.82	30.84	30.82	31.21	31.38	31.05	31.23	30.91	31.06
18	30.93	30.80	30.81	30.80	30.84	30.82	31.22	31.40	31.04	31.23	30.90	31.07
19	30.93	30.79	30.81	30.79	30.84	30.81	31.24	31.39	31.02	31.21	30.90	31.07
20	30.93	30.79	30.81	30.78	30.84	30.81	31.28	31.37	31.03	31.18	30.88	31.07
21	30.92	30.79	30.83	30.77	30.84	30.81	31.29	31.35	31.02	31.17	30.86	31.07
22	30.91	30.78	30.82	30.79	30.83	30.82	31.29	31.33	31.00	31.16	30.85	31.06
23	30.90	30.78	30.82	30.86	30.83	30.81	31.29	31.31	30.99	31.14	30.84	31.07
24	30.89	30.78	30.81	30.88	30.83	30.81	31.29	31.30	30.98	31.13	30.83	31.10
25	30.89	30.78	30.81	30.87	30.83	30.81	31.29	31.29	30.98	31.12	30.84	31.08
26	30.89	30.79	30.81	30.87	30.83	30.80	31.28	31.28	30.96	31.10	30.88	31.07
27	30.89	30.79	30.83	30.87	30.83	30.80	31.28	31.27	30.96	31.09	30.92	31.07
28	30.88	30.79	30.83	30.86	30.82	30.79	31.27	31.26	30.94	31.08	30.90	31.06
29	30.88	30.79	30.82	30.87	---	30.79	31.26	31.25	30.95	31.10	30.90	31.07
30	30.88	30.79	30.82	30.88	---	30.81	31.26	31.24	30.93	31.14	30.91	31.10
31	30.88	---	30.85	30.87	---	30.84	---	31.26	---	31.13	30.89	---
MEAN	30.88	30.82	30.81	30.85	30.85	30.81	31.12	31.31	31.07	31.06	30.95	31.02
MAX	30.93	30.87	30.85	30.89	30.88	30.84	31.29	31.40	31.26	31.23	31.11	31.10
MIN	30.82	30.78	30.79	30.77	30.82	30.78	30.84	31.24	30.93	30.89	30.83	30.85
CAL YR 1981	MEAN 31.06		MAX 31.47		MIN 30.74							
WTR YR 1982	MEAN 30.96		MAX 31.40		MIN 30.77							

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.09	31.21	31.30	31.47	31.55	31.56	31.64	31.68	31.70	31.64	31.48	31.59
2	31.11	31.21	31.30	31.47	31.57	31.57	31.65	31.69	31.70	31.63	31.47	31.58
3	31.12	31.21	31.32	31.46	31.60	31.58	31.64	31.68	31.71	31.72	31.60	31.57
4	31.11	31.21	31.31	31.46	31.59	31.59	31.64	31.67	31.78	31.80	31.60	31.56
5	31.11	31.21	31.32	31.46	31.58	31.61	31.64	31.66	31.77	31.77	31.59	31.59
6	31.14	31.21	31.34	31.48	31.59	31.63	31.64	31.66	31.76	31.76	31.58	31.63
7	31.16	31.21	31.33	31.51	31.58	31.64	31.65	31.72	31.75	31.75	31.57	31.63
8	31.15	31.20	31.32	31.50	31.58	31.63	31.66	31.73	31.74	31.74	31.54	31.61
9	31.15	31.19	31.32	31.50	31.58	31.62	31.65	31.72	31.73	31.72	31.52	31.62
10	31.18	31.20	31.31	31.51	31.58	31.61	31.66	31.71	31.72	31.71	31.69	31.64
11	31.18	31.21	31.32	31.52	31.58	31.62	31.67	31.71	31.72	31.71	31.76	31.64
12	31.17	31.28	31.32	31.52	31.58	31.61	31.67	31.69	31.71	31.69	31.74	31.65
13	31.16	31.28	31.31	31.52	31.57	31.61	31.69	31.72	31.70	31.68	31.73	31.64
14	31.16	31.29	31.30	31.53	31.58	31.60	31.72	31.72	31.70	31.67	31.72	31.64
15	31.15	31.29	31.30	31.55	31.58	31.60	31.74	31.70	31.71	31.66	31.71	31.63
16	31.13	31.29	31.30	31.54	31.58	31.60	31.73	31.69	31.72	31.64	31.71	31.67
17	31.12	31.28	31.30	31.54	31.57	31.61	31.73	31.68	31.71	31.63	31.72	31.66
18	31.13	31.28	31.29	31.53	31.57	31.64	31.73	31.67	31.70	31.63	31.72	31.66
19	31.12	31.28	31.31	31.53	31.57	31.64	31.73	31.66	31.70	31.62	31.71	31.68
20	31.24	31.32	31.31	31.53	31.57	31.64	31.72	31.66	31.68	31.62	31.69	31.83
21	31.26	31.34	31.31	31.54	31.57	31.63	31.71	31.67	31.69	31.61	31.69	31.81
22	31.25	31.33	31.31	31.53	31.57	31.63	31.71	31.70	31.76	31.60	31.69	31.80
23	31.25	31.33	31.32	31.54	31.57	31.62	31.71	31.73	31.75	31.58	31.67	31.79
24	31.24	31.32	31.33	31.53	31.57	31.62	31.70	31.73	31.74	31.55	31.66	31.78
25	31.24	31.32	31.39	31.52	31.56	31.62	31.70	31.72	31.73	31.54	31.65	31.77
26	31.23	31.31	31.40	31.51	31.55	31.61	31.70	31.71	31.72	31.51	31.65	31.77
27	31.22	31.30	31.39	31.50	31.55	31.63	31.69	31.70	31.69	31.50	31.64	31.76
28	31.22	31.30	31.45	31.51	31.55	31.63	31.68	31.70	31.67	31.50	31.63	31.76
29	31.23	31.30	31.46	31.53	---	31.62	31.69	31.70	31.65	31.50	31.62	31.76
30	31.23	31.30	31.46	31.53	---	31.62	31.68	31.70	31.64	31.50	31.61	31.75
31	31.21	---	31.47	31.55	---	31.63	---	31.70	---	31.50	31.60	---
MEAN	31.18	31.27	31.34	31.51	31.57	31.62	31.69	31.70	31.72	31.63	31.64	31.68
MAX	31.26	31.34	31.47	31.55	31.60	31.64	31.73	31.73	31.78	31.80	31.76	31.83
MIN	31.09	31.19	31.29	31.46	31.55	31.56	31.64	31.66	31.64	31.50	31.47	31.56
CAL YR 1982	MEAN 31.07		MAX 31.47		MIN 30.77							
WTR YR 1983	MEAN 31.54		MAX 31.83		MIN 31.09							

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.74	31.76	31.98	32.01	31.99	32.02	32.00	32.01	31.85	31.76	31.48	31.48
2	31.74	31.76	31.98	32.02	31.99	32.02	31.99	32.01	31.84	31.74	31.50	31.58
3	31.74	31.74	31.98	32.02	32.00	32.01	31.99	32.00	31.84	31.74	31.49	31.60
4	31.73	31.74	31.98	32.02	31.99	32.00	31.99	32.00	31.82	31.74	31.48	31.59
5	31.72	31.73	31.98	32.02	31.99	32.03	31.98	32.00	31.84	31.73	31.49	31.58
6	31.71	31.74	31.97	32.02	31.98	32.02	31.98	32.01	31.85	31.70	31.50	31.56
7	31.74	31.73	31.97	32.02	31.98	32.01	31.97	32.02	31.88	31.68	31.51	31.56
8	31.77	31.73	31.97	32.01	31.98	32.01	31.97	32.01	31.86	31.66	31.61	31.56
9	31.76	31.76	31.97	32.00	31.98	32.00	31.96	32.02	31.92	31.65	31.59	31.55
10	31.74	31.79	31.96	32.00	31.97	31.99	31.95	32.02	31.92	31.66	31.57	31.54
11	31.78	31.78	31.98	31.98	31.97	31.99	31.95	32.02	31.90	31.67	31.55	31.53
12	31.85	31.77	32.00	32.00	32.02	31.99	31.94	32.01	31.92	31.66	31.53	31.57
13	31.86	31.77	32.00	32.02	32.05	32.00	31.96	32.02	31.92	31.66	31.52	31.61
14	31.87	31.77	32.00	32.02	32.05	32.01	31.96	32.02	31.90	31.66	31.54	31.59
15	31.86	31.79	32.04	32.01	32.05	32.03	31.95	32.01	31.88	31.65	31.58	31.57
16	31.87	31.79	32.03	32.02	32.05	32.02	31.95	32.00	31.87	31.63	31.57	31.56
17	31.86	31.79	32.03	32.01	32.04	32.01	31.93	32.00	31.87	31.62	31.56	31.54
18	31.85	31.78	32.01	32.00	32.04	32.01	31.92	31.99	31.86	31.62	31.57	31.53
19	31.85	31.79	32.01	32.00	32.06	32.01	31.91	31.98	31.85	31.61	31.55	31.52
20	31.84	31.83	32.02	32.00	32.06	32.02	31.91	31.97	31.84	31.61	31.53	31.51
21	31.84	31.85	32.03	32.00	32.06	32.04	31.89	31.96	31.83	31.60	31.53	31.49
22	31.83	31.84	32.02	32.00	32.07	32.04	31.88	31.98	31.82	31.58	31.53	31.48
23	31.83	31.91	32.01	32.00	32.06	32.04	31.88	31.97	31.81	31.58	31.51	31.48
24	31.82	31.94	32.01	32.01	32.06	32.04	31.89	31.96	31.79	31.56	31.50	31.54
25	31.81	31.93	32.01	32.01	32.05	32.04	31.88	31.95	31.77	31.54	31.48	31.58
26	31.81	31.93	32.02	32.00	32.04	32.03	31.89	31.93	31.78	31.52	31.48	31.56
27	31.80	31.92	32.02	32.00	32.04	32.03	31.94	31.91	31.81	31.50	31.53	31.55
28	31.79	31.95	32.02	32.00	32.04	32.02	31.95	31.89	31.80	31.48	31.53	31.54
29	31.78	31.97	32.01	32.00	32.03	32.01	31.93	31.88	31.78	31.47	31.52	31.52
30	31.78	31.98	32.01	32.00	---	32.01	32.01	31.86	31.77	31.46	31.51	31.51
31	31.77	---	32.01	31.99	---	32.00	---	31.86	---	31.44	31.48	---
MEAN	31.80	31.82	32.00	32.01	32.02	32.02	31.94	31.98	31.85	31.62	31.53	31.55
MAX	31.87	31.98	32.04	32.02	32.07	32.04	32.01	32.02	31.96	31.76	31.61	31.61
MIN	31.71	31.73	31.96	31.98	31.97	31.99	31.88	31.86	31.77	31.44	31.48	31.48
CAL YR 1983	MEAN	31.70	MAX	32.04	MIN	31.46						
WTR YR 1984	MEAN	31.84	MAX	32.07	MIN	31.44						

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

455909089405603 VANDERCOOK LAKE RAIN GAGE NEAR WOODRUFF, WI

LOCATION.--Lat 45°59'09", long 89°40'56", in SW 1/4 NE 1/4 SE 1/4 sec.36, T.41 N., R.6 E., Vilas County,
Hydrologic Unit 07070001, at north end of lake on dirt road off County Trunk Highway M, 6.1 mi north of
Woodruff.

PERIOD OF RECORD.--March 1981 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.98 in., Aug. 10, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.75 in., Aug. 7.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	.00	.05	.00	.00	.14	.02
2						---	.00	.00	.10	.00	.00	.00
3						---	.03	.61	.24	.01	.63	.00
4						---	.00	1.46	.00	.00	.01	.00
5						---	.00	.20	.06	.00	.00	.00
6						---	.00	.00	.00	.00	.35	.00
7						---	.00	.00	.00	.00	.22	.52
8						---	.00	.00	.00	.40	.00	.00
9						---	.00	.02	.06	.00	.00	.00
10						---	.00	.00	.20	.00	.00	.00
11						---	.00	.00	.12	.00	.00	.00
12						---	.00	.00	.01	.10	.00	.00
13						---	.00	.00	2.36	.00	.00	.00
14						---	.00	.00	2.06	.38	.00	.00
15						---	.00	.00	.02	.01	.00	.07
16						---	.00	.00	.00	.00	.00	.05
17						---	.00	.00	.00	.00	.00	.02
18						---	.00	.00	.00	.00	.00	.00
19						---	.12	.00	.13	.00	.00	.00
20						---	.00	.00	.89	.41	.00	.00
21						---	.00	.00	.46	.00	.00	.00
22						---	.60	.00	.15	.00	.00	.00
23						---	.25	.67	.28	.03	.00	.02
24						.00	.04	.15	.01	.12	.00	.04
25						.03	.01	.35	.00	.02	.05	.01
26						.13	.03	.00	.00	.00	.03	.18
27						.06	.02	.00	.00	.00	.00	.01
28						.00	.01	.07	1.13	.00	.09	.13
29						.04	.00	.00	.02	.00	.01	.00
30						.08	.02	.00	.00	.00	.00	.76
31						.03	---	.00	---	.00	.00	---
TOTAL							1.13	3.58	8.30	1.48	1.53	1.83

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

455909089405603 VANDERCOOK LAKE RAIN GAGE NEAR WOODRUFF, WI--CONTINUED

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50								---	.00	.01	.08
2	.05								---	.00	.00	.41
3	.00								---	.55	.02	.00
4	.34								---	.09	.00	.00
5	.39								---	.01	.00	2.37
6	.11								---	.24	.00	.32
7	.00								---	.07	.04	.04
8	.00								---	.00	.32	.32
9	.00								.13	.19	.04	.16
10	.06								.01	2.42	.01	.18
11	.00								.00	.31	.00	.00
12	.00								.00	.01	.00	.64
13	.14								.00	.00	.00	.47
14	.37								.32	.00	.00	.09
15	.00								.05	1.93	.00	.46
16	.00								.04	.21	.00	.01
17	.49								.02	.47	.00	.43
18	.23								.00	.01	.00	.01
19	.00								.16	.00	.03	.29
20	.01								.08	.00	.00	.27
21	.04								.01	.00	.01	.00
22	.01								.00	.00	.03	.01
23	.08								.00	.00	.20	.61
24	.00								.12	.01	.17	.10
25	.08								.01	.00	.49	.00
26	.10								.00	.07	1.02	.00
27	.00								.00	.00	.01	.00
28	.00								.26	.00	.00	.00
29	---								.04	1.23	.34	.54
30	---								.00	.00	.27	.00
31	---								---	.00	.23	---
TOTAL										7.82	3.24	7.81

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00						---	.00	.00	.00	.00	.00
2	.54						---	.19	.00	.00	.00	.00
3	.00						---	.00	.95	2.26	1.99	.00
4	.01						---	.00	.10	.03	.00	.04
5	.00						---	.00	.00	.00	.00	1.20
6	.80						---	.20	.04	.00	.00	.18
7	.02						.00	.89	.00	.00	.00	.01
8	.00						.01	.00	.00	.00	.00	.00
9	.51						.00	.00	.00	.00	.00	.14
10	.04						.29	.00	.00	.00	2.98	.75
11	.04						.02	.00	.00	.00	.02	.18
12	.02						.03	.00	.00	.00	.00	.36
13	.02						.20	.53	.00	.00	.00	.13
14	.06						.45	.00	.07	.00	.00	.01
15	.05						.21	.00	.43	.00	.00	.55
16	.00						.05	.00	.09	.00	.06	.20
17	.08						.01	.00	.01	.14	.37	.08
18	.00						.00	.00	.00	.00	.00	.08
19	.55						.00	.05	.00	.07	.02	2.29
20	.56						.00	.13	.00	.00	.00	.18
21	.07						.00	.00	.94	.08	.24	.01
22	.80						.00	.90	.01	.00	.00	.08
23	.02						.00	.03	.00	.00	.00	.00
24	.00						.00	.18	.00	.00	.00	.00
25	.00						.04	.00	.00	.00	.00	.00
26	.00						.00	.00	.00	.01	.01	.00
27	.01						.00	.00	.00	.04	.00	.00
28	.00						.02	.27	.00	.01	.00	.01
29	---						.11	.20	.00	.00	.00	.00
30	---						.00	.07	.01	.38	.22	.02
31	---						---	.05	---	.07	.00	---
TOTAL								3.69	2.67	3.09	5.91	6.50

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

455909089405603 VANDERCOOK LAKE RAIN GAGE NEAR WOODRUFF, WI--CONTINUED

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02						---	---	.01	.00	.93	.45
2	.02						---	---	.04	.00	.01	1.44
3	.04						---	---	.00	.19	.01	.11
4	.02						---	---	.00	.01	.13	.04
5	.07						---	---	.41	.12	.17	.01
6	.00						---	---	.40	.04	.00	.00
7	1.07						---	---	.45	.00	1.75	.02
8	.02						---	---	.33	.00	.00	.28
9	.00						---	---	.05	.24	.00	.01
10	.00						.01	---	.09	.14	.00	.01
11	1.20						.00	---	.00	.04	.00	.00
12	.49						.16	---	.39	.00	.00	1.10
13	.02						.02	---	.00	.11	.00	.01
14	.21						---	---	.00	.06	.73	.00
15	.22						---	---	.00	.00	.00	.00
16	.01						---	---	.02	.01	.00	.00
17	.00						---	.01	.00	.26	.25	.00
18	.08						---	.00	.01	.01	.01	.00
19	.02						---	.00	.01	.14	.00	.00
20	.01						---	.00	.01	.01	.28	.00
21	.00						---	.03	.00	.00	.07	.00
22	.00						---	.30	.00	.00	.02	.05
23	.00						---	.00	.04	.00	.01	.00
24	.00						---	.05	.00	.00	.00	1.45
25	.00						---	.00	.00	.00	.00	.15
26	---						---	.00	.86	.00	.82	.01
27	---						---	.03	.07	.00	.01	.00
28	---						---	.00	.01	.00	.00	.00
29	---						---	.00	.00	.00	.11	.00
30	---						---	.00	.00	.00	.02	.00
31	---						---	.00	---	.00	.00	---
TOTAL									3.20	1.38	5.33	5.14

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

455910089403701 WELL VI-41/07E/31-0085

LOCATION.--Lat 45°59'10", long 89°40'37", in SW 1/4 NW 1/4 SW 1/4 sec.31, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07070001, 0.25 mi northeast of Vandercook Lake, about 6.1 mi north of Woodruff.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 60 ft, cased to 57 ft, well screened 57-60 ft.

PERIOD OF RECORD.--November 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,600.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except for period of missing record, Apr. 16 to Oct. 12, 1982.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 33.54 ft, July 4, 1983; minimum observed water level, 31.47 ft, Mar. 27 and 28, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum observed water level, 33.50 ft, Nov. 29; minimum observed water level, 32.72 ft, Sept. 26.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	32.53	32.33	32.17	31.95	31.88	32.20	32.46	32.81	32.92	32.89
2		---	32.50	32.30	32.12	31.94	31.87	32.21	32.47	32.84	32.93	32.87
3		---	32.51	32.30	32.11	31.94	31.91	32.22	32.48	32.86	32.93	32.86
4		---	32.49	32.27	32.09	31.93	31.94	32.23	32.47	32.86	32.93	32.84
5		---	32.50	32.31	32.09	31.93	31.94	32.23	32.48	32.86	32.93	32.83
6		---	32.50	32.32	32.09	31.92	31.98	32.32	32.47	32.87	32.93	32.83
7		32.52	32.50	32.29	32.10	31.92	32.03	32.41	32.48	32.88	32.94	32.83
8		32.55	32.52	32.27	32.08	31.91	32.05	32.47	32.50	32.89	32.94	32.84
9		32.54	32.52	32.25	32.06	31.91	32.07	32.49	32.49	32.88	32.94	32.83
10		32.49	32.52	32.23	32.05	31.90	32.11	32.49	32.48	32.88	32.94	32.84
11		32.49	32.50	32.23	32.04	31.90	32.12	32.50	32.45	32.89	32.94	32.83
12		32.53	32.53	32.26	32.02	31.89	32.13	32.50	32.45	32.90	32.94	32.81
13		32.55	32.46	32.26	32.02	31.89	32.16	32.51	32.47	32.90	32.94	32.80
14		32.54	32.45	32.24	32.02	31.88	32.14	32.51	32.54	32.90	32.94	32.80
15		32.54	32.46	32.23	32.03	31.88	32.14	32.50	32.60	32.90	32.94	32.78
16		32.55	32.43	32.19	32.04	31.87	32.18	32.48	32.65	32.90	32.92	32.76
17		32.55	32.49	32.20	32.02	31.87	32.19	32.47	32.70	32.90	32.92	32.74
18		32.56	32.45	32.20	32.02	31.86	32.17	32.47	32.74	32.90	32.92	32.73
19		32.56	32.37	32.21	32.02	31.86	32.16	32.48	32.74	32.91	32.92	32.75
20		32.59	32.35	32.18	32.01	31.85	32.16	32.48	32.75	32.92	32.92	32.75
21		32.56	32.35	32.17	32.03	31.85	32.17	32.48	32.76	32.92	32.92	32.74
22		32.59	32.39	32.18	32.00	31.84	32.19	32.48	32.76	32.91	32.91	32.71
23		32.58	32.39	32.17	31.98	31.84	32.20	32.47	32.77	32.91	32.91	32.70
24		32.56	32.35	32.17	31.96	31.84	32.18	32.49	32.79	32.91	32.91	32.70
25		32.55	32.37	32.19	31.99	31.83	32.18	32.49	32.79	32.91	32.90	32.70
26		32.55	32.36	32.18	31.96	31.84	32.19	32.47	32.77	32.91	32.90	32.73
27		32.57	32.34	32.15	31.96	31.81	32.21	32.47	32.79	32.91	32.90	32.72
28		32.59	32.34	32.14	31.95	31.84	32.21	32.47	32.80	32.92	32.89	32.67
29		32.58	32.31	32.10	---	31.86	32.21	32.48	32.81	32.92	32.89	32.67
30		32.58	32.34	32.09	---	31.88	32.21	32.47	32.81	32.92	32.89	32.68
31		---	32.35	32.13	---	31.87	---	32.46	---	32.92	32.89	---
MEAN		---	32.43	32.22	32.04	31.88	32.11	32.43	32.62	32.89	32.92	32.77
MAX		---	32.53	32.33	32.17	31.95	32.21	32.51	32.81	32.92	32.94	32.89
MIN		---	32.31	32.09	31.95	31.81	31.87	32.20	32.45	32.81	32.89	32.67

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

455910089403701 WELL VI-41/07E/31-0085--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.71	32.55	32.46	32.17	31.81	31.65	31.48					
2	32.67	32.55	32.44	32.17	31.80	31.63	31.50					
3	32.67	32.55	32.41	32.16	31.79	31.62	31.54					
4	32.68	32.55	32.38	32.17	31.78	31.62	31.49					
5	32.68	32.56	32.38	32.16	31.78	31.61	31.49					
6	32.68	32.55	32.40	32.14	31.77	31.61	31.49					
7	32.66	32.55	32.40	32.11	31.76	31.60	31.47					
8	32.65	32.55	32.37	32.08	31.75	31.59	31.47					
9	32.65	32.53	32.35	32.08	31.74	31.58	31.47					
10	32.65	32.54	32.35	32.08	31.74	31.58	31.47					
11	32.63	32.52	32.34	32.05	31.73	31.57	31.46					
12	32.63	32.51	32.34	32.02	31.72	31.58	31.47					
13	32.63	32.51	32.34	32.02	31.71	31.58	31.46					
14	32.63	32.51	32.34	32.01	31.71	31.54	31.45					
15	32.63	32.51	32.33	32.01	31.70	31.53	31.46					
16	32.63	32.51	32.32	31.98	31.69	31.54	---					
17	32.67	32.49	32.31	31.97	31.69	31.52	---					
18	32.68	32.49	32.30	31.95	31.69	31.52	---					
19	32.63	32.49	32.30	31.92	31.69	31.51	---					
20	32.63	32.48	32.30	31.90	31.69	31.51	---					
21	32.59	32.48	32.31	31.89	31.67	31.51	---					
22	32.60	32.46	32.30	31.91	31.67	31.50	---					
23	32.60	32.46	32.29	31.96	31.66	31.50	---					
24	32.61	32.45	32.27	31.89	31.66	31.50	---					
25	32.61	32.45	32.22	31.86	31.64	31.49	---					
26	32.59	32.47	32.22	31.85	31.65	31.48	---					
27	32.59	32.46	32.23	31.89	31.64	31.47	---					
28	32.57	32.42	32.20	31.84	31.64	31.47	---					
29	32.57	32.42	32.19	31.83	---	31.48	---					
30	32.57	32.42	32.18	31.82	---	31.52	---					
31	32.56	---	32.20	31.81	---	31.51	---					
MEAN	32.63	32.50	32.32	31.99	31.71	31.55	---					
MAX	32.71	32.56	32.46	32.17	31.81	31.65	---					
MIN	32.56	32.42	32.18	31.81	31.64	31.47	---					

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	32.64	32.83	32.82	32.82	32.74	33.01	33.33	33.45	33.52	33.40	33.28
2	---	32.65	32.84	32.79	32.87	32.74	33.01	33.34	33.40	33.51	33.37	33.27
3	---	32.66	32.83	32.82	32.86	32.76	33.00	33.33	33.42	33.51	33.40	33.26
4	---	32.65	32.81	32.85	32.80	32.76	33.00	33.33	33.44	33.54	33.41	33.27
5	---	32.65	32.83	32.84	32.81	32.78	33.00	33.32	33.43	33.50	33.41	33.28
6	---	32.64	32.81	32.88	32.82	32.81	32.99	33.32	33.44	33.47	33.40	33.29
7	---	32.64	32.80	32.84	32.82	32.84	32.99	33.32	33.44	33.47	33.38	33.25
8	---	32.64	32.79	32.84	32.80	32.87	32.98	33.29	33.45	33.48	33.38	33.24
9	---	32.62	32.77	32.87	32.79	32.90	32.99	33.31	33.45	33.50	33.35	33.26
10	---	32.63	32.78	32.90	32.80	32.92	33.04	33.32	33.46	33.49	33.39	33.27
11	---	32.66	32.74	32.85	32.76	32.93	33.02	33.33	33.47	33.50	33.43	33.24
12	---	32.67	32.73	32.85	32.77	32.95	33.00	33.33	33.47	33.50	33.42	33.23
13	32.48	32.61	32.76	32.85	32.81	32.98	33.04	33.36	33.48	33.49	33.42	33.21
14	32.47	32.60	32.75	32.85	32.81	33.00	33.07	33.36	33.48	33.49	33.43	33.21
15	32.47	32.61	32.72	32.83	32.78	33.00	33.05	33.35	33.50	33.49	33.41	33.22
16	32.45	32.63	32.69	32.87	32.79	32.99	33.04	33.35	33.51	33.49	33.42	33.26
17	32.46	32.64	32.73	32.83	32.77	33.00	33.05	33.34	33.50	33.49	33.43	33.26
18	32.48	32.66	32.75	32.80	32.77	33.02	33.08	33.36	33.49	33.48	33.43	33.27
19	32.50	32.69	32.73	32.81	32.78	33.04	33.10	33.37	33.48	33.48	33.42	33.23
20	32.50	32.72	32.72	32.82	32.76	33.04	33.10	33.37	33.48	33.48	33.41	33.31
21	32.50	32.71	32.71	32.83	32.74	33.03	33.12	33.38	33.50	33.48	33.40	33.34
22	32.49	32.71	32.74	32.87	32.77	33.04	33.12	33.42	33.50	33.48	33.39	33.35
23	32.51	32.74	32.76	32.88	32.77	33.01	33.13	33.45	33.50	33.47	33.36	33.32
24	32.52	32.74	32.74	32.88	32.75	32.97	33.18	33.45	33.51	33.47	33.36	33.32
25	32.54	32.76	32.78	32.85	32.73	32.98	33.22	33.43	33.50	33.46	33.35	33.33
26	32.56	32.77	32.77	32.83	32.74	32.98	33.25	33.43	33.51	33.43	33.36	33.33
27	32.58	32.76	32.82	32.84	32.75	32.99	33.28	33.45	33.51	33.44	33.35	33.32
28	32.61	32.78	32.83	32.87	32.74	33.03	33.30	33.46	33.50	33.44	33.34	33.31
29	32.65	32.81	32.78	32.88	---	32.99	33.32	33.48	33.50	33.41	33.33	33.30
30	32.64	32.82	32.78	32.87	---	32.93	33.33	33.51	33.51	33.39	33.32	33.29
31	32.62	---	32.82	32.82	---	32.96	---	33.51	---	33.41	33.30	---
MEAN	---	32.68	32.77	32.85	32.79	32.93	33.09	33.38	33.48	33.48	33.39	33.28
MAX	---	32.82	32.84	32.90	32.87	33.04	33.33	33.51	33.51	33.54	33.43	33.35
MIN	---	32.60	32.69	32.79	32.73	32.74	32.98	33.29	33.40	33.39	33.30	33.21

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

455910089403701 WELL VI-41/07E/31-0085--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	33.31	33.44	33.27	33.15	33.05	---	33.25	33.22	33.13	32.96	32.81
2	---	33.30	33.46	33.29	33.17	33.02	---	33.31	33.22	33.13	32.95	32.81
3	---	33.25	33.44	33.34	33.17	33.02	---	33.35	33.21	33.13	32.95	32.81
4	---	33.25	33.47	33.32	33.13	33.04	---	33.36	33.21	33.12	32.95	32.81
5	---	33.30	33.44	33.34	33.10	33.06	---	33.36	33.23	33.11	32.94	32.80
6	---	33.31	33.45	33.29	33.09	33.00	---	33.36	33.23	33.11	32.94	32.80
7	---	33.31	33.44	33.28	33.07	33.00	---	33.36	33.23	33.11	32.93	32.84
8	---	33.28	33.42	33.24	33.10	32.99	---	33.37	33.23	33.10	32.92	32.82
9	---	33.26	33.39	33.23	33.12	33.00	---	33.36	33.23	33.10	32.92	32.81
10	---	33.25	33.37	33.22	33.13	33.04	32.94	33.35	33.22	33.09	32.92	32.80
11	---	33.24	33.42	33.22	33.11	33.01	32.99	33.33	33.21	33.09	32.91	32.79
12	---	33.23	33.43	33.19	33.11	33.01	33.05	33.30	33.21	33.08	32.91	32.79
13	---	33.27	33.44	33.20	33.14	33.02	33.10	33.31	33.20	33.07	32.91	32.81
14	---	33.29	33.48	33.16	33.10	33.01	33.13	33.28	33.19	33.07	32.90	32.78
15	---	33.26	33.45	33.22	33.06	33.03	33.15	33.26	33.19	33.06	32.90	32.78
16	---	33.24	33.38	33.26	33.07	32.97	33.18	33.27	33.18	33.05	32.90	32.78
17	---	33.25	33.35	33.20	33.09	32.99	33.21	33.30	33.18	33.05	32.89	32.78
18	---	33.27	33.33	33.19	33.10	32.99	33.21	33.30	33.17	33.04	32.87	32.78
19	---	33.28	33.32	33.19	33.12	33.01	33.22	33.30	33.17	33.04	32.87	32.78
20	---	33.36	33.31	33.14	33.10	33.04	33.21	33.29	33.17	33.03	32.86	32.76
21	---	33.31	33.39	33.20	33.10	32.99	33.20	33.29	33.16	33.02	32.86	32.75
22	---	33.26	33.40	33.17	33.12	---	33.25	33.28	33.15	33.02	32.86	32.75
23	---	33.38	33.38	33.19	33.12	---	33.28	33.27	33.15	33.01	32.85	32.75
24	---	33.39	33.35	33.23	33.09	---	33.27	33.27	33.14	33.00	32.85	32.76
25	33.34	33.44	33.34	33.18	33.05	---	33.23	33.26	33.14	33.00	32.85	32.76
26	33.35	33.43	33.37	33.15	33.03	---	33.21	33.25	33.14	32.99	32.84	32.72
27	33.37	33.44	33.35	33.15	33.06	---	33.25	33.24	33.15	32.99	32.83	32.73
28	33.33	33.49	33.34	33.22	33.07	---	33.22	33.22	33.15	32.98	32.83	32.73
29	33.26	33.50	33.28	33.16	33.07	---	33.19	33.22	33.14	32.97	32.80	32.73
30	33.28	33.46	33.29	33.12	---	---	33.29	33.21	33.13	32.97	32.81	32.73
31	33.29	---	33.28	33.14	---	---	---	33.21	---	32.96	32.81	---
MEAN	---	33.32	33.39	33.22	33.10	---	---	33.29	33.19	33.05	32.89	32.78
MAX	---	33.50	33.48	33.34	33.17	---	---	33.37	33.23	33.13	32.96	32.84
MIN	---	33.23	33.28	33.12	33.03	---	---	33.21	33.13	32.96	32.80	32.72

ACID DEPOSITION RECORDS
VANDERCOOK LAKE
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
QUALITY OF SURFACE WATER

DATE	TIME	SAM- FLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ACIDITY (MG/L AS H) (71825)		
455903089405402 - NE BASIN VANDERCOOK LAKE NR WOODRUFF, WI (LAT 45 59 03 LONG 089 40 54)										
APR , 1984										
04...	1150	3.00	18	5.7	7.5	4.5	9.5	<.1		
455909089405602 - VANDERCOOK LAKE NEAR WOODRUFF, WI (LAT 45 59 09 LONG 089 40 56)										
OCT , 1983										
** 05...	1000	3.00	14	6.3	--	15.5	9.0	<.1		
** 05...	1001	3.00	14	6.3	--	15.5	9.0	<.1		
NOV										
07...	1340	3.00	15	6.4	10.5	7.5	11.2	.2		
07...	1350	19.0	15	6.3	10.5	7.5	11.2	.1		
JAN , 1984										
11...	1115	3.00	18	6.2	-15.0	2.0	13.3	.1		
MAR										
06...	1110	3.00	19	6.0	-13.0	4.0	8.1	.1		
APR										
04...	1125	3.00	17	5.7	7.5	4.0	8.4	<.1		
MAY										
02...	1600	3.00	14	6.2	10.5	8.0	11.2	<.1		
JUN										
** 05...	1040	3.00	14	6.2	22.0	17.5	8.7	<.1		
** 05...	1041	3.00	14	6.3	22.0	17.5	8.7	<.1		
JUL										
03...	1305	3.00	14	6.1	20.5	22.0	8.5	<.1		
AUG										
06...	1415	3.00	15	6.2	28.5	23.5	8.7	<.1		
SEP										
05...	1245	3.00	15	6.0	--	19.5	8.3	.1		
455903089405402 - NE BASIN VANDERCOOK LAKE NR WOODRUFF, WI (LAT 45 59 03 LONG 089 40 54)										
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SI02) (00955)
455903089405402 - NE BASIN VANDERCOOK LAKE NR WOODRUFF, WI (LAT 45 59 03 LONG 089 40 54)										
APR , 1984										
04...	1.3	.39	.40	.37	3.0	4.4	<.20	<.01	<.0	
455909089405602 - VANDERCOOK LAKE NEAR WOODRUFF, WI (LAT 45 59 09 LONG 089 40 56)										
OCT , 1983										
** 05...	1.3	.35	.60	.23	7.0	3.8	.25	.04	.0	
** 05...	1.3	.39	.60	.25	7.0	3.7	.25	.04	.0	
NOV										
07...	1.2	.29	1.1	.20	6.0	3.9	.33	<.01	.0	
07...	1.3	.37	1.0	.19	6.0	3.8	.25	.04	.0	
JAN , 1984										
11...	1.3	.33	.40	.25	7.0	3.9	.27	<.01	<.0	
MAR										
06...	1.7	.51	.60	.50	4.0	6.0	.36	.05	<.0	
APR										
04...	1.2	.35	.50	.36	3.0	4.1	.23	<.01	<.0	
MAY										
02...	1.2	.34	.40	.30	3.0	3.9	<.20	<.01	.0	
JUN										
** 05...	1.5	.36	2.0	.28	3.0	4.2	.27	.03	.3	
** 05...	1.2	.35	.90	.26	3.0	4.1	.27	.01	.4	
JUL										
03...	1.5	.41	3.8	.33	3.0	3.9	.25	.03	.8	
AUG										
06...	1.2	.37	.60	.15	3.0	3.9	.24	<.01	.0	
SEP										
05...	1.2	.34	.60	.17	3.0	3.9	.26	.05	.0	

** SAMPLES WITH THE SAME DATES ARE REPLICATES.

ACID DEPOSITION RECORDS
VANDERCOOK LAKE
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
QUALITY OF SURFACE WATER

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS N (00618)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L) AS P (00671)	ALUM- INUM, DIS- SOLVED (UG/L) AS AL (01106)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C (00681)
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455903089405402 - NE BASIN VANDERCOOK LAKE NR WOODRUFF, WI (LAT 45 59 03 LONG 089 40 54)

APR , 1984	--	<.05	.044	.006	20	15	12	3.0
04...								

455909089405602 - VANDERCOOK LAKE NEAR WOODRUFF, WI (LAT 45 59 09 LONG 089 40 56)

OCT , 1983								
** 05...	11	<.05	.015	<.001	<10	9	2	4.7
** 05...	11	<.05	.018	.002	<10	5	2	9.6
NOV								
07...	11	<.05	.011	.012	<10	9	5	4.5
07...	11	<.05	.002	.019	<10	5	4	5.8
JAN , 1984								
11...	--	<.05	.004	<.001	<10	5	4	6.0
MAR								
06...	--	<.05	.061	<.001	<10	7	8	5.1
APR								
04...	--	.14	.097	<.001	30	10	12	2.0
MAY								
02...	--	<.05	.003	<.001	<10	12	11	4.1
JUN								
** 05...	11	<.05	.026	.005	40	5	<1	5.8
** 05...	9	<.05	.035	<.001	20	6	<1	3.9
JUL								
03...	13	.32	.083	.023	100	9	<1	6.0
AUG								
06...	8	<.05	.024	<.001	<10	6	2	5.4
SEP								
05...	9	<.05	<.001	.101	10	7	3	6.7

** SAMPLES WITH THE SAME DATES ARE REPLICATES.

ACID DEPOSITION RECORDS
VANDERCOOK LAKE
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
QUALITY OF PRECIPITATION

DATE	PRECIP- ITATION DAILY (IN) (00045)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	ACIDITY (MG/L AS H) (71825)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)
455911089405903 - VANDERCOOK LK BULK PRECIP COLL NR WOODRUFF, WI (LAT 45 59 11 LONG 089 40 59)										
1983										
SEP 30 - OCT 28	3.50	15	4.6	<.1	.30	.08	.40	.03	4.0	1.6
OCT 28 - NOV 29	4.53	16	4.7	<.1	.43	.10	.20	3.0	4.0	1.5
NOV 29 - DEC 31	1.69	15	4.6	.1	.18	<.01	<.20	.02	4.0	.7
1984										
JAN 01 - JAN 31	.56	19	4.5	<.1	.40	.04	.40	.04	2.0	1.1
JAN 31 - MAR 01	1.84	21	4.5	.1	.32	<.01	<.20	.04	<1.0	1.9
MAR 01 - APR 02	1.33	28	4.3	.1	.33	.04	<.20	.03	<1.0	2.5
** APR 02 - MAY 02	2.24	11	5.6	.1	.83	.04	<.20	.15	3.0	1.9
** APR 02 - MAY 02	2.24	10	5.6	.1	.81	.04	<.20	.13	3.0	1.8
MAY 02 - JUN 01	1.79	17	6.0	<.1	.89	.22	.80	.33	4.0	2.9
JUN 01 - JUL 03	3.42	22	6.6	<.1	.98	.33	1.4	.42	6.0	2.7
JUL 03 - AUG 06	2.47	19	5.9	<.1	.59	.09	<.20	.25	4.0	3.1
AUG 06 - SEP 05	6.20	14	4.6	.2	.35	.05	<.20	.08	1.0	2.0
SEP 05 - OCT 09	4.52	13	4.7	.3	.47	.07	1.3	.06	1.0	1.8
460307089391203 - TROUT LK BULK PRECIP COLL NR BOULDER JCT, WI (LAT 46 03 07 LONG 089 39 12)										
1983										
SEP 30 - OCT 28	3.02	12	4.7	<.1	.29	.07	.30	.03	4.0	1.7
OCT 28 - NOV 29	3.57	12	4.7	.1	.14	.04	<.20	.15	2.0	.9
NOV 29 - DEC 31	1.26	15	4.6	.1	.12	.02	<.20	.03	<1.0	.6
1984										
JAN 01 - JAN 31	.62	17	4.5	.1	.40	.04	.30	.03	<1.0	.8
JUL 02 - AUG 06	3.01	17	4.6	.1	.47	.06	<.20	.08	1.0	2.9
** AUG 06 - SEP 05	7.56	15	4.6	.1	.27	.03	<.20	.08	1.0	1.8
** AUG 06 - SEP 05	7.56	15	4.6	.1	.26	.02	.30	.08	1.0	1.8
SEP 05 - OCT 09	4.27	12	4.8	.2	.53	.05	.20	.06	1.0	1.8
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
455911089405903 - VANDERCOOK LK BULK PRECIP COLL NR WOODRUFF, WI (LAT 45 59 11 LONG 089 40 59)										
1983										
SEP 30 - OCT 28	<.20	<.01	<.01	.29	.286	.004	<10	5	3	1.8
OCT 28 - NOV 29	<.20	<.01	<.01	.30	.179	.065	20	17	5	2.1
NOV 29 - DEC 31	<.20	<.01	<.01	.26	.061	.004	40	<3	<1	1.8
1984										
JAN 01 - JAN 31	.20	<.01	<.01	.55	.179	.008	10	5	3	3.1
JAN 31 - MAR 01	<.20	<.01	<.01	.33	.274	<.001	<10	7	2	2.4
MAR 01 - APR 02	<.20	<.01	<.01	.43	.229	.055	30	15	6	3.0
** APR 02 - MAY 02	<.20	<.01	.05	.29	.271	.010	10	13	10	1.8
** APR 02 - MAY 02	<.20	<.01	.05	.26	.258	<.001	<10	8	10	3.8
MAY 02 - JUN 01	<.20	.02	.20	.57	1.10	.006	<10	6	2	3.7
JUN 01 - JUL 03	<.20	<.01	.07	.35	2.00	.217	60	5	2	4.5
JUL 03 - AUG 06	<.20	<.01	.01	.46	1.30	.093	10	7	3	4.2
AUG 06 - SEP 05	<.20	.02	.03	.33	.449	<.001	20	5	6	1.9
SEP 05 - OCT 09	.08	<.01	.90	.23	.215	<.010	<10	3	<1	1.2
460307089391203 - TROUT LK BULK PRECIP COLL NR BOULDER JCT, WI (LAT 46 03 07 LONG 089 39 12)										
1983										
SEP 30 - OCT 28	<.20	<.01	<.01	.27	.270	<.001	10	5	2	2.2
OCT 28 - NOV 29	<.20	<.01	<.01	.19	.129	.002	10	5	1	3.0
NOV 29 - DEC 31	.48	<.01	<.01	.13	.076	.009	50	<3	<1	1.9
1984										
JAN 03 - JAN 31	<.20	.03	<.01	.69	.191	.004	50	9	3	2.3
JUL 02 - AUG 06	<.20	<.01	<.01	.34	.533	<.001	<10	7	5	3.4
** AUG 06 - SEP 05	<.20	.02	.02	.29	.473	<.001	<10	5	4	3.0
** AUG 06 - SEP 05	<.20	.03	.02	.29	.463	<.001	10	4	4	3.5
SEP 05 - OCT 09	.07	<.01	.10	.26	.272	<.010	10	6	4	3.4

** SAMPLES WITH THE SAME DATES ARE REPLICATES.

ACID DEPOSITION RECORDS
VANDERCOOK LAKE
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
QUALITY OF GROUND WATER

STATION NUMBER	LOCAL IDENTIFIER	HYDRO-LOGIC UNIT CODE	GEO-LOGIC UNIT	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	PH (STANDARD AR) (00400)	TEMPERATURE (DEG C) (00010)	ACIDITY (MG/L AS H) (71825)
VILAS									
455842089411420	VI-40/06E/01-0749	07070001	110QRNR	83-10-05	11.00	17	6.0	16.0	<.1
		07070001	110QRNR	83-11-16	11.00	23	6.0	11.0	<.1
455846089405920	VI-40/06E/01-0873	07070001	110QRNR	84-01-11	11.00	22	6.0	6.0	.1
		07070001	110QRNR	83-10-05	11.00	26	6.1	14.0	<.1
		07070001	110QRNR	83-11-16	11.00	29	6.2	9.5	.1
455901089412020	VI-41/06E/36-0875	07070001	110QRNR	84-01-11	11.00	20	5.8	4.5	.1
		07070001	110QRNR	83-10-05	11.00	17	5.8	16.0	<.1
		07070001	110QRNR	83-11-16	11.00	18	6.0	8.5	.1
		07070001	110QRNR	84-01-11	11.00	19	5.9	3.0	.1
		07070001	110QRNR	84-03-06	11.00	21	5.8	2.0	.2
		07070001	110QRNR	84-04-04**	11.00	22	5.9	2.0	<.1
		07070001	110QRNR	84-04-04**	11.00	22	5.9	2.0	<.1
		07070001	110QRNR	84-05-02	11.00	18	5.9	6.5	.2
		07070001	110QRNR	84-06-05	11.00	16	5.8	12.5	<.1
		07070001	110QRNR	84-07-03	11.00	17	5.8	15.5	<.1
455903089404720	VI-41/06E/36-0872	07070001	110QRNR	84-08-06	11.00	18	5.4	17.5	.2
		07070001	110QRNR	84-09-05	11.00	17	5.6	18.0	<.1
		07070001	110QRNR	83-10-05	8.00	63	6.5	11.0	<.1
		07070001	110QRNR	83-11-16	8.00	66	6.6	9.5	<.1
		07070001	110QRNR	84-05-02	8.00	62	6.6	5.0	.1
455910089410120	VI-41/06E/36-0876	07070001	110QRNR	84-06-05	8.00	60	6.5	8.0	<.1
		07070001	110QRNR	84-07-03	8.00	64	6.4	--	<.1
		07070001	110QRNR	84-08-06	8.00	61	6.2	11.5	.1
		07070001	110QRNR	84-09-05	8.00	61	6.7	13.0	.2
		07070001	110QRNR	83-10-05	11.00	44	5.7	11.5	.2
		07070001	110QRNR	83-11-16**	11.00	44	5.7	9.0	.2
		07070001	110QRNR	83-11-16**	11.00	46	5.8	9.0	.3
		07070001	110QRNR	84-01-11**	11.00	40	5.5	7.5	.1
		07070001	110QRNR	84-01-11**	11.00	41	5.5	7.5	.1

STATION NUMBER	DATE OF SAMPLE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)
VILAS											
455842089411420	83-10-05	1.2	.36	.70	.43	8.0	.9	.25	.02	1.6	11
	83-11-16	1.7	.54	.90	.50	12	1.4	.29	<.01	2.2	16
455846089405920	84-01-11	1.6	.44	.60	.42	9.0	1.8	.28	<.01	1.6	14
	83-10-05	1.5	.47	.80	.54	12	1.2	.27	.04	3.5	18
	83-11-16	1.7	.57	1.0	.43	13	1.0	.28	<.01	3.4	19
455901089412020	84-01-11	1.5	.39	.50	.40	5.0	5.0	.29	<.01	.2	12
	83-10-05	1.4	.34	.70	.61	9.0	.6	.21	<.01	1.4	13
	83-11-16	1.5	.42	.80	.38	9.0	1.1	.44	<.01	1.0	12
	84-01-11	1.4	.34	.60	.25	7.0	2.8	.29	.02	.6	12
	84-03-06	1.5	.41	.50	.30	5.0	3.0	.33	.02	.7	11
	84-04-04**	1.6	.46	.50	.31	5.0	3.6	.29	<.01	.7	12
	84-04-04**	1.6	.40	.50	.26	4.0	3.5	.38	<.01	.7	11
	84-05-02	1.3	.31	.50	.28	4.0	1.7	.22	<.01	.5	8
	84-06-05	1.5	.34	.80	.45	6.0	.3	<.20	<.01	1.8	--
	84-07-03	1.3	.31	1.0	.54	7.0	.3	<.20	.04	1.2	--
455903089404720	84-08-06	1.3	.36	.70	.49	6.0	.8	.30	<.01	1.6	10
	84-09-05	1.1	.25	.60	.46	6.0	.9	.28	.03	1.6	10
	83-10-05	6.4	2.2	2.3	.52	24	7.9	.28	.09	19	53
	83-11-16	6.5	2.3	2.5	.46	25	8.1	.30	<.01	17	53
	84-05-02	6.2	2.1	1.9	.40	22	7.7	.27	.07	15	47
455910089410120	84-06-05	6.4	2.2	2.2	.46	24	8.8	.33	.06	16	51
	84-07-03	6.5	2.2	4.2	.48	22	8.3	.30	.07	16	51
	84-08-06	6.2	2.2	2.3	.40	22	8.7	.31	.07	17	50
	84-09-05	6.2	2.2	2.3	.55	22	8.6	.31	.08	17	50
	83-10-05	2.1	.89	1.2	.39	6.0	.4	.30	<.01	16	34
	83-11-16**	1.9	.84	1.3	.38	6.0	.3	.29	<.01	13	31
	83-11-16**	2.0	.83	1.3	.31	6.0	<.2	.28	<.01	14	--
	84-01-11**	1.8	.66	.80	.27	11	.3	.78	.04	12	30
	84-01-11**	1.7	.60	.80	.29	10	.4	.37	.06	12	29

** SAMPLES WITH THE SAME DATES ARE REPLICATES.

ACID DEPOSITION RECORDS
VANDERCOOK LAKE
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
QUALITY OF GROUND WATER

STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	
			VILAS							
455842089411420	83-10-05	<.05	.278	.008	70	660	14	4.8		
	83-11-16	<.05	.269	<.001	30	1000	24	3.7		
	84-01-11	.09	.191	<.001	10	870	23	4.2		
455846089405920	83-10-05	<.05	.394	<.001	100	2200	30	3.6		
	83-11-16	<.05	.467	.023	30	2400	34	6.0		
	84-01-11	.04	.039	<.001	10	4	8	4.6		
455901089412020	83-10-05	.20	.213	.003	170	670	14	7.1		
	83-11-16	<.05	.255	.009	110	830	15	5.1		
	84-01-11	.09	.191	<.001	80	740	14	4.3		
	84-03-06	<.05	.185	<.001	90	810	17	3.3		
	84-04-04**	<.05	.207	.004	90	860	18	2.5		
	84-04-04**	<.05	.199	.024	90	840	18	1.9		
	84-05-02	<.05	.166	.003	120	650	14	3.9		
	84-06-05	<.05	.176	<.001	120	640	15	3.3		
	84-07-03	<.05	.268	.002	<10	630	14	3.7		
	84-08-06	<.05	.284	.002	130	720	15	4.1		
	84-09-05	<.05	.289	<.001	180	720	13	4.1		
	83-10-05	.06	.005	.003	<10	10	2	1.5		
455903089404720	83-11-16	.13	.102	.017	10	15	2	2.4		
	84-05-02	.06	.104	.011	<10	8	1	1.0		
	84-06-05	<.05	.044	<.001	30	<3	2	1.6		
	84-07-03	<.05	.063	<.001	120	<3	<1	1.4		
	84-08-06	<.05	.007	<.001	10	9	5	1.0		
	84-09-05	<.05	<.001	<.001	20	13	9	1.4		
455910089410120	83-10-05	<.05	1.70	.089	600	5900	26	27		
	83-11-16**	<.05	1.70	.115	1000	5400	23	28		
	83-11-16**	<.05	1.40	.097	390	5900	25	24		
	84-01-11**	<.05	1.70	.100	<100	4300	19	32		
	84-01-11**	<.05	1.70	.104	<100	4300	20	31		

** SAMPLES WITH THE SAME DATES ARE REPLICATES.

ACID DEPOSITION RECORDS

STAGE RECORDS

455946089415702 LITTLE ROCK LAKE NEAR WOODRUFF. WI

LOCATION.--Lat 45°59'46", long 89°41'57", in NW 1/4 NW 1/4 sec.36, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07070001, 7 mi north of Woodruff, 800 ft west of U.S. Highway 57, and 200 ft southeast of boat landing.

DRAINAGE AREA.--0.22 mi². Area of lake, 0.07 mi².

PERIOD OF RECORD.--October 1983 to September 1984.

GAGE.--Water-ataga recorder. Datum of gage is 1,600.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lake does not have surface inlet or outlet.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 27.88 ft, Dec. 16; minimum observed gage height, 27.12 ft, July 31.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.65	27.66	27.84	27.87	27.80	27.78	27.69	27.74	27.59	27.50	27.16	27.23
2	27.64	27.66	27.83	27.87	27.79	27.77	27.69	27.74	27.59	27.48	27.19	27.34
3	27.64	27.64	27.82	27.87	27.79	27.76	27.69	27.74	27.57	27.47	27.18	27.37
4	27.63	27.64	27.82	27.86	27.78	27.76	27.69	27.73	27.55	27.46	27.17	27.36
5	27.62	27.63	27.82	27.86	27.78	27.77	27.69	27.73	27.56	27.44	27.18	27.35
6	27.61	27.63	27.82	27.86	27.79	27.77	27.69	27.72	27.57	27.41	27.20	27.34
7	27.64	27.62	27.82	27.85	27.79	27.76	27.68	27.74	27.63	27.39	27.22	27.32
8	27.68	27.62	27.82	27.85	27.80	27.76	27.68	27.74	27.67	27.38	27.36	27.34
9	27.66	27.64	27.81	27.85	27.81	27.75	27.68	27.74	27.66	27.38	27.35	27.35
10	27.65	27.67	27.81	27.84	27.82	27.74	27.69	27.74	27.66	27.39	27.34	27.34
11	27.68	27.66	27.81	27.84	27.82	27.74	27.70	27.74	27.66	27.39	27.33	27.32
12	27.76	27.66	27.80	27.84	27.84	27.74	27.70	27.73	27.67	27.38	27.32	27.36
13	27.77	27.64	27.83	27.83	27.83	27.74	27.72	27.73	27.67	27.38	27.30	27.38
14	27.77	27.65	27.84	27.82	27.83	27.74	27.71	27.73	27.65	27.37	27.32	27.38
15	27.77	27.66	27.85	27.81	27.83	27.75	27.71	27.73	27.64	27.36	27.34	27.36
16	27.77	27.66	27.88	27.80	27.83	27.75	27.71	27.72	27.63	27.34	27.33	27.34
17	27.77	27.66	27.87	27.80	27.83	27.74	27.70	27.73	27.62	27.33	27.32	27.33
18	27.77	27.66	27.86	27.80	27.84	27.74	27.69	27.72	27.61	27.33	27.33	27.31
19	27.76	27.67	27.86	27.78	27.83	27.74	27.69	27.72	27.60	27.31	27.31	27.30
20	27.76	27.71	27.85	27.78	27.83	27.74	27.68	27.71	27.59	27.31	27.29	27.29
21	27.75	27.73	27.85	27.78	27.82	27.74	27.67	27.70	27.57	27.30	27.28	27.27
22	27.74	27.72	27.86	27.79	27.81	27.71	27.65	27.72	27.56	27.28	27.29	27.26
23	27.73	27.79	27.82	27.79	27.81	27.71	27.65	27.71	27.55	27.27	27.28	27.26
24	27.73	27.82	27.85	27.79	27.81	27.71	27.64	27.69	27.53	27.26	27.26	27.34
25	27.72	27.81	27.86	27.79	27.80	27.70	27.63	27.69	27.51	27.23	27.26	27.39
26	27.71	27.81	27.86	27.81	27.80	27.70	27.63	27.67	27.52	27.21	27.26	27.37
27	27.70	27.80	27.86	27.81	27.79	27.70	27.66	27.66	27.55	27.19	27.29	27.36
28	27.69	27.82	27.86	27.81	27.78	27.70	27.66	27.64	27.54	27.17	27.28	27.35
29	27.68	27.85	27.86	27.81	27.78	27.69	27.65	27.63	27.52	27.16	27.28	27.33
30	27.68	27.85	27.86	27.81	---	27.69	27.73	27.61	27.51	27.14	27.26	27.32
31	27.67	---	27.86	27.81	---	27.69	---	27.59	---	27.12	27.24	---
MEAN	27.70	27.70	27.84	27.82	27.81	27.73	27.68	27.71	27.59	27.33	27.27	27.33
MAX	27.77	27.85	27.88	27.87	27.84	27.78	27.73	27.74	27.67	27.50	27.36	27.39
MIN	27.61	27.62	27.80	27.78	27.78	27.69	27.63	27.59	27.51	27.12	27.16	27.23
WTR YR 1984	MEAN 27.63		MAX 27.88	MIN 27.12								

ACID DEPOSITION RECORDS

STAGE RECORDS

461342091561002 ROUND LAKE NEAR GORDON, WI

LOCATION.--Lat 46°13'42", long 91°56'10", in NE 1/4 NE 1/4 NW 1/4 sec.12, T.43 N., R.13 W., Douglas County, Hydrologic Unit 07030001, at north end of lake, 6.5 mi west of Gordon.

DRAINAGE AREA.--0.20 mi². Area of lake, 0.053 mi².

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lake does not have surface inlet or outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 46.43 ft, Sept. 24, 1984; minimum observed gage height, 43.63 ft, July 21-28, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 46.43 ft, Sept. 24; minimum observed gage height, 44.96 ft, Oct. 5.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	43.70	43.99
2										---	43.77	43.97
3										---	43.79	43.97
4										---	43.82	43.97
5										---	43.82	43.96
6										---	43.85	43.96
7										---	43.88	43.96
8										---	43.88	43.96
9										---	43.88	43.96
10										---	43.88	43.96
11										---	43.87	43.96
12										---	43.87	43.96
13										---	43.88	43.97
14										---	43.88	43.97
15										---	43.88	43.96
16										---	43.88	43.94
17										---	43.88	43.94
18										---	43.87	43.94
19										---	43.86	43.94
20										---	43.85	43.93
21										---	43.85	43.93
22										43.63	43.86	43.93
23										43.63	43.87	43.92
24										43.63	43.88	43.92
25										43.63	43.91	43.92
26										43.63	43.97	43.92
27										43.63	43.99	43.94
28										43.63	43.99	43.95
29										43.62	43.99	43.95
30										43.63	43.99	43.95
31										43.64	43.99	---
MEAN										---	43.88	43.95
MAX										---	43.99	43.99
MIN										---	43.70	43.92

ACID DEPOSITION RECORDS

STAGE RECORDS

461342091561002 ROUND LAKE NEAR GORDON, WI--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43.99	44.15	44.11	44.11	44.08	43.94	43.88	43.80	43.96	43.98	44.21	44.16
2	43.99	44.14	44.12	44.12	44.08	43.95	43.88	43.80	43.95	43.97	44.21	44.17
3	43.99	44.15	44.12	44.13	44.07	43.93	43.93	43.78	43.94	44.01	44.21	44.16
4	43.99	44.15	44.12	44.13	44.06	43.93	43.92	43.79	43.94	44.03	44.21	44.15
5	44.00	44.15	44.11	44.12	44.05	43.92	43.92	43.87	43.93	44.04	44.20	44.23
6	44.04	44.14	44.11	44.11	44.05	43.92	43.91	43.87	43.93	44.09	44.20	44.26
7	44.08	44.14	44.11	44.10	44.05	43.91	43.90	43.87	43.93	44.21	44.19	44.24
8	44.08	44.14	44.11	44.10	44.04	43.91	43.89	43.86	43.92	44.19	44.18	44.24
9	44.07	44.12	44.10	44.09	44.03	43.92	43.89	43.85	43.93	44.19	44.15	44.24
10	44.09	44.12	44.09	44.08	44.01	43.92	43.88	43.87	43.94	44.22	44.15	44.29
11	44.09	44.12	44.09	44.08	44.01	43.91	43.88	43.98	43.93	44.26	44.13	44.31
12	44.09	44.12	44.09	44.07	44.02	43.92	43.87	43.97	43.94	44.24	44.12	44.31
13	44.10	44.12	44.09	44.08	44.01	43.96	43.89	44.02	43.93	44.26	44.12	44.31
14	44.14	44.11	44.09	44.08	44.01	43.95	43.89	44.04	43.94	44.26	44.12	44.28
15	44.14	44.11	44.10	44.08	44.01	43.93	43.90	44.03	43.96	44.25	44.12	44.29
16	44.14	44.12	44.09	44.07	44.02	43.94	43.91	44.04	43.95	44.25	44.12	44.30
17	44.17	44.12	44.09	44.07	44.01	43.95	43.91	44.04	43.95	44.26	44.12	44.30
18	44.22	44.12	44.09	44.07	44.01	43.95	43.90	44.10	43.95	44.25	44.12	44.30
19	44.20	44.11	44.08	44.07	44.00	43.93	43.90	44.10	43.95	44.22	44.18	44.29
20	44.20	44.10	44.08	44.07	44.00	43.93	43.89	44.07	43.95	44.22	44.17	44.28
21	44.18	44.10	44.09	44.07	43.99	43.94	43.89	44.05	43.95	44.22	44.16	44.26
22	44.18	44.10	44.09	44.13	43.98	43.94	43.88	44.03	43.96	44.22	44.16	44.25
23	44.17	44.10	44.09	44.15	43.97	43.93	43.87	44.02	43.96	44.20	44.16	44.25
24	44.16	44.10	44.09	44.14	43.96	43.92	43.86	44.01	43.97	44.20	44.15	44.25
25	44.16	44.10	44.09	44.13	43.96	43.91	43.86	44.01	43.99	44.20	44.15	44.24
26	44.16	44.11	44.08	44.12	43.96	43.89	43.84	44.00	43.97	44.20	44.15	44.23
27	44.16	44.11	44.09	44.12	43.96	43.88	43.83	44.00	43.97	44.19	44.17	44.23
28	44.16	44.11	44.09	44.11	43.95	43.87	43.82	44.00	43.98	44.18	44.16	44.22
29	44.16	44.11	44.09	44.11	---	43.86	43.81	43.99	43.98	44.18	44.15	44.23
30	44.16	44.10	44.09	44.10	---	43.87	43.81	43.99	43.98	44.19	44.15	44.26
31	44.16	---	44.11	44.09	---	43.89	---	43.97	---	44.19	44.15	---
MEAN	44.12	44.12	44.10	44.10	44.01	43.92	43.88	43.96	43.95	44.18	44.16	44.25
MAX	44.22	44.15	44.12	44.15	44.08	43.96	43.93	44.10	43.99	44.26	44.21	44.31
MIN	43.99	44.10	44.08	44.07	43.95	43.86	43.81	43.78	43.92	43.97	44.12	44.15
WTR YR 1982	MEAN 44.06		MAX 44.31	MIN 43.78								

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.25	44.32	44.29	44.40	44.36	44.29	44.37	44.51	44.61	44.75	44.76	44.93
2	44.26	44.31	44.28	44.38	44.36	44.29	44.41	44.50	44.60	44.74	44.75	44.93
3	44.28	44.31	44.27	44.38	44.36	44.30	44.41	44.50	44.60	44.89	45.02	44.91
4	44.27	44.31	44.27	44.37	44.36	44.30	44.41	44.49	44.62	44.83	45.04	44.92
5	44.26	44.31	44.26	44.37	44.35	44.30	44.41	44.49	44.62	44.92	45.02	45.00
6	44.29	44.29	44.25	44.39	44.35	44.33	44.41	44.49	44.61	44.90	45.01	44.99
7	44.35	44.29	44.24	44.42	44.33	44.35	44.43	44.47	44.60	44.89	44.98	44.98
8	44.35	44.27	44.23	44.40	44.34	44.36	44.43	44.46	44.60	44.88	44.96	44.97
9	44.33	44.27	44.23	44.39	44.34	44.37	44.43	44.46	44.59	44.87	44.95	44.97
10	44.34	44.28	44.22	44.40	44.34	44.36	44.43	44.50	44.59	44.86	45.00	45.01
11	44.35	44.28	44.21	44.39	44.34	44.36	44.43	44.54	44.59	44.84	45.00	45.01
12	44.35	44.28	44.20	44.39	44.34	44.36	44.42	44.55	44.60	44.84	44.99	45.01
13	44.35	44.36	44.19	44.38	44.34	44.36	44.46	44.62	44.62	44.82	44.97	45.02
14	44.34	44.35	44.19	44.38	44.34	44.36	44.53	44.61	44.64	44.81	44.96	45.00
15	44.33	44.34	44.19	44.38	44.34	44.35	44.57	44.60	44.68	44.81	44.95	45.00
16	44.31	44.33	44.19	44.38	44.34	44.35	44.56	44.60	44.68	44.79	44.95	45.03
17	44.31	44.32	44.19	44.37	44.34	44.35	44.56	44.59	44.68	44.82	44.95	45.03
18	44.31	44.31	44.20	44.37	44.33	44.36	44.55	44.59	44.68	44.85	44.95	45.02
19	44.31	44.30	44.22	44.37	44.33	44.36	44.55	44.58	44.67	44.85	44.95	45.00
20	44.37	44.32	44.22	44.36	44.33	44.35	44.55	44.58	44.65	44.85	44.95	45.00
21	44.36	44.34	44.22	44.36	44.33	44.34	44.53	44.59	44.67	44.84	44.94	44.99
22	44.35	44.36	44.22	44.36	44.33	44.33	44.53	44.59	44.70	44.82	44.94	44.98
23	44.34	44.35	44.22	44.36	44.32	44.33	44.53	44.58	44.69	44.80	44.91	44.96
24	44.33	44.34	44.23	44.36	44.31	44.33	44.53	44.58	44.69	44.79	44.90	44.95
25	44.32	44.33	44.29	44.35	44.31	44.33	44.52	44.57	44.70	44.78	44.90	44.95
26	44.32	44.33	44.31	44.34	44.29	44.33	44.52	44.56	44.71	44.77	44.89	44.95
27	44.31	44.32	44.31	44.33	44.29	44.34	44.52	44.56	44.69	44.75	44.89	44.95
28	44.30	44.31	44.41	44.33	44.29	44.34	44.51	44.56	44.67	44.75	44.89	44.95
29	44.34	44.31	44.42	44.34	---	44.34	44.52	44.58	44.66	44.75	44.90	44.95
30	44.33	44.30	44.40	44.36	---	44.34	44.52	44.59	44.71	44.75	44.94	44.97
31	44.32	---	44.40	44.36	---	44.34	---	44.61	---	44.76	44.94	---
MEAN	44.32	44.31	44.26	44.37	44.33	44.34	44.49	44.55	44.65	44.82	44.94	44.98
MAX	44.37	44.36	44.42	44.42	44.36	44.37	44.57	44.62	44.71	44.93	45.04	45.03
MIN	44.25	44.27	44.19	44.33	44.29	44.29	44.37	44.46	44.59	44.74	44.75	44.91
CAL YR 1982	MEAN 44.11		MAX 44.42	MIN 43.78								
WTR YR 1983	MEAN 44.53		MAX 45.04	MIN 44.19								

ACID DEPOSITION RECORDS

STAGE RECORDS

461342091561002 ROUND LAKE NEAR GORDON, WI--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.98	45.00	45.24	45.24	45.26	45.28	45.23	45.33	45.49	45.93	46.04	46.27
2	44.99	45.00	45.24	45.24	45.26	45.28	45.22	45.33	45.53	45.93	46.04	46.28
3	44.99	45.00	45.24	45.24	45.26	45.28	45.22	45.33	45.53	45.97	46.04	46.27
4	44.99	45.00	45.24	45.24	45.27	45.28	45.22	45.31	45.53	45.98	46.06	46.27
5	44.99	44.99	45.24	45.24	45.27	45.29	45.21	45.32	45.56	45.98	46.21	46.27
6	44.98	44.98	45.24	45.25	45.27	45.29	45.21	45.33	45.57	45.99	46.23	46.27
7	44.98	44.98	45.24	45.25	45.26	45.28	45.20	45.35	45.60	45.99	46.24	46.27
8	44.98	44.98	45.24	45.25	45.26	45.28	45.20	45.36	45.70	45.99	46.25	46.27
9	44.98	45.02	45.24	45.24	45.26	45.28	45.19	45.40	45.68	45.99	46.25	46.27
10	44.96	45.04	45.24	45.23	45.26	45.27	45.19	45.40	45.77	46.01	46.24	46.27
11	45.01	45.04	45.24	45.23	45.26	45.27	45.18	45.42	45.78	46.02	46.23	46.27
12	45.06	45.04	45.23	45.23	45.30	45.27	45.18	45.41	45.83	46.02	46.22	46.33
13	45.03	45.04	45.22	45.23	45.33	45.27	45.20	45.42	45.85	46.02	46.21	46.33
14	45.03	45.04	45.24	45.23	45.33	45.27	45.20	45.42	45.85	46.02	46.20	46.33
15	45.04	45.04	45.26	45.23	45.33	45.27	45.20	45.42	45.84	46.02	46.27	46.32
16	45.08	45.04	45.26	45.24	45.33	45.28	45.20	45.41	45.84	46.02	46.27	46.32
17	45.08	45.04	45.26	45.24	45.33	45.27	45.19	45.41	45.84	46.04	46.26	46.31
18	45.07	45.04	45.25	45.24	45.33	45.27	45.17	45.41	45.86	46.04	46.27	46.30
19	45.07	45.05	45.24	45.24	45.33	45.27	45.17	45.40	45.86	46.04	46.27	46.29
20	45.07	45.12	45.24	45.24	45.33	45.27	45.17	45.39	45.86	46.04	46.27	46.29
21	45.07	45.13	45.24	45.24	45.33	45.28	45.15	45.44	45.86	46.04	46.27	46.28
22	45.07	45.13	45.24	45.24	45.33	45.28	45.15	45.58	45.87	46.04	46.27	46.28
23	45.06	45.17	45.24	45.24	45.33	45.28	45.13	45.56	45.88	46.04	46.26	46.28
24	45.05	45.22	45.24	45.24	45.33	45.28	45.13	45.56	45.88	46.04	46.26	46.43
25	45.05	45.22	45.24	45.24	45.33	45.27	45.13	45.55	45.87	46.04	46.26	46.43
26	45.04	45.22	45.24	45.24	45.32	45.26	45.18	45.54	45.89	46.04	46.26	46.41
27	45.03	45.22	45.24	45.24	45.31	45.26	45.27	45.52	45.94	46.04	46.28	46.39
28	45.03	45.23	45.24	45.25	45.31	45.25	45.26	45.51	45.93	46.04	46.28	46.39
29	45.02	45.24	45.24	45.26	45.30	45.24	45.25	45.50	45.93	46.04	46.28	46.37
30	45.01	45.24	45.24	45.26	---	45.24	45.32	45.50	45.93	46.04	46.27	46.36
31	45.00	---	45.24	45.26	---	45.23	---	45.49	---	46.04	46.27	---
MEAN	45.03	45.08	45.24	45.24	45.30	45.27	45.20	45.43	45.78	46.02	46.23	46.31
MAX	45.08	45.24	45.26	45.26	45.33	45.29	45.32	45.58	45.94	46.04	46.28	46.43
MIN	44.96	44.98	45.22	45.23	45.26	45.23	45.13	45.31	45.49	45.93	46.04	46.27
CAL YR 1983	MEAN	44.74	MAX	45.26	MIN	44.29						
WTR YR 1984	MEAN	45.51	MAX	46.43	MIN	44.96						

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

461342091561003 ROUND LAKE RAIN GAGE NEAR GORDON, WI

LOCATION.--Lat 46°13'42", long 91°56'10", in NE 1/4 NE 1/4 NW 1/4 sec.12, T.43 N., R.13 W., Douglas County,
Hydrologic Unit 07030001, at north end of lake, 6.5 mi west of Gordon.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.12 in., July 3, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.64 in., Aug. 5.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	1.59	.01
2										---	.00	.00
3										---	.51	.00
4										---	.00	.00
5										---	.01	.00
6										---	.78	.00
7										---	.03	.26
8										---	.01	.01
9										---	.01	.00
10										---	.00	.00
11										---	.00	.00
12										---	.00	.01
13										---	.00	.00
14										---	.00	.00
15										---	.00	.00
16										---	.00	.09
17										---	.00	.01
18										---	.00	.00
19										---	.00	.00
20										---	.00	.00
21										---	.12	.11
22										---	.13	.00
23										---	.00	.02
24										---	.34	.00
25										---	.01	.02
26										---	.97	.33
27										---	.00	.01
28										.00	.00	.05
29										.00	.00	.00
30										.00	.00	.60
31										.01	.03	---
TOTAL											4.54	1.53

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

461342091561003 ROUND LAKE RAIN GAGE NEAR GORDON, WI--CONTINUED

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12							.00	.00	.05	.47	.25
2	.00						---	.00	.00	.05	.00	.00
3	.45						---	.01	.00	.73	.03	.00
4	.41						---	.52	.00	.00	.00	.00
5	.14						---	.48	.00	.00	.00	1.54
6	.09						---	.19	.06	1.72	.00	.00
7	.00						---	.01	.00	.25	.02	.00
8	.01						---	.00	.01	.00	.00	.00
9	.22						---	.11	.20	.00	.00	.17
10	.08						---	1.39	.00	1.05	.01	.55
11	.00						---	.01	.15	.01	.00	.00
12	.00						.15	.45	.00	.21	.00	.03
13	.46						.00	.34	.00	.02	.12	.01
14	.11						.00	.04	.36	.00	.03	.00
15	.01						.21	.30	.05	.01	.00	.07
16	.00						.00	.04	.13	.00	.00	.00
17	.77						.06	.70	.07	.18	.00	.08
18	.24						.14	.08	.05	.00	.86	.00
19	.00						.01	.00	.08	.00	.01	.05
20	.01						.01	.00	.03	.00	.00	.00
21	.00						.00	.00	.06	.00	.06	.00
22	.01						.01	.01	.00	.00	.39	.00
23	---						.01	.00	.00	.00	.00	.17
24	---						.00	.00	.13	.03	.18	.00
25	---						.01	.00	.00	.00	.04	.00
26	---						.00	.00	.00	.00	.43	.00
27	---						.00	.00	.00	.00	.00	.00
28	---						.00	.00	.18	.00	.00	.04
29	---						.00	.02	.07	.29	.04	.42
30	---						.00	.00	.06	.02	.00	.01
31	---						---	.02	---	.01	.05	---
TOTAL								4.72	1.69	4.63	2.74	3.39

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.01						---	.00	.00	.00	.00
2	.12	.02						---	.00	.00	.01	.00
3	.00	.01						---	.22	2.12	1.59	.01
4	.01	.00						---	.02	.26	.18	.00
5	.01	.00						---	.02	.00	.02	.02
6	.88	.04						---	.01	.00	.00	.00
7	.00	.00						---	.00	.01	.00	---
8	.00	.00						---	.00	.00	.00	---
9	.14	---						.00	.01	.00	.00	---
10	.03	---						.00	.01	.00	.40	---
11	.00	---						.00	.00	.00	.15	---
12	.00	---						.52	.34	.00	.04	.00
13	.00	---						.39	.00	.00	.01	.00
14	.00	---						.00	.21	.00	.00	.00
15	.00	---						.00	.17	.00	.00	.00
16	.00	---						.00	.04	.16	.01	.04
17	.15	---						.00	.00	.46	.07	.02
18	.00	---						.00	.01	.05	.02	.00
19	.27	---						.02	.00	.02	.01	.00
20	.16	---						.02	.00	.02	.00	.01
21	.01	---						.00	.21	.00	.01	.00
22	.00	---						.01	.01	.01	.00	.01
23	.00	---						.00	.00	.01	.00	1.44
24	.00	---						.03	.16	.00	.01	.08
25	.02	---						.01	.00	.00	.00	.02
26	.00	---						.00	.21	.00	.00	.01
27	.00	---						.01	.00	.10	.00	.01
28	.08	---						.31	.00	.07	.07	.00
29	.01	---						.07	.13	.02	.01	.00
30	.01	---						.07	.85	.13	.00	.01
31	.00	---						.02	---	.11	.00	---
TOTAL	2.05								2.63	3.55	2.61	

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

461342091561003 ROUND LAKE RAIN GAGE NEAR GORDON, WI--CONTINUED

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01					---	.12	.45	.00	.06	.12
2	.01	.00					---	.00	.01	.01	.01	.26
3	.00	.00					---	.00	.00	.67	.00	.15
4	.00	.00					---	.03	.27	.01	1.00	.00
5	.00	.00					---	.14	.08	.29	1.64	.02
6	.01	.00					---	.00	.16	.00	.01	.02
7	.00	.00					---	.09	1.01	.00	.32	.18
8	.01	.05					---	.11	.01	.01	.00	.06
9	.75	.56					---	.00	.08	.05	.00	.04
10	.06	.01					---	.39	1.23	.06	.00	.00
11	.11	.00					---	.00	.02	.00	.00	.00
12	.08	.00					---	.04	.74	.00	.00	.98
13	.63	.00					---	.24	.00	.00	.63	.00
14	.05	.26					---	.00	.00	.00	.00	.00
15	.82	---					---	.00	.04	.00	.02	.00
16	.00	---					.00	.10	.01	.23	.00	.00
17	.01	---					.00	.02	.00	.02	.22	.01
18	.07	---					.00	.00	.01	.00	.00	.00
19	.15	---					.00	.00	.01	.00	.00	.00
20	.00	---					.00	.00	.04	.00	.04	.00
21	.00	---					.00	1.38	.01	.01	.28	.00
22	.00	---					.00	.52	.08	.02	.00	.00
23	.00	---					.00	.01	.00	.00	.00	.69
24	.01	---					.00	.06	.00	.00	.01	1.05
25	.00	---					.00	.00	.00	.00	.00	.18
26	.00	---					1.14	.00	.72	.00	.55	.00
27	.00	---					.39	.00	.01	.00	.12	.02
28	.00	---					.00	.00	.00	.00	.00	.00
29	.00	---					.24	.00	.00	.00	.00	.00
30	.00	---					.30	.00	.00	.00	.00	.00
31	.00	---					---	.00	---	.01	.05	---
TOTAL	2.78							3.25	4.99	1.39	4.96	3.78

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

461342091554201 WELL DS-43/13W/12-0367

LOCATION.--Lat 46°13'42", long 91°55'42", in NW 1/4 NE 1/4 NE 1/4, sec.12, T.43 N., R.13 W., Douglas County, Hydrologic Unit 07030001, 0.25 mi northeast of Round Lake, about 6.5 mi west of Gordon.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 53 ft, cased to 50 ft, well screened 50-53 ft.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 46.09 ft, Sept. 30, 1984; minimum observed water level, 43.08 ft, July 21, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum observed water level, 46.09 ft, Sept. 30; minimum observed water level, 44.54 ft, Oct. 9.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	43.21	43.49
2										---	43.24	43.49
3										---	43.26	43.51
4										---	43.27	43.51
5										---	43.28	43.51
6										---	43.30	43.52
7										---	43.32	43.53
8										---	43.33	43.53
9										---	43.34	43.54
10										---	43.35	43.54
11										---	43.35	43.54
12										---	43.37	43.53
13										---	43.37	43.54
14										---	43.38	43.53
15										---	43.38	43.53
16										---	43.38	43.53
17										---	43.39	43.53
18										---	43.40	43.54
19										---	43.40	43.55
20										---	43.40	43.55
21										43.08	43.40	43.55
22										43.09	43.41	43.53
23										43.11	43.42	43.53
24										43.12	43.42	43.54
25										43.14	43.43	43.55
26										43.14	43.45	43.56
27										43.15	43.46	43.56
28										43.17	43.46	43.54
29										43.18	43.47	43.56
30										43.18	43.48	43.57
31										43.20	43.49	---
MEAN										---	43.37	43.53
MAX										---	43.49	43.57
MIN										---	43.21	43.49

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

461342091554201 WELL DS-43/13W/12-0367--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43.58	43.74	43.72	43.64	43.57	43.46	43.44	43.34	43.56	43.57	43.74	43.70
2	43.57	43.72	43.72	43.64	43.57	43.45	43.44	43.34	43.55	43.57	43.74	43.70
3	43.59	43.71	43.70	43.65	43.55	43.44	43.48	43.34	43.55	43.57	43.75	43.68
4	43.61	43.73	43.68	43.65	43.55	43.44	43.44	43.34	43.55	43.58	43.74	43.67
5	43.61	43.73	43.67	43.65	43.55	43.44	43.42	43.35	43.55	43.59	43.73	43.70
6	43.62	43.72	43.69	43.64	43.56	43.43	43.41	43.35	43.55	43.60	43.72	43.71
7	43.62	43.73	43.70	43.62	43.58	43.42	43.41	43.37	43.55	43.62	43.72	43.71
8	43.62	43.71	43.67	43.63	43.55	43.42	43.41	43.36	43.55	43.63	43.73	43.72
9	43.63	43.69	43.65	43.63	43.56	43.41	43.41	43.35	43.55	43.65	43.72	43.72
10	43.64	43.72	43.65	43.63	43.56	43.42	43.41	43.35	43.55	43.66	43.72	43.75
11	43.64	43.70	43.65	43.62	43.55	43.42	43.40	43.39	43.55	43.69	43.70	43.76
12	43.64	43.71	43.66	43.61	43.53	43.42	43.40	43.40	43.55	43.69	43.70	43.76
13	43.65	43.71	43.66	43.61	43.53	43.45	43.41	43.42	43.55	43.71	43.70	43.75
14	43.66	43.72	43.66	43.62	43.55	43.41	43.40	43.45	43.55	43.71	43.70	43.75
15	43.66	43.72	43.67	43.63	43.55	43.40	43.41	43.45	43.56	43.72	43.70	43.75
16	43.67	43.72	43.67	43.60	43.52	43.41	43.43	43.46	43.56	43.73	43.69	43.76
17	43.69	43.71	43.66	43.61	43.52	43.40	43.43	43.47	43.56	43.74	43.68	43.78
18	43.71	43.71	43.65	43.60	43.52	43.38	43.41	43.51	43.56	43.74	43.68	43.78
19	43.71	43.71	43.65	43.59	43.51	43.38	43.41	43.53	43.56	43.74	43.69	43.78
20	43.72	43.70	43.68	43.57	43.51	43.39	43.41	43.53	43.56	43.74	43.70	43.77
21	43.71	43.70	43.71	43.57	43.50	43.39	43.39	43.53	43.56	43.74	43.69	43.76
22	43.72	43.70	43.69	43.61	43.49	43.38	43.38	43.53	43.56	43.74	43.71	43.76
23	43.73	43.70	43.67	43.65	43.48	43.39	43.39	43.53	43.56	43.73	43.71	43.77
24	43.73	43.69	43.65	43.61	43.47	43.40	43.40	43.54	43.56	43.73	43.70	43.77
25	43.74	43.70	43.65	43.59	43.45	43.38	43.40	43.54	43.56	43.73	43.70	43.75
26	43.74	43.72	43.65	43.60	43.45	43.37	43.38	43.55	43.56	43.73	43.69	43.75
27	43.74	43.70	43.67	43.63	43.45	43.36	43.36	43.55	43.56	43.73	43.69	43.76
28	43.74	43.68	43.64	43.59	43.45	43.36	43.35	43.55	43.57	43.73	43.67	43.76
29	43.74	43.68	43.62	43.58	---	43.37	43.35	43.56	43.57	43.73	43.68	43.75
30	43.75	43.69	43.63	43.57	---	43.42	43.35	43.56	43.57	43.74	43.68	43.74
31	43.74	---	43.66	43.57	---	43.46	---	43.56	---	43.74	43.67	---
MEAN	43.67	43.71	43.67	43.61	43.52	43.41	43.40	43.45	43.56	43.69	43.70	43.74
MAX	43.75	43.74	43.72	43.65	43.58	43.46	43.48	43.56	43.57	43.74	43.75	43.78
MIN	43.57	43.68	43.62	43.57	43.45	43.36	43.35	43.34	43.55	43.57	43.67	43.67
WTR YR 1982	MEAN 43.60		MAX 43.78	MIN 43.34								

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43.74	43.81	43.89	43.91	43.91	43.93	44.00	44.12	44.15	44.20	44.27	44.44
2	43.77	43.81	43.89	43.91	43.94	43.93	44.01	44.12	44.15	44.20	44.27	44.45
3	43.77	43.81	43.89	43.90	43.94	43.94	44.01	44.11	44.16	44.24	44.33	44.45
4	43.76	43.81	43.88	43.92	43.91	43.94	44.00	44.11	44.16	44.27	44.36	44.45
5	43.75	43.80	43.89	43.92	43.91	43.96	43.99	44.11	44.16	44.27	44.37	44.47
6	43.77	43.80	43.88	43.93	43.91	44.00	43.99	44.11	44.16	44.27	44.38	44.47
7	43.79	43.80	43.85	43.92	43.91	44.01	44.01	44.10	44.16	44.27	44.39	44.47
8	43.79	43.78	43.84	43.92	43.92	44.02	44.01	44.09	44.14	44.28	44.39	44.47
9	43.80	43.79	43.87	43.93	43.92	43.99	44.01	44.09	44.14	44.28	44.40	44.47
10	43.81	43.81	43.89	43.94	43.93	43.98	44.01	44.10	44.13	44.28	44.42	44.48
11	43.80	43.84	43.87	43.92	43.92	43.98	44.00	44.10	44.13	44.27	44.42	44.48
12	43.81	43.84	43.88	43.92	43.91	44.00	44.01	44.11	44.14	44.28	44.43	44.49
13	43.81	43.81	43.90	43.93	43.93	44.02	44.03	44.12	44.14	44.28	44.43	44.51
14	43.81	43.82	43.90	43.93	43.94	44.01	44.05	44.13	44.15	44.28	44.43	44.51
15	43.80	43.83	43.88	43.91	43.93	44.00	44.05	44.12	44.16	44.28	44.43	44.52
16	43.79	43.84	43.85	43.94	43.93	43.98	44.05	44.12	44.16	44.28	44.43	44.54
17	43.80	43.84	43.87	43.93	43.92	43.98	44.06	44.12	44.16	44.27	44.45	44.55
18	43.81	43.84	43.89	43.92	43.92	43.99	44.07	44.12	44.16	44.28	44.45	44.55
19	43.80	43.85	43.88	43.92	43.94	43.99	44.08	44.13	44.16	44.29	44.45	44.54
20	43.82	43.87	43.87	43.92	43.92	43.99	44.08	44.12	44.16	44.29	44.43	44.55
21	43.81	43.85	43.87	43.92	43.91	43.99	44.09	44.13	44.16	44.29	44.45	44.55
22	43.81	43.85	43.87	43.94	43.92	43.98	44.10	44.14	44.17	44.29	44.44	44.55
23	43.81	43.86	43.88	43.94	43.92	43.97	44.10	44.12	44.16	44.29	44.43	44.54
24	43.82	43.86	43.87	43.94	43.92	43.97	44.10	44.13	44.17	44.28	44.43	44.55
25	43.82	43.87	43.88	43.92	43.91	43.97	44.11	44.12	44.17	44.28	44.43	44.55
26	43.82	43.87	43.87	43.91	43.91	43.97	44.12	44.12	44.18	44.27	44.43	44.54
27	43.82	43.87	43.88	43.92	43.92	43.98	44.10	44.13	44.18	44.27	44.43	44.54
28	43.82	43.89	43.90	43.94	43.92	43.97	44.10	44.13	44.18	44.27	44.43	44.54
29	43.83	43.89	43.89	43.94	---	43.96	44.11	44.14	44.18	44.27	44.43	44.53
30	43.82	43.89	43.89	43.93	---	43.97	44.11	44.14	44.19	44.27	44.45	44.54
31	43.81	---	43.91	43.91	---	43.99	---	44.15	---	44.27	44.44	---
MEAN	43.80	43.84	43.88	43.92	43.92	43.98	44.05	44.12	44.16	44.27	44.41	44.51
MAX	43.83	43.89	43.91	43.94	43.94	44.02	44.12	44.15	44.19	44.29	44.45	44.55
MIN	43.74	43.78	43.84	43.90	43.91	43.93	43.99	44.09	44.13	44.20	44.27	44.44
CAL YR 1982	MEAN 43.64		MAX 43.91	MIN 43.34								
WTR YR 1983	MEAN 44.07		MAX 44.55	MIN 43.74								

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

461342091554201 WELL DS-43/13W/12-0367--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.56	44.60	44.77	44.85	44.84	44.89	44.84	44.87	45.15	45.59	45.78	45.98
2	44.57	44.60	44.77	44.85	44.86	44.88	44.84	44.89	45.15	45.60	45.78	45.99
3	44.57	44.58	44.78	44.83	44.87	44.88	44.84	44.91	45.16	45.62	45.78	45.98
4	44.56	44.58	44.79	44.86	44.85	44.88	44.84	44.91	45.17	45.63	45.78	45.99
5	44.57	44.60	44.79	44.83	44.83	44.89	44.84	44.91	45.19	45.64	45.80	45.99
6	44.55	44.61	44.79	44.83	44.82	44.88	44.84	44.91	45.20	45.65	45.84	46.00
7	44.56	44.61	44.79	44.82	44.82	44.89	44.83	44.93	45.22	45.65	45.86	46.01
8	44.55	44.60	44.79	44.81	44.83	44.88	44.83	44.93	45.25	45.67	45.88	46.00
9	44.54	44.60	44.79	44.81	44.85	44.88	44.83	44.94	45.25	45.68	45.89	46.01
10	44.57	44.60	44.79	44.80	44.85	44.89	44.83	44.97	45.28	45.68	45.89	46.01
11	44.58	44.61	44.79	44.81	44.85	44.87	44.83	44.98	45.30	45.69	45.89	46.00
12	44.56	44.61	44.80	44.81	44.86	44.86	44.84	44.97	45.34	45.70	45.89	46.03
13	44.56	44.63	44.80	44.82	44.88	44.88	44.85	44.98	45.37	45.70	45.90	46.04
14	44.56	44.63	44.81	44.80	44.88	44.90	44.82	44.98	45.38	45.71	45.92	46.03
15	44.56	44.64	44.82	44.84	44.87	44.90	44.81	44.98	45.40	45.71	45.93	46.03
16	44.56	44.64	44.81	44.86	44.88	44.85	44.81	44.99	45.42	45.72	45.93	46.03
17	44.57	44.64	44.80	44.83	44.88	44.86	44.82	45.00	45.44	45.73	45.93	46.04
18	44.59	44.65	44.80	44.83	44.88	44.87	44.81	45.00	45.45	45.73	45.94	46.04
19	44.59	44.66	44.80	44.84	44.89	44.88	44.80	45.00	45.46	45.73	45.94	46.05
20	44.59	44.69	44.82	44.83	44.89	44.90	44.78	45.01	45.47	45.74	45.94	46.05
21	44.60	44.68	44.84	44.85	44.89	44.91	44.78	45.02	45.48	45.74	45.95	46.04
22	44.61	44.67	44.84	44.84	44.91	44.89	44.80	45.05	45.50	45.75	45.95	46.05
23	44.61	44.71	44.84	44.85	44.91	44.86	44.81	45.07	45.51	45.75	45.94	46.03
24	44.61	44.72	44.84	44.86	44.89	44.86	44.80	45.10	45.52	45.75	45.95	46.07
25	44.61	44.73	44.84	44.84	44.89	44.86	44.78	45.10	45.52	45.76	45.95	46.09
26	44.61	44.73	44.83	44.83	44.87	44.86	44.79	45.10	45.54	45.76	45.96	46.08
27	44.62	44.73	44.82	44.84	44.87	44.87	44.85	45.10	45.56	45.76	45.97	46.09
28	44.60	44.75	44.84	44.86	44.87	44.87	44.83	45.11	45.56	45.76	45.99	46.09
29	44.57	44.77	44.83	44.84	44.88	44.86	44.82	45.11	45.57	45.76	45.98	46.09
30	44.58	44.77	44.82	44.82	---	44.84	44.88	45.12	45.58	45.77	45.98	46.09
31	44.59	---	44.82	44.84	---	44.84	---	45.14	---	45.78	45.97	---
MEAN	44.58	44.65	44.81	44.83	44.87	44.88	44.82	45.00	45.38	45.71	45.91	46.03
MAX	44.62	44.77	44.84	44.86	44.91	44.91	44.88	45.14	45.58	45.78	45.99	46.09
MIN	44.54	44.58	44.77	44.80	44.82	44.84	44.78	44.87	45.15	45.59	45.78	45.98
CAL YR 1983	MEAN 44.28		MAX 44.84	MIN 43.90								
WTR YR 1984	MEAN 45.12		MAX 46.09	MIN 44.54								

ACID DEPOSITION RECORDS

STAGE RECORDS

462458091274402 EAST EIGHTMILE LAKE NEAR IRON RIVER, WI

LOCATION.--Lat 46°24'58", long 91°27'44", in NW 1/4 NE 1/4 NW 1/4 sec.2, T.45 N., R.9 W., Bayfield County, Hydrologic Unit 07030001, at south end of lake, 10.2 mi south of Iron River.

DRAINAGE AREA.--0.25 mi². Area of lake, 0.050 mi².

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,100.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lake does not have surface inlet or outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 69.74 ft, Sept. 26-29, 1984; minimum observed gage height, 66.54 ft, July 2, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 69.74 ft, Sept. 26-29; minimum observed gage height, 68.35 ft, Apr. 24.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	67.30	67.27
2										---	67.35	67.25
3										---	67.37	67.24
4										---	67.41	67.24
5										---	67.40	67.22
6										---	67.41	67.22
7										---	67.46	67.25
8										---	67.44	67.24
9										---	67.44	67.23
10										---	67.43	67.23
11										---	67.41	67.23
12										---	67.40	67.22
13										---	67.39	67.21
14										---	67.40	67.20
15										---	67.39	67.19
16										---	67.37	67.18
17										---	67.35	67.19
18										---	67.33	67.17
19										---	67.32	67.17
20										---	67.31	67.16
21										---	67.30	67.16
22										---	67.30	67.14
23										---	67.30	67.13
24										67.32	67.30	67.13
25										67.32	67.31	67.13
26										67.31	67.30	67.15
27										67.29	67.29	67.16
28										67.28	67.28	67.15
29										67.27	67.28	67.16
30										67.26	67.28	67.16
31										67.26	67.27	---
MEAN										---	67.35	67.19
MAX										---	67.46	67.27
MIN										---	67.27	67.13

ACID DEPOSITION RECORDS

STAGE RECORDS

462458091274402 EAST EIGHTMILE LAKE NEAR IRON RIVER, WI--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67.22	67.24	67.10	67.05	66.99	66.85	66.82	66.75	66.72	66.55	67.09	67.04
2	67.22	67.23	67.11	67.04	66.99	66.84	66.83	66.74	66.70	66.54	67.07	67.05
3	67.21	67.21	67.11	67.05	66.98	66.84	66.89	66.73	66.68	66.56	67.07	67.04
4	67.25	67.22	67.11	67.04	66.97	66.85	66.91	66.74	66.67	66.57	67.07	67.04
5	67.25	67.21	67.10	67.03	66.96	66.84	66.89	66.83	66.66	66.57	67.05	67.08
6	67.25	67.20	67.09	67.03	66.95	66.83	66.88	66.84	66.65	66.62	67.05	67.09
7	67.25	67.20	67.09	67.02	66.95	66.83	66.87	66.83	66.65	66.70	67.05	67.08
8	67.24	67.19	67.08	67.01	66.94	66.83	66.86	66.82	66.64	66.68	67.05	67.07
9	67.23	67.17	67.08	67.01	66.93	66.83	66.85	66.80	66.63	66.85	67.04	67.07
10	67.25	67.16	67.07	67.00	66.93	66.82	66.85	66.80	66.63	67.11	67.02	67.21
11	67.25	67.16	67.07	67.01	66.92	66.82	66.84	66.86	66.62	67.15	67.01	67.33
12	67.24	67.15	67.07	67.00	66.92	66.83	66.85	66.85	66.62	67.13	67.00	67.34
13	67.24	67.14	67.07	67.00	66.91	66.85	66.86	66.87	66.61	67.11	67.00	67.35
14	67.29	67.14	67.07	66.99	66.91	66.84	66.86	66.88	66.61	67.13	67.00	67.32
15	67.28	67.13	67.05	66.99	66.91	66.82	66.87	66.88	66.62	67.12	67.01	67.34
16	67.27	67.13	67.05	66.99	66.90	66.83	66.87	66.87	66.60	67.13	67.01	67.34
17	67.30	67.13	67.05	66.98	66.89	66.83	66.88	66.87	66.59	67.16	67.00	67.34
18	67.35	67.13	67.05	66.98	66.90	66.83	66.87	66.91	66.58	67.14	67.00	67.34
19	67.34	67.12	67.04	66.98	66.90	66.82	66.88	66.90	66.58	67.12	67.01	67.32
20	67.34	67.11	67.04	66.97	66.89	66.83	66.87	66.88	66.58	67.10	66.99	67.32
21	67.33	67.11	67.05	66.97	66.88	66.84	66.85	66.86	66.59	67.10	66.98	67.30
22	67.31	67.10	67.04	66.99	66.88	66.83	66.85	66.84	66.58	67.09	66.98	67.29
23	67.31	67.09	67.04	67.06	66.87	66.82	66.84	66.82	66.57	67.07	66.99	67.28
24	67.29	67.09	67.03	67.06	66.87	66.82	66.83	66.8	66.57	67.08	67.01	67.29
25	67.29	67.09	67.03	67.04	66.87	66.81	66.82	66.79	66.57	67.08	67.03	67.28
26	67.28	67.10	67.03	67.03	66.87	66.80	66.81	66.78	66.56	67.07	67.03	67.27
27	67.27	67.11	67.04	67.03	66.86	66.79	66.79	66.78	66.56	67.07	67.02	67.27
28	67.26	67.10	67.04	67.01	66.86	66.79	66.78	66.7	66.55	67.05	67.01	67.25
29	67.26	67.09	67.03	67.01	---	66.78	66.77	66.76	66.57	67.09	67.01	67.26
30	67.25	67.09	67.02	67.01	---	66.81	66.76	66.75	66.56	67.11	67.02	67.29
31	67.25	---	67.04	66.99	---	66.83	---	66.73	---	67.10	67.02	---
MEAN	67.27	67.14	67.06	67.01	66.91	66.83	66.85	66.82	66.61	66.97	67.02	67.23
MAX	67.35	67.24	67.11	67.06	66.99	66.85	66.91	66.91	66.72	67.16	67.09	67.35
MIN	67.21	67.09	67.02	66.97	66.86	66.78	66.76	66.73	66.5	66.54	66.98	67.04

WTR YR 1982 MEAN 66.98 MAX 67.35 MIN 66.54

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67.27	67.38	67.48	67.73	67.76	67.76	67.84	68.01	68.07	68.15	68.23	68.28
2	67.28	67.38	67.49	67.72	67.77	67.76	67.87	68.01	68.07	68.15	68.23	68.27
3	67.29	67.37	67.50	67.72	67.77	67.76	67.87	68.00	68.07	68.24	68.29	68.27
4	67.28	67.40	67.50	67.71	67.77	67.77	67.87	67.99	68.08	68.30	68.30	68.28
5	67.28	67.41	67.50	67.71	67.77	67.78	67.86	67.99	68.08	68.29	68.30	68.37
6	67.32	67.40	67.49	67.73	67.76	67.81	67.87	67.98	68.08	68.27	68.29	68.37
7	67.37	67.40	67.49	67.75	67.76	67.82	67.89	67.97	68.07	68.25	68.27	68.38
8	67.37	67.39	67.48	67.74	67.75	67.82	67.89	67.97	68.06	68.25	68.26	68.36
9	67.36	67.37	67.48	67.74	67.76	67.82	67.89	67.96	68.06	68.24	68.23	68.36
10	67.38	67.38	67.48	67.74	67.77	67.82	67.91	67.95	68.06	68.23	68.34	68.43
11	67.38	67.39	67.48	67.74	67.77	67.81	67.92	67.95	68.05	68.22	68.38	68.44
12	67.38	67.47	67.48	67.75	67.77	67.81	67.92	67.94	68.06	68.19	68.36	68.43
13	67.38	67.48	67.48	67.75	67.77	67.82	67.95	68.00	68.07	68.19	68.34	68.40
14	67.37	67.47	67.48	67.75	67.77	67.82	68.02	68.00	68.09	68.19	68.34	68.40
15	67.36	67.46	67.48	67.75	67.77	67.81	68.07	67.99	68.12	68.19	68.32	68.41
16	67.35	67.45	67.48	67.75	67.77	67.81	68.05	67.98	68.15	68.18	68.32	68.44
17	67.34	67.45	67.49	67.75	67.77	67.81	68.04	67.98	68.13	68.18	68.32	68.44
18	67.34	67.44	67.51	67.74	67.77	67.82	68.03	67.97	68.13	68.20	68.32	68.44
19	67.35	67.45	67.53	67.74	67.77	67.82	68.03	67.97	68.12	68.20	68.32	68.42
20	67.44	67.50	67.53	67.74	67.77	67.81	68.02	67.97	68.11	68.20	68.31	68.42
21	67.43	67.51	67.53	67.74	67.77	67.81	68.02	67.98	68.11	68.20	68.29	68.42
22	67.41	67.51	67.53	67.73	67.77	67.80	68.02	67.99	68.12	68.20	68.29	68.41
23	67.41	67.51	67.54	67.73	67.76	67.80	68.02	67.99	68.12	68.19	68.28	68.40
24	67.39	67.50	67.55	67.73	67.76	67.80	68.02	67.99	68.12	68.17	68.27	68.38
25	67.39	67.50	67.63	67.73	67.75	67.79	68.02	67.99	68.12	68.16	68.27	68.38
26	67.38	67.49	67.64	67.73	67.75	67.79	68.02	67.98	68.13	68.14	68.26	68.38
27	67.37	67.48	67.63	67.73	67.75	67.81	68.01	67.98	68.12	68.14	68.25	68.38
28	67.36	67.48	67.75	67.73	67.75	67.81	68.01	67.98	68.10	68.14	68.27	68.38
29	67.41	67.48	67.75	67.74	---	67.80	68.02	67.99	68.09	68.14	68.27	68.38
30	67.40	67.48	67.74	67.77	---	67.80	68.02	68.04	68.13	68.18	68.28	68.40
31	67.39	---	67.74	67.77	---	67.81	---	68.07	---	68.23	68.28	---
MEAN	67.36	67.45	67.54	67.74	67.76	67.80	67.97	67.99	68.10	68.20	68.29	68.38
MAX	67.44	67.51	67.75	67.77	67.77	67.82	68.07	68.07	68.15	68.30	68.38	68.44
MIN	67.27	67.37	67.48	67.71	67.75	67.76	67.84	67.94	68.05	68.14	68.23	68.27

CAL YR 1982 MEAN 67.05 MAX 67.75 MIN 66.54
WTR YR 1983 MEAN 67.88 MAX 68.44 MIN 67.27

ACID DEPOSITION RECORDS

STAGE RECORDS

462458091274402 EAST EIGHTMILE LAKE NEAR IRON RIVER, WI--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68.40	68.40	68.64	68.57	68.52	68.55	68.48	68.61	68.75	69.14	69.34	69.43
2	68.41	68.40	68.64	68.57	68.52	68.54	68.48	68.61	68.78	69.14	69.35	69.44
3	68.41	68.40	68.62	68.57	68.52	68.54	68.47	68.60	68.77	69.21	69.35	69.46
4	68.41	68.39	68.62	68.57	68.52	68.53	68.47	68.59	68.77	69.23	69.35	69.46
5	68.41	68.39	68.61	68.56	68.53	68.54	68.47	68.59	68.79	69.23	69.41	69.46
6	68.41	68.39	68.61	68.56	68.53	68.54	68.47	68.59	68.80	69.23	69.43	69.46
7	68.41	68.39	68.60	68.56	68.53	68.54	68.47	68.60	68.81	69.23	69.43	69.46
8	68.41	68.39	68.60	68.55	68.53	68.54	68.47	68.62	68.90	69.23	69.43	69.48
9	68.40	68.42	68.59	68.55	68.53	68.53	68.47	68.66	68.90	69.23	69.43	69.50
10	68.39	68.44	68.58	68.54	68.53	68.52	68.47	68.66	69.03	69.23	69.44	69.50
11	68.44	68.44	68.58	68.53	68.53	68.51	68.46	68.67	69.06	69.28	69.44	69.50
12	68.45	68.43	68.58	68.53	68.58	68.51	68.44	68.66	69.09	69.28	69.44	69.55
13	68.45	68.43	68.59	68.53	68.60	68.51	68.44	68.66	69.11	69.28	69.44	69.58
14	68.45	68.41	68.62	68.53	68.61	68.51	68.44	68.65	69.11	69.28	69.43	69.58
15	68.44	68.45	68.64	68.53	68.61	68.51	68.44	68.67	69.11	69.28	69.42	69.58
16	68.47	68.43	68.64	68.53	68.61	68.51	68.44	68.69	69.11	69.28	69.42	69.58
17	68.47	68.43	68.64	68.53	68.61	68.50	68.44	68.70	69.11	69.28	69.42	69.58
18	68.46	68.43	68.63	68.53	68.61	68.50	68.41	68.70	69.11	69.28	69.42	69.58
19	68.46	68.44	68.62	68.53	68.60	68.50	68.38	68.69	69.11	69.28	69.42	69.58
20	68.46	68.51	68.61	68.52	68.60	68.50	68.38	68.69	69.11	69.28	69.42	69.58
21	68.45	68.52	68.61	68.52	68.60	68.52	68.36	68.71	69.11	69.28	69.42	69.58
22	68.45	68.52	68.61	68.52	68.60	68.52	68.36	68.82	69.12	69.28	69.42	69.58
23	68.45	68.56	68.61	68.52	68.60	68.52	68.36	68.81	69.13	69.28	69.42	69.58
24	68.45	68.62	68.60	68.52	68.59	68.52	68.35	68.80	69.13	69.28	69.42	69.70
25	68.44	68.61	68.60	68.52	68.58	68.51	68.36	68.79	69.13	69.28	69.42	69.70
26	68.44	68.60	68.60	68.52	68.57	68.50	68.38	68.79	69.13	69.28	69.42	69.74
27	68.43	68.59	68.60	68.52	68.57	68.50	68.50	68.77	69.14	69.28	69.42	69.74
28	68.42	68.62	68.59	68.52	68.56	68.50	68.50	68.76	69.14	69.28	69.43	69.74
29	68.42	68.64	68.59	68.32	68.55	68.50	68.50	68.75	69.14	69.28	69.43	69.74
30	68.41	68.64	68.57	68.52	---	68.49	68.58	68.75	69.14	69.28	69.43	69.73
31	68.40	---	68.57	68.52	---	68.49	---	68.75	---	69.28	69.43	---
MEAN	68.43	68.48	68.61	68.54	68.57	68.52	68.44	68.69	69.02	69.26	69.42	69.57
MAX	68.47	68.64	68.64	68.57	68.61	68.55	68.58	68.82	69.14	69.28	69.44	69.74
MIN	68.39	68.39	68.57	68.52	68.52	68.49	68.35	68.59	68.75	69.14	69.34	69.43
CAL YR 1983	MEAN 68.15		MAX 68.64	MIN 67.71								
WTR YR 1984	MEAN 68.79		MAX 69.74	MIN 68.35								

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

462458091274403 EAST EIGHTMILE LAKE RAIN GAGE NEAR IRON RIVER, WI

LOCATION.--Lat 46°24'58", long 91°27'44", in NW 1/4 NE 1/4 NW 1/4 sec.2, T.45 N., R.9 W., Bayfield County,
Hydrologic Unit 07030001, at south end of lake, 10.2 mi south of Iron River.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.06 in., July 9, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.23 in., June 10.

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	1.15	.01
2										---	.08	.01
3										---	.83	.00
4										---	.00	.00
5										---	.00	.00
6										---	1.05	.02
7										---	.01	.56
8										---	.13	.00
9										---	.11	.00
10										---	.00	.00
11										---	.00	.00
12										---	.01	.00
13										---	.22	.00
14										---	.02	.00
15										---	.00	.04
16										---	.00	.24
17										---	.00	.02
18										---	.00	.00
19										---	.00	.00
20										---	.00	.01
21										---	.06	.01
22										---	.20	.01
23										---	.30	.03
24										.01	.04	.01
25										.00	.04	.03
26										.00	.11	.36
27										.00	.13	.03
28										.00	.00	.27
29										.00	.05	.00
30										.06	.00	.56
31										.05	.26	---
TOTAL											4.80	2.22

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

46245809091274403 EAST EIGHTMILE LAKE RAIN GAGE NEAR IRON RIVER, WI--CONTINUED

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32						---	.00	.00	.00	.00	.30
2	.01						---	.00	.00	.00	.00	.18
3	.15						---	.00	.00	.30	.12	.00
4	.36						---	1.05	.00	.00	.00	.00
5	.07						---	.49	.00	.00	.00	.92
6	.11						---	.27	.06	1.68	.00	.00
7	.00						---	.00	.00	.15	.12	.00
8	.00						---	.00	.00	.00	.15	.00
9	.21						---	.09	.15	3.06	.00	.09
10	.21						---	.75	.02	2.78	.00	2.91
11	.00						---	.03	.09	.02	.00	.10
12	.01						---	.42	.00	.03	.00	.55
13	.40						.00	.25	.00	.00	.20	.01
14	.27						.01	.05	.24	.35	.03	.03
15	.00						.14	.14	.00	.41	.00	.52
16	.00						.08	.08	.00	.00	.00	.04
17	.84						.12	.70	.00	.48	.00	.33
18	.45						.18	.13	.00	.00	.09	.01
19	.02						.01	.02	.11	.02	.03	.20
20	.03						.00	.00	.15	.00	.00	.02
21	---						.00	.00	.02	.02	.01	.00
22	---						.00	.00	.00	.00	.02	.01
23	---						.00	.00	.00	.00	.24	.30
24	---						.00	.00	.02	.49	.59	.05
25	---						.00	.00	.01	.00	.05	.00
26	---						.00	.00	.00	.07	.23	.00
27	---						.00	.01	.00	.00	.01	.00
28	---						.00	.00	.29	.00	.00	.04
29	---						.00	.00	.01	1.02	.23	.47
30	---						.00	.00	.00	.00	.04	.02
31	---						---	.01	---	.00	.13	---
TOTAL								4.49	1.17	10.88	2.29	7.10

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.01						---	.00	.01	.00	.00
2	.41	.03						---	.00	.00	.01	.00
3	.00	.05						---	.25	1.90	1.19	.01
4	.00	.00						---	.09	.11	.00	1.57
5	.00	.00						---	.00	.00	.00	.00
6	1.43	.42						---	.00	.00	.00	.30
7	.10	.03						---	.00	.01	.00	.00
8	.01	.00						---	.00	.00	.00	.00
9	.37	.00						---	.00	.00	.02	.17
10	.22	---						---	.00	.00	2.06	1.18
11	.06	---					.00	.00	.00	.01	.00	.10
12	.12	---					.03	.15	.00	.00	.00	.05
13	.03	---					.65	.00	.00	.00	.01	.09
14	.04	---					.00	.41	.00	.00	.00	.00
15	.00	---					.00	.58	.00	.00	.00	.88
16	.00	---					.00	.07	.36	.19	.02	.02
17	.18	---					.00	.00	.26	.01	.00	.00
18	.06	---					.00	.00	.19	.01	.00	.00
19	.44	---					.06	.00	.03	.04	.23	.23
20	.20	---					.12	.05	.00	.00	.10	.10
21	.00	---					.01	.01	.01	.01	.00	.05
22	.00	---					.09	.00	.00	.00	.01	.00
23	.00	---					.00	.00	.01	.00	.00	.00
24	.00	---					.05	.00	.01	.00	.00	.00
25	.00	---					.00	.00	.00	.00	.00	.00
26	.00	---					.00	.36	.00	.00	.00	.00
27	.00	---					.00	.00	.14	.00	.00	.00
28	.21	---					.26	.00	.11	.22	.00	.00
29	.44	---					.29	.29	.00	.14	.23	.23
30	.00	---					.58	.57	1.16	.26	.11	.11
31	.00	---					.02	---	.21	.00	---	---
TOTAL	4.38								2.83	4.53	4.17	5.09

ACID DEPOSITION RECORDS

PRECIPITATION QUANTITY

46245809091274403 EAST EIGHTMILE LAKE RAIN GAGE NEAR IRON RIVER, WI--CONTINUED

RAINFALL, ACCUMULATED (INCHES), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
SUMMATION VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.01					---	.17	.30	.00	1.51	.12
2	.02	.02					---	.00	.05	.32	.00	.43
3	.03	.02					---	.00	.00	1.21	.00	.20
4	.04	.02					---	.03	.25	.01	.47	.03
5	.16	.01					---	.03	.21	.43	.81	.01
6	.00	.00					---	.00	.00	.00	.04	.00
7	.19	.00					---	.42	1.22	.00	.04	.38
8	.01	.02					---	.71	.01	.00	.16	.38
9	.00	.27					---	.03	.05	.11	.25	.08
10	.43	.00					---	.25	2.23	.00	.00	.01
11	.56	.00					---	.00	.02	.00	.00	.00
12	.01	.00					---	.05	.86	.00	.00	1.08
13	.02	.00					---	.08	.39	.11	.00	.00
14	.30	.19					---	.00	.27	.00	.00	.07
15	.51	.00					---	.00	.36	.00	.17	.00
16	.04	.03					---	.12	.00	.13	.00	.00
17	.00	.00					---	.00	.00	.02	.11	.00
18	.04	---					.01	.00	.01	.00	.00	.00
19	.13	---					.00	.00	.06	.00	.00	.00
20	.00	---					.00	.00	.12	.00	.00	.01
21	.00	---					.00	1.69	.01	.00	.32	.00
22	.00	---					.00	.20	.63	.02	.00	.01
23	.00	---					.01	.00	.00	.00	.00	.86
24	.05	---					.01	.04	.00	.00	.00	1.58
25	.00	---					.01	.01	.00	.00	.01	.27
26	.00	---					.96	.04	.60	.01	.45	.00
27	.00	---					1.07	.00	.02	.00	.22	.02
28	.00	---					.01	.00	.00	.00	.00	.01
29	.00	---					.21	.00	.00	.00	.00	.00
30	.00	---					.45	.00	.00	.01	.00	.00
31	.00	---					---	.00	---	.14	.00	---
TOTAL	2.81							3.87	7.67	2.52	4.56	5.55

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

462428091265801 WELL BA-45/09W/02-0186

LOCATION.--Lat 46°24'28", long 91°26'58", in NE 1/4 NE 1/4 SE 1/4, sec.2, T.45 N., R.9 W., Bayfield County, Hydrologic Unit 07030001, 0.75 mi southeast of East Eightmile Lake, about 10.2 mi south of Iron River.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 36 ft, cased to 33 ft, well screened 33-36 ft.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,100.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 71.74 ft, Sept. 30, 1984; minimum observed water level, 68.54 ft, June 2-5, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum observed water level, 71.74 ft, Sept. 30; minimum observed water level, 70.18 ft, Apr. 7-10.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	69.18	69.28
2										---	69.19	69.28
3										---	69.20	69.26
4										---	69.20	69.27
5										---	69.20	69.27
6										---	69.21	69.27
7										---	69.21	69.27
8										---	69.21	69.27
9										---	69.21	69.28
10										---	69.21	69.28
11										---	69.22	69.28
12										---	69.25	69.28
13										---	69.25	69.28
14										---	69.25	69.28
15										---	69.25	69.27
16										---	69.25	69.26
17										---	69.25	69.26
18										---	69.25	69.26
19										---	69.25	69.26
20										---	69.25	69.27
21										---	69.26	69.27
22										---	69.26	69.26
23										---	69.26	69.26
24										---	69.26	69.26
25										---	69.26	69.26
26										---	69.27	69.27
27										---	69.27	69.27
28										---	69.27	69.25
29										---	69.28	69.25
30										69.18	69.28	69.25
31										69.18	69.27	---
MEAN										---	69.24	69.27
MAX										---	69.28	69.28
MIN										---	69.18	69.25

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

462428091265801 WELL BA-45/09W/02-0186--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69.26	69.16	69.06	68.91	68.80	68.74	68.64	68.58	68.55	68.56	68.72	68.82
2	69.24	69.16	69.06	68.91	68.80	68.74	68.64	68.58	68.54	68.56	68.73	68.82
3	69.24	69.14	69.04	68.91	68.80	68.73	68.65	68.58	68.54	68.58	68.74	68.82
4	69.24	69.12	69.02	68.91	68.79	68.73	68.63	68.58	68.54	68.58	68.74	68.82
5	69.24	69.13	69.02	68.90	68.79	68.73	68.62	68.58	68.54	68.58	68.74	68.82
6	69.24	69.12	69.02	68.89	68.79	68.73	68.62	68.58	68.54	68.59	68.74	68.82
7	69.22	69.12	69.03	68.88	68.79	68.72	68.61	68.58	68.56	68.59	68.74	68.82
8	69.23	69.11	69.01	68.88	68.78	68.72	68.61	68.57	68.56	68.58	68.76	68.83
9	69.23	69.09	69.00	68.88	68.78	68.71	68.61	68.57	68.56	68.58	68.76	68.82
10	69.23	69.11	69.00	68.87	68.78	68.73	68.61	68.56	68.55	68.59	68.75	68.83
11	69.21	69.09	69.00	68.87	68.78	68.73	68.61	68.56	68.54	68.60	68.76	68.84
12	69.21	69.09	69.00	68.86	68.79	68.73	68.61	68.55	68.54	68.60	68.76	68.84
13	69.22	69.09	69.00	68.85	68.79	68.73	68.60	68.54	68.54	68.59	68.77	68.84
14	69.22	69.09	69.00	68.86	68.80	68.72	68.60	68.54	68.54	68.60	68.77	68.83
15	69.21	69.09	68.98	68.86	68.80	68.71	68.60	68.54	68.55	68.62	68.78	68.84
16	69.21	69.10	68.98	68.85	68.79	68.71	68.60	68.54	68.55	68.64	68.77	68.84
17	69.23	69.09	68.98	68.85	68.79	68.71	68.60	68.54	68.55	68.66	68.77	68.85
18	69.23	69.08	68.96	68.85	68.78	68.70	68.60	68.55	68.55	68.66	68.78	68.86
19	69.21	69.08	68.96	68.85	68.78	68.70	68.60	68.55	68.55	68.66	68.79	68.86
20	69.21	69.07	68.97	68.84	68.78	68.70	68.60	68.55	68.56	68.66	68.79	68.86
21	69.19	69.07	68.99	68.83	68.77	68.70	68.59	68.55	68.56	68.66	68.79	68.86
22	69.18	69.06	68.98	68.84	68.77	68.69	68.59	68.55	68.56	68.66	68.80	68.87
23	69.18	69.06	68.97	68.88	68.76	68.69	68.59	68.55	68.55	68.66	68.80	68.88
24	69.20	69.06	68.95	68.83	68.76	68.69	68.60	68.55	68.55	68.68	68.80	68.88
25	69.20	69.06	68.95	68.82	68.74	68.67	68.60	68.55	68.55	68.68	68.80	68.89
26	69.19	69.07	68.94	68.82	68.74	68.66	68.59	68.55	68.55	68.68	68.81	68.89
27	69.19	69.06	68.94	68.85	68.74	68.66	68.59	68.55	68.55	68.69	68.80	68.89
28	69.18	69.04	68.94	68.82	68.74	68.66	68.58	68.55	68.56	68.69	68.79	68.89
29	69.18	69.04	68.93	68.81	---	68.66	68.58	68.55	68.56	68.71	68.80	68.90
30	69.18	69.04	68.92	68.81	---	68.67	68.58	68.55	68.56	68.71	68.81	68.90
31	69.17	---	68.92	68.80	---	68.66	---	68.55	---	68.72	68.81	---
MEAN	69.21	69.09	68.98	68.86	68.78	68.70	68.61	68.56	68.55	68.63	68.77	68.85
MAX	69.26	69.16	69.06	68.91	68.80	68.74	68.65	68.58	68.56	68.72	68.81	68.90
MIN	69.17	69.04	68.92	68.80	68.74	68.66	68.58	68.54	68.54	68.56	68.72	68.82
WTR	YR 1982	MEAN 68.80	MAX 69.26	MIN 68.54								

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68.90	68.97	69.10	69.26	69.41	69.49	69.54	69.65	69.78	69.97	70.07	70.20
2	68.90	68.97	69.12	69.26	69.42	69.49	69.54	69.66	69.79	69.97	70.07	70.20
3	68.91	68.98	69.12	69.26	69.42	69.49	69.54	69.66	69.80	69.99	70.08	70.21
4	68.91	68.98	69.12	69.27	69.42	69.49	69.54	69.67	69.81	70.00	70.08	70.21
5	68.91	68.98	69.13	69.28	69.42	69.50	69.53	69.67	69.81	69.99	70.08	70.22
6	68.91	68.98	69.14	69.30	69.42	69.51	69.53	69.68	69.82	69.99	70.08	70.22
7	68.92	68.99	69.13	69.30	69.42	69.51	69.54	69.68	69.83	70.00	70.08	70.22
8	68.92	68.99	69.13	69.30	69.43	69.51	69.54	69.68	69.84	70.00	70.08	70.22
9	68.92	68.99	69.14	69.32	69.44	69.50	69.55	69.69	69.84	70.00	70.11	70.23
10	68.93	69.00	69.15	69.33	69.44	69.49	69.56	69.68	69.84	70.01	70.15	70.23
11	68.93	69.01	69.15	69.33	69.44	69.49	69.56	69.65	69.85	70.02	70.15	70.23
12	68.93	69.01	69.15	69.32	69.44	69.50	69.56	69.65	69.86	70.01	70.15	70.23
13	68.92	68.99	69.17	69.33	69.45	69.52	69.57	69.65	69.87	70.00	70.15	70.20
14	68.93	68.99	69.17	69.34	69.45	69.53	69.58	69.65	69.88	70.00	70.15	70.19
15	68.93	69.01	69.18	69.33	69.45	69.51	69.57	69.65	69.88	70.00	70.15	70.21
16	68.93	69.02	69.18	69.34	69.46	69.51	69.56	69.66	69.87	70.01	70.15	70.22
17	68.93	69.02	69.19	69.34	69.45	69.51	69.56	69.67	69.88	70.01	70.16	70.22
18	68.93	69.03	69.20	69.34	69.46	69.52	69.56	69.68	69.88	70.02	70.16	70.23
19	68.94	69.04	69.20	69.34	69.46	69.53	69.57	69.69	69.88	70.02	70.17	70.23
20	68.95	69.05	69.20	69.35	69.46	69.53	69.57	69.69	69.89	70.03	70.17	70.23
21	68.95	69.04	69.20	69.35	69.46	69.53	69.58	69.71	69.90	70.03	70.17	70.24
22	68.95	69.04	69.21	69.36	69.47	69.53	69.58	69.72	69.92	70.03	70.17	70.24
23	68.95	69.04	69.22	69.37	69.47	69.53	69.58	69.72	69.92	70.04	70.17	70.24
24	68.95	69.05	69.22	69.37	69.47	69.53	69.59	69.73	69.92	70.04	70.17	70.24
25	68.95	69.06	69.23	69.37	69.47	69.53	69.60	69.73	69.95	70.04	70.17	70.24
26	68.95	69.06	69.23	69.38	69.48	69.53	69.62	69.73	69.96	70.04	70.17	70.24
27	68.95	69.07	69.23	69.39	69.48	69.53	69.63	69.74	69.95	70.05	70.19	70.24
28	68.96	69.08	69.25	69.41	69.48	69.53	69.63	69.75	69.95	70.05	70.19	70.25
29	68.97	69.09	69.25	69.41	---	69.52	69.63	69.76	69.96	70.06	70.20	70.25
30	68.97	69.10	69.25	69.41	---	69.52	69.64	69.78	69.97	70.06	70.20	70.25
31	68.97	---	69.25	69.41	---	69.54	---	69.78	---	70.07	70.20	---
MEAN	68.93	69.02	69.18	69.34	69.45	69.51	69.57	69.69	69.88	70.02	70.14	70.23
MAX	68.97	69.10	69.25	69.41	69.48	69.54	69.64	69.78	69.97	70.07	70.20	70.25
MIN	68.90	68.97	69.10	69.26	69.41	69.49	69.53	69.65	69.78	69.97	70.07	70.19
CAL YR 1982	MEAN	68.79	MAX	69.25	MIN	68.54						
WTR YR 1983	MEAN	69.58	MAX	70.25	MIN	68.90						

ACID DEPOSITION RECORDS

GROUND-WATER LEVELS

462428091265801 WELL BA-45/09W/02-0186--CONTINUED

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70.25	70.24	70.30	70.28	70.32	70.28	70.20	70.29	70.54	70.92	71.27	71.57
2	70.25	70.24	70.30	70.28	70.34	70.28	70.20	70.28	70.54	70.94	71.27	71.57
3	70.27	70.23	70.30	70.33	70.34	70.27	70.19	70.30	70.55	70.96	71.28	71.57
4	70.27	70.23	70.30	70.32	70.34	70.27	70.19	70.31	70.57	70.97	71.30	71.58
5	70.27	70.24	70.30	70.33	70.31	70.29	70.19	70.32	70.59	70.97	71.32	71.58
6	70.25	70.25	70.30	70.31	70.31	70.27	70.19	70.32	70.59	70.98	71.33	71.60
7	70.25	70.26	70.30	70.31	70.28	70.26	70.18	70.33	70.61	70.99	71.35	71.62
8	70.24	70.26	70.30	70.29	70.28	70.25	70.18	70.33	70.63	71.01	71.36	71.62
9	70.24	70.26	70.30	70.28	70.30	70.24	70.18	70.34	70.62	71.02	71.37	71.63
10	70.25	70.25	70.29	70.27	70.31	70.27	70.18	70.36	70.64	71.02	71.37	71.63
11	70.26	70.25	70.29	70.29	70.31	70.24	70.19	70.37	70.64	71.02	71.37	71.63
12	70.25	70.25	70.29	70.29	70.32	70.24	70.22	70.37	70.66	71.03	71.38	71.65
13	70.25	70.27	70.29	70.29	70.33	70.24	70.23	70.37	70.68	71.04	71.40	71.66
14	70.25	70.27	70.33	70.27	70.32	70.24	70.21	70.36	70.68	71.06	71.41	71.65
15	70.23	70.26	70.33	70.30	70.31	70.25	70.20	70.35	70.70	71.07	71.42	71.65
16	70.24	70.26	70.30	70.34	70.31	70.20	70.20	70.36	70.72	71.08	71.42	71.66
17	70.24	70.28	70.27	70.31	70.31	70.20	70.21	70.38	70.74	71.09	71.44	71.68
18	70.24	70.30	70.25	70.30	70.31	70.20	70.22	70.40	70.75	71.09	71.45	71.69
19	70.23	70.31	70.24	70.30	70.31	70.22	70.22	70.41	70.76	71.12	71.45	71.69
20	70.23	70.33	70.25	70.29	70.31	70.24	70.22	70.41	70.77	71.13	71.46	71.70
21	70.23	70.32	70.29	70.31	70.31	70.25	70.21	70.43	70.79	71.15	71.47	71.71
22	70.24	70.30	70.31	70.31	70.33	70.25	70.24	70.44	70.81	71.17	71.48	71.72
23	70.25	70.31	70.29	70.33	70.34	70.22	70.28	70.44	70.82	71.17	71.48	71.71
24	70.25	70.33	70.28	70.35	70.32	70.22	70.29	70.46	70.84	71.18	71.49	71.73
25	70.25	70.32	70.29	70.34	70.31	70.22	70.29	70.46	70.85	71.19	71.50	71.72
26	70.25	70.29	70.32	70.34	70.28	70.22	70.29	70.46	70.88	71.20	71.52	71.69
27	70.26	70.27	70.32	70.32	70.28	70.22	70.32	70.46	70.89	71.21	71.53	71.70
28	70.25	70.30	70.32	70.36	70.28	70.22	70.29	70.46	70.89	71.21	71.54	71.72
29	70.21	70.31	70.29	70.34	70.28	70.21	70.26	70.48	70.89	71.23	71.55	71.73
30	70.21	70.31	70.30	70.31	---	70.20	70.31	70.50	70.91	71.24	71.55	71.74
31	70.22	---	70.29	70.31	---	70.20	---	70.52	---	71.26	71.55	---
MEAN	70.24	70.28	70.29	70.31	70.31	70.24	70.23	70.39	70.72	71.09	71.42	71.66
MAX	70.27	70.33	70.33	70.36	70.34	70.29	70.32	70.52	70.91	71.26	71.55	71.74
MIN	70.21	70.23	70.24	70.27	70.28	70.20	70.18	70.28	70.54	70.92	71.27	71.57
CAL YR 1983	MEAN 69.89		MAX 70.33		MIN 69.26							
WTR YR 1984	MEAN 70.60		MAX 71.74		MIN 70.18							

DISCONTINUED STATIONS

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 Upson, 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
04067000	Menominee River below Koss, WI	3,730	1907-09, 1913-81
04068000	Peshigo 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
04074538	Swamp Creek above Rice Lake at Mole Lake, WI	46.3	1977-83
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
04080950	Emmons Creek near Rural, WI	27	1968-74
04080976	Storm Sewer to Mirror Lake at Waupaca, WI	0.04	1971-74
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	Brothertown Creek at Brothertown, WI	5.59	1976-77
04085813	Onion River at Hingham, WI	37.2	1978-80
04085845	Onion River near Sheboygan Falls, WI	94.1	1978-82
04086150	Milwaukee River at Kewaskum, WI	138	1968-81
04086200	East Branch Milwaukee River near New Fane, WI	54.1	1968-81
04086340	North Branch Milwaukee River near Fillmore, WI	148	1968-81
04086360	Milwaukee River at Waukegan, WI	432	1968-81
04087018	Menominee River at Germantown, WI	19.0	1974-77
04087019	Jefferson Park Drainageway at Germantown, WI	1.82	1976-78
04087040	Menominee River at Butler, WI	60.6	1974-79
04087060	Noyes Creek at Milwaukee, WI	1.94	1974-79
04087070	Little Menominee River at Milwaukee, WI	19.7	1974-77
04087119	Honey Creek at Wauwatosa, WI	10.3	1974-81
04087125	Schoonmaker Creek at Wauwatosa, WI	1.94	1974-79
04087130	Hawley Road Storm Sewer at Milwaukee, WI	1.83	1975-77
04087160	Kinnickinnic River at Milwaukee, WI	20.4	1976-82
05332000	Namekagon River at Trego, WI	460	1914-27
05332500	Namekagon River near Trego, WI	503	1927-70
05333500	St. Croix River near Danbury, WI	1,588	1914-81
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
05356121	Couderay River near Couderay, WI	169	1981-83
05357500	Flambeau River at Flambeau Flowage (Flambeau Reservoir), WI	666	1927-61
05358000	Flambeau River near Butternut, WI	737	1914-38

LIST OF DISCONTINUED STATIONS--CONTINUED

Station number	Station name	Drainage area (sq mi)	Period of record
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	1903-06, 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
05364500	Duncan Creek at Bloomer, WI	49.2	1943-51
05365000	Duncan Creek at Chippewa Falls, WI	114	1942-55
05365500	Chippewa River at Chippewa Falls, WI	5,650	1888-1983
05366000	Eau Claire River near Augusta, WI	500	1914-26
05366300	Bridge Creek at Augusta, WI	34.5	1979-80
05366500	Eau Claire River near Fall Creek, WI	758	1942-55
05367000	Chippewa River at (near) Eau Claire, WI	6,630	1902-09, 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
05369900	Eau Galle River near Woodville, WI	39.4	1978-83
05369945	Eau Galle River at Low-Water Bridge at Spring Valley, WI	47.9	1981-83
05369955	French Creek near Spring Valley, WI	6.03	1980-83
05369970	Lousy Creek near Spring Valley, WI	5.97	1980-83
05369985	Lohn Creek near Spring Valley, WI	2.53	1980-83
05370500	Eau Galle River at Elmwood, WI	91.9	1942-53
05372000	Buffalo River near Tell, WI	406	1932-51
05379288	Bruce Valley Creek near Pleasantville, WI	10.1	1979-80
05379305	Elk Creek near Independence, WI	99.7	1979-80
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
05382500	Little LaCrosse River near Leon, WI	77.4	1934-61, 1978-81
05383000	LaCrosse River near West Salem, WI	398	1913-70
05386490	Spring Coulee Creek near Coon Valley, WI	8.93	1978-81
05386500	Coon Creek at Coon Valley, WI	78.3	1934-40, 1978-81
05386999	Coon Creek near Stoddard, WI	120	1934-40, 1979-81
05387100	North Fork Bad Axe River near Genoa, 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
05397110	Eau Claire River near Antigo, WI	200	1974-81
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 Arnott, 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 Nekoosa, 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
05403700	Dell Creek near Lake Delton, WI	44.9	1957-1965, 1970-80
05404200	Narrows Creek at Loganville, WI	40.0	1964-66

LIST OF DISCONTINUED STATIONS--CONTINUED

Station number	Station name	Drainage area (sq mi)	Period of record
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 Nederlo Creek near Gays Mills, WI	2.21	1967-79
05409890	Nederlo Creek near Gays Mills, WI	9.46	1967-80
05410000	Kickapoo River at Gays Mills, WI	617	1913-34, 1964-77
05413400	Pigeon Creek near Lancaster, WI	6.81	1964-66
05414894	Pats Creek near Belmont, WI	5.42	1980-82
05414915	Madden Branch Tributary near Belmont, WI	2.83	1980-82
05414920	Madden Branch near Meekers Grove, WI	15.1	1980-82
05418731	Apple River near Shullsburg, WI	9.34	1980-82
05423000	West Branch Rock River near Waupun, WI	40.7	1949-70, 1978-81
05423100	West Branch Rock River at County Trunk Highway D near Waupun, WI	43.9	1978-81
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
05426900	Whitewater Creek at Millis Road near Whitewater, WI	20.6	1978-81
05427000	Whitewater Creek at Whitewater, WI	22.7	1926-28, 1946-54
05427507	Koshkonong Creek near Rockdale, WI	150	1976-82
05427718	Yahara River at Windsor, WI	73.6	1976-81
05427800	Token Creek near Madison, WI	24.3	1975-80
05427900	Sixmile Creek near Waunakee, WI	41.1	1976-81
05427943	Pheasant Branch at Airport Road near Middleton, WI	9.61	1977-81
05427945	South Fork Pheasant Branch at Highway 14 near Middleton, WI	5.74	1977-81
05427950	Pheasant Branch at Century Avenue at Middleton, WI	20.8	1977-81
05427952	Pheasant Branch at mouth at Middleton, WI	24.5	1978-81
05427970	Willow Creek at Madison, WI	3.15	1973-83
05428665	Olbrich Park Storm Ditch at Madison, WI	2.57	1976-80
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
05429580	Door Creek near Cottage Grove, WI	15.3	1975-79
05430000	Yahara River near Edgerton, WI	459	1916-17
05430030	Oregon Branch at Oregon, WI	9.93	1979-81
05430100	Badfish Creek near Stoughton, WI	43.5	1956-66
05431500	Turtle Creek near Clinton, WI	202	1939-79
05433500	Yellowstone River near Blanchardville, WI	28.5	1954-65, 1977-79
05434000	Pecatonica River at Dill, WI	951	1914-19
05433510	Steiner Branch near Waldwick, WI	5.9	1977-79
05434235	Skinner Creek at Skinner Hollow Road near Monroe, WI	32.6	1978-81
05434240	Skinner Creek at Klondyke Road near Monroe, WI	35.0	1978-81
05435980	West Branch Sugar River near Mount Vernon, WI	32.7	1979-80
05436000	Mount Vernon Creek near Mount Vernon, WI	16.4	1954-65, 1975-80
05545300	White River near Burlington, WI	110	1973-82

DEFINITION OF TERMS

Terms used in this report with reference to streamflow, water-quality, and other hydrologic data are defined below. For conversion of inch-pound units and International System (SI) units see the table on the inside of the back cover.

Acre-foot (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.

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.

Fecal coliform bacteria are present in the intestines of warmblooded animals and are used to determine the sanitary quality of water. They are defined as those organisms that produce blue colonies within 24 hours when incubated at $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ on FC culture medium. Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal streptococci 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. They are defined as those organisms that produce red or pink colonies within 48 hours at $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ on M-enterococcus 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 for the decomposition of organic matter.

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.

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 (ft^3/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 an operational definition used by Federal and State agencies collecting water data as that material in a water sample which passes through a 0.45 μm membrane filter. 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 noncontributing 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 or lake~~ where systematic hydrologic data are collected.

Geologic unit is a geologic formation or group of formations; in this report, the term is used in the same sense as "aquifer" and refers to the geologic formation(s) open to the uncased or screened portion of a well.

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 delineated by the Office of Water Data Coordination; each hydrologic unit is identified by an 8-digit number.

Micrograms per gram ($\mu\text{g/g}$) indicates the concentration of a chemical constituent as the mass (micrograms) of that constituent per unit mass (gram) of sediment.

Micrograms per kilogram ($\mu\text{g/kg}$) indicates the concentration of a chemical constituent as mass (micrograms) of that constituent per unit mass (kilogram) of sediment.

Micrograms per liter (ug/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) indicates the concentration of a chemical constituent or suspended sediment as the mass (milligrams) per unit volume (liter) of water.

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 mean sea level at any particular place.

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 (surface 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.

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} disintegrations per second. A picocurie yields 2.22 disintegrations per minute.

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 sample of bottom material has been digested by an acid or mixture of acids that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material usually 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.

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 discharge-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 cross 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 and is 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 mg/L 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.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a water-sediment sample retained on a 0.45 um membrane filter has been digested by dilute acid that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter usually 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 dissolved and total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45 um 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 dissolved and total concentrations of the constituent.

Tons per acre-foot indicates the dry weight of a constituent 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 (mg/L) by 0.0027 times the discharge of the stream (cfs).

Total is the total amount of a given constituent in a water-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." The term indicates the sample consists of a water-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 water-sediment sample has been digested by dilute acid resulting in dissolution of only readily soluble substances. Complete dissolution of all particulate matter usually is not achieved, 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."

WDR is the abbreviation for "Water-Data Report" 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-five manuals, one open-file report, and two water supply papers 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 reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202.

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".

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Benson, M.A., and Dalrymple, Tate, 1967, General field and office procedures for indirect discharge measurements: U.S. Geol. Survey Tech. Water-Resources Inv. Book 3, Chap. A1, 30p.

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- Smoot, G.F., and Novak, C.E., 1968, Calibration and maintenance of verticle-axis type current meters: U.S. Geol. Survey Tech. Water-Resources Inv. Book 8, Chap. A2, 15p.
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INDEX

	Page
Access to WATSTORE data.....	8
Accuracy of field data and computed results.....	6
Acid deposition records.....	301
Adams County, ground-water levels in.....	267
quality of ground water in.....	297
Afton, Rock River at.....	200,262
Allen Creek (Rock River basin), near Fort Atkinson.....	252
Allen Creek tributary (Menominee-Oconto-Pestigo River basin), near Alvin.....	245
Apple Creek near Kaukauna.....	246
Arkansaw Creek tributary near Arkansaw.....	248
Armstrong Creek near Armstrong Creek.....	246
Ashland County, ground-water levels in.....	267
Ashland, White River near.....	24,254
Babcock, Yellow River at.....	152,260
Bad River near Mellen.....	245
at Odanah.....	25
near Odanah.....	23,254
Bad Axe River Basin, crest-stage partial-record stations in.....	249
North Fork, near Genoa.....	249
Badfish Creek near Cooksville.....	198,262
Baird Creek tributary at Green Bay.....	247
Baraboo River near Baraboo.....	156,260
Bark River near Rome.....	185
Barron County, ground-water levels in.....	267
Bashaw Brook near Shell Lake.....	247
Bear Branch near Platteville.....	251
Bear River near Powell.....	247
Bearskin Creek near Harshaw.....	250
Beaver Dam Creek at Green Bay.....	246
Berlin, Fox River at.....	49,256
Big Eau Pleine River near Stratford.....	149,259
Big Sandy Creek near Wausau.....	250
Bird Creek at Wautoma.....	246
Black Earth Creek at Black Earth.....	157,260
Black River basin, crest-stage partial-record stations in.....	249
gaging-station records in.....	133
water-quality partial-record stations in.....	259
Black River (Black River basin) near Galesville.....	134
at Neillsville.....	133,259
tributary near Whittlesey.....	249
Blanchardville, East Branch	
Pecatonica River near.....	235,263
Bois Brule River near Brule.....	19,254
Boulder Junction, Trout Lake near.....	336
Brodhead, Sugar River near.....	237
Brown County, ground-water levels in.....	268
Bruce, Chippewa River near.....	113,258
Flambeau River near.....	114,258
Brule, Bois Brule River near.....	19,254
Brule River near Florence.....	29
Buffalo River basin, crest-stage partial-record stations in.....	249
Buffalo River near Mondovi.....	249
tributary near Osseo.....	249
Buncombe, Galena River at.....	170,261
Burnett County, ground-water levels in.....	269
Burton, Grant River at.....	166
Cawley Creek near Neillsville.....	249
Cedar Creek near Cedarburg.....	76,257
Cedarburg, Cedar Creek near.....	76,257
Milwaukee River near.....	78
Chippewa County, ground-water levels in.....	269
Chippewa River at Bishop's Bridge, near Winter.....	112,258
at Durand.....	118
near Bruce.....	113,258
Chippewa River basin, crest-stage partial-record stations in.....	247
gaging-station records in.....	112
location map of.....	111
water-quality partial-record stations in.....	258
Cisco Branch, Ontonagon River at	
Cisco Lake Outlet, MI.....	27
Clark County, ground-water levels in.....	269
Clinton, Turtle Creek at Carvers Rock Road near.....	233,263
Collection and computation of surface-water data.....	3
Collection and examination of water-quality data.....	6
Collection of ground-water data.....	8
Cooksville, Badfish Creek near.....	198,262
Cooperation.....	1
Crawfish River at Milford.....	183
Crooked Creek near Boscobel.....	251
Dane County, ground-water levels in.....	270
Darlington, Pecatonica River at.....	234,263
Definition of terms.....	361
Decker Corner, Mud Lake outlet channel near.....	75
Delavan Lake at center near Delavan Lake.....	222
at north end near Lake Lawn.....	226
at sw. end near Delavan Lake.....	219
Inlet at US Hwy 50 at Lake Lawn.....	213
Outlet at Borg Road near Delavan.....	229
Tributary at Park near Lake Lawn.....	263
Tributary at South Shore Drive near Delavan.....	214
Dell Creek near Lake Delton.....	251
Des Plaines River at Russell, IL.....	241
Devil Creek near Merrill.....	250
Discontinued gaging stations, list of.....	358
Dodge County, ground-water levels in.....	270
Dodge, Trempealeau River at.....	132,259
Door County, ground-water levels in.....	271
Douglas County, ground-water levels in.....	271
Douglas Creek near Prentice.....	248
Downstream order and station number.....	3
Duncan Creek at Bloomer.....	248
Durand, Chippewa River at.....	118
Eagle Creek near Fountain City.....	249
East Eightmile Lake near Iron River.....	349
rain gage near Iron River.....	352
East Twin River at Mishicot.....	68,257
Eau Claire River (Central Wisconsin River basin)	
at Kelly.....	147,259
Eau Claire River (Chippewa River basin) near Fall Creek.....	248
Elkhorn, Jackson Creek at Mounds Road near.....	212
Jackson Creek at Petrie Road near.....	201
Jackson Creek tributary near.....	206
Eau Galle River at Spring Valley.....	121
Embarrass River near Embarrass.....	53,256
Evergreen Creek near Langlade.....	246
Explanation of ground-water records.....	8
surface-water records.....	3
water-quality records.....	6
Fence, Popple River near.....	31
Fisher Creek tributary at Janesville.....	252
Flambeau River near Bruce.....	114,258
Florence, Brule River near.....	29
Menominee River near.....	30
Fond du Lac County, ground-water levels in.....	272
Forest County, ground-water levels in.....	272
Fourmile Creek near Three Lakes.....	250
Fowler Lake, Center at Oconomowoc.....	177
Fox River (Lake Michigan basin) at Berlin.....	49,256
at Rapide Croche Dam, near Wrightstown.....	63
at Wrightstown.....	64
tributary at Green Bay.....	246
Fox-Wolf River basin location map.....	41
Fox River (Illinois River basin)	
at Waukesha.....	242
at Wilmet.....	244
Franklin, Root River near.....	102
Root River Canal near.....	103
French Creek near Ettrick.....	249
Fulton, Yahara River near.....	199,262
Galena River at Buncombe.....	170,261
Galena River basin, crest-stage	
partial-record stations in.....	251
gaging-station records in.....	170
water-quality, partial-record stations in.....	261
Galesville, Black River near.....	134
Gill Creek near Brooklyn.....	252

Gillett, Oconto River near.....	39,255	gaging station records in.....	16
Goggle-Eye Creek near Thorp.....	248	tributary at Superior.....	245
Gordon, Round Lake near.....	340	water-quality partial-record stations in.....	254
Round Lake, rain gage near.....	343	west basin of lagoon at w. end of Michigan Is.....	254
Grant County, ground-water levels in.....	272	Lake Tomahawk, Wisconsin River at Rainbow Lake.....	142
Grant River at Burton.....	166	Lake Winnebago at Oshkosh.....	61
Grant River basin, crest-stage partial-record stations in.....	251	at Stockbridge.....	62
gaging-stations records in.....	166	Lakes:	
Green County, ground-water levels in.....	273	Clara near Tomahawk.....	310
Green Lake, White Creek at		Delavan at Center near Delavan Lake.....	222
Forest Glen beach near.....	43	at north end near Lake Lawn.....	226
Ground water, chemical analysis.....	297	at sw. end near Delavan Lake.....	219
levels of, by counties.....	267	East Eightmile near Iron River.....	349
Gudegast Creek near Starks.....	250	Fowler Center at Oconomowoc.....	177
Hay Creek near Prentice.....	248	Hills near Wild Rose.....	57
Hay River at Wheeler.....	116,258	Lac la Belle at Oconomowoc.....	180
Hills Lake near Wild Rose.....	57	Little Rock near Woodruff.....	339
Honey Creek at Milwaukee.....	247	Mendota at Madison.....	195
Hulbert Creek near Wisconsin Dells.....	251	Monona at Madison.....	196
Hunting River near Elcho.....	246	Morris near Mt. Morris.....	59
Hustisford, Rock River at.....	172	Okauchee at Okauchee.....	173
Hydrologic bench-mark program, explanation of.....	2	Round near Gordon.....	340
Illinois River basin, crest-stage		Superior, east basin of lagoon at w. end, Michigan Is.....	254
partial-record stations in.....	252	West basin of lagoon at w. end of Michigan Is.....	254
gaging-station records in.....	241	Vandercook near Woodruff.....	325
Indianford, Rock River at.....	186,252	Winnebago at Oshkosh.....	61
Introduction.....	1	near Stockbridge.....	62
Iowa County, ground-water levels in.....	274	Wolf near Mt. Calvary.....	72
Iron River, East Eightmile Lake near.....	349	Langlade County, ground-water levels in.....	276
East Eightmile Lake rain gage near.....	352	Langlade, Wolf River at.....	51,256
Jackson County, ground-water levels in.....	274	Lemonweir River at New Lisbon.....	153,260
Jackson Creek at Mounds Road near Elkhorn.....	212	Lightning Creek at Alma.....	248
at Petrie Road near Elkhorn.....	201	Lily River near Lily.....	246
tributary near Elkhorn.....	206	Lincoln County, ground-water levels in.....	276
Jefferson, Rock River at.....	184	quality of ground water in.....	323
Johnson Creek near Knowlton.....	250	Little Frog Creek near Minong.....	247
Jump River at Sheldon.....	115,258	Little La Crosse River near Leon.....	249
North Fork near Phillips.....	248	Little Menomonee River near Freistadt.....	247
Juneau County, ground-water levels in.....	274	Little Pine Creek near Irma.....	250
Kelly, Eau Claire River at.....	147,259	Little Plover River at Plover.....	150,260
Kenosha County, ground-water levels in.....	275	Little Popple River near Aurora.....	245
Keshena, Wolf River at Keshena Falls near.....	52,256	Little River, North Branch near Coleman.....	246
Kewaunee River near Kewaunee.....	67,257	Little Rock Lake near Woodruff.....	339
Kickapoo River at La Farge.....	161,261	Little Turtle Creek at Allens Grove.....	252
at Steuben.....	162,261	Little Wolf River at Royalton.....	59,256
Killsnake River near Chilton.....	247	Lloyd Creek near Doering.....	250
Kinnickinnic River (Lake Michigan		McAllister, Menominee River near.....	35
basin) at South 11th Street at Milwaukee.....	98	McFarland, Yahara River near.....	197,262
Kinnickinnic River tributary (St. Croix		McGregor, IA, Mississippi River at.....	137
River basin) at River Falls.....	247	Madison:	
Lac La Belle at Oconomowoc.....	180	Lake Mendota at.....	195
La Crosse River basin, crest-stage partial-record stations in.....	249	Lake Monona at.....	196
La Farge, Kickapoo River at.....	161,261	Spring Harbor Storm Sewer at.....	193
Lafayette County, ground-water levels in.....	275	Manitowoc County, ground-water levels in.....	277
Lake Clara near Tomahawk.....	307	Manitowoc River at Manitowoc.....	69
Outlet near Tomahawk.....	310	Marathon County, ground-water levels in.....	278
Rain gage near Tomahawk.....	313	Marquette County, ground-water levels in.....	279
Tributary near Tomahawk.....	304	Marquette County, ground-water levels in.....	280
Lake Lawn, Delavan Lake at north end near.....	226	Martintown, Pecatonica River at.....	236,263
Delavan Lake Inlet at US Hwy 50 near.....	213	Mauneshia River near Sun Prairie.....	252
Delavan Lake Tributary at Park at.....	263	Menominee-Oconto-Peshigo River basin location map.....	28
Lake Mendota at Madison.....	195	Menominee River below Pemene Creek near Pembine.....	34,255
Lake Michigan, streams tributary to, crest-		near Florence.....	30
stage partial-record stations in.....	245	near McAllister.....	35
Fox-Wolf basin location map.....	41	Menominee, Red Cedar River at.....	117,258
gaging station records in.....	29	Menomonee River at Falk Corporation at Milwaukee.....	96
Lake Michigan basin location map.....	66	at Menomonee Falls.....	88
Menominee-Oconto-Peshigo River basin location map.....	28	at Milwaukee.....	95
water-quality partial-record stations in.....	255	at Wauwatosa.....	92
Lake Monona at Madison.....	196	Merrill, Prairie River near.....	144,259
Lake Morris near Mt. Morris.....	59	Wisconsin River at.....	145
Lake Superior, streams tributary to, basin location.....	15	Middleton, Pheasant Branch at.....	187
crest-stage partial-records in.....	245	Milford, Crawfish River at.....	183
east basin of lagoon at w. end of Michigan Is.....	254	*Milwaukee County, ground-water levels in.....	280
		Milwaukee, Kinnickinnic River at South 11th Street at.....	98
		Menomonee River at.....	95

Menomonee River at Falk Corporation.....	96	Portage County, ground-water levels in.....	285
Milwaukee River at.....	81	quality of ground water in.....	297
Milwaukee River above North Avenue dam at Milwaukee.....	85	Prairie River near Merrill.....	144,259
at Milwaukee.....	81	Prescott, Mississippi River at.....	110
near Cedarburg.....	78	Price County, ground-water levels in.....	287
Mishicot, East Twin River at.....	68,257	Price Creek near Phillips.....	248
Mishonagon Creek near Woodruff.....	250	Publications on techniques of water resources investigations.....	367
Mississippi River at McGregor, IA.....	137		
at Prescott.....	110	Raccoon Creek, East Fork, tributary near Beloit.....	252
at Winona, MN.....	127	Racine County, ground-water levels in.....	288
Mole Lake, Swamp Creek below Rice Lake at.....	50,256	Racine, Root River at.....	104
Monroe County, ground-water levels in.....	282	Pike River near.....	105
Mormon Creek basin, crest-stage partial-record stations in.....	249	Radiochemical surveillance program, explanation of.....	3
Mormon Creek near La Crosse.....	249	Raspberry River near Sand Bay.....	21
Mt. Calvary, Wolf Lake near.....	72	Red Cedar River at Menomonie.....	117,258
Mount Morris, Lake Morris near.....	59	Red Cliff, Red Cliff Creek near.....	22
Mud Creek near Nashville.....	246	Sand River near.....	20
Mud Lake outlet channel near Decker Corner.....	75	Red Cliff Creek near Red Cliff.....	22
Mukwonago River at Mukwonago.....	243	Reservoirs in Wisconsin River basin.....	163
Muscoda, Wisconsin River at.....	158	Richland County, ground-water levels in.....	289
Muskrat Creek at Conover.....	249	Richland Creek near Plugtoun.....	251
		Robbins Creek at Columbus.....	251
Narrows Creek at Loganville.....	251	Rock Branch near Mineral Point.....	252
National stream-quality accounting network, explanation of.....	3	Rock County, ground-water levels in.....	289
Neillsville, Black River at.....	133,259	Rock-Fox River basin, location map.....	171
Nemadji River near South Superior.....	16	Rock River basin crest-stage partial-record stations in.....	251
Neshota River tributary near Denmark.....	247	gaging-station records in.....	172
New Lisbon, Lemonweir River at.....	153,260	water-quality partial-record stations in.....	262
New London, Wolf River at.....	54,256	Rock River at Afton.....	200,262
Nippersink Creek, North Branch, tributary near Genoa City.....	252	at Hustisford.....	172
Noteworthy hydrologic events of 1984.....	9	at Indianford.....	186,262
Numbering system for ground-water and lake data sites.....	3	at Jefferson.....	184
		at Rockton, IL.....	240
Oak Creek at South Milwaukee.....	101	at Watertown.....	182
near South Milwaukee.....	247	East Branch, tributary near Slinger.....	251
Oconomowoc, center of Fowler Lake at.....	177	Rockton, IL, Rock River at.....	240
Lac La Belle at.....	180	Rockville, Platte River at.....	169,261
Oconomowoc River at Oconomowoc Lake-Oconomowoc.....	175	Rocky Branch near Richland Center.....	251
Oconto County, ground-water levels in.....	283	Rome, Bark River near.....	185
Oconto River near Gillett.....	39,255	Root River near Franklin.....	102
North Branch, near Wabeno.....	246	at Racine.....	104
Odanah, Bad River at.....	25	Root River Canal near Franklin.....	103
Bad River near.....	23,254	West Branch, tributary near North Cape.....	247
Okauchee Lake at Okauchee.....	173	Rothschild, Wisconsin River at.....	148,259
Oneida County, ground-water levels in.....	283	Round Lake near Gordon.....	340
Onemile Creek near Mauston.....	251	Rain gage near Gordon.....	343
Ontonagon River, Cisco Branch at Cisco Lake Outlet, MI.....	27	Rowan Creek at Poynette.....	251
Oshkosh, Lake Winnebago at.....	61	Royalton, Little Wolf River at.....	55,256
Outagamie County, ground-water levels in.....	284	Rusk County, ground-water levels in.....	289
		Russell, IL, Des Plaines River at.....	241
Pats Creek near Elk Grove.....	251		
Pearl Creek at Grandview.....	245	St. Croix County, ground-water levels in.....	290
Pearson Creek near Maple.....	245	St. Croix River at St. Croix Falls.....	107
Pecatonica River, at Darlington.....	234,263	St. Croix River basin, crest-stage partial-record stations in.....	247
at Martintown.....	236,263	gaging-station records in.....	107
Pecatonica-Sugar River basin location map.....	165	location map.....	106
East Branch, near Blanchardville.....	235,263	Sand Bay, Raspberry River near.....	21
Pembine, Menominee River below Pemene Creek near.....	34,255	Sand River near Redcliff.....	20
Pensaukee River near Pensaukee.....	40,255	tributary near Red Cliff.....	245
near Pulaski.....	246	Sauk County, ground-water levels in.....	290
Peshtigo River at Peshtigo.....	38,255	Sawyer Creek at Oshkosh.....	246
near Cavour.....	246	Sediment.....	7
Pet Brook tributary near Edgar.....	250	Seth Creek near Cadott.....	248
Pheasant Branch at Middleton.....	187	Shawano County, ground-water levels in.....	290
Pigeon Creek near Lancaster.....	251	Sheboygan River at Sheboygan.....	74,257
Pike Creek near Kenosha.....	247	Sheldon, Jump River at.....	115,258
Pike River near Racine.....	105	Sioux River near Washburn.....	245
Pine Creek, East Branch, tributary near Dallas.....	248	Smith Creek near Parks Falls.....	248
Pine River, North Branch, at Windsor Dam near Alvin.....	245	South Milwaukee, Oak Creek at.....	101
Platte River basin, crest-stage partial-record stations in.....	251	South Superior, Nemadji River near.....	16
gaging-stations records in.....	169	Spaulding Creek near Big Falls.....	246
water-quality partial-record stations in.....	261	Special networks and programs.....	2
Platte River near Rockville.....	169,261	Spirit River at Spirit Falls.....	143,259
Plover, Little Plover River at.....	150,260	Spring Creek near Durand.....	248
Polk County, ground-water levels in.....	284	Spring Harbor Storm Sewer at Madison.....	193
Poplar River near Owen.....	249	Spring Valley, Eau Galle River at.....	121
Popple River near Fence.....	31	Squaw Creek near Harrison.....	250
South Branch, near Newald.....	245		

Steuben, Kickapoo River at.....	162,261	White Creek at Forest Glen beach near Green Lake.....	42
Stockbridge, Lake Winnebago near.....	62	White River (Illinois River basin), tributary near Burlington.....	252
Stoney Brook near Superior.....	245	White River (tributary to Lake Superior), near Ashland.....	24,254
Stratford, Big Eau Pleine River near.....	149,259	Wild Rose, Hills Lake near.....	57
Sugar Creek at Elkhorn.....	252	Willow Creek near Eau Claire.....	248
Sugar River near Brodhead.....	237	Wilmot, Fox River at.....	244
tributary, near Pine Bluff.....	252	Winnebago County, ground-water levels in.....	296
Swamp Creek below Rice Lake at Mole Lake.....	50,256	Winona, MN, Mississippi River at.....	127
Taylor County, ground-water levels in.....	291	Winter, Chippewa River at Bishop's Bridge near.....	112,258
Token Creek near Madison.....	252	Wisconsin Dells, Wisconsin River near.....	154,260
Tomahawk, Lake Clara near.....	310	Wisconsin Rapids, Wisconsin River at.....	151
Lake Clara Outlet near.....	307	Wisconsin River basin, crest-stage partial-record stations in.....	249
Lake Clara rain gage near.....	313	gaging-station records in.....	142
Lake Clara Tributary near.....	304	location map.....	
Trade River near Frederic.....	247	upper Wisconsin River basin.....	141
Trappe River tributary near Merrill.....	250	central Wisconsin River basin.....	146
Trempealeau County, ground-water levels in.....	293	lower Wisconsin River basin.....	155
Trempealeau-Black River basin location map.....	126	reservoirs in.....	163
Trempealeau River basin, gaging-station records in.....	132	water-quality partial-record stations in.....	259
Trempealeau River at Dodge.....	132,259	Wisconsin River at Merrill.....	145
Trout lake bulk precip coll near Boulder Junction.....	336	at Muscoda.....	158
Turtle Creek at Carvers Rock Road near Clinton.....	233,263	at Rainbow Lake near Lake Tomahawk.....	142
Underwood Creek at Wauwatosa.....	91	at Rothschild.....	148,259
Vandercook Lake near Woodruff.....	240	at Wisconsin Rapids.....	151
Rain Gage near Woodruff.....	328	near Wisconsin Dells.....	154,260
Vilas County, ground-water levels in.....	293	tributary at Wausau.....	250
quality of ground water in.....	337	Wolf Lake near Mt. Calvary.....	72
Walworth County, ground-water levels in.....	294	Wolf River at Keshena Falls near Keshena.....	52,256
quality of ground water in.....	300	at Langlade.....	51,256
Watertown, Rock River at.....	182	at New London.....	54,256
WATSTORE data, access to.....	8	Woods Creek near Fence.....	245
Waukesha County, ground-water levels in.....	294	Woodruff, Little Rock Lake near.....	339
Waukesha, Fox River at.....	242	Vandercook Lake near.....	325
Waumandee Creek basin, crest-stage partial-record stations in.....	249	Vandercook Lake Rain Gage near.....	328
Waupaca County, ground-water levels in.....	295	Wrightstown, Fox River at.....	
Waupaca River near Waupaca.....	56,257	Fox River at.....	64
Waushara County, ground-water levels in.....	295	Rapide Croche Dam near.....	63
Wauwatosa, Menomonee River at.....	92	Yahara River at McFarland.....	197,262
Underwood Creek at.....	91	near Fulton.....	199,262
Weber Creek near Mercer.....	247	Yellow River (central Wisconsin River basin) at Babcock.....	152,260
Webster Creek at New Lisbon.....	250	tributary near Pittsville.....	250
Wheeler, Hay River at.....	116,258	Yellow River (Chippewa River basin) at Cadott.....	248
		Yellowstone River near Blanchardville.....	252

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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