

1972

# Water Resources Data for Wisconsin

Part 1. Surface Water Records

Part 2. Water Quality Records



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Prepared in cooperation with the State of Wisconsin  
and with other agencies

# CALENDAR FOR WATER YEAR 1972

## OCTOBER 1971

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

## NOVEMBER 1971

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| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
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## DECEMBER 1971

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| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 |    |

## JANUARY 1972

| S  | M  | T  | W  | T  | F  | S  |
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| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 |    |    |    |    |    |

## FEBRUARY 1972

| S  | M  | T  | W  | T  | F  | S  |
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| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 |    |    |    |    |

## MARCH 1972

| S  | M  | T  | W  | T  | F  | S  |
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| 26 | 27 | 28 | 29 | 30 | 31 |    |

## APRIL 1972

| S  | M  | T  | W  | T  | F  | S  |
|----|----|----|----|----|----|----|
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| 2  | 3  | 4  | 5  | 6  | 7  | 8  |
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| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
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## MAY 1972

| S  | M  | T  | W  | T  | F  | S  |
|----|----|----|----|----|----|----|
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| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 |    |    |    |

## JUNE 1972

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

## JULY 1972

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

## AUGUST 1972

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

## SEPTEMBER 1972

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

# 1972

## Water Resources Data for Wisconsin

Part 1. Surface Water Records

Part 2. Water Quality Records



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DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Prepared in cooperation with the State of Wisconsin  
and with other agencies

Prepared in cooperation with  
Wisconsin Department of Natural Resources  
Wisconsin Department of Transportation  
The University of Wisconsin-Extension  
Geological and Natural History Survey  
Southeastern Wisconsin Regional Planning Commission  
City of Madison

Copies of this report may be obtained from  
District Chief, Water Resources Division  
U. S. Geological Survey  
1815 University Avenue  
Madison, Wisconsin 53706

1974

## CONTENTS

|                                                                                              | Page |
|----------------------------------------------------------------------------------------------|------|
| List of surface-water stations, in downstream order,<br>for which records are published..... | V    |
| List of water-quality stations, in downstream order,<br>for which records are published..... | VIII |
| Introduction.....                                                                            | 1    |
| Cooperation.....                                                                             | 2    |
| Definition of terms.....                                                                     | 3    |
| Special networks and programs.....                                                           | 9    |
| Downstream order and station numbers.....                                                    | 9    |
| Surface water records.....                                                                   | 10   |
| Collection and computation of data.....                                                      | 10   |
| Accuracy of data.....                                                                        | 15   |
| Publications.....                                                                            | 15   |
| Other data available.....                                                                    | 16   |
| Water quality records.....                                                                   | 16   |
| Collection and examination of data.....                                                      | 16   |
| Solutes.....                                                                                 | 18   |
| Temperature.....                                                                             | 19   |
| Sediment.....                                                                                | 19   |
| Publications.....                                                                            | 19   |
| Selected references.....                                                                     | 20   |
| Part 1. Surface water records.....                                                           | 23   |
| Hydrologic conditions.....                                                                   | 25   |
| Discharge at partial-record stations and miscellaneous<br>sites:                             |      |
| Low-flow partial-record stations.....                                                        | 155  |
| Crest-stage partial-record stations.....                                                     | 162  |
| Measurements at miscellaneous sites.....                                                     | 171  |
| Low-flow investigations:                                                                     |      |
| Montreal River basin.....                                                                    | 176  |
| West Branch Fond du Lac River basin.....                                                     | 176  |
| East Branch Fond du Lac River basin.....                                                     | 177  |
| DeNevue Creek basin.....                                                                     | 179  |
| Neenah Slough basin.....                                                                     | 180  |
| Whitewater Creek basin.....                                                                  | 181  |
| Part 2. Water quality records.....                                                           | 182  |
| Analyses of samples collected at miscellaneous sites....                                     | 219  |
| Analyses of samples collected at water-quality partial-<br>record stations.....              | 225  |
| Index.....                                                                                   | 259  |

ILLUSTRATIONS

|                                                                                                                                                   | Page |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Figure 1. Map of Wisconsin showing location of lake and continuous-stream gaging stations.....                                                    | 24   |
| 2. Variation of the 1972 runoff compared with the long-term average runoff.....                                                                   | 25   |
| 3. Comparison of discharge at three long-term representative gaging stations during 1972 water year with median discharge for period 1931-60..... | 26   |
| 4. Comparison of extremes of stage of three southern lakes for each water year since 1937.....                                                    | 27   |
| 5. Comparison of extremes of stage at three northern lakes for each water year since 1937.....                                                    | 28   |
| 6. Map of Wisconsin showing location of stations where water-quality data were obtained....                                                       | 183  |

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 TABLES
 

---

|                                                                                                                                 |    |
|---------------------------------------------------------------------------------------------------------------------------------|----|
| Table 1. Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter... | 6  |
| 2. Factors for conversion of sediment concentrations in milligrams per liter to parts per million.....                          | 6  |
| 3. Degrees Celsius (°C) to degrees Fahrenheit (°F).....                                                                         | 18 |

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

V

Page

ST. LAWRENCE RIVER BASIN (PART 4)

STREAMS TRIBUTARY TO LAKE SUPERIOR

|                                                                                                           |    |
|-----------------------------------------------------------------------------------------------------------|----|
| Bois Brule River at Brule.....                                                                            | 30 |
| Iron River:                                                                                               |    |
| Long Lake near Iron River.....                                                                            | 31 |
| Bad River near Mellen.....                                                                                | 32 |
| Alder Creek near Upson.....                                                                               | 33 |
| Bad River near Odanah.....                                                                                | 34 |
| White River near Ashland.....                                                                             | 35 |
| Black River near Bessemer, Mich.....                                                                      | 36 |
| Presque Isle River at Marenisco, Mich.....                                                                | 37 |
| Middle Branch Ontonagon River:                                                                            |    |
| West Branch Ontonagon River:                                                                              |    |
| Cisco Branch Ontonagon River (head of South<br>Branch Ontonagon River) at Cisco Lake<br>Outlet, Mich..... | 38 |

STREAMS TRIBUTARY TO LAKE MICHIGAN

|                                                               |    |
|---------------------------------------------------------------|----|
| Brule River (head of Menominee River) near Florence....       | 39 |
| Menominee River near Florence.....                            | 40 |
| Pine River:                                                   |    |
| Popple River near Fence.....                                  | 41 |
| Pine River below Pine River powerplant, near<br>Florence..... | 42 |
| Menominee River near Pembine.....                             | 43 |
| Menominee River below Koss, Mich.....                         | 44 |
| Peshtigo River at Peshtigo.....                               | 45 |
| Oconto River:                                                 |    |
| Wheeler Lake near Lakewood.....                               | 46 |
| Oconto River near Gillett.....                                | 47 |
| Fox River:                                                    |    |
| Montello Creek:                                               |    |
| Lawrence Creek near Westfield.....                            | 48 |
| Grand River near Kingston.....                                | 49 |
| Fox River at Berlin.....                                      | 50 |
| Wolf River at Langlade.....                                   | 51 |
| Evergreen River:                                              |    |
| Evergreen Creek near Langlade.....                            | 52 |
| Wolf River at Keshena Falls.....                              | 53 |
| Embarrass River near Embarrass.....                           | 54 |
| Wolf River at New London.....                                 | 55 |
| Waupaca River:                                                |    |
| Crystal River:                                                |    |
| Emmons Creek near Rural.....                                  | 56 |
| Lake Winnebago at Oshkosh.....                                | 57 |
| Fox River at Rapide Croche Dam, near Wrightstown.....         | 58 |
| Kewaunee River near Kewaunee.....                             | 59 |
| Sheboygan River:                                              |    |
| Unnamed Creek:                                                |    |
| Cedar Lake near Kiel.....                                     | 60 |

ST. LAWRENCE RIVER BASIN (PART 4)--ContinuedSTREAMS TRIBUTARY TO LAKE MICHIGAN--Continued

|                                                 |    |
|-------------------------------------------------|----|
| Sheboygan River at Sheboygan.....               | 61 |
| Milwaukee River at Kewaskum.....                | 62 |
| East Branch Milwaukee River near New Fane.....  | 63 |
| North Branch Milwaukee River near Fillmore..... | 64 |
| Milwaukee River near Waubeka.....               | 65 |
| Milwaukee River at Milwaukee.....               | 66 |
| Menomonee River at Wauwatosa.....               | 67 |
| Oak Creek at South Milwaukee.....               | 68 |
| Root River near Franklin.....                   | 69 |
| Root River Canal near Franklin.....             | 70 |
| Root River at Racine.....                       | 71 |
| Pike River near Racine.....                     | 72 |

UPPER MISSISSIPPI RIVER BASIN (PART 5)Mississippi River:ST. CROIX RIVER BASINSt. Croix River:

|                                   |    |
|-----------------------------------|----|
| St. Croix River near Danbury..... | 73 |
|-----------------------------------|----|

Yellow River:Sawyer Creek:

|                               |    |
|-------------------------------|----|
| Shell Lake at Shell Lake..... | 74 |
|-------------------------------|----|

|                                       |    |
|---------------------------------------|----|
| Snake River near Pine City, Minn..... | 75 |
|---------------------------------------|----|

|                                         |    |
|-----------------------------------------|----|
| St. Croix River at St. Croix Falls..... | 76 |
|-----------------------------------------|----|

CHIPPEWA RIVER BASIN

|                                                    |    |
|----------------------------------------------------|----|
| Chippewa River at Bishops Bridge, near Winter..... | 77 |
|----------------------------------------------------|----|

|                                |    |
|--------------------------------|----|
| Chippewa River near Bruce..... | 78 |
|--------------------------------|----|

Flambeau River:

|                           |    |
|---------------------------|----|
| Pine Creek near Oxbo..... | 79 |
|---------------------------|----|

|                                                  |    |
|--------------------------------------------------|----|
| Flambeau River at Babbs Island, near Winter..... | 80 |
|--------------------------------------------------|----|

|                                              |    |
|----------------------------------------------|----|
| South Fork Flambeau River near Phillips..... | 81 |
|----------------------------------------------|----|

|                                |    |
|--------------------------------|----|
| Flambeau River near Bruce..... | 82 |
|--------------------------------|----|

|                            |    |
|----------------------------|----|
| Jump River at Sheldon..... | 83 |
|----------------------------|----|

|                                       |    |
|---------------------------------------|----|
| Chippewa River at Chippewa Falls..... | 84 |
|---------------------------------------|----|

Red Cedar River:

|                                   |    |
|-----------------------------------|----|
| Red Cedar River near Cameron..... | 85 |
|-----------------------------------|----|

|                           |    |
|---------------------------|----|
| Hay River at Wheeler..... | 87 |
|---------------------------|----|

|                                   |    |
|-----------------------------------|----|
| Red Cedar River at Menomonie..... | 88 |
|-----------------------------------|----|

|                               |    |
|-------------------------------|----|
| Chippewa River at Durand..... | 89 |
|-------------------------------|----|

|                                       |    |
|---------------------------------------|----|
| Eau Galle River at Spring Valley..... | 90 |
|---------------------------------------|----|

|                                         |    |
|-----------------------------------------|----|
| Reservoirs in Chippewa River Basin..... | 91 |
|-----------------------------------------|----|

TREMPEALEAU RIVER BASIN

|                                   |    |
|-----------------------------------|----|
| Trempealeau River at Arcadia..... | 92 |
|-----------------------------------|----|

|                                 |    |
|---------------------------------|----|
| Trempealeau River at Dodge..... | 93 |
|---------------------------------|----|

BLACK RIVER BASIN

|                                 |    |
|---------------------------------|----|
| Black River at Neillsville..... | 94 |
|---------------------------------|----|

|                                  |    |
|----------------------------------|----|
| Black River near Galesville..... | 95 |
|----------------------------------|----|

|                                          |    |
|------------------------------------------|----|
| Mississippi River at McGregor, Iowa..... | 96 |
|------------------------------------------|----|

UPPER MISSISSIPPI RIVER BASIN (PART 5) --ContinuedWISCONSIN RIVER BASIN

## Eagle River:

|                                                         |     |
|---------------------------------------------------------|-----|
| Anvil Lake near Eagle River.....                        | 97  |
| Wisconsin River at Rainbow Lake, near Lake Tomahawk.... | 98  |
| Tomahawk River at Bradley.....                          | 99  |
| Spirit River at Spirit Falls.....                       | 100 |
| Prairie River near Merrill.....                         | 101 |
| Wisconsin River at Merrill.....                         | 102 |
| Eau Claire River at Kelly.....                          | 103 |
| Wisconsin River at Rothschild.....                      | 104 |
| Big Eau Pleine River near Stratford.....                | 105 |
| Little Plover River near Arnott.....                    | 106 |
| Little Plover River at Plover.....                      | 107 |
| Wisconsin River at Wisconsin Rapids.....                | 108 |
| Tenmile Creek ditch 5 near Bancroft.....                | 109 |
| Tenmile Creek near Nekoosa.....                         | 110 |
| Fourteenmile Creek near New Rome.....                   | 111 |
| Big Roche a Cri Creek near Adams.....                   | 112 |
| Yellow River at Babcock.....                            | 113 |
| Lemonweir River at New Lisbon.....                      | 114 |
| Hulbert Creek near Wisconsin Dells.....                 | 115 |
| Dell Creek near Lake Delton.....                        | 116 |
| Wisconsin River near Wisconsin Dells.....               | 117 |
| Baraboo River:                                          |     |
| Devils Lake near Baraboo.....                           | 118 |
| Baraboo River near Baraboo.....                         | 119 |
| Fish Lake near Sauk City.....                           | 120 |
| Blue Mound Creek:                                       |     |
| Black Earth Creek at Black Earth.....                   | 121 |
| Otter Creek near Highland.....                          | 122 |
| Wisconsin River at Muscoda.....                         | 123 |
| Kickapoo River at La Farge.....                         | 124 |
| Tainter River:                                          |     |
| Nederlo Creek:                                          |     |
| North Fork Nederlo Creek near Gays Mills.....           | 125 |
| Nederlo Creek near Gays Mills.....                      | 126 |
| Kickapoo River at Gays Mills.....                       | 127 |
| Kickapoo River at Steuben.....                          | 128 |
| Reservoirs in Wisconsin River Basin.....                | 129 |
| GRANT RIVER BASIN                                       |     |
| Grant River at Burton.....                              | 132 |
| PLATTE RIVER BASIN                                      |     |
| Platte River near Rockville.....                        | 133 |
| GALENA RIVER BASIN                                      |     |
| Galena River at Buncombe.....                           | 134 |
| ROCK RIVER BASIN                                        |     |
| Crawfish River at Milford.....                          | 135 |
| Yahara River:                                           |     |
| Lake Mendota at Madison.....                            | 136 |

|                                                          | Page |
|----------------------------------------------------------|------|
| <u>UPPER MISSISSIPPI RIVER BASIN (PART 5)--Continued</u> |      |
| <u>ROCK RIVER BASIN--Continued</u>                       |      |
| Lake Monona at Madison.....                              | 137  |
| Murphy Creek:                                            |      |
| Lake Wingra:                                             |      |
| Manitou Way Storm Sewer at Madison.....                  | 138  |
| Nakoma Storm Sewer at Madison.....                       | 139  |
| Lake Wingra Outlet at Madison.....                       | 140  |
| Yahara River near McFarland.....                         | 142  |
| Rock River at Afton.....                                 | 143  |
| Turtle Creek near Clinton.....                           | 144  |
| Pecatonica River at Darlington.....                      | 145  |
| East Branch Pecatonica River near Blanchardville...      | 146  |
| Pecatonica River at Martintown.....                      | 147  |
| Sugar River near Brodhead.....                           | 148  |
| Rock River at Rockton, Ill.....                          | 149  |
| <u>ILLINOIS RIVER BASIN</u>                              |      |
| Kankakee River (head of Illinois River):                 |      |
| Des Plaines River at Russell, Ill.....                   | 150  |
| Illinois River:                                          |      |
| Fox River at Waukesha.....                               | 151  |
| Honey Creek:                                             |      |
| North Lake near Elkhorn.....                             | 152  |
| Rockland Lake near Burlington.....                       | 153  |
| Fox River at Wilmot.....                                 | 154  |

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

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

|                                                     |     |
|-----------------------------------------------------|-----|
| <u>ST. LAWRENCE RIVER BASIN (PART 4)</u>            |     |
| <u>STREAMS TRIBUTARY TO LAKE MICHIGAN</u>           |     |
| Popple River near Fence, Wis. (cts).....            | 184 |
| Lake Michigan at Milwaukee (c).....                 | 190 |
| <u>UPPER MISSISSIPPI RIVER BASIN (PART 5)</u>       |     |
| <u>Mississippi River:</u>                           |     |
| <u>WISCONSIN RIVER BASIN</u>                        |     |
| Tenmile Creek ditch 5, near Bancroft, Wis. (t)..... | 195 |
| Kickapoo River near Rockton (cts)*.....             | 197 |
| Kickapoo River at LaFarge (ts).....                 | 204 |
| Nederlo Creek near Gays Mills (ts).....             | 212 |
| <u>ROCK RIVER BASIN</u>                             |     |
| Rock River at Afton, Wis. (t).....                  | 217 |

## WATER RESOURCES DATA FOR WISCONSIN, 1972

Part 1. Surface-Water Records

Part 2. Water-Quality Records

### INTRODUCTION

Water-resources data in this report include records of streamflow, lake stage, and reservoir storage at gaging stations, partial-record stations, miscellaneous sites and chemical and physical characteristics of surface water. Records for a few pertinent gaging stations in bordering States also are included. Locations of gaging stations on streams and lakes are shown in figure 1. Locations of water-quality stations are shown in figure 6. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey under the direction of C.L.R. Holt, Jr., district chief. Included with these data are that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Wisconsin.

Through September 30, 1960, the records of discharge and stage of streams, and contents and stage of lakes and reservoirs were published in an annual series of U.S. Geological Survey Water-Supply Papers titled "Surface Water Supply of the United States". Streamflow records for 1961-65 are published in a Geological Survey Water-Supply Paper series titled, "Surface Water Supply of the United States 1961-65". The Geological Survey has published records of chemical quality, suspended sediment, and water temperatures since 1941 in an annual series of Water-Supply Papers titled "Quality of Surface Waters of the United States".

Beginning with the 1961 water year, streamflow records and related data have been released by the Geological Survey in annual reports on a State-boundary basis. Beginning with the 1964 water year, water-quality records have been released with streamflow records or in a separate part. Distribution of these reports is limited; they are designed primarily for rapid release of data shortly after the end of the water year.

## COOPERATION

The U.S. Geological Survey and organizations of the State of Wisconsin have had cooperative agreements for the systematic collection of streamflow records since 1913, and for water-quality records since 1963. Organizations that supplied data are acknowledged in station descriptions.

Organizations that cooperated in collecting records are:

Wisconsin Department of Natural Resources, L. P. Voigt, secretary.

Wisconsin Department of Transportation, N. M. Clapp, secretary, and W. A. Kline, chief bridge engineer.

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

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

City of Madison, D. E. Theobald, city engineer.

Assistance in the form of funds or services was given by:

|                                            |                    |
|--------------------------------------------|--------------------|
| Department of the Army, Corps of Engineers |                    |
| St. Paul District                          | 11 gaging stations |
| Rock Island District                       | 7 gaging stations  |
| Chicago District                           | 4 gaging stations  |

United States Environmental Protection Agency - 1  
quality water station.

The following organizations aided in collecting records:

Wisconsin Valley Improvement Co.  
Lake Superior District Power Co.  
Wisconsin-Michigan Power Co.  
Wisconsin Public Service Corp.  
Northern States Power Co.  
Dairyland Power Cooperative  
Wisconsin Power and Light Co.  
Nekoosa-Edwards Paper Co.  
Wisconsin River Power Co.  
Milwaukee County Park Commission  
Milwaukee Water Works, Linwood Avenue Plant

## DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined as follows:

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

Bed material is the shifting portion of fragmented material in the streambed.

Biochemical oxygen demand (BOD) is the amount of oxygen required by bacteria while stabilizing decomposable organic matter under aerobic conditions.

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

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

Coliform organisms are a group of bacteria that indicate the sanitary quality of water. The number of coliform colonies per 100 milliliters is determined by the immediate or delayed incubation membrane filter method.

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

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

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

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

Discharge is the volume of fluid that passes a given point within a given period of time.

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

Instantaneous discharge is the discharge at a particular instant of time. Where this discharge is used in tables instead of the daily mean, the column heading is "Discharge (cfs)".

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Drainage-area figures include the entire basin area including noncontributing areas unless otherwise noted.

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

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

Hardness of water is a physical-chemical characteristic attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ( $\text{CaCO}_3$ ).

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

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

Milligrams per liter (mg/l, MG/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume of water. Milligrams or micrograms per liter may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per liter by multiplying by the factors in table 1, page 6. Concentration of suspended sediment also is expressed in mg/l, and is based on the weight of sediment per liter of water-sediment mixture. Sediment concentrations may be converted to parts per million by using the factors in table 2, page 6.

Partial-record station is a site where limited streamflow or water-quality data are collected systematically over a period of years.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the stream water at the time and point of sampling) (Guy, 1969).

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

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

The particle-size distribution given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis (Guy, 1969).

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

| <u>Ion</u>                                    | <u>Multi-<br/>ply by</u> | <u>Ion</u>                                   | <u>Multi-<br/>ply by</u> |
|-----------------------------------------------|--------------------------|----------------------------------------------|--------------------------|
| Aluminum (Al <sup>+3</sup> )*...              | 0.11119                  | Iodide (I <sup>-1</sup> ).....               | 0.00788                  |
| Ammonia as NH <sub>4</sub> <sup>+1</sup> ...  | .05544                   | Iron (Fe <sup>+3</sup> )*.....               | .05372                   |
| Barium (Ba <sup>+2</sup> ).....               | .01456                   | Lead (Pb <sup>+2</sup> )*.....               | .00965                   |
| Bicarbonate (HCO <sub>3</sub> <sup>-1</sup> ) | .01639                   | Lithium (Li <sup>+1</sup> )*....             | .14411                   |
| Bromide (Br <sup>-1</sup> ).....              | .01251                   | Magnesium (Mg <sup>+2</sup> )...             | .08226                   |
| Calcium (Ca <sup>+2</sup> ).....              | .04990                   | Manganese (Mn <sup>+2</sup> )*..             | .03640                   |
| Carbonate (CO <sub>3</sub> <sup>-2</sup> )..  | .03333                   | Nickel (Ni <sup>+2</sup> )*.....             | .03406                   |
| Chloride (Cl <sup>-1</sup> ).....             | .02821                   | Nitrate (NO <sub>3</sub> <sup>-1</sup> ).... | .01613                   |
| Chromium (Cr <sup>+6</sup> )*...              | .11539                   | Nitrite (NO <sub>2</sub> <sup>-1</sup> ).... | .02174                   |
| Cobalt (Co <sup>+2</sup> )*.....              | .03394                   | Phosphate (PO <sub>4</sub> <sup>-3</sup> ).. | .03159                   |
| Copper (Cu <sup>+2</sup> )*.....              | .03148                   | Potassium (K <sup>+1</sup> )....             | .02557                   |
| Cyanide (CN <sup>-1</sup> ).....              | .03844                   | Sodium (Na <sup>+1</sup> ).....              | .04350                   |
| Fluoride (F <sup>-1</sup> ).....              | .05264                   | Strontium (Sr <sup>+2</sup> )*..             | .02283                   |
| Hydrogen (H <sup>+1</sup> ).....              | .99209                   | Sulfate (SO <sub>4</sub> <sup>-2</sup> ).... | .02082                   |
| Hydroxide (OH <sup>-1</sup> )...              | .05880                   | Zinc (Zn <sup>+2</sup> )*.....               | .03060                   |

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

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

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

\*Based on water density of 1.000 g/ml (grams per milliliter) and a specific gravity of sediment of 2.65.

Picocurie (PC) is a unit for measuring radioactivity equal to  $1 \times 10^{-12}$  Curie. One Curie is equal to that quantity of any radioactive isotope undergoing  $3.7 \times 10^{10}$  disintegrations per second.

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

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

Suspended sediment is the sediment that is maintained in suspension by the upward components of turbulent currents or that is suspended as a colloid.

Suspended-sediment discharge is the rate at which a dry weight of sediment passes a stream section, or it is the dry weight or volume discharged during a time period. It is the product of the instantaneous stream discharge, the concentration (mg/l), and 0.0027.

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

Sodium adsorption ratio (SAR) expresses the relative activity of sodium ions in exchange reactions with soil and is an index of the sodium or alkali hazard to the soil. This ratio is used to determine the suitability of water for irrigation.

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

Specific conductance is a measure of the ability of water to conduct electric current and is expressed in micromhos per centimeter at 25°C. Because specific conductance is related to the number and types of ions in solution, it can be used to approximate the dissolved-solids content in water. Commonly the amount of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation differs from stream to stream and from well to well; it may even differ with the composition of ions in the water.

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

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

Tons per acre-foot indicates the dry weight of dissolved solids in 1 acre-foot of water. It is the product of the sediment concentration (in mg/l) and 0.00136.

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

WRD is an abbreviation for "Water-Resources Data" in the summary REVISIONS paragraph that refers to published State annual basic-data reports.

WSP is an abbreviation for "Water-Supply Paper".

## SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin. Index stations are located to provide current streamflow data that are representative of the area. Stream-quality station is part of a network that depicts the area variability of water-quality conditions and detects and assesses long-term changes in stream quality.

## DOWNSTREAM ORDER AND STATION NUMBER

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

For identification, each gaging station, partial-record station, and water-quality station has been assigned a station number. These numbers are in the same downstream order mentioned above. In assigning station numbers no distinction is made between partial-record stations and gaging stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the series of numbers so that new stations may be established. The complete 8-digit number for each station, such as 05407000 appears just left of the station name and includes the 2-digit part number "05" plus the 6-digit downstream order number "407000". In this report the records are listed in downstream order by parts. The part number refers to an area bounded by certain natural major drainage lines. Records in this report are in Part 4 (St. Lawrence River basin) and Part 5 (Upper Mississippi River basin). All records for a drainage basin encompassing more than one State can be arranged in downstream order by assembling pages from the various State reports by station number.

## SURFACE-WATER RECORDS

Collection and computation of data

The basic data collected at gaging stations consist of records of stage and measurements of discharge of streams and stage, surface area, and contents of lakes and reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at 15-, 30-, or 60-minute intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks, in Water-Supply Paper 88, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

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

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

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

For some gaging stations there are periods without gage-height record or the recorded gage height is faulty. This happens when the recorder stops or fails to operate properly, intakes are plugged, the float is frozen in the well, or for other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with station records from the same or nearby basins.

Data in this report include a general description of the stations and tabulations of daily and monthly figures. A table showing the daily discharge and monthly and yearly discharges is given for gaging stations on streams or canals. A monthly summary table of stage and contents or a table showing the daily contents is given for gaging stations on lakes and reservoirs. Records are published for the water year, which begins October 1 and ends September 30. A calendar for the current water year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the gaging stations gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, general remarks, and notations of revisions of previously published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD." The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey unless otherwise qualified. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE;" it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. The maximum discharge (or contents) and the maximum gage height, the minimum discharge if there is little or no regulation (or minimum contents) and the minimum gage height if it is significant are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation (also the minimum discharge and gage height if they are abnormally low). In the first paragraph headed "Current year," the data given are for the complete current water year unless otherwise specified. In the second paragraph under "EXTREMES" headed "Period of record:" the data given are for the period of record given in PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES." Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge (or contents), it is given separately. Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of Water Quality records, is given under "REMARKS."

Published records of some stations were found to be erroneous, based on data obtained later. Revisions of erroneous records usually are published with the current records in one of the annual or compilation reports. A paragraph headed "REVISIONS (WATER YEARS)" has been added to the description of all stations having published revised records. All reports in which revisions have been published are listed, each followed by the water years for which figures are revised in that report. In listing the water years, only one year is given; for instance, 1965 stands for the period October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge were revised, notations after the dates indicate the following revisions: "(M)" only instantaneous maximum discharge; "(m)" only the instantaneous minimum; and "(P)" only peak discharges. If the drainage area has been revised, the water year is given in which the revised figure was first published. For all stations with published cubic feet per second per square mile and runoff in inches, a revision of the drainage area necessitates revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches, resulting from revised drainage area only, usually are not published in the annual report series.

Skeleton rating tables are published for stream-gaging stations where they are useful and where applicable dates are easily identified.

The daily table for a stream-gaging station gives the discharge corresponding to the daily mean gage height unless large or rapid changes occur in the discharge during a day. For days having large or rapid changes, discharge for the day is computed by averaging the mean discharge for several parts of a day. Where digital recorders are used, the daily mean discharge is the average discharge at each punched reading. For stations equipped with nonrecording gages, the daily discharge corresponds to once-daily readings of the gage or to the mean of twice-daily readings; for periods of rapidly changing stage the discharge is determined from a gage-height graph based on gage readings.

A monthly summary is below the daily table. For stream-gaging stations the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM") and in inches (line headed "IN."). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, or if the drainage area includes large noncontributing areas.

In the yearly summary, below the monthly summary, the figures following "MAX" are the maximum daily discharges for the calendar and water years; likewise, those following "MIN" are the minimum daily discharges.

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

Peak discharges, their times of occurrence, and the corresponding gage heights for many stations are listed below the yearly summary. All peaks above the selected base are listed. The base discharge, in parentheses, is selected to present about three peaks a year. Peak discharges are not published for canals, ditches, drains, or streams substantially controlled by man. Time of day is expressed in 24-hour local standard time; for example 12:30 a.m. is 0030, and 1:30 p.m. is 1330.

Information for gaging stations on lakes includes a station description and a monthly summary table of stage. Information for reservoir stations includes a description and location paragraph and month-end contents, in millions of cubic feet.

Data collected at partial-record stations and miscellaneous sites are listed in three tables at the end of the surface-water records. The first table is discharge measurements at low-flow partial-record stations, the second is annual maximum stage and discharge at crest-stage stations, and the third is discharge measurements at miscellaneous sites. A fourth table lists measured discharges for low-flow investigations.

### Accuracy of Data

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

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

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

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to diversion, consumption, storage regulation, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents unless it is so stated. Even where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

### Publications

Each Water-Supply Paper titled "Surface Water Supply of the United States" has a list of previous Water-Supply Papers containing streamflow information for the area covered by that report. There is also a list of Water-Supply Papers containing detailed information on major floods in the area. Records for stations in Wisconsin for the period October 1960 through September 1965 are in Water-Supply Papers 1911, 1914, and 1915.

Two series of summary reports titled "Compilation of Records of Surface Waters of the United States" have been published; the first series covers the entire period of record through September 1950 and the second series covers the period October 1950 through September 1960. These reports contain summaries of monthly and annual discharge and monthend storage for all published records, as well as some records not contained in the annual series of Water-Supply Papers. All records were revised where warranted. Estimated discharges fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the Water-Supply Papers in which daily records were published for that station. Records for stations in Wisconsin are compiled in Water-Supply Papers 1307 and 1308 through September 1950, and in 1727 and 1728 for October 1950 through September 1960.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than Water-Supply Papers. Information relative to these reports may be obtained from the district office.

#### Other data available

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

### WATER QUALITY RECORDS

#### Collection and examination of data

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used with the computations of the chemical constituents and sediment loads in this report.

Description of water-quality stations located at or near streamflow stations include location, drainage area, periods of record for the various water-quality data, extremes of pertinent data, and general remarks. The format is similar to that used for streamflow gaging stations.

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

Before the 1968 water year, data for chemical constituents and concentration of suspended sediment were reported in parts per million (ppm), and water temperatures were reported in degrees Fahrenheit (°F). In October 1967 the U.S. Geological Survey began to use the metric system; data for chemical constituents and concentrations of suspended sediment are now reported in milligrams per liter (mg/l), and water temperatures are given in degrees Celsius (centigrade, °C). In waters with a density of 1.000 g/ml (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. Temperatures in degrees Celsius are converted to Fahrenheit in table 3, page 18.

In October 1968, the Geological Survey began reporting many chemical constituents and minor elements in micrograms per liter. (See "Definition of Terms," p. 4.)

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

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

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

### Solutes

Methods of collecting and analyzing water samples for determining the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the water. Some streams must be sampled at several verticals across the channel to determine accurately the solute load.

### Temperature

Water temperatures are measured at most water-quality stations. Large streams have a small diurnal temperature change; small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-head discharges.

Records at stations having continuously recording thermographs include maximum and minimum daily temperatures and monthly averages.

### Sediment

Suspended-sediment concentrations are determined from samples collected with depth-integrating samplers. Samples usually are obtained at a single vertical in the cross-section. During periods of high or rapidly changing flow, samples are taken twice or more throughout the day at many stations. Suspended-sediment samples are collected periodically at all stations. Although such data may represent conditions only at the time of collection, they are useful in establishing relations between sediment discharge and streamflow. These relations are used to predict long-term sediment-discharge characteristics for the stream.

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

For days of high flow, sediment discharges may not represent actual sediment transport because a sufficient number of samples were not collected to accurately define mean sediment concentration for the day.

### Publications

The annual series of water-supply papers that contain information on quality of surface waters in Wisconsin are listed on the following page.

## Parts 3 and 4

| <u>Water<br/>year</u> | <u>WSP<br/>No.</u> | <u>Water<br/>year</u> | <u>WSP<br/>No.</u> | <u>Water<br/>year</u> | <u>WSP<br/>No.</u> | <u>Water<br/>year</u> | <u>WSP<br/>No.</u> |
|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| 1941                  | 942                | 1948                  | 1132               | 1955                  | 1400               | 1962                  | 1942               |
| 1942                  | 950                | 1949                  | 1162               | 1956                  | 1450               | 1963                  | 1948               |
| 1943                  | 970                | 1950                  | 1186               | 1957                  | 1520               | 1964                  | 1955               |
| 1944                  | 1022               | 1951                  | 1197               | 1958                  | 1571               | 1965                  | 1962               |
| 1945                  | 1030               | 1952                  | 1250               | 1959                  | 1642               | 1966                  | 1992               |
| 1946                  | 1050               | 1953                  | 1290               | 1960                  | 1742               | 1967                  | 2012               |
| 1947                  | 1102               | 1954                  | 1350               | 1961                  | 1882               |                       |                    |

## Parts 5 and 6

|      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|
| 1941 | 942  | 1948 | 1132 | 1955 | 1401 | 1962 | 1943 |
| 1942 | 950  | 1949 | 1162 | 1956 | 1451 | 1963 | 1949 |
| 1943 | 970  | 1950 | 1187 | 1957 | 1521 | 1964 | 1956 |
| 1944 | 1022 | 1951 | 1198 | 1958 | 1572 | 1965 | 1963 |
| 1945 | 1030 | 1952 | 1251 | 1959 | 1643 | 1966 | 1993 |
| 1946 | 1050 | 1953 | 1291 | 1960 | 1743 | 1967 | 2013 |
| 1947 | 1102 | 1954 | 1351 | 1961 | 1883 |      |      |

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PART 1. SURFACE WATER RECORDS



 Stream gage

Lake gage

Basin divide

## Part 4

### St Lawrence River Basin

## Part 5

Upper Mississippi River Basin

**Figure 1. Map of Wisconsin showing location of lake and continuous stream-gaging stations**

## HYDROLOGIC CONDITIONS

Runoff in Wisconsin for the water year ending Sept. 30, 1972, was above normal for most streams. Only in a small area in the south was runoff below normal (see figure 2). In the southeast corner of the state yearly runoff was considerably above normal.

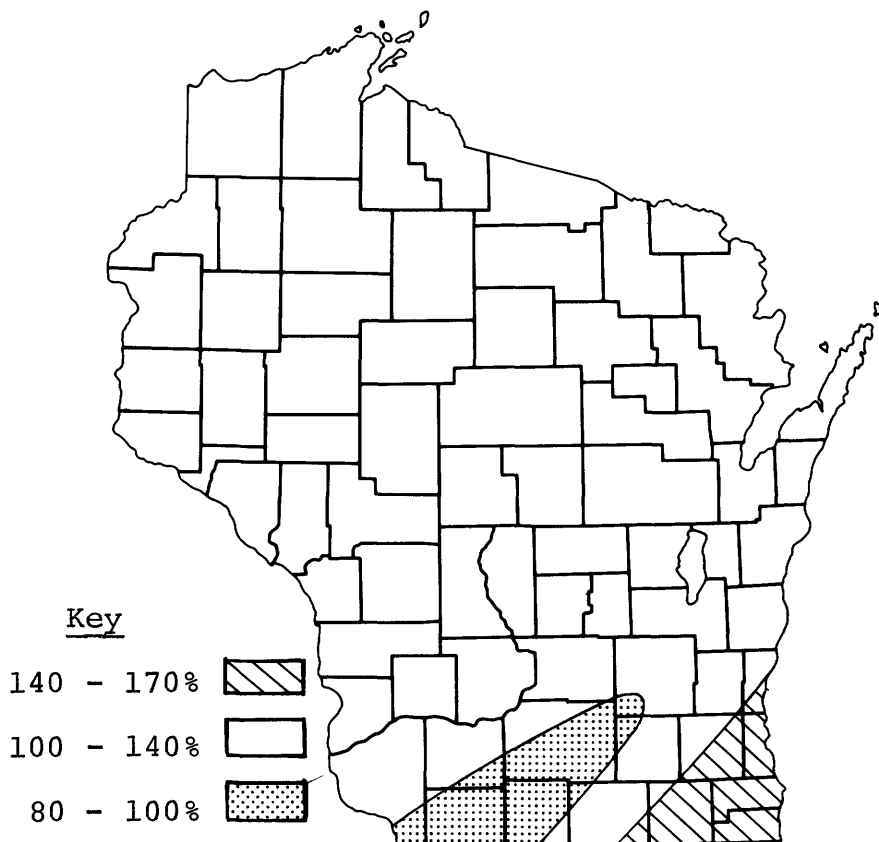


Figure 2. Variation of 1972 runoff compared with long-term average runoff.

The water year began with streamflow in the normal range in the southern part of Wisconsin and slightly above normal in the rest of the state. Streamflow seasonally declined after the spring high flows until substantial rainfall in July, August, and September increased flows into the excessive range. In east and southeastern Wisconsin maximum discharges for the year occurred in September for many streams. Some localized minor flooding occurred during the latter part of the water year.

Figures 4 and 5 show extremes of stage during the water year 1972 for selected lakes.

## HYDROLOGIC CONDITIONS

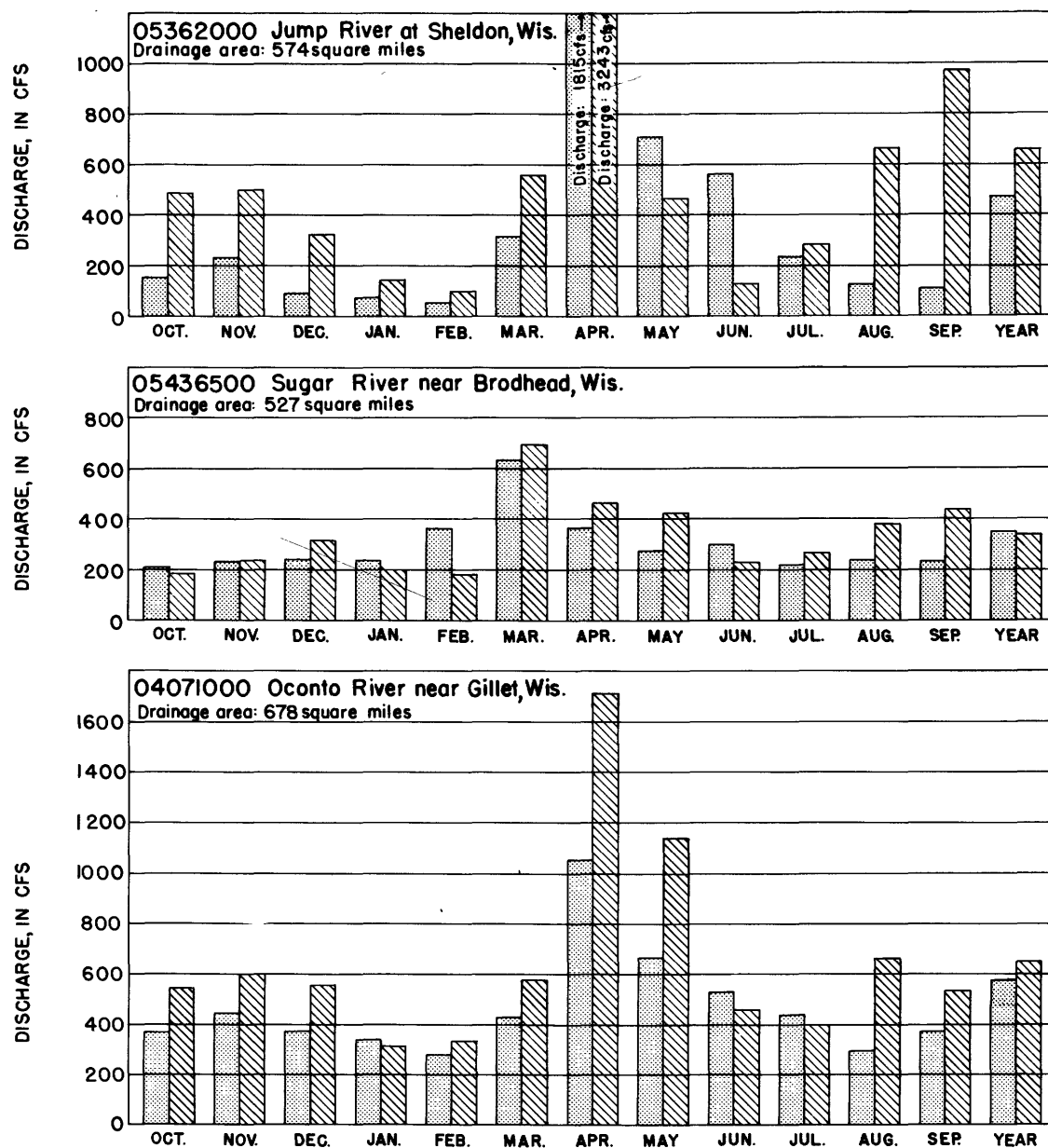


Figure 3. Comparison of discharge at three long-term representative gaging stations during 1972 water year with median discharge for period 1931-60.

-  Median of monthly and yearly mean discharge for period 1931-60  
 Monthly and yearly mean discharge for 1972 water year.

Lake stage in feet above an assumed datum.

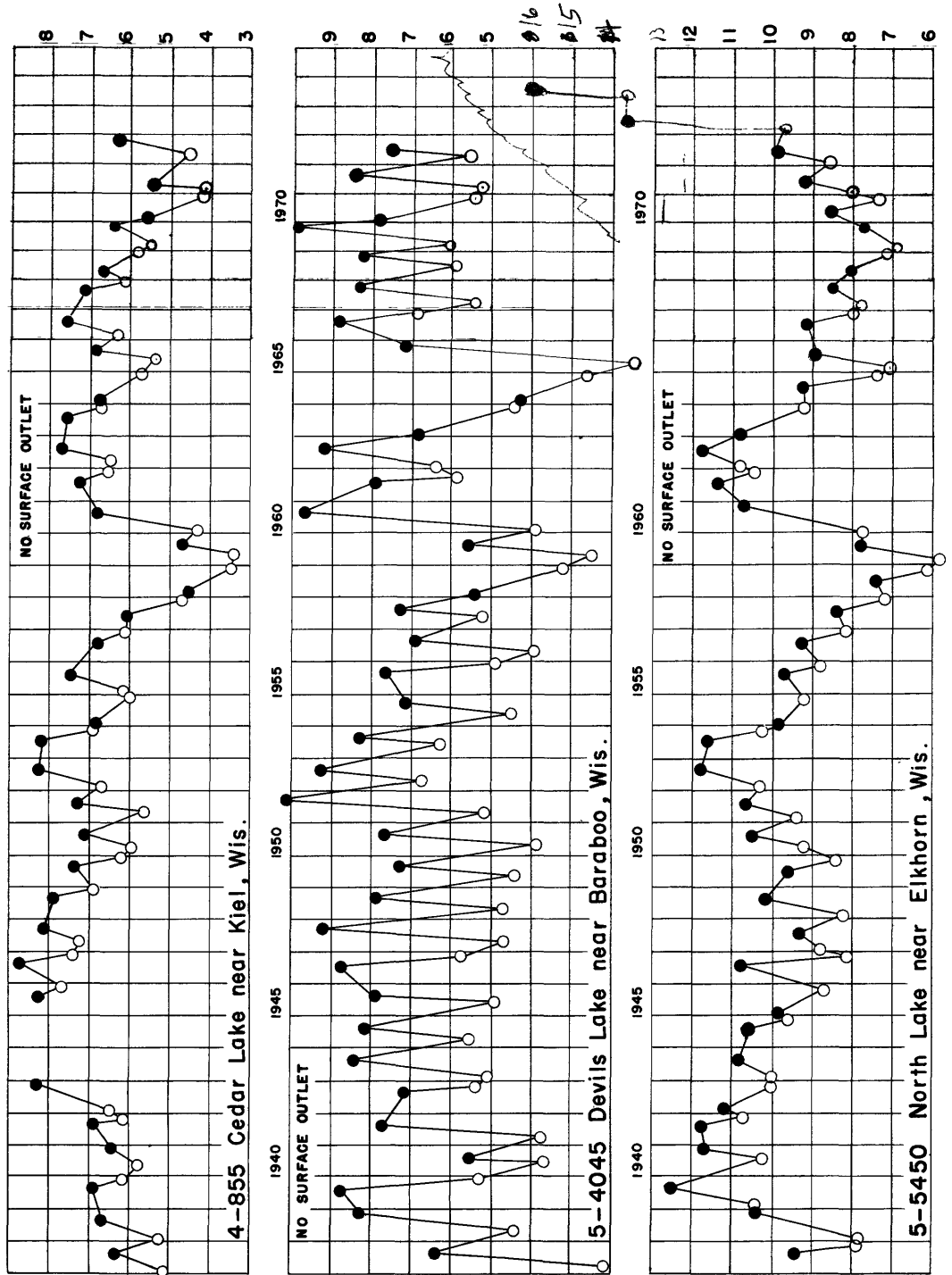


Figure 4. A comparison of extremes of stage of three southern lakes for each water year since 1937.  
 ● Maximum stage observed    ○ Minimum stage observed    Connecting lines do not indicate actual stage between extremes.

## HYDROLOGIC CONDITIONS

Lake stage in feet above an assumed datum.

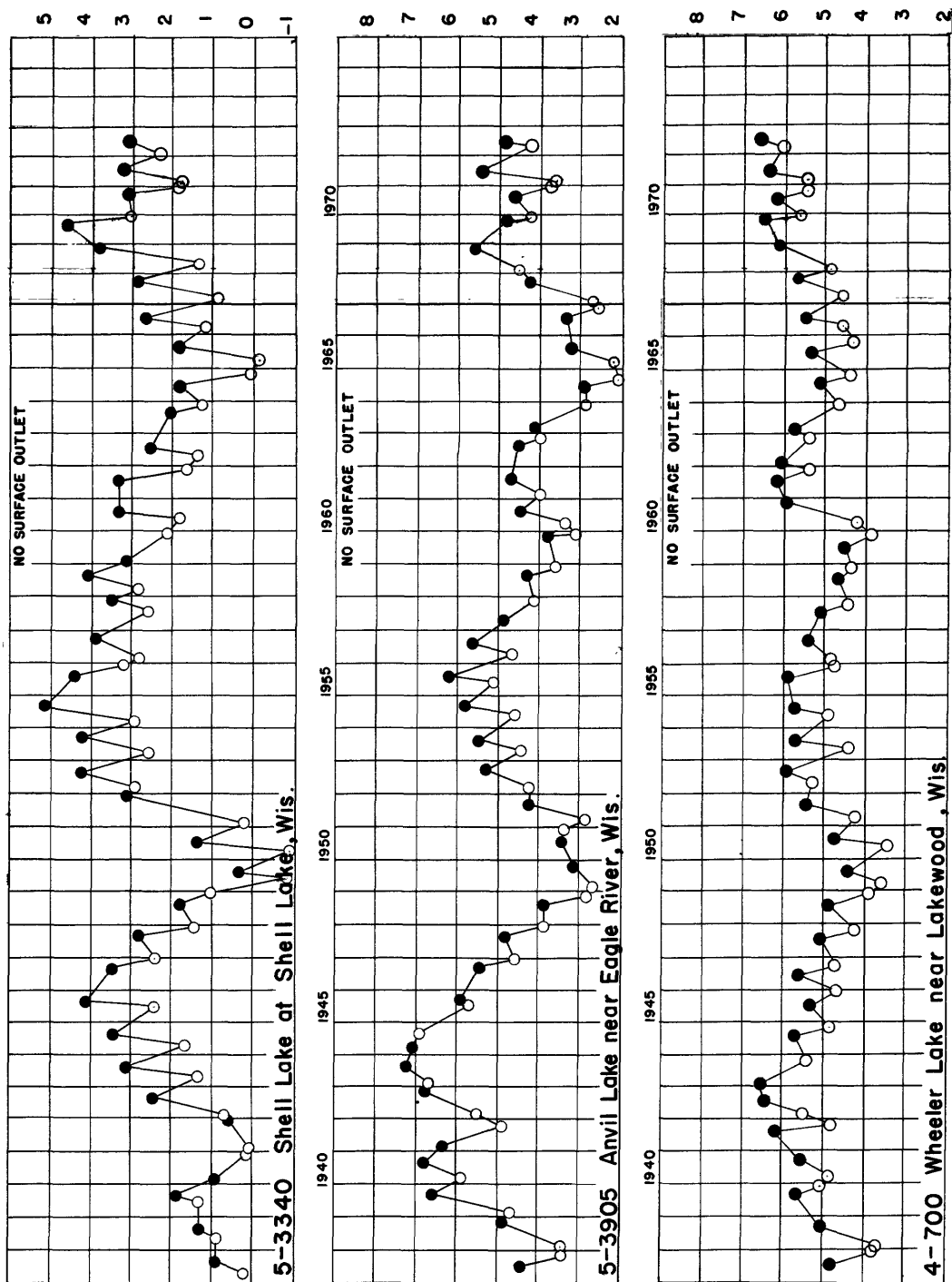


Figure 5. A comparison of extremes of stage of three northern lakes for each water year since 1937.

● Maximum stage observed. ○ Minimum stage observed. Connecting lines do not indicate actual stage between extremes.

## STREAMS TRIBUTARY TO LAKE SUPERIOR

04025500 Bois Brule River at Brule, Wis.

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, on right bank, 1.4 miles southwest of Brule Post Office, 1.4 miles downstream from Nebagamon Creek, and 1.7 miles upstream from Little Brule River.

DRAINAGE AREA.--120 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 948.49 ft above mean sea level. Prior to October 1964, non-recording gage at same site and datum supplemented by water-stage recorder part of 1959-62.

AVERAGE DISCHARGE.--30 years, 171 cfs (19.35 inches per year).

EXTREMES.--Current year: Maximum discharge, 822 cfs Apr. 20 (gage height, 4.05 ft); minimum, 140 cfs Apr. 8 (gage height, 1.60 ft).

Period of record: Maximum discharge, 1,520 cfs June 5, 1944 (gage height, 5.2 ft, from graph based on gage readings) from rating curve extended above 750 cfs; minimum observed, 67 cfs Mar. 13, 1943.

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

REVISIONS (WATER YEARS).--WSP 1207: Drainage area. WSP 1337: 1943(M), 1944, 1945-50(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Oct. 27 to Nov. 18, Sept. 19-23; stage-discharge relation affected by ice Dec. 12 to Mar. 19.)

|     |     |     |       |
|-----|-----|-----|-------|
| 1.4 | 111 | 3.0 | 443   |
| 2.0 | 214 | 4.0 | 812   |
|     |     | 4.4 | 1,010 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 189   | 442   | 226   | 160   | 160   | 150   | 173   | 414   | 208   | 214   | 229   | 195   |
| 2     | 230   | 429   | 216   | 150   | 150   | 160   | 172   | 458   | 195   | 196   | 219   | 186   |
| 3     | 231   | 400   | 210   | 150   | 150   | 160   | 173   | 431   | 185   | 202   | 212   | 178   |
| 4     | 213   | 367   | 210   | 150   | 150   | 160   | 171   | 405   | 179   | 195   | 204   | 177   |
| 5     | 202   | 337   | 210   | 150   | 150   | 160   | 169   | 390   | 175   | 184   | 195   | 175   |
| 6     | 201   | 306   | 210   | 150   | 150   | 160   | 169   | 417   | 171   | 176   | 199   | 177   |
| 7     | 190   | 275   | 210   | 150   | 150   | 170   | 168   | 373   | 170   | 171   | 199   | 187   |
| 8     | 182   | 255   | 210   | 150   | 150   | 170   | 167   | 352   | 168   | 168   | 221   | 180   |
| 9     | 174   | 240   | 210   | 150   | 150   | 160   | 168   | 330   | 165   | 168   | 209   | 171   |
| 10    | 170   | 232   | 210   | 160   | 150   | 160   | 172   | 307   | 162   | 164   | 200   | 167   |
| 11    | 165   | 225   | 210   | 160   | 160   | 160   | 182   | 287   | 162   | 168   | 207   | 166   |
| 12    | 162   | 217   | 200   | 160   | 150   | 160   | 194   | 270   | 167   | 166   | 194   | 161   |
| 13    | 166   | 210   | 210   | 150   | 150   | 160   | 225   | 259   | 168   | 161   | 187   | 165   |
| 14    | 164   | 209   | 230   | 150   | 150   | 160   | 223   | 256   | 182   | 160   | 178   | 160   |
| 15    | 160   | 209   | 220   | 150   | 150   | 150   | 246   | 248   | 178   | 157   | 184   | 156   |
| 16    | 234   | 230   | 210   | 150   | 150   | 150   | 308   | 240   | 170   | 153   | 299   | 156   |
| 17    | 267   | 331   | 190   | 150   | 150   | 150   | 349   | 231   | 162   | 151   | 475   | 154   |
| 18    | 260   | 430   | 210   | 150   | 150   | 150   | 383   | 222   | 160   | 153   | 372   | 152   |
| 19    | 269   | 411   | 230   | 160   | 150   | 160   | 463   | 213   | 170   | 151   | 308   | 150   |
| 20    | 247   | 380   | 260   | 160   | 150   | 164   | 623   | 205   | 259   | 228   | 303   | 202   |
| 21    | 259   | 349   | 270   | 160   | 160   | 186   | 658   | 207   | 238   | 267   | 287   | 270   |
| 22    | 263   | 320   | 230   | 150   | 150   | 187   | 558   | 206   | 221   | 475   | 346   | 252   |
| 23    | 247   | 292   | 190   | 150   | 150   | 179   | 500   | 195   | 204   | 580   | 291   | 226   |
| 24    | 234   | 276   | 180   | 150   | 150   | 173   | 496   | 186   | 189   | 454   | 269   | 209   |
| 25    | 221   | 266   | 180   | 150   | 150   | 172   | 492   | 181   | 180   | 395   | 258   | 195   |
| 26    | 211   | 256   | 180   | 150   | 150   | 171   | 496   | 178   | 174   | 350   | 239   | 189   |
| 27    | 335   | 249   | 170   | 150   | 150   | 171   | 498   | 178   | 197   | 318   | 236   | 185   |
| 28    | 433   | 242   | 170   | 150   | 150   | 171   | 484   | 176   | 236   | 295   | 230   | 183   |
| 29    | 376   | 236   | 160   | 150   | 150   | 171   | 454   | 217   | 246   | 272   | 221   | 181   |
| 30    | 415   | 229   | 160   | 150   | ----- | 173   | 421   | 239   | 234   | 255   | 212   | 177   |
| 31    | 494   | ----- | 160   | 150   | ----- | 172   | ----- | 223   | ----- | 245   | 204   | ----- |
| TOTAL | 7,564 | 8,850 | 6,342 | 4,720 | 4,380 | 5,100 | 9,955 | 8,494 | 5,675 | 7,392 | 7,587 | 5,482 |
| MEAN  | 244   | 295   | 205   | 152   | 151   | 165   | 332   | 274   | 189   | 238   | 245   | 183   |
| MAX   | 494   | 442   | 270   | 160   | 160   | 187   | 658   | 458   | 259   | 580   | 475   | 270   |
| MIN   | 160   | 209   | 160   | 150   | 150   | 150   | 167   | 176   | 160   | 151   | 178   | 150   |
| CFSM  | 2.03  | 2.46  | 1.71  | 1.27  | 1.26  | 1.38  | 2.77  | 2.28  | 1.58  | 1.98  | 2.04  | 1.53  |
| IN.   | 2.34  | 2.74  | 1.97  | 1.46  | 1.36  | 1.58  | 3.09  | 2.63  | 1.76  | 2.29  | 2.35  | 1.70  |

CAL YR 1971 TOTAL 71,864 MEAN 197 MAX 766 MIN 121 CFSM 1.64 IN 22.28  
WTR YR 1972 TOTAL 81,541 MEAN 223 MAX 658 MIN 150 CFSM 1.86 IN 25.28

## PEAK DISCHARGE (BASE, 300 CFS)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-27 | 2200 | 3.29  | 497       | 4-20 | 2200 | 4.05  | 822       |
| 10-31 | 0200 | 3.40  | 519       | 7-23 | 0400 | 3.59  | 636       |
| 11-18 | 0800 | 3.12  | 443       | 8-17 | 0300 | 3.21  | 497       |

## STREAMS TRIBUTARY TO LAKE SUPERIOR

31

04026100 Long Lake near Iron River, Wis.

LOCATION.--Lat 46°35'05", long 91°20'33", in SW 1/4 sec.35, T.48 N., R.8 W., Bayfield County, at residence of Melvin C. Platt, east side of lake, 3.6 miles northeast of Iron River.

DRAINAGE AREA.--1.28 sq mi. Area of Long Lake, 184 acres.

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

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

EXTREMES.--Current year: Maximum gage height observed, 3.65 ft Sept. 27; minimum observed, 2.63 ft Oct. 4.  
Period of record: Maximum gage height observed, 3.65 ft Sept. 27, 1972; minimum observed, 1.39 ft Aug. 28, 1968.

REMARKS.--Lake has no surface outlet. Lake ice covered from Nov. 13 to May 3.

| GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972 |      |       |     |      |       |     |       |      |       |     |     |       |
|-----------------------------------------------------------------|------|-------|-----|------|-------|-----|-------|------|-------|-----|-----|-------|
| DAY                                                             | OCT  | NOV   | DEC | JAN  | FEB   | MAR | APR   | MAY  | JUN   | JUL | AUG | SEP   |
| 1                                                               |      |       |     |      |       |     |       |      |       |     |     |       |
| 2                                                               | 2.64 |       |     |      |       |     |       |      |       |     |     |       |
| 3                                                               |      |       |     |      |       |     |       |      | 3.44  |     |     |       |
| 4                                                               | 2.63 |       |     | 3.03 |       |     |       |      |       |     |     |       |
| 5                                                               |      |       |     |      |       |     |       |      |       |     |     |       |
| 6                                                               |      | 2.80  |     |      |       |     |       |      |       |     |     |       |
| 7                                                               |      |       |     |      | 3.15  |     |       |      |       |     |     |       |
| 8                                                               |      |       |     |      |       |     |       |      | 3.31  |     |     |       |
| 9                                                               | 2.64 | 2.75  |     |      |       |     |       |      |       |     |     |       |
| 10                                                              |      |       |     |      |       |     |       |      | 3.30  |     |     |       |
| 11                                                              |      |       |     |      |       |     |       |      |       |     |     |       |
| 12                                                              |      |       |     |      |       |     |       |      |       |     |     |       |
| 13                                                              |      | 2.74  |     |      |       |     |       |      |       |     |     |       |
| 14                                                              |      |       |     |      |       |     |       |      |       |     |     |       |
| 15                                                              |      |       |     |      |       |     |       |      |       |     |     |       |
| 16                                                              | 2.66 |       |     |      |       |     |       |      |       |     |     |       |
| 17                                                              |      |       |     |      |       |     |       |      | 3.33  |     |     |       |
| 18                                                              |      |       |     |      |       |     | 3.34  |      |       |     |     |       |
| 19                                                              |      |       |     |      |       |     |       |      |       |     |     |       |
| 20                                                              |      |       |     |      |       |     |       |      |       |     |     | 3.48  |
| 21                                                              |      |       |     |      |       |     |       |      |       |     |     |       |
| 22                                                              |      |       |     |      |       |     |       |      |       |     |     |       |
| 23                                                              | 2.66 |       |     |      |       |     |       |      |       |     |     |       |
| 24                                                              |      |       |     |      |       |     |       |      | 3.30  |     |     |       |
| 25                                                              |      |       |     |      |       |     |       |      |       |     |     |       |
| 26                                                              |      |       |     |      |       |     |       |      |       |     |     |       |
| 27                                                              |      |       |     |      |       |     |       | 3.38 |       |     |     | 3.65  |
| 28                                                              |      |       |     |      |       |     |       |      |       |     |     |       |
| 29                                                              |      |       |     |      |       |     |       |      | 3.30  |     |     |       |
| 30                                                              | 2.70 |       |     |      | ----- |     |       | 3.44 | ----- |     |     | 3.60  |
| 31                                                              |      | ----- |     |      | ----- |     | ----- |      |       |     |     | ----- |

## STREAMS TRIBUTARY TO LAKE SUPERIOR

04026450 Bad River near Mellen, Wis.

LOCATION.--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, Chequamegon National Forest, on left bank 150 ft downstream from bridge on U.S. Forest Service Road 184, 250 ft downstream from Iron River and 4.4 miles southwest of Mellen.

DRAINAGE AREA.--83.4 sq mi.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,390 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 2,130 cfs July 23 (gage height, 7.61 ft); minimum, 14 cfs June 13 (gage height, 0.87 ft).

Period of record: Maximum discharge, 2,130 cfs July 23, 1972 (gage height, 7.61 ft); minimum, 8.2 cfs Aug. 8, 9, 13, 1971 (gage height, 0.70 ft).

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

Rating table, except period of no gage-height record, (gage height, in feet, and discharge, in cubic feet per second). (Shifting-control method used Apr. 13-19.)

|     |     |     |       |
|-----|-----|-----|-------|
| 0.9 | 15  | 3.0 | 330   |
| 1.1 | 26  | 4.0 | 599   |
| 1.5 | 59  | 6.0 | 1,340 |
| 2.0 | 123 | 8.0 | 2,340 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN  | FEB   | MAR  | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     | 49    | 184   | 66    | 27   | 22    | 20   | 43    | 632   | 69    | 137   | 95    | 97    |
| 2     | 97    | 213   | 62    | 27   | 22    | 20   | 43    | 641   | 50    | 94    | 78    | 80    |
| 3     | 118   | 243   | 58    | 26   | 22    | 20   | 43    | 584   | 41    | 72    | 73    | 69    |
| 4     | 112   | 191   | 55    | 26   | 22    | 20   | 43    | 471   | 33    | 66    | 62    | 62    |
| 5     | 90    | 154   | 52    | 26   | 22    | 19   | 44    | 386   | 30    | 54    | 53    | 57    |
| 6     | 84    | 126   | 50    | 26   | 22    | 19   | 44    | 399   | 30    | 42    | 44    | 53    |
| 7     | 86    | 97    | 48    | 25   | 22    | 19   | 44    | 379   | 26    | 34    | 45    | 68    |
| 8     | 97    | 78    | 46    | 25   | 21    | 19   | 45    | 312   | 23    | 29    | 106   | 69    |
| 9     | 75    | 68    | 44    | 25   | 21    | 19   | 45    | 245   | 21    | 26    | 126   | 56    |
| 10    | 70    | 63    | 42    | 25   | 21    | 19   | 45    | 187   | 16    | 26    | 93    | 49    |
| 11    | 63    | 59    | 40    | 25   | 21    | 20   | 46    | 153   | 21    | 23    | 100   | 44    |
| 12    | 55    | 56    | 39    | 25   | 21    | 20   | 51    | 128   | 18    | 22    | 99    | 46    |
| 13    | 52    | 53    | 38    | 25   | 21    | 20   | 56    | 112   | 15    | 20    | 79    | 47    |
| 14    | 54    | 52    | 37    | 24   | 21    | 21   | 62    | 106   | 93    | 20    | 63    | 44    |
| 15    | 54    | 57    | 36    | 24   | 21    | 22   | 78    | 104   | 94    | 18    | 67    | 39    |
| 16    | 49    | 63    | 35    | 24   | 21    | 23   | 151   | 94    | 62    | 17    | 542   | 41    |
| 17    | 52    | 132   | 34    | 24   | 21    | 24   | 275   | 89    | 44    | 20    | 1,820 | 38    |
| 18    | 54    | 279   | 33    | 24   | 21    | 25   | 389   | 80    | 31    | 75    | 1,220 | 36    |
| 19    | 53    | 318   | 32    | 24   | 20    | 27   | 407   | 64    | 33    | 72    | 767   | 31    |
| 20    | 56    | 279   | 31    | 24   | 20    | 28   | 557   | 51    | 468   | 154   | 578   | 50    |
| 21    | 45    | 220   | 31    | 24   | 20    | 29   | 673   | 47    | 551   | 372   | 673   | 169   |
| 22    | 44    | 201   | 31    | 23   | 20    | 30   | 617   | 44    | 417   | 1,590 | 695   | 89    |
| 23    | 43    | 145   | 30    | 23   | 20    | 32   | 536   | 39    | 272   | 2,040 | 557   | 76    |
| 24    | 39    | 126   | 30    | 23   | 20    | 33   | 457   | 34    | 162   | 1,420 | 174   | 77    |
| 25    | 40    | 114   | 29    | 23   | 20    | 35   | 438   | 31    | 106   | 858   | 318   | 132   |
| 26    | 43    | 100   | 29    | 23   | 20    | 36   | 498   | 31    | 79    | 503   | 245   | 135   |
| 27    | 48    | 93    | 29    | 23   | 20    | 38   | 611   | 30    | 66    | 312   | 199   | 135   |
| 28    | 61    | 95    | 28    | 23   | 20    | 39   | 712   | 29    | 142   | 215   | 167   | 123   |
| 29    | 61    | 79    | 28    | 22   | 20    | 41   | 770   | 42    | 266   | 171   | 153   | 174   |
| 30    | 99    | 72    | 28    | 22   | ----- | 42   | 708   | 111   | 209   | 137   | 110   | 165   |
| 31    | 201   | ----- | 27    | 22   | ----- | 43   | ----- | 93    | ----- | 108   | 97    | ----- |
| TOTAL | 2,144 | 4,000 | 1,198 | 752  | 605   | 822  | 8,531 | 5,748 | 3,488 | 8,747 | 9,498 | 2,350 |
| MEAN  | 69.2  | 133   | 38.6  | 24.3 | 20.9  | 26.5 | 284   | 185   | 116   | 282   | 306   | 78.3  |
| MAX   | 201   | 318   | 66    | 27   | 22    | 43   | 770   | 641   | 551   | 2,040 | 1,820 | 174   |
| MIN   | 39    | 52    | 27    | 22   | 20    | 19   | 43    | 29    | 15    | 17    | 44    | 31    |
| CFSM  | .83   | 1.59  | .46   | .29  | .25   | .32  | 3.41  | 2.22  | 1.39  | 3.38  | 3.67  | .94   |
| IN.   | .96   | 1.78  | .53   | .34  | .27   | .37  | 3.81  | 2.56  | 1.56  | 3.90  | 4.24  | 1.05  |

CAL YR 1971 TOTAL 38,647.0 MEAN 106 MAX 1,345 MIN 9.1 CFSM 1.27 IN 17.24  
WTR YR 1972 TOTAL 47,883.0 MEAN 131 MAX 2,040 MIN 15 CFSM 1.57 IN 21.36

NOTE.--No gage-height record Dec. 3 to Apr. 12.

## STREAMS TRIBUTARY TO LAKE SUPERIOR

33

04026870 Alder Creek near Upson, Wis.

LOCATION.--Lat 46°23'09", long 90°24'30", in SE 1/4 SE 1/4 sec. 7, T.45 N., R.1 E., Iron County, on right bank 10 ft upstream from State Highway 122 bridge and 1.0 mile north of Upson.

DRAINAGE AREA.--22.3 sq mi.

PERIOD OF RECORD.--April 1972 to current year

GAGE.--Water-stage recorder. Datum of gage is 1,380.24 ft above mean sea level. Prior to May 16, 1972, non-recording gage at same site and datum.

EXTREMES.--April to September 1972: Maximum discharge during period, 663 cfs Aug. 17 (gage height, 7.29 ft); minimum, 4.0 cfs Sept. 16.

REMARKS.--Records fair.

Rating table (gage height, in feet, and discharge, in cubic feet per second).

Apr. 1 to Aug. 17

Aug. 18 to Sept. 30

|     |     |     |     |
|-----|-----|-----|-----|
| 3.1 | 3.5 | 4.5 | 78  |
| 3.4 | 9.3 | 5.0 | 140 |
| 3.7 | 19  | 6.0 | 320 |
| 4.1 | 42  | 7.1 | 605 |

|     |     |     |    |
|-----|-----|-----|----|
| 3.3 | 4.6 | 3.7 | 17 |
| 3.5 | 9.7 | 3.9 | 28 |

Note.--same as preceding table above 3.9 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT | NOV   | DEC | JAN | FEB   | MAR | APR   | MAY     | JUN     | JUL     | AUG     | SEP   |
|-------|-----|-------|-----|-----|-------|-----|-------|---------|---------|---------|---------|-------|
| 1     |     |       |     |     |       |     | 25    | 222     | 26      | 39      | 13      | 7.2   |
| 2     |     |       |     |     |       |     | 25    | 205     | 15      | 20      | 10      | 6.2   |
| 3     |     |       |     |     |       |     | 25    | 148     | 11      | 13      | 9.3     | 5.3   |
| 4     |     |       |     |     |       |     | 25    | 98      | 8.4     | 12      | 8.2     | 4.6   |
| 5     |     |       |     |     |       |     | 25    | 69      | 7.8     | 9.8     | 6.9     | 4.4   |
| 6     |     |       |     |     |       |     | 25    | 70      | 7.8     | 6.7     | 6.7     | 5.1   |
| 7     |     |       |     |     |       |     | 26    | 74      | 7.1     | 7.8     | 6.3     | 6.7   |
| 8     |     |       |     |     |       |     | 27    | 86      | 6.3     | 6.7     | 8.4     | 6.7   |
| 9     |     |       |     |     |       |     | 31    | 44      | 5.5     | 6.5     | 9.8     | 6.2   |
| 10    |     |       |     |     |       |     | 35    | 30      | 5.1     | 6.3     | 9.3     | 5.3   |
| 11    |     |       |     |     |       |     | 40    | 24      | 4.8     | 5.7     | 12      | 4.8   |
| 12    |     |       |     |     |       |     | 50    | 16      | 4.8     | 5.5     | 13      | 4.4   |
| 13    |     |       |     |     |       |     | 67    | 17      | 5.3     | 5.1     | 11      | 4.8   |
| 14    |     |       |     |     |       |     | 75    | 18      | 19      | 5.1     | 9.1     | 4.8   |
| 15    |     |       |     |     |       |     | 88    | 18      | 22      | 4.9     | 8.4     | 4.4   |
| 16    |     |       |     |     |       |     | 117   | 16      | 16      | 4.5     | 155     | 5.3   |
| 17    |     |       |     |     |       |     | 102   | 15      | 11      | 4.8     | 605     | 6.2   |
| 18    |     |       |     |     |       |     | 276   | 14      | 8.6     | 7.8     | 324     | 5.3   |
| 19    |     |       |     |     |       |     | 420   | 12      | 14      | 8.2     | 137     | 5.8   |
| 20    |     |       |     |     |       |     | 458   | 11      | 174     | 14      | 64      | 6.0   |
| 21    |     |       |     |     |       |     | 430   | 11      | 245     | 33      | 44      | 12    |
| 22    |     |       |     |     |       |     | 237   | 12      | 136     | 136     | 42      | 14    |
| 23    |     |       |     |     |       |     | 237   | 10      | 58      | 268     | 41      | 10    |
| 24    |     |       |     |     |       |     | 158   | 9.1     | 24      | 202     | 38      | 8.6   |
| 25    |     |       |     |     |       |     | 124   | 8.0     | 15      | 98      | 33      | 9.1   |
| 26    |     |       |     |     |       |     | 154   | 7.1     | 11      | 44      | 26      | 17    |
| 27    |     |       |     |     |       |     | 243   | 6.5     | 12      | 24      | 21      | 21    |
| 28    |     |       |     |     |       |     | 377   | 7.5     | 28      | 19      | 15      | 21    |
| 29    |     |       |     |     |       |     | 422   | 9.6     | 53      | 21      | 12      | 24    |
| 30    |     |       |     |     |       |     | 340   | 34      | 63      | 21      | 9.4     | 16    |
| 31    |     | ----- |     |     | ----- |     | ----- | 41      | -----   | 17      | 7.7     | ----- |
| TOTAL |     |       |     |     |       |     | 4,684 | 1,362.8 | 1,024.5 | 1,076.4 | 1,715.5 | 262.2 |
| MEAN  |     |       |     |     |       |     | 156   | 44.0    | 34.2    | 34.7    | 55.3    | 8.74  |
| MAX   |     |       |     |     |       |     | 458   | 222     | 245     | 268     | 605     | 24    |
| MIN   |     |       |     |     |       |     | 25    | 6.5     | 4.8     | 4.5     | 6.3     | 4.4   |
| CFSM  |     |       |     |     |       |     | 7.00  | 1.97    | 1.53    | 1.56    | 2.48    | .39   |
| IN.   |     |       |     |     |       |     | 7.81  | 2.27    | 1.71    | 1.80    | 2.86    | .44   |

## STREAMS TRIBUTARY TO LAKE SUPERIOR

04027000 Bad River near Odanah, Wis.

LOCATION.--Lat 46°29'15", long 90°41'45", in SE 1/4 sec.2, T.46 N., R.3 W., Ashland County, on left bank just downstream from Elm Hoist Bridge, 5.0 miles downstream from Potato River, 8.5 miles south of Odanah, and 23 miles from mouth.

DRAINAGE AREA.--611 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 668.30 ft above mean sea level. 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 miles downstream at different datum.

AVERAGE DISCHARGE.--32 years (1914-22, 1948-72), 611 cfs (13.58 inches per year).

EXTREMES.--Current year: Maximum discharge, 9,250 cfs July 23 (gage height, 12.10 ft); minimum daily, 140 cfs Feb. 19 to Mar. 10.

Period of record: Maximum discharge, 27,700 cfs Apr. 24, 1960 (gage height, 21.7 ft from floodmarks), from rating curve extended above 12,000 cfs and comparison with contracted-opening measurement of peak flow (45,600 cfs) at Odanah, drainage area approximately 970 sq mi; minimum 49 cfs Aug. 8, 1964 (gage height, 2.03 ft).

Flood of June 24, 1946, reached a stage of at least 22.2 ft (top of bridge submerged), information from Indian Service.

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

REVISIONS (WATER YEARS).--WSP 1207: Drainage area. WSP 1337: 1922.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Aug. 16-25; stage-discharge relation affected by ice Nov. 30 to Apr. 15.)

|     |     |      |        |
|-----|-----|------|--------|
| 2.0 | 40  | 6.0  | 2,260  |
| 2.5 | 174 | 9.0  | 5,000  |
| 3.0 | 336 | 11.0 | 7,600  |
| 4.0 | 830 | 13.0 | 10,600 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC   | JAN   | FEB   | MAR   | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| 1     | 255    | 1,050  | 400   | 200   | 170   | 140   | 550    | 3,720  | 580    | 692    | 520    | 520    |
| 2     | 515    | 1,140  | 390   | 190   | 170   | 140   | 530    | 3,860  | 433    | 505    | 428    | 485    |
| 3     | 485    | 1,240  | 400   | 190   | 170   | 140   | 520    | 3,410  | 336    | 398    | 385    | 424    |
| 4     | 714    | 1,000  | 400   | 190   | 170   | 140   | 520    | 2,610  | 275    | 336    | 336    | 368    |
| 5     | 560    | 830    | 380   | 180   | 170   | 140   | 520    | 2,030  | 236    | 282    | 292    | 344    |
| 6     | 490    | 692    | 380   | 180   | 170   | 140   | 590    | 2,180  | 218    | 252    | 265    | 336    |
| 7     | 495    | 565    | 360   | 180   | 170   | 140   | 560    | 2,070  | 209    | 224    | 249    | 348    |
| 8     | 510    | 520    | 340   | 170   | 170   | 140   | 580    | 1,680  | 200    | 197    | 282    | 385    |
| 9     | 470    | 456    | 400   | 170   | 170   | 140   | 620    | 1,380  | 186    | 188    | 402    | 368    |
| 10    | 410    | 402    | 300   | 170   | 170   | 140   | 640    | 1,130  | 171    | 186    | 385    | 329    |
| 11    | 378    | 380    | 280   | 170   | 160   | 150   | 710    | 932    | 157    | 186    | 447    | 310    |
| 12    | 329    | 364    | 200   | 170   | 160   | 160   | 850    | 808    | 152    | 168    | 515    | 282    |
| 13    | 303    | 340    | 250   | 170   | 160   | 170   | 1,070  | 720    | 157    | 157    | 419    | 285    |
| 14    | 282    | 321    | 250   | 170   | 160   | 180   | 1,400  | 655    | 221    | 152    | 344    | 325    |
| 15    | 272    | 318    | 240   | 160   | 150   | 200   | 1,700  | 630    | 465    | 152    | 299    | 285    |
| 16    | 282    | 325    | 240   | 180   | 150   | 210   | 3,510  | 580    | 376    | 149    | 2,850  | 275    |
| 17    | 442    | 742    | 240   | 190   | 150   | 220   | 5,190  | 515    | 299    | 141    | 6,430  | 275    |
| 18    | 424    | 2,410  | 250   | 190   | 150   | 240   | 5,280  | 456    | 249    | 154    | 6,620  | 272    |
| 19    | 364    | 2,200  | 250   | 200   | 140   | 280   | 4,010  | 402    | 227    | 249    | 5,250  | 239    |
| 20    | 356    | 1,600  | 260   | 190   | 140   | 300   | 4,990  | 368    | 1,830  | 325    | 3,840  | 239    |
| 21    | 336    | 1,270  | 270   | 190   | 140   | 340   | 5,720  | 360    | 2,540  | 956    | 4,140  | 580    |
| 22    | 314    | 956    | 280   | 190   | 140   | 370   | 4,800  | 352    | 1,880  | 4,940  | 2,950  | 625    |
| 23    | 306    | 920    | 290   | 190   | 140   | 400   | 4,030  | 314    | 1,260  | 8,680  | 2,630  | 550    |
| 24    | 289    | 748    | 280   | 190   | 140   | 450   | 3,160  | 272    | 986    | 7,500  | 1,800  | 406    |
| 25    | 275    | 720    | 270   | 180   | 140   | 490   | 2,770  | 236    | 1,270  | 4,480  | 1,430  | 356    |
| 26    | 262    | 590    | 270   | 180   | 140   | 520   | 3,090  | 212    | 565    | 2,340  | 1,130  | 442    |
| 27    | 255    | 535    | 250   | 180   | 140   | 570   | 3,440  | 200    | 348    | 1,490  | 1,040  | 610    |
| 28    | 321    | 490    | 240   | 170   | 140   | 590   | 4,730  | 194    | 495    | 1,110  | 896    | 560    |
| 29    | 380    | 415    | 230   | 170   | 140   | 590   | 5,280  | 215    | 872    | 998    | 753    | 610    |
| 30    | 470    | 410    | 210   | 170   | ----- | 580   | 4,600  | 726    | 974    | 786    | 630    | 660    |
| 31    | 1,260  | -----  | 200   | 170   | ----- | 590   | -----  | 764    | -----  | 630    | 545    | -----  |
| TOTAL | 13,311 | 24,039 | 8,970 | 5,010 | 4,480 | 8,970 | 76,460 | 33,981 | 18,167 | 39,003 | 48,502 | 12,093 |
| MEAN  | 429    | 801    | 289   | 181   | 154   | 289   | 2,549  | 1,096  | 606    | 1,258  | 1,565  | 403    |
| MAX   | 1,260  | 2,410  | 400   | 200   | 170   | 590   | 5,720  | 3,860  | 2,540  | 8,680  | 6,620  | 660    |
| MIN   | 255    | 318    | 200   | 170   | 140   | 140   | 520    | 194    | 152    | 141    | 249    | 239    |
| CFSM  | .70    | 1.31   | .47   | .30   | .25   | .47   | 4.17   | 1.79   | .99    | 2.06   | 2.56   | .66    |
| IN.   | .81    | 1.46   | .55   | .34   | .27   | .55   | 4.66   | 2.07   | 1.11   | 2.37   | 2.95   | .74    |

CAL YR 1971 TOTAL 254,624 MEAN 698 MAX 10,100 MIN 95 CFSM 1.14 IN 15.50  
WTR YR 1972 TOTAL 293,586 MEAN 802 MAX 8,680 MIN 140 CFSM 1.31 IN 17.87

PEAK DISCHARGE (BASE, 3,000 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 4-18 | 0400 | 9.65  | 5,780     | 7-23 | 1800 | 12.10 | 9,250     |
| 4-21 | 0600 | 9.94  | 6,140     | 8-18 | 2200 | 11.25 | 7,280     |
| 4-29 | 1200 | 9.41  | 5,490     |      |      |       |           |

## 04027500 White River near Ashland, Wis.

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

DRAINAGE AREA.--279 sq mi.

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

GAGE.--Nonrecording gage. Datum of gage is 660.15 ft above mean sea level (Lake Superior District Power Co. bench mark).

AVERAGE DISCHARGE.--24 years, 289 cfs (14.07 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,050 cfs Aug. 20 (gage height, 6.80 ft); minimum observed, 92 cfs Dec. 13 (gage height, 0.74 ft); minimum daily, 92 cfs Dec. 13.  
Period of record: Maximum discharge, 6,270 cfs July 1, 1953 (gage height, 7.90 ft) from rating curve extended above 3,000 cfs; minimum, 3.1 cfs Apr. 28-30, 1949 (gage height, 0.09 ft).

REMARKS.--Records good except those for winter period and periods of no gage-height record, which are fair. Diurnal fluctuation caused by powerplant at gage.

REVISIONS.--WSP 1207: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 3 to Mar. 20.)

|     |     |     |       |
|-----|-----|-----|-------|
| 0.7 | 84  | 2.0 | 585   |
| .8  | 104 | 3.0 | 1,270 |
| .9  | 129 | 4.0 | 2,160 |
| 1.0 | 158 | 5.0 | 3,160 |
| 1.5 | 343 | 6.8 | 5,050 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT           | NOV    | DEC      | JAN       | FEB    | MAR       | APR      | MAY    | JUN   | JUL    | AUG    | SEP   |
|-------------|---------------|--------|----------|-----------|--------|-----------|----------|--------|-------|--------|--------|-------|
| 1           | 204           | 397    | 227      | 204       | 160    | 150       | 388      | 348    | 300   | 250    | 282    | 299   |
| 2           | 352           | 585    | 185      | 240       | 160    | 150       | 482      | 585    | 270   | 220    | 220    | 299   |
| 3           | 361           | 580    | 224      | 200       | 160    | 150       | 537      | 507    | 240   | 200    | 210    | 234   |
| 4           | 343           | 507    | 227      | 170       | 160    | 150       | 366      | 564    | 220   | 190    | 220    | 260   |
| 5           | 325           | 463    | 256      | 140       | 160    | 150       | 325      | 507    | 217   | 191    | 224    | 227   |
| 6           | 265           | 411    | 238      | 160       | 160    | 150       | 434      | 670    | 217   | 265    | 210    | 245   |
| 7           | 256           | 325    | 238      | 200       | 160    | 150       | 356      | 472    | 210   | 191    | 207    | 265   |
| 8           | 256           | 290    | 238      | 200       | 160    | 150       | 453      | 448    | 207   | 188    | 207    | 317   |
| 9           | 201           | 245    | 238      | 200       | 160    | 150       | 440      | 439    | 207   | 191    | 265    | 282   |
| 10          | 220           | 249    | 238      | 200       | 160    | 150       | 430      | 374    | 207   | 190    | 207    | 242   |
| 11          | 217           | 238    | 204      | 200       | 150    | 150       | 420      | 343    | 198   | 191    | 210    | 252   |
| 12          | 189           | 238    | 152      | 200       | 150    | 150       | 411      | 320    | 191   | 170    | 290    | 242   |
| 13          | 173           | 238    | 92       | 150       | 150    | 150       | 497      | 300    | 240   | 170    | 260    | 234   |
| 14          | 176           | 238    | 158      | 170       | 150    | 150       | 527      | 290    | 350   | 170    | 198    | 245   |
| 15          | 173           | 238    | 242      | 180       | 150    | 150       | 532      | 270    | 290   | 170    | 227    | 238   |
| 16          | 194           | 238    | 234      | 190       | 150    | 160       | 1,470    | 250    | 260   | 170    | 1,080  | 217   |
| 17          | 429           | 630    | 234      | 190       | 150    | 160       | 1,450    | 250    | 230   | 170    | 1,820  | 220   |
| 18          | 388           | 830    | 170      | 190       | 150    | 170       | 1,690    | 240    | 210   | 170    | 1,780  | 234   |
| 19          | 370           | 653    | 176      | 190       | 150    | 190       | 1,560    | 230    | 194   | 190    | 1,810  | 260   |
| 20          | 312           | 653    | 201      | 190       | 150    | 220       | 1,650    | 230    | 719   | 220    | 4,100  | 217   |
| 21          | 269           | 670    | 214      | 190       | 150    | 250       | 1,160    | 230    | 507   | 500    | 1,620  | 388   |
| 22          | 256           | 477    | 220      | 190       | 150    | 280       | 1,110    | 220    | 558   | 2,960  | 1,870  | 317   |
| 23          | 242           | 402    | 204      | 180       | 150    | 310       | 954      | 220    | 444   | 2,310  | 940    | 317   |
| 24          | 242           | 361    | 224      | 170       | 150    | 350       | 864      | 220    | 321   | 1,270  | 919    | 312   |
| 25          | 231           | 334    | 207      | 170       | 150    | 380       | 817      | 220    | 270   | 1,690  | 817    | 295   |
| 26          | 220           | 290    | 194      | 170       | 150    | 400       | 954      | 240    | 230   | 1,150  | 682    | 330   |
| 27          | 234           | 282    | 182      | 160       | 150    | 420       | 653      | 260    | 238   | 864    | 596    | 256   |
| 28          | 453           | 238    | 185      | 160       | 150    | 420       | 624      | 300    | 343   | 585    | 502    | 252   |
| 29          | 402           | 249    | 188      | 160       | 150    | 420       | 817      | 360    | 366   | 434    | 416    | 234   |
| 30          | 512           | 201    | 185      | 160       | -----  | 430       | 558      | 420    | 330   | 330    | 361    | 245   |
| 31          | 830           | -----  | 217      | 160       | -----  | 420       | -----    | 366    | ----- | 224    | 308    | ----- |
| TOTAL       | 9,294         | 11,750 | 6,392    | 5,634     | 4,450  | 7,230     | 22,929   | 10,693 | 8,784 | 16,184 | 23,058 | 7,975 |
| MEAN        | 300           | 392    | 206      | 182       | 153    | 233       | 764      | 345    | 293   | 522    | 744    | 266   |
| MAX         | 830           | 830    | 256      | 240       | 160    | 430       | 1,690    | 670    | 719   | 2,960  | 4,100  | 388   |
| MIN         | 173           | 201    | 92       | 140       | 150    | 150       | 325      | 220    | 191   | 170    | 198    | 217   |
| CFSM        | 1.08          | 1.41   | .74      | .65       | .55    | .84       | 2.74     | 1.24   | 1.05  | 1.87   | 2.67   | .95   |
| IN.         | 1.24          | 1.57   | .85      | .75       | .59    | .96       | 3.06     | 1.43   | 1.17  | 2.16   | 3.07   | 1.06  |
| CAL YR 1971 | TOTAL 104,557 |        | MEAN 286 | MAX 2,540 | MIN 92 | CFSM 1.03 | IN 13.94 |        |       |        |        |       |
| WTR YR 1972 | TOTAL 134,373 |        | MEAN 367 | MAX 4,100 | MIN 92 | CFSM 1.32 | IN 17.92 |        |       |        |        |       |

NOTE.--No gage-height record Jan. 16 to Mar. 31, June 30 to July 30.

## STREAMS TRIBUTARY TO LAKE SUPERIOR

04031000 Black River near Bessemer, Mich.

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

DRAINAGE AREA.--200 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 1,150 ft (from topographic map).

AVERAGE DISCHARGE.--18 years, 235 cfs (15.96 inches per year).

EXTREMES.--Current year: Maximum discharge, 8,360 cfs Aug. 16 (gage height, 11.73 ft); minimum daily, 33 cfs Mar. 2, 3; minimum gage height, 0.78 ft July 16.  
Period of record: Maximum discharge, 14,800 cfs Apr. 24, 1960 (gage height, 14.27 ft, from floodmark), from rating curve extended above 5,300 cfs on basis of slope-area measurement of peak flow; minimum, 7.8 cfs Sept. 9, 1970 (gage height, 0.36 ft).

REMARKS.--Records good except those for winter periods, which are poor. Prior to 1967, some ground water pumped from mines at Bessemer.

REVISIONS.--WSP 1911: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY           | OCT          | NOV      | DEC       | JAN    | FEB       | MAR      | APR    | MAY    | JUN   | JUL   | AUG    | SEP   |
|---------------|--------------|----------|-----------|--------|-----------|----------|--------|--------|-------|-------|--------|-------|
| 1             | 63           | 267      | 160       | 54     | 37        | 34       | 72     | 2,240  | 238   | 447   | 120    | 166   |
| 2             | 156          | 338      | 150       | 52     | 37        | 33       | 72     | 1,990  | 186   | 330   | 100    | 139   |
| 3             | 135          | 356      | 145       | 50     | 37        | 33       | 72     | 1,470  | 151   | 248   | 95     | 125   |
| 4             | 105          | 332      | 135       | 48     | 37        | 34       | 72     | 1,100  | 115   | 205   | 75     | 115   |
| 5             | 94           | 341      | 130       | 46     | 37        | 35       | 72     | 842    | 97    | 158   | 63     | 117   |
| 6             | 115          | 332      | 120       | 45     | 37        | 36       | 72     | 876    | 85    | 126   | 60     | 108   |
| 7             | 125          | 252      | 115       | 44     | 37        | 38       | 72     | 734    | 73    | 103   | 78     | 124   |
| 8             | 133          | 231      | 110       | 42     | 37        | 39       | 73     | 594    | 65    | 85    | 101    | 107   |
| 9             | 131          | 195      | 110       | 40     | 37        | 40       | 76     | 481    | 54    | 74    | 112    | 90    |
| 10            | 137          | 182      | 110       | 39     | 36        | 40       | 80     | 382    | 46    | 64    | 86     | 85    |
| 11            | 121          | 174      | 120       | 38     | 36        | 40       | 88     | 333    | 42    | 57    | 96     | 80    |
| 12            | 103          | 166      | 130       | 37     | 36        | 40       | 110    | 288    | 47    | 50    | 95     | 72    |
| 13            | 102          | 155      | 160       | 37     | 36        | 40       | 150    | 253    | 51    | 43    | 80     | 80    |
| 14            | 100          | 152      | 145       | 36     | 36        | 40       | 250    | 227    | 120   | 42    | 71     | 81    |
| 15            | 93           | 170      | 130       | 36     | 36        | 41       | 406    | 204    | 160   | 38    | 70     | 73    |
| 16            | 94           | 174      | 120       | 35     | 36        | 42       | 733    | 184    | 132   | 38    | 5,830  | 67    |
| 17            | 105          | 320      | 115       | 35     | 36        | 43       | 1,120  | 163    | 113   | 52    | 3,630  | 80    |
| 18            | 103          | 558      | 105       | 35     | 36        | 45       | 1,380  | 145    | 94    | 130   | 1,800  | 77    |
| 19            | 113          | 539      | 100       | 35     | 36        | 46       | 1,380  | 125    | 84    | 112   | 1,090  | 66    |
| 20            | 111          | 461      | 95        | 35     | 36        | 49       | 1,880  | 110    | 831   | 155   | 721    | 85    |
| 21            | 104          | 403      | 90        | 35     | 36        | 56       | 2,110  | 98     | 915   | 229   | 530    | 213   |
| 22            | 109          | 357      | 85        | 35     | 36        | 66       | 1,770  | 88     | 591   | 635   | 624    | 221   |
| 23            | 106          | 330      | 82        | 36     | 36        | 84       | 1,460  | 80     | 416   | 886   | 503    | 193   |
| 24            | 100          | 290      | 78        | 36     | 36        | 96       | 1,210  | 69     | 307   | 737   | 468    | 165   |
| 25            | 97           | 251      | 74        | 36     | 36        | 100      | 1,280  | 61     | 229   | 539   | 443    | 146   |
| 26            | 95           | 226      | 70        | 36     | 36        | 94       | 1,710  | 54     | 177   | 390   | 336    | 316   |
| 27            | 102          | 208      | 67        | 36     | 36        | 85       | 2,280  | 54     | 199   | 294   | 282    | 333   |
| 28            | 120          | 192      | 64        | 36     | 36        | 78       | 2,840  | 63     | 617   | 236   | 227    | 354   |
| 29            | 108          | 185      | 62        | 36     | 35        | 74       | 3,180  | 138    | 729   | 208   | 187    | 530   |
| 30            | 167          | 170      | 59        | 36     | -----     | 72       | 2,800  | 389    | 587   | 163   | 156    | 481   |
| 31            | 330          | -----    | 57        | 36     | -----     | 72       | -----  | 309    | ----- | 152   | 155    | ----- |
| TOTAL         | 3,677        | 8,307    | 3,293     | 1,213  | 1,052     | 1,665    | 28,870 | 14,144 | 7,551 | 7,026 | 18,284 | 4,889 |
| MEAN          | 119          | 277      | 106       | 39.1   | 36.3      | 53.7     | 962    | 456    | 252   | 227   | 590    | 163   |
| MAX           | 330          | 558      | 160       | 54     | 37        | 100      | 3,180  | 2,240  | 915   | 886   | 5,830  | 530   |
| MIN           | 63           | 152      | 57        | 35     | 35        | 33       | 72     | 54     | 42    | 38    | 60     | 66    |
| CFSM          | .60          | 1.39     | .53       | .20    | .18       | .27      | 4.81   | 2.28   | 1.26  | 1.14  | 2.95   | .82   |
| IN            | .68          | 1.55     | .61       | .23    | .20       | .31      | 5.37   | 2.63   | 1.40  | 1.31  | 3.40   | .91   |
| TOTAL YR 1971 | TOTAL 97,673 | MEAN 268 | MAX 4,860 | MIN 18 | CFSM 1.34 | IN 18.17 |        |        |       |       |        |       |
| TOTAL YR 1972 | TOTAL 99,971 | MEAN 273 | MAX 5,830 | MIN 33 | CFSM 1.37 | IN 18.59 |        |        |       |       |        |       |

## 04031500 Presque Isle River at Marenisco, Mich.

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

DRAINAGE AREA.--171 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,489.30 ft above mean sea level (levels by Michigan Department of Natural Resources). Prior to May 27, 1949, nonrecording gage at site 0.3 mile downstream at different datum.

AVERAGE DISCHARGE.--27 years, 176 cfs (13.98 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,260 cfs Aug. 18 (gage height, 7.98 ft); minimum, 61 cfs June 9, 11 (gage height, 3.72 ft).

Period of record: Maximum discharge, 3,520 cfs Apr. 25, 1960 (gage height, 11.25 ft); minimum observed, 13 cfs Sept. 30, 1948 (gage height, 2.25 ft, site and datum then in use).

REMARKS.--Records fair. Occasional regulation for lake or pond level control at several places above station.

REVISIONS (WATER YEARS).--WSP 1707: 1954. WSP 1911: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT          | NOV      | DEC       | JAN    | FEB       | MAR      | APR    | MAY    | JUN   | JUL   | AUG    | SEP   |
|-------------|--------------|----------|-----------|--------|-----------|----------|--------|--------|-------|-------|--------|-------|
| 1           | 117          | 154      | 115       | 85     | 80        | 74       | 125    | 1,070  | 195   | 298   | 149    | 316   |
| 2           | 121          | 182      | 110       | 85     | 80        | 72       | 125    | 994    | 159   | 244   | 103    | 303   |
| 3           | 135          | 191      | 105       | 84     | 82        | 70       | 125    | 890    | 130   | 200   | 91     | 269   |
| 4           | 123          | 183      | 105       | 84     | 82        | 70       | 125    | 748    | 111   | 174   | 96     | 246   |
| 5           | 103          | 145      | 102       | 84     | 81        | 70       | 125    | 649    | 100   | 148   | 97     | 242   |
| 6           | 93           | 175      | 101       | 84     | 81        | 72       | 122    | 619    | 90    | 129   | 94     | 238   |
| 7           | 92           | 157      | 101       | 83     | 81        | 74       | 122    | 616    | 84    | 112   | 118    | 229   |
| 8           | 99           | 188      | 101       | 82     | 81        | 78       | 122    | 538    | 76    | 106   | 134    | 221   |
| 9           | 101          | 136      | 103       | 82     | 80        | 80       | 122    | 485    | 66    | 102   | 144    | 204   |
| 10          | 114          | 134      | 122       | 82     | 80        | 80       | 125    | 430    | 65    | 95    | 135    | 191   |
| 11          | 109          | 122      | 140       | 81     | 80        | 81       | 135    | 335    | 64    | 92    | 154    | 185   |
| 12          | 98           | 109      | 150       | 81     | 80        | 82       | 160    | 298    | 69    | 93    | 147    | 177   |
| 13          | 95           | 103      | 130       | 80     | 78        | 82       | 200    | 295    | 72    | 88    | 128    | 178   |
| 14          | 97           | 100      | 115       | 80     | 78        | 82       | 240    | 287    | 145   | 92    | 108    | 168   |
| 15          | 83           | 107      | 110       | 80     | 78        | 84       | 300    | 273    | 161   | 87    | 103    | 150   |
| 16          | 80           | 106      | 100       | 80     | 77        | 84       | 376    | 258    | 143   | 86    | 659    | 151   |
| 17          | 86           | 150      | 100       | 80     | 77        | 86       | 458    | 239    | 124   | 95    | 1,160  | 209   |
| 18          | 82           | 254      | 98        | 80     | 77        | 86       | 567    | 184    | 106   | 139   | 1,180  | 190   |
| 19          | 86           | 285      | 96        | 80     | 77        | 88       | 537    | 161    | 93    | 131   | 988    | 168   |
| 20          | 83           | 273      | 94        | 80     | 77        | 92       | 589    | 166    | 415   | 157   | 572    | 174   |
| 21          | 82           | 240      | 93        | 80     | 77        | 105      | 691    | 159    | 548   | 219   | 424    | 304   |
| 22          | 87           | 215      | 92        | 80     | 77        | 125      | 728    | 158    | 474   | 360   | 500    | 324   |
| 23          | 84           | 195      | 91        | 80     | 77        | 140      | 673    | 147    | 323   | 502   | 415    | 292   |
| 24          | 110          | 180      | 90        | 78     | 77        | 140      | 625    | 132    | 147   | 523   | 409    | 252   |
| 25          | 103          | 165      | 89        | 78     | 76        | 140      | 604    | 119    | 152   | 467   | 476    | 215   |
| 26          | 98           | 150      | 88        | 78     | 76        | 135      | 631    | 110    | 148   | 391   | 471    | 311   |
| 27          | 113          | 140      | 87        | 78     | 76        | 135      | 728    | 103    | 133   | 309   | 435    | 345   |
| 28          | 114          | 130      | 87        | 78     | 76        | 130      | 905    | 101    | 202   | 223   | 318    | 329   |
| 29          | 103          | 125      | 87        | 78     | 75        | 130      | 1,070  | 124    | 306   | 198   | 218    | 327   |
| 30          | 152          | 120      | 87        | 80     | -----     | 130      | 1,130  | 222    | 326   | 184   | 236    | 312   |
| 31          | 193          | -----    | 86        | 80     | -----     | 125      | -----  | 234    | ----- | 164   | 265    | ----- |
| TOTAL       | 3,236        | 4,954    | 3,175     | 2,505  | 2,274     | 3,022    | 12,585 | 11,144 | 5,227 | 6,208 | 10,527 | 7,220 |
| MEAN        | 104          | 165      | 102       | 80.8   | 78.4      | 97.5     | 420    | 359    | 174   | 200   | 340    | 241   |
| MAX         | 193          | 285      | 150       | 85     | 82        | 140      | 1,130  | 1,070  | 548   | 523   | 1,180  | 345   |
| MIN         | 80           | 100      | 86        | 78     | 75        | 70       | 122    | 101    | 64    | 86    | 91     | 150   |
| CFSM        | .61          | .96      | .60       | .47    | .46       | .57      | 2.46   | 2.10   | 1.02  | 1.17  | 1.99   | 1.41  |
| IN.         | .70          | 1.08     | .69       | .54    | .49       | .66      | 2.74   | 2.42   | 1.14  | 1.35  | 2.29   | 1.57  |
| CAL YR 1971 | TOTAL 71,701 | MEAN 196 | MAX 1,700 | MIN 42 | CFSM 1.15 | IN 15.60 |        |        |       |       |        |       |
| WTR YR 1972 | TOTAL 72,077 | MEAN 197 | MAX 1,180 | MIN 64 | CFSM 1.15 | IN 15.68 |        |        |       |       |        |       |

## STREAMS TRIBUTARY TO LAKE SUPERIOR

04037500 Cisco Branch Ontonagon River at Cisco Lake Outlet, Mich.

LOCATION.--Lat 46°15'12", long 89°27'05", in E 1/2 sec.32, T.45 N., R.41 W., Gogebic County, on right bank 80 ft downstream from Cisco Lake Dam, 2.5 miles upstream from Langford Creek, 5.0 miles upstream from U.S. Highway 2, and 13 miles west of Watersmeet.

DRAINAGE AREA.--50.7 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,672.69 ft above mean sea level. Prior to Oct. 1, 1968, non-recording gage at same site at datum 4.0 ft higher.

AVERAGE DISCHARGE.--28 years, 46.7 cfs (12.51 inches per year).

EXTREMES.--Current year: Maximum discharge, 203 cfs Aug. 16 (gage height, 5.65 ft); minimum daily, 0.19 cfs

June 6-9, 13; minimum gage height, 3.87 ft June 5-10, 12-14.

Period of record: Maximum discharge, 288 cfs May 1-4, 1951 (gage height, 6.10 ft, present datum); minimum daily, 0.13 cfs Aug. 4-7, Aug. 22 to Sept. 5, 1970.

REMARKS.--Records fair. Flow regulated by Cisco Lake (usable capacity, 15,600 acre-ft).

REVISIONS.--WSP 1911: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY    | JUN    | JUL      | AUG     | SEP     |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|----------|---------|---------|
| 1     | 59    | 94    | 41    | 56    | 57    | 43    | 28    | 89     | .22    | .72      | 60      | 30      |
| 2     | 69    | 93    | 41    | 55    | 57    | 43    | 28    | 93     | .22    | .54      | 58      | 30      |
| 3     | 78    | 91    | 41    | 40    | 56    | 43    | 29    | 95     | .22    | .37      | 30      | 30      |
| 4     | 74    | 90    | 40    | 26    | 56    | 44    | 29    | 92     | .22    | .35      | 3.9     | 30      |
| 5     | 54    | 90    | 41    | 27    | 39    | 45    | 29    | 87     | .22    | .34      | 3.3     | 51      |
| 6     | 38    | 84    | 34    | 27    | 26    | 45    | 29    | 92     | .19    | .34      | 2.9     | 68      |
| 7     | 39    | 82    | 27    | 27    | 26    | 52    | 29    | 98     | .19    | .31      | 10      | 64      |
| 8     | 40    | 82    | 27    | 28    | 26    | 58    | 36    | 96     | .19    | .28      | 22      | 63      |
| 9     | 38    | 79    | 28    | 28    | 27    | 57    | 44    | 96     | .19    | .21      | 48      | 63      |
| 10    | 38    | 78    | 29    | 28    | 27    | 56    | 44    | 89     | .20    | .24      | 62      | 63      |
| 11    | 37    | 77    | 46    | 28    | 27    | 55    | 52    | 44     | .22    | .26      | 71      | 60      |
| 12    | 38    | 75    | 59    | 28    | 27    | 54    | 58    | 5.8    | .22    | .31      | 78      | 60      |
| 13    | 38    | 74    | 58    | 29    | 27    | 46    | 70    | 1.9    | .19    | .34      | 77      | 58      |
| 14    | 39    | 74    | 57    | 29    | 26    | 39    | 78    | 1.9    | 15     | 10       | 47      | 32      |
| 15    | 38    | 71    | 57    | 29    | 26    | 32    | 77    | 1.6    | 24     | 16       | 26      | 12      |
| 16    | 39    | 70    | 58    | 30    | 27    | 24    | 77    | 1.2    | 24     | 16       | 119     | 8.2     |
| 17    | 40    | 72    | 57    | 29    | 27    | 25    | 78    | 1.2    | 24     | 44       | 197     | 4.8     |
| 18    | 90    | 72    | 57    | 29    | 27    | 25    | 79    | 1.0    | 25     | 104      | 195     | 4.5     |
| 19    | 138   | 72    | 56    | 29    | 28    | 25    | 80    | .70    | 25     | 134      | 192     | 18      |
| 20    | 131   | 71    | 42    | 29    | 28    | 25    | 81    | .40    | 64     | 135      | 185     | 41      |
| 21    | 127   | 71    | 28    | 30    | 28    | 44    | 83    | .40    | 97     | 138      | 180     | 95      |
| 22    | 121   | 72    | 28    | 30    | 29    | 71    | 87    | .37    | 94     | 163      | 172     | 128     |
| 23    | 118   | 72    | 28    | 30    | 29    | 78    | 88    | .31    | 58     | 180      | 168     | 124     |
| 24    | 114   | 70    | 28    | 31    | 29    | 77    | 89    | .25    | 11     | 172      | 170     | 120     |
| 25    | 111   | 69    | 28    | 33    | 35    | 76    | 89    | .25    | .86    | 93       | 166     | 86      |
| 26    | 107   | 69    | 28    | 41    | 44    | 74    | 89    | .25    | .83    | 29       | 162     | 97      |
| 27    | 108   | 68    | 29    | 62    | 44    | 64    | 92    | .25    | .55    | 30       | 159     | 121     |
| 28    | 101   | 67    | 37    | 62    | 44    | 53    | 92    | .25    | .40    | 47       | 105     | 122     |
| 29    | 98    | 53    | 52    | 61    | 44    | 40    | 82    | .25    | .38    | 61       | 43      | 124     |
| 30    | 99    | 41    | 57    | 60    | ----- | 27    | 87    | .25    | .50    | 61       | 30      | 124     |
| 31    | 97    | ----- | 57    | 59    | ----- | 28    | ----- | .22    | -----  | 61       | 31      | -----   |
| TOTAL | 2,356 | 2,243 | 1,296 | 1,130 | 993   | 1,468 | 1,933 | 989.75 | 467.21 | 1,498.61 | 2,873.1 | 1,931.5 |
| MEAN  | 76.0  | 74.8  | 41.8  | 36.5  | 34.2  | 47.4  | 64.4  | 31.9   | 15.6   | 48.3     | 92.7    | 64.4    |
| MAX   | 138   | 94    | 59    | 62    | 57    | 78    | 92    | 98     | 97     | 180      | 197     | 128     |
| MIN   | 37    | 41    | 27    | 26    | 26    | 24    | 28    | .22    | .19    | .21      | 2.9     | 4.5     |

CAL YR 1971 TOTAL 19,685.15 MEAN 53.9 MAX 179 MIN 1.3  
 WTR YR 1972 TOTAL 19,179.17 MEAN 52.4 MAX 197 MIN .19

04061000 Brule River near Florence, Wis.

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, on left bank 40 ft upstream from highway bridge, 1 mile upstream from Paint River, 2.5 miles north of Florence, and 5.0 miles upstream from confluence with Michigamme River.

DRAINAGE AREA.--389 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 1,210 ft (from topographic map). Prior to Aug. 29, 1944, nonrecording gage at bridge 40 ft downstream at same datum.

AVERAGE DISCHARGE.--29 years (1914-15, 1944-72), 355 cfs (12.39 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,320 cfs Apr. 30 (gage height, 4.65 ft); maximum gage height, 7.13 ft Dec. 30 (backwater from ice); minimum daily discharge, 240 cfs Jan. 16-22; minimum gage height, 2.12 ft Aug. 6.

Period of record: Maximum discharge, 4,700 cfs July 2, 1953 (gage height, 6.57 ft); maximum gage height, 8.27 ft Dec. 26, 1969 (backwater from ice); minimum discharge, 118 cfs Dec. 2, 1963 (discharge measurement); minimum gage height, 1.79 ft July 24, 1964.

REMARKS.--Records good except those for winter periods, which are fair. Discharge includes some mine pumpage (see sta 04060500).

REVISIONS (WATER YEARS).--WSP 1387: 1914-16. WSP 1911: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT           | NOV      | DEC       | JAN     | FEB       | MAR      | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|---------------|----------|-----------|---------|-----------|----------|--------|--------|--------|--------|--------|--------|
| 1           | 450           | 356      | 250       | 240     | 265       | 260      | 325    | 2,250  | 501    | 321    | 289    | 454    |
| 2           | 600           | 423      | 245       | 300     | 265       | 255      | 320    | 2,140  | 446    | 311    | 280    | 414    |
| 3           | 760           | 444      | 245       | 240     | 260       | 250      | 315    | 1,970  | 423    | 285    | 286    | 383    |
| 4           | 800           | 404      | 240       | 275     | 260       | 250      | 310    | 1,700  | 418    | 275    | 280    | 368    |
| 5           | 700           | 370      | 245       | 260     | 260       | 245      | 305    | 1,370  | 392    | 270    | 270    | 399    |
| 6           | 560           | 344      | 240       | 260     | 245       | 245      | 300    | 1,180  | 373    | 275    | 267    | 379    |
| 7           | 530           | 326      | 270       | 255     | 245       | 245      | 300    | 1,080  | 356    | 294    | 295    | 373    |
| 8           | 540           | 333      | 280       | 260     | 255       | 250      | 300    | 939    | 345    | 302    | 350    | 363    |
| 9           | 550           | 314      | 240       | 265     | 255       | 245      | 295    | 809    | 359    | 301    | 391    | 346    |
| 10          | 540           | 297      | 300       | 270     | 255       | 260      | 300    | 707    | 361    | 299    | 343    | 343    |
| 11          | 510           | 293      | 315       | 260     | 255       | 265      | 310    | 645    | 349    | 284    | 343    | 331    |
| 12          | 480           | 291      | 325       | 255     | 255       | 275      | 320    | 594    | 401    | 302    | 335    | 324    |
| 13          | 450           | 291      | 335       | 250     | 255       | 265      | 340    | 553    | 414    | 279    | 304    | 317    |
| 14          | 430           | 297      | 340       | 250     | 245       | 245      | 370    | 540    | 403    | 278    | 285    | 312    |
| 15          | 410           | 249      | 340       | 245     | 245       | 305      | 420    | 521    | 394    | 283    | 277    | 299    |
| 16          | 390           | 287      | 330       | 240     | 255       | 320      | 494    | 487    | 375    | 275    | 1,060  | 292    |
| 17          | 370           | 302      | 325       | 240     | 245       | 340      | 651    | 457    | 351    | 311    | 1,750  | 301    |
| 18          | 350           | 341      | 320       | 240     | 255       | 350      | 807    | 434    | 334    | 425    | 1,640  | 300    |
| 19          | 340           | 368      | 315       | 240     | 250       | 360      | 877    | 412    | 327    | 377    | 1,250  | 291    |
| 20          | 330           | 352      | 310       | 240     | 250       | 370      | 600    | 395    | 482    | 331    | 816    | 304    |
| 21          | 330           | 334      | 305       | 240     | 250       | 370      | 1,100  | 421    | 593    | 452    | 638    | 645    |
| 22          | 330           | 325      | 300       | 240     | 250       | 375      | 1,130  | 398    | 491    | 520    | 657    | 619    |
| 23          | 320           | 320      | 290       | 245     | 245       | 375      | 991    | 373    | 403    | 536    | 631    | 486    |
| 24          | 320           | 315      | 245       | 245     | 250       | 370      | 922    | 358    | 367    | 486    | 710    | 405    |
| 25          | 315           | 310      | 245       | 250     | 245       | 365      | 906    | 350    | 346    | 409    | 990    | 387    |
| 26          | 315           | 300      | 280       | 250     | 245       | 360      | 1,010  | 345    | 329    | 359    | 1,020  | 916    |
| 27          | 315           | 295      | 280       | 255     | 260       | 355      | 1,270  | 342    | 312    | 348    | 816    | 1,070  |
| 28          | 315           | 290      | 280       | 260     | 260       | 350      | 1,640  | 346    | 411    | 326    | 647    | 976    |
| 29          | 313           | 280      | 280       | 265     | 260       | 345      | 2,030  | 425    | 460    | 315    | 547    | 990    |
| 30          | 308           | 260      | 285       | 270     | -----     | 335      | 2,290  | 650    | 369    | 301    | 484    | 866    |
| 31          | 348           | -----    | 290       | 270     | -----     | 330      | -----  | 619    | -----  | 294    | 459    | -----  |
| TOTAL       | 13,613        | 9,746    | 9,060     | 7,975   | 7,415     | 9,610    | 21,848 | 23,810 | 11,885 | 10,424 | 18,710 | 14,253 |
| MEAN        | 439           | 325      | 292       | 257     | 240       | 310      | 728    | 768    | 396    | 336    | 604    | 475    |
| MAX         | 800           | 449      | 340       | 300     | 265       | 375      | 2,290  | 2,250  | 593    | 536    | 1,750  | 1,070  |
| MIN         | 308           | 260      | 245       | 240     | 250       | 245      | 295    | 342    | 312    | 270    | 267    | 291    |
| CFSM        | 1.13          | .84      | .75       | .66     | .66       | .80      | 1.87   | 1.97   | 1.02   | .86    | 1.55   | 1.22   |
| IN.         | 1.30          | .93      | .87       | .76     | .71       | .92      | 2.09   | 2.28   | 1.14   | 1.00   | 1.79   | 1.36   |
| CAL YR 1971 | TOTAL 141,662 | MEAN 388 | MAX 1,940 | MIN 219 | CFSM 1.00 | IN 13.55 |        |        |        |        |        |        |
| WTR YR 1972 | TOTAL 154,355 | MEAN 433 | MAX 2,290 | MIN 240 | CFSM 1.11 | IN 15.14 |        |        |        |        |        |        |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04063000 Menominee River near Florence, Wis.

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, on left bank 0.5 mile downstream from confluence of Brule and Michigamme Rivers, 3.5 miles northeast of Florence, and at mile 117.

DRAINAGE AREA.--1,780 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 1,120 ft (from topographic map). Prior to July 1950, head-water and tailwater gages and generation data entered hourly in daily log sheets by company employees at the Twin Falls Powerplant of Wisconsin-Michigan Power Co., 10.4 miles downstream.

AVERAGE DISCHARGE.--58 years, 1,788 cfs.

EXTREMES.--Current year: Maximum discharge, 9,500 cfs May 4 (gage height, 9.35 ft); minimum, 110 cfs Oct. 31 (gage height, 1.56 ft); minimum daily, 660 cfs Jan. 29.

Period of record: Maximum discharge, 19,500 cfs Apr. 26, 1960 (gage height, 14.15 ft); minimum, 38 cfs Aug. 21, 1962; minimum gage height, 1.18 ft Aug. 21, 1962, Nov. 4, 1965; minimum daily discharge, 154 cfs Aug. 9, 1925.

REMARKS.--Records excellent. Prior to July 1950 discharge determined from powerplant records computed on basis of load-discharge rating of hydroelectric units and rating for tailwater gage during periods of spill. Rating developed by Geological Survey. Flow regulated by powerplants, and by 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.

REVISIONS (WATER YEARS).--WSP 1707: 1953(M). WSP 1911: Drainage area of former site.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY     | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|
| 1     | 1,670  | 1,610  | 1,430  | 1,830  | 1,380  | 2,100  | 1,600  | 8,880   | 3,330  | 1,840  | 1,510  | 2,210  |
| 2     | 1,840  | 1,680  | 1,630  | 1,670  | 1,290  | 2,010  | 1,390  | 8,790   | 3,040  | 1,620  | 1,410  | 2,170  |
| 3     | 2,100  | 1,830  | 1,400  | 2,150  | 1,360  | 1,350  | 1,220  | 8,650   | 2,490  | 1,210  | 1,480  | 1,720  |
| 4     | 1,990  | 1,850  | 1,470  | 1,790  | 1,500  | 1,160  | 1,260  | 9,270   | 2,180  | 1,180  | 1,350  | 1,750  |
| 5     | 2,230  | 2,000  | 1,450  | 2,140  | 921    | 1,140  | 1,230  | 8,400   | 2,380  | 1,490  | 727    | 1,760  |
| 6     | 2,100  | 1,650  | 1,470  | 1,780  | 750    | 1,970  | 1,570  | 7,360   | 2,050  | 1,550  | 757    | 1,750  |
| 7     | 2,060  | 1,790  | 1,680  | 1,510  | 1,790  | 2,260  | 1,490  | 5,310   | 1,680  | 1,450  | 1,620  | 1,730  |
| 8     | 1,840  | 1,900  | 1,670  | 1,050  | 1,700  | 2,240  | 1,140  | 5,310   | 1,850  | 961    | 1,530  | 1,860  |
| 9     | 1,640  | 1,870  | 1,840  | 1,340  | 1,590  | 2,070  | 1,010  | 6,070   | 1,440  | 710    | 1,550  | 1,350  |
| 10    | 1,050  | 1,890  | 2,060  | 1,750  | 1,410  | 1,580  | 1,270  | 6,890   | 1,020  | 1,580  | 1,720  | 1,180  |
| 11    | 1,610  | 1,840  | 2,120  | 1,530  | 1,630  | 1,160  | 1,830  | 6,450   | 947    | 1,610  | 1,470  | 1,480  |
| 12    | 1,380  | 1,970  | 1,230  | 1,640  | 1,080  | 1,130  | 2,110  | 5,250   | 1,560  | 1,500  | 1,500  | 1,630  |
| 13    | 1,710  | 1,900  | 1,770  | 2,030  | 714    | 1,920  | 2,370  | 4,360   | 1,470  | 1,290  | 1,060  | 1,530  |
| 14    | 1,770  | 1,980  | 1,650  | 2,060  | 1,790  | 2,210  | 2,020  | 4,700   | 1,660  | 1,440  | 1,660  | 1,330  |
| 15    | 1,320  | 2,110  | 1,800  | 1,630  | 1,660  | 1,900  | 2,020  | 5,100   | 1,660  | 740    | 1,600  | 1,380  |
| 16    | 947    | 1,950  | 2,080  | 1,060  | 1,870  | 1,800  | 1,760  | 4,250   | 1,680  | 790    | 2,920  | 980    |
| 17    | 729    | 2,120  | 2,170  | 1,900  | 1,880  | 1,480  | 2,170  | 3,940   | 1,350  | 1,640  | 4,610  | 929    |
| 18    | 1,670  | 2,020  | 1,810  | 1,400  | 1,410  | 884    | 2,720  | 3,370   | 1,040  | 1,560  | 4,080  | 1,570  |
| 19    | 1,600  | 1,930  | 1,850  | 1,620  | 1,010  | 971    | 3,000  | 2,830   | 1,410  | 1,630  | 3,790  | 1,520  |
| 20    | 1,690  | 1,870  | 2,000  | 1,440  | 950    | 1,680  | 2,480  | 2,800   | 1,840  | 1,870  | 3,250  | 1,800  |
| 21    | 1,730  | 1,740  | 1,850  | 1,680  | 1,870  | 2,070  | 3,240  | 3,100   | 2,330  | 2,000  | 3,210  | 1,690  |
| 22    | 1,690  | 1,550  | 2,100  | 1,000  | 1,920  | 2,180  | 3,960  | 3,630   | 2,210  | 2,020  | 3,000  | 2,030  |
| 23    | 885    | 1,570  | 2,000  | 781    | 1,970  | 1,910  | 3,680  | 3,530   | 2,260  | 2,210  | 2,510  | 1,720  |
| 24    | 819    | 1,540  | 1,980  | 2,260  | 2,090  | 2,170  | 3,510  | 2,890   | 2,140  | 2,230  | 2,630  | 1,940  |
| 25    | 1,740  | 834    | 1,710  | 1,940  | 1,890  | 1,950  | 3,530  | 2,630   | 2,180  | 2,260  | 3,320  | 2,240  |
| 26    | 1,510  | 1,460  | 1,560  | 1,250  | 1,430  | 2,070  | 3,630  | 2,370   | 2,280  | 2,170  | 3,740  | 3,800  |
| 27    | 1,700  | 1,120  | 1,940  | 1,500  | 1,640  | 1,730  | 4,030  | 1,630   | 2,140  | 1,600  | 3,570  | 4,040  |
| 28    | 1,480  | 898    | 2,000  | 1,430  | 1,740  | 1,880  | 4,730  | 1,470   | 2,220  | 1,240  | 3,340  | 3,930  |
| 29    | 1,420  | 1,610  | 2,000  | 660    | 2,230  | 1,510  | 6,960  | 2,040   | 1,850  | 836    | 2,920  | 4,040  |
| 30    | 1,480  | 1,500  | 2,000  | 800    | -----  | 1,680  | 8,420  | 3,020   | 2,050  | 752    | 2,730  | 4,120  |
| 31    | 1,310  | -----  | 1,900  | 1,580  | -----  | 1,570  | -----  | 3,650   | -----  | 1,680  | 2,560  | -----  |
| TOTAL | 48,710 | 51,582 | 55,620 | 48,201 | 44,465 | 53,735 | 81,350 | 147,940 | 57,737 | 46,659 | 73,124 | 61,179 |
| MEAN  | 1,571  | 1,719  | 1,794  | 1,555  | 1,533  | 1,733  | 2,712  | 4,772   | 1,925  | 1,505  | 2,359  | 2,039  |
| MAX   | 2,230  | 2,120  | 2,170  | 2,260  | 2,230  | 2,260  | 8,420  | 9,270   | 3,330  | 2,260  | 4,610  | 4,120  |
| MIN   | 729    | 834    | 1,230  | 660    | 714    | 884    | 1,010  | 1,470   | 947    | 710    | 727    | 929    |

CAL YR 1971 TOTAL 731,973 MEAN 2,005 MAX 9,920 MIN 484  
WTR YR 1972 TOTAL 770,302 MEAN 2,105 MAX 9,270 MIN 660

04063700 Popple River near Fence, Wis.  
(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, on left bank 20 ft upstream from bridge on U.S. Forest Service road 2159, 1.8 miles downstream from Mud Creek, 2.6 miles northwest of Fence, and 11.5 miles upstream from mouth.

DRAINAGE AREA.--131 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,406.16 ft above mean sea level. Prior to June 18, 1964, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--9 years, 123 cfs (12.75 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,120 cfs May 2 (gage height, 4.14 ft); minimum, 39 cfs Aug. 6 (gage height, 1.31 ft).

Period of record: Maximum discharge, 1,120 cfs May 2, 1972 (gage height, 4.21 ft); minimum, 15 cfs July 19, 23, 24, 1964 (gage height, 1.04 ft).

REMARKS.--Records good except those for winter months, which are fair. Records of chemical analysis, water temperatures, and suspended sediment loads for the water year 1972 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Oct. 1 to Dec. 9, Apr. 15 to June 2, June 8 to Sept. 30; stage-discharge relation affected by ice Dec. 10 to Apr. 14.)

|     |     |     |       |
|-----|-----|-----|-------|
| 1.0 | 17  | 2.6 | 360   |
| 1.4 | 50  | 3.0 | 520   |
| 1.8 | 120 | 3.7 | 860   |
| 2.2 | 230 | 4.3 | 1,160 |

# DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY    | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| 1     | 227   | 125   | 86    | 70    | 46    | 44    | 84    | 1,020  | 132   | 52    | 50    | 106   |
| 2     | 340   | 158   | 80    | 70    | 43    | 44    | 84    | 1,100  | 110   | 49    | 53    | 108   |
| 3     | 504   | 176   | 77    | 66    | 43    | 45    | 82    | 1,100  | 92    | 43    | 62    | 102   |
| 4     | 640   | 176   | 76    | 64    | 44    | 45    | 80    | 1,040  | 82    | 42    | 59    | 88    |
| 5     | 665   | 165   | 76    | 64    | 45    | 45    | 80    | 925    | 77    | 41    | 65    | 84    |
| 6     | 620   | 148   | 78    | 64    | 46    | 45    | 80    | 810    | 74    | 40    | 42    | 81    |
| 7     | 580   | 135   | 80    | 64    | 47    | 44    | 78    | 695    | 70    | 44    | 47    | 80    |
| 8     | 540   | 135   | 82    | 66    | 48    | 44    | 78    | 595    | 60    | 46    | 78    | 78    |
| 9     | 492   | 110   | 82    | 68    | 48    | 44    | 82    | 512    | 60    | 46    | 114   | 72    |
| 10    | 428   | 100   | 90    | 68    | 47    | 44    | 88    | 460    | 59    | 43    | 130   | 66    |
| 11    | 440   | 98    | 100   | 70    | 47    | 44    | 92    | 396    | 58    | 42    | 150   | 65    |
| 12    | 293   | 98    | 120   | 70    | 46    | 44    | 100   | 340    | 59    | 44    | 128   | 59    |
| 13    | 245   | 100   | 110   | 70    | 47    | 45    | 120   | 293    | 64    | 44    | 112   | 58    |
| 14    | 194   | 96    | 100   | 70    | 47    | 45    | 150   | 263    | 68    | 46    | 96    | 53    |
| 15    | 155   | 94    | 96    | 70    | 47    | 46    | 197   | 242    | 70    | 50    | 82    | 50    |
| 16    | 125   | 94    | 94    | 68    | 49    | 47    | 251   | 227    | 65    | 49    | 102   | 48    |
| 17    | 116   | 96    | 92    | 70    | 48    | 48    | 305   | 209    | 60    | 52    | 162   | 44    |
| 18    | 110   | 110   | 90    | 70    | 47    | 50    | 368   | 179    | 53    | 88    | 197   | 42    |
| 19    | 112   | 128   | 84    | 68    | 46    | 52    | 396   | 155    | 49    | 96    | 203   | 48    |
| 20    | 125   | 132   | 82    | 70    | 46    | 56    | 452   | 140    | 58    | 80    | 203   | 59    |
| 21    | 128   | 130   | 82    | 68    | 46    | 64    | 508   | 128    | 80    | 82    | 182   | 150   |
| 22    | 128   | 122   | 80    | 66    | 45    | 72    | 420   | 125    | 84    | 98    | 155   | 179   |
| 23    | 122   | 110   | 80    | 64    | 45    | 82    | 436   | 130    | 74    | 104   | 130   | 165   |
| 24    | 116   | 100   | 78    | 62    | 45    | 86    | 476   | 120    | 66    | 100   | 142   | 138   |
| 25    | 112   | 96    | 76    | 60    | 46    | 88    | 472   | 106    | 60    | 84    | 162   | 130   |
| 26    | 112   | 92    | 76    | 62    | 45    | 90    | 500   | 96     | 53    | 76    | 182   | 314   |
| 27    | 110   | 96    | 74    | 60    | 45    | 90    | 556   | 88     | 49    | 74    | 200   | 364   |
| 28    | 108   | 94    | 72    | 58    | 45    | 90    | 650   | 82     | 71    | 64    | 197   | 404   |
| 29    | 104   | 90    | 72    | 54    | 44    | 88    | 775   | 100    | 68    | 58    | 182   | 428   |
| 30    | 102   | 88    | 70    | 52    | ----- | 88    | 910   | 148    | 59    | 53    | 142   | 440   |
| 31    | 116   | ----- | 70    | 50    | ----- | 86    | ----- | 152    | ----- | 50    | 114   | ----- |
| TOTAL | 8,209 | 3,492 | 2,605 | 2,016 | 1,333 | 1,845 | 8,950 | 11,976 | 2,084 | 1,880 | 3,923 | 4,103 |
| MEAN  | 265   | 116   | 84.0  | 65.0  | 46.0  | 59.5  | 298   | 386    | 69.5  | 60.6  | 127   | 137   |
| MAX   | 665   | 176   | 120   | 70    | 49    | 90    | 910   | 1,100  | 132   | 104   | 203   | 440   |
| MIN   | 102   | 88    | 70    | 50    | 43    | 44    | 78    | 82     | 49    | 40    | 42    | 42    |
| CFSM  | 2.02  | .89   | .64   | .50   | .35   | .45   | 2.27  | 2.95   | .53   | .46   | .97   | 1.05  |
| IN.   | 2.33  | .99   | .74   | .57   | .38   | .52   | 2.54  | 3.40   | .59   | .53   | 1.11  | 1.17  |

CAL YR 1971 TOTAL 45,023 MEAN 123 MAX 820 MIN 28 CFSM .94 IN 12.79  
WTR YR 1972 TOTAL 52,416 MEAN 143 MAX 1,100 MIN 40 CFSM 1.09 IN 14.88

## PEAK DISCHARGE (BASE, 300 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-5 | 0600 | 3.33  | 670       | 9-30 | 1800 | 2.85  | 444       |
| 5-2  | 2400 | 4.14  | 1,120     |      |      |       |           |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04064500 Pine River below Pine River Powerplant, near Florence, Wis.

LOCATION.--Lat 45°50'16", long 88°13'31", in SW 1/4 sec.22, T.39 N., R.18 E., Florence County, on left bank 60 ft upstream from bridge on County Trunk N, 1.9 miles downstream from powerplant of Wisconsin-Michigan Power Co., 6.0 miles south of Florence, and 7.0 miles downstream from Popple River.

DRAINAGE AREA.--528 sq mi.

PERIOD OF RECORD.--October 1923 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,098.84 ft above mean sea level. Prior to October 1968, record obtained from Pine River powerplant 1.9 miles upstream with a drainage area of 528 sq mi.

AVERAGE DISCHARGE.--49 years, 427 cfs (10.98 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,000 cfs May 2 (gage height, 8.46 ft); minimum daily, 150 cfs Feb. 2, 3.

Period of record: Maximum daily discharge, 4,380 cfs Apr. 9, 1929; no flow at times during 1924, 1926-27, 1930-31, 1933, 1940.

REMARKS.--Records good except those for winter months, which are fair. Flow regulated by Pine River powerplant 1.9 miles upstream; pondage is small and monthly discharge is near natural flow.

REVISIONS.--WSP 1237: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 2-4, 11-14, Dec. 17 to Apr. 14.)

|     |       |     |       |
|-----|-------|-----|-------|
| 1.8 | 128   | 5.5 | 1,690 |
| 2.5 | 305   | 6.5 | 2,330 |
| 3.5 | 665   | 7.5 | 3,080 |
| 4.5 | 1,130 | 8.5 | 4,040 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC   | JAN   | FEB   | MAR   | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| 1     | 822    | 473    | 265   | 290   | 180   | 190   | 320    | 3,100  | 600    | 288    | 203    | 576    |
| 2     | 1,330  | 602    | 220   | 290   | 150   | 180   | 310    | 3,680  | 526    | 316    | 291    | 505    |
| 3     | 1,570  | 641    | 270   | 290   | 150   | 180   | 300    | 3,540  | 476    | 309    | 279    | 480    |
| 4     | 1,830  | 648    | 200   | 290   | 160   | 180   | 310    | 3,190  | 395    | 245    | 305    | 410    |
| 5     | 1,690  | 640    | 282   | 280   | 180   | 190   | 280    | 2,780  | 379    | 258    | 258    | 445    |
| 6     | 1,480  | 540    | 355   | 270   | 200   | 190   | 310    | 2,440  | 324    | 252    | 236    | 481    |
| 7     | 1,300  | 494    | 324   | 270   | 220   | 190   | 270    | 2,120  | 333    | 243    | 255    | 453    |
| 8     | 1,260  | 334    | 322   | 290   | 230   | 200   | 260    | 1,850  | 395    | 272    | 390    | 439    |
| 9     | 1,150  | 404    | 323   | 300   | 240   | 200   | 270    | 1,630  | 318    | 254    | 474    | 398    |
| 10    | 1,010  | 436    | 356   | 310   | 230   | 200   | 300    | 1,390  | 304    | 364    | 493    | 381    |
| 11    | 860    | 376    | 380   | 320   | 220   | 190   | 310    | 1,240  | 226    | 206    | 559    | 397    |
| 12    | 740    | 327    | 460   | 320   | 210   | 190   | 340    | 1,080  | 331    | 256    | 520    | 357    |
| 13    | 669    | 390    | 330   | 300   | 200   | 180   | 400    | 1,000  | 336    | 283    | 469    | 260    |
| 14    | 601    | 341    | 380   | 270   | 230   | 190   | 490    | 886    | 332    | 207    | 421    | 265    |
| 15    | 565    | 340    | 442   | 240   | 210   | 200   | 614    | 903    | 332    | 235    | 361    | 204    |
| 16    | 474    | 379    | 363   | 220   | 190   | 190   | 918    | 824    | 296    | 267    | 526    | 265    |
| 17    | 367    | 325    | 350   | 260   | 220   | 190   | 1,350  | 736    | 253    | 373    | 780    | 261    |
| 18    | 446    | 434    | 340   | 250   | 200   | 200   | 1,630  | 730    | 280    | 436    | 900    | 301    |
| 19    | 406    | 427    | 310   | 240   | 180   | 210   | 1,620  | 640    | 323    | 493    | 840    | 189    |
| 20    | 465    | 458    | 300   | 230   | 170   | 220   | 1,700  | 577    | 262    | 471    | 800    | 254    |
| 21    | 504    | 488    | 300   | 260   | 190   | 260   | 1,950  | 562    | 485    | 449    | 700    | 538    |
| 22    | 460    | 358    | 310   | 270   | 190   | 300   | 1,730  | 508    | 469    | 585    | 616    | 698    |
| 23    | 457    | 317    | 310   | 270   | 200   | 310   | 1,530  | 508    | 399    | 704    | 601    | 724    |
| 24    | 434    | 351    | 310   | 270   | 200   | 320   | 1,610  | 507    | 330    | 730    | 621    | 621    |
| 25    | 421    | 357    | 310   | 270   | 200   | 330   | 1,570  | 499    | 306    | 613    | 739    | 539    |
| 26    | 401    | 360    | 310   | 270   | 200   | 330   | 1,680  | 334    | 308    | 535    | 840    | 1,300  |
| 27    | 402    | 335    | 300   | 280   | 200   | 330   | 1,950  | 335    | 220    | 331    | 900    | 1,500  |
| 28    | 409    | 333    | 280   | 280   | 200   | 330   | 2,290  | 337    | 377    | 357    | 800    | 1,700  |
| 29    | 379    | 326    | 260   | 270   | 200   | 330   | 2,660  | 451    | 446    | 332    | 654    | 1,900  |
| 30    | 379    | 380    | 280   | 270   | ----- | 330   | 2,930  | 699    | 376    | 320    | 571    | 1,600  |
| 31    | 402    | -----  | 290   | 250   | ----- | 320   | -----  | 656    | -----  | 334    | 504    | -----  |
| TOTAL | 23,683 | 12,614 | 9,832 | 8,490 | 5,750 | 7,350 | 32,202 | 39,732 | 10,737 | 11,318 | 16,906 | 18,441 |
| MEAN  | 764    | 420    | 317   | 274   | 198   | 237   | 1,073  | 1,282  | 358    | 365    | 545    | 615    |
| MAX   | 1,830  | 648    | 460   | 320   | 240   | 330   | 2,930  | 3,680  | 600    | 730    | 900    | 1,900  |
| MIN   | 367    | 317    | 200   | 220   | 150   | 180   | 260    | 334    | 220    | 206    | 203    | 189    |
| CFSM  | 1.45   | .80    | .60   | .52   | .38   | .45   | 2.03   | 2.43   | .68    | .69    | 1.03   | 1.16   |
| IN.   | 1.67   | .89    | .69   | .60   | .41   | .52   | 2.27   | 2.80   | .76    | .80    | 1.19   | 1.30   |

CAL YR 1971 TOTAL 172,297 MEAN 472 MAX 2,480 MIN 124 CFSM .89 IN 12.14  
WTR YR 1972 TOTAL 197,055 MEAN 538 MAX 3,680 MIN 150 CFSM 1.02 IN 13.88

04066000 Menominee River near Pembine, Wis.

LOCATION.--Lat 45°35'24", long 87°46'34", in sec.21, T.37 N., R.28 W., Michigan meridian, Menominee County, Mich., on left bank 0.1 mile upstream from Pemene Creek, 4.0 miles west of Nathan, Mich., 15 miles southeast of Pembine, and at mile 65.3.

DRAINAGE AREA.--3,240 sq mi, approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 745 ft (from river-profile map).

AVERAGE DISCHARGE.--23 years, 2,965 cfs.

EXTREMES.--Current year: Maximum daily discharge, 18,000 cfs May 1-3; minimum, 946 cfs Aug. 7 (gage height, 1.85 ft).

Period of record: Maximum discharge, 26,900 cfs May 8, 1960 (gage height, 13.90 ft); minimum, 694 cfs Sept. 3, 1969 (gage height, 1.66 ft).

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

REVISIONS (WATER YEARS).--WSP 1277: 1952.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 3-5, 7, Dec. 13 to Apr. 11.)

|     |       |      |        |
|-----|-------|------|--------|
| 1.8 | 855   | 6.0  | 6,470  |
| 2.5 | 1,500 | 8.0  | 10,400 |
| 4.0 | 3,330 | 11.0 | 18,200 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT             | NOV        | DEC        | JAN       | FEB    | MAR    | APR     | MAY     | JUN    | JUL    | AUG     | SEP    |
|-------------|-----------------|------------|------------|-----------|--------|--------|---------|---------|--------|--------|---------|--------|
| 1           | 2,860           | 2,260      | 2,360      | 2,700     | 1,500  | 2,400  | 2,500   | 18,000  | 5,640  | 2,800  | 2,220   | 3,670  |
| 2           | 3,310           | 3,200      | 2,190      | 2,500     | 1,800  | 2,300  | 2,200   | 18,000  | 4,850  | 2,590  | 2,070   | 3,110  |
| 3           | 4,330           | 3,690      | 2,300      | 2,400     | 1,600  | 2,000  | 2,200   | 18,000  | 4,490  | 2,310  | 1,920   | 3,020  |
| 4           | 4,860           | 3,660      | 2,500      | 2,500     | 1,700  | 1,700  | 2,200   | 17,000  | 3,750  | 2,050  | 2,180   | 2,660  |
| 5           | 4,940           | 3,580      | 2,400      | 2,500     | 1,700  | 1,600  | 2,200   | 16,000  | 2,970  | 1,940  | 1,960   | 2,280  |
| 6           | 4,880           | 3,600      | 2,400      | 2,400     | 1,600  | 1,700  | 2,100   | 14,000  | 3,140  | 2,080  | 1,420   | 2,360  |
| 7           | 4,400           | 2,750      | 2,400      | 2,300     | 1,800  | 2,000  | 2,300   | 11,000  | 2,770  | 2,250  | 1,390   | 2,470  |
| 8           | 4,090           | 2,810      | 2,230      | 2,200     | 1,500  | 2,300  | 2,300   | 9,600   | 2,410  | 1,840  | 1,680   | 2,660  |
| 9           | 4,130           | 2,930      | 2,530      | 2,200     | 1,900  | 2,300  | 1,900   | 9,800   | 2,490  | 1,620  | 2,410   | 2,670  |
| 10          | 3,590           | 2,560      | 2,760      | 2,000     | 2,000  | 2,300  | 2,200   | 10,500  | 2,320  | 1,470  | 2,440   | 2,140  |
| 11          | 2,930           | 2,860      | 3,280      | 2,200     | 1,900  | 2,000  | 2,600   | 9,690   | 1,930  | 1,880  | 2,530   | 1,790  |
| 12          | 2,970           | 3,050      | 2,910      | 2,300     | 1,700  | 1,600  | 3,400   | 8,520   | 1,630  | 2,170  | 2,630   | 1,700  |
| 13          | 2,960           | 2,810      | 2,300      | 2,300     | 1,500  | 1,800  | 4,000   | 6,720   | 2,110  | 2,070  | 2,550   | 2,020  |
| 14          | 2,970           | 2,560      | 3,000      | 2,400     | 1,600  | 2,100  | 4,900   | 6,380   | 2,500  | 1,960  | 2,000   | 2,230  |
| 15          | 2,830           | 2,950      | 3,600      | 2,200     | 2,000  | 2,600  | 6,000   | 6,650   | 2,540  | 1,860  | 2,220   | 1,700  |
| 16          | 2,470           | 2,690      | 2,900      | 2,100     | 2,200  | 2,300  | 8,600   | 7,190   | 2,420  | 1,570  | 2,420   | 1,640  |
| 17          | 1,390           | 2,890      | 2,400      | 2,000     | 2,200  | 2,100  | 10,000  | 5,580   | 2,490  | 1,490  | 5,800   | 1,460  |
| 18          | 1,910           | 2,800      | 2,300      | 1,800     | 2,000  | 2,200  | 11,000  | 5,470   | 2,170  | 2,130  | 6,220   | 1,410  |
| 19          | 2,190           | 3,040      | 2,500      | 2,300     | 1,900  | 1,800  | 11,000  | 4,580   | 1,610  | 2,600  | 5,700   | 1,870  |
| 20          | 2,940           | 2,920      | 2,600      | 2,100     | 1,600  | 2,300  | 11,400  | 4,420   | 2,180  | 2,550  | 5,090   | 2,040  |
| 21          | 2,770           | 2,870      | 2,700      | 2,200     | 1,800  | 2,700  | 11,600  | 3,750   | 3,020  | 3,110  | 4,640   | 2,280  |
| 22          | 2,920           | 2,900      | 2,800      | 2,100     | 2,000  | 2,600  | 11,000  | 4,660   | 3,270  | 3,110  | 4,500   | 2,940  |
| 23          | 2,410           | 2,530      | 3,200      | 1,800     | 2,200  | 2,500  | 10,800  | 4,830   | 3,460  | 3,370  | 4,600   | 2,890  |
| 24          | 1,930           | 2,210      | 3,100      | 2,100     | 2,200  | 2,400  | 10,600  | 4,340   | 3,140  | 3,480  | 3,250   | 2,880  |
| 25          | 1,870           | 1,890      | 2,900      | 1,700     | 2,300  | 2,700  | 10,600  | 3,780   | 2,970  | 3,570  | 4,860   | 2,980  |
| 26          | 2,520           | 1,890      | 2,600      | 1,800     | 2,200  | 2,800  | 11,000  | 3,610   | 3,020  | 3,340  | 4,820   | 4,040  |
| 27          | 2,680           | 2,070      | 2,300      | 2,100     | 2,000  | 2,800  | 12,000  | 3,100   | 3,250  | 2,800  | 6,200   | 6,830  |
| 28          | 2,620           | 1,990      | 2,600      | 1,800     | 2,200  | 2,600  | 13,000  | 2,370   | 2,850  | 2,480  | 5,150   | 6,970  |
| 29          | 2,310           | 1,790      | 2,500      | 2,000     | 2,300  | 2,500  | 15,000  | 2,160   | 3,100  | 2,010  | 5,090   | 7,490  |
| 30          | 2,150           | 2,040      | 2,600      | 1,600     | -----  | 2,500  | 17,000  | 4,160   | 3,120  | 1,510  | 4,070   | 7,550  |
| 31          | 2,340           | -----      | 2,400      | 1,500     | -----  | 2,400  | -----   | 5,250   | -----  | 1,520  | 3,530   | -----  |
| TOTAL       | 93,470          | 81,690     | 81,560     | 66,100    | 54,900 | 69,900 | 217,600 | 249,150 | 87,610 | 71,530 | 107,560 | 91,750 |
| MEAN        | 3,015           | 2,723      | 2,631      | 2,132     | 1,893  | 2,255  | 7,253   | 8,037   | 2,920  | 2,307  | 3,470   | 3,058  |
| MAX         | 4,940           | 3,690      | 3,600      | 2,700     | 2,300  | 2,800  | 17,000  | 18,000  | 5,640  | 3,570  | 6,220   | 7,550  |
| MIN         | 1,390           | 1,790      | 2,190      | 1,500     | 1,500  | 1,600  | 1,900   | 2,160   | 1,610  | 1,470  | 1,390   | 1,410  |
| CAL YR 1971 | TOTAL 1,114,060 | MEAN 3,052 | MAX 15,600 | MIN 1,130 |        |        |         |         |        |        |         |        |
| WTR YR 1972 | TOTAL 1,272,820 | MEAN 3,478 | MAX 18,000 | MIN 1,390 |        |        |         |         |        |        |         |        |

NOTE.--No gage-height record Apr. 12 to May 5, May 7-10.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04067000 Menominee River below Koss, Mich.

LOCATION.--Lat 45°21'16", long 87°38'55", in sec.9, T.34 N., R.27 W., Michigan meridian, Menominee County, on left bank at powerplant of Wisconsin Public Service Corp., 0.5 mile upstream from Little Cedar River, 3.6 miles southeast of Koss, and at mile 24.7.

DRAINAGE AREA.--3,790 sq mi, approximately.

PERIOD OF RECORD.--July 1907 to March 1909 (published as "at Koss"), July 1913 to current year.

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

AVERAGE DISCHARGE.--60 years (1907-8, 1913-72), 3,129 cfs.

EXTREMES.--Current year: Maximum daily discharge, 18,700 cfs May 3; minimum daily, 1,360 cfs Aug. 7.  
Period of record: Maximum daily discharge, 33,000 cfs May 10, 1960; minimum daily, 162 cfs Sept. 15, 1931.

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

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

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT             | NOV    | DEC        | JAN    | FEB        | MAR    | APR       | MAY     | JUN    | JUL    | AUG     | SEP    |
|-------------|-----------------|--------|------------|--------|------------|--------|-----------|---------|--------|--------|---------|--------|
| 1           | 2,590           | 2,690  | 2,020      | 2,640  | 1,660      | 2,360  | 2,520     | 15,900  | 6,650  | 2,880  | 1,870   | 4,120  |
| 2           | 2,690           | 3,350  | 2,020      | 2,880  | 1,630      | 2,590  | 2,560     | 17,100  | 6,590  | 2,760  | 2,110   | 4,450  |
| 3           | 4,070           | 3,840  | 2,300      | 2,640  | 1,940      | 2,500  | 2,320     | 18,700  | 5,540  | 2,350  | 2,200   | 2,740  |
| 4           | 4,650           | 4,150  | 2,160      | 2,640  | 1,740      | 2,360  | 2,340     | 18,300  | 5,140  | 2,160  | 2,010   | 3,070  |
| 5           | 4,940           | 4,150  | 2,370      | 2,640  | 1,860      | 1,940  | 2,300     | 18,400  | 3,540  | 2,050  | 2,060   | 2,500  |
| 6           | 4,900           | 3,960  | 2,400      | 2,660  | 1,860      | 1,730  | 2,300     | 17,200  | 3,240  | 1,940  | 1,870   | 2,690  |
| 7           | 5,080           | 3,480  | 2,740      | 2,550  | 1,790      | 1,790  | 2,210     | 15,100  | 3,240  | 2,100  | 1,360   | 2,760  |
| 8           | 4,590           | 3,240  | 2,950      | 2,550  | 1,950      | 2,200  | 2,400     | 12,900  | 2,770  | 2,270  | 1,690   | 2,460  |
| 9           | 4,370           | 3,000  | 2,950      | 2,300  | 1,620      | 2,400  | 2,400     | 10,300  | 2,570  | 2,020  | 2,210   | 2,880  |
| 10          | 3,960           | 3,160  | 3,000      | 2,350  | 2,040      | 2,500  | 2,020     | 9,790   | 2,560  | 1,780  | 2,480   | 2,480  |
| 11          | 4,030           | 3,190  | 3,810      | 2,090  | 2,160      | 2,500  | 2,210     | 9,980   | 2,400  | 1,850  | 2,760   | 2,400  |
| 12          | 3,000           | 3,190  | 3,370      | 2,460  | 2,110      | 2,210  | 2,730     | 11,000  | 2,140  | 1,930  | 2,880   | 2,180  |
| 13          | 3,240           | 3,480  | 2,730      | 2,400  | 2,020      | 1,730  | 3,580     | 9,990   | 1,930  | 2,150  | 2,880   | 2,070  |
| 14          | 3,300           | 3,000  | 2,480      | 2,500  | 1,780      | 1,910  | 4,110     | 7,740   | 2,350  | 2,200  | 2,620   | 2,210  |
| 15          | 3,120           | 2,910  | 3,490      | 2,560  | 1,620      | 2,220  | 4,580     | 7,540   | 2,810  | 2,180  | 2,180   | 2,300  |
| 16          | 2,960           | 3,350  | 4,070      | 2,410  | 1,950      | 2,700  | 5,350     | 7,880   | 2,710  | 1,930  | 2,420   | 1,920  |
| 17          | 2,680           | 3,000  | 3,200      | 2,280  | 2,260      | 2,560  | 7,970     | 7,990   | 2,400  | 1,910  | 4,330   | 1,600  |
| 18          | 1,610           | 3,240  | 2,550      | 2,220  | 2,320      | 2,280  | 10,100    | 6,390   | 2,500  | 2,060  | 6,370   | 1,800  |
| 19          | 2,270           | 3,120  | 2,460      | 1,940  | 2,240      | 2,240  | 10,600    | 5,870   | 2,210  | 2,390  | 6,720   | 1,920  |
| 20          | 2,800           | 3,480  | 2,730      | 2,420  | 2,180      | 1,850  | 11,700    | 4,940   | 1,870  | 2,690  | 6,600   | 1,920  |
| 21          | 3,240           | 3,220  | 2,760      | 2,280  | 1,750      | 2,120  | 11,800    | 4,580   | 2,750  | 2,690  | 5,470   | 2,100  |
| 22          | 3,000           | 3,270  | 2,950      | 2,280  | 1,700      | 2,850  | 11,800    | 4,330   | 3,120  | 3,360  | 5,250   | 2,640  |
| 23          | 3,240           | 3,000  | 3,000      | 2,350  | 2,050      | 2,880  | 12,000    | 4,970   | 2,910  | 3,120  | 4,780   | 2,920  |
| 24          | 2,510           | 2,850  | 3,400      | 1,940  | 2,300      | 2,880  | 11,600    | 5,250   | 2,950  | 3,360  | 4,300   | 2,760  |
| 25          | 2,310           | 2,450  | 3,320      | 2,270  | 2,300      | 2,520  | 11,100    | 4,580   | 2,880  | 3,360  | 3,720   | 3,000  |
| 26          | 2,350           | 2,120  | 3,120      | 1,890  | 2,400      | 2,880  | 11,100    | 3,720   | 2,760  | 3,480  | 4,940   | 3,760  |
| 27          | 2,740           | 2,310  | 2,820      | 1,860  | 2,500      | 3,000  | 11,100    | 3,360   | 2,620  | 2,960  | 5,800   | 5,780  |
| 28          | 2,860           | 2,490  | 2,470      | 2,280  | 2,110      | 3,000  | 11,400    | 2,800   | 3,070  | 2,680  | 6,900   | 7,450  |
| 29          | 2,910           | 2,230  | 2,760      | 1,940  | 2,210      | 2,880  | 12,700    | 2,500   | 2,980  | 2,400  | 5,770   | 7,750  |
| 30          | 2,600           | 2,490  | 2,640      | 2,090  | -----      | 2,700  | 14,100    | 3,600   | 2,680  | 1,930  | 6,510   | 7,730  |
| 31          | 2,530           | -----  | 2,760      | 1,800  | -----      | 2,700  | -----     | 5,480   | -----  | 1,660  | 4,740   | -----  |
| TOTAL       | 101,140         | 93,410 | 87,800     | 72,110 | 58,050     | 74,980 | 205,000   | 278,180 | 93,880 | 74,600 | 117,800 | 96,360 |
| MEAN        | 3,263           | 3,114  | 2,832      | 2,326  | 2,002      | 2,419  | 6,833     | 8,974   | 3,129  | 2,406  | 3,800   | 3,212  |
| MAX         | 5,080           | 4,150  | 4,070      | 2,880  | 2,500      | 3,000  | 14,100    | 18,700  | 6,650  | 3,480  | 6,900   | 7,750  |
| MIN         | 1,610           | 2,120  | 2,020      | 1,800  | 1,620      | 1,730  | 2,020     | 2,500   | 1,870  | 1,660  | 1,360   | 1,600  |
| CAL YR 1971 | TOTAL 1,271,050 |        | MEAN 3,482 |        | MAX 17,000 |        | MIN 1,300 |         |        |        |         |        |
| WTR YR 1972 | TOTAL 1,353,310 |        | MEAN 3,698 |        | MAX 18,700 |        | MIN 1,360 |         |        |        |         |        |

04069500 Peshtigo River at Peshtigo, Wis.

LOCATION.--Lat 45°02'49", long 87°44'40", in NE 1/4 sec.30, T.30 N., R.23 E., Marinette County, on left bank 75 ft downstream from Chicago and Northwestern Railway bridge, 0.5 mile downstream from Wisconsin Public Service Corp. powerplant in Peshtigo, and 11.5 miles upstream from mouth.

DRAINAGE AREA.--1,124 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 584.64 ft above mean sea level.

AVERAGE DISCHARGE.--19 years, 889 cfs (10.74 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,920 cfs May 3 (gage height, 9.52 ft); minimum, 162 cfs June 27 (gage height, 1.37 ft); minimum daily, 310 cfs July 5.

Period of record: Maximum discharge, 9,790 cfs May 9, 1960 (gage height, 11.59 ft), from rating curve extended above 5,000 cfs on basis of computation of peak flow through dam gates; minimum, 17 cfs Nov. 29, 1966 (gage height, 1.00 ft); minimum daily, 84 cfs Aug. 5, 1957.

REMARKS.--Records good except those for winter months, which are fair. Diurnal fluctuation caused by power-plants upstream.

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used May 15 to June 28; stage-discharge relation affected by ice Dec. 10-24, 30, Jan. 2 to Apr. 7.)

Oct. 1 to Apr. 10

Apr. 11 to Sept. 30

|     |       |     |       |     |       |
|-----|-------|-----|-------|-----|-------|
| 2.0 | 325   | 1.9 | 292   | 5.0 | 1,990 |
| 3.0 | 750   | 2.5 | 515   | 7.0 | 3,590 |
| 4.0 | 1,300 | 3.5 | 1,000 | 9.5 | 5,900 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT           | NOV        | DEC       | JAN     | FEB      | MAR      | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|---------------|------------|-----------|---------|----------|----------|--------|--------|--------|--------|--------|--------|
| 1           | 1,070         | 675        | 548       | 780     | 390      | 430      | 840    | 4,920  | 1,050  | 612    | 779    | 912    |
| 2           | 1,160         | 1,100      | 487       | 640     | 430      | 400      | 840    | 4,860  | 1,100  | 638    | 781    | 804    |
| 3           | 1,110         | 1,600      | 600       | 580     | 480      | 490      | 860    | 5,650  | 1,040  | 483    | 765    | 631    |
| 4           | 1,220         | 1,680      | 626       | 600     | 470      | 580      | 860    | 5,730  | 790    | 428    | 639    | 644    |
| 5           | 1,330         | 1,420      | 636       | 640     | 500      | 450      | 840    | 5,130  | 789    | 310    | 498    | 655    |
| 6           | 1,270         | 1,100      | 607       | 580     | 460      | 390      | 900    | 4,690  | 664    | 427    | 504    | 771    |
| 7           | 1,300         | 935        | 841       | 660     | 440      | 390      | 940    | 4,120  | 738    | 496    | 695    | 689    |
| 8           | 1,280         | 880        | 904       | 680     | 500      | 420      | 1,040  | 3,490  | 686    | 499    | 754    | 645    |
| 9           | 1,310         | 860        | 859       | 600     | 540      | 500      | 1,130  | 2,700  | 572    | 443    | 1,160  | 613    |
| 10          | 1,110         | 880        | 860       | 560     | 400      | 470      | 1,260  | 2,300  | 551    | 342    | 983    | 485    |
| 11          | 891           | 880        | 840       | 500     | 450      | 540      | 1,920  | 2,080  | 454    | 582    | 1,070  | 449    |
| 12          | 985           | 800        | 800       | 580     | 460      | 500      | 2,180  | 2,050  | 453    | 685    | 1,040  | 680    |
| 13          | 946           | 760        | 820       | 620     | 400      | 620      | 2,520  | 1,880  | 854    | 528    | 1,070  | 628    |
| 14          | 857           | 700        | 860       | 700     | 370      | 600      | 3,250  | 1,500  | 932    | 618    | 853    | 635    |
| 15          | 741           | 760        | 840       | 560     | 460      | 660      | 3,920  | 1,400  | 826    | 650    | 824    | 565    |
| 16          | 637           | 820        | 800       | 560     | 380      | 780      | 4,880  | 1,700  | 742    | 710    | 837    | 540    |
| 17          | 686           | 677        | 740       | 540     | 380      | 800      | 5,100  | 1,550  | 617    | 415    | 1,090  | 501    |
| 18          | 603           | 844        | 660       | 450     | 400      | 820      | 5,050  | 1,400  | 590    | 623    | 1,450  | 426    |
| 19          | 750           | 962        | 840       | 540     | 480      | 800      | 5,280  | 1,280  | 479    | 538    | 1,400  | 534    |
| 20          | 706           | 893        | 860       | 680     | 500      | 840      | 5,330  | 1,250  | 595    | 803    | 1,400  | 490    |
| 21          | 744           | 781        | 740       | 520     | 410      | 840      | 4,990  | 930    | 609    | 797    | 1,120  | 580    |
| 22          | 706           | 716        | 640       | 480     | 380      | 820      | 4,750  | 898    | 562    | 938    | 1,120  | 604    |
| 23          | 710           | 692        | 700       | 500     | 520      | 780      | 4,930  | 950    | 578    | 1,050  | 825    | 779    |
| 24          | 820           | 666        | 780       | 400     | 620      | 780      | 5,110  | 897    | 628    | 849    | 1,080  | 764    |
| 25          | 760           | 699        | 814       | 350     | 560      | 800      | 4,890  | 776    | 536    | 818    | 1,440  | 852    |
| 26          | 745           | 596        | 850       | 520     | 500      | 860      | 4,390  | 729    | 386    | 754    | 1,390  | 1,240  |
| 27          | 680           | 850        | 768       | 540     | 420      | 880      | 3,860  | 800    | 502    | 751    | 1,770  | 1,760  |
| 28          | 750           | 637        | 849       | 450     | 350      | 860      | 3,620  | 765    | 495    | 607    | 1,670  | 1,770  |
| 29          | 690           | 703        | 873       | 500     | 390      | 840      | 3,570  | 621    | 494    | 752    | 1,500  | 2,300  |
| 30          | 850           | 656        | 900       | 620     | -----    | 860      | 4,010  | 597    | 563    | 633    | 1,210  | 2,510  |
| 31          | 760           | -----      | 819       | 370     | -----    | 840      | -----  | 1,060  | -----  | 546    | 1,070  | -----  |
| TOTAL       | 28,177        | 26,222     | 23,761    | 17,300  | 13,080   | 20,640   | 93,060 | 68,703 | 19,875 | 19,325 | 32,787 | 25,456 |
| MEAN        | 909           | 874        | 766       | 558     | 451      | 666      | 3,102  | 2,216  | 663    | 623    | 1,058  | 849    |
| MAX         | 1,330         | 1,680      | 904       | 780     | 620      | 880      | 5,330  | 5,730  | 1,100  | 1,050  | 1,770  | 2,510  |
| MIN         | 603           | 596        | 487       | 350     | 370      | 390      | 840    | 597    | 386    | 310    | 498    | 426    |
| CFSM        | .81           | .78        | .68       | .50     | .40      | .59      | 2.76   | 1.97   | .59    | .55    | .94    | .76    |
| IN.         | .93           | .87        | .79       | .57     | .43      | .68      | 3.08   | 2.27   | .66    | .64    | 1.09   | .84    |
| CAL YR 1971 | TOTAL 371,586 | MEAN 1,018 | MAX 5,430 | MIN 320 | CFSM .91 | IN 12.30 |        |        |        |        |        |        |
| WTR YR 1972 | TOTAL 388,386 | MEAN 1,061 | MAX 5,730 | MIN 310 | CFSM .94 | IN 12.85 |        |        |        |        |        |        |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04070000 Wheeler Lake near Lakewood, Wis.

LOCATION.--Lat 45°19'07", long 88°28'58", in NW 1/4 sec.27, T.33 N., R.16 E., Oconto County, near the home of Carl Zuelzke on west shore of lake 2.3 miles northeast of Lakewood.

DRAINAGE AREA.--2 sq mi, approximately. Area of Wheeler Lake, 380 acres.

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

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

EXTREMES.--Current year: Maximum elevation observed, 6.73 ft May 3; minimum observed, 6.02 ft Oct. 17, Nov. 10, 17.

Period of record: Maximum elevation observed, 6.73 ft May 3, 1972; minimum observed, 3.45 ft Feb. 5, 1950.

REMARKS.--Add 90 ft to obtain elevation above datum assumed for this lake by Wisconsin Department of Natural Resources. Lake has no surface outlet. Lake was ice covered about Nov. 24 to May 5.

## GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | OCT  | NOV   | DEC  | JAN  | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-----|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1   |      |       |      |      |       |      |       |      |       |      |      |       |
| 2   |      |       |      |      |       |      |       |      |       |      | 6.20 |       |
| 3   |      | 6.11  |      |      |       |      |       | 6.73 |       |      |      |       |
| 4   |      |       |      |      |       |      |       |      |       |      |      |       |
| 5   |      | 6.10  |      |      |       |      |       |      |       |      |      | 6.39  |
| 6   |      |       | 6.11 |      |       |      | 6.06  |      |       | 6.06 |      |       |
| 7   |      |       |      |      |       |      |       |      | 6.37  |      |      |       |
| 8   |      |       |      |      |       | 6.54 |       |      |       |      |      |       |
| 9   |      |       |      |      |       |      |       | 6.63 |       |      | 6.27 |       |
| 10  |      | 6.02  |      |      |       |      | 6.56  |      |       |      |      |       |
| 11  |      |       |      | 6.28 | 6.31  |      |       | 6.62 |       |      |      |       |
| 12  |      |       |      |      |       |      |       |      |       | 6.14 |      |       |
| 13  | 6.04 |       |      |      |       |      |       |      | 6.60  |      |      | 6.37  |
| 14  |      |       |      |      |       |      |       |      | 6.33  |      |      |       |
| 15  |      |       |      |      |       |      |       |      |       |      |      |       |
| 16  |      |       |      |      |       |      |       |      |       |      | 6.33 |       |
| 17  | 6.02 | 6.02  |      |      |       |      |       | 6.59 |       |      |      |       |
| 18  |      |       |      |      |       |      |       |      |       |      |      |       |
| 19  |      |       |      |      |       |      |       |      |       | 6.20 |      | 6.31  |
| 20  | 6.05 |       |      |      |       |      |       |      |       |      |      |       |
| 21  |      |       |      |      |       |      |       |      |       |      |      |       |
| 22  |      |       |      |      |       |      |       |      | 6.21  |      |      |       |
| 23  |      |       |      |      |       |      |       |      |       |      | 6.38 |       |
| 24  |      | 6.03  |      |      |       |      |       | 6.51 |       |      |      |       |
| 25  |      |       |      |      |       |      |       |      |       |      |      |       |
| 26  | 6.07 |       |      |      |       |      |       |      |       | 6.24 |      |       |
| 27  |      |       |      |      |       |      |       |      |       |      |      | 6.39  |
| 28  |      |       |      |      |       |      |       |      | 6.15  |      |      |       |
| 29  |      |       |      |      |       |      |       |      |       |      |      |       |
| 30  |      |       |      |      |       |      |       |      |       |      |      |       |
| 31  |      | ----- |      |      | ----- |      | ----- | 6.45 | ----- |      |      | ----- |

STREAMS TRIBUTARY TO LAKE MICHIGAN

47

04071000 Oconto River near Gillett, Wis.

LOCATION.--Lat 44°51'53", long 88°18'00", in NW 1/4 sec.34, T.28 N., R.18 E., Oconto County, on left bank just upstream from County Trunk BB bridge, 2.0 miles upstream from Christy Brook, 2.0 miles south of Gillett, and at mile 29.

DRAINAGE AREA.--678 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 732.87 ft above mean sea level (levels by Wisconsin Department of Transportation). See WSP 1727 for history of changes prior to Aug. 25, 1938.

AVERAGE DISCHARGE.--61 years (1906-8, 1913-72), 575 cfs (11.52 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,100 cfs Apr. 23 (gage height, 5.44 ft); maximum gage height, 5.58 ft Dec. 19 (backwater from ice); minimum daily discharge, 300 cfs on many days in Jan., Feb.  
Period of record: Maximum discharge, 8,400 cfs Apr. 10, 1922 (gage height, 11.2 ft from floodmarks), caused by failure of dam at Pulcifer 4 miles above station; minimum, 93 cfs Nov. 26, 1941 (gage height, 0.13 ft), flow retarded by anchor ice above station.

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

REVISIONS (WATER YEARS).--WSP 384: Drainage area. WSP 1207: 1922. WSP 1307: 1907-8(M), 1914-16(M), 1918-21(M), 1923-33(M), 1937-38(M), 1943(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Sept. 27-30; stage-discharge relation affected by ice Nov. 18 to Apr. 13.)

|     |     |     |       |
|-----|-----|-----|-------|
| 0.5 | 165 | 3.0 | 1,410 |
| 1.0 | 330 | 4.0 | 2,070 |
| 1.5 | 559 | 5.0 | 2,770 |
| 2.0 | 820 | 6.0 | 3,520 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT    | NOV     | DEC    | JAN   | FEB   | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|--------|---------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| 1           | 648    | 536     | 540    | 330   | 300   | 370    | 720    | 2,120  | 590    | 365    | 367    | 720    |
| 2           | 653    | 740     | 600    | 330   | 310   | 370    | 720    | 2,170  | 582    | 355    | 421    | 580    |
| 3           | 628    | 847     | 700    | 320   | 300   | 380    | 700    | 2,210  | 561    | 344    | 429    | 525    |
| 4           | 618    | 878     | 800    | 310   | 300   | 380    | 700    | 2,190  | 532    | 333    | 388    | 495    |
| 5           | 623    | 896     | 640    | 310   | 300   | 390    | 680    | 2,100  | 504    | 326    | 362    | 490    |
| 6           | 613    | 876     | 580    | 300   | 300   | 410    | 660    | 1,940  | 475    | 318    | 349    | 473    |
| 7           | 593    | 801     | 540    | 300   | 300   | 420    | 640    | 1,750  | 452    | 316    | 352    | 481    |
| 8           | 569    | 717     | 500    | 300   | 300   | 450    | 620    | 1,570  | 450    | 343    | 390    | 464    |
| 9           | 559    | 631     | 460    | 300   | 310   | 470    | 620    | 1,430  | 447    | 364    | 489    | 443    |
| 10          | 554    | 582     | 480    | 300   | 310   | 520    | 620    | 1,330  | 435    | 362    | 576    | 425    |
| 11          | 554    | 570     | 520    | 300   | 310   | 540    | 700    | 1,230  | 427    | 397    | 616    | 448    |
| 12          | 534    | 581     | 660    | 300   | 320   | 560    | 820    | 1,150  | 434    | 439    | 586    | 479    |
| 13          | 510    | 574     | 520    | 300   | 330   | 580    | 980    | 1,090  | 455    | 415    | 517    | 472    |
| 14          | 490    | 567     | 560    | 300   | 330   | 580    | 1,210  | 1,040  | 524    | 413    | 462    | 458    |
| 15          | 481    | 556     | 600    | 300   | 340   | 600    | 1,490  | 998    | 558    | 419    | 418    | 427    |
| 16          | 471    | 545     | 680    | 300   | 340   | 600    | 1,900  | 977    | 548    | 461    | 464    | 399    |
| 17          | 456    | 535     | 780    | 300   | 350   | 580    | 2,310  | 949    | 507    | 486    | 711    | 381    |
| 18          | 443    | 540     | 900    | 300   | 350   | 580    | 2,580  | 907    | 466    | 448    | 860    | 370    |
| 19          | 433    | 560     | 1,100  | 300   | 360   | 580    | 2,860  | 865    | 429    | 424    | 987    | 373    |
| 20          | 510    | 560     | 660    | 300   | 370   | 560    | 2,970  | 798    | 425    | 448    | 1,100  | 384    |
| 21          | 559    | 540     | 540    | 300   | 370   | 560    | 2,930  | 713    | 423    | 441    | 1,120  | 427    |
| 22          | 584    | 500     | 500    | 300   | 370   | 600    | 2,960  | 677    | 425    | 409    | 933    | 439    |
| 23          | 584    | 480     | 460    | 310   | 380   | 660    | 3,050  | 658    | 395    | 417    | 706    | 458    |
| 24          | 559    | 480     | 430    | 310   | 380   | 740    | 3,080  | 629    | 381    | 449    | 667    | 449    |
| 25          | 544    | 470     | 390    | 310   | 380   | 820    | 3,000  | 589    | 378    | 448    | 719    | 476    |
| 26          | 530    | 460     | 370    | 310   | 380   | 780    | 2,760  | 563    | 375    | 422    | 821    | 703    |
| 27          | 525    | 460     | 350    | 300   | 370   | 780    | 2,490  | 545    | 369    | 408    | 906    | 834    |
| 28          | 521    | 470     | 340    | 300   | 370   | 780    | 2,330  | 529    | 371    | 393    | 944    | 895    |
| 29          | 511    | 480     | 330    | 300   | 370   | 760    | 2,220  | 518    | 379    | 376    | 955    | 1,020  |
| 30          | 496    | 500     | 320    | 300   | ----- | 740    | 2,140  | 541    | 376    | 372    | 948    | 1,060  |
| 31          | 509    | -----   | 320    | 300   | ----- | 740    | -----  | 569    | -----  | 361    | 877    | -----  |
| TOTAL       | 16,862 | 17,932  | 17,170 | 9,440 | 9,800 | 17,880 | 51,460 | 35,345 | 13,673 | 12,272 | 20,440 | 16,048 |
| MEAN        | 544    | 598     | 554    | 305   | 338   | 577    | 1,715  | 1,140  | 456    | 396    | 659    | 535    |
| MAX         | 653    | 896     | 1,100  | 330   | 380   | 820    | 3,080  | 2,210  | 590    | 486    | 1,120  | 1,060  |
| MIN         | 433    | 460     | 320    | 300   | 300   | 370    | 620    | 518    | 365    | 316    | 349    | 370    |
| CFSM        | .80    | .88     | .82    | .45   | .50   | .85    | 2.53   | 1.68   | .67    | .58    | .97    | .79    |
| IN.         | .93    | .98     | .94    | .52   | .54   | .98    | 2.82   | 1.94   | .75    | .67    | 1.12   | .88    |
| CAL YR 1971 | TOTAL  | 226,184 | MEAN   | 620   | MAX   | 3,000  | MIN    | 279    | CFSM   | .91    | IN     | 12.41  |
| WTR YR 1972 | TOTAL  | 238,322 | MEAN   | 651   | MAX   | 3,080  | MIN    | 300    | CFSM   | .96    | IN     | 13.08  |

PEAK DISCHARGE (BASE, 1,500 CFS).--Apr. 23 (2200) 3,100 cfs (5.44 ft).

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04072750 Lawrence Creek near Westfield, Wis.

LOCATION.--Lat 43°53'52", long 89°34'43", in SW 1/4 sec.32, T.17 N., R.8 E., Marquette County, on left bank 0.8 mile upstream from Lawrence Lake and 4.0 miles northwest of Westfield.

DRAINAGE AREA.--16 sq mi, approximately (includes approximately 10 sq mi without surface drainage).

PERIOD OF RECORD.--November 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 900 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 66 cfs Aug. 26 (gage height, 8.75 ft); minimum daily, 14 cfs July 25, Aug. 18.

Period of record: Maximum discharge, 66 cfs Aug. 26, 1972 (gage height, 8.75 ft); minimum daily, 12 cfs Jan. 23-26, 28, 31, Feb. 5, 1968.

REMARKS.--Records are fair. Flow includes large ground-water inflow.

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 27, Feb. 2-8.)

Oct. 1 to Mar. 19

Mar. 20 to Sept. 30

|     |    |     |    |
|-----|----|-----|----|
| 7.8 | 15 | 8.0 | 20 |
| 7.9 | 17 | 8.1 | 23 |
|     |    | 8.2 | 26 |

|     |    |     |    |
|-----|----|-----|----|
| 7.7 | 13 | 8.0 | 23 |
| 7.8 | 15 | 8.2 | 33 |
| 7.9 | 19 | 8.4 | 45 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC  | JAN  | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-------|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1     | 17   | 19    | 18   | 16   | 15    | 16   | 17    | 18   | 16    | 17   | 15   | 17    |
| 2     | 17   | 24    | 18   | 16   | 15    | 16   | 17    | 18   | 16    | 17   | 17   | 15    |
| 3     | 21   | 17    | 18   | 16   | 15    | 16   | 17    | 17   | 16    | 16   | 15   | 15    |
| 4     | 17   | 17    | 18   | 16   | 15    | 16   | 17    | 17   | 16    | 16   | 15   | 15    |
| 5     | 17   | 17    | 18   | 16   | 15    | 16   | 17    | 17   | 17    | 15   | 15   | 15    |
| 6     | 17   | 17    | 18   | 16   | 15    | 17   | 17    | 18   | 16    | 15   | 15   | 15    |
| 7     | 16   | 17    | 18   | 16   | 15    | 16   | 17    | 17   | 16    | 17   | 15   | 16    |
| 8     | 17   | 17    | 18   | 16   | 15    | 16   | 17    | 17   | 16    | 16   | 16   | 16    |
| 9     | 16   | 17    | 18   | 16   | 15    | 16   | 17    | 17   | 16    | 17   | 15   | 16    |
| 10    | 16   | 17    | 20   | 16   | 15    | 16   | 19    | 17   | 16    | 15   | 15   | 16    |
| 11    | 16   | 17    | 18   | 16   | 15    | 16   | 19    | 17   | 16    | 15   | 16   | 16    |
| 12    | 16   | 17    | 18   | 16   | 15    | 15   | 21    | 17   | 18    | 17   | 15   | 16    |
| 13    | 16   | 17    | 17   | 16   | 16    | 15   | 20    | 18   | 16    | 15   | 15   | 24    |
| 14    | 16   | 17    | 17   | 15   | 16    | 16   | 18    | 18   | 18    | 15   | 16   | 17    |
| 15    | 16   | 17    | 22   | 15   | 16    | 16   | 18    | 17   | 16    | 15   | 16   | 16    |
| 16    | 16   | 18    | 18   | 15   | 16    | 16   | 17    | 17   | 16    | 15   | 15   | 16    |
| 17    | 16   | 17    | 18   | 15   | 16    | 17   | 17    | 16   | 16    | 16   | 15   | 16    |
| 18    | 16   | 18    | 17   | 15   | 16    | 17   | 17    | 17   | 16    | 15   | 14   | 31    |
| 19    | 18   | 17    | 17   | 15   | 16    | 17   | 18    | 17   | 16    | 15   | 16   | 22    |
| 20    | 17   | 17    | 17   | 15   | 16    | 23   | 17    | 17   | 16    | 15   | 15   | 18    |
| 21    | 17   | 17    | 17   | 15   | 16    | 22   | 21    | 17   | 16    | 15   | 15   | 18    |
| 22    | 17   | 17    | 17   | 15   | 16    | 19   | 21    | 17   | 16    | 15   | 15   | 17    |
| 23    | 16   | 17    | 17   | 15   | 16    | 18   | 18    | 16   | 16    | 16   | 15   | 17    |
| 24    | 17   | 17    | 17   | 15   | 16    | 17   | 17    | 16   | 16    | 15   | 16   | 17    |
| 25    | 16   | 17    | 17   | 15   | 16    | 18   | 17    | 16   | 16    | 14   | 18   | 25    |
| 26    | 16   | 18    | 17   | 15   | 16    | 17   | 17    | 16   | 16    | 18   | 39   | 29    |
| 27    | 18   | 18    | 16   | 15   | 17    | 17   | 17    | 16   | 15    | 17   | 17   | 18    |
| 28    | 17   | 18    | 16   | 15   | 18    | 17   | 17    | 16   | 16    | 15   | 16   | 29    |
| 29    | 17   | 18    | 16   | 15   | 17    | 18   | 17    | 17   | 16    | 15   | 16   | 26    |
| 30    | 17   | 18    | 16   | 15   | ----- | 18   | 17    | 19   | 15    | 15   | 15   | 18    |
| 31    | 17   | ----- | 16   | 15   | ----- | 17   | ----- | 17   | ----- | 15   | 16   | ----- |
| TOTAL | 519  | 526   | 543  | 478  | 456   | 527  | 533   | 527  | 483   | 484  | 504  | 562   |
| MEAN  | 16.7 | 17.5  | 17.5 | 15.4 | 15.7  | 17.0 | 17.8  | 17.0 | 16.1  | 15.6 | 16.3 | 18.7  |
| MAX   | 21   | 24    | 22   | 16   | 18    | 23   | 21    | 19   | 18    | 18   | 39   | 31    |
| MIN   | 16   | 17    | 16   | 15   | 15    | 15   | 17    | 16   | 15    | 14   | 14   | 15    |

CAL YR 1971 TOTAL 5,916 MEAN 16.2 MAX 28 MIN 14  
WTR YR 1972 TOTAL 6,142 MEAN 16.8 MAX 39 MIN 14

## STREAMS TRIBUTARY TO LAKE MICHIGAN

49

04073050 Grand River near Kingston, Wis.

LOCATION.--Lat 43°41'09", long 89°05'09", between secs.16 and 17, T.14 N., R.12 E., Green Lake County, on left bank just upstream of town road bridge, 1.3 miles upstream and east of Grand Lake and 2.3 miles east of Kingston.

DRAINAGE AREA.--73.7 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 795 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 544 cfs Mar. 21 (gage height, 5.78 ft); minimum daily, 7.3 cfs Sept. 10.

Period of record: Maximum discharge, 544 cfs Mar. 21, 1972 (gage height, 5.78 ft); minimum, 2.0 cfs Nov. 28, 1970 (gage height, 1.14 ft), result of freezeup.

REMARKS.--Records good except those for winter period, which are fair. Occasional regulation by mill about 2 miles upstream.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used July 21 to Sept. 30; stage-discharge relation affected by ice Dec. 1, 13-23, Dec. 27 to Feb. 26, Feb. 29 to Mar. 8.)

Oct. 1 to Mar. 17

Mar. 17 to Sept. 30

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| 1.3 | 7.3 | 1.3 | 6.2 | 3.0 | 118 |
| 1.5 | 16  | 1.5 | 14  | 4.0 | 218 |
| 2.0 | 46  | 1.7 | 24  | 5.0 | 363 |
| 3.0 | 115 | 2.0 | 43  | 6.0 | 616 |
| 4.0 | 204 |     |     |     |     |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC  | JAN  | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG   | SEP     |
|-------|------|-------|------|------|-------|-------|-------|-------|-------|------|-------|---------|
| 1     | 13   | 16    | 18   | 17   | 11    | 12    | 56    | 61    | 25    | 20   | 16    | 27      |
| 2     | 12   | 30    | 18   | 16   | 11    | 12    | 51    | 62    | 24    | 28   | 15    | 15      |
| 3     | 12   | 50    | 17   | 16   | 11    | 12    | 51    | 75    | 23    | 37   | 13    | 18      |
| 4     | 13   | 37    | 17   | 17   | 11    | 12    | 47    | 74    | 21    | 37   | 12    | 16      |
| 5     | 14   | 29    | 17   | 19   | 11    | 12    | 49    | 51    | 21    | 32   | 12    | 13      |
| 6     | 13   | 22    | 19   | 18   | 11    | 12    | 58    | 59    | 23    | 26   | 12    | 12      |
| 7     | 13   | 17    | 22   | 17   | 10    | 13    | 60    | 58    | 22    | 25   | 12    | 11      |
| 8     | 13   | 16    | 25   | 17   | 9.8   | 13    | 51    | 54    | 22    | 23   | 12    | 10      |
| 9     | 12   | 16    | 46   | 17   | 9.6   | 12    | 71    | 50    | 21    | 26   | 13    | 8.9     |
| 10    | 13   | 17    | 24   | 17   | 9.6   | 13    | 96    | 45    | 20    | 28   | 15    | 7.3     |
| 11    | 12   | 16    | 49   | 17   | 9.6   | 13    | 112   | 42    | 20    | 31   | 19    | 7.7     |
| 12    | 12   | 17    | 51   | 16   | 9.6   | 13    | 133   | 43    | 31    | 24   | 24    | 9.2     |
| 13    | 11   | 16    | 40   | 14   | 9.6   | 14    | 238   | 36    | 47    | 20   | 25    | 100     |
| 14    | 11   | 15    | 27   | 12   | 9.6   | 16    | 187   | 38    | 40    | 18   | 41    | 84      |
| 15    | 10   | 16    | 29   | 10   | 10    | 19    | 191   | 57    | 35    | 18   | 100   | 60      |
| 16    | 10   | 17    | 32   | 10   | 11    | 28    | 152   | 48    | 32    | 17   | 86    | 39      |
| 17    | 10   | 17    | 50   | 11   | 11    | 120   | 116   | 44    | 31    | 18   | 32    | 27      |
| 18    | 10   | 20    | 38   | 11   | 11    | 302   | 96    | 37    | 28    | 17   | 32    | 274     |
| 19    | 11   | 25    | 30   | 10   | 11    | 234   | 85    | 32    | 26    | 18   | 24    | 171     |
| 20    | 20   | 28    | 24   | 10   | 11    | 316   | 75    | 29    | 25    | 18   | 23    | 142     |
| 21    | 18   | 26    | 22   | 10   | 11    | 500   | 79    | 27    | 25    | 19   | 16    | 166     |
| 22    | 16   | 23    | 20   | 11   | 11    | 484   | 138   | 25    | 24    | 20   | 8.5   | 151     |
| 23    | 16   | 17    | 19   | 11   | 11    | 391   | 123   | 24    | 23    | 19   | 8.1   | 122     |
| 24    | 16   | 17    | 19   | 11   | 11    | 267   | 118   | 22    | 22    | 18   | 11    | 101     |
| 25    | 17   | 16    | 19   | 11   | 11    | 174   | 101   | 21    | 22    | 18   | 25    | 151     |
| 26    | 15   | 18    | 19   | 11   | 12    | 132   | 82    | 20    | 21    | 19   | 58    | 227     |
| 27    | 14   | 18    | 19   | 10   | 13    | 89    | 69    | 19    | 21    | 19   | 46    | 176     |
| 28    | 14   | 19    | 19   | 10   | 12    | 87    | 61    | 19    | 20    | 18   | 37    | 157     |
| 29    | 13   | 21    | 19   | 10   | 12    | 70    | 52    | 19    | 20    | 17   | 27    | 161     |
| 30    | 13   | 19    | 19   | 10   | ----- | 45    | 44    | 23    | 20    | 17   | 22    | 146     |
| 31    | 13   | ----- | 18   | 11   | ----- | 58    | ----- | 26    | ----- | 17   | 21    | -----   |
| TOTAL | 410  | 631   | 805  | 408  | 312.4 | 3,495 | 2,842 | 1,240 | 755   | 682  | 817.6 | 2,610.1 |
| MEAN  | 13.2 | 21.0  | 26.0 | 13.2 | 10.8  | 113   | 94.7  | 40.0  | 25.2  | 22.0 | 26.4  | 87.0    |
| MAX   | 20   | 50    | 51   | 19   | 13    | 500   | 238   | 75    | 47    | 37   | 100   | 274     |
| MIN   | 10   | 15    | 17   | 10   | 9.6   | 12    | 44    | 19    | 20    | 17   | 8.1   | 7.3     |
| CFSM  | .18  | .28   | .35  | .18  | .15   | 1.53  | 1.28  | .54   | .34   | .30  | .36   | 1.18    |
| IN.   | .21  | .32   | .41  | .21  | .16   | 1.76  | 1.43  | .63   | .38   | .34  | .41   | 1.32    |

CAL YR 1971 TOTAL 12,830.3 MEAN 35.2 MAX 362 MIN 5.1 CFSM .48 IN 6.48  
WT- YR 1972 TOTAL 15,008.1 MEAN 41.0 MAX 500 MIN 7.3 CFSM .56 IN 7.58

PEAK DISCHARGE (BASE, 150 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 3-21 | 0200 | 5.78  | 544       | 8-16 | 1800 | 3.91  | 178       |
| 4-13 | 0900 | 4.48  | 281       | 9-18 | 1200 | 5.45  | 351       |
| 4-22 | 0700 | 3.39  | 153       | 9-26 | 0700 | 4.72  | 247       |

NOTE.--No gage-height record Oct. 1 to Nov. 11.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04073500 Fox River at Berlin, Wis.

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

DRAINAGE AREA.--1,430 sq mi, approximately.

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

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 mile upstream at same datum.

AVERAGE DISCHARGE.--74 years, 1,075 cfs (10.21 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,440 cfs Apr. 1 (gage height, 12.83 ft); minimum, 492 cfs May 29 (gage height, 7.82 ft).

Period of record: Maximum discharge, 6,900 cfs Mar. 17, 18, 1946 (gage height, 15.5 ft); minimum observed, 248 cfs Sept. 16, 1948 (gage height, 6.1 ft).

REMARKS.--Records good except those for winter period, which are fair. Usually less than about 5 cfs was diverted into the basin from the Wisconsin River at Portage Canal throughout the year.

REVISIONS.--WSP 1337: 1910.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 2-7, Dec. 20 to Mar. 16.)

|     |       |      |       |
|-----|-------|------|-------|
| 7.8 | 485   | 11.0 | 2,160 |
| 8.0 | 560   | 13.0 | 3,600 |
| 9.0 | 1,020 |      |       |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 557    | 711    | 894    | 900    | 560    | 540    | 3,420  | 2,190  | 688    | 581    | 588    | 1,510  |
| 2     | 571    | 729    | 860    | 880    | 580    | 540    | 3,350  | 2,170  | 717    | 646    | 650    | 1,550  |
| 3     | 577    | 783    | 840    | 860    | 580    | 560    | 3,100  | 2,140  | 716    | 649    | 665    | 1,570  |
| 4     | 586    | 928    | 820    | 840    | 560    | 560    | 2,830  | 2,080  | 677    | 644    | 655    | 1,580  |
| 5     | 584    | 1,000  | 840    | 800    | 540    | 560    | 2,610  | 2,040  | 625    | 633    | 664    | 1,570  |
| 6     | 576    | 1,010  | 860    | 800    | 540    | 560    | 2,450  | 2,010  | 608    | 627    | 663    | 1,560  |
| 7     | 572    | 950    | 880    | 800    | 540    | 540    | 2,320  | 1,970  | 590    | 614    | 648    | 1,550  |
| 8     | 601    | 858    | 903    | 800    | 540    | 540    | 2,240  | 1,920  | 588    | 606    | 651    | 1,530  |
| 9     | 618    | 849    | 931    | 820    | 540    | 540    | 2,180  | 1,860  | 584    | 623    | 660    | 1,500  |
| 10    | 618    | 864    | 969    | 820    | 540    | 540    | 2,150  | 1,800  | 510    | 623    | 662    | 1,470  |
| 11    | 612    | 958    | 1,040  | 800    | 540    | 560    | 2,130  | 1,750  | 507    | 635    | 676    | 1,460  |
| 12    | 595    | 982    | 1,070  | 760    | 520    | 580    | 2,130  | 1,690  | 560    | 637    | 673    | 1,440  |
| 13    | 609    | 955    | 978    | 700    | 520    | 620    | 2,220  | 1,650  | 606    | 631    | 653    | 1,470  |
| 14    | 590    | 918    | 945    | 680    | 520    | 680    | 2,270  | 1,630  | 689    | 606    | 657    | 1,490  |
| 15    | 611    | 907    | 1,180  | 660    | 520    | 800    | 2,320  | 1,580  | 786    | 609    | 704    | 1,500  |
| 16    | 596    | 883    | 1,310  | 640    | 520    | 1,000  | 2,360  | 1,460  | 800    | 580    | 762    | 1,500  |
| 17    | 573    | 873    | 1,360  | 620    | 540    | 1,190  | 2,380  | 1,400  | 804    | 582    | 816    | 1,520  |
| 18    | 602    | 890    | 1,220  | 620    | 540    | 1,340  | 2,370  | 1,280  | 799    | 614    | 836    | 1,650  |
| 19    | 634    | 899    | 1,150  | 620    | 540    | 1,490  | 2,360  | 1,150  | 786    | 601    | 844    | 1,710  |
| 20    | 672    | 914    | 1,100  | 600    | 540    | 1,630  | 2,330  | 1,080  | 805    | 616    | 975    | 1,770  |
| 21    | 680    | 838    | 1,100  | 580    | 540    | 1,840  | 2,310  | 1,010  | 749    | 631    | 1,030  | 1,850  |
| 22    | 692    | 762    | 1,100  | 560    | 520    | 2,060  | 2,400  | 973    | 716    | 615    | 1,040  | 1,890  |
| 23    | 677    | 756    | 1,200  | 560    | 520    | 2,260  | 2,430  | 929    | 687    | 605    | 1,030  | 1,910  |
| 24    | 661    | 849    | 1,200  | 540    | 520    | 2,550  | 2,430  | 882    | 667    | 596    | 1,050  | 1,940  |
| 25    | 676    | 884    | 1,200  | 540    | 520    | 2,760  | 2,420  | 831    | 671    | 561    | 1,080  | 2,000  |
| 26    | 682    | 929    | 1,100  | 540    | 540    | 2,870  | 2,400  | 761    | 664    | 567    | 1,150  | 2,100  |
| 27    | 688    | 936    | 1,100  | 540    | 540    | 2,920  | 2,370  | 600    | 663    | 589    | 1,220  | 2,150  |
| 28    | 729    | 917    | 1,000  | 540    | 540    | 2,950  | 2,330  | 520    | 641    | 598    | 1,280  | 2,200  |
| 29    | 681    | 935    | 1,000  | 540    | 540    | 3,010  | 2,290  | 504    | 611    | 600    | 1,340  | 2,250  |
| 30    | 637    | 887    | 960    | 540    | -----  | 3,100  | 2,240  | 578    | 588    | 596    | 1,390  | 2,300  |
| 31    | 677    | -----  | 940    | 560    | -----  | 3,310  | -----  | 643    | -----  | 589    | 1,430  | -----  |
| TOTAL | 19,434 | 26,554 | 32,070 | 21,060 | 15,600 | 45,000 | 73,140 | 43,081 | 20,102 | 18,904 | 27,142 | 51,490 |
| MEAN  | 627    | 885    | 1,035  | 679    | 538    | 1,452  | 2,438  | 1,390  | 670    | 610    | 876    | 1,716  |
| MAX   | 729    | 1,010  | 1,360  | 900    | 580    | 3,310  | 3,420  | 2,190  | 805    | 649    | 1,430  | 2,300  |
| MIN   | 557    | 711    | 820    | 540    | 520    | 540    | 2,130  | 504    | 507    | 561    | 588    | 1,440  |
| CFSM  | .44    | .62    | .72    | .47    | .38    | 1.02   | 1.70   | .97    | .47    | .43    | .61    | 1.20   |
| IN.   | .51    | .69    | .83    | .55    | .41    | 1.17   | 1.90   | 1.12   | .52    | .49    | .71    | 1.34   |

CAL YR 1971 TOTAL 398,083 MEAN 1,091 MAX 4,200 MIN 376 CFSM .76 IN 10.36  
WTR YR 1972 TOTAL 393,577 MEAN 1,075 MAX 3,420 MIN 504 CFSM .75 IN 10.24

## STREAMS TRIBUTARY TO LAKE MICHIGAN

51

04074950 Wolf River at Langlade, Wis.

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

DRAINAGE AREA.--460 sq mi.

PERIOD OF RECORD.--March 1966 to current year.

GAGE.--Nonrecording gage. Altitude of gage is about 1,240 ft (from topographic map).

AVERAGE DISCHARGE.--6 years, 466 cfs (13.76 inches per year).

EXTREMES.--Current year: Maximum discharge observed, 1,770 cfs May 2 (gage height, 9.23 ft); maximum gage height observed, 9.60 ft Dec. 28 (backwater from ice); minimum discharge observed, 220 cfs July 7 (gage height, 7.45 ft).  
Period of record: Maximum discharge observed, 1,770 cfs May 2, 1972 (gage height, 9.23 ft); maximum gage height observed, 9.98 ft Dec. 5, 1968 (backwater from ice); minimum discharge observed, 156 cfs Aug. 27, 29, 1970.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Nov. 25 to Dec. 6, Dec. 10 to Apr. 11.)

|     |     |     |       |
|-----|-----|-----|-------|
| 7.2 | 142 | 8.5 | 930   |
| 7.5 | 260 | 9.0 | 1,440 |
| 8.0 | 540 | 9.5 | 2,230 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT           | NOV      | DEC       | JAN     | FEB       | MAR      | APR    | MAY    | JUN   | JUL   | AUG    | SE    |
|-------------|---------------|----------|-----------|---------|-----------|----------|--------|--------|-------|-------|--------|-------|
| 1           | 350           | 452      | 410       | 480     | 330       | 280      | 470    | 1,660  | 399   | 256   | 303    | 91    |
| 2           | 405           | 521      | 390       | 450     | 320       | 280      | 420    | 1,770  | 366   | 251   | 303    | 60    |
| 3           | 464           | 560      | 390       | 430     | 320       | 280      | 400    | 1,720  | 355   | 242   | 303    | 54    |
| 4           | 601           | 574      | 390       | 420     | 320       | 280      | 370    | 1,650  | 339   | 242   | 298    | 52    |
| 5           | 666           | 560      | 380       | 410     | 320       | 280      | 360    | 1,500  | 329   | 242   | 284    | 51    |
| 6           | 719           | 527      | 370       | 390     | 320       | 280      | 360    | 1,430  | 329   | 234   | 270    | 48    |
| 7           | 727           | 508      | 360       | 380     | 310       | 290      | 360    | 1,320  | 324   | 220   | 350    | 47    |
| 8           | 758           | 508      | 350       | 370     | 310       | 300      | 370    | 1,210  | 313   | 260   | 394    | 45    |
| 9           | 758           | 476      | 350       | 360     | 310       | 310      | 380    | 1,160  | 303   | 260   | 495    | 44    |
| 10          | 711           | 452      | 370       | 360     | 300       | 320      | 400    | 1,080  | 313   | 256   | 527    | 44    |
| 11          | 680           | 434      | 450       | 350     | 300       | 340      | 420    | 1,000  | 303   | 251   | 514    | 44    |
| 12          | 615           | 422      | 370       | 340     | 300       | 360      | 446    | 939    | 355   | 289   | 428    | 47    |
| 13          | 514           | 410      | 370       | 340     | 300       | 370      | 482    | 877    | 434   | 298   | 366    | 47    |
| 14          | 476           | 410      | 380       | 340     | 300       | 380      | 527    | 934    | 410   | 298   | 339    | 45    |
| 15          | 458           | 410      | 400       | 340     | 300       | 390      | 601    | 842    | 394   | 313   | 324    | 44    |
| 16          | 446           | 399      | 420       | 340     | 290       | 400      | 719    | 800    | 366   | 324   | 547    | 42    |
| 17          | 428           | 334      | 480       | 350     | 290       | 400      | 877    | 719    | 344   | 329   | 912    | 42    |
| 18          | 446           | 405      | 430       | 360     | 290       | 400      | 1,000  | 608    | 324   | 329   | 948    | 42    |
| 19          | 540           | 394      | 420       | 360     | 290       | 400      | 1,140  | 540    | 308   | 324   | 957    | 44    |
| 20          | 594           | 382      | 430       | 360     | 280       | 400      | 1,240  | 534    | 303   | 318   | 877    | 43    |
| 21          | 622           | 355      | 460       | 350     | 280       | 390      | 1,440  | 574    | 318   | 339   | 895    | 52    |
| 22          | 608           | 334      | 470       | 350     | 280       | 380      | 1,440  | 574    | 298   | 355   | 886    | 58    |
| 23          | 601           | 399      | 420       | 350     | 280       | 360      | 1,440  | 547    | 279   | 382   | 895    | 56    |
| 24          | 601           | 366      | 420       | 340     | 280       | 350      | 1,470  | 527    | 270   | 388   | 1,030  | 54    |
| 25          | 594           | 370      | 420       | 340     | 280       | 350      | 1,520  | 508    | 270   | 355   | 1,000  | 63    |
| 26          | 581           | 390      | 440       | 340     | 280       | 350      | 1,560  | 428    | 265   | 344   | 939    | 81    |
| 27          | 581           | 410      | 450       | 340     | 280       | 360      | 1,600  | 428    | 242   | 344   | 886    | 1,04  |
| 28          | 567           | 450      | 470       | 340     | 280       | 390      | 1,660  | 422    | 242   | 334   | 851    | 1,21  |
| 29          | 534           | 440      | 500       | 330     | 280       | 450      | 1,720  | 416    | 279   | 318   | 851    | 1,38  |
| 30          | 534           | 460      | 580       | 330     | -----     | 560      | 1,700  | 470    | 274   | 308   | 834    | 1,40  |
| 31          | 470           | -----    | 520       | 330     | -----     | 520      | -----  | 416    | ----- | 284   | 783    | ----- |
| TOTAL       | 17,649        | 13,112   | 13,060    | 11,270  | 8,620     | 11,200   | 26,892 | 27,503 | 9,648 | 9,287 | 19,589 | 18,55 |
| MEAN        | 566           | 437      | 421       | 364     | 267       | 361      | 896    | 887    | 322   | 300   | 632    | 61    |
| MAX         | 758           | 574      | 580       | 480     | 330       | 580      | 1,720  | 1,770  | 434   | 388   | 1,030  | 1,40  |
| MIN         | 350           | 334      | 350       | 330     | 280       | 280      | 360    | 416    | 242   | 220   | 270    | 42    |
| CFSM        | 1.24          | .95      | .92       | .79     | .65       | .78      | 1.95   | 1.93   | .70   | .65   | 1.37   | 1.3   |
| IN.         | 1.43          | 1.06     | 1.06      | .91     | .70       | .91      | 2.17   | 2.22   | .78   | .75   | 1.58   | 1.5   |
| CAL YR 1971 | TOTAL 165,432 | MEAN 453 | MAX 1,700 | MIN 180 | CFSM .98  | IN 13.38 |        |        |       |       |        |       |
| WTR YR 1972 | TOTAL 186,380 | MEAN 509 | MAX 1,770 | MIN 220 | CFSM 1.11 | IN 15.07 |        |        |       |       |        |       |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04075200 Evergreen Creek near Langlade, Wis.

LOCATION.--Lat 45°10'11", long 88°48'12", in NW 1/4 sec.18, T.31 N., R.14 E., Langlade County, on right bank 30 ft upstream from culvert on State Highway 64, 0.1 mile downstream from Town Line Lake outlet, 2.5 miles upstream from mouth, 3.8 miles southwest of Langlade.

DRAINAGE AREA.--8.0 sq mi, approximately, of which about 4.9 sq mi contributes directly to surface runoff (revised).

PERIOD OF RECORD.--Annual maximum, water years 1959-64, and occasional low-flow measurements, water years 1961-64. June 1964 to current year (no winter record 1964-67).

GAGE.--Water-stage recorder. Altitude of gage is 1,320 ft (from topographic map). Prior to June 16, 1964, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--5 years, 11.3 cfs.

EXTREMES.--Current year: Maximum discharge, 31 cfs Aug. 8 (gage height, 10.42 ft); minimum, 8.1 cfs Feb. 26-29, Mar. 17-19 (gage height, 9.61 ft).

Period of record: Maximum discharge, 78 cfs Apr. 11, 1965 (gage height, 11.62 ft); minimum recorded, 6.1 cfs Mar. 14, 1971 (gage height, 9.45 ft).

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 1, 2, 4, 11, 13, 28, Jan. 12 to Feb. 25, Mar. 1-12, 23, 24.)

|     |     |      |    |
|-----|-----|------|----|
| 9.5 | 6.5 | 10.3 | 26 |
| 9.9 | 14  | 10.8 | 43 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-------|------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 14   | 13    | 12    | 11    | 9.2   | 8.6   | 8.7   | 20   | 12    | 12   | 16   | 13    |
| 2     | 14   | 19    | 11    | 12    | 9.2   | 9.4   | 8.7   | 21   | 12    | 12   | 12   | 12    |
| 3     | 18   | 14    | 11    | 9.4   | 9.2   | 9.2   | 8.7   | 18   | 12    | 12   | 12   | 12    |
| 4     | 14   | 12    | 12    | 12    | 9.2   | 9.2   | 8.7   | 16   | 12    | 12   | 12   | 12    |
| 5     | 12   | 12    | 11    | 11    | 9.0   | 9.2   | 11    | 14   | 12    | 12   | 12   | 13    |
| 6     | 12   | 11    | 11    | 11    | 9.0   | 9.2   | 8.5   | 14   | 12    | 12   | 12   | 12    |
| 7     | 11   | 11    | 11    | 11    | 8.8   | 9.0   | 9.4   | 13   | 12    | 13   | 14   | 12    |
| 8     | 12   | 11    | 11    | 11    | 8.8   | 9.0   | 9.4   | 13   | 12    | 13   | 23   | 12    |
| 9     | 12   | 11    | 11    | 11    | 8.8   | 8.8   | 8.9   | 12   | 12    | 13   | 19   | 12    |
| 10    | 12   | 11    | 12    | 9.2   | 8.8   | 8.8   | 9.4   | 12   | 12    | 13   | 13   | 12    |
| 11    | 12   | 11    | 11    | 9.2   | 8.6   | 8.8   | 9.8   | 12   | 12    | 15   | 13   | 13    |
| 12    | 11   | 11    | 10    | 9.2   | 8.6   | 8.6   | 10    | 12   | 13    | 15   | 12   | 13    |
| 13    | 12   | 11    | 12    | 9.2   | 8.5   | 8.5   | 13    | 12   | 13    | 13   | 12   | 12    |
| 14    | 11   | 11    | 10    | 9.2   | 8.5   | 8.3   | 13    | 13   | 13    | 17   | 12   | 12    |
| 15    | 11   | 11    | 14    | 9.2   | 8.5   | 8.3   | 18    | 12   | 13    | 16   | 12   | 12    |
| 16    | 11   | 11    | 12    | 9.2   | 8.6   | 8.3   | 18    | 12   | 13    | 12   | 20   | 12    |
| 17    | 11   | 11    | 12    | 9.2   | 8.6   | 8.1   | 20    | 12   | 12    | 13   | 24   | 12    |
| 18    | 11   | 13    | 12    | 9.4   | 8.6   | 8.1   | 20    | 12   | 12    | 13   | 20   | 12    |
| 19    | 15   | 12    | 13    | 9.4   | 8.6   | 8.1   | 27    | 11   | 12    | 12   | 16   | 12    |
| 20    | 14   | 12    | 12    | 9.2   | 8.6   | 8.3   | 23    | 11   | 12    | 12   | 14   | 12    |
| 21    | 12   | 11    | 11    | 9.2   | 8.4   | 9.2   | 20    | 12   | 12    | 12   | 14   | 14    |
| 22    | 12   | 11    | 12    | 9.2   | 8.4   | 9.0   | 19    | 11   | 12    | 12   | 15   | 12    |
| 23    | 12   | 10    | 9.6   | 9.2   | 8.2   | 10    | 19    | 11   | 12    | 13   | 13   | 12    |
| 24    | 12   | 10    | 10    | 9.4   | 8.2   | 9.0   | 19    | 11   | 12    | 12   | 24   | 12    |
| 25    | 12   | 10    | 11    | 9.4   | 8.2   | 8.5   | 18    | 11   | 12    | 12   | 17   | 18    |
| 26    | 12   | 11    | 11    | 9.4   | 8.1   | 8.5   | 18    | 11   | 12    | 12   | 23   | 26    |
| 27    | 12   | 11    | 11    | 9.3   | 8.1   | 8.5   | 19    | 11   | 12    | 12   | 23   | 18    |
| 28    | 12   | 10    | 12    | 9.2   | 8.1   | 8.5   | 20    | 11   | 13    | 12   | 15   | 19    |
| 29    | 11   | 10    | 11    | 9.2   | 8.1   | 8.7   | 19    | 12   | 13    | 12   | 13   | 23    |
| 30    | 12   | 10    | 12    | 9.2   | ----- | 8.7   | 19    | 14   | 12    | 13   | 13   | 16    |
| 31    | 14   | ----- | 12    | 9.2   | ----- | 8.7   | ----- | 12   | ----- | 16   | 13   | ----- |
| TOTAL | 383  | 343   | 353.6 | 302.9 | 249.5 | 271.1 | 453.2 | 399  | 367   | 400  | 483  | 414   |
| MEAN  | 12.4 | 11.4  | 11.4  | 9.77  | 8.60  | 8.75  | 15.1  | 12.9 | 12.2  | 12.9 | 15.6 | 13.8  |
| MAX   | 18   | 19    | 14    | 12    | 9.2   | 10    | 27    | 21   | 13    | 17   | 24   | 26    |
| MIN   | 11   | 10    | 9.6   | 9.2   | 8.1   | 8.1   | 8.5   | 11   | 12    | 12   | 12   | 12    |

CAL YR 1971 TOTAL 4,059.5 MEAN 11.1 MAX 22 MIN 7.2  
WTR YR 1972 TCTAL 4,419.3 MEAN 12.1 MAX 27 MIN 8.1

## 04077000 Wolf River at Keshena Falls, Wis.

LOCATION.--Lat 44°53'28", long 88°39'18", in E 1/2 sec.22, T.28 N., R.15 E., Menominee County, on right bank 500 ft downstream from Keshena Falls, 1.7 miles upstream from Keshena, 3.1 miles downstream from West Branch Wolf River, and at mile 136.4.

DRAINAGE AREA.--812 sq mi.

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.

GAGE.--Water-stage recorder. Datum of gage is 820.0 ft above mean sea level (levels by Wisconsin Power and Light Co.). Prior to Mar. 23, 1928, nonrecording gage at bridge in Keshena 1.7 miles downstream at datum 4.03 ft lower.

AVERAGE DISCHARGE.--63 years (1907-8, 1910-72), 756 cfs (12.64 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,780 cfs Apr. 22 (gage height, 7.88 ft); maximum gage height, 9.44 ft Dec. 1 (backwater from ice); minimum daily discharge, 410 cfs July 6, 7.

Period of record: Maximum discharge, 4,830 cfs May 7, 1960 (gage height, 9.67 ft) from rating curve extended above 3,300 cfs; instantaneous peak caused when earth fill wall near powerplant was dynamited to relieve pressure on dam; maximum discharge after flow stabilized, 4,330 cfs May 8 (gage height, 9.36 ft) from rating curve extended above 3,300 cfs; maximum gage height, 13.83 ft Nov. 17, 1943 (backwater from ice); minimum, 91 cfs Dec. 22, 1939 (gage height, 4.67 ft), result of ice storage.

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

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Apr. 15-25; stage-discharge relation affected by ice Nov. 29 to Apr. 12.)

|     |     |     |       |
|-----|-----|-----|-------|
| 5.0 | 229 | 7.0 | 1,740 |
| 5.5 | 488 | 8.0 | 2,800 |
| 6.0 | 842 |     |       |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 919    | 746    | 1,500  | 720    | 560    | 480    | 640    | 2,510  | 816    | 470    | 480    | 1,100  |
| 2     | 813    | 1,030  | 1,400  | 700    | 560    | 480    | 620    | 2,650  | 739    | 450    | 540    | 1,100  |
| 3     | 841    | 1,130  | 1,300  | 700    | 560    | 470    | 620    | 2,580  | 710    | 450    | 540    | 1,000  |
| 4     | 957    | 1,060  | 1,200  | 700    | 560    | 470    | 600    | 2,400  | 681    | 430    | 520    | 920    |
| 5     | 1,030  | 986    | 1,100  | 680    | 560    | 490    | 600    | 2,210  | 661    | 420    | 480    | 820    |
| 6     | 1,040  | 925    | 1,100  | 680    | 560    | 520    | 600    | 2,040  | 653    | 410    | 460    | 740    |
| 7     | 1,070  | 819    | 1,100  | 680    | 540    | 540    | 600    | 1,910  | 636    | 410    | 450    | 680    |
| 8     | 1,100  | 722    | 1,000  | 660    | 540    | 580    | 620    | 1,790  | 607    | 420    | 520    | 640    |
| 9     | 1,090  | 802    | 1,000  | 640    | 540    | 600    | 660    | 1,680  | 588    | 440    | 600    | 600    |
| 10    | 1,050  | 757    | 1,000  | 640    | 540    | 600    | 720    | 1,590  | 553    | 470    | 700    | 580    |
| 11    | 999    | 732    | 1,300  | 640    | 520    | 620    | 760    | 1,500  | 535    | 500    | 780    | 580    |
| 12    | 942    | 712    | 1,100  | 620    | 520    | 620    | 840    | 1,390  | 551    | 520    | 740    | 580    |
| 13    | 855    | 694    | 1,000  | 620    | 520    | 640    | 924    | 1,340  | 626    | 540    | 680    | 580    |
| 14    | 765    | 682    | 980    | 600    | 520    | 640    | 1,030  | 1,340  | 691    | 540    | 620    | 560    |
| 15    | 717    | 675    | 960    | 600    | 500    | 640    | 1,270  | 1,310  | 690    | 560    | 540    | 540    |
| 16    | 690    | 671    | 1,200  | 620    | 500    | 640    | 1,570  | 1,270  | 638    | 580    | 660    | 520    |
| 17    | 677    | 655    | 1,100  | 620    | 500    | 640    | 1,760  | 1,210  | 587    | 620    | 900    | 490    |
| 18    | 673    | 652    | 1,000  | 620    | 500    | 620    | 1,860  | 1,100  | 550    | 580    | 1,100  | 490    |
| 19    | 693    | 711    | 980    | 620    | 490    | 620    | 2,180  | 978    | 533    | 540    | 1,300  | 490    |
| 20    | 893    | 726    | 960    | 620    | 490    | 620    | 2,430  | 908    | 546    | 560    | 1,400  | 520    |
| 21    | 938    | 691    | 940    | 620    | 490    | 600    | 2,470  | 921    | 540    | 560    | 1,400  | 540    |
| 22    | 972    | 560    | 900    | 620    | 490    | 600    | 2,720  | 944    | 531    | 540    | 1,200  | 560    |
| 23    | 928    | 488    | 860    | 600    | 490    | 580    | 2,600  | 911    | 495    | 520    | 1,000  | 580    |
| 24    | 889    | 599    | 820    | 600    | 480    | 560    | 2,480  | 835    | 480    | 560    | 860    | 580    |
| 25    | 899    | 594    | 780    | 600    | 480    | 560    | 2,430  | 828    | 473    | 600    | 940    | 700    |
| 26    | 880    | 607    | 780    | 600    | 480    | 540    | 2,410  | 792    | 464    | 600    | 1,000  | 900    |
| 27    | 869    | 576    | 740    | 600    | 480    | 520    | 2,440  | 726    | 455    | 580    | 1,100  | 1,100  |
| 28    | 844    | 727    | 740    | 600    | 480    | 520    | 2,510  | 705    | 448    | 560    | 1,200  | 1,300  |
| 29    | 796    | 800    | 720    | 580    | 480    | 540    | 2,550  | 717    | 480    | 520    | 1,300  | 1,500  |
| 30    | 781    | 1,800  | 720    | 580    | -----  | 600    | 2,520  | 823    | 490    | 490    | 1,200  | 1,600  |
| 31    | 803    | -----  | 720    | 580    | -----  | 660    | -----  | 860    | -----  | 470    | 1,200  | -----  |
| TOTAL | 27,413 | 23,329 | 31,020 | 19,560 | 14,930 | 17,810 | 46,034 | 42,768 | 17,447 | 15,910 | 26,410 | 22,890 |
| MEAN  | 884    | 778    | 1,001  | 631    | 515    | 575    | 1,534  | 1,380  | 582    | 513    | 852    | 763    |
| MAX   | 1,100  | 1,800  | 1,500  | 720    | 560    | 660    | 2,720  | 2,650  | 816    | 620    | 1,400  | 1,600  |
| MIN   | 673    | 488    | 720    | 580    | 480    | 470    | 600    | 705    | 448    | 410    | 450    | 490    |
| CFSM  | 1.09   | .96    | 1.23   | .78    | .63    | .71    | 1.89   | 1.70   | .72    | .63    | 1.05   | .94    |
| IN.   | 1.26   | 1.07   | 1.42   | .90    | .68    | .82    | 2.11   | 1.96   | .80    | .73    | 1.21   | 1.05   |

CAL YR 1971 TOTAL 290,242 MEAN 795 MAX 2,530 MIN 400 CFSM .98 IN 13.30  
WTR YR 1972 TOTAL 305,521 MEAN 835 MAX 2,720 MIN 410 CFSM 1.03 IN 14.00

## PEAK DISCHARGE (BASE, 1,500 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE | NOTE                                              |
|------|------|-------|-----------|------|------|-------|-----------|---------------------------------------------------|
| 12-1 | -    | -     | a2,000    | 9-30 | -    | -     | a1,600    | NOTE.--No gage-height record June 29 to Sept. 30. |
| 4-22 | 1400 | 7.88  | 2,780     |      |      |       |           |                                                   |

a About.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04078500 Embarrass River near Embarrass, Wis.

LOCATION.--Lat 44°43'29", long 88°44'10", in SW 1/4 sec.18, T.26 N., R.15 E., Shawano County, on left bank 10 ft downstream from bridge on county road, 1.3 miles downstream from Mill Creek, and 4.0 miles northwest of Embarrass.

DRAINAGE AREA.--395 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 803.95 ft above mean sea level. Prior to Aug. 23, 1938, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--53 years, 287 cfs (9.87 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,160 cfs Apr. 20 (gage height, 8.20 ft); minimum, 118 cfs July 5, 6 (gage height, 2.85 ft).

Period of record: Maximum discharge, 7,080 cfs Apr. 12, 1965 (gage height, 12.13 ft), affected by failure of dam near Pella, 9.2 miles above station; minimum observed, 23 cfs Aug. 3, 6, 7, 1931.

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

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Nov. 28 to Dec. 4, Dec. 7 to Apr. 2.)

|     |     |     |       |
|-----|-----|-----|-------|
| 2.8 | 104 | 5.0 | 1,140 |
| 3.0 | 151 | 7.0 | 2,340 |
| 3.4 | 290 | 9.0 | 3,760 |
| 4.0 | 589 |     |       |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR    | MAY    | JUN   | JUL   | AUG    | SEP    |
|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|--------|--------|
| 1     | 526   | 259   | 210   | 210   | 150   | 140   | 320    | 955    | 225   | 136   | 170    | 404    |
| 2     | 554   | 509   | 220   | 200   | 150   | 140   | 310    | 1,020  | 206   | 130   | 182    | 270    |
| 3     | 550   | 788   | 240   | 190   | 150   | 140   | 301    | 1,050  | 188   | 125   | 177    | 253    |
| 4     | 516   | 772   | 210   | 180   | 150   | 140   | 309    | 936    | 174   | 122   | 164    | 238    |
| 5     | 496   | 655   | 206   | 170   | 150   | 130   | 283    | 828    | 166   | 119   | 148    | 230    |
| 6     | 443   | 492   | 212   | 170   | 140   | 140   | 266    | 712    | 162   | 118   | 136    | 220    |
| 7     | 378   | 360   | 210   | 160   | 140   | 150   | 291    | 517    | 161   | 125   | 133    | 220    |
| 8     | 300   | 271   | 230   | 160   | 140   | 160   | 286    | 515    | 155   | 132   | 143    | 210    |
| 9     | 277   | 280   | 240   | 150   | 140   | 190   | 262    | 454    | 152   | 144   | 168    | 200    |
| 10    | 260   | 259   | 260   | 150   | 140   | 200   | 282    | 413    | 149   | 145   | 198    | 190    |
| 11    | 242   | 247   | 280   | 140   | 140   | 220   | 431    | 387    | 154   | 153   | 215    | 200    |
| 12    | 217   | 239   | 400   | 140   | 140   | 230   | 699    | 361    | 177   | 161   | 194    | 220    |
| 13    | 209   | 236   | 290   | 140   | 130   | 240   | 820    | 343    | 217   | 188   | 170    | 200    |
| 14    | 204   | 232   | 310   | 130   | 130   | 250   | 940    | 350    | 285   | 194   | 154    | 190    |
| 15    | 199   | 228   | 330   | 130   | 130   | 260   | 1,310  | 364    | 297   | 184   | 144    | 180    |
| 16    | 193   | 226   | 370   | 130   | 130   | 270   | 1,720  | 390    | 265   | 189   | 153    | 180    |
| 17    | 187   | 227   | 420   | 130   | 130   | 270   | 2,020  | 427    | 215   | 185   | 255    | 180    |
| 18    | 181   | 248   | 520   | 130   | 130   | 280   | 2,400  | 373    | 188   | 166   | 341    | 180    |
| 19    | 195   | 294   | 600   | 140   | 140   | 270   | 2,750  | 329    | 166   | 159   | 592    | 180    |
| 20    | 243   | 326   | 400   | 140   | 140   | 260   | 3,090  | 295    | 164   | 165   | 654    | 190    |
| 21    | 302   | 321   | 370   | 140   | 150   | 260   | 2,670  | 277    | 160   | 162   | 614    | 270    |
| 22    | 316   | 269   | 350   | 140   | 140   | 300   | 2,540  | 264    | 155   | 156   | 402    | 360    |
| 23    | 290   | 227   | 320   | 140   | 140   | 350   | 2,380  | 238    | 146   | 148   | 249    | 300    |
| 24    | 263   | 224   | 310   | 140   | 150   | 410   | 2,020  | 224    | 140   | 139   | 395    | 270    |
| 25    | 249   | 216   | 290   | 150   | 150   | 390   | 1,670  | 201    | 133   | 133   | 781    | 500    |
| 26    | 238   | 219   | 280   | 150   | 140   | 380   | 1,430  | 200    | 132   | 133   | 1,030  | 900    |
| 27    | 231   | 192   | 260   | 150   | 140   | 370   | 1,280  | 197    | 132   | 136   | 1,240  | 1,500  |
| 28    | 224   | 200   | 250   | 150   | 140   | 360   | 1,140  | 191    | 132   | 140   | 1,350  | 1,300  |
| 29    | 217   | 200   | 240   | 150   | 150   | 350   | 1,080  | 189    | 133   | 142   | 1,180  | 1,700  |
| 30    | 211   | 210   | 230   | 150   | ----- | 340   | 1,010  | 207    | 139   | 142   | 883    | 1,200  |
| 31    | 223   | ----- | 220   | 150   | ----- | 350   | -----  | 231    | ----- | 143   | 530    | -----  |
| TOTAL | 9,134 | 9,426 | 9,278 | 4,700 | 4,090 | 7,940 | 36,310 | 13,438 | 5,268 | 4,614 | 13,145 | 12,635 |
| MEAN  | 295   | 314   | 299   | 152   | 141   | 256   | 1,210  | 433    | 176   | 149   | 424    | 421    |
| MAX   | 554   | 788   | 600   | 210   | 150   | 410   | 3,090  | 1,050  | 297   | 194   | 1,350  | 1,700  |
| MIN   | 181   | 192   | 206   | 130   | 130   | 130   | 262    | 189    | 132   | 118   | 133    | 180    |
| CFSM  | .75   | .79   | .76   | .38   | .36   | .65   | 3.06   | 1.10   | .45   | .38   | 1.07   | 1.07   |
| IN.   | .86   | .89   | .87   | .44   | .39   | .75   | 3.42   | 1.27   | .50   | .43   | 1.24   | 1.19   |

CAL YR 1971 TOTAL 118,658 MEAN 325 MAX 2,780 MIN 118 CFSM .82 IN 11.17

WTR YR 1972 TOTAL 129,978 MEAN 355 MAX 3,090 MIN 118 CFSM .90 IN 12.24

04079000 Wolf River at New London, Wis.

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, on right bank 100 ft downstream from Pearl Street bridge in New London, 0.2 mile downstream from Embarrass River, and at mile 56.3.

DRAINAGE AREA.--2,240 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 749.0 ft above mean sea level (levels by Corps of Engineers). Prior to October 4, 1951, nonrecording gage.

AVERAGE DISCHARGE.--76 years, 1,710 cfs (10.37 inches per year).

EXTREMES.--Current year: Maximum discharge, 10,300 cfs Apr. 25 (gage height, 9.76 ft); minimum daily, 800 cfs Feb. 28 to Mar. 5.

Period of record: Maximum daily discharge, 15,500 cfs Apr. 13, 1922 (gage height, 11.4 ft); minimum daily, 150 cfs Mar. 1, 1900.

Maximum stage known, 11.6 ft Apr. 16, 1888, from information by Corps of Engineers.

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

REVISIONS (WATER YEARS).--WSP 1114: 1943(M). WSP 1337: 1931.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used May 23 to June 17, Sept. 26-30; stage-discharge relation affected by ice Nov. 29 to Apr. 10.)

|     |       |      |        |
|-----|-------|------|--------|
| 0.5 | 610   | 6.0  | 2,920  |
| 1.0 | 762   | 8.0  | 5,080  |
| 2.0 | 1,080 | 9.0  | 7,630  |
| 4.0 | 1,800 | 10.0 | 11,200 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT           | NOV        | DEC        | JAN     | FEB      | MAR      | APR     | MAY     | JUN    | JUL    | AUG    | SEP    |
|-------------|---------------|------------|------------|---------|----------|----------|---------|---------|--------|--------|--------|--------|
| 1           | 1,310         | 1,460      | 1,200      | 1,400   | 1,100    | 800      | 2,300   | 7,060   | 1,350  | 1,010  | 1,050  | 2,800  |
| 2           | 1,450         | 1,550      | 1,200      | 1,400   | 1,100    | 800      | 2,300   | 6,740   | 1,350  | 987    | 1,050  | 2,850  |
| 3           | 1,540         | 1,680      | 1,200      | 1,400   | 1,100    | 800      | 2,200   | 6,460   | 1,330  | 983    | 1,050  | 2,850  |
| 4           | 1,590         | 1,830      | 1,300      | 1,400   | 1,100    | 800      | 2,200   | 6,240   | 1,310  | 973    | 1,050  | 2,770  |
| 5           | 1,620         | 1,980      | 1,300      | 1,300   | 1,100    | 800      | 2,200   | 6,020   | 1,270  | 955    | 1,040  | 2,590  |
| 6           | 1,630         | 2,070      | 1,300      | 1,300   | 1,100    | 820      | 2,300   | 5,850   | 1,220  | 944    | 997    | 2,420  |
| 7           | 1,610         | 2,090      | 1,400      | 1,300   | 1,100    | 820      | 2,400   | 5,660   | 1,160  | 940    | 978    | 2,220  |
| 8           | 1,590         | 2,060      | 1,500      | 1,200   | 1,100    | 820      | 2,700   | 5,450   | 1,130  | 924    | 980    | 2,010  |
| 9           | 1,570         | 1,990      | 1,500      | 1,200   | 1,100    | 820      | 2,900   | 5,190   | 1,100  | 931    | 980    | 1,780  |
| 10          | 1,540         | 1,870      | 1,500      | 1,200   | 1,100    | 840      | 3,100   | 4,880   | 1,070  | 977    | 1,010  | 1,570  |
| 11          | 1,530         | 1,720      | 1,500      | 1,200   | 1,100    | 860      | 3,300   | 4,560   | 1,060  | 1,000  | 1,090  | 1,450  |
| 12          | 1,510         | 1,630      | 1,500      | 1,200   | 1,100    | 860      | 3,580   | 4,220   | 1,080  | 1,010  | 1,170  | 1,410  |
| 13          | 1,510         | 1,570      | 1,500      | 1,200   | 1,100    | 860      | 3,960   | 3,940   | 1,130  | 1,020  | 1,210  | 1,430  |
| 14          | 1,480         | 1,560      | 1,500      | 1,100   | 1,000    | 860      | 4,350   | 3,730   | 1,230  | 1,050  | 1,210  | 1,430  |
| 15          | 1,450         | 1,570      | 1,600      | 1,100   | 1,000    | 880      | 4,670   | 3,580   | 1,330  | 1,130  | 1,180  | 1,410  |
| 16          | 1,390         | 1,540      | 1,600      | 1,100   | 1,000    | 880      | 4,920   | 3,440   | 1,400  | 1,140  | 1,130  | 1,370  |
| 17          | 1,320         | 1,480      | 1,700      | 1,100   | 1,000    | 900      | 5,180   | 3,310   | 1,430  | 1,160  | 1,090  | 1,330  |
| 18          | 1,280         | 1,460      | 1,700      | 1,100   | 980      | 920      | 5,510   | 3,190   | 1,420  | 1,170  | 1,160  | 1,340  |
| 19          | 1,280         | 1,470      | 1,700      | 1,100   | 960      | 940      | 6,000   | 3,050   | 1,350  | 1,140  | 1,400  | 1,360  |
| 20          | 1,300         | 1,490      | 1,700      | 1,100   | 920      | 980      | 6,710   | 2,880   | 1,280  | 1,130  | 1,560  | 1,410  |
| 21          | 1,320         | 1,500      | 1,700      | 1,100   | 900      | 1,000    | 7,610   | 2,730   | 1,190  | 1,100  | 1,760  | 1,440  |
| 22          | 1,410         | 1,500      | 1,600      | 1,100   | 880      | 1,100    | 8,690   | 2,580   | 1,150  | 1,110  | 1,830  | 1,420  |
| 23          | 1,490         | 1,490      | 1,600      | 1,100   | 860      | 1,100    | 9,560   | 2,390   | 1,120  | 1,100  | 1,890  | 1,400  |
| 24          | 1,530         | 1,450      | 1,600      | 1,100   | 840      | 1,200    | 10,100  | 2,220   | 1,090  | 1,060  | 1,970  | 1,390  |
| 25          | 1,550         | 1,380      | 1,600      | 1,100   | 820      | 1,300    | 10,200  | 2,060   | 1,080  | 1,040  | 2,020  | 1,480  |
| 26          | 1,550         | 1,340      | 1,600      | 1,100   | 820      | 1,500    | 10,100  | 1,860   | 1,070  | 1,030  | 2,240  | 2,000  |
| 27          | 1,540         | 1,320      | 1,600      | 1,100   | 820      | 1,600    | 9,590   | 1,710   | 1,050  | 1,060  | 2,500  | 2,440  |
| 28          | 1,520         | 1,240      | 1,600      | 1,100   | 800      | 1,800    | 8,930   | 1,570   | 1,040  | 1,070  | 2,630  | 2,800  |
| 29          | 1,480         | 1,200      | 1,500      | 1,100   | 800      | 2,000    | 8,220   | 1,470   | 1,010  | 1,080  | 2,730  | 3,270  |
| 30          | 1,450         | 1,200      | 1,500      | 1,100   | -----    | 2,200    | 7,540   | 1,390   | 1,010  | 1,080  | 2,780  | 3,510  |
| 31          | 1,460         | -----      | 1,400      | 1,100   | -----    | 2,300    | -----   | 1,340   | -----  | 1,070  | 2,770  | -----  |
| TOTAL       | 45,800        | 47,690     | 46,700     | 36,500  | 28,700   | 34,160   | 163,320 | 116,770 | 35,810 | 32,374 | 47,505 | 58,950 |
| MEAN        | 1,477         | 1,590      | 1,506      | 1,177   | 990      | 1,102    | 5,444   | 3,767   | 1,194  | 1,044  | 1,532  | 1,965  |
| MAX         | 1,630         | 2,090      | 1,700      | 1,400   | 1,100    | 2,300    | 10,200  | 7,060   | 1,430  | 1,170  | 2,780  | 3,510  |
| MIN         | 1,280         | 1,200      | 1,200      | 1,100   | 800      | 800      | 2,200   | 1,340   | 1,010  | 924    | 978    | 1,330  |
| CFSM        | .66           | .71        | .67        | .53     | .44      | .49      | 2.43    | 1.68    | .53    | .47    | .68    | .88    |
| IN.         | .76           | .79        | .78        | .61     | .48      | .57      | 2.71    | 1.94    | .59    | .54    | .79    | .98    |
| CAL YR 1971 | TOTAL 675,395 | MEAN 1,850 | MAX 9,980  | MIN 840 | CFSM .83 | IN 11.22 |         |         |        |        |        |        |
| WTR YR 1972 | TOTAL 694,279 | MEAN 1,897 | MAX 10,200 | MIN 800 | CFSM .85 | IN 11.53 |         |         |        |        |        |        |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04080950 Emmons Creek near Rural, Wis.

LOCATION.--Lat 44°18'55", long 89°11'34", in NW 1/4 NE 1/4 sec.8, T.21 N., R.11 E., Waupaca County, 0.8 mile upstream from Long Lake and 1.8 miles west of Rural.

DRAINAGE AREA.--27 sq mi, approximately; the ground-water drainage area is about one-third larger than the surface-water drainage area.

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

GAGE.--Nonrecording gage and crest-stage gage. Altitude of gage is 890 ft (by barometer).

EXTREMES.--Current year: Maximum discharge, 54 cfs Aug. 26 (gage height, 3.13 ft, from graph based on gage readings); minimum daily, 21 cfs July 25.  
 Period of record: Maximum discharge, 142 cfs May 27, 1969 (gage height, 4.28 ft); minimum, 21 cfs Aug. 30, 1969, Feb. 14, Aug. 3, 8, 10, 15-17, 20-28, 1970, July 25, 1972.

REMARKS.--Records good.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
 (Stage-discharge relation affected by ice Dec. 30, 31, Jan. 14-18, Jan. 25 to Feb. 1, Feb. 3, 6, 8-11, Mar. 2, 3, 5, 6, 8-10.)

|     |    |     |    |
|-----|----|-----|----|
| 2.1 | 20 | 3.0 | 48 |
| 2.5 | 32 | 3.1 | 52 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC  | JAN  | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-------|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1     | 26   | 27    | 27   | 25   | 24    | 24   | 27    | 28   | 24    | 23   | 22   | 27    |
| 2     | 26   | 38    | 26   | 25   | 24    | 24   | 27    | 28   | 24    | 23   | 24   | 24    |
| 3     | 29   | 29    | 26   | 24   | 24    | 24   | 27    | 28   | 24    | 23   | 22   | 24    |
| 4     | 27   | 28    | 26   | 27   | 24    | 24   | 26    | 27   | 24    | 23   | 22   | 24    |
| 5     | 26   | 28    | 27   | 25   | 24    | 24   | 27    | 27   | 24    | 23   | 22   | 24    |
| 6     | 27   | 28    | 27   | 27   | 24    | 24   | 27    | 27   | 24    | 23   | 22   | 24    |
| 7     | 26   | 26    | 27   | 25   | 24    | 24   | 27    | 27   | 24    | 23   | 26   | 24    |
| 8     | 27   | 26    | 28   | 25   | 24    | 24   | 27    | 27   | 24    | 23   | 25   | 24    |
| 9     | 26   | 27    | 28   | 25   | 24    | 24   | 27    | 27   | 24    | 23   | 23   | 24    |
| 10    | 26   | 28    | 30   | 25   | 24    | 34   | 28    | 27   | 23    | 22   | 23   | 24    |
| 11    | 26   | 27    | 29   | 25   | 24    | 24   | 31    | 26   | 23    | 22   | 24   | 25    |
| 12    | 26   | 26    | 28   | 25   | 24    | 27   | 31    | 26   | 26    | 22   | 23   | 24    |
| 13    | 26   | 26    | 27   | 24   | 24    | 24   | 34    | 27   | 24    | 22   | 22   | 28    |
| 14    | 26   | 27    | 27   | 24   | 24    | 25   | 31    | 27   | 27    | 24   | 22   | 26    |
| 15    | 26   | 27    | 36   | 23   | 24    | 25   | 32    | 27   | 24    | 23   | 23   | 24    |
| 16    | 26   | 28    | 29   | 23   | 24    | 25   | 31    | 27   | 24    | 22   | 23   | 24    |
| 17    | 26   | 27    | 28   | 24   | 24    | 25   | 30    | 26   | 24    | 22   | 23   | 24    |
| 18    | 26   | 31    | 28   | 24   | 24    | 26   | 30    | 26   | 24    | 22   | 23   | 34    |
| 19    | 27   | 28    | 27   | 24   | 23    | 26   | 29    | 26   | 23    | 24   | 26   | 27    |
| 20    | 26   | 28    | 27   | 24   | 23    | 26   | 29    | 26   | 23    | 24   | 24   | 26    |
| 21    | 26   | 27    | 27   | 24   | 23    | 29   | 30    | 26   | 23    | 24   | 23   | 26    |
| 22    | 26   | 26    | 26   | 24   | 23    | 30   | 36    | 25   | 23    | 22   | 24   | 26    |
| 23    | 26   | 26    | 26   | 24   | 23    | 30   | 30    | 25   | 23    | 22   | 24   | 25    |
| 24    | 26   | 27    | 27   | 24   | 24    | 27   | 29    | 25   | 23    | 22   | 29   | 25    |
| 25    | 26   | 27    | 26   | 24   | 23    | 27   | 28    | 25   | 23    | 21   | 26   | 43    |
| 26    | 26   | 28    | 26   | 23   | 23    | 27   | 28    | 25   | 23    | 22   | 50   | 46    |
| 27    | 26   | 28    | 26   | 23   | 23    | 27   | 28    | 25   | 23    | 23   | 29   | 28    |
| 28    | 26   | 27    | 25   | 23   | 24    | 27   | 27    | 24   | 24    | 22   | 25   | 27    |
| 29    | 26   | 28    | 25   | 23   | 23    | 27   | 27    | 25   | 23    | 22   | 25   | 33    |
| 30    | 27   | 27    | 25   | 23   | ----- | 27   | 27    | 27   | 23    | 23   | 25   | 29    |
| 31    | 28   | ----- | 25   | 23   | ----- | 27   | ----- | 25   | ----- | 22   | 25   | ----- |
| TOTAL | 816  | 831   | 842  | 751  | 687   | 808  | 868   | 814  | 712   | 701  | 769  | 813   |
| MEAN  | 26.3 | 27.7  | 27.2 | 24.2 | 23.7  | 26.1 | 28.9  | 26.3 | 23.7  | 22.6 | 24.8 | 27.1  |
| MAX   | 29   | 38    | 36   | 27   | 24    | 34   | 36    | 28   | 27    | 24   | 50   | 46    |
| MIN   | 26   | 26    | 25   | 23   | 23    | 24   | 26    | 24   | 23    | 21   | 22   | 24    |
| CFSM  | .97  | 1.03  | 1.01 | .90  | .88   | .97  | 1.07  | .97  | .88   | .84  | .92  | 1.00  |
| IN.   | 1.12 | 1.14  | 1.16 | 1.03 | .95   | 1.11 | 1.20  | 1.12 | .98   | .97  | 1.06 | 1.12  |

|             |       |       |      |      |     |    |     |    |      |     |    |       |
|-------------|-------|-------|------|------|-----|----|-----|----|------|-----|----|-------|
| CAL YR 1971 | TOTAL | 9,596 | MEAN | 26.3 | MAX | 56 | MIN | 23 | CFSM | .97 | IN | 13.22 |
| WTR YR 1972 | TOTAL | 9,412 | MEAN | 25.7 | MAX | 50 | MIN | 21 | CFSM | .95 | IN | 12.97 |

## 57

LOCATION.--Lat 44°00'41", long 88°32'01", in SW 1/4 sec.24, T.18 N., R.16 E., Winnebago County, in mouth of the Upper Fox River at Chicago and North Western Railway bridge, 0.2 mile downstream from Main Street Bridge in Oshkosh and 18 miles south of Menasha Dam and outlet.

PERIOD OF RECORD.--October 1938 to current year in reports of Geological Survey. Records from 1857 to 1938 in files of Corps of Engineers. A report on Fox River by Corps of Engineers, published as House Document No. 146, 67th Congress, 2nd session, contains semi-monthly records of inflow of Lake Winnebago for the period 1896-1917.

EXTREMES.--Current year: Maximum gage height observed, 3.30 ft Sept. 1; minimum observed, 0.94 ft Mar. 19, 20.  
Period of record: Maximum gage height observed, 5.33 ft (Deuchman gage) Nov. 8, 1881, minimum observed, -2.00 ft (Deuchman gage) Nov. 28, 1891.

COOPERATION.--Records furnished by Corps of Engineers.

| DAY  | OCT  | NOV   | DEC  | JAN  | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|------|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1    | 2.51 | 2.82  | 2.71 | 2.69 | 1.96  | 1.44 | 1.27  | 2.89 | 3.13  | 2.88 | 2.84 | 3.30  |
| 2    | 2.54 | 2.79  | 2.87 | 2.69 | 2.05  | 1.44 | 1.29  | 2.92 | 3.14  | 3.04 | 2.80 | 3.24  |
| 3    | 2.57 | 3.02  | 2.64 | 2.66 | 2.02  | 1.47 | 1.30  | 2.99 | 3.08  | 2.92 | 2.88 | 3.16  |
| 4    | 2.53 | 2.97  | 2.61 | 2.63 | 2.00  | 1.52 | 1.38  | 3.00 | 3.18  | 2.95 | 2.83 | 3.09  |
| 5    | 2.53 | 2.86  | 2.63 | 2.62 | 1.99  | 1.46 | 1.40  | 3.02 | 3.12  | 2.88 | 2.79 | 3.06  |
| 6    | 2.51 | 2.68  | 2.60 | 2.60 | 1.94  | 1.46 | 1.44  | 3.02 | 3.15  | 2.89 | 2.82 | 3.06  |
| 7    | 2.53 | 2.84  | 2.59 | 2.60 | 1.91  | 1.38 | 1.44  | 3.03 | 3.12  | 2.87 | 2.84 | 2.99  |
| 8    | 2.52 | 2.86  | 2.60 | 2.56 | 1.90  | 1.34 | 1.49  | 3.00 | 3.10  | 2.90 | 2.84 | 2.98  |
| 9    | 2.56 | 2.78  | 2.57 | 2.54 | 1.90  | 1.32 | 1.54  | 2.96 | 3.13  | 2.87 | 2.80 | 2.94  |
| 10   | 2.60 | 2.86  | 2.63 | 2.50 | 1.86  | 1.28 | 1.54  | 2.95 | 3.04  | 2.90 | 2.78 | 2.90  |
| 11   | 2.62 | 2.82  | 2.64 | 2.54 | 1.82  | 1.20 | 1.60  | 2.95 | 3.00  | 2.89 | 2.78 | 2.84  |
| 12   | 2.64 | 2.84  | 2.57 | 2.48 | 1.80  | 1.17 | 1.64  | 2.96 | 3.02  | 2.89 | 2.84 | 2.80  |
| 13   | 2.63 | 2.88  | 2.64 | 2.46 | 1.76  | 1.12 | 1.78  | 2.96 | 3.02  | 2.88 | 2.82 | 2.90  |
| 14   | 2.61 | 2.73  | 2.60 | 2.45 | 1.74  | 1.05 | 1.82  | 2.87 | 3.08  | 2.93 | 2.86 | 2.80  |
| 15   | 2.65 | 2.77  | 2.69 | 2.44 | 1.72  | 1.02 | 1.88  | 2.91 | 3.08  | 2.91 | 2.82 | 2.75  |
| 16   | 2.67 | 2.70  | 2.68 | 2.40 | 1.71  | 1.00 | 1.92  | 2.96 | 3.13  | 2.87 | 2.72 | 2.76  |
| 17   | 2.60 | 2.81  | 2.67 | 2.40 | 1.68  | .96  | 1.98  | 2.96 | 3.10  | 2.92 | 2.80 | 2.70  |
| 18   | 2.67 | 2.76  | 2.69 | 2.36 | 1.69  | .95  | 2.06  | 3.02 | 3.07  | 2.83 | 2.77 | 2.82  |
| 19   | 2.62 | 2.75  | 2.69 | 2.35 | 1.66  | .94  | 2.12  | 3.02 | 3.05  | 2.86 | 2.90 | 2.70  |
| 20   | 2.69 | 2.80  | 2.68 | 2.36 | 1.66  | .94  | 2.18  | 3.06 | 3.02  | 2.81 | 2.88 | 2.78  |
| 21   | 2.75 | 2.83  | 2.69 | 2.32 | 1.62  | 1.00 | 2.28  | 3.08 | 3.08  | 2.92 | 2.90 | 2.77  |
| 22   | 2.74 | 2.80  | 2.66 | 2.29 | 1.63  | 1.06 | 2.35  | 3.10 | 3.08  | 2.90 | 3.00 | 2.82  |
| 23   | 2.87 | 2.70  | 2.64 | 2.24 | 1.60  | 1.08 | 2.46  | 3.12 | 3.00  | 2.86 | 2.96 | 2.78  |
| 24   | 2.79 | 2.69  | 2.66 | 2.24 | 1.58  | 1.10 | 2.62  | 3.12 | 2.96  | 2.84 | 2.98 | 2.73  |
| 25   | 2.82 | 2.73  | 2.68 | 2.22 | 1.56  | 1.10 | 2.64  | 3.12 | 2.98  | 2.88 | 3.04 | 2.78  |
| 26   | 2.82 | 2.75  | 2.68 | 2.20 | 1.53  | 1.10 | 2.67  | 3.15 | 2.95  | 2.82 | 3.07 | 2.73  |
| 27   | 2.81 | 2.79  | 2.65 | 2.17 | 1.49  | 1.10 | 2.71  | 3.14 | 2.93  | 2.84 | 3.07 | 2.87  |
| 28   | 2.74 | 2.78  | 2.64 | 2.17 | 1.50  | 1.14 | 2.76  | 3.11 | 2.95  | 2.83 | 3.14 | 2.84  |
| 29   | 2.82 | 2.79  | 2.62 | 2.16 | 1.48  | 1.20 | 2.83  | 3.12 | 2.93  | 2.80 | 3.18 | 2.78  |
| 30   | 2.87 | 2.70  | 2.65 | 2.10 | ----- | 1.26 | 2.82  | 3.24 | 2.92  | 2.76 | 3.18 | 2.83  |
| 31   | 2.61 | ----- | 2.70 | 2.04 | ----- | 1.26 | ----- | 3.16 | ----- | 2.77 | 3.14 | ----- |
| MEAN | 2.66 | 2.80  | 2.65 | 2.40 | 1.75  | 1.19 | 1.97  | 3.03 | 3.05  | 2.87 | 2.91 | 2.88  |
| MAX  | 2.87 | 3.02  | 2.71 | 2.69 | 2.05  | 1.52 | 2.83  | 3.24 | 3.18  | 3.04 | 3.18 | 3.30  |
| MIN  | 2.51 | 2.68  | 2.57 | 2.04 | 1.48  | .94  | 1.27  |      |       |      |      |       |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04084500 Fox River at Rapide Croche Dam, near Wrightstown, Wis.

LOCATION.--Lat 44°19'03", long 88°11'50", in SE 1/4 sec.4, T.21 N., R.19 E., Outagamie County, at Rapide Croche Dam, 2.0 miles upstream from Wrightstown, and 18 miles upstream from mouth.

DRAINAGE AREA.--6,150 sq mi, approximately.

RECORDS AVAILABLE.--March 1896 to September 1917 (monthly discharge only), October 1917 to current year.

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

AVERAGE DISCHARGE.--76 years, 4,140 cfs.

EXTREMES.--Current year: Maximum daily discharge during year, 13,200 cfs Apr. 25; minimum daily, 1,340 cfs

July 6, Aug. 9.

Period of record: Maximum daily discharge, 24,000 cfs Apr. 18, 1952; minimum daily, 138 cfs Aug. 2, 1936.

REMARKS.--Records good. Flow regulated by storage in Lake Winnebago (see p. 57). Daily discharge determined from records of flow through turbines, head, gate openings, and lockages through navigation canal. Usually less than about 5 cfs 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT             | NOV     | DEC        | JAN     | FEB        | MAR     | APR       | MAY     | JUN    | JUL    | AUG    | SEP     |
|-------------|-----------------|---------|------------|---------|------------|---------|-----------|---------|--------|--------|--------|---------|
| 1           | 1,820           | 2,250   | 4,560      | 4,220   | 3,580      | 3,480   | 6,710     | 10,300  | 2,840  | 2,090  | 2,000  | 7,000   |
| 2           | 1,540           | 3,780   | 5,000      | 4,190   | 3,470      | 4,450   | 6,530     | 10,700  | 2,800  | 2,210  | 2,550  | 7,860   |
| 3           | 1,780           | 4,340   | 4,520      | 4,140   | 3,460      | 4,400   | 6,390     | 11,200  | 2,660  | 1,860  | 1,930  | 6,980   |
| 4           | 1,520           | 4,450   | 3,920      | 4,120   | 2,870      | 4,120   | 6,070     | 11,100  | 2,800  | 1,660  | 1,810  | 7,160   |
| 5           | 1,800           | 4,620   | 4,220      | 3,940   | 3,560      | 4,280   | 5,900     | 11,200  | 2,730  | 2,010  | 2,000  | 8,200   |
| 6           | 1,640           | 4,320   | 4,640      | 4,070   | 3,420      | 4,670   | 6,170     | 11,200  | 2,680  | 1,340  | 1,960  | 7,340   |
| 7           | 1,590           | 3,780   | 4,600      | 4,260   | 3,340      | 4,900   | 6,030     | 11,100  | 2,620  | 2,360  | 1,580  | 7,740   |
| 8           | 1,910           | 4,180   | 4,590      | 4,370   | 3,310      | 4,620   | 5,060     | 11,100  | 2,640  | 1,960  | 2,830  | 6,610   |
| 9           | 1,800           | 4,520   | 4,860      | 3,980   | 3,300      | 4,640   | 5,530     | 11,100  | 2,680  | 1,890  | 1,340  | 6,650   |
| 10          | 1,560           | 4,070   | 5,050      | 4,340   | 3,340      | 5,210   | 6,020     | 11,200  | 1,920  | 1,820  | 2,340  | 7,020   |
| 11          | 1,700           | 3,880   | 5,210      | 4,240   | 3,220      | 5,600   | 6,240     | 11,300  | 2,480  | 2,050  | 2,670  | 6,920   |
| 12          | 1,620           | 3,840   | 3,640      | 4,220   | 3,280      | 5,040   | 6,400     | 10,800  | 2,810  | 2,060  | 1,760  | 6,250   |
| 13          | 1,620           | 3,790   | 3,980      | 4,060   | 3,310      | 5,170   | 6,560     | 9,550   | 2,150  | 2,090  | 1,950  | 9,290   |
| 14          | 1,750           | 3,660   | 4,260      | 3,640   | 3,270      | 4,940   | 6,400     | 9,220   | 2,890  | 2,140  | 1,980  | 6,690   |
| 15          | 1,740           | 3,860   | 4,900      | 3,970   | 3,100      | 5,180   | 6,560     | 8,980   | 2,790  | 1,810  | 1,870  | 6,840   |
| 16          | 1,630           | 3,770   | 4,740      | 4,180   | 3,140      | 5,000   | 6,130     | 6,500   | 1,850  | 1,840  | 1,930  | 6,550   |
| 17          | 1,580           | 3,680   | 4,320      | 4,300   | 3,110      | 4,840   | 7,170     | 4,900   | 2,420  | 2,260  | 2,130  | 6,480   |
| 18          | 1,740           | 3,780   | 3,760      | 4,160   | 3,100      | 4,930   | 6,960     | 3,250   | 2,540  | 2,000  | 2,410  | 6,760   |
| 19          | 1,880           | 3,880   | 3,910      | 3,640   | 2,820      | 5,140   | 6,030     | 2,570   | 2,700  | 1,980  | 2,360  | 7,070   |
| 20          | 1,900           | 4,040   | 4,400      | 3,790   | 3,080      | 5,150   | 6,140     | 2,330   | 2,230  | 2,310  | 2,400  | 7,200   |
| 21          | 1,620           | 3,170   | 4,340      | 3,260   | 2,860      | 5,500   | 5,940     | 2,840   | 2,270  | 2,120  | 2,400  | 7,400   |
| 22          | 1,980           | 3,780   | 4,280      | 3,820   | 3,000      | 6,360   | 7,890     | 2,640   | 2,000  | 2,560  | 2,430  | 6,430   |
| 23          | 1,650           | 5,090   | 4,400      | 3,570   | 3,220      | 6,260   | 6,680     | 2,330   | 1,770  | 1,980  | 2,300  | 6,700   |
| 24          | 1,860           | 5,060   | 4,050      | 3,370   | 3,820      | 6,450   | 8,250     | 2,880   | 1,910  | 2,130  | 1,980  | 6,560   |
| 25          | 2,060           | 4,480   | 4,060      | 3,450   | 3,880      | 6,560   | 13,200    | 2,780   | 2,000  | 1,790  | 2,920  | 6,520   |
| 26          | 2,080           | 4,640   | 3,490      | 3,540   | 3,680      | 6,530   | 10,600    | 2,570   | 2,060  | 2,120  | 2,990  | 7,220   |
| 27          | 2,500           | 4,570   | 4,220      | 4,170   | 3,340      | 6,380   | 10,200    | 2,840   | 2,050  | 2,240  | 2,700  | 6,890   |
| 28          | 2,020           | 4,640   | 4,780      | 3,540   | 3,630      | 6,380   | 10,700    | 2,720   | 2,210  | 1,520  | 2,720  | 7,380   |
| 29          | 1,550           | 4,800   | 4,320      | 3,420   | 3,880      | 6,310   | 10,800    | 2,740   | 2,140  | 1,860  | 2,730  | 8,940   |
| 30          | 2,000           | 4,380   | 4,120      | 3,300   | -----      | 6,260   | 10,100    | 2,300   | 2,260  | 1,940  | 3,410  | 7,380   |
| 31          | 2,660           | -----   | 4,370      | 3,500   | -----      | 6,400   | -----     | 2,450   | -----  | 2,000  | 5,000  | -----   |
| TOTAL       | 56,100          | 123,100 | 135,510    | 120,770 | 96,390     | 165,150 | 219,360   | 208,710 | 71,300 | 62,000 | 73,380 | 214,030 |
| MEAN        | 1,810           | 4,103   | 4,371      | 3,896   | 3,324      | 5,327   | 7,312     | 6,733   | 2,377  | 2,000  | 2,367  | 7,134   |
| MAX         | 2,660           | 5,090   | 5,210      | 4,370   | 3,880      | 6,560   | 13,200    | 11,300  | 2,890  | 2,560  | 5,000  | 9,290   |
| MIN         | 1,520           | 2,250   | 3,490      | 3,260   | 2,820      | 3,480   | 5,060     | 2,300   | 1,770  | 1,340  | 1,340  | 6,250   |
| CAL YR 1971 | TOTAL 1,457,840 |         | MEAN 3,994 |         | MAX 10,800 |         | MIN 1,280 |         |        |        |        |         |
| WTR YR 1972 | TOTAL 1,545,800 |         | MEAN 4,223 |         | MAX 13,200 |         | MIN 1,340 |         |        |        |        |         |

04085200 Kewaunee River near Kewaunee, Wis.

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

DRAINAGE AREA.--129 sq mi.

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 water years 1965 and 1966.

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

AVERAGE DISCHARGE.--6 years, 70.7 cfs (7.44 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,500 cfs Mar. 22 (gage height, 15.29 ft, backwater from ice); minimum discharge, 6.9 cfs Nov. 22 (gage height, 7.92 ft), result of freezeup.  
Period of record: Maximum discharge, 6,500 cfs Mar. 30, 1960 (gage height, 16.03 ft); minimum recorded, 4.5 cfs Nov. 3, 4, 1966 (gage height, 8.14 ft).

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 1-6, 13, 14, 17-25, Dec. 27 to Apr. 1.)

|     |     |      |       |
|-----|-----|------|-------|
| 8.2 | 12  | 10.0 | 302   |
| 8.3 | 18  | 11.0 | 683   |
| 8.5 | 36  | 12.0 | 1,260 |
| 9.0 | 98  | 13.0 | 2,140 |
| 9.5 | 181 |      |       |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC   | JAN  | FEB   | MAR    | APR   | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|------|-------|-------|------|-------|--------|-------|-------|-------|------|-------|-------|
| 1     | 41   | 24    | 32    | 46   | 28    | 37     | 220   | 112   | 24    | 15   | 13    | 88    |
| 2     | 32   | 241   | 29    | 42   | 29    | 35     | 299   | 177   | 24    | 15   | 21    | 142   |
| 3     | 24   | 234   | 26    | 39   | 28    | 34     | 515   | 160   | 20    | 15   | 26    | 134   |
| 4     | 22   | 108   | 25    | 34   | 27    | 34     | 427   | 134   | 61    | 14   | 19    | 88    |
| 5     | 22   | 70    | 26    | 32   | 27    | 34     | 341   | 106   | 32    | 13   | 16    | 67    |
| 6     | 18   | 52    | 30    | 31   | 26    | 35     | 277   | 92    | 28    | 13   | 17    | 62    |
| 7     | 18   | 40    | 48    | 34   | 26    | 38     | 211   | 84    | 25    | 15   | 36    | 55    |
| 8     | 18   | 33    | 62    | 38   | 26    | 37     | 194   | 74    | 24    | 15   | 48    | 48    |
| 9     | 20   | 32    | 87    | 42   | 26    | 36     | 196   | 65    | 22    | 15   | 73    | 44    |
| 10    | 20   | 31    | 243   | 45   | 27    | 36     | 320   | 58    | 19    | 16   | 55    | 38    |
| 11    | 19   | 30    | 1,030 | 42   | 28    | 36     | 627   | 55    | 19    | 15   | 43    | 42    |
| 12    | 18   | 29    | 329   | 38   | 29    | 37     | 557   | 50    | 33    | 17   | 33    | 42    |
| 13    | 17   | 28    | 130   | 30   | 30    | 37     | 623   | 49    | 39    | 17   | 29    | 46    |
| 14    | 16   | 27    | 110   | 23   | 30    | 38     | 499   | 50    | 44    | 17   | 24    | 46    |
| 15    | 16   | 25    | 253   | 20   | 31    | 39     | 484   | 53    | 87    | 25   | 22    | 41    |
| 16    | 15   | 24    | 723   | 24   | 30    | 40     | 446   | 53    | 61    | 25   | 53    | 36    |
| 17    | 14   | 26    | 180   | 28   | 30    | 42     | 351   | 47    | 44    | 20   | 189   | 33    |
| 18    | 14   | 25    | 120   | 29   | 29    | 43     | 271   | 43    | 36    | 18   | 157   | 54    |
| 19    | 15   | 24    | 110   | 30   | 29    | 46     | 231   | 41    | 32    | 16   | 185   | 66    |
| 20    | 20   | 24    | 82    | 31   | 30    | 50     | 185   | 40    | 29    | 23   | 116   | 58    |
| 21    | 31   | 22    | 74    | 30   | 31    | 500    | 152   | 37    | 28    | 43   | 78    | 98    |
| 22    | 34   | 18    | 68    | 30   | 32    | 2,100  | 396   | 35    | 25    | 30   | 74    | 126   |
| 23    | 42   | 22    | 64    | 29   | 32    | 1,900  | 683   | 33    | 23    | 23   | 97    | 91    |
| 24    | 35   | 19    | 56    | 28   | 32    | 1,400  | 386   | 31    | 21    | 18   | 291   | 66    |
| 25    | 30   | 20    | 64    | 26   | 31    | 1,300  | 248   | 29    | 20    | 16   | 196   | 76    |
| 26    | 26   | 26    | 70    | 26   | 32    | 1,500  | 170   | 27    | 20    | 15   | 285   | 209   |
| 27    | 25   | 42    | 68    | 26   | 34    | 1,300  | 137   | 25    | 19    | 16   | 332   | 280   |
| 28    | 24   | 43    | 64    | 26   | 37    | 1,000  | 119   | 24    | 19    | 16   | 213   | 234   |
| 29    | 24   | 44    | 45    | 26   | 38    | 500    | 104   | 24    | 18    | 15   | 131   | 640   |
| 30    | 22   | 40    | 33    | 26   | ----- | 300    | 94    | 27    | 16    | 14   | 90    | 484   |
| 31    | 23   | ----- | 45    | 27   | ----- | 250    | ----- | 26    | ----- | 13   | 66    | ----- |
| TOTAL | 715  | 1,423 | 4,326 | 978  | 865   | 12,814 | 9,763 | 1,861 | 912   | 558  | 3,028 | 3,534 |
| MEAN  | 23.1 | 47.4  | 140   | 31.5 | 29.8  | 413    | 325   | 60.0  | 30.4  | 18.0 | 97.7  | 118   |
| MAX   | 42   | 241   | 1,030 | 46   | 38    | 2,100  | 683   | 177   | 87    | 43   | 332   | 640   |
| MIN   | 14   | 18    | 25    | 20   | 26    | 34     | 94    | 24    | 16    | 13   | 13    | 33    |
| CFSM  | .18  | .37   | 1.09  | .24  | .23   | 3.20   | 2.52  | .47   | .24   | .14  | .76   | .91   |
| IN.   | .21  | .41   | 1.25  | .28  | .25   | 3.70   | 2.82  | .54   | .26   | .16  | .87   | 1.02  |

CAL YR 1971 TOTAL 32,678.8 MEAN 89.5 MAX 1,370 MIN 9.4 CFSM .69 IN 9.42  
WTR YR 1972 TOTAL 40,777.0 MEAN 111 MAX 2,100 MIN 13 CFSM .86 IN 11.76

## PEAK DISCHARGE (BASE, 500 CFS)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 12-11 | 0900 | 12.16 | 1,380     | 4-13 | 1900 | 11.04 | 703       |
| 12-16 | 0730 | 11.53 | 962       | 4-23 | 0900 | 11.16 | 763       |
| 3-22  | 1630 | 15.29 | a2,500    | 9-29 | 1630 | 11.25 | 810       |

a About.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04085500 Cedar Lake near Kiel, Wis.

LOCATION.--Lat 43°55'35", long 87°56'25", in SW 1/4 sec.24, T.17 N., R.21 E., Manitowoc County, at Cedar Lake Resort on narrows of Lake, 5.8 miles east of Kiel.

DRAINAGE AREA.--1.33 sq mi.

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

GAGE.--Nonrecording gage. Altitude of gage is 890 ft (from topographic map).

EXTREMES.--Current year: Maximum elevation observed, 96.30 ft Sept. 30; minimum observed, 94.61 ft Nov. 27.  
 Period of record: Maximum elevation observed, 98.72 ft Mar. 9, 1946; minimum observed, 93.34 ft Oct. 4, Nov. 1, 1958, Jan. 17, 1959.  
 An elevation of 100.37 ft was observed May 20, 1929, by Wisconsin Department of Natural Resources.

REMARKS.--Gage heights have been reduced to elevations above datum assumed for this lake by Wisconsin Department of Natural Resources. Lake ice covered about Dec. 4 to Apr. 15.

## GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | OCT  | NOV   | DEC  | JAN  | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-----|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1   |      |       |      |      |       |      |       |      |       |      |      |       |
| 2   | 4.67 |       |      |      |       |      |       |      |       |      |      | 6.14  |
| 3   |      |       |      |      |       |      |       |      | 5.58  |      |      |       |
| 4   |      |       |      |      |       |      |       |      |       |      | 5.86 |       |
| 5   |      |       |      |      |       |      |       |      |       |      |      |       |
| 6   |      | 4.70  |      |      |       |      |       | 5.57 | 5.59  |      |      |       |
| 7   | 4.67 |       |      |      |       |      |       | 5.64 |       |      |      |       |
| 8   |      |       |      |      |       |      |       |      |       |      |      |       |
| 9   | 4.69 |       |      |      |       |      |       |      |       |      |      | 6.09  |
| 10  |      | 4.65  |      |      |       |      |       |      | 5.58  |      |      |       |
| 11  |      |       |      |      |       |      |       |      |       |      |      |       |
| 12  |      |       |      |      |       |      |       |      |       |      | 5.97 |       |
| 13  |      | 4.64  |      |      |       |      |       | 5.64 |       | 5.67 |      |       |
| 14  |      |       | 4.61 |      |       |      |       |      |       | 5.69 |      |       |
| 15  |      |       |      |      |       |      |       |      |       |      |      |       |
| 16  | 4.62 |       |      |      |       |      |       |      |       |      |      | 6.15  |
| 17  |      |       |      |      |       |      |       | 5.64 | 5.73  |      |      |       |
| 18  |      |       |      |      |       |      |       |      |       |      |      |       |
| 19  |      |       |      |      |       |      |       |      |       |      | 6.17 |       |
| 20  |      | 4.62  |      | 5.08 |       |      |       | 5.61 |       |      |      |       |
| 21  |      |       |      |      |       |      |       |      |       |      |      |       |
| 22  |      |       |      |      |       |      | 5.37  |      |       | 5.79 |      | 6.22  |
| 23  | 4.63 |       |      |      |       |      |       |      |       |      |      |       |
| 24  |      |       |      |      |       |      |       | 5.58 |       |      |      |       |
| 25  |      |       |      |      |       |      |       |      |       |      |      |       |
| 26  |      |       |      |      |       |      | 5.53  |      |       |      | 6.20 |       |
| 27  |      | 4.61  |      |      |       |      |       | 5.55 |       |      |      |       |
| 28  |      |       |      |      |       |      |       |      |       |      |      |       |
| 29  |      |       |      |      | 5.06  |      | 5.53  |      |       | 5.76 |      |       |
| 30  | 4.64 |       |      |      | ----- | 5.28 | ----- |      | ----- |      | 6.12 | 6.30  |
| 31  |      | ----- |      |      | ----- |      |       |      |       |      |      | ----- |

NOTE.--Add 90 ft to obtain elevation above datum assumed for this lake by Wisconsin Department of Natural Resources.

04086000 Sheboygan River at Sheboygan, Wis.

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, on left bank 400 ft upstream from bridge on State Highway 141, near west city limits of Sheboygan, and 4.2 miles upstream from mouth.

DRAINAGE AREA.--432 sq mi.

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.

GAGE.--Water-stage recorder. Datum of gage is 584.00 ft above mean sea level. June 1916 to June 1924, non-recording gage at site 0.7 mile downstream at different datum. November 1950 to June 1951, nonrecording gage at site 0.3 mile downstream at datum 3.15 ft lower.

AVERAGE DISCHARGE.--30 years (1916-24, 1950-72), 224 cfs (7.04 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,290 cfs Mar. 21 (gage height, 8.61 ft); minimum, 23 cfs Nov. 22 (gage height, 1.58 ft).

Period of record: Maximum discharge observed, 7,140 cfs Mar. 26, 1920 (gage height, 9.40 ft, datum then in use); minimum observed, about 1 cfs Aug. 27, 1922 (gage height, 1.48 ft, datum then in use), caused by shutdown of powerplants.

REVISIONS (WATER YEARS).--WSP 1307: 1917(M), 1919(M), 1921(M), 1923(M), WSP 1557: Drainage area.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Dec. 7 to Mar. 29, June 17 to July 24; stage-discharge relation affected by ice Dec. 1-4, 18-25, Dec. 27 to Mar. 16.)

|     |    |     |     |     |       |
|-----|----|-----|-----|-----|-------|
| 1.6 | 24 | 2.5 | 135 | 4.0 | 550   |
| 1.8 | 37 | 3.0 | 240 | 5.0 | 1,000 |
| 2.0 | 57 | 3.5 | 371 | 6.0 | 1,620 |
|     |    |     |     | 8.0 | 3,170 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT          | NOV      | DEC       | JAN    | FEB      | MAR     | APR    | MAY   | JUN   | JUL   | AUG   | SEP    |
|-------------|--------------|----------|-----------|--------|----------|---------|--------|-------|-------|-------|-------|--------|
| 1           | 43           | 50       | 66        | 190    | 55       | 56      | 677    | 377   | 113   | 57    | 58    | 143    |
| 2           | 34           | 111      | 66        | 150    | 64       | 54      | 665    | 481   | 104   | 60    | 82    | 137    |
| 3           | 45           | 142      | 66        | 150    | 65       | 54      | 647    | 477   | 104   | 62    | 95    | 128    |
| 4           | 37           | 111      | 66        | 120    | 65       | 54      | 578    | 381   | 101   | 56    | 106   | 113    |
| 5           | 36           | 86       | 61        | 100    | 66       | 56      | 545    | 290   | 90    | 54    | 91    | 111    |
| 6           | 41           | 64       | 62        | 100    | 60       | 58      | 546    | 261   | 84    | 54    | 99    | 108    |
| 7           | 38           | 44       | 91        | 110    | 58       | 58      | 535    | 335   | 76    | 65    | 127   | 103    |
| 8           | 37           | 54       | 106       | 110    | 56       | 58      | 421    | 308   | 69    | 65    | 176   | 108    |
| 9           | 34           | 65       | 122       | 110    | 56       | 50      | 440    | 280   | 66    | 81    | 176   | 98     |
| 10          | 37           | 82       | 232       | 120    | 56       | 54      | 416    | 261   | 64    | 88    | 172   | 88     |
| 11          | 36           | 58       | 501       | 110    | 54       | 130     | 433    | 226   | 55    | 93    | 193   | 91     |
| 12          | 34           | 59       | 378       | 110    | 54       | 200     | 436    | 204   | 57    | 84    | 303   | 110    |
| 13          | 39           | 54       | 200       | 98     | 60       | 400     | 678    | 199   | 64    | 73    | 242   | 160    |
| 14          | 37           | 56       | 146       | 82     | 60       | 260     | 701    | 195   | 96    | 73    | 191   | 197    |
| 15          | 40           | 52       | 765       | 76     | 60       | 200     | 634    | 193   | 128   | 67    | 172   | 172    |
| 16          | 33           | 53       | 1,040     | 74     | 60       | 170     | 602    | 193   | 143   | 70    | 185   | 141    |
| 17          | 29           | 55       | 702       | 80     | 60       | 262     | 575    | 178   | 116   | 67    | 240   | 120    |
| 18          | 31           | 57       | 450       | 82     | 58       | 610     | 547    | 160   | 103   | 66    | 247   | 338    |
| 19          | 36           | 54       | 230       | 82     | 56       | 970     | 586    | 146   | 88    | 73    | 242   | 644    |
| 20          | 43           | 64       | 280       | 82     | 52       | 1,550   | 566    | 145   | 79    | 73    | 215   | 500    |
| 21          | 44           | 60       | 340       | 82     | 54       | 2,280   | 500    | 130   | 82    | 84    | 191   | 1,040  |
| 22          | 53           | 40       | 300       | 82     | 54       | 2,390   | 1,110  | 115   | 75    | 145   | 180   | 995    |
| 23          | 51           | 44       | 250       | 78     | 52       | 1,460   | 1,010  | 110   | 66    | 130   | 168   | 783    |
| 24          | 53           | 58       | 210       | 72     | 52       | 1,110   | 810    | 93    | 58    | 98    | 178   | 619    |
| 25          | 51           | 53       | 190       | 66     | 52       | 1,030   | 631    | 88    | 58    | 78    | 178   | 590    |
| 26          | 48           | 59       | 170       | 62     | 54       | 981     | 534    | 76    | 57    | 76    | 191   | 1,010  |
| 27          | 48           | 72       | 160       | 60     | 56       | 927     | 469    | 70    | 56    | 87    | 226   | 1,060  |
| 28          | 49           | 80       | 160       | 60     | 56       | 1,020   | 393    | 66    | 58    | 91    | 231   | 889    |
| 29          | 45           | 93       | 170       | 60     | 56       | 920     | 359    | 67    | 58    | 85    | 210   | 889    |
| 30          | 44           | 70       | 180       | 60     | -----    | 746     | 330    | 110   | 58    | 70    | 178   | 828    |
| 31          | 41           | -----    | 190       | 62     | -----    | 651     | -----  | 127   | ----- | 64    | 158   | -----  |
| TOTAL       | 1,276        | 2,005    | 8,092     | 2,910  | 1,684    | 18,859  | 17,374 | 6,342 | 2,431 | 2,389 | 5,501 | 12,313 |
| MEAN        | 41.2         | 66.8     | 261       | 93.9   | 58.1     | 608     | 579    | 205   | 81.0  | 77.1  | 177   | 410    |
| MAX         | 53           | 142      | 1,080     | 190    | 68       | 2,390   | 1,110  | 481   | 143   | 145   | 303   | 1,060  |
| MIN         | 29           | 40       | 66        | 60     | 52       | 54      | 330    | 66    | 55    | 54    | 58    | 88     |
| CFSM        | .10          | .15      | .60       | .22    | .13      | 1.41    | 1.34   | .47   | .19   | .18   | .41   | .95    |
| IN.         | .11          | .17      | .70       | .25    | .15      | 1.62    | 1.50   | .55   | .21   | .21   | .47   | 1.06   |
| CAL YR 1971 | TOTAL 90,598 | MEAN 248 | MAX 2,600 | MIN 26 | CFSM .57 | IN 7.80 |        |       |       |       |       |        |
| WTR YR 1972 | TOTAL 81,176 | MEAN 222 | MAX 2,390 | MIN 29 | CFSM .51 | IN 6.99 |        |       |       |       |       |        |

PEAK DISCHARGE (BASE, 1,500 CFS).--Mar. 21 (2300) 3,290 cfs (8.61 ft).

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086150 Milwaukee River at Kewaskum, Wis.

LOCATION.--Lat 43°31'02", long 88°13'24", in SE 1/4 SE 1/4 sec.9, T.12 N., R.19 E., Washington County, on right abutment of small dam in Kewaskum, 50 ft above unnamed tributary and 2.6 miles above East Branch Milwaukee River.

DRAINAGE AREA.--146 sq mi.

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

GAGE.--Nonrecording gage and crest-stage gage. Altitude of gage is 930 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 1,060 cfs Sept. 21 (gage height, 7.06 ft); minimum observed, 6.2 cfs Oct. 2 (gage height, 1.88 ft).

Period of record: Maximum discharge, 1,060 cfs Sept. 21, 1972 (gage height, 7.06 ft); minimum observed, 1.1 cfs Aug. 25-28, 1970 (gage height, 1.64 ft).

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used July 19 to Sept. 30; stage-discharge relation affected by ice Jan. 19 to Mar. 18.)

|     |     |     |       |
|-----|-----|-----|-------|
| 1.8 | 4.0 | 3.0 | 89    |
| 1.9 | 6.8 | 4.0 | 260   |
| 2.1 | 15  | 5.0 | 535   |
| 2.3 | 26  | 6.0 | 920   |
| 2.5 | 40  | 7.0 | 1,350 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN  | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 6.8   | 10    | 14    | 22   | 13    | 15    | 180   | 225   | 40    | 20   | 18    | 78    |
| 2     | 6.2   | 13    | 15    | 20   | 14    | 17    | 160   | 208   | 37    | 21   | 25    | 74    |
| 3     | 7.5   | 22    | 15    | 18   | 14    | 16    | 130   | 182   | 37    | 28   | 30    | 67    |
| 4     | 10    | 19    | 14    | 16   | 13    | 14    | 110   | 168   | 38    | 27   | 28    | 62    |
| 5     | 7.5   | 17    | 14    | 15   | 13    | 13    | 134   | 162   | 32    | 26   | 28    | 56    |
| 6     | 8.3   | 15    | 15    | 15   | 13    | 13    | 131   | 172   | 34    | 25   | 40    | 60    |
| 7     | 6.8   | 14    | 16    | 16   | 12    | 14    | 89    | 162   | 29    | 28   | 51    | 60    |
| 8     | 7.5   | 14    | 19    | 16   | 12    | 14    | 70    | 165   | 27    | 31   | 49    | 46    |
| 9     | 6.8   | 15    | 21    | 16   | 11    | 14    | 178   | 146   | 19    | 43   | 40    | 40    |
| 10    | 6.8   | 14    | 29    | 16   | 11    | 15    | 131   | 134   | 19    | 59   | 40    | 31    |
| 11    | 6.8   | 13    | 46    | 15   | 12    | 16    | 116   | 108   | 19    | 41   | 52    | 40    |
| 12    | 6.8   | 13    | 40    | 14   | 12    | 17    | 131   | 102   | 31    | 33   | 130   | 44    |
| 13    | 6.8   | 12    | 38    | 13   | 12    | 18    | 159   | 89    | 113   | 37   | 120   | 44    |
| 14    | 6.8   | 12    | 40    | 13   | 12    | 24    | 178   | 77    | 75    | 32   | 120   | 46    |
| 15    | 6.8   | 12    | 64    | 13   | 12    | 33    | 185   | 73    | 64    | 32   | 110   | 44    |
| 16    | 6.8   | 12    | 100   | 15   | 12    | 54    | 189   | 79    | 46    | 32   | 79    | 43    |
| 17    | 6.8   | 12    | 68    | 16   | 12    | 100   | 200   | 73    | 45    | 30   | 68    | 43    |
| 18    | 7.5   | 12    | 46    | 17   | 12    | 160   | 189   | 73    | 40    | 30   | 60    | 376   |
| 19    | 8.3   | 13    | 39    | 17   | 12    | 282   | 192   | 68    | 35    | 29   | 99    | 382   |
| 20    | 9.0   | 13    | 43    | 16   | 12    | 354   | 185   | 56    | 32    | 29   | 94    | 500   |
| 21    | 9.8   | 12    | 42    | 15   | 13    | 720   | 175   | 48    | 53    | 30   | 81    | 1,040 |
| 22    | 9.0   | 12    | 41    | 14   | 13    | 535   | 251   | 41    | 46    | 29   | 90    | 932   |
| 23    | 9.8   | 12    | 39    | 14   | 13    | 382   | 220   | 40    | 37    | 28   | 88    | 720   |
| 24    | 10    | 12    | 36    | 14   | 13    | 314   | 238   | 38    | 31    | 27   | 81    | 720   |
| 25    | 9.8   | 13    | 32    | 13   | 12    | 304   | 238   | 34    | 23    | 27   | 79    | 680   |
| 26    | 9.0   | 13    | 30    | 13   | 12    | 260   | 196   | 31    | 23    | 29   | 110   | 640   |
| 27    | 9.8   | 14    | 25    | 13   | 12    | 240   | 162   | 32    | 20    | 33   | 130   | 563   |
| 28    | 10    | 15    | 21    | 13   | 12    | 220   | 162   | 32    | 20    | 28   | 120   | 440   |
| 29    | 9.8   | 16    | 20    | 13   | 12    | 200   | 152   | 32    | 20    | 28   | 99    | 382   |
| 30    | 9.0   | 15    | 22    | 13   | ----- | 180   | 152   | 40    | 20    | 28   | 85    | 371   |
| 31    | 9.4   | ----- | 23    | 13   | ----- | 170   | ----- | 44    | ----- | 21   | 81    | ----- |
| TOTAL | 252.0 | 411   | 1,027 | 467  | 358   | 4,728 | 4,983 | 2,934 | 1,105 | 941  | 2,325 | 8,624 |
| MEAN  | 8.13  | 13.7  | 33.1  | 15.1 | 12.3  | 153   | 166   | 94.6  | 36.8  | 30.4 | 75.0  | 287   |
| MAX   | 10    | 22    | 100   | 22   | 14    | 720   | 251   | 225   | 113   | 59   | 130   | 1,040 |
| MIN   | 6.2   | 10    | 14    | 13   | 11    | 13    | 70    | 31    | 19    | 20   | 18    | 31    |
| CFSM  | .06   | .09   | .23   | .10  | .08   | 1.05  | 1.14  | .65   | .25   | .21  | .51   | 1.97  |
| JN.   | .06   | .10   | .26   | .12  | .09   | 1.20  | 1.27  | .75   | .28   | .24  | .59   | 2.20  |

|             |       |          |      |      |     |       |     |     |      |     |    |      |
|-------------|-------|----------|------|------|-----|-------|-----|-----|------|-----|----|------|
| CAL YR 1971 | TOTAL | 26,846.1 | MEAN | 73.4 | MAX | 736   | MIN | 3.2 | CFSM | .50 | IN | 6.84 |
| WTR YR 1972 | TOTAL | 28,155.0 | MEAN | 76.9 | max | 1,040 | MIN | 6.2 | CFSM | .53 | IN | 7.17 |

NOTE.--No gage-height record Nov. 1 to Jan. 18.

04086200 East Branch Milwaukee River at New Fane, Wis.

LOCATION.--Lat 43°33'01", long 88°11'18", in center of sec.35, T.13 N., R.19 E., Fond du Lac County, on left bank at upstream side of bridge on County Trunk Highway S, 0.4 mile southwest of New Fane, 0.5 mile downstream from recreation dam (formerly a mill dam), and 6.0 miles upstream from mouth.

DRAINAGE AREA.--57.2 sq mi.

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

GAGE.--Nonrecording gage. Altitude of gage is 950 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, about 170 cfs Mar. 25; maximum observed gage height, 2.49 ft Mar. 25 (backwater from ice); minimum daily discharge, 4.2 cfs Oct. 2.  
Period of record: Maximum discharge, about 190 cfs Apr. 2, 1971; minimum daily, 0.76 cfs Sept. 16, 1971.

REVISION.--WRD Wis. 1971(M).

REMARKS.--Records fair except those for winter period and those for period of no gage-height record, which are poor. Water-stage recorder removed during period of bridge construction. Temporary nonrecording gage established 0.4 mile upstream at different datum and used Jan. 21 to Sept. 30.

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 21 to Mar. 25.)

| Oct. 1-31 |     |     |     | Jan. 21 to Sept. 30 |    |     |     |
|-----------|-----|-----|-----|---------------------|----|-----|-----|
| 0.70      | 0.7 | 1.1 | 2.3 | 0.4                 | 5  | 1.0 | 20  |
| .80       | .9  | 1.2 | 2.9 | .5                  | 7  | 1.5 | 49  |
| .90       | 1.2 | 1.4 | 6.3 | .7                  | 12 | 2.0 | 99  |
| 1.0       | 1.7 | 1.6 | 14  |                     |    | 2.5 | 177 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC  | JAN   | FEB   | MAR     | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-------|-------|-------|------|-------|-------|---------|-------|------|-------|------|------|-------|
| 1     | 4.5   | 10    | 10   | 15    | 7.4   | 6.2     | 59    | 47   | 17    | 14   | 16   | 22    |
| 2     | 4.2   | 12    | 11   | 14    | 7.4   | 6.8     | 58    | 56   | 16    | 19   | 18   | 22    |
| 3     | 5.3   | 13    | 11   | 12    | 7.6   | 7.2     | 56    | 56   | 19    | 19   | 17   | 19    |
| 4     | 5.3   | 13    | 11   | 11    | 7.6   | 7.5     | 47    | 56   | 17    | 18   | 16   | 18    |
| 5     | 5.3   | 11    | 11   | 9.8   | 7.4   | 7.8     | 46    | 56   | 16    | 17   | 15   | 17    |
| 6     | 6.1   | 10    | 12   | 9.6   | 7.2   | 8.0     | 46    | 56   | 16    | 16   | 22   | 16    |
| 7     | 6.1   | 10    | 13   | 10    | 7.0   | 8.2     | 46    | 50   | 15    | 20   | 27   | 16    |
| 8     | 5.5   | 10    | 14   | 11    | 7.0   | 8.2     | 42    | 45   | 14    | 18   | 27   | 15    |
| 9     | 5.5   | 10    | 16   | 11    | 7.0   | 8.0     | 39    | 42   | 14    | 27   | 30   | 15    |
| 10    | 5.5   | 10    | 21   | 10    | 7.2   | 7.4     | 35    | 37   | 13    | 26   | 28   | 15    |
| 11    | 5.3   | 9.8   | 30   | 9.6   | 7.2   | 9.2     | 38    | 34   | 13    | 23   | 30   | 14    |
| 12    | 4.7   | 9.6   | 29   | 8.8   | 7.4   | 10      | 37    | 30   | 15    | 21   | 30   | 25    |
| 13    | 4.7   | 9.4   | 27   | 8.2   | 7.4   | 10      | 54    | 29   | 18    | 19   | 30   | 24    |
| 14    | 4.5   | 9.0   | 27   | 7.4   | 7.4   | 11      | 58    | 29   | 24    | 17   | 33   | 23    |
| 15    | 4.5   | 8.8   | 32   | 7.4   | 7.4   | 11      | 59    | 28   | 26    | 16   | 33   | 25    |
| 16    | 4.5   | 9.0   | 50   | 8.0   | 7.4   | 12      | 57    | 28   | 25    | 16   | 34   | 24    |
| 17    | 4.3   | 9.2   | 34   | 8.2   | 7.4   | 12      | 55    | 26   | 23    | 18   | 25   | 28    |
| 18    | 5.9   | 9.3   | 31   | 8.4   | 7.4   | 12      | 55    | 24   | 20    | 20   | 24   | 40    |
| 19    | 7.0   | 9.6   | 29   | 8.4   | 7.2   | 13      | 59    | 23   | 19    | 17   | 25   | 77    |
| 20    | 7.0   | 9.8   | 29   | 8.4   | 7.0   | 15      | 56    | 23   | 18    | 17   | 24   | 108   |
| 21    | 7.3   | 9.4   | 30   | 8.4   | 6.6   | 16      | 57    | 21   | 17    | 20   | 23   | 130   |
| 22    | 7.7   | 8.8   | 30   | 8.0   | 6.4   | 63      | 64    | 19   | 17    | 19   | 22   | 123   |
| 23    | 7.7   | 8.8   | 27   | 7.8   | 6.2   | 100     | 61    | 18   | 16    | 18   | 28   | 113   |
| 24    | 8.3   | 9.2   | 25   | 7.6   | 6.0   | 140     | 61    | 17   | 16    | 17   | 30   | 102   |
| 25    | 8.3   | 9.2   | 23   | 7.4   | 5.8   | 170     | 62    | 16   | 15    | 16   | 22   | 104   |
| 26    | 8.3   | 9.4   | 20   | 7.4   | 5.6   | 150     | 59    | 15   | 14    | 16   | 23   | 92    |
| 27    | 8.0   | 10    | 18   | 7.2   | 5.4   | 100     | 56    | 14   | 14    | 18   | 24   | 91    |
| 28    | 7.7   | 11    | 16   | 7.2   | 5.4   | 79      | 47    | 13   | 14    | 17   | 25   | 86    |
| 29    | 9.0   | 12    | 15   | 7.4   | 5.4   | 70      | 47    | 15   | 14    | 16   | 24   | 79    |
| 30    | 9.7   | 12    | 16   | 7.5   | ----- | 62      | 46    | 23   | 14    | 16   | 24   | 74    |
| 31    | 9.0   | ----- | 16   | 7.8   | ----- | 60      | ----- | 22   | ----- | 14   | 23   | ----- |
| TOTAL | 196.7 | 302.3 | 684  | 279.9 | 199.6 | 1,200.5 | 1,562 | 968  | 509   | 565  | 772  | 1,557 |
| MEAN  | 6.35  | 10.1  | 22.1 | 9.03  | 6.88  | 38.7    | 52.1  | 31.2 | 17.0  | 18.2 | 24.9 | 51.9  |
| MAX   | 9.7   | 13    | 50   | 15    | 7.8   | 170     | 64    | 56   | 26    | 27   | 34   | 130   |
| MIN   | 4.2   | 8.6   | 10   | 7.2   | 5.4   | 6.2     | 35    | 13   | 13    | 14   | 15   | 14    |
| CFSM  | .11   | .18   | .39  | .16   | .12   | .68     | .91   | .55  | .30   | .32  | .44  | .91   |
| IN.   | .13   | .20   | .44  | .18   | .13   | .78     | 1.02  | .63  | .33   | .37  | .50  | 1.01  |

CAL YR 1971 TOTAL 9,845.16 MEAN 27.0 MAX 180 MIN .76 CFSM .47 IN 6.40  
WTR YR 1972 TOTAL 8,796.00 MEAN 24.0 MAX 170 MIN 4.2 CFSM .42 IN 5.72

NOTE.--No gage-height record Nov. 1 to Jan. 20.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086340 North Branch Milwaukee River near Fillmore, Wis.

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

DRAINAGE AREA.--153 sq mi.

RECORDS AVAILABLE.--April 1968 to current year.

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

EXTREMES.--Current year: Maximum discharge, 955 cfs Mar. 22 (gage height, 5.69 ft); minimum daily, 18 cfs Oct. 14-17.

Period of record: Maximum discharge, 955 cfs Mar. 22, 1972 (gage height, 5.69 ft); minimum, 3.0 cfs Aug. 17, 18, 1970 (gage height, 0.19 ft).

REVISIONS.--The maximum discharge for the water year 1971 has been revised to 784 cfs Apr. 13, 1971 (gage height, 5.57 ft), superseding figure published in WRD Wisconsin 1971.

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

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 19 to Mar. 21.)

Oct. 1 to Mar. 19

Mar. 20 to Sept. 30

|      |    |     |     |      |     |     |     |
|------|----|-----|-----|------|-----|-----|-----|
| 0.70 | 18 | 2.0 | 83  | 0.80 | 21  | 4.0 | 276 |
| 1.0  | 30 | 3.0 | 159 | 1.0  | 30  | 5.0 | 470 |
| 1.5  | 54 | 4.0 | 276 | 2.0  | 83  | 5.4 | 620 |
|      |    |     |     | 3.0  | 159 | 5.7 | 970 |

DISCHARGE. IN CUBIC FEET PER SECOND. WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC   | JAN  | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 23   | 35    | 39    | 56   | 22    | 26    | 181   | 128   | 62    | 21    | 24    | 40    |
| 2     | 20   | 52    | 42    | 54   | 23    | 26    | 174   | 158   | 55    | 32    | 36    | 38    |
| 3     | 19   | 58    | 41    | 50   | 23    | 26    | 160   | 180   | 53    | 36    | 48    | 36    |
| 4     | 24   | 54    | 40    | 47   | 22    | 26    | 144   | 184   | 62    | 30    | 39    | 33    |
| 5     | 24   | 48    | 39    | 42   | 22    | 26    | 141   | 173   | 54    | 27    | 32    | 32    |
| 6     | 22   | 42    | 39    | 36   | 22    | 27    | 140   | 157   | 47    | 24    | 34    | 30    |
| 7     | 22   | 36    | 43    | 33   | 22    | 29    | 139   | 147   | 40    | 29    | 93    | 29    |
| 8     | 21   | 38    | 49    | 31   | 22    | 33    | 133   | 135   | 35    | 40    | 102   | 28    |
| 9     | 20   | 40    | 56    | 33   | 22    | 38    | 130   | 121   | 31    | 56    | 97    | 28    |
| 10    | 19   | 37    | 70    | 35   | 22    | 46    | 129   | 107   | 29    | 72    | 93    | 27    |
| 11    | 19   | 34    | 170   | 33   | 23    | 70    | 130   | 95    | 27    | 59    | 107   | 28    |
| 12    | 19   | 32    | 140   | 31   | 23    | 110   | 139   | 84    | 31    | 46    | 138   | 32    |
| 13    | 20   | 31    | 100   | 29   | 24    | 140   | 165   | 76    | 63    | 42    | 142   | 86    |
| 14    | 18   | 30    | 90    | 28   | 25    | 120   | 174   | 72    | 77    | 37    | 126   | 116   |
| 15    | 18   | 29    | 200   | 26   | 26    | 110   | 180   | 69    | 88    | 42    | 108   | 96    |
| 16    | 18   | 29    | 330   | 25   | 26    | 120   | 181   | 67    | 78    | 41    | 88    | 82    |
| 17    | 18   | 30    | 270   | 24   | 25    | 120   | 172   | 62    | 66    | 31    | 69    | 66    |
| 18    | 19   | 30    | 140   | 23   | 25    | 140   | 157   | 57    | 55    | 40    | 55    | 165   |
| 19    | 21   | 31    | 46    | 23   | 25    | 170   | 146   | 51    | 45    | 40    | 57    | 246   |
| 20    | 23   | 32    | 110   | 23   | 24    | 320   | 141   | 45    | 39    | 36    | 53    | 314   |
| 21    | 24   | 31    | 130   | 22   | 24    | 620   | 139   | 41    | 36    | 48    | 45    | 575   |
| 22    | 25   | 30    | 120   | 22   | 24    | 910   | 197   | 38    | 33    | 61    | 40    | 652   |
| 23    | 26   | 29    | 100   | 22   | 25    | 676   | 230   | 35    | 29    | 51    | 38    | 468   |
| 24    | 27   | 30    | 48    | 22   | 25    | 590   | 232   | 32    | 26    | 41    | 75    | 396   |
| 25    | 26   | 31    | 46    | 21   | 25    | 470   | 212   | 29    | 26    | 33    | 81    | 333   |
| 26    | 26   | 30    | 78    | 21   | 26    | 391   | 188   | 27    | 26    | 30    | 90    | 297   |
| 27    | 27   | 35    | 80    | 21   | 26    | 276   | 165   | 25    | 24    | 40    | 101   | 294   |
| 28    | 28   | 40    | 62    | 21   | 26    | 244   | 143   | 24    | 23    | 40    | 86    | 260   |
| 29    | 26   | 44    | 48    | 21   | 26    | 215   | 126   | 27    | 23    | 34    | 69    | 241   |
| 30    | 27   | 42    | 54    | 21   | ----- | 182   | 113   | 55    | 23    | 30    | 57    | 222   |
| 31    | 27   | ----- | 58    | 22   | ----- | 176   | ----- | 67    | ----- | 26    | 47    | ----- |
| TOTAL | 696  | 1,090 | 3,018 | 918  | 695   | 6,473 | 4,801 | 2,568 | 1,306 | 1,215 | 2,270 | 5,290 |
| MEAN  | 22.5 | 36.3  | 97.4  | 29.6 | 24.0  | 209   | 160   | 82.8  | 43.5  | 39.2  | 73.2  | 176   |
| MAX   | 28   | 58    | 330   | 56   | 26    | 910   | 232   | 184   | 88    | 72    | 142   | 652   |
| MIN   | 18   | 29    | 39    | 21   | 22    | 26    | 113   | 24    | 23    | 21    | 24    | 27    |
| CFSM  | .15  | .24   | .64   | .19  | .16   | 1.37  | 1.05  | .54   | .28   | .26   | .48   | 1.15  |
| IN.   | .17  | .27   | .73   | .22  | .17   | 1.57  | 1.17  | .62   | .32   | .30   | .55   | 1.29  |

CAL YR 1971 TOTAL 30,529 MEAN 83.6 MAX 623 MIN 11 CFSM .55 IN 7.42  
WTR YR 1972 TOTAL 30,340 MEAN 82.9 MAX 910 MIN 18 CFSM .54 IN 7.38

NOTE.--No gage-height record Oct. 7 to Jan. 19.

04086360 Milwaukee River at Waubeka, Wis.

LOCATION.--Lat 43°28'22", long 87°59'23", in SE 1/4 sec.28, T.12 N., R.21 E., Ozaukee County, on right bank 100 ft downstream from bridge on County Trunk Highway I, 800 ft downstream from recreation pond dam at Waubeka, and 2.4 miles downstream from North Branch Milwaukee River.

DRAINAGE AREA.--428 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 770 ft (from topographic map). Prior to Aug. 1, 1968, non-recording gage at same site and datum.

EXTREMES.--Current year: Maximum discharge, 2,100 cfs Mar. 22 (gage height, 8.14 ft, backwater from ice); minimum, 41 cfs Nov. 22 (gage height, 2.15 ft).  
Period of record: Maximum discharge, 2,500 cfs Apr. 13, 1971 (gage height, 7.35 ft); minimum, 19 cfs Aug. 18, 1970 (gage height, 1.90 ft).

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 19 to Mar. 28.)

|     |     |     |       |
|-----|-----|-----|-------|
| 2.2 | 49  | 4.0 | 489   |
| 2.5 | 93  | 5.0 | 894   |
| 3.0 | 191 | 6.0 | 1,380 |
| 3.5 | 315 | 7.0 | 2,150 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR    | APR    | MAY   | JUN   | JUL   | AUG   | SEP    |
|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|--------|
| 1     | 64    | 89    | 102   | 150   | 72    | 96     | 519    | 406   | 168   | 70    | 82    | 176    |
| 2     | 60    | 149   | 118   | 140   | 72    | 100    | 493    | 493   | 151   | 90    | 100   | 168    |
| 3     | 57    | 162   | 118   | 120   | 72    | 100    | 452    | 533   | 151   | 100   | 127   | 162    |
| 4     | 63    | 155   | 107   | 110   | 72    | 100    | 395    | 496   | 155   | 90    | 114   | 149    |
| 5     | 64    | 143   | 107   | 100   | 70    | 100    | 412    | 478   | 137   | 82    | 105   | 139    |
| 6     | 60    | 127   | 112   | 96    | 68    | 98     | 409    | 467   | 125   | 78    | 114   | 131    |
| 7     | 60    | 107   | 129   | 100   | 68    | 100    | 423    | 445   | 112   | 90    | 234   | 120    |
| 8     | 59    | 118   | 143   | 110   | 68    | 110    | 361    | 416   | 98    | 110   | 248   | 114    |
| 9     | 56    | 120   | 166   | 110   | 70    | 130    | 371    | 364   | 90    | 140   | 250   | 107    |
| 10    | 56    | 110   | 243   | 100   | 72    | 150    | 371    | 312   | 82    | 170   | 234   | 100    |
| 11    | 55    | 105   | 354   | 96    | 74    | 230    | 357    | 306   | 78    | 150   | 315   | 96     |
| 12    | 53    | 103   | 328   | 92    | 76    | 330    | 388    | 273   | 86    | 140   | 398   | 105    |
| 13    | 55    | 100   | 281   | 88    | 78    | 450    | 410    | 253   | 193   | 130   | 367   | 255    |
| 14    | 53    | 96    | 286   | 84    | 78    | 400    | 460    | 238   | 231   | 129   | 328   | 321    |
| 15    | 52    | 92    | 526   | 80    | 78    | 380    | 490    | 236   | 260   | 318   | 292   | 298    |
| 16    | 53    | 93    | 800   | 78    | 78    | 370    | 510    | 225   | 243   | 168   | 278   | 258    |
| 17    | 53    | 95    | 450   | 76    | 78    | 420    | 500    | 211   | 218   | 125   | 229   | 195    |
| 18    | 55    | 96    | 320   | 76    | 78    | 600    | 470    | 200   | 255   | 145   | 200   | 597    |
| 19    | 57    | 100   | 290   | 74    | 80    | 900    | 450    | 187   | 213   | 143   | 193   | 548    |
| 20    | 66    | 102   | 320   | 72    | 82    | 1,300  | 430    | 166   | 187   | 129   | 202   | 930    |
| 21    | 74    | 100   | 330   | 72    | 84    | 1,500  | 620    | 157   | 133   | 145   | 200   | 1,510  |
| 22    | 75    | 90    | 320   | 70    | 86    | 1,900  | 780    | 143   | 121   | 162   | 183   | 1,640  |
| 23    | 76    | 95    | 300   | 68    | 86    | 1,800  | 740    | 133   | 105   | 147   | 170   | 1,600  |
| 24    | 78    | 100   | 280   | 68    | 88    | 1,600  | 660    | 123   | 93    | 127   | 278   | 1,350  |
| 25    | 78    | 96    | 250   | 68    | 88    | 1,400  | 567    | 116   | 87    | 110   | 263   | 1,290  |
| 26    | 78    | 98    | 230   | 66    | 86    | 1,300  | 537    | 103   | 84    | 102   | 309   | 1,270  |
| 27    | 81    | 110   | 190   | 66    | 86    | 1,200  | 478    | 93    | 80    | 123   | 321   | 1,270  |
| 28    | 83    | 114   | 160   | 68    | 86    | 960    | 423    | 86    | 75    | 121   | 303   | 1,100  |
| 29    | 83    | 125   | 150   | 68    | 90    | 782    | 395    | 96    | 70    | 110   | 265   | 1,040  |
| 30    | 83    | 120   | 160   | 68    | ----- | 601    | 361    | 155   | 68    | 98    | 227   | 849    |
| 31    | 84    | ----- | 170   | 70    | ----- | 519    | -----  | 164   | ----- | 87    | 200   | -----  |
| TOTAL | 2,024 | 3,310 | 7,840 | 2,704 | 2,264 | 20,026 | 14,232 | 8,074 | 4,149 | 3,929 | 7,129 | 17,888 |
| MEAN  | 65.3  | 110   | 253   | 87.2  | 78.1  | 646    | 474    | 260   | 138   | 127   | 230   | 596    |
| MAX   | 84    | 162   | 800   | 150   | 90    | 1,900  | 780    | 533   | 260   | 318   | 398   | 1,640  |
| MIN   | 52    | 89    | 102   | 66    | 68    | 96     | 357    | 86    | 68    | 70    | 82    | 96     |
| CFSM  | .15   | .26   | .59   | .20   | .18   | 1.51   | 1.11   | .61   | .32   | .30   | .54   | 1.39   |
| IN.   | .18   | .29   | .68   | .24   | .20   | 1.74   | 1.24   | .70   | .36   | .34   | .62   | 1.55   |

CAL YR 1971 TOTAL 96,372 MEAN 264 MAX 2,250 MIN 26 CFSM .62 IN 8.38  
WTR YR 1972 TOTAL 93,569 MEAN 256 MAX 1,900 MIN 52 CFSM .60 IN 8.13

NOTE.--No gage-height record Dec. 16 to Jan. 18.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 Milwaukee River at Milwaukee, Wis.

LOCATION.--Lat 43°06'00", long 87°54'32", in NE 1/4 sec.5, T.7 N., R.22 E., Milwaukee County, on left bank near northeast limits of Milwaukee in Estabrook Park, 2,000 ft downstream from Port Washington Road Bridge and 6.6 miles upstream from mouth.

DRAINAGE AREA.--686 sq mi.

PERIOD OF RECORD.--April 1914 to current year. Published as "near Milwaukee" prior to 1936.

GAGE.--Water-stage recorder. Datum of gage is 607.23 ft above mean sea level (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 half a mile upstream at different datum.

AVERAGE DISCHARGE.--58 years, 382 cfs (7.56 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,090 cfs Sept. 18 (gage height, 6.24 ft); minimum, 6.6 cfs May 15 (gage height, 1.65 ft), result of regulation.

Period of record: Maximum discharge, 15,100 cfs 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.

REMARKS.--Records good except those for winter periods, which are fair. Occasional regulation caused by recreation dam approximately 600 ft upstream.

REVISIONS (WATER YEARS).--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). WSP 1557: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used June 3 to Sept. 30; stage-discharge relation affected by ice Dec. 2-6, Jan. 4 to Feb. 22, Feb. 26 to Mar. 5.)

|     |     |     |       |
|-----|-----|-----|-------|
| 1.9 | 55  | 3.0 | 700   |
| 2.0 | 84  | 4.0 | 1,750 |
| 2.2 | 165 | 5.0 | 3,180 |
| 2.5 | 325 | 6.0 | 4,900 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC    | JAN   | FEB   | MAR    | APR    | MAY    | JUN   | JUL   | AUG    | SEP    |
|-------|-------|-------|--------|-------|-------|--------|--------|--------|-------|-------|--------|--------|
| 1     | 122   | 301   | 143    | 275   | 120   | 140    | 881    | 800    | 250   | 147   | 138    | 364    |
| 2     | 105   | 497   | 140    | 260   | 120   | 130    | 819    | 1,070  | 269   | 152   | 207    | 308    |
| 3     | 216   | 247   | 140    | 260   | 120   | 120    | 761    | 1,120  | 370   | 156   | 152    | 270    |
| 4     | 111   | 252   | 150    | 240   | 120   | 110    | 704    | 1,060  | 325   | 175   | 153    | 258    |
| 5     | 108   | 216   | 160    | 220   | 120   | 110    | 631    | 905    | 332   | 180   | 149    | 255    |
| 6     | 101   | 190   | 170    | 200   | 110   | 124    | 666    | 856    | 295   | 185   | 169    | 248    |
| 7     | 86    | 165   | 180    | 180   | 110   | 175    | 727    | 876    | 255   | 215   | 305    | 245    |
| 8     | 85    | 150   | 199    | 180   | 100   | 250    | 658    | 790    | 225   | 225   | 293    | 230    |
| 9     | 86    | 160   | 233    | 190   | 100   | 227    | 583    | 745    | 210   | 225   | 376    | 205    |
| 10    | 79    | 161   | 512    | 210   | 100   | 219    | 575    | 640    | 190   | 230   | 358    | 185    |
| 11    | 80    | 154   | 840    | 190   | 110   | 212    | 583    | 559    | 165   | 264   | 536    | 220    |
| 12    | 84    | 144   | 767    | 180   | 110   | 339    | 583    | 532    | 250   | 284   | 618    | 185    |
| 13    | 83    | 139   | 604    | 170   | 120   | 477    | 666    | 498    | 384   | 334   | 667    | 895    |
| 14    | 82    | 128   | 446    | 160   | 120   | 437    | 754    | 460    | 772   | 437   | 916    | 763    |
| 15    | 83    | 125   | 1,900  | 150   | 120   | 395    | 828    | 180    | 945   | 890   | 663    | 772    |
| 16    | 82    | 120   | 2,020  | 150   | 120   | 427    | 915    | 142    | 683   | 556   | 576    | 658    |
| 17    | 77    | 120   | 1,430  | 150   | 110   | 488    | 885    | 338    | 551   | 293   | 537    | 528    |
| 18    | 343   | 130   | 501    | 150   | 110   | 807    | 838    | 351    | 425   | 278   | 430    | 1,880  |
| 19    | 414   | 130   | 451    | 140   | 110   | 1,160  | 781    | 325    | 390   | 253   | 439    | 1,560  |
| 20    | 248   | 140   | 636    | 140   | 110   | 1,460  | 700    | 301    | 425   | 261   | 339    | 1,560  |
| 21    | 134   | 130   | 747    | 140   | 120   | 2,010  | 718    | 271    | 358   | 240   | 351    | 3,230  |
| 22    | 113   | 120   | 524    | 130   | 120   | 2,730  | 1,320  | 260    | 271   | 219   | 360    | 2,960  |
| 23    | 119   | 114   | 486    | 130   | 112   | 2,620  | 1,410  | 245    | 225   | 243   | 367    | 2,700  |
| 24    | 151   | 129   | 482    | 120   | 114   | 2,330  | 1,280  | 230    | 195   | 246   | 493    | 2,380  |
| 25    | 135   | 138   | 384    | 120   | 115   | 2,110  | 1,080  | 220    | 170   | 213   | 640    | 2,000  |
| 26    | 118   | 151   | 398    | 110   | 110   | 1,740  | 905    | 210    | 156   | 195   | 1,100  | 2,180  |
| 27    | 118   | 203   | 392    | 110   | 100   | 1,510  | 828    | 200    | 152   | 214   | 730    | 1,950  |
| 28    | 108   | 168   | 258    | 110   | 120   | 1,280  | 718    | 175    | 152   | 184   | 737    | 1,850  |
| 29    | 110   | 275   | 225    | 110   | 120   | 1,060  | 615    | 156    | 156   | 180   | 629    | 2,160  |
| 30    | 130   | 218   | 304    | 110   | ----- | 911    | 567    | 185    | 152   | 163   | 510    | 1,750  |
| 31    | 111   | ----- | 240    | 110   | ----- | 795    | -----  | 220    | ----- | 147   | 415    | -----  |
| TOTAL | 4,022 | 5,315 | 16,062 | 5,095 | 3,291 | 26,903 | 23,979 | 14,920 | 9,698 | 7,984 | 14,353 | 34,749 |
| MEAN  | 130   | 177   | 518    | 164   | 113   | 868    | 799    | 481    | 323   | 258   | 463    | 1,158  |
| MAX   | 414   | 497   | 2,020  | 275   | 120   | 2,730  | 1,410  | 1,120  | 945   | 890   | 1,100  | 3,230  |
| MIN   | 77    | 114   | 140    | 110   | 100   | 110    | 567    | 142    | 152   | 147   | 138    | 185    |
| CFSM  | .19   | .26   | .76    | .24   | .16   | 1.27   | 1.16   | .70    | .47   | .38   | .67    | 1.69   |
| IN.   | .22   | .29   | .87    | .28   | .18   | 1.46   | 1.30   | .81    | .53   | .43   | .78    | 1.88   |

CAL YR 1971 TOTAL 169,272 MEAN 464 MAX 3,810 MIN 64 CFSM .68 IN 9.18  
WTR YR 1972 TOTAL 166,371 MEAN 455 MAX 3,230 MIN 77 CFSM .66 IN 9.02

## PEAK DISCHARGE (BASE, 2,000 CFS)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 10-18 | 0900 | 5.15  | a3,320    | 7-14 | 2300 | 4.45  | 2,120     |
| 10-19 | 2000 | 4.41  | a2,190    | 8-14 | 1600 | 4.63  | 2,290     |
| 12-15 | 0800 | 4.76  | 2,800     | 8-25 | 2300 | 4.46  | 2,110     |
| 3-22  | 1800 | 4.81  | 2,880     | 9-18 | 0300 | 6.24  | 5,090     |
|       |      |       |           | 9-20 | 2300 | 5.39  | 3,580     |

a Regulated.

STREAMS TRIBUTARY TO LAKE MICHIGAN

67

04087120 Menomonee River at Wauwatosa, Wis.

LOCATION.--Lat 43°02'44", long 87°59'59", in NW 1/4 sec.27, T.7 N., R.21 E., Milwaukee County, near left bank on downstream side of 70th Street bridge in Wauwatosa, 800 ft downstream from Honey Creek, and 6.2 miles upstream from mouth.

DRAINAGE AREA.--123 sq mi.

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

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 630.86 ft above mean sea level.

AVERAGE DISCHARGE.--11 years, 74.2 cfs (8.19 inches per year).

EXTREMES.--Current year: Maximum observed discharge, 6,610 cfs Sept. 18 (gage height, 10.39 ft); minimum daily, 13 cfs Oct. 11.  
Period of record: Maximum discharge, 6,610 cfs Sept. 18, 1972 (gage height, 10.39 ft); minimum daily, 2.8 cfs Jan. 18, 1964.

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

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 3-7, Jan. 13 to Feb. 18.)

| Oct. 1 to Dec. 14 |     |     |       | Dec. 15 to Sept. 17 |    |     |       | Sept. 18-30 |       |
|-------------------|-----|-----|-------|---------------------|----|-----|-------|-------------|-------|
| 0.90              | 11  | 2.0 | 188   | 0.90                | 13 | 1.7 | 150   | 2.0         | 287   |
| 1.0               | 16  | 2.5 | 365   | 1.0                 | 19 | 2.0 | 240   | 2.5         | 481   |
| 1.1               | 22  | 3.0 | 582   | 1.1                 | 28 | 2.5 | 415   | 3.0         | 700   |
| 1.2               | 31  | 4.0 | 1,060 | 1.2                 | 41 | 3.0 | 615   | 4.0         | 1,190 |
| 1.4               | 56  | 5.0 | 1,710 | 1.4                 | 78 | 4.0 | 1,090 | 5.0         | 1,770 |
| 1.7               | 113 |     |       |                     |    | 5.0 | 1,710 | 7.0         | 3,210 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP    |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 1     | 15   | 21    | 49    | 64    | 25    | 156   | 124   | 565   | 36    | 25    | 93    | 72     |
| 2     | 14   | 194   | 76    | 58    | 25    | 51    | 134   | 318   | 33    | 44    | 134   | 76     |
| 3     | 211  | 46    | 18    | 50    | 24    | 41    | 127   | 199   | 89    | 15    | 38    | 55     |
| 4     | 24   | 34    | 29    | 45    | 24    | 34    | 117   | 153   | 72    | 15    | 31    | 46     |
| 5     | 18   | 29    | 34    | 45    | 24    | 36    | 102   | 117   | 38    | 16    | 25    | 46     |
| 6     | 17   | 22    | 46    | 46    | 24    | 34    | 117   | 158   | 34    | 14    | 36    | 44     |
| 7     | 15   | 19    | 56    | 48    | 24    | 573   | 129   | 211   | 32    | 37    | 114   | 41     |
| 8     | 15   | 22    | 60    | 51    | 24    | 153   | 100   | 181   | 31    | 25    | 72    | 46     |
| 9     | 14   | 26    | 79    | 129   | 25    | 124   | 91    | 122   | 27    | 17    | 44    | 40     |
| 10    | 14   | 22    | 946   | 78    | 26    | 62    | 91    | 97    | 24    | 21    | 36    | 33     |
| 11    | 13   | 22    | 246   | 74    | 28    | 129   | 98    | 78    | 23    | 19    | 33    | 80     |
| 12    | 31   | 24    | 127   | 70    | 30    | 227   | 93    | 72    | 158   | 18    | 164   | 46     |
| 13    | 19   | 30    | 122   | 50    | 31    | 172   | 140   | 89    | 145   | 46    | 89    | 426    |
| 14    | 17   | 22    | 1,350 | 32    | 32    | 140   | 129   | 134   | 119   | 28    | 72    | 214    |
| 15    | 17   | 17    | 742   | 24    | 33    | 100   | 164   | 91    | 107   | 237   | 224   | 178    |
| 16    | 16   | 19    | 516   | 24    | 35    | 150   | 360   | 62    | 53    | 184   | 170   | 147    |
| 17    | 17   | 18    | 202   | 25    | 37    | 706   | 145   | 50    | 38    | 290   | 122   | 321    |
| 18    | 17   | 83    | 175   | 26    | 35    | 449   | 124   | 46    | 32    | 127   | 98    | 2,520  |
| 19    | 19   | 30    | 158   | 27    | 33    | 404   | 112   | 41    | 93    | 78    | 167   | 839    |
| 20    | 70   | 23    | 117   | 27    | 38    | 793   | 96    | 40    | 44    | 66    | 100   | 610    |
| 21    | 37   | 20    | 100   | 28    | 44    | 1,160 | 297   | 32    | 32    | 58    | 80    | 1,960  |
| 22    | 27   | 17    | 82    | 29    | 28    | 544   | 658   | 28    | 27    | 41    | 89    | 839    |
| 23    | 20   | 20    | 74    | 28    | 24    | 364   | 293   | 27    | 25    | 60    | 64    | 619    |
| 24    | 41   | 21    | 76    | 27    | 32    | 234   | 178   | 26    | 24    | 34    | 442   | 510    |
| 25    | 25   | 19    | 72    | 26    | 31    | 164   | 145   | 26    | 22    | 27    | 346   | 380    |
| 26    | 26   | 19    | 72    | 25    | 28    | 127   | 119   | 24    | 23    | 161   | 569   | 346    |
| 27    | 25   | 61    | 89    | 24    | 25    | 102   | 105   | 25    | 23    | 78    | 300   | 388    |
| 28    | 19   | 29    | 60    | 24    | 300   | 102   | 87    | 24    | 24    | 33    | 202   | 338    |
| 29    | 17   | 158   | 85    | 24    | 202   | 110   | 82    | 56    | 28    | 27    | 140   | 650    |
| 30    | 29   | 52    | 127   | 24    | ----- | 129   | 72    | 43    | 24    | 24    | 105   | 396    |
| 31    | 20   | ----- | 93    | 24    | ----- | 127   | ----- | 36    | ----- | 24    | 76    | -----  |
| TOTAL | 880  | 1,139 | 6,028 | 1,276 | 1,291 | 7,697 | 4,629 | 3,171 | 1,480 | 1,889 | 4,275 | 12,306 |
| MEAN  | 28.4 | 38.0  | 194   | 41.2  | 44.5  | 248   | 154   | 102   | 49.3  | 60.9  | 138   | 410    |
| MAX   | 211  | 194   | 1,350 | 129   | 300   | 1,160 | 658   | 565   | 158   | 290   | 569   | 2,520  |
| MIN   | 13   | 17    | 18    | 24    | 24    | 34    | 72    | 24    | 22    | 14    | 25    | 33     |
| CFSM  | .23  | .31   | 1.58  | .34   | .36   | 2.02  | 1.25  | .83   | .40   | .50   | 1.12  | 3.33   |
| IN.   | .27  | .34   | 1.82  | .39   | .39   | 2.33  | 1.40  | .96   | .45   | .57   | 1.29  | 3.72   |

CAL YR 1971 TOTAL 35,842 MEAN 98.3 MAX 1,550 MIN 10 CFSM .80 IN 10.85  
WTR YR 1972 TOTAL 46,061 MEAN 126 MAX 2,520 MIN 13 CFSM 1.02 IN 13.93

PEAK DISCHARGE (BASE, 700 CFS)

| DATE  | TIME | G. H. | DISCHARGE | DATE  | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|-------|------|-------|-----------|
| 11-2  | -    | 5.09  | 1,770     | 6-12  | -    | 3.80  | 982       |
| 12-10 | -    | 4.01  | 1,060     | 7-17  | -    | 4.58  | 1,430     |
| 12-14 | 1325 | 4.45  | 1,320     | a9-18 | -    | 10.39 | 6,610     |
| 3-17  | 1640 | 3.21  | 706       | a9-21 | -    | 6.38  | 2,720     |
| 3-21  | 1650 | 4.13  | 1,160     |       |      |       |           |

a About.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087204 Oak Creek at South Milwaukee, Wis.

LOCATION.--Lat 42°55'30", long 87°52'12", in NW 1/4 sec.2, T.5 N., R.22 E., Milwaukee County, on left bank 25 ft downstream from 15th Avenue bridge in South Milwaukee and 2.8 miles upstream from mouth.

DRAINAGE AREA.--25.0 sq mi.

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

GAGE.--Water-stage recorder and crest-stage indicator. Altitude of gage is 630 ft (from topographic map).

AVERAGE DISCHARGE.--9 years, 18.6 cfs (10.10 inches per year).

EXTREMES.--Current year: Maximum discharge, 916 cfs Sept. 18 (gage height, 8.23 ft); minimum, 0.60 cfs Oct. 18 (gage height, 2.30 ft).

Period of record: Maximum discharge, 916 cfs Sept. 18, 1972 (gage height, 8.23 ft); minimum, 0.40 cfs Jan. 3, 1964 (gage height, 2.33 ft).

REMARKS.--Records fair except those for winter periods, periods of no gage-height record, and periods of back-water from vegetation, which are poor. Low flows may occasionally be affected by activity of gravel pit upstream.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Sept. 13, 14, 17-22, 29; stage-discharge relation affected by ice Jan. 4 to Feb. 15, Feb. 17-22, 24, 26.)

|     |     |     |     |
|-----|-----|-----|-----|
| 2.3 | 0.6 | 3.5 | 67  |
| 2.4 | 1.6 | 4.0 | 105 |
| 2.5 | 4.2 | 5.0 | 207 |
| 2.7 | 14  | 6.0 | 358 |
| 3.0 | 32  | 7.0 | 550 |
|     |     | 8.0 | 836 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR     | APR   | MAY   | JUN   | JUL   | AUG   | SEP     |
|-------|-------|-------|-------|-------|-------|---------|-------|-------|-------|-------|-------|---------|
| 1     | 1.4   | 3.7   | 7.4   | 14    | 1.4   | 75      | 24    | 27    | 2.8   | 3.6   | 3.0   | 3.7     |
| 2     | 1.1   | 17    | 3.7   | 15    | 1.5   | 42      | 21    | 24    | 2.8   | 58    | 63    | 3.4     |
| 3     | 2.4   | 12    | 2.6   | 10    | 1.6   | 14      | 17    | 18    | 5.0   | 27    | 37    | 2.9     |
| 4     | 5.6   | 3.4   | 2.4   | 7.2   | 1.5   | 9.3     | 16    | 14    | 4.1   | 13    | 13    | 2.4     |
| 5     | 3.0   | 1.4   | 2.5   | 5.0   | 1.4   | 6.8     | 14    | 11    | 3.0   | 8.6   | 8.7   | 2.1     |
| 6     | 1.4   | 1.3   | 5.0   | 4.0   | 1.3   | 7.9     | 18    | 17    | 2.8   | 5.9   | 12    | 1.9     |
| 7     | 1.1   | 1.3   | 7.2   | 3.0   | 1.2   | 7.3     | 27    | 33    | 2.4   | 8.2   | 12    | 3.9     |
| 8     | 1.4   | 1.3   | 5.2   | 3.5   | 1.2   | 5.7     | 14    | 52    | 2.4   | 6.8   | 10    | 4.6     |
| 9     | 1.2   | 1.3   | 7.3   | 4.5   | 1.2   | 2.8     | 13    | 87    | 1.9   | 5.0   | 7.2   | 3.2     |
| 10    | 1.1   | 1.4   | 2.0   | 5.0   | 1.3   | 1.2     | 1.2   | 34    | 1.6   | 4.0   | 5.4   | 2.1     |
| 11    | 1.6   | 1.5   | 6.0   | 5.4   | 1.4   | 36      | 12    | 21    | 1.4   | 4.5   | 37    | 6.6     |
| 12    | 1.0   | 1.5   | 2.5   | 5.0   | 1.5   | 9.8     | 13    | 16    | 3.4   | 3.9   | 40    | 7.8     |
| 13    | 1.0   | 1.3   | 13    | 4.0   | 1.5   | 7.1     | 16    | 14    | 2.1   | 5.7   | 16    | 326     |
| 14    | 1.2   | 1.2   | 7.0   | 2.0   | 1.5   | 15      | 16    | 15    | 18    | 14    | 12    | 200     |
| 15    | 1.1   | 1.1   | 5.5   | 1.0   | 2.1   | 16      | 18    | 16    | 5.3   | 35    | 9.9   | 64      |
| 16    | 1.2   | 1.2   | 10.0  | 1.2   | 2.1   | 23      | 193   | 17    | 15    | 16    | 7.8   | 41      |
| 17    | 1.2   | 1.2   | 30    | 1.6   | 2.3   | 170     | 221   | 13    | 7.1   | 38    | 6.6   | 166     |
| 18    | 5.80  | 1.5   | 2.2   | 2.0   | 2.4   | 252     | 85    | 11    | 4.5   | 119   | 5.0   | 710     |
| 19    | 2.4   | 1.4   | 17    | 1.8   | 2.4   | 125     | 48    | 9.1   | 23    | 39    | 7.8   | 509     |
| 20    | 4.9   | 1.5   | 10    | 1.6   | 2.4   | 119     | 33    | 7.8   | 104   | 20    | 6.2   | 246     |
| 21    | 8.8   | 1.5   | 8.0   | 1.4   | 2.4   | 157     | 38    | 6.8   | 32    | 12    | 4.6   | 312     |
| 22    | 3.4   | 1.5   | 10    | 1.8   | 2.3   | 102     | 250   | 6.1   | 14    | 8.2   | 3.9   | 152     |
| 23    | 2.4   | 1.3   | 5.4   | 2.2   | 2.3   | 32      | 91    | 5.5   | 4.3   | 6.1   | 7.8   | 78      |
| 24    | 3.2   | 1.3   | 5.9   | 2.0   | 2.1   | 22      | 46    | 5.3   | 6.8   | 5.0   | 8.8   | 53      |
| 25    | 2.6   | 1.2   | 5.8   | 1.7   | 1.5   | 17      | 29    | 4.7   | 5.7   | 4.6   | 14    | 41      |
| 26    | 2.9   | 3.7   | 5.8   | 1.5   | 1.7   | 14      | 21    | 4.4   | 5.2   | 5.9   | 83    | 32      |
| 27    | 1.9   | 7.5   | 5.2   | 1.3   | 1.5   | 12      | 16    | 3.7   | 4.6   | 7.2   | 36    | 25      |
| 28    | 1.4   | 7.8   | 7.0   | 1.3   | 2.1   | 12      | 14    | 3.2   | 4.5   | 5.5   | 14    | 52      |
| 29    | 1.2   | 16    | 10    | 1.3   | 3.8   | 13      | 13    | 3.7   | 6.1   | 3.7   | 8.8   | 199     |
| 30    | 1.3   | 18    | 18    | 1.3   | ----- | 13      | 11    | 4.3   | 4.1   | 3.0   | 6.2   | 54      |
| 31    | 1.2   | ----- | 31    | 1.4   | ----- | 15      | ----- | 3.6   | ----- | 2.7   | 4.6   | -----   |
| TOTAL | 71.00 | 118.2 | 522.0 | 119.0 | 106.7 | 1,664.0 | 1,360 | 538.2 | 402.1 | 499.1 | 511.3 | 3,304.6 |
| MEAN  | 2.29  | 3.94  | 16.8  | 3.84  | 3.64  | 53.7    | 45.3  | 17.4  | 13.4  | 16.1  | 16.5  | 110     |
| MAX   | 9.9   | 18    | 100   | 18    | 38    | 252     | 250   | 87    | 104   | 119   | 83    | 710     |
| MIN   | 0.80  | 1.1   | 2.4   | 1.0   | 1.2   | 6.8     | 11    | 3.2   | 1.4   | 2.7   | 3.0   | 1.9     |
| CFSM  | 0.09  | 0.16  | 0.67  | 0.15  | 0.15  | 2.15    | 1.81  | 0.70  | 0.54  | 0.64  | 0.66  | 4.40    |
| W.Y.  | 0.11  | 0.15  | 0.78  | 0.18  | 0.16  | 2.48    | 2.02  | 0.80  | 0.60  | 0.74  | 0.76  | 4.92    |

CAL YR 1971 TOTAL 6,854.80 MEAN 18.4 MAX 450 MIN .80 CFSM .75 IN 10.20  
WTR YR 1972 TOTAL 9,216.20 MEAN 25.2 MAX 710 MIN .80 CFSM 1.01 IN 13.71

PEAK DISCHARGE (BASE, 250 CFS)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 12-16 | -    | 5.54  | 281       | 9-13 | 1045 | 7.00  | 495       |
| 3-17  | 1915 | 6.03  | 363       | 9-18 | 0245 | 8.23  | 916       |
| 4-16  | 2000 | 6.26  | 405       | 9-21 | 1145 | 6.44  | 374       |
| 4-22  | 0715 | 5.88  | 338       | 9-29 | 0745 | 5.88  | 288       |

NOTE.--No gage-height record Oct. 1-14, Nov. 8-15, Dec. 4-30.

04087220 Root River near Franklin, Wis.

LOCATION.--Lat 42°52'25", long 87°59'45", in SE 1/4 sec.22, T.5 N., R.21 E., Milwaukee County, on right bank 400 ft upstream from State Highway 100, 2.1 miles upstream from Root River Canal, 2.4 miles southeast of Franklin, 5.5 miles southeast of Hales Corners, and about 24 miles upstream from mouth.

DRAINAGE AREA.--49.3 sq mi.

RECORDS AVAILABLE.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 674.5 ft above mean sea level.

AVERAGE DISCHARGE.--9 years, 38.7 cfs (10.66 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,270 cfs Sept. 18 (gage height, 8.80 ft); minimum discharge, 1.2 cfs Oct. 2, 3 (gage height, 1.65 ft).

Period of record: Maximum discharge, 2,650 cfs June 30, 1969 (gage height, 8.36 ft); maximum gage height, 8.80 ft Sept. 18, 1972, backwater from vegetation; minimum discharge, 0.38 cfs Aug. 10, 1971 (gage height, 1.45 ft).

Flood of Mar. 30, 1960, reached a stage of 9.57 ft (discharge, 5,130 cfs, from rating curve extended above 2,000 cfs on basis of contracted-opening measurement of peak-flow).

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Oct. 20, Nov. 2, 3, Dec. 30, Mar. 17-25, Apr. 16 to May 10, Aug. 26, Sept. 13, 14, 18-22, 29; stage-discharge relation affected by ice Dec. 21, 22, 24, 25, Dec. 31 to Mar. 16.)

|     |     |     |     |     |       |
|-----|-----|-----|-----|-----|-------|
| 1.6 | 1.0 | 2.4 | 38  | 6.0 | 350   |
| 1.7 | 1.8 | 3.0 | 84  | 6.5 | 498   |
| 1.9 | 7.2 | 5.0 | 212 | 7.0 | 760   |
| 2.1 | 18  | 5.5 | 267 | 7.5 | 1,300 |
|     |     |     |     | 8.0 | 2,040 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC     | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG     | SEP     |
|-------|-------|-------|---------|-------|-------|-------|-------|-------|-------|-------|---------|---------|
| 1     | 2.5   | 3.2   | 26      | 25    | 3.7   | 80    | 52    | 65    | 11    | 6.0   | 4.2     | 15      |
| 2     | 1.6   | 91    | 22      | 12    | 4.2   | 94    | 59    | 72    | 8.0   | 68    | 60      | 15      |
| 3     | 3.8   | 22    | 15      | 7.0   | 4.8   | 44    | 42    | 62    | 19    | 34    | 58      | 13      |
| 4     | 21    | 13    | 6.3     | 4.5   | 4.3   | 38    | 42    | 45    | 18    | 22    | 17      | 11      |
| 5     | 4.9   | 2.7   | 5.9     | 3.9   | 3.5   | 34    | 38    | 36    | 11    | 13    | 11      | 9.8     |
| 6     | 2.0   | 53    | 19      | 3.5   | 3.0   | 32    | 41    | 42    | 8.1   | 8.8   | 11      | 9.9     |
| 7     | 1.6   | 4.1   | 23      | 4.5   | 2.7   | 50    | 66    | 70    | 6.5   | 10    | 79      | 8.9     |
| 8     | 2.3   | 3.7   | 27      | 6.8   | 2.5   | 150   | 35    | 136   | 5.6   | 13    | 37      | 18      |
| 9     | 1.8   | 3.9   | 24      | 9.0   | 2.5   | 120   | 31    | 159   | 5.4   | 8.7   | 19      | 13      |
| 10    | 1.6   | 4.9   | 123     | 15    | 2.6   | 94    | 30    | 73    | 4.9   | 7.3   | 13      | 11      |
| 11    | 1.6   | 4.8   | 239     | 11    | 2.7   | 70    | 34    | 47    | 5.1   | 6.9   | 47      | 14      |
| 12    | 1.4   | 5.2   | 55      | 8.0   | 2.8   | 180   | 31    | 39    | 28    | 5.7   | 101     | 21      |
| 13    | 1.4   | 3.5   | 31      | 5.6   | 3.0   | 190   | 38    | 35    | 98    | 14    | 28      | 306     |
| 14    | 2.0   | 3.4   | 21      | 4.0   | 3.2   | 150   | 36    | 38    | 25    | 19    | 27      | 364     |
| 15    | 1.5   | 3.6   | 266     | 3.1   | 3.3   | 130   | 43    | 41    | 125   | 76    | 42      | 107     |
| 16    | 1.4   | 3.6   | 408     | 2.5   | 3.4   | 120   | 190   | 42    | 48    | 25    | 28      | 49      |
| 17    | 1.3   | 4.1   | 83      | 2.9   | 3.5   | 416   | 340   | 34    | 22    | 18    | 20      | 116     |
| 18    | 1.4   | 4.5   | 65      | 3.4   | 3.6   | 1,340 | 119   | 29    | 17    | 77    | 16      | 1,380   |
| 19    | 2.2   | 3.7   | 50      | 4.5   | 3.8   | 888   | 68    | 26    | 14    | 28    | 15      | 1,130   |
| 20    | 40    | 5.7   | 25      | 6.0   | 3.9   | 356   | 50    | 25    | 55    | 19    | 15      | 359     |
| 21    | 13    | 3.4   | 23      | 5.6   | 3.9   | 615   | 54    | 23    | 29    | 13    | 12      | 630     |
| 22    | 4.5   | 2.8   | 19      | 6.8   | 4.0   | 384   | 541   | 21    | 17    | 10    | 10      | 590     |
| 23    | 3.1   | 3.2   | 17      | 8.0   | 4.0   | 105   | 222   | 20    | 13    | 8.1   | 10      | 205     |
| 24    | 3.4   | 2.8   | 16      | 6.0   | 3.8   | 55    | 98    | 18    | 10    | 7.8   | 81      | 135     |
| 25    | 6.4   | 2.9   | 16      | 4.5   | 3.8   | 46    | 58    | 16    | 9.7   | 7.1   | 36      | 95      |
| 26    | 5.7   | 3.2   | 16      | 3.9   | 4.0   | 39    | 46    | 14    | 8.9   | 6.5   | 235     | 89      |
| 27    | 2.9   | 14    | 16      | 3.3   | 6.4   | 32    | 39    | 14    | 8.3   | 16    | 191     | 73      |
| 28    | 2.4   | 15    | 20      | 3.1   | 10    | 33    | 34    | 10    | 8.2   | 11    | 52      | 77      |
| 29    | 1.8   | 15    | 28      | 3.0   | 60    | 30    | 33    | 10    | 8.0   | 7.2   | 30      | 350     |
| 30    | 1.8   | 32    | 63      | 3.1   | ----- | 29    | 32    | 14    | 6.8   | 5.6   | 23      | 199     |
| 31    | 2.8   | ----- | 52      | 3.3   | ----- | 35    | ----- | 13    | ----- | 4.8   | 18      | -----   |
| TOTAL | 145.7 | 343.9 | 1,821.2 | 192.8 | 167.0 | 5,939 | 2,542 | 1,289 | 653.5 | 576.5 | 1,346.2 | 6,413.6 |
| MEAN  | 4.70  | 11.5  | 58.7    | 6.22  | 5.76  | 192   | 84.7  | 41.6  | 21.8  | 18.6  | 43.4    | 214     |
| MAX   | 40    | 91    | 408     | 25    | 60    | 1,340 | 541   | 159   | 125   | 77    | 235     | 1,380   |
| MIN   | 1.3   | 2.8   | 6.3     | 2.5   | 2.5   | 29    | 30    | 10    | 4.9   | 4.8   | 4.2     | 8.9     |
| CFSM  | .10   | .23   | 1.19    | .13   | .12   | 3.89  | 1.72  | .84   | .44   | .38   | .88     | 4.34    |
| IN.   | .11   | .26   | 1.37    | .15   | .13   | 4.48  | 1.92  | .97   | .49   | .44   | 1.02    | 4.84    |

CAL YR 1971 TOTAL 14,407.98 MEAN 39.5 MAX 866 MIN .44 CFSM .80 IN 10.87  
WTR YR 1972 TOTAL 21,430.40 MEAN 58.6 MAX 1,380 MIN 1.3 CFSM 1.19 IN 16.17

PEAK DISCHARGE (BASE, 350 CFS)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 12-16 | 0200 | 6.85  | 660       | 9-14 | 0300 | 6.94  | 550       |
| 3-18  | 1000 | 7.54  | 1,640     | 9-18 | 2000 | 8.80  | 2,270     |
| 3-21  | 0600 | 7.03  | 920       | 9-21 | 2000 | 7.55  | 870       |
| 4-17  | 0300 | 6.42  | 546       | 9-29 | 1600 | 6.60  | 423       |
| 4-22  | 1500 | 6.85  | 800       |      |      |       |           |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087233 Root River Canal near Franklin, Wis.

LOCATION.--Lat 42°48'55", long 87°59'40", in SE 1/4 sec.10, T.4 N., R.21 E., Racine County, on right bank 10 ft downstream from highway bridge 3.5 miles upstream from mouth, 5.5 miles southeast of intersection U.S. 45 and State 100 in Franklin, and 8.7 miles southeast of Hales Corners.

DRAINAGE AREA.--57.2 sq mi.

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

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

AVERAGE DISCHARGE.--9 years, 38.5 cfs (9.14 inches per year).

EXTREMES.--Current year: Maximum discharge, 704 cfs Sept. 18 (gage height, 9.66 ft); minimum, 0.60 cfs Nov. 23 (gage height, 2.19 ft).

Period of record: Maximum discharge, 774 cfs Feb. 11, 1966 (gage height, 9.27 ft); minimum daily, 0.40 cfs Dec. 19, 1963, result of freezeup.

REMARKS.--Records fair except those below 3.0 cfs, which are poor.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Oct. 9 to Dec. 30, May 31 to June 15, Aug. 2-27, Sept. 12-25; stage-discharge relation affected by ice Dec. 24-28, Jan. 3, 4, 6-8, Jan. 27 to Mar. 5, Mar. 7-15.)

|     |      |     |     |      |       |
|-----|------|-----|-----|------|-------|
| 2.0 | 0.50 | 3.5 | 32  | 7.0  | 223   |
| 2.2 | 2.8  | 4.0 | 47  | 8.0  | 340   |
| 2.5 | 7.8  | 5.0 | 87  | 9.0  | 580   |
| 3.0 | 19   | 6.0 | 143 | 10.0 | 1,060 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT   | NOV       | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN     | JUL     | AUG   | SEP   |
|-------------|-------|-----------|-------|-------|-------|-------|-------|-------|---------|---------|-------|-------|
| 1           | 2.0   | 1.4       | 3.6   | 41    | 3.6   | 28    | 37    | 57    | 11      | 14      | 10    | 34    |
| 2           | 1.5   | 2.0       | 2.0   | 34    | 3.4   | 25    | 42    | 57    | 9.4     | 18      | 128   | 40    |
| 3           | 2.0   | 9.0       | 1.3   | 25    | 4.0   | 22    | 45    | 51    | 11      | 17      | 224   | 32    |
| 4           | 4.6   | 6.0       | 1.0   | 21    | 4.0   | 19    | 49    | 45    | 12      | 15      | 122   | 26    |
| 5           | 3.4   | 4.2       | 1.3   | 20    | 3.8   | 17    | 48    | 40    | 9.0     | 13      | 72    | 22    |
| 6           | 2.3   | 3.1       | 2.2   | 16    | 3.5   | 15    | 52    | 44    | 8.8     | 11      | 56    | 20    |
| 7           | 1.8   | 2.7       | 2.7   | 14    | 3.3   | 13    | 53    | 53    | 7.8     | 13      | 148   | 19    |
| 8           | 1.6   | 2.2       | 3.1   | 11    | 3.1   | 10    | 45    | 100   | 7.1     | 13      | 108   | 22    |
| 9           | 1.5   | 2.1       | 3.6   | 10    | 2.9   | 42    | 39    | 137   | 7.3     | 11      | 70    | 19    |
| 10          | 1.6   | 2.0       | 27    | 15    | 2.9   | 36    | 38    | 98    | 7.4     | 9.8     | 51    | 16    |
| 11          | 1.4   | 2.1       | 55    | 13    | 2.9   | 34    | 39    | 72    | 7.3     | 8.4     | 74    | 42    |
| 12          | 1.1   | 2.1       | 27    | 12    | 2.9   | 37    | 40    | 58    | 13      | 7.6     | 132   | 103   |
| 13          | 1.2   | 2.0       | 17    | 11    | 2.9   | 43    | 56    | 52    | 18      | 12      | 85    | 351   |
| 14          | 1.8   | 1.8       | 11    | 8.6   | 2.4   | 54    | 55    | 49    | 18      | 17      | 97    | 511   |
| 15          | 1.9   | 1.6       | 83    | 5.7   | 2.8   | 72    | 57    | 48    | 177     | 177     | 291   | 391   |
| 16          | 1.8   | 1.6       | 113   | 4.6   | 2.8   | 96    | 296   | 46    | 135     | 209     | 209   | 205   |
| 17          | 1.5   | 1.7       | 59    | 4.6   | 2.8   | 272   | 562   | 41    | 72      | 111     | 111   | 130   |
| 18          | 1.3   | 1.8       | 45    | 6.2   | 2.9   | 562   | 499   | 36    | 47      | 173     | 73    | 556   |
| 19          | 1.1   | 1.8       | 29    | 8.6   | 3.0   | 409   | 361   | 32    | 40      | 131     | 65    | 684   |
| 20          | 1.4   | 1.8       | 23    | 8.8   | 3.2   | 224   | 200   | 29    | 227     | 85      | 55    | 559   |
| 21          | 7.2   | 1.3       | 17    | 8.2   | 3.5   | 222   | 136   | 26    | 202     | 58      | 44    | 523   |
| 22          | 5.6   | 1.0       | 14    | 9.0   | 3.7   | 218   | 369   | 23    | 96      | 42      | 37    | 485   |
| 23          | 4.3   | 7.0       | 13    | 11    | 3.0   | 111   | 383   | 21    | 57      | 33      | 32    | 381   |
| 24          | 3.5   | 1.2       | 12    | 10    | 3.4   | 74    | 240   | 19    | 43      | 27      | 37    | 230   |
| 25          | 2.7   | 1.3       | 11    | 8.0   | 3.2   | 57    | 139   | 17    | 35      | 22      | 34    | 146   |
| 26          | 2.4   | 1.5       | 11    | 6.0   | 3.4   | 48    | 103   | 15    | 28      | 19      | 156   | 113   |
| 27          | 2.2   | 2.3       | 10    | 5.2   | 4.0   | 41    | 83    | 14    | 24      | 21      | 141   | 95    |
| 28          | 1.8   | 3.0       | 10    | 4.3   | 4.8   | 37    | 68    | 14    | 21      | 18      | 85    | 89    |
| 29          | 2.0   | 3.1       | 12    | 3.7   | 5.8   | 35    | 61    | 13    | 20      | 15      | 59    | 283   |
| 30          | 2.4   | 5.8       | 41    | 3.4   | ----- | 33    | 54    | 14    | 17      | 13      | 46    | 241   |
| 31          | 2.3   | -----     | 71    | 3.2   | ----- | 32    | ----- | 12    | -----   | 11      | 37    | ----- |
| TOTAL       | 73.2  | 74.20     | 731.8 | 368.1 | 99.4  | 2,998 | 4,259 | 1,333 | 1,388.1 | 1,344.8 | 2,889 | 6,368 |
| MEAN        | 2.36  | 2.47      | 23.6  | 11.9  | 3.43  | 96.7  | 142   | 43.0  | 46.3    | 43.4    | 93.2  | 212   |
| MAX         | 7.2   | 9.0       | 113   | 41    | 5.8   | 562   | 562   | 137   | 227     | 209     | 291   | 684   |
| MIN         | 1.1   | 7.0       | 1.0   | 3.2   | 2.8   | 15    | 37    | 12    | 7.1     | 7.6     | 10    | 16    |
| CFSM        | .04   | .04       | .41   | .21   | .06   | 1.69  | 2.48  | .75   | .81     | .76     | 1.63  | 3.71  |
| IN.         | .05   | .05       | .48   | .24   | .06   | 1.95  | 2.77  | .87   | .90     | .87     | 1.88  | 4.14  |
| CAL YR 1971 | TOTAL | 15,596.87 | MEAN  | 42.7  | MAX   | 720   | MIN   | .65   | CFSM    | .75     | IN    | 10.14 |
| WTR YR 1972 | TOTAL | 21,926.60 | MEAN  | 59.9  | MAX   | 684   | MIN   | .70   | CFSM    | 1.05    | IN    | 14.26 |

## PEAK DISCHARGE (BASE, 300 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 3-18 | 0800 | 9.19  | 640       | 8-15 | 1400 | 7.54  | 306       |
| 4-17 | 0700 | 8.99  | 577       | 9-18 | 2000 | 9.66  | 704       |

04087240 Root River at Racine, Wis.

LOCATION.--Lat 42°45'05", long 87°49'25", in NE 1/4 sec.6, T.3 N., R.23 E., Racine County, on left bank 30 ft downstream from State Highway 38 bridge in Racine, 350 ft downstream from Horlick Dam, and 5.2 miles upstream from mouth.

DRAINAGE AREA.--187 sq mi.

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

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

AVERAGE DISCHARGE.--9 years, 137 cfs (9.95 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,740 cfs Sept. 20 (gage height, 6.54 ft); minimum daily, 3.8 cfs Oct. 17, 18.

Period of record: Maximum discharge, 2,740 cfs Sept. 20, 1972 (gage height, 6.54 ft); minimum daily, 1.3 cfs Oct. 12, Dec. 31, 1963, Jan. 1, 2, 1964.

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

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 2, 3, 28, 29, Jan. 4-8, 11-17, Jan. 22 to Mar. 15, Mar. 18-21.)

Oct. 1 to Mar. 14

Mar. 15 to Sept. 30

|     |     |     |     |     |     |     |       |
|-----|-----|-----|-----|-----|-----|-----|-------|
| 2.0 | 3.0 | 2.7 | 74  | 2.2 | 12  | 4.0 | 663   |
| 2.1 | 6.8 | 3.0 | 146 | 2.3 | 21  | 5.0 | 1,390 |
| 2.3 | 20  | 3.5 | 325 | 2.5 | 47  | 6.0 | 2,250 |
| 2.5 | 41  | 4.0 | 575 | 2.7 | 82  | 7.0 | 3,200 |
|     |     |     |     | 3.0 | 160 |     |       |

DISCHARGE, IN CUBIC FEET PER SECOND. WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR    | MAY   | JUN   | JUL   | AUG   | SEP    |
|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|--------|
| 1     | 10    | 5.3   | 29    | 173   | 14    | 80    | 127    | 167   | 52    | 52    | 27    | 120    |
| 2     | 7.9   | 9.6   | 35    | 114   | 16    | 100   | 163    | 232   | 44    | 57    | 145   | 109    |
| 3     | 9.6   | 72    | 21    | 91    | 17    | 120   | 160    | 232   | 41    | 127   | 315   | 102    |
| 4     | 9.0   | 50    | 15    | 90    | 15    | 88    | 145    | 180   | 44    | 95    | 340   | 82     |
| 5     | 14    | 23    | 12    | 76    | 14    | 74    | 142    | 145   | 46    | 67    | 194   | 74     |
| 6     | 18    | 16    | 11    | 68    | 14    | 64    | 145    | 142   | 39    | 60    | 136   | 63     |
| 7     | 11    | 11    | 17    | 50    | 13    | 90    | 180    | 180   | 29    | 58    | 224   | 58     |
| 8     | 7.4   | 8.5   | 29    | 35    | 12    | 130   | 177    | 315   | 26    | 63    | 345   | 50     |
| 9     | 5.7   | 7.9   | 38    | 35    | 11    | 150   | 125    | 458   | 26    | 67    | 224   | 58     |
| 10    | 4.9   | 6.8   | 74    | 47    | 11    | 180   | 114    | 447   | 23    | 57    | 151   | 50     |
| 11    | 4.5   | 7.4   | 196   | 56    | 11    | 160   | 114    | 297   | 20    | 52    | 136   | 71     |
| 12    | 4.1   | 7.4   | 249   | 47    | 10    | 140   | 117    | 213   | 33    | 47    | 283   | 125    |
| 13    | 4.5   | 7.4   | 130   | 35    | 9.8   | 180   | 136    | 177   | 112   | 109   | 297   | 601    |
| 14    | 5.3   | 7.9   | 74    | 27    | 9.4   | 230   | 160    | 160   | 157   | 145   | 198   | 728    |
| 15    | 4.9   | 7.9   | 152   | 22    | 9.2   | 300   | 157    | 163   | 386   | 546   | 288   | 803    |
| 16    | 4.1   | 6.4   | 366   | 20    | 9.2   | 355   | 701    | 167   | 424   | 430   | 683   | 748    |
| 17    | 3.8   | 6.4   | 460   | 24    | 12    | 452   | 1,240  | 148   | 292   | 493   | 302   | 515    |
| 18    | 3.8   | 6.4   | 257   | 25    | 12    | 700   | 1,240  | 130   | 174   | 577   | 202   | 1,460  |
| 19    | 4.1   | 6.4   | 141   | 29    | 10    | 820   | 1,000  | 125   | 122   | 552   | 148   | 2,000  |
| 20    | 4.1   | 7.4   | 107   | 34    | 11    | 1,100 | 735    | 133   | 458   | 311   | 136   | 2,570  |
| 21    | 33    | 8.5   | 78    | 38    | 13    | 980   | 516    | 127   | 464   | 184   | 120   | 2,150  |
| 22    | 28    | 8.5   | 67    | 33    | 14    | 933   | 702    | 122   | 365   | 127   | 97    | 1,700  |
| 23    | 15    | 9.0   | 61    | 35    | 13    | 810   | 925    | 109   | 204   | 97    | 82    | 1,650  |
| 24    | 10    | 9.0   | 54    | 31    | 13    | 452   | 940    | 100   | 139   | 74    | 86    | 1,320  |
| 25    | 7.9   | 9.6   | 50    | 25    | 12    | 240   | 620    | 93    | 109   | 61    | 154   | 846    |
| 26    | 7.4   | 9.6   | 48    | 21    | 14    | 187   | 375    | 86    | 89    | 53    | 397   | 577    |
| 27    | 11    | 8.5   | 46    | 19    | 16    | 151   | 266    | 80    | 67    | 50    | 511   | 402    |
| 28    | 11    | 9.6   | 40    | 16    | 19    | 136   | 232    | 73    | 57    | 57    | 493   | 335    |
| 29    | 7.4   | 26    | 39    | 14    | 25    | 125   | 180    | 63    | 57    | 46    | 292   | 493    |
| 30    | 6.0   | 24    | 91    | 13    | ----- | 114   | 163    | 57    | 50    | 36    | 180   | 632    |
| 31    | 5.3   | ----- | 149   | 12    | ----- | 109   | -----  | 58    | ----- | 29    | 136   | -----  |
| TOTAL | 282.7 | 403.4 | 3,136 | 1,355 | 379.6 | 9,750 | 11,997 | 5,179 | 4,149 | 4,779 | 7,322 | 20,492 |
| MEAN  | 9.12  | 13.4  | 101   | 43.7  | 13.1  | 315   | 400    | 167   | 138   | 154   | 236   | 683    |
| MAX   | 33    | 72    | 460   | 173   | 25    | 1,100 | 1,240  | 458   | 464   | 577   | 683   | 2,570  |
| MIN   | 3.8   | 5.3   | 11    | 12    | 9.2   | 64    | 114    | 57    | 20    | 29    | 27    | 50     |
| CFSM  | .05   | .07   | .54   | .23   | .07   | 1.68  | 2.14   | .89   | .74   | .82   | 1.26  | 3.65   |
| IN.   | .06   | .08   | .62   | .27   | .08   | 1.94  | 2.39   | 1.03  | .83   | .95   | 1.46  | 4.08   |

CAL YR 1971 TOTAL 45,315.9 MEAN 124 MAX 1,460 MIN 2.5 CFSM .66 IN 9.01  
WTR YR 1972 TOTAL 69,224.7 MEAN 189 MAX 2,570 MIN 3.8 CFSM 1.01 IN 13.77

PEAK DISCHARGE (BASE, 500 CFS)

| DATE  | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|-------|------|-------|-----------|------|------|-------|-----------|
| 12-17 | 1800 | 3.86  | 500       | 6-20 | 1400 | 3.76  | 516       |
| 3-20  | --   | --    | al,300    | 7-15 | 0500 | 4.14  | 755       |
| 4-16  | 1930 | 5.25  | 1,590     | 8-28 | 0930 | 3.77  | 522       |
| 4-23  | 2200 | 4.57  | 1,070     | 9-20 | 0630 | 6.54  | 2,740     |

a About.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087257 Pike River near Racine, Wis.

LOCATION.--Lat 42°30'49", long 87°51'30", in SE 1/4 NE 1/4 sec.11, T.2 N., R.22 E., Kenosha County, on right bank just downstream from unnamed tributary, 1.7 miles downstream from Pike Creek, 6.8 miles southwest of Racine post office and 9.0 miles upstream from mouth.

DRAINAGE AREA.--38.7 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 620 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 1,200 cfs June 15 (gage height, 7.60 ft, from floodmark); minimum daily, 0.53 cfs Nov. 11.

Period of record: Maximum discharge, 1,200 cfs June 15, 1972 (gage height, 7.60 ft, from floodmark); minimum daily, 0.53 cfs Nov. 11, 1971.

REMARKS.--Records good except those for winter periods, which are fair. Low flows may be affected by occasional regulation of small recreation dam 1.1 miles upstream.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 3-7, 14-17, Jan. 23 to Feb. 11.)

Oct. 1 to Mar. 12

Mar. 13 to Sept. 30

|     |      |     |     |     |     |     |     |
|-----|------|-----|-----|-----|-----|-----|-----|
| 1.8 | 0.40 | 2.3 | 6.8 | 2.1 | 5.0 | 3.0 | 64  |
| 1.9 | .60  | 2.4 | 10  | 2.2 | 8.2 | 4.0 | 167 |
| 2.0 | 1.2  | 2.6 | 22  | 2.3 | 12  | 5.0 | 336 |
| 2.1 | 2.3  | 3.0 | 60  | 2.5 | 24  | 6.0 | 600 |
| 2.2 | 4.1  | 3.6 | 122 |     |     |     |     |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV    | DEC   | JAN   | FEB   | MAR     | APR   | MAY   | JUN     | JUL     | AUG     | SEP   |
|-------|-------|--------|-------|-------|-------|---------|-------|-------|---------|---------|---------|-------|
| 1     | 3.4   | 3.0    | 2.5   | 14    | 9.4   | 38      | 24    | 34    | 4.3     | 13      | 4.7     | 29    |
| 2     | 3.4   | 19     | 2.1   | 14    | 5.4   | 15      | 26    | 37    | 11      | 13      | 139     | 27    |
| 3     | 20    | 2.2    | 1.9   | 10    | 5.4   | 12      | 26    | 34    | 14      | 13      | 88      | 17    |
| 4     | 8.0   | 3.2    | 1.6   | 7.0   | 5.9   | 10      | 27    | 23    | 11      | 14      | 43      | 19    |
| 5     | 4.6   | 2.2    | 1.5   | 6.0   | 5.6   | 9.4     | 27    | 24    | 5.1     | 12      | 34      | 18    |
| 6     | 3.9   | 1.9    | 1.6   | 6.0   | 4.3   | 3.5     | 19    | 24    | 7.7     | 12      | 34      | 18    |
| 7     | 4.2   | 1.6    | 1.9   | 6.0   | 4.0   | 57      | 49    | 36    | 7.4     | 13      | 40      | 15    |
| 8     | 3.9   | 1.3    | 1.9   | 5.8   | 5.6   | 33      | 24    | 74    | 7.0     | 14      | 33      | 20    |
| 9     | 3.5   | 6.5    | 2.8   | 6.5   | 6.8   | 17      | 25    | 44    | 6.4     | 13      | 24      | 17    |
| 10    | 3.1   | .54    | 63    | 5.8   | 5.3   | 11      | 14    | 60    | 6.2     | 8.2     | 16      | 15    |
| 11    | 3.1   | .53    | 42    | 4.9   | 6.4   | 21      | 28    | 49    | 6.4     | 7.8     | 52      | 75    |
| 12    | 3.1   | 1.1    | 13    | 4.6   | 6.9   | 36      | 27    | 45    | 130     | 8.6     | 63      | 96    |
| 13    | 4.0   | 2.7    | 7.5   | 3.9   | 5.7   | 138     | 41    | 33    | 100     | 17      | 32      | 383   |
| 14    | 2.8   | 2.3    | 5.9   | 3.0   | 4.7   | 40      | 38    | 38    | 400     | 25      | 81      | 211   |
| 15    | 2.7   | 2.3    | 112   | 2.1   | 8.1   | 33      | 41    | 31    | 569     | 308     | 232     | 100   |
| 16    | 2.5   | 2.7    | 70    | 2.8   | 7.2   | 62      | 456   | 25    | 158     | 132     | 155     | 40    |
| 17    | 2.5   | 2.8    | 34    | 4.3   | 9.1   | 330     | 349   | 30    | 44      | 116     | 90      | 60    |
| 18    | 2.5   | 2.7    | 13    | 5.2   | 17    | 143     | 185   | 22    | 54      | 188     | 71      | 500   |
| 19    | 3.7   | 3.3    | 13    | 3.6   | 8.0   | 102     | 124   | 21    | 61      | 93      | 50      | 300   |
| 20    | 5.1   | 3.1    | 10    | 3.7   | 5.7   | 49      | 92    | 20    | 350     | 65      | 45      | 100   |
| 21    | 10    | 2.7    | 4.0   | 4.0   | 13    | 112     | 76    | 12    | 118     | 43      | 34      | 200   |
| 22    | 5.0   | 2.3    | 5.8   | 4.6   | 16    | 107     | 261   | 26    | 40      | 36      | 20      | 80    |
| 23    | 3.6   | 2.4    | 6.0   | 4.8   | 11    | 49      | 140   | 12    | 47      | 25      | 25      | 210   |
| 24    | 4.0   | 14     | 6.3   | 3.7   | 9.1   | 34      | 45    | 14    | 45      | 23      | 40      | 120   |
| 25    | 4.1   | 1.4    | 5.5   | 3.7   | 8.2   | 25      | 54    | 14    | 32      | 20      | 24      | 80    |
| 26    | 3.8   | 1.5    | 5.5   | 2.8   | 7.2   | 22      | 57    | 14    | 23      | 13      | 272     | 56    |
| 27    | 5.3   | 3.6    | 5.8   | 3.6   | 6.4   | 19      | 46    | 14    | 26      | 18      | 133     | 52    |
| 28    | 3.3   | 1.6    | 5.4   | 4.2   | 35    | 18      | 45    | 17    | 20      | 15      | 84      | 53    |
| 29    | 2.3   | 8.6    | 5.1   | 4.4   | 57    | 17      | 41    | 17    | 20      | 12      | 55      | 143   |
| 30    | 2.3   | 5.4    | 49    | 5.4   | ----- | 18      | 28    | 15    | 20      | 8.5     | 37      | 84    |
| 31    | 2.8   | -----  | 31    | 7.0   | ----- | 18      | ----- | 4.7   | -----   | 8.2     | 33      | ----- |
| TOTAL | 136.5 | 108.47 | 539.6 | 170.4 | 300.4 | 1,687.5 | 2,507 | 930.7 | 2,472.5 | 1,307.3 | 2,096.7 | 3,138 |
| MFAN  | 4.40  | 3.62   | 17.4  | 5.50  | 10.4  | 54.4    | 83.4  | 30.0  | 82.4    | 42.2    | 67.6    | 105   |
| MAX   | 20    | 19     | 112   | 18    | 57    | 340     | 456   | 94    | 560     | 308     | 272     | 500   |
| MIN   | 2.3   | .53    | 1.5   | 2.1   | 4.0   | 9.6     | 14    | 4.7   | 5.1     | 7.8     | 9.7     | 15    |
| CFSM  | .11   | .09    | .45   | .14   | .27   | 1.41    | 2.16  | .78   | 2.13    | 1.09    | 1.75    | 2.71  |
| IN.   | .13   | .10    | .52   | .16   | .29   | 1.62    | 2.40  | .89   | 2.38    | 1.26    | 2.02    | 3.02  |

WTR YR 1972 TOTAL 15,389.07 MEAN 42.0 MAX 500 MIN .53 CFSM 1.09 IN 14.79

05333500 St. Croix River near Danbury, Wis.

LOCATION.--Lat 46°04'28", long 92°14'50", in SW 1/4 sec.33, T.42 N., R.15 W., Burnett County, on left bank at downstream side of bridge on State Highway 35, 3.5 miles downstream from Namekagon River, 10 miles northeast of Danbury, and at mile 129.2.

DRAINAGE AREA.--1,588 sq mi.

PERIOD OF RECORD.--March 1914 to current year. Prior to October 1933, published as "at Swiss".

GAGE.--Water-stage recorder. Datum of gage is 882.21 ft above mean sea level. Prior to Apr. 23, 1937, non-recording gage 40 ft downstream at same datum. Apr. 23, 1937, to Jan. 5, 1939, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--58 years, 1,297 cfs (11.09 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,140 cfs July 23 (gage height, 6.21 ft); minimum, 788 cfs July 13 (gage height, 0.64 ft).

Period of record: Maximum discharge, 10,200 cfs May 6, 1950 (gage height, 8.22 ft); minimum observed, 393 cfs Aug. 6, 13, 1934 (gage height, -0.20 ft, site then in use).

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

REVISIONS (WATER YEARS).--WSP 1208: Drainage area. WSP 1438: 1915(M), 1919-20, 1923-24(M), 1927(M), 1931(M), 1934, 1935-37(M). WSP 1628: 1918.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 8 to Apr. 9.)

|     |       |     |       |
|-----|-------|-----|-------|
| 0.6 | 760   | 3.0 | 3,010 |
| .8  | 900   | 4.0 | 4,130 |
| 1.0 | 1,060 | 5.0 | 5,440 |
| 2.0 | 1,940 | 6.0 | 6,830 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 1,170  | 3,420  | 1,530  | 1,300  | 1,000  | 1,300  | 1,500  | 2,570  | 1,730  | 1,200  | 2,660  | 1,570  |
| 2     | 1,400  | 3,030  | 1,560  | 1,300  | 1,000  | 1,300  | 1,400  | 2,920  | 1,570  | 1,120  | 2,270  | 1,450  |
| 3     | 1,560  | 2,790  | 1,600  | 1,300  | 1,000  | 1,300  | 1,300  | 3,010  | 1,480  | 1,060  | 1,950  | 1,450  |
| 4     | 1,540  | 2,510  | 1,510  | 1,200  | 1,000  | 1,300  | 1,300  | 2,870  | 1,360  | 1,120  | 1,990  | 1,350  |
| 5     | 1,520  | 2,280  | 1,450  | 1,200  | 1,000  | 1,300  | 1,300  | 2,790  | 1,240  | 1,050  | 1,950  | 1,280  |
| 6     | 1,570  | 2,030  | 1,390  | 1,200  | 1,000  | 1,300  | 1,300  | 3,130  | 1,100  | 1,050  | 1,810  | 1,320  |
| 7     | 1,550  | 1,880  | 1,390  | 1,200  | 1,000  | 1,300  | 1,300  | 3,210  | 1,130  | 1,040  | 1,760  | 1,410  |
| 8     | 1,360  | 1,770  | 1,300  | 1,200  | 1,000  | 1,300  | 1,300  | 3,070  | 1,050  | 1,040  | 1,870  | 1,350  |
| 9     | 1,210  | 1,630  | 1,300  | 1,100  | 1,000  | 1,300  | 1,300  | 2,840  | 954    | 1,070  | 1,880  | 1,350  |
| 10    | 1,200  | 1,510  | 1,200  | 1,100  | 1,100  | 1,300  | 1,340  | 2,650  | 1,020  | 934    | 1,920  | 1,360  |
| 11    | 1,220  | 1,440  | 1,100  | 1,100  | 1,100  | 1,300  | 1,500  | 2,410  | 958    | 1,040  | 1,820  | 1,260  |
| 12    | 1,160  | 1,420  | 1,100  | 1,100  | 1,100  | 1,300  | 1,670  | 1,970  | 944    | 930    | 1,680  | 1,280  |
| 13    | 1,160  | 1,400  | 1,200  | 1,000  | 1,100  | 1,300  | 1,900  | 1,910  | 927    | 883    | 1,670  | 1,240  |
| 14    | 1,130  | 1,390  | 1,400  | 1,000  | 1,100  | 1,400  | 2,070  | 1,920  | 1,140  | 940    | 1,580  | 1,220  |
| 15    | 1,100  | 1,380  | 1,800  | 1,000  | 1,100  | 1,500  | 2,230  | 1,840  | 1,200  | 1,050  | 1,540  | 1,200  |
| 16    | 1,270  | 1,370  | 1,700  | 1,000  | 1,100  | 1,600  | 2,860  | 1,730  | 1,250  | 1,000  | 1,490  | 1,170  |
| 17    | 1,820  | 1,870  | 1,600  | 1,000  | 1,100  | 1,700  | 3,590  | 1,600  | 1,110  | 1,000  | 1,720  | 1,130  |
| 18    | 1,820  | 2,630  | 1,500  | 1,000  | 1,100  | 1,700  | 4,120  | 1,510  | 1,030  | 1,020  | 2,300  | 1,140  |
| 19    | 1,830  | 2,820  | 1,600  | 980    | 1,100  | 1,800  | 4,340  | 1,510  | 1,020  | 962    | 2,520  | 1,180  |
| 20    | 1,880  | 2,680  | 1,600  | 980    | 1,100  | 1,800  | 4,460  | 1,380  | 1,500  | 1,090  | 2,410  | 1,460  |
| 21    | 1,860  | 2,500  | 1,600  | 980    | 1,100  | 1,800  | 4,520  | 1,490  | 1,650  | 1,600  | 2,280  | 1,820  |
| 22    | 1,890  | 2,320  | 1,500  | 980    | 1,100  | 1,800  | 4,440  | 1,440  | 1,560  | 3,640  | 2,280  | 1,800  |
| 23    | 1,810  | 2,240  | 1,500  | 980    | 1,100  | 1,800  | 4,160  | 1,280  | 1,470  | 6,460  | 2,270  | 1,580  |
| 24    | 1,750  | 2,030  | 1,500  | 980    | 1,200  | 1,900  | 3,960  | 1,210  | 1,290  | 6,460  | 2,230  | 1,460  |
| 25    | 1,640  | 1,980  | 1,400  | 1,000  | 1,200  | 1,900  | 3,720  | 1,190  | 1,250  | 5,610  | 2,140  | 1,440  |
| 26    | 1,460  | 1,920  | 1,400  | 1,000  | 1,200  | 1,800  | 3,390  | 1,060  | 1,100  | 5,150  | 2,040  | 1,400  |
| 27    | 1,610  | 1,770  | 1,400  | 1,000  | 1,200  | 1,800  | 3,070  | 991    | 1,100  | 5,200  | 1,940  | 1,420  |
| 28    | 2,610  | 1,680  | 1,400  | 1,000  | 1,300  | 1,800  | 2,880  | 1,090  | 1,330  | 4,820  | 1,790  | 1,320  |
| 29    | 3,040  | 1,580  | 1,400  | 1,000  | 1,300  | 1,700  | 2,650  | 1,650  | 1,560  | 4,140  | 1,740  | 1,310  |
| 30    | 2,890  | 1,580  | 1,300  | 1,000  | -----  | 1,600  | 2,320  | 2,490  | 1,340  | 3,390  | 1,680  | 1,280  |
| 31    | 3,300  | -----  | 1,300  | 1,000  | -----  | 1,600  | -----  | 2,240  | -----  | 2,790  | 1,610  | -----  |
| TOTAL | 52,330 | 60,850 | 44,530 | 33,180 | 31,800 | 47,900 | 77,190 | 62,971 | 37,363 | 69,859 | 60,790 | 41,000 |
| MEAN  | 1,688  | 2,028  | 1,436  | 1,070  | 1,097  | 1,545  | 2,573  | 2,031  | 1,245  | 2,254  | 1,961  | 1,367  |
| MAX   | 3,300  | 3,420  | 1,800  | 1,300  | 1,300  | 1,900  | 4,520  | 3,210  | 1,730  | 6,460  | 2,660  | 1,820  |
| MIN   | 1,100  | 1,370  | 1,100  | 980    | 1,000  | 1,300  | 1,300  | 991    | 927    | 883    | 1,490  | 1,130  |
| CFSM  | 1.06   | 1.28   | .90    | .67    | .69    | .97    | 1.62   | 1.28   | .78    | 1.42   | 1.23   | .86    |
| IN.   | 1.23   | 1.43   | 1.04   | .78    | .74    | 1.12   | 1.81   | 1.48   | .88    | 1.64   | 1.42   | .96    |

CAL YR 1971 TOTAL 516,337 MEAN 1,415 MAX 5,710 MIN 741 CFSM .89 IN 12.10  
WTR YR 1972 TOTAL 619,763 MEAN 1,693 MAX 6,460 MIN 883 CFSM 1.07 IN 14.52

PEAK DISCHARGE (BASE, 3,000 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 11-1 | 0900 | 3.45  | 3,500     | 5- 6 | 2300 | 3.19  | 3,220     |
| 4-21 | 0300 | 4.34  | 4,550     | 7-23 | 2300 | 6.21  | 7,140     |

## ST. CROIX RIVER BASIN

05334000 Shell Lake at Shell Lake, Wis.

LOCATION.--Lat 45°44'46", long 91°55'00", in NE 1/4 sec.25, T.38 N., R.13 W., Washburn County, 500 ft east of Peterson Boat Factory in the village of Shell Lake.

DRAINAGE AREA.--34.0 sq mi, approximately. Area of Shell Lake, 3,200 acres.

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

GAGE.--Nonrecording gage. Datum of gage is 1,215.88 ft above mean sea level. May 3, 1952, to Apr. 21, 1961, 2.3 miles southeast of village of Shell Lake at same datum.

EXTREMES.--Current year: Maximum gage height observed, 3.11 ft May 9; minimum observed, 2.34 ft Oct. 15, 23. Period of record: Maximum gage height observed, 5.13 ft July 17, 1954; minimum observed, -0.92 ft Nov. 28, 1949.

REMARKS.--Lake has no surface outlet. Lake ice covered from Dec. 10 to Apr. 20.

## GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | OCT  | NOV   | DEC  | JAN   | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-----|------|-------|------|-------|-------|------|-------|------|-------|------|------|-------|
| 1   | 2.42 |       |      |       |       |      |       |      |       |      |      |       |
| 2   |      |       |      |       |       |      |       |      |       |      |      | 3.00  |
| 3   |      |       |      |       |       |      |       |      | 2.88  | 2.85 |      |       |
| 4   |      |       | 2.48 |       |       |      |       |      |       |      |      |       |
| 5   |      |       |      |       |       |      |       |      |       |      | 3.02 |       |
| 6   |      | 2.42  |      |       |       |      |       |      |       |      |      |       |
| 7   |      |       |      |       |       |      |       |      |       |      |      |       |
| 8   |      | 2.39  |      |       |       |      |       |      |       | 2.78 |      |       |
| 9   | 2.39 |       |      |       |       |      |       | 3.11 |       |      |      | 2.88  |
| 10  |      |       |      |       |       |      |       |      | 2.76  |      | 2.88 |       |
| 11  |      |       |      | 2.57  |       |      |       |      |       |      |      |       |
| 12  |      |       |      |       |       |      |       |      |       |      | 2.92 |       |
| 13  |      | 2.38  |      |       |       |      |       | 3.08 |       |      |      |       |
| 14  |      |       |      |       |       |      |       |      |       |      |      |       |
| 15  | 2.34 |       |      |       |       |      |       |      |       | 2.78 |      | 2.84  |
| 16  |      |       |      |       |       | 2.66 |       |      |       |      |      |       |
| 17  |      |       |      |       |       |      |       |      | 2.80  |      |      |       |
| 18  |      |       |      |       |       |      |       |      |       |      |      |       |
| 19  |      |       |      |       |       |      |       |      |       |      | 3.08 |       |
| 20  |      | 2.48  |      | 2.50  |       |      |       | 3.04 |       |      |      |       |
| 21  | 2.36 |       |      |       |       |      |       |      |       | 2.92 |      | 2.84  |
| 22  |      |       |      |       |       |      |       |      |       |      |      |       |
| 23  | 2.34 |       |      |       |       |      |       |      |       |      |      | 2.76  |
| 24  |      |       |      |       |       |      |       |      | 2.76  |      |      |       |
| 25  |      |       |      |       |       |      |       | 2.96 |       |      |      |       |
| 26  |      |       |      |       |       |      |       |      |       |      | 3.04 |       |
| 27  |      | 2.48  |      |       |       |      |       | 2.98 |       |      |      |       |
| 28  |      |       |      |       |       |      |       |      |       |      |      |       |
| 29  |      |       |      |       |       |      |       |      |       | 3.10 |      |       |
| 30  |      |       |      |       | ----- |      |       |      | 2.86  |      |      | 2.70  |
| 31  | 2.42 | ----- |      | ----- |       |      | ----- |      | ----- |      |      | ----- |

## 05338500 Snake River near Pine City, Minn.

LOCATION.--Lat 45°50'30", long 92°56'00", in SE 1/4 NW 1/4 sec.26, T.39 N., R.21 W., Pine County, on left bank at site of former powerplant and dam, 0.5 mile downstream from Cross Lake and 1.5 miles northeast of Pine City.

DRAINAGE AREA.--958 sq mi.

RECORDS AVAILABLE.--June 1913 to September 1917, July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 919.00 ft above mean sea level, datum of 1929. June 25, 1913, to Sept. 30, 1917, nonrecording gage at site 500 ft downstream at different datum. July 1 to Oct. 28, 1951, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--25 years, 594 cfs (8.42 inches per year).

EXTREMES.--Current year: Maximum discharge, 14,300 cfs July 27 (gage height, 10.38 ft); minimum, 88 cfs Oct. 12 (gage height, 3.00 ft).

Period of record: Maximum discharge 14,300 cfs July 27, 1972 (gage height, 10.38 ft); minimum, 5.5 cfs Oct. 1, 1964 (gage height, 2.57 ft), result of dam rehabilitation 0.5 mile upstream.  
A discharge measurement of 12,500 cfs was made May 9, 1950.

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

## DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY    | OCT    | NOV    | DEC    | JAN   | FEB   | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|--------|--------|--------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| 1      | 107    | 2,420  | 405    | 210   | 155   | 160    | 2,530  | 2,390  | 1,030  | 310    | 7,050  | 817    |
| 2      | 137    | 2,070  | 417    | 205   | 155   | 160    | 2,270  | 2,240  | 1,070  | 293    | 5,760  | 697    |
| 3      | 140    | 3,700  | 700    | 200   | 155   | 160    | 2,110  | 2,080  | 1,030  | 275    | 4,540  | 610    |
| 4      | 137    | 3,950  | 701    | 195   | 150   | 150    | 1,910  | 2,000  | 935    | 264    | 3,400  | 538    |
| 5      | 122    | 4,050  | 700    | 190   | 145   | 150    | 1,700  | 1,930  | 817    | 246    | 2,700  | 478    |
| 6      | 107    | 3,940  | 703    | 185   | 145   | 150    | 1,550  | 1,910  | 706    | 218    | 2,340  | 457    |
| 7      | 102    | 3,940  | 702    | 180   | 140   | 150    | 1,450  | 1,850  | 611    | 207    | 2,170  | 422    |
| 8      | 117    | 3,940  | 700    | 175   | 140   | 150    | 1,420  | 1,860  | 538    | 207    | 2,030  | 402    |
| 9      | 157    | 3,940  | 700    | 175   | 140   | 150    | 1,360  | 1,870  | 429    | 224    | 2,000  | 364    |
| 10     | 112    | 2,070  | 402    | 175   | 135   | 150    | 1,350  | 1,840  | 390    | 218    | 2,010  | 352    |
| 11     | 112    | 1,620  | 400    | 175   | 140   | 155    | 1,280  | 1,750  | 352    | 224    | 2,060  | 352    |
| 12     | 157    | 1,610  | 405    | 175   | 145   | 150    | 1,340  | 1,620  | 328    | 230    | 2,030  | 334    |
| 13     | 140    | 1,610  | 400    | 170   | 150   | 150    | 1,380  | 1,500  | 304    | 202    | 1,910  | 340    |
| 14     | 147    | 1,610  | 377    | 170   | 150   | 174    | 1,470  | 1,350  | 322    | 281    | 1,770  | 322    |
| 15     | 137    | 1,610  | 375    | 165   | 150   | 145    | 2,000  | 1,210  | 293    | 287    | 1,560  | 304    |
| 16     | 164    | 400    | 300    | 150   | 150   | 141    | 2,440  | 1,120  | 298    | 287    | 1,400  | 293    |
| 17     | 210    | 1,610  | 340    | 155   | 155   | 210    | 2,750  | 1,030  | 328    | 293    | 1,250  | 264    |
| 18     | 310    | 1,610  | 300    | 155   | 155   | 205    | 3,060  | 945    | 352    | 304    | 1,130  | 246    |
| 19     | 407    | 1,610  | 315    | 160   | 155   | 204    | 3,490  | 855    | 409    | 285    | 986    | 235    |
| 20     | 500    | 2,070  | 305    | 150   | 155   | 334    | 3,960  | 770    | 478    | 304    | 935    | 310    |
| 21     | 730    | 2,070  | 250    | 150   | 155   | 600    | 4,330  | 724    | 485    | 364    | 1,020  | 428    |
| 22     | 835    | 2,070  | 205    | 155   | 155   | 1,150  | 4,660  | 688    | 546    | 798    | 1,080  | 538    |
| 23     | 675    | 2,070  | 215    | 155   | 155   | 1,730  | 4,690  | 715    | 594    | 2,260  | 1,160  | 779    |
| 24     | 875    | 2,070  | 210    | 155   | 155   | 2,260  | 4,520  | 751    | 594    | 4,810  | 1,280  | 895    |
| 25     | 835    | 2,070  | 205    | 150   | 155   | 2,540  | 4,280  | 798    | 562    | 8,660  | 1,360  | 895    |
| 26     | 700    | 2,070  | 200    | 150   | 155   | 3,060  | 3,970  | 789    | 493    | 12,600 | 1,450  | 855    |
| 27     | 940    | 1,610  | 240    | 150   | 160   | 3,240  | 3,640  | 789    | 442    | 14,200 | 1,480  | 751    |
| 28     | 1,060  | 1,610  | 200    | 150   | 160   | 3,220  | 3,270  | 779    | 409    | 13,700 | 1,400  | 706    |
| 29     | 1,440  | 1,610  | 200    | 150   | 160   | 3,120  | 2,940  | 617    | 370    | 12,300 | 1,250  | 636    |
| 30     | 1,450  | 1,610  | 215    | 150   | ----- | 3,010  | 2,540  | 846    | 346    | 10,300 | 1,090  | 562    |
| 31     | 2,500  | -----  | 210    | 150   | ----- | 2,810  | -----  | 935    | -----  | 8,370  | 955    | -----  |
| TOTAL  | 16,427 | 69,280 | 13,174 | 5,239 | 4,375 | 30,692 | 80,580 | 40,751 | 15,861 | 93,521 | 62,556 | 15,182 |
| MEAN   | 530    | 2,230  | 425    | 164   | 151   | 990    | 2,606  | 1,315  | 529    | 3,017  | 2,018  | 506    |
| MAX    | 2,500  | 4,050  | 700    | 210   | 160   | 3,240  | 4,690  | 2,340  | 1,070  | 14,200 | 7,050  | 895    |
| MIN    | 102    | 465    | 210    | 150   | 135   | 150    | 1,280  | 688    | 293    | 202    | 935    | 235    |
| CFS/IN | 0.55   | 2.41   | 0.44   | 0.18  | 0.15  | 1.03   | 2.80   | 1.37   | 0.55   | 3.15   | 2.11   | 0.53   |
| IN     | 0.64   | 2.89   | 0.51   | 0.20  | 0.17  | 1.19   | 3.13   | 1.58   | 0.62   | 3.63   | 2.43   | 0.59   |

CAL Yr 1971 TOTAL 195,397 MEAN 239 MAX 4,000 MIN 57 CFS/IN .30 IN 4.09  
WTR Yr 1970 TOTAL 447,535 MEAN 1,223 MAX 14,200 MIN 102 CFS/IN 1.28 IN 17.38



05356000 Chippewa River at Bishops Bridge, near Winter, Wis.

LOCATION.--Lat 45°50'57", long 91°04'44", in sec.23, T.39 N., R.6 W., Sawyer County, on right bank 15 ft upstream from highway bridge on County Trunk G, 3.2 miles downstream from Lake Chippewa Dam, and 3.7 miles northwest of Winter.

DRAINAGE AREA.--787 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 1,270 ft (from Lake Chippewa datum). See WSP 1708 or 1728 for history of changes prior to July 23, 1930.

AVERAGE DISCHARGE.--60 years, 711 cfs.

EXTREMES.--Current year: Maximum discharge, 5,930 cfs Aug. 21 (gage height, 9.61 ft); minimum, 80 cfs Apr. 6 (gage height, 3.77 ft); minimum daily 93 cfs Apr. 6.  
Period of record: Maximum discharge, 7,520 cfs Sept. 4, 5, 1914 (gage height, 11.05 ft); minimum, 14 cfs Apr. 17-20, 1925 (gage height, 3.25 ft).

REMARKS.--Records good. Flow regulated by Moose Lake and Lake Chippewa (see p. 91).

REVISIONS (WATER YEARS).--WSP 1208: Drainage area. WSP 1438: 1913(M), 1915-18(M), 1919, 1920-23(M), 1924, 1925(M), 1927(M), 1928, 1929-30(M), 1939(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Aug. 18-26.)

|     |     |      |       |
|-----|-----|------|-------|
| 3.8 | 86  | 6.0  | 1,370 |
| 4.2 | 196 | 7.0  | 2,430 |
| 4.6 | 350 | 8.0  | 3,770 |
| 5.0 | 560 | 9.0  | 5,350 |
|     |     | 10.0 | 6,550 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB    | MAR   | APR   | MAY   | JUN    | JUL    | AUG    | SEP    |
|-------|-------|--------|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|
| 1     | 224   | 1,300  | 1,360  | 1,250  | 1,090  | 305   | 142   | 135   | 229    | 1,460  | 2,240  | 1,280  |
| 2     | 233   | 1,430  | 1,360  | 1,240  | 1,080  | 310   | 142   | 143   | 238    | 1,140  | 1,980  | 1,270  |
| 3     | 230   | 1,430  | 1,360  | 1,240  | 1,070  | 310   | 142   | 137   | 237    | 1,020  | 1,670  | 1,270  |
| 4     | 226   | 1,430  | 1,360  | 1,230  | 1,070  | 310   | 143   | 133   | 238    | 855    | 1,380  | 1,270  |
| 5     | 226   | 1,430  | 1,350  | 1,230  | 1,070  | 307   | 111   | 134   | 240    | 730    | 911    | 1,270  |
| 6     | 225   | 1,430  | 1,350  | 1,220  | 1,060  | 308   | 93    | 137   | 239    | 665    | 616    | 1,270  |
| 7     | 226   | 1,420  | 1,340  | 1,210  | 1,050  | 301   | 138   | 135   | 240    | 616    | 648    | 1,270  |
| 8     | 259   | 1,420  | 1,340  | 1,210  | 1,040  | 301   | 112   | 132   | 241    | 618    | 869    | 1,240  |
| 9     | 301   | 1,410  | 1,340  | 1,200  | 1,040  | 301   | 105   | 131   | 240    | 616    | 692    | 1,210  |
| 10    | 301   | 1,410  | 1,330  | 1,200  | 1,030  | 308   | 105   | 130   | 240    | 613    | 394    | 1,210  |
| 11    | 271   | 1,410  | 1,330  | 1,200  | 1,020  | 302   | 110   | 130   | 242    | 615    | 622    | 1,200  |
| 12    | 246   | 1,400  | 1,330  | 1,190  | 1,010  | 301   | 117   | 162   | 244    | 613    | 863    | 1,180  |
| 13    | 249   | 1,400  | 1,330  | 1,190  | 1,000  | 301   | 130   | 311   | 245    | 611    | 862    | 1,180  |
| 14    | 248   | 1,400  | 1,320  | 1,180  | 992    | 301   | 128   | 311   | 261    | 614    | 1,080  | 972    |
| 15    | 244   | 1,400  | 1,320  | 1,180  | 984    | 303   | 146   | 264   | 247    | 610    | 1,300  | 733    |
| 16    | 247   | 1,390  | 1,310  | 1,180  | 979    | 305   | 207   | 198   | 264    | 610    | 1,310  | 559    |
| 17    | 248   | 1,400  | 1,310  | 1,170  | 972    | 305   | 235   | 182   | 363    | 616    | 1,650  | 559    |
| 18    | 246   | 1,430  | 1,310  | 1,160  | 966    | 305   | 222   | 182   | 430    | 613    | 1,970  | 556    |
| 19    | 249   | 1,420  | 1,300  | 1,160  | 958    | 305   | 180   | 181   | 441    | 610    | 3,350  | 557    |
| 20    | 247   | 1,410  | 1,290  | 1,150  | 950    | 306   | 163   | 204   | 802    | 609    | 3,810  | 568    |
| 21    | 245   | 1,400  | 1,290  | 1,150  | 941    | 316   | 149   | 215   | 1,160  | 615    | 5,580  | 566    |
| 22    | 245   | 1,390  | 1,290  | 1,140  | 934    | 324   | 149   | 176   | 1,390  | 656    | 5,900  | 561    |
| 23    | 245   | 1,390  | 1,280  | 1,140  | 925    | 331   | 148   | 173   | 1,610  | 895    | 5,820  | 561    |
| 24    | 245   | 1,390  | 1,280  | 1,140  | 914    | 307   | 143   | 172   | 1,610  | 2,760  | 4,970  | 561    |
| 25    | 246   | 1,380  | 1,270  | 1,130  | 910    | 143   | 138   | 172   | 1,610  | 4,390  | 4,130  | 566    |
| 26    | 246   | 1,380  | 1,270  | 1,130  | 899    | 141   | 133   | 172   | 1,610  | 5,140  | 4,040  | 572    |
| 27    | 278   | 1,380  | 1,270  | 1,120  | 888    | 141   | 132   | 201   | 1,430  | 5,130  | 3,760  | 567    |
| 28    | 478   | 1,370  | 1,260  | 1,110  | 878    | 142   | 129   | 221   | 1,340  | 5,490  | 2,490  | 420    |
| 29    | 632   | 1,370  | 1,260  | 1,110  | 735    | 142   | 129   | 228   | 1,490  | 5,240  | 1,650  | 235    |
| 30    | 821   | 1,370  | 1,250  | 1,100  | -----  | 142   | 128   | 224   | 1,620  | 3,910  | 1,430  | 230    |
| 31    | 1,040 | -----  | 1,250  | 1,090  | -----  | 145   | ----- | 224   | -----  | 2,860  | 1,300  | -----  |
| TOTAL | 9,667 | 41,990 | 40,610 | 36,350 | 28,455 | 8,369 | 4,249 | 5,650 | 20,791 | 51,540 | 69,287 | 25,463 |
| MEAN  | 312   | 1,400  | 1,310  | 1,173  | 981    | 270   | 142   | 182   | 693    | 1,663  | 2,235  | 849    |
| MAX   | 1,040 | 1,430  | 1,360  | 1,250  | 1,090  | 331   | 235   | 311   | 1,620  | 5,490  | 5,900  | 1,280  |
| MIN   | 224   | 1,300  | 1,250  | 1,090  | 735    | 141   | 93    | 130   | 229    | 609    | 394    | 230    |

CAL YR 1971 TOTAL 264,864 MEAN 726 MAX 2,170 MIN 96  
WTR YR 1972 TOTAL 342,421 MEAN 936 MAX 5,900 MIN 93

## CHIPPEWA RIVER BASIN

05356500 Chippewa River near Bruce, Wis.

LOCATION.--Lat 45°27'08", long 91°15'39", in SE 1/4 sec.5, T.34 N., R.7 E., Rusk County, on right bank 1.0 mile east of Bruce and 1.0 mile downstream from Thornapple River.

DRAINAGE AREA.--1,630 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,059.62 ft above mean sea level. Prior to May 28, 1935, non-recording gage at railroad bridge 0.8 mile upstream at datum 2.30 ft higher.

AVERAGE DISCHARGE.--58 years, 1,441 cfs.

EXTREMES.--Current year: Maximum discharge, 8,220 cfs Apr. 18 (gage height, 9.47 ft); minimum, 415 cfs June 11 (gage height, 1.49 ft).  
Period of record: Maximum discharge, 25,800 cfs Sept. 1, 1941 (gage height, 20.46 ft, from floodmarks), from rating curve extended above 20,000 cfs; minimum, 155 cfs June 10, 1932 (gage height, 0.9 ft, site and datum then in use).

REMARKS.--Records good except those for winter period, which are fair. Flow from 48 percent of the drainage area regulated by Moose Lake and Lake Chippewa (see p. 91).

REVISIONS (WATER YEARS).--WSP 875: 1936-38. WSP 1278: Drainage area. WSP 1308: 1922, 1937(M). WSP 1508: 1914-26(M), 1927, 1928-31(M), 1932, 1933(M), 1934-36, 1938.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 11 to Apr. 9.)

|     |       |      |       |
|-----|-------|------|-------|
| 1.5 | 420   | 5.0  | 3,040 |
| 2.0 | 728   | 8.0  | 6,410 |
| 3.0 | 1,420 | 10.0 | 8,960 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 1,690  | 3,160  | 1,990  | 1,800  | 1,400  | 1,300  | 2,100  | 1,120  | 660    | 2,420  | 3,260  | 1,800  |
| 2     | 1,670  | 3,380  | 1,980  | 1,800  | 1,400  | 1,100  | 2,000  | 1,870  | 641    | 1,950  | 2,680  | 1,770  |
| 3     | 1,910  | 3,520  | 1,830  | 1,700  | 1,400  | 640    | 2,000  | 2,330  | 667    | 1,550  | 2,360  | 1,720  |
| 4     | 1,590  | 2,970  | 1,930  | 1,700  | 1,400  | 700    | 1,900  | 1,860  | 574    | 1,530  | 1,970  | 1,680  |
| 5     | 1,190  | 2,630  | 1,810  | 1,600  | 1,400  | 780    | 1,800  | 1,560  | 591    | 1,260  | 1,600  | 1,660  |
| 6     | 989    | 2,400  | 1,810  | 1,600  | 1,400  | 860    | 1,700  | 1,440  | 567    | 1,160  | 1,300  | 1,710  |
| 7     | 902    | 2,210  | 1,810  | 1,600  | 1,400  | 900    | 1,500  | 1,340  | 572    | 1,090  | 1,120  | 1,920  |
| 8     | 822    | 2,050  | 1,810  | 1,600  | 1,400  | 920    | 1,300  | 1,240  | 558    | 1,040  | 1,560  | 1,910  |
| 9     | 800    | 2,010  | 1,800  | 1,600  | 1,400  | 920    | 1,200  | 1,080  | 563    | 1,000  | 1,950  | 1,760  |
| 10    | 856    | 1,930  | 1,790  | 1,600  | 1,400  | 920    | 1,120  | 949    | 578    | 1,010  | 1,450  | 1,680  |
| 11    | 800    | 1,910  | 1,800  | 1,600  | 1,400  | 940    | 1,550  | 896    | 536    | 999    | 1,060  | 1,810  |
| 12    | 780    | 1,880  | 1,800  | 1,600  | 1,400  | 960    | 2,180  | 822    | 578    | 983    | 1,220  | 1,840  |
| 13    | 742    | 1,870  | 1,900  | 1,600  | 1,400  | 1,000  | 3,880  | 846    | 632    | 964    | 1,310  | 1,730  |
| 14    | 863    | 1,860  | 1,900  | 1,600  | 1,400  | 1,100  | 4,520  | 1,100  | 936    | 1,070  | 1,300  | 1,660  |
| 15    | 874    | 1,860  | 1,900  | 1,600  | 1,300  | 1,100  | 3,920  | 1,060  | 1,220  | 1,120  | 1,600  | 1,360  |
| 16    | 807    | 1,860  | 1,900  | 1,600  | 1,300  | 1,100  | 5,510  | 952    | 964    | 1,020  | 1,710  | 1,200  |
| 17    | 807    | 2,040  | 1,900  | 1,500  | 1,300  | 1,200  | 7,620  | 875    | 858    | 1,170  | 2,050  | 953    |
| 18    | 790    | 2,890  | 1,900  | 1,500  | 1,300  | 1,300  | 8,130  | 747    | 777    | 1,700  | 2,620  | 977    |
| 19    | 860    | 3,520  | 1,900  | 1,500  | 1,300  | 1,400  | 7,200  | 661    | 912    | 1,470  | 3,390  | 912    |
| 20    | 839    | 3,240  | 1,900  | 1,500  | 1,300  | 1,500  | 5,760  | 661    | 1,610  | 1,220  | 4,130  | 954    |
| 21    | 923    | 2,850  | 1,800  | 1,500  | 1,300  | 1,900  | 4,390  | 723    | 2,750  | 1,350  | 5,150  | 1,270  |
| 22    | 770    | 2,440  | 1,800  | 1,500  | 1,300  | 2,600  | 3,440  | 612    | 2,490  | 1,870  | 6,490  | 1,300  |
| 23    | 772    | 2,240  | 1,800  | 1,500  | 1,300  | 2,700  | 3,100  | 630    | 2,390  | 4,740  | 6,760  | 1,120  |
| 24    | 697    | 2,150  | 1,800  | 1,500  | 1,300  | 2,800  | 3,050  | 598    | 2,190  | 5,790  | 6,370  | 1,070  |
| 25    | 738    | 2,100  | 1,800  | 1,500  | 1,300  | 2,800  | 2,730  | 599    | 1,980  | 5,650  | 5,650  | 1,060  |
| 26    | 718    | 2,080  | 1,700  | 1,500  | 1,300  | 2,800  | 2,240  | 585    | 1,920  | 5,750  | 4,860  | 1,550  |
| 27    | 764    | 2,040  | 1,700  | 1,500  | 1,300  | 2,700  | 1,800  | 593    | 1,910  | 5,850  | 4,810  | 1,790  |
| 28    | 1,080  | 1,970  | 1,700  | 1,500  | 1,300  | 2,600  | 1,550  | 576    | 2,220  | 5,650  | 3,970  | 1,720  |
| 29    | 1,360  | 1,920  | 1,800  | 1,400  | 1,300  | 2,500  | 1,400  | 711    | 2,870  | 5,890  | 2,650  | 2,190  |
| 30    | 1,610  | 1,890  | 1,800  | 1,400  | -----  | 2,400  | 1,190  | 779    | 2,770  | 5,300  | 2,120  | 1,790  |
| 31    | 2,750  | -----  | 1,800  | 1,400  | -----  | 2,300  | -----  | 710    | -----  | 3,980  | 1,900  | -----  |
| TOTAL | 32,763 | 70,870 | 56,860 | 48,400 | 39,100 | 48,740 | 91,780 | 30,525 | 38,484 | 77,546 | 90,370 | 45,866 |
| MEAN  | 1,057  | 2,362  | 1,834  | 1,561  | 1,348  | 1,572  | 3,059  | 985    | 1,283  | 2,501  | 2,915  | 1,529  |
| MAX   | 2,750  | 3,520  | 1,990  | 1,800  | 1,400  | 2,800  | 8,130  | 2,330  | 2,870  | 5,890  | 6,760  | 2,190  |
| MIN   | 697    | 1,860  | 1,700  | 1,400  | 1,300  | 640    | 1,120  | 576    | 536    | 964    | 1,060  | 912    |

CAL YR 1971 TOTAL 629,416 MEAN 1,724 MAX 14,100 MIN 523  
WTR YR 1972 TOTAL 671,304 MEAN 1,834 MAX 8,130 MIN 536

05358300 Pine Creek near Oxbo, Wis.

LOCATION.--Lat 45°54'12", long 90°41'00", in SE 1/4 sec.36, T.40 N., R.3 W., Sawyer County, Chequamegon National Forest, on right bank just downstream from culvert on County Trunk Highway EE, 2.0 miles upstream from mouth and 3.0 miles northeast of Oxbo.

DRAINAGE AREA.--37.8 sq mi.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1967-70. October 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,400 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 670 cfs Aug. 18 (gage height, 5.00 ft); minimum daily, 17 cfs Oct. 21, 26.

Period of record: Maximum discharge, 670 cfs Aug. 18, 1972 (gage height, 5.00 ft); minimum daily, 16 cfs Sept. 19-22, 1971.

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

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC  | JAN  | FEB   | MAR  | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|------|-------|------|------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     | 47   | 24    | 34   | 20   | 23    | 21   | 28    | 90    | 28    | 67    | 37    | 62    |
| 2     | 51   | 33    | 28   | 20   | 23    | 21   | 26    | 110   | 24    | 49    | 36    | 53    |
| 3     | 47   | 36    | 27   | 20   | 23    | 21   | 25    | 102   | 22    | 40    | 37    | 41    |
| 4     | 43   | 36    | 27   | 20   | 23    | 21   | 32    | 83    | 20    | 39    | 30    | 36    |
| 5     | 35   | 36    | 27   | 20   | 23    | 21   | 36    | 70    | 18    | 33    | 28    | 38    |
| 6     | 30   | 35    | 27   | 20   | 23    | 21   | 26    | 80    | 22    | 28    | 28    | 41    |
| 7     | 28   | 34    | 27   | 20   | 23    | 21   | 28    | 76    | 20    | 28    | 36    | 55    |
| 8     | 23   | 33    | 26   | 23   | 23    | 21   | 28    | 65    | 20    | 26    | 75    | 48    |
| 9     | 21   | 32    | 28   | 24   | 23    | 21   | 24    | 58    | 20    | 24    | 75    | 38    |
| 10    | 21   | 32    | 26   | 25   | 23    | 21   | 25    | 51    | 18    | 22    | 51    | 34    |
| 11    | 21   | 31    | 25   | 25   | 23    | 21   | 35    | 46    | 18    | 21    | 43    | 34    |
| 12    | 21   | 30    | 25   | 25   | 22    | 22   | 45    | 42    | 25    | 30    | 38    | 34    |
| 13    | 22   | 28    | 25   | 25   | 22    | 23   | 58    | 41    | 48    | 34    | 32    | 34    |
| 14    | 22   | 28    | 24   | 24   | 22    | 23   | 66    | 43    | 104   | 31    | 30    | 32    |
| 15    | 22   | 31    | 24   | 24   | 22    | 22   | 80    | 40    | 85    | 32    | 28    | 29    |
| 16    | 21   | 33    | 24   | 24   | 22    | 22   | 150   | 33    | 51    | 26    | 39    | 28    |
| 17    | 20   | 50    | 23   | 24   | 22    | 22   | 252   | 30    | 36    | 22    | 335   | 27    |
| 18    | 20   | 86    | 23   | 24   | 22    | 22   | 363   | 29    | 29    | 54    | 637   | 25    |
| 19    | 20   | 90    | 22   | 24   | 22    | 22   | 363   | 25    | 28    | 43    | 540   | 23    |
| 20    | 18   | 71    | 22   | 24   | 22    | 23   | 365   | 25    | 103   | 38    | 408   | 29    |
| 21    | 17   | 59    | 22   | 24   | 22    | 38   | 356   | 24    | 122   | 52    | 321   | 52    |
| 22    | 18   | 62    | 22   | 24   | 22    | 45   | 301   | 25    | 69    | 31    | 223   | 42    |
| 23    | 18   | 45    | 21   | 24   | 22    | 42   | 242   | 24    | 46    | 280   | 154   | 30    |
| 24    | 18   | 43    | 21   | 24   | 22    | 39   | 188   | 23    | 37    | 321   | 111   | 29    |
| 25    | 18   | 40    | 21   | 24   | 22    | 36   | 163   | 22    | 32    | 252   | 95    | 32    |
| 26    | 17   | 40    | 21   | 24   | 21    | 33   | 146   | 20    | 28    | 156   | 82    | 81    |
| 27    | 18   | 39    | 20   | 24   | 21    | 31   | 134   | 20    | 26    | 87    | 72    | 64    |
| 28    | 19   | 37    | 20   | 24   | 21    | 29   | 121   | 20    | 75    | 65    | 59    | 64    |
| 29    | 20   | 38    | 20   | 23   | 21    | 28   | 108   | 28    | 138   | 56    | 51    | 91    |
| 30    | 22   | 46    | 20   | 23   | ----- | 29   | 94    | 52    | 113   | 51    | 44    | 68    |
| 31    | 27   | ----- | 20   | 23   | ----- | 30   | ----- | 36    | ----- | 44    | 50    | ----- |
| TOTAL | 765  | 1,258 | 742  | 716  | 645   | 812  | 3,908 | 1,433 | 1,425 | 2,082 | 3,825 | 1,294 |
| MEAN  | 24.7 | 41.9  | 23.9 | 23.1 | 22.2  | 26.2 | 130   | 46.2  | 47.5  | 67.2  | 123   | 43.1  |
| MAX   | 51   | 90    | 34   | 25   | 23    | 45   | 365   | 110   | 138   | 321   | 637   | 91    |
| MIN   | 17   | 24    | 20   | 20   | 21    | 21   | 24    | 20    | 18    | 21    | 28    | 23    |
| CFSM  | .65  | 1.11  | .63  | .61  | .59   | .69  | 3.44  | 1.22  | 1.26  | 1.78  | 3.25  | 1.14  |
| IN.   | .75  | 1.24  | .73  | .70  | .63   | .80  | 3.85  | 1.41  | 1.40  | 2.05  | 3.76  | 1.27  |

CAL YR 1971 TOTAL 16,106 MEAN 44.1 MAX 565 MIN 16 CFSM 1.17 IN 15.85  
WTR YR 1972 TOTAL 18,905 MEAN 51.7 MAX 637 MIN 17 CFSM 1.37 IN 18.60

NOTE.--No gage-height record Dec. 20 to Feb. 9.

## CHIPPEWA RIVER BASIN

05358500 Flambeau River at Babbs Island, near Winter, Wis.

LOCATION.--Lat 45°46'07", long 90°45'41", in SE 1/4 sec.17, T.38 N., R.3 W., Sawyer County, on right bank 3.6 miles upstream from Connors Creek, 11.5 miles upstream from South Fork Flambeau River, 13 miles east of Winter, and at mile 61.9.

DRAINAGE AREA.--1,000 sq mi.

PERIOD OF RECORD.--August 1929 to current year. Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder. Altitude of gage is 1,330 ft (from river profile map). Prior to Oct. 1, 1934, at bridge 300 ft upstream at datum 9.0 ft lower. Oct. 1, 1934, to Sept. 8, 1938, at bridge 300 ft upstream at present datum.

AVERAGE DISCHARGE.--43 years, 978 cfs.

EXTREMES.--Current year: Maximum discharge, 5,680 cfs Aug. 18 (gage height, 6.40 ft); minimum, 461 cfs Oct. 10 (gage height, 1.09 ft).

Period of record: Maximum discharge, 9,440 cfs June 25, 1946 (gage height, 9.45 ft); minimum, 86 cfs Oct. 21, 22, 1948 (gage height, 0.20 ft); minimum daily, 118 cfs Oct. 10, 1948.

REMARKS.--Records good except those for winter periods or backwater from vegetation, which are fair. Flow regulated by Rest Lake and Flambeau Flowage reservoirs (see p. 91).

REVISIONS (WATER YEARS).--WSP 855: 1935-36. WSP 1175: Drainage area. WSP 1508: 1930.

Rating table except periods of backwater from vegetation (gage height, in feet, and discharge, in cubic feet per second). (Stage-discharge relation affected by ice Nov. 27 to Apr. 16.)

|     |       |     |       |
|-----|-------|-----|-------|
| 1.1 | 466   | 3.0 | 1,850 |
| 1.3 | 571   | 4.0 | 2,900 |
| 1.6 | 750   | 6.0 | 5,320 |
| 2.0 | 1,020 | 7.0 | 6,530 |
| 2.5 | 1,420 |     |       |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 877    | 941    | 900    | 1,000  | 900    | 920    | 1,200  | 1,360  | 773    | 1,010  | 1,400  | 2,320  |
| 2     | 649    | 1,050  | 880    | 1,000  | 900    | 920    | 1,200  | 1,560  | 727    | 927    | 1,400  | 1,870  |
| 3     | 814    | 1,100  | 880    | 1,000  | 900    | 920    | 1,200  | 1,420  | 774    | 765    | 1,180  | 1,650  |
| 4     | 696    | 984    | 860    | 1,000  | 900    | 940    | 1,200  | 1,240  | 732    | 683    | 1,110  | 1,750  |
| 5     | 622    | 839    | 860    | 1,000  | 900    | 940    | 1,200  | 1,050  | 661    | 664    | 967    | 1,820  |
| 6     | 555    | 823    | 840    | 1,000  | 900    | 940    | 1,200  | 954    | 694    | 753    | 954    | 1,310  |
| 7     | 504    | 795    | 840    | 1,000  | 900    | 940    | 1,200  | 997    | 688    | 814    | 1,180  | 1,750  |
| 8     | 572    | 824    | 840    | 1,000  | 900    | 940    | 1,200  | 985    | 688    | 733    | 1,140  | 1,850  |
| 9     | 490    | 834    | 840    | 1,000  | 900    | 960    | 1,200  | 988    | 663    | 737    | 1,380  | 1,550  |
| 10    | 478    | 768    | 840    | 1,000  | 900    | 960    | 1,200  | 905    | 706    | 691    | 1,240  | 1,790  |
| 11    | 496    | 697    | 860    | 1,000  | 880    | 960    | 1,200  | 882    | 609    | 727    | 1,110  | 1,530  |
| 12    | 597    | 743    | 880    | 1,000  | 880    | 960    | 1,200  | 1,040  | 700    | 660    | 1,180  | 1,650  |
| 13    | 535    | 747    | 920    | 1,000  | 880    | 980    | 1,100  | 932    | 804    | 794    | 1,320  | 1,670  |
| 14    | 537    | 729    | 960    | 1,000  | 880    | 1,000  | 1,100  | 836    | 1,220  | 779    | 1,080  | 1,190  |
| 15    | 633    | 729    | 980    | 1,000  | 880    | 1,000  | 1,000  | 808    | 1,260  | 846    | 1,160  | 1,290  |
| 16    | 647    | 738    | 960    | 980    | 880    | 1,000  | 1,100  | 937    | 1,060  | 803    | 1,330  | 1,270  |
| 17    | 716    | 837    | 960    | 980    | 880    | 1,100  | 2,130  | 825    | 909    | 743    | 3,640  | 1,160  |
| 18    | 630    | 1,070  | 940    | 960    | 900    | 1,100  | 2,840  | 796    | 833    | 959    | 5,390  | 1,320  |
| 19    | 632    | 1,430  | 940    | 960    | 900    | 1,100  | 2,700  | 802    | 782    | 764    | 5,460  | 1,300  |
| 20    | 722    | 1,320  | 940    | 960    | 900    | 1,100  | 2,480  | 751    | 1,050  | 750    | 5,240  | 1,430  |
| 21    | 647    | 1,270  | 960    | 960    | 900    | 1,200  | 2,630  | 776    | 1,320  | 934    | 4,970  | 1,570  |
| 22    | 664    | 1,270  | 980    | 960    | 920    | 1,200  | 2,280  | 787    | 1,170  | 1,490  | 4,510  | 1,480  |
| 23    | 653    | 1,130  | 1,000  | 940    | 920    | 1,200  | 2,070  | 717    | 997    | 2,280  | 4,060  | 1,320  |
| 24    | 793    | 1,170  | 1,000  | 940    | 920    | 1,100  | 1,640  | 709    | 881    | 2,980  | 3,290  | 1,330  |
| 25    | 598    | 1,190  | 1,000  | 940    | 920    | 1,100  | 1,600  | 710    | 811    | 2,400  | 2,910  | 1,250  |
| 26    | 605    | 1,220  | 1,000  | 920    | 920    | 1,100  | 1,540  | 706    | 680    | 2,070  | 2,790  | 1,610  |
| 27    | 660    | 1,200  | 1,000  | 920    | 920    | 1,100  | 1,450  | 713    | 816    | 1,720  | 2,620  | 1,680  |
| 28    | 779    | 1,100  | 1,000  | 920    | 920    | 1,100  | 1,450  | 702    | 1,020  | 1,660  | 2,580  | 1,470  |
| 29    | 714    | 1,100  | 1,000  | 920    | 920    | 1,200  | 1,360  | 706    | 1,520  | 1,580  | 2,190  | 1,720  |
| 30    | 894    | 1,000  | 1,000  | 920    | -----  | 1,200  | 1,280  | 882    | 1,170  | 1,470  | 2,250  | 1,550  |
| 31    | 881    | -----  | 1,000  | 920    | -----  | 1,200  | -----  | 869    | -----  | 1,430  | 1,730  | -----  |
| TOTAL | 20,290 | 29,648 | 28,860 | 30,100 | 26,120 | 32,380 | 46,150 | 28,345 | 26,718 | 35,616 | 72,761 | 46,450 |
| MEAN  | 655    | 988    | 931    | 971    | 901    | 1,045  | 1,538  | 914    | 891    | 1,149  | 2,347  | 1,548  |
| MAX   | 894    | 1,430  | 1,000  | 1,000  | 920    | 1,200  | 2,840  | 1,560  | 1,520  | 2,980  | 5,460  | 2,320  |
| MIN   | 478    | 697    | 840    | 920    | 880    | 920    | 1,000  | 702    | 609    | 660    | 954    | 1,160  |

CAL YR 1971 TOTAL 379,975 MEAN 1,041 MAX 4,200 MIN 374  
WTR YR 1972 TOTAL 423,438 MEAN 1,157 MAX 5,460 MIN 478

NOTE.--Backwater from aquatic vegetation July 1 to Aug. 18.

05359500 South Fork Flambeau River near Phillips, Wis.

LOCATION.--Lat 45°42'08", long 90°36'58", in NW 1/4 SW 1/4 sec.10, T.37 N., R.2 W., Price County, on left bank at downstream side of bridge on County Trunk W, 0.4 mile downstream from Big Elk River and 12 miles west of Phillips.

DRAINAGE AREA.--615 sq mi.

PERIOD OF RECORD.--August 1929 to current year. Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder. Altitude of gage is 1,360 ft (by barometer). Prior to Jan. 11, 1954, nonrecording gage at site 600 ft downstream at same datum. Jan. 12, 1954, to Sept. 4, 1968, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--43 years, 584 cfs (12.90 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,260 cfs Apr. 20 (gage height, 11.34 ft); minimum, 198 cfs June 11 (gage height, 5.03 ft).

Period of record: Maximum discharge, 10,200 cfs June 18, 1943 (gage height, 14.32 ft); minimum, 39 cfs Aug. 31, Sept. 3-5, 1933.

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

REVISIONS (WATER YEARS).--WSP 975: 1934. WSP 1175: Drainage area. WSP 1308: 1931-34(M), 1936-42(M), 1944-45(M), 1947-50(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 9 to Apr. 11.)

|     |       |      |       |
|-----|-------|------|-------|
| 5.0 | 189   | 8.0  | 1,880 |
| 5.5 | 364   | 9.0  | 2,780 |
| 6.0 | 580   | 10.0 | 3,730 |
| 7.0 | 1,140 | 12.0 | 6,230 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT           | NOV      | DEC       | JAN     | FEB       | MAR      | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|---------------|----------|-----------|---------|-----------|----------|--------|--------|--------|--------|--------|--------|
| 1           | 1,930         | 772      | 540       | 330     | 260       | 250      | 620    | 2,230  | 394    | 813    | 521    | 1,320  |
| 2           | 2,210         | 903      | 527       | 330     | 260       | 310      | 600    | 2,380  | 355    | 734    | 477    | 1,270  |
| 3           | 1,970         | 955      | 482       | 330     | 250       | 400      | 600    | 2,450  | 317    | 612    | 437    | 1,190  |
| 4           | 1,770         | 933      | 440       | 330     | 250       | 500      | 580    | 2,410  | 285    | 535    | 400    | 1,100  |
| 5           | 1,370         | 943      | 392       | 330     | 250       | 560      | 560    | 2,280  | 267    | 485    | 373    | 988    |
| 6           | 1,120         | 936      | 356       | 330     | 240       | 580      | 560    | 2,150  | 257    | 452    | 354    | 923    |
| 7           | 937           | 790      | 338       | 330     | 240       | 580      | 540    | 1,800  | 254    | 422    | 353    | 1,010  |
| 8           | 712           | 674      | 333       | 330     | 240       | 600      | 520    | 1,410  | 243    | 396    | 477    | 997    |
| 9           | 604           | 570      | 330       | 330     | 240       | 600      | 500    | 1,320  | 224    | 369    | 564    | 845    |
| 10          | 599           | 504      | 340       | 340     | 240       | 600      | 520    | 1,230  | 207    | 348    | 570    | 774    |
| 11          | 592           | 462      | 350       | 350     | 240       | 580      | 540    | 1,130  | 202    | 331    | 541    | 765    |
| 12          | 584           | 442      | 360       | 350     | 240       | 580      | 675    | 1,040  | 219    | 314    | 501    | 722    |
| 13          | 632           | 426      | 370       | 340     | 240       | 560      | 1,060  | 971    | 288    | 298    | 467    | 684    |
| 14          | 638           | 433      | 350       | 310     | 240       | 560      | 1,540  | 920    | 1,190  | 309    | 425    | 652    |
| 15          | 622           | 453      | 340       | 280     | 240       | 540      | 2,080  | 851    | 2,190  | 317    | 378    | 619    |
| 16          | 599           | 443      | 340       | 280     | 240       | 540      | 2,410  | 796    | 1,420  | 306    | 372    | 587    |
| 17          | 583           | 510      | 340       | 290     | 240       | 520      | 3,130  | 740    | 893    | 335    | 1,150  | 549    |
| 18          | 570           | 767      | 350       | 290     | 230       | 500      | 4,530  | 642    | 780    | 457    | 2,410  | 480    |
| 19          | 569           | 972      | 350       | 290     | 230       | 520      | 5,160  | 544    | 649    | 462    | 3,040  | 433    |
| 20          | 522           | 999      | 350       | 290     | 230       | 560      | 5,240  | 505    | 922    | 470    | 3,560  | 469    |
| 21          | 495           | 944      | 350       | 300     | 230       | 600      | 5,150  | 480    | 1,070  | 582    | 3,680  | 733    |
| 22          | 516           | 744      | 350       | 300     | 230       | 620      | 4,710  | 456    | 989    | 805    | 2,930  | 949    |
| 23          | 520           | 723      | 340       | 300     | 230       | 640      | 4,130  | 429    | 838    | 1,400  | 2,210  | 1,010  |
| 24          | 520           | 738      | 340       | 310     | 230       | 640      | 3,320  | 403    | 704    | 1,630  | 1,820  | 912    |
| 25          | 512           | 731      | 340       | 300     | 230       | 640      | 2,810  | 376    | 516    | 1,460  | 1,670  | 826    |
| 26          | 497           | 694      | 340       | 290     | 230       | 640      | 2,740  | 333    | 390    | 1,160  | 1,660  | 1,190  |
| 27          | 505           | 651      | 340       | 290     | 230       | 640      | 2,740  | 301    | 348    | 878    | 1,660  | 1,470  |
| 28          | 535           | 638      | 340       | 280     | 230       | 640      | 2,680  | 285    | 486    | 662    | 1,530  | 1,630  |
| 29          | 535           | 610      | 340       | 270     | 230       | 640      | 2,540  | 277    | 735    | 621    | 1,290  | 1,850  |
| 30          | 593           | 552      | 340       | 270     | -----     | 640      | 2,270  | 314    | 791    | 594    | 1,160  | 1,760  |
| 31          | 724           | -----    | 330       | 260     | -----     | 640      | -----  | 400    | -----  | 563    | 1,190  | -----  |
| TOTAL       | 25,085        | 20,912   | 11,328    | 9,550   | 6,910     | 17,420   | 65,055 | 31,853 | 18,423 | 19,120 | 38,170 | 28,707 |
| MEAN        | 809           | 697      | 365       | 308     | 238       | 562      | 2,169  | 1,028  | 614    | 617    | 1,231  | 957    |
| MAX         | 2,210         | 999      | 540       | 350     | 260       | 640      | 5,240  | 2,450  | 2,190  | 1,630  | 3,680  | 1,850  |
| MIN         | 495           | 426      | 330       | 260     | 230       | 250      | 500    | 277    | 202    | 298    | 353    | 433    |
| CFSM        | 1.32          | 1.13     | .59       | .50     | .39       | .91      | 3.53   | 1.67   | 1.00   | 1.00   | 2.00   | 1.56   |
| IN.         | 1.52          | 1.26     | .69       | .58     | .42       | 1.05     | 3.94   | 1.93   | 1.11   | 1.16   | 2.31   | 1.74   |
| CAL YR 1971 | TOTAL 233,596 | MEAN 640 | MAX 5,830 | MIN 150 | CFSM 1.04 | IN 14.13 |        |        |        |        |        |        |
| WTR YR 1972 | TOTAL 292,533 | MEAN 799 | MAX 5,240 | MIN 202 | CFSM 1.30 | IN 17.69 |        |        |        |        |        |        |

## CHIPPEWA RIVER BASIN

05360500 Flambeau River near Bruce, Wis.

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, on right bank 2.5 miles downstream from Thornapple powerplant, 6.0 miles upstream from mouth, and 7.0 miles southeast of Bruce.

DRAINAGE AREA.--1,897 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage, 1,060 ft (by river survey, WSP 417).

AVERAGE DISCHARGE.--21 years, 1,794 cfs.

EXTREMES.--Current year: Maximum discharge, 10,800 cfs Apr. 19 (gage height, 8.29 ft); minimum, 321 cfs May 29 (gage height, 2.31 ft).

Period of record: Maximum discharge, 17,400 cfs May 1, 1954 (gage height, 10.90 ft); minimum, about 100 cfs Aug. 7, 9, 1957 (gage height, 2.06 ft).

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated by several powerplants above station and by Rest Lake and Flambeau Flowage reservoirs (see p. 91).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used July 1 to Aug. 18; stage-discharge relation affected by ice Dec. 8-10, Dec. 12 to Apr. 3.)

|     |       |     |        |
|-----|-------|-----|--------|
| 2.9 | 725   | 4.0 | 1,930  |
| 3.1 | 905   | 5.0 | 3,480  |
| 3.4 | 1,210 | 7.0 | 7,610  |
| 3.7 | 1,550 | 9.0 | 12,600 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR     | MAY    | JUN    | JUL    | AUG     | SEP    |
|-------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|---------|--------|
| 1     | 2,350  | 2,370  | 1,630  | 1,500  | 1,100  | 1,200  | 1,900   | 3,970  | 1,360  | 2,020  | 2,040   | 3,210  |
| 2     | 3,640  | 2,430  | 1,570  | 1,400  | 1,200  | 1,200  | 1,900   | 4,360  | 1,350  | 1,980  | 2,030   | 3,900  |
| 3     | 3,280  | 2,460  | 1,310  | 1,300  | 1,200  | 1,200  | 1,900   | 4,730  | 1,140  | 1,690  | 1,930   | 3,100  |
| 4     | 2,910  | 2,560  | 1,470  | 1,300  | 1,200  | 1,100  | 1,880   | 4,310  | 1,150  | 1,270  | 1,680   | 3,000  |
| 5     | 2,650  | 2,370  | 1,500  | 1,300  | 1,200  | 1,100  | 1,780   | 3,480  | 1,180  | 1,410  | 1,560   | 3,370  |
| 6     | 2,240  | 1,990  | 1,490  | 1,300  | 1,100  | 1,100  | 1,750   | 3,300  | 975    | 1,300  | 1,460   | 2,820  |
| 7     | 1,870  | 2,020  | 1,450  | 1,400  | 1,100  | 1,100  | 1,850   | 3,300  | 957    | 1,250  | 1,390   | 2,670  |
| 8     | 1,480  | 1,740  | 1,400  | 1,400  | 1,100  | 1,100  | 1,820   | 3,010  | 1,050  | 1,450  | 1,770   | 3,130  |
| 9     | 1,860  | 1,800  | 1,400  | 1,400  | 1,200  | 1,100  | 1,860   | 2,660  | 969    | 1,240  | 2,060   | 3,110  |
| 10    | 1,280  | 1,740  | 1,400  | 1,400  | 1,200  | 1,100  | 1,840   | 2,500  | 875    | 1,090  | 1,940   | 2,810  |
| 11    | 1,330  | 1,440  | 1,300  | 1,400  | 1,100  | 1,200  | 1,950   | 2,470  | 860    | 1,140  | 2,030   | 2,720  |
| 12    | 1,200  | 1,370  | 1,300  | 1,400  | 1,100  | 1,200  | 2,330   | 2,160  | 891    | 1,080  | 1,670   | 2,660  |
| 13    | 1,390  | 1,290  | 1,400  | 1,400  | 1,100  | 1,300  | 4,420   | 2,300  | 809    | 1,030  | 1,620   | 2,520  |
| 14    | 1,430  | 1,410  | 1,300  | 1,300  | 1,200  | 1,300  | 4,360   | 2,110  | 1,470  | 1,080  | 1,810   | 2,740  |
| 15    | 1,370  | 1,330  | 1,300  | 1,200  | 1,200  | 1,400  | 3,960   | 1,950  | 3,130  | 1,140  | 1,520   | 2,360  |
| 16    | 1,430  | 1,340  | 1,300  | 1,200  | 1,100  | 1,400  | 5,000   | 1,680  | 3,690  | 989    | 1,410   | 2,300  |
| 17    | 1,460  | 1,450  | 1,400  | 1,200  | 1,100  | 1,400  | 4,740   | 2,040  | 2,520  | 1,410  | 2,700   | 2,170  |
| 18    | 1,610  | 1,830  | 1,400  | 1,200  | 1,200  | 1,500  | 6,710   | 1,650  | 1,980  | 1,300  | 6,480   | 1,830  |
| 19    | 1,360  | 2,450  | 1,500  | 1,200  | 1,200  | 1,500  | 10,500  | 1,670  | 1,700  | 1,480  | 8,400   | 1,940  |
| 20    | 1,400  | 3,120  | 1,600  | 1,200  | 1,100  | 1,800  | 9,660   | 1,530  | 1,760  | 1,490  | 8,530   | 1,830  |
| 21    | 1,460  | 3,140  | 1,600  | 1,100  | 1,200  | 2,000  | 8,980   | 1,450  | 2,420  | 1,360  | 9,470   | 2,550  |
| 22    | 1,380  | 2,010  | 1,600  | 1,200  | 1,200  | 2,000  | 8,660   | 1,350  | 2,330  | 2,000  | 8,620   | 2,580  |
| 23    | 1,360  | 2,420  | 1,600  | 1,300  | 1,100  | 2,000  | 7,940   | 1,210  | 2,330  | 4,450  | 7,220   | 1,930  |
| 24    | 1,170  | 1,930  | 1,600  | 1,200  | 1,200  | 2,000  | 6,300   | 1,320  | 1,800  | 4,480  | 5,690   | 2,180  |
| 25    | 1,450  | 1,950  | 1,600  | 1,100  | 1,200  | 2,000  | 5,320   | 1,130  | 1,650  | 4,840  | 4,920   | 2,650  |
| 26    | 1,450  | 2,510  | 1,600  | 1,000  | 1,200  | 2,000  | 4,680   | 1,240  | 1,280  | 3,080  | 5,370   | 2,750  |
| 27    | 1,330  | 1,940  | 1,600  | 1,000  | 1,200  | 2,000  | 4,850   | 1,080  | 1,110  | 3,050  | 4,920   | 3,380  |
| 28    | 1,350  | 1,960  | 1,600  | 1,100  | 1,200  | 1,900  | 4,800   | 971    | 1,740  | 2,410  | 4,420   | 3,930  |
| 29    | 1,590  | 2,290  | 1,600  | 1,100  | 1,200  | 1,900  | 4,670   | 1,060  | 2,080  | 2,300  | 4,560   | 4,200  |
| 30    | 1,700  | 1,740  | 1,600  | 1,200  | -----  | 1,900  | 4,280   | 1,210  | 2,510  | 2,110  | 3,740   | 4,280  |
| 31    | 1,670  | -----  | 1,600  | 1,200  | -----  | 1,900  | -----   | 1,250  | -----  | 2,080  | 3,770   | -----  |
| TOTAL | 53,450 | 60,400 | 46,020 | 38,900 | 33,700 | 46,900 | 132,590 | 68,451 | 49,066 | 58,999 | 116,730 | 84,620 |
| MEAN  | 1,724  | 2,013  | 1,485  | 1,255  | 1,162  | 1,513  | 4,420   | 2,208  | 1,636  | 1,903  | 3,765   | 2,821  |
| MAX   | 3,640  | 3,140  | 1,630  | 1,500  | 1,200  | 2,000  | 10,500  | 4,730  | 3,690  | 4,840  | 9,470   | 4,280  |
| MIN   | 1,170  | 1,290  | 1,300  | 1,000  | 1,100  | 1,100  | 1,750   | 971    | 809    | 989    | 1,390   | 1,830  |

CAL YR 1971 TOTAL 659,627 MEAN 1,807 MAX 12,300 MIN 508  
WTR YR 1972 TOTAL 789,826 MEAN 2,158 MAX 10,500 MIN 809

05362000 Jump River at Sheldon, Wis.

LOCATION.--Lat 45°18'29", long 90°57'23", in sec.26, T.33 N., R.5 W., Rusk County, on right bank just downstream from highway bridge in Sheldon, 1,500 ft upstream from Shoulder Creek and 11 miles upstream from mouth.

DRAINAGE AREA.--574 sq mi.

PERIOD OF RECORD.--July 1915 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,092.75 ft above mean sea level. 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.

AVERAGE DISCHARGE.--57 years, 509 cfs (12.04 inches per year).

EXTREMES.--Current year: Maximum discharge, 10,700 cfs Apr. 19 (gage height, 11.38 ft); minimum, 68 cfs June 11 (gage height, 3.51 ft).

Period of record: Maximum discharge observed, 46,000 cfs Aug. 31, 1941 (gage height, 18.8 ft from flood-mark), from rating curve extended above 13,000 cfs on basis of contracted-opening measurement of peak flow; minimum observed, 11 cfs Dec. 18, 1943 (gage height, 3.99 ft).

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

REVISIONS (WATER YEARS).--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).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used May 10-30, July 19-29, Sept. 9-30; stage-discharge relation affected by ice Nov. 25 to Apr. 11.)

|     |     |      |        |
|-----|-----|------|--------|
| 3.6 | 68  | 6.5  | 1,540  |
| 4.0 | 155 | 8.0  | 3,290  |
| 4.6 | 342 | 10.0 | 6,810  |
| 5.5 | 756 | 12.0 | 12,600 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN   | FEB   | MAR    | APR    | MAY    | JUN   | JUL   | AUG    | SEP    |
|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|-------|--------|--------|
| 1     | 616    | 660    | 260    | 210   | 110   | 100    | 1,100  | 998    | 157   | 171   | 224    | 611    |
| 2     | 1,030  | 898    | 310    | 210   | 110   | 110    | 1,000  | 1,310  | 129   | 142   | 190    | 492    |
| 3     | 1,540  | 1,270  | 300    | 200   | 110   | 110    | 980    | 1,460  | 113   | 119   | 164    | 387    |
| 4     | 1,470  | 1,150  | 290    | 200   | 110   | 110    | 940    | 1,270  | 101   | 106   | 139    | 309    |
| 5     | 1,160  | 986    | 310    | 200   | 100   | 120    | 900    | 1,020  | 92    | 99    | 121    | 268    |
| 6     | 836    | 794    | 310    | 190   | 100   | 130    | 860    | 851    | 87    | 98    | 118    | 245    |
| 7     | 665    | 589    | 310    | 170   | 100   | 140    | 820    | 739    | 83    | 95    | 123    | 315    |
| 8     | 565    | 443    | 300    | 160   | 100   | 150    | 820    | 636    | 78    | 93    | 250    | 442    |
| 9     | 486    | 434    | 300    | 150   | 100   | 190    | 820    | 543    | 75    | 88    | 741    | 370    |
| 10    | 425    | 368    | 300    | 150   | 100   | 220    | 860    | 463    | 71    | 84    | 682    | 285    |
| 11    | 381    | 344    | 320    | 150   | 100   | 240    | 1,100  | 398    | 69    | 82    | 515    | 336    |
| 12    | 343    | 332    | 350    | 140   | 100   | 270    | 2,050  | 340    | 75    | 79    | 355    | 541    |
| 13    | 320    | 312    | 350    | 140   | 100   | 290    | 3,960  | 301    | 94    | 90    | 247    | 412    |
| 14    | 319    | 300    | 450    | 140   | 100   | 320    | 4,250  | 298    | 168   | 98    | 151    | 302    |
| 15    | 313    | 292    | 430    | 130   | 98    | 360    | 4,160  | 296    | 309   | 95    | 157    | 239    |
| 16    | 271    | 284    | 380    | 130   | 98    | 380    | 6,380  | 294    | 251   | 95    | 137    | 191    |
| 17    | 269    | 278    | 410    | 130   | 98    | 390    | 9,780  | 274    | 204   | 146   | 146    | 155    |
| 18    | 261    | 431    | 460    | 130   | 98    | 390    | 10,300 | 247    | 142   | 269   | 311    | 132    |
| 19    | 262    | 674    | 430    | 120   | 98    | 400    | 10,300 | 220    | 118   | 412   | 526    | 121    |
| 20    | 274    | 695    | 410    | 120   | 96    | 410    | 8,010  | 222    | 122   | 316   | 613    | 142    |
| 21    | 289    | 619    | 360    | 120   | 96    | 490    | 6,010  | 354    | 172   | 238   | 1,480  | 839    |
| 22    | 302    | 443    | 340    | 120   | 96    | 640    | 4,770  | 402    | 193   | 276   | 1,370  | 1,020  |
| 23    | 298    | 387    | 320    | 120   | 96    | 900    | 3,920  | 312    | 160   | 778   | 1,780  | 717    |
| 24    | 282    | 363    | 300    | 120   | 96    | 1,500  | 3,230  | 230    | 130   | 1,530 | 2,140  | 521    |
| 25    | 270    | 327    | 280    | 110   | 96    | 1,500  | 2,530  | 183    | 112   | 1,040 | 1,770  | 481    |
| 26    | 258    | 310    | 270    | 110   | 96    | 1,400  | 2,020  | 152    | 101   | 644   | 1,500  | 4,430  |
| 27    | 255    | 300    | 260    | 110   | 98    | 1,400  | 1,690  | 131    | 99    | 434   | 1,460  | 5,400  |
| 28    | 272    | 290    | 250    | 110   | 98    | 1,300  | 1,440  | 115    | 109   | 339   | 1,220  | 3,930  |
| 29    | 286    | 260    | 240    | 110   | 100   | 1,200  | 1,230  | 107    | 123   | 279   | 857    | 3,190  |
| 30    | 295    | 240    | 230    | 110   | ----- | 1,200  | 1,060  | 154    | 174   | 240   | 604    | 2,490  |
| 31    | 443    | -----  | 220    | 110   | ----- | 1,100  | -----  | 185    | ----- | 226   | 527    | -----  |
| TOTAL | 15,056 | 15,073 | 10,090 | 4,420 | 2,898 | 17,460 | 97,290 | 14,505 | 3,911 | 8,801 | 20,658 | 29,313 |
| MEAN  | 486    | 502    | 325    | 143   | 99.9  | 563    | 3,243  | 468    | 130   | 284   | 666    | 977    |
| MAX   | 1,540  | 1,270  | 460    | 210   | 110   | 1,500  | 10,300 | 1,460  | 309   | 1,530 | 2,140  | 5,400  |
| MIN   | 255    | 240    | 220    | 110   | 96    | 100    | 820    | 107    | 69    | 79    | 118    | 121    |
| CFSM  | .85    | .87    | .57    | .25   | .17   | .98    | 5.65   | .82    | .23   | .49   | 1.16   | 1.70   |
| IN.   | .98    | .98    | .65    | .29   | .19   | 1.13   | 6.31   | .94    | .25   | .57   | 1.34   | 1.90   |

CAL YR 1971 TOTAL 200,929 MEAN 550 MAX 12,100 MIN 57 CFSM .96 IN 13.02  
WTR YR 1972 TOTAL 239,475 MEAN 654 MAX 10,300 MIN 69 CFSM 1.14 IN 15.52

## PEAK DISCHARGE (BASE, 3,500 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 4-19 | 0300 | 11.38 | 10,700    | 9-27 | 0900 | 9.62  | 5,720     |

## CHIPPEWA RIVER BASIN

05365500 Chippewa River at Chippewa Falls, Wis.

LOCATION.--Lat 44°55'37", long 91°24'33", in lot 1, sec.12, T.28 N., R.9 W., Chippewa County, on right bank at Chippewa Falls, 1.0 mile downstream from Duncan Creek.

DRAINAGE AREA.--5,600 sq mi, approximately.

PERIOD OF RECORD.--June 1888 to current year. Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 798.46 ft above mean sea level. Prior to January 1914, non-recording gage, and January 1914 to June 19, 1932, water-stage recorder at site 1 mile upstream at different datum. June 19, 1932, to current year, water-stage recorder at present site and datum.

AVERAGE DISCHARGE.--84 years, 5,079 cfs.

EXTREMES.--Current year: Maximum discharge, 41,100 cfs Apr. 19 (gage height, 15.74 ft); minimum daily, 362 cfs June 11.

Period of record: Maximum discharge, 102,000 cfs Sept. 1, 1941 (gage height, 24.8 ft); minimum, 22 cfs Apr. 2, 1934 (gage height, 0.63 ft); minimum daily, 40 cfs Feb. 4, 1917. Maximum stage known, 26.94 ft Sept. 10, 1884, site and datum in use to June 1932.

REMARKS.--Records good. Considerable regulation by Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota reservoirs (see p. 91). Diurnal fluctuation caused by hydroelectric plant 1.1 mile upstream.

REVISIONS (WATER YEARS).--WSP 785: 1934(M). WSP 1508: 1897, 1905, 1918(M), 1924(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 24 to Feb. 26, Mar. 22-29.)

|     |       |      |        |
|-----|-------|------|--------|
| 1.5 | 325   | 8.0  | 11,200 |
| 2.0 | 583   | 12.0 | 24,500 |
| 3.0 | 1,440 | 16.0 | 42,400 |
| 5.0 | 4,440 |      |        |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1     | 4,500   | 6,430   | 4,480   | 3,670   | 3,220   | 5,040   | 9,250   | 7,910   | 2,440   | 5,550   | 7,460   | 7,700   |
| 2     | 6,130   | 9,440   | 4,070   | 3,940   | 3,680   | 5,140   | 9,140   | 8,960   | 3,690   | 4,180   | 6,370   | 6,240   |
| 3     | 8,380   | 10,000  | 4,310   | 3,880   | 3,390   | 4,800   | 9,150   | 12,200  | 2,200   | 4,830   | 5,290   | 6,720   |
| 4     | 7,570   | 9,920   | 3,740   | 3,990   | 3,730   | 4,110   | 9,100   | 12,100  | 374     | 2,130   | 5,050   | 5,890   |
| 5     | 7,440   | 8,970   | 3,210   | 3,300   | 3,180   | 3,170   | 8,460   | 8,820   | 2,540   | 3,740   | 3,030   | 5,280   |
| 6     | 5,450   | 6,920   | 4,980   | 3,060   | 2,370   | 3,590   | 6,260   | 8,200   | 2,690   | 3,300   | 3,750   | 6,550   |
| 7     | 4,840   | 4,980   | 5,470   | 4,080   | 3,130   | 4,430   | 6,570   | 5,920   | 2,190   | 3,310   | 4,100   | 5,900   |
| 8     | 4,070   | 5,600   | 4,970   | 3,420   | 3,750   | 4,350   | 6,650   | 6,900   | 2,110   | 2,220   | 4,160   | 6,440   |
| 9     | 2,400   | 5,260   | 4,320   | 3,710   | 2,900   | 3,990   | 6,500   | 6,080   | 1,540   | 1,610   | 5,160   | 6,200   |
| 10    | 1,830   | 5,400   | 4,310   | 4,200   | 3,260   | 4,020   | 8,350   | 5,390   | 724     | 4,410   | 6,340   | 6,090   |
| 11    | 3,660   | 4,940   | 5,410   | 4,130   | 3,560   | 4,480   | 8,050   | 4,730   | 362     | 2,790   | 5,090   | 5,680   |
| 12    | 4,660   | 4,190   | 3,600   | 3,690   | 2,910   | 3,520   | 8,920   | 4,660   | 3,100   | 2,170   | 4,150   | 5,860   |
| 13    | 2,450   | 4,390   | 3,120   | 3,780   | 2,510   | 3,980   | 9,170   | 3,680   | 2,800   | 3,010   | 2,610   | 5,570   |
| 14    | 3,440   | 3,330   | 3,000   | 4,520   | 3,600   | 4,260   | 9,590   | 4,010   | 2,170   | 3,630   | 4,630   | 6,050   |
| 15    | 4,010   | 4,490   | 3,860   | 2,430   | 3,810   | 5,920   | 9,760   | 5,250   | 3,740   | 1,340   | 4,960   | 6,020   |
| 16    | 1,480   | 4,200   | 4,220   | 1,910   | 5,200   | 4,980   | 18,900  | 3,720   | 4,980   | 1,360   | 5,120   | 4,730   |
| 17    | 2,780   | 4,480   | 4,310   | 4,060   | 3,880   | 5,500   | 29,000  | 4,430   | 5,740   | 5,110   | 5,460   | 2,820   |
| 18    | 3,890   | 5,790   | 4,290   | 3,620   | 4,540   | 4,520   | 31,100  | 3,990   | 2,790   | 3,730   | 5,850   | 3,450   |
| 19    | 3,630   | 7,270   | 4,010   | 3,790   | 4,270   | 4,510   | 38,400  | 2,780   | 3,670   | 4,200   | 11,600  | 4,090   |
| 20    | 3,230   | 8,990   | 4,410   | 3,240   | 2,900   | 5,720   | 35,600  | 2,300   | 4,770   | 4,690   | 13,500  | 4,490   |
| 21    | 3,720   | 8,800   | 4,280   | 3,810   | 4,400   | 7,640   | 28,100  | 2,270   | 5,140   | 4,790   | 14,900  | 4,290   |
| 22    | 3,140   | 6,750   | 4,670   | 2,740   | 4,780   | 6,780   | 26,400  | 4,190   | 5,420   | 3,580   | 17,800  | 6,530   |
| 23    | 2,030   | 5,440   | 4,290   | 3,080   | 4,550   | 6,680   | 23,100  | 3,030   | 5,790   | 8,670   | 16,300  | 5,420   |
| 24    | 2,050   | 5,630   | 3,750   | 3,780   | 4,750   | 7,650   | 19,200  | 2,600   | 4,680   | 13,300  | 16,300  | 4,760   |
| 25    | 3,550   | 4,770   | 4,000   | 3,900   | 4,750   | 7,900   | 16,500  | 3,050   | 4,100   | 14,100  | 14,500  | 5,740   |
| 26    | 3,300   | 5,790   | 4,110   | 3,030   | 4,250   | 8,050   | 13,100  | 2,670   | 3,330   | 13,300  | 13,400  | 11,500  |
| 27    | 3,520   | 5,230   | 3,840   | 3,400   | 3,780   | 8,060   | 12,600  | 1,320   | 3,900   | 9,890   | 15,200  | 16,700  |
| 28    | 3,720   | 5,100   | 5,550   | 2,810   | 4,690   | 9,060   | 11,000  | 671     | 4,480   | 9,890   | 13,500  | 16,800  |
| 29    | 3,500   | 5,460   | 3,020   | 2,760   | 4,890   | 8,260   | 9,850   | 1,110   | 6,020   | 9,890   | 11,400  | 15,400  |
| 30    | 4,310   | 5,250   | 4,220   | 2,710   | -----   | 9,140   | 9,810   | 3,650   | 6,080   | 9,340   | 10,300  | 13,400  |
| 31    | 5,540   | -----   | 3,740   | 3,200   | -----   | 9,310   | -----   | 2,660   | -----   | 7,010   | 6,810   | -----   |
| TOTAL | 124,220 | 183,210 | 129,560 | 107,640 | 110,630 | 178,560 | 447,580 | 149,251 | 103,560 | 171,070 | 264,090 | 212,310 |
| MEAN  | 4,007   | 6,107   | 4,179   | 3,472   | 3,815   | 5,760   | 14,920  | 4,815   | 3,452   | 5,518   | 8,519   | 7,077   |
| MAX   | 8,380   | 10,000  | 5,550   | 4,520   | 5,200   | 9,310   | 38,400  | 12,200  | 6,080   | 14,100  | 17,800  | 16,800  |
| MIN   | 1,480   | 3,330   | 3,000   | 1,910   | 2,370   | 3,170   | 6,260   | 671     | 362     | 1,340   | 2,610   | 2,820   |

CAL YR 1971 TOTAL 1,946,930 MEAN 5,334 MAX 48,600 MIN 423  
WTR YR 1972 TOTAL 2,181,681 MEAN 5,961 MAX 38,400 MIN 362

05367426 Red Cedar River near Cameron, Wis.

LOCATION.--Lat 45°23'20", long 91°45'55", SW 1/4 NW 1/4 sec.32, T.34 N., R.11 W., Barron County, on downstream side of bridge on town road, 0.8 mile upstream of Cranberry Creek, 1.6 miles southwest of Cameron and 4.3 miles east of Barron.

DRAINAGE AREA.--453 sq mi.

PERIOD OF RECORD.--April 1966 to September 1970 (published as 05367425), June 1971 to current year.

GAGE.--Nonrecording gage. Altitude of gage is 1,060 ft (from topographic map). April 1966 to September 1970, nonrecording gage 2.1 miles upstream at different datum.

AVERAGE DISCHARGE.--5 years, 397 cfs.

EXTREMES.--June to September 1971: Maximum discharge during period, 763 cfs July 1 (gage height, 6.08 ft); minimum observed, 179 cfs July 17 (gage height, 5.14 ft).  
 Water year 1972: Maximum discharge, 1,860 cfs July 23 (gage height, 9.21 ft); minimum observed, 194 cfs June 13 (gage height, 5.64 ft).  
 Period of record: Maximum discharge, 4,650 cfs Mar. 30, 1967 (gage height, 10.00 ft, from floodmark); minimum observed, 110 cfs Aug. 30, 1969 (gage height, 5.21 ft).

REMARKS.--Records fair. Flow partially affected by operation of recreation and power dams upstream.

REVISIONS (WATER YEARS).--WRD WIS. 1967: 1966.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

| DAY   | OCT | NOV   | DEC | JAN | FEB   | MAR | APR   | MAY | JUN    | JUL    | AUG    | SEP   |
|-------|-----|-------|-----|-----|-------|-----|-------|-----|--------|--------|--------|-------|
| 1     |     |       |     |     |       |     |       |     | 340    | 763    | 450    | 304   |
| 2     |     |       |     |     |       |     |       |     | 310    | 655    | 454    | 304   |
| 3     |     |       |     |     |       |     |       |     | 290    | 529    | 445    | 300   |
| 4     |     |       |     |     |       |     |       |     | 290    | 534    | 441    | 292   |
| 5     |     |       |     |     |       |     |       |     | 350    | 529    | 423    | 433   |
| 6     |     |       |     |     |       |     |       |     | 670    | 579    | 419    | 346   |
| 7     |     |       |     |     |       |     |       |     | 628    | 584    | 423    | 284   |
| 8     |     |       |     |     |       |     |       |     | 611    | 558    | 397    | 284   |
| 9     |     |       |     |     |       |     |       |     | 579    | 524    | 359    | 280   |
| 10    |     |       |     |     |       |     |       |     | 564    | 500    | 272    | 304   |
| 11    |     |       |     |     |       |     |       |     | 548    | 482    | 259    | 304   |
| 12    |     |       |     |     |       |     |       |     | 586    | 450    | 228    | 304   |
| 13    |     |       |     |     |       |     |       |     | 564    | 454    | 192    | 304   |
| 14    |     |       |     |     |       |     |       |     | 548    | 436    | 346    | 304   |
| 15    |     |       |     |     |       |     |       |     | 505    | 406    | 276    | 292   |
| 16    |     |       |     |     |       |     |       |     | 450    | 338    | 224    | 284   |
| 17    |     |       |     |     |       |     |       |     | 371    | 179    | 216    | 276   |
| 18    |     |       |     |     |       |     |       |     | 354    | 209    | 209    | 276   |
| 19    |     |       |     |     |       |     |       |     | 350    | 325    | 574    | 276   |
| 20    |     |       |     |     |       |     |       |     | 371    | 272    | 558    | 276   |
| 21    |     |       |     |     |       |     |       |     | 363    | 359    | 548    | 280   |
| 22    |     |       |     |     |       |     |       |     | 350    | 309    | 533    | 276   |
| 23    |     |       |     |     |       |     |       |     | 333    | 251    | 463    | 280   |
| 24    |     |       |     |     |       |     |       |     | 288    | 272    | 454    | 280   |
| 25    |     |       |     |     |       |     |       |     | 251    | 276    | 414    | 280   |
| 26    |     |       |     |     |       |     |       |     | 235    | 280    | 414    | 268   |
| 27    |     |       |     |     |       |     |       |     | 239    | 280    | 384    | 255   |
| 28    |     |       |     |     |       |     |       |     | 252    | 304    | 388    | 338   |
| 29    |     |       |     |     |       |     |       |     | 284    | 346    | 300    | 388   |
| 30    |     |       |     |     |       |     |       |     | 428    | 393    | 309    | 264   |
| 31    |     | ----- |     |     | ----- |     | ----- |     | -----  | 468    | 309    | ----- |
| TOTAL |     |       |     |     |       |     |       |     | 12,302 | 12,844 | 11,681 | 8,936 |
| MEAN  |     |       |     |     |       |     |       |     | 410    | 414    | 377    | 298   |
| MAX   |     |       |     |     |       |     |       |     | 670    | 763    | 574    | 433   |
| MIN   |     |       |     |     |       |     |       |     | 235    | 179    | 192    | 255   |

## CHIPPEWA RIVER BASIN

05367426 Red Cedar River near Cameron, Wis.--Continued

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN   | FEB   | MAR    | APR    | MAY    | JUN   | JUL    | AUG    | SEP   |
|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|-------|
| 1     | 1,600  | 920    | 380    | 300   | 280   | 260    | 392    | 648    | 200   | 454    | 477    | 346   |
| 2     | 1,700  | 840    | 380    | 300   | 280   | 260    | 388    | 656    | 200   | 426    | 415    | 340   |
| 3     | 1,300  | 720    | 388    | 300   | 270   | 260    | 396    | 661    | 209   | 403    | 415    | 324   |
| 4     | 940    | 660    | 380    | 290   | 270   | 270    | 385    | 610    | 221   | 396    | 407    | 317   |
| 5     | 760    | 600    | 380    | 280   | 270   | 280    | 378    | 481    | 221   | 388    | 385    | 284   |
| 6     | 660    | 540    | 380    | 280   | 270   | 280    | 378    | 488    | 224   | 374    | 381    | 280   |
| 7     | 580    | 520    | 380    | 290   | 270   | 290    | 400    | 462    | 224   | 370    | 381    | 284   |
| 8     | 540    | 480    | 371    | 290   | 270   | 300    | 396    | 446    | 221   | 353    | 385    | 297   |
| 9     | 480    | 470    | 371    | 300   | 260   | 310    | 392    | 411    | 224   | 337    | 356    | 271   |
| 10    | 450    | 460    | 350    | 300   | 260   | 320    | 388    | 346    | 203   | 334    | 360    | 258   |
| 11    | 430    | 450    | 350    | 300   | 260   | 330    | 450    | 346    | 200   | 314    | 363    | 274   |
| 12    | 410    | 440    | 340    | 300   | 260   | 350    | 466    | 356    | 200   | 271    | 367    | 258   |
| 13    | 410    | 440    | 340    | 300   | 260   | 370    | 697    | 360    | 194   | 242    | 353    | 258   |
| 14    | 400    | 430    | 330    | 280   | 260   | 400    | 622    | 353    | 224   | 261    | 356    | 258   |
| 15    | 380    | 420    | 330    | 250   | 270   | 440    | 634    | 350    | 300   | 284    | 422    | 252   |
| 16    | 370    | 420    | 330    | 240   | 280   | 480    | 622    | 346    | 290   | 271    | 403    | 249   |
| 17    | 370    | 450    | 310    | 250   | 280   | 530    | 622    | 340    | 264   | 324    | 422    | 249   |
| 18    | 370    | 540    | 270    | 260   | 280   | 580    | 706    | 334    | 264   | 330    | 499    | 352   |
| 19    | 370    | 700    | 260    | 280   | 280   | 700    | 744    | 327    | 264   | 327    | 462    | 352   |
| 20    | 370    | 740    | 260    | 280   | 270   | 800    | 775    | 300    | 353   | 330    | 407    | 258   |
| 21    | 360    | 600    | 260    | 280   | 270   | 900    | 756    | 297    | 506   | 415    | 374    | 307   |
| 22    | 350    | 510    | 300    | 280   | 270   | 1,000  | 775    | 287    | 458   | 541    | 381    | 337   |
| 23    | 350    | 460    | 350    | 270   | 270   | 1,100  | 775    | 274    | 502   | 1,860  | 374    | 363   |
| 24    | 350    | 450    | 350    | 270   | 270   | 860    | 795    | 264    | 481   | 1,460  | 363    | 363   |
| 25    | 350    | 440    | 350    | 270   | 270   | 700    | 800    | 252    | 462   | 1,290  | 360    | 363   |
| 26    | 360    | 430    | 340    | 260   | 270   | 640    | 760    | 233    | 454   | 1,160  | 385    | 422   |
| 27    | 400    | 430    | 320    | 260   | 270   | 570    | 711    | 221    | 442   | 1,050  | 378    | 446   |
| 28    | 600    | 410    | 320    | 260   | 270   | 520    | 697    | 218    | 580   | 756    | 370    | 430   |
| 29    | 580    | 410    | 310    | 260   | 260   | 470    | 630    | 224    | 648   | 835    | 360    | 446   |
| 30    | 640    | 432    | 310    | 270   | ----- | 440    | 639    | 206    | 558   | 760    | 353    | 442   |
| 31    | 800    | -----  | 300    | 270   | ----- | 410    | -----  | 197    | ----- | 656    | 353    | ----- |
| TOTAL | 18,030 | 15,812 | 10,400 | 8,620 | 7,820 | 15,420 | 17,569 | 11,294 | 9,791 | 17,572 | 12,067 | 9,680 |
| MEAN  | 582    | 527    | 335    | 278   | 270   | 497    | 586    | 364    | 326   | 567    | 389    | 323   |
| MAX   | 1,700  | 920    | 388    | 300   | 280   | 1,100  | 800    | 661    | 648   | 1,860  | 499    | 446   |
| MIN   | 350    | 410    | 260    | 240   | 260   | 260    | 378    | 197    | 194   | 242    | 353    | 249   |

WTR YR 1972 TOTAL 154,075 MEAN 421 MAX 1,860 MIN 194

NOTE.--No gage-height record Oct. 1 to Nov. 29.

05368000 Hay River at Wheeler, Wis.

LOCATION.--Lat 45°02'52", long 91°54'39", in SW 1/4 sec.25, T.30 N., R.13 W., Dunn County, on right bank 25 ft downstream from highway bridge in Wheeler, 1.8 miles upstream from Otter Creek, and 2.4 miles downstream from South Fork Hay River.

DRAINAGE AREA.--426 sq mi.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 893.66 ft above mean sea level. Prior to Mar. 25, 1951, non-recording gage.

AVERAGE DISCHARGE.--22 years, 283 cfs (9.02 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,720 cfs Mar. 22 (gage height, 7.44 ft); minimum daily, 200 cfs Feb. 6, 7, but may have been less during ice period.  
Period of record: Maximum discharge, 13,600 cfs Mar. 31, 1967 (gage height, 15.04 ft), from rating curve extended above 9,000 cfs; minimum, 55 cfs Mar. 13, 1954 (gage height, 2.32 ft), result of freezeup.  
Maximum stage known since 1915, 16.6 ft in April 1934, from floodmarks.

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

REVISIONS.--WSP 1338: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Nov. 18-20, Mar. 17 to Apr. 16, July 13 to Sept. 7; stage-discharge relation affected by ice Dec. 13 to Mar. 20.)

|     |     |     |       |
|-----|-----|-----|-------|
| 2.6 | 193 | 6.0 | 1,200 |
| 3.0 | 275 | 8.0 | 2,090 |
| 4.0 | 538 |     |       |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT           | NOV      | DEC       | JAN     | FEB      | MAR      | APR    | MAY    | JUN   | JUL    | AUG   | SEP   |
|-------------|---------------|----------|-----------|---------|----------|----------|--------|--------|-------|--------|-------|-------|
| 1           | 1,260         | 1,060    | 288       | 270     | 220      | 220      | 395    | 402    | 274   | 269    | 306   | 249   |
| 2           | 1,390         | 882      | 328       | 260     | 210      | 220      | 365    | 463    | 265   | 252    | 301   | 243   |
| 3           | 1,040         | 788      | 308       | 260     | 210      | 220      | 365    | 455    | 259   | 244    | 287   | 235   |
| 4           | 782           | 618      | 299       | 250     | 210      | 230      | 365    | 411    | 252   | 243    | 271   | 231   |
| 5           | 596           | 529      | 304       | 250     | 210      | 230      | 344    | 387    | 249   | 238    | 259   | 238   |
| 6           | 525           | 476      | 302       | 260     | 200      | 230      | 356    | 377    | 251   | 232    | 260   | 247   |
| 7           | 469           | 425      | 303       | 260     | 200      | 230      | 425    | 364    | 244   | 230    | 289   | 336   |
| 8           | 426           | 397      | 303       | 260     | 210      | 240      | 439    | 366    | 241   | 230    | 334   | 336   |
| 9           | 394           | 385      | 302       | 270     | 210      | 240      | 398    | 349    | 242   | 244    | 320   | 286   |
| 10          | 367           | 373      | 294       | 270     | 210      | 250      | 377    | 331    | 231   | 229    | 278   | 263   |
| 11          | 342           | 362      | 270       | 270     | 210      | 250      | 432    | 318    | 227   | 221    | 264   | 253   |
| 12          | 321           | 353      | 240       | 260     | 210      | 260      | 538    | 315    | 238   | 217    | 256   | 250   |
| 13          | 326           | 350      | 250       | 250     | 210      | 260      | 814    | 317    | 240   | 209    | 243   | 261   |
| 14          | 321           | 341      | 270       | 250     | 220      | 270      | 1,110  | 323    | 278   | 217    | 244   | 259   |
| 15          | 302           | 336      | 270       | 250     | 220      | 270      | 885    | 315    | 282   | 234    | 257   | 248   |
| 16          | 290           | 336      | 260       | 250     | 220      | 280      | 690    | 310    | 264   | 221    | 246   | 243   |
| 17          | 291           | 365      | 300       | 250     | 220      | 300      | 599    | 300    | 248   | 242    | 236   | 241   |
| 18          | 291           | 516      | 350       | 240     | 220      | 330      | 536    | 294    | 238   | 310    | 233   | 237   |
| 19          | 296           | 615      | 440       | 240     | 220      | 380      | 513    | 286    | 240   | 260    | 239   | 243   |
| 20          | 295           | 522      | 390       | 240     | 220      | 600      | 513    | 278    | 292   | 233    | 242   | 264   |
| 21          | 288           | 437      | 350       | 240     | 220      | 1,210    | 477    | 279    | 354   | 242    | 242   | 341   |
| 22          | 286           | 367      | 330       | 240     | 220      | 1,640    | 553    | 287    | 321   | 286    | 252   | 316   |
| 23          | 281           | 364      | 320       | 240     | 220      | 1,450    | 767    | 282    | 279   | 565    | 233   | 282   |
| 24          | 275           | 352      | 310       | 230     | 220      | 1,040    | 761    | 270    | 261   | 1,090  | 233   | 271   |
| 25          | 274           | 342      | 300       | 230     | 220      | 836      | 627    | 270    | 249   | 1,130  | 234   | 274   |
| 26          | 271           | 346      | 290       | 220     | 220      | 720      | 518    | 271    | 244   | 746    | 297   | 377   |
| 27          | 300           | 339      | 280       | 220     | 220      | 609      | 464    | 268    | 242   | 460    | 428   | 438   |
| 28          | 593           | 329      | 270       | 220     | 220      | 533      | 431    | 277    | 279   | 376    | 364   | 391   |
| 29          | 674           | 326      | 270       | 220     | 220      | 489      | 410    | 290    | 312   | 347    | 295   | 397   |
| 30          | 615           | 308      | 270       | 220     | -----    | 452      | 400    | 306    | 297   | 327    | 268   | 345   |
| 31          | 940           | -----    | 270       | 220     | -----    | 423      | -----  | 289    | ----- | 315    | 256   | ----- |
| TOTAL       | 15,121        | 13,539   | 9,331     | 7,610   | 6,240    | 14,912   | 15,867 | 10,050 | 7,893 | 10,659 | 8,467 | 8,595 |
| MEAN        | 488           | 451      | 301       | 245     | 215      | 481      | 529    | 324    | 263   | 344    | 273   | 287   |
| MAX         | 1,390         | 1,060    | 440       | 270     | 220      | 1,640    | 1,110  | 463    | 354   | 1,130  | 428   | 438   |
| MIN         | 271           | 308      | 240       | 220     | 200      | 220      | 344    | 268    | 227   | 209    | 233   | 231   |
| CFSM        | 1.15          | 1.06     | .71       | .58     | .50      | 1.13     | 1.24   | .76    | .62   | .81    | .64   | .67   |
| IN.         | 1.32          | 1.18     | .81       | .66     | .54      | 1.30     | 1.39   | .88    | .69   | .93    | .74   | .75   |
| CAL YR 1971 | TOTAL 147,485 | MEAN 404 | MAX 2,260 | MIN 210 | CFSM .95 | IN 12.88 |        |        |       |        |       |       |
| WTR YR 1972 | TOTAL 128,284 | MEAN 351 | MAX 1,640 | MIN 200 | CFSM .82 | IN 11.20 |        |        |       |        |       |       |

## PEAK DISCHARGE (BASE, 1,000 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 10-2 | 0300 | 6.75  | 1,620     | 4-14 | 0900 | 5.74  | 1,160     |
| 11-1 | 0100 | 5.70  | 1,210     | 7-25 | 0900 | 6.12  | 1,170     |
| 3-22 | 1900 | 7.44  | 1,720     |      |      |       |           |

05369000 Red Cedar River at Menomonie, Wis.

LOCATION.--Lat 44°53'02", long 91°55'57", in NW 1/4 sec.26, T.28 N., R.13 W., Dunn County, 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.--1,760 sq mi, approximately.

PERIOD OF RECORD.--June 1907 to September 1908, May 1913 to current year. Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 780 ft above mean sea level (Northern States Power Co. bench mark). Prior to Sept. 3, 1908, nonrecording gage at site 1 mile 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.

AVERAGE DISCHARGE.--60 years, 1,225 cfs.

EXTREMES.--Current year: Maximum discharge, 13,200 cfs July 26 (gage height, 7.18 ft); minimum, 142 cfs May 28 (gage height, 0.84 ft); minimum daily, 577 cfs May 28.

Period of record: Maximum discharge, 40,000 cfs Apr. 4, 1934 (gage height, 16.0 ft, from floodmarks), from rating curve extended above 27,000 cfs on basis of computed flow over Cedar Falls Dam 6 miles upstream; minimum, 21 cfs Dec. 9, 1928 (gage height, 0.65 ft).

REMARKS.--Records good. Flow regulated by powerplants at Menomonie and Cedar Falls.

REVISIONS.--WSP 805: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).

|     |       |     |        |
|-----|-------|-----|--------|
| 1.6 | 518   | 3.0 | 2,620  |
| 1.8 | 700   | 4.0 | 4,440  |
| 2.0 | 965   | 5.0 | 6,580  |
| 2.5 | 1,730 | 6.0 | 9,400  |
|     |       | 8.0 | 16,000 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 2,750  | 2,950  | 4-7    | 1,180  | 972    | 1,070  | 2,050  | 2,210  | 780    | 1,840  | 1,170  |
| 2     | 3,000  | 3,170  | 1,3-0  | 1,240  | 1,140  | 939    | 2,100  | 1,370  | 828    | 1,440  | 1,380  |
| 3     | 2,850  | 2,840  | 1,5-0  | 1,210  | 942    | 1,080  | 1,750  | 1,460  | 1,380  | 637    | 1,160  |
| 4     | 2,750  | 2,840  | 1,3-0  | 1,100  | 1,030  | 1,010  | 1,750  | 1,400  | 998    | 1,170  | 632    |
| 5     | 2,750  | 2,840  | 1,3-0  | 1,100  | 976    | 1,620  | 1,840  | 1,030  | 1,300  | 656    | 1,350  |
| 6     | 2,750  | 2,840  | 1,3-0  | 1,050  | 990    | 1,250  | 1,390  | 1,310  | 1,020  | 1,200  | 1,360  |
| 7     | 1,340  | 2,050  | 1,4-0  | 1,130  | 993    | 1,050  | 1,750  | 1,490  | 1,010  | 1,170  | 1,660  |
| 8     | 1,600  | 2,300  | 1,5-0  | 1,270  | 935    | 1,190  | 1,760  | 1,750  | 1,070  | 1,330  | 1,950  |
| 9     | 1,350  | 1,280  | 1,3-0  | 1,140  | 1,030  | 1,080  | 1,790  | 1,400  | 1,020  | 1,080  | 2,370  |
| 10    | 1,350  | 1,350  | 1,3-0  | 1,150  | 995    | 1,050  | 1,800  | 1,420  | 849    | 1,380  | 1,270  |
| 11    | 1,350  | 1,350  | 1,3-0  | 1,150  | 967    | 1,190  | 1,790  | 1,320  | 868    | 1,000  | 592    |
| 12    | 1,350  | 1,350  | 1,3-0  | 1,240  | 923    | 1,170  | 2,150  | 1,370  | 1,360  | 1,220  | 1,430  |
| 13    | 1,350  | 1,350  | 1,3-0  | 1,050  | 880    | 1,300  | 2,510  | 1,460  | 1,000  | 1,130  | 1,440  |
| 14    | 1,350  | 1,350  | 1,3-0  | 1,100  | 947    | 1,390  | 2,850  | 1,390  | 1,930  | 1,400  | 1,460  |
| 15    | 1,350  | 1,350  | 1,3-0  | 959    | 1,040  | 1,450  | 3,290  | 1,500  | 1,350  | 1,170  | 1,350  |
| 16    | 1,190  | 1,550  | 1,3-0  | 942    | 1,050  | 1,550  | 3,380  | 1,260  | 1,470  | 1,130  | 1,570  |
| 17    | 1,270  | 1,750  | 1,1-0  | 982    | 1,070  | 1,800  | 3,310  | 1,700  | 1,200  | 1,390  | 1,420  |
| 18    | 1,280  | 2,300  | 9-4    | 1,040  | 1,100  | 1,720  | 3,290  | 1,550  | 1,070  | 1,600  | 1,540  |
| 19    | 1,450  | 2,400  | 9-1    | 1,100  | 1,050  | 2,050  | 3,080  | 1,390  | 1,290  | 1,490  | 1,520  |
| 20    | 1,450  | 2,400  | 1,1-0  | 1,070  | 1,040  | 2,270  | 3,060  | 1,430  | 1,460  | 1,580  | 1,570  |
| 21    | 1,360  | 2,090  | 9-4    | 1,000  | 1,010  | 2,050  | 3,050  | 1,240  | 1,940  | 1,490  | 1,610  |
| 22    | 1,350  | 1,730  | 1,3-0  | 1,050  | 1,040  | 3,120  | 2,910  | 1,440  | 1,990  | 1,730  | 1,330  |
| 23    | 1,280  | 2,000  | 1,4-0  | 1,070  | 947    | 3,530  | 2,960  | 1,230  | 1,430  | 3,530  | 1,240  |
| 24    | 1,350  | 1,350  | 1,3-0  | 1,050  | 1,000  | 3,530  | 3,070  | 1,400  | 1,560  | 3,710  | 1,440  |
| 25    | 1,340  | 1,500  | 1,3-0  | 971    | 941    | 3,400  | 3,030  | 1,260  | 1,310  | 4,260  | 1,570  |
| 26    | 1,400  | 1,850  | 1,270  | 1,080  | 1,100  | 3,330  | 2,910  | 2,020  | 1,260  | 6,480  | 1,670  |
| 27    | 1,880  | 1,470  | 1,270  | 959    | 1,020  | 2,800  | 2,800  | 1,070  | 1,320  | 4,630  | 1,930  |
| 28    | 2,130  | 1,350  | 1,170  | 1,050  | 1,000  | 2,700  | 2,520  | 577    | 1,720  | 3,400  | 1,930  |
| 29    | 2,450  | 1,350  | 1,390  | 952    | 1,070  | 2,390  | 2,360  | 1,360  | 1,940  | 2,830  | 1,630  |
| 30    | 2,340  | 1,350  | 1,370  | 1,020  | -----  | 2,240  | 2,280  | 1,620  | 2,220  | 2,660  | 1,510  |
| 31    | 2,570  | -----  | 1,240  | 987    | -----  | 2,190  | -----  | 886    | -----  | 2,540  | 1,360  |
| TOTAL | 54,430 | 48,110 | 44,440 | 43,542 | 29,432 | 78,675 | 74,410 | 44,073 | 39,673 | 63,580 | 44,857 |
| MEAN  | 1,755  | 1,552  | 1,430  | 1,402  | 1,015  | 1,893  | 2,480  | 1,422  | 1,322  | 2,051  | 1,447  |
| MAX   | 3,400  | 3,170  | 1,010  | 1,270  | 1,140  | 3,530  | 3,380  | 2,210  | 2,220  | 6,480  | 2,370  |
| MIN   | 1,150  | 1,300  | 816    | 859    | 880    | 939    | 1,390  | 577    | 780    | 1,000  | 592    |
| CFSM  | 1.01   | 1.16   | .70    | .81    | .58    | 1.08   | 1.41   | .81    | .75    | 1.17   | .82    |
| IN%   | 1.16   | 1.23   | .81    | .71    | .62    | 1.24   | 1.57   | .93    | .84    | 1.34   | .95    |

CAL YR 1971 TOTAL 54,430 MEAN 1,639 MAX 3,630 MIN 769 CFSM .93 IN 12.64  
 WTR YR 1972 TOTAL 54,432 MEAN 1,597 MAX 3,686 MIN 577 CFSM .91 IN 12.35

## 89

LOCATION.--Lat 44°37'40", long 91°58'10", in SW 1/4 sec.21, T.25 N., R.13 W., in Pepin County, on left bank 75 ft downstream from bridge on U.S. Highway 10, and 9.5 miles downstream from Red Cedar River.

PERIOD OF RECORD.--July 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 694.59 ft above mean sea level. Prior to Dec. 9, 1930, non-recording gage at bridge 400 ft downstream at same datum.

AVERAGE DISCHARGE.--44 years, 7,404 cfs.

EXTREMES.--Current year: Maximum discharge, 43,100 cfs Apr. 20 (gage height, 11.32 ft); minimum daily, 2,790 cfs June 12.  
Period of record: Maximum discharge, 123,000 cfs Apr. 2, 1967 (gage height, 16.93 ft); minimum observed, 1,020 cfs Nov. 24, 1950 (gage height, 0.12 ft).  
Maximum stage known. 18.4 ft Sept. 12. 1884.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by powerplants, Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota on Chippewa and Flambeau Rivers (see p. 91).

REVISIONS (WATER YEARS).--WSP 785: 1930, 1934(M). WSP 875: 1930 (monthly and yearly runoff). WSP 925: 1938. WSP 1508: 1929(M). 1932.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 20 to Mar. 24.)

|     |       |      |        |
|-----|-------|------|--------|
| 0.5 | 2,140 | 5.0  | 12,710 |
| 1.0 | 2,960 | 7.0  | 19,700 |
| 2.0 | 4,790 | 10.0 | 34,300 |
| 3.0 | 7,070 | 13.0 | 61,000 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT             | NOV     | DEC        | JAN     | FEB        | MAR     | APR       | MAY     | JUN     | JUL     | AUG     | SEP     |
|-------------|-----------------|---------|------------|---------|------------|---------|-----------|---------|---------|---------|---------|---------|
| 1           | 6,240           | 8,770   | 7,420      | 6,400   | 5,600      | 7,800   | 13,800    | 12,800  | 4,280   | 8,190   | 10,000  | 9,720   |
| 2           | 7,460           | 11,600  | 6,610      | 6,600   | 5,800      | 8,200   | 13,600    | 11,500  | 4,260   | 7,270   | 9,220   | 9,860   |
| 3           | 10,400          | 12,900  | 6,640      | 6,800   | 5,800      | 8,200   | 13,400    | 12,400  | 5,020   | 6,170   | 7,950   | 8,680   |
| 4           | 10,800          | 13,200  | 6,800      | 6,600   | 6,000      | 8,000   | 12,800    | 15,600  | 4,290   | 6,130   | 6,890   | 8,570   |
| 5           | 7,170           | 13,000  | 6,340      | 6,200   | 6,000      | 7,000   | 12,100    | 14,400  | 3,120   | 4,400   | 6,280   | 7,660   |
| 6           | 7,230           | 11,400  | 6,070      | 6,200   | 5,600      | 6,600   | 10,800    | 11,800  | 4,070   | 5,340   | 5,310   | 8,110   |
| 7           | 7,630           | 10,200  | 7,000      | 6,600   | 5,400      | 6,800   | 10,500    | 10,700  | 4,270   | 5,350   | 5,950   | 8,550   |
| 8           | 8,140           | 8,470   | 8,260      | 6,800   | 5,600      | 7,200   | 10,600    | 9,360   | 3,820   | 5,410   | 6,700   | 8,530   |
| 9           | 7,840           | 8,880   | 7,110      | 6,600   | 5,800      | 7,400   | 10,700    | 9,340   | 4,130   | 4,640   | 7,200   | 8,730   |
| 10          | 7,120           | 7,980   | 6,600      | 6,800   | 5,800      | 7,200   | 12,000    | 8,760   | 3,670   | 4,080   | 8,000   | 8,410   |
| 11          | 5,320           | 8,500   | 6,860      | 6,800   | 5,800      | 7,600   | 12,300    | 7,900   | 2,890   | 5,740   | 7,500   | 8,030   |
| 12          | 5,960           | 7,430   | 8,070      | 6,600   | 5,800      | 7,600   | 13,200    | 7,530   | 2,790   | 4,910   | 6,700   | 7,550   |
| 13          | 6,560           | 6,810   | 5,440      | 6,400   | 5,400      | 7,000   | 14,900    | 6,930   | 4,020   | 4,960   | 6,350   | 8,350   |
| 14          | 5,750           | 6,990   | 5,430      | 6,400   | 5,400      | 7,200   | 16,000    | 6,440   | 5,150   | 4,590   | 4,970   | 7,820   |
| 15          | 5,460           | 6,290   | 5,420      | 6,200   | 5,800      | 7,600   | 17,300    | 6,410   | 4,440   | 5,540   | 6,510   | 8,020   |
| 16          | 5,900           | 6,960   | 6,380      | 6,000   | 6,800      | 10,000  | 18,600    | 7,400   | 5,290   | 3,890   | 6,840   | 7,580   |
| 17          | 4,370           | 7,090   | 6,730      | 5,800   | 7,000      | 9,800   | 28,300    | 6,180   | 6,510   | 3,840   | 6,970   | 6,740   |
| 18          | 4,840           | 8,150   | 6,910      | 5,800   | 7,000      | 10,000  | 34,700    | 6,810   | 6,350   | 7,270   | 7,180   | 5,330   |
| 19          | 6,130           | 9,090   | 6,990      | 5,800   | 7,000      | 9,200   | 37,400    | 6,360   | 4,670   | 5,950   | 8,900   | 5,820   |
| 20          | 5,980           | 11,000  | 6,600      | 6,000   | 6,800      | 9,400   | 41,600    | 5,490   | 5,640   | 6,330   | 13,300  | 6,550   |
| 21          | 5,640           | 11,900  | 6,800      | 6,000   | 6,600      | 12,000  | 41,700    | 4,820   | 6,710   | 6,850   | 14,500  | 7,010   |
| 22          | 5,810           | 11,000  | 6,800      | 5,800   | 6,600      | 20,000  | 35,500    | 4,680   | 7,310   | 6,950   | 16,700  | 8,190   |
| 23          | 5,340           | 9,600   | 7,000      | 5,600   | 7,400      | 25,000  | 32,200    | 6,150   | 7,820   | 8,410   | 17,900  | 9,780   |
| 24          | 4,730           | 8,730   | 7,000      | 5,800   | 7,800      | 28,000  | 28,500    | 5,680   | 6,910   | 13,000  | 17,100  | 8,390   |
| 25          | 4,790           | 9,130   | 6,800      | 5,800   | 7,800      | 21,100  | 25,900    | 4,930   | 6,450   | 16,400  | 17,400  | 7,600   |
| 26          | 5,180           | 7,620   | 6,600      | 6,000   | 7,600      | 18,600  | 21,500    | 5,490   | 5,870   | 19,500  | 15,900  | 11,400  |
| 27          | 5,790           | 9,120   | 6,600      | 5,800   | 7,600      | 17,200  | 18,400    | 5,050   | 5,400   | 17,100  | 16,600  | 17,700  |
| 28          | 6,520           | 7,530   | 7,400      | 5,600   | 7,600      | 15,600  | 16,900    | 3,360   | 6,180   | 14,100  | 17,800  | 21,900  |
| 29          | 6,540           | 8,310   | 8,600      | 5,400   | 7,600      | 15,000  | 14,800    | 2,820   | 6,820   | 13,200  | 15,200  | 23,600  |
| 30          | 6,960           | 8,080   | 7,200      | 5,200   | -----      | 14,200  | 13,700    | 3,960   | 8,420   | 13,000  | 13,800  | 20,900  |
| 31          | 8,160           | -----   | 6,600      | 5,200   | -----      | 14,100  | -----     | 5,420   | -----   | 11,900  | 11,900  | -----   |
| TOTAL       | 201,760         | 275,730 | 211,480    | 189,600 | 187,000    | 360,600 | 603,700   | 236,470 | 156,570 | 250,410 | 323,520 | 295,080 |
| MEAN        | 6,508           | 9,191   | 6,822      | 6,116   | 6,448      | 11,630  | 20,120    | 7,628   | 5,219   | 8,078   | 10,440  | 9,836   |
| MAX         | 10,800          | 13,200  | 8,600      | 6,800   | 7,800      | 28,000  | 41,700    | 15,600  | 8,420   | 19,500  | 17,900  | 23,600  |
| MIN         | 4,370           | 6,290   | 5,420      | 5,200   | 5,400      | 6,600   | 10,500    | 2,820   | 2,790   | 3,840   | 4,970   | 5,330   |
| CAL YR 1971 | TOTAL 3,085,410 |         | MEAN 8,453 |         | MAX 56,700 |         | MIN 2,810 |         |         |         |         |         |
| WTR YR 1972 | TOTAL 3,291,920 |         | MEAN 8,994 |         | MAX 41,700 |         | MIN 2,790 |         |         |         |         |         |

## CHIPPEWA RIVER BASIN

05370000 Eau Galle River at Spring Valley, Wis.

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, on right bank, 1,500 ft upstream from Mines Creek.

DRAINAGE AREA.--64.8 sq mi.

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

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is mean sea level (levels by Corps of Engineers). Prior to July 31, 1957, nonrecording gage at site 850 ft downstream at datum of 912.45 ft above mean sea level. Aug. 1, 1957, to June 6, 1966, nonrecording gage at downstream site at datum of 910.45 ft above mean sea level. June 7, 1966, to Oct. 31, 1968, nonrecording gage at downstream site at datum of 909.45 ft above mean sea level.

AVERAGE DISCHARGE.--24 years (1944-68), 25.9 cfs (5.43 inches per year) prior to reservoir operation.

EXTREMES.--Current year: Maximum discharge, 1,050 cfs Mar. 20 (gage height, 916.48 ft); minimum, 5.6 cfs Nov. 10 (gage height, 912.87 ft).

Period of record: Maximum discharge, 7,000 cfs 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; minimum observed prior to dam construction period, 5.8 cfs Sept. 25, 27, 28, 30, 1949.

Maximum stage known since at least 1894, 19.98 ft Sept. 18, 1942, with datum at 909.45 ft above mean sea level, from floodmarks (discharge, 33,000 cfs estimated by Corps of Engineers on basis of slope-area measurement by Geological Survey of peak discharge of 39,000 cfs at Elmwood, drainage area, 91.9 sq mi).

REMARKS.--Records good. Flow regulated by flood-control dam 766 ft upstream.

REVISIONS (WATER YEARS).--1967 Water Resources Data for Wisconsin: 1966.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC  | JAN   | FEB   | MAR   | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-------|-------|-------|------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 18    | 82    | 14   | 13    | 12    | 12    | 24    | 24   | 13    | 12   | 17   | 13    |
| 2     | 25    | 56    | 14   | 13    | 12    | 11    | 22    | 30   | 13    | 12   | 16   | 12    |
| 3     | 22    | 48    | 14   | 12    | 12    | 12    | 20    | 32   | 13    | 12   | 14   | 12    |
| 4     | 16    | 37    | 14   | 12    | 12    | 12    | 20    | 26   | 12    | 11   | 14   | 13    |
| 5     | 17    | 26    | 15   | 12    | 12    | 12    | 21    | 22   | 12    | 11   | 13   | 13    |
| 6     | 18    | 18    | 15   | 12    | 12    | 12    | 28    | 20   | 13    | 11   | 17   | 14    |
| 7     | 18    | 15    | 15   | 12    | 12    | 11    | 40    | 18   | 12    | 12   | 19   | 15    |
| 8     | 18    | 28    | 15   | 13    | 12    | 11    | 35    | 17   | 12    | 12   | 28   | 13    |
| 9     | 19    | 20    | 15   | 13    | 11    | 11    | 28    | 16   | 12    | 13   | 21   | 13    |
| 10    | 19    | 5.6   | 15   | 13    | 11    | 11    | 24    | 16   | 11    | 12   | 16   | 12    |
| 11    | 23    | 13    | 14   | 13    | 12    | 12    | 28    | 15   | 11    | 18   | 15   | 13    |
| 12    | 27    | 15    | 14   | 13    | 12    | 12    | 34    | 16   | 12    | 47   | 14   | 13    |
| 13    | 31    | 14    | 13   | 12    | 12    | 12    | 93    | 17   | 14    | 24   | 14   | 15    |
| 14    | 29    | 14    | 14   | 8.8   | 12    | 12    | 66    | 16   | 20    | 21   | 17   | 13    |
| 15    | 28    | 14    | 15   | 7.0   | 12    | 14    | 76    | 16   | 14    | 17   | 15   | 13    |
| 16    | 27    | 15    | 14   | 7.0   | 12    | 15    | 57    | 15   | 12    | 14   | 14   | 12    |
| 17    | 27    | 20    | 13   | 12    | 12    | 17    | 40    | 15   | 12    | 19   | 14   | 12    |
| 18    | 29    | 90    | 13   | 12    | 12    | 32    | 30    | 15   | 12    | 17   | 13   | 12    |
| 19    | 31    | 69    | 14   | 12    | 12    | 150   | 28    | 14   | 12    | 14   | 13   | 42    |
| 20    | 29    | 40    | 14   | 12    | 12    | 498   | 31    | 14   | 15    | 26   | 13   | 74    |
| 21    | 28    | 30    | 13   | 12    | 11    | 634   | 30    | 15   | 14    | 27   | 14   | 98    |
| 22    | 28    | 24    | 13   | 13    | 11    | 186   | 61    | 14   | 12    | 22   | 15   | 53    |
| 23    | 28    | 20    | 13   | 12    | 11    | 107   | 103   | 14   | 11    | 120  | 14   | 29    |
| 24    | 28    | 17    | 13   | 13    | 12    | 67    | 56    | 14   | 11    | 48   | 14   | 20    |
| 25    | 28    | 16    | 13   | 13    | 12    | 51    | 36    | 13   | 11    | 27   | 15   | 26    |
| 26    | 29    | 21    | 13   | 12    | 11    | 45    | 27    | 13   | 11    | 26   | 25   | 165   |
| 27    | 39    | 18    | 14   | 11    | 11    | 39    | 23    | 13   | 13    | 28   | 21   | 71    |
| 28    | 119   | 16    | 14   | 12    | 11    | 32    | 21    | 14   | 23    | 25   | 16   | 40    |
| 29    | 57    | 15    | 13   | 12    | 11    | 28    | 21    | 15   | 16    | 21   | 15   | 31    |
| 30    | 62    | 15    | 14   | 12    | ----- | 26    | 21    | 14   | 13    | 18   | 14   | 27    |
| 31    | 228   | ----- | 13   | 12    | ----- | 25    | ----- | 13   | ----- | 20   | 14   | ----- |
| TOTAL | 1,145 | 831.6 | 430  | 367.8 | 339   | 2,129 | 1,144 | 526  | 392   | 717  | 494  | 909   |
| MEAN  | 36.9  | 27.7  | 13.9 | 11.9  | 11.7  | 68.7  | 38.1  | 17.0 | 13.1  | 23.1 | 15.9 | 30.3  |
| MAX   | 228   | 90    | 15   | 13    | 12    | 634   | 103   | 32   | 23    | 120  | 28   | 165   |
| MIN   | 16    | 5.6   | 13   | 7.0   | 11    | 11    | 20    | 13   | 11    | 11   | 13   | 12    |

CAL YR 1971 TOTAL 10,525.20 MEAN 28.8 MAX 718 MIN 0  
WTR YR 1972 TOTAL 9,424.40 MEAN 25.7 MAX 634 MIN 5.6

## Reservoirs in Chippewa River Basin

The five reservoirs listed below are used to stabilize the flow of the Chippewa and Flambeau Rivers for power utilization, and are also used for recreational purposes. The first four are operated by Chippewa-Flambeau Improvement Co. The remaining one is operated by the Northern States Power Co., which also furnishes the gage heights and capacity tables for all the reservoirs. Month-end contents are computed by the Geological Survey. The usable capacity of these reservoirs is usually less in summer than 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.

- 05355400 Moose Lake on West Fork Chippewa River, lat 46°02'00", long 91°04'32", in NE 1/4 sec.14, T.41 N., R.6 W., Sawyer County, 15.0 miles north of Winter, Wis., completed in 1893, has a usable capacity of 400,000,000 cu ft. Drainage area, 225 sq mi. Datum of gage is at mean sea level (Northern States Power Co. bench mark).
- 05355600 Lake Chippewa on Chippewa River, lat 45°53'20", long 91°04'40", in SE 1/4 sec.2, T.39 N., R.6 W., Sawyer County, 3.2 miles upstream from Geological Survey river-gaging station, 5.5 miles northwest of Winter, Wis., completed in 1923, has a usable capacity of 10,000,000,000 cu ft. Drainage area, 775 sq mi. Datum of gage is at mean sea level (Northern States Power Co. bench mark).
- 05357300 Rest Lake on Manitowish River, lat 46°08'20", long 89°53'05", in NW 1/4 sec.9, T.42 N., R.5 E., Vilas County, 6.2 miles east of Manitowish, Wis., used as a reservoir since 1887, has a capacity of 660,000,000 cu ft between gage heights 105.00 ft and 108.50 ft. This reservoir includes nine lakes controlled by the same dam. Drainage area, 243 sq mi. Altitude of gage is 1,600 ft (by U.S. Geological Survey topographic map).
- 05357400 Flambeau Flowage on North Fork Flambeau River, lat 46°04'13", long 90°13'23", in SE 1/4 sec.34, T.42 N., R.2 E., Iron County, 0.5 mile upstream from discontinued Geological Survey river-gaging station, 10.2 miles southwest of Mercer, Wis., completed in 1926, has a usable capacity of 5,895,000,000 cu ft. Drainage area, 666 sq mi. Datum of gage is at mean sea level (Northern States Power Co. bench mark).
- 05364200 Lake Wissota on Chippewa River, lat 44°56'18", long 91°20'27", in NW 1/4 sec.3, T.28 N., R.8 W., Chippewa County, 2.0 miles east of Chippewa Falls, Wis., city limits, completed in 1917, has a usable capacity of 3,547,000,000 cu ft. Drainage area, 5,548 sq mi. Datum of gage is at mean sea level (Northern States Power Co. bench mark).

Month-end contents, in millions of cubic feet, water year October 1971 to September 1972

| Date          | Moose<br>Lake | Lake<br>Chippewa | Rest<br>Lake | Flambeau<br>Flowage | Lake<br>Wissota |
|---------------|---------------|------------------|--------------|---------------------|-----------------|
| Sept. 30..... | 400           | 8,804            | 918          | 4,347               | 3,898           |
| Oct. 31.....  | 182           | 9,928            | 435          | 5,268               | 3,924           |
| Nov. 30.....  | 60            | 8,940            | 350          | 5,596               | 3,892           |
| Dec. 31.....  | 15            | 6,890            | 350          | 4,836               | 3,844           |
| Jan. 31.....  | 15            | 4,552            | 350          | 3,710               | 3,887           |
| Feb. 28.....  | 15            | 2,320            | 350          | 2,514               | 2,574           |
| Mar. 31.....  | 55            | 3,184            | 350          | 1,640               | 2,149           |
| Apr. 30.....  | 372           | 6,710            | 477          | 3,980               | 3,946           |
| May 31.....   | 400           | 9,280            | 817          | 5,520               | 3,900           |
| June 30.....  | 393           | 9,856            | 1,010        | 5,376               | 3,919           |
| July 31.....  | 393           | 10,000           | 991          | 5,900               | 3,884           |
| Aug. 31.....  | 393           | 9,676            | 973          | 5,900               | 3,924           |
| Sept. 30..... | 393           | 9,280            | 973          | 5,634               | 3,978           |

## TREMPEALEAU RIVER BASIN

05379400 Trempealeau River at Arcadia, Wis.

LOCATION.--Lat 44°15'15", long 91°30'25", in SW 1/4 sec.32, T.21 N., R.9 W., Trempealeau County, near right bank on downstream side of bridge on State Highway 93 and 95 in Arcadia, 0.5 mile downstream from Turton Creek.

DRAINAGE AREA.--552 sq mi.

RECORDS AVAILABLE.--July 1960 to current year.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 719.61 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 349 cfs (8.59 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,510 cfs Sept. 27 (gage height, 6.85 ft); minimum daily, 200 cfs Jan. 6-9.

Period of record: Maximum discharge, 9,740 cfs Apr. 6, 1965 (gage height, 7.15 ft, from graph based on gage readings) from rating curve extended above 7,000 cfs; maximum gage height observed, 8.04 ft Mar. 2, 1965 (backwater from ice); minimum discharge observed, 110 cfs Aug. 8, 9, 19, 1964.

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

REVISIONS (WATER YEARS).--WRD Wis. 1970: 1968, 1969.

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Oct. 1 to Dec. 13; stage-discharge relation affected by ice Dec. 14 to Mar. 18.)

Oct. 1 to Mar. 19

Mar. 20 to Sept. 30

|     |     |     |       |     |     |     |       |
|-----|-----|-----|-------|-----|-----|-----|-------|
| 1.2 | 227 | 4.0 | 1,390 | 1.1 | 210 | 4.0 | 1,390 |
| 1.5 | 315 | 5.0 | 1,930 | 1.5 | 332 | 5.0 | 1,930 |
| 2.0 | 490 | 6.0 | 2,820 | 2.0 | 518 | 6.0 | 2,820 |
| 3.0 | 920 | 7.0 | 4,950 | 3.0 | 934 | 7.0 | 4,950 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN   | FEB   | MAR    | APR    | MAY    | JUN   | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|
| 1     | 467    | 407    | 309    | 270   | 220   | 280    | 478    | 459    | 322   | 239    | 339    | 335    |
| 2     | 569    | 400    | 362    | 250   | 220   | 280    | 463    | 494    | 297   | 230    | 316    | 319    |
| 3     | 475    | 392    | 322    | 230   | 220   | 290    | 448    | 502    | 288   | 227    | 306    | 316    |
| 4     | 389    | 342    | 371    | 220   | 220   | 290    | 440    | 486    | 275   | 227    | 275    | 306    |
| 5     | 363    | 322    | 371    | 210   | 220   | 290    | 410    | 440    | 278   | 227    | 266    | 306    |
| 6     | 352    | 345    | 368    | 200   | 220   | 290    | 467    | 417    | 281   | 227    | 269    | 303    |
| 7     | 345    | 315    | 375    | 200   | 220   | 290    | 455    | 398    | 278   | 251    | 310    | 335    |
| 8     | 333    | 327    | 378    | 200   | 220   | 290    | 425    | 373    | 275   | 257    | 303    | 332    |
| 9     | 330    | 324    | 385    | 200   | 220   | 300    | 402    | 352    | 275   | 332    | 294    | 319    |
| 10    | 315    | 327    | 400    | 210   | 220   | 300    | 388    | 346    | 263   | 294    | 263    | 297    |
| 11    | 315    | 321    | 475    | 220   | 230   | 310    | 410    | 332    | 257   | 269    | 263    | 288    |
| 12    | 312    | 327    | 422    | 230   | 230   | 330    | 486    | 326    | 263   | 346    | 257    | 288    |
| 13    | 315    | 321    | 429    | 230   | 230   | 350    | 526    | 339    | 395   | 417    | 254    | 352    |
| 14    | 312    | 327    | 380    | 230   | 240   | 390    | 478    | 339    | 326   | 346    | 260    | 349    |
| 15    | 303    | 321    | 350    | 220   | 240   | 470    | 486    | 346    | 294   | 326    | 260    | 326    |
| 16    | 297    | 321    | 330    | 220   | 250   | 900    | 502    | 342    | 275   | 288    | 263    | 300    |
| 17    | 303    | 339    | 310    | 220   | 250   | 1,600  | 463    | 332    | 260   | 413    | 251    | 288    |
| 18    | 297    | 378    | 300    | 210   | 250   | 3,600  | 451    | 326    | 260   | 657    | 248    | 278    |
| 19    | 318    | 375    | 310    | 210   | 260   | 2,690  | 657    | 316    | 257   | 486    | 322    | 319    |
| 20    | 333    | 368    | 310    | 210   | 260   | 2,240  | 766    | 310    | 275   | 380    | 398    | 470    |
| 21    | 327    | 356    | 320    | 210   | 260   | 2,570  | 636    | 306    | 275   | 329    | 550    | 942    |
| 22    | 333    | 324    | 320    | 210   | 260   | 2,550  | 522    | 306    | 254   | 303    | 558    | 665    |
| 23    | 324    | 321    | 330    | 210   | 270   | 1,710  | 766    | 300    | 248   | 373    | 478    | 486    |
| 24    | 315    | 327    | 320    | 210   | 270   | 1,090  | 640    | 294    | 239   | 478    | 425    | 410    |
| 25    | 312    | 327    | 300    | 210   | 270   | 787    | 518    | 288    | 239   | 359    | 366    | 1,290  |
| 26    | 345    | 339    | 240    | 210   | 270   | 682    | 490    | 294    | 233   | 373    | 707    | 3,740  |
| 27    | 352    | 371    | 290    | 210   | 270   | 665    | 451    | 281    | 227   | 366    | 884    | 3,650  |
| 28    | 336    | 371    | 290    | 210   | 280   | 538    | 440    | 281    | 245   | 352    | 619    | 2,960  |
| 29    | 345    | 371    | 300    | 210   | 280   | 506    | 432    | 294    | 275   | 332    | 470    | 2,370  |
| 30    | 358    | 358    | 290    | 220   | ----- | 470    | 432    | 312    | 248   | 316    | 395    | 1,580  |
| 31    | 422    | -----  | 280    | 220   | ----- | 467    | -----  | 322    | ----- | 326    | 359    | -----  |
| TOTAL | 10,817 | 10,436 | 10,720 | 6,720 | 7,070 | 27,815 | 14,928 | 10,873 | 8,177 | 10,346 | 11,528 | 24,519 |
| MEAN  | 349    | 348    | 346    | 217   | 244   | 897    | 498    | 351    | 273   | 334    | 372    | 817    |
| MAX   | 569    | 407    | 422    | 270   | 280   | 3,600  | 766    | 502    | 395   | 657    | 884    | 3,740  |
| MIN   | 297    | 315    | 280    | 200   | 220   | 280    | 388    | 281    | 227   | 227    | 248    | 278    |
| CFSM  | .63    | .63    | .63    | .39   | .44   | 1.63   | .90    | .64    | .49   | .61    | .67    | 1.48   |
| IN.   | .73    | .70    | .72    | .45   | .48   | 1.87   | 1.01   | .73    | .55   | .70    | .78    | 1.65   |

CAL YR 1971 TOTAL 151,712 MEAN 416 MAX 2,070 MIN 230 CFSM .75 IN 10.22  
WTR YR 1972 TOTAL 153,949 MEAN 421 MAX 3,740 MIN 200 CFSM .76 IN 10.37

05379500 Trempealeau River at Dodge, Wis.

LOCATION.--Lat 44°07'55", long 91°33'14", in SE 1/4 sec.10, T.19 N., R.10 W., on Trempealeau County line, near left bank on downstream side of highway bridge in Dodge, 9.0 miles upstream from mouth.

DRAINAGE AREA.--643 sq mi.

PERIOD OF RECORD.--December 1913 to September 1919, April 1934 to current year.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 661.42 ft above mean sea level. Prior to Oct. 1, 1966, datum 2.00 ft higher.

AVERAGE DISCHARGE.--43 years (1914-19, 1934-72), 392 cfs (8.24 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,950 cfs Sept. 29 (gage height, 10.10 ft); minimum daily, 210 cfs Jan. 6-8.

Period of record: Maximum discharge, 17,400 cfs Apr. 4, 1956 (gage height, 10.35 ft); minimum daily, 98 cfs Jan. 10, 1938.

REMARKS.--Records for the year are fair.

COOPERATION.--Gage-height record collected in cooperation with Corps of Engineers.

REVISIONS (WATER YEARS).--WSP 1238: Drainage area. WSP 1388: 1919(M). WSP 1438: 1914, 1915-18(M), 1934-44 (M), 1946-49 (M).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Nov. 6-22, June 25 to July 21; stage-discharge relation affected by ice Dec. 1-3, Dec. 14 to Mar. 19.)

|     |     |      |       |
|-----|-----|------|-------|
| 2.1 | 240 | 5.0  | 1,060 |
| 2.5 | 310 | 6.0  | 1,450 |
| 3.0 | 430 | 8.0  | 2,440 |
| 4.0 | 720 | 9.0  | 3,390 |
|     |     | 10.0 | 5,540 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN   | FEB   | MAR    | APR    | MAY    | JUN   | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|
| 1     | 492    | 501    | 380    | 330   | 250   | 330    | 552    | 480    | 349   | 279    | 366    | 370    |
| 2     | 498    | 477    | 370    | 310   | 250   | 330    | 549    | 516    | 332   | 262    | 392    | 346    |
| 3     | 489    | 627    | 340    | 280   | 250   | 330    | 549    | 615    | 317   | 255    | 337    | 334    |
| 4     | 438    | 470    | 405    | 250   | 250   | 330    | 525    | 600    | 306   | 249    | 328    | 323    |
| 5     | 415    | 440    | 415    | 220   | 250   | 330    | 498    | 549    | 296   | 248    | 314    | 325    |
| 6     | 405    | 417    | 432    | 210   | 250   | 330    | 486    | 536    | 304   | 250    | 286    | 323    |
| 7     | 392    | 373    | 417    | 210   | 250   | 330    | 513    | 470    | 306   | 269    | 319    | 337    |
| 8     | 380    | 339    | 425    | 210   | 260   | 340    | 525    | 440    | 296   | 258    | 312    | 330    |
| 9     | 373    | 325    | 438    | 220   | 260   | 340    | 498    | 435    | 290   | 332    | 300    | 323    |
| 10    | 363    | 339    | 440    | 240   | 270   | 350    | 467    | 420    | 285   | 366    | 302    | 312    |
| 11    | 358    | 328    | 448    | 250   | 270   | 350    | 465    | 407    | 277   | 310    | 288    | 308    |
| 12    | 358    | 339    | 442    | 250   | 280   | 360    | 519    | 390    | 272   | 334    | 279    | 306    |
| 13    | 356    | 339    | 440    | 260   | 280   | 380    | 561    | 385    | 323   | 458    | 274    | 351    |
| 14    | 363    | 337    | 410    | 260   | 290   | 420    | 606    | 400    | 380   | 478    | 272    | 420    |
| 15    | 361    | 337    | 340    | 260   | 290   | 450    | 606    | 410    | 358   | 417    | 267    | 400    |
| 16    | 354    | 330    | 370    | 270   | 300   | 600    | 573    | 400    | 317   | 356    | 272    | 382    |
| 17    | 349    | 334    | 370    | 270   | 300   | 1,000  | 582    | 395    | 296   | 400    | 270    | 366    |
| 18    | 342    | 351    | 380    | 260   | 300   | 1,570  | 576    | 382    | 283   | 869    | 264    | 304    |
| 19    | 344    | 380    | 380    | 250   | 300   | 2,900  | 567    | 370    | 279   | 588    | 346    | 304    |
| 20    | 349    | 398    | 390    | 250   | 310   | 3,750  | 806    | 361    | 286   | 486    | 458    | 361    |
| 21    | 380    | 382    | 390    | 250   | 310   | 2,850  | 747    | 346    | 306   | 442    | 624    | 738    |
| 22    | 370    | 388    | 400    | 250   | 310   | 2,920  | 830    | 342    | 302   | 351    | 648    | 633    |
| 23    | 375    | 361    | 410    | 250   | 310   | 2,990  | 911    | 339    | 285   | 435    | 576    | 579    |
| 24    | 382    | 417    | 400    | 250   | 320   | 3,030  | 796    | 330    | 277   | 564    | 478    | 473    |
| 25    | 356    | 395    | 380    | 250   | 320   | 2,570  | 669    | 328    | 262   | 440    | 415    | 588    |
| 26    | 356    | 413    | 360    | 250   | 320   | 1,040  | 612    | 317    | 255   | 425    | 555    | 1,680  |
| 27    | 354    | 452    | 350    | 250   | 320   | 782    | 543    | 312    | 254   | 457    | 876    | 3,270  |
| 28    | 392    | 445    | 330    | 250   | 330   | 684    | 519    | 300    | 252   | 400    | 760    | 5,210  |
| 29    | 390    | 455    | 320    | 250   | 330   | 624    | 480    | 321    | 277   | 373    | 585    | 4,290  |
| 30    | 398    | 442    | 320    | 250   | ----- | 612    | 475    | 325    | 310   | 334    | 450    | 3,260  |
| 31    | 425    | -----  | 330    | 250   | ----- | 579    | -----  | 312    | ----- | 330    | 392    | -----  |
| TOTAL | 11,957 | 11,931 | 12,212 | 7,810 | 8,330 | 33,801 | 17,605 | 12,533 | 8,932 | 12,015 | 12,605 | 27,546 |
| MEAN  | 386    | 398    | 394    | 252   | 287   | 1,090  | 587    | 404    | 298   | 388    | 407    | 918    |
| MAX   | 498    | 627    | 498    | 330   | 330   | 3,750  | 911    | 615    | 380   | 869    | 876    | 5,210  |
| MIN   | 342    | 325    | 320    | 210   | 250   | 330    | 465    | 300    | 252   | 248    | 264    | 304    |
| CFSM  | .60    | .62    | .61    | .39   | .45   | 1.70   | .91    | .63    | .46   | .60    | .63    | 1.43   |
| IN.   | .69    | .69    | .71    | .45   | .48   | 1.96   | 1.02   | .73    | .52   | .70    | .73    | 1.59   |

CAL YR 1971 TOTAL 167,388 MEAN 459 MAX 2,050 MIN 240 CFSM .71 IN 9.68  
WTR YR 1972 TOTAL 177,277 MEAN 484 MAX 5,210 MIN 210 CFSM .75 IN 10.26

## BLACK RIVER BASIN

05381000 Black River at Neillsville, Wis.

LOCATION.--Lat 44°33'35", long 90°36'54", in sec.15, T.24 N., R.2 W., Clark County, on right bank at downstream side of bridge on U.S. Highway 10 in Neillsville, 1.0 mile downstream from O'Neill Creek, and 2.6 miles upstream from Cunningham Creek.

DRAINAGE AREA.--756 sq mi.

PERIOD OF RECORD.--April 1905 to March 1909, October 1913 to current year. Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 962.77 ft above mean sea level (levels by U.S. Weather Bureau). Prior to Oct. 24, 1934, nonrecording gage.

AVERAGE DISCHARGE.--62 years (1905-8, 1913-72), 575 cfs (10.33 inches per year).

EXTREMES.--Current year: Maximum discharge, 16,600 cfs Sept. 26 (gage height, 14.62 ft); minimum, 37 cfs June 27, 28 (gage height, 2.63 ft).

Period of record: Maximum discharge, 48,800 cfs Sept. 10, 1938 (gage height, 23.8 ft); minimum, 0.6 cfs Aug. 15, 1936 (gage height, 1.84 ft).

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

REVISIONS (WATER YEARS).--WSP 805: Drainage area. WSP 1308: 1914. WSP 1438: 1905, 1906-8(M), 1914-17(M), 1918-19, 1920-25(M), 1926-27, 1928-29(M), 1930, 1931(M), 1932, 1933(M), 1934, 1935(M), 1936. WSP 1508: 1950.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Apr. 9 to May 7; stage-discharge relation affected by ice Nov. 27 to Apr. 8.)

|     |     |     |       |    |        |
|-----|-----|-----|-------|----|--------|
| 2.5 | 27  | 4.0 | 401   | 10 | 6,760  |
| 2.7 | 50  | 5.0 | 870   | 12 | 10,600 |
| 3.0 | 101 | 6.0 | 1,520 | 14 | 15,100 |
| 3.5 | 226 | 8.0 | 3,520 | 15 | 17,600 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC    | JAN   | FEB   | MAR    | APR     | MAY   | JUN   | JUL   | AUG    | SEP    |
|-------|-------|-------|--------|-------|-------|--------|---------|-------|-------|-------|--------|--------|
| 1     | 266   | 327   | 150    | 460   | 90    | 100    | 960     | 757   | 77    | 47    | 496    | 350    |
| 2     | 1,220 | 618   | 170    | 450   | 88    | 100    | 900     | 976   | 79    | 42    | 747    | 250    |
| 3     | 955   | 712   | 170    | 420   | 86    | 100    | 820     | 911   | 78    | 42    | 599    | 210    |
| 4     | 776   | 724   | 180    | 380   | 82    | 100    | 760     | 793   | 73    | 58    | 333    | 190    |
| 5     | 487   | 629   | 170    | 350   | 80    | 100    | 740     | 622   | 71    | 62    | 253    | 170    |
| 6     | 339   | 483   | 170    | 300   | 78    | 100    | 780     | 495   | 66    | 55    | 190    | 160    |
| 7     | 242   | 362   | 180    | 280   | 76    | 100    | 900     | 404   | 62    | 56    | 168    | 150    |
| 8     | 187   | 274   | 190    | 240   | 74    | 110    | 1,100   | 345   | 60    | 52    | 693    | 150    |
| 9     | 156   | 223   | 210    | 210   | 74    | 110    | 1,490   | 295   | 55    | 58    | 1,200  | 140    |
| 10    | 138   | 211   | 290    | 190   | 72    | 110    | 2,120   | 250   | 50    | 56    | 1,110  | 130    |
| 11    | 127   | 191   | 620    | 180   | 70    | 110    | 4,520   | 217   | 46    | 66    | 789    | 120    |
| 12    | 121   | 174   | 540    | 170   | 70    | 120    | 5,470   | 192   | 47    | 100   | 468    | 120    |
| 13    | 120   | 166   | 500    | 160   | 68    | 120    | 7,040   | 176   | 55    | 95    | 295    | 110    |
| 14    | 119   | 161   | 520    | 160   | 68    | 130    | 7,510   | 166   | 75    | 201   | 217    | 100    |
| 15    | 116   | 156   | 500    | 150   | 66    | 140    | 8,880   | 181   | 66    | 394   | 652    | 98     |
| 16    | 117   | 161   | 580    | 150   | 68    | 160    | 10,200  | 197   | 56    | 555   | 2,000  | 96     |
| 17    | 117   | 173   | 560    | 140   | 68    | 180    | 10,500  | 204   | 53    | 774   | 1,400  | 96     |
| 18    | 114   | 201   | 520    | 140   | 70    | 200    | 8,710   | 194   | 50    | 506   | 900    | 110    |
| 19    | 121   | 243   | 540    | 130   | 72    | 290    | 9,150   | 175   | 48    | 387   | 600    | 160    |
| 20    | 122   | 284   | 520    | 130   | 74    | 450    | 6,730   | 146   | 48    | 403   | 500    | 340    |
| 21    | 121   | 310   | 500    | 120   | 80    | 3,000  | 4,520   | 126   | 52    | 299   | 400    | 200    |
| 22    | 134   | 271   | 470    | 120   | 82    | 2,500  | 4,700   | 120   | 56    | 207   | 350    | 110    |
| 23    | 122   | 208   | 420    | 120   | 86    | 2,200  | 4,610   | 107   | 53    | 183   | 320    | 220    |
| 24    | 124   | 198   | 390    | 110   | 90    | 2,100  | 3,390   | 95    | 44    | 161   | 310    | 150    |
| 25    | 131   | 216   | 370    | 110   | 92    | 1,800  | 2,340   | 87    | 41    | 411   | 300    | 130    |
| 26    | 128   | 169   | 370    | 110   | 94    | 1,700  | 1,630   | 78    | 40    | 429   | 1,500  | 13,000 |
| 27    | 127   | 170   | 370    | 100   | 98    | 1,500  | 1,180   | 73    | 38    | 269   | 2,500  | 7,000  |
| 28    | 132   | 170   | 390    | 100   | 100   | 1,500  | 885     | 67    | 39    | 188   | 1,500  | 4,900  |
| 29    | 144   | 180   | 400    | 98    | 100   | 1,400  | 718     | 69    | 39    | 150   | 900    | 11,000 |
| 30    | 173   | 170   | 430    | 94    | ----- | 1,200  | 609     | 79    | 47    | 126   | 780    | 5,000  |
| 31    | 275   | ----- | 450    | 92    | ----- | 1,100  | -----   | 76    | ----- | 113   | 490    | -----  |
| TOTAL | 7,571 | 8,535 | 11,840 | 5,964 | 2,316 | 22,930 | 113,862 | 8,673 | 1,664 | 6,545 | 22,960 | 44,960 |
| MEAN  | 244   | 285   | 382    | 192   | 79.9  | 740    | 3,795   | 280   | 55.5  | 211   | 741    | 1,499  |
| MAX   | 1,220 | 724   | 620    | 460   | 100   | 3,000  | 10,500  | 976   | 79    | 774   | 2,500  | 13,000 |
| MIN   | 114   | 156   | 150    | 92    | 66    | 100    | 609     | 67    | 38    | 42    | 168    | 96     |
| CFSM  | .32   | .38   | .51    | .25   | .11   | .98    | 5.02    | .37   | .07   | .28   | .98    | 1.98   |
| IN.   | .37   | .42   | .58    | .29   | .11   | 1.13   | 5.60    | .43   | .08   | .32   | 1.13   | 2.21   |

CAL YR 1971 TOTAL 205,835 MEAN 564 MAX 14,000 MIN 37 CFSM .75 IN 10.13  
WTR YR 1972 TOTAL 257,820 MEAN 704 MAX 13,000 MIN 38 CFSM .93 IN 12.69

## PEAK DISCHARGE (BASE, 5,000 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 4-17 | 0100 | 12.73 | 11,700    | 9-26 | -    | 14.62 | 16,600    |
| 8-27 | -    | -     | 16,000    | 9-29 | -    | 13.81 | 14,600    |

NOTE.--No gage-height record Aug. 16 to Sept. 25, 27-30.

a About.

## 05382000 Black River near Galesville, Wis.

LOCATION(revised).--Lat 44°04'22", long 91°17'41", in SW 1/4 sec.1, T.18 N., R.8 W., La Crosse County, on left bank 1,000 ft upstream from bridge on U.S. Highway 53, 4.5 miles southeast of Galesville, and 4.8 miles downstream from Fleming Creek.

DRAINAGE AREA.--2,120 sq mi, approximately.

PERIOD OF RECORD.--December 1931 to current year.

GAGE.--Water-stage recorder. Datum of gage is 658.43 ft above mean sea level, unadjusted. 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.

AVERAGE DISCHARGE.--40 years (1932-72), 1,643 cfs (10.52 inches per year).

EXTREMES.--Current year: Maximum discharge, 17,600 cfs Sept. 29 (gage height, 12.25 ft); minimum daily, 394 cfs July 6.  
Period of record: Maximum discharge, 65,500 cfs Apr. 1, 1967 (gage height, 14.63 ft); minimum observed, 180 cfs Dec. 20, 1932.

REMARKS.--Records good except those for winter periods, which are fair. Flow partly regulated by Hatfield Dam powerplant where drainage area is 1,290 sq mi and storage capacity is 272 million cubic feet. Water diverted periodically from the basin into the Lemonweir River basin for cranberry culture.

REVISIONS (WATER YEARS).--WSP 1438: 1932-34, 1935-36(M).

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Oct. 1-11, Aug. 5-7, Aug. 12 to Sept. 11; stage-discharge relation affected by ice Nov. 28, 29, Dec. 20 to Mar. 22.)

Oct. 1 to Apr. 18

Apr. 19 to Sept. 30

|     |       |      |        |     |       |      |        |
|-----|-------|------|--------|-----|-------|------|--------|
| 1.7 | 520   | 6.0  | 4,300  | 1.7 | 385   | 6.0  | 4,050  |
| 2.3 | 870   | 8.0  | 6,920  | 2.3 | 710   | 8.0  | 6,790  |
| 3.0 | 1,340 | 10.0 | 10,200 | 3.0 | 1,180 | 10.0 | 10,600 |
| 4.0 | 2,150 | 12.0 | 15,800 | 4.0 | 1,950 | 12.0 | 16,600 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR     | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|
| 1     | 1,260  | 714    | 1,010  | 1,400  | 660    | 740    | 4,010   | 2,190  | 730    | 426    | 578    | 1,560  |
| 2     | 1,310  | 810    | 1,140  | 1,300  | 720    | 800    | 3,580   | 2,300  | 686    | 455    | 596    | 1,400  |
| 3     | 1,290  | 1,070  | 1,170  | 1,000  | 780    | 820    | 3,440   | 2,720  | 686    | 445    | 710    | 1,300  |
| 4     | 990    | 1,400  | 1,140  | 650    | 760    | 860    | 3,150   | 3,300  | 632    | 426    | 905    | 1,210  |
| 5     | 1,060  | 1,500  | 1,020  | 800    | 740    | 860    | 2,850   | 3,080  | 566    | 435    | 944    | 1,030  |
| 6     | 1,060  | 1,530  | 762    | 900    | 740    | 820    | 2,660   | 2,850  | 560    | 394    | 847    | 840    |
| 7     | 942    | 1,510  | 310    | 940    | 720    | 760    | 2,770   | 2,390  | 602    | 417    | 614    | 886    |
| 8     | 978    | 1,450  | 1,040  | 960    | 660    | 800    | 2,970   | 2,130  | 578    | 412    | 1,000  | 905    |
| 9     | 876    | 1,180  | 1,090  | 860    | 600    | 840    | 3,290   | 1,930  | 548    | 445    | 1,200  | 847    |
| 10    | 906    | 1,160  | 1,170  | 700    | 640    | 900    | 3,470   | 1,840  | 515    | 470    | 1,400  | 788    |
| 11    | 930    | 1,120  | 1,330  | 640    | 740    | 920    | 3,790   | 1,850  | 490    | 430    | 1,500  | 662    |
| 12    | 828    | 1,110  | 1,780  | 840    | 740    | 920    | 4,430   | 1,700  | 495    | 602    | 1,360  | 632    |
| 13    | 858    | 1,070  | 2,000  | 1,000  | 740    | 880    | 5,100   | 1,540  | 510    | 470    | 1,320  | 600    |
| 14    | 1,050  | 972    | 4,300  | 960    | 680    | 840    | 7,670   | 1,410  | 542    | 505    | 944    | 580    |
| 15    | 852    | 744    | 5,170  | 900    | 620    | 940    | 11,300  | 1,090  | 505    | 465    | 710    | 580    |
| 16    | 768    | 560    | 3,990  | 780    | 600    | 1,100  | 12,700  | 1,020  | 510    | 480    | 827    | 580    |
| 17    | 726    | 888    | 5,900  | 580    | 640    | 1,300  | 13,300  | 1,240  | 495    | 515    | 847    | 560    |
| 18    | 600    | 984    | 5,100  | 520    | 700    | 1,600  | 14,500  | 1,180  | 465    | 626    | 1,240  | 660    |
| 19    | 618    | 984    | 4,660  | 700    | 700    | 2,000  | 15,600  | 1,170  | 490    | 1,240  | 1,150  | 860    |
| 20    | 654    | 1,040  | 4,500  | 780    | 740    | 2,500  | 13,300  | 1,100  | 480    | 1,070  | 1,050  | 1,000  |
| 21    | 702    | 1,060  | 3,900  | 760    | 700    | 2,500  | 14,200  | 1,020  | 510    | 951    | 964    | 716    |
| 22    | 762    | 942    | 3,100  | 780    | 620    | 3,700  | 12,100  | 768    | 470    | 879    | 1,210  | 1,030  |
| 23    | 702    | 798    | 2,300  | 780    | 700    | 5,040  | 10,000  | 762    | 460    | 931    | 1,290  | 1,240  |
| 24    | 660    | 1,010  | 2,700  | 660    | 780    | 7,330  | 10,100  | 827    | 421    | 662    | 1,180  | 1,680  |
| 25    | 654    | 1,030  | 2,700  | 620    | 780    | 8,370  | 9,640   | 801    | 435    | 656    | 1,180  | 2,460  |
| 26    | 594    | 1,030  | 2,700  | 680    | 760    | 8,120  | 8,030   | 808    | 403    | 834    | 1,280  | 3,670  |
| 27    | 618    | 840    | 2,600  | 740    | 740    | 7,440  | 5,610   | 788    | 408    | 879    | 1,410  | 4,970  |
| 28    | 618    | 700    | 1,600  | 760    | 720    | 6,970  | 4,390   | 749    | 460    | 957    | 2,060  | 8,980  |
| 29    | 666    | 680    | 1,400  | 720    | 700    | 5,810  | 3,420   | 698    | 460    | 998    | 2,530  | 15,900 |
| 30    | 822    | 840    | 1,400  | 660    | -----  | 4,910  | 2,440   | 680    | 430    | 868    | 2,550  | 13,800 |
| 31    | 804    | -----  | 1,400  | 620    | -----  | 4,560  | -----   | 743    | -----  | 584    | 2,080  | -----  |
| TOTAL | 26,158 | 30,726 | 75,402 | 25,000 | 20,460 | 85,950 | 213,810 | 46,674 | 15,542 | 19,867 | 37,476 | 71,926 |
| MEAN  | 844    | 1,024  | 2,432  | 806    | 706    | 2,773  | 7,127   | 1,506  | 518    | 641    | 1,209  | 2,398  |
| MAX   | 1,310  | 1,530  | 5,900  | 1,400  | 780    | 8,370  | 15,600  | 3,300  | 730    | 1,240  | 2,550  | 15,900 |
| MIN   | 594    | 560    | 762    | 520    | 600    | 740    | 2,440   | 680    | 403    | 394    | 578    | 560    |
| CFSM  | .40    | .48    | 1.15   | .38    | .33    | 1.31   | 3.36    | .71    | .24    | .30    | .57    | 1.13   |
| IN.   | .46    | .54    | 1.32   | .44    | .36    | 1.51   | 3.75    | .82    | .27    | .35    | .66    | 1.26   |

CAL YR 1971 TOTAL 626,147 MEAN 1,715 MAX 18,300 MIN 520 CFSM .81 IN 10.99  
WTR YR 1972 TOTAL 668,991 MEAN 1,828 MAX 15,900 MIN 394 CFSM .86 IN 11.74

PEAK DISCHARGE (BASE, 12,500 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 4-19 | 0500 | 11.88 | 16,100    | 9-29 | 0200 | 12.25 | 17,600    |

NOTE.--No gage-height record Apr. 12 to May 24, Sept. 12-30.

05389500 Mississippi River at McGregor, Iowa

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, on right bank in city park at east end of Main Street in McGregor, 2.6 miles upstream from Wisconsin River, 4.3 miles downstream from Yellow River, and at mile 633.4 upstream from Ohio River.

DRAINAGE AREA.--67,500 sq mi, approximately.

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

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

AVERAGE DISCHARGE.--36 years, 33,090 cfs (6.66 inches per year, 23,970,000 acre-ft per year).

EXTREMES.--Current year: Maximum daily discharge, 116,000 cfs Apr. 29; maximum gage height, 16.32 ft Apr. 27; minimum daily discharge, 17,000 cfs Oct. 15; minimum gage height, 6.48 ft Oct. 14, 15.

Period of record: Maximum daily discharge, 276,000 cfs Apr. 24, 1965; maximum gage height, 25.38 ft Apr. 24, 1965; minimum daily discharge, 6,200 cfs Dec. 9, 1936; minimum gage height, -0.86 ft Aug. 18, 1936. Maximum stage since at least 1828, that of Apr. 24, 1965.

REMARKS.--Records good except those for winter period, which are fair. Stage-discharge relation affected by backwater from Wisconsin River and Dam 10. Flow regulated by reservoirs and navigation dams.

COOPERATION.--Gage height record at Dam 9 collected in cooperation with Corps of Engineers.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT              | NOV         | DEC         | JAN        | FEB      | MAR      | APR              | MAY      | JUN      | JUL      | AUG      | SEP      |
|-------------|------------------|-------------|-------------|------------|----------|----------|------------------|----------|----------|----------|----------|----------|
| 1           | 23,800           | 38,300      | 54,800      | 25,000     | 20,000   | 20,000   | 95,500           | 111,000  | 44,600   | 37,800   | 81,200   | 62,100   |
| 2           | 25,100           | 40,400      | 52,000      | 27,000     | 20,000   | 20,000   | 94,800           | 107,000  | 44,100   | 36,900   | 91,100   | 60,000   |
| 3           | 26,500           | 41,600      | 47,600      | 27,000     | 21,000   | 20,000   | 93,900           | 103,000  | 43,700   | 35,400   | 97,900   | 58,400   |
| 4           | 25,700           | 42,700      | 45,700      | 26,000     | 21,000   | 21,000   | 92,800           | 98,300   | 42,500   | 33,700   | 101,000  | 55,200   |
| 5           | 27,700           | 45,900      | 44,500      | 26,000     | 21,000   | 21,000   | 91,300           | 94,000   | 42,900   | 30,600   | 101,000  | 50,600   |
| 6           | 28,500           | 51,400      | 42,800      | 23,000     | 21,000   | 22,000   | 88,000           | 91,700   | 44,000   | 28,200   | 99,700   | 46,300   |
| 7           | 27,700           | 55,300      | 40,200      | 24,000     | 21,000   | 22,000   | 85,400           | 89,700   | 44,900   | 29,100   | 96,800   | 44,800   |
| 8           | 25,200           | 59,400      | 38,400      | 23,000     | 21,000   | 22,000   | 82,700           | 88,700   | 45,400   | 29,000   | 92,200   | 42,600   |
| 9           | 23,800           | 63,100      | 37,200      | 23,000     | 20,000   | 22,000   | 79,100           | 86,600   | 45,600   | 28,500   | 86,000   | 40,300   |
| 10          | 23,500           | 63,600      | 37,500      | 24,000     | 20,000   | 21,000   | 76,700           | 84,400   | 45,300   | 29,400   | 79,900   | 38,100   |
| 11          | 22,700           | 63,900      | 38,100      | 24,000     | 20,000   | 21,000   | 73,500           | 82,400   | 45,200   | 28,500   | 74,800   | 37,300   |
| 12          | 19,700           | 63,900      | 38,300      | 25,000     | 20,000   | 20,000   | 70,200           | 80,400   | 45,000   | 28,900   | 68,600   | 36,700   |
| 13          | 17,100           | 62,000      | 36,600      | 25,000     | 20,000   | 20,000   | 68,200           | 78,800   | 44,600   | 28,700   | 62,300   | 37,200   |
| 14          | 17,500           | 59,300      | 23,400      | 23,000     | 19,000   | 27,000   | 67,200           | 77,700   | 44,000   | 29,200   | 59,000   | 39,100   |
| 15          | 17,000           | 55,800      | 20,600      | 23,000     | 19,000   | 36,000   | 68,700           | 76,700   | 44,200   | 29,400   | 57,400   | 38,800   |
| 16          | 18,900           | 54,500      | 21,500      | 22,000     | 20,000   | 45,000   | 69,800           | 75,600   | 42,900   | 29,600   | 55,800   | 37,700   |
| 17          | 19,300           | 52,400      | 26,000      | 21,000     | 20,000   | 50,000   | 70,600           | 73,800   | 41,900   | 28,200   | 54,200   | 36,400   |
| 18          | 19,300           | 50,800      | 25,000      | 21,000     | 20,000   | 54,000   | 73,400           | 71,500   | 40,200   | 27,400   | 52,600   | 33,500   |
| 19          | 22,100           | 48,100      | 24,900      | 22,000     | 20,000   | 56,000   | 76,100           | 67,000   | 39,000   | 28,700   | 52,100   | 30,700   |
| 20          | 25,300           | 47,300      | 25,100      | 24,000     | 20,000   | 60,000   | 79,300           | 65,200   | 39,900   | 31,600   | 51,600   | 28,000   |
| 21          | 28,800           | 46,400      | 28,000      | 23,000     | 21,000   | 64,000   | 84,700           | 64,200   | 40,900   | 33,200   | 52,800   | 30,000   |
| 22          | 29,900           | 44,200      | 35,000      | 23,000     | 21,000   | 65,500   | 90,800           | 61,300   | 41,300   | 32,300   | 54,600   | 30,500   |
| 23          | 29,200           | 46,000      | 36,000      | 24,000     | 21,000   | 66,000   | 94,500           | 58,900   | 41,400   | 34,400   | 55,100   | 30,000   |
| 24          | 27,900           | 51,000      | 35,000      | 24,000     | 22,000   | 66,000   | 98,500           | 55,600   | 41,500   | 38,400   | 55,100   | 31,300   |
| 25          | 27,200           | 53,300      | 35,000      | 23,000     | 22,000   | 70,200   | 104,000          | 51,800   | 41,400   | 41,200   | 55,700   | 36,700   |
| 26          | 26,700           | 55,200      | 35,000      | 22,000     | 22,000   | 77,000   | 109,000          | 50,600   | 40,900   | 42,400   | 58,300   | 48,200   |
| 27          | 28,700           | 56,200      | 30,100      | 20,000     | 22,000   | 82,900   | 112,000          | 49,900   | 40,200   | 45,100   | 58,800   | 55,800   |
| 28          | 30,800           | 56,600      | 25,000      | 19,000     | 22,000   | 86,000   | 115,000          | 49,600   | 39,800   | 48,500   | 59,300   | 58,600   |
| 29          | 31,600           | 57,300      | 27,000      | 19,000     | 21,000   | 89,200   | 116,000          | 49,800   | 39,900   | 55,200   | 60,200   | 60,600   |
| 30          | 33,500           | 56,300      | 28,000      | 19,000     | -----    | 92,200   | 114,000          | 49,800   | 38,900   | 62,700   | 60,500   | 66,100   |
| 31          | 36,800           | -----       | 25,000      | 19,000     | -----    | 94,100   | -----            | 47,300   | -----    | 71,400   | 60,800   | -----    |
| TOTAL       | 788,500          | 1,582.2M    | 1,053.3M    | 713,000    | 598,000  | 1,453.1M | 2,635.7M         | 2,292.3M | 1,276.1M | 1,113.6M | 2,146.4M | 1,301.6M |
| MEAN        | 25,440           | 52,740      | 33,980      | 23,000     | 20,620   | 46,870   | 87,860           | 73,950   | 42,540   | 35,920   | 69,240   | 43,390   |
| MAX         | 36,800           | 63,900      | 54,800      | 27,000     | 22,000   | 94,100   | 116,000          | 111,000  | 45,600   | 71,400   | 101,000  | 66,100   |
| MIN         | 17,000           | 38,300      | 20,600      | 19,000     | 19,000   | 20,000   | 67,200           | 47,300   | 38,900   | 27,400   | 51,600   | 28,000   |
| CFSM        | .38              | .78         | .50         | .34        | .31      | .69      | 1.30             | 1.10     | .63      | .53      | 1.03     | .64      |
| IN.         | .43              | .87         | .58         | .39        | .33      | .80      | 1.45             | 1.26     | .70      | .61      | 1.18     | .72      |
| AC-FT       | 1,564M           | 3,138M      | 2,089M      | 1,414M     | 1,186M   | 2,882M   | 5,228M           | 4,547M   | 2,531M   | 2,209M   | 4,257M   | 2,582M   |
| CAL YR 1971 | TOTAL 14,391,800 | MEAN 39,430 | MAX 138,000 | MIN 10,400 | CFSM .58 | IN 7.93  | AC-FT 28,550,000 |          |          |          |          |          |
| WTP YR 1972 | TOTAL 16,953,800 | MEAN 46,320 | MAX 116,000 | MIN 17,000 | CFSM .69 | IN 9.34  | AC-FT 33,630,000 |          |          |          |          |          |

05390500 Anvil Lake near Eagle River, Wis.

LOCATION.--Lat 45°57'10", long 89°03'11", in sec.13, T.40 N., R.11 E., Vilas County, near the home of Violet Waggoner on north side of lake, 11 miles northeast of Eagle River.

DRAINAGE AREA.--3 sq mi, approximately. Area of Anvil Lake, 380 acres.

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

GAGE.--Nonrecording gage. Datum of gage is 90.00 ft above datum assumed by Wisconsin Department of Natural Resources; gage readings have been reduced to elevations above this datum. Prior to Aug. 13, 1950, staff gage 0.3 mile south at same datum.

EXTREMES.--Current year: Maximum elevation observed, 4.89 ft Apr. 10; minimum observed, 4.20 ft Jan. 14.  
Period of record: Maximum elevation observed, 7.20 ft May 3, 7, 17, 21, 24, 28, June 20, 24, 1943;  
minimum observed, 2.10 ft July 31, 1964.

REMARKS.--Add 90 ft to obtain elevation above datum assumed for this lake by Wisconsin Department of Natural Resources. Lake has no surface outlet. Lake was ice covered about Nov. 20 to Apr. 16.

## GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | OCT  | NOV   | DEC | JAN  | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-----|------|-------|-----|------|-------|------|-------|------|-------|------|------|-------|
| 1   |      | 4.25  |     |      |       |      |       |      |       |      |      |       |
| 2   |      |       |     |      |       |      |       |      |       |      |      | 4.59  |
| 3   |      |       |     |      |       |      |       |      |       |      |      |       |
| 4   |      |       |     |      |       |      |       |      |       |      |      |       |
| 5   | 4.29 |       |     |      |       |      |       |      |       |      | 4.39 |       |
| 6   |      |       |     |      |       |      |       |      |       |      |      |       |
| 7   |      |       |     |      |       |      |       |      |       |      |      |       |
| 8   |      |       |     |      |       | 4.45 |       |      |       | 4.39 |      |       |
| 9   |      |       |     |      | 4.23  |      |       |      |       |      |      | 4.59  |
| 10  |      |       |     |      |       |      | 4.89  | 4.82 | 4.49  |      |      |       |
| 11  |      |       |     |      |       |      |       |      |       |      |      |       |
| 12  | 4.29 |       |     |      |       |      |       |      | 4.49  |      | 4.39 |       |
| 13  |      |       |     |      |       |      |       |      |       |      |      |       |
| 14  |      |       |     | 4.20 |       |      |       | 4.74 |       |      |      |       |
| 15  |      |       |     |      |       |      |       |      |       | 4.44 |      |       |
| 16  |      |       |     |      |       |      |       |      |       |      |      |       |
| 17  |      |       |     |      |       |      |       |      | 4.49  | 4.44 |      |       |
| 18  |      |       |     |      |       |      |       |      |       |      |      |       |
| 19  |      |       |     |      |       |      |       |      |       |      | 4.59 |       |
| 20  |      |       |     |      |       |      |       | 4.74 |       |      |      |       |
| 21  |      |       |     |      |       |      | 4.64  |      |       |      |      |       |
| 22  |      |       |     |      |       |      |       |      |       | 4.59 |      |       |
| 23  |      |       |     |      |       |      |       |      |       |      |      | 4.64  |
| 24  |      |       |     |      |       |      |       |      | 4.39  |      |      |       |
| 25  |      |       |     |      |       |      |       |      |       |      |      |       |
| 26  |      |       |     |      |       |      |       |      |       |      | 4.59 |       |
| 27  | 4.39 |       |     |      |       |      |       | 4.64 |       |      |      |       |
| 28  |      |       |     |      |       |      |       |      |       |      |      |       |
| 29  |      |       |     |      |       |      | 4.84  |      |       | 4.54 |      | 4.63  |
| 30  |      |       |     |      | ----- |      |       |      | 4.49  |      |      | 4.64  |
| 31  |      | ----- |     |      | ----- |      | ----- |      | ----- |      |      | ----- |

## WISCONSIN RIVER BASIN

05391000 Wisconsin River at Rainbow Lake, near Lake Tomahawk, Wis.

LOCATION.--Lat 45°49'58", long 89°32'51", in S 1/2 SW 1/4 sec.30, T.39 N., R.8 E., Oneida County, on right bank 400 ft upstream from Gilmore Creek, 0.3 mile downstream from Rainbow Lake, and 2.5 miles northeast of Lake Tomahawk. Records include flow of Gilmore Creek.

DRAINAGE AREA.--750 sq mi, approximately, includes that of Gilmore Creek.

PERIOD OF RECORD.--July 1936 to current year. Prior to October 1955, published as "at Rainbow Reservoir, near Lake Tomahawk."

GAGE.--Water-stage recorder. Datum of gage is 1,570.05 ft above mean sea level (Public Service Commission of Wisconsin bench mark).

AVERAGE DISCHARGE.--36 years, 696 cfs.

EXTREMES.--Current year: Maximum daily discharge, 1,780 cfs Sept. 30 (gage height, 4.76 ft); minimum daily, 180 cfs Oct. 7.

Period of record: Maximum discharge, 3,570 cfs Sept. 5, 1941 (gage height, 7.59 ft); minimum, 17 cfs Oct. 10-12, 1940; minimum daily, 35 cfs Apr. 6, 1955.

REMARKS.--Records good. Flow regulated by Rainbow Lake and 12 smaller reservoirs above station (see p.129).

REVISIONS (WATER YEARS).--WSP 895: 1937(M), WSP 1508: 1944.

Rating table (gage height, in feet, and discharge, in cubic feet per second).

|     |     |     |       |
|-----|-----|-----|-------|
| 0.8 | 173 | 2.4 | 630   |
| 1.3 | 284 | 3.0 | 875   |
| 1.8 | 430 | 4.0 | 1,350 |
|     |     | 5.0 | 1,920 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT           | NOV      | DEC       | JAN     | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|---------------|----------|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1           | 332           | 655      | 810       | 956     | 908    | 882    | 831    | 389    | 620    | 786    | 706    | 970    |
| 2           | 276           | 778      | 809       | 953     | 903    | 911    | 775    | 359    | 634    | 662    | 497    | 1,010  |
| 3           | 181           | 767      | 808       | 948     | 899    | 936    | 697    | 354    | 655    | 623    | 666    | 1,010  |
| 4           | 277           | 656      | 807       | 946     | 899    | 923    | 663    | 394    | 662    | 588    | 798    | 1,010  |
| 5           | 346           | 586      | 809       | 944     | 896    | 911    | 612    | 538    | 644    | 588    | 822    | 818    |
| 6           | 262           | 567      | 807       | 944     | 892    | 916    | 555    | 615    | 660    | 584    | 839    | 642    |
| 7           | 180           | 569      | 804       | 939     | 891    | 915    | 574    | 622    | 648    | 626    | 839    | 602    |
| 8           | 244           | 676      | 803       | 942     | 888    | 902    | 532    | 691    | 789    | 698    | 734    | 722    |
| 9           | 336           | 672      | 804       | 940     | 894    | 944    | 514    | 695    | 854    | 694    | 666    | 810    |
| 10          | 374           | 597      | 807       | 934     | 900    | 928    | 501    | 607    | 904    | 690    | 630    | 798    |
| 11          | 618           | 574      | 809       | 930     | 899    | 913    | 509    | 571    | 926    | 638    | 686    | 786    |
| 12          | 584           | 618      | 806       | 904     | 896    | 904    | 499    | 608    | 781    | 670    | 714    | 710    |
| 13          | 493           | 688      | 803       | 853     | 891    | 904    | 450    | 700    | 682    | 702    | 694    | 626    |
| 14          | 587           | 713      | 802       | 886     | 886    | 933    | 422    | 800    | 593    | 822    | 616    | 770    |
| 15          | 667           | 711      | 800       | 938     | 903    | 923    | 416    | 836    | 654    | 750    | 620    | 880    |
| 16          | 696           | 709      | 802       | 941     | 944    | 924    | 401    | 715    | 773    | 626    | 746    | 884    |
| 17          | 770           | 686      | 799       | 931     | 930    | 942    | 410    | 590    | 809    | 690    | 439    | 810    |
| 18          | 812           | 673      | 795       | 926     | 919    | 929    | 376    | 590    | 808    | 578    | 346    | 766    |
| 19          | 742           | 678      | 794       | 926     | 918    | 899    | 385    | 591    | 777    | 494    | 352    | 762    |
| 20          | 651           | 680      | 802       | 924     | 917    | 908    | 396    | 592    | 738    | 532    | 472    | 844    |
| 21          | 696           | 680      | 806       | 927     | 904    | 932    | 353    | 615    | 705    | 794    | 469    | 814    |
| 22          | 853           | 700      | 804       | 923     | 900    | 927    | 372    | 643    | 705    | 875    | 463    | 626    |
| 23          | 918           | 766      | 824       | 921     | 920    | 989    | 388    | 658    | 750    | 822    | 830    | 734    |
| 24          | 888           | 793      | 866       | 921     | 946    | 990    | 407    | 679    | 776    | 609    | 592    | 822    |
| 25          | 817           | 791      | 868       | 924     | 933    | 955    | 405    | 701    | 749    | 451    | 830    | 869    |
| 26          | 647           | 789      | 865       | 920     | 929    | 966    | 394    | 707    | 699    | 626    | 778    | 810    |
| 27          | 554           | 791      | 869       | 918     | 915    | 943    | 393    | 679    | 682    | 742    | 875    | 616    |
| 28          | 729           | 791      | 905       | 909     | 904    | 933    | 392    | 664    | 686    | 834    | 1,280  | 525    |
| 29          | 907           | 790      | 953       | 902     | 884    | 926    | 396    | 645    | 674    | 848    | 1,490  | 1,210  |
| 30          | 800           | 805      | 956       | 902     | -----  | 921    | 389    | 470    | 698    | 826    | 1,250  | 1,780  |
| 31          | 749           | -----    | 960       | 907     | -----  | 913    | -----  | 507    | -----  | 806    | 1,100  | -----  |
| TOTAL       | 17,986        | 20,949   | 25,756    | 28,679  | 26,308 | 28,742 | 14,407 | 18,825 | 21,735 | 21,274 | 22,839 | 25,036 |
| MEAN        | 580           | 698      | 831       | 925     | 907    | 927    | 480    | 607    | 725    | 686    | 737    | 835    |
| MAX         | 918           | 805      | 960       | 956     | 946    | 990    | 831    | 836    | 926    | 875    | 1,490  | 1,780  |
| MIN         | 180           | 567      | 794       | 853     | 884    | 882    | 353    | 354    | 593    | 451    | 346    | 525    |
| CAL YR 1971 | TOTAL 260,963 | MEAN 715 | MAX 1,180 | MIN 180 |        |        |        |        |        |        |        |        |
| WTR YR 1972 | TOTAL 272,536 | MEAN 745 | MAX 1,780 | MIN 180 |        |        |        |        |        |        |        |        |

NOTE.--No gage-height record June 28 to Sept. 30.

05393000 Tomahawk River at Bradley, Wis.

LOCATION.--Lat 45°32'21", long 89°44'47", in NW 1/4 NW 1/4 sec.9, T.35 N., R.6 E., Lincoln County, at dam at outlet of Lake Nokomis, 0.5 mile northeast of Bradley, 4.0 miles upstream from Jersey powerplant, and 4.7 miles upstream from mouth.

DRAINAGE AREA.--545 sq mi.

PERIOD OF RECORD.--January 1930 to current year. Prior to October 1951, published as "at Tomahawk".

GAGE.--Nonrecording gage and concrete dam, supplemented by frequent readings of tainter-gate openings. Datum of gage is 1,448.24 ft above mean sea level. Prior to October 1951, powerplant records at site 4.0 miles downstream.

AVERAGE DISCHARGE.--42 years, 536 cfs.

EXTREMES.--Current year: Maximum discharge, 1,030 cfs Jan. 15; minimum, 16 cfs Apr. 14.

Period of record: Maximum discharge, 2,690 cfs Oct. 2, 1959; no flow at times in 1931, 1932, 1934, 1940, 1957.

REMARKS.--Records good except those below 250 cfs, which are poor. Flow completely regulated by four reservoirs operated by Wisconsin Valley Improvement Company (see p. 130).

COOPERATION.--Record of lake elevations and gate openings furnished by Wisconsin Valley Improvement Company.

REVISIONS (WATER YEARS).--WSP 875: 1932, 1935, 1938. WSP 1278: 1952.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB    | MAR    | APR   | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|-------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|
| 1     | 71    | 148    | 725    | 864    | 870    | 935    | 458   | 27     | 526    | 624    | 582    | 413    |
| 2     | 73    | 149    | 724    | 863    | 868    | 860    | 490   | 46     | 556    | 717    | 531    | 363    |
| 3     | 74    | 242    | 724    | 861    | 866    | 898    | 469   | 131    | 596    | 746    | 583    | 369    |
| 4     | 76    | 206    | 724    | 859    | 864    | 895    | 456   | 320    | 614    | 789    | 677    | 459    |
| 5     | 76    | 150    | 723    | 914    | 857    | 894    | 460   | 318    | 642    | 827    | 770    | 613    |
| 6     | 77    | 282    | 723    | 936    | 851    | 894    | 476   | 264    | 657    | 860    | 772    | 552    |
| 7     | 78    | 378    | 723    | 933    | 846    | 892    | 482   | 152    | 656    | 870    | 738    | 627    |
| 8     | 79    | 453    | 722    | 933    | 843    | 889    | 484   | 277    | 835    | 866    | 645    | 740    |
| 9     | 80    | 490    | 722    | 935    | 839    | 886    | 490   | 356    | 898    | 863    | 477    | 777    |
| 10    | 80    | 504    | 722    | 934    | 834    | 881    | 494   | 318    | 862    | 833    | 532    | 787    |
| 11    | 199   | 512    | 723    | 904    | 825    | 874    | 430   | 296    | 841    | 840    | 551    | 787    |
| 12    | 271   | 541    | 722    | 883    | 826    | 870    | 310   | 296    | 857    | 813    | 531    | 770    |
| 13    | 204   | 667    | 722    | 908    | 821    | 866    | 112   | 296    | 813    | 814    | 583    | 778    |
| 14    | 278   | 653    | 721    | 967    | 826    | 860    | 16    | 296    | 710    | 788    | 630    | 804    |
| 15    | 314   | 715    | 721    | 1,010  | 824    | 858    | 17    | 296    | 737    | 762    | 674    | 798    |
| 16    | 276   | 781    | 722    | 997    | 822    | 852    | 18    | 297    | 793    | 775    | 456    | 785    |
| 17    | 243   | 780    | 769    | 990    | 819    | 870    | 18    | 297    | 866    | 781    | 154    | 802    |
| 18    | 190   | 718    | 794    | 975    | 815    | 875    | 19    | 370    | 833    | 706    | 83     | 810    |
| 19    | 135   | 601    | 789    | 968    | 818    | 871    | 20    | 412    | 750    | 661    | 84     | 809    |
| 20    | 114   | 554    | 832    | 912    | 813    | 935    | 22    | 458    | 728    | 691    | 85     | 806    |
| 21    | 151   | 555    | 812    | 877    | 812    | 983    | 22    | 525    | 719    | 770    | 86     | 499    |
| 22    | 174   | 602    | 845    | 874    | 811    | 950    | 23    | 522    | 762    | 776    | 196    | 291    |
| 23    | 101   | 707    | 880    | 872    | 811    | 903    | 24    | 502    | 786    | 600    | 263    | 380    |
| 24    | 57    | 784    | 878    | 868    | 808    | 850    | 25    | 540    | 804    | 420    | 370    | 461    |
| 25    | 95    | 802    | 876    | 865    | 805    | 778    | 25    | 521    | 796    | 507    | 310    | 479    |
| 26    | 244   | 753    | 874    | 920    | 802    | 685    | 26    | 522    | 810    | 556    | 377    | 489    |
| 27    | 330   | 725    | 872    | 949    | 802    | 599    | 26    | 601    | 855    | 686    | 394    | 499    |
| 28    | 352   | 725    | 869    | 948    | 802    | 529    | 26    | 672    | 809    | 744    | 299    | 665    |
| 29    | 316   | 725    | 867    | 943    | 824    | 436    | 27    | 530    | 722    | 738    | 286    | 727    |
| 30    | 313   | 725    | 865    | 938    | -----  | 370    | 27    | 374    | 594    | 698    | 266    | 599    |
| 31    | 214   | -----  | 865    | 896    | -----  | 421    | ----- | 452    | -----  | 668    | 342    | -----  |
| TOTAL | 5,335 | 16,627 | 24,250 | 28,496 | 24,022 | 25,059 | 5,992 | 11,324 | 22,427 | 22,789 | 13,327 | 18,738 |
| MEAN  | 172   | 554    | 782    | 919    | 829    | 810    | 200   | 365    | 748    | 735    | 430    | 625    |
| MAX   | 352   | 802    | 880    | 1,010  | 870    | 990    | 494   | 672    | 898    | 870    | 772    | 810    |
| MIN   | 57    | 148    | 721    | 859    | 802    | 370    | 16    | 27     | 526    | 420    | 83     | 291    |

CAL YR 1971 TOTAL 217,289 MEAN 595 MAX 952 MIN 53  
WTR YR 1972 TOTAL 218,436 MEAN 597 MAX 1,010 MIN 16

## WISCONSIN RIVER BASIN

05393500 Spirit River at Spirit Falls, Wis.

LOCATION.--Lat 45°26'58", long 89°58'47", in NW 1/4 sec.10, T.34 N., R.4 E., Lincoln County, near center of span on downstream side of bridge 0.2 mile south of Spirit Falls, 0.6 mile upstream from Squaw Creek, and 2.0 miles downstream from Richie Creek.

DRAINAGE AREA.--82 sq mi, approximately.

PERIOD OF RECORD.--April 1942 to current year.

GAGE.--Nonrecording gage and crest-stage gage. Altitude of gage is 1,450 ft (from dam and reservoir data).

AVERAGE DISCHARGE.--30 years, 82.3 cfs (13.63 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,750 cfs Apr. 18 (gage height, 6.52 ft); minimum discharge observed, 5.5 cfs July 7, 11.

Period of record: Maximum discharge, 4,180 cfs Sept. 18, 1942 (gage height, 10.00 ft), from rating curve extended above 2,500 cfs; minimum observed, 1.0 cfs Aug. 11, 1964 (gage height, 0.85 ft).

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

REVISIONS (WATER YEARS).--WSP 1208: Drainage area. WSP 1308: 1943(M), 1948-50(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Oct. 1-27; stage-discharge relation affected by ice Oct. 28 to Apr. 9.)

|     |     |     |     |     |       |
|-----|-----|-----|-----|-----|-------|
| 1.0 | 2.2 | 2.0 | 52  | 4.0 | 470   |
| 1.2 | 6.2 | 2.5 | 122 | 5.0 | 830   |
| 1.4 | 12  | 3.0 | 220 | 6.0 | 1,370 |
| 1.6 | 21  | 3.5 | 335 | 7.0 | 2,130 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN  | FEB   | MAR   | APR    | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|------|-------|-------|--------|-------|-------|-------|-------|-------|
| 1     | 129   | 64    | 52    | 32   | 23    | 21    | 88     | 260   | 16    | 14    | 20    | 80    |
| 2     | 162   | 80    | 50    | 32   | 23    | 21    | 84     | 360   | 14    | 9.1   | 18    | 58    |
| 3     | 136   | 110   | 50    | 31   | 23    | 21    | 82     | 405   | 13    | 7.8   | 17    | 52    |
| 4     | 93    | 66    | 50    | 31   | 23    | 21    | 78     | 308   | 12    | 7.0   | 16    | 35    |
| 5     | 59    | 58    | 52    | 31   | 23    | 21    | 78     | 232   | 10    | 6.7   | 13    | 34    |
| 6     | 33    | 54    | 56    | 30   | 23    | 22    | 78     | 192   | 9.4   | 6.2   | 12    | 30    |
| 7     | 35    | 50    | 60    | 29   | 23    | 22    | 82     | 172   | 9.1   | 5.5   | 12    | 37    |
| 8     | 36    | 49    | 66    | 28   | 22    | 23    | 90     | 136   | 7.0   | 6.2   | 26    | 46    |
| 9     | 40    | 46    | 76    | 28   | 22    | 23    | 110    | 115   | 9.1   | 6.2   | 190   | 38    |
| 10    | 38    | 46    | 84    | 28   | 22    | 23    | 140    | 93    | 8.3   | 5.8   | 98    | 31    |
| 11    | 35    | 46    | 96    | 27   | 21    | 24    | 216    | 81    | 7.5   | 5.5   | 68    | 29    |
| 12    | 33    | 47    | 80    | 27   | 21    | 24    | 282    | 73    | 10    | 6.5   | 44    | 34    |
| 13    | 34    | 49    | 68    | 27   | 21    | 25    | 385    | 64    | 14    | 8.0   | 37    | 30    |
| 14    | 36    | 52    | 66    | 27   | 21    | 26    | 494    | 62    | 11    | 7.2   | 31    | 28    |
| 15    | 35    | 54    | 76    | 26   | 20    | 27    | 606    | 60    | 9.8   | 21    | 26    | 25    |
| 16    | 36    | 60    | 96    | 25   | 20    | 34    | 925    | 59    | 9.1   | 18    | 24    | 22    |
| 17    | 36    | 70    | 76    | 25   | 20    | 38    | 1,360  | 51    | 8.0   | 11    | 38    | 20    |
| 18    | 41    | 86    | 64    | 24   | 20    | 43    | 1,590  | 46    | 7.0   | 16    | 57    | 18    |
| 19    | 43    | 84    | 56    | 24   | 21    | 50    | 1,200  | 38    | 7.0   | 17    | 58    | 16    |
| 20    | 54    | 76    | 49    | 24   | 21    | 66    | 1,080  | 33    | 9.8   | 14    | 57    | 15    |
| 21    | 53    | 70    | 45    | 24   | 21    | 76    | 1,050  | 35    | 13    | 12    | 111   | 258   |
| 22    | 56    | 68    | 42    | 24   | 21    | 100   | 750    | 37    | 10    | 18    | 120   | 198   |
| 23    | 50    | 64    | 38    | 24   | 20    | 130   | 622    | 36    | 7.2   | 118   | 536   | 101   |
| 24    | 45    | 62    | 36    | 24   | 20    | 140   | 569    | 26    | 6.5   | 127   | 437   | 72    |
| 25    | 44    | 60    | 35    | 24   | 20    | 120   | 512    | 20    | 6.5   | 58    | 362   | 72    |
| 26    | 45    | 58    | 35    | 24   | 20    | 110   | 452    | 19    | 6.2   | 45    | 265   | 672   |
| 27    | 44    | 56    | 35    | 24   | 20    | 100   | 400    | 16    | 6.0   | 33    | 244   | 718   |
| 28    | 46    | 54    | 35    | 24   | 20    | 98    | 368    | 14    | 5.8   | 29    | 164   | 413   |
| 29    | 52    | 52    | 34    | 24   | 20    | 96    | 328    | 14    | 20    | 23    | 109   | 470   |
| 30    | 52    | 52    | 34    | 24   | ----- | 94    | 285    | 18    | 15    | 25    | 91    | 395   |
| 31    | 54    | ----- | 33    | 24   | ----- | 92    | -----  | 19    | ----- | 22    | 70    | ----- |
| TOTAL | 1,685 | 1,841 | 1,725 | 820  | 615   | 1,731 | 14,384 | 3,094 | 297.3 | 708.7 | 3,371 | 4,047 |
| MEAN  | 54.4  | 61.4  | 55.6  | 26.5 | 21.2  | 55.8  | 479    | 99.8  | 9.91  | 22.9  | 109   | 135   |
| MAX   | 162   | 110   | 96    | 32   | 23    | 140   | 1,590  | 405   | 20    | 127   | 536   | 718   |
| MIN   | 33    | 46    | 33    | 24   | 20    | 21    | 78     | 14    | 5.8   | 5.5   | 12    | 15    |
| CFSM  | .66   | .75   | .68   | .32  | .26   | .68   | 5.84   | 1.22  | .12   | .28   | 1.33  | 1.65  |
| IN.   | .76   | .84   | .78   | .37  | .28   | .79   | 6.53   | 1.40  | .13   | .32   | 1.53  | 1.84  |

|             |                |           |           |         |           |          |
|-------------|----------------|-----------|-----------|---------|-----------|----------|
| CAL YR 1971 | TOTAL 34,014.2 | MEAN 93.2 | MAX 2,150 | MIN 4.9 | CFSM 1.14 | IN 15.43 |
| WTR YR 1972 | TOTAL 34,319.0 | MEAN 93.8 | MAX 1,590 | MIN 5.5 | CFSM 1.14 | IN 15.57 |

05394500 Prairie River near Merrill, Wis.

LOCATION.--Lat 45°14'09", long 89°38'59", on line between secs.20 and 29, T.32 N., R.7 E., Lincoln County, on left bank 40 ft upstream from County Highway C bridge, 1.5 miles upstream from Meadow Creek, 4.5 miles northeast of Merrill, and 8.0 miles upstream from mouth.

DRAINAGE AREA.--181 sq mi.

PERIOD OF RECORD.--January 1914 to September 1931, August 1939 to current year. Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder. Altitude of gage is 1,300 ft (from topographic map). Prior to Oct. 9, 1968, non-recording gage 40 ft downstream at same datum.

AVERAGE DISCHARGE.--50 years (1914-31, 1939-72), 180 cfs (13.50 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,070 cfs Apr. 18 (gage height, 6.33 ft); minimum daily, 56 cfs July 5-10.

Period of record: Maximum discharge, 5,800 cfs Aug. 31, 1941 (gage height, 9.45 ft, from floodmarks), from rating curve extended above 2,200 cfs; minimum observed, 34 cfs Oct. 26, 1947 (gage height, 1.39 ft).

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

REVISIONS (WATER YEARS).--WSP 1308: 1915-17(M), 1919-21(M), 1923-31(M), 1942-43(M), 1945(M), 1948-50(M).  
WSP 1558: Drainage area.

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 10 to Apr. 9.)

|     |     |     |       |
|-----|-----|-----|-------|
| 2.0 | 74  | 4.0 | 643   |
| 2.3 | 122 | 5.0 | 1,110 |
| 3.0 | 298 | 6.4 | 2,120 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR    | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| 1     | 150   | 180   | 110   | 94    | 82    | 74    | 140    | 579   | 133   | 68    | 100   | 180   |
| 2     | 180   | 227   | 113   | 90    | 82    | 74    | 140    | 566   | 112   | 64    | 110   | 160   |
| 3     | 266   | 258   | 110   | 88    | 82    | 76    | 130    | 533   | 101   | 60    | 98    | 140   |
| 4     | 314   | 232   | 109   | 86    | 82    | 78    | 130    | 465   | 92    | 58    | 86    | 130   |
| 5     | 297   | 201   | 111   | 86    | 82    | 78    | 130    | 394   | 87    | 56    | 78    | 130   |
| 6     | 239   | 172   | 112   | 86    | 82    | 80    | 130    | 339   | 90    | 56    | 72    | 130   |
| 7     | 195   | 138   | 111   | 86    | 82    | 82    | 130    | 293   | 82    | 56    | 72    | 120   |
| 8     | 169   | 138   | 113   | 86    | 82    | 82    | 130    | 255   | 76    | 56    | 120   | 110   |
| 9     | 159   | 132   | 115   | 86    | 82    | 86    | 130    | 224   | 74    | 56    | 180   | 100   |
| 10    | 147   | 122   | 130   | 86    | 80    | 90    | 135    | 204   | 72    | 56    | 210   | 92    |
| 11    | 137   | 119   | 150   | 84    | 80    | 92    | 159    | 183   | 72    | 60    | 160   | 98    |
| 12    | 130   | 119   | 180   | 84    | 80    | 94    | 211    | 166   | 78    | 72    | 130   | 110   |
| 13    | 131   | 117   | 190   | 82    | 80    | 98    | 299    | 157   | 90    | 82    | 120   | 100   |
| 14    | 131   | 116   | 170   | 80    | 78    | 100   | 369    | 163   | 110   | 88    | 110   | 94    |
| 15    | 127   | 117   | 150   | 80    | 78    | 100   | 524    | 196   | 96    | 94    | 100   | 88    |
| 16    | 121   | 120   | 120   | 86    | 78    | 100   | 852    | 178   | 90    | 82    | 96    | 84    |
| 17    | 118   | 119   | 160   | 88    | 78    | 100   | 1,500  | 152   | 82    | 80    | 140   | 82    |
| 18    | 119   | 135   | 210   | 88    | 76    | 100   | 1,990  | 136   | 78    | 78    | 280   | 80    |
| 19    | 123   | 164   | 390   | 86    | 76    | 100   | 1,700  | 127   | 74    | 86    | 500   | 80    |
| 20    | 145   | 169   | 210   | 88    | 76    | 110   | 1,480  | 118   | 80    | 80    | 680   | 84    |
| 21    | 163   | 155   | 150   | 88    | 76    | 120   | 1,370  | 116   | 72    | 76    | 500   | 110   |
| 22    | 180   | 123   | 130   | 88    | 76    | 130   | 1,300  | 114   | 68    | 80    | 400   | 160   |
| 23    | 172   | 131   | 110   | 86    | 76    | 150   | 1,060  | 107   | 64    | 94    | 300   | 140   |
| 24    | 157   | 123   | 100   | 86    | 76    | 160   | 914    | 100   | 62    | 140   | 360   | 130   |
| 25    | 141   | 123   | 90    | 88    | 78    | 170   | 814    | 94    | 60    | 130   | 480   | 250   |
| 26    | 132   | 124   | 84    | 86    | 76    | 160   | 747    | 89    | 58    | 120   | 640   | 540   |
| 27    | 134   | 115   | 80    | 86    | 76    | 160   | 708    | 86    | 58    | 100   | 900   | 1,200 |
| 28    | 136   | 122   | 76    | 84    | 76    | 150   | 687    | 88    | 60    | 98    | 600   | 1,100 |
| 29    | 127   | 121   | 90    | 84    | 76    | 150   | 660    | 107   | 68    | 92    | 400   | 1,300 |
| 30    | 129   | 113   | 92    | 84    | ----- | 150   | 620    | 152   | 80    | 90    | 300   | 820   |
| 31    | 157   | ----- | 100   | 84    | ----- | 140   | -----  | 158   | ----- | 88    | 230   | ----- |
| TOTAL | 5,026 | 4,345 | 4,166 | 2,664 | 2,284 | 3,434 | 19,289 | 6,639 | 2,419 | 2,496 | 8,552 | 7,942 |
| MEAN  | 162   | 145   | 134   | 85.9  | 78.8  | 111   | 643    | 214   | 80.6  | 80.5  | 276   | 265   |
| MAX   | 314   | 258   | 390   | 94    | 82    | 170   | 1,990  | 579   | 133   | 140   | 900   | 1,300 |
| MIN   | 118   | 113   | 76    | 80    | 76    | 74    | 130    | 86    | 58    | 56    | 72    | 80    |
| CFSM  | .90   | .80   | .74   | .47   | .44   | .61   | 3.55   | 1.18  | .45   | .44   | 1.52  | 1.46  |
| IN.   | 1.03  | .89   | .86   | .55   | .47   | .71   | 3.96   | 1.36  | .50   | .51   | 1.76  | 1.63  |

CAL YR 1971 TOTAL 62,368 MEAN 171 MAX 1,780 MIN 76 CFSM .94 IN 12.82  
WTR YR 1972 TOTAL 69,256 MEAN 189 MAX 1,990 MIN 56 CFSM 1.04 IN 14.23

NOTE.--No gage-height record June 6 to Sept. 30.

## WISCONSIN RIVER BASIN

05395000 Wisconsin River at Merrill, Wis.

LOCATION.--Lat 45°10'41", long 89°40'52", on line between secs.12 and 13, T.31 N., R.6 E., Lincoln County, on left bank 300 ft downstream from Highway 51 bridge at east end of Merrill, and 0.5 mile downstream from Prairie River.

DRAINAGE AREA.--2,780 sq mi, approximately.

PERIOD OF RECORD.--November 1902 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,228.85 ft above mean sea level. Prior to June 18, 1903, non-recording gage at different datum. June 18, 1903, to Sept. 10, 1914, nonrecording gage at present datum.

AVERAGE DISCHARGE.--69 years (1903-72), 2,679 cfs.

EXTREMES.--Current year: Maximum discharge, 16,300 cfs Apr. 18 (gage height, 11.04 ft); minimum, 1,170 cfs June 26 (gage height, 4.23 ft).

Period of record: Maximum discharge, 49,400 cfs Aug. 31, 1941 (gage height, 18.26 ft) from rating curve extended above 20,000 cfs; minimum, about 90 cfs Sept. 26, 1908 (gage height, 2.45 ft).

REMARKS.--Records good except those for winter months, which are fair. Flow regulated by 20 reservoirs (see p. 129) and 9 powerplants above station.

REVISIONS (WATER YEARS).--WSP 805: Drainage area. WSP 1308: 1904-7, 1909-11, 1913. WSP 1508: 1908, 1915-16 (M), 1917, 1920-21(M), 1925(M), 1930, 1935-36.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Aug. 3 to Sept. 25; stage-discharge relation affected by ice Dec. 10 to Apr. 7.)

|     |       |      |        |
|-----|-------|------|--------|
| 4.0 | 980   | 7.0  | 5,630  |
| 4.5 | 1,510 | 9.0  | 9,900  |
| 5.0 | 2,130 | 11.0 | 16,200 |
| 6.0 | 3,690 | 12.0 | 19,800 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR     | MAY    | JUN    | JUL    | AUG    | SEP     |
|-------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|---------|
| 1     | 3,390  | 2,650  | 2,650  | 2,400  | 2,000  | 2,200  | 2,500   | 4,660  | 1,930  | 1,870  | 2,190  | 3,160   |
| 2     | 2,610  | 2,770  | 2,270  | 2,400  | 2,000  | 2,200  | 2,400   | 4,660  | 2,190  | 1,820  | 2,080  | 2,940   |
| 3     | 3,320  | 2,770  | 2,410  | 2,400  | 2,000  | 2,200  | 2,400   | 4,940  | 2,130  | 1,910  | 2,000  | 2,230   |
| 4     | 3,270  | 2,850  | 2,640  | 2,300  | 2,000  | 2,200  | 2,400   | 4,330  | 2,030  | 1,720  | 1,800  | 2,310   |
| 5     | 2,840  | 2,640  | 2,680  | 2,300  | 2,000  | 2,100  | 2,600   | 4,780  | 1,980  | 1,860  | 1,850  | 2,470   |
| 6     | 2,860  | 2,160  | 2,530  | 2,200  | 1,900  | 2,100  | 2,400   | 3,900  | 2,150  | 2,060  | 2,160  | 2,720   |
| 7     | 2,240  | 2,000  | 2,480  | 2,300  | 1,900  | 2,100  | 2,200   | 3,330  | 1,920  | 2,030  | 2,180  | 2,680   |
| 8     | 2,610  | 2,320  | 2,450  | 2,400  | 1,900  | 2,100  | 2,170   | 3,000  | 2,020  | 1,840  | 2,530  | 1,870   |
| 9     | 2,340  | 2,240  | 2,670  | 2,500  | 1,800  | 2,000  | 2,440   | 3,370  | 2,320  | 1,880  | 2,700  | 2,190   |
| 10    | 2,320  | 2,160  | 2,700  | 2,600  | 1,800  | 2,000  | 2,970   | 3,190  | 2,080  | 1,950  | 2,560  | 2,230   |
| 11    | 2,020  | 2,170  | 2,900  | 2,600  | 1,800  | 2,000  | 2,430   | 2,750  | 1,920  | 2,020  | 2,270  | 2,230   |
| 12    | 1,990  | 2,210  | 2,700  | 2,600  | 1,800  | 2,100  | 3,240   | 2,410  | 2,250  | 2,160  | 2,200  | 2,330   |
| 13    | 2,200  | 2,350  | 2,600  | 2,600  | 1,800  | 2,100  | 3,840   | 2,500  | 2,290  | 2,060  | 2,140  | 2,470   |
| 14    | 2,320  | 2,190  | 2,500  | 2,500  | 1,900  | 2,100  | 4,770   | 2,150  | 2,280  | 2,170  | 2,040  | 2,260   |
| 15    | 2,140  | 2,220  | 2,600  | 2,400  | 2,000  | 2,200  | 6,060   | 2,720  | 2,240  | 2,430  | 1,950  | 2,380   |
| 16    | 2,090  | 2,440  | 2,700  | 2,400  | 2,000  | 2,200  | 8,470   | 2,560  | 1,730  | 2,120  | 1,980  | 2,080   |
| 17    | 2,120  | 2,660  | 2,800  | 2,400  | 1,900  | 2,200  | 11,800  | 2,490  | 1,970  | 2,190  | 4,130  | 2,230   |
| 18    | 1,940  | 2,760  | 2,700  | 2,300  | 1,900  | 2,200  | 15,800  | 2,430  | 2,070  | 2,410  | 4,670  | 2,040   |
| 19    | 1,950  | 2,900  | 2,800  | 2,400  | 1,900  | 2,100  | 14,900  | 2,150  | 2,080  | 2,350  | 5,110  | 2,130   |
| 20    | 2,220  | 2,540  | 2,700  | 2,500  | 2,000  | 2,100  | 11,800  | 1,940  | 2,200  | 2,100  | 4,690  | 2,420   |
| 21    | 2,260  | 2,700  | 2,600  | 2,500  | 2,100  | 2,300  | 11,100  | 2,370  | 2,260  | 2,190  | 4,470  | 3,020   |
| 22    | 2,360  | 2,380  | 2,700  | 2,400  | 2,100  | 2,800  | 10,300  | 2,170  | 2,080  | 2,470  | 4,140  | 2,460   |
| 23    | 2,230  | 2,240  | 2,600  | 2,300  | 2,100  | 2,700  | 9,300   | 1,890  | 2,110  | 2,810  | 3,870  | 2,620   |
| 24    | 2,180  | 2,810  | 2,600  | 2,200  | 2,100  | 2,700  | 8,030   | 2,590  | 1,930  | 2,710  | 4,090  | 2,240   |
| 25    | 2,110  | 2,650  | 2,700  | 2,200  | 2,100  | 2,600  | 7,140   | 1,860  | 1,870  | 2,520  | 4,790  | 2,760   |
| 26    | 2,100  | 2,650  | 2,600  | 2,200  | 2,200  | 2,500  | 6,610   | 1,910  | 1,840  | 2,060  | 4,830  | 8,330   |
| 27    | 2,270  | 2,680  | 2,600  | 2,200  | 2,200  | 2,500  | 6,010   | 2,070  | 2,160  | 2,020  | 4,950  | 9,700   |
| 28    | 2,350  | 2,650  | 2,600  | 2,100  | 2,200  | 2,600  | 5,810   | 1,830  | 2,250  | 1,980  | 4,180  | 9,050   |
| 29    | 2,090  | 2,670  | 2,600  | 2,100  | 2,200  | 2,700  | 5,430   | 2,000  | 2,340  | 2,350  | 3,440  | 10,700  |
| 30    | 2,210  | 2,670  | 2,600  | 2,100  | -----  | 2,500  | 5,490   | 2,470  | 2,210  | 2,180  | 3,200  | 8,470   |
| 31    | 2,110  | -----  | 2,500  | 2,000  | -----  | 2,500  | -----   | 2,290  | -----  | 2,060  | 3,400  | -----   |
| TOTAL | 73,060 | 75,100 | 81,180 | 72,800 | 57,600 | 70,900 | 182,810 | 87,710 | 62,830 | 66,300 | 98,590 | 106,720 |
| MEAN  | 2,357  | 2,503  | 2,619  | 2,348  | 1,986  | 2,287  | 6,094   | 2,829  | 2,094  | 2,139  | 3,180  | 3,557   |
| MAX   | 3,390  | 2,900  | 2,900  | 2,600  | 2,200  | 2,800  | 15,800  | 4,940  | 2,340  | 2,810  | 5,110  | 10,700  |
| MIN   | 1,940  | 2,000  | 2,270  | 2,000  | 1,800  | 2,000  | 2,170   | 1,830  | 1,730  | 1,720  | 1,800  | 1,870   |

CAL YR 1971 TOTAL 1,017,120 MEAN 2,787 MAX 16,600 MIN 1,720  
WTR YR 1972 TOTAL 1,035,600 MEAN 2,830 MAX 15,800 MIN 1,720

05397500 Eau Claire River at Kelly, Wis.

LOCATION.--Lat 44°55'06", long 89°33'00", on line between secs.9 and 10, T.28 N., R.8 E., Marathon County, on right bank 50 ft downstream from County Highway SS bridge, 0.7 mile northeast of Kelly, 1.3 miles upstream from Big Sandy Creek, 4.5 miles upstream from mouth, and 5.0 miles southeast of Wausau.

DRAINAGE AREA.--326 sq mi.

PERIOD OF RECORD.--January 1914 to November 1926, August 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,177.88 ft above mean sea level. Prior to Sept. 17, 1953, non-recording gage at same site at datum 1.00 ft higher.

AVERAGE DISCHARGE.--45 years, 248 cfs (10.30 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,360 cfs Apr. 19 (gage height, 9.42 ft); minimum daily, 66 cfs Feb. 18-21.

Period of record: Maximum discharge, 8,300 cfs Aug. 21, 1926 (gage height, 8.4 ft from graph based on gage readings), from rating curve extended above 6,000 cfs; minimum observed, 8 cfs July 17, 1944 (gage height, 0.17 ft), probably result of temporary regulation.

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

REVISIONS (WATER YEARS).--WSP 1508: 1915, 1916-17(M), 1919-26(M), 1940(M), 1945(M), 1950(M).

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Apr. 9-16; stage-discharge relation affected by ice Nov. 8-14, 18-22, Nov. 24 to Apr. 9.)

Oct. 1 to Mar. 31

Apr. 1 to Sept. 30

|     |       |     |     |     |       |
|-----|-------|-----|-----|-----|-------|
| 1.0 | 52    | 1.0 | 40  | 4.0 | 1,390 |
| 1.7 | 207   | 1.5 | 157 | 5.0 | 2,140 |
| 2.5 | 515   | 2.0 | 325 | 7.0 | 3,820 |
| 3.6 | 1,070 | 3.0 | 780 | 9.0 | 5,900 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC    | JAN   | FEB   | MAR   | APR    | MAY   | JUN   | JUL   | AUG    | SEP    |
|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|--------|--------|
| 1     | 341   | 289   | 210    | 190   | 78    | 70    | 260    | 657   | 141   | 90    | 183    | 260    |
| 2     | 328   | 508   | 210    | 190   | 76    | 72    | 240    | 722   | 130   | 83    | 197    | 225    |
| 3     | 779   | 571   | 220    | 180   | 76    | 76    | 230    | 699   | 122   | 80    | 156    | 196    |
| 4     | 930   | 508   | 240    | 180   | 74    | 80    | 240    | 612   | 114   | 76    | 136    | 175    |
| 5     | 862   | 420   | 250    | 170   | 72    | 84    | 220    | 513   | 107   | 73    | 120    | 178    |
| 6     | 597   | 337   | 270    | 160   | 72    | 90    | 200    | 442   | 104   | 74    | 102    | 171    |
| 7     | 397   | 262   | 280    | 160   | 72    | 100   | 190    | 354   | 104   | 78    | 101    | 159    |
| 8     | 314   | 180   | 310    | 150   | 72    | 110   | 170    | 352   | 98    | 76    | 141    | 150    |
| 9     | 274   | 170   | 340    | 150   | 72    | 130   | 170    | 313   | 100   | 76    | 298    | 139    |
| 10    | 246   | 170   | 400    | 140   | 70    | 150   | 172    | 283   | 104   | 76    | 355    | 129    |
| 11    | 213   | 160   | 600    | 140   | 70    | 160   | 260    | 255   | 95    | 84    | 267    | 135    |
| 12    | 188   | 160   | 800    | 130   | 70    | 170   | 402    | 236   | 105   | 114   | 210    | 149    |
| 13    | 182   | 150   | 720    | 130   | 70    | 180   | 571    | 224   | 124   | 126   | 163    | 144    |
| 14    | 179   | 150   | 540    | 120   | 70    | 190   | 788    | 223   | 139   | 131   | 132    | 135    |
| 15    | 171   | 155   | 580    | 120   | 70    | 200   | 1,380  | 246   | 132   | 147   | 116    | 126    |
| 16    | 157   | 153   | 680    | 120   | 68    | 210   | 2,500  | 225   | 122   | 136   | 109    | 120    |
| 17    | 147   | 155   | 800    | 110   | 68    | 230   | 3,450  | 207   | 111   | 116   | 279    | 118    |
| 18    | 141   | 180   | 450    | 110   | 66    | 240   | 4,730  | 195   | 102   | 113   | 730    | 125    |
| 19    | 168   | 240   | 360    | 110   | 66    | 270   | 5,780  | 174   | 95    | 125   | 1,220  | 118    |
| 20    | 261   | 210   | 300    | 110   | 66    | 320   | 4,260  | 167   | 98    | 117   | 1,070  | 120    |
| 21    | 287   | 190   | 270    | 100   | 66    | 400   | 3,160  | 160   | 97    | 103   | 825    | 226    |
| 22    | 285   | 170   | 250    | 100   | 68    | 450   | 2,470  | 153   | 97    | 99    | 579    | 248    |
| 23    | 265   | 169   | 240    | 98    | 70    | 480   | 1,980  | 145   | 88    | 114   | 448    | 206    |
| 24    | 236   | 190   | 230    | 96    | 70    | 450   | 1,630  | 136   | 85    | 112   | 631    | 175    |
| 25    | 214   | 250   | 220    | 92    | 70    | 420   | 1,450  | 128   | 83    | 112   | 953    | 286    |
| 26    | 198   | 330   | 220    | 90    | 70    | 380   | 1,250  | 124   | 81    | 104   | 1,170  | 1,730  |
| 27    | 190   | 250   | 210    | 86    | 70    | 360   | 1,050  | 118   | 79    | 96    | 1,900  | 2,120  |
| 28    | 200   | 230   | 210    | 84    | 68    | 340   | 872    | 114   | 82    | 87    | 1,180  | 2,100  |
| 29    | 196   | 220   | 200    | 84    | 68    | 310   | 768    | 132   | 92    | 91    | 693    | 2,790  |
| 30    | 187   | 210   | 200    | 82    | ----- | 290   | 691    | 156   | 99    | 126   | 427    | 1,980  |
| 31    | 271   | ----- | 190    | 80    | ----- | 270   | -----  | 158   | ----- | 120   | 319    | -----  |
| TOTAL | 9,404 | 7,337 | 11,000 | 3,862 | 2,038 | 7,282 | 41,534 | 8,663 | 3,130 | 3,155 | 15,210 | 14,933 |
| MEAN  | 303   | 245   | 355    | 125   | 70.3  | 235   | 1,384  | 279   | 104   | 102   | 491    | 498    |
| MAX   | 930   | 571   | 800    | 190   | 78    | 480   | 5,780  | 722   | 141   | 147   | 1,900  | 2,790  |
| MIN   | 141   | 150   | 190    | 80    | 66    | 70    | 170    | 114   | 79    | 73    | 101    | 118    |
| CFSM  | .93   | .75   | 1.09   | .38   | .22   | .72   | 4.25   | .86   | .32   | .31   | 1.51   | 1.53   |
| IN.   | 1.07  | .84   | 1.26   | .44   | .23   | .83   | 4.74   | .99   | .36   | .36   | 1.74   | 1.70   |

CAL YR 1971 TOTAL 97,483 MEAN 267 MAX 4,450 MIN 61 CFSM .82 IN 11.12  
WTR YR 1972 TOTAL 127,548 MEAN 348 MAX 5,780 MIN 66 CFSM 1.07 IN 14.55

PEAK DISCHARGE (BASE, 1,500 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 4-19 | 1200 | 9.42  | 6,360     | 9-29 | 0300 | 6.55  | 3,420     |
| 8-27 | 1000 | 4.95  | 2,070     |      |      |       |           |

## WISCONSIN RIVER BASIN

05398000 Wisconsin River at Rothschild, Wis.

LOCATION.--Lat 44°53'09", long 89°38'05", in sec.26, T.28 N., R.7 E., Marathon County, on left bank at Rothschild, 0.5 mile downstream from Rothschild Dam, 1.7 miles north of bridge on U.S. Highway 51, 2.0 miles downstream from Eau Claire River, and 5.0 miles upstream from Black Creek.

DRAINAGE AREA.--4,000 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,135.86 ft above mean sea level. Auxiliary water-stage recorder in Mosinee Pond 8 miles downstream. Prior to July 23, 1964, nonrecording auxiliary gage at same site and datum, read hourly.

AVERAGE DISCHARGE.--28 years, 3,367 cfs.

EXTREMES.--Current year: Maximum discharge, 40,500 cfs Apr. 18 (gage height, 16.66 ft); minimum daily, 1,780 cfs July 6.

Period of record: Maximum discharge, 49,200 cfs Apr. 12, 1965, Mar. 31, 1967 (gage height, 18.46 ft); minimum daily, 680 cfs Oct. 17, 1948.

Flood of Sept. 1, 1941, reached stage of 22.3 ft from tailwater data at Rothschild Dam (discharge 75,000 cfs from rating curve extended above 45,000 cfs by logarithmic plotting).

REMARKS.--Records good except those for winter months, or discharge below 1,500 cfs, which are fair. Flow regulated by 20 reservoirs (see p. 129) and 12 powerplants above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT     | NOV     | DEC     | JAN    | FEB    | MAR     | APR     | MAY     | JUN    | JUL    | AUG     | SEP     |
|-------|---------|---------|---------|--------|--------|---------|---------|---------|--------|--------|---------|---------|
| 1     | 6,310   | 3,690   | 3,190   | 3,000  | 3,100  | 2,600   | 4,400   | 7,000   | 2,490  | 2,250  | 3,270   | 4,520   |
| 2     | 7,460   | 5,740   | 2,950   | 3,000  | 2,800  | 2,700   | 3,700   | 7,400   | 2,390  | 1,880  | 3,340   | 4,520   |
| 3     | 8,300   | 5,760   | 2,830   | 3,200  | 2,700  | 2,600   | 3,400   | 7,520   | 2,410  | 2,020  | 2,250   | 2,650   |
| 4     | 7,720   | 4,860   | 2,770   | 3,200  | 2,900  | 2,700   | 3,700   | 6,490   | 2,680  | 2,010  | 2,410   | 2,820   |
| 5     | 5,360   | 4,430   | 3,170   | 3,000  | 2,600  | 2,400   | 3,400   | 6,930   | 2,580  | 1,990  | 2,280   | 2,920   |
| 6     | 5,190   | 3,820   | 3,190   | 2,900  | 2,500  | 2,600   | 3,500   | 6,040   | 2,380  | 1,780  | 2,190   | 3,480   |
| 7     | 3,870   | 2,670   | 3,180   | 3,000  | 2,700  | 2,600   | 3,200   | 5,400   | 2,370  | 2,460  | 2,730   | 3,320   |
| 8     | 3,500   | 2,950   | 3,190   | 2,900  | 2,600  | 2,600   | 3,200   | 4,270   | 2,310  | 1,910  | 3,040   | 3,200   |
| 9     | 3,420   | 3,150   | 3,180   | 2,900  | 2,600  | 2,700   | 3,300   | 4,780   | 2,220  | 2,220  | 4,280   | 2,540   |
| 10    | 3,420   | 2,940   | 4,310   | 3,100  | 2,700  | 2,900   | 4,310   | 4,350   | 2,640  | 2,100  | 3,970   | 2,660   |
| 11    | 2,810   | 2,900   | 6,330   | 3,200  | 2,700  | 2,700   | 5,050   | 3,960   | 2,420  | 2,400  | 3,050   | 2,950   |
| 12    | 2,910   | 2,900   | 6,260   | 3,300  | 2,700  | 2,500   | 7,180   | 3,300   | 2,210  | 2,890  | 2,740   | 3,040   |
| 13    | 3,070   | 2,640   | 4,500   | 3,200  | 2,400  | 2,900   | 9,590   | 3,560   | 2,770  | 2,610  | 2,720   | 3,060   |
| 14    | 3,020   | 2,620   | 3,700   | 3,000  | 2,800  | 3,000   | 12,500  | 2,970   | 2,810  | 3,110  | 2,650   | 3,150   |
| 15    | 3,210   | 2,760   | 4,200   | 2,700  | 2,600  | 2,900   | 15,700  | 3,560   | 2,690  | 3,520  | 2,260   | 3,080   |
| 16    | 2,570   | 2,910   | 5,000   | 2,800  | 2,600  | 3,000   | 25,300  | 3,110   | 2,310  | 3,450  | 2,280   | 2,670   |
| 17    | 2,250   | 3,000   | 5,600   | 2,700  | 2,800  | 3,100   | 34,200  | 3,610   | 2,020  | 2,530  | 3,750   | 2,450   |
| 18    | 2,650   | 3,250   | 3,300   | 3,100  | 2,700  | 3,100   | 40,000  | 3,280   | 2,240  | 3,010  | 6,600   | 2,970   |
| 19    | 2,850   | 3,380   | 3,600   | 2,800  | 2,200  | 3,000   | 37,000  | 2,760   | 2,360  | 3,250  | 6,970   | 2,920   |
| 20    | 3,070   | 3,830   | 3,400   | 2,300  | 2,200  | 2,900   | 32,000  | 2,540   | 2,390  | 2,680  | 7,410   | 3,230   |
| 21    | 3,440   | 3,250   | 3,500   | 3,000  | 2,800  | 3,500   | 28,000  | 2,850   | 2,330  | 2,600  | 7,450   | 4,980   |
| 22    | 3,550   | 3,180   | 3,400   | 2,900  | 2,900  | 4,400   | 22,000  | 2,910   | 2,400  | 2,970  | 6,220   | 4,510   |
| 23    | 3,620   | 2,970   | 3,500   | 2,800  | 2,700  | 4,800   | 18,000  | 2,610   | 2,240  | 3,010  | 5,910   | 4,060   |
| 24    | 2,990   | 3,000   | 3,600   | 2,900  | 2,600  | 5,400   | 15,000  | 2,940   | 2,110  | 3,250  | 6,010   | 3,300   |
| 25    | 3,030   | 3,140   | 3,500   | 2,800  | 2,700  | 6,200   | 12,000  | 2,420   | 1,920  | 3,280  | 7,220   | 4,390   |
| 26    | 2,990   | 3,120   | 3,500   | 2,800  | 2,600  | 5,400   | 10,000  | 2,340   | 1,960  | 2,720  | 7,520   | 20,800  |
| 27    | 2,930   | 3,130   | 3,300   | 2,700  | 2,800  | 5,200   | 9,000   | 2,450   | 2,030  | 2,200  | 10,300  | 27,200  |
| 28    | 3,140   | 3,140   | 3,000   | 2,700  | 3,000  | 5,000   | 8,200   | 2,400   | 2,500  | 2,420  | 8,010   | 17,200  |
| 29    | 3,200   | 3,120   | 3,000   | 2,600  | 2,900  | 4,800   | 7,600   | 2,320   | 2,350  | 2,190  | 6,030   | 24,300  |
| 30    | 2,790   | 3,150   | 3,100   | 2,400  | -----  | 4,500   | 7,800   | 3,310   | 2,690  | 2,510  | 4,870   | 17,300  |
| 31    | 3,200   | -----   | 3,100   | 2,800  | -----  | 4,000   | -----   | 2,620   | -----  | 2,780  | 4,470   | -----   |
| TOTAL | 117,840 | 101,400 | 114,350 | 89,700 | 77,900 | 108,700 | 392,230 | 122,000 | 71,220 | 80,000 | 144,200 | 190,190 |
| MEAN  | 3,801   | 3,380   | 3,689   | 2,894  | 2,686  | 3,506   | 13,070  | 3,935   | 2,374  | 2,581  | 4,652   | 6,340   |
| MAX   | 8,300   | 5,760   | 6,330   | 3,300  | 3,100  | 6,200   | 40,000  | 7,520   | 2,810  | 3,520  | 10,300  | 27,200  |
| MIN   | 2,250   | 2,620   | 2,770   | 2,300  | 2,200  | 2,400   | 3,200   | 2,320   | 1,920  | 1,780  | 2,190   | 2,450   |

CAL YR 1971 TOTAL 1,433,610 MEAN 3,928 MAX 35,800 MIN 1,680  
WTR YR 1972 TOTAL 1,609,730 MEAN 4,398 MAX 40,000 MIN 1,780

05399500 Big Eau Pleine River near Stratford, Wis.

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, on left bank 15 ft upstream from bridge on State Highway 97, 1.0 mile north of Stratford, and 1.4 miles downstream from small tributary.

DRAINAGE AREA.--224 sq mi.

PERIOD OF RECORD.--July 1914 to December 1925, Apr. 1937 to current year. Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 1,154.24 ft above mean sea level. July 24, 1914, to Dec. 31, 1925, nonrecording gage at site 0.5 mile upstream at different datum. Apr. 30, 1937, to Sept. 15, 1938, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--46 years (1914-25, 1937-72), 171 cfs (10.37 inches per year).

EXTREMES.--Current year: Maximum discharge, 14,600 cfs Sept. 26 (gage height, 18.91 ft); minimum, 4.9 cfs June 28 (gage height, 2.45 ft).

Period of record: Maximum discharge, 41,000 cfs Sept. 9, 1938 (gage height, 24.5 ft, from floodmarks), from rating curve extended above 24,000 cfs; no flow Aug. 17, 1947, Jan. 22 to Feb. 5, 1961.

Flood of June 5, 1914, reached a stage of 20.7 ft, from floodmarks (discharge, 40,000 cfs), former site and datum.

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

REVISIONS (WATER YEARS).--WSP 1308: 1917, 1920-22, 1926, 1946, 1948, 1950. WSP 1508: 1915-25(M), 1937, 1946(M), 1948(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Aug. 9 to Sept. 18; rate of change in stage used as a factor Apr. 14-20; stage-discharge relation affected by ice Nov. 26 to Apr. 13.)

|     |     |     |       |      |       |
|-----|-----|-----|-------|------|-------|
| 2.3 | 1.5 | 4.0 | 175   | 10.0 | 2,690 |
| 2.6 | 12  | 5.0 | 410   | 12.0 | 4,400 |
| 3.0 | 38  | 6.0 | 690   | 14.0 | 6,540 |
| 3.5 | 88  | 8.0 | 1,500 | 16.0 | 9,450 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN  | FEB   | MAR   | APR    | MAY   | JUN   | JUL   | AUG   | SEP    |
|-------|-------|-------|-------|------|-------|-------|--------|-------|-------|-------|-------|--------|
| 1     | 309   | 209   | 42    | 40   | 16    | 17    | 350    | 227   | 14    | 7.0   | 40    | 46     |
| 2     | 1,150 | 461   | 42    | 38   | 16    | 18    | 330    | 421   | 13    | 6.2   | 110   | 34     |
| 3     | 439   | 358   | 43    | 37   | 15    | 18    | 320    | 273   | 12    | 6.2   | 78    | 26     |
| 4     | 207   | 209   | 44    | 36   | 15    | 19    | 310    | 155   | 10    | 8.0   | 52    | 21     |
| 5     | 125   | 142   | 46    | 34   | 15    | 19    | 300    | 104   | 9.6   | 9.2   | 34    | 23     |
| 6     | 82    | 99    | 50    | 33   | 15    | 20    | 290    | 83    | 8.8   | 8.2   | 28    | 23     |
| 7     | 60    | 72    | 56    | 32   | 15    | 21    | 340    | 70    | 8.0   | 8.4   | 24    | 20     |
| 8     | 50    | 54    | 64    | 31   | 15    | 21    | 420    | 59    | 7.2   | 7.6   | 110   | 20     |
| 9     | 43    | 46    | 74    | 30   | 15    | 22    | 520    | 50    | 6.8   | 8.0   | 540   | 19     |
| 10    | 38    | 43    | 120   | 29   | 15    | 23    | 600    | 44    | 5.8   | 8.4   | 324   | 18     |
| 11    | 34    | 41    | 370   | 28   | 15    | 23    | 1,400  | 38    | 5.3   | 12    | 184   | 16     |
| 12    | 34    | 40    | 280   | 27   | 15    | 24    | 2,000  | 34    | 7.0   | 16    | 99    | 15     |
| 13    | 33    | 40    | 230   | 26   | 15    | 26    | 2,700  | 33    | 8.5   | 14    | 56    | 15     |
| 14    | 31    | 39    | 200   | 25   | 15    | 27    | 3,660  | 41    | 11    | 25    | 44    | 14     |
| 15    | 30    | 38    | 220   | 24   | 15    | 28    | 5,120  | 49    | 11    | 50    | 270   | 12     |
| 16    | 28    | 39    | 340   | 23   | 15    | 31    | 6,640  | 59    | 9.7   | 76    | 91    | 12     |
| 17    | 25    | 44    | 270   | 22   | 15    | 34    | 5,630  | 57    | 8.1   | 120   | 44    | 23     |
| 18    | 24    | 56    | 210   | 21   | 15    | 37    | 2,950  | 38    | 7.1   | 86    | 29    | 37     |
| 19    | 28    | 73    | 170   | 21   | 15    | 46    | 3,480  | 28    | 6.5   | 56    | 26    | 24     |
| 20    | 39    | 79    | 140   | 20   | 16    | 62    | 1,290  | 26    | 6.9   | 60    | 77    | 20     |
| 21    | 52    | 74    | 110   | 19   | 16    | 90    | 700    | 22    | 7.5   | 45    | 145   | 17     |
| 22    | 59    | 65    | 92    | 19   | 16    | 200   | 954    | 29    | 7.6   | 31    | 135   | 16     |
| 23    | 50    | 47    | 80    | 18   | 16    | 400   | 1,130  | 20    | 6.8   | 28    | 89    | 39     |
| 24    | 42    | 42    | 66    | 18   | 16    | 460   | 643    | 17    | 5.9   | 25    | 72    | 30     |
| 25    | 38    | 36    | 60    | 17   | 17    | 520   | 400    | 15    | 5.6   | 50    | 68    | 24     |
| 26    | 37    | 38    | 56    | 17   | 17    | 470   | 269    | 13    | 5.4   | 62    | 442   | 9,300  |
| 27    | 39    | 37    | 54    | 17   | 17    | 440   | 197    | 12    | 5.0   | 45    | 876   | 2,400  |
| 28    | 42    | 37    | 50    | 17   | 17    | 400   | 151    | 13    | 4.9   | 32    | 501   | 1,800  |
| 29    | 42    | 40    | 47    | 16   | 17    | 390   | 118    | 20    | 5.6   | 23    | 235   | 2,000  |
| 30    | 54    | 41    | 45    | 16   | ----- | 370   | 98     | 22    | 7.4   | 19    | 120   | 1,200  |
| 31    | 244   | ----- | 42    | 16   | ----- | 360   | -----  | 16    | ----- | 17    | 67    | -----  |
| TOTAL | 3,508 | 2,639 | 3,713 | 767  | 452   | 4,636 | 43,310 | 2,088 | 238.0 | 969.2 | 5,010 | 17,264 |
| MEAN  | 113   | 88.0  | 120   | 24.7 | 15.6  | 150   | 1,444  | 67.4  | 7.93  | 31.3  | 162   | 575    |
| MAX   | 1,150 | 461   | 370   | 40   | 17    | 520   | 6,640  | 421   | 14    | 120   | 876   | 9,300  |
| MIN   | 24    | 36    | 42    | 16   | 15    | 17    | 98     | 12    | 4.9   | 6.2   | 24    | 12     |
| CFSM  | .50   | .39   | .54   | .11  | .07   | .67   | 6.45   | .30   | .04   | .14   | .72   | 2.57   |
| IN.   | .58   | .44   | .62   | .13  | .08   | .77   | 7.19   | .35   | .04   | .16   | .83   | 2.87   |

CAL YR 1971 TOTAL 61,934.0 MEAN 170 MAX 7,200 MIN 4.4 CFSM .76 IN 10.29  
WTR YR 1972 TOTAL 84,594.2 MEAN 231 MAX 9,300 MIN 4.9 CFSM 1.03 IN 14.05

PEAK DISCHARGE (BASE, 2,500 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE | NOTE                                                           |
|------|------|-------|-----------|------|------|-------|-----------|----------------------------------------------------------------|
| 4-16 | 2400 | 15.14 | 8,110     | 9-26 | 0645 | 18.91 | 14,600    | --No gage-height record June 27 to Aug. 9, Sept. 19-24, 28-30. |

## WISCONSIN RIVER BASIN

05400600 Little Plover River near Arnott, Wis.

LOCATION.--Lat 44°28'05", long 89°29'20", in NE 1/4 sec.24, T.23 N., R.8 E., Portage County, 150 ft below bridge on town road 2.2 miles northwest of Arnott and 3.5 miles upstream from mouth.

DRAINAGE AREA.--1.5 sq mi, approximately, of which a portion is noncontributing.

PERIOD OF RECORD.--July 1959 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 1,087.37 ft above mean sea level (levels by Wisconsin Department of Natural Resources). Prior to April 1960, nonrecording gage at same site and datum 0.26 ft higher.

AVERAGE DISCHARGE.--13 years, 3.46 cfs.

EXTREMES.--Current year: Maximum discharge, 42 cfs Sept. 26 (gage height, 2.60 ft); minimum, 1.8 cfs Mar. 1 (gage height, 0.66 ft).  
Period of record: Maximum discharge, 66 cfs Sept. 13, 1962 (gage height, 3.43 ft); minimum, 0.8 cfs for many days in July, August, and September 1959.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used June 20.)

|     |     |     |     |
|-----|-----|-----|-----|
| 0.7 | 2.3 | 1.6 | 8.4 |
| 1.0 | 4.0 | 2.0 | 19  |
| 1.3 | 6.0 | 2.7 | 46  |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN  | FEB   | MAR  | APR   | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|-------|-------|-------|------|-------|------|-------|-------|-------|------|-------|-------|
| 1     | 3.7   | 4.3   | 3.4   | 3.4  | 2.8   | 2.8  | 3.2   | 6.2   | 4.8   | 3.8  | 3.6   | 5.6   |
| 2     | 3.6   | 7.5   | 3.5   | 3.4  | 2.9   | 2.8  | 3.2   | 6.7   | 4.6   | 3.5  | 3.8   | 5.4   |
| 3     | 4.7   | 4.8   | 3.6   | 3.1  | 2.8   | 2.7  | 3.2   | 6.3   | 4.4   | 3.3  | 3.5   | 5.4   |
| 4     | 3.9   | 4.9   | 3.5   | 3.0  | 2.8   | 2.6  | 3.1   | 5.7   | 4.2   | 3.2  | 3.3   | 5.0   |
| 5     | 3.7   | 4.5   | 3.6   | 3.0  | 2.8   | 2.8  | 3.2   | 5.5   | 4.4   | 3.1  | 3.2   | 5.0   |
| 6     | 3.6   | 4.0   | 3.7   | 3.1  | 2.8   | 2.8  | 3.3   | 5.6   | 4.2   | 3.1  | 4.0   | 5.4   |
| 7     | 3.4   | 3.8   | 3.7   | 3.2  | 2.7   | 2.6  | 3.2   | 5.2   | 4.1   | 3.0  | 4.5   | 5.0   |
| 8     | 3.5   | 3.8   | 3.8   | 3.3  | 2.7   | 2.6  | 3.2   | 5.2   | 4.1   | 3.4  | 4.0   | 4.7   |
| 9     | 3.6   | 3.7   | 4.0   | 3.3  | 2.7   | 2.5  | 3.4   | 5.1   | 3.9   | 3.2  | 3.8   | 4.7   |
| 10    | 3.5   | 3.6   | 5.5   | 3.3  | 2.7   | 2.5  | 6.9   | 4.9   | 3.6   | 3.2  | 3.7   | 4.7   |
| 11    | 3.4   | 3.6   | 5.2   | 3.2  | 2.8   | 2.8  | 8.4   | 4.9   | 3.7   | 3.4  | 3.7   | 4.9   |
| 12    | 3.4   | 3.6   | 4.5   | 3.1  | 2.9   | 2.6  | 8.0   | 4.9   | 4.3   | 3.3  | 3.6   | 5.6   |
| 13    | 3.4   | 3.6   | 4.0   | 3.0  | 2.9   | 2.6  | 11    | 5.1   | 4.0   | 3.3  | 3.5   | 6.4   |
| 14    | 3.3   | 3.6   | 4.1   | 3.1  | 2.9   | 2.7  | 8.8   | 5.8   | 4.6   | 3.4  | 3.5   | 5.0   |
| 15    | 3.2   | 3.5   | 6.0   | 3.1  | 2.7   | 2.7  | 11    | 6.0   | 4.0   | 3.3  | 3.5   | 5.0   |
| 16    | 3.2   | 3.7   | 5.3   | 3.1  | 2.7   | 2.8  | 13    | 5.4   | 3.7   | 3.4  | 3.3   | 5.0   |
| 17    | 3.2   | 3.8   | 4.3   | 3.1  | 2.9   | 2.8  | 13    | 5.1   | 3.7   | 3.5  | 3.3   | 5.2   |
| 18    | 3.2   | 4.3   | 3.9   | 3.0  | 2.8   | 2.7  | 13    | 4.9   | 3.7   | 3.5  | 3.6   | 7.0   |
| 19    | 3.9   | 4.0   | 4.2   | 3.0  | 2.6   | 2.7  | 13    | 4.7   | 3.7   | 3.2  | 5.0   | 5.9   |
| 20    | 3.6   | 4.0   | 4.0   | 3.0  | 2.7   | 3.4  | 9.1   | 5.0   | 3.6   | 3.3  | 4.3   | 5.7   |
| 21    | 3.5   | 3.6   | 3.7   | 3.0  | 2.8   | 4.5  | 7.6   | 5.3   | 3.4   | 3.1  | 3.9   | 5.4   |
| 22    | 3.5   | 3.5   | 3.6   | 3.2  | 2.6   | 5.0  | 13    | 5.2   | 3.3   | 3.0  | 5.2   | 5.1   |
| 23    | 3.5   | 3.5   | 3.8   | 3.0  | 2.8   | 4.3  | 10    | 5.0   | 3.3   | 3.0  | 6.6   | 5.1   |
| 24    | 3.3   | 3.6   | 3.7   | 3.0  | 2.8   | 3.9  | 7.6   | 4.9   | 3.3   | 2.9  | 9.0   | 5.1   |
| 25    | 3.3   | 3.5   | 3.7   | 2.9  | 2.7   | 4.0  | 6.6   | 4.8   | 3.3   | 2.9  | 6.0   | 22    |
| 26    | 3.3   | 3.8   | 3.7   | 2.8  | 2.6   | 4.1  | 6.4   | 4.6   | 3.2   | 3.1  | 10    | 28    |
| 27    | 3.5   | 3.7   | 3.6   | 2.8  | 2.7   | 3.7  | 6.1   | 4.6   | 3.2   | 3.2  | 7.0   | 12    |
| 28    | 3.2   | 3.6   | 3.4   | 2.8  | 2.8   | 3.8  | 5.9   | 4.9   | 3.3   | 3.0  | 6.0   | 13    |
| 29    | 3.2   | 3.7   | 3.4   | 2.8  | 2.7   | 3.9  | 5.8   | 5.5   | 3.4   | 3.0  | 5.8   | 14    |
| 30    | 3.6   | 3.5   | 3.6   | 2.9  | ----- | 3.5  | 6.1   | 5.1   | 3.6   | 3.0  | 5.4   | 9.5   |
| 31    | 3.6   | ----- | 3.4   | 2.8  | ----- | 3.3  | ----- | 4.8   | ----- | 3.1  | 5.8   | ----- |
| TOTAL | 108.5 | 118.6 | 123.4 | 94.8 | 80.1  | 98.5 | 219.3 | 162.9 | 114.6 | 99.7 | 145.4 | 225.8 |
| MEAN  | 3.50  | 3.95  | 3.98  | 3.06 | 2.76  | 3.18 | 7.31  | 5.25  | 3.82  | 3.22 | 4.69  | 7.53  |
| MAX   | 4.7   | 7.5   | 6.0   | 3.4  | 2.9   | 5.0  | 13    | 6.7   | 4.8   | 3.8  | 10    | 28    |
| MIN   | 3.2   | 3.5   | 3.4   | 2.8  | 2.6   | 2.5  | 3.1   | 4.6   | 3.2   | 2.9  | 3.2   | 4.7   |

CAL YR 1971 TOTAL 1,453.8 MEAN 3.98 MAX 14 MIN 2.9  
WTR YR 1972 TOTAL 1,591.6 MEAN 4.35 MAX 28 MIN 2.5

NOTE.--No gage-height record June 21 to Sept. 14.

05400650 Little Plover River at Plover, Wis.

LOCATION.--Lat 44°28'26", long 89°31'44", in SW 1/4 sec.14, T.23 N., R.8 E., Portage County, on right bank at bridge on town road, 1.0 mile northeast of Plover and 1.2 miles upstream from mouth.

DRAINAGE AREA.--15 sq mi, approximately, of which a large portion is noncontributing.

PERIOD OF RECORD.--July 1959 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 1,068.34 ft above mean sea level (levels by Wisconsin Department of Natural Resources). Prior to May 1960, nonrecording gage at same site and datum 0.88 ft lower.

AVERAGE DISCHARGE.--13 years, 9.93 cfs.

EXTREMES.--Current year: Maximum daily discharge, 60 cfs Sept. 26; minimum, 6.1 cfs Mar. 1 (gage height, 0.73 ft).

Period of record: Maximum discharge, 79 cfs Feb. 9, 1966 (gage height, 2.95 ft); minimum, 2.4 cfs May 23, 1965 (gage height, 0.41 ft), result of temporary dam at flume entrance; minimum daily, 4.3 cfs Aug. 19, 20, 1959.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).

|     |     |     |    |
|-----|-----|-----|----|
| 0.7 | 5.7 | 2.0 | 29 |
| 1.0 | 10  | 2.5 | 44 |
| 1.5 | 19  | 3.0 | 84 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 1     | 9.4   | 10    | 9.7   | 10    | 8.2   | 7.7   | 9.7   | 16   | 11    | 10    | 9.6   | 15    |
| 2     | 9.2   | 15    | 10    | 10    | 8.4   | 8.8   | 9.6   | 16   | 11    | 9.0   | 9.7   | 14    |
| 3     | 11    | 12    | 10    | 9.4   | 8.5   | 8.4   | 9.4   | 16   | 11    | 8.8   | 8.8   | 14    |
| 4     | 9.8   | 12    | 10    | 9.2   | 7.9   | 8.2   | 9.2   | 15   | 11    | 8.2   | 8.5   | 13    |
| 5     | 9.6   | 12    | 10    | 9.2   | 8.1   | 8.1   | 9.2   | 14   | 11    | 8.2   | 8.4   | 13    |
| 6     | 9.4   | 11    | 10    | 9.6   | 8.2   | 8.1   | 9.6   | 14   | 11    | 8.2   | 9.7   | 14    |
| 7     | 9.2   | 11    | 10    | 9.8   | 7.8   | 8.4   | 9.4   | 14   | 10    | 7.9   | 12    | 13    |
| 8     | 9.2   | 11    | 10    | 9.8   | 7.7   | 7.8   | 9.1   | 14   | 10    | 8.9   | 11    | 12    |
| 9     | 9.2   | 11    | 11    | 10    | 7.5   | 8.1   | 9.7   | 14   | 10    | 8.5   | 10    | 12    |
| 10    | 9.4   | 11    | 14    | 9.8   | 7.5   | 7.9   | 13    | 14   | 9.8   | 8.5   | 9.7   | 12    |
| 11    | 9.2   | 11    | 13    | 9.6   | 7.7   | 8.8   | 18    | 14   | 10    | 9.0   | 9.7   | 12    |
| 12    | 9.2   | 11    | 12    | 9.4   | 7.8   | 8.4   | 17    | 14   | 11    | 8.6   | 9.4   | 13    |
| 13    | 9.4   | 11    | 11    | 8.8   | 8.1   | 8.2   | 21    | 14   | 10    | 8.8   | 9.1   | 17    |
| 14    | 9.2   | 11    | 11    | 9.0   | 8.5   | 8.4   | 17    | 15   | 11    | 8.6   | 9.1   | 13    |
| 15    | 9.1   | 11    | 14    | 9.0   | 8.5   | 8.5   | 19    | 16   | 10    | 8.8   | 9.1   | 12    |
| 16    | 9.1   | 11    | 14    | 9.0   | 7.9   | 8.6   | 21    | 14   | 9.8   | 8.8   | 9.0   | 12    |
| 17    | 9.1   | 11    | 11    | 9.0   | 8.5   | 8.5   | 21    | 14   | 9.8   | 8.8   | 8.6   | 12    |
| 18    | 9.1   | 11    | 11    | 9.2   | 8.5   | 8.5   | 21    | 13   | 9.8   | 9.1   | 9.0   | 16    |
| 19    | 10    | 11    | 12    | 8.6   | 7.9   | 8.5   | 22    | 13   | 9.8   | 8.5   | 13    | 14    |
| 20    | 10    | 11    | 11    | 8.8   | 8.1   | 9.2   | 19    | 13   | 10    | 8.6   | 11    | 14    |
| 21    | 9.8   | 11    | 11    | 8.8   | 8.5   | 11    | 18    | 12   | 9.1   | 8.2   | 10    | 13    |
| 22    | 9.7   | 10    | 11    | 9.2   | 7.9   | 13    | 21    | 12   | 8.8   | 7.8   | 12    | 13    |
| 23    | 9.7   | 10    | 11    | 8.2   | 8.4   | 11    | 20    | 12   | 8.6   | 7.9   | 16    | 12    |
| 24    | 9.6   | 10    | 11    | 8.4   | 8.5   | 11    | 18    | 12   | 8.6   | 7.5   | 18    | 12    |
| 25    | 9.6   | 10    | 11    | 7.9   | 8.2   | 11    | 17    | 11   | 8.6   | 7.5   | 15    | 30    |
| 26    | 9.6   | 10    | 11    | 8.2   | 8.1   | 11    | 16    | 11   | 8.6   | 8.2   | 26    | 60    |
| 27    | 9.7   | 10    | 11    | 8.2   | 8.4   | 10    | 16    | 11   | 8.5   | 8.2   | 21    | 28    |
| 28    | 9.6   | 10    | 10    | 8.2   | 8.5   | 10    | 16    | 11   | 8.6   | 7.9   | 15    | 30    |
| 29    | 9.4   | 10    | 10    | 8.4   | 8.5   | 11    | 15    | 12   | 8.8   | 7.8   | 19    | 33    |
| 30    | 9.7   | 10    | 10    | 8.4   | ----- | 11    | 15    | 12   | 9.8   | 7.9   | 14    | 27    |
| 31    | 10    | ----- | 10    | 8.4   | ----- | 9.8   | ----- | 11   | ----- | 7.7   | 15    | ----- |
| TOTAL | 295.2 | 327   | 341.7 | 279.5 | 236.3 | 286.9 | 465.9 | 414  | 294.2 | 260.4 | 372.4 | 525   |
| MEAN  | 9.52  | 10.9  | 11.0  | 9.02  | 8.15  | 9.25  | 15.5  | 13.4 | 9.81  | 8.40  | 12.0  | 17.5  |
| MAX   | 11    | 15    | 14    | 10    | 8.5   | 13    | 22    | 16   | 11    | 10    | 26    | 60    |
| MIN   | 9.1   | 10    | 9.7   | 7.9   | 7.5   | 7.7   | 9.1   | 11   | 8.5   | 7.5   | 8.4   | 12    |

CAL YR 1971 TOTAL 3,902.7 MEAN 10.7 MAX 21 MIN 7.9  
WTR YR 1972 TOTAL 4,098.5 MEAN 11.2 MAX 60 MIN 7.5

PEAK DISCHARGE (BASE, 22 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 4-10 | 2400 | 1.79  | 25        | 4-22 | 2100 | 1.66  | 22        |
| 4-13 | 0400 | 1.76  | 24        | 8-23 | 0200 | 1.72  | 23        |
| 4-17 | 0200 | 1.72  | 23        | 8-26 | 1700 | 2.32  | 38        |
| 4-19 | 1200 | 1.71  | 23        | 9-26 | -    | -     | 60        |

NOTE.--No gage-height record Sept. 24-30.

LOCATION.--Lat 44°22'05", long 89°51'30", in SW 1/4 sec.24, T.22 N., R.5 E., Wood County, at Centralia power-plant of Nekoosa-Edwards Paper, Inc., 1.6 miles downstream from Chicago and Northwestern Railway bridge in Wisconsin Rapids.

PERIOD OF RECORD.--May 1914 to March 1950 (published as "near Nekoosa"), October 1957 to current year.

AVERAGE DISCHARGE.--50 years (1914-49, 1957-72), 4,906 cfs.

REMARKS.--Records good. Discharge computed from powerplant records on basis of load-discharge rating of hydro-electric units as developed by Geological Survey and tainter-gate ratings and spillway ratings based on theoretical formulas and discharge measurements. Flow regulated by 21 reservoirs (see p. 129) and many powerplants above station. Water diverted periodically from pond of Wisconsin Rapids powerplant 2.6 miles upstream into Cranberry Creek, a tributary of Yellow River, for cranberry culture. Probably most of the water diverted is lost by evaporation and transpiration. These diversions in cubic feet per second, for water year October 1971 to September 1972, were as follows:

REVISIONS (WATER YEARS).--WSP 1308 1915(M).

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR    | MAY    | JUN   | JUL   | AUG    | SEP    |
|-----|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|--------|--------|
| 1   | 8,040 | 4,180 | 3,950 | 4,170 | 3,960 | 3,770 | 7,220  | 13,200 | 3,150 | 2,930 | 3,310  | 5,610  |
| 2   | 9,010 | 7,440 | 4,240 | 4,120 | 4,160 | 3,680 | 6,730  | 13,500 | 3,210 | 2,360 | 3,440  | 4,950  |
| 3   | 9,420 | 8,360 | 4,170 | 4,090 | 3,740 | 3,520 | 6,380  | 11,800 | 3,190 | 1,580 | 3,230  | 1,000  |
| 4   | 8,820 | 6,570 | 3,790 | 4,050 | 3,700 | 3,470 | 5,260  | 11,200 | 2,560 | 1,480 | 2,940  | 2,690  |
| 5   | 7,470 | 4,900 | 3,310 | 4,090 | 3,820 | 2,720 | 5,380  | 9,660  | 3,210 | 2,820 | 2,750  | 4,370  |
| 6   | 5,620 | 4,510 | 3,900 | 4,050 | 3,690 | 3,360 | 5,400  | 8,380  | 3,180 | 2,990 | 2,780  | 4,520  |
| 7   | 4,040 | 4,530 | 4,130 | 4,040 | 3,850 | 3,420 | 5,330  | 6,340  | 3,260 | 2,940 | 3,100  | 3,600  |
| 8   | 3,750 | 4,180 | 4,150 | 3,950 | 3,900 | 3,500 | 5,460  | 5,390  | 3,190 | 2,800 | 3,430  | 3,600  |
| 9   | 3,660 | 4,180 | 4,030 | 3,730 | 3,850 | 3,260 | 5,340  | 5,230  | 3,340 | 2,240 | 3,680  | 3,650  |
| 10  | 4,240 | 3,970 | 5,060 | 3,980 | 4,080 | 3,280 | 5,590  | 5,640  | 3,080 | 2,750 | 4,060  | 2,550  |
| 11  | 3,890 | 4,160 | 7,540 | 4,150 | 3,870 | 3,250 | 18,430 | 5,700  | 2,550 | 3,110 | 4,090  | 3,610  |
| 12  | 3,390 | 4,120 | 9,130 | 4,290 | 3,540 | 2,960 | 12,300 | 5,220  | 3,170 | 3,770 | 3,270  | 3,580  |
| 13  | 3,360 | 3,690 | 6,350 | 4,240 | 3,320 | 3,410 | 16,600 | 4,580  | 3,330 | 3,220 | 2,520  | 3,860  |
| 14  | 3,440 | 3,400 | 5,480 | 4,030 | 3,840 | 3,700 | 18,800 | 3,730  | 3,400 | 3,180 | 2,810  | 3,600  |
| 15  | 3,620 | 3,560 | 6,800 | 4,210 | 3,720 | 4,150 | 21,900 | 4,350  | 3,240 | 3,090 | 3,260  | 3,500  |
| 16  | 3,440 | 4,020 | 8,690 | 3,950 | 3,760 | 4,100 | 30,600 | 4,790  | 3,190 | 2,520 | 3,310  | 3,420  |
| 17  | 2,800 | 4,050 | 7,220 | 4,090 | 3,670 | 4,050 | 37,800 | 4,710  | 3,020 | 3,750 | 3,550  | 2,780  |
| 18  | 3,320 | 4,050 | 5,520 | 4,100 | 3,680 | 4,070 | 39,600 | 4,560  | 2,510 | 3,780 | 5,600  | 3,640  |
| 19  | 3,910 | 4,320 | 5,270 | 4,140 | 3,440 | 4,130 | 42,400 | 5,030  | 2,990 | 3,370 | 8,260  | 4,300  |
| 20  | 3,880 | 4,340 | 5,600 | 4,120 | 3,360 | 4,360 | 44,100 | 4,090  | 3,130 | 3,410 | 8,210  | 4,390  |
| 21  | 3,800 | 4,020 | 5,890 | 4,130 | 3,570 | 4,370 | 36,600 | 2,720  | 3,140 | 3,100 | 9,410  | 5,030  |
| 22  | 4,310 | 4,010 | 5,360 | 4,080 | 3,580 | 5,280 | 29,000 | 3,770  | 3,080 | 2,830 | 8,640  | 5,240  |
| 23  | 4,140 | 4,120 | 4,880 | 4,060 | 3,440 | 5,590 | 26,100 | 3,870  | 3,090 | 2,310 | 6,220  | 4,720  |
| 24  | 3,730 | 4,120 | 4,000 | 4,180 | 3,390 | 7,010 | 22,700 | 3,740  | 3,000 | 3,290 | 7,160  | 4,650  |
| 25  | 3,670 | 4,080 | 4,340 | 4,090 | 3,610 | 8,500 | 19,000 | 3,530  | 2,370 | 3,530 | 7,750  | 6,290  |
| 26  | 3,840 | 4,240 | 5,150 | 4,130 | 3,380 | 9,740 | 16,300 | 3,030  | 2,940 | 3,490 | 9,630  | 18,200 |
| 27  | 3,640 | 4,160 | 5,110 | 4,080 | 3,300 | 9,680 | 15,200 | 2,720  | 2,590 | 3,380 | 10,200 | 34,200 |
| 28  | 3,710 | 3,850 | 4,860 | 4,080 | 3,400 | 8,870 | 10,600 | 2,650  | 2,710 | 3,370 | 11,900 | 31,600 |
| 29  | 3,890 | 3,970 | 4,310 | 3,950 | 3,540 | 8,550 | 12,000 | 2,580  | 3,080 | 3,160 | 9,190  | 30,700 |
| 30  | 4,060 | 3,960 | 4,160 | 3,500 | ----- | 7,780 | 12,500 | 3,130  | 3,030 | 2,580 | 7,010  | 31,700 |
| 31  | 3,600 | ----- | 4,330 | 4,040 | ----- | 7,380 |        |        |       |       |        |        |

05401020 Tenmile Creek ditch 5 near Bancroft, Wis.

LOCATION.--Lat 44°18'08", long 89°32'59", in NE 1/4 sec.16, T.21 N., R.8 E., Portage County, at bridge on country road, 1.2 miles west of U.S. Highway 51 and 1.8 miles southwest of Bancroft.

DRAINAGE AREA.--8.8 sq mi, approximately.

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

GAGE.--Water-stage recorder and 90° V-notch sharp-crested weir in one bay of dam and broad-crested weir in other bay. Datum of gage is 1,063.57 ft above mean sea level (levels by Wisconsin Works Progress Administration).

AVERAGE DISCHARGE.--8 years, 7.42 cfs.

EXTREMES.--Current year: Maximum discharge, 42 cfs Sept. 26 (gage height, 2.80 ft); minimum daily, 3.4 cfs Aug. 4, 5.

Period of record: Maximum discharge, 202 cfs May 27, 1969 (gage height, 4.53 ft); minimum, 2.1 cfs Jan. 18, 1967 (gage height, 0.81 ft); minimum daily, 2.2 cfs Aug. 11, 13, 14, 17-19, 1967, Aug. 27, 1970.

REMARKS.--Records good, except when stop logs are moved, which are fair. There is approximately 2 miles of dredged drainage ditching above this gage. Sprinkler irrigation from ground-water wells is quite extensive in the basin. Records of water temperatures for the current year are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 6.5   | 7.2   | 7.2   | 7.9   | 5.6   | 5.2   | 9.1   | 11    | 6.5   | 5.6   | 3.6   | 8.1   |
| 2     | 6.0   | 14    | 7.1   | 7.7   | 5.7   | 5.5   | 8.8   | 11    | 6.4   | 6.8   | 4.0   | 7.5   |
| 3     | 6.7   | 11    | 7.0   | 7.3   | 5.8   | 5.3   | 8.8   | 11    | 6.3   | 6.0   | 3.7   | 7.3   |
| 4     | 6.4   | 10    | 7.1   | 7.1   | 5.6   | 5.3   | 8.5   | 10    | 6.1   | 5.9   | 3.4   | 7.1   |
| 5     | 6.4   | 9.7   | 7.1   | 6.8   | 5.6   | 5.2   | 8.6   | 9.8   | 6.1   | 5.6   | 3.4   | 7.0   |
| 6     | 6.4   | 9.0   | 7.2   | 7.2   | 5.7   | 5.2   | 9.5   | 9.7   | 6.1   | 5.5   | 3.7   | 8.0   |
| 7     | 6.3   | 8.7   | 7.4   | 7.1   | 5.3   | 5.3   | 9.3   | 9.3   | 6.0   | 6.0   | 4.3   | 7.3   |
| 8     | 6.3   | 8.5   | 7.9   | 7.2   | 5.1   | 5.1   | 8.8   | 9.0   | 6.0   | 5.7   | 4.2   | 6.8   |
| 9     | 6.2   | 8.5   | 8.5   | 7.3   | 4.8   | 5.1   | 9.4   | 8.8   | 5.9   | 5.9   | 4.0   | 6.6   |
| 10    | 6.2   | 8.2   | 11    | 7.1   | 4.9   | 5.1   | 13    | 8.6   | 5.9   | 5.6   | 3.8   | 6.4   |
| 11    | 6.1   | 8.3   | 14    | 7.0   | 5.3   | 5.3   | 18    | 8.5   | 5.8   | 5.3   | 3.8   | 7.3   |
| 12    | 6.0   | 8.2   | 11    | 7.0   | 5.6   | 5.2   | 16    | 8.3   | 7.3   | 5.5   | 3.8   | 7.3   |
| 13    | 6.1   | 8.1   | 9.8   | 6.6   | 5.7   | 5.2   | 16    | 8.3   | 6.7   | 5.2   | 3.6   | 11    |
| 14    | 6.0   | 8.0   | 9.5   | 6.1   | 5.7   | 5.2   | 14    | 8.6   | 8.5   | 5.3   | 4.5   | 9.1   |
| 15    | 5.8   | 7.7   | 13    | 5.3   | 5.7   | 5.3   | 15    | 8.8   | 7.6   | 5.3   | 4.9   | 8.3   |
| 16    | 5.6   | 8.1   | 13    | 5.1   | 5.7   | 5.3   | 15    | 8.3   | 7.3   | 4.9   | 4.5   | 7.9   |
| 17    | 5.5   | 8.1   | 11    | 6.0   | 6.0   | 5.6   | 14    | 8.0   | 7.0   | 4.8   | 4.2   | 7.5   |
| 18    | 5.5   | 9.3   | 9.7   | 6.4   | 5.9   | 6.2   | 14    | 7.9   | 6.7   | 4.9   | 4.0   | 10    |
| 19    | 6.3   | 9.1   | 9.5   | 6.1   | 5.8   | 6.4   | 14    | 7.5   | 6.5   | 4.6   | 3.6   | 9.5   |
| 20    | 6.2   | 8.7   | 9.3   | 6.2   | 5.8   | 11    | 13    | 7.4   | 6.5   | 4.6   | 3.5   | 9.1   |
| 21    | 6.0   | 8.1   | 8.5   | 6.2   | 5.9   | 17    | 13    | 7.3   | 6.4   | 4.4   | 3.6   | 9.3   |
| 22    | 6.0   | 7.6   | 8.6   | 6.3   | 5.7   | 18    | 16    | 7.2   | 6.2   | 4.2   | 5.0   | 8.6   |
| 23    | 5.9   | 7.5   | 8.6   | 6.1   | 5.9   | 13    | 14    | 7.0   | 6.0   | 4.3   | 5.8   | 8.2   |
| 24    | 5.9   | 7.5   | 8.5   | 6.0   | 5.9   | 12    | 13    | 6.8   | 6.0   | 4.0   | 7.4   | 8.1   |
| 25    | 5.9   | 7.6   | 8.5   | 5.6   | 5.8   | 14    | 12    | 6.6   | 6.0   | 3.8   | 6.7   | 25    |
| 26    | 5.8   | 8.0   | 8.5   | 5.3   | 5.7   | 13    | 12    | 6.4   | 5.7   | 4.2   | 13    | 33    |
| 27    | 5.9   | 7.7   | 8.3   | 5.2   | 5.9   | 11    | 12    | 6.4   | 5.6   | 4.5   | 12    | 20    |
| 28    | 5.7   | 7.6   | 8.0   | 5.5   | 5.9   | 11    | 11    | 6.4   | 6.0   | 4.1   | 10    | 24    |
| 29    | 5.6   | 7.6   | 8.0   | 5.5   | 5.9   | 11    | 11    | 6.7   | 6.0   | 3.9   | 9.0   | 29    |
| 30    | 6.0   | 7.3   | 8.1   | 5.3   | ----- | 9.7   | 11    | 7.4   | 5.6   | 3.7   | 8.5   | 19    |
| 31    | 6.7   | ----- | 7.9   | 5.6   | ----- | 9.3   | ----- | 6.8   | ----- | 3.6   | 8.0   | ----- |
| TOTAL | 187.9 | 254.9 | 278.8 | 197.1 | 163.9 | 252.0 | 367.8 | 254.8 | 190.7 | 153.7 | 167.5 | 343.3 |
| MEAN  | 6.06  | 8.50  | 8.99  | 6.36  | 5.65  | 8.13  | 12.3  | 8.22  | 6.36  | 4.96  | 5.40  | 11.4  |
| MAX   | 6.7   | 14    | 14    | 7.9   | 6.0   | 18    | 18    | 11    | 8.5   | 6.8   | 13    | 33    |
| MIN   | 5.5   | 7.2   | 7.0   | 5.1   | 4.8   | 5.1   | 8.5   | 6.4   | 5.6   | 3.6   | 3.4   | 6.4   |

CAL YR 1971 TOTAL 2,679.2 MEAN 7.34 MAX 26 MIN 2.9  
WTR YR 1972 TOTAL 2,812.4 MEAN 7.68 MAX 33 MIN 3.4

## WISCONSIN RIVER BASIN

05401050 Tenmile Creek near Nekoosa, Wis.

LOCATION.--Lat 44°15'44", long 89°48'38", in NE 1/4 sec.32, T.21 N., R.6 E., Wood County, on left bank upstream from bridge on State Highway 13, 5.8 miles southeast of Nekoosa.

DRAINAGE AREA.--64 sq mi, approximately.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1962-63. October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 967.39 ft above mean sea level. Prior to May 13, 1964, non-recording gage at present site and datum.

AVERAGE DISCHARGE.--9 years, 56.1 cfs.

EXTREMES.--Current year: Maximum discharge, 247 cfs Sept. 30 (gage height, 5.70 ft); minimum daily, 23 cfs Feb. 14-18.

Period of record: Maximum discharge, 326 cfs Apr. 4, 1969 (gage height, 6.07 ft); minimum, 9.5 cfs Dec. 16, 1964 (gage height, 3.65 ft), result of freezeup.

REMARKS.--Records good except those for winter periods, which are fair. Approximately 40 miles of drainage ditches and 22 check dams are used to control the water table in the basin. Sprinkler irrigation from ground-water sources is developing rapidly in the area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 23 to Jan. 15, Jan. 25 to Mar. 10.)

|     |    |     |     |
|-----|----|-----|-----|
| 3.8 | 18 | 5.0 | 129 |
| 4.0 | 28 | 5.5 | 210 |
| 4.5 | 68 | 6.0 | 310 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 50    | 51    | 56    | 52    | 29    | 25    | 87    | 102   | 66    | 44    | 37    | 64    |
| 2     | 48    | 66    | 54    | 50    | 28    | 25    | 84    | 108   | 64    | 53    | 38    | 63    |
| 3     | 54    | 74    | 54    | 49    | 28    | 27    | 83    | 105   | 62    | 53    | 37    | 60    |
| 4     | 52    | 72    | 54    | 48    | 27    | 26    | 83    | 101   | 60    | 51    | 35    | 58    |
| 5     | 50    | 70    | 56    | 50    | 27    | 26    | 82    | 97    | 60    | 49    | 34    | 57    |
| 6     | 49    | 68    | 56    | 48    | 26    | 26    | 86    | 95    | 60    | 48    | 34    | 59    |
| 7     | 48    | 63    | 58    | 47    | 26    | 26    | 90    | 92    | 58    | 50    | 34    | 60    |
| 8     | 48    | 63    | 62    | 46    | 25    | 26    | 85    | 89    | 56    | 50    | 36    | 57    |
| 9     | 47    | 63    | 66    | 45    | 25    | 26    | 87    | 87    | 55    | 53    | 34    | 55    |
| 10    | 46    | 62    | 80    | 43    | 25    | 26    | 92    | 86    | 53    | 51    | 32    | 53    |
| 11    | 46    | 61    | 100   | 42    | 24    | 27    | 109   | 84    | 53    | 49    | 32    | 54    |
| 12    | 44    | 60    | 94    | 41    | 24    | 27    | 120   | 84    | 57    | 49    | 32    | 56    |
| 13    | 44    | 59    | 84    | 40    | 24    | 27    | 133   | 86    | 59    | 48    | 31    | 65    |
| 14    | 43    | 58    | 74    | 40    | 23    | 27    | 140   | 55    | 64    | 48    | 36    | 69    |
| 15    | 42    | 58    | 90    | 40    | 23    | 28    | 142   | 103   | 64    | 49    | 39    | 66    |
| 16    | 41    | 59    | 95    | 40    | 23    | 28    | 145   | 97    | 60    | 46    | 39    | 63    |
| 17    | 41    | 61    | 81    | 40    | 23    | 30    | 146   | 92    | 58    | 45    | 38    | 61    |
| 18    | 41    | 63    | 71    | 43    | 23    | 33    | 143   | 87    | 57    | 45    | 36    | 69    |
| 19    | 44    | 66    | 73    | 41    | 24    | 42    | 137   | 83    | 55    | 43    | 38    | 73    |
| 20    | 47    | 66    | 72    | 42    | 24    | 53    | 129   | 81    | 54    | 42    | 42    | 72    |
| 21    | 49    | 64    | 70    | 41    | 24    | 72    | 123   | 78    | 52    | 40    | 49    | 71    |
| 22    | 48    | 58    | 67    | 42    | 24    | 85    | 134   | 76    | 51    | 39    | 50    | 69    |
| 23    | 46    | 60    | 64    | 40    | 24    | 79    | 143   | 73    | 49    | 39    | 51    | 66    |
| 24    | 46    | 60    | 64    | 40    | 24    | 87    | 136   | 72    | 48    | 39    | 55    | 65    |
| 25    | 46    | 59    | 62    | 37    | 25    | 89    | 127   | 70    | 47    | 38    | 58    | 101   |
| 26    | 46    | 60    | 58    | 33    | 25    | 98    | 120   | 68    | 46    | 39    | 69    | 162   |
| 27    | 46    | 60    | 54    | 32    | 25    | 96    | 115   | 67    | 45    | 41    | 80    | 220   |
| 28    | 45    | 60    | 50    | 31    | 25    | 100   | 110   | 68    | 45    | 40    | 78    | 222   |
| 29    | 44    | 58    | 52    | 30    | 25    | 101   | 106   | 69    | 47    | 39    | 72    | 229   |
| 30    | 46    | 58    | 50    | 30    | ----- | 92    | 102   | 71    | 46    | 38    | 67    | 240   |
| 31    | 48    | ----- | 52    | 29    | ----- | 89    | ----- | 68    | ----- | 36    | 65    | ----- |
| TOTAL | 1,435 | 1,860 | 2,073 | 1,272 | 722   | 1,569 | 3,419 | 2,634 | 1,651 | 1,394 | 1,408 | 2,679 |
| MEAN  | 46.3  | 62.0  | 66.9  | 41.0  | 24.9  | 50.6  | 114   | 85.0  | 55.0  | 45.0  | 45.4  | 89.3  |
| MAX   | 54    | 74    | 100   | 52    | 29    | 101   | 146   | 108   | 66    | 53    | 80    | 240   |
| MIN   | 41    | 51    | 50    | 29    | 23    | 25    | 82    | 67    | 45    | 36    | 31    | 53    |

CAL YR 1971 TOTAL 21,526 MEAN 59.0 MAX 198 MIN 23

WTR YR 1972 TOTAL 22,116 MEAN 60.4 MAX 240 MIN 23

05401100 Fourteenmile Creek near New Rome, Wis.

LOCATION.--Lat 44°12'15", long 89°48'29", in S 1/2 sec.17, T.20 N., R.6 E., Adams County, 50 ft above twin culverts on State Highway 13, and 2.7 miles southeast of New Rome.

DRAINAGE AREA.--77 sq mi, approximately.

PERIOD OF RECORD.--Annual maximum and occasional low-flow measurements, water years 1961-64. March 1964 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 980 ft (from topographic map). Prior to Mar. 2, 1964, crest-stage gage only at datum 7.03 ft lower, and Mar. 2, 1964, to Aug. 27, 1964, non-recording gage and crest-stage gage.

AVERAGE DISCHARGE.--8 years, 40.1 cfs.

EXTREMES.--Current year: Maximum discharge, 374 cfs Sept. 30 (gage height, 5.68 ft); minimum daily, 4.5 cfs Aug. 11.

Period of record: Maximum discharge, 374 cfs Sept. 30, 1972; minimum, 0.65 cfs Jan. 25-27, 1968 (gage height, 1.45 ft).

REMARKS.--Records good. Some regulation caused by manipulation of gates at recreation dam above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second).

| Oct. 1 to Sept. 24 |     |     |     | Sept. 24-30 |     |     |     |
|--------------------|-----|-----|-----|-------------|-----|-----|-----|
| 1.9                | 2.6 | 3.1 | 90  | 3.0         | 81  | 4.5 | 205 |
| 2.1                | 10  | 3.5 | 125 | 3.5         | 125 | 5.0 | 260 |
| 2.3                | 23  | 4.0 | 165 | 4.0         | 165 | 5.7 | 378 |
| 2.7                | 54  | 5.0 | 260 |             |     |     |     |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT            | NOV       | DEC     | JAN     | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------------|----------------|-----------|---------|---------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1           | 16             | 20        | 36      | 45      | 21    | 19    | 58    | 62    | 26    | 13    | 8.7   | 54    |
| 2           | 11             | 36        | 27      | 45      | 21    | 20    | 58    | 64    | 26    | 22    | 10    | 49    |
| 3           | 15             | 44        | 27      | 44      | 21    | 19    | 58    | 62    | 26    | 17    | 8.3   | 44    |
| 4           | 12             | 58        | 27      | 44      | 21    | 20    | 58    | 60    | 25    | 15    | 6.2   | 42    |
| 5           | 10             | 70        | 27      | 42      | 21    | 19    | 57    | 57    | 22    | 13    | 5.5   | 41    |
| 6           | 11             | 68        | 34      | 29      | 20    | 19    | 57    | 55    | 23    | 12    | 6.6   | 40    |
| 7           | 9.6            | 63        | 39      | 25      | 20    | 19    | 57    | 52    | 21    | 17    | 8.3   | 39    |
| 8           | 10             | 66        | 39      | 26      | 20    | 18    | 54    | 49    | 20    | 18    | 7.9   | 36    |
| 9           | 9.6            | 66        | 39      | 26      | 20    | 18    | 54    | 46    | 21    | 26    | 6.2   | 35    |
| 10          | 9.2            | 66        | 39      | 26      | 20    | 18    | 54    | 44    | 17    | 24    | 4.7   | 32    |
| 11          | 8.7            | 67        | 39      | 26      | 20    | 17    | 53    | 43    | 15    | 20    | 4.5   | 33    |
| 12          | 7.9            | 67        | 39      | 27      | 20    | 17    | 52    | 42    | 22    | 20    | 5.8   | 36    |
| 13          | 8.3            | 68        | 39      | 33      | 20    | 10    | 52    | 44    | 26    | 20    | 6.2   | 46    |
| 14          | 7.9            | 68        | 39      | 37      | 19    | 4.8   | 53    | 52    | 38    | 20    | 8.7   | 44    |
| 15          | 7.9            | 67        | 42      | 36      | 18    | 5.2   | 54    | 52    | 38    | 20    | 11    | 42    |
| 16          | 8.3            | 63        | 43      | 35      | 17    | 10    | 54    | 50    | 32    | 17    | 10    | 41    |
| 17          | 7.5            | 60        | 44      | 34      | 18    | 17    | 56    | 48    | 27    | 17    | 11    | 43    |
| 18          | 7.9            | 56        | 44      | 33      | 19    | 19    | 58    | 44    | 25    | 17    | 10    | 68    |
| 19          | 17             | 55        | 45      | 32      | 20    | 20    | 48    | 41    | 21    | 14    | 18    | 83    |
| 20          | 76             | 55        | 55      | 32      | 20    | 20    | 38    | 37    | 18    | 13    | 25    | 93    |
| 21          | 90             | 56        | 63      | 25      | 20    | 29    | 37    | 36    | 15    | 12    | 36    | 92    |
| 22          | 76             | 56        | 63      | 21      | 19    | 46    | 37    | 35    | 13    | 11    | 38    | 85    |
| 23          | 60             | 56        | 63      | 22      | 19    | 65    | 37    | 32    | 12    | 12    | 35    | 77    |
| 24          | 37             | 57        | 63      | 22      | 19    | 72    | 15    | 30    | 12    | 9.2   | 34    | 74    |
| 25          | 20             | 56        | 63      | 22      | 19    | 66    | 34    | 28    | 12    | 7.1   | 33    | 135   |
| 26          | 20             | 56        | 62      | 22      | 19    | 65    | 58    | 26    | 12    | 8.3   | 52    | 213   |
| 27          | 20             | 54        | 61      | 22      | 19    | 64    | 65    | 26    | 12    | 9.2   | 58    | 298   |
| 28          | 16             | 52        | 60      | 22      | 19    | 63    | 65    | 25    | 12    | 7.9   | 60    | 327   |
| 29          | 14             | 52        | 59      | 22      | 18    | 61    | 62    | 28    | 13    | 7.9   | 59    | 356   |
| 30          | 14             | 48        | 52      | 22      | ----- | 59    | 60    | 35    | 12    | 8.7   | 57    | 360   |
| 31          | 14             | -----     | 45      | 22      | ----- | 58    | ----- | 29    | ----- | 7.5   | 53    | ----- |
| TOTAL       | 651.8          | 1,726     | 1,417   | 921     | 567   | 977.0 | 1,553 | 1,334 | 614   | 455.8 | 697.6 | 2,958 |
| MEAN        | 21.0           | 57.5      | 45.7    | 29.7    | 19.6  | 31.5  | 51.8  | 43.0  | 20.5  | 14.7  | 22.5  | 98.6  |
| MAX         | 90             | 70        | 63      | 45      | 21    | 72    | 65    | 64    | 38    | 26    | 60    | 360   |
| MIN         | 7.5            | 20        | 27      | 21      | 17    | 4.8   | 15    | 25    | 12    | 7.1   | 4.5   | 32    |
| CAL YR 1971 | TOTAL 12,797.4 | MEAN 35.1 | MAX 142 | MIN 2.1 |       |       |       |       |       |       |       |       |
| WTR YR 1972 | TOTAL 13,872.2 | MEAN 37.9 | MAX 360 | MIN 4.5 |       |       |       |       |       |       |       |       |

## WISCONSIN RIVER BASIN

05401535 Big Roche a Cri Creek near Adams, Wis.

LOCATION.--Lat 44°05'52", long 89°46'30", in SW 1/4 sec.22, T.19 N., R.6 E., Adams County, at culverts on Brown Deer Avenue, 0.5 mile upstream from Dry Creek, and 10 miles north of Adams.

DRAINAGE AREA.--54 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 959.45 ft above mean sea level. Prior to May 15, 1964, non-recording gage at same site at datum 1.71 ft higher.

AVERAGE DISCHARGE.--9 years, 56.5 cfs.

EXTREMES.--Current year: Maximum daily discharge, 250 cfs Sept. 29, 30; minimum, 30 cfs Feb. 26 (gage height, 1.59 ft), result of freezeup.

Period of record: Maximum daily discharge, 250 cfs Sept. 29, 30, 1972; minimum, 24 cfs Dec. 31, 1964 (gage height, 1.36 ft), result of freezeup, Feb. 28 (gage height, 1.47 ft).

REMARKS.--Records good except those for winter periods and those for period of no gage-height record, which are fair. There is some irrigation from ground-water sources in the upper portion of basin.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Oct. 1 to Dec. 16, June 24-27; stage-discharge relation affected by ice Dec. 19 to Feb. 12.)

|     |    |     |     |
|-----|----|-----|-----|
| 1.6 | 30 | 3.0 | 93  |
| 2.0 | 48 | 4.0 | 143 |
| 2.5 | 70 | 5.0 | 193 |
|     |    | 5.8 | 263 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 52    | 56    | 57    | 60    | 48    | 44    | 73    | 85    | 61    | 50    | 44    | 73    |
| 2     | 45    | 84    | 63    | 58    | 47    | 46    | 71    | 89    | 59    | 59    | 49    | 72    |
| 3     | 48    | 82    | 64    | 56    | 49    | 46    | 71    | 90    | 58    | 53    | 44    | 64    |
| 4     | 52    | 71    | 61    | 56    | 50    | 47    | 68    | 86    | 56    | 50    | 41    | 62    |
| 5     | 47    | 68    | 61    | 60    | 48    | 50    | 69    | 82    | 56    | 49    | 40    | 60    |
| 6     | 46    | 66    | 60    | 60    | 49    | 49    | 70    | 81    | 56    | 49    | 40    | 59    |
| 7     | 46    | 63    | 61    | 60    | 48    | 47    | 72    | 80    | 54    | 52    | 44    | 58    |
| 8     | 47    | 63    | 61    | 58    | 48    | 46    | 68    | 77    | 53    | 52    | 44    | 57    |
| 9     | 47    | 63    | 63    | 58    | 47    | 47    | 71    | 76    | 54    | 58    | 42    | 55    |
| 10    | 46    | 63    | 67    | 58    | 47    | 47    | 74    | 75    | 53    | 54    | 40    | 54    |
| 11    | 46    | 62    | 81    | 58    | 48    | 46    | 90    | 74    | 52    | 50    | 40    | 54    |
| 12    | 45    | 61    | 78    | 56    | 48    | 48    | 99    | 73    | 62    | 49    | 39    | 56    |
| 13    | 46    | 60    | 65    | 54    | 48    | 50    | 111   | 73    | 63    | 48    | 38    | 67    |
| 14    | 46    | 59    | 72    | 56    | 50    | 51    | 117   | 84    | 67    | 47    | 40    | 69    |
| 15    | 45    | 58    | 86    | 58    | 49    | 53    | 116   | 93    | 72    | 49    | 46    | 62    |
| 16    | 45    | 60    | 98    | 56    | 47    | 53    | 118   | 81    | 62    | 47    | 42    | 62    |
| 17    | 45    | 62    | 86    | 54    | 51    | 53    | 115   | 76    | 59    | 46    | 40    | 68    |
| 18    | 45    | 64    | 70    | 54    | 48    | 56    | 110   | 72    | 57    | 48    | 38    | 74    |
| 19    | 50    | 68    | 72    | 52    | 46    | 57    | 106   | 69    | 56    | 46    | 50    | 72    |
| 20    | 57    | 64    | 74    | 52    | 50    | 64    | 101   | 67    | 55    | 45    | 51    | 70    |
| 21    | 53    | 63    | 72    | 52    | 48    | 96    | 98    | 67    | 55    | 44    | 88    | 66    |
| 22    | 51    | 58    | 68    | 52    | 46    | 112   | 106   | 66    | 53    | 42    | 67    | 64    |
| 23    | 49    | 60    | 68    | 52    | 49    | 87    | 117   | 64    | 52    | 44    | 59    | 70    |
| 24    | 49    | 59    | 68    | 50    | 48    | 81    | 114   | 62    | 52    | 43    | 61    | 130   |
| 25    | 49    | 60    | 66    | 50    | 47    | 79    | 105   | 61    | 52    | 41    | 62    | 180   |
| 26    | 50    | 61    | 64    | 50    | 47    | 79    | 97    | 60    | 52    | 43    | 86    | 220   |
| 27    | 50    | 63    | 62    | 50    | 47    | 77    | 93    | 59    | 51    | 49    | 106   | 230   |
| 28    | 51    | 62    | 58    | 48    | 47    | 77    | 89    | 59    | 51    | 45    | 89    | 240   |
| 29    | 49    | 63    | 56    | 49    | 48    | 79    | 87    | 61    | 55    | 43    | 76    | 250   |
| 30    | 51    | 63    | 56    | 49    | ----- | 78    | 85    | 66    | 52    | 41    | 70    | 250   |
| 31    | 56    | ----- | 58    | 49    | ----- | 74    | ----- | 65    | ----- | 40    | 67    | ----- |
| TOTAL | 1,504 | 1,909 | 2,096 | 1,685 | 1,393 | 1,919 | 2,781 | 2,273 | 1,690 | 1,476 | 1,683 | 2,968 |
| MEAN  | 48.5  | 63.6  | 67.6  | 54.4  | 48.0  | 61.9  | 92.7  | 73.3  | 56.3  | 47.6  | 54.3  | 98.9  |
| MAX   | 57    | 84    | 98    | 60    | 51    | 112   | 118   | 93    | 72    | 59    | 106   | 250   |
| MIN   | 45    | 56    | 56    | 48    | 46    | 44    | 68    | 59    | 51    | 40    | 38    | 54    |

CAL YR 1971 TOTAL 22,025 MEAN 60.3 MAX 169 MIN 33  
WTR YR 1972 TOTAL 23,377 MEAN 63.9 MAX 250 MIN 38

## PEAK DISCHARGE (BASE, 110 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 3-22 | 0200 | 3.48  | 117       | 4-23 | 1600 | 3.50  | 118       |
| 4-16 | 1100 | 3.53  | 120       | 9-29 | -    | -     | a250      |

a About.

NOTE.--No gage-height record Sept. 15-30.

05402000 Yellow River at Babcock, Wis.

LOCATION.--Lat 44°18'05", long 90°07'15", in NW 1/4 sec.14, T.21 N., R.3 E., Wood County, on right bank at downstream side of bridge on State Highway 80 at Babcock, 1.9 miles upstream from Hemlock Creek.

DRAINAGE AREA.--223 sq mi.

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

GAGE.--Water stage recorder. Datum of gage is 954.75 ft above mean sea level. Prior to Oct. 28, 1948, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--28 years, 136 cfs (8.28 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,220 cfs Sept. 29 (gage height, 14.17 ft); minimum, 11 cfs June 14-16, 25-28.

Period of record: Maximum discharge, 11,600 cfs Apr. 2, 1952 (gage height, 17.38 ft); minimum observed, 1.0 cfs Oct. 1, 1948 (gage height, 1.22 ft).

REMARKS.--Records good except those for winter periods and those for period of no gage-height record, which are fair. There is a large recreation dam about 5 miles upstream.

REVISIONS (WATER YEARS).--WSP 1308: 1944(M), 1946-47(M), 1949(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Oct. 1 to Nov. 19, Nov. 30 to Dec. 4, May 19 to June 26, Sept. 25-30; stage-discharge relation affected by ice Nov. 20-29, Dec. 5 to Apr. 9.)

|     |     |     |       |      |       |
|-----|-----|-----|-------|------|-------|
| 1.5 | 5.2 | 3.3 | 184   | 10.0 | 1,880 |
| 1.8 | 16  | 4.5 | 389   | 12.0 | 3,360 |
| 2.1 | 39  | 6.0 | 659   | 14.0 | 5,400 |
| 2.6 | 96  | 8.0 | 1,060 |      |       |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT          | NOV      | DEC       | JAN    | FEB      | MAR      | APR    | MAY   | JUN   | JUL   | AUG   | SEP    |
|-------------|--------------|----------|-----------|--------|----------|----------|--------|-------|-------|-------|-------|--------|
| 1           | 186          | 76       | 30        | 38     | 13       | 24       | 450    | 158   | 20    | 14    | 250   | 90     |
| 2           | 115          | 93       | 28        | 36     | 13       | 24       | 350    | 473   | 20    | 13    | 140   | 60     |
| 3           | 103          | 149      | 27        | 33     | 13       | 26       | 240    | 895   | 20    | 14    | 60    | 52     |
| 4           | 90           | 319      | 28        | 32     | 13       | 29       | 190    | 738   | 19    | 16    | 35    | 46     |
| 5           | 40           | 283      | 30        | 29     | 13       | 31       | 170    | 395   | 17    | 18    | 31    | 42     |
| 6           | 43           | 226      | 34        | 28     | 13       | 29       | 220    | 292   | 13    | 16    | 30    | 39     |
| 7           | 49           | 96       | 40        | 25     | 13       | 27       | 280    | 188   | 13    | 16    | 45    | 36     |
| 8           | 42           | 66       | 45        | 23     | 13       | 27       | 350    | 109   | 15    | 15    | 110   | 34     |
| 9           | 36           | 107      | 52        | 21     | 13       | 27       | 450    | 108   | 14    | 15    | 760   | 32     |
| 10          | 35           | 110      | 60        | 20     | 13       | 27       | 651    | 103   | 14    | 17    | 450   | 31     |
| 11          | 31           | 107      | 80        | 19     | 14       | 27       | 1,270  | 91    | 14    | 20    | 200   | 29     |
| 12          | 29           | 95       | 130       | 18     | 15       | 28       | 2,530  | 82    | 17    | 30    | 90    | 28     |
| 13          | 30           | 53       | 250       | 17     | 16       | 31       | 2,960  | 77    | 14    | 28    | 64    | 27     |
| 14          | 28           | 71       | 410       | 16     | 18       | 40       | 3,080  | 75    | 13    | 90    | 56    | 27     |
| 15          | 26           | 70       | 280       | 15     | 22       | 52       | 2,230  | 79    | 12    | 180   | 1,100 | 26     |
| 16          | 26           | 58       | 220       | 15     | 38       | 64       | 2,670  | 90    | 15    | 140   | 150   | 25     |
| 17          | 27           | 45       | 280       | 14     | 54       | 58       | 2,920  | 92    | 14    | 220   | 80    | 25     |
| 18          | 29           | 56       | 330       | 14     | 50       | 52       | 2,110  | 79    | 14    | 170   | 50    | 150    |
| 19          | 35           | 70       | 390       | 14     | 43       | 50       | 1,640  | 66    | 13    | 80    | 45    | 200    |
| 20          | 40           | 64       | 170       | 13     | 39       | 47       | 2,700  | 57    | 12    | 45    | 45    | 90     |
| 21          | 41           | 58       | 110       | 13     | 35       | 60       | 1,460  | 49    | 14    | 30    | 45    | 66     |
| 22          | 42           | 60       | 76        | 13     | 33       | 100      | 971    | 43    | 13    | 28    | 45    | 134    |
| 23          | 47           | 56       | 66        | 13     | 31       | 190      | 1,320  | 31    | 12    | 27    | 46    | 152    |
| 24          | 48           | 52       | 58        | 13     | 30       | 410      | 1,220  | 27    | 12    | 64    | 54    | 97     |
| 25          | 50           | 50       | 54        | 12     | 28       | 680      | 910    | 27    | 11    | 50    | 140   | 86     |
| 26          | 73           | 47       | 52        | 12     | 26       | 900      | 557    | 25    | 11    | 40    | 700   | 636    |
| 27          | 74           | 43       | 64        | 13     | 25       | 760      | 424    | 22    | 11    | 50    | 1,800 | 3,630  |
| 28          | 74           | 43       | 54        | 13     | 25       | 660      | 247    | 23    | 11    | 24    | 1,000 | 2,020  |
| 29          | 73           | 39       | 48        | 14     | 25       | 620      | 215    | 24    | 12    | 22    | 600   | 3,560  |
| 30          | 73           | 37       | 45        | 13     | -----    | 600      | 176    | 28    | 13    | 21    | 330   | 2,570  |
| 31          | 76           | -----    | 41        | 13     | -----    | 520      | -----  | 25    | ----- | 31    | 170   | -----  |
| TOTAL       | 1,711        | 2,699    | 3,582     | 582    | 697      | 6,220    | 34,961 | 4,571 | 423   | 1,544 | 8,721 | 14,040 |
| MEAN        | 55.2         | 90.0     | 116       | 18.8   | 24.0     | 201      | 1,165  | 147   | 14.1  | 49.8  | 281   | 468    |
| MAX         | 186          | 319      | 410       | 38     | 54       | 900      | 3,080  | 895   | 20    | 220   | 1,800 | 3,630  |
| MIN         | 26           | 37       | 27        | 12     | 13       | 24       | 170    | 22    | 11    | 13    | 30    | 25     |
| CFSM        | .25          | .40      | .52       | .08    | .11      | .90      | 5.22   | .66   | .06   | .22   | 1.26  | 2.10   |
| IN.         | .29          | .45      | .60       | .10    | .12      | 1.04     | 5.83   | .76   | .07   | .26   | 1.45  | 2.34   |
| C&L YR 1971 | TOTAL 54,935 | MEAN 151 | MAX 4,310 | MIN 11 | CFSM .68 | IN 9.16  |        |       |       |       |       |        |
| WTR YR 1972 | TOTAL 79,751 | MEAN 218 | MAX 3,630 | MIN 11 | CFSM .98 | IN 13.30 |        |       |       |       |       |        |

## PEAK DISCHARGE (BASE, 1,200 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 4-14 | 0100 | 11.83 | 3,210     | 8-27 | -    | -     | a2,000    |
| 4-23 | 1600 | 9.30  | 1,530     | 9-29 | 1600 | 14.17 | 5,220     |

NOTE.--No gage-height record June 27 to Sept. 21.

a About.

## WISCONSIN RIVER BASIN

05403500 Lemonweir River at New Lisbon, Wis.

LOCATION.--Lat 43°52'47", long 90°09'40", in SE 1/4 sec.8, T.16 N., R.3 E., Juneau County, 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 miles upstream from Webster Creek.

DRAINAGE AREA.--500 sq mi, approximately.

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

GAGE.--Nonrecording gage. Datum of gage is 867.05 ft above mean sea level. Prior to May 5, 1948, nonrecording gage at site 100 ft downstream at same datum.

AVERAGE DISCHARGE.--28 years, 348 cfs (9.45 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,460 cfs Sept. 28 (gage height, 12.30 ft, from graph based on gage readings); minimum observed, 83 cfs June 30 (gage height, 1.21 ft).  
Period of record: Maximum discharge, 6,880 cfs May 8, 1960 (gage height, 12.94 ft, from graph based on gage readings); minimum observed, 36 cfs Aug. 15, 1944 (gage height, -0.06 ft).

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.

REVISIONS (WATER YEARS).--WSP 1308: 1944(M), 1949-50(M). WSP 1728: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Aug. 20 to Sept. 4, Sept. 14-30; stage-discharge relation affected by ice Dec. 28, Jan. 3-6, Jan. 16 to Mar. 16.)

|     |     |      |       |
|-----|-----|------|-------|
| 1.2 | 82  | 7.0  | 1,030 |
| 2.0 | 143 | 9.0  | 1,870 |
| 3.0 | 250 | 11.0 | 3,370 |
| 5.0 | 560 | 12.0 | 4,390 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV    | DEC    | JAN   | FEB   | MAR    | APR    | MAY    | JUN   | JUL   | AUG    | SEP    |
|-------|-------|--------|--------|-------|-------|--------|--------|--------|-------|-------|--------|--------|
| 1     | 346   | 289    | 340    | 307   | 180   | 190    | 916    | 693    | 145   | 102   | 243    | 713    |
| 2     | 352   | 427    | 357    | 341   | 180   | 180    | 851    | 700    | 153   | 134   | 226    | 537    |
| 3     | 362   | 459    | 379    | 330   | 180   | 180    | 810    | 726    | 145   | 142   | 206    | 408    |
| 4     | 384   | 458    | 371    | 320   | 180   | 180    | 760    | 815    | 131   | 137   | 190    | 308    |
| 5     | 474   | 472    | 352    | 300   | 180   | 190    | 711    | 877    | 126   | 130   | 185    | 263    |
| 6     | 456   | 508    | 342    | 290   | 170   | 210    | 717    | 861    | 128   | 126   | 181    | 239    |
| 7     | 405   | 520    | 349    | 290   | 170   | 210    | 784    | 779    | 124   | 133   | 181    | 223    |
| 8     | 352   | 517    | 363    | 294   | 180   | 210    | 784    | 691    | 116   | 133   | 188    | 216    |
| 9     | 294   | 453    | 390    | 298   | 160   | 200    | 731    | 604    | 115   | 152   | 190    | 205    |
| 10    | 282   | 408    | 416    | 304   | 160   | 200    | 717    | 535    | 114   | 151   | 189    | 192    |
| 11    | 282   | 363    | 452    | 301   | 160   | 200    | 740    | 443    | 112   | 144   | 205    | 205    |
| 12    | 280   | 346    | 506    | 304   | 160   | 200    | 812    | 376    | 143   | 166   | 200    | 192    |
| 13    | 273   | 340    | 459    | 289   | 160   | 210    | 1,090  | 335    | 156   | 160   | 200    | 273    |
| 14    | 260   | 312    | 472    | 268   | 170   | 220    | 1,350  | 333    | 155   | 144   | 190    | 346    |
| 15    | 251   | 275    | 642    | 256   | 170   | 250    | 1,380  | 333    | 163   | 143   | 200    | 418    |
| 16    | 243   | 262    | 774    | 240   | 180   | 290    | 1,370  | 350    | 151   | 144   | 200    | 451    |
| 17    | 236   | 276    | 740    | 230   | 180   | 421    | 1,360  | 384    | 142   | 159   | 200    | 435    |
| 18    | 226   | 301    | 700    | 230   | 180   | 612    | 1,290  | 381    | 142   | 188   | 200    | 544    |
| 19    | 228   | 321    | 675    | 240   | 170   | 827    | 1,200  | 312    | 140   | 195   | 230    | 840    |
| 20    | 236   | 329    | 682    | 250   | 170   | 1,010  | 1,090  | 266    | 128   | 187   | 294    | 1,090  |
| 21    | 243   | 340    | 708    | 250   | 170   | 1,560  | 1,030  | 242    | 120   | 192   | 368    | 1,360  |
| 22    | 245   | 336    | 656    | 240   | 180   | 2,040  | 1,170  | 217    | 116   | 191   | 590    | 1,480  |
| 23    | 252   | 321    | 584    | 230   | 180   | 2,090  | 1,220  | 201    | 116   | 202   | 736    | 1,350  |
| 24    | 270   | 318    | 488    | 230   | 180   | 2,120  | 1,270  | 179    | 116   | 204   | 835    | 1,110  |
| 25    | 279   | 311    | 443    | 220   | 190   | 2,040  | 1,250  | 161    | 120   | 193   | 841    | 1,080  |
| 26    | 291   | 318    | 416    | 200   | 190   | 1,810  | 1,190  | 149    | 117   | 213   | 864    | 1,760  |
| 27    | 291   | 329    | 390    | 190   | 190   | 1,540  | 1,090  | 144    | 111   | 304   | 936    | 3,200  |
| 28    | 293   | 343    | 350    | 190   | 200   | 1,350  | 999    | 133    | 105   | 350   | 929    | 4,240  |
| 29    | 279   | 359    | 246    | 180   | 200   | 1,180  | 892    | 132    | 97    | 333   | 968    | 4,190  |
| 30    | 273   | 346    | 340    | 180   | ----- | 983    | 769    | 138    | 88    | 298   | 978    | 3,640  |
| 31    | 287   | -----  | 335    | 180   | ----- | 952    | -----  | 133    | ----- | 270   | 884    | -----  |
| TOTAL | 9,269 | 10,957 | 14,797 | 7,962 | 5,100 | 23,905 | 30,343 | 12,623 | 3,835 | 5,720 | 13,027 | 31,508 |
| MEAN  | 299   | 365    | 477    | 257   | 176   | 771    | 1,011  | 407    | 128   | 185   | 420    | 1,050  |
| MAX   | 474   | 520    | 774    | 331   | 200   | 2,120  | 1,380  | 877    | 163   | 350   | 978    | 4,240  |
| MIN   | 226   | 262    | 256    | 180   | 160   | 180    | 711    | 132    | 88    | 102   | 181    | 192    |
| CFSM  | .60   | .73    | .95    | .51   | .35   | 1.54   | 2.02   | .81    | .26   | .37   | .84    | 2.10   |
| IN.   | .69   | .82    | 1.10   | .59   | .38   | 1.78   | 2.26   | .94    | .29   | .43   | .97    | 2.34   |

CAL YR 1971 TOTAL 144,555 MEAN 396 MAX 2,080 MIN 93 CFSM .79 IN 10.75  
WTR YR 1972 TOTAL 169,046 MEAN 462 MAX 4,240 MIN 88 CFSM .92 IN 12.58

## WISCONSIN RIVER BASIN

115

05403630 Hulburt Creek near Wisconsin Dells, Wis.

LOCATION.--Lat 43°37'37", long 89°48'36", in SW 1/4 sec.5, T.13 N., R.6 E., Sauk County, on left bank 300 ft upstream from highway bridge, 2.0 miles west of Wisconsin Dells, and 1.6 miles upstream from mouth.

DRAINAGE AREA.--11.1 sq mi.

RECORDS AVAILABLE.--October 1970 to current year.

GAGE.--Water-stage recorder.

EXTREMES.--Current year: Maximum discharge, 93 cfs Aug. 26 (gage height, 4.76 ft); minimum, 1.3 cfs June 24.  
Period of record: Maximum discharge, 93 cfs Aug. 26, 1972 (gage height, 4.76 ft); minimum, 1.3 cfs June 24, 1972.

REMARKS.--Records fair through May and poor thereafter.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 2.9  | 4.6   | 3.9   | 3.5   | 3.1   | 3.8   | 4.2   | 5.3   | 2.7   | 2.4  | 2.7   | 17    |
| 2     | 2.6  | 4.2   | 3.9   | 3.5   | 3.1   | 3.5   | 4.4   | 5.8   | 2.6   | 4.1  | 6.7   | 8.2   |
| 3     | 4.0  | 4.3   | 4.0   | 3.3   | 3.1   | 3.3   | 4.4   | 5.4   | 2.3   | 2.8  | 3.4   | 5.3   |
| 4     | 3.0  | 3.5   | 4.0   | 3.3   | 3.1   | 3.4   | 4.3   | 4.7   | 2.4   | 2.2  | 2.4   | 5.0   |
| 5     | 2.7  | 3.5   | 4.1   | 3.6   | 3.1   | 3.4   | 4.9   | 4.4   | 2.6   | 2.1  | 2.3   | 4.8   |
| 6     | 2.6  | 3.4   | 4.3   | 3.8   | 3.0   | 3.3   | 7.1   | 4.3   | 2.4   | 2.1  | 3.6   | 4.8   |
| 7     | 2.4  | 3.3   | 4.6   | 3.5   | 3.0   | 3.3   | 7.0   | 4.2   | 2.3   | 2.2  | 8.5   | 4.7   |
| 8     | 2.6  | 3.4   | 4.6   | 3.5   | 3.0   | 3.4   | 4.7   | 4.1   | 2.2   | 2.2  | 4.8   | 4.7   |
| 9     | 2.6  | 3.3   | 4.7   | 3.6   | 3.0   | 3.2   | 4.8   | 4.1   | 2.4   | 3.5  | 3.9   | 4.4   |
| 10    | 2.6  | 4.0   | 6.1   | 3.5   | 3.0   | 3.2   | 5.6   | 4.0   | 2.4   | 2.5  | 2.8   | 4.4   |
| 11    | 2.6  | 4.0   | 5.2   | 3.4   | 3.1   | 3.6   | 6.0   | 3.9   | 2.3   | 2.6  | 4.4   | 5.2   |
| 12    | 2.6  | 4.0   | 4.1   | 3.4   | 3.1   | 4.0   | 5.8   | 3.8   | 4.2   | 3.1  | 4.1   | 6.2   |
| 13    | 2.6  | 4.1   | 3.5   | 3.2   | 3.1   | 4.0   | 7.7   | 4.2   | 2.9   | 2.8  | 3.0   | 26    |
| 14    | 2.6  | 4.1   | 3.8   | 3.2   | 3.1   | 5.7   | 5.7   | 7.6   | 12    | 2.2  | 2.8   | 9.1   |
| 15    | 2.7  | 4.1   | 11    | 3.2   | 3.2   | 7.4   | 5.6   | 9.4   | 4.3   | 2.8  | 3.2   | 6.4   |
| 16    | 2.6  | 5.7   | 6.1   | 3.2   | 3.2   | 9.4   | 7.0   | 4.9   | 2.8   | 2.7  | 3.0   | 5.7   |
| 17    | 2.7  | 5.3   | 4.8   | 3.2   | 3.3   | 29    | 5.8   | 4.1   | 2.3   | 4.1  | 2.6   | 5.6   |
| 18    | 2.9  | 5.8   | 3.4   | 3.2   | 3.3   | 44    | 5.6   | 3.9   | 2.2   | 4.2  | 2.3   | 17    |
| 19    | 2.9  | 4.9   | 3.6   | 3.2   | 3.2   | 22    | 5.3   | 3.8   | 2.2   | 2.9  | 4.3   | 11    |
| 20    | 2.7  | 4.4   | 3.6   | 3.2   | 3.3   | 22    | 4.9   | 3.5   | 2.2   | 2.9  | 6.2   | 8.6   |
| 21    | 3.2  | 4.1   | 3.5   | 3.2   | 3.2   | 18    | 8.8   | 3.4   | 2.3   | 3.6  | 4.3   | 7.9   |
| 22    | 3.2  | 3.9   | 3.4   | 3.4   | 3.2   | 7.7   | 14    | 3.4   | 2.1   | 2.6  | 5.4   | 6.2   |
| 23    | 2.8  | 3.9   | 3.8   | 3.2   | 3.2   | 5.4   | 7.0   | 3.3   | 1.8   | 3.5  | 4.0   | 5.8   |
| 24    | 3.0  | 4.1   | 4.0   | 3.4   | 3.2   | 4.9   | 5.8   | 3.2   | 1.9   | 2.9  | 3.5   | 5.8   |
| 25    | 3.0  | 4.2   | 3.8   | 3.3   | 3.2   | 4.7   | 5.4   | 3.3   | 2.0   | 2.4  | 7.1   | 10    |
| 26    | 2.9  | 4.7   | 3.8   | 3.4   | 3.1   | 4.7   | 5.0   | 3.1   | 2.0   | 4.7  | 59    | 23    |
| 27    | 3.4  | 4.7   | 3.5   | 3.3   | 3.2   | 4.6   | 4.8   | 3.0   | 2.0   | 5.6  | 13    | 10    |
| 28    | 3.4  | 4.3   | 3.2   | 3.3   | 3.3   | 4.7   | 4.7   | 2.8   | 2.4   | 2.8  | 7.1   | 10    |
| 29    | 3.1  | 4.4   | 3.2   | 3.3   | 3.3   | 4.7   | 4.8   | 2.9   | 2.3   | 2.6  | 7.0   | 15    |
| 30    | 3.3  | 4.1   | 3.8   | 3.2   | ----- | 4.3   | 4.8   | 5.8   | 2.2   | 2.3  | 4.9   | 8.8   |
| 31    | 3.4  | ----- | 3.5   | 3.2   | ----- | 4.3   | ----- | 3.4   | ----- | 2.2  | 4.9   | ----- |
| TOTAL | 89.3 | 130.8 | 132.8 | 103.7 | 91.3  | 252.9 | 175.9 | 133.0 | 82.7  | 91.6 | 197.2 | 266.6 |
| MEAN  | 2.88 | 4.36  | 4.28  | 3.35  | 3.15  | 8.16  | 5.86  | 4.29  | 2.76  | 2.95 | 6.36  | 8.89  |
| MAX   | 4.0  | 6.2   | 11    | 3.8   | 3.3   | 44    | 14    | 9.4   | 12    | 5.6  | 59    | 26    |
| MIN   | 2.4  | 3.3   | 3.2   | 3.2   | 3.0   | 3.2   | 4.2   | 2.8   | 1.8   | 2.1  | 2.3   | 4.4   |
| CFSM  | .26  | .39   | .49   | .30   | .28   | .74   | .53   | .39   | .25   | .27  | .57   | .80   |
| IN.   | .30  | .44   | .45   | .35   | .31   | .85   | .59   | .45   | .28   | .31  | .66   | .89   |

CAL YR 1971 TOTAL 1661.5 MEAN 4.55 MAX 38 MIN 2.4 CFSM .41 IN 5.57  
WTR YR 1972 TOTAL 1747.8 MEAN 4.78 MAX 59 MIN 1.8 CFSM .43 IN 5.86

## PEAK DISCHARGE (BASE, 30 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 3-18 | 0200 | 3.97  | 76        | 9-13 | 0600 | 3.74  | 52        |
| 8-26 | 0800 | 4.76  | 93        | 9-26 | 0900 | 3.38  | 44        |
| 9-1  | 1300 | 3.13  | 33        |      |      |       |           |

## WISCONSIN RIVER BASIN

05403700 Dell Creek near Lake Delton, Wis.

LOCATION.--Lat 43°33'05", long 89°51'55", in NW 1/4 sec.2, T.12 N., R.5 E., on right bank 50 ft upstream from highway bridge, 6.0 miles southwest of Lake Delton, and 7.0 miles upstream from mouth.

DRAINAGE AREA.--44.9 sq mi.

RECORDS AVAILABLE.--September 1957 to September 1964, October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 847.49 ft above mean sea level, datum of 1929. Prior to Oct. 4, 1957, wire-weight gage 50 ft downstream at same datum.

AVERAGE DISCHARGE.--10 years, 27.3 cfs (8.26 inches per year).

EXTREMES.--Current year: Maximum discharge, 276 cfs Mar. 17 (gage height, 6.30 ft); minimum, 15 cfs Mar. 11 (gage height, 2.21 ft).

Period of record: Maximum discharge, 992 cfs Mar. 2, 1965 (gage height, 8.38 ft); minimum, 10.9 cfs Aug. 1, 2, 1959 (gage height, 1.75 ft).

REMARKS.--Records good except those for periods of no gage-height record, winter periods, and periods of back-water from beaver dams, which are poor.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC  | JAN  | FEB   | MAR   | APR   | MAY  | JUN   | JUL  | AUG   | SEP   |
|-------|------|-------|------|------|-------|-------|-------|------|-------|------|-------|-------|
| 1     | 21   | 27    | 24   | 21   | 19    | 20    | 28    | 31   | 20    | 20   | 20    | 98    |
| 2     | 21   | 10    | 23   | 21   | 18    | 20    | 28    | 35   | 19    | 22   | 41    | 59    |
| 3     | 24   | 35    | 23   | 20   | 18    | 19    | 29    | 34   | 19    | 19   | 55    | 28    |
| 4     | 22   | 25    | 23   | 20   | 18    | 19    | 28    | 29   | 18    | 18   | 47    | 26    |
| 5     | 20   | 23    | 23   | 21   | 18    | 18    | 30    | 26   | 20    | 18   | 45    | 25    |
| 6     | 19   | 23    | 25   | 22   | 18    | 14    | 38    | 27   | 20    | 18   | 48    | 25    |
| 7     | 19   | 22    | 27   | 23   | 18    | 18    | 54    | 26   | 18    | 18   | 34    | 25    |
| 8     | 19   | 22    | 28   | 23   | 18    | 17    | 33    | 25   | 18    | 18   | 28    | 24    |
| 9     | 19   | 23    | 29   | 23   | 18    | 17    | 30    | 24   | 19    | 28   | 25    | 23    |
| 10    | 20   | 25    | 46   | 23   | 18    | 17    | 30    | 24   | 19    | 20   | 21    | 23    |
| 11    | 18   | 26    | 36   | 22   | 18    | 17    | 38    | 24   | 18    | 19   | 24    | 25    |
| 12    | 19   | 27    | 27   | 21   | 19    | 20    | 35    | 23   | 28    | 21   | 29    | 28    |
| 13    | 19   | 27    | 22   | 21   | 19    | 22    | 51    | 25   | 22    | 21   | 23    | 131   |
| 14    | 19   | 27    | 21   | 20   | 19    | 42    | 42    | 31   | 26    | 19   | 25    | 102   |
| 15    | 18   | 28    | 43   | 20   | 20    | 68    | 36    | 30   | 34    | 19   | 36    | 32    |
| 16    | 19   | 29    | 55   | 20   | 20    | 101   | 42    | 25   | 22    | 18   | 25    | 27    |
| 17    | 18   | 32    | 26   | 20   | 21    | 150   | 41    | 23   | 21    | 22   | 22    | 26    |
| 18    | 18   | 33    | 21   | 20   | 20    | 213   | 34    | 23   | 20    | 25   | 20    | 76    |
| 19    | 24   | 43    | 21   | 20   | 20    | 180   | 33    | 22   | 19    | 20   | 35    | 69    |
| 20    | 30   | 26    | 22   | 21   | 20    | 132   | 30    | 22   | 19    | 19   | 36    | 42    |
| 21    | 25   | 24    | 22   | 22   | 20    | 127   | 42    | 21   | 19    | 32   | 28    | 35    |
| 22    | 22   | 22    | 21   | 22   | 21    | 87    | 109   | 20   | 18    | 20   | 29    | 24    |
| 23    | 21   | 21    | 20   | 22   | 20    | 32    | 57    | 20   | 18    | 22   | 27    | 27    |
| 24    | 21   | 22    | 18   | 22   | 20    | 32    | 36    | 20   | 18    | 21   | 25    | 26    |
| 25    | 19   | 23    | 18   | 21   | 20    | 30    | 31    | 20   | 18    | 19   | 60    | 45    |
| 26    | 19   | 27    | 19   | 20   | 21    | 30    | 29    | 19   | 18    | 25   | 145   | 102   |
| 27    | 21   | 28    | 22   | 20   | 20    | 28    | 28    | 19   | 18    | 36   | 116   | 93    |
| 28    | 21   | 25    | 20   | 19   | 20    | 29    | 27    | 19   | 18    | 23   | 58    | 46    |
| 29    | 20   | 26    | 20   | 19   | 20    | 30    | 29    | 19   | 22    | 20   | 28    | 80    |
| 30    | 21   | 25    | 23   | 19   | ----- | 29    | 28    | 26   | 18    | 19   | 25    | 83    |
| 31    | 22   | ----- | 21   | 19   | ----- | 28    | ----- | 22   | ----- | 19   | 24    | ----- |
| TOTAL | 638  | 836   | 749  | 647  | 559   | 1,610 | 1,126 | 754  | 604   | 658  | 1,204 | 1,475 |
| MEAN  | 20.6 | 27.9  | 25.5 | 20.9 | 19.3  | 51.9  | 37.5  | 24.3 | 20.1  | 21.2 | 38.8  | 49.2  |
| MAX   | 30   | 70    | 45   | 23   | 21    | 213   | 109   | 35   | 34    | 36   | 145   | 131   |
| MIN   | 18   | 21    | 18   | 19   | 18    | 17    | 27    | 19   | 18    | 18   | 20    | 23    |
| CFSM  | .46  | .62   | .57  | .47  | .43   | 1.16  | .84   | .54  | .45   | .47  | .86   | 1.10  |
| IN.   | .53  | .69   | .65  | .54  | .46   | 1.33  | .93   | .62  | .50   | .55  | 1.00  | 1.22  |

CAL YR 1971 TOTAL 10,129 MEAN 27.8 MAX 221 MIN 18 CFSM .62 IN 8.39  
WTR YR 1972 TOTAL 10,900 MEAN 29.8 MAX 213 MIN 17 CFSM .66 IN 9.03

NOTE.--Stage-discharge relation affected by beaver dams from Oct. 1 to Dec. 31, Aug. 2 to Sept. 30. No gage-height record Nov. 5-17, Jan. 1-6.

05404000 Wisconsin River near Wisconsin Dells, Wis.

LOCATION.--Lat 43°36'22", long 89°45'25", in NW 1/4 sec.14, T.13 N., R.6 E., Sauk County, on right bank 0.5 mile downstream from Dell Creek and 3.0 miles downstream from Wisconsin Dells.

DRAINAGE AREA.--7,830 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 801.48 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1963, water-stage recorder at same site at datum 5.00 ft higher.

AVERAGE DISCHARGE.--38 years, 6,671 cfs.

EXTREMES.--Current year: Maximum discharge, 45,500 cfs Sept. 29 (gage height, 17.77 ft); minimum daily, 2,980 cfs July 3.

Period of record: Maximum discharge, 72,200 cfs Sept. 14, 1938 (gage height, 23.83 ft, present datum); minimum daily, 1,060 cfs Aug. 19, 1936.

REMARKS.--Records good. Flow regulated by 23 reservoirs above station (see p. 129). In 1938, when the maximum of record occurred, there were 21 reservoirs above station, the two large reservoirs, Petenwell and Castle Rock not yet in existence. Diurnal fluctuation caused by powerplant of Wisconsin Power & Light Co. at Wisconsin Dells, which shuts down frequently to 1,000 KWH, about 660 cfs, from powerplant records.

REVISIONS (WATER YEARS).--WSP 1728: 1936(m). WSP 1914: 1951, 1953-55.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 17-20, Jan. 5-8, Jan. 13 to Mar. 16.)

|      |        |      |        |
|------|--------|------|--------|
| 5.0  | 2,870  | 13.0 | 24,300 |
| 7.0  | 7,650  | 15.0 | 31,800 |
| 9.0  | 12,800 | 17.0 | 41,300 |
| 11.0 | 18,200 | 18.0 | 46,800 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY           | OCT     | NOV       | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|---------------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1             | 7.220   | 5.480     | 6.550   | 8.020   | 5.400   | 6.200   | 13.000  | 13.800  | 4.400   | 3.660   | 4.360   | 10.000  |
| 2             | 8.620   | 6.240     | 6.550   | 7.420   | 5.400   | 5.000   | 12.900  | 15.870  | 4.400   | 3.520   | 4.730   | 9.970   |
| 3             | 9.680   | 8.430     | 6.600   | 7.120   | 5.400   | 6.600   | 12.800  | 17.300  | 4.400   | 2.980   | 4.700   | 8.960   |
| 4             | 11.500  | 9.540     | 6.000   | 5.410   | 5.600   | 6.800   | 12.100  | 14.500  | 4.300   | 3.050   | 4.890   | 7.050   |
| 5             | 10.300  | 9.510     | 6.150   | 4.900   | 5.600   | 5.600   | 11.200  | 13.300  | 4.500   | 3.830   | 4.960   | 5.070   |
| 6             | 9.910   | 8.510     | 5.390   | 5.600   | 5.600   | 6.200   | 10.900  | 13.100  | 4.700   | 3.730   | 4.330   | 5.150   |
| 7             | 9.710   | 7.670     | 6.050   | 7.000   | 5.400   | 6.800   | 10.400  | 12.100  | 4.900   | 3.510   | 3.700   | 5.490   |
| 8             | 8.150   | 7.180     | 5.720   | 6.800   | 5.000   | 6.600   | 10.100  | 10.500  | 4.830   | 3.790   | 4.280   | 5.450   |
| 9             | 6.920   | 6.870     | 6.180   | 5.720   | 5.600   | 6.600   | 10.100  | 9.950   | 4.940   | 3.580   | 5.760   | 5.210   |
| 10            | 5.680   | 6.230     | 6.180   | 5.340   | 6.000   | 6.800   | 9.340   | 9.730   | 5.390   | 3.690   | 5.610   | 4.920   |
| 11            | 5.200   | 6.010     | 6.950   | 5.900   | 5.800   | 6.800   | 9.100   | 9.670   | 5.090   | 3.850   | 4.710   | 4.650   |
| 12            | 5.200   | 6.190     | 7.200   | 5.600   | 5.800   | 6.200   | 9.960   | 9.530   | 5.140   | 4.660   | 5.620   | 4.810   |
| 13            | 4.800   | 5.920     | 7.750   | 6.000   | 6.000   | 6.200   | 10.800  | 9.520   | 5.680   | 4.830   | 5.330   | 5.790   |
| 14            | 4.400   | 5.690     | 8.950   | 6.200   | 5.800   | 6.600   | 13.900  | 8.540   | 6.960   | 5.090   | 5.070   | 6.080   |
| 15            | 4.700   | 5.340     | 9.260   | 5.200   | 5.600   | 7.200   | 17.100  | 7.130   | 7.190   | 5.120   | 4.390   | 6.040   |
| 16            | 5.000   | 5.460     | 9.730   | 5.800   | 5.400   | 7.000   | 21.700  | 5.850   | 6.870   | 4.150   | 4.410   | 5.750   |
| 17            | 4.400   | 6.310     | 9.800   | 5.800   | 5.800   | 9.370   | 27.200  | 5.460   | 6.960   | 4.180   | 4.720   | 4.550   |
| 18            | 4.700   | 5.780     | 10.000  | 6.200   | 5.800   | 10.100  | 31.400  | 6.610   | 5.600   | 4.740   | 4.440   | 5.570   |
| 19            | 4.700   | 6.120     | 10.000  | 6.000   | 5.400   | 9.940   | 38.000  | 7.140   | 4.620   | 5.640   | 6.190   | 5.900   |
| 20            | 4.800   | 6.280     | 10.000  | 5.800   | 6.200   | 9.910   | 42.000  | 7.270   | 4.780   | 5.390   | 7.260   | 7.850   |
| 21            | 5.000   | 6.180     | 9.730   | 5.400   | 6.400   | 11.700  | 41.900  | 6.620   | 4.930   | 5.120   | 8.940   | 8.020   |
| 22            | 5.000   | 6.280     | 9.650   | 5.800   | 6.200   | 11.700  | 41.000  | 5.320   | 4.910   | 5.230   | 10.600  | 7.920   |
| 23            | 5.400   | 6.050     | 8.620   | 5.600   | 6.200   | 11.000  | 39.800  | 6.200   | 4.740   | 4.530   | 12.400  | 8.000   |
| 24            | 5.800   | 5.550     | 7.680   | 5.800   | 6.200   | 11.500  | 31.800  | 5.950   | 4.320   | 3.390   | 11.400  | 7.930   |
| 25            | 5.200   | 5.510     | 7.150   | 4.600   | 6.200   | 11.900  | 22.200  | 5.750   | 3.890   | 4.010   | 10.400  | 8.670   |
| 26            | 5.200   | 6.080     | 7.100   | 5.000   | 6.200   | 12.000  | 20.200  | 5.610   | 3.530   | 3.450   | 13.200  | 11.500  |
| 27            | 5.000   | 7.020     | 6.900   | 5.400   | 6.200   | 12.100  | 19.800  | 5.400   | 3.460   | 4.100   | 14.800  | 23.400  |
| 28            | 5.200   | 6.950     | 7.080   | 5.600   | 6.400   | 13.100  | 20.200  | 4.900   | 4.190   | 4.160   | 14.700  | 34.800  |
| 29            | 5.220   | 6.320     | 7.720   | 6.000   | 6.300   | 13.400  | 17.400  | 4.200   | 3.700   | 4.500   | 14.100  | 43.200  |
| 30            | 5.230   | 5.700     | 7.500   | 5.400   | -----   | 13.200  | 14.100  | 4.200   | 3.870   | 4.400   | 12.200  | 41.500  |
| 31            | 5.170   | -----     | 7.750   | 5.400   | -----   | 13.100  | -----   | 4.300   | -----   | 4.480   | 10.100  | -----   |
| TOTAL         | 193.010 | 196.400   | 237.890 | 181.830 | 168.900 | 277.220 | 602.400 | 265.250 | 147.190 | 130.360 | 232.300 | 319.200 |
| MEAN          | 6.226   | 6.547     | 7.674   | 5.865   | 5.824   | 8.943   | 20.080  | 8.556   | 4.906   | 4.205   | 7.494   | 10.640  |
| MAX           | 11.500  | 9.540     | 10.000  | 8.020   | 6.400   | 13.400  | 42.000  | 17.300  | 7.190   | 5.640   | 14.800  | 43.200  |
| MIN           | 4.400   | 5.340     | 5.390   | 4.600   | 5.000   | 5.000   | 9.100   | 4.200   | 3.460   | 2.980   | 3.700   | 4.550   |
| CAL YEAR 1971 | TOTAL   | 2,695,930 | MEAN    | 7.386   | MAX     | 35,400  | MIN     | 2,500   |         |         |         |         |
| WTR YEAR 1972 | TOTAL   | 2,951,950 | MEAN    | 8.065   | MAX     | 43,200  | MIN     | 2,980   |         |         |         |         |

## WISCONSIN RIVER BASIN

05404500 Devils Lake near Baraboo, Wis.

LOCATION.--Lat 43°25'18", long 89°43'38", in NW 1/4 NE 1/4 sec.24, T.11 N., R.6 E., Sauk County, in Devils Lake State Park, 3.5 miles south of Baraboo.

DRAINAGE AREA.--5.64 sq mi. Area of Devils Lake, 361 acres.

PERIOD OF RECORD.--June 1922 to August 1930, June to August 1932, June 1934 to current year (fragmentary).

GAGE.--Nonrecording gage. Elevation of lake from reference mark read about twice a week except in winter. Datum of gage is 956.39 ft above mean sea level, unadjusted.

EXTREMES.--Current year: Maximum gage height observed, 7.71 ft May 14; minimum observed, 5.55 ft Mar. 20.  
Period of record: Maximum gage height observed, 10.6 ft June 1, 1927; minimum observed, 1.49 ft Feb. 8, 1965.

REMARKS.--Lake has no surface outlet. Lake was ice covered Dec. 28 to Apr. 22. Add 955.00 ft to obtain elevation above mean sea level.

COOPERATION.--Observer services furnished by Ralph T. Tuttle, custodian, Devils Lake State Park.

## GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | OCT  | NOV   | DEC  | JAN  | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-----|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1   |      |       | 5.64 |      |       |      |       | 7.39 | 7.33  |      |      |       |
| 2   |      |       |      |      |       |      |       | 7.50 |       |      | 6.71 | 6.97  |
| 3   |      |       |      |      | 5.82  |      |       |      |       |      |      |       |
| 4   |      |       |      |      |       |      | 6.23  | 7.55 |       |      |      |       |
| 5   |      |       |      |      |       |      |       |      | 7.26  | 6.66 |      |       |
| 6   |      |       |      |      |       |      |       | 7.60 |       |      |      | 6.85  |
| 7   |      |       |      | 5.99 |       |      |       | 7.64 | 7.23  |      | 6.75 |       |
| 8   |      | 5.79  |      |      |       |      | 6.29  |      |       |      |      |       |
| 9   |      |       |      |      |       |      |       | 7.66 |       |      |      | 6.79  |
| 10  |      |       | 5.72 |      | 5.82  |      |       |      | 7.17  |      |      |       |
| 11  |      |       |      |      |       |      |       |      |       |      |      |       |
| 12  |      |       |      |      |       |      | 6.39  | 7.69 | 7.21  | 6.71 | 6.77 | 6.73  |
| 13  | 6.24 |       |      |      |       |      | 6.47  |      |       |      |      | 6.89  |
| 14  |      |       |      | 5.94 | 5.80  |      | 6.57  | 7.71 | 7.09  |      |      |       |
| 15  |      |       | 6.04 |      |       |      |       |      |       | 6.67 |      |       |
| 16  |      |       |      |      |       |      |       | 7.69 | 7.02  |      | 6.71 |       |
| 17  | 6.10 | 5.95  |      |      |       |      | 6.67  |      |       | 6.67 |      |       |
| 18  |      |       |      |      |       |      | 6.75  | 7.64 |       |      |      | 7.11  |
| 19  |      |       |      |      |       |      |       |      |       | 6.60 |      |       |
| 20  |      |       |      |      |       | 5.55 | 6.87  | 7.57 | 6.89  |      | 6.77 |       |
| 21  |      |       |      | 5.87 |       |      | 6.94  |      |       |      |      | 7.19  |
| 22  |      |       |      |      |       |      | 7.10  | 7.49 | 6.81  |      |      |       |
| 23  | 6.04 |       |      |      |       |      | 7.17  |      |       |      |      |       |
| 24  |      |       |      |      |       |      | 7.27  |      | 6.77  |      | 6.84 | 7.25  |
| 25  |      |       |      |      |       |      |       | 7.47 | 6.74  | 6.50 |      |       |
| 26  | 5.97 | 5.74  |      |      |       |      | 7.29  |      |       |      | 7.01 | 7.41  |
| 27  |      |       |      | 5.84 |       |      |       |      | 6.69  |      |      |       |
| 28  |      |       |      |      |       | 6.05 | 7.33  |      |       | 6.53 |      |       |
| 29  |      |       |      |      |       |      |       |      |       |      |      |       |
| 30  |      |       |      |      | ----- |      |       | 7.37 | 6.65  |      |      | 7.39  |
| 31  | 5.93 | ----- | 6.08 |      | ----- |      | ----- |      | ----- | 6.47 |      | ----- |

05405000 Baraboo River near Baraboo, Wis.

LOCATION.--Lat 43°28'51", long 89°38'09", in NW 1/4 sec.35, T.12 N., R.7 E., Sauk County, on left bank 50 ft downstream from highway bridge, 0.3 mile downstream from Rowley Creek and 5.3 miles east of Baraboo.

DRAINAGE AREA.--600 sq mi.

PERIOD OF RECORD.--December 1913 to March 1922. September 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 788.21 ft above mean sea level. Dec. 18, 1913, to Mar. 31, 1922, nonrecording gage at bridge 2.3 miles upstream at datum 7.6 ft higher. Sept. 24, 1942, to June 10, 1963, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--37 years (1914-21, 1942-current year), 360 cfs (8.15 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,350 cfs Mar. 22 (gage height, 17.65 ft); minimum, 118 cfs Jan. 27, result of freezeup.

Period of record: Maximum discharge observed, 7,900 cfs Mar. 26, 1917 (gage height, 17.5 ft, estimated, site and datum then in use), from rating curve extended above 6,000 cfs; minimum observed, 9 cfs Feb. 17, 1944 (gage height, 5.08 ft); minimum daily, 26 cfs Oct. 6, 1950.

Flood of Aug. 6, 1935, reached a stage of 15.8 ft, from floodmarks, site and datum in use in 1922 (discharge, 5,100 cfs).

REMARKS.--Records good except those for winter periods, which are fair. Diurnal fluctuation from several powerplants at Baraboo.

REVISIONS (WATER YEARS).--WSP 455: 1915. WSP 505: 1917(M). WSP 1438: 1914-15(M), 1916-17, 1918-20(M), 1944(M), 1949(M). WSP 1728: Drainage area. WSP 1914: 1948, 1950, 1956.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 4-6, Jan. 9 to Feb. 29, Mar. 2-5.)

|     |     |      |       |
|-----|-----|------|-------|
| 6.4 | 107 | 11.0 | 1,180 |
| 7.0 | 226 | 13.0 | 1,740 |
| 8.0 | 436 | 15.0 | 2,400 |
| 9.0 | 675 | 18.0 | 3,490 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT           | NOV   | DEC    | JAN      | FEB       | MAR     | APR      | MAY     | JUN   | JUL   | AUG    | SEP    |
|-------------|---------------|-------|--------|----------|-----------|---------|----------|---------|-------|-------|--------|--------|
| 1           | 202           | 237   | 262    | 216      | 170       | 170     | 324      | 355     | 159   | 130   | 209    | 1,240  |
| 2           | 183           | 335   | 224    | 212      | 170       | 170     | 311      | 369     | 166   | 172   | 291    | 1,150  |
| 3           | 205           | 434   | 250    | 210      | 160       | 170     | 307      | 422     | 166   | 176   | 388    | 971    |
| 4           | 207           | 578   | 242    | 200      | 160       | 170     | 305      | 453     | 166   | 176   | 336    | 646    |
| 5           | 218           | 593   | 248    | 200      | 160       | 170     | 310      | 443     | 166   | 176   | 255    | 404    |
| 6           | 232           | 493   | 246    | 200      | 160       | 177     | 360      | 399     | 164   | 169   | 223    | 320    |
| 7           | 211           | 379   | 249    | 189      | 160       | 181     | 491      | 352     | 157   | 145   | 320    | 287    |
| 8           | 184           | 306   | 268    | 186      | 160       | 181     | 578      | 325     | 157   | 124   | 443    | 265    |
| 9           | 184           | 243   | 296    | 190      | 160       | 173     | 635      | 306     | 160   | 124   | 466    | 248    |
| 10          | 184           | 228   | 336    | 190      | 160       | 178     | 624      | 284     | 160   | 158   | 434    | 238    |
| 11          | 184           | 227   | 369    | 190      | 160       | 186     | 524      | 261     | 160   | 220   | 355    | 231    |
| 12          | 184           | 228   | 421    | 190      | 160       | 216     | 485      | 248     | 169   | 205   | 273    | 227    |
| 13          | 184           | 227   | 420    | 180      | 170       | 235     | 559      | 240     | 168   | 182   | 248    | 510    |
| 14          | 180           | 220   | 380    | 180      | 180       | 328     | 618      | 236     | 175   | 204   | 313    | 931    |
| 15          | 176           | 210   | 427    | 170      | 180       | 576     | 739      | 248     | 269   | 220   | 352    | 867    |
| 16          | 175           | 220   | 699    | 170      | 180       | 915     | 893      | 268     | 348   | 209   | 354    | 888    |
| 17          | 175           | 229   | 692    | 170      | 180       | 1,330   | 987      | 273     | 305   | 188   | 355    | 917    |
| 18          | 178           | 291   | 571    | 170      | 180       | 1,620   | 871      | 263     | 241   | 189   | 299    | 1,100  |
| 19          | 185           | 338   | 581    | 170      | 170       | 1,840   | 705      | 245     | 204   | 202   | 327    | 816    |
| 20          | 192           | 361   | 518    | 180      | 170       | 2,160   | 582      | 232     | 182   | 223   | 1,170  | 782    |
| 21          | 226           | 359   | 433    | 180      | 170       | 2,710   | 551      | 221     | 172   | 281   | 1,280  | 844    |
| 22          | 249           | 335   | 381    | 180      | 170       | 3,280   | 1,060    | 213     | 165   | 233   | 1,260  | 804    |
| 23          | 276           | 291   | 316    | 180      | 170       | 2,960   | 1,250    | 199     | 166   | 225   | 1,170  | 737    |
| 24          | 275           | 251   | 274    | 180      | 170       | 2,480   | 1,140    | 192     | 164   | 214   | 1,110  | 546    |
| 25          | 245           | 231   | 250    | 170      | 180       | 1,990   | 1,090    | 189     | 161   | 210   | 985    | 489    |
| 26          | 225           | 230   | 241    | 170      | 180       | 1,490   | 968      | 174     | 160   | 222   | 1,920  | 765    |
| 27          | 208           | 239   | 240    | 170      | 180       | 869     | 665      | 162     | 160   | 224   | 2,170  | 1,030  |
| 28          | 215           | 257   | 234    | 170      | 180       | 503     | 460      | 159     | 154   | 263   | 1,680  | 1,090  |
| 29          | 207           | 282   | 220    | 170      | 180       | 405     | 393      | 156     | 144   | 307   | 1,480  | 1,340  |
| 30          | 214           | 288   | 217    | 170      | -----     | 361     | 368      | 158     | 130   | 303   | 1,500  | 1,660  |
| 31          | 228           | ----- | 228    | 170      | -----     | 333     | -----    | 157     | ----- | 239   | 1,420  | -----  |
| TOTAL       | 6,391         | 9,140 | 10,733 | 5,673    | 4,930     | 28,527  | 19,153   | 8,202   | 5,418 | 6,313 | 23,386 | 22,343 |
| MEAN        | 206           | 305   | 346    | 183      | 170       | 920     | 638      | 265     | 181   | 204   | 754    | 745    |
| MAX         | 276           | 593   | 699    | 216      | 180       | 3,280   | 1,250    | 453     | 348   | 307   | 2,170  | 1,660  |
| MIN         | 175           | 210   | 217    | 170      | 160       | 170     | 305      | 156     | 130   | 124   | 209    | 227    |
| CFSM        | .34           | .51   | .58    | .31      | .28       | 1.53    | 1.06     | .44     | .30   | .34   | 1.26   | 1.24   |
| IN.         | .40           | .57   | .67    | .35      | .31       | 1.77    | 1.19     | .51     | .34   | .39   | 1.45   | 1.39   |
| CAL YR 1971 | TOTAL 129,816 |       |        | MEAN 356 | MAX 1,960 | MIN 130 | CFSM .59 | IN 8.05 |       |       |        |        |
| WTR YR 1972 | TOTAL 150,209 |       |        | MEAN 410 | MAX 3,280 | MIN 124 | CFSM .68 | IN 9.31 |       |       |        |        |

## WISCONSIN RIVER BASIN

05406050 Fish Lake near Sauk City, Wis.

LOCATION.--Lat 43°17'02", long 89°39'15", in NE 1/4 SW 1/4 sec.3, T.9 N., R.7 E., Dane County, on south side of lake near Ganser's Tavern and Dance Hall, 0.4 mile southwest of Crystal Lake, and 3.1 miles east of Sauk City.

DRAINAGE AREA.--3.79 sq mi. Area of Fish Lake, 252 acres.

PERIOD OF RECORD.--November 1966 to current year (fragmentary).

GAGE.--Nonrecording gage in lake bed. Altitude of gage is 853 ft (from topographic map).

EXTREMES.--Current year: Maximum gage height observed, 4.18 ft May 20; minimum observed, 3.23 ft Oct. 16.  
Period of record: Maximum gage height observed, 4.85 ft July 10, 1969; minimum observed, 3.02 ft Aug. 29, 1970.

REMARKS.--Lake has no surface outlet. Lake ice covered Dec. 5 to Apr. 23.

## GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | OCT  | NOV   | DEC  | JAN  | FEB   | MAR | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-----|------|-------|------|------|-------|-----|-------|------|-------|------|------|-------|
| 1   |      |       |      |      |       |     |       |      |       | 3.66 |      |       |
| 2   | 3.50 |       |      |      |       |     |       |      |       |      |      | 3.90  |
| 3   |      |       |      |      |       |     |       |      | 3.94  |      |      |       |
| 4   |      |       | 3.45 |      |       |     |       |      |       |      |      |       |
| 5   |      |       |      |      |       |     |       |      |       |      | 3.68 |       |
| 6   |      | 3.45  |      |      |       |     |       | 4.17 |       |      |      |       |
| 7   |      |       |      |      |       |     |       |      |       |      |      |       |
| 8   | 3.32 |       |      |      |       |     |       |      |       | 3.58 |      |       |
| 9   | 3.27 |       |      |      |       |     |       |      |       |      |      | 3.82  |
| 10  |      |       |      | 3.58 |       |     |       |      | 3.88  |      |      |       |
| 11  |      |       |      |      |       |     |       |      |       |      |      |       |
| 12  |      |       |      |      |       |     |       |      |       | 3.60 | 3.65 |       |
| 13  |      | 3.45  |      |      |       |     |       | 4.17 |       |      |      |       |
| 14  |      |       |      |      |       |     |       |      |       |      |      |       |
| 15  |      |       |      |      |       |     |       |      |       | 3.58 |      |       |
| 16  | 3.23 |       |      |      |       |     |       |      |       |      |      | 3.80  |
| 17  |      |       |      |      |       |     |       |      | 3.84  |      |      |       |
| 18  |      |       |      |      |       |     |       |      |       |      |      |       |
| 19  |      |       |      |      |       |     |       |      |       |      | 3.80 |       |
| 20  |      | 3.45  |      |      |       |     |       | 4.18 |       |      |      |       |
| 21  |      |       |      |      |       |     |       |      |       |      |      |       |
| 22  |      |       |      |      | 3.59  |     |       |      |       | 3.61 |      |       |
| 23  | 3.31 |       |      |      |       |     |       |      |       |      |      | 3.94  |
| 24  |      |       |      |      |       |     | 4.13  |      | 3.71  |      |      |       |
| 25  |      |       |      |      |       |     |       |      |       |      |      |       |
| 26  |      |       |      |      |       |     | 4.13  | 4.02 |       |      | 3.92 |       |
| 27  |      | 3.45  |      |      |       |     |       | 4.00 |       |      |      |       |
| 28  |      |       |      |      |       |     |       |      |       |      |      |       |
| 29  |      |       |      |      |       |     |       |      |       | 3.58 |      |       |
| 30  | 3.35 |       |      |      | ----- |     |       |      | 3.67  |      | 3.88 | 3.92  |
| 31  |      | ----- |      |      | ----- |     | ----- |      | ----- |      |      | ----- |

05406500 Black Earth Creek at Black Earth, Wis.

LOCATION.--Lat 43°08'03", long 89°43'56", in SW 1/4 sec.25, T.8 N., R.6 E., Dane County, on right bank, 0.8 mile east of Black Earth and 2.1 miles upstream from Vermont Creek.

DRAINAGE AREA.--46.4 sq mi (includes 3.6 sq mi without surface drainage).

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

GAGE.--Water-stage recorder. Datum of gage is 812.95 ft above mean sea level.

AVERAGE DISCHARGE.--18 years, 28.6 cfs (8.37 inches per year).

EXTREMES.--Current year: Maximum discharge, 451 cfs Mar. 17 (gage height, 4.39 ft); minimum, 14 cfs Mar. 8 (gage height, 1.63 ft).

Period of record: Maximum discharge, 1,750 cfs July 3, 1954 (gage height, 6.58 ft); minimum, 4.8 cfs Nov. 29, 1958 (gage height, 1.39 ft), result of freezeup.

REMARKS.--Records good.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Oct. 1 to Nov. 14, July 6 to Sept. 30; stage-discharge relation affected by ice Jan. 4-7, Mar. 5.)

|     |    |     |     |
|-----|----|-----|-----|
| 1.7 | 18 | 3.0 | 169 |
| 2.0 | 43 | 3.5 | 256 |
| 2.5 | 96 |     |     |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT          | NOV       | DEC     | JAN    | FEB       | MAR     | APR   | MAY  | JUN   | JUL  | AUG   | SEP   |
|-------------|--------------|-----------|---------|--------|-----------|---------|-------|------|-------|------|-------|-------|
| 1           | 24           | 32        | 23      | 28     | 24        | 28      | 29    | 35   | 26    | 19   | 26    | 30    |
| 2           | 24           | 108       | 22      | 28     | 24        | 25      | 28    | 37   | 26    | 20   | 37    | 30    |
| 3           | 26           | 41        | 22      | 28     | 23        | 22      | 29    | 35   | 25    | 18   | 30    | 28    |
| 4           | 24           | 32        | 22      | 27     | 23        | 23      | 28    | 33   | 24    | 19   | 27    | 27    |
| 5           | 24           | 32        | 22      | 26     | 23        | 22      | 35    | 32   | 26    | 20   | 27    | 26    |
| 6           | 24           | 29        | 24      | 26     | 22        | 22      | 54    | 36   | 25    | 21   | 28    | 26    |
| 7           | 24           | 28        | 28      | 26     | 22        | 24      | 48    | 37   | 26    | 21   | 28    | 25    |
| 8           | 24           | 27        | 30      | 27     | 22        | 23      | 34    | 35   | 26    | 21   | 28    | 26    |
| 9           | 24           | 28        | 32      | 28     | 22        | 22      | 38    | 33   | 26    | 22   | 27    | 25    |
| 10          | 25           | 27        | 40      | 27     | 22        | 21      | 37    | 31   | 26    | 22   | 26    | 25    |
| 11          | 25           | 27        | 38      | 28     | 22        | 78      | 38    | 31   | 26    | 22   | 31    | 27    |
| 12          | 24           | 26        | 32      | 27     | 23        | 142     | 37    | 30   | 27    | 22   | 27    | 27    |
| 13          | 24           | 25        | 29      | 27     | 24        | 55      | 37    | 31   | 25    | 24   | 26    | 43    |
| 14          | 24           | 26        | 28      | 26     | 25        | 51      | 36    | 35   | 25    | 23   | 29    | 35    |
| 15          | 24           | 25        | 70      | 25     | 25        | 76      | 39    | 34   | 25    | 26   | 32    | 30    |
| 16          | 24           | 25        | 50      | 25     | 26        | 140     | 38    | 32   | 24    | 23   | 30    | 28    |
| 17          | 23           | 25        | 34      | 26     | 26        | 217     | 36    | 31   | 25    | 25   | 28    | 27    |
| 18          | 23           | 30        | 36      | 27     | 25        | 169     | 34    | 31   | 25    | 25   | 27    | 27    |
| 19          | 25           | 28        | 34      | 29     | 25        | 88      | 33    | 30   | 24    | 24   | 44    | 30    |
| 20          | 24           | 27        | 32      | 28     | 24        | 43      | 32    | 29   | 24    | 24   | 57    | 29    |
| 21          | 23           | 26        | 31      | 27     | 24        | 90      | 47    | 29   | 24    | 24   | 41    | 30    |
| 22          | 25           | 24        | 31      | 27     | 24        | 62      | 66    | 28   | 23    | 23   | 34    | 28    |
| 23          | 24           | 24        | 30      | 27     | 24        | 41      | 47    | 27   | 24    | 26   | 32    | 27    |
| 24          | 24           | 24        | 30      | 26     | 24        | 38      | 40    | 27   | 22    | 24   | 35    | 28    |
| 25          | 26           | 24        | 29      | 25     | 24        | 36      | 37    | 27   | 21    | 24   | 44    | 34    |
| 26          | 25           | 26        | 24      | 24     | 24        | 34      | 36    | 26   | 22    | 26   | 64    | 43    |
| 27          | 25           | 24        | 30      | 23     | 24        | 33      | 34    | 25   | 22    | 26   | 45    | 36    |
| 28          | 25           | 24        | 28      | 23     | 25        | 32      | 33    | 27   | 23    | 25   | 36    | 33    |
| 29          | 24           | 24        | 26      | 23     | 23        | 32      | 34    | 27   | 23    | 24   | 32    | 34    |
| 30          | 25           | 23        | 29      | 23     | -----     | 31      | 33    | 26   | 20    | 25   | 31    | 32    |
| 31          | 24           | -----     | 28      | 24     | -----     | 30      | ----- | 26   | ----- | 26   | 29    | ----- |
| TOTAL       | 753          | 891       | 976     | 811    | 694       | 1,756   | 1,132 | 953  | 731   | 714  | 1,038 | 896   |
| MEAN        | 24.3         | 29.7      | 31.5    | 26.2   | 23.9      | 56.6    | 37.7  | 30.7 | 24.4  | 23.0 | 33.5  | 29.9  |
| MAX         | 26           | 108       | 70      | 29     | 24        | 217     | 66    | 37   | 27    | 26   | 64    | 43    |
| MIN         | 23           | 23        | 22      | 23     | 22        | 21      | 29    | 25   | 20    | 18   | 26    | 25    |
| CFS/M       | .52          | .64       | .68     | .56    | .52       | 1.22    | .81   | .66  | .53   | .50  | .72   | .64   |
| IN.         | .60          | .71       | .78     | .65    | .56       | 1.41    | .91   | .76  | .59   | .57  | .83   | .72   |
| CAL YR 1971 | TOTAL 11,274 | MEAN 30.9 | MAX 135 | MJN 19 | CFS/M .67 | IN 9.04 |       |      |       |      |       |       |
| WTR YR 1972 | TOTAL 11,345 | MEAN 31.0 | MAX 217 | MJN 18 | CFS/M .67 | IN 9.10 |       |      |       |      |       |       |

NOTE.--No gage-height record Jan. 15 to Feb. 21.

## WISCONSIN RIVER BASIN

05406640 Otter Creek near Highland, Wis.

LOCATION.--Lat 43°01'42", long 90°16'38", in NE 1/4 sec.5, T.6 N., R.2 E., Iowa County, on left bank 50 ft upstream from bridge on town road, 0.3 mile downstream from recreation reservoir outlet, 0.4 mile upstream from unnamed tributary, 2.2 miles upstream from Flint Creek and 5.3 miles southeast of Highland.

DRAINAGE AREA.--16.6 sq mi.

PERIOD OF RECORD.--May 1968 to June 1969, August 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 840 ft (from topographic map). Prior to August 1970 at site 100 ft upstream.

EXTREMES.--Current year: Maximum discharge, 83 cfs Mar. 17 (gage height, 2.07 ft); minimum, 1.2 cfs Nov. 11-17, 20-22 (gage height, 0.87 ft).

Period of record: Maximum discharge, 148 cfs Mar. 17, 1969 (gage height, 3.72 ft); minimum, 0.07 cfs Aug. 27, 1970 (gage height, 0.57 ft, result of shutdown of dam outlet).

REMARKS.--Records good except those less than 2.0 cfs, which are fair. Flow regulated by Black Hawk Lake reservoir 0.3 mile upstream. Pool surface area of reservoir is 222 acres. Supplemental discharge measurements on Narvison Branch which enters Otter Creek 0.5 mile downstream, are obtained to provide additional data for the drainage basin.

## Narvison Branch discharge measurements (discharge in cubic feet per second)

|                    |      |              |      |              |      |
|--------------------|------|--------------|------|--------------|------|
| Nov. 11, 1971..... | 1.18 | Apr. 24..... | 2.06 | Aug. 9.....  | 1.97 |
| Dec. 21.....       | 1.25 | May 23.....  | 1.83 | Sept. 21.... | 2.27 |
| Jan. 27, 1972..... | 1.37 | June 28..... | 1.84 |              |      |

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used June 14 to Sept. 5; stage-discharge relation affected by ice Jan. 3-6, 15, 18, Jan. 23 to Feb. 13.)

|     |      |     |    |
|-----|------|-----|----|
| 0.8 | 0.70 | 1.2 | 10 |
| .9  | 1.6  | 1.4 | 23 |
| 1.0 | 3.2  | 1.6 | 37 |
|     |      | 2.0 | 75 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC  | JAN  | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 2.0  | 1.8   | 1.5  | 1.6  | 1.7   | 2.0   | 7.1   | 8.5   | 13    | 5.5   | 4.5   | 9.3   |
| 2     | 2.1  | 1.6   | 1.5  | 1.6  | 1.7   | 1.9   | 6.7   | 9.1   | 8.3   | 5.9   | 8.7   | 7.9   |
| 3     | 2.1  | 1.5   | 1.5  | 1.6  | 1.7   | 1.9   | 6.5   | 8.6   | 2.3   | 5.5   | 8.2   | 6.3   |
| 4     | 2.1  | 1.4   | 1.5  | 1.6  | 1.7   | 2.1   | 6.1   | 8.6   | 2.3   | 4.9   | 6.8   | 5.6   |
| 5     | 2.2  | 1.4   | 1.5  | 1.6  | 1.7   | 2.1   | 6.1   | 8.8   | 2.4   | 4.5   | 6.0   | 5.1   |
| 6     | 2.2  | 1.4   | 1.6  | 1.7  | 1.7   | 2.1   | 7.3   | 10    | 2.5   | 4.5   | 6.4   | 5.0   |
| 7     | 2.2  | 1.4   | 1.5  | 1.8  | 1.7   | 2.1   | 8.4   | 10    | 2.3   | 4.5   | 7.4   | 4.5   |
| 8     | 2.3  | 1.4   | 1.5  | 1.9  | 1.7   | 2.1   | 7.7   | 9.3   | 2.3   | 4.4   | 6.6   | 4.3   |
| 9     | 2.3  | 1.4   | 1.6  | 1.8  | 1.7   | 2.1   | 7.3   | 8.8   | 2.2   | 4.6   | 5.7   | 4.0   |
| 10    | 2.2  | 1.4   | 1.6  | 1.7  | 1.8   | 2.1   | 7.2   | 8.1   | 2.2   | 4.8   | 5.3   | 3.9   |
| 11    | 2.0  | 1.3   | 1.6  | 1.6  | 1.8   | 3.9   | 7.4   | 7.4   | 2.1   | 4.8   | 6.6   | 7.0   |
| 12    | 1.9  | 1.2   | 1.5  | 1.7  | 1.8   | 2.9   | 7.2   | 7.0   | 2.2   | 5.3   | 7.3   | 7.8   |
| 13    | 1.8  | 1.3   | 1.5  | 1.7  | 1.8   | 2.5   | 7.4   | 7.8   | 4.7   | 5.6   | 6.7   | 13    |
| 14    | 1.7  | 1.2   | 1.5  | 1.7  | 1.9   | 3.9   | 7.3   | 10    | 9.4   | 6.8   | 6.1   | 12    |
| 15    | 1.6  | 1.2   | 3.1  | 1.7  | 1.9   | 8.3   | 7.3   | 11    | 10    | 12    | 5.7   | 10    |
| 16    | 1.6  | 1.3   | 1.8  | 1.7  | 1.9   | 29    | 7.5   | 9.8   | 8.7   | 9.6   | 5.7   | 9.1   |
| 17    | 1.7  | 1.3   | 1.6  | 1.7  | 1.9   | 57    | 7.2   | 9.0   | 7.2   | 9.7   | 5.7   | 8.1   |
| 18    | 1.6  | 1.4   | 1.6  | 2.0  | 2.0   | 68    | 6.8   | 8.3   | 6.6   | 9.7   | 5.6   | 7.8   |
| 19    | 1.6  | 1.3   | 1.6  | 1.8  | 1.9   | 54    | 6.5   | 8.1   | 6.3   | 8.2   | 6.2   | 9.1   |
| 20    | 1.5  | 1.3   | 1.6  | 1.8  | 1.9   | 46    | 5.7   | 7.6   | 6.3   | 6.9   | 11    | 9.1   |
| 21    | 1.5  | 1.3   | 1.6  | 1.8  | 1.8   | 39    | 10    | 7.1   | 6.0   | 5.9   | 12    | 8.3   |
| 22    | 1.5  | 1.3   | 1.6  | 1.7  | 1.8   | 33    | 16    | 6.6   | 5.4   | 5.3   | 10    | 7.0   |
| 23    | 1.5  | 1.3   | 1.6  | 1.7  | 1.9   | 23    | 15    | 6.0   | 4.8   | 5.9   | 9.3   | 6.1   |
| 24    | 1.5  | 1.3   | 1.6  | 1.7  | 1.9   | 17    | 12    | 5.7   | 3.9   | 5.5   | 8.0   | 6.0   |
| 25    | 1.5  | 1.3   | 1.6  | 1.7  | 1.9   | 14    | 11    | 5.2   | 3.7   | 4.8   | 18    | 7.5   |
| 26    | 1.5  | 1.3   | 1.8  | 1.7  | 1.9   | 11    | 9.4   | 5.7   | 3.8   | 5.0   | 23    | 9.7   |
| 27    | 1.6  | 1.3   | 1.7  | 1.7  | 1.9   | 10    | 8.4   | 5.1   | 3.8   | 5.0   | 17    | 8.7   |
| 28    | 1.6  | 1.3   | 1.6  | 1.7  | 2.0   | 9.3   | 7.8   | 4.8   | 4.3   | 4.6   | 13    | 8.0   |
| 29    | 1.5  | 1.4   | 1.6  | 1.7  | 2.0   | 9.6   | 8.1   | 5.5   | 5.8   | 4.3   | 11    | 7.5   |
| 30    | 1.5  | 1.5   | 1.7  | 1.7  | ----- | 9.1   | 8.0   | 5.1   | 5.3   | 4.1   | 9.5   | 6.6   |
| 31    | 1.5  | ----- | 1.6  | 1.7  | ----- | 7.7   | ----- | 9.7   | ----- | 3.9   | 8.3   | ----- |
| TOTAL | 55.4 | 40.8  | 50.7 | 53.1 | 53.0  | 478.7 | 246.4 | 242.3 | 150.1 | 182.0 | 271.3 | 224.3 |
| MEAN  | 1.79 | 1.36  | 1.64 | 1.71 | 1.83  | 15.4  | 8.21  | 7.82  | 5.00  | 5.87  | 8.75  | 7.48  |
| MAX   | 2.3  | 1.8   | 3.1  | 2.0  | 2.0   | 68    | 16    | 11    | 13    | 12    | 23    | 13    |
| MIN   | 1.5  | 1.2   | 1.5  | 1.6  | 1.7   | 1.9   | 5.7   | 4.8   | 2.1   | 3.9   | 4.5   | 3.9   |
| CFSM  | .11  | .08   | .10  | .10  | .11   | .93   | .49   | .47   | .30   | .35   | .53   | .45   |
| IN.   | .12  | .09   | .11  | .12  | .12   | 1.07  | .55   | .54   | .34   | .41   | .61   | .50   |

|             |               |           |        |         |          |         |
|-------------|---------------|-----------|--------|---------|----------|---------|
| CAL YR 1971 | TOTAL 2,394.8 | MEAN 6.56 | MAX 23 | MIN 1.2 | CFSM .40 | IN 5.37 |
| WTR YR 1972 | TOTAL 2,048.1 | MEAN 5.60 | MAX 68 | MIN 1.2 | CFSM .34 | IN 4.59 |

05407000 Wisconsin River at Muscoda, Wis.

LOCATION.--Lat 43°11'54", long 90°26'26", in NW 1/4 sec.1, T.8 N., R.1 W., Grant County, on left bank at bridge on State Highway 80, 0.5 mile upstream from Eagle Mill Creek and 1.0 mile north of Muscoda.

DRAINAGE AREA.--10,300 sq mi, approximately.

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.

GAGE.--Water-stage recorder. Datum of gage is 667.05 ft above mean sea level. Prior to Nov. 22, 1929, non-recording gage on bridge 200 ft upstream at same datum. Nov. 22, 1929, to Mar. 15, 1930, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--59 years (1913-72), 8,491 cfs.

EXTREMES.--Current year: Maximum discharge, 48,200 cfs Apr. 24 (gage height, 8.63 ft); minimum, 3,630 cfs July 5, 6 (gage height, 0.58 ft); minimum daily, 4,090 cfs July 5.

Period of record: Maximum discharge, 80,800 cfs Sept. 16, 1938 (gage height, 11.48 ft); minimum daily, 2,000 cfs Feb. 11, 1918.

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated by 23 reservoirs and many powerplants above station (see p. 129). In 1938 when the maximum of record occurred, there were 21 reservoirs above station, the two large reservoirs, Petenwell and Castle Rock not yet in existence. Usually less than about 5 cfs was diverted out of basin through Portage canal to Fox River throughout the year.

REVISIONS (WATER YEARS).--WSP 785: 1921(M). WSP 875: 1921. WSP 1308: 1915(M), 1917-18(M), 1920-21(M), 1924(M).

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 3 to Mar. 24.)

| Oct. 1 to Mar. 12 |       |     |        | Mar. 13 to Sept. 30 |       |     |        |
|-------------------|-------|-----|--------|---------------------|-------|-----|--------|
| 1.4               | 5,080 | 3.0 | 11,000 | 0.7                 | 3,930 | 3.0 | 11,700 |
| 2.0               | 7,080 | 4.0 | 15,300 | 1.0                 | 4,720 | 5.0 | 21,100 |
|                   |       | 5.0 | 20,000 | 2.0                 | 7,800 | 7.0 | 34,300 |
|                   |       |     |        |                     |       | 9.0 | 51,500 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1     | 5.330   | 5.940   | 7.740   | 9.220   | 6.400   | 4.300   | 15.400  | 20.100  | 5.440   | 5.710   | 5.530   | 15.700  |
| 2     | 6.080   | 8.370   | 7.470   | 9.340   | 6.800   | 4.000   | 15.400  | 16.700  | 6.030   | 4.770   | 6.780   | 14.500  |
| 3     | 8.690   | 8.300   | 7.840   | 9.700   | 7.000   | 7.300   | 15.300  | 16.900  | 6.270   | 5.940   | 7.210   | 14.000  |
| 4     | 9.940   | 8.740   | 7.720   | 8.200   | 6.900   | 7.000   | 14.000  | 18.500  | 5.700   | 5.680   | 6.780   | 13.100  |
| 5     | 10.600  | 10.000  | 7.510   | 7.200   | 6.500   | 7.600   | 14.300  | 19.100  | 6.060   | 4.090   | 5.940   | 10.900  |
| 6     | 11.200  | 10.400  | 7.540   | 6.900   | 6.900   | 7.900   | 14.500  | 16.000  | 5.940   | 4.240   | 6.210   | 9.820   |
| 7     | 10.800  | 10.700  | 7.100   | 7.000   | 6.900   | 7.600   | 13.900  | 16.100  | 5.790   | 4.750   | 6.270   | 7.040   |
| 8     | 9.590   | 9.550   | 7.420   | 8.200   | 7.000   | 8.400   | 13.600  | 15.000  | 6.030   | 5.210   | 6.400   | 7.560   |
| 9     | 10.600  | 9.400   | 7.750   | 8.400   | 6.800   | 4.000   | 13.100  | 14.300  | 5.910   | 4.750   | 5.590   | 7.380   |
| 10    | 8.370   | 8.640   | 7.810   | 8.000   | 6.800   | 8.400   | 12.600  | 13.800  | 6.720   | 5.050   | 5.330   | 7.380   |
| 11    | 7.400   | 7.970   | 8.480   | 7.600   | 7.200   | 8.500   | 12.400  | 12.300  | 6.120   | 5.420   | 5.880   | 7.180   |
| 12    | 6.940   | 7.440   | 8.910   | 7.400   | 7.500   | 8.600   | 12.400  | 11.700  | 6.000   | 5.050   | 6.880   | 7.180   |
| 13    | 6.040   | 7.570   | 9.200   | 7.200   | 7.600   | 8.500   | 12.100  | 11.400  | 7.420   | 5.210   | 7.210   | 7.910   |
| 14    | 6.440   | 7.670   | 9.480   | 6.600   | 7.800   | 8.000   | 12.500  | 11.500  | 6.560   | 6.180   | 6.370   | 9.240   |
| 15    | 5.670   | 6.790   | 11.500  | 6.000   | 7.600   | 8.200   | 13.600  | 12.000  | 7.980   | 6.060   | 6.520   | 9.280   |
| 16    | 6.090   | 7.430   | 11.700  | 5.900   | 7.400   | 8.600   | 16.100  | 10.300  | 8.720   | 6.850   | 5.970   | 8.900   |
| 17    | 5.230   | 7.350   | 11.200  | 7.000   | 7.300   | 8.600   | 18.800  | 8.790   | 8.460   | 5.970   | 6.240   | 8.750   |
| 18    | 5.530   | 8.420   | 8.650   | 7.800   | 7.400   | 11.000  | 22.700  | 8.200   | 7.700   | 6.120   | 6.090   | 8.600   |
| 19    | 6.320   | 7.590   | 9.240   | 7.800   | 7.500   | 13.000  | 25.800  | 7.280   | 7.870   | 5.730   | 6.780   | 9.390   |
| 20    | 5.870   | 7.640   | 11.400  | 7.400   | 7.300   | 13.500  | 29.500  | 8.790   | 6.560   | 6.120   | 7.910   | 9.510   |
| 21    | 6.110   | 8.130   | 11.500  | 7.200   | 7.500   | 15.000  | 37.800  | 8.900   | 6.120   | 6.520   | 9.660   | 9.550   |
| 22    | 5.780   | 7.730   | 11.800  | 7.000   | 7.900   | 16.000  | 44.800  | 8.680   | 6.060   | 6.850   | 10.600  | 10.100  |
| 23    | 6.450   | 7.610   | 10.800  | 7.400   | 8.100   | 16.500  | 47.700  | 8.020   | 6.210   | 6.680   | 11.700  | 11.400  |
| 24    | 6.040   | 7.490   | 10.800  | 7.000   | 8.100   | 16.500  | 47.700  | 7.110   | 5.730   | 6.560   | 12.800  | 9.320   |
| 25    | 6.650   | 7.160   | 10.000  | 6.800   | 7.600   | 16.800  | 46.800  | 8.160   | 5.530   | 5.730   | 13.500  | 10.600  |
| 26    | 6.640   | 7.750   | 9.700   | 6.500   | 7.500   | 16.400  | 43.400  | 7.730   | 5.420   | 5.130   | 15.200  | 11.600  |
| 27    | 6.100   | 7.720   | 9.610   | 6.200   | 8.000   | 17.200  | 36.400  | 6.810   | 5.590   | 6.150   | 15.400  | 12.100  |
| 28    | 6.170   | 8.700   | 8.990   | 6.300   | 8.200   | 16.800  | 26.100  | 7.210   | 4.830   | 5.020   | 17.200  | 14.300  |
| 29    | 6.500   | 8.080   | 7.870   | 6.800   | 8.300   | 16.200  | 24.300  | 6.400   | 5.050   | 5.190   | 18.200  | 19.900  |
| 30    | 6.370   | 7.060   | 9.350   | 7.200   | -----   | 15.900  | 23.400  | 6.496   | 5.300   | 5.440   | 18.200  | 26.000  |
| 31    | 6.140   | -----   | 9.070   | 7.200   | -----   | 15.500  | -----   | 6.650   | -----   | 5.560   | 16.700  | -----   |
| TOTAL | 221,680 | 243,620 | 285,920 | 228,960 | 214,700 | 354,800 | 696,400 | 350,920 | 189,120 | 173,730 | 287,050 | 328,190 |
| MEAN  | 7.151   | 8.121   | 9.223   | 7.386   | 7.403   | 11.450  | 23.210  | 11.320  | 6.304   | 5.604   | 9.260   | 10.940  |
| MAX   | 11.200  | 10.700  | 11,800  | 9,840   | 8,300   | 17.200  | 47,700  | 20,100  | 8,720   | 6,850   | 18,200  | 26,000  |
| MIN   | 5.230   | 5.940   | 7.100   | 5.900   | 6.800   | 7.000   | 12.100  | 6.400   | 4.830   | 4.090   | 5.330   | 7.040   |

CAL YR 1971 TOTAL 3,345,150 MEAN 9.165 MAX 38.300 MIN 4.010  
WTR YR 1972 TOTAL 3,575,090 MEAN 9.768 MAX 47.700 MIN 4.090

05408000 Kickapoo River at La Farge, Wis.

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, on left bank 10 ft upstream from bridge on State Highway 82, in La Farge, 0.3 mile upstream from Otter Creek, and 1.3 miles downstream from powerplant.

DRAINAGE AREA.--266 sq mi.

PERIOD OF RECORD.--October 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 782.00 ft above mean sea level, adjustment of 1912. Prior to Dec. 4, 1939, nonrecording gage on highway bridge at same datum.

AVERAGE DISCHARGE.--34 years, 165 cfs (8.43 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,420 cfs Sept. 27 (gage height, 10.33 ft); minimum daily, 88 cfs Oct. 18.

Period of record: Maximum discharge, 9,910 cfs Feb. 9, 1966 (gage height, 13.67 ft); minimum, 1.8 cfs Mar. 24, 1951; minimum daily, 36 cfs Nov. 3, 1939.

REMARKS.--Records good except those for winter months, which are fair. Considerable diurnal fluctuation caused by operation of powerplant 1.3 miles upstream.

REVISIONS (WATER YEARS).--WSP 1388: 1951(M), 1954(M). WSP 1438: 1944-45(M), 1946, 1948, 1950(M).

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Period of ice effect, Dec. 29 to Mar. 18.)

| Oct. 1 to Mar. 19 |     |     |       | Mar. 20 to Sept. 30 |     |     |       |
|-------------------|-----|-----|-------|---------------------|-----|-----|-------|
| 1.9               | 84  | 4.0 | 420   | 1.7                 | 80  | 4.0 | 448   |
| 2.0               | 96  | 5.0 | 629   | 2.0                 | 112 | 5.0 | 662   |
| 2.5               | 162 | 6.0 | 874   | 2.5                 | 177 | 7.0 | 1,200 |
| 3.0               | 239 | 7.0 | 1,170 | 3.0                 | 257 | 9.0 | 1,850 |

DISCHARGE. IN CUBIC FEET PER SECOND. WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR    | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 149   | 156   | 118   | 110   | 100   | 130    | 150   | 188   | 110   | 110   | 111   | 123   |
| 2     | 104   | 293   | 135   | 110   | 100   | 120    | 148   | 220   | 113   | 120   | 126   | 108   |
| 3     | 113   | 258   | 145   | 110   | 100   | 110    | 146   | 198   | 98    | 97    | 122   | 108   |
| 4     | 112   | 139   | 132   | 100   | 100   | 110    | 141   | 169   | 104   | 89    | 106   | 105   |
| 5     | 105   | 142   | 131   | 100   | 100   | 120    | 146   | 152   | 113   | 91    | 98    | 106   |
| 6     | 105   | 130   | 132   | 100   | 100   | 130    | 233   | 157   | 123   | 97    | 120   | 106   |
| 7     | 100   | 119   | 142   | 110   | 100   | 130    | 440   | 150   | 110   | 96    | 188   | 106   |
| 8     | 106   | 116   | 142   | 120   | 100   | 130    | 177   | 142   | 99    | 98    | 157   | 105   |
| 9     | 96    | 119   | 134   | 120   | 100   | 120    | 196   | 139   | 110   | 116   | 132   | 100   |
| 10    | 102   | 119   | 168   | 120   | 100   | 120    | 169   | 135   | 109   | 104   | 120   | 98    |
| 11    | 110   | 119   | 207   | 120   | 100   | 130    | 330   | 129   | 99    | 100   | 109   | 103   |
| 12    | 97    | 118   | 161   | 120   | 100   | 180    | 298   | 126   | 113   | 113   | 118   | 103   |
| 13    | 97    | 117   | 118   | 110   | 110   | 220    | 1,430 | 136   | 131   | 117   | 109   | 586   |
| 14    | 101   | 126   | 138   | 100   | 120   | 270    | 360   | 148   | 178   | 104   | 109   | 255   |
| 15    | 99    | 101   | 215   | 96    | 120   | 350    | 280   | 156   | 173   | 102   | 116   | 157   |
| 16    | 100   | 130   | 361   | 100   | 120   | 470    | 293   | 140   | 120   | 102   | 109   | 139   |
| 17    | 94    | 179   | 156   | 120   | 120   | 600    | 271   | 129   | 116   | 137   | 106   | 132   |
| 18    | 88    | 148   | 136   | 130   | 120   | 800    | 225   | 125   | 104   | 215   | 98    | 129   |
| 19    | 108   | 154   | 170   | 150   | 120   | 1,010  | 220   | 117   | 106   | 126   | 142   | 160   |
| 20    | 151   | 142   | 165   | 140   | 110   | 1,270  | 189   | 116   | 99    | 114   | 228   | 218   |
| 21    | 102   | 139   | 155   | 130   | 120   | 1,700  | 235   | 114   | 103   | 116   | 412   | 167   |
| 22    | 125   | 116   | 128   | 120   | 120   | 1,070  | 501   | 113   | 108   | 142   | 170   | 150   |
| 23    | 116   | 118   | 131   | 120   | 120   | 288    | 315   | 111   | 91    | 173   | 157   | 131   |
| 24    | 118   | 123   | 139   | 110   | 120   | 226    | 230   | 108   | 89    | 157   | 131   | 129   |
| 25    | 106   | 128   | 131   | 110   | 130   | 202    | 198   | 104   | 93    | 114   | 126   | 567   |
| 26    | 139   | 125   | 136   | 110   | 130   | 195    | 163   | 105   | 98    | 164   | 262   | 1,830 |
| 27    | 100   | 170   | 136   | 100   | 130   | 176    | 167   | 104   | 97    | 324   | 250   | 1,590 |
| 28    | 105   | 143   | 106   | 100   | 140   | 166    | 157   | 103   | 89    | 153   | 162   | 520   |
| 29    | 119   | 144   | 120   | 100   | 140   | 167    | 159   | 116   | 123   | 135   | 137   | 925   |
| 30    | 95    | 134   | 120   | 100   | ----- | 164    | 153   | 131   | 98    | 124   | 134   | 368   |
| 31    | 147   | ----- | 120   | 100   | ----- | 145    | ----- | 129   | ----- | 117   | 116   | ----- |
| TOTAL | 3,409 | 4,265 | 4,628 | 3,486 | 3,290 | 11,019 | 8,120 | 4,210 | 3,317 | 3,967 | 4,581 | 9,424 |
| MEAN  | 110   | 142   | 149   | 112   | 113   | 355    | 271   | 136   | 111   | 128   | 148   | 314   |
| MAX   | 151   | 293   | 361   | 150   | 140   | 1,700  | 1,430 | 220   | 178   | 324   | 412   | 1,830 |
| MIN   | 88    | 101   | 106   | 96    | 100   | 110    | 141   | 103   | 89    | 89    | 98    | 98    |
| CFSM  | .41   | .53   | .56   | .42   | .42   | 1.33   | 1.02  | .51   | .42   | .48   | .56   | 1.18  |
| IN.   | .48   | .60   | .65   | .49   | .46   | 1.54   | 1.14  | .59   | .46   | .55   | .64   | 1.32  |

CAL YR 1971 TOTAL 56,737 MEAN 155 MAX 999 MIN 80 CFSM .58 IN 7.93  
WTR YR 1972 TOTAL 63,716 MEAN 174 MAX 1,830 MIN 88 CFSM .65 IN 8.91

PEAK DISCHARGE (BASE, 1,700 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 3-21 | 1515 | 9.48  | 2,040     | 9-27 | 0545 | 10.33 | 2,420     |
| 4-13 | 1315 | 9.50  | 2,050     |      |      |       |           |

05409830 North Fork Nederlo Creek near Gays Mills, Wis.

LOCATION.--Lat 43°21'47", long 90°54'34", in NE 1/4 sec.12, T.10 N., R.5 W., Crawford County, on right bank 160 ft upstream from town-road bridge, 0.3 mile above the confluence with South Fork Nederlo Creek, and 4.5 miles northwest of Gays Mills.

DRAINAGE AREA.--2.3 sq mi.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Concrete control since Oct. 8, 1968. Altitude of gage is 800 ft (from topographic map).

AVERAGE DISCHARGE.--5 years, 0.76 cfs (4.49 inches per year).

EXTREMES.--Current year: Maximum discharge, 84 cfs Mar. 15 (gage height, 12.92 ft); minimum, 0.49 cfs Jan. 4 (gage height, 10.71 ft), result of freezeup.

Period of record: Maximum discharge, 541 cfs June 23, 1968 (gage height, 14.60 ft) from rating curve extended above 3 cfs on basis of contracted-opening measurement made at 14.60 ft, computation of flow through culvert made at gage height 13.80 ft and slope-area measurement made at gage height 13.10 ft; minimum, 0.34 cfs Feb. 22, 1971 (gage height, 10.65 ft), result of freezeup.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WRD Wis. 1970: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 18, Jan. 4-5, 14-16, 25-26, Feb. 4, 7, Mar. 5.)

|      |      |      |     |
|------|------|------|-----|
| 10.7 | 0.46 | 11.4 | 4.6 |
| 10.8 | .80  | 11.7 | 9.0 |
| 11.0 | 1.6  | 12.0 | 18  |
| 11.2 | 2.8  |      |     |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT          | NOV      | DEC     | JAN     | FEB      | MAR     | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------------|--------------|----------|---------|---------|----------|---------|-------|-------|-------|-------|-------|-------|
| 1           | .66          | .88      | .70     | .63     | .63      | .70     | .77   | .99   | .66   | .66   | .77   | .80   |
| 2           | .63          | .95      | .70     | .66     | .63      | .70     | .77   | 1.0   | .66   | .63   | .80   | .73   |
| 3           | .63          | .77      | .70     | .63     | .63      | .70     | .77   | .91   | .66   | .63   | .70   | .70   |
| 4           | .63          | .73      | .70     | .66     | .63      | .66     | .73   | .84   | .66   | .60   | .66   | .70   |
| 5           | .63          | .70      | .70     | .66     | .63      | .66     | .91   | .84   | .73   | .63   | .66   | .66   |
| 6           | .63          | .66      | .73     | .66     | .63      | .66     | 1.2   | .88   | .66   | .66   | .66   | .66   |
| 7           | .63          | .66      | .73     | .63     | .63      | .66     | .80   | .80   | .66   | .63   | .66   | .66   |
| 8           | .63          | .66      | .73     | .66     | .60      | .66     | .80   | .80   | .66   | .66   | .66   | .66   |
| 9           | .63          | .66      | .73     | .66     | .63      | .66     | .80   | .77   | .66   | .70   | .63   | .66   |
| 10          | .63          | .66      | .84     | .66     | .66      | .66     | .80   | .77   | .66   | .63   | .60   | .66   |
| 11          | .63          | .66      | .80     | .66     | .63      | .91     | .80   | .73   | .66   | .70   | 1.8   | .73   |
| 12          | .63          | .66      | .73     | .66     | .66      | .91     | .80   | .73   | .66   | 1.2   | .77   | 1.4   |
| 13          | .63          | .66      | .73     | .66     | .66      | 6.9     | .80   | .80   | .70   | .73   | .73   | 1.2   |
| 14          | .63          | .66      | .73     | .66     | .66      | 10      | .80   | .77   | .77   | .77   | .70   | .77   |
| 15          | .63          | .66      | .95     | .66     | .66      | 13      | .80   | .77   | .70   | .77   | .66   | .73   |
| 16          | .63          | .80      | .80     | .63     | .70      | 10      | .91   | .73   | .66   | .73   | .63   | .73   |
| 17          | .63          | .73      | .73     | .63     | .70      | 12      | .84   | .73   | .66   | .95   | .63   | .70   |
| 18          | .63          | .77      | .73     | 2.0     | .66      | 3.6     | .84   | .70   | .66   | .77   | .60   | .66   |
| 19          | .66          | .73      | .73     | .70     | .66      | 2.6     | .80   | .66   | .66   | .73   | .70   | .70   |
| 20          | .66          | .73      | .70     | .66     | .70      | 1.2     | .80   | .66   | .70   | .70   | 1.4   | .70   |
| 21          | .66          | .70      | .66     | .66     | .66      | .95     | .95   | .66   | .66   | .70   | .91   | .70   |
| 22          | .66          | .66      | .66     | .66     | .66      | .88     | .91   | .66   | .66   | .66   | .73   | .66   |
| 23          | .70          | .66      | .66     | .63     | .66      | .80     | .88   | .66   | .63   | .80   | .73   | .66   |
| 24          | .66          | .66      | .66     | .63     | .66      | .80     | .80   | .66   | .66   | .66   | .73   | .66   |
| 25          | .66          | .70      | .66     | .63     | .66      | .77     | .77   | .70   | .66   | .63   | 1.3   | 1.2   |
| 26          | .66          | .73      | .66     | .60     | .70      | .77     | .77   | .66   | .66   | .80   | .95   | 1.4   |
| 27          | .66          | .73      | .66     | .60     | .66      | .77     | .77   | .66   | .63   | .70   | .88   | .84   |
| 28          | .66          | .73      | .66     | .60     | .70      | .73     | .80   | .70   | .73   | .66   | .80   | 5.4   |
| 29          | .66          | .73      | .66     | .60     | .70      | .73     | .84   | .84   | .66   | .66   | .73   | 1.1   |
| 30          | .73          | .70      | .66     | .60     | -----    | .77     | .88   | .73   | .66   | .63   | .73   | .95   |
| 31          | .70          | -----    | .63     | .60     | -----    | .73     | ----- | .70   | ----- | .66   | .73   | ----- |
| TOTAL       | 20.10        | 21.39    | 22.12   | 21.24   | 19.05    | 76.54   | 24.91 | 23.51 | 20.11 | 22.04 | 24.64 | 28.78 |
| MEAN        | .65          | .71      | .71     | .69     | .66      | 2.47    | .83   | .76   | .67   | .71   | .79   | .96   |
| MAX         | .73          | .95      | .95     | 2.0     | .70      | 13      | 1.2   | 1.0   | .77   | 1.2   | 1.8   | 5.4   |
| MIN         | .63          | .66      | .63     | .60     | .60      | .66     | .73   | .66   | .63   | .60   | .60   | .66   |
| CFSM        | .28          | .31      | .31     | .30     | .29      | 1.07    | .36   | .33   | .29   | .31   | .34   | .42   |
| IN.         | .33          | .35      | .36     | .34     | .31      | 1.24    | .40   | .38   | .33   | .36   | .40   | .47   |
| CAL YR 1971 | TOTAL 253.99 | MEAN .70 | MAX 1.2 | MIN .60 | CFSM .30 | IN 4.11 |       |       |       |       |       |       |
| WTR YR 1972 | TOTAL 324.43 | MEAN .89 | MAX 13  | MIN .60 | CFSM .39 | IN 5.25 |       |       |       |       |       |       |

## WISCONSIN RIVER BASIN

05409890 Nederlo Creek near Gays Mills, Wis.

LOCATION.--Lat 43°21'43", long 90°52'44", in NW 1/4 sec.8, T.10 N., R.4 W., Crawford County, on right bank just upstream from bridge on private road, 1.2 miles upstream from Tainter Creek and 3.4 miles north of Gays Mills.

DRAINAGE AREA.--9.6 sq mi.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 740 ft (from topographic map).

AVERAGE DISCHARGE.--5 years, 4.28 cfs (6.05 inches per year).

EXTREMES.--Current year: Maximum discharge, 233 cfs Mar. 17 (gage height, 13.40 ft); minimum daily, 3.4 cfs Jan. 30 to Feb. 2, Feb. 11.

Period of record: Maximum discharge, 2,600 cfs June 23, 1968 (gage height, 17.06 ft) from rating curve extended above 20 cfs on basis of slope-area measurement at site 1.2 miles upstream at gage height 17.06 ft, computation of flow through culvert at gage height 14.80 ft, and slope-area measurement made at gage height 13.36 ft; minimum, 1.7 cfs Feb. 16, 1968 (gage height, 10.78 ft), result of freezeup.

REMARKS.--Records good except those for winter periods, which are fair. Hydrologic studies are being made in the Nederlo Creek basin and additional data at upstream sites are available.

REVISIONS (WATER YEARS).--WRD Wis. 1970: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 5-6, 16, 24-25, Feb. 4, 6-7, 22.)

|      |     |      |    |
|------|-----|------|----|
| 10.7 | 3.4 | 11.2 | 14 |
| 10.8 | 4.2 | 11.3 | 19 |
| 10.9 | 5.3 | 11.4 | 25 |
| 11.0 | 7.5 | 11.5 | 32 |
| 11.1 | 10  | 11.8 | 55 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 3.8   | 5.0   | 3.7   | 3.6   | 3.4   | 3.7   | 4.2   | 5.1   | 3.9   | 3.8   | 4.3   | 5.0   |
| 2     | 3.8   | 5.0   | 3.7   | 3.7   | 3.4   | 3.6   | 4.2   | 5.7   | 4.0   | 3.6   | 4.5   | 4.2   |
| 3     | 3.8   | 4.0   | 3.7   | 3.6   | 3.5   | 3.7   | 4.2   | 4.9   | 3.9   | 3.6   | 4.1   | 4.1   |
| 4     | 3.7   | 3.9   | 3.7   | 3.6   | 3.5   | 3.7   | 4.1   | 4.5   | 3.8   | 3.6   | 3.9   | 4.0   |
| 5     | 3.7   | 3.8   | 3.6   | 3.6   | 3.5   | 3.7   | 4.8   | 4.4   | 4.0   | 3.6   | 3.9   | 4.0   |
| 6     | 3.7   | 3.6   | 3.8   | 3.6   | 3.5   | 3.6   | 5.2   | 4.5   | 3.8   | 3.6   | 4.0   | 4.0   |
| 7     | 3.7   | 3.7   | 3.8   | 3.6   | 3.5   | 3.6   | 4.3   | 4.3   | 3.7   | 3.7   | 3.9   | 4.0   |
| 8     | 3.7   | 3.7   | 3.8   | 3.6   | 3.5   | 3.7   | 4.2   | 4.2   | 3.7   | 3.7   | 3.9   | 4.0   |
| 9     | 3.7   | 3.7   | 3.8   | 3.7   | 3.6   | 3.6   | 4.2   | 4.2   | 3.8   | 3.8   | 3.9   | 3.9   |
| 10    | 3.7   | 3.7   | 4.2   | 3.6   | 3.5   | 3.6   | 4.4   | 4.2   | 3.7   | 3.6   | 4.2   | 3.9   |
| 11    | 3.8   | 3.7   | 3.9   | 3.6   | 3.4   | 5.0   | 4.3   | 4.1   | 3.7   | 4.1   | 10    | 4.2   |
| 12    | 3.8   | 3.7   | 3.8   | 3.6   | 3.5   | 5.1   | 4.3   | 4.1   | 3.6   | 8.7   | 4.6   | 8.2   |
| 13    | 3.8   | 3.7   | 3.7   | 3.6   | 3.5   | 34    | 4.4   | 4.3   | 3.7   | 4.0   | 4.1   | 11    |
| 14    | 3.8   | 3.7   | 3.7   | 3.6   | 3.5   | 47    | 4.3   | 4.2   | 4.1   | 4.2   | 3.9   | 4.2   |
| 15    | 3.8   | 3.7   | 4.8   | 3.7   | 3.5   | 52    | 4.3   | 4.2   | 3.8   | 4.2   | 3.9   | 4.2   |
| 16    | 3.7   | 4.3   | 4.0   | 3.7   | 3.8   | 52    | 5.3   | 4.1   | 3.6   | 3.8   | 3.9   | 4.2   |
| 17    | 3.6   | 3.9   | 3.8   | 3.7   | 3.6   | 54    | 4.5   | 4.0   | 3.6   | 5.7   | 3.8   | 4.1   |
| 18    | 3.7   | 4.1   | 3.7   | 15    | 3.6   | 18    | 4.4   | 4.0   | 3.6   | 4.2   | 3.7   | 4.0   |
| 19    | 3.9   | 3.9   | 3.7   | 4.5   | 4.1   | 15    | 4.3   | 3.9   | 3.6   | 4.0   | 4.2   | 4.0   |
| 20    | 3.8   | 3.9   | 3.6   | 3.6   | 3.6   | 8.0   | 4.2   | 3.9   | 3.7   | 4.0   | 9.7   | 4.0   |
| 21    | 3.7   | 3.9   | 3.6   | 3.6   | 3.5   | 5.3   | 4.3   | 3.9   | 3.6   | 3.9   | 8.5   | 4.0   |
| 22    | 3.7   | 3.9   | 3.6   | 3.6   | 3.6   | 4.5   | 4.4   | 3.9   | 3.6   | 3.8   | 4.2   | 3.9   |
| 23    | 3.8   | 3.9   | 3.6   | 3.6   | 3.6   | 4.2   | 4.5   | 3.8   | 3.6   | 5.6   | 4.2   | 3.9   |
| 24    | 3.8   | 3.9   | 3.6   | 3.6   | 3.6   | 4.2   | 4.3   | 3.8   | 3.6   | 3.9   | 4.2   | 3.9   |
| 25    | 3.8   | 3.9   | 3.6   | 3.6   | 3.6   | 4.2   | 4.2   | 3.9   | 3.6   | 3.8   | 13    | 7.6   |
| 26    | 3.8   | 4.0   | 3.6   | 3.6   | 3.8   | 4.2   | 4.2   | 3.9   | 3.6   | 4.8   | 5.5   | 14    |
| 27    | 3.8   | 3.9   | 3.6   | 3.6   | 3.5   | 4.2   | 4.2   | 3.8   | 3.6   | 4.2   | 4.6   | 4.6   |
| 28    | 3.8   | 3.8   | 3.5   | 3.6   | 3.6   | 4.2   | 4.2   | 4.0   | 3.9   | 4.0   | 4.4   | 31    |
| 29    | 3.8   | 3.9   | 3.7   | 3.5   | 3.6   | 4.2   | 4.2   | 4.9   | 3.7   | 3.9   | 4.3   | 7.1   |
| 30    | 4.1   | 3.7   | 3.6   | 3.4   | ----- | 4.1   | 4.4   | 4.2   | 3.6   | 3.9   | 4.2   | 5.3   |
| 31    | 3.9   | ----- | 3.6   | 3.4   | ----- | 4.1   | ----- | 4.0   | ----- | 3.9   | 4.2   | ----- |
| TOTAL | 117.0 | 117.5 | 116.1 | 123.9 | 103.4 | 374.0 | 131.0 | 130.9 | 111.7 | 129.2 | 153.7 | 178.5 |
| MEAN  | 3.77  | 3.92  | 3.75  | 4.00  | 3.57  | 12.1  | 4.37  | 4.22  | 3.72  | 4.17  | 4.96  | 5.95  |
| MAX   | 4.1   | 5.0   | 4.8   | 15    | 4.1   | 54    | 5.3   | 5.7   | 4.1   | 8.7   | 13    | 31    |
| MIN   | 3.6   | 3.6   | 3.5   | 3.4   | 3.4   | 3.6   | 4.1   | 3.8   | 3.6   | 3.6   | 3.7   | 3.9   |
| CFSM  | .39   | .41   | .39   | .42   | .37   | 1.26  | .46   | .44   | .39   | .43   | .52   | .62   |
| IN.   | .45   | .46   | .45   | .48   | .40   | 1.45  | .51   | .51   | .43   | .50   | .60   | .69   |

CAL YR 1971 TOTAL 1,526.5 MEAN 4.18 MAX 7.8 MIN 3.5 CFSM .44 IN 5.92  
WTR YR 1972 TOTAL 1,786.9 MEAN 4.88 MAX 54 MIN 3.4 CFSM .51 IN 6.92

## 05410000 Kickapoo River at Gays Mills, Wis.

LOCATION.--Lat 43°19'10", long 90°51'08", in NE 1/4 sec.28, T.10 N., R.4 W., Crawford County, on upstream side of State Highway 171 bridge 300 ft downstream from dam in Gays Mills and 3.3 miles downstream from Taintor Creek.

DRAINAGE AREA.--616 sq mi.

PERIOD OF RECORD.--December 1913 to September 1934. Monthly discharge only July to September 1934, published in WSP 1308. April 1964 to current year.

GAGE.--Nonrecording gage. Datum of gage is 685.75 ft above mean sea level.

AVERAGE DISCHARGE.--28 years (1914-34, 1964-72), 412 cfs (9.08 inches per year).

EXTREMES.--Current year: Maximum discharge observed, 2,540 cfs Mar. 21 (gage height, 12.55 ft); minimum observed, 238 cfs Oct. 29.  
 Period of record: Maximum discharge, 10,600 cfs Feb. 10, 1966 (gage height, 16.00 ft); minimum observed, 48 cfs July 27, 1931 (gage height, 0.51 ft).  
 Flood in 1913 reached a stage of 15.2 ft, from floodmark (backwater from ice probable).  
 Flood in 1961 reached a stage of 16.37 ft, from floodmark.

REMARKS.--Records good except those for winter periods, which are fair. Occasional regulation caused by dam 300 ft upstream.

REVISIONS (WATER YEARS).--WSP 1438: 1915-16(M), 1917, 1918-19(M), 1920-23, 1924-26(M), 1927-30, 1931(M), 1932, 1933-34(M).

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
 (Shifting-control method used Oct. 1-28; stage-discharge relation affected by ice Dec. 30 to Mar. 14.)

| Oct. 1 to Mar. 20 |     |      |       | Mar. 21 to Sept. 30 |     |      |       |
|-------------------|-----|------|-------|---------------------|-----|------|-------|
| 4.0               | 246 | 10.0 | 1,280 | 3.9                 | 259 | 10.0 | 1,280 |
| 6.0               | 515 | 12.0 | 2,100 | 4.0                 | 272 | 12.0 | 2,100 |
| 8.0               | 880 | 12.1 | 2,160 | 6.0                 | 560 | 12.3 | 2,310 |
|                   |     |      |       | 8.0                 | 888 |      |       |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC    | JAN   | FEB   | MAR    | APR    | MAY    | JUN   | JUL    | AUG    | SEP    |
|-------|-------|-------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|
| 1     | 261   | 294   | 333    | 270   | 240   | 280    | 468    | 470    | 340   | 278    | 344    | 420    |
| 2     | 252   | 415   | 326    | 260   | 240   | 280    | 413    | 527    | 318   | 275    | 364    | 390    |
| 3     | 258   | 491   | 312    | 260   | 240   | 270    | 442    | 554    | 319   | 271    | 355    | 364    |
| 4     | 254   | 462   | 314    | 250   | 240   | 260    | 434    | 515    | 292   | 266    | 330    | 354    |
| 5     | 261   | 335   | 323    | 250   | 240   | 250    | 430    | 464    | 292   | 268    | 302    | 336    |
| 6     | 256   | 314   | 317    | 250   | 250   | 250    | 470    | 446    | 295   | 264    | 304    | 325    |
| 7     | 256   | 304   | 328    | 260   | 250   | 250    | 590    | 449    | 312   | 263    | 326    | 326    |
| 8     | 255   | 300   | 327    | 270   | 250   | 250    | 739    | 413    | 294   | 269    | 410    | 330    |
| 9     | 256   | 306   | 330    | 270   | 250   | 250    | 506    | 410    | 295   | 272    | 389    | 326    |
| 10    | 253   | 302   | 335    | 270   | 250   | 250    | 494    | 389    | 289   | 288    | 351    | 322    |
| 11    | 258   | 302   | 345    | 270   | 250   | 260    | 500    | 369    | 295   | 285    | 436    | 312    |
| 12    | 256   | 300   | 354    | 260   | 260   | 300    | 629    | 371    | 288   | 375    | 491    | 315    |
| 13    | 255   | 304   | 364    | 260   | 260   | 380    | 746    | 378    | 285   | 344    | 645    | 640    |
| 14    | 252   | 288   | 322    | 250   | 260   | 700    | 1,020  | 381    | 343   | 334    | 449    | 867    |
| 15    | 256   | 297   | 366    | 250   | 270   | 1,190  | 911    | 395    | 354   | 329    | 367    | 634    |
| 16    | 257   | 319   | 483    | 260   | 270   | 1,480  | 730    | 399    | 395   | 308    | 353    | 444    |
| 17    | 259   | 356   | 568    | 270   | 280   | 1,840  | 677    | 378    | 360   | 315    | 336    | 404    |
| 18    | 255   | 402   | 384    | 320   | 280   | 2,070  | 598    | 354    | 301   | 404    | 336    | 393    |
| 19    | 260   | 353   | 343    | 390   | 280   | 2,080  | 554    | 344    | 286   | 390    | 336    | 392    |
| 20    | 275   | 327   | 322    | 370   | 280   | 2,150  | 534    | 334    | 285   | 362    | 365    | 422    |
| 21    | 307   | 323   | 310    | 350   | 280   | 2,260  | 539    | 329    | 292   | 330    | 520    | 422    |
| 22    | 287   | 326   | 317    | 330   | 280   | 2,060  | 701    | 326    | 293   | 308    | 712    | 425    |
| 23    | 283   | 300   | 302    | 310   | 280   | 2,110  | 860    | 325    | 282   | 385    | 428    | 419    |
| 24    | 283   | 301   | 300    | 300   | 290   | 1,550  | 686    | 308    | 272   | 420    | 400    | 379    |
| 25    | 277   | 309   | 296    | 290   | 290   | 755    | 571    | 306    | 275   | 389    | 378    | 425    |
| 26    | 277   | 320   | 294    | 280   | 290   | 602    | 524    | 308    | 273   | 340    | 527    | 792    |
| 27    | 261   | 309   | 314    | 270   | 290   | 595    | 485    | 301    | 275   | 389    | 570    | 1,240  |
| 28    | 302   | 308   | 253    | 260   | 280   | 524    | 467    | 299    | 277   | 571    | 570    | 1,360  |
| 29    | 259   | 314   | 258    | 260   | 280   | 488    | 468    | 333    | 278   | 470    | 449    | 1,940  |
| 30    | 283   | 312   | 260    | 250   | ----- | 479    | 466    | 337    | 275   | 297    | 404    | 2,140  |
| 31    | 281   | ----- | 280    | 250   | ----- | 470    | -----  | 348    | ----- | 312    | 395    | -----  |
| TOTAL | 8,245 | 9,893 | 10,280 | 8,660 | 7,700 | 26,933 | 17,652 | 11,860 | 9,030 | 10,371 | 12,942 | 17,858 |
| MEAN  | 266   | 330   | 332    | 279   | 266   | 869    | 588    | 383    | 301   | 335    | 417    | 595    |
| MAX   | 307   | 491   | 568    | 390   | 290   | 2,260  | 1,020  | 554    | 395   | 571    | 712    | 2,140  |
| MIN   | 252   | 288   | 253    | 250   | 240   | 250    | 413    | 299    | 272   | 263    | 302    | 312    |

CAL YR 1971 TOTAL 135,173 MEAN 370 MAX 1,380 MIN 180  
 WTR YR 1972 TOTAL 151,424 MEAN 414 MAX 2,260 MIN 240

## WISCONSIN RIVER BASIN

05410500 Kickapoo River at Steuben, Wis.

LOCATION.--Lat 43°11'27", long 90°52'28", in NW 1/4 sec.8, T.8 N., R.4 W., Crawford County, on right bank 0.8 mile upstream from Duffy Creek, 1.0 mile northwest of Steuben and 14 miles upstream from mouth.

DRAINAGE AREA.--690 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 657.82 ft above mean sea level, adjustment of 1912. Prior to Oct. 20, 1938, nonrecording gage at site 1 mile upstream at datum 1.3 ft higher.

AVERAGE DISCHARGE.--39 years, 450 cfs (8.86 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,520 cfs Mar. 21 (gage height, 9.22 ft); minimum, 278 cfs Dec. 30 (gage height, 2.98 ft).

Period of record: Maximum discharge, 10,800 cfs Mar. 28, 1961 (gage height, 12.33 ft); minimum observed, 161 cfs Aug. 9, 1936 (gage height, 0.76 ft, site and datum then in use).

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

REVISIONS (WATER YEARS).--WSP 855: Drainage area. WSP 1438: 1933-38.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Oct. 15 to Dec. 30; stage-discharge relation affected by ice Dec. 31 to Mar. 16.)

|     |     |      |       |
|-----|-----|------|-------|
| 2.9 | 289 | 7.0  | 1,000 |
| 3.0 | 303 | 8.0  | 1,250 |
| 4.0 | 450 | 9.0  | 2,080 |
| 5.0 | 600 | 10.0 | 4,570 |
| 6.0 | 780 |      |       |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB   | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 339    | 360    | 382    | 360    | 310   | 360    | 518    | 524    | 382    | 335    | 387    | 454    |
| 2     | 360    | 450    | 368    | 360    | 310   | 350    | 506    | 556    | 364    | 328    | 430    | 459    |
| 3     | 376    | 512    | 352    | 330    | 310   | 340    | 507    | 598    | 351    | 348    | 418    | 422    |
| 4     | 338    | 558    | 374    | 320    | 310   | 330    | 498    | 580    | 341    | 335    | 398    | 396    |
| 5     | 337    | 453    | 375    | 320    | 310   | 330    | 488    | 538    | 332    | 306    | 374    | 384    |
| 6     | 339    | 394    | 369    | 320    | 310   | 330    | 507    | 519    | 335    | 296    | 362    | 378    |
| 7     | 337    | 378    | 375    | 330    | 310   | 320    | 582    | 500    | 346    | 304    | 368    | 376    |
| 8     | 334    | 364    | 381    | 340    | 310   | 320    | 713    | 484    | 348    | 311    | 406    | 380    |
| 9     | 334    | 360    | 393    | 340    | 310   | 320    | 632    | 466    | 334    | 324    | 429    | 372    |
| 10    | 334    | 356    | 405    | 340    | 310   | 320    | 543    | 447    | 328    | 330    | 404    | 362    |
| 11    | 325    | 354    | 424    | 340    | 310   | 320    | 546    | 436    | 334    | 335    | 408    | 366    |
| 12    | 327    | 352    | 446    | 340    | 320   | 360    | 590    | 426    | 334    | 454    | 1,010  | 368    |
| 13    | 324    | 352    | 446    | 330    | 320   | 440    | 664    | 424    | 328    | 418    | 574    | 715    |
| 14    | 324    | 351    | 399    | 330    | 330   | 740    | 959    | 432    | 354    | 384    | 436    | 786    |
| 15    | 320    | 346    | 405    | 320    | 340   | 980    | 1,080  | 442    | 394    | 368    | 402    | 847    |
| 16    | 324    | 360    | 489    | 320    | 340   | 1,250  | 1,050  | 446    | 434    | 346    | 387    | 567    |
| 17    | 321    | 398    | 579    | 330    | 350   | 2,250  | 788    | 435    | 390    | 351    | 382    | 477    |
| 18    | 324    | 440    | 501    | 370    | 350   | 2,300  | 704    | 412    | 350    | 402    | 370    | 447    |
| 19    | 335    | 438    | 420    | 490    | 350   | 2,400  | 630    | 398    | 337    | 476    | 366    | 429    |
| 20    | 344    | 420    | 446    | 470    | 350   | 2,400  | 591    | 386    | 332    | 456    | 384    | 459    |
| 21    | 362    | 405    | 484    | 420    | 350   | 2,440  | 582    | 374    | 335    | 386    | 586    | 518    |
| 22    | 382    | 386    | 444    | 390    | 350   | 2,440  | 658    | 366    | 325    | 358    | 618    | 492    |
| 23    | 342    | 375    | 432    | 370    | 360   | 2,320  | 860    | 360    | 320    | 426    | 572    | 458    |
| 24    | 357    | 366    | 400    | 350    | 360   | 2,320  | 856    | 352    | 316    | 452    | 478    | 430    |
| 25    | 348    | 364    | 378    | 340    | 360   | 1,910  | 664    | 348    | 306    | 459    | 470    | 482    |
| 26    | 346    | 372    | 372    | 330    | 360   | 998    | 586    | 346    | 304    | 412    | 603    | 828    |
| 27    | 344    | 390    | 368    | 320    | 360   | 679    | 546    | 344    | 304    | 420    | 597    | 1,110  |
| 28    | 372    | 396    | 354    | 310    | 360   | 614    | 518    | 337    | 309    | 546    | 646    | 1,200  |
| 29    | 346    | 416    | 318    | 310    | 360   | 574    | 514    | 357    | 313    | 532    | 540    | 1,270  |
| 30    | 337    | 396    | 342    | 310    | ----- | 555    | 510    | 381    | 317    | 417    | 474    | 1,460  |
| 31    | 357    | -----  | 340    | 310    | ----- | 536    | -----  | 382    | -----  | 393    | 440    | -----  |
| TOTAL | 10,593 | 11,862 | 12,581 | 10,760 | 9,680 | 32,146 | 19,390 | 13,396 | 10,197 | 12,008 | 14,719 | 17,692 |
| MEAN  | 342    | 395    | 406    | 347    | 334   | 1,037  | 646    | 432    | 340    | 387    | 475    | 590    |
| MAX   | 382    | 558    | 579    | 490    | 360   | 2,440  | 1,080  | 598    | 434    | 546    | 1,010  | 1,460  |
| MIN   | 320    | 346    | 318    | 310    | 310   | 320    | 488    | 337    | 304    | 296    | 362    | 362    |
| CFSM  | .50    | .57    | .59    | .50    | .48   | 1.50   | .94    | .63    | .49    | .56    | .69    | .86    |
| IN.   | .57    | .64    | .68    | .58    | .52   | 1.73   | 1.05   | .72    | .55    | .65    | .79    | .95    |

CAL YR 1971 TOTAL 155,159 MEAN 425 MAX 1,200 MIN 200 CFSM .62 IN 8.37  
WTR YR 1972 TOTAL 175,024 MEAN 478 MAX 2,440 MIN 296 CFSM .69 IN 9.44

PEAK DISCHARGE (BASE, 1,900 CFS).--Mar. 21 (2400) 2,520 cfs (9.22 ft).

NOTE.--No gage-height record Jan. 15 to Feb. 19.

## Reservoirs in Wisconsin River Basin

The 24 reservoirs listed below are used to stabilize the flow of the Wisconsin and Tomahawk Rivers for power utilization and are also used for recreational purposes. The first 21 reservoirs are owned and operated by the Wisconsin Valley Improvement Co., which furnished 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 these 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 NE 1/4 sec.17, T.42 N., R.11 E., Vilas County, 4.8 miles northwest of Phelps, Wis., used as a reservoir since 1908, has a usable capacity of 652,000,000 cu ft. Drainage area, 28 sq mi. Datum of gage is 1,679.53 ft above mean sea level.
- 05390150 Twin Lakes on Twin River, lat 46°01'20", long 89°10'05", in SW 1/4 NE 1/4 sec.19, T.41 N., R.11 E., Vilas County, 5.0 miles southwest of Phelps, Wis., used as a reservoir since 1908, has a usable capacity of 313,000,000 cu ft. Drainage area, 26 sq mi. Altitude of gage is 1,640 ft (from river-profile map).
- 05390200 Buckatabon Lakes on Buckatabon Creek, lat 46°01'18", long 89°18'40", in SE 1/4 NE 1/4 sec.24, T.41 N., R.9 E., Vilas County, 3.3 miles southwest of Conover, Wis., used as a reservoir since 1908, has a usable capacity of 130,000,000 cu ft. Drainage area, 14 sq mi. Datum of gage is 1,637.85 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05390250 Sevenmile Lake on Sevenmile Creek, lat 45°52'30", long 89°04'07", in SE 1/4 NE 1/4 sec.11, T.39 N., R.11 E., Oneida County, 9.1 miles southeast of town of Eagle River, Wis., used as a reservoir since 1908, has a usable capacity of 93,000,000 cu ft. Drainage area, 14 sq mi. Datum of gage is 1,646.30 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05390300 Lower Ninemile Lake on Ninemile Creek, lat 45°53'37", long 89°07'15", in NE 1/4 NW 1/4 sec.4, T.39 N., R.11 E., Oneida County, 6.6 miles southeast of town of Eagle River, Wis., used as a reservoir since 1908, has a usable capacity of 121,000,000 cu ft. Drainage area, 25 sq mi. Datum of gage is 1,638.27 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 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 miles southeast of town of Eagle River, Wis., used as a reservoir since 1908, has a usable capacity of 779,000,000 cu ft. This reservoir includes 18 lakes controlled by the same dam. Drainage area, 129 sq mi. Altitude of gage is 1,620 ft (from river-profile map).
- 05390400 Long Lake on Deerskin River, lat 46°02'37", long 89°02'44", in NW 1/4 SE 1/4 sec.7, T.41 N., R.12 E., Vilas County, 2.5 miles southeast of Phelps, Wis., used as a reservoir since 1908, has a usable capacity of 400,000,000 cu ft. Drainage area, 35 sq mi. Datum of gage is 1,695.14 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05390600 Deerskin Lake on Little Deerskin River, lat 45°59'07", long 89°09'40", in SE 1/4 sec.31, T.41 N., R.11 E., Vilas County, 6.3 miles northeast of town of Eagle River, Wis., used as a reservoir since 1908, has a usable capacity of 22,000,000 cu ft. Drainage area, 5 sq mi. Datum of gage is 1,640.16 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05390650 Sugar Camp Reservoir on Sugar Camp Creek, lat 45°52'19", long 89°23'40", in NE 1/4 sec.17, T.39 N., R.9 E., Oneida County, 7.6 miles southwest of town of Eagle River, Wis., used as a reservoir since 1908, has a usable capacity of 471,000,000 cu ft. Drainage area, 59 sq mi. Datum of gage is 1,591.94 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05390700 Little St. Germain Lake on Little St. Germain Creek, lat 45°53'57", long 89°27'08", in SE 1/4 sec.35, T.40 N., R.8 E., Vilas County, 9.6 miles west of town of Eagle River, Wis., used as a reservoir since 1908, has a usable capacity of 79,000,000 cu ft. Drainage area, 19 sq mi. Datum of gage is 1,611.54 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05390750 Big St. Germain Lake on St. Germain River, lat 45°55'06", long 89°31'55", in SE 1/4 sec.30, T.40 N., R.8 E., Vilas County, 5.0 miles south of Sayner, Wis., used as a reservoir since 1908, has a usable capacity of 202,000,000 cu ft. Drainage area, 69 sq mi. Datum of gage is 1,588.32 ft above mean sea level (levels by Public Service Commission of Wisconsin).
- 05390800 Pickereel 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 miles northeast of town of Lake Tomahawk, Wis., used as a reservoir since 1935, has a usable capacity of 338,000,000 cu ft. Drainage area, 78 sq mi. Datum of gage is 1,582.00 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05390900 Rainbow Lake on Wisconsin River, lat 45°50'02", long 89°32'42", in SW 1/4 sec.30, T.39 N., R.8 E., Oneida County, 800 ft upstream from U.S. Geological Survey river gaging station, 2.7 miles northeast of town of Lake Tomahawk, Wis., used as a reservoir since 1935, has a usable capacity of 2,181,000,000 cu ft. Drainage area, 740 sq mi. Datum of gage is 1,570.00 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05391100 South Pelican Lake on Pelican River, lat 45°31'37", long 89°12'24", in S 1/2 sec.11, T.35 N., R.10 E., Oneida County, 2.8 miles northwest of town of Pelican Lake, Wis., used as a reservoir since 1909, has a usable capacity of 305,000,000 cu ft. Drainage area, 22 sq mi. Datum of gage is 1,589.98 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).

## Reservoirs in Wisconsin River Basin--Continued

- 05391300 North Pelican Lakes (includes Moen Lakes) on North Branch Pelican River, lat 45°38'05", long 89°14'38", in SE 1/4 sec.4, T.36 N., R.10 E., Oneida County, 0.2 mile below Twin Lakes Creek and 8.0 miles east of Rhinelander, Wis., city limits, used as a reservoir since 1908, has a usable capacity of 218,000,000 cu ft. Drainage area, 71 sq mi. Datum of gage is 1,569.10 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05392100 Minocqua Lake on Tomahawk River, lat 45°52'35", long 89°43'38", on line between secs.10 and 15, T.39 N., R.6 E., Oneida County, 1.0 mile west of Minocqua, Wis., used as a reservoir since 1910, has a usable capacity of 628,000,000 cu ft. Drainage area, 89 sq mi. Datum of gage is 1,584.56 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05392200 Squirrel Lake on Squirrel River, lat 45°50'37", long 89°54'13", in NE 1/4 sec.30, T.39 N., R.5 E., Oneida County, 8.8 miles southwest of Minocqua, Wis., used as a reservoir since 1908, has a usable capacity of 182,000,000 cu ft. Drainage area, 17 sq mi. Datum of gage is 1,560.93 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05392300 Willow Reservoir on Tomahawk River, lat 45°42'45", long 89°50'38", in NE 1/4 sec.10, T.37 N., R.5 E., Oneida County, 8.8 miles southwest of Hazelhurst, Wis., used as a reservoir since 1927, has a usable capacity of 3,302,000,000 cu ft. Drainage area, 327 sq mi. Datum of gage is 1,505.87 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05392500 Lake Nokomis on Tomahawk River, lat 45°32'20", long 89°44'48", in NW 1/4 sec.9, T.35 N., R.6 E., Lincoln County, at U.S. Geological Survey river gaging station, 0.5 mile east of Bradley, Wis., used as a reservoir since 1912, has a usable capacity of 1,808,000,000 cu ft. Drainage area, 548 sq mi. Datum of gage is 1,448.24 ft above mean sea level.
- 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 miles south of Tomahawk, Wis., used as a reservoir since 1923, has a usable capacity of 756,000,000 cu ft. Drainage area, 174 sq mi. Datum of gage is 1,420.53 ft above mean sea level.
- 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 miles northeast of Dancy, Wis., used as a reservoir since 1937, has a usable capacity of 4,457,000,000 cu ft. Drainage area, 365 sq mi. Datum of gage is 1,115.00 ft above mean sea level (levels by Wisconsin Valley Improvement Co.).
- 05400295 Lake Dubay on Wisconsin River, lat 44°39'54", long 89°39'03", in sec.10, T.25 N., R.7 E., Wood County, 1.5 miles downstream from Little Eau Pleine River and 10.5 miles northwest of Stevens Point, has a usable capacity of 2,117,000,000 cu ft. Drainage area, 4,890 sq mi. Datum of gage is at mean sea level (power company levels).
- 05401400 Petenwell Flowage on Wisconsin River, lat 44°03'26", long 90°01'18", in SE 1/4 sec.4, T.18 N., R.4 E., Adams County, 5.2 miles upstream from Roche a Cri Creek, 2.4 miles west of Strongs Prairie, Wis., and 3.5 miles northeast of Necedah, Wis., used as a reservoir since 1950, has a total capacity of 19,880,000,000 cu ft. Drainage area, 5,869 sq mi. Datum of gage is 790.2 ft above mean sea level (levels by Wisconsin River Power Co.).
- 05403200 Castle Rock Flowage on Wisconsin River, lat 43°51'48", long 89°57'38", in sec.13, T.16 N., R.4 E., Adams County, 4.5 miles upstream from Duck Creek, and 2.0 miles south of Germantown, Wis., and 7.0 miles northeast of Mauston, Wis., used as a reservoir since 1950, has a total capacity of 7,630,000,000 cu ft. Drainage area, 6,860 sq mi. Datum of gage is 790.2 ft above mean sea level (levels by Wisconsin River Power Co.).

Month-end contents, in millions of cubic feet, water year October 1971 to September 1972

|               | Lac Vieux<br>Desert | Twin<br>Lakes | Buckatabon<br>Lake | Sevenmile<br>Lake | Lower<br>Ninemile<br>Lake | Burnt<br>Rollways<br>Reservoir | Long<br>Lake | Deerskin<br>Lake |
|---------------|---------------------|---------------|--------------------|-------------------|---------------------------|--------------------------------|--------------|------------------|
| Sept. 30..... | 284*                | 203*          | 108*               | 78*               | 121                       | 762*                           | 174          | 14*              |
| Oct. 31.....  | 212                 | 173           | 109                | 66                | 51                        | 679                            | 152          | 7                |
| Nov. 30.....  | 124                 | 98            | 119                | 74                | 72                        | 732                            | 142          | 4                |
| Dec. 31.....  | 72                  | 0             | 130                | 77                | 57                        | 606                            | 130          | 3                |
| Jan. 31.....  | 14                  | 0             | 52                 | 79                | 2                         | 158                            | 68           | 3                |
| Feb. 29.....  | 0                   | 0             | 30                 | 79                | 1                         | 0                              | 24           | 3                |
| Mar. 31.....  | 26                  | 24            | 37                 | 79                | 8                         | 258                            | 12           | 7                |
| Apr. 30.....  | 199                 | 124           | 105                | 74                | 116                       | 779                            | 246          | 10               |
| May 31.....   | 308                 | 204           | 118                | 67                | 109                       | 712                            | 247          | 15               |
| June 30.....  | 340                 | 230           | 118                | 77                | 124                       | 766                            | 256          | 14               |
| July 31.....  | 380                 | 273           | 117                | 89                | 118                       | 739                            | 257          | 15               |
| Aug. 31.....  | 401                 | 286           | 118                | 83                | 120                       | 736                            | 252          | 15               |
| Sept. 30..... | 340                 | 289           | 118                | 86                | 123                       | 738                            | 246          | 14               |

## Reservoirs in Wisconsin River Basin--Continued

Month-end contents, in millions of cubic feet, water year October 1971 to September 1972

|               | Sugar<br>Camp<br>Reservoir | Little<br>St. Germain<br>Lake | Big<br>St. Germain<br>Lake | Pickerel<br>Lake | Rainbow<br>Lake | South<br>Pelican<br>Lake | North<br>Pelican<br>Lakes | Minocqua<br>Lake |
|---------------|----------------------------|-------------------------------|----------------------------|------------------|-----------------|--------------------------|---------------------------|------------------|
| Sept. 30..... | 453*                       | 74*                           | 162                        | 249*             | 840*            | 241                      | 142                       | 532*             |
| Oct. 31.....  | 423                        | 61                            | 168                        | 268              | 2,115           | 237                      | 136                       | 370              |
| Nov. 30.....  | 399                        | 57                            | 174                        | 266              | 2,113           | 178                      | 118                       | 299              |
| Dec. 31.....  | 368                        | 47                            | 151                        | 238              | 1,966           | 148                      | 64                        | 225              |
| Jan. 31.....  | 224                        | 32                            | 92                         | 204              | 1,709           | 89                       | 42                        | 122              |
| Feb. 29.....  | 16                         | 11                            | 38                         | 166              | 1,056           | 63                       | 28                        | 110              |
| Mar. 31.....  | 144                        | 15                            | 29                         | 27               | 233             | 76                       | 56                        | 79               |
| Apr. 30.....  | 459                        | 66                            | 151                        | 237              | 1,144           | 248                      | 166                       | 45               |
| May 31.....   | 427                        | 75                            | 168                        | 278              | 2,056           | 273                      | 143                       | 437              |
| June 30.....  | 414                        | 76                            | 164                        | 278              | 1,295           | 228                      | 137                       | 550              |
| July 31.....  | 408                        | 75                            | 162                        | 266              | 1,128           | 228                      | 139                       | 502              |
| Aug. 31.....  | 415                        | 75                            | 162                        | 276              | 2,151           | 292                      | 135                       | 556              |
| Sept. 30..... | 451                        | 75                            | 171                        | 266              | 2,155           | 318                      | 144                       | 529              |

|               | Squirrel<br>Lake | Willow<br>Reservoir | Lake<br>Nokomis | Spirit<br>Lake<br>Flowage | Big Eau<br>Pleine<br>Reservoir | Lake<br>Dubay | Petenwell<br>Flowage | Castle<br>Rock<br>Flowage |
|---------------|------------------|---------------------|-----------------|---------------------------|--------------------------------|---------------|----------------------|---------------------------|
| Sept. 30..... | 178*             | 1,583*              | 835*            | 324*                      | 2,487*                         | 4,552*        | 18,802*              | 6,761*                    |
| Oct. 31.....  | 155              | 2,844               | 1,684           | 564                       | 2,885                          | 4,461         | 18,820               | 6,684                     |
| Nov. 30.....  | 142              | 3,056               | 1,654           | 655                       | 3,130                          | 4,454         | 18,836               | 6,698                     |
| Dec. 31.....  | 65               | 2,493               | 1,470           | 596                       | 3,450                          | 4,291         | 18,768               | 6,418                     |
| Jan. 31.....  | 45               | 1,574               | 965             | 372                       | 1,781                          | 4,358         | 18,584               | 6,446                     |
| Feb. 29.....  | 2                | 607                 | 740             | 134                       | 187                            | 4,233         | 17,879               | 5,158                     |
| Mar. 31.....  | 23               | 437                 | 93              | 3                         | 1,323                          | 3,105         | 15,663               | 4,307                     |
| Apr. 30.....  | 142              | 2,298               | 1,533           | 659                       | 4,396                          | 4,911         | 19,754               | 7,548                     |
| May 31.....   | 152              | 2,944               | 1,654           | 563                       | 3,966                          | 4,818         | 19,448               | 7,300                     |
| June 30.....  | 155              | 2,178               | 1,429           | 418                       | 3,427                          | 4,358         | 18,624               | 6,656                     |
| July 31.....  | 148              | 1,716               | 1,271           | 435                       | 3,335                          | 4,304         | 18,580               | 6,782                     |
| Aug. 31.....  | 145              | 2,611               | 1,796           | 705                       | 3,925                          | 4,265         | 18,749               | 6,768                     |
| Sept. 30..... | 158              | 2,826               | 1,786           | 725                       | 4,302                          | 4,548         | 18,800               | 6,779                     |

\*Corrected

## GRANT RIVER BASIN

05413500 Grant River at Burton, Wis.

LOCATION.--Lat 42°43'13", long 90°49'09", in NW 1/4 sec.23, T.3 N., R.4 W., Grant County, on right bank at downstream side of highway bridge at Burton, 5.9 miles northwest of Potosi and 9.5 miles upstream from mouth.

DRAINAGE AREA.--267 sq mi.

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.

GAGE.--Water-stage recorder. Datum of gage is 606.89 ft above mean sea level, adjustment of 1912. Oct. 17, 1934, to Sept. 30, 1947, nonrecording gage at site 6 miles upstream at datum 33.18 ft higher. Mar. 18, 1947, to July 27, 1949, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--38 years, 158 cfs (8.04 inches per year).

EXTREMES.--Current year: Maximum discharge, 10,900 cfs Mar. 15 (gage height, 20.52 ft); minimum daily, 64 cfs Jan. 26, backwater from ice.

Period of record: Maximum discharge, 25,000 cfs July 16, 1950 (gage height, 24.82 ft), from rating curve extended above 18,000 cfs on basis of slope-area measurement of peak flow; minimum, 21 cfs Mar. 4, 1954, result of freezeup.

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

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

REVISIONS (WATER YEARS).--WSP 1308: 1935-37(M), 1941(M), 1945-46(M), 1949(M). WSP 1728: 1942(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Shifting-control method used Mar. 12-13, 15-16, Apr. 18-21; stage-discharge relation affected by ice Dec. 2-8, 18-20, 22, Dec. 26-Mar. 10.)

| Oct. 1 to Apr. 22 |     |      |       | Apr. 23 to Aug. 2 |     |      |       | Aug. 3 to Sept. 30 |       |  |  |
|-------------------|-----|------|-------|-------------------|-----|------|-------|--------------------|-------|--|--|
| 4.4               | 64  | 14.0 | 1,170 | 4.9               | 84  | 15.0 | 1,310 | 6.1                | 158   |  |  |
| 5.0               | 105 | 16.0 | 1,460 | 6.0               | 162 | 17.0 | 1,730 | 8.0                | 296   |  |  |
| 7.0               | 288 | 17.0 | 1,730 | 9.0               | 524 | 18.0 | 3,620 | 11.0               | 676   |  |  |
| 10.0              | 654 | 18.0 | 3,620 | 12.0              | 914 |      |       | 14.0               | 1,150 |  |  |
|                   |     |      |       |                   |     |      |       | 16.0               | 1,490 |  |  |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR    | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 100   | 138   | 94    | 110   | 78    | 500    | 124   | 185   | 114   | 94    | 689   | 554   |
| 2     | 94    | 468   | 86    | 100   | 78    | 220    | 124   | 214   | 112   | 105   | 2,250 | 223   |
| 3     | 115   | 163   | 90    | 94    | 76    | 170    | 125   | 216   | 112   | 96    | 457   | 190   |
| 4     | 114   | 135   | 94    | 84    | 74    | 120    | 121   | 184   | 107   | 89    | 300   | 181   |
| 5     | 98    | 127   | 98    | 80    | 72    | 100    | 120   | 175   | 108   | 87    | 252   | 176   |
| 6     | 95    | 118   | 100   | 82    | 72    | 90     | 131   | 220   | 112   | 86    | 333   | 172   |
| 7     | 93    | 108   | 110   | 84    | 70    | 110    | 136   | 278   | 103   | 89    | 536   | 171   |
| 8     | 95    | 113   | 115   | 90    | 70    | 140    | 124   | 239   | 104   | 88    | 290   | 171   |
| 9     | 96    | 116   | 123   | 96    | 70    | 130    | 132   | 221   | 389   | 286   | 245   | 161   |
| 10    | 94    | 115   | 135   | 98    | 70    | 140    | 156   | 200   | 136   | 113   | 222   | 160   |
| 11    | 92    | 113   | 154   | 96    | 72    | 580    | 150   | 184   | 116   | 115   | 225   | 1,340 |
| 12    | 92    | 110   | 134   | 96    | 74    | 2,940  | 138   | 172   | 114   | 622   | 265   | 338   |
| 13    | 92    | 108   | 126   | 84    | 76    | 1,400  | 139   | 175   | 114   | 174   | 220   | 856   |
| 14    | 91    | 106   | 122   | 76    | 78    | 816    | 135   | 185   | 169   | 119   | 202   | 400   |
| 15    | 90    | 105   | 376   | 70    | 80    | 1,380  | 136   | 207   | 128   | 499   | 192   | 314   |
| 16    | 89    | 114   | 338   | 68    | 78    | 1,660  | 167   | 169   | 111   | 161   | 187   | 284   |
| 17    | 88    | 130   | 168   | 72    | 76    | 816    | 180   | 155   | 106   | 588   | 181   | 259   |
| 18    | 90    | 128   | 190   | 96    | 76    | 616    | 149   | 142   | 104   | 364   | 176   | 241   |
| 19    | 104   | 136   | 210   | 150   | 74    | 315    | 142   | 140   | 104   | 205   | 171   | 228   |
| 20    | 126   | 119   | 180   | 140   | 74    | 276    | 139   | 138   | 115   | 168   | 168   | 222   |
| 21    | 111   | 114   | 155   | 110   | 74    | 279    | 167   | 135   | 109   | 149   | 166   | 216   |
| 22    | 108   | 106   | 140   | 94    | 74    | 281    | 320   | 131   | 103   | 138   | 163   | 207   |
| 23    | 99    | 109   | 128   | 84    | 76    | 174    | 221   | 126   | 99    | 346   | 162   | 204   |
| 24    | 102   | 112   | 130   | 76    | 78    | 149    | 187   | 124   | 97    | 177   | 160   | 204   |
| 25    | 105   | 111   | 130   | 70    | 80    | 139    | 167   | 123   | 96    | 143   | 203   | 220   |
| 26    | 100   | 115   | 120   | 64    | 82    | 137    | 154   | 119   | 96    | 135   | 184   | 421   |
| 27    | 100   | 123   | 110   | 68    | 88    | 132    | 145   | 117   | 94    | 134   | 196   | 246   |
| 28    | 102   | 114   | 100   | 74    | 100   | 133    | 140   | 114   | 97    | 138   | 173   | 220   |
| 29    | 101   | 117   | 110   | 78    | 120   | 136    | 148   | 128   | 105   | 136   | 163   | 223   |
| 30    | 104   | 112   | 120   | 80    | ----- | 126    | 160   | 138   | 98    | 130   | 158   | 213   |
| 31    | 114   | ----- | 120   | 80    | ----- | 126    | ----- | 117   | ----- | 124   | 164   | ----- |
| TOTAL | 3,094 | 3,903 | 4,406 | 2,744 | 2,260 | 14,331 | 4,577 | 5,171 | 3,572 | 5,898 | 9,453 | 9,015 |
| MEAN  | 99.8  | 130   | 142   | 88.5  | 77.9  | 462    | 153   | 167   | 119   | 190   | 305   | 301   |
| MAX   | 126   | 468   | 376   | 150   | 120   | 2,940  | 320   | 278   | 389   | 622   | 2,250 | 1,340 |
| MIN   | 88    | 105   | 86    | 64    | 70    | 90     | 120   | 114   | 94    | 86    | 158   | 160   |
| CFSM  | .37   | .49   | .53   | .33   | .29   | 1.73   | .57   | .63   | .45   | .71   | 1.14  | 1.13  |
| IN.   | .43   | .54   | .61   | .38   | .31   | 2.00   | .64   | .72   | .50   | .82   | 1.32  | 1.26  |

CAL YR 1971 TOTAL 57,861 MEAN 159 MAX 1,260 MIN 66 CFSM .60 IN 8.06  
WTR YR 1972 TOTAL 68,424 MEAN 187 MAX 2,940 MIN 64 CFSM .70 IN 9.53

PEAK DISCHARGE (BASE, 2,400 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 3-12 | 0645 | 18.88 | 6,150     | 8- 2 | 0545 | 18.38 | 4,700     |
| 3-15 | 2345 | 20.52 | 10,900    | 9-11 | 1000 | 18.01 | 3,650     |

05414000 Platte River near Rockville, Wis.

LOCATION.--Lat 42°43'52", long 90°38'25", in SW 1/4 sec.17, T.3 N., R.2 W., Grant County, on right bank just downstream from bridge on County Trunk Highway B, 0.8 mile upstream from Blakely Branch, 2.2 miles east of Rockville, 4.5 miles northeast of Potosi, and 15.2 miles upstream from mouth.

DRAINAGE AREA.--139 sq mi.

PERIOD OF RECORD.--October 1934 to current year. Monthly discharge only for October and November 1934, published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 642.96 ft above mean sea level, adjustment of 1912. Prior to Oct. 1, 1941, nonrecording gage at site 1.3 miles upstream at datum 12.55 ft higher. Oct. 1, 1941, to June 29, 1949, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--38 years, 93.6 cfs (9.14 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,550 cfs July 14 (gage height, 10.97 ft); minimum daily, 42 cfs Feb. 6-9.

Period of record: Maximum discharge, 43,500 cfs July 16, 1950 (gage height, 17.26 ft), from rating curve extended above 7,000 cfs on basis of slope-area measurement of peak flow; no flow Nov. 24, 1950.

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

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

REVISIONS (WATER YEARS).--WSP 1438: 1935-36, 1937(M), 1939(M), 1941-43, 1946(M).

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 2-6, 18, Dec. 27 to Mar. 12.)

| Oct. 1 to Mar. 11 |    |     |     | Mar. 12 to Sept. 30 |     |     |       |
|-------------------|----|-----|-----|---------------------|-----|-----|-------|
| 3.2               | 49 | 4.0 | 184 | 3.2                 | 55  | 5.0 | 450   |
| 3.5               | 86 | 5.0 | 450 | 3.6                 | 109 | 6.0 | 750   |
|                   |    | 6.0 | 750 | 4.0                 | 184 | 7.0 | 1,050 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 58    | 111   | 64    | 72    | 45    | 180   | 74    | 104   | 79    | 61    | 90    | 119   |
| 2     | 56    | 260   | 50    | 68    | 44    | 110   | 72    | 112   | 76    | 80    | 438   | 91    |
| 3     | 66    | 120   | 54    | 62    | 44    | 74    | 71    | 116   | 76    | 66    | 176   | 83    |
| 4     | 62    | 96    | 56    | 56    | 43    | 66    | 79    | 108   | 74    | 61    | 130   | 81    |
| 5     | 58    | 86    | 60    | 52    | 43    | 58    | 79    | 109   | 74    | 60    | 112   | 80    |
| 6     | 57    | 78    | 66    | 54    | 42    | 54    | 94    | 137   | 76    | 59    | 158   | 78    |
| 7     | 54    | 73    | 70    | 58    | 42    | 62    | 94    | 154   | 74    | 57    | 166   | 78    |
| 8     | 56    | 71    | 70    | 60    | 42    | 86    | 79    | 142   | 71    | 55    | 124   | 76    |
| 9     | 56    | 72    | 78    | 70    | 42    | 74    | 88    | 128   | 83    | 83    | 111   | 76    |
| 10    | 56    | 73    | 90    | 76    | 43    | 70    | 102   | 121   | 75    | 63    | 103   | 80    |
| 11    | 56    | 71    | 110   | 70    | 45    | 400   | 98    | 112   | 71    | 61    | 104   | 252   |
| 12    | 54    | 70    | 86    | 68    | 45    | 800   | 86    | 106   | 70    | 81    | 176   | 139   |
| 13    | 54    | 68    | 74    | 62    | 45    | 432   | 81    | 109   | 71    | 87    | 109   | 332   |
| 14    | 54    | 67    | 90    | 48    | 44    | 417   | 80    | 130   | 79    | 705   | 100   | 176   |
| 15    | 54    | 66    | 400   | 44    | 44    | 921   | 81    | 144   | 77    | 420   | 94    | 150   |
| 16    | 54    | 67    | 210   | 43    | 45    | 798   | 98    | 118   | 68    | 97    | 93    | 120   |
| 17    | 54    | 72    | 160   | 43    | 45    | 786   | 97    | 109   | 67    | 168   | 90    | 116   |
| 18    | 56    | 80    | 100   | 70    | 46    | 332   | 90    | 103   | 67    | 144   | 87    | 102   |
| 19    | 75    | 80    | 130   | 210   | 46    | 240   | 87    | 98    | 67    | 93    | 86    | 97    |
| 20    | 76    | 76    | 116   | 120   | 47    | 206   | 81    | 96    | 70    | 84    | 84    | 96    |
| 21    | 70    | 73    | 104   | 80    | 47    | 240   | 102   | 91    | 68    | 76    | 84    | 97    |
| 22    | 66    | 70    | 94    | 70    | 47    | 193   | 172   | 88    | 66    | 72    | 83    | 90    |
| 23    | 62    | 68    | 94    | 64    | 47    | 94    | 133   | 87    | 63    | 88    | 83    | 88    |
| 24    | 62    | 70    | 96    | 60    | 48    | 81    | 116   | 84    | 62    | 90    | 83    | 88    |
| 25    | 61    | 70    | 91    | 56    | 49    | 79    | 102   | 83    | 61    | 70    | 96    | 133   |
| 26    | 60    | 72    | 91    | 52    | 50    | 74    | 96    | 81    | 60    | 75    | 111   | 242   |
| 27    | 59    | 75    | 75    | 50    | 54    | 71    | 88    | 80    | 60    | 80    | 93    | 116   |
| 28    | 59    | 71    | 62    | 49    | 60    | 68    | 86    | 79    | 61    | 71    | 84    | 106   |
| 29    | 58    | 75    | 74    | 48    | 70    | 71    | 91    | 84    | 66    | 68    | 81    | 108   |
| 30    | 62    | 71    | 78    | 47    | ----- | 66    | 96    | 94    | 63    | 66    | 79    | 100   |
| 31    | 66    | ----- | 74    | 46    | ----- | 72    | ----- | 80    | ----- | 65    | 79    | ----- |
| TOTAL | 1,851 | 2,472 | 3,068 | 2,028 | 1,354 | 7,275 | 2,793 | 3,287 | 2,095 | 3,406 | 3,587 | 3,590 |
| MEAN  | 59.7  | 82.4  | 99.0  | 65.4  | 46.7  | 235   | 93.1  | 106   | 69.8  | 110   | 116   | 120   |
| MAX   | 76    | 260   | 400   | 210   | 70    | 921   | 172   | 154   | 83    | 705   | 438   | 332   |
| MIN   | 54    | 66    | 50    | 43    | 42    | 54    | 71    | 79    | 60    | 55    | 79    | 76    |
| CFSM  | .43   | .59   | .71   | .47   | .34   | 1.69  | .67   | .76   | .50   | .79   | .83   | .86   |
| IN.   | .50   | .66   | .82   | .54   | .36   | 1.95  | .75   | .88   | .56   | .91   | .96   | .96   |

CAL YR 1971 TOTAL 36,356 MEAN 99.6 MAX 885 MIN 35 CFSM .72 IN 9.73  
WTR YR 1972 TOTAL 36,806 MEAN 101 MAX 921 MIN 42 CFSM .73 IN 9.85

PEAK DISCHARGE (BASE, 2,100 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 3-11 | 2300 | 10.64 | 3,540     | 7-14 | 2400 | 10.97 | 5,550     |
| 3-15 | 2145 | 10.02 | 3,730     |      |      |       |           |

a Backwater from ice.

## GALENA RIVER BASIN

05415000 Galena River at Buncombe, Wis.

LOCATION.--Lat 42°30'49", long 90°22'40", in SW 1/4 sec.33, T.1 N., R.1 E., Lafayette County, on left bank at Buncombe, 0.6 mile upstream from Coon Branch, 1.5 miles upstream from Scrabble Branch, 2.0 miles upstream from Wisconsin-Illinois State line, and 3.5 miles southeast of Hazel Green.

DRAINAGE AREA.--128 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 682.77 ft above mean sea level, adjustment of 1912 (Corps of Engineers bench mark). Prior to Dec. 1, 1939, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--33 years, 73.1 cfs (7.76 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,780 cfs Aug. 2 (gage height, 12.94 ft); minimum, 12 cfs Jan. 4 (gage height, 2.85 ft, result of freezeup).

Period of record: Maximum discharge, 29,700 cfs June 29, 1969 (gage height, 19.57 ft) from rating curve extended above 8,100 cfs on basis of slope-area measurements at gage heights 15.68 ft and 19.57 ft; minimum, 0.8 cfs Mar. 3, 1954.

Flood in February 1937 reached a stage of about 17.1 ft, from information by local resident (discharge, 18,000 cfs).

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

REVISIONS (WATER YEARS).--WSP 1438: 1942(P), 1943(M), 1944(P), 1945(M).

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 1-4, Jan. 1 to Mar. 6.)

| Oct. 1 to Feb. 29 |    |     |     | Mar. 1 to Sept. 30 |     |     |       |
|-------------------|----|-----|-----|--------------------|-----|-----|-------|
| 2.9               | 14 | 3.8 | 70  | 3.0                | 21  | 6.0 | 602   |
| 3.0               | 17 | 4.2 | 118 | 3.4                | 53  | 7.0 | 980   |
| 3.4               | 36 | 5.0 | 265 | 4.0                | 127 | 8.0 | 1,420 |
|                   |    |     |     | 5.0                | 314 | 9.0 | 1,950 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC   | JAN  | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 23   | 32    | 21    | 30   | 24    | 200   | 37    | 86    | 39    | 25   | 41    | 150   |
| 2     | 22   | 200   | 20    | 24   | 24    | 70    | 38    | 85    | 38    | 28   | 1,740 | 90    |
| 3     | 25   | 90    | 21    | 21   | 24    | 62    | 38    | 80    | 35    | 24   | 200   | 64    |
| 4     | 24   | 50    | 24    | 20   | 24    | 50    | 36    | 71    | 34    | 22   | 128   | 60    |
| 5     | 23   | 35    | 27    | 21   | 24    | 40    | 34    | 66    | 34    | 22   | 102   | 58    |
| 6     | 23   | 30    | 31    | 22   | 24    | 43    | 42    | 94    | 38    | 21   | 123   | 56    |
| 7     | 22   | 25    | 34    | 24   | 24    | 361   | 46    | 117   | 30    | 23   | 258   | 54    |
| 8     | 25   | 28    | 34    | 26   | 24    | 211   | 39    | 126   | 32    | 23   | 126   | 52    |
| 9     | 27   | 28    | 36    | 35   | 24    | 112   | 45    | 109   | 46    | 43   | 105   | 50    |
| 10    | 26   | 28    | 44    | 40   | 24    | 86    | 66    | 94    | 48    | 32   | 89    | 60    |
| 11    | 25   | 27    | 48    | 35   | 25    | 451   | 80    | 84    | 34    | 26   | 242   | 250   |
| 12    | 24   | 27    | 39    | 29   | 25    | 423   | 53    | 76    | 33    | 34   | 195   | 150   |
| 13    | 25   | 26    | 33    | 26   | 25    | 281   | 51    | 81    | 35    | 38   | 133   | 400   |
| 14    | 25   | 26    | 32    | 23   | 26    | 107   | 47    | 94    | 38    | 32   | 112   | 150   |
| 15    | 24   | 26    | 225   | 19   | 26    | 491   | 52    | 90    | 42    | 30   | 96    | 120   |
| 16    | 23   | 25    | 108   | 16   | 27    | 647   | 270   | 73    | 31    | 27   | 90    | 110   |
| 17    | 23   | 24    | 56    | 19   | 27    | 286   | 156   | 66    | 29    | 45   | 82    | 100   |
| 18    | 23   | 37    | 56    | 30   | 27    | 155   | 103   | 61    | 28    | 80   | 74    | 100   |
| 19    | 29   | 36    | 57    | 100  | 27    | 82    | 85    | 57    | 31    | 38   | 70    | 103   |
| 20    | 45   | 30    | 49    | 50   | 27    | 76    | 75    | 53    | 42    | 32   | 74    | 105   |
| 21    | 35   | 27    | 42    | 45   | 27    | 106   | 102   | 51    | 34    | 28   | 66    | 110   |
| 22    | 28   | 25    | 37    | 35   | 27    | 148   | 184   | 48    | 30    | 24   | 62    | 91    |
| 23    | 26   | 25    | 40    | 30   | 27    | 55    | 124   | 45    | 26    | 27   | 61    | 86    |
| 24    | 25   | 26    | 40    | 27   | 27    | 48    | 102   | 42    | 26    | 32   | 59    | 85    |
| 25    | 25   | 26    | 37    | 25   | 27    | 43    | 87    | 43    | 27    | 24   | 64    | 172   |
| 26    | 25   | 28    | 37    | 24   | 27    | 41    | 78    | 42    | 26    | 34   | 82    | 266   |
| 27    | 25   | 30    | 35    | 24   | 27    | 39    | 70    | 42    | 25    | 46   | 65    | 145   |
| 28    | 25   | 28    | 25    | 24   | 50    | 38    | 67    | 39    | 27    | 33   | 57    | 295   |
| 29    | 25   | 31    | 36    | 24   | 300   | 41    | 75    | 44    | 30    | 28   | 54    | 256   |
| 30    | 25   | 28    | 42    | 24   | ----- | 38    | 72    | 53    | 27    | 27   | 51    | 161   |
| 31    | 28   | ----- | 36    | 24   | ----- | 38    | ----- | 43    | ----- | 25   | 49    | ----- |
| TOTAL | 798  | 1,104 | 1,402 | 916  | 1,041 | 4,869 | 2,354 | 2,155 | 995   | 973  | 4,750 | 3,949 |
| MEAN  | 25.7 | 36.8  | 45.2  | 29.5 | 35.9  | 157   | 78.5  | 69.5  | 33.2  | 31.4 | 153   | 132   |
| MAX   | 45   | 200   | 225   | 100  | 300   | 647   | 270   | 126   | 48    | 80   | 1,740 | 400   |
| MIN   | 22   | 24    | 20    | 16   | 24    | 38    | 34    | 39    | 25    | 21   | 41    | 50    |
| CFSM  | .20  | .29   | .35   | .23  | .28   | 1.23  | .61   | .54   | .26   | .25  | 1.20  | 1.03  |
| IN.   | .23  | .32   | .41   | .27  | .30   | 1.42  | .68   | .63   | .29   | .28  | 1.38  | 1.15  |

CAL YR 1971 TOTAL 21,837 MEAN 59.8 MAX 1,100 MIN 20 CFSM .47 IN 6.35  
WTR YR 1972 TOTAL 25,306 MEAN 69.1 MAX 1,740 MIN 16 CFSM .54 IN 7.35

PEAK DISCHARGE (BASE, 3,000 CFS).--Aug. 2 (0830) 5,780 cfs (12.94 ft).

05426000 Crawfish River at Milford, Wis.

LOCATION.--Lat 43°06'00", long 88°50'58", in SW 1/4 sec.4, T.7 N., R.14 E., Jefferson County, near left bank on upstream side of highway bridge in Milford, 1.4 miles downstream from Rock Creek and 9.8 miles upstream from mouth.

DRAINAGE AREA.--732 sq mi.

PERIOD OF RECORD.--June 1931 to current year.

GAGE.--Water-stage recorder. Datum of gage is 779.40 ft above mean sea level. Prior to July 28, 1966, non-recording gage at present site and datum.

AVERAGE DISCHARGE.--41 years, 329 cfs (6.10 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,270 cfs Mar. 25 (gage height, 6.49 ft); minimum, 4.2 cfs Oct. 27 (gage height, 1.23 ft).

Period of record: Maximum discharge, 6,140 cfs Apr. 6, 1959 (gage height, 11.15 ft); minimum observed, 0.2 cfs Sept. 15, 1958 (gage height, 1.11 ft).

REMARKS.--Records good except those for winter periods, which are fair. Some diurnal fluctuation at low flow possible, due to small dams upstream.

REVISIONS (WATER YEARS).--WSP 805: Drainage area. WSP 975: 1937-38. WSP 1438: 1932-33(M), 1935(M), 1937, 1938-41(M), 1943-44(M), 1947-48(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 1 to Mar. 24.)

|     |     |     |       |
|-----|-----|-----|-------|
| 1.4 | 13  | 2.5 | 280   |
| 1.5 | 20  | 3.0 | 495   |
| 1.7 | 45  | 5.0 | 1,450 |
| 1.9 | 86  | 7.0 | 2,550 |
| 2.1 | 140 |     |       |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT           | NOV      | DEC       | JAN    | FEB      | MAR     | APR    | MAY    | JUN   | JUL   | AUG    | SEP    |
|-------------|---------------|----------|-----------|--------|----------|---------|--------|--------|-------|-------|--------|--------|
| 1           | 41            | 79       | 80        | 170    | 100      | 100     | 1,570  | 800    | 144   | 56    | 100    | 616    |
| 2           | 47            | 112      | 74        | 150    | 100      | 100     | 1,430  | 815    | 129   | 81    | 105    | 584    |
| 3           | 47            | 129      | 72        | 130    | 100      | 98      | 1,320  | 817    | 131   | 96    | 138    | 548    |
| 4           | 49            | 140      | 70        | 120    | 100      | 94      | 1,190  | 799    | 120   | 100   | 135    | 515    |
| 5           | 52            | 99       | 72        | 120    | 100      | 92      | 1,110  | 772    | 107   | 97    | 127    | 489    |
| 6           | 59            | 179      | 76        | 130    | 100      | 92      | 1,070  | 785    | 116   | 86    | 138    | 452    |
| 7           | 49            | 159      | 80        | 130    | 98       | 94      | 1,080  | 817    | 102   | 85    | 207    | 444    |
| 8           | 36            | 137      | 84        | 130    | 98       | 96      | 1,040  | 812    | 93    | 84    | 212    | 470    |
| 9           | 47            | 150      | 88        | 130    | 98       | 100     | 993    | 776    | 103   | 90    | 247    | 445    |
| 10          | 45            | 143      | 96        | 140    | 100      | 100     | 992    | 731    | 97    | 85    | 234    | 417    |
| 11          | 49            | 126      | 100       | 130    | 110      | 110     | 987    | 681    | 62    | 79    | 269    | 414    |
| 12          | 38            | 126      | 110       | 130    | 110      | 110     | 967    | 624    | 82    | 74    | 357    | 411    |
| 13          | 39            | 112      | 120       | 120    | 110      | 110     | 970    | 595    | 108   | 96    | 395    | 438    |
| 14          | 25            | 79       | 130       | 110    | 110      | 110     | 930    | 584    | 114   | 119   | 446    | 493    |
| 15          | 33            | 112      | 160       | 100    | 110      | 120     | 926    | 576    | 164   | 193   | 494    | 531    |
| 16          | 47            | 104      | 220       | 110    | 100      | 120     | 921    | 548    | 171   | 184   | 510    | 554    |
| 17          | 32            | 86       | 280       | 110    | 100      | 130     | 855    | 521    | 161   | 165   | 547    | 607    |
| 18          | 26            | 86       | 470       | 110    | 100      | 140     | 816    | 496    | 142   | 192   | 546    | 764    |
| 19          | 25            | 91       | 430       | 110    | 94       | 160     | 823    | 464    | 124   | 176   | 537    | 901    |
| 20          | 49            | 112      | 400       | 110    | 90       | 180     | 773    | 432    | 152   | 155   | 498    | 1,030  |
| 21          | 44            | 137      | 380       | 110    | 90       | 320     | 708    | 389    | 160   | 173   | 455    | 1,340  |
| 22          | 56            | 75       | 350       | 110    | 90       | 900     | 842    | 346    | 144   | 155   | 426    | 1,460  |
| 23          | 61            | 72       | 330       | 110    | 90       | 1,500   | 897    | 316    | 129   | 148   | 397    | 1,550  |
| 24          | 49            | 75       | 310       | 110    | 90       | 2,100   | 967    | 286    | 102   | 154   | 362    | 1,600  |
| 25          | 39            | 75       | 290       | 100    | 90       | 2,260   | 973    | 267    | 92    | 141   | 354    | 1,600  |
| 26          | 29            | 77       | 240       | 100    | 92       | 2,250   | 959    | 241    | 84    | 119   | 443    | 1,670  |
| 27          | 13            | 89       | 220       | 98     | 96       | 2,200   | 923    | 219    | 73    | 130   | 551    | 1,720  |
| 28          | 50            | 89       | 210       | 96     | 98       | 2,060   | 881    | 190    | 73    | 122   | 611    | 1,760  |
| 29          | 68            | 99       | 210       | 98     | 98       | 1,910   | 844    | 170    | 85    | 115   | 643    | 1,830  |
| 30          | 50            | 81       | 200       | 98     | -----    | 1,830   | 802    | 201    | 75    | 104   | 646    | 1,820  |
| 31          | 45            | -----    | 190       | 100    | -----    | 1,690   | -----  | 170    | ----- | 94    | 626    | -----  |
| TOTAL       | 1,339         | 3,230    | 6,142     | 3,620  | 2,862    | 21,276  | 29,559 | 16,240 | 3,439 | 3,748 | 11,756 | 27,473 |
| MEAN        | 43.2          | 108      | 198       | 117    | 98.7     | 686     | 985    | 524    | 115   | 121   | 379    | 916    |
| MAX         | 68            | 179      | 470       | 170    | 110      | 2,260   | 1,570  | 817    | 171   | 193   | 646    | 1,830  |
| MIN         | 13            | 72       | 70        | 96     | 90       | 92      | 708    | 170    | 62    | 56    | 100    | 411    |
| CFSM        | .06           | .15      | .27       | .16    | .13      | .94     | 1.35   | .72    | .16   | .17   | .52    | 1.25   |
| IN.         | .07           | .16      | .31       | .18    | .15      | 1.08    | 1.50   | .83    | .17   | .19   | .60    | 1.40   |
| CAL YR 1971 | TOTAL 140,206 | MEAN 384 | MAX 2,500 | MIN 13 | CFSM .52 | IN 7.13 |        |        |       |       |        |        |
| WTR YR 1972 | TOTAL 130,684 | MEAN 357 | MAX 2,260 | MIN 13 | CFSM .49 | IN 6.64 |        |        |       |       |        |        |

## PEAK DISCHARGE (BASE, 1,250 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 3-25 | 0900 | 6.49  | 2,270     | 9-29 | 1300 | 5.81  | 1,850     |

## 05428000 Lake Mendota at Madison, Wis.

LOCATION.--Lat 43°05'42", long 89°22'12", in SE 1/4 sec.12, T.7 N., R.9 E., Dane County, attached to left wall of lock of dam at outlet, in Madison.

DRAINAGE AREA.--254 sq mi. Area of Lake Mendota, 15.2 sq mi.

PERIOD OF RECORD.--December 1902 to May 1903, January 1916 to current year (incomplete).

GAGE.--Water-stage recorder. Datum of gage is 847.82 ft above mean sea level, or 2.22 ft above city of Madison datum. Prior to Nov. 15, 1971, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum gage height, 2.55 ft Sept. 26; minimum, 1.34 ft Mar. 11.

Period of record: Maximum gage height observed, 4.19 ft Apr. 5, 1959; minimum observed, 0.20 ft Feb. 24 to Mar. 10, 1920.

REMARKS.--Lake level regulated by concrete dam with two 12-foot tainter gates and 20-foot lock at outlet.

COOPERATION.--Gage-height record furnished by city engineer of Madison through Oct. 26, 1971. Record of recorder stage obtained thereafter in cooperation with the city of Madison.

## GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY  | OCT  | NOV   | DEC  | JAN  | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|------|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1    | 1.54 |       | 1.89 | 2.24 | 1.64  | 1.38 | 2.22  | 1.99 | 1.85  | 1.51 | 1.59 | 2.37  |
| 2    | 1.54 |       | 1.89 | 2.23 | 1.63  | 1.40 | 2.19  | 2.05 | 1.84  | 1.52 | 1.68 | 2.36  |
| 3    | 1.56 |       | 1.88 | 2.22 | 1.63  | 1.40 | 2.15  | 2.07 | 1.82  | 1.50 | 1.68 | 2.34  |
| 4    | 1.56 |       | 1.87 | 2.19 | 1.60  | 1.42 | 2.11  | 2.09 | 1.78  | 1.49 | 1.65 | 2.33  |
| 5    | 1.56 |       | 1.88 | 2.18 | 1.58  | 1.41 | 2.08  | 2.08 | 1.75  | 1.48 | 1.64 | 2.32  |
| 6    | 1.56 |       | 1.90 | 2.17 | 1.57  | 1.41 | 2.08  | 2.12 | 1.75  | 1.48 | 1.67 | 2.29  |
| 7    | 1.52 |       | 1.90 | 2.15 | 1.55  | 1.40 | 2.08  | 2.12 | 1.74  | 1.49 | 1.67 | 2.30  |
| 8    | 1.52 |       | 1.90 | 2.13 | 1.53  | 1.37 | 2.06  | 2.11 | 1.72  | 1.48 | 1.66 | 2.30  |
| 9    | 1.50 |       | 1.91 | 2.11 | 1.51  | 1.38 | 2.05  | 2.10 | 1.69  | 1.48 | 1.63 | 2.26  |
| 10   | 1.50 |       | 1.97 | 2.10 | 1.49  | 1.37 | 2.04  | 2.09 | 1.62  | 1.48 | 1.62 | 2.22  |
| 11   | 1.50 |       | 1.99 | 2.08 | 1.48  | 1.37 | 2.03  | 2.09 | 1.58  | 1.48 | 1.71 | 2.24  |
| 12   | 1.48 |       | 2.00 | 2.06 | 1.47  | 1.38 | 2.02  | 2.08 | 1.59  | 1.49 | 1.75 | 2.24  |
| 13   | 1.46 |       | 2.00 | 2.04 | 1.45  | 1.45 | 2.03  | 2.09 | 1.60  | 1.49 | 1.76 | 2.33  |
| 14   | 1.46 |       | 2.00 |      | 1.42  | 1.51 | 1.98  | 2.13 | 1.63  | 1.50 | 1.80 | 2.35  |
| 15   | 1.45 | 1.86  | 2.18 |      | 1.46  | 1.56 | 1.99  | 2.14 | 1.66  | 1.52 | 1.80 | 2.32  |
| 16   | 1.46 | 1.86  | 2.22 |      | 1.45  | 1.54 | 1.97  | 2.15 | 1.61  | 1.51 | 1.81 | 2.31  |
| 17   | 1.46 | 1.87  | 2.26 |      | 1.46  | 1.73 | 1.94  | 2.13 | 1.59  | 1.50 | 1.84 | 2.31  |
| 18   | 1.44 | 1.92  | 2.22 |      | 1.45  | 1.88 | 1.94  | 2.12 | 1.56  | 1.54 | 1.85 | 2.31  |
| 19   | 1.46 | 2.23  | 2.22 |      | 1.42  | 2.04 | 1.91  | 2.10 | 1.57  | 1.56 | 1.93 | 2.33  |
| 20   | 1.50 | 1.91  | 2.22 |      | 1.41  | 2.18 | 1.86  | 2.10 | 1.59  | 1.59 | 1.95 | 2.34  |
| 21   | 1.52 | 1.90  | 2.22 |      | 1.41  | 2.29 | 1.90  | 2.08 | 1.57  | 1.60 | 1.96 | 2.40  |
| 22   | 1.55 | 1.85  | 2.20 |      | 1.38  | 2.34 | 1.96  | 2.04 | 1.55  | 1.60 | 1.96 | 2.36  |
| 23   | 1.54 | 1.84  | 2.21 |      | 1.39  | 2.35 | 1.95  | 2.01 | 1.55  | 1.63 | 1.97 | 2.34  |
| 24   | 1.54 | 1.86  | 2.21 | 1.80 | 1.39  | 2.34 | 1.93  | 1.99 | 1.51  | 1.64 | 2.03 | 2.33  |
| 25   | 1.56 | 1.85  | 2.19 | 1.77 | 1.39  | 2.33 | 1.92  | 1.97 | 1.51  | 1.61 | 2.06 | 2.38  |
| 26   | 1.56 | 1.88  | 2.20 | 1.76 | 1.38  | 2.31 | 1.91  | 1.95 | 1.52  | 1.60 | 2.29 | 2.47  |
| 27   |      | 1.91  | 2.20 | 1.74 | 1.38  | 2.28 | 1.88  | 1.94 | 1.55  | 1.61 | 2.31 | 2.45  |
| 28   |      | 1.99  | 2.19 | 1.73 | 1.38  | 2.26 | 1.91  | 1.91 | 1.51  | 1.59 | 2.33 | 2.43  |
| 29   |      | 1.92  | 2.18 | 1.70 | 1.38  | 2.28 | 1.92  | 1.90 | 1.51  | 1.60 | 2.36 | 2.43  |
| 30   |      | 1.91  | 2.25 | 1.68 | ----- | 2.28 | 1.93  | 1.90 | 1.52  | 1.60 | 2.37 | 2.39  |
| 31   |      | ----- | 2.25 | 1.66 | ----- | 2.25 | ----- | 1.86 | ----- | 1.60 | 2.36 | ----- |
| MEAN |      |       | 2.08 |      | 1.47  | 1.81 | 2.00  | 2.05 | 1.63  | 1.54 | 1.89 | 2.34  |
| MAX  |      |       | 2.26 |      | 1.64  | 2.35 | 2.22  | 2.15 | 1.85  | 1.64 | 2.37 | 2.47  |
| MIN  |      |       | 1.87 |      | 1.38  | 1.37 | 1.88  | 1.86 | 1.51  | 1.48 | 1.59 | 2.22  |

05429000 Lake Monona at Madison, Wis.

LOCATION.--Lat 43°03'48", long 89°23'49", in SW 1/4 sec.23, T.7 N., R.9 E., Dane County, at end of concrete storm sewer in Brittingham Park, in Madison.

DRAINAGE AREA.--273 sq mi. Area of Lake Monona, 5.3 sq mi.

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.

GAGE.--Water-stage recorder. Datum of gage is 843.61 ft above mean sea level, or 1.99 ft below city of Madison datum. Prior to Nov. 15, 1971, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum gage height, 1.87 ft Sept. 26; minimum, 0.46 ft Dec. 8, 9.  
Period of record: Maximum gage height observed, 3.66 ft July 28, 1929; minimum observed, -0.39 ft Jan. 20, 1965.

REMARKS.--Lake level regulated by concrete dam with four 12-foot stop-log sections and 12-foot lock at outlet of Lake Waubesa.

COOPERATION.--Gage-height record furnished by city engineer of Madison through Oct. 26, 1971. Record of recorder stage obtained thereafter in cooperation with the city of Madison.

REVISION.--WSP 1338: Lake area.

## GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY  | OCT  | NOV   | DEC | JAN | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|------|------|-------|-----|-----|-------|------|-------|------|-------|------|------|-------|
| 1    | 1.19 |       | .50 | .71 | .91   | .75  | 1.36  | 1.62 | 1.61  | 1.34 | 1.44 | 1.69  |
| 2    |      | 1.27  | .49 | .70 | .91   | .75  | 1.37  | 1.59 | 1.64  | 1.34 | 1.51 | 1.64  |
| 3    |      |       | .49 | .68 | .92   | .77  | 1.38  | 1.53 | 1.69  | 1.32 | 1.50 | 1.58  |
| 4    | 1.18 |       | .48 | .66 | .93   | .73  | 1.39  | 1.51 | 1.72  | 1.29 | 1.48 | 1.52  |
| 5    |      | 1.19  | .47 | .66 | .93   | .73  | 1.39  | 1.53 | 1.75  | 1.26 | 1.46 | 1.47  |
| 6    | 1.14 |       | .48 | .66 | .93   | .73  | 1.43  | 1.60 | 1.77  | 1.25 | 1.45 | 1.43  |
| 7    |      |       | .48 | .68 | .93   | .73  | 1.48  | 1.68 | 1.76  | 1.24 | 1.43 | 1.39  |
| 8    | 1.12 |       | .47 | .70 | .93   | .73  | 1.48  | 1.69 | 1.78  | 1.23 | 1.39 | 1.36  |
| 9    |      |       | .46 | .72 | .93   | .73  | 1.48  | 1.68 | 1.82  | 1.21 | 1.37 | 1.37  |
| 10   |      |       | .50 | .73 | .93   | .73  | 1.48  | 1.66 | 1.79  | 1.21 | 1.36 | 1.38  |
| 11   | 1.06 |       | .49 | .74 | .93   | .73  | 1.47  | 1.66 | 1.77  | 1.20 | 1.49 | 1.43  |
| 12   |      | 1.03  | .50 | .76 | .95   | .73  | 1.47  | 1.68 | 1.77  | 1.19 | 1.54 | 1.46  |
| 13   | 1.06 |       | .48 | .75 | .96   | .73  | 1.41  | 1.70 | 1.75  | 1.20 | 1.53 | 1.56  |
| 14   |      |       | .48 | .76 | .96   | .74  | 1.40  | 1.75 | 1.76  | 1.20 | 1.55 | 1.56  |
| 15   | 1.04 | .87   | .67 | .77 | .97   | .71  | 1.45  | 1.77 | 1.74  | 1.29 | 1.58 | 1.53  |
| 16   |      | .85   | .74 | .78 | .96   | .91  | 1.47  | 1.77 | 1.71  | 1.31 | 1.57 | 1.54  |
| 17   |      | .83   | .72 | .79 | .95   | .98  | 1.47  | 1.76 | 1.69  | 1.38 | 1.56 | 1.57  |
| 18   | 1.04 | .42   | .75 | .81 | .96   | 1.09 | 1.46  | 1.76 | 1.67  | 1.46 | 1.56 | 1.60  |
| 19   |      | .77   | .77 | .81 | .96   | 1.15 | 1.46  | 1.77 | 1.64  | 1.48 | 1.63 | 1.63  |
| 20   |      | .72   | .77 | .82 | .96   | 1.17 | 1.43  | 1.75 | 1.61  | 1.49 | 1.63 | 1.67  |
| 21   |      | .65   | .76 | .83 | .96   | 1.21 | 1.52  | 1.76 | 1.56  | 1.49 | 1.61 | 1.73  |
| 22   | 1.07 | .61   | .74 | .83 | .95   | 1.26 | 1.65  | 1.76 | 1.51  | 1.47 | 1.56 | 1.72  |
| 23   |      | .60   | .72 | .84 | .95   | 1.26 | 1.70  | 1.73 | 1.46  | 1.50 | 1.56 | 1.72  |
| 24   |      | .57   | .71 | .85 | .94   | 1.22 | 1.74  | 1.71 | 1.43  | 1.50 | 1.58 | 1.72  |
| 25   | 1.05 | .54   | .70 | .87 | .93   | 1.27 | 1.78  | 1.69 | 1.42  | 1.47 | 1.65 | 1.76  |
| 26   |      | .53   | .69 | .88 | .92   | 1.28 | 1.82  | 1.68 | 1.41  | 1.50 | 1.86 | 1.84  |
| 27   |      | .53   | .68 | .88 | .82   | 1.28 | 1.83  | 1.66 | 1.39  | 1.50 | 1.86 | 1.84  |
| 28   |      | .53   | .66 | .88 | .75   | 1.28 | 1.75  | 1.66 | 1.39  | 1.47 | 1.85 | 1.83  |
| 29   | .99  | .55   | .66 | .90 | .75   | 1.30 | 1.70  | 1.67 | 1.37  | 1.46 | 1.81 | 1.81  |
| 30   |      | .53   | .73 | .90 | ----- | 1.34 | 1.62  | 1.68 | 1.35  | 1.44 | 1.78 | 1.78  |
| 31   |      | ----- | .72 | .91 | ----- | 1.35 | ----- | 1.64 | ----- | 1.42 | 1.73 | ----- |
| MEAN |      |       | .61 | .78 | .91   | .98  | 1.53  | 1.68 | 1.62  | 1.36 | 1.58 | 1.60  |
| MAX  |      |       | .77 | .91 | .97   | 1.35 | 1.83  | 1.77 | 1.82  | 1.50 | 1.86 | 1.84  |
| MIN  |      |       | .46 | .66 | .75   | .71  | 1.36  | 1.51 | 1.35  | 1.19 | 1.36 | 1.36  |

## ROCK RIVER BASIN

05429040 Manitou Way Storm Sewer at Madison, Wis.

LOCATION.--Lat 43°02'41", long 89°26'24", in NW 1/4 NW 1/4 sec.33, T.7 N., R.9 E., Dane County, at inlet to storm sewer on Manitou Way near intersection with Mandan Crescent, in Madison.

DRAINAGE AREA.--0.23 sq mi (revised).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 840 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 62 cfs Aug. 26 (gage height, 12.88 ft); no flow many days.

Period of record: Maximum discharge, 66 cfs Apr. 12, 1971 (gage height, 12.97 ft); no flow many days in 1971-72.

REMARKS.--Records fair. Discharge at more frequent intervals is available in the district office. Data for Mallatt Storm Sewer, Knickerbocker Storm Sewer, Van Buren Storm Sewer, Marshland Creek, and Murphy Creek at Beld Street are available in the district office.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT   | NOV   | DEC  | JAN  | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-------------|-------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1           | 0     | 1.9   | 0    | 0    | 0     | 0    | .02   | .49  | 0     | 0    | .15  | .03   |
| 2           | .03   | .12   | 0    | 0    | 0     | 0    | .01   | .16  | 0     | 0    | .21  | .02   |
| 3           | 0     | 0     | 0    | 0    | 0     | .01  | .08   | .01  | 0     | 0    | 0    | 0     |
| 4           | .07   | 0     | 0    | 0    | 0     | 0    | .01   | 0    | 0     | 0    | 0    | 0     |
| 5           | .01   | 0     | .01  | 0    | 0     | 0    | .12   | .26  | .07   | 0    | 0    | 0     |
| 6           | 0     | 0     | .06  | 0    | 0     | 0    | 1.5   | .18  | 0     | 0    | 0    | 0     |
| 7           | 0     | 0     | 0    | 0    | 0     | .17  | 2.0   | 0    | 0     | 0    | 0    | 0     |
| 8           | 0     | 0     | 0    | 0    | 0     | 0    | .04   | 0    | 0     | 0    | .01  | 0     |
| 9           | 0     | 0     | .01  | 0    | 0     | .01  | .03   | 0    | 0     | 0    | .06  | 0     |
| 10          | 0     | 0     | .36  | 0    | 0     | .02  | .75   | 0    | 0     | 0    | 0    | 0     |
| 11          | 0     | 0     | 0    | 0    | 0     | .51  | .45   | 0    | 0     | 0    | .91  | .18   |
| 12          | 0     | 0     | 0    | 0    | 0     | .26  | 1.3   | 0    | .11   | .03  | 0    | .22   |
| 13          | 0     | 0     | 0    | 0    | 0     | .07  | 1.2   | .35  | 0     | 0    | 0    | .36   |
| 14          | 0     | 0     | .07  | 0    | 0     | .29  | .24   | .29  | .10   | .21  | .75  | 0     |
| 15          | 0     | 0     | 2.7  | 0    | .06   | .45  | .01   | .02  | 0     | 0    | 0    | 0     |
| 16          | 0     | 0     | 0    | 0    | .01   | .42  | .06   | 0    | 0     | 0    | 0    | 0     |
| 17          | 0     | 0     | 0    | 0    | .02   | .88  | 0     | 0    | 0     | .60  | 0    | .20   |
| 18          | 0     | .24   | 0    | .15  | 0     | .31  | 0     | 0    | 0     | 0    | 0    | 0     |
| 19          | .11   | 0     | 0    | .01  | 0     | .38  | 0     | 0    | 0     | .30  | .67  | .22   |
| 20          | .10   | 0     | 0    | .01  | 0     | .48  | 0     | 0    | 0     | 0    | .01  | .57   |
| 21          | .11   | 0     | 0    | 0    | .01   | .62  | .97   | 0    | 0     | 0    | 0    | .02   |
| 22          | .19   | 0     | 0    | .02  | 0     | 0    | .02   | 0    | 0     | 0    | 0    | 0     |
| 23          | 0     | 0     | 0    | 0    | 0     | 0    | 0     | 0    | 0     | .40  | .82  | 0     |
| 24          | 0     | .02   | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | .02  | 0     |
| 25          | 0     | 0     | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 1.0  | .82   |
| 26          | 0     | .03   | 0    | 0    | .01   | 0    | 0     | 0    | 0     | .30  | .86  | .47   |
| 27          | .15   | .05   | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | .02  | 0     |
| 28          | 0     | 0     | 0    | 0    | .09   | 0    | .02   | .01  | .02   | 0    | .01  | .12   |
| 29          | 0     | .04   | 0    | 0    | .07   | .03  | .02   | .05  | 0     | 0    | 0    | 0     |
| 30          | .14   | .02   | 0    | 0    | ----- | .08  | 0     | .06  | 0     | 0    | 0    | 0     |
| 31          | 0     | ----- | 0    | 0    | ----- | .02  | ----- | 0    | ----- | 0    | 0    | ----- |
| TOTAL       | .91   | 2.42  | 3.21 | .19  | .27   | 5.01 | 8.85  | 1.88 | .30   | 1.84 | 5.50 | 3.23  |
| MEAN        | .029  | .081  | .10  | .006 | .009  | .16  | .30   | .061 | .010  | .059 | .18  | .11   |
| MAX         | .19   | 1.9   | 2.7  | .15  | .09   | .88  | 2.0   | .49  | .11   | .60  | 1.0  | .82   |
| MIN         | 0     | 0     | 0    | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0    | 0     |
| CAL YR 1971 | TOTAL | 22.96 | MEAN | .063 | MAX   | 2.9  | MIN   | 0    |       |      |      |       |
| WTR YR 1972 | TOTAL | 33.61 | MEAN | .092 | MAX   | 2.7  | MIN   | 0    |       |      |      |       |

05429050 Nakoma Storm Sewer at Madison, Wis.

LOCATION.--Lat 43°02'55", long 89°26'16", in SE 1/4 SW 1/4 sec.28, T.7 N., R.9 E., Dane County, near the junction of Manitou Way and Nakoma Road, in the University of Wisconsin Arboretum, in Madison.

DRAINAGE AREA.--2.34 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 865 ft (from topographic map).

EXTREMES.--December 1971 to September 1972, maximum discharge during period, 188 cfs Feb. 23 (gage height, 14.6 ft); no flow many days.

REMARKS.--Records fair. Discharge at more frequent intervals is available in the district office. Data for Mallatt Storm Sewer, Knickerbocker Storm Sewer, Van Buren Storm Sewer, Marshland Creek, Murphy Creek at Beld Street are available in the district office.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT | NOV   | DEC   | JAN  | FEB   | MAR    | APR   | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|-----|-------|-------|------|-------|--------|-------|-------|-------|------|-------|-------|
| 1     |     |       | .20   | 0    | .08   | .28    | .48   | 3.5   | 0     | .02  | 1.2   | .17   |
| 2     |     |       | .20   | 0    | .05   | .22    | .40   | 2.2   | 0     | .02  | 2.7   | .20   |
| 3     |     |       | .10   | 0    | 0     | .06    | .68   | .72   | 0     | .01  | .46   | .28   |
| 4     |     |       | .10   | 0    | 0     | .04    | .40   | .26   | 0     | .01  | .11   | .21   |
| 5     |     |       | .27   | 0    | .06   | .24    | .82   | .87   | 0     | 0    | .07   | .16   |
| 6     |     |       | .40   | 0    | 3.4   | 5.4    | 2.1   | 1.9   | 0     | 0    | .08   | .29   |
| 7     |     |       | .08   | 0    | 2.0   | 3.6    | 1.8   | 1.1   | 0     | .01  | .05   | .15   |
| 8     |     |       | .08   | 0    | 1.6   | 3.1    | 1.0   | .38   | 0     | .01  | .12   | .11   |
| 9     |     |       | .14   | 0    | 2.1   | 3.7    | 1.6   | .14   | .02   | .01  | .05   | .10   |
| 10    |     |       | 3.9   | 0    | 1.6   | 21     | 2.8   | .11   | .01   | .01  | .04   | .08   |
| 11    |     |       | 1.5   | 0    | 0     | 10     | 1.6   | .08   | .01   | .01  | 7.3   | .82   |
| 12    |     |       | .39   | 0    | 0     | 3.6    | .57   | .05   | .38   | .08  | 1.3   | .77   |
| 13    |     |       | .10   | 0    | .20   | 1.1    | .44   | .98   | .02   | .01  | .35   | 2.5   |
| 14    |     |       | .13   | 0    | .80   | 2.6    | 1.1   | 3.1   | .54   | .55  | 4.3   | .50   |
| 15    |     |       | 16    | 0    | .42   | 3.6    | 1.3   | 1.4   | .03   | .01  | 2.7   | .21   |
| 16    |     |       | 4.2   | 0    | .27   | 5.7    | .94   | .33   | .01   | .01  | .65   | .15   |
| 17    |     |       | 1.4   | 0    | .25   | 25     | .41   | .15   | .01   | 2.2  | .23   | .67   |
| 18    |     |       | .35   | .20  | .04   | 13     | .26   | .08   | .01   | .08  | .17   | .12   |
| 19    |     |       | .12   | .10  | .38   | 6.2    | .16   | .04   | .02   | .64  | 4.7   | .58   |
| 20    |     |       | .05   | 0    | 1.7   | 4.4    | .16   | .04   | .01   | .03  | 1.6   | 3.3   |
| 21    |     |       | .03   | .30  | .24   | 5.9    | 6.0   | .04   | .01   | .03  | .47   | 5.0   |
| 22    |     |       | .04   | .20  | 1.8   | 2.8    | 4.8   | .04   | .01   | .02  | .18   | 1.8   |
| 23    |     |       | .04   | .07  | .67   | .79    | 1.3   | .05   | .01   | 1.4  | 8.4   | .39   |
| 24    |     |       | .03   | .07  | 1.5   | .56    | .18   | .05   | .01   | .03  | 8.6   | .17   |
| 25    |     |       | .04   | .10  | 3.4   | .43    | .14   | .05   | .01   | .02  | 5.5   | 2.3   |
| 26    |     |       | .04   | .01  | .04   | .36    | .11   | .06   | .01   | .93  | 11    | 7.5   |
| 27    |     |       | .08   | .25  | 0     | .38    | .08   | .05   | .01   | .04  | 2.2   | 2.4   |
| 28    |     |       | .10   | .27  | .48   | .36    | .14   | .06   | .03   | .04  | .57   | 1.0   |
| 29    |     |       | 0     | 0    | .67   | .43    | .20   | .33   | .01   | .04  | .18   | .46   |
| 30    |     |       | 0     | 0    | ----- | .62    | .07   | .13   | .01   | .02  | .13   | .24   |
| 31    |     | ----- | 0     | .30  | ----- | .48    | ----- | 0     | ----- | .02  | .11   | ----- |
| TOTAL |     |       | 30.11 | 1.87 | 23.75 | 125.95 | 32.04 | 18.29 | 1.19  | 6.31 | 65.52 | 32.63 |
| MEAN  |     |       | .97   | .06  | .82   | 4.06   | 1.07  | .59   | .040  | .20  | 2.11  | 1.09  |
| MAX   |     |       | 16    | .30  | 3.4   | 25     | 6.0   | 3.5   | .54   | 2.2  | 11    | 7.5   |
| MIN   |     |       | 0     | 0    | 0     | .04    | .07   | 0     | 0     | 0    | .04   | .08   |

## ROCK RIVER BASIN

05429120 Lake Wingra Outlet at Madison, Wis.

LOCATION.--Lat 43°03'28", long 89°24'22", in NE 1/4 NE 1/4 sec.27, T.7 N., R.9 E., Dane County, at outlet of Lake Wingra in Madison.

DRAINAGE AREA.--6.04 sq mi.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 846.8 ft above mean sea level and 1.2 ft above city of Madison datum.

EXTREMES.--October 1970 to September 1971, maximum discharge during period, 24 cfs Apr. 13 (gage height, 1.40 ft); no flow many days in October, July, August, and September.

Current year: Maximum discharge, 25 cfs Aug. 26 (gage height, 1.41 ft); no flow Oct. 1 to Nov. 1 and June 1 to Aug. 11.

Period of record: Maximum discharge, 25 cfs Aug. 26, 1972 (gage height, 1.41 ft); no flow many days in 1971-72.

REMARKS.--Records fair. Water from Lake Wingra lagoons bypasses gage through a 30 inch storm sewer. The following flows were measured:

| Date         | Discharge<br>(cfs) |
|--------------|--------------------|
| June 2, 1972 | 0.56               |
| July 3       | .45                |
| Oct. 20      | .71                |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB    | MAR   | APR   | MAY   | JUN   | JUL   | AUG  | SEP   |
|-------|------|-------|-------|-------|--------|-------|-------|-------|-------|-------|------|-------|
| 1     | 0    | .02   | 2.4   | 1.3   | .77    | 6.9   | 7.5   | 3.8   | .52   | .56   | 0    | .10   |
| 2     | 0    | .05   | 2.4   | 1.2   | .95    | 6.0   | 7.1   | 2.9   | 2.0   | .10   | 0    | .08   |
| 3     | 0    | .08   | 2.1   | 1.9   | 1.0    | 5.5   | 6.6   | 2.6   | 2.2   | 0     | 0    | .10   |
| 4     | 0    | .44   | 1.3   | 3.9   | 1.3    | 5.1   | 6.0   | 2.7   | 2.3   | 0     | 0    | .09   |
| 5     | 0    | .44   | .95   | 3.3   | 1.9    | 4.9   | 5.7   | 2.7   | 2.4   | 0     | 0    | .22   |
| 6     | 0    | .65   | .02   | 2.8   | 1.9    | 5.3   | 5.5   | 2.4   | 2.6   | 0     | 0    | .71   |
| 7     | 0    | .44   | .08   | 2.4   | 1.7    | 4.8   | 4.8   | 2.2   | 2.7   | 0     | 0    | .40   |
| 8     | 0    | .20   | .20   | 2.3   | 1.8    | 4.1   | 4.3   | 2.2   | 1.8   | 2.6   | 0    | .22   |
| 9     | 0    | .95   | .89   | 2.4   | 1.8    | 3.5   | 3.5   | 2.0   | 1.6   | 2.2   | 0    | .06   |
| 10    | 0    | 1.2   | .40   | 2.2   | 1.8    | 3.2   | 2.9   | 1.8   | 1.2   | 1.7   | 0    | .06   |
| 11    | 0    | 1.6   | 3.1   | 1.9   | 1.7    | 2.6   | 2.9   | 1.6   | .22   | 1.1   | 0    | 0     |
| 12    | 0    | 1.2   | 3.1   | 1.6   | 1.6    | 2.6   | 4.8   | 1.0   | .36   | .95   | 0    | 0     |
| 13    | 0    | .95   | 3.1   | 1.8   | 1.2    | 3.2   | 18    | 1.2   | .56   | .95   | 0    | 0     |
| 14    | 0    | .95   | 3.1   | 1.8   | 1.3    | 5.3   | 18    | 1.0   | .52   | .44   | .23  | 0     |
| 15    | 0    | .65   | 3.1   | 1.2   | 1.3    | 7.5   | 15    | 1.1   | .25   | .44   | .06  | 0     |
| 16    | 0    | .65   | 3.1   | 1.2   | 1.3    | 9.4   | 14    | .56   | .09   | .20   | .02  | 0     |
| 17    | 0    | .44   | 2.9   | 1.2   | 1.4    | 8.4   | 14    | .56   | .08   | .07   | .01  | 0     |
| 18    | 0    | .44   | 2.8   | 1.8   | 1.7    | 8.9   | 11    | 1.0   | .02   | .03   | .02  | 0     |
| 19    | 0    | .44   | 2.6   | 1.6   | 4.9    | 12    | 10    | 1.7   | 0     | .01   | .02  | 0     |
| 20    | 0    | 1.8   | 2.4   | 1.7   | 7.7    | 11    | 9.9   | .56   | 2.3   | 0     | .01  | 0     |
| 21    | 0    | 2.1   | 2.1   | 2.0   | 10     | 9.9   | 8.4   | .20   | 1.4   | 0     | 0    | 0     |
| 22    | 0    | 2.8   | 2.1   | 1.9   | 12     | 8.4   | 7.8   | .20   | 1.3   | 0     | 0    | 0     |
| 23    | 0    | 1.2   | 2.0   | 1.7   | 12     | 7.1   | 7.1   | .20   | 3.3   | 0     | 1.2  | 0     |
| 24    | 0    | 1.6   | 1.6   | 1.6   | 9.4    | 6.2   | 5.8   | .77   | 2.7   | 0     | 1.6  | 0     |
| 25    | 0    | 1.8   | 1.6   | 1.6   | 8.2    | 5.7   | 5.7   | 1.7   | 3.5   | 0     | 2.3  | 0     |
| 26    | 0    | 2.1   | 1.6   | 1.2   | 8.4    | 5.5   | 3.6   | .77   | 3.1   | 0     | 1.5  | 0     |
| 27    | 0    | 1.8   | 1.4   | .77   | 9.1    | 5.7   | 4.1   | .83   | 2.9   | 0     | .89  | 0     |
| 28    | 0    | 1.8   | 1.2   | .89   | 7.8    | 6.9   | 5.5   | 1.0   | 2.2   | 0     | .56  | 0     |
| 29    | .02  | 2.1   | 1.1   | 1.0   | -----  | 6.9   | 4.3   | .77   | 1.7   | 0     | .40  | 0     |
| 30    | .05  | 2.1   | 1.2   | .71   | -----  | 7.3   | 4.1   | .46   | 1.2   | 0     | .15  | 0     |
| 31    | .05  | ----- | 1.2   | .60   | -----  | 7.8   | ----- | .28   | ----- | 0     | .12  | ----- |
| TOTAL | .12  | 32.99 | 57.14 | 53.47 | 115.92 | 197.6 | 227.9 | 42.76 | 47.02 | 11.35 | 9.09 | 2.04  |
| MEAN  | .004 | 1.10  | 1.84  | 1.72  | 4.14   | 6.37  | 7.60  | 1.38  | 1.57  | .37   | .29  | .068  |
| MAX   | .05  | 2.8   | 3.1   | 3.9   | 12     | 12    | 18    | 3.8   | 3.5   | 2.6   | 2.3  | .71   |
| MIN   | 0    | .02   | .02   | .60   | .77    | 2.6   | 2.9   | .20   | 0     | 0     | 0    | 0     |

WTR YR 1971 TOTAL 797.40 MEAN 2.18 MAX 18 MIN 0

## 05429120 Lake Wingra Outlet at Madison, Wis.--Continued

| DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972 |       |          |       |      |       |       |       |        |       |     |        |        |
|--------------------------------------------------------------------------------|-------|----------|-------|------|-------|-------|-------|--------|-------|-----|--------|--------|
| DAY                                                                            | OCT   | NOV      | DEC   | JAN  | FEB   | MAR   | APR   | MAY    | JUN   | JUL | AUG    | SEP    |
| 1                                                                              |       | 0        | 2.1   | 3.3  | 1.9   | 2.1   | 6.4   | 8.4    |       |     | 0      | 6.9    |
| 2                                                                              |       | .01      | 2.6   | 3.2  | 1.8   | 2.4   | 5.7   | 8.2    |       |     | 0      | 4.8    |
| 3                                                                              |       | .09      | 1.5   | 3.1  | 1.8   | 2.3   | 5.3   | 7.1    |       |     | 0      | 3.6    |
| 4                                                                              |       | .02      | 1.0   | 3.1  | 1.8   | 2.9   | 4.9   | 6.6    |       |     | 0      | 3.1    |
| 5                                                                              |       | .06      | 1.1   | 2.9  | 1.8   | 2.8   | 5.3   | 7.3    |       |     | 0      | 2.4    |
| 6                                                                              |       | .05      | 1.1   | 2.9  | 1.6   | 2.8   | 5.3   | 8.0    |       |     | 0      | 1.9    |
| 7                                                                              |       | .01      | 1.1   | 2.9  | 1.8   | 3.1   | 6.0   | 8.0    |       |     | 0      | 1.3    |
| 8                                                                              |       | .01      | 1.2   | 2.8  | 1.6   | 2.7   | 6.0   | 6.9    |       |     | 0      | 1.0    |
| 9                                                                              |       | .01      | 2.3   | 2.7  | 1.6   | 2.3   | 6.0   | 6.0    |       |     | 0      | .65    |
| 10                                                                             |       | .01      | 3.1   | 2.7  | 1.8   | 2.1   | 6.4   | 6.0    |       |     | 0      | .48    |
| 11                                                                             |       | .01      | 2.6   | 2.6  | 1.8   | 3.1   | 6.9   | 5.7    |       |     | 0      | 1.3    |
| 12                                                                             |       | .01      | 2.1   | 2.6  | 1.7   | 5.1   | 6.9   | 5.3    |       |     | .02    | 1.0    |
| 13                                                                             |       | .01      | 2.0   | 2.4  | 1.7   | 6.2   | 7.3   | 5.3    |       |     | .08    | 4.8    |
| 14                                                                             |       | .03      | 2.7   | 2.3  | 1.8   | 6.9   | 6.9   | 7.8    |       |     | .95    | 4.1    |
| 15                                                                             |       | .01      | 1.6   | 2.2  | 1.8   | 7.3   | 8.0   | 8.0    |       |     | 2.4    | 3.5    |
| 16                                                                             |       | .61      | 17    | 2.2  | 1.7   | 13    | 8.9   | 7.8    |       |     | 3.1    | 3.1    |
| 17                                                                             |       | .02      | 14    | 2.1  | 2.1   | 14    | 8.9   | 6.9    |       |     | 2.9    | 2.9    |
| 18                                                                             |       | .13      | 12    | 2.6  | 2.1   | 18    | 9.0   | 6.0    |       |     | 1.9    | 2.9    |
| 19                                                                             |       | .48      | 11    | 2.9  | 1.7   | 19    | 6.0   | 4.9    |       |     | 3.6    | 3.2    |
| 20                                                                             |       | .52      | 4.9   | 2.9  | 1.8   | 18    | 6.0   | 4.9    |       |     | 4.1    | 4.1    |
| 21                                                                             |       | .56      | 7.3   | 2.8  | 1.7   | 18    | 6.9   | 3.6    |       |     | 3.5    | 6.9    |
| 22                                                                             |       | .60      | 5.5   | 2.7  | 1.8   | 16    | 14    | 2.4    |       |     | 3.2    | 5.7    |
| 23                                                                             |       | .65      | 5.1   | 2.6  | 1.8   | 14    | 13    | 1.8    |       |     | 2.8    | 4.9    |
| 24                                                                             |       | .77      | 4.4   | 2.4  | 1.8   | 11    | 12    | 1.2    |       |     | 6.2    | 4.4    |
| 25                                                                             |       | .89      | 4.8   | 2.2  | 1.9   | 9.9   | 9.9   | .65    |       |     | 7.3    | 6.6    |
| 26                                                                             |       | 1.0      | 4.6   | 2.1  | 1.8   | 8.4   | 8.4   | .20    |       |     | 23     | 12     |
| 27                                                                             |       | 1.2      | 4.3   | 2.0  | 1.8   | 8.7   | 7.8   | .02    |       |     | 20     | 11     |
| 28                                                                             |       | 1.4      | 3.9   | 2.0  | 1.8   | 8.4   | 7.3   | .02    |       |     | 18     | 9.4    |
| 29                                                                             |       | 1.6      | 3.6   | 2.0  | 1.7   | 8.4   | 6.9   | .02    |       |     | 13     | 7.5    |
| 30                                                                             |       | 1.8      | 3.6   | 1.9  | ----- | 8.4   | 6.4   | .01    |       |     | 11     | 6.1    |
| 31                                                                             |       | -----    | 3.5   | 1.9  | ----- | 8.2   | ----- | .01    | ----- |     | 8.4    | -----  |
| TOTAL                                                                          | 0     | 11.94    | 156.5 | 74.0 | 49.2  | 255.5 | 223.7 | 145.03 | 0     | 0   | 135.45 | 131.53 |
| MEAN                                                                           | 0     | .40      | 5.05  | 2.55 | 1.70  | 8.24  | 7.46  | 4.68   | 0     | 0   | 4.37   | 4.38   |
| MAX                                                                            | 0     | 1.8      | 17    | 3.3  | 2.1   | 19    | 14    | 8.4    | 0     | 0   | 23     | 12     |
| MIN                                                                            | 0     | 0        | 1.0   | 1.9  | 1.3   | 2.1   | 4.9   | .01    | 0     | 0   | 0      | .48    |
| CAL YR 1971                                                                    | TOTAL | 875.63   | MEAN  | 2.40 | MAX   | 18    | MIN   | 0      |       |     |        |        |
| WTR YR 1972                                                                    | TOTAL | 1,187.89 | MEAN  | 3.25 | MAX   | 23    | MIN   | 0      |       |     |        |        |

## ROCK RIVER BASIN

05429500 Yahara River near McFarland, Wis.

LOCATION.--Lat 43°00'32", long 89°18'18", in SW 1/4 sec.3, T.6 N., R.10 E., Dane County, on left bank just upstream from bridge on U.S. Highway 51, at dam at outlet of Lake Waubesa and 1.0 mile southwest of McFarland.

DRAINAGE AREA.--323 sq mi.

PERIOD OF RECORD.--September 1930 to current year.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above mean sea level (levels by Wisconsin Department of Natural Resources). Prior to Dec. 23, 1934, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--42 years, 146 cfs (6.14 inches per year).

EXTREMES.--Current year: Maximum discharge, 325 cfs Apr. 16 (gage height, 4.32 ft); maximum gage height, 4.77 ft June 2 (backwater from aquatic vegetation and construction in river channel; minimum daily discharge, 16 cfs Oct. 11-12.

Period of record: Maximum discharge, 867 cfs 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 cfs Oct. 18, 1964.

REMARKS.--Records fair. Flow regulated by dams at outlets of Lake Mendota and Lake Waubesa. The Madison Metropolitan Sewerage District diverted an average of 30.27 million gallons per day of effluent into the Badfish Creek basin during 1972. Prior to 1958 the effluent was discharged into the Yahara River above McFarland.

REVISIONS.--WSP 805, WRD Wis. 1971: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 30   | 45    | 116   | 130   | 140   | 130   | 288   | 242   | 41    | 33    | 37    | 188   |
| 2     | 28   | 82    | 112   | 130   | 140   | 130   | 290   | 255   | 70    | 33    | 42    | 181   |
| 3     | 26   | 89    | 110   | 130   | 140   | 130   | 292   | 158   | 100   | 33    | 44    | 174   |
| 4     | 25   | 84    | 105   | 130   | 140   | 130   | 295   | 84    | 105   | 34    | 45    | 161   |
| 5     | 23   | 70    | 103   | 125   | 140   | 125   | 298   | 73    | 110   | 33    | 46    | 154   |
| 6     | 20   | 59    | 105   | 125   | 140   | 125   | 302   | 75    | 116   | 33    | 48    | 149   |
| 7     | 21   | 56    | 105   | 125   | 140   | 125   | 315   | 120   | 120   | 33    | 50    | 125   |
| 8     | 20   | 48    | 105   | 125   | 140   | 125   | 318   | 149   | 120   | 33    | 47    | 95    |
| 9     | 19   | 43    | 105   | 125   | 140   | 120   | 320   | 145   | 120   | 33    | 41    | 89    |
| 10    | 18   | 89    | 116   | 125   | 140   | 120   | 318   | 142   | 105   | 32    | 41    | 86    |
| 11    | 16   | 138   | 120   | 125   | 140   | 130   | 320   | 147   | 103   | 31    | 48    | 89    |
| 12    | 16   | 131   | 120   | 125   | 145   | 140   | 318   | 140   | 103   | 29    | 54    | 95    |
| 13    | 17   | 129   | 120   | 125   | 145   | 160   | 318   | 145   | 110   | 28    | 54    | 118   |
| 14    | 18   | 120   | 120   | 130   | 145   | 150   | 310   | 161   | 114   | 31    | 53    | 116   |
| 15    | 18   | 116   | 135   | 130   | 145   | 150   | 318   | 172   | 114   | 38    | 56    | 120   |
| 16    | 20   | 114   | 150   | 130   | 145   | 170   | 320   | 161   | 112   | 39    | 54    | 120   |
| 17    | 25   | 112   | 31    | 130   | 145   | 210   | 320   | 149   | 105   | 38    | 46    | 118   |
| 18    | 26   | 114   | 28    | 130   | 145   | 238   | 320   | 131   | 88    | 41    | 46    | 118   |
| 19    | 25   | 125   | 150   | 130   | 140   | 240   | 315   | 120   | 86    | 40    | 49    | 125   |
| 20    | 25   | 136   | 155   | 130   | 140   | 240   | 258   | 120   | 72    | 41    | 49    | 133   |
| 21    | 28   | 131   | 150   | 130   | 140   | 245   | 133   | 105   | 78    | 37    | 50    | 156   |
| 22    | 28   | 122   | 150   | 130   | 140   | 252   | 129   | 112   | 73    | 36    | 48    | 163   |
| 23    | 32   | 108   | 145   | 130   | 135   | 255   | 140   | 125   | 67    | 37    | 46    | 158   |
| 24    | 41   | 112   | 145   | 135   | 135   | 252   | 147   | 114   | 48    | 37    | 50    | 152   |
| 25    | 50   | 110   | 140   | 135   | 135   | 250   | 149   | 103   | 48    | 37    | 72    | 152   |
| 26    | 48   | 108   | 140   | 135   | 130   | 252   | 198   | 95    | 53    | 41    | 127   | 163   |
| 27    | 47   | 116   | 140   | 135   | 130   | 252   | 270   | 93    | 54    | 41    | 140   | 168   |
| 28    | 42   | 112   | 135   | 140   | 130   | 255   | 308   | 64    | 37    | 40    | 165   | 172   |
| 29    | 38   | 118   | 135   | 140   | 130   | 270   | 315   | 59    | 33    | 38    | 198   | 177   |
| 30    | 38   | 116   | 130   | 140   | ----- | 280   | 302   | 54    | 37    | 38    | 198   | 188   |
| 31    | 35   | ----- | 130   | 140   | ----- | 285   | ----- | 67    | ----- | 37    | 188   | ----- |
| TOTAL | 863  | 3,053 | 3,751 | 4,045 | 4,040 | 5,936 | 8,244 | 3,880 | 2,542 | 1,105 | 2,232 | 4,203 |
| MEAN  | 27.8 | 102   | 121   | 130   | 139   | 191   | 275   | 125   | 84.7  | 35.6  | 72.0  | 140   |
| MAX   | 50   | 138   | 155   | 140   | 145   | 285   | 320   | 255   | 120   | 41    | 198   | 188   |
| MIN   | 16   | 43    | 28    | 125   | 130   | 120   | 129   | 54    | 33    | 28    | 37    | 86    |
| CFSM  | .09  | .32   | .37   | .40   | .43   | .59   | .85   | .39   | .26   | .11   | .22   | .43   |
| IN.   | .10  | .35   | .43   | .47   | .47   | .68   | .95   | .45   | .29   | .13   | .26   | .48   |

CAL YR 1971 TOTAL 41,758.4 MEAN 114 MAX 386 MIN 6.5 CFSM .35 IN 4.81  
WTR YR 1972 TOTAL 43,894.0 MEAN 120 MAX 320 MIN 16 CFSM .37 IN 5.06

05430500 Rock River at Afton, Wis.

LOCATION.--Lat 42°36'33", long 89°04'14", in NE 1/4 sec.28, T.2 N., R.12 E., Rock County, on right bank in Afton, 0.3 mile downstream from highway bridge and 1.1 miles upstream from Bass Creek.

DRAINAGE AREA.--3,331 sq mi.

PERIOD OF RECORD.--January 1914 to current year. Monthly discharge only for January 1914, published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 742.36 ft above mean sea level. Prior to Aug. 21, 1932, a non-recording gage, and Aug. 21, 1932, to Sept. 30, 1933, water-stage recorder, at same site at datum 1 ft higher.

AVERAGE DISCHARGE.--58 years, 1,688 cfs (6.88 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,170 cfs Sept. 30 (gage height, 7.76 ft); minimum daily, 255 cfs Oct. 6.

Period of record: Maximum discharge, 13,000 cfs 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 cfs Sept. 9, 1964; minimum daily, 42 cfs Aug. 25, 26, 1934; minimum gage height, 0.09 ft Aug. 26, 1934.

REMARKS.--Records good except those for winter periods, which are fair. Diurnal fluctuation caused by power-plants above station. Records of water temperature for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1238: 1916(M), 1919(M), 1933, 1937-38, 1943. WRD Wis. 1971: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Jan. 1 to Mar. 11.)

|     |       |     |       |
|-----|-------|-----|-------|
| 2.1 | 212   | 5.0 | 2,220 |
| 2.5 | 420   | 6.0 | 3,160 |
| 3.0 | 740   | 7.0 | 4,210 |
| 4.0 | 1,440 | 8.0 | 5,480 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR     | MAY     | JUN    | JUL    | AUG    | SEP    |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|
| 1     | 353    | 567    | 943    | 1,600  | 740    | 860    | 3,960   | 4,330   | 1,650  | 522    | 950    | 2,600  |
| 2     | 301    | 768    | 992    | 1,500  | 700    | 860    | 4,060   | 4,350   | 1,470  | 782    | 1,070  | 2,620  |
| 3     | 301    | 782    | 971    | 1,350  | 300    | 760    | 4,080   | 4,320   | 700    | 706    | 1,070  | 2,520  |
| 4     | 306    | 638    | 978    | 1,300  | 380    | 720    | 3,970   | 4,250   | 740    | 685    | 1,270  | 2,380  |
| 5     | 296    | 706    | 992    | 1,250  | 370    | 780    | 3,960   | 4,160   | 999    | 651    | 1,190  | 2,160  |
| 6     | 255    | 599    | 992    | 1,250  | 370    | 660    | 3,970   | 4,000   | 845    | 645    | 1,140  | 2,130  |
| 7     | 301    | 592    | 943    | 1,250  | 380    | 540    | 4,040   | 4,200   | 852    | 625    | 1,070  | 2,070  |
| 8     | 348    | 768    | 992    | 1,200  | 390    | 900    | 3,860   | 4,390   | 803    | 645    | 645    | 2,090  |
| 9     | 364    | 775    | 1,060  | 1,200  | 420    | 840    | 3,740   | 4,320   | 922    | 658    | 605    | 2,000  |
| 10    | 381    | 775    | 1,170  | 1,200  | 450    | 840    | 3,750   | 4,110   | 1,560  | 706    | 658    | 1,850  |
| 11    | 364    | 796    | 1,200  | 1,150  | 480    | 960    | 3,740   | 4,010   | 1,410  | 645    | 901    | 1,830  |
| 12    | 316    | 817    | 1,270  | 1,100  | 520    | 1,660  | 3,750   | 3,920   | 1,220  | 605    | 1,050  | 1,870  |
| 13    | 348    | 894    | 1,350  | 1,050  | 500    | 1,600  | 3,690   | 4,080   | 999    | 740    | 1,100  | 2,110  |
| 14    | 359    | 880    | 1,360  | 980    | 500    | 1,410  | 3,700   | 4,200   | 978    | 838    | 1,110  | 2,040  |
| 15    | 280    | 775    | 2,290  | 960    | 490    | 1,560  | 3,750   | 3,870   | 957    | 1,240  | 1,370  | 1,830  |
| 16    | 381    | 824    | 2,400  | 960    | 500    | 1,830  | 4,000   | 3,740   | 1,060  | 1,270  | 1,720  | 1,820  |
| 17    | 522    | 880    | 2,140  | 1,000  | 490    | 2,360  | 3,980   | 3,630   | 1,090  | 1,360  | 1,760  | 1,910  |
| 18    | 444    | 873    | 2,100  | 1,050  | 480    | 3,050  | 3,750   | 3,300   | 1,050  | 1,800  | 1,790  | 2,140  |
| 19    | 420    | 789    | 2,410  | 1,000  | 500    | 2,910  | 3,840   | 3,220   | 1,010  | 1,830  | 1,870  | 2,280  |
| 20    | 338    | 586    | 2,110  | 960    | 520    | 3,010  | 3,850   | 3,210   | 1,020  | 1,710  | 1,910  | 2,570  |
| 21    | 398    | 775    | 2,040  | 940    | 520    | 3,170  | 3,960   | 3,030   | 1,110  | 1,660  | 1,860  | 3,240  |
| 22    | 426    | 880    | 2,110  | 920    | 370    | 3,320  | 4,060   | 2,700   | 1,120  | 1,520  | 1,900  | 3,580  |
| 23    | 450    | 978    | 2,030  | 920    | 450    | 3,400  | 3,800   | 2,240   | 1,080  | 1,420  | 1,950  | 3,800  |
| 24    | 529    | 726    | 1,960  | 900    | 500    | 3,530  | 3,890   | 2,180   | 1,080  | 1,480  | 1,890  | 4,070  |
| 25    | 491    | 845    | 1,960  | 860    | 540    | 3,630  | 4,000   | 2,160   | 999    | 1,390  | 2,090  | 4,430  |
| 26    | 444    | 859    | 1,890  | 860    | 620    | 3,690  | 3,960   | 2,530   | 964    | 1,360  | 2,340  | 4,670  |
| 27    | 541    | 838    | 1,880  | 840    | 640    | 3,670  | 4,060   | 2,350   | 901    | 1,380  | 2,270  | 4,840  |
| 28    | 504    | 838    | 1,710  | 820    | 640    | 3,640  | 4,080   | 2,150   | 908    | 1,290  | 2,350  | 4,950  |
| 29    | 554    | 1,080  | 1,750  | 820    | 640    | 3,810  | 4,070   | 1,990   | 651    | 1,200  | 2,640  | 5,130  |
| 30    | 638    | 1,020  | 1,880  | 800    | -----  | 3,770  | 4,040   | 1,940   | 306    | 1,130  | 2,710  | 5,140  |
| 31    | 579    | -----  | 1,720  | 780    | -----  | 3,860  | -----   | 1,860   | -----  | 1,060  | 2,630  | -----  |
| TOTAL | 12,532 | 23,923 | 49,593 | 32,770 | 14,400 | 67,600 | 117,360 | 104,740 | 30,454 | 33,553 | 48,879 | 86,670 |
| MEAN  | 404    | 797    | 1,600  | 1,057  | 497    | 2,181  | 3,912   | 3,379   | 1,015  | 1,082  | 1,577  | 2,889  |
| MAX   | 638    | 1,080  | 2,410  | 1,600  | 740    | 3,860  | 4,080   | 4,390   | 1,650  | 1,830  | 2,710  | 5,140  |
| MIN   | 255    | 567    | 943    | 780    | 300    | 540    | 3,690   | 1,860   | 306    | 522    | 605    | 1,820  |
| CFSM  | .12    | .24    | .48    | .32    | .15    | .65    | 1.17    | 1.01    | .30    | .32    | .47    | .87    |
| IN.   | .14    | .27    | .55    | .37    | .16    | .75    | 1.31    | 1.17    | .34    | .37    | .55    | .97    |

CAL YR 1971 TOTAL 586,669 MEAN 1,607 MAX 5,880 MIN 250 CFSM .48 IN 6.55  
WTR YR 1972 TOTAL 622,474 MEAN 1,701 MAX 5,140 MIN 255 CFSM .51 IN 6.95

## ROCK RIVER BASIN

05431500 Turtle Creek near Clinton, Wis.

LOCATION.--Lat 42°35'47", long 88°51'50", in SE 1/4 sec.29, T.2 N., R.14 E., Rock County, on left bank 15 ft downstream from bridge on State Highway 140, 2.7 miles north of Clinton, 11 miles northeast of Beloit, and 16 miles upstream from mouth.

DRAINAGE AREA.--202 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 817.00 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--33 years, 105 cfs (7.06 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,570 cfs Sept. 18 (gage height, 7.29 ft); minimum, 26 cfs Dec. 2 (gage height, 2.30 ft), result of freezeup.

Period of record: Maximum discharge, 6,560 cfs Feb. 24, 1949 (gage height, 10.22 ft); maximum gage height, 10.27 ft Feb. 20, 1971 (backwater from ice); minimum discharge, 8 cfs Dec. 29, 1956 (gage height, 2.04 ft), result of freezeup.

Maximum stage known, 12.09 ft in February 1938, from floodmarks (discharge, 10,700 cfs, from rating curve extended above 5,500 cfs).

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.

REVISIONS (WATER YEARS).--WSP 955: 1940. WSP 1308: 1950(M). WRD Wis. 1971: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Nov. 7, 8, 22, 23, Nov. 30 to Dec. 5, Dec. 18-23, 26-31, Jan. 3 to Mar. 15.)

|     |     |     |       |
|-----|-----|-----|-------|
| 2.4 | 38  | 4.0 | 469   |
| 2.6 | 66  | 5.0 | 918   |
| 3.0 | 142 | 6.0 | 1,460 |
| 3.5 | 282 | 7.0 | 2,280 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP    |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 1     | 46    | 84    | 60    | 144   | 43    | 150   | 87    | 153   | 85    | 68    | 102   | 223    |
| 2     | 45    | 114   | 56    | 128   | 43    | 90    | 92    | 157   | 84    | 77    | 776   | 214    |
| 3     | 58    | 86    | 54    | 120   | 44    | 110   | 97    | 161   | 79    | 78    | 626   | 156    |
| 4     | 60    | 71    | 54    | 110   | 43    | 90    | 99    | 174   | 78    | 72    | 323   | 133    |
| 5     | 53    | 64    | 56    | 100   | 42    | 70    | 111   | 152   | 78    | 70    | 235   | 124    |
| 6     | 53    | 58    | 61    | 90    | 42    | 80    | 171   | 150   | 79    | 68    | 223   | 118    |
| 7     | 74    | 56    | 75    | 84    | 43    | 100   | 141   | 176   | 75    | 70    | 269   | 118    |
| 8     | 73    | 54    | 97    | 82    | 43    | 160   | 121   | 279   | 74    | 69    | 323   | 127    |
| 9     | 55    | 55    | 108   | 80    | 43    | 120   | 109   | 429   | 72    | 70    | 330   | 120    |
| 10    | 55    | 56    | 164   | 76    | 43    | 90    | 104   | 375   | 76    | 69    | 306   | 114    |
| 11    | 52    | 54    | 226   | 70    | 44    | 110   | 108   | 352   | 72    | 68    | 382   | 206    |
| 12    | 50    | 54    | 198   | 64    | 45    | 200   | 105   | 272   | 75    | 68    | 334   | 313    |
| 13    | 50    | 53    | 169   | 60    | 46    | 160   | 110   | 200   | 75    | 77    | 192   | 1,250  |
| 14    | 50    | 52    | 144   | 58    | 45    | 140   | 112   | 189   | 81    | 110   | 166   | 996    |
| 15    | 48    | 50    | 382   | 54    | 44    | 160   | 145   | 253   | 125   | 569   | 192   | 523    |
| 16    | 49    | 51    | 363   | 52    | 44    | 296   | 648   | 214   | 100   | 266   | 164   | 421    |
| 17    | 49    | 51    | 260   | 50    | 45    | 809   | 861   | 200   | 90    | 263   | 144   | 410    |
| 18    | 49    | 54    | 300   | 50    | 45    | 976   | 453   | 152   | 86    | 932   | 129   | 1,740  |
| 19    | 52    | 59    | 320   | 50    | 46    | 345   | 413   | 133   | 82    | 445   | 135   | 928    |
| 20    | 61    | 57    | 270   | 49    | 47    | 285   | 382   | 120   | 96    | 394   | 131   | 617    |
| 21    | 56    | 55    | 220   | 49    | 47    | 269   | 417   | 112   | 97    | 352   | 122   | 1,240  |
| 22    | 55    | 54    | 180   | 49    | 47    | 232   | 856   | 106   | 86    | 323   | 122   | 828    |
| 23    | 55    | 53    | 150   | 48    | 48    | 223   | 498   | 94    | 80    | 282   | 116   | 539    |
| 24    | 55    | 52    | 134   | 47    | 48    | 212   | 410   | 87    | 77    | 195   | 154   | 494    |
| 25    | 68    | 57    | 119   | 45    | 48    | 198   | 367   | 85    | 76    | 133   | 253   | 457    |
| 26    | 86    | 54    | 110   | 44    | 49    | 156   | 306   | 84    | 74    | 124   | 986   | 453    |
| 27    | 98    | 59    | 100   | 43    | 50    | 104   | 206   | 82    | 72    | 138   | 445   | 417    |
| 28    | 104   | 57    | 92    | 42    | 60    | 91    | 152   | 82    | 71    | 127   | 256   | 382    |
| 29    | 106   | 60    | 100   | 42    | 100   | 93    | 145   | 85    | 73    | 116   | 241   | 494    |
| 30    | 101   | 62    | 210   | 42    | ----- | 91    | 139   | 95    | 71    | 106   | 226   | 296    |
| 31    | 91    | ----- | 170   | 42    | ----- | 85    | ----- | 93    | ----- | 104   | 214   | -----  |
| TOTAL | 1,957 | 1,796 | 5,002 | 2,064 | 1,377 | 6,295 | 7,965 | 5,296 | 2,439 | 5,903 | 8,617 | 14,451 |
| MEAN  | 63.1  | 59.9  | 161   | 66.6  | 47.5  | 203   | 266   | 171   | 81.3  | 190   | 278   | 482    |
| MAX   | 106   | 114   | 382   | 144   | 100   | 976   | 861   | 429   | 125   | 932   | 986   | 1,740  |
| MIN   | 45    | 50    | 54    | 42    | 42    | 70    | 87    | 82    | 71    | 68    | 102   | 114    |
| CFSM  | .31   | .30   | .80   | .33   | .24   | 1.01  | 1.32  | .85   | .40   | .94   | 1.38  | 2.39   |
| IN.   | .36   | .33   | .92   | .38   | .25   | 1.16  | 1.47  | .98   | .45   | 1.09  | 1.59  | 2.66   |

|             |              |          |           |        |          |          |
|-------------|--------------|----------|-----------|--------|----------|----------|
| CAL YR 1971 | TOTAL 46,485 | MEAN 127 | MAX 2,370 | MIN 45 | CFSM .63 | IN 8.56  |
| WTR YR 1972 | TOTAL 63,162 | MEAN 173 | MAX 1,740 | MIN 42 | CFSM .86 | IN 11.63 |

## PEAK DISCHARGE (BASE, 1,200 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 4-17 | 0100 | 5.93  | 1,420     | 9-18 | 1500 | 7.29  | 2,570     |
| 9-13 | 1800 | 6.42  | 1,770     | 9-21 | 1500 | 6.06  | 1,500     |

05432500 Pecatonica River at Darlington, Wis.

LOCATION.--Lat 42°40'40", long 90°07'07", in NE 1/4 sec.3, T.2 N., R.3 E., Lafayette County, on right bank in Darlington, 0.3 mile downstream from Vinegar Branch, and 3.6 miles upstream from Otter Creek.

DRAINAGE AREA.--274 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 802.42 ft above mean sea level.

AVERAGE DISCHARGE.--33 years, 176 cfs (8.72 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,830 cfs Mar. 17 (gage height, 11.57 ft); minimum, 50 cfs Dec. 28 (gage height, 1.58 ft), result of freezeup.

Period of record: Maximum discharge, 22,000 cfs July 16, 1950 (gage height, 20.71 ft), from rating curve extended above 11,000 cfs on basis of slope-area determination of peak flow; minimum, 17 cfs Nov. 29, 1966 (gage height, 2.09 ft), result of freezeup; minimum gage height, 1.07 ft Dec. 6, 1968, result of freezeup. Flood of Feb. 21, 1937, reached a stage of 17.6 ft from floodmarks.

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

Rating tables (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 2-4, 19, Jan. 2-5, Jan. 13 to Mar. 14.)

Oct. 1 to Mar. 19

Mar. 20 to Sept. 30

|     |     |      |       |     |     |      |       |
|-----|-----|------|-------|-----|-----|------|-------|
| 1.5 | 45  | 7.0  | 720   | 1.5 | 48  | 5.0  | 447   |
| 2.0 | 82  | 9.0  | 1,070 | 2.0 | 92  | 7.0  | 720   |
| 3.0 | 187 | 11.0 | 1,620 | 2.5 | 144 | 9.0  | 1,070 |
| 5.0 | 447 | 12.0 | 2,000 | 3.0 | 200 | 11.0 | 1,620 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR    | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 75    | 103   | 64    | 97    | 76    | 300    | 116   | 175   | 101   | 76    | 159   | 152   |
| 2     | 73    | 531   | 62    | 90    | 76    | 160    | 122   | 180   | 98    | 78    | 422   | 180   |
| 3     | 76    | 233   | 64    | 80    | 76    | 110    | 128   | 184   | 96    | 77    | 321   | 135   |
| 4     | 79    | 112   | 70    | 76    | 74    | 96     | 124   | 161   | 93    | 70    | 163   | 121   |
| 5     | 73    | 98    | 80    | 72    | 74    | 86     | 118   | 151   | 90    | 68    | 131   | 116   |
| 6     | 72    | 91    | 87    | 74    | 74    | 80     | 161   | 195   | 97    | 68    | 140   | 112   |
| 7     | 71    | 73    | 95    | 78    | 74    | 100    | 167   | 247   | 92    | 68    | 220   | 111   |
| 8     | 72    | 87    | 95    | 80    | 74    | 150    | 137   | 228   | 87    | 70    | 157   | 115   |
| 9     | 73    | 86    | 102   | 93    | 74    | 110    | 136   | 198   | 89    | 74    | 133   | 108   |
| 10    | 73    | 86    | 123   | 112   | 74    | 100    | 163   | 178   | 90    | 74    | 117   | 102   |
| 11    | 72    | 85    | 148   | 104   | 76    | 200    | 176   | 164   | 85    | 70    | 134   | 196   |
| 12    | 71    | 83    | 125   | 86    | 78    | 800    | 153   | 154   | 84    | 76    | 154   | 217   |
| 13    | 71    | 82    | 101   | 80    | 78    | 1,100  | 144   | 155   | 154   | 110   | 128   | 294   |
| 14    | 72    | 80    | 95    | 70    | 80    | 1,000  | 142   | 186   | 105   | 94    | 115   | 387   |
| 15    | 71    | 79    | 325   | 60    | 82    | 1,170  | 153   | 214   | 107   | 455   | 108   | 219   |
| 16    | 70    | 78    | 553   | 54    | 84    | 1,660  | 234   | 179   | 94    | 252   | 105   | 188   |
| 17    | 70    | 79    | 208   | 50    | 84    | 1,740  | 246   | 156   | 84    | 128   | 103   | 174   |
| 18    | 70    | 98    | 132   | 90    | 84    | 1,760  | 183   | 145   | 83    | 175   | 98    | 169   |
| 19    | 82    | 113   | 120   | 300   | 84    | 977    | 165   | 133   | 83    | 126   | 95    | 168   |
| 20    | 126   | 93    | 151   | 150   | 84    | 515    | 154   | 129   | 87    | 104   | 180   | 188   |
| 21    | 96    | 85    | 125   | 120   | 84    | 420    | 180   | 124   | 86    | 95    | 328   | 188   |
| 22    | 84    | 75    | 112   | 100   | 84    | 545    | 427   | 121   | 81    | 86    | 134   | 159   |
| 23    | 79    | 80    | 113   | 90    | 84    | 226    | 314   | 116   | 76    | 89    | 115   | 144   |
| 24    | 78    | 80    | 113   | 82    | 84    | 168    | 238   | 112   | 73    | 92    | 109   | 142   |
| 25    | 77    | 80    | 105   | 78    | 84    | 151    | 205   | 109   | 73    | 85    | 151   | 195   |
| 26    | 77    | 83    | 104   | 74    | 84    | 141    | 183   | 107   | 74    | 84    | 525   | 414   |
| 27    | 77    | 88    | 101   | 74    | 84    | 132    | 168   | 107   | 73    | 106   | 238   | 318   |
| 28    | 77    | 85    | 65    | 74    | 84    | 128    | 158   | 102   | 74    | 95    | 167   | 243   |
| 29    | 75    | 86    | 100   | 74    | 100   | 130    | 168   | 103   | 87    | 84    | 143   | 288   |
| 30    | 82    | 86    | 98    | 74    | ----- | 128    | 162   | 124   | 89    | 80    | 130   | 232   |
| 31    | 88    | ----- | 102   | 76    | ----- | 117    | ----- | 111   | ----- | 77    | 122   | ----- |
| TOTAL | 2,402 | 3,198 | 3,938 | 2,812 | 2,332 | 14,500 | 5,325 | 4,748 | 2,685 | 3,286 | 5,345 | 5,775 |
| MEAN  | 77.5  | 107   | 127   | 90.7  | 80.4  | 468    | 178   | 153   | 89.5  | 106   | 172   | 193   |
| MAX   | 126   | 531   | 553   | 300   | 100   | 1,760  | 427   | 247   | 154   | 455   | 525   | 414   |
| MIN   | 70    | 73    | 62    | 50    | 74    | 80     | 116   | 102   | 73    | 68    | 95    | 102   |
| CFSM  | .28   | .39   | .46   | .33   | .29   | 1.71   | .65   | .56   | .33   | .39   | .63   | .70   |
| IN.   | .33   | .43   | .53   | .38   | .32   | 1.97   | .72   | .64   | .36   | .45   | .73   | .78   |

CAL YR 1971 TOTAL 57,966 MEAN 159 MAX 1,880 MIN 62 CFSM .58 IN 7.87  
WTR YR 1972 TOTAL 56,346 MEAN 154 MAX 1,760 MIN 50 CFSM .56 IN 7.65

PEAK DISCHARGE (BASE, 2,000 CFS).--No peak above base.

05433000 East Branch Pecatonica River near Blanchardville, Wis.

LOCATION.--Lat 42°47'10", long 89°51'40", in SE 1/4 sec.26, T.4 N., R.5 E., Lafayette County, on left bank at downstream side of bridge on State Highway 78, 1.8 miles south of Blanchardville and 4.5 miles upstream from Sawmill Creek.

DRAINAGE AREA.--221 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 796.8 ft above mean sea level, unadjusted. Prior to Dec. 20, 1939, nonrecording gage at bridge 50 ft upstream at same datum. Auxiliary nonrecording gage 2.7 miles upstream at same datum read every six hours or more often when stages exceed 10 ft.

AVERAGE DISCHARGE.--33 years, 134 cfs (8.23 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,380 cfs Mar. 18 (gage height, 11.85 ft); minimum daily, 66 cfs Jan. 15.

Period of record: Maximum discharge, 11,700 cfs Feb. 28, 1948 (gage height, 15.74 ft); minimum, 18 cfs Nov. 29, 1966.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 2-5, 29, Jan. 3 to Mar. 16.)

|     |     |      |       |
|-----|-----|------|-------|
| 2.9 | 64  | 7.0  | 420   |
| 3.0 | 71  | 8.0  | 520   |
| 4.0 | 150 | 9.0  | 632   |
| 5.0 | 230 | 10.0 | 760   |
| 6.0 | 320 | 11.0 | 990   |
|     |     | 12.0 | 1,470 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 73    | 86    | 77    | 107   | 72    | 130   | 108   | 149   | 104   | 75    | 79    | 100   |
| 2     | 72    | 363   | 72    | 90    | 72    | 90    | 112   | 167   | 103   | 74    | 117   | 106   |
| 3     | 85    | 173   | 76    | 80    | 72    | 34    | 114   | 182   | 101   | 74    | 105   | 96    |
| 4     | 83    | 104   | 82    | 76    | 72    | 82    | 114   | 147   | 98    | 73    | 80    | 94    |
| 5     | 75    | 96    | 88    | 76    | 72    | 80    | 108   | 146   | 96    | 73    | 76    | 94    |
| 6     | 73    | 92    | 89    | 72    | 72    | 80    | 160   | 165   | 96    | 72    | 77    | 95    |
| 7     | 74    | 82    | 94    | 96    | 72    | 86    | 164   | 199   | 95    | 72    | 78    | 94    |
| 8     | 74    | 85    | 94    | 100   | 74    | 100   | 111   | 174   | 93    | 72    | 76    | 94    |
| 9     | 75    | 86    | 101   | 100   | 74    | 78    | 120   | 157   | 92    | 71    | 75    | 94    |
| 10    | 74    | 87    | 123   | 94    | 70    | 75    | 116   | 145   | 91    | 71    | 78    | 94    |
| 11    | 74    | 85    | 176   | 86    | 76    | 120   | 120   | 137   | 90    | 71    | 105   | 115   |
| 12    | 72    | 84    | 115   | 80    | 74    | 400   | 118   | 132   | 90    | 70    | 151   | 118   |
| 13    | 72    | 83    | 102   | 74    | 78    | 600   | 120   | 138   | 92    | 81    | 95    | 158   |
| 14    | 73    | 83    | 96    | 70    | 78    | 450   | 130   | 176   | 87    | 72    | 86    | 167   |
| 15    | 72    | 81    | 254   | 66    | 76    | 580   | 129   | 185   | 89    | 241   | 84    | 116   |
| 16    | 72    | 80    | 300   | 70    | 76    | 700   | 159   | 154   | 84    | 113   | 84    | 108   |
| 17    | 72    | 82    | 140   | 40    | 74    | 1,230 | 178   | 139   | 83    | 88    | 84    | 104   |
| 18    | 72    | 94    | 176   | 98    | 74    | 684   | 139   | 131   | 81    | 115   | 84    | 103   |
| 19    | 74    | 108   | 191   | 150   | 74    | 552   | 132   | 124   | 81    | 84    | 100   | 115   |
| 20    | 96    | 92    | 141   | 100   | 74    | 412   | 126   | 119   | 79    | 79    | 111   | 143   |
| 21    | 79    | 87    | 120   | 88    | 72    | 417   | 147   | 117   | 79    | 78    | 132   | 132   |
| 22    | 78    | 80    | 99    | 80    | 72    | 172   | 354   | 114   | 78    | 78    | 92    | 114   |
| 23    | 75    | 83    | 104   | 78    | 72    | 145   | 221   | 111   | 78    | 81    | 87    | 105   |
| 24    | 74    | 83    | 102   | 76    | 72    | 132   | 177   | 109   | 78    | 78    | 92    | 105   |
| 25    | 74    | 83    | 96    | 74    | 74    | 129   | 160   | 107   | 77    | 75    | 97    | 173   |
| 26    | 74    | 86    | 97    | 74    | 75    | 124   | 148   | 107   | 77    | 77    | 315   | 349   |
| 27    | 76    | 91    | 96    | 74    | 78    | 120   | 140   | 106   | 76    | 90    | 162   | 216   |
| 28    | 75    | 85    | 94    | 74    | 84    | 120   | 134   | 104   | 75    | 79    | 122   | 158   |
| 29    | 73    | 90    | 100   | 74    | 98    | 120   | 137   | 104   | 78    | 77    | 109   | 170   |
| 30    | 78    | 87    | 111   | 74    | ----- | 110   | 133   | 110   | 75    | 77    | 101   | 148   |
| 31    | 81    | ----- | 113   | 74    | ----- | 116   | ----- | 106   | ----- | 77    | 97    | ----- |
| TOTAL | 2,350 | 2,941 | 3,670 | 2,605 | 2,184 | 8,439 | 4,329 | 4,261 | 2,596 | 2,608 | 3,231 | 3,878 |
| MEAN  | 75.8  | 99.4  | 118   | 84.0  | 75.3  | 272   | 144   | 137   | 86.5  | 84.1  | 104   | 129   |
| MAX   | 96    | 363   | 300   | 150   | 98    | 1,230 | 354   | 199   | 104   | 241   | 315   | 349   |
| MIN   | 72    | 80    | 72    | 66    | 72    | 76    | 108   | 104   | 75    | 70    | 75    | 94    |
| CFSM  | .34   | .45   | .53   | .38   | .34   | 1.23  | .65   | .62   | .39   | .38   | .47   | .58   |
| IN.   | .40   | .50   | .62   | .44   | .37   | 1.42  | .73   | .72   | .44   | .44   | .54   | .65   |

CAL YR 1971 TOTAL 44,282 MEAN 121 MAX 885 MIN 64 CFSM .55 IN 7.45  
WTR YR 1972 TOTAL 43,132 MEAN 118 MAX 1,230 MIN 66 CFSM .53 IN 7.26

PEAK DISCHARGE (BASE, 1,300 CFS).--Mar. 18 (1600) 1,380 cfs (11.85 ft).

## ROCK RIVER BASIN

147

05434500 Pecatonica River at Martintown, Wis.

LOCATION.--Lat 42°30'34", long 89°47'58", in SE 1/4 sec.32, T.1 N., R.6 E., Green County, on right bank about 400 ft downstream from highway bridge in Martintown, 0.3 mile upstream from Wisconsin-Illinois State line and 8.8 miles downstream from Skinner Creek.

DRAINAGE AREA.--1,034 sq mi.

RECORDS AVAILABLE.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 757.9 ft above mean sea level. Prior to Jan. 6, 1940, non-recording gage at same site and datum. Auxiliary nonrecording gage 1.2 miles downstream read several times daily during high water.

AVERAGE DISCHARGE.--33 years, 674 cfs (8.85 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,970 cfs Mar. 20 (gage height, 14.23 ft); minimum daily, 280 cfs Jan. 24 to Feb. 13.

Period of record: Maximum discharge, 15,100 cfs July 1, 1969 (gage height, 21.46 ft); no flow for part of Dec. 14, 1939.

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

REVISIONS (WATER YEARS).--WSP 1308: 1949-50(M). WRD Wis. 1971: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 3-6, 19-23, Dec. 29 to Mar. 16.)

|     |     |      |       |
|-----|-----|------|-------|
| 3.0 | 256 | 7.0  | 1,160 |
| 3.5 | 343 | 9.0  | 1,710 |
| 4.0 | 440 | 11.0 | 2,280 |
| 5.0 | 660 | 13.0 | 3,160 |
|     |     | 15.0 | 4,660 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV    | DEC    | JAN    | FEB   | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------|-------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 306   | 362    | 355    | 460    | 280   | 1,400  | 506    | 808    | 498    | 380    | 339    | 594    |
| 2     | 304   | 514    | 337    | 400    | 280   | 1,300  | 495    | 874    | 473    | 368    | 1,120  | 613    |
| 3     | 301   | 501    | 320    | 370    | 280   | 1,000  | 501    | 875    | 436    | 354    | 1,520  | 645    |
| 4     | 333   | 887    | 320    | 360    | 280   | 700    | 507    | 844    | 438    | 350    | 1,110  | 586    |
| 5     | 337   | 562    | 320    | 360    | 280   | 520    | 514    | 815    | 428    | 328    | 708    | 543    |
| 6     | 318   | 432    | 350    | 380    | 280   | 440    | 622    | 840    | 428    | 336    | 572    | 523    |
| 7     | 307   | 383    | 405    | 400    | 280   | 580    | 726    | 1,010  | 428    | 328    | 804    | 515    |
| 8     | 304   | 359    | 413    | 420    | 280   | 960    | 695    | 1,290  | 420    | 327    | 848    | 505    |
| 9     | 306   | 351    | 426    | 430    | 280   | 1,000  | 604    | 1,250  | 418    | 327    | 668    | 510    |
| 10    | 307   | 357    | 444    | 440    | 280   | 740    | 589    | 1,030  | 426    | 328    | 561    | 488    |
| 11    | 303   | 382    | 573    | 420    | 280   | 750    | 635    | 893    | 422    | 340    | 592    | 543    |
| 12    | 312   | 395    | 588    | 390    | 280   | 1,300  | 632    | 814    | 414    | 328    | 851    | 762    |
| 13    | 305   | 403    | 528    | 350    | 280   | 1,700  | 604    | 780    | 452    | 339    | 824    | 2,550  |
| 14    | 305   | 399    | 458    | 330    | 290   | 1,900  | 583    | 847    | 492    | 374    | 650    | 2,700  |
| 15    | 307   | 388    | 670    | 320    | 300   | 2,400  | 700    | 928    | 506    | 437    | 551    | 2,310  |
| 16    | 304   | 367    | 1,220  | 330    | 300   | 3,000  | 1,230  | 922    | 460    | 569    | 510    | 1,580  |
| 17    | 303   | 373    | 1,300  | 400    | 310   | 3,550  | 1,860  | 835    | 430    | 754    | 484    | 1,130  |
| 18    | 295   | 386    | 862    | 570    | 310   | 3,520  | 1,400  | 744    | 400    | 583    | 465    | 1,080  |
| 19    | 311   | 417    | 560    | 400    | 310   | 3,700  | 977    | 682    | 393    | 550    | 466    | 937    |
| 20    | 332   | 449    | 540    | 350    | 320   | 3,940  | 806    | 636    | 389    | 491    | 564    | 1,020  |
| 21    | 373   | 421    | 560    | 320    | 320   | 3,680  | 789    | 604    | 409    | 413    | 1,030  | 1,410  |
| 22    | 383   | 376    | 500    | 310    | 320   | 2,720  | 1,150  | 579    | 396    | 381    | 979    | 1,220  |
| 23    | 354   | 363    | 500    | 240    | 330   | 1,980  | 1,380  | 556    | 387    | 362    | 705    | 942    |
| 24    | 334   | 359    | 485    | 280    | 330   | 1,300  | 1,280  | 536    | 371    | 372    | 609    | 839    |
| 25    | 325   | 373    | 477    | 280    | 330   | 815    | 1,030  | 517    | 363    | 384    | 618    | 786    |
| 26    | 332   | 343    | 461    | 280    | 330   | 671    | 880    | 496    | 361    | 364    | 1,120  | 950    |
| 27    | 328   | 393    | 446    | 280    | 330   | 606    | 795    | 496    | 360    | 385    | 1,410  | 1,440  |
| 28    | 325   | 401    | 398    | 280    | 330   | 571    | 738    | 481    | 363    | 403    | 1,180  | 1,440  |
| 29    | 326   | 397    | 410    | 280    | 660   | 555    | 714    | 477    | 376    | 391    | 838    | 1,910  |
| 30    | 333   | 381    | 440    | 280    | ----- | 546    | 702    | 473    | 382    | 366    | 694    | 1,810  |
| 31    | 338   | -----  | 460    | 280    | ----- | 530    | -----  | 494    | -----  | 348    | 618    | -----  |
| TOTAL | 9,955 | 12,917 | 16,146 | 11,040 | 9,060 | 48,374 | 24,644 | 23,426 | 12,519 | 12,360 | 24,008 | 32,881 |
| MEAN  | 321   | 431    | 521    | 356    | 312   | 1,560  | 821    | 756    | 417    | 399    | 774    | 1,096  |
| MAX   | 383   | 901    | 1,300  | 570    | 660   | 3,940  | 1,860  | 1,290  | 506    | 754    | 1,520  | 2,700  |
| MIN   | 295   | 351    | 320    | 280    | 280   | 440    | 495    | 473    | 360    | 327    | 339    | 488    |
| CFSM  | .31   | .41    | .50    | .34    | .30   | 1.50   | .79    | .73    | .40    | .38    | .74    | 1.05   |
| IN.   | .36   | .46    | .58    | .39    | .32   | 1.73   | .88    | .84    | .45    | .44    | .86    | 1.18   |

CAL YR 1971 TOTAL 235,079 MEAN 644 MAX 4,200 MIN 270 CFSM .62 IN 8.41  
WTR YR 1972 TOTAL 237,330 MEAN 648 MAX 3,940 MIN 280 CFSM .62 IN 8.49

PEAK DISCHARGE (BASE, 4,000 CFS).--No peaks above the base.

## ROCK RIVER BASIN

05436500 Sugar River near Brodhead, Wis.

LOCATION.--Lat 42°36'42", long 89°23'53", in SW 1/4 sec.26, T.2 N., R.9 E., Green County, on left bank at downstream side of highway bridge, 1.2 miles southwest of Brodhead, and 1.9 miles upstream from Sylvester Creek.

DRAINAGE AREA.--530 sq mi.

PERIOD OF RECORD.--January 1914 to current year. Monthly discharge only for January and February 1914, published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 768.14 ft above mean sea level. Prior to Oct. 17, 1938, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--58 years, 333 cfs (8.53 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,720 cfs Mar. 13 (gage height, 5.23 ft); minimum, 127 cfs Jan. 4 (gage height, 0.24 ft), result of freezeup.  
Period of record: Maximum discharge, 14,800 cfs Sept. 13, 1915 (gage height, 11.4 ft, from floodmarks, from rating curve extended above 7,500 cfs; minimum, 35 cfs Sept. 19, 1959 (gage height, -0.16 ft).

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

REVISIONS (WATER YEARS).--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). WRD Wis. 1971: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 1-5, Dec. 12-17, Jan. 2 to Mar. 11.)

|     |     |     |       |
|-----|-----|-----|-------|
| 0.3 | 138 | 2.0 | 561   |
| .6  | 197 | 3.0 | 912   |
| 1.0 | 280 | 4.0 | 1,270 |
| 1.5 | 409 | 5.0 | 1,630 |

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR    | APR    | MAY    | JUN   | JUL   | AUG    | SEP    |
|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|-------|--------|--------|
| 1     | 177   | 204   | 221   | 276   | 160   | 250    | 280    | 597    | 271   | 210   | 241    | 334    |
| 2     | 172   | 263   | 180   | 250   | 160   | 500    | 278    | 633    | 266   | 215   | 412    | 319    |
| 3     | 171   | 403   | 180   | 200   | 160   | 400    | 280    | 568    | 251   | 197   | 438    | 302    |
| 4     | 172   | 441   | 170   | 180   | 160   | 330    | 281    | 518    | 241   | 193   | 426    | 288    |
| 5     | 174   | 364   | 180   | 170   | 160   | 290    | 282    | 454    | 241   | 191   | 331    | 279    |
| 6     | 174   | 285   | 200   | 180   | 160   | 250    | 318    | 441    | 241   | 188   | 298    | 272    |
| 7     | 171   | 244   | 270   | 200   | 160   | 240    | 407    | 520    | 242   | 188   | 285    | 272    |
| 8     | 173   | 227   | 226   | 230   | 170   | 450    | 487    | 712    | 234   | 187   | 289    | 260    |
| 9     | 173   | 222   | 244   | 240   | 170   | 350    | 440    | 776    | 232   | 188   | 260    | 266    |
| 10    | 173   | 219   | 267   | 250   | 170   | 370    | 365    | 624    | 230   | 186   | 251    | 260    |
| 11    | 175   | 237   | 330   | 280   | 170   | 410    | 341    | 481    | 226   | 185   | 287    | 307    |
| 12    | 171   | 246   | 402   | 260   | 170   | 758    | 343    | 398    | 225   | 187   | 383    | 374    |
| 13    | 174   | 214   | 421   | 220   | 180   | 1,570  | 339    | 381    | 230   | 204   | 507    | 594    |
| 14    | 173   | 211   | 341   | 180   | 180   | 1,500  | 341    | 457    | 240   | 222   | 448    | 644    |
| 15    | 171   | 208   | 320   | 150   | 180   | 1,350  | 347    | 547    | 240   | 329   | 333    | 549    |
| 16    | 170   | 203   | 537   | 140   | 190   | 1,200  | 567    | 574    | 231   | 398   | 315    | 433    |
| 17    | 168   | 202   | 600   | 150   | 190   | 1,380  | 799    | 500    | 223   | 323   | 311    | 365    |
| 18    | 171   | 197   | 660   | 170   | 190   | 1,600  | 830    | 386    | 217   | 388   | 293    | 376    |
| 19    | 189   | 211   | 500   | 190   | 190   | 1,630  | 619    | 338    | 214   | 508   | 293    | 340    |
| 20    | 204   | 224   | 400   | 210   | 190   | 1,500  | 442    | 324    | 215   | 463   | 321    | 349    |
| 21    | 185   | 220   | 370   | 240   | 200   | 1,110  | 418    | 320    | 215   | 384   | 373    | 543    |
| 22    | 190   | 209   | 340   | 230   | 200   | 826    | 747    | 285    | 211   | 285   | 377    | 686    |
| 23    | 192   | 199   | 295   | 210   | 200   | 645    | 913    | 290    | 202   | 261   | 351    | 695    |
| 24    | 191   | 200   | 286   | 200   | 200   | 466    | 925    | 287    | 197   | 276   | 298    | 558    |
| 25    | 188   | 201   | 278   | 190   | 200   | 371    | 577    | 280    | 197   | 312   | 419    | 408    |
| 26    | 186   | 201   | 273   | 180   | 200   | 325    | 444    | 273    | 197   | 270   | 536    | 405    |
| 27    | 187   | 213   | 271   | 170   | 200   | 305    | 392    | 268    | 195   | 282   | 624    | 477    |
| 28    | 183   | 213   | 252   | 160   | 210   | 292    | 364    | 264    | 197   | 330   | 732    | 606    |
| 29    | 183   | 218   | 234   | 160   | 220   | 302    | 354    | 276    | 211   | 301   | 598    | 941    |
| 30    | 190   | 217   | 270   | 160   | ----- | 296    | 354    | 308    | 224   | 250   | 404    | 579    |
| 31    | 195   | ----- | 286   | 160   | ----- | 288    | -----  | 284    | ----- | 246   | 342    | -----  |
| TOTAL | 5,566 | 7,116 | 9,754 | 6,186 | 5,290 | 21,554 | 13,874 | 13,364 | 6,756 | 8,347 | 11,776 | 13,081 |
| MEAN  | 180   | 237   | 315   | 200   | 182   | 695    | 462    | 431    | 225   | 269   | 380    | 436    |
| MAX   | 204   | 441   | 660   | 280   | 220   | 1,630  | 925    | 776    | 271   | 508   | 732    | 941    |
| MIN   | 168   | 197   | 170   | 140   | 160   | 240    | 278    | 264    | 195   | 185   | 241    | 260    |
| CFSM  | .34   | .45   | .59   | .38   | .34   | 1.31   | .87    | .81    | .42   | .51   | .72    | .82    |
| IN.   | .39   | .50   | .68   | .43   | .37   | 1.51   | .97    | .94    | .47   | .59   | .83    | .92    |

CAL YR 1971 TOTAL 112,510 MEAN 308 MAX 1,800 MIN 142 CFSM .58 IN 7.90  
WTR YR 1972 TOTAL 122,664 MEAN 335 MAX 1,630 MIN 140 CFSM .63 IN 8.61

## PEAK DISCHARGE (BASE, 1,300 CFS)

| DATE | TIME | G. H. | DISCHARGE | DATE | TIME | G. H. | DISCHARGE |
|------|------|-------|-----------|------|------|-------|-----------|
| 3-13 | 1400 | 5.23  | 1,720     | 3-19 | 0200 | 5.06  | 1,650     |

05437500 Rock River at Rockton, Ill.

LOCATION.--Lat 42°27'05", long 89°04'20", in SE 1/4 NW 1/4 sec.24, T.46 N., R.1 E., Winnebago County, on left bank at upstream side of bridge on State Highway 2 in Rockton, 0.8 mile downstream from Pecatonica River.

DRAINAGE AREA.--6,361 sq mi (revised).

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.

GAGE.--Water-stage recorder. Datum of gage is 707.94 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1906, nonrecording gage at same site at datum about 1 ft higher. Oct. 1, 1906, to Mar. 31, 1909, nonrecording gage at same site at datum about 2 ft higher. July 30, 1914, to Apr. 30, 1919, nonrecording gage at site at Rockford about 21 miles downstream, at different datum.

AVERAGE DISCHARGE.--40 years (1903-5, 1914-19, 1939-72), 3,658 cfs (7.81 inches per year), discharge for site at Rockford adjusted for difference in drainage area.

EXTREMES.--Current year: Maximum discharge, 12,200 cfs Sept. 19 (gage height, 8.78 ft); minimum daily, 1,010 cfs Oct. 16.

Period of record: Maximum discharge, 32,500 cfs Mar. 30, 1916 (gage height, 13.06 ft, site and datum then in use); minimum daily, 501 cfs Sept. 14, 1958.

Flood in February 1937 reached a stage of 14.6 ft (backwater from ice), from painted floodmark.

REMARKS.--Records good except those for winter periods, which are poor. Low flow regulated by powerplants above station.

REVISIONS (WATER YEARS).--WSP 325: 1903-9. WSP 895: 1904(M). WSP 1508: 1915, 1916-17(M).

## DISCHARGE, 1 CUBIC FOOT PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY   | OCT    | NOV    | DEC     | JAN    | FEB    | MAR     | APR     | MAY     | JUN    | JUL    | AUG     | SEP     |
|-------|--------|--------|---------|--------|--------|---------|---------|---------|--------|--------|---------|---------|
| 1     | 1,240  | 1,410  | 1,750   | 3,430  | 1,300  | 2,400   | 5,040   | 7,550   | 3,590  | 1,840  | 2,500   | 5,800   |
| 2     | 1,140  | 1,700  | 1,710   | 3,410  | 1,500  | 3,500   | 5,080   | 4,300   | 3,570  | 2,130  | 3,660   | 5,460   |
| 3     | 1,180  | 1,280  | 1,740   | 3,050  | 1,300  | 4,200   | 5,120   | 4,840   | 2,560  | 2,190  | 5,030   | 5,140   |
| 4     | 1,110  | 1,500  | 1,700   | 2,050  | 1,030  | 4,000   | 5,060   | 4,930   | 2,340  | 2,120  | 5,400   | 4,910   |
| 5     | 1,130  | 2,030  | 1,310   | 2,550  | 1,330  | 3,500   | 5,040   | 5,440   | 2,740  | 2,050  | 5,440   | 4,490   |
| 6     | 1,120  | 2,410  | 2,050   | 2,500  | 1,350  | 3,540   | 5,160   | 4,190   | 2,690  | 1,920  | 5,230   | 4,420   |
| 7     | 1,110  | 2,440  | 2,300   | 2,430  | 1,370  | 2,590   | 4,240   | 4,490   | 2,480  | 1,890  | 4,880   | 4,280   |
| 8     | 1,130  | 1,310  | 2,300   | 2,500  | 1,310  | 4,000   | 4,270   | 4,620   | 2,370  | 1,790  | 4,370   | 4,240   |
| 9     | 1,140  | 1,810  | 2,100   | 2,740  | 1,340  | 4,450   | 5,350   | 10,700  | 2,460  | 1,900  | 3,890   | 4,130   |
| 10    | 1,150  | 1,700  | 2,510   | 2,500  | 1,350  | 4,050   | 5,290   | 10,500  | 3,260  | 1,860  | 3,740   | 3,920   |
| 11    | 1,160  | 1,800  | 2,310   | 2,550  | 1,340  | 3,960   | 5,140   | 10,500  | 3,240  | 1,920  | 3,750   | 4,050   |
| 12    | 1,160  | 1,750  | 2,210   | 2,450  | 1,320  | 4,020   | 5,160   | 10,200  | 3,140  | 1,680  | 4,230   | 4,520   |
| 13    | 1,100  | 1,700  | 3,050   | 2,400  | 1,320  | 5,770   | 4,080   | 9,510   | 2,890  | 2,080  | 4,110   | 6,410   |
| 14    | 1,100  | 1,530  | 2,350   | 2,220  | 1,380  | 5,420   | 5,430   | 8,570   | 2,930  | 2,290  | 4,060   | 9,480   |
| 15    | 1,160  | 1,730  | 4,270   | 2,310  | 1,370  | 5,110   | 5,270   | 4,420   | 3,470  | 3,850  | 4,200   | 8,950   |
| 16    | 1,310  | 1,830  | 5,370   | 2,230  | 1,350  | 7,640   | 7,870   | 4,140   | 3,530  | 4,520  | 4,460   | 8,830   |
| 17    | 1,250  | 1,700  | 5,100   | 2,150  | 1,350  | 4,320   | 10,500  | 7,940   | 3,300  | 4,140  | 4,270   | 9,230   |
| 18    | 1,160  | 1,870  | 4,220   | 2,100  | 1,420  | 10,500  | 4,990   | 7,380   | 3,040  | 4,990  | 4,120   | 11,700  |
| 19    | 1,130  | 1,770  | 4,500   | 2,050  | 1,410  | 4,450   | 10,000  | 6,690   | 2,810  | 5,080  | 4,250   | 11,800  |
| 20    | 1,190  | 1,640  | 4,550   | 1,470  | 1,400  | 4,340   | 10,100  | 5,420   | 2,820  | 4,740  | 4,800   | 10,500  |
| 21    | 1,180  | 1,600  | 4,330   | 2,080  | 1,570  | 4,550   | 4,490   | 6,040   | 2,780  | 4,320  | 5,150   | 11,100  |
| 22    | 1,250  | 1,750  | 4,070   | 1,500  | 1,450  | 4,450   | 10,600  | 5,630   | 2,680  | 4,020  | 4,950   | 11,200  |
| 23    | 1,260  | 1,950  | 3,500   | 2,000  | 1,370  | 4,770   | 4,450   | 4,750   | 2,710  | 3,590  | 4,820   | 10,200  |
| 24    | 1,340  | 1,780  | 3,900   | 2,120  | 1,500  | 4,530   | 4,430   | 4,620   | 2,520  | 3,410  | 4,730   | 9,920   |
| 25    | 1,390  | 1,610  | 3,720   | 2,310  | 1,550  | 4,410   | 4,350   | 4,340   | 2,530  | 3,180  | 5,050   | 9,780   |
| 26    | 1,330  | 1,720  | 3,570   | 2,480  | 1,580  | 8,850   | 4,030   | 4,740   | 2,420  | 3,140  | 7,950   | 9,560   |
| 27    | 1,200  | 1,410  | 3,440   | 2,520  | 1,500  | 7,650   | 4,390   | 4,500   | 2,370  | 3,160  | 7,850   | 9,190   |
| 28    | 1,320  | 1,700  | 3,210   | 2,500  | 1,580  | 5,580   | 7,770   | 4,280   | 2,270  | 3,110  | 7,370   | 9,060   |
| 29    | 1,350  | 2,640  | 2,880   | 2,320  | 2,100  | 6,270   | 7,320   | 4,000   | 2,240  | 3,030  | 7,590   | 9,930   |
| 30    | 1,410  | 2,210  | 3,550   | 2,100  | -----  | 6,120   | 7,130   | 4,060   | 1,680  | 2,830  | 7,360   | 10,400  |
| 31    | 1,420  | -----  | 3,550   | 1,480  | -----  | 5,440   | -----   | 3,990   | -----  | 2,700  | 6,580   | -----   |
| TOTAL | 37,350 | 54,850 | 100,120 | 74,670 | 41,780 | 149,140 | 229,420 | 224,290 | 83,430 | 91,470 | 155,830 | 232,600 |
| MEAN  | 1,205  | 1,785  | 3,230   | 2,409  | 1,441  | 6,425   | 7,647   | 7,235   | 2,781  | 2,951  | 5,027   | 7,753   |
| MAX   | 1,420  | 2,410  | 5,370   | 3,430  | 2,100  | 10,500  | 10,500  | 10,700  | 3,590  | 5,080  | 7,950   | 11,800  |
| MIN   | 1,010  | 1,410  | 1,700   | 1,470  | 1,080  | 2,690   | 5,930   | 3,990   | 1,680  | 1,680  | 2,500   | 3,920   |
| CFSM  | .19    | .29    | .51     | .38    | .23    | 1.01    | 1.20    | 1.14    | .44    | .46    | .79     | 1.22    |
| IN.   | .22    | .32    | .59     | .44    | .24    | 1.16    | 1.34    | 1.31    | .49    | .53    | .91     | 1.36    |

CAL YR 1971 TOTAL 1,325,507 MEAN 3,632 MAX 17,200 MIN 695 CFSM .57 IN 7.75  
 WTR YR 1972 TOTAL 1,524,990 MEAN 4,167 MAX 11,800 MIN 1,010 CFSM .66 IN 8.92

## ILLINOIS RIVER BASIN

05527800 Des Plaines River at Russell, Ill.

LOCATION.--Lat 42°29'22", long 87°55'32", in SE 1/4 sec.3, T.46 N., R.11 E., Lake County, at center on downstream side of bridge on Russell Road, 0.3 mile west of Russell, 7.2 miles upstream from Mill Creek, and at mile 109.14.

DRAINAGE AREA.--124 sq mi.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1961-63, and annual maximum stages, water years 1962-1966, June 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 662.00 ft above mean sea level. Oct. 17, 1961 to June 29, 1967, crest-stage gage at left downstream side of bridge at datum 4.29 ft higher.

AVERAGE DISCHARGE.--5 years, 79.9 cfs (8.75 inches per year).

EXTREMES.--Current year: Maximum discharge, 816 cfs Apr. 19 (gage height, 8.10 ft); maximum gage height, 9.40 ft Sept. 22; minimum discharge, 1.0 cfs Oct. 23.

Period of record: Maximum discharge, 898 cfs Feb. 23, 1971 (gage height, 8.61 ft); maximum gage height, 9.40 ft Sept. 22, 1972; no flow at times most years.

Maximum stage since 1938, 9.69 ft, present datum, in April 1960, from floodmark.

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

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY               | OCT       | NOV   | DEC     | JAN   | FEB   | MAR   | APR    | MAY   | JUN     | JUL   | AUG   | SEP    |
|-------------------|-----------|-------|---------|-------|-------|-------|--------|-------|---------|-------|-------|--------|
| 1                 | 1.5       | 2.1   | 7.6     | 40    | 2.5   | 41    | 104    | 255   | 20      | 103   | 60    | 288    |
| 2                 | 1.4       | 2.2   | 7.2     | 70    | 2.4   | 45    | 114    | 223   | 18      | 64    | 71    | 260    |
| 3                 | 1.7       | 3.2   | 5.4     | 55    | 3.0   | 44    | 110    | 202   | 18      | 44    | 128   | 225    |
| 4                 | 2.9       | 3.4   | 4.5     | 50    | 2.4   | 39    | 117    | 181   | 21      | 32    | 164   | 188    |
| 5                 | 2.2       | 4.0   | 4.2     | 44    | 2.8   | 33    | 117    | 157   | 22      | 25    | 187   | 149    |
| 6                 | 2.0       | 3.2   | 4.0     | 30    | 2.6   | 26    | 114    | 147   | 17      | 21    | 203   | 110    |
| 7                 | 2.4       | 3.1   | 4.0     | 31    | 2.5   | 25    | 118    | 161   | 13      | 20    | 208   | 81     |
| 8                 | 2.7       | 3.0   | 4.4     | 24    | 2.5   | 27    | 128    | 207   | 12      | 19    | 201   | 76     |
| 9                 | 2.0       | 2.5   | 5.0     | 20    | 2.4   | 31    | 128    | 254   | 9.5     | 19    | 183   | 77     |
| 10                | 1.7       | 2.5   | 13      | 25    | 2.3   | 32    | 124    | 283   | 7.5     | 17    | 156   | 70     |
| 11                | 1.7       | 2.3   | 40      | 23    | 2.3   | 35    | 117    | 297   | 7.5     | 15    | 126   | 107    |
| 12                | 1.4       | 2.3   | 72      | 20    | 2.5   | 70    | 114    | 288   | 7.5     | 14    | 122   | 229    |
| 13                | 2.1       | 1.4   | 71      | 10    | 2.7   | 46    | 137    | 266   | 7.8     | 17    | 128   | 343    |
| 14                | 1.5       | 1.4   | 55      | 13    | 3.4   | 90    | 156    | 239   | 10      | 40    | 132   | 438    |
| 15                | 1.5       | 2.5   | 75      | 7.0   | 4.1   | 73    | 254    | 212   | 61      | 189   | 165   | 484    |
| 16                | 1.4       | 2.4   | 145     | 0.5   | 0.4   | 120   | 442    | 188   | 150     | 285   | 227   | 518    |
| 17                | 2.5       | 2.7   | 171     | 7.3   | 9.2   | 246   | 710    | 162   | 227     | 324   | 281   | 531    |
| 18                | 2.4       | 2.4   | 172     | 8.4   | 12    | 330   | 790    | 137   | 280     | 366   | 306   | 578    |
| 19                | 1.6       | 2.7   | 175     | 7.6   | 11    | 435   | 809    | 111   | 312     | 390   | 316   | 647    |
| 20                | 1.3       | 2.7   | 162     | 0.8   | 9.5   | 450   | 758    | 87    | 340     | 411   | 313   | 706    |
| 21                | 1.5       | 2.3   | 133     | 6.0   | 8.7   | 430   | 667    | 69    | 354     | 413   | 301   | 745    |
| 22                | 1.3       | 2.7   | 98      | 5.0   | 9.2   | 405   | 682    | 57    | 356     | 402   | 283   | 763    |
| 23                | 1.1       | 2.0   | 67      | 5.4   | 8.8   | 385   | 646    | 46    | 352     | 381   | 260   | 744    |
| 24                | 1.9       | 1.9   | 57      | 6.1   | 8.3   | 365   | 635    | 38    | 340     | 359   | 241   | 703    |
| 25                | 2.4       | 1.9   | 50      | 5.3   | 7.8   | 335   | 604    | 32    | 325     | 335   | 220   | 652    |
| 26                | 1.8       | 2.1   | 45      | 4.4   | 7.4   | 303   | 550    | 26    | 299     | 306   | 257   | 599    |
| 27                | 2.3       | 2.6   | 42      | 3.7   | 7.9   | 240   | 486    | 22    | 269     | 277   | 301   | 545    |
| 28                | 2.1       | 3.1   | 38      | 3.1   | 12    | 185   | 415    | 19    | 235     | 241   | 316   | 494    |
| 29                | 2.0       | 4.3   | 33      | 2.6   | 23    | 142   | 348    | 19    | 196     | 200   | 321   | 483    |
| 30                | 2.5       | 6.2   | 48      | 2.4   | ----- | 117   | 296    | 19    | 152     | 154   | 319   | 460    |
| 31                | 2.2       | ----- | 76      | 2.5   | ----- | 102   | -----  | 21    | -----   | 102   | 308   | -----  |
| TOTAL             | 60.4      | 82.5  | 1,891.8 | 623.1 | 182.7 | 5,297 | 10,778 | 4,425 | 4,438.8 | 5,585 | 6,804 | 12,293 |
| MEAN              | 1.95      | 2.75  | 61.0    | 20.1  | 6.30  | 171   | 359    | 143   | 148     | 180   | 219   | 410    |
| MAX               | 2.9       | 6.2   | 175     | 80    | 23    | 450   | 809    | 297   | 356     | 413   | 321   | 763    |
| MIN               | 1.1       | 1.4   | 4.0     | 2.4   | 2.3   | 25    | 104    | 19    | 7.5     | 14    | 60    | 70     |
| CFSM              | .02       | .02   | .49     | .16   | .05   | 1.38  | 2.90   | 1.15  | 1.19    | 1.45  | 1.77  | 3.31   |
| IN.               | .02       | .02   | .57     | .19   | .05   | 1.59  | 3.23   | 1.33  | 1.33    | 1.68  | 2.04  | 3.69   |
| CAL YR 1971 TOTAL | 25,379.48 | MEAN  | 69.5    | MAX   | 853   | MIN   | .24    | CFSM  | .56     | IN    | 7.61  |        |
| WTR YR 1972 TOTAL | 52,461.30 | MEAN  | 143     | MAX   | 809   | MIN   | 1.1    | CFSM  | 1.15    | IN    | 15.74 |        |

05543830 Fox River at Waukesha, Wis.

LOCATION.--Lat 43°00'17", long 88°14'37", in SW 1/4 sec.3, T.6 N., R.18 E., Waukesha County, on left bank 20 ft downstream from Prairie Street bridge in Waukesha, 1.0 mile downstream from dam and 3.2 miles downstream from Pewaukee River.

DRAINAGE AREA.--127 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 793.04 ft above mean sea level (levels by city of Waukesha).

AVERAGE DISCHARGE.--9 years, 70.7 cfs (7.56 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,150 cfs Sept. 18 (gage height, 6.06 ft); minimum, 9.0 cfs May 31 (gage height, 1.72 ft).

Period of record: Maximum discharge, 1,240 cfs Mar. 6, 1965 (gage height, 5.79 ft); minimum, 3.0 cfs Jan. 1, 1964 (gage height, 1.52 ft), Sept. 18, 19, 1971 (gage height, 1.54 ft).

REMARKS.--Records good except those for winter periods, which are fair. Occasional regulation from mill dam one mile upstream.

Rating table (gage height, in feet, and discharge, in cubic feet per second).  
(Stage-discharge relation affected by ice Dec. 29 to Jan. 1, Jan. 9-31, Feb. 6-18.)

|     |    |     |       |
|-----|----|-----|-------|
| 1.8 | 13 | 3.0 | 162   |
| 2.0 | 27 | 4.0 | 395   |
| 2.5 | 81 | 5.0 | 705   |
|     |    | 6.0 | 1,120 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT            | NOV       | DEC       | JAN     | FEB      | MAR      | APR   | MAY   | JUN   | JUL   | AUG   | SEP    |
|-------------|----------------|-----------|-----------|---------|----------|----------|-------|-------|-------|-------|-------|--------|
| 1           | 13             | 41        | 29        | 68      | 27       | 47       | 138   | 216   | 39    | 42    | 48    | 180    |
| 2           | 13             | 85        | 23        | 66      | 29       | 38       | 150   | 260   | 56    | 48    | 81    | 158    |
| 3           | 23             | 76        | 21        | 60      | 29       | 44       | 142   | 253   | 81    | 47    | 80    | 136    |
| 4           | 15             | 40        | 21        | 51      | 29       | 39       | 142   | 246   | 79    | 44    | 74    | 120    |
| 5           | 15             | 31        | 24        | 46      | 30       | 40       | 138   | 222   | 69    | 44    | 63    | 111    |
| 6           | 15             | 27        | 31        | 40      | 28       | 34       | 146   | 209   | 61    | 46    | 61    | 99     |
| 7           | 14             | 21        | 41        | 39      | 27       | 69       | 160   | 205   | 55    | 52    | 66    | 95     |
| 8           | 13             | 20        | 54        | 41      | 26       | 79       | 137   | 216   | 48    | 46    | 74    | 85     |
| 9           | 13             | 22        | 63        | 42      | 26       | 79       | 129   | 214   | 45    | 45    | 76    | 81     |
| 10          | 13             | 21        | 162       | 45      | 25       | 53       | 126   | 193   | 42    | 44    | 75    | 74     |
| 11          | 14             | 21        | 216       | 43      | 25       | 79       | 126   | 166   | 41    | 43    | 116   | 117    |
| 12          | 15             | 21        | 182       | 40      | 26       | 166      | 122   | 144   | 93    | 42    | 131   | 87     |
| 13          | 15             | 19        | 140       | 38      | 27       | 166      | 128   | 133   | 108   | 46    | 126   | 150    |
| 14          | 15             | 18        | 116       | 35      | 29       | 116      | 135   | 124   | 118   | 69    | 131   | 191    |
| 15          | 15             | 18        | 264       | 33      | 30       | 160      | 142   | 124   | 133   | 101   | 121   | 193    |
| 16          | 15             | 18        | 337       | 32      | 31       | 110      | 154   | 122   | 133   | 114   | 123   | 139    |
| 17          | 15             | 18        | 300       | 31      | 32       | 211      | 186   | 118   | 107   | 122   | 114   | 158    |
| 18          | 15             | 30        | 258       | 31      | 33       | 286      | 176   | 110   | 88    | 129   | 103   | 544    |
| 19          | 60             | 24        | 224       | 30      | 33       | 350      | 158   | 100   | 76    | 144   | 106   | 707    |
| 20          | 48             | 24        | 170       | 30      | 35       | 419      | 144   | 91    | 69    | 144   | 94    | 815    |
| 21          | 38             | 21        | 144       | 29      | 36       | 538      | 150   | 82    | 62    | 128   | 90    | 979    |
| 22          | 25             | 17        | 119       | 28      | 35       | 588      | 242   | 77    | 58    | 111   | 84    | 1,010  |
| 23          | 20             | 19        | 104       | 27      | 35       | 470      | 279   | 72    | 56    | 101   | 118   | 926    |
| 24          | 20             | 18        | 95        | 27      | 35       | 400      | 242   | 51    | 53    | 89    | 144   | 795    |
| 25          | 20             | 17        | 88        | 27      | 34       | 330      | 207   | 61    | 50    | 79    | 194   | 659    |
| 26          | 19             | 21        | 81        | 27      | 32       | 267      | 178   | 56    | 48    | 77    | 243   | 558    |
| 27          | 19             | 24        | 77        | 26      | 32       | 207      | 158   | 51    | 46    | 69    | 291   | 485    |
| 28          | 19             | 24        | 64        | 26      | 43       | 184      | 142   | 46    | 45    | 65    | 280   | 449    |
| 29          | 19             | 31        | 62        | 26      | 48       | 166      | 129   | 47    | 45    | 60    | 257   | 427    |
| 30          | 21             | 28        | 56        | 26      | -----    | 113      | 121   | 91    | 44    | 54    | 234   | 411    |
| 31          | 18             | -----     | 60        | 27      | -----    | 142      | ----- | 34    | ----- | 50    | 206   | -----  |
| TOTAL       | 612            | 815       | 3,626     | 1,137   | 907      | 5,990    | 4,727 | 4,134 | 2,048 | 2,295 | 4,004 | 10,939 |
| MEAN        | 19.7           | 27.2      | 117       | 36.7    | 31.3     | 193      | 158   | 133   | 68.3  | 74.0  | 129   | 365    |
| MAX         | 60             | 85        | 337       | 68      | 48       | 588      | 279   | 260   | 133   | 144   | 291   | 1,010  |
| MIN         | 13             | 17        | 21        | 26      | 25       | 34       | 121   | 34    | 39    | 42    | 48    | 74     |
| CFSM        | .16            | .21       | .92       | .29     | .25      | 1.52     | 1.24  | 1.05  | .54   | .58   | 1.02  | 2.87   |
| IN.         | .18            | .24       | 1.06      | .33     | .27      | 1.75     | 1.38  | 1.21  | .60   | .67   | 1.17  | 3.20   |
| CAL YR 1971 | TOTAL 31,143.6 | MEAN 85.3 | MAX 601   | MIN 4.2 | CFSM .67 | IN 9.12  |       |       |       |       |       |        |
| WTR YR 1972 | TOTAL 41,234.0 | MEAN 113  | MAX 1,010 | MIN 13  | CFSM .89 | IN 12.08 |       |       |       |       |       |        |

## ILLINOIS RIVER BASIN

05545000 North Lake near Elkhorn, Wis.

LOCATION.--Lat 42°44'38", long 88°37'45", in SE 1/4 sec.5, T.3 N., R.16 E., Walworth County, attached to post in lake near end of road at south end of lake, 6.5 miles northwest of Elkhorn.

DRAINAGE AREA.--1 sq mi, approximately. Area of North Lake, 350 acres, approximately, at high stage.

PERIOD OF RECORD.--May 1937 to current year (fragmentary). Published as Holden Lake prior to October 1958.

GAGE.--Nonrecording gage read about once weekly or more often except during winter. Altitude of gage is 900 ft (from topographic map).

EXTREMES.--Current year: Maximum gage height observed, 9.95 ft May 13; minimum observed, 8.68 ft Oct. 2.  
Period of record: Maximum gage height observed, 12.45 ft Mar. 25, 1939; lake dry for parts of period July to December 1958.

REMARKS.--Lake has no surface outlet. Lake ice covered Nov. 27 to Apr. 15.

## GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | OCT  | NOV   | DEC  | JAN | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
|-----|------|-------|------|-----|-------|------|-------|------|-------|------|------|-------|
| 1   |      |       |      |     |       |      |       |      |       | 9.45 |      |       |
| 2   | 8.68 |       |      |     |       |      |       |      |       |      |      | 9.60  |
| 3   |      |       |      |     |       |      |       |      | 9.65  |      |      |       |
| 4   |      |       |      |     |       |      |       |      |       |      |      |       |
| 5   |      |       |      |     |       |      |       |      |       |      | 9.45 |       |
| 6   |      | 8.79  |      |     |       |      |       | 9.77 |       |      |      |       |
| 7   |      |       |      |     |       |      |       |      |       |      |      |       |
| 8   |      |       |      |     | 9.16  |      |       |      |       | 9.40 |      |       |
| 9   | 8.71 |       |      |     |       |      |       |      |       |      | 9.43 | 9.45  |
| 10  |      |       |      |     |       |      |       |      | 9.58  |      |      |       |
| 11  |      |       |      |     |       |      |       |      |       |      |      |       |
| 12  |      |       |      |     |       |      |       |      |       |      | 9.45 |       |
| 13  |      | 8.74  |      |     |       |      |       | 9.95 |       |      |      |       |
| 14  |      |       |      |     |       |      |       |      |       |      |      |       |
| 15  |      |       |      |     |       |      |       |      |       | 9.50 |      |       |
| 16  | 8.69 |       |      |     |       |      |       |      |       |      |      | 9.65  |
| 17  |      |       |      |     |       |      |       |      | 9.48  |      |      |       |
| 18  |      |       |      |     |       |      |       |      |       |      |      |       |
| 19  |      |       |      |     |       |      |       | 9.87 |       |      | 9.55 |       |
| 20  |      | 8.74  |      |     |       |      |       | 9.87 |       |      |      |       |
| 21  |      |       |      |     |       |      |       |      |       |      |      |       |
| 22  |      |       |      |     |       |      | 9.87  |      |       | 9.53 |      |       |
| 23  | 8.71 |       |      |     |       |      |       |      |       |      |      | 9.80  |
| 24  |      |       |      |     |       |      |       |      | 9.53  |      |      |       |
| 25  |      |       |      |     |       |      |       |      |       |      |      |       |
| 26  |      |       |      |     |       |      |       |      |       |      |      |       |
| 27  |      |       |      |     |       |      |       | 9.69 |       |      | 9.60 | 9.80  |
| 28  |      |       |      |     |       |      |       |      |       |      |      |       |
| 29  |      |       | 9.10 |     |       |      | 9.77  |      | 9.45  | 9.50 |      |       |
| 30  | 8.71 |       |      |     | ----- | 9.65 |       |      |       |      |      | 9.83  |
| 31  |      | ----- |      |     | ----- |      | ----- |      | ----- |      |      | ----- |

05545550 Rockland Lake near Burlington, Wis.

LOCATION.--Lat 42°40'34", long 88°14'57", in NE 1/4 SE 1/4 sec.33, T.3 N., R.19 E., Racine County, about 0.8 mile east of Burlington at Camp MacLean.

DRAINAGE AREA.--0.99 sq mi. Area of Rockland Lake, 45 acres.

PERIOD OF RECORD.--January 1967 to current year.

GAGE.--Nonrecording gage. Altitude of gage is 758 ft (from topographic map).

EXTREMES.--Current year: Maximum gage height observed, 5.14 ft Sept. 22; minimum observed, 4.47 ft Oct. 16.  
Period of record: Maximum gage height observed, 5.58 ft July 30, 1969; minimum gage height, 4.49 ft Sept. 22, 1971.

REMARKS.--Lake ice covered Nov. 30 to Dec. 12 and from Dec. 18 to Apr. 12.

| GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972 |      |       |      |      |       |      |       |      |       |      |      |       |
|-----------------------------------------------------------------|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| DAY                                                             | OCT  | NOV   | DEC  | JAN  | FEB   | MAR  | APR   | MAY  | JUN   | JUL  | AUG  | SEP   |
| 1                                                               |      |       |      |      |       |      |       |      |       |      |      |       |
| 2                                                               |      |       |      |      |       |      |       |      | 4.94  |      |      |       |
| 3                                                               |      |       |      |      |       |      |       |      |       |      | 4.93 |       |
| 4                                                               |      |       | 4.62 | 4.85 |       |      |       |      |       |      |      |       |
| 5                                                               |      |       |      |      |       |      | 5.00  |      |       | 4.66 |      |       |
| 6                                                               |      | 4.61  |      |      |       |      |       | 4.94 |       |      |      |       |
| 7                                                               | 4.54 |       |      |      |       |      |       |      |       |      |      |       |
| 8                                                               |      |       |      |      |       |      |       |      |       |      |      |       |
| 9                                                               |      |       | 4.54 |      |       |      |       |      |       |      |      | 4.87  |
| 10                                                              |      |       |      |      |       |      |       |      | 4.93  |      | 4.81 |       |
| 11                                                              |      |       |      |      |       |      | 5.02  |      |       |      |      |       |
| 12                                                              |      |       |      |      |       |      |       |      |       |      |      |       |
| 13                                                              |      | 4.57  |      | 4.79 |       |      |       | 4.96 |       |      |      |       |
| 14                                                              |      |       |      |      |       |      |       |      |       | 4.66 |      | 5.12  |
| 15                                                              |      |       |      |      |       |      |       |      |       |      |      |       |
| 16                                                              | 4.47 |       |      |      |       |      |       |      |       |      | 4.87 |       |
| 17                                                              |      |       | 4.58 |      |       |      |       |      | 4.91  |      |      |       |
| 18                                                              |      |       |      |      |       | 5.04 |       |      |       |      |      |       |
| 19                                                              |      |       |      | 4.75 |       |      |       |      |       | 4.91 |      |       |
| 20                                                              |      | 4.51  |      |      |       |      |       | 4.95 |       |      |      |       |
| 21                                                              |      |       |      |      |       |      |       |      |       |      |      |       |
| 22                                                              |      |       | 4.55 |      |       |      |       |      | 4.79  |      |      | 5.14  |
| 23                                                              | 4.51 |       |      |      |       |      |       |      |       |      |      |       |
| 24                                                              |      |       |      |      |       | 5.06 |       |      |       |      |      |       |
| 25                                                              |      |       |      |      |       |      |       |      |       | 4.81 |      |       |
| 26                                                              |      |       |      |      |       |      |       |      |       |      | 5.06 | 5.10  |
| 27                                                              |      | 4.52  |      |      |       |      |       | 4.94 |       |      |      |       |
| 28                                                              |      |       | 4.83 | 4.77 |       |      |       |      |       |      |      |       |
| 29                                                              |      |       |      |      |       |      | 5.00  |      |       |      |      |       |
| 30                                                              | 4.59 |       |      |      | ----- |      |       |      | 4.70  |      |      |       |
| 31                                                              |      | ----- |      |      | ----- | 5.02 | ----- |      | ----- |      | 4.96 | ----- |

## ILLINOIS RIVER BASIN

05546500 Fox River at Wilmot, Wis.

LOCATION.--Lat 42°30'40", long 88°10'45", in SW 1/4 sec.30, T.1 N., R.20 E., Kenosha County, on right bank 100 ft downstream from bridge on County Trunk C, 300 ft upstream from Wilmot Dam, 1.0 mile north of Wisconsin-Illinois State line, and 6.0 miles upstream from Fox chain of lakes.

DRAINAGE AREA.--868 sq mi.

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

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 735.22 ft above mean sea level. Prior to Sept. 1, 1956, nonrecording gage and concrete dam.

AVERAGE DISCHARGE.--33 years, 464 cfs (7.26 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,280 cfs Sept. 23 (gage height, 7.65 ft); minimum daily, 138 cfs Oct. 27.

Period of record: Maximum discharge, 7,520 cfs 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 cfs Sept. 9, 1958.

REMARKS.--Records good except those for winter periods, which are fair. Three 6-foot 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.

REVISIONS (WATER YEARS).--WSP 1308: 1943(M), 1945(M). WRD Wis. 1967: Drainage area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY         | OCT           | NOV      | DEC       | JAN     | FEB      | MAR      | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-------------|---------------|----------|-----------|---------|----------|----------|--------|--------|--------|--------|--------|--------|
| 1           | 158           | 196      | 227       | 813     | 210      | 410      | 1,130  | 1,060  | 254    | 285    | 307    | 927    |
| 2           | 142           | 265      | 209       | 734     | 200      | 486      | 1,040  | 1,080  | 251    | 281    | 665    | 872    |
| 3           | 158           | 369      | 213       | 656     | 190      | 505      | 1,020  | 1,050  | 254    | 327    | 1,100  | 834    |
| 4           | 182           | 369      | 218       | 250     | 180      | 499      | 989    | 1,070  | 255    | 317    | 1,090  | 798    |
| 5           | 182           | 334      | 218       | 340     | 170      | 410      | 950    | 1,030  | 250    | 294    | 919    | 762    |
| 6           | 174           | 312      | 213       | 460     | 170      | 368      | 934    | 997    | 250    | 272    | 813    | 694    |
| 7           | 174           | 318      | 182       | 390     | 180      | 378      | 958    | 1,080  | 249    | 263    | 769    | 613    |
| 8           | 158           | 275      | 196       | 380     | 190      | 643      | 950    | 1,230  | 245    | 263    | 749    | 595    |
| 9           | 154           | 260      | 236       | 383     | 200      | 722      | 911    | 1,400  | 243    | 259    | 619    | 602    |
| 10          | 166           | 251      | 400       | 383     | 210      | 669      | 834    | 1,520  | 241    | 259    | 613    | 590    |
| 11          | 154           | 251      | 745       | 387     | 220      | 613      | 850    | 1,470  | 231    | 259    | 572    | 676    |
| 12          | 142           | 251      | 752       | 394     | 220      | 715      | 828    | 1,370  | 260    | 255    | 820    | 973    |
| 13          | 146           | 246      | 712       | 370     | 210      | 934      | 828    | 1,200  | 318    | 281    | 688    | 1,230  |
| 14          | 146           | 232      | 654       | 260     | 200      | 1,040    | 834    | 1,090  | 334    | 362    | 707    | 1,680  |
| 15          | 146           | 213      | 754       | 250     | 200      | 1,110    | 865    | 1,080  | 769    | 936    | 842    | 1,870  |
| 16          | 146           | 209      | 1,330     | 250     | 200      | 1,110    | 1,100  | 1,080  | 813    | 1,100  | 865    | 1,770  |
| 17          | 154           | 204      | 1,400     | 270     | 200      | 1,230    | 1,820  | 1,020  | 682    | 950    | 813    | 1,580  |
| 18          | 154           | 200      | 1,030     | 290     | 210      | 1,960    | 2,190  | 950    | 584    | 1,230  | 755    | 1,670  |
| 19          | 154           | 204      | 712       | 290     | 200      | 2,320    | 2,070  | 820    | 474    | 1,360  | 749    | 2,180  |
| 20          | 246           | 213      | 896       | 281     | 200      | 2,010    | 1,880  | 777    | 663    | 1,270  | 783    | 2,580  |
| 21          | 286           | 232      | 1,010     | 263     | 190      | 1,820    | 1,620  | 734    | 904    | 1,140  | 749    | 2,780  |
| 22          | 302           | 213      | 1,020     | 263     | 190      | 1,810    | 1,620  | 676    | 749    | 973    | 688    | 3,060  |
| 23          | 291           | 178      | 989       | 250     | 200      | 1,830    | 1,880  | 613    | 619    | 820    | 694    | 3,250  |
| 24          | 270           | 166      | 1,000     | 250     | 200      | 1,770    | 1,940  | 556    | 528    | 715    | 950    | 3,250  |
| 25          | 270           | 170      | 911       | 220     | 200      | 1,740    | 1,810  | 533    | 465    | 644    | 1,020  | 3,120  |
| 26          | 182           | 182      | 865       | 190     | 206      | 1,720    | 1,620  | 507    | 363    | 572    | 1,080  | 2,970  |
| 27          | 138           | 204      | 798       | 180     | 206      | 1,610    | 1,430  | 465    | 337    | 556    | 1,300  | 2,970  |
| 28          | 166           | 213      | 591       | 180     | 213      | 1,430    | 1,280  | 404    | 332    | 539    | 1,320  | 2,650  |
| 29          | 191           | 232      | 501       | 180     | 290      | 1,270    | 1,180  | 404    | 327    | 496    | 1,230  | 2,640  |
| 30          | 191           | 251      | 722       | 190     | -----    | 1,260    | 1,120  | 391    | 317    | 381    | 1,100  | 2,700  |
| 31          | 191           | -----    | 820       | 200     | -----    | 1,150    | -----  | 261    | -----  | 255    | 966    | -----  |
| TOTAL       | 5,714         | 7,213    | 20,524    | 10,197  | 5,855    | 35,542   | 38,481 | 27,918 | 12,561 | 17,914 | 26,335 | 52,886 |
| MEAN        | 184           | 240      | 662       | 329     | 202      | 1,147    | 1,283  | 901    | 419    | 578    | 850    | 1,763  |
| MAX         | 302           | 369      | 1,400     | 813     | 290      | 2,320    | 2,190  | 1,520  | 904    | 1,360  | 1,320  | 3,250  |
| MIN         | 138           | 166      | 182       | 180     | 170      | 368      | 828    | 261    | 231    | 255    | 307    | 590    |
| CFSM        | .21           | .28      | .76       | .38     | .23      | 1.32     | 1.48   | 1.04   | .48    | .67    | .98    | 2.03   |
| IN.         | .24           | .31      | .88       | .44     | .25      | 1.52     | 1.65   | 1.20   | .54    | .77    | 1.13   | 2.27   |
| CAL YR 1971 | TOTAL 195,786 | MEAN 536 | MAX 2,900 | MIN 117 | CFSM .62 | IN 8.39  |        |        |        |        |        |        |
| WTR YR 1972 | TOTAL 261,140 | MEAN 713 | MAX 3,250 | MIN 138 | CFSM .82 | IN 11.19 |        |        |        |        |        |        |

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

## Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site. Measurements have been made at numerous other stations throughout the State since 1961. These measurements are published in preceding Water Resources Data for Wisconsin publications.

Discharge measurements made at low-flow partial-record stations during water year 1972

| Discharge measurements made at low-flow partial-record stations during water year 1972 |                                     |                                                                                                                     |                       |                                 |                                             |                             |
|----------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------|---------------------------------------------|-----------------------------|
| Station No.                                                                            | Station name                        | Location                                                                                                            | Drainage area (sq mi) | Period of record                | Measurements                                |                             |
|                                                                                        |                                     |                                                                                                                     |                       |                                 | Date                                        | Discharge (cfs)             |
| Streams tributary to Lake Superior                                                     |                                     |                                                                                                                     |                       |                                 |                                             |                             |
| 04024350                                                                               | Black River near Chaffey, Wis.      | S 1/2 sec.19, T.46 N., R.14 W., at bridge on State Highway 35, 4.0 miles southeast of Patzau.                       | d53.6                 | 1964<br>1967<br>1969-72         | 10-14-71                                    | 37.8                        |
| 04025000                                                                               | Amnicon River near Poplar, Wis.     | On common boundary of secs.29 and 32, T.48 N., R.12 W., at bridge on U.S. Highway 2, 4.5 miles northwest of Poplar. | 112                   | 1964<br>1967<br>1969-72         | 10-14-71                                    | 58.1                        |
| 04025100                                                                               | Middle River near Poplar, Wis.      | SE 1/4 sec.12, T.48 N., R.12 W., at bridge on State Highway 13, 4.6 miles north of Poplar.                          | 51.6                  | 1964<br>1967<br>1969-72         | 10-14-71                                    | 22.6                        |
| 04026030                                                                               | Reefer Creek near Port Wing, Wis.   | NW 1/4 sec.4, T.49 N., R.9 W., at bridge on State Highway 13, 5.8 miles southwest of Port Wing.                     | d10.9                 | 1964<br>1967<br>1969-72         | 10-13-71                                    | 4.14                        |
| 04026120                                                                               | Flag River at Port Wing, Wis.       | Center of sec.28, T.50 N., R.8 W., at bridge on State Highway 13, just northeast of Port Wing.                      | d33.9                 | 1964<br>1967<br>1969-72         | 10-13-71                                    | 30.1                        |
| 04026190                                                                               | Sand River near Red Cliff, Wis.     | NE 1/4 sec.14, T.51 N., R.5 W., at bridge on State Highway 13, 8.5 miles northwest of Red Cliff.                    | 28.2                  | 1964<br>1967<br>1969-72         | 10-14-71                                    | 5.23                        |
| *04026300                                                                              | Sioux River near Washburn, Wis.     | NE 1/4 sec.35, T.49 N., R.5 W., at twin concrete box culvert on County Trunk C, 2.25 miles west of Washburn.        | d35.2                 | 1962-64<br>b1964-66<br>d1967-72 | 10-14-71                                    | 9.10                        |
| 04026350                                                                               | North Fish Creek near Ashland, Wis. | SW 1/4 sec.2, T.47 N., R.5 W., at bridge on U.S. Highway 2, 3.0 miles west of Ashland.                              | d88.1                 | 1967<br>1969-72                 | 10-14-71<br>8-15-72                         | 82.1<br>86.4                |
| *04026400                                                                              | Spillerberg Creek near Cayuga, Wis. | NW 1/4 sec.21, T.43 N., R.2 W., at concrete culvert pipe on State Highway 13, 4.25 miles southeast of Cayuga.       | a6.18                 | 1961-67<br>1969-72              | 10-14-71                                    | 4.05                        |
| 04026500                                                                               | Bad River at Mellen, Wis.           | NW 1/4 sec.6, T.44 N., R.2 W., at State Highway 13 at Mellen.                                                       | d105                  | 1948-55 <sup>a</sup><br>1969-72 | 10- 6-71<br>10-14-71<br>11-10-71<br>7-12-72 | 114<br>58.6<br>72.9<br>23.9 |
| 04026550                                                                               | Tyler Forks River near Upson, Wis.  | SE 1/4 sec.28, T.45 N., R.1 W., at culvert on State Highway 77, 4.3 miles southwest of Upson.                       | 41.3                  | 1967<br>1969-72                 | 10-13-71<br>8-15-72                         | 27.7<br>24.8                |

\* Also a crest-stage station.

<sup>a</sup> Operated as a continuous-record gaging station.

b Approximately.

c Operated as a seasonal continuous-record gaging station.

d Operated as a seasonal continuous-record gaging station without records being published.

e Revised.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1972

| Station No.                                   | Station name                                    | Location                                                                                                                | Drainage area (sq mi) | Period of record              | Measurements                    |                      |
|-----------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------|---------------------------------|----------------------|
|                                               |                                                 |                                                                                                                         |                       |                               | Date                            | Discharge (cfs)      |
| Streams tributary to Lake Superior--Continued |                                                 |                                                                                                                         |                       |                               |                                 |                      |
| 04026600                                      | Marengo River near Marengo, Wis.                | NW 1/4 sec.36, T.46 N., R.4 W., at bridge on State Highway 13, 0.2 mile north of Marengo.                               | a101                  | 1967<br>1969-72               | 10-14-71<br>12-13-71<br>8-15-72 | 53.3<br>74.4<br>55.4 |
| 04026650                                      | Trout Brook near Highbridge, Wis.               | SW 1/4 sec.8, T.45 N., R.3 W., at culvert on State Highway 13, 1.9 miles west of Highbridge.                            | d8.60                 | 1967<br>1969-72               | 10-14-71<br>8-15-72             | 2.08<br>5.91         |
| 04026900                                      | Potato River near Gurney, Wis.                  | SW 1/4 sec.16, T.46 N., R.1 W., at bridge on State Highway 169, 0.7 mile south of Gurney.                               | a92.7                 | 1967<br>1969-72               | 10-13-71<br>8-15-72             | 53.0<br>33.5         |
| 04027200                                      | Pearl Creek at Grand View, Wis.                 | SE 1/4 NE 1/4 sec.22, T.45 N., R.6 W., at bridge at U.S. Highway 63, 0.8 mile east of Grand View.                       | 16.9                  | 1961-70<br>1972               | 10-14-71<br>12-13-71            | 9.57<br>13.4         |
| 04027900                                      | Layman Creek near Hurley, Wis.                  | NE 1/4 sec.6, T.44 N., R.3 E., at bridge on U.S. Highway 51, 8.0 miles southeast of Montreal.                           | a17.8                 | 1967<br>1969-72               | 10-12-71<br>10-13-71<br>8-14-72 | 10.9<br>12.3<br>11.6 |
| *04029700                                     | Boomer Creek near Saxon, Wis.                   | N 1/2 sec.3, T.46 N., R.1 E., at concrete culvert pipe on U.S. Highway 2, 3.0 miles east of Saxon.                      | d5.94                 | 1961-64<br>1966-69<br>1970-72 | 10-13-71                        | 1.57                 |
| Streams tributary to Lake Michigan            |                                                 |                                                                                                                         |                       |                               |                                 |                      |
| 04060990                                      | Montagne Creek near Florence, Wis.              | SE 1/4 SW 1/4 sec.11, T.40 N., R.17 E., at town road, 4.8 miles northwest of Florence.                                  | 14.4                  | 1969-70<br>1972               | 8-11-72                         | 5.98                 |
| 04063690                                      | South Branch Popple River near Fence, Wis.      | SW 1/4 NE 1/4 sec.25, T.38 N., R.15 E., at U.S. Forest Service Road 2159, 6.5 miles west of Fence.                      | 10.2                  | 1969<br>1972                  | 7-31-72                         | 7.42                 |
| 04065970                                      | South Branch Pemebowon River near Pembine, Wis. | SE 1/4 SE 1/4 sec.19, T.37 N., R.20 E., at County Trunk O, 2.8 miles northwest of Pembine.                              | 26.6                  | 1969-70<br>1972               | 8- 2-72                         | 8.40                 |
| 04066250                                      | South Branch Pike River near Dunbar, Wis.       | NE 1/4 SE 1/4 sec.36, T.36 N., R.18 E., at town road, 6.9 miles south of Dunbar.                                        | 72.4                  | 1969-70<br>1972               | 8- 2-72                         | 33.2                 |
| 04067700                                      | North Branch Peshtigo River near Argonne, Wis.  | NW 1/4 SW 1/4 sec.24, T.37 N., R.13 E., at U.S. Forest Service Road 2387, 2.9 miles northeast of Argonne.               | 32.4                  | 1969<br>1972                  | 8- 1-72                         | 6.76                 |
| 04067750                                      | Camp Eight Creek near Cavour, Wis.              | NE 1/4 NE 1/4 sec.36, T.37 N., R.14 E., at County Trunk G, 2.3 miles west of Cavour.                                    | 15.0                  | 1969<br>1972                  | 8- 1-72                         | 4.04                 |
| 04067900                                      | Rat River near Wabeno, Wis.                     | SE 1/4 sec.28, T.35 N., R.16 E., at bridge on U.S. Forest Service Road 2134, 8.0 miles northeast of Wabeno.             | 82.6                  | 1969-70<br>1972               | 8- 2-72                         | 47.1                 |
| 04067990                                      | Eagle Creek near Athelstene, Wis.               | On common boundary of secs.24 and 25, T.34 N., R.18 E., at bridge on County Trunk C, 4.5 miles southwest of Athelstene. | 38.6                  | 1969-70<br>1972               | 8- 2-72                         | 16.2                 |
| 04068100                                      | North Fork Thunder River near Lakewood, Wis.    | NE 1/4 sec.23, T.33 N., R.17 E., at culvert on U.S. Forest Service Road 2101, 9.7 miles northeast of Lakewood.          | 20.0                  | 1969-70<br>1972               | 8- 2-72                         | 11.2                 |
| 04069350                                      | South Branch Beaver Creek near Beaver, Wis.     | SW 1/4 NE 1/4 sec.28, T.31 N., R.20 E., at U.S. Highway 141, 0.5 mile south of Beaver.                                  | 53.9                  | 1969<br>1972                  | 8- 4-72                         | 24.3                 |

\* Also a crest-stage station.

a Approximately.

d Revised.

## Discharge measurements made at low-flow partial-record stations during water year 1972

| Station No.                                   | Station name                                       | Location                                                                                                                                              | Drainage area (sq mi) | Period of record                        | Measurements       |                 |
|-----------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|--------------------|-----------------|
|                                               |                                                    |                                                                                                                                                       |                       |                                         | Date               | Discharge (cfs) |
| Streams tributary to Lake Michigan--Continued |                                                    |                                                                                                                                                       |                       |                                         |                    |                 |
| 04069390                                      | Little Peshtigo River near Coleman, Wis.           | SE 1/4 SW 1/4 sec.18, T.30 N., R.21 E., at County Trunk B, 1.9 miles east of Coleman.                                                                 | 49.9                  | 1969<br>1972                            | 8- 3-72            | 12.2            |
| 04070100                                      | North Branch Oconto River near Mountain, Wis.      | On common boundary of secs.23 and 26, T.31 N., R.16 E., at bridge on U.S. Forest Service Road 2106, 3.2 miles north of Mountain.                      | 178                   | 1969-70<br>1972                         | 8- 2-72            | 123             |
| 04070300                                      | Waupee River near Mountain, Wis.                   | SW 1/4 sec.30, T.31 N., R.17 E., at bridge on State Highway 32, 4.2 miles southeast of Mountain.                                                      | 47.9                  | 1969-70<br>1972                         | 8- 3-72            | 29.6            |
| 04070600                                      | Hills Pond Creek near Langlade, Wis.               | SE 1/4 sec.4, T.31 N., R.15 E., at bridge on State Highway 64, 5.5 miles east of Langlade.                                                            | 9.15                  | 1969-70<br>1972                         | 8- 3-72            | 12.0            |
| 04070800                                      | Pecore Creek near Hayes, Wis.                      | NE 1/4 sec.8, T.29 N., R.17 E., at culvert on country road, 1.2 miles northwest of Hayes.                                                             | 30.4                  | 1969-70<br>1972                         | 8- 3-72            | 18.3            |
| 04071730                                      | Kelly Brook near Lena, Wis.                        | SE 1/4 NW 1/4 sec.22, T.29 N., R.20 E., at U.S. Highway 141, 1.5 miles north of Lena.                                                                 | 79.6                  | 1969<br>1972                            | 8- 3-72            | 16.5            |
| 04072000                                      | Suamico River at Suamico, Wis.                     | NW 1/4 sec.22, T.25 N., R.20 E., at bridge on County Trunk B, 0.5 mile west of Suamico, 7.5 miles north of Green Bay and 3 miles upstream from mouth. | 57.0                  | 1969<br>1972                            | 7-27-72            | 3.70            |
| 04076400                                      | Little West Branch near Neopit, Wis.               | NW 1/4 sec.11, T.29 N., R.14 E., at culvert on County Trunk M, 3.8 miles northeast of Neopit.                                                         | 21.1                  | 1969-70<br>1972                         | 8- 2-72            | 11.4            |
| 04078490                                      | Mill Creek near Pella, Wis.                        | NW 1/4 sec.12, T.26 N., R.14 E., at bridge on country road, 2.8 miles east of Pella.                                                                  | 23.1                  | 1969-70<br>1972                         | 8- 3-72            | 11.5            |
| 04078800                                      | Bear Creek near Sugar Bush, Wis.                   | SE 1/4 sec.5, T.23 N., R.15 E., at bridge on country road, 1.9 miles northeast of Sugar Bush.                                                         | 26.3                  | 1969-70<br>1972                         | 8- 1-72            | .53             |
| 04079600                                      | Little Wolf River at Galloway, Wis.                | SW 1/4 SW 1/4 sec.23, T.26 N., R.10 E., at State Highway 49, 0.2 mile north of Galloway.                                                              | 22.5                  | 1962-67<br>1972                         | 7-17-72<br>7-25-72 | 9.04<br>6.01    |
| 04083000                                      | West Branch Fond du Lac River at Fond du Lac, Wis. | NE 1/4 NE 1/4 sec.20, T.15 N., R.17 E., at County Trunk T, 2.0 miles southwest of downtown Fond du Lac.                                               | 84.5                  | 1939-54 <sup>#</sup><br>1972            | 11-17-71           | 7.28            |
| 04083500                                      | East Branch Fond du Lac River at Fond du Lac, Wis. | NE 1/4 SW 1/4 sec.22, T.15 N., R.17 E., at County Trunk VV, 1.4 miles south of downtown Fond du Lac.                                                  | 77.9                  | 1939-54 <sup>#</sup><br>1962-67<br>1972 | 11-17-71           | 5.87            |
| 04085070                                      | Ashwaubenon Creek near De Pere, Wis.               | On common boundary of land grants 28 and 29, T.23 N., R.20 E., at culverts on County Trunk G, 0.5 mile west of De Pere.                               | 25.2                  | 1969-70<br>1972                         | 7-26-72            | .40             |
| 04085110                                      | East River near De Pere, Wis.                      | SE 1/4 sec.3, T.22 N., R.20 E., at bridge on State Highway 32, 2.5 miles south of De Pere.                                                            | 58.4                  | 1969-70<br>1972                         | 7-26-72            | .68             |
| 04085170                                      | Hibbard Creek at Jacksonport, Wis.                 | SE 1/4 sec.14, T.29 N., R.27 E., at culvert on State Highway 57, 0.8 mile northeast of Jacksonport.                                                   | 22.5                  | 1969-70<br>1972                         | 7-20-72            | 2.16            |

<sup>#</sup> Operated as a continuous-record gaging station.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1972

| Station No.                                   | Station name                                    | Location                                                                                                                                                                  | Drainage area (sq mi) | Period of record                          | Measurements |                 |
|-----------------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------|--------------|-----------------|
|                                               |                                                 |                                                                                                                                                                           |                       |                                           | Date         | Discharge (cfs) |
| Streams tributary to Lake Michigan--Continued |                                                 |                                                                                                                                                                           |                       |                                           |              |                 |
| 04059800                                      | Brule Creek at Alvin, Wis.                      | NW 1/4 sec.34, T.41 N., R.13 E., at bridge on Forest Service Road 2458, 1.6 miles northwest of Alvin.                                                                     | 37                    | 1969-72                                   | 7-31-72      | 21.7            |
| 04063600                                      | Pine River near Three Lakes, Wis.               | NW 1/4 sec.30, T.39 N., R.13 E., at bridge on U.S. Forest Service Road 2182, 12.4 miles northeast of Three Lakes.                                                         | 16.2                  | 1966<br>1969-72                           | 7-31-72      | 9.63            |
| 04069480                                      | Trout Creek near Peshtigo, Wis.                 | On common boundary of secs.23 and 24, T.30 N., R.22 E., at bridge, 1.5 miles west of Peshtigo.                                                                            | 24.3                  | 1969-72                                   | 8-13-72      | .94             |
| *04071800                                     | Pensaukee River near Pulaski, Wis.              | NE 1/4 sec.1, T.26 N., R.18 E., at bridge on State Highway 32, 6.1 miles north of Pulaski.                                                                                | 43.2                  | 1961<br>1963-67<br>1969<br>1972           | 7-27-72      | .81             |
| 04078055                                      | Black Creek at Black Creek, Wis.                | NE 1/4 sec.8, T.23 N., R.17 E., at bridge on State Highway 47, 0.3 mile north of Black Creek.                                                                             | 55.9                  | 1969-72                                   | 8- 1-72      | .11             |
| 04078080                                      | Bear Creek at Stephenville, Wis.                | NE 1/4 sec.20, T.22 N., R.16 E., at bridge on State Highway 76, at Stephenville.                                                                                          | 59.4                  | 1969-72                                   | 7-31-72      | .92             |
| 04078600                                      | North Branch Pigeon River near Marion, Wis.     | NE 1/4 sec.5, T.25 N., R.13 E., at farm bridge, 2.8 miles west of Marion.                                                                                                 | 10.8                  | 1969-72                                   | 8- 1-72      | 3.18            |
| *04081000                                     | Waupaca River near Waupaca, Wis.                | On north line of sec.1, T.21 N., R.12 E., on right bank 10 ft downstream from highway bridge, 4.0 miles upstream from Weyauwega Lake dam, 4.5 miles southeast of Waupaca. | 272                   | 1962-64<br>b 1964-66<br>c 1966-70<br>1972 | 8- 3-72      | 177             |
| 04085390                                      | South Branch Manitowoc River near Chilton, Wis. | NW 1/4 sec.17, T.18 N., R.20 E., at bridge on country road, 1.1 miles northeast of Chilton.                                                                               | 75.2                  | 1969-72                                   | 7-17-72      | 8.66            |
| *04085400                                     | Killsnake River near Chilton, Wis.              | E 1/2 sec.6, T.18 N., R.20 E., at bridge on country road, 2.4 miles northeast of Chilton.                                                                                 | 29.5                  | 1963-67<br>1969-72                        | 7-17-72      | 3.18            |

\* Also a crest-stage station.

b Operated as a seasonal continuous-record gaging station.

c Operated as a seasonal continuous-record gaging station without records being published.

## Discharge measurements made at low-flow partial-record stations during water year 1972

| Station No.                                   | Station name                             | Location                                                                                                            | Drainage area (sq mi) | Period of record | Measurements |                 |
|-----------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|--------------|-----------------|
|                                               |                                          |                                                                                                                     |                       |                  | Date         | Discharge (cfs) |
| Streams tributary to Lake Michigan--Continued |                                          |                                                                                                                     |                       |                  |              |                 |
| 04085180                                      | Stoney Creek near Algoma, Wis.           | NW 1/4 sec.5, T.25 N., R.26 E., at bridge on County Trunk U, 5.5 miles northeast of Algoma.                         | 24.8                  | 1969-70<br>1972  | 7-20-72      | 2.43            |
| 04085190                                      | Silver Creek near Algoma, Wis.           | NE 1/4 sec.19, T.25 N., R.25 E., at bridge on County Trunk D, 3.5 miles northwest of Algoma.                        | 58.0                  | 1969-70<br>1972  | 7-20-72      | 4.08            |
| 04085280                                      | East Twin River at Mishicot, Wis.        | NW 1/4 sec.4, T.20 N., R.24 E., at bridge on State Highway 147, at Mishicot.                                        | 109                   | 1969-70<br>1972  | 7-19-72      | 14.5            |
| 04085330                                      | West Twin River near Francis Creek, Wis. | SW 1/4 sec.7, T.20 N., R.24 E., at bridge on County Trunk Q, 2.3 miles northeast of Francis.                        | 146                   | 1969-70<br>1972  | 7-19-72      | 18.6            |
| 04085410                                      | Mud Creek near Reedsville, Wis.          | SW 1/4 sec.2, T.19 N., R.21 E., at bridge on country road, 1.0 mile south of Reedsville.                            | 38.7                  | 1969-70<br>1972  | 7-18-72      | 2.40            |
| 04085420                                      | Branch River near Cato, Wis.             | SE 1/4 sec.22, T.20 N., R.22 E., at bridge on country road, 3.3 miles north of Cato.                                | 80.7                  | 1969-70<br>1972  | 7-18-72      | 10.1            |
| 04085460                                      | Pigeon River near Millersville, Wis.     | SW 1/4 sec.6, T.15 N., R.23 E., at bridge on country road, 2.1 miles southeast of Millersville.                     | 66.1                  | 1969-70<br>1972  | 7-19-72      | 4.20            |
| 04085800                                      | Onion River near Waldo, Wis.             | On common boundary of secs.10 and 11, T.14 N., R.21 E., at bridge on County Trunk AC, 1.4 miles northwest of Waldo. | 18.2                  | 1969-70<br>1972  | 7-20-72      | 9.36            |

## St. Croix River Basin

|           |                                      |                                                                                                                            |       |                         |                     |              |
|-----------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------|-------------------------|---------------------|--------------|
| 05331590  | Lower Ox Creek near Gordon, Wis.     | NE 1/4 SE 1/4 sec.16, T.44 N., R.11 W., at town road, 4.6 miles northeast of Gordon.                                       | 99.4  | 1969-72                 | 10-13-71            | 18.2         |
| 05331700  | Moose River near Solon Springs, Wis. | On common boundary of secs.14 and 23, T.44 N., R.13 W., at bridge on County Trunk M, 7.8 miles southwest of Solon Springs. | 49.9  | 1964<br>1967<br>1969-72 | 10-13-71            | 23.2         |
| 05331900  | Chippanazie Creek at Stanberry, Wis. | NW 1/4 sec.33, T.41 N., R.10 W., at culvert on U.S. Highway 63, 0.8 mile southwest of Stanberry.                           | a33.8 | 1964<br>1967<br>1969-72 | 10-13-71            | 17.9         |
| 05331950  | Bean Brook near Spring Brook, Wis.   | NE 1/4 sec.1, T.39 N., R.11 W., at culvert on County Trunk M, 3.5 miles southeast of Spring Brook.                         | a38.1 | 1964<br>1967<br>1969-72 | 10-13-71            | 33.7         |
| 05332700  | Stuntz Brook near Minong, Wis.       | SW 1/4 sec.23, T.41 N., R.13 W., at culvert on County Trunk F, 8.8 miles southwest of Minong.                              | 18.2  | 1964<br>1967<br>1969-72 | 10-13-71            | 5.27         |
| 05333060  | Ounce River near Gordon, Wis.        | SW 1/2 sec.30, T.43 N., R.10 W., at bridge on country road, 7.8 miles southeast of Gordon.                                 | a41.7 | 1964<br>1967<br>1969-72 | 10-13-71            | 18.9         |
| 05333080  | Frog Creek near Minong, Wis.         | NW 1/4 sec.20, T.42 N., R.11 W., at bridge on country road, 2.4 miles northeast of Minong.                                 | a31.7 | 1964<br>1967<br>1969-72 | 10-13-71<br>8-16-72 | 10.5<br>12.9 |
| *05333100 | Little Frog Creek near Minong, Wis.  | NW 1/4 sec.29, T.42 N., R.11 W., at culvert on country road, 2.5 miles east of Minong.                                     | 13.6  | 1961<br>1963-72         | 10-13-71            | 6.08         |

\* Also a crest-stage station.

a Approximately.

## Discharge measurements made at low-flow partial-record stations during water year 1972

| Station No.                      | Station name                                | Location                                                                                                             | Drainage area (sq mi) | Period of record                             | Measurements        |                 |
|----------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------|---------------------|-----------------|
|                                  |                                             |                                                                                                                      |                       |                                              | Date                | Discharge (cfs) |
| St. Croix River Basin--Continued |                                             |                                                                                                                      |                       |                                              |                     |                 |
| 05333510                         | Chases Brook near Danbury, Wis.             | NE 1/4 sec.32, T.42 N., R.15 W., at bridge on country road, 7.0 miles northeast of Danbury.                          | a38.0                 | 1964<br>1967<br>1969-72                      | 10-14-71<br>8-16-72 | 14.8<br>16.6    |
| 05334500                         | Yellow River at Webster, Wis.               | On common boundary of secs.4 and 5, T.39 N., R.16 W., at bridge on State Highway 35, 1.3 miles north of Webster.     | 228                   | 1914 <sup>#</sup><br>1964<br>1967<br>1969-72 | 10-14-71<br>8-16-72 | 204<br>222      |
| 05338900                         | Wood River near Siren, Wis.                 | On common boundary of secs.27 and 28, T.38 N., R.17 W., at bridge on country road, 4.8 miles southwest of Siren.     | 26.8                  | 1964<br>1967<br>1969-72                      | 10-15-71<br>8-16-72 | .61<br>2.73     |
| 05338950                         | North Fork Wood River near Grantsburg, Wis. | E 1/2 sec.8, T.38 N., R.18 W., at bridge on country road, 3.5 miles northeast of Grantsburg.                         | 67.3                  | 1964<br>1967<br>1969-72                      | 10-15-71<br>8-15-72 | 7.70<br>18.5    |
| 05340400                         | Wolf Creek near St. Croix Falls, Wis.       | SE 1/4 sec.33, T.36 N., R.19 W., at bridge on County Trunk G, 11 miles northwest of St. Croix Falls.                 | 29.3                  | 1964<br>1967<br>1969-72                      | 10-15-71<br>8-15-72 | 5.00<br>16.3    |
| Chippewa River Basin             |                                             |                                                                                                                      |                       |                                              |                     |                 |
| 05355370                         | Moose River near Clam Lake, Wis.            | SW 1/4 SW 1/4 sec.34, T.42 N., R.4 W., County Trunk GG, 6.1 miles southeast of Clam Lake.                            | 23.9                  | 1969-72                                      | 10-15-71            | 18.6            |
| 05355420                         | Hay Creek near Hayward, Wis.                | SW 1/4 sec.31, T.41 N., R.6 W., at culvert on country road, 15 miles east of Hayward.                                | a14.9                 | 1967<br>1970-72                              | 10-13-71            | 9.94            |
| 05355530                         | East Fork Chippewa River near Glidden, Wis. | On common boundary of secs.12 and 13, T.42 N., R.2 W., at bridge on State Highway 13, 0.7 mile southeast of Glidden. | a94.6                 | 1967<br>1970-72                              | 10-14-71            | 60.6            |
| 05357350                         | Lost Creek near Powell, Wis.                | SE 1/4 sec.27, T.42 N., R.4 E., at bridge on State Highway 47, 1.0 mile west of Powell.                              | 14.5                  | 1967<br>1969<br>1972                         | 10-13-71            | 4.60            |
| 05359100                         | Springstead Creek near Park Falls, Wis.     | SE 1/4 sec.16, T.40 N., R.3 E., at bridge on Forest Road No. 147, 16 miles east of Park Falls.                       | a21.4                 | 1967<br>1970-72                              | 10-14-71            | 15.2            |
| 05359350                         | Elk River near Phillips, Wis.               | On common boundary of secs.33 and 34, T.38 N., R.2 E., at bridge on County Trunk H, 8.9 miles northeast of Phillips. | a42.1                 | 1967<br>1970-72                              | 10-14-71            | 31.9            |
| Copper Creek Basin               |                                             |                                                                                                                      |                       |                                              |                     |                 |
| 05388380                         | Copper Creek near Mt. Sterling, Wis.        | NW 1/4 sec.29, T.10 N., R.5 W., at bridge on country road, 4.2 miles west of Mt. Sterling.                           | 14.1                  | 1963<br>1966-70<br>1972                      | 9- 6-72             | 7.21            |
| Wisconsin River Basin            |                                             |                                                                                                                      |                       |                                              |                     |                 |
| 05390140                         | Muskrat Creek at Conover, Wis.              | SE 1/4 SW 1/4 sec.4, T.41 N., R.8 E., at U.S. Highway 45, at Conover.                                                | 9.95                  | 1969-70<br>1972                              | 7-12-72             | 4.32            |

<sup>#</sup> Operated as a continuous-record gaging station.

a Approximately.

## Discharge measurements made at low-flow partial-record stations during water year 1972

| Discharge Measurements Made at Low Flow Partial Record Stations during Year 1972 |                                           |                                                                                                                        |                       |                                    |                     |                 |
|----------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------|---------------------|-----------------|
| Station No.                                                                      | Station name                              | Location                                                                                                               | Drainage area (sq mi) | Period of record                   | Measurements        |                 |
|                                                                                  |                                           |                                                                                                                        |                       |                                    | Date                | Discharge (cfs) |
| Wisconsin River Basin--Continued                                                 |                                           |                                                                                                                        |                       |                                    |                     |                 |
| 05390450                                                                         | Deerskin River near Eagle River, Wis.     | NW 1/4 SW 1/4 sec.25, T.41 N., R.11 E., at U.S. Forest Service Road 2178, 10.5 miles northeast of Eagle River.         | 32.5                  | 1969-70<br>1972                    | 7-12-72             | 21.6            |
| 05391200                                                                         | Monico Creek near Monico, Wis.            | SW 1/4 NW 1/4 sec.29, T.36 N., R.11 E., at U.S. Highway 45, 0.3 mile north-east of Monico.                             | 19.8                  | 1969-70<br>1972                    | 7-13-72             | .64             |
| 05391250                                                                         | Gudegast Creek near Rhinelander, Wis.     | NE 1/4 SE 1/4 sec.9, T.37 N., R.10 E., at town road, 9.5 miles northeast of Rhinelander.                               | 11.3                  | 1969-70<br>1972                    | 7-13-72             | 3.72            |
| 05391900                                                                         | Noisy Creek near Rhinelander, Wis.        | SW 1/4 SW 1/4 sec.36, T.36 N., R.8 E., at State Highway 17, 6.0 miles southwest of Rhinelander.                        | 36.8                  | 1969-70<br>1972                    | 7-13-72             | 7.79            |
| 05392150                                                                         | Mishonagon Creek near Woodruff, Wis.      | NE 1/4 NE 1/4 sec.32, T.40 N., R.6 E., at State Highway 47, 3.0 miles north-west of Woodruff.                          | d11.9                 | 1961<br>1963-67<br>1969-70<br>1972 | 10-13-71            | 24.4            |
| 05392290                                                                         | Willow River near Hazelhurst, Wis.        | SE 1/4 sec.19, T.38 N., R.4 E., at culvert on country road, 14.9 miles west of Hazelhurst.                             | 7.97                  | 1969-72                            | 10-14-71            | 10.6            |
| 05392320                                                                         | Rocky Run Creek near Goodnow, Wis.        | SE 1/4 sec.17, T.37 N., R.6 E., on country road, 4.3 miles west of Goodnow.                                            | 20.3                  | 1969-72                            | 7-11-72             | 20.9            |
| *05392350                                                                        | Bearskin Creek near Harshaw, Wis.         | SW 1/4 sec.36, T.37 N., R.6 E., at culvert on County Trunk K, 2 1/8 miles southwest of Harshaw.                        | d27.8                 | 1963-64<br>b1964-66<br>c1967-72    | 10-12-71            | 49.5            |
| 05392450                                                                         | Little Rice River near Bradley, Wis.      | NE 1/4 sec.23, T.36 N., R.5 E., at culvert on Kelly Fire Lane, 5.4 miles northwest of Bradley.                         | 25.9                  | 1969-72                            | 10-12-71<br>7-11-72 | 28.4<br>5.71    |
| 05393200                                                                         | Somo River (e) near Tripoli, Wis.         | NW 1/4 sec.10, T.35 N., R.4 E., at bridge on County Trunk T, 1.8 miles southeast of Tripoli.                           | a44.1                 | 1967<br>1969-71                    | 10-14-71<br>7-11-72 | 28.4<br>3.85    |
| 05393630                                                                         | Little Pine Creek near Tomahawk, Wis.     | On common boundary of secs.31 and 32, T.34 N., R.7 E., at culverts on County Trunk V, 6.5 miles southeast of Tomahawk. | 21.1                  | 1967<br>1969-72                    | 10-12-71<br>7-11-72 | 9.43<br>5.50    |
| Rock River Basin                                                                 |                                           |                                                                                                                        |                       |                                    |                     |                 |
| *05431400                                                                        | Little Turtle Creek at Allens Grove, Wis. | NE 1/4 sec.6, T.1 N., R.15 E., at bridge on country road, 0.2 mile south of Allens Grove.                              | 41.8                  | 1961-69<br>1972                    | 6-26-72             | 11.0            |

\* Also a crest-stage station.

a Approximately.

b Operated as a seasonal continuous-record gaging station.

c Operated as a seasonal continuous-record gaging station without records being published.

d Revised.

e Formerly published as Big Somo River.

## 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 maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

| Station No.                        | Station name                                            | Location                                                                                                                                                           | Drainage area (sq mi) | Period of record                        | Annual maximum |                    |                  |
|------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|----------------|--------------------|------------------|
|                                    |                                                         |                                                                                                                                                                    |                       |                                         | Date           | Gage height (feet) | Dis-charge (cfs) |
| Streams tributary to Lake Superior |                                                         |                                                                                                                                                                    |                       |                                         |                |                    |                  |
| 04024400                           | Stony Brook near Superior, Wis.                         | SE 1/4 sec.4, T.47 N., R.14 W., at box culvert on State Highway 35, 12 1/2 miles south of toll bridge on U.S. Highways 2 and 35 at St. Louis River in Superior.    | 2.20                  | 1959-72                                 | 9-20-72        | 26.63              | 460              |
| 04025200                           | Pearson Creek near Maple, Wis.                          | Common boundary of secs.11 and 14, T.48 N., R.11 W., at box culvert on State Highway 13, 4 miles north of Maple.                                                   | 4.01                  | 1957-72                                 | 9-20-72        | 19.45              | 850              |
| 04026200                           | Sand River tributary near Red Cliff, Wis.               | NE 1/4 sec.14, T.51 N., R.5 W., at box culvert on State Highway 13, 8 miles northwest of Red Cliff.                                                                | 1.14                  | 1959-72                                 | 8-16-72        | 14.27              | 360              |
| *04026300                          | Sioux River near Washburn, Wis.                         | NE 1/4 sec.35, T.49 N., R.5 W., on County Trunk C, 2 1/2 miles west of Washburn.                                                                                   | d35.2                 | 1959-65<br>1966 <sup>a</sup><br>1967-72 | 8-22-72        | 16.67              | 1,420            |
| *04026400                          | Spillerberg Creek near Cayuga, Wis.                     | NW 1/4 sec.21, T.43 N., R.2 W., at concrete culvert pipe on State Highway 13, 4 1/4 miles southeast of Cayuga.                                                     | 6.18                  | 1958-72                                 | 8-16-72        | 12.68              | 105              |
| 04026700                           | Trout Brook tributary near Marengo, Wis.                | NE 1/4 sec.7, T.45 N., R.3 W., at box culvert on State Highway 13, 2.6 miles southeast of Marengo.                                                                 | .77                   | 1960-72                                 | 8-16-72        | 11.6               | 160              |
| 04026850                           | Apple Creek near Upson, Wis.                            | SE 1/4 sec.30, T.45 N., R.1 E., at 2-barrel corrugated culvert on graveled O'Brien Lake Road, 1.5 miles south of Upson.                                            | 5.39                  | 1970-72                                 | 8-16-72        | 12.52              | <sup>a</sup>     |
| *04027200                          | Pearl Creek at Grandview, Wis.                          | NE 1/4 sec.22, T.45 N., R.6 W., at box culvert on U.S. Highway 63, 0.8 mile east of Grandview.                                                                     | e16.9                 | 1960-72                                 | 8-16-72        | i15.99             | 540              |
| *04029700                          | Boomer Creek near Saxon, Wis.                           | N 1/2 sec.3, T.46 N., R.1 E., at concrete culvert pipe on U.S. Highway 2, 3 miles east of Saxon.                                                                   | 5.94                  | 1958-72                                 | 8-16-72        | 14.6               | 205              |
| Streams tributary to Lake Michigan |                                                         |                                                                                                                                                                    |                       |                                         |                |                    |                  |
| *04059900                          | Allen Creek tributary near Alvin, Wis.                  | North boundary sec.7, T.40 N., R.14 E., at culvert on State Highway 70, 2.2 miles southeast of Alvin.                                                              | a1.9                  | 1960-72                                 | 8-16-72        | 10.46              | 8                |
| 04063640                           | North Branch Pine River at Windsor Dam near Alvin, Wis. | SE 1/4 sec.21, T.40 N., R.13 E., at bridge on country road at Windsor Dam 3.8 miles upstream from confluence of North and South Forks, 4 miles southwest of Alvin. | 29.4                  | 1967-68 <sup>a</sup><br>1970-72         | 4-28-72        | 2.80               | 85               |
| 04063688                           | South Branch Popple River near Newald, Wis.             | NW 1/4 sec.26, T.38 N., R.15 E., at corrugated twin barrel culvert on unmarked gravel Forest Road 2159, 5.4 miles east of Newald.                                  | 8.44                  | 1970-72                                 | 8-16-72        | 11.92              | 48               |

\* Also a low-flow partial-record station.

<sup>a</sup> Operated as a continuous-record gaging station.

<sup>a</sup> Discharge not determined.

<sup>a</sup> Approximately.

d Includes 20.3 sq mi without surface drainage.

e Includes 6.4 sq mi without surface drainage.

i Backwater from logs.

## Annual maximum discharge at crest-stage partial-record stations

| Station No.                                   | Station name                                 | Location                                                                                                                                       | Drainage area (sq mi) | Period of record            | Annual maximum |                    |                 |
|-----------------------------------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------|----------------|--------------------|-----------------|
|                                               |                                              |                                                                                                                                                |                       |                             | Date           | Gage height (feet) | Discharge (cfs) |
| Streams tributary to Lake Michigan--Continued |                                              |                                                                                                                                                |                       |                             |                |                    |                 |
| *04063800                                     | Woods Creek near Fence, Wis.                 | SE 1/4 sec.29, T.39 N., R.17 E., at box culvert on State Highway 101, 6 miles north of Fence.                                                  | 41.4                  | 1958-72                     | 5- 1-72        | 11.90              | 305             |
| 04064800                                      | Little Popple River near Aurora, Wis.        | SW 1/4 sec.1, T.38 N., R.18 E., at 3-barrel corrugated culvert on County Trunk Highway N, 5.5 miles west of Aurora.                            | 35.0                  | 1970-72                     | 4-25-72        | 13.15              | 395             |
| *04066300                                     | Cole Creek near Dunbar, Wis.                 | South boundary sec.34, T.37 N., R.19 E., at culvert on U.S. Highway 8, 3.6 miles southeast of Dunbar.                                          | a3.2                  | 1960-72                     | 4-25-72        | 10.45              | 18              |
| 04066700                                      | McCall Creek at Wausaukee, Wis.              | NW 1/4 sec.1, T.33 N., R.20 E., at culvert on U.S. Highway 141, 1 mile south of Wausaukee.                                                     | 1.48                  | 1959-72                     | 8- 8-72        | 11.10              | 16              |
| 04067500                                      | Menominee River near McAllister, Wis.        | Sec.17, T.33 N., R.23 E., 300 ft above highway bridge on County Trunk JJ, 2.9 miles east of McAllister.                                        | a4.020                | 1945-61<br>1962-72          | 5- 3-72        | 17.27              | 23,600          |
| 04067760                                      | Peshigo River near Cavour, Wis.              | SW 1/4 sec.29, T.37 N., R.15 E., at bridge on U.S. Highway 8, 0.7 mile northwest of Cavour.                                                    | 153                   | 1970-72                     | 4-28-72        | 14.28              | 1,140           |
| *04067800                                     | Armstrong Creek near Armstrong Creek, Wis.   | W 1/2 sec.27, T.37 N., R.16 E., at bridge on U.S. Highway 8, 1 3/4 miles northwest of Armstrong Creek.                                         | 23.1                  | 1958-72                     | 4-29-72        | 10.56              | 145             |
| 04069700                                      | North Branch Oconto River near Wabeno, Wis.  | SW 1/4 sec.9, T.34 N., R.15 E., at pipe arch culvert on County Trunk Highway C, 0.6 mile east of intersection with State Highway 32 in Wabeno. | 32.2                  | 1970-72                     | 4-29-72        | 12.02              | 150             |
| 04071700                                      | North Branch Little River near Coleman, Wis. | On common boundary of secs.2 and 3, T.29 N., R.20 E., at bridge on U.S. Highway 141, 3 3/4 miles south of Coleman.                             | 23.3                  | 1958-72                     | 4-16-72        | 13.56              | 390             |
| *04071800                                     | Pensaukee River near Pulaski, Wis.           | NE 1/4 sec.1, T.26 N., R.18 E., at bridge on State Highway 32 and 6.1 miles north of Pulaski.                                                  | 41.8                  | 1961-72                     | 4-22-72        | 13.59              | 620             |
| *04073400                                     | Bird Creek at Wautoma, Wis.                  | S 1/2 sec.34, T.19 N., R.10 E., at concrete culvert on State Highway 21, 1/4 mile west of Wautoma.                                             | 3.59                  | 1959-72                     | 9-28-72        | 11.32              | 57              |
| 04074300                                      | Mud Creek near Nashville, Wis.               | SW 1/4 sec.30, T.36 N., R.12 E., at concrete circular culvert on U.S. Highway 8, 3 1/2 miles north of Nashville.                               | 10.0                  | 1970-72                     | 4-26-72        | 12.57              | 65              |
| *04074700                                     | Hunting River near Elcho, Wis.               | N 1/2 sec.24, T.34 N., R.10 E., at twin culverts on U.S. Highway 45 and State Highway 47, 1 1/2 miles south of Elcho.                          | a9.0                  | 1958-72                     | 9-26-72        | 11.80              | 72              |
| *04074850                                     | Lily River near Lily, Wis.                   | SE 1/4 sec.11, T.33 N., R.13 E., at culvert on County Trunk Highway A, 3.2 miles north from junction of State Highways 55 and 52 in Lily.      | 52.4                  | 1970-72                     | 9-26-72        | 10.76              | 121             |
| *04079700                                     | Spaulding Creek near Big Falls, Wis.         | On common boundary of secs.14 and 15, T.25 N., R.12 E., at culvert on County Trunk E, 1.5 miles north of Big Falls.                            | a4.9                  | 1959-65<br>1966-<br>1967-72 | 4-22-72        | 10.80              | 52              |
| 04081010                                      | Waupaca River tributary near Waupaca, Wis.   | NW 1/4 sec.1, T.21 N., R.12 E., at culvert on U.S. Highway 10, 5 miles southeast of Waupaca.                                                   | a1.0                  | 1960-72                     | 4-22-72        | 11.25              | 20              |

\* Also a low-flow partial-record station.

† Operated as a continuous-record gaging station.

a Approximately.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Annual Maximum discharge at crest-stage partial-record stations

| Station No.                                   | Station name                                                 | Location                                                                                                                                         | Drainage area (sq mi) | Period of record | Annual maximum |                    |                  |
|-----------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|----------------|--------------------|------------------|
|                                               |                                                              |                                                                                                                                                  |                       |                  | Date           | Gage height (feet) | Dis-charge (cfs) |
| Streams tributary to Lake Michigan--Continued |                                                              |                                                                                                                                                  |                       |                  |                |                    |                  |
| 04081900                                      | Sawyer Creek at Oshkosh, Wis.                                | SW 1/4 sec.15, T.18 N., R.16 E., at bridge on U.S. Highway 41, 1 mile southwest of Algoma Street Fox River bridge in Oshkosh.                    | 15.3                  | 1961-72          | 1972           | b                  | 300              |
| 04083400                                      | East Branch Fond du Lac River tributary near Eden, Wis.      | NE 1/4 sec.14, T.14 N., R.17 E., at culvert on U.S. Highway 41, 3 miles west of Eden.                                                            | 1.19                  | 1961-72          | 8-18-72        | 12.00              | 85               |
| *04085030                                     | Apple Creek near Kaukauna, Wis.                              | On west boundary sec.2, T.21 N., R.18 E., at bridge on State Highway 55, 3 miles north of Kaukauna.                                              | 14.6                  | 1960-72          | 4-21-72        | 13.18              | 320              |
| 04085100                                      | East River tributary at Greenleaf, Wis.                      | NE 1/4 sec.8, T.21 N., R.20 E., at railroad box culvert, 1/2 mile south of Greenleaf.                                                            | 8.0                   | 1958-72          | 4-13-72        | 12.26              | 200              |
| 04085300                                      | Neshota River tributary near Denmark, Wis.                   | NE 1/4 sec.7, T.22 N., R.22 E., at box culvert on U.S. Highway 141, 3 3/4 miles northwest of Denmark.                                            | 3.08                  | 1959-72          | 4-13-72        | 12.5               | 75               |
| *04085400                                     | Killsnake River near Chilton, Wis.                           | E 1/2 sec.6, T.18 N., R.20 E., at bridge on country road, 2.4 miles northeast of Chilton.                                                        | 29.5                  | 1961-72          | 3-21-72        | 11.9               | 660              |
| *04085700                                     | Sheboygan River tributary near Plymouth, Wis.                | On common boundary of secs.2 and 11, T.15 N., R.21 E., at concrete culvert on County Trunk J, 3 1/2 miles northeast of Plymouth.                 | 5.51                  | 1959-72          | 9-21-72        | 10.9               | 150              |
| 04086400                                      | Milwaukee River tributary near Fredonia, Wis.                | SE 1/4 sec.1, T.11 N., R.21 E., at culvert on country road, 2.3 miles southeast of Fredonia.                                                     | .84                   | 1962-72          | 9-21-22        | 12.5               | 70               |
| *04087050                                     | Little Menomonee River near Freistadt, Wis.                  | On common boundary of secs.29 and 32, T.9 N., R.21 E., at bridge on Donges Bay Road, 2 miles south of Freistadt.                                 | 7.96                  | 1958-72          | 12-15-71       | 11.45              | 165              |
| 04087100                                      | Honey Creek at Milwaukee, Wis.                               | SE 1/4 sec.15, T.6 N., R.21 E., 400 ft upstream from bridge on S. 68th Street, and 6 miles southwest from mouth of Milwaukee River in Milwaukee. | 3.34                  | 1959-72          | 9-18-72        | 21.54              | 680              |
| *04087200                                     | Oak Creek near South Milwaukee, Wis.                         | On common boundary of secs.21 and 22, T.5 N., R.22 E., at bridge on west Nicholson Road, 3 miles southwest of South Milwaukee.                   | 13.9                  | 1958-72          | 9-18-72        | 17.08              | 740              |
| 04087230                                      | West Branch Root River Canal tributary near North Cape, Wis. | SE 1/4 sec.33, T.4 N., R.21 E., at culvert on County Trunk U, 3 miles southeast of North Cape.                                                   | 3.92                  | 1962-72          | 4-16-72        | 11.61              | 85               |
| *04087250                                     | Pike Creek near Kenosha, Wis.                                | W 1/2 sec.27, T.2 N., R.22 E., at box culvert on State Highway 43, 3 miles northwest of Kenosha.                                                 | 7.25                  | 1960-72          | 9-13-72        | 15.92              | 110              |
| St. Croix River Basin                         |                                                              |                                                                                                                                                  |                       |                  |                |                    |                  |
| *05333100                                     | Little Frog Creek near Minong, Wis.                          | NW 1/4 sec.29, T.42 N., R.11 W., at culvert on country road, 2 1/2 miles east of Minong.                                                         | 13.0                  | 1961-72          | 7-22-72        | 15.93              | 480              |
| 05334100                                      | Sawyer Creek near Shell Lake, Wis.                           | SE 1/4 sec.13, T.38 N., R.13 W., at box culvert on U.S. Highway 63, 2 miles north of Shell Lake.                                                 | 1.04                  | 1960-72          | 4-17-72        | 12.48              | 75               |

\* Also a low-flow partial-record station.

b Peak did not reach bottom of the gage.

f Backwater from ice.

## Annual maximum discharge at crest-stage partial-record stations

| Station No.                      | Station name                                              | Location                                                                                                                                       | Drainage area (sq mi) | Period of record                        | Annual maximum |                    |                  |
|----------------------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|----------------|--------------------|------------------|
|                                  |                                                           |                                                                                                                                                |                       |                                         | Date           | Gage height (feet) | Dis-charge (cfs) |
| St. Croix River Basin--Continued |                                                           |                                                                                                                                                |                       |                                         |                |                    |                  |
| *05335380                        | Bashaw Brook near Shell Lake, Wis.                        | SW 1/4 sec.8, T.38 N., R.14 W., at twin box culvert on country road 10.5 miles northwest of Shell Lake.                                        | 24.9                  | 1959-65<br>1966 <sup>a</sup><br>1967-72 | 7-23-72        | 11.14              | 44               |
| *05340300                        | Trade River near Frederic, Wis.                           | SW 1/4 sec.4, T.36 N., R.17 W., at box culvert on State Highways 35 and 48, 2.5 miles southwest of Frederic.                                   | 6.34                  | 1958-72                                 | 7-22-72        | 13.02              | 210              |
| 05341700                         | Willow River tributary near New Richmond, Wis.            | NW 1/4 sec.17, T.30 N., R.17 W., at Twin box culvert on County Trunk GG, 3.6 miles southeast of New Richmond.                                  | 1.40                  | 1959-72                                 | 7-22-72        | 11.40              | 32               |
| 05341900                         | Kinnickinnic River tributary at River Falls, Wis.         | NE 1/4 sec.14, T.27 N., R.19 W., at bridge on County Trunk FF, 1.6 miles southwest of River Falls.                                             | 7.26                  | 1959-72                                 | 7-22-72        | 11.56              | 380              |
| Trimbelle Creek Basin            |                                                           |                                                                                                                                                |                       |                                         |                |                    |                  |
| *05346600                        | Little Trimbelle Creek near Bay City, Wis.                | S 1/2 sec.21, T.25 N., R.18 W., at bridge on County Trunk K, 7 miles northwest of Bay City.                                                    | 19.9                  | 1961-72                                 | 1972           | b                  | 220              |
| Chippewa River Basin             |                                                           |                                                                                                                                                |                       |                                         |                |                    |                  |
| 05356200                         | Kenyon Creek near Radisson, Wis.                          | NW 1/4 sec.22, T.38 N., R.6 W., at bridge on State Highway 27, 5 miles east of Radisson.                                                       | a7.5                  | 1960-72                                 | 4-18-72        | 11.81              | 192              |
| 05357360                         | Bear River near Powell, Wis.                              | NE 1/4 sec.32, T.42 N., R.4 E., at bridge on State Highway 182, 3 miles west of Powell.                                                        | 118                   | 1972                                    | 8-18-72        | 12.65              | 560              |
| 05357390                         | Weber Creek near Mercer, Wis.                             | SE 1/4 sec.21, T.43 N., R.3 E., at culvert on U.S. Highway 51, 3.7 miles northeast of Mercer.                                                  | 5.86                  | 1970-72                                 | 8-17-72        | 12.65              | 270              |
| 05358100                         | Smith Creek near Park Falls, Wis.                         | NE 1/4 sec.15, T.40 N., R.1 W., at culvert on State Highway 13, 1 1/2 miles northeast of Park Falls.                                           | 9.11                  | 1970-72                                 | 4-17-72        | 14.26              | 320              |
| 05359200                         | South Fork Flambeau River tributary near Park Falls, Wis. | SW 1/4 sec.15, T.40 N., R.1 E., at culvert on State Highway 182, 5.1 miles east of Park Falls.                                                 | .86                   | 1960-72                                 | 8-17-72        | 11.16              | 62               |
| *05359600                        | Price Creek near Phillips, Wis.                           | SW 1/4 sec.31, T.38 N., R.2 W., at culvert on County Trunk W, 13 miles west of Phillips.                                                       | 14.7                  | 1958-65<br>1966 <sup>a</sup><br>1967-72 | 4-18-72        | 12.79              | 175              |
| 05360200                         | Flambeau River tributary at Ladysmith, Wis.               | SW 1/4 sec.27, T.35 N., R.6 W., at culvert on State Highway 27, 1 mile north of Ladysmith.                                                     | a0.8                  | 1960-72                                 | 7-23-72        | 11.62              | 23               |
| *05361400                        | Hay Creek near Prentice, Wis.                             | SE 1/4 sec.4, T.35 N., R.1 E., at culvert on U.S. Highway 8, 3.5 miles west of Prentice.                                                       | 21.9                  | 1961-72                                 | 9-26-72        | 13.21              | 720              |
| 05361420                         | Douglas Creek near Prentice, Wis.                         | NE 1/4 sec.17, T.35 N., R.2 E., at culvert on County Trunk Highway C, 2.3 miles southeast from intersection with State Highway 13 in Prentice. | 24.6                  | 1970-72                                 | 4-20-72        | 15.12              | 960              |
| 05361600                         | North Fork Jump River near Phillips, Wis.                 | SW 1/4 sec.5, T.36 N., R.1 E., at culvert on State Highway 13, 4 miles south of Phillips.                                                      | 10.4                  | 1970-72                                 | 4-18-72        | 12.25              | 175              |

\* Also a low-flow partial-record station.

<sup>a</sup> Operated as a continuous-record gaging station.

a Approximately.

b Peak did not reach bottom of the gage.

## Annual maximum discharge at crest-stage partial-record stations

| Station No.                     | Station name                                       | Location                                                                                                                | Drainage area (sq mi) | Period of record                | Annual maximum |                    |                  |
|---------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------|----------------|--------------------|------------------|
|                                 |                                                    |                                                                                                                         |                       |                                 | Date           | Gage height (feet) | Dis-charge (cfs) |
| Chippewa River Basin--Continued |                                                    |                                                                                                                         |                       |                                 |                |                    |                  |
| *05364000                       | Yellow River at Cadott, Wis.                       | NE 1/4 sec.31, T.29 N., R.6 W., at bridge on State Highway 27, in Cadott.                                               | 351                   | 1943-61 <del>4</del><br>1962-72 | 9-25-72        | 9.88               | 3,000            |
| 05364100                        | Seth Creek near Cadott, Wis.                       | SW 1/4 sec.17, T.29 N., R.6 W., at culvert on State Highway 27, 3.1 miles north of Cadott.                              | 3.04                  | 1962-72                         | 4-19-72        | 11.85              | 85               |
| 05364500                        | Duncan Creek at Bloomer, Wis.                      | Sec.8, T.30 N., R.9 W., 1/4 mile below Bloomer Dam at Bloomer.                                                          | 49.2                  | 1945-51 <del>4</del><br>1958-72 | 4-18-72        | 4.16               | 265              |
| *05365700                       | Goggle-eye Creek near Thorp, Wis.                  | West boundary sec.19, T.29 N., R.3 W., at culvert on State Highway 73, 1.3 miles north of Thorp.                        | 6.70                  | 1958-72                         | 4-18-72        | 12.27              | 160              |
| *05366500                       | Eau Claire River near Fall Creek, Wis.             | NW 1/4 sec.19, T.27 N., R.7 W., 500 ft east of County Trunk K, 3 1/4 miles north of Fall Creek.                         | 758                   | 1943-55 <del>4</del><br>1958-72 | 9-25-72        | 9.67               | 6,350            |
| 05367030                        | Willow Creek near Eau Claire, Wis.                 | On common boundary of secs.14 and 15, T.26 N., R.9 W., at box culvert on State Highway 93, 4 miles south of Eau Claire. | 4.38                  | 1958-72                         | 3-29-72        | 11.5               | 150              |
| *05367480                       | East Branch Pine Creek tributary near Dallas, Wis. | SW 1/4 sec.1, T.32 N., R.12 W., at culvert on County Trunk O, 1 1/2 miles north of Dallas.                              | 3.85                  | 1960-72                         | 7-22-72        | 12.17              | 115              |
| 05367500                        | Red Cedar River near Colfax, Wis.                  | SW 1/4 sec.22, T.30 N., R.11 W., 3.2 miles below Trout Creek and 4.7 miles north of Colfax.                             | al,110                | 1914-61 <del>4</del><br>1962-72 | 7-20-72        | 6.02               | 7,000            |
| 05367700                        | Lightning Creek at Almena, Wis.                    | NW 1/4 sec.19, T.34 N., R.13 W., at bridge on County Trunk P, in Almena.                                                | 19.8                  | 1958-72                         | 7-23-72        | 11.43              | 690              |
| 05369800                        | Eau Galle River tributary near Hersey, Wis.        | SW 1/4 sec.5, T.28 N., R.15 W., at box culvert on Interstate Highway 94, 2 miles southwest of Hersey.                   | .65                   | 1960-72                         | 4-13-72        | 10.64              | 60               |
| 05370600                        | Arkansaw Creek tributary near Arkansaw, Wis.       | SW 1/4 sec.14, T.25 N., R.14 W., at box culvert on U.S. Highway 10, 1 1/4 miles northwest of Arkansaw.                  | 2.56                  | 1959-72                         | 9-25-72        | 11.4               | 105              |
| *05370900                       | Spring Creek near Durand, Wis.                     | S 1/2 sec.9, T.24 N., R.13 W., at bridge on country road, 4 miles south of Chippewa River bridge in Durand.             | 6.49                  | 1962-72                         | 9-25-72        | 13.80              | 400              |
| By Golly Creek Basin            |                                                    |                                                                                                                         |                       |                                 |                |                    |                  |
| 05371300                        | By Golly Creek near Nelson, Wis.                   | SW 1/4 sec.28, T.23 N., R.13 W., at culvert on County Trunk D, 3 miles northeast of Nelson.                             | .28                   | 1962-72                         | 1972           | b                  | <10              |
| Buffalo River Basin             |                                                    |                                                                                                                         |                       |                                 |                |                    |                  |
| 05371800                        | Buffalo River tributary near Osseo, Wis.           | S 1/2 sec.3, T.24 N., R.6 W., at culvert on U.S. Highway 10, 6 1/2 miles east of Osseo.                                 | 1.44                  | 1960-72                         | 9-25-72        | 11.17              | 92               |
| Waumandee Creek Basin           |                                                    |                                                                                                                         |                       |                                 |                |                    |                  |
| *05378200                       | Eagle Creek near Fountain City, Wis.               | SW 1/4 sec.33, T.20 N., R.11 W., at bridge on County Trunk G, 2 1/2 miles north of Fountain City.                       | 26.8                  | 1961-72                         | 8-19-72        | 12.60              | 520              |

\* Also a low-flow partial-record station.

<sup>a</sup> Operated as a continuous-record gaging station.

b Approximately.

b Peak did not reach bottom of the gage.

## Annual maximum discharge at crest-stage partial-record stations

| Station No.           | Station name                                | Location                                                                                                                     | Drainage area (sq mi) | Period of record                        | Annual maximum |                    |                  |
|-----------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|----------------|--------------------|------------------|
|                       |                                             |                                                                                                                              |                       |                                         | Date           | Gage height (feet) | Dis-charge (cfs) |
| Black River Basin     |                                             |                                                                                                                              |                       |                                         |                |                    |                  |
| 05380800              | Black River tributary near Whittlesey, Wis. | SW 1/4 sec.35, T.32 N., R.1 E., at bridge on State Highway 13, 1.1 miles south of Whittlesey.                                | 2.12                  | 1960-72                                 | 4-16-72        | 12.09              | 175              |
| *05380900             | Poplar River near Owen, Wis.                | NW 1/4 sec.25, T.28 N., R.2 W., at bridge on County Trunk N, 4 1/4 miles south of Owen.                                      | 157                   | 1958-65<br>1966 <sup>‡</sup><br>1967-72 | 4-16-72        | 15.47              | 4,300            |
| *05380970             | Cawley Creek near Neillsville, Wis.         | SW 1/4 sec.25, T.25 N., R.2 W., at bridge on State Highway 73, 3.7 miles north of Neillsville.                               | 38.6                  | 1961-72                                 | 9-26-72        | 16.66              | 2,840            |
| *05382200             | French Creek near Ettrick, Wis.             | NE 1/4 sec.27, T.20 N., R.8 W., at bridge on County Trunk D and T, 2 1/2 miles west of Ettrick.                              | 14.3                  | 1960-72                                 | 9-26-72        | 12.50              | 980              |
| La Crosse River Basin |                                             |                                                                                                                              |                       |                                         |                |                    |                  |
| 05382300              | Beaver Creek tributary near Sparta, Wis.    | NW 1/4 sec.11, T.17 N., R.4 W., at box culvert on State Highways 27 and 71, 1.9 miles north of Sparta.                       | 1.72                  | 1959-72                                 | 9-26-72        | 11.72              | 105              |
| *05382500             | Little La Crosse River near Leon, Wis.      | NE 1/4 sec.3, T.16 N., R.4 W., 4 miles upstream from mouth and 1.5 miles northwest of Leon.                                  | 77.1                  | 1934-61 <sup>*</sup><br>1962-72         | 4-22-72        | 5.1                | 760              |
| Mormon Creek Basin    |                                             |                                                                                                                              |                       |                                         |                |                    |                  |
| *05386300             | Mormon Creek near La Crosse, Wis.           | NE 1/4 sec.19, T.15 N., R.6 W., at bridge on country road, 6 miles southeast of La Crosse.                                   | 25.5                  | 1961-72                                 | 1972           | b                  | 230              |
| Bad Axe River Basin   |                                             |                                                                                                                              |                       |                                         |                |                    |                  |
| *05387100             | North Fork Bad Axe River near Genoa, Wis.   | SW 1/4 sec.36, T.13 N., R.7 W., at bridge on State Highway 56, 4.1 miles southeast of Genoa.                                 | 68.8                  | 1959-65<br>1966 <sup>‡</sup><br>1967-72 | 4-22-72        | 12.98              | 840              |
| Du Charme Creek Basin |                                             |                                                                                                                              |                       |                                         |                |                    |                  |
| 05388460              | Du Charme Creek at Eastman, Wis.            | NE 1/4 sec.13, T.8 N., R.6 W., at culvert on County Trunk D in Eastman.                                                      | .30                   | 1961-72                                 | 8-20-72        | 11.94              | 145              |
| Wisconsin River Basin |                                             |                                                                                                                              |                       |                                         |                |                    |                  |
| *05390140             | Muskrat Creek at Conover, Wis.              | SW 1/4 sec.4, T.41 N., R.10 E., at corrugated culvert on U.S. Highway 45, 0.1 mile north of Conover.                         | 9.95                  | 1970-72                                 | 9-26-72        | 11.71              | 57               |
| 05390240              | Fourmile Creek near Three Lakes, Wis.       | NE 1/4 sec.26, T.39 N., R.11 E., at 2-barrel corrugated culvert on blacktop forest road, 5.5 miles northeast of Three Lakes. | 11.6                  | 1970-72                                 | 4-28-72        | 11.47              | 70               |
| 05391260              | Gudegast Creek near Starks, Wis.            | NW 1/4 sec.16, T.37 N., R.10 E., at corrugated culvert on country road, 3 miles northwest of Starks.                         | 13.0                  | 1970-72                                 | 8-18-72        | 12.61              | 94               |
| 05391950              | Squaw Creek near Harrison, Wis.             | SW 1/4 sec.3, T.35 N., R.8 E., at culvert on County Trunk Highway A, 5 miles northeast of Harrison.                          | 3.19                  | 1970-72                                 | 8-18-72        | 10.29              | 12               |

\* Also a low-flow partial-record station.

‡ Operated as a continuous-record gaging station.

b Peak did not reach bottom of the gage.

## DICHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Annual maximum discharge at crest-stage partial-record stations

| Station No.                      | Station name                                       | Location                                                                                                                         | Drainage area (sq mi) | Period of record                        | Annual maximum     |                    |                  |
|----------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|--------------------|--------------------|------------------|
|                                  |                                                    |                                                                                                                                  |                       |                                         | Date               | Gage height (feet) | Dis-charge (cfs) |
| Wisconsin River Basin--Continued |                                                    |                                                                                                                                  |                       |                                         |                    |                    |                  |
| *05392150                        | Mishonagon Creek near Woodruff, Wis.               | NE 1/4 sec.32, T.40 N., R.6 E., at twin culvert on State Highway 47, 3 miles northwest of Woodruff.                              | 11.9                  | 1958-72                                 | 8-17-72            | 11.33              | 117              |
| *05392350                        | Bearskin Creek near Harshaw, Wis.                  | SW 1/4 sec.36, T.37 N., R.6 E., at culvert on County Trunk K, 2 1/8 miles southwest of Harshaw.                                  | 27.8                  | 1958-65<br>1966 <sup>g</sup><br>1967-72 | 9-26-72            | 9.52               | 68               |
| 05393620                         | Skanawan Creek near Tomahawk, Wis.                 | SW 1/4 sec.13, T.34 N., R.6 E., at culvert on State Highway 107, 3 1/2 miles southeast of Tomahawk.                              | 6.59                  | 1970-72                                 | 4-17-72            | 11.13              | 65               |
| 05393640                         | Little Pine Creek near Irma, Wis.                  | NW 1/4 sec.31, T.34 N., R.7 E., at box culvert on U.S. Highway 51, 3 miles north of Irma.                                        | 22.9                  | 1970-72                                 | 4-13-71<br>4-18-72 | 13.12<br>12.79     | g160<br>120      |
| *05394000                        | New Wood River near Merrill, Wis.                  | E 1/2 sec.15, T.32 N., R.5 E., at bridge on County Trunk E, 9.5 miles northwest of Merrill.                                      | a83.1                 | 1953-61 <sup>g</sup><br>1962-72         | 4-18-72            | 6.14               | 2,290            |
| *05394200                        | Devil Creek near Merrill, Wis.                     | N 1/2 sec.30, T.31 N., R.6 E., at culvert on County Trunk F, 5.8 miles southwest of Merrill.                                     | 10.1                  | 1961-72                                 | 9-26-72            | 13.82              | 480              |
| 05395020                         | Lloyd Creek near Doering, Wis.                     | SE 1/4 sec.21, T.32 N., R.9 E., at bridge on County Trunk C, 4.5 miles east of Doering.                                          | 8.54                  | 1970-72                                 | 8-17-72            | 13.43              | 330              |
| 05395100                         | Trappe River tributary near Merrill, Wis.          | SW 1/4 sec.28, T.31 N., R.8 E., at culvert on County Trunk P, 9 1/2 miles southeast of Merrill.                                  | a2.2                  | 1959-72                                 | 9-26-72            | 12.53              | 120              |
| 05396100                         | Pet Brook tributary near Edgar, Wis.               | SE 1/4 sec.31, T.29 N., R.5 E., at culvert on State Highway 29, 1.5 miles northeast of Edgar.                                    | 6.69                  | 1962-72                                 | 4-16-72            | 14.19              | 480              |
| 05397600                         | Big Sandy Creek near Wausau, Wis.                  | SE 1/4 sec.31, T.30 N., R.9 E., at bridge on State Highway 52, 10 miles northeast of Wausau.                                     | a9.9                  | 1959-72                                 | 9-26-72            | 13.09              | 780              |
| 05399200                         | Randall Creek tributary near Abbottsford, Wis.     | South boundary of sec.36, T.29 N., R.2 E., at concrete culvert, on State Highway 29, 5.8 miles east of Abbottsford.              | .56                   | 1959-72                                 | 9-26-72            | 12.83              | 215              |
| 05401800                         | Yellow River tributary near Pittsville, Wis.       | On common boundary of secs.11 and 14, T.23 N., R.3 E., at bridge on County Trunk C, 2 miles north of Pittsville.                 | 7.27                  | 1959-72                                 | 4-10-72            | 12.66              | 470              |
| *05403520                        | Webster Creek at New Lisbon, Wis.                  | NE 1/4 sec.19, T.16 N., R.3 E., at bridge on State Highway 80, 1.2 miles south of New Lisbon.                                    | 11.5                  | 1961-72                                 | 9-26-72            | 13.68              | 260              |
| *05403550                        | One Mile Creek near Mauston, Wis.                  | SE 1/4 sec.24, T.15 N., R.3 E., at bridge on State Highway 58, 2.4 miles south of Mauston.                                       | 30.4                  | 1958-72                                 | 9-26-72            | 14.92              | 650              |
| 05403610                         | Wisconsin River tributary at Wisconsin Dells, Wis. | NE 1/4 sec.3, T.13 N., R.6 E., at culvert on State Highway 13, 0.8 mile north of Wisconsin Dells.                                | 1.16                  | 1962-72                                 | 1972               | b                  | <10              |
| *05403700                        | Dell Creek near Lake Delton, Wis.                  | NW 1/4 sec.2, T.12 N., R.5 E., at bridge on town road, 1/4 mile north of State Highway 23, and 5 miles southwest of Lake Delton. | 44.9                  | 1957-65 <sup>g</sup><br>1966-72         | 3-17-72            | 6.30               | 276              |
| *05404200                        | Narrows Creek at Loganville, Wis.                  | SE 1/4 sec.8, T.11 N., R.4 E., at bridge on State Highways 23 and 154, and 1/4 mile north of Loganville.                         | 40.0                  | 1958-65<br>1966 <sup>g</sup><br>1967-72 | 8-20-72            | 14.93              | 2,500            |

\* Also a low-flow partial-record station.

<sup>g</sup> Operated as a continuous-record gaging station.

a Approximately.

b Peak did not reach bottom of the gage.

g Not previously published.

## Annual Maximum discharge at crest-stage partial-record stations

| Station No.                      | Station name                                        | Location                                                                                                                           | Drainage area (sq mi) | Period of record            | Annual maximum |                    |                  |
|----------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------|----------------|--------------------|------------------|
|                                  |                                                     |                                                                                                                                    |                       |                             | Date           | Gage height (feet) | Dis-charge (cfs) |
| Wisconsin River Basin--Continued |                                                     |                                                                                                                                    |                       |                             |                |                    |                  |
| *05405600                        | Rowan Creek at Poynette, Wis.                       | S 1/2 sec.35, T.11 N., R.9 E., at bridge on U.S. Highway 51, in Poynette.                                                          | 10.1                  | 1961-72                     | 3-17-72        | 11.7               | 160              |
| 05406800                         | Rocky Branch near Richland Center, Wis.             | E 1/2 sec.29, T.10 N., R.1 E., at culvert on State Highway 80, 1 1/2 miles south of Richland Center.                               | 1.71                  | 1960-72                     | 8-26-72        | 17.4               | 1,100            |
| *05407100                        | Richland Creek near Plughtown, Wis.                 | NW 1/4 sec.9, T.8 N., R.3 W., at bridge on U.S. Highway 61, 2 miles south of Plughtown.                                            | 19.2                  | 1958-72                     | 4-21-72        | 14.29              | 450              |
| *05407200                        | Crooked Creek near Boscobel, Wis.                   | SE 1/4 sec.2, T.7 N., R.3 W., at bridge on U.S. Highway 61, 1.6 miles south of Boscobel.                                           | 13.1                  | 1959-72                     | 8-25-72        | 12.6               | 470              |
| *05407400                        | Morris Creek tributary near Norwalk, Wis.           | NW 1/4 sec.21, T.16 N., R.2 W., at bridge on County Trunk T, 2 miles north of Norwalk.                                             | 4.67                  | 1960-72                     | 9-26-72        | 12.49              | 710              |
| Grant River Basin                |                                                     |                                                                                                                                    |                       |                             |                |                    |                  |
| *05413400                        | Pigeon Creek near Lancaster, Wis.                   | SW 1/4 sec.15, T.4 N., R.3 W., at culvert on country road, 2 miles south of Lancaster.                                             | 6.81                  | 1960-65<br>1966#<br>1967-72 | 7-16-72        | 18.95              | 1,860            |
| Platte River Basin               |                                                     |                                                                                                                                    |                       |                             |                |                    |                  |
| *05414200                        | Bear Branch near Platteville, Wis.                  | NE 1/4 sec.4, T.3 N., R.1 W., at box culvert on State Highway 81, 2.3 miles northwest of Platteville.                              | 2.80                  | 1958-72                     | 4-16-72        | 15.2               | 560              |
| Galena River Basin               |                                                     |                                                                                                                                    |                       |                             |                |                    |                  |
| *05414900                        | Pats Creek near Elk Grove, Wis.                     | SW 1/4 sec.4, T.2 N., R.1 E., at bridge on State Highway 81, 7 miles southeast of Platteville.                                     | 8.49                  | 1960-72                     | 4-16-72        | 13.01              | 260              |
| Rock River Basin                 |                                                     |                                                                                                                                    |                       |                             |                |                    |                  |
| 05423000                         | West Branch Rock River near Waupun, Wis.            | SW 1/4 sec.24, T.14 N., R.15 E., on right bank 700 feet downstream from bridge on U.S. Highway 151, 4.5 miles northeast of Waupun. | 41.4                  | 1949-70#<br>1972            | 9-17-72        | 3.89               | 165              |
| *05423300                        | South Branch Rock River tributary near Waupun, Wis. | S 1/2 sec.22, T.14 N., R.14 E., at concrete culvert on country road 4 1/2 miles northwest of Waupun.                               | 11.9                  | 1959-72                     | 3-16-72        | 11.36              | 200              |
| *05423800                        | East Branch Rock River tributary near Slinger, Wis. | S 1/2 sec.26, T.11 N., R.18 E., at culvert on U.S. Highway 41, 4 miles northwest of Slinger.                                       | 3.04                  | 1960-72                     | 8-14-72        | 13.12              | 340              |
| 05424300                         | Rock River tributary near Watertown, Wis.           | NE 1/4 sec.18, T.8 N., R.16 E., at concrete culvert on old U.S. Highway 16, 5 miles east of Watertown.                             | 4.58                  | 1959-72                     | 9-18-72        | 12.87              | 120              |
| *05425700                        | Robbins Creek near Columbus, Wis.                   | SE 1/4 sec.11, T.10 N., R.12 E., at culvert on U.S. Highway 16, in Columbus.                                                       | 8.54                  | 1960-72                     | 3-17-72        | 12.91              | 120              |

\* Also a low-flow partial-record station.

# Operated as a continuous-record gaging station.

## Annual maximum discharge at crest-stage partial-record stations

| Station No.                 | Station name                                                  | Location                                                                                                                      | Drainage area (sq mi) | Period of record                        | Annual maximum |                    |                  |
|-----------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|----------------|--------------------|------------------|
|                             |                                                               |                                                                                                                               |                       |                                         | Date           | Gage height (feet) | Dis-charge (cfs) |
| Rock River Basin--Continued |                                                               |                                                                                                                               |                       |                                         |                |                    |                  |
| 05426100                    | Scuppernong Creek near Wales, Wis.                            | NE 1/4 sec.6, T.6 N., R.18 E., at culvert on U.S. Highway 18, 1.8 miles northwest of Wales.                                   | 8.28                  | 1962-72                                 | 9-19-72        | 11.3               | 120              |
| *05427200                   | Allen Creek near Fort Atkinson, Wis.                          | NE 1/4 sec.17, T.5 N., R.14 E., at box culvert on State Highway 26, 2.5 miles southwest of Fort Atkinson.                     | 10.2                  | 1958-72                                 | 3-16-72        | 10.17              | 80               |
| *05427800                   | Token Creek near Madison, Wis.                                | SW 1/4 sec.4, T.8 N., R.10 E., at culvert on U.S. Highway 51, 8 miles northeast of State Capitol in Madison.                  | 24.2                  | 1961-65<br>1966 <sup>f</sup><br>1967-72 | 3-15-72        | 12.53              | 325              |
| *05431400                   | Little Turtle Creek at Allens Grove, Wis.                     | NE 1/4 sec.6, T.1 N., R.15 E., at bridge on country road, 0.2 mile south of Allens Grove.                                     | 41.8                  | 1962-72                                 | 8-25-72        | 14.60              | 1,490            |
| *05432300                   | Rock Branch near Mineral Point, Wis.                          | SE 1/4 sec.8, T.4 N., R.3 E., at box culvert on State Highway 23, 2 1/2 miles south of Mineral Point.                         | 4.83                  | 1959-72                                 | 8-11-72        | 13.75              | 570              |
| *05433500                   | Yellowstone River near Blanchardville, Wis.                   | NE 1/4 sec.34, T.4 N., R.4 E., 0.6 mile upstream from bridge on County Trunk F, and 7 miles west-southwest of Blanchardville. | 28.5                  | 1954-65 <sup>f</sup><br>1966-72         | 4-21-72        | 7.96               | j                |
| 05434200                    | Skinner Creek tributary near Monroe, Wis.                     | S 1/2 sec.14, T.2 N., R.7 E., at culvert on State Highway 69, 2.4 miles north of Monroe.                                      | .48                   | 1959-72                                 | 3-11-72        | 10.95              | 24               |
| 05435900                    | Sugar River tributary near Pine Bluff, Wis.                   | SE 1/4 sec.27, T.7 N., R.7 E., at culvert on County Trunk J, 1.1 miles southeast of Pine Bluff.                               | 7.46                  | 1961-72                                 | 3-12-72        | 13.44              | 165              |
| *05436200                   | Gill Creek near Brooklyn, Wis.                                | NW 1/4 sec.16, T.4 N., R.9 E., at culvert on State Highway 92, 4.3 miles west of Brooklyn.                                    | 3.34                  | 1961-72                                 | 4-22-72        | 12.92              | 90               |
| *05437200                   | East Fork Raccoon Creek tributary near Beloit, Wis.           | On common boundary of secs.30 and 31, T.1 N., R.12 E., at culvert on State Highway 81, 2.9 miles west of Beloit.              | 4.67                  | 1958-72                                 | 8- 2-72        | 12.32              | 160              |
| Illinois River Basin        |                                                               |                                                                                                                               |                       |                                         |                |                    |                  |
| 05544300                    | Mukwonago River tributary near Mukwonago, Wis.                | S 1/2 sec.36, T.5 N., R.18 E., at culvert on State Highway 83, 1 1/2 miles southeast of Mukwonago.                            | 1.32                  | 1960-72                                 | 1972           | j                  | <sup>f</sup>     |
| 05545100                    | Sugar Creek at Elkhorn, Wis.                                  | SW 1/4 sec.29, T.3 N., R.17 E., at culvert on State Highway 11, 2 miles northeast of Elkhorn.                                 | 6.68                  | 1962-72                                 | 4-16-72        | 12.57              | 225              |
| 05545200                    | White River tributary near Burlington, Wis.                   | On common boundary of secs.27 and 34, T.3 N., R.18 E., at box culvert on State Highway 11, 4.5 miles west of Burlington.      | 2.42                  | 1958-72                                 | 3-17-72        | 12.48              | 155              |
| *05545300                   | White River near Burlington, Wis.                             | NW 1/4 sec.1, T.2 N., R.18 E., at bridge on State Highway 36, 2 1/4 miles southwest of Burlington.                            | 97.5                  | 1958-65<br>1966 <sup>f</sup><br>1967-72 | 4-21-72        | 12.43              | 1,140            |
| *05548150                   | North Branch Nippersink Creek tributary near Genoa City, Wis. | E 1/2 sec.32, T.1 N., R.18 E., at bridge on County Trunk B, 3 miles west of Genoa City.                                       | 13.8                  | 1962-72                                 | 9-19-72        | 11.62              | 196              |

\* Also a low-flow partial-record station.

<sup>f</sup> Operated as a continuous-record gaging station.<sup>f</sup> Discharge not determined.<sup>f</sup> Backwater from ice.

j Gage not operating.

## Measurements at Miscellaneous Sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table or in the low-flow investigations section if a series of measurements were made along a reach of a stream. Those that are measurements of base flow are designated by an asterisk (\*).

Discharge measurements made at miscellaneous sites during water year 1972

| Stream                             | Tributary to      | Location                                                                                                                       | Drainage area (sq mi) | Measured previously (water years) | Measurements                                                                                                |                                                                                                  |
|------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
|                                    |                   |                                                                                                                                |                       |                                   | Date                                                                                                        | Discharge (cfs)                                                                                  |
| Streams tributary to Lake Michigan |                   |                                                                                                                                |                       |                                   |                                                                                                             |                                                                                                  |
| Mecan River                        | Fox River         | NW 1/4 NW 1/4 sec.8, T.18 N., R.9 E., Waushara County, at bridge on County Trunk GG, 2.3 miles northwest of Richford.          | -                     | 1970-71                           | 12-11-71<br>3-11-72<br>4- 4-72<br>4-18-72<br>4-28-72<br>6-24-72<br>6-29-72<br>7-11-72<br>7-28-72<br>9-20-72 | *11.30<br>*11.30<br>*12.79<br>*12.57<br>*12.33<br>*11.70<br>*10.83<br>*10.99<br>*10.65<br>*12.43 |
| Little Wolf River                  | Wolf River        | SE 1/4 NE 1/4 sec.34, T.26 N., R.10 E., Marathon County, at bridge on State Highway 49, and about 1.5 miles south of Galloway. | -                     | -                                 | 7-17-72<br>7-25-72                                                                                          | *9.05<br>*6.21                                                                                   |
| Holt Creek                         | Little Wolf River | NW 1/4 sec.28, T.26 N., R.10 E., Marathon County, at country road bridge, 1.6 miles west of Galloway.                          | -                     | -                                 | 5- 4-72<br>5-15-72<br>5-23-72<br>6- 2-72<br>7-17-72<br>7-25-72                                              | 11.1<br>6.15<br>*3.42<br>*2.70<br>*2.23<br>*1.69                                                 |
| Do                                 | Do                | SE 1/4 sec.27, T.26 N., R.10 E., Marathon County, at country road bridge, 1.0 mile southeast of Galloway.                      | -                     | -                                 | 5- 4-72<br>5-15-72<br>5-23-72<br>6- 2-72<br>7-17-72<br>7-25-72                                              | 16.7<br>10.6<br>*5.6<br>*4.90<br>*4.01<br>*2.94                                                  |
| Do                                 | Do                | SE 1/4 sec.34, T.26 N., R.10 E., Marathon County, at bridge on State Highway 49, and 2.3 miles south of Galloway.              | -                     | -                                 | 5- 4-72<br>5-15-72<br>5-23-72<br>6- 2-72<br>7-17-72<br>7-25-72                                              | 33.8<br>18.53<br>*10.8<br>*8.53<br>*7.25<br>*4.55                                                |
| St. Croix River Basin              |                   |                                                                                                                                |                       |                                   |                                                                                                             |                                                                                                  |
| Willow River                       | St. Croix River   | NW 1/4 SW 1/4 sec.2, T.29 N., R.19 W., St. Croix County, at bridge on County Trunk I, at Burkhardt.                            | -                     | 1971                              | 3-20-72                                                                                                     | 371                                                                                              |
| Chippewa River Basin               |                   |                                                                                                                                |                       |                                   |                                                                                                             |                                                                                                  |
| Pine Creek                         | Flambeau River    | NW 1/4 NW 1/4 sec.27, T.41 N., R.2 W., Ashland County, at country road, 5.3 miles west of Butternut.                           | -                     | -                                 | 10-12-71                                                                                                    | *a2.9                                                                                            |
| Do                                 | Do                | NW 1/4 NE 1/4 sec.19, T.40 N., R.2 W., Price County, 0.3 mile downstream from Pine Creek Road, and 5.4 miles north of Oxbow.   | -                     | -                                 | 10-12-71                                                                                                    | *a15.4                                                                                           |
| Do                                 | Do                | SE 1/4 NW 1/4 sec.19, T.40 N., R.2 W., Price County, upstream from Hay Creek, and 5.2 miles north of Oxbow.                    | -                     | -                                 | 10-12-71                                                                                                    | *a13.7                                                                                           |
| Hay Creek                          | Pine Creek        | NE 1/4 SW 1/4 sec.19, T.40 N., R.2 W., Price County, 200 ft upstream from mouth, and 5.1 miles north of Oxbow.                 | -                     | -                                 | 10-12-71                                                                                                    | *a1.91                                                                                           |

a Published in Hydrology of Pine Creek, Wisconsin, U.S. Geological Survey, Open-file Report, December 1971.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1972

| Stream                              | Tributary to                                     | Location                                                                                                                                                                                     | Drainage area (sq mi) | Measured previously (water years)       | Measurements                             |                            |
|-------------------------------------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|------------------------------------------|----------------------------|
|                                     |                                                  |                                                                                                                                                                                              |                       |                                         | Date                                     | Discharge (cfs)            |
| Chippewa River Basin--Continued     |                                                  |                                                                                                                                                                                              |                       |                                         |                                          |                            |
| Pine Creek                          | Flambeau River                                   | NW 1/4 SW 1/4 sec.19, T.40 N., R.2 W., Price County, 0.4 mile downstream from Hay Creek, and 4.8 miles north of Oxbow.                                                                       | -                     | -                                       | 10-12-71                                 | *a18.4                     |
| Do                                  | Do                                               | NW 1/4 NW 1/4 sec.30, T.40 N., R.2 W., Price County, 1.1 miles downstream from Hay Creek, and 4.4 miles north of Oxbow.                                                                      | -                     | -                                       | 10-12-71                                 | *a18.9                     |
| Chippewa River                      | Mississippi River                                | NE 1/4 sec.25, T.27 N., R.10 W., Eau Claire County, at bridge on State Highways 37 and 85 at Eau Claire, 1.2 miles upstream from Lowes Creek and 2.8 miles downstream from Eau Claire River. | 6,630                 | 1902-09#<br>1944-54#<br>1966-69<br>1971 | 3-13-72                                  | 58,000                     |
| Red Cedar River                     | Chippewa River                                   | SE 1/4 NE 1/4 sec.21, T.36 N., R.11 W., Barron County, outlet Red Cedar Lake at south edge of Mikana.                                                                                        | 148                   | -                                       | 5-29-72<br>7-18-72<br>8- 9-72            | *68.5<br>91.5<br>132       |
| Brill River                         | Red Cedar River                                  | SW 1/4 SW 1/4 sec.24, T.37 N., R.11 W., Washburn County, outlet Long Lake, 1.2 miles east of Nobleton.                                                                                       | 83.6                  | -                                       | 5-29-72<br>7-14-72<br>8- 9-72            | *18.1<br>41.8<br>59.5      |
| Bear Creek                          | Do                                               | NW 1/4 NE 1/4 sec.18, T.36 N., R.11 W., Barron County, at outlet of Bear Lake, at Haugen.                                                                                                    | 36.8                  | -                                       | 7-14-72<br>8- 9-72                       | 14.4<br>20.5               |
| Red Cedar River                     | Chippewa River                                   | SE 1/4 SW 1/4 sec.21, T.35 N., R.11 W., Barron County, at Illinois Northern Railroad bridge in Rice Lake.                                                                                    | 378                   | -                                       | 5-29-72<br>6-13-72<br>7-18-72<br>8- 8-72 | *178<br>*140<br>267<br>292 |
| Chetek River                        | Red Cedar River                                  | NW 1/4 SW 1/4 sec.31, T.33 N., R.10 W., Barron County, at County Trunk I, downstream from Tenmile Creek, 1.8 miles south of Chetek.                                                          | 194                   | -                                       | 7-18-72<br>8- 8-72                       | 169<br>178                 |
| Black River Basin                   |                                                  |                                                                                                                                                                                              |                       |                                         |                                          |                            |
| Levis Creek                         | Black River                                      | NE 1/4 SE 1/4 sec.12, T.21 N., R.4 W., Jackson County, at bridge on State Highway 54, 2.2 miles northeast of Black River Falls.                                                              | 39.7                  | 1964<br>1966-70                         | 7- 7-72                                  | b10.7                      |
| Sugar Creek Basin                   |                                                  |                                                                                                                                                                                              |                       |                                         |                                          |                            |
| Sugar Creek                         | Mississippi River                                | SW 1/4 SE 1/4 sec.32, T.11 N., R. 5 W., Crawford County, 0.3 miles downstream from bridge on County Trunk C, 3.1 miles southwest of Rising Sun.                                              | 7.81                  | 1969                                    | 9- 6-72                                  | *3.30                      |
| Sugar Creek tributary               | Sugar Creek                                      | NW 1/4 NW 1/4 sec.7, T.10 N., R.5 W., Crawford County, at mouth, 3.5 miles southwest of Rising Sun.                                                                                          | 2.40                  | 1969                                    | 9- 6-72                                  | *0.17                      |
| Copper Creek Basin                  |                                                  |                                                                                                                                                                                              |                       |                                         |                                          |                            |
| North Branch Copper Creek tributary | North Branch Copper Creek (head of Copper Creek) | NW 1/4 SW 1/4 sec.22, T.10 N., R.5 W., Crawford County, 300 ft upstream from State Highway 171, 0.1 mile upstream from mouth, 1.6 miles west of Mt. Sterling.                                | 1.24                  | 1969                                    | 9- 6-72                                  | *0.50                      |
| Upper Copper Creek                  | Do                                               | SE 1/4 NE 1/4 sec.16, T.10 N., R.5 W., Crawford County, 1.5 miles upstream from bridge on State Highway 171, 2.5 miles northeast of Mt. Sterling.                                            | 2.33                  | 1969                                    | 9- 6-72                                  | *0.52                      |

# Regular gaging station during this period.

a Published in Hydrology of Pine Creek, Wisconsin, U.S. Geological Survey, Open-file Report, December 1971.

b Also operated as low-flow partial-record station (05381350).

## Discharge measurements made at miscellaneous sites during water year 1972

| Stream                   | Tributary to      | Location                                                                                                                                             | Drainage area (sq mi) | Measured previously (water years)                                                        | Measurements                  |                      |
|--------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------|-------------------------------|----------------------|
|                          |                   |                                                                                                                                                      |                       |                                                                                          | Date                          | Discharge (cfs)      |
| Wisconsin River Basin    |                   |                                                                                                                                                      |                       |                                                                                          |                               |                      |
| Witches Gulch            | Wisconsin River   | SW 1/4 NW 1/4 sec.21, T.14 N., R.6 E., Adams County, on State Highway 13, 3.4 miles northwest of Wisconsin Dells.                                    | 6.16                  | -                                                                                        | 4-21-72<br>7-12-72<br>8-28-72 | 1.13<br>1.01<br>1.48 |
| Baraboo River            | Do                | SE 1/4 SE 1/4 sec.15, T.12 N., R.4 E., Sauk County, at bridge on town road, 1.0 mile south of Reedsburg.                                             | -                     | 1967<br>1971                                                                             | 3-17-72                       | 805                  |
| Black Earth Creek        | Blue Mounds Creek | SW 1/4 NW 1/4 sec.3, T.7 N., R.7 E., Dane County, at bridge on County Trunk KP, at Cross Plains.                                                     | 26.1                  | -                                                                                        | 3-17-72                       | 197                  |
| Do                       | Do                | SE 1/4 SW 1/4 sec.9, T.8 N., R.6 E., Dane County, at bridge on County Trunk Y, at Mazomanie.                                                         | 98.6                  | -                                                                                        | 3-17-72                       | 257                  |
| Kickapoo River           | Wisconsin River   | NE 1/4 NE 1/4 sec.20, T.13 N., R.2 W., Vernon County, at bridge on State Highway 131, 1.4 miles north of La Farge.                                   | 262                   | -                                                                                        | 10- 6-71                      | 129                  |
| Do                       | Do                | NE 1/4 NE 1/4 sec.24, T.12 N., R.3 W., Vernon County, at bridge on State Highway 56 at Viola.                                                        | 340                   | 1960-62<br>1964-65<br>1968<br>1971                                                       | 3-20-72                       | 1,340                |
| Do                       | Do                | NW 1/4 SW 1/4 sec.8, T.11 N., R.3 W., Vernon County, at bridge on U.S. Highway 14, 5 miles upstream from mouth of Reads Creek, at Readstown.         | 485                   | 1952<br>1960-62<br>1965<br>1968<br>1971                                                  | 3-17-72                       | 1,470                |
| Do                       | Do                | SE 1/4 sec.30, T.11 N., R.3 W., Crawford County, at bridge on State Highway 131, 450 ft downstream from Baker Creek, at Soldiers Grove.              | 530                   | 1939#<br>1960<br>1962<br>1965<br>1967<br>1971                                            | 3-17-72                       | 1,190                |
| Conway Valley tributary  | Conway Valley     | SW 1/4 NW 1/4 sec.32, T.11 N., R.4 W., Crawford County, at bridge on County Trunk C, 5.7 miles west of Soldiers Grove.                               | 1.67                  | 1964<br>1969                                                                             | 9- 6-72                       | *0.62                |
| Kickapoo River tributary | Kickapoo River    | SW 1/4 SE 1/4 sec.21, T.10 N., R.4 W., Crawford County, at bridge on country road, 0.2 miles upstream from mouth, 0.5 miles northwest of Gays Mills. | 4.67                  | 1969                                                                                     | 9- 7-72                       | *2.68                |
| Wisconsin River          | Mississippi River | NW 1/4 NE 1/4 sec.14, T.6 N., R.6 W., Crawford County, at bridge on U.S. Highway 18, at Bridgeport.                                                  | 11,700                | 1935-36<br>1938<br>1944-46<br>1950<br>1951<br>1952<br>1955<br>1960<br>1965-67<br>1970-71 | 4-26-72                       | 46,300               |
| Rock River Basin         |                   |                                                                                                                                                      |                       |                                                                                          |                               |                      |
| Rock River tributary     | Rock River        | SW 1/4 NW 1/4 sec.14, T.8 N., R.16 E., Jefferson County, at mouth, 1.7 miles northeast of Ixonia.                                                    | -                     | -                                                                                        | 6- 2-72                       | *0.44                |
| Steel Brook tributary    | Steel Brook       | SE 1/4 SW 1/4 sec.1, T.4 N., R.15 E., Walworth County, at bridge on town road, 3.3 miles east of Whitewater.                                         | 3.26                  | -                                                                                        | 6-26-72                       | *1.45                |

# Regular gaging station during this period.

Discharge measurements made at miscellaneous sites during water year 1972

| Stream                      | Tributary to        | Location                                                                                                                                           | Drainage area (sq mi) | Measured previously (water years)    | Measurements       |                 |
|-----------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------|--------------------|-----------------|
|                             |                     |                                                                                                                                                    |                       |                                      | Date               | Discharge (cfs) |
| Rock River Basin--Continued |                     |                                                                                                                                                    |                       |                                      |                    |                 |
| Whitewater Creek            | Bark River          | NE 1/4 SE 1/4 sec.15, T.4 N., R.15 E., Walworth County, at town road, 2.5 miles southeast of Whitewater.                                           | 20.61                 | 1971                                 | 6-27-72            | *11.7           |
| Do                          | Do                  | NE 1/4 SW 1/4 sec.10, T.4 N., R.15 E., Walworth County, at town road, 1.5 miles southeast of Whitewater.                                           | c22.7                 | 1926-28#<br>1946-54#<br>1966<br>1971 | 6-27-72            | *13.8           |
| Spring Brook tributary      | Spring Creek        | NE 1/4 SE 1/4 sec.18, T.4 N., R.15 E., Walworth County, at culvert on town road, 2.5 miles southwest of Whitewater.                                | -                     | 1971                                 | 6-26-72            | *2.51           |
| Spring Brook                | Whitewater Creek    | NW 1/4 SE 1/4 sec.8, T.4 N., R.15 E., Walworth County, at State Highway 89, 1.2 miles southwest of Post Office in Whitewater.                      | 16.15                 | 1971                                 | 6-26-72            | *4.95           |
| Turtle Creek tributary      | Turtle Creek        | NE 1/4 NE 1/4 sec.24, T.3 N., R.15 E., Walworth County, at bridge on County Trunk P, 5.2 miles north of Horton Park in Delavan.                    | 3.03                  | -                                    | 6-27-72            | *1.08           |
| Do                          | Do                  | NW 1/4 SW 1/4 sec.31, T.3 N., R.16 E., Walworth County, at bridge on County Trunk P, 0.45 mile upstream from mouth and 3.0 miles north of Delavan. | 2.58                  | 1968-69                              | 6-28-72            | *1.53           |
| Do                          | Do                  | SW 1/4 SE 1/4 sec.5, T.2 N., R.16 E., Walworth County, at bridge on County Trunk O, 1.3 miles north of Racine Street intersection in Delavan.      | 9.0                   | -                                    | 6-28-72            | *0.24           |
| Turtle Creek                | Rock River          | NE 1/4 NW 1/4 sec.18, T.2 N., R.16 E., Walworth County, at bridge on town road, at outlet of Comus Lake at Delavan.                                | 33.1                  | 1967-69                              | 6-26-72            | *10.4           |
| Jackson Creek               | Turtle Creek        | NE 1/4 SE 1/4 sec.12, T.2 N., R.16 E., Walworth County, at bridge on State Highway 67 and 1.9 miles south of Elkhorn.                              | 9.59                  | 1968-69                              | 6- 2-72<br>6-26-72 | 0.828<br>*0.995 |
| Delavan Lake Outlet         | Do                  | SW 1/4 SE 1/4 sec.20, T.2 N., R.16 E., Walworth County, at bridge on town road, and 1.4 miles southeast of Delavan.                                | 40.6                  | 1967-69                              | 6-27-72            | *5.48           |
| Do                          | Do                  | SW 1/4 NW 1/4 sec.18, T.2 N., R.16 E., Walworth County, at bridge on County Trunk P at Delavan.                                                    | 47.4                  | 1967<br>1969                         | 6-26-72            | *5.26           |
| Turtle Creek                | Rock River          | NE 1/4 SW 1/4 sec.10, T.2 N., R.15 E., Walworth County, at bridge on State Highway 11 and 3.5 miles west of Delavan Post Office.                   | 87.78                 | -                                    | 6-26-72            | *22.8           |
| Do                          | Do                  | NW 1/4 SW 1/4 sec.18, T.2 N., R.15 E., Walworth County, at bridge on County Trunk C, and 3.5 miles north of Allens Grove.                          | 107.3                 | -                                    | 6-26-72            | *42.0           |
| Little Turtle Creek         | Turtle Creek        | NE 1/4 NE 1/4 sec.36, T.1 N., R.14 E., Rock County, at bridge on private road and 2.5 miles west of Sharon.                                        | 6.26                  | -                                    | 6-26-72            | *1.30           |
| Ladd Creek                  | Little Turtle Creek | SW 1/4 SE 1/4 sec.17, T.1 N., R.15 E., Walworth County, at bridge on Salt Box Road, and 3.0 miles south of Allens Grove.                           | 6.33                  | 1968-69                              | 6-26-72            | *1.26           |
| Do                          | Do                  | NE 1/4 SW 1/4 sec.7, T.1 N., R.15 E., Walworth County, at mouth and 1.9 miles south of Allens Grove.                                               | 12.1                  | 1968-69                              | 6-26-72            | *3.64           |

<sup>#</sup> Regular gaging station during this period.

c Revised.

Discharge measurements made at miscellaneous sites during water year 1972

| Stream                        | Tributary to        | Location                                                                                                                   | Drainage area (sq mi) | Measured previously (water years) | Measurements |                 |
|-------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------|--------------|-----------------|
|                               |                     |                                                                                                                            |                       |                                   | Date         | Discharge (cfs) |
| Rock River Basin--Continued   |                     |                                                                                                                            |                       |                                   |              |                 |
| Little Turtle Creek tributary | Little Turtle Creek | NE 1/4 SE 1/4 sec.32, T.2 N., R.15 E., Walworth County, at culvert on State Highway 15 and 1.2 miles east of Allens Grove. | 11.0                  | 1968-69                           | 6-26-72      | *2.16           |
| Do                            | Do                  | SE 1/4 NE 1/4 sec.31, T.2 N., R.15 E., Walworth County, at bridge on country road, 0.7 mile north of Allens Grove.         | 22.2                  | -                                 | 6-26-72      | *4.14           |
| Illinois River Basin          |                     |                                                                                                                            |                       |                                   |              |                 |
| Honey Creek                   | Fox River           | SE 1/4 NW 1/4 sec.36, T.4 N., R.16 E., Walworth County, at State Highway 67, 4.9 miles south of Little Prairie.            | 16.31                 | -                                 | 6-26-72      | 2.32            |

## LOW-FLOW INVESTIGATIONS

Series of base-flow discharge measurements were made in various areas of the State during the 1972 water year. These measurements were made as part of a comprehensive program now being carried on in cooperation with the University Extension, the University of Wisconsin Geological and Natural History Survey, to investigate the water resources of all major river basins within the State of Wisconsin or as part of a program in cooperation with the Wisconsin Department of Natural Resources, the object of which is to obtain information on the variability of base flow within small basins of about 100 square miles.

The measurements for each study are listed in order proceeding downstream, and each tributary is inserted in the order in which it enters the main stream. The data collected in these series of measurements were used in determining the base-flow yields of various parts of the basins. Drainage areas shown were determined from the most recent U.S. Geological Survey maps of the area. Water temperature and specific conductance measurements were obtained at the time the discharge measurements were made and are available upon request to the district office.

## STREAMS TRIBUTARY TO LAKE SUPERIOR

## Montreal River basin low-flow investigation

A series of base-flow discharge measurements was made in the Montreal River basin, upstream from Iron Mountain, Michigan, during the period October 12-14. In the week prior to and including the dates the measurements were made, weather records indicate an average of 1.06 inches of precipitation in the area. Based on weather records and recorded streamflow data in the region, the discharge measurements are considered to represent medium to high-range base flow.

| Stream                                                   | Location                                                                                                               | Drainage<br>area<br>(sq mi) | Measured Discharge |      |      |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------|------|------|
|                                                          |                                                                                                                        |                             | Date               | Cfs  | Cfsm |
| Discharge measurements of Montreal River and tributaries |                                                                                                                        |                             |                    |      |      |
| Montreal River tributary                                 | SW 1/4 SW 1/4 sec.20, T.44 N., R.3 E., Iron County, at culvert on U.S. Highway 51, and 12.6 miles south of Hurley.     | 0.59                        | 10-14-71           | 0.22 | .373 |
| Do                                                       | NW 1/4 SW 1/4 sec.8, T.44 N., R.3 E., Iron County, at culvert on U.S. Highway 51, 10.2 miles south of Hurley.          | .25                         | 10-14-71           | .28  | 1.12 |
| Laymans Creek                                            | SE 1/4 SW 1/4 sec.1, T.44 N., R.2 E., Iron County, at culvert on town road, 9.3 miles south of Hurley.                 | .40                         | 10-13-71           | 2.30 | 5.75 |
| Do                                                       | SW 1/4 NW 1/4 sec.6, T.44 N., R.3 E., Iron County, above luenue with tributary, and 9.0 miles south of Hurley.         | 5.02                        | 10-13-71           | 4.65 | .926 |
| Laymans Creek tributary                                  | NW 1/4 SW 1/4 sec.6, T.44 N., R.3 E., Iron County, at culverts on town road, 9.1 miles south of Hurley.                | 9.00                        | 10-13-71           | 5.52 | .613 |
| Do                                                       | NE 1/4 NE 1/4 sec.6, T.44 N., R.3 E., Iron County, at Schomberg Park, 8.6 miles south of Hurley.                       | 2.17                        | 10-12-71           | 1.45 | .668 |
| Laymans Creek                                            | NE 1/4 NE 1/4 sec.6, T.44 N., R.3 E., Iron County, at bridge on U.S. Highway 51, 8.8 miles south of Hurley.            | r17.5                       | 10-12-71           | 10.9 | .623 |
| Do                                                       | NW 1/4 NE 1/4 sec.32, T.45 N., R.3 E., Iron County, at bridge on town road, 8.0 miles south of Hurley.                 | 18.4                        | 10-13-71           | 14.1 | .766 |
| Montreal River                                           | SE 1/4 NE 1/4 sec.28, T.45 N., R.3 E., Iron County, at end of town road, 7.5 miles south of Hurley.                    | 39.1                        | 10-12-71           | 28.0 | .716 |
| Montreal River tributary                                 | NW 1/4 NW 1/4 sec.29, T.45 N., R.3 E., Iron County, at culvert on town road, 6.8 miles south of Hurley.                | .68                         | 10-13-71           | .32  | .471 |
| Do                                                       | NW 1/4 SW 1/4 sec.20, T.45 N., R.3 E., Iron County, at culverts on town road, 6.2 miles south of Hurley.               | 1.84                        | 10-12-71           | .60  | .326 |
| Do                                                       | NE 1/4 NE 1/4 sec.20, T.45 N., R.3 E., Iron County, at culvert on town road, 5.8 miles south of Hurley.                | 3.03                        | 10-12-71           | .93  | .307 |
| Whitney Creek                                            | SE 1/4 NW 1/4 sec.13, T.46 N., R.46 W., Gogebic County, at bridge on town road, 5.4 miles south of Ironwood, Michigan. | 4.18                        | 10-14-71           | 2.38 | .569 |
| Montreal River                                           | SW 1/4 SE 1/4 sec.8, T.45 N., R.3 E., Iron County, at bridge on County Trunk Highway C, 4.7 miles south of Hurley.     | r52.1                       | 10-12-71           | 30.4 | .583 |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

## West Branch Fond du Lac River basin low-flow investigation

A series of base-flow discharge measurements was made in the West Branch Fond du Lac River basin during the period November 16-18. In the week prior to the measurements, weather records indicate .01 inch precipitation fell in the area. On the first day of the measurements, about .29 inch of precipitation fell, but this amount is presumed not to have affected base-flow conditions. Based on recorded streamflow data in the region, the discharge measurements are considered to represent medium-range base flow.

|                                                                         |                                                                                                                    |     |          |   |   |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----|----------|---|---|
| Discharge measurements of West Branch Fond du Lac River and tributaries |                                                                                                                    |     |          |   |   |
| West Branch Fond du Lac River                                           | SW 1/4 SW 1/4 sec.4, T.15 N., R.15 E., Fond du Lac County, on County Trunk Highway M, 2.6 miles west of Rosendale. | .75 | 11-16-71 | 0 | 0 |

r Revised.

† Other discharge measurements available.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

## West Branch Fond du Lac River basin low-flow investigation--Continued

| Stream                                                                             | Location                                                                                                                                              | Drainage<br>area<br>(sq mi) | Measured Discharge |      |      |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------|------|------|
|                                                                                    |                                                                                                                                                       |                             | Date               | Cfs  | Cfsm |
| Discharge measurements of West Branch Fond du Lac River and tributaries--Continued |                                                                                                                                                       |                             |                    |      |      |
| West Branch Fond du Lac River                                                      | NE 1/4 SE 1/4 sec.3, T.15 N., R.15 E., Fond du Lac County, at bridge on country road, 0.9 mile southwest of Rosendale.                                | 3.04                        | 11-16-71           | .27  | .089 |
| Do                                                                                 | NW 1/4 SW 1/4 sec.36, T.16 N., R.15 E., Fond du Lac County, at culverts on County Trunk Highway 000 at sewage plant, 0.9 mile northeast of Rosendale. | 5.32                        | 11-16-71           | .97  | .182 |
| West Branch Fond du Lac River tributary                                            | NE 1/4 NW 1/4 sec.35, T.16 N., R.15 E., Fond du Lac County, at bridge on State Highway 26, 0.8 mile north of Rosendale.                               | 2.85                        | 11-16-71           | .66  | .232 |
| Do                                                                                 | SW 1/4 NE 1/4 sec.18, T.16 N., R.15 E., Fond du Lac County, at culvert on country road, 5.1 miles northwest of Rosendale.                             | 3.08                        | 11-18-71           | .11  | .036 |
| Do                                                                                 | NE 1/4 NW 1/4 sec.28, T.16 N., R.15 E., Fond du Lac County, at bridge on County Trunk Highway M, 2.9 miles northwest of Rosendale.                    | 12.0                        | 11-18-71           | .99  | .082 |
| Tributary to unnamed tributary                                                     | NW 1/4 NW 1/4 sec.10, T.16 N., R.15 E., Fond du Lac County, on country road at Triangle School, 5.2 miles north of Rosendale.                         | 5.38                        | 11-18-71           | .09  | .017 |
| Do                                                                                 | NW 1/4 NE 1/4 sec.15, T.16 N., R.15 E., Fond du Lac County, at culvert on County Trunk Highway N, 3.9 miles north of Rosendale.                       | 2.76                        | 11-18-71           | .08  | .029 |
| West Branch Fond du Lac River tributary                                            | NE 1/4 NW 1/4 sec.26, T.16 N., R.15 E., Fond du Lac County, at bridge on State Highway 26, 2.0 miles north of Rosendale.                              | 30.6                        | 11-17-71           | 3.01 | .098 |
| Tributary to unnamed tributary                                                     | SE 1/4 NE 1/4 sec.23, T.16 N., R.15 E., Fond du Lac County, at culvert on private road on State Highway 26, 2.8 miles north of Rosendale.             | .96                         | 11-18-71           | .25  | .260 |
| West Branch Fond du Lac River tributary                                            | NE 1/4 SW 1/4 sec.14, T.15 N., R.15 E., Fond du Lac County, at bridge on State Highway 26, 2.6 miles south of Rosendale.                              | 1.84                        | 11-16-71           | .26  | .141 |
| Do                                                                                 | NW 1/4 NW 1/4 sec.7, T.15 N., R.15 E., Fond du Lac County, at bridge on County Trunk Highway KKK, 2.0 miles southeast of Rosendale.                   | 4.93                        | 11-17-71           | 1.01 | .205 |
| Do                                                                                 | NE 1/4 SE 1/4 sec.36, T.16 N., R.15 E., Fond du Lac County, at bridge on County Trunk Highway 000, 1.5 miles east of Rosendale.                       | 8.80                        | 11-16-71           | 1.18 | .134 |
| West Branch Fond du Lac River                                                      | SE 1/4 SW 1/4 sec.29, T.16 N., R.16 E., Fond du Lac County, near end of private road, 3.3 miles east of Rosendale.                                    | 56.6                        | 11-16-71           | 6.06 | .107 |
| West Branch Fond du Lac River tributary                                            | SW 1/4 SW 1/4 sec.16, T.16 N., R.16 E., Fond du Lac County, at culvert on County Trunk Highway N, 4.8 miles northeast of Rosendale.                   | .10                         | 11-17-71           | 0    | 0    |
| Tributary to unnamed tributary                                                     | SE 1/4 SW 1/4 sec.20, T.16 N., R.16 E., Fond du Lac County, on country road, 3.8 miles northeast of Rosendale.                                        | .43                         | 11-17-71           | 0    | 0    |
| West Branch Fond du Lac River tributary                                            | NE 1/4 NW 1/4 sec.16, T.16 N., R.16 E., Fond du Lac County, on country road, 5.3 miles northeast of Rosendale.                                        | 2.90                        | 11-17-71           | 0    | 0    |
| Do                                                                                 | SW 1/4 SE 1/4 sec.16, T.16 N., R.16 E., Fond du Lac County, on County Trunk Highway N, 5.0 miles northeast of Rosendale.                              | 1.55                        | 11-17-71           | 0    | 0    |
| West Branch Fond du Lac River                                                      | SW 1/4 NW 1/4 sec.12, T.15 N., R.16 E., Fond du Lac County, at bridge on State Highway 23, 7.0 miles east of Rosendale.                               | 77.0                        | 11-17-71           | 6.55 | .085 |
| Do                                                                                 | SE 1/4 SE 1/4 sec.13, T.15 N., R.16 E., Fond du Lac County, at bridge on country road, 7.9 miles east of Rosendale.                                   | 79.8                        | 11-17-71           | 6.51 | .082 |
| #Do                                                                                | NE 1/4 NE 1/4 sec.20, T.15 N., R.17 E., Fond du Lac County, at County Trunk Highway T, 2.0 miles southwest of downtown Fond du Lac.                   | r84.3                       | 11-17-71           | 7.28 | .086 |

## East Branch Fond du Lac River basin low-flow investigation

A series of base-flow discharge measurements was made in the East Branch Fond du Lac River basin during the period November 16-18. In the week prior to the measurements, weather records indicate .01 inch precipitation fell in the area. On the first day of the measurements, about .29 inch of precipitation fell, but this amount is presumed not to have affected base-flow conditions. Based on recorded streamflow data in the region, the discharge measurements are considered to represent medium-range base flow.

## Discharge measurements of East Branch Fond du Lac River and tributaries

|                               |                                                                                                                                         |      |          |      |   |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------|----------|------|---|
| East Branch Fond du Lac River | NE 1/4 NW 1/4 sec.9, T.14 N., R.16 E., Fond du Lac County, at site on U.S. Highway 151, 8.9 miles southwest of Fond du Lac Post Office. | 4.69 | 11-17-71 | .002 | - |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------|----------|------|---|

r Revised.

# Formerly operated as a continuous-record gaging station.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

East Branch Fond du Lac River basin low-flow investigation--Continued

| Stream                                                                             | Location                                                                                                                                          | Drainage<br>area<br>(sq mi) | Measured Discharge |      |      |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------|------|------|
|                                                                                    |                                                                                                                                                   |                             | Date               | Cfs  | Cfsm |
| Discharge measurements of East Branch Fond du Lac River and tributaries--Continued |                                                                                                                                                   |                             |                    |      |      |
| East Branch Fond du Lac River                                                      | SE 1/4 NE 1/4 sec.9, T.14 N., R.16 E., Fond du Lac County, at site on country road, 8.5 miles southwest of Fond du Lac Post Office.               | 8.55                        | 11-17-71           | 0    | 0    |
| East Branch Fond du Lac River tributary                                            | NE 1/4 SW 1/4 sec.10, T.14 N., R.16 E., Fond du Lac County, at site on country road, 8.3 miles southwest of Fond du Lac Post Office.              | 5.31                        | 11-17-71           | .03  | .006 |
| Campground Creek                                                                   | NW 1/4 NE 1/4 sec.29, T.14 N., R.17 E., Fond du Lac County, on County Trunk Highway F, 8.3 miles south of Fond du Lac Post Office.                | .46                         | 11-16-71           | 0    | 0    |
| Campground Creek tributary                                                         | NW 1/4 SW 1/4 sec.21, T.14 N., R.17 E., Fond du Lac County, on country road, 7.9 miles south of Fond du Lac Post Office.                          | .25                         | 11-16-71           | 0    | 0    |
| Do                                                                                 | SW 1/4 NW 1/4 sec.21, T.14 N., R.17 E., Fond du Lac County, on country road, 7.5 miles south of Fond du Lac Post Office.                          | .26                         | 11-16-71           | 0    | 0    |
| Campground Creek                                                                   | NW 1/4 NE 1/4 sec.19, T.14 N., R.17 E., Fond du Lac County, at culvert on country road, 7.7 miles south of Fond du Lac Post Office.               | 4.03                        | 11-16-71           | 1.71 | .424 |
| Do                                                                                 | SW 1/4 SE 1/4 sec.11, T.14 N., R.16 E., Fond du Lac County, at bridge on County Trunk Highway Y, 7.9 miles southwest of Fond du Lac Post Office.  | 8.64                        | 11-17-71           | 2.55 | .295 |
| Campground Creek tributary                                                         | NE 1/4 NE 1/4 sec.14, T.14 N., R.16 E., Fond du Lac County, at culvert on County Trunk Highway Y, 7.9 miles southwest of Fond du Lac Post Office. | .49                         | 11-16-71           | .06  | .122 |
| Campground Creek                                                                   | NW 1/4 SE 1/4 sec.10, T.14 N., R.16 E., Fond du Lac County, at site on country road, 8.1 miles southwest of Fond du Lac Post Office.              | 10.5                        | 11-17-71           | 2.86 | .272 |
| Sevenmile Creek tributary                                                          | SE 1/4 NW 1/4 sec.18, T.15 N., R.16 E., Fond du Lac County, on County Trunk Highway C, 9.3 miles west of Fond du Lac Post Office.                 | .61                         | 11-17-71           | 0    | 0    |
| Do                                                                                 | NE 1/4 SW 1/4 sec.19, T.15 N., R.16 E., Fond du Lac County, at bridge on County Trunk Highway C, 9.4 miles west of Fond du Lac Post Office.       | 1.29                        | 11-17-71           | .66  | .512 |
| Sevenmile Creek                                                                    | NE 1/4 NW 1/4 sec.27, T.15 N., R.16 E., Fond du Lac County, at bridge on County Trunk Highway Y, 6.6 miles west of Fond du Lac Post Office.       | 16.8                        | 11-17-71           | 1.29 | .077 |
| Do                                                                                 | SW 1/4 NE 1/4 sec.3, T.14 N., R.16 E., Fond du Lac County, at site on country road, 7.4 miles southwest of Fond du Lac Post Office.               | 18.7                        | 11-17-71           | 1.70 | .091 |
| East Branch Fond du Lac River                                                      | SW 1/4 SW 1/4 sec.2, T.14 N., R.16 E., Fond du Lac County, at site on County Trunk Highway Y, 7.3 miles southwest of Fond du Lac Post Office.     | 45.3                        | 11-17-71           | 4.34 | .096 |
| Do                                                                                 | SW 1/4 SE 1/4 sec.30, T.15 N., R.17 E., Fond du Lac County, at bridge on County Trunk Highway D, 4.3 miles southwest of Fond du Lac Post Office.  | 52.2                        | 11-17-71           | 5.18 | .099 |
| East Branch Fond du Lac River tributary                                            | NW 1/4 NW 1/4 sec.25, T.15 N., R.16 E., Fond du Lac County, at site on country road, 4.9 miles southwest of Fond du Lac Post Office.              | 2.27                        | 11-17-71           | 0    | 0    |
| Do                                                                                 | SW 1/4 SE 1/4 sec.30, T.15 N., R.17 E., Fond du Lac County, at site on U.S. Highway 151, 4.1 miles southwest of Fond du Lac Post Office.          | 5.00                        | 11-17-71           | 0    | 0    |
| Do                                                                                 | SW 1/4 SW 1/4 sec.5, T.14 N., R.17 E., Fond du Lac County, at site on County Trunk Highway FFF, 5.3 miles south of Fond du Lac Post Office.       | 1.41                        | 11-16-71           | 0    | 0    |
| East Branch Fond du Lac River                                                      | NW 1/4 NE 1/4 sec.32, T.15 N., R.17 E., Fond du Lac County, at bridge on country road, 3.7 miles south of Fond du Lac Post Office.                | 60.6                        | 11-16-71           | 3.85 | .064 |
| East Branch Fond du Lac River tributary                                            | NW 1/4 SE 1/4 sec.5, T.14 N., R.17 E., Fond du Lac County, at site on County Trunk Highway FFF, 4.9 miles south of Fond du Lac Post Office.       | 1.03                        | 11-16-71           | 0    | 0    |
| Do                                                                                 | NE 1/4 SE 1/4 sec.5, T.14 N., R.17 E., Fond du Lac County, at site on County Trunk Highway FFF, 4.7 miles south of Fond du Lac Post Office.       | 1.24                        | 11-16-71           | 0    | 0    |
| Do                                                                                 | SW 1/4 SE 1/4 sec.10, T.14 N., R.17 E., Fond du Lac County, at bridge on State Highway 135, 5.8 miles south of Fond du Lac Post Office.           | 1.86                        | 11-15-71           | .04  | .022 |
| Do                                                                                 | NE 1/4 SW 1/4 sec.9, T.14 N., R.17 E., Fond du Lac County, at bridge on County Trunk Highway B, 5.6 miles south of Fond du Lac Post Office.       | 5.55                        | 11-16-71           | 1.13 | .204 |
| Do                                                                                 | NW 1/4 SW 1/4 sec.4, T.14 N., R.17 E., Fond du Lac County, at bridge on County Trunk Highway FFF, 4.6 miles south of Fond du Lac Post Office.     | 6.10                        | 11-16-71           | 1.35 | .221 |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

## East Branch Fond du Lac River basin low-flow investigation--Continued

| Stream                                                                             | Location                                                                                                                                      | Drainage<br>area<br>(sq mi) | <u>Measured Discharge</u> |      |      |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------|------|------|
|                                                                                    |                                                                                                                                               |                             | Date                      | Cfs  | Cfsm |
| Discharge measurements of East Branch Fond du Lac River and tributaries--Continued |                                                                                                                                               |                             |                           |      |      |
| Tributary to unnamed tributary                                                     | NW 1/4 SE 1/4 sec.4, T.14 N., R.17 E., Fond du Lac County, at bridge on County Trunk Highway FFF, 4.6 miles south of Fond du Lac Post Office. | 1.37                        | 11-16-71                  | .40  | .292 |
| East Branch Fond du Lac River                                                      | NW 1/4 SE 1/4 sec.33, T.15 N., R.17 E., Fond du Lac County, at bridge on country road, 3.8 miles south of Fond du Lac Post Office.            | 73.0                        | 11-16-71                  | 5.37 | .074 |
| East Branch Fond du Lac River tributary                                            | SW 1/4 SE 1/4 sec.34, T.15 N., R.17 E., Fond du Lac County, at bridge on State Highway 135, 3.8 miles south of Fond du Lac Post Office.       | 1.29                        | 11-15-71                  | .19  | .147 |
| Do                                                                                 | SW 1/4 NE 1/4 sec.34, T.15 N., R.17 E., Fond du Lac County, at site on State Highway 135, 3.3 miles south of Fond du Lac Post Office.         | .46                         | 11-15-71                  | 0    | 0    |
| Do                                                                                 | NW 1/4 NE 1/4 sec.34, T.15 N., R.17 E., Fond du Lac County, at site on State Highway 135, 3.0 miles south of Fond du Lac post office.         | .59                         | 11-15-71                  | 0    | 0    |
| East Branch Fond du Lac River                                                      | NE 1/4 SW 1/4 sec.22, T.15 N., R.17 E., Fond du Lac County, at County Trunk Highway VV, 1.6 miles south of Fond du Lac Post Office.           | 77.9                        | 11-17-71                  | 5.87 | 0.75 |

## DeNevue Creek basin low-flow investigation

A series of base-flow discharge measurements was made in the DeNevue Creek basin during the period November 16-18. In the week prior to the measurements, weather records indicate .01 inch precipitation fell in the area. On the first day of the measurements, about .29 inch of precipitation fell, but this amount is presumed not to have affected base-flow conditions. Based on recorded streamflow data in the region, the discharge measurements are considered to represent medium-range base flow.

| Discharge measurements of DeNevue Creek and tributaries |                                                                                                                                                           |      |          |      |      |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|------|------|
| DeNevue Creek                                           | SE 1/4 SE 1/4 sec.2, T.14 N., R.17 E., Fond du Lac County, at site on country road, 5.1 miles south of Fond du Lac Post Office.                           | 2.62 | 11-15-71 | .06  | .023 |
| Do                                                      | NE 1/4 SW 1/4 sec.25, T.15 N., R.17 E., Fond du Lac County, at site on country road, 3.0 miles southeast of Fond du Lac Post Office.                      | 5.25 | 11-16-71 | 0    | 0    |
| DeNevue Creek tributary                                 | NW 1/4 NE 1/4 sec.8, T.14 N., R.18 E., Fond du Lac County, at site on County Trunk Highway UU, 6.4 miles southeast of Fond du Lac Post Office.            | 3.41 | 11-15-71 | .39  | .114 |
| Tributary to unnamed tributary                          | SW 1/4 SE 1/4 sec.6, T.14 N., R.18 E., Fond du Lac County, at site on County Trunk Highway V, 5.7 miles southeast of Fond du Lac Post Office.             | .60  | 11-15-71 | .15  | .250 |
| DeNevue Creek tributary                                 | NW 1/4 NW 1/4 sec.6, T.14 N., R.18 E., Fond du Lac County, at site on country road, 4.7 miles southeast of Fond du Lac Post Office.                       | 9.08 | 11-16-71 | 1.16 | .128 |
| Tributary to unnamed tributary                          | NW 1/4 SW 1/4 sec.30, T.15 N., R.18 E., Fond du Lac County, at site on County Trunk Highway K, 3.5 miles southeast of Fond du Lac Post Office.            | .79  | 11-16-71 | .03  | .038 |
| DeNevue Creek                                           | NE 1/4 NE 1/4 sec.25, T.15 N., R.17 E., Fond du Lac County, at site on U.S. Highway 45, 3.1 miles southeast of Fond du Lac Post Office.                   | 16.4 | 11-16-71 | 1.18 | .072 |
| Do                                                      | SE 1/4 NE 1/4 sec.14, T.15 N., R.17 E., Fond du Lac County, at site on 4th Street, 1.3 miles east of Fond du Lac Post Office.                             | 18.4 | 11-16-71 | 1.17 | .064 |
| Do                                                      | NW 1/4 SE 1/4 sec.11, T.15 N., R.17 E., Fond du Lac County, at site on State Highway 23 (Johnson Street), 1.0 miles northeast of Fond du Lac Post Office. | 18.8 | 11-16-71 | 1.11 | .059 |
| DeNevue Creek tributary                                 | NW 1/4 NW 1/4 sec.19, T.15 N., R.18 E., Fond du Lac County, at site on County Trunk Highway V, 2.7 miles southeast of Fond du Lac Post Office.            | .77  | 11-16-71 | .26  | .338 |
| Do                                                      | SW 1/4 SW 1/4 sec.12, T.15 N., R.17 E., Fond du Lac County, at site on Division Street, 1.5 miles east of Fond du Lac Post Office.                        | 1.39 | 11-16-71 | .23  | .165 |
| Do                                                      | SW 1/4 NE 1/4 sec.11, T.15 N., R.17 E., Fond du Lac County, at site on city street, 1.1 miles northeast of Fond du Lac Post Office.                       | 1.75 | 11-16-71 | .20  | .114 |

# Formerly operated as a continuous-record gaging station.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

## Neenah Slough basin\* low-flow investigations

A series of base-flow discharge measurements was made in the Neenah Slough basin during the period November 15-18. In the week prior to the measurements, weather records indicate only a very small amount of precipitation fell in the area. On the second day of the measurements, less than .2 of an inch of precipitation fell, but this amount is presumed not to have affected base-flow conditions. Based on recorded streamflow data in the region, the discharge measurements are considered to represent medium-range base flow.

| Stream                                        | Location                                                                                                                        | Drainage<br>area<br>(sq mi) | Measured Discharge |       |      |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------|-------|------|
|                                               |                                                                                                                                 |                             | Date               | Cfs   | Cfsm |
| Discharge measurements of Fox River tributary |                                                                                                                                 |                             |                    |       |      |
| Fox River tributary No. 1                     | SE 1/4 SE 1/4 sec.2, T.19 N., R.16 E., Winnebago County, at culvert on County Trunk Highway G, 9.0 miles north of Oshkosh.      | .26                         | 11-15-71           | 0     | 0    |
| Do                                            | SW 1/4 NW 1/4 sec.13, T.19 N., R.16 E., Winnebago County, at culvert on U.S. Highway 45, 7.4 miles north of Oshkosh.            | .91                         | 11-15-71           | 0     | 0    |
| Tributary No. 1                               | NW 1/4 SW 1/4 sec.13, T.19 N., R.16 E., Winnebago County, at culvert on U.S. Highway 45, 7.0 miles north of Oshkosh.            | .26                         | 11-15-71           | 0     | 0    |
| Tributary No. 2                               | NW 1/4 NE 1/4 sec.24, T.19 N., R.16 E., Winnebago County, at culvert on County Trunk Highway GG, 6.7 miles north of Oshkosh.    | 1.59                        | 11-15-71           | 0     | 0    |
| Fox River tributary No. 1                     | SW 1/4 NW 1/4 sec.18, T.19 N., R.17 E., Winnebago County, at bridge on Wooden Shoe Road, 7.4 miles north of Oshkosh.            | 4.02                        | 11-15-71           | 0     | 0    |
| Tributary No. 3                               | SE 1/4 SW 1/4 sec.8, T.19 N., R.17 E., Winnebago County, at culvert on U.S. Highway 41, 4.0 miles southwest of Neenah.          | .70                         | 11-16-71           | 0     | 0    |
| Tributary No. 4                               | NW 1/4 NE 1/4 sec.12, T.19 N., R.16 E., Winnebago County, at culvert on County Trunk Highway G, 4.2 miles southwest of Neenah.  | .64                         | 11-15-71           | 0     | 0    |
| Do                                            | NE 1/4 NE 1/4 sec.12, T.19 N., R.16 E., Winnebago County, at culvert on country road, 4.1 miles southwest of Neenah.            | 1.17                        | 11-15-71           | 0     | 0    |
| Tributary No. 5                               | NE 1/4 NE 1/4 sec.1, T.19 N., R.16 E., Winnebago County, at culvert on Wooden Shoe Road, 3.8 miles southwest of Neenah.         | .38                         | 11-16-71           | 0     | 0    |
| Do                                            | NE 1/4 NW 1/4 sec.7, T.19 N., R.17 E., Winnebago County, at bridge on County Trunk Highway G, 4.0 miles southwest of Neenah.    | 1.16                        | 11-16-71           | 0     | 0    |
| Tributary No. 6                               | NW 1/4 NE 1/4 sec.8, T.19 N., R.17 E., Winnebago County, at culverts on U.S. Highway 41, 3.3 miles south of Neenah.             | .41                         | 11-16-71           | 0     | 0    |
| Tributary No. 7                               | SE 1/4 SE 1/4 sec.36, T.20 N., R.16 E., Winnebago County, at culverts on State Highway 114, 3.6 miles southwest of Neenah.      | .74                         | 11-16-71           | .01** | -    |
| Tributary                                     | SE 1/4 NW 1/4 sec.31, T.20 N., R.17 E., Winnebago County, at culvert on State Highway 114, 3.0 miles west of Neenah.            | .41                         | 11-16-71           | 0     | 0    |
| Tributary No. 7                               | NE 1/4 NE 1/4 sec.7, T.19 N., R.17 E., Winnebago County, at bridge on County Trunk Highway G, 3.6 miles southwest of Neenah.    | 2.17                        | 11-16-71           | .1**  | -    |
| Fox River tributary No. 1                     | SE 1/4 NW 1/4 sec.5, T.19 N., R.17 E., Winnebago County, 0.7 mile upstream from U.S. Highway 41, 2.9 miles southwest of Neenah. | 13.2                        | 11-17-71           | .57   | .043 |
| Tributary No. 9                               | SE 1/4 SE 1/4 sec.30, T.20 N., R.17 E., Winnebago County, at culverts on Pendleton Road, 2.2 miles west of Neenah.              | .48                         | 11-16-71           | 0     | 0    |
| Do                                            | SE 1/4 NE 1/4 sec.32, T.20 N., R.17 E., Winnebago County, at culvert on U.S. Highway 41, 1.6 miles southwest of Neenah.         | 1.14                        | 11-17-71           | .25   | .219 |
| Tributary No. 10                              | NE 1/4 NW 1/4 sec.33, T.20 N., R.17 E., Winnebago County, at bridge on Harrison Street, 1.1 miles southwest of Neenah.          | .67                         | 11-16-71           | .07   | .104 |
| Fox River tributary No. 1                     | NW 1/4 SW 1/4 sec.28, T.20 N., R.17 E., Winnebago County, at State Highway 114, at Neenah.                                      | 18.1                        | 11-16-71           | 4.19  | .231 |
| Tributary No. 11                              | NE 1/4 NE 1/4 sec.35, T.20 N., R.16 E., Winnebago County, at culvert on U.S. Highway 45, 4.0 miles west of Neenah.              | .21                         | 11-17-71           | 0     | 0    |
| Do                                            | NW 1/4 SW 1/4 sec.30, T.20 N., R.17 E., Winnebago County, at culvert on County Trunk Highway S, 3.0 miles west of Neenah.       | 1.27                        | 11-16-71           | 0     | 0    |
| Do                                            | NE 1/4 NE 1/4 sec.30, T.20 N., R.17 E., Winnebago County, at bridge on Pendleton Road, 1.9 miles west of Neenah.                | 1.81                        | 11-17-71           | 0     | 0    |
| Do                                            | SE 1/4 NW 1/4 sec.29, T.20 N., R.17 E., Winnebago County, at culvert on country road, 1.5 miles west of Neenah.                 | 1.96                        | 11-16-71           | 0     | 0    |
| Do                                            | SE 1/4 NE 1/4 sec.29, T.20 N., R.17 E., Winnebago County, at culvert on U.S. Highway 41, 1.3 miles west of Neenah.              | 2.46                        | 11-17-71           | 1.00a | -    |
| Do                                            | SE 1/4 NE 1/4 sec.29, T.20 N., R.17 E., Winnebago County, at bridge on Green Bay Road, 1.0 miles west of Neenah.                | 2.54                        | 11-17-71           | .24   | -    |

\* The main stream in this basin is an unnamed tributary of the Fox River and for this seepage run the area is called the Neenah Slough basin.

\*\* Field estimate.

a Most of flow from quarry sump approximately 1/2 mile above site.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

## Whitewater Creek basin low-flow investigations

A series of base-flow discharge measurements was made in the Whitewater Creek basin during the period September 24-25, 1971 (not published in 1971 report). In the week prior to the measurements, weather records at Whitewater indicate .83 inch of precipitation September 19 and .02 inch of precipitation September 20 and 23. Based on recorded streamflow data in the region, the discharge measurements are considered to represent low-range base flow.

| Stream                                                     | Location                                                                                                                                             | Drainage<br>area<br>(sq mi) | Measured Discharge |      |      |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------|------|------|
|                                                            |                                                                                                                                                      |                             | Date               | Cfs  | Cfsm |
| Discharge measurements of Whitewater Creek and tributaries |                                                                                                                                                      |                             |                    |      |      |
| Whitewater Creek                                           | SW 1/4 NW 1/4 sec.26, T.4 N., R.15 E., Walworth County, at town road at outlet of Rice Lake, 4.1 miles south of Whitewater.                          | -                           | 9-24-71            | 0    | 0    |
| Whitewater Creek tributary                                 | NW 1/4 NW 1/4 sec.27, T.4 N., R.15 E., Walworth County, at town road, 3.5 miles south of Post Office in Whitewater.                                  | -                           | 9-24-71            | 1.54 | -    |
| Bluff Creek                                                | NE 1/4 NE 1/4 sec.23, T.4 N., R.15 E., Walworth County, at County Trunk Highway P, 3.4 miles southeast of Post Office in Whitewater.                 | -                           | 9-24-71            | 9.53 | -    |
| Whitewater Creek                                           | NE 1/4 SE 1/4 sec.15, T.4 N., R.15 E., Walworth County, 2.5 miles southeast of Post Office in Whitewater.                                            | -                           | 9-24-71            | 11.6 | -    |
| Whitewater Creek                                           | NE 1/4 SW 1/4 sec.10, T.4 N., R.15 E., Walworth County, at town road, 1.5 miles southeast of Whitewater.                                             | -                           | 9-24-71            | 10.6 | -    |
| Spring Brook                                               | SE 1/4 NE 1/4 sec.22, T.4 N., R.14 E., Rock County, at bridge on State Highway 59 at junction with country road, 0.5 miles northeast of Lima Center. | -                           | 9-25-71            | 0    | 0    |
| Do                                                         | NE 1/4 SE 1/4 sec.24, T.4 N., R.14 E., Rock County, at bridge on town road, 3.0 miles southwest of Whitewater.                                       | -                           | 9-24-71            | 1.57 | -    |
| Spring Brook tributary                                     | SE 1/4 NE 1/4 sec.36, T.4 N., R.14 E., Rock County, at bridge on country road, 5.4 miles southwest of Whitewater Post Office.                        | -                           | 9-24-71            | <.01 | -    |
| Do                                                         | NE 1/4 NE 1/4 sec.31, T.4 N., R.15 E., Walworth County, at bridge on town road, 4.7 miles south of Whitewater.                                       | -                           | 9-25-71            | .079 | -    |
| Spring Brook                                               | NW 1/4 SW 1/4 sec.20, T.4 N., R.15 E., Walworth County, at culvert on country road, 3.1 mile southwest of Whitewater Post Office.                    | -                           | 9-24-71            | 1.64 | -    |
| Spring Brook tributary                                     | NE 1/4 SE 1/4 sec.18, T.4 N., R.15 E., Walworth County, at culvert on town road, 2.5 miles southwest of Whitewater.                                  | -                           | 9-24-71            | 0    | 0    |
| Spring Brook                                               | NW 1/4 SE 1/4 sec.8, T.4 N., R.15 E., Walworth County, at State Highway 89, 1.2 miles southwest of Post Office in Whitewater.                        | -                           | 9-24-71            | 2.38 | -    |
| Whitewater Creek                                           | NW 1/4 NW 1/4 sec.4, T.4 N., R.15 E., Walworth County, at bridge on private road on county line, 0.6 mile north of Post Office at Whitewater.        | -                           | 9-25-71            | 14.3 | -    |
| Whitewater Creek tributary                                 | NW 1/4 NW 1/4 sec.34, T.5 N., R.15 E., Jefferson County, at State Highway 59, 1.7 miles northeast of Post Office in Whitewater.                      | -                           | 9-25-71            | .24  | -    |
| Tributary to Whitewater Creek tributary                    | SE 1/4 SW 1/4 sec.28, T.5 N., R.15 E., Jefferson County, at County Trunk Highway U, 1.7 miles north of Post Office in Whitewater.                    | -                           | 9-25-71            | 0    | 0    |
| Galloway Creek                                             | NE 1/4 SE 1/4 sec.35, T.5 N., R.14 E., Jefferson County, at culvert on town road, 3.5 miles west of Whitewater.                                      | -                           | 9-24-71            | 0    | 0    |
| Galloway Creek tributary                                   | NW 1/4 NW 1/4 sec.36, T.5 N., R.14 E., Jefferson County, at bridge on U.S. Highway 12 and State Highway 89, 3.6 miles west of Whitewater.            | -                           | 9-24-71            | 0    | 0    |
| Do                                                         | NE 1/4 NW 1/4 sec.12, T.4 N., R.14 E., Rock County, at bridge on County Trunk N, 3.0 miles west of Whitewater.                                       | -                           | 9-24-71            | <.01 | -    |
| Do                                                         | NW 1/4 NE 1/4 sec.1, T.4 N., R.14 E., Rock County, at bridge on town road, 2.8 miles west of Whitewater.                                             | -                           | 9-25-71            | .10  | -    |
| Galloway Creek                                             | SE 1/4 NW 1/4 sec.30, T.5 N., R.15 E., Jefferson County, at County Trunk Highway N, 2.9 miles northwest of Whitewater.                               | -                           | 9-25-71            | 1.50 | -    |
| Galloway Creek tributary                                   | SE 1/4 SW 1/4 sec.24, T.5 N., R.14 E., Jefferson County, at bridge on town road, 4.0 miles northwest of Whitewater.                                  | -                           | 9-24-71            | 0    | 0    |
| Do                                                         | SE 1/4 NW 1/4 sec.30, T.5 N., R.15 E., Jefferson County, at County Trunk N, 2.8 miles northwest of Whitewater.                                       | -                           | 9-25-71            | .006 | -    |
| Do                                                         | SE 1/4 NW 1/4 sec.6, T.4 N., R.15 E., Walworth County, at bridge on U.S. Highway 12 and State Highway 89, 1.8 miles west of Whitewater.              | -                           | 9-24-71            | 0    | 0    |
| Tributary to Galloway Creek tributary                      | SW 1/4 NE 1/4 sec.6, T.4 N., R.16 E., Walworth County, at bridge on U.S. Highway 12 and State Highway 89, at Whitewater.                             | -                           | 9-25-71            | <.01 | -    |
| Galloway Creek tributary                                   | NE 1/4 SE 1/4 sec.30, T.5 N., R.15 E., Jefferson County, at culvert on County Trunk N, 2.5 miles northwest of Whitewater.                            | -                           | 9-25-71            | .58  | -    |
| Do                                                         | SE 1/4 SW 1/4 sec.19, T.5 N., R.15 E., Jefferson County, at culvert on County Trunk N, 3.4 miles northwest of Whitewater.                            | -                           | 9-25-71            | .01  | -    |

PART 2. WATER QUALITY RECORDS

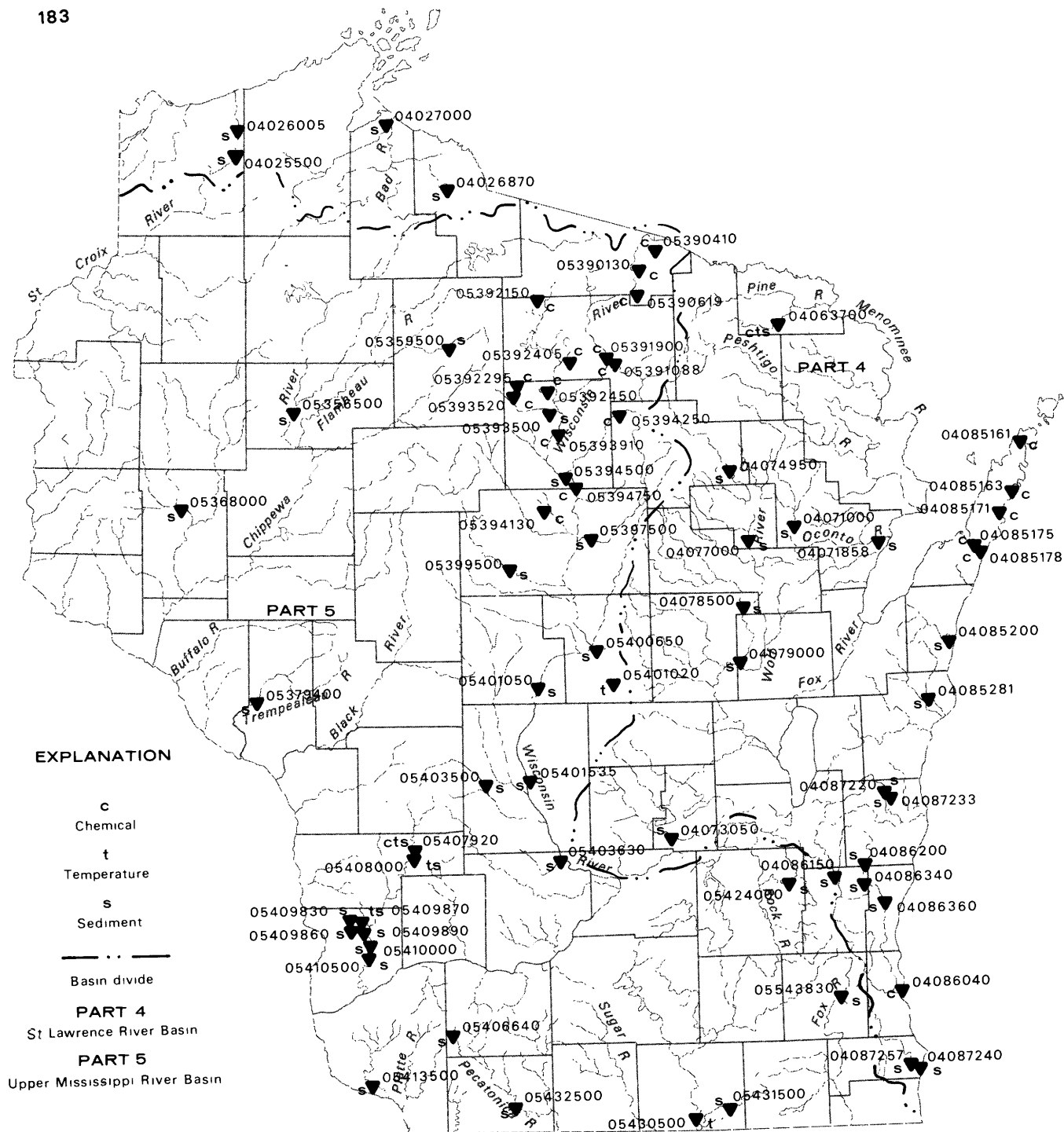


Figure 6. Map of Wisconsin showing location of stations where water-quality data were obtained.

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04063700 POPPLE RIVER NEAR FENCE, WIS.  
(Hydrologic bench-mark station)

LOCATION.--Lat 45°45'49", long 88°27'47", in NW 1/4 sec.23, T.38 N., R.16 E., Florence County, temperature recorder at gaging station, on left bank 20 ft upstream from bridge on U.S. Forest Service Road 2159, 1.8 miles downstream from Mud Creek, 2.6 miles northwest of Fence, and at mile 11.5.

DRAINAGE AREA.--131 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

Water temperatures: June 1964 to September 1972.

EXTREMES, 1971-72.--Water temperatures: Maximum, 24.0°C June 8; minimum, freezing point on many days during November to April.

EXTREMES, 1964-72.--Water temperatures: Maximum, 29.0°C July 1, 2, 1970; minimum, freezing point on many days during winter months.

REMARKS.--Miscellaneous samples of chemical data published for water years 1964-67. Laboratory analyses of biological constituents furnished by State Lab of Hygiene, Madison, Wisconsin.

## WATER QUALITY DATA. WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE  | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SI02)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | PH<br>(UNITS) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO |
|-------|-----------------------------|-------------------------|----------------------------------------------|------------------------------------------|----------------------------------------------------|---------------|------------------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|--------------------------------------------|-----------------------------------------|
| OCT.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 06... | 10.0                        | 591                     | 7.8                                          | 880                                      | 62                                                 | 6.5           | 87                                                         | 15                                               | 2.9                                                     | 1.1                                        | .1                                      |
| NOV.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 02... | 4.5                         | 161                     | 11                                           | 740                                      | 28                                                 | 7.4           | 125                                                        | 15                                               | 8.0                                                     | 1.6                                        | .1                                      |
| DEC.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 08... | 0.0                         | 83                      | 13                                           | 580                                      | 990                                                | 7.4           | 200                                                        | 18                                               | 9.7                                                     | 1.9                                        | .1                                      |
| JAN.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 12... | 0.0                         | 68                      | 14                                           | 540                                      | 2000                                               | 7.3           | 250                                                        | 27                                               | 8.4                                                     | 2.7                                        | .1                                      |
| FEB.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 10... | 0.0                         | 46                      | 12                                           | 550                                      | 69                                                 | 7.4           | 202                                                        | 22                                               | 12                                                      | 2.0                                        | .1                                      |
| MAR.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 09... | 0.0                         | 44                      | 16                                           | 430                                      | 54                                                 | 7.3           | 220                                                        | 24                                               | 12                                                      | 2.1                                        | .1                                      |
| APR.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 11... | 1.0                         | 80                      | 14                                           | 460                                      | 46                                                 | 7.2           | 161                                                        | 17                                               | 10                                                      | 1.3                                        | .1                                      |
| MAY   |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 10... | 11.0                        | 465                     | 4.6                                          | 290                                      | 22                                                 | 6.5           | 65                                                         | 6.4                                              | 4.0                                                     | .8                                         | .1                                      |
| JUNE  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 13... | 17.0                        | 61                      | 7.6                                          | 310                                      | 73                                                 | 7.3           | 175                                                        | 20                                               | 11                                                      | 1.4                                        | .1                                      |
| JULY  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 11... | 20.5                        | 40                      | 7.0                                          | 280                                      | 62                                                 | 7.6           | 202                                                        | 23                                               | 12                                                      | 1.4                                        | .1                                      |
| AUG.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 14... | 20.0                        | 95                      | 10                                           | 520                                      | 7                                                  | 7.6           | 145                                                        | 17                                               | 8.0                                                     | 1.3                                        | .1                                      |
| SEP.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |                                         |
| 11... | 14.5                        | 59.1                    | 11                                           | 710                                      | 70                                                 | 7.1           | 154                                                        | 20                                               | 8.7                                                     | 1.4                                        | .1                                      |

| DATE  | PERCENT<br>SODIUM | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO3<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(N)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) |
|-------|-------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|------------------------------------------|----------------------------------------------|---------------------------------------------------|--------------------------------------------------|-----------------------------------|----------------------------------------------------------|
| OCT.  |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 06... | 4                 | 1.2                                                    | 38                                   | 0                                 | 31                                       | 17                                           | 3.0                                               | .5                                               | .40                               | .030                                                     |
| NOV.  |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 02... | 5                 | .7                                                     | 72                                   | 0                                 | 59                                       | 7.2                                          | 2.5                                               | .1                                               | .20                               | .04                                                      |
| DEC.  |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 08... | 5                 | .6                                                     | 96                                   | 0                                 | 79                                       | 8.8                                          | 1.5                                               | .1                                               | .20                               | .03                                                      |
| JAN.  |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 12... | 5                 | .7                                                     | 106                                  | 0                                 | 87                                       | 20                                           | 2.0                                               | .2                                               | .20                               | .06                                                      |
| FEB.  |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 10... | 4                 | 1.0                                                    | 120                                  | 0                                 | 98                                       | 7.2                                          | 2.0                                               | .1                                               | .20                               | .04                                                      |
| MAR.  |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 09... | 4                 | 1.2                                                    | 126                                  | 0                                 | 103                                      | 7.4                                          | 2.0                                               | .2                                               | .80                               | .02                                                      |
| APR.  |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 11... | 3                 | .5                                                     | 94                                   | 0                                 | 77                                       | 6.2                                          | 1.0                                               | .2                                               | .30                               | .02                                                      |
| MAY   |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 10... | 5                 | .5                                                     | 30                                   | 0                                 | 25                                       | 1.8                                          | 1.0                                               | .3                                               | .20                               | .13                                                      |
| JUNE  |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 13... | 3                 | .7                                                     | 109                                  | 0                                 | 89                                       | 5.4                                          | 4.0                                               | .1                                               | .00                               | .03                                                      |
| JULY  |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 11... | 3                 | .7                                                     | 127                                  | 0                                 | 104                                      | 5.4                                          | 4.0                                               | .1                                               | .00                               | .04                                                      |
| AUG.  |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 14... | 4                 | .5                                                     | 83                                   | 0                                 | 68                                       | .8                                           | 4.0                                               | .3                                               | .10                               | .02                                                      |
| SEP.  |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                   |                                                          |
| 11... | 3                 | .6                                                     | 92                                   | 0                                 | 75                                       | 5.2                                          | 3.5                                               | .3                                               | .18                               | .05                                                      |

04063700 POPPLE RIVER NEAR FENCE, WIS.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE       | DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS-SOLVED SOLIDS (TONS PER DAY) | DIS-SOLVED SOLIDS (TONS PER AC-FT) | HARDNESS (CA, MG) (MG/L) | NON-CARBONATE HARDNESS (MG/L) | COLOR (PLATINUM-COBALT UNITS) | RIO-CHEMICAL OXYGEN DEMAND (MG/L) | IMMEDIATE COLIFORM (COL. PER 100 ML) | FECAL COLIFORM (COL. PER 100 ML) |
|------------|---------------------------------------------|------------------------------------------------|----------------------------------|------------------------------------|--------------------------|-------------------------------|-------------------------------|-----------------------------------|--------------------------------------|----------------------------------|
| OCT. 06... | 136                                         | 70                                             | 217                              | .18                                | 50                       | 19                            | 280                           | 4.9                               | 560                                  | <5                               |
| NOV. 02... | 112                                         | 83                                             | 48.7                             | .15                                | 70                       | 12                            | 120                           | 1.8                               | 610                                  | 15                               |
| DEC. 08... | 116                                         | 103                                            | 26.0                             | .16                                | 85                       | 6                             | 100                           | .6                                | 310                                  | <5                               |
| JAN. 12... | 131                                         | 131                                            | 24.1                             | .18                                | 110                      | 20                            | 80                            | --                                | 400                                  | <5                               |
| FEB. 10... | 134                                         | 119                                            | 16.6                             | .18                                | 100                      | 6                             | 30                            | 1.2                               | 40                                   | <5                               |
| MAR. 09... | 140                                         | 131                                            | 16.6                             | .19                                | 110                      | 6                             | 25                            | 1.5                               | 1000                                 | <5                               |
| APR. 11... | 116                                         | 98                                             | 25.1                             | .16                                | 84                       | 6                             | 50                            | --                                | 230                                  | <5                               |
| MAY 10...  | 70                                          | 35                                             | 87.9                             | .10                                | 32                       | 8                             | 100                           | 1.2                               | --                                   | --                               |
| JUNE 13... | 99                                          | 105                                            | 16.3                             | .13                                | 95                       | 6                             | 50                            | 6.1                               | 130                                  | 5                                |
| JULY 11... | 116                                         | 116                                            | 12.5                             | .16                                | 110                      | 3                             | 40                            | .9                                | 700                                  | 10                               |
| AUG. 14... | 125                                         | 84                                             | 32.1                             | .17                                | 76                       | 8                             | 140                           | .0                                | 300                                  | 20                               |
| SEP. 11... | 129                                         | 97                                             | 15.5                             | .18                                | 86                       | 10                            | 120                           | .9                                | 2600                                 | 5                                |

| DATE       | DIS-CHARGE (CFS) | TEMPERATURE (DEG C) | DIS-SOLVED LEAD (PB) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) | DIS-SOLVED COBALT (CO) (UG/L) | DIS-SOLVED CHROMIUM (CR) (UG/L) | DIS-SOLVED ARSENIC (AS) (UG/L) |
|------------|------------------|---------------------|-----------------------------|-----------------------------|-------------------------------|---------------------------------|--------------------------------|
| MAR. 19... | 90               | --                  | 7                           | 30                          | 0                             | 0                               | --                             |
| MAY 10...  | 465              | 11.0                | 0                           | 40                          | 0                             | 0                               | 19                             |
| AUG. 14... | 95               | 20.0                | 0                           | 10                          | 0                             | 0                               | 6                              |

| DATE       | DIS-SOLVED CADMIUM (CD) (UG/L) | DIS-SOLVED MERCURY (HG) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED NICKEL (NI) (UG/L) | DIS-SOLVED MANGANESE (MN) (UG/L) | DIS-SOLVED IRON (FE) (UG/L) |
|------------|--------------------------------|--------------------------------|-------------------------------|-------------------------------|----------------------------------|-----------------------------|
| MAR. 19... | 0                              | <.5                            | 3                             | 0                             | 76                               | 280                         |
| MAY 10...  | 0                              | <.5                            | 3                             | 0                             | 22                               | 290                         |
| AUG. 14... | 1                              | <.5                            | 9                             | 0                             | 7                                | 520                         |

| DATE       | TEMPERATURE (DEG C) | DIS-CHARGE (CFS) | TOTAL ORGANIC CARBON (C) (MG/L) | ALDRIN (UG/L) | ALDRIN IN BOTTOM DEPOSITS (UG/KG) | LINDANE (UG/L) | LINDANE IN BOTTOM DEPOSITS (UG/KG) | CHLORDANE (UG/L) | CHLORDANE IN BOTTOM DEPOSITS (UG/KG) | DDD (UG/L) | DDD IN BOTTOM DEPOSITS (UG/KG) | DDE (UG/L) |
|------------|---------------------|------------------|---------------------------------|---------------|-----------------------------------|----------------|------------------------------------|------------------|--------------------------------------|------------|--------------------------------|------------|
| OCT. 06... | 10.0                | 591              | --                              | .00           | <.2                               | .00            | <.2                                | .0               | <1.0                                 | .00        | <.2                            | .00        |
| AUG. 14... | 19.5                | 95               | 28                              | .00           | <.2                               | .00            | <.2                                | .0               | <1.0                                 | .00        | <.2                            | .00        |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04063700 POPPLE RIVER NEAR FENCE, WIS.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE          | PCB<br>(UG/L) | MALA-<br>THION<br>(UG/L) | MALA-<br>THION<br>IN BOT-<br>TOM DE-<br>POSITS<br>(UG/KG) | PARA-<br>THION<br>(UG/L) | PARA-<br>THION<br>IN BOT-<br>TOM DE-<br>POSITS<br>(UG/KG) | DI-<br>AZINON<br>(UG/L) | METHYL<br>PARA-<br>THION<br>(UG/L) | METHYL<br>PARA-<br>THION<br>IN BOT-<br>TOM DE-<br>POSITS<br>(UG/KG) | 2,4-D<br>(UG/L) | 2,4,5-T<br>(UG/L) | SILVEX<br>(UG/L) |
|---------------|---------------|--------------------------|-----------------------------------------------------------|--------------------------|-----------------------------------------------------------|-------------------------|------------------------------------|---------------------------------------------------------------------|-----------------|-------------------|------------------|
| OCT.<br>06... | <.5           | .00                      | <.2                                                       | .00                      | <.2                                                       | .00                     | .00                                | <.2                                                                 | .00             | .00               | .00              |
| AUG.<br>14... | --            | .00                      | --                                                        | .00                      | --                                                        | .00                     | .00                                | --                                                                  | .00             | .00               | .00              |

| DATE          | DDE<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | DDT<br>(UG/L) | DDT<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | DI-<br>ELDRIN<br>(UG/L) | DI-<br>ELDRIN<br>IN BOT-<br>TOM DE-<br>POSITS<br>(UG/KG) | ENDRIN<br>(UG/L) | ENDRIN<br>IN BOT-<br>TOM DE-<br>POSITS<br>(UG/KG) | HEPTA-<br>CHLOR<br>(UG/L) | HEPTA-<br>CHLOR<br>IN BOT-<br>TOM DE-<br>POSITS<br>(UG/KG) | HEPTA-<br>CHLOR<br>EPOXIDE<br>(UG/L) | HEPTA-<br>CHLOR<br>EPOXIDE<br>IN BOT-<br>TOM DE-<br>POSITS<br>(UG/KG) |
|---------------|-------------------------------------------------|---------------|-------------------------------------------------|-------------------------|----------------------------------------------------------|------------------|---------------------------------------------------|---------------------------|------------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------|
| OCT.<br>06... | .4                                              | .00           | <.2                                             | .00                     | <.2                                                      | .00              | <.2                                               | .00                       | <.2                                                        | .00                                  | <.2                                                                   |
| AUG.<br>14... | <.2                                             | .00           | <.2                                             | .00                     | <.2                                                      | .00              | <.2                                               | .00                       | <.2                                                        | .00                                  | <.2                                                                   |

| DATE          | TIME | DIS-<br>SOLVED<br>RA-226<br>(RADON<br>METHOD)<br>(PC/L) | DIS-<br>SOLVED<br>GROSS<br>ALPHA<br>AS<br>U-NAT.<br>(UG/L) | DIS-<br>SOLVED<br>GROSS<br>ALPHA<br>AS<br>U-NAT.<br>(PC/L) | DIS-<br>SOLVED<br>GROSS<br>BETA<br>AS SR90<br>/Y90<br>(PC/L) |
|---------------|------|---------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------|
| OCT.<br>06... | 1315 | .04                                                     | 2.0                                                        | .7                                                         | 8.4                                                          |

| DATE          | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | PH<br>(UNITS) |
|---------------|-----------------------------|-------------------------|------------------------------------------------------------|------------------------------------|---------------------------------|---------------|
| OCT.<br>06... | 10.0                        | 591                     | 87                                                         | 10.7                               | 95                              | 6.5           |
| NOV.<br>02... | 4.5                         | 161                     | 125                                                        | 11.6                               | 90                              | 7.4           |
| DEC.<br>08... | .0                          | 83                      | 200                                                        | 10.6                               | 73                              | 7.4           |
| JAN.<br>12... | 0.0                         | 68                      | 250                                                        | 11.5                               | 79                              | 7.3           |
| FEB.<br>10... | 0.0                         | 46                      | 202                                                        | 11.6                               | 79                              | 7.4           |
| MAR.<br>09... | 0.0                         | 44                      | 220                                                        | 10.1                               | 69                              | 7.3           |
| APR.<br>11... | 1.0                         | 80                      | 161                                                        | 13.4                               | 84                              | 7.2           |
| MAY<br>10...  | 11.0                        | 465                     | 65                                                         | 10.0                               | 81                              | 6.5           |
| JUNE<br>13... | 17.0                        | 61                      | 175                                                        | 8.5                                | 88                              | 7.3           |
| JULY<br>11... | 20.5                        | 40                      | 202                                                        | 22.0                               | 25                              | 7.6           |
| AUG.<br>14... | 20.0                        | 95                      | 145                                                        | 7.8                                | 85                              | 7.6           |
| SEP.<br>11... | 14.5                        | 59                      | 154                                                        | 9.9                                | 96                              | 7.1           |

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972  
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

|       | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH     |      |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-----------|------|
| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX       | MIN  |
| 1     | 14.5    | 12.0 | 6.0      | 4.5  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 2     | 15.0    | 14.0 | 4.5      | 4.5  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 3     | 15.5    | 14.5 | 4.5      | 3.5  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 4     | 14.5    | 13.0 | 3.5      | 3.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 5     | 13.0    | 12.0 | 3.0      | 2.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 6     | 12.0    | 10.0 | 2.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 7     | 10.0    | 9.0  | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 8     | 9.5     | 8.5  | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 9     | 9.0     | 8.5  | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 10    | 9.0     | 8.0  | 1.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 11    | 8.5     | 7.0  | 1.5      | 0.5  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 12    | 7.0     | 5.5  | 2.0      | 1.5  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 13    | 7.0     | 6.0  | 3.0      | 2.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 14    | 9.0     | 7.0  | 3.0      | 2.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 15    | 9.0     | 7.0  | 4.0      | 3.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 16    | 8.0     | 7.0  | 4.0      | 4.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 17    | 9.0     | 7.0  | 5.5      | 4.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 18    | 9.5     | 9.0  | 6.5      | 5.5  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 19    | 11.5    | 9.5  | 5.5      | 3.5  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 20    | 11.0    | 10.0 | 3.5      | 2.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 21    | 11.5    | 10.5 | 2.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 22    | 11.5    | 11.0 | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 23    | 11.0    | 10.0 | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 24    | 10.0    | 10.0 | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 25    | 10.0    | 10.0 | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 26    | 11.0    | 10.0 | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 27    | 11.0    | 11.0 | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 28    | 11.0    | 9.0  | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 29    | 9.0     | 8.0  | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
| 30    | 8.5     | 8.0  | 0.0      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | ---      | ---  | 0.0       | 0.0  |
| 31    | 8.5     | 6.0  | ---      | ---  | 0.0      | 0.0  | 0.0     | 0.0  | ---      | ---  | 0.0       | 0.0  |
| MONTH | 15.5    | 5.5  | 6.5      | 0.0  | 0.0      | 0.0  | 0.0     | 0.0  | 0.0      | 0.0  | 0.0       | 0.0  |
|       |         |      |          |      |          |      |         |      |          |      |           |      |
|       | APRIL   |      | MAY      |      | JUNE     |      | JULY    |      | AUGUST   |      | SEPTEMBER |      |
| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX       | MIN  |
| 1     | 0.0     | 0.0  | 6.0      | 5.5  | 18.0     | 14.0 | 21.5    | 18.5 | 21.0     | 18.5 | 19.5      | 18.0 |
| 2     | 0.0     | 0.0  | 5.5      | 5.5  | 20.5     | 15.5 | 21.0    | 18.0 | 21.0     | 18.5 | 19.0      | 15.5 |
| 3     | 0.0     | 0.0  | 6.5      | 5.0  | 21.5     | 16.5 | 20.0    | 16.0 | 20.5     | 18.0 | 16.0      | 13.5 |
| 4     | 0.0     | 0.0  | 8.5      | 6.0  | 21.0     | 16.5 | 16.5    | 13.5 | 19.5     | 15.5 | 15.5      | 13.0 |
| 5     | 0.0     | 0.0  | 10.0     | 7.0  | 20.5     | 16.5 | 18.5    | 14.0 | 19.5     | 16.0 | 16.5      | 14.5 |
| 6     | 0.0     | 0.0  | 10.0     | 9.5  | 20.0     | 15.0 | 18.5    | 15.0 | 19.5     | 16.5 | 16.0      | 14.0 |
| 7     | 0.0     | 0.0  | 11.5     | 9.0  | 21.5     | 16.0 | 18.0    | 15.0 | 17.0     | 14.5 | 16.5      | 13.5 |
| 8     | 0.0     | 0.0  | 12.0     | 9.5  | 24.0     | 19.0 | 17.0    | 14.0 | 17.0     | 13.5 | 16.5      | 13.5 |
| 9     | 0.0     | 0.0  | 12.0     | 10.0 | 23.5     | 18.0 | 18.0    | 15.5 | 14.0     | 11.5 | 16.0      | 13.0 |
| 10    | 0.0     | 0.0  | 12.0     | 10.0 | 19.0     | 13.5 | 20.0    | 16.0 | 14.5     | 11.5 | 15.5      | 14.0 |
| 11    | 0.0     | 0.0  | 13.5     | 10.0 | 18.0     | 14.0 | 21.0    | 19.0 | 16.0     | 14.0 | 15.5      | 14.0 |
| 12    | 0.0     | 0.0  | 14.5     | 12.0 | 16.5     | 14.5 | 21.5    | 19.0 | 19.0     | 14.5 | 15.5      | 13.5 |
| 13    | 0.0     | 0.0  | 14.5     | 12.0 | 16.5     | 14.5 | 21.5    | 19.0 | 20.5     | 16.5 | 16.5      | 15.0 |
| 14    | 0.0     | 0.0  | 13.0     | 11.5 | 18.0     | 15.5 | 21.5    | 19.0 | 20.0     | 19.0 | 16.5      | 14.0 |
| 15    | 0.0     | 0.0  | 14.0     | 11.5 | 18.0     | 14.5 | 21.0    | 18.0 | 19.5     | 16.5 | 16.5      | 13.5 |
| 16    | 0.0     | 0.0  | 16.5     | 12.0 | 17.0     | 13.0 | 20.5    | 17.0 | 20.0     | 18.0 | 16.0      | 13.0 |
| 17    | 0.0     | 0.0  | 19.0     | 14.5 | 19.0     | 13.5 | 19.0    | 16.5 | 21.5     | 19.0 | 15.5      | 13.0 |
| 18    | 0.0     | 0.0  | 20.0     | 16.0 | 20.0     | 14.5 | 20.5    | 15.5 | 21.0     | 19.5 | 15.5      | 14.5 |
| 19    | 0.0     | 0.0  | 21.0     | 16.5 | 22.0     | 16.5 | 21.0    | 18.0 | 21.0     | 19.0 | 15.5      | 13.5 |
| 20    | 0.0     | 0.0  | 19.5     | 18.0 | 22.0     | 15.5 | 21.5    | 20.0 | 20.5     | 19.0 | 15.5      | 14.5 |
| 21    | 0.0     | 0.0  | 21.0     | 16.5 | 16.0     | 13.5 | 21.5    | 20.0 | 21.0     | 19.5 | 15.5      | 13.5 |
| 22    | 0.0     | 0.0  | 22.0     | 18.0 | 18.0     | 13.5 | 23.5    | 19.5 | 21.0     | 18.5 | 13.5      | 11.0 |
| 23    | 0.0     | 0.0  | 22.0     | 18.0 | 16.5     | 13.5 | 23.5    | 21.0 | 18.5     | 16.5 | 12.0      | 10.5 |
| 24    | 2.0     | 0.0  | 22.0     | 18.5 | 18.5     | 13.0 | 23.0    | 20.0 | 18.0     | 16.0 | 13.0      | 12.0 |
| 25    | 3.5     | 0.5  | 21.0     | 18.0 | 19.0     | 15.5 | 21.5    | 19.0 | 18.0     | 16.5 | 13.0      | 10.5 |
| 26    | 4.5     | 2.0  | 22.0     | 17.0 | 21.0     | 15.5 | 20.0    | 16.5 | 18.0     | 16.0 | 10.5      | 9.5  |
| 27    | 5.0     | 3.5  | 23.0     | 17.0 | 22.0     | 18.0 | 18.5    | 16.0 | 18.5     | 15.5 | 10.0      | 9.5  |
| 28    | 6.5     | 4.5  | 23.0     | 18.5 | 21.5     | 18.0 | 18.5    | 16.5 | 19.0     | 16.0 | 10.0      | 9.5  |
| 29    | 8.0     | 5.0  | 20.5     | 15.5 | 21.5     | 18.0 | 20.0    | 16.5 | 19.0     | 16.5 | 9.5       | 9.0  |
| 30    | 6.5     | 6.0  | 16.0     | 13.5 | 22.0     | 18.5 | 22.0    | 18.0 | 20.5     | 18.0 | 9.0       | 8.0  |
| 31    | ---     | ---  | 16.0     | 12.0 | ---      | ---  | 22.0    | 20.0 | 20.0     | 19.0 | ---       | ---  |
| MONTH | 8.0     | 0.0  | 23.0     | 5.0  | 24.0     | 13.0 | 23.5    | 13.5 | 21.5     | 11.5 | 19.5      | 8.0  |
| YEAR  | 24.0    | 0.0  |          |      |          |      |         |      |          |      |           |      |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04063700 POPPLE RIVER NEAR FENCE, WIS.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE  | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|-------|------|-------------------------|------------------------------------------|-------------------------------------------------------------|
| OCT.  |      |                         |                                          |                                                             |
| 06... | 1215 | 593                     | 1                                        | 1.6                                                         |
| 11... | 1430 | 93                      | 2                                        | .50                                                         |
| NOV.  |      |                         |                                          |                                                             |
| 02... | 1250 | 192                     | 8                                        | 4.1                                                         |
| 17... | 1415 | 87                      | 4                                        | .94                                                         |
| 24... | 1730 | 85                      | 2                                        | .46                                                         |
| DEC.  |      |                         |                                          |                                                             |
| 02... | 1720 | .68                     | 6                                        | .01                                                         |
| 08... | 1230 | 67                      | 6                                        | 1.1                                                         |
| 08... | 1510 | 68                      | 4                                        | .73                                                         |
| 16... | 1330 | 94                      | 2                                        | .51                                                         |
| 22... | 0915 | 80                      | 7                                        | 1.5                                                         |
| 29... | 1230 | 72                      | 2                                        | .39                                                         |
| JAN.  |      |                         |                                          |                                                             |
| 04... | 1715 | 64                      | 31                                       | 5.4                                                         |
| 11... | 1220 | 70                      | 2                                        | .38                                                         |
| 12... | 1300 | 68                      | 6                                        | 1.1                                                         |
| 19... | 1430 | 68                      | 3                                        | .55                                                         |
| 25... | 1730 | 60                      | 2                                        | .32                                                         |
| FEB.  |      |                         |                                          |                                                             |
| 01... | 1115 | 46                      | 2                                        | .25                                                         |
| 09... | 1130 | 48                      | 3                                        | .39                                                         |
| 16... | 1710 | 49                      | 1                                        | .13                                                         |
| 23... | 1730 | 45                      | 12                                       | 1.5                                                         |
| MAR.  |      |                         |                                          |                                                             |
| 02... | 1130 | 44                      | 2                                        | .24                                                         |
| 08... | 1115 | 44                      | 1                                        | .12                                                         |
| 09... | 1200 | 44                      | 6                                        | .71                                                         |
| 11... | 1400 | 166                     | 4                                        | 1.8                                                         |
| 14... | 1730 | 45                      | 1                                        | .12                                                         |
| 20... | 1300 | 106                     | 2                                        | .57                                                         |
| 21... | 1315 | 108                     | 4                                        | 1.2                                                         |
| 22... | 1210 | 140                     | 12                                       | 4.5                                                         |
| 23... | 1330 | 140                     | 20                                       | 7.6                                                         |
| 24... | 1230 | 145                     | 6                                        | 2.3                                                         |
| 25... | 1500 | 142                     | 4                                        | 1.5                                                         |
| 26... | 1210 | 138                     | 4                                        | 1.5                                                         |
| 27... | 1315 | 132                     | 5                                        | 1.8                                                         |
| 28... | 1410 | 142                     | 3                                        | 1.2                                                         |
| 29... | 1330 | 132                     | 4                                        | 1.4                                                         |
| 30... | 1315 | 128                     | 3                                        | 1.0                                                         |
| 31... | 1510 | 116                     | 4                                        | 1.3                                                         |
| APR.  |      |                         |                                          |                                                             |
| 01... | 1820 | 114                     | 2                                        | .62                                                         |
| 02... | 1130 | 112                     | 2                                        | .60                                                         |
| 03... | 1730 | 128                     | 4                                        | 1.4                                                         |
| 04... | 1810 | 128                     | 2                                        | .69                                                         |
| 05... | 1745 | 114                     | 2                                        | .62                                                         |
| 06... | 1815 | 110                     | 2                                        | .59                                                         |
| 07... | 1845 | 110                     | 6                                        | 1.8                                                         |
| 09... | 1515 | 128                     | 4                                        | 1.4                                                         |
| 10... | 1605 | 88                      | 0                                        | .00                                                         |
| 10... | 1720 | 138                     | 4                                        | 1.5                                                         |
| 11... | 1300 | 80                      | 1                                        | .22                                                         |
| 11... | 1820 | 106                     | 6                                        | 1.7                                                         |
| 12... | 1710 | 108                     | 6                                        | 1.7                                                         |
| 13... | 1800 | 132                     | 8                                        | 2.9                                                         |
| 14... | 1720 | 176                     | 8                                        | 3.8                                                         |
| 15... | 1515 | 203                     | 12                                       | 6.6                                                         |
| 16... | 1710 | 287                     | 16                                       | 12                                                          |
| 17... | 1045 | 290                     | 18                                       | 14                                                          |
| 18... | 1545 | 376                     | 10                                       | 10                                                          |
| 19... | 1545 | 404                     | 11                                       | 12                                                          |
| 20... | 1330 | 452                     | 30                                       | 37                                                          |
| 21... | 1100 | 492                     | 8                                        | 11                                                          |
| 22... | 1500 | 392                     | 7                                        | 7.4                                                         |
| 23... | 1630 | 460                     | 5                                        | 6.2                                                         |
| 24... | 1415 | 484                     | 7                                        | 9.1                                                         |
| 25... | 1330 | 484                     | 5                                        | 6.5                                                         |
| 26... | 1015 | 500                     | 6                                        | 8.1                                                         |
| 27... | 1545 | 565                     | 4                                        | 6.1                                                         |
| 28... | 1330 | 650                     | 5                                        | 8.8                                                         |
| 29... | 1630 | 805                     | 6                                        | 13                                                          |
| 30... | 1845 | 945                     | 6                                        | 15                                                          |
| MAY   |      |                         |                                          |                                                             |
| 01... | 0745 | 985                     | 4                                        | 11                                                          |
| 01... | 1920 | 1060                    | 7                                        | 20                                                          |
| 02... | 0730 | 1110                    | 5                                        | 15                                                          |
| 02... | 1815 | 1120                    | 3                                        | 9.1                                                         |
| 03... | 0715 | 1120                    | 4                                        | 12                                                          |

04063700 POPPLE RIVER NEAR FENCE, WIS.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE  | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY) |
|-------|------|-------------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| MAY   |      |                         |                                          |                                           |                                           |                                           |                                           |
| 03... | 1915 | 1090                    | 2                                        | 5.9                                       |                                           |                                           |                                           |
| 04... | 0700 | 1040                    | 3                                        | 8.4                                       |                                           |                                           |                                           |
| 04... | 1930 | 1010                    | 2                                        | 5.5                                       |                                           |                                           |                                           |
| 05... | 0715 | 1000                    | 4                                        | 11                                        |                                           |                                           |                                           |
| 05... | 2115 | 880                     | 2                                        | 4.8                                       |                                           |                                           |                                           |
| 06... | 0815 | 830                     | 4                                        | 9.0                                       |                                           |                                           |                                           |
| 06... | 2000 | 730                     | 2                                        | 3.9                                       |                                           |                                           |                                           |
| 07... | 1110 | 700                     | 2                                        | 3.8                                       |                                           |                                           |                                           |
| 07... | 1915 | 665                     | 2                                        | 3.6                                       |                                           |                                           |                                           |
| 08... | 0700 | 615                     | 2                                        | 3.3                                       |                                           |                                           |                                           |
| 08... | 2000 | 570                     | 4                                        | 6.2                                       |                                           |                                           |                                           |
| 09... | 0700 | 528                     | 3                                        | 4.3                                       |                                           |                                           |                                           |
| 09... | 2030 | 492                     | 4                                        | 5.3                                       |                                           |                                           |                                           |
| 10... | 1335 | 420                     | 2                                        | 2.3                                       |                                           |                                           |                                           |
| JUNE  |      |                         |                                          |                                           |                                           |                                           |                                           |
| 13... | 1300 | 61                      | 6                                        | .99                                       |                                           |                                           |                                           |
| AUG.  |      |                         |                                          |                                           |                                           |                                           |                                           |
| 14... | 1100 | 95                      | 10                                       | 2.6                                       |                                           |                                           |                                           |

| DATE  | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM |
|-------|------|-------------------------|------------------------------------------|-------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| MAY   |      |                         |                                          |                                           |                                                             |                                                             |                                                             |
| 03... | 1915 | 1090                    | 2                                        | 5.9                                       | 0                                                           | 4                                                           | 9                                                           |

| DATE  | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.500 MM |
|-------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| MAY   |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 03... | 21                                                          | 34                                                          | 44                                                          | 63                                                          | 82                                                          | 100                                                         |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086040 LAKE MICHIGAN AT MILWAUKEE, WIS.

LOCATION.--Lat 43°04'56", long 87°50'44", SW 1/4 SW 1/4 NW 1/4 sec.12, T.7 N., R.22 E., Milwaukee County, at City of Milwaukee public water supply intake, 1.1 miles offshore and at mile 624.40.

DRAINAGE AREA.--67,900 sq mi. Surface area: 22,400 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1972.

REMARKS.--Samples are taken from the raw water tap in the Linwood Purification Plant Laboratory. Analyses are performed by purification plant personnel, USGS, and EPA-WQO. Drainage area and surface area provided by EPA-WQO. Station operated by FWQA during period August 1960 to September 1969.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE  | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAR-<br>BONATE<br>(CO <sub>3</sub> )<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) | CARBON-<br>ATE<br>ALKA-<br>LINITY<br>AS<br>CACO <sub>3</sub><br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) |
|-------|-----------------------------|-----------------------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|--------------------------------------------------|-------------------------------------------|
| OCT.  |                             |                                                           |                                            |                                                        |                                                   |                                                |                                                      |                                                                        |                                                           |                                                   |                                                  |                                           |
| 04... | 6.1                         | 1.7                                                       | --                                         | --                                                     | 130                                               | 0                                              | 107                                                  | 0                                                                      | 21                                                        | 7.5                                               | .2                                               | .05                                       |
| 11... | 7.5                         | 1.5                                                       | --                                         | --                                                     | 132                                               | 0                                              | 108                                                  | 0                                                                      | 19                                                        | 7.7                                               | .2                                               | --                                        |
| 18... | 9.6                         | 1.1                                                       | --                                         | --                                                     | 126                                               | 3                                              | 108                                                  | 2                                                                      | 20                                                        | 7.6                                               | .2                                               | --                                        |
| 25... | 13.0                        | .7                                                        | --                                         | --                                                     | 116                                               | 7                                              | 107                                                  | 4                                                                      | 21                                                        | 7.7                                               | .2                                               | --                                        |
| NOV.  |                             |                                                           |                                            |                                                        |                                                   |                                                |                                                      |                                                                        |                                                           |                                                   |                                                  |                                           |
| 01... | 7.6                         | 1.6                                                       | --                                         | --                                                     | 132                                               | 0                                              | 108                                                  | 0                                                                      | 21                                                        | 8.0                                               | .2                                               | .00                                       |
| 08... | 7.5                         | 1.3                                                       | --                                         | --                                                     | 130                                               | 0                                              | 107                                                  | 0                                                                      | 21                                                        | 7.6                                               | .1                                               | --                                        |
| 15... | 7.4                         | .6                                                        | --                                         | --                                                     | 118                                               | 7                                              | 108                                                  | 4                                                                      | 22                                                        | 8.4                                               | .2                                               | --                                        |
| 22... | 5.4                         | 1.7                                                       | --                                         | --                                                     | 126                                               | 3                                              | 108                                                  | 2                                                                      | 20                                                        | 7.7                                               | .1                                               | --                                        |
| 29... | 4.7                         | 1.4                                                       | --                                         | --                                                     | 123                                               | 5                                              | 109                                                  | 3                                                                      | 22                                                        | --                                                | .2                                               | --                                        |
| DEC.  |                             |                                                           |                                            |                                                        |                                                   |                                                |                                                      |                                                                        |                                                           |                                                   |                                                  |                                           |
| 06... | .4                          | 1.8                                                       | 4.5                                        | 1.1                                                    | 132                                               | 0                                              | 108                                                  | 0                                                                      | 18                                                        | 7.8                                               | .1                                               | .22                                       |
| 13... | 3.4                         | 1.7                                                       | 4.4                                        | 1.2                                                    | 123                                               | 5                                              | 109                                                  | 3                                                                      | 23                                                        | 7.9                                               | .1                                               | --                                        |
| 20... | 2.3                         | 1.7                                                       | --                                         | --                                                     | 134                                               | 0                                              | 110                                                  | 0                                                                      | 21                                                        | 8.5                                               | .2                                               | --                                        |
| 28... | 2.3                         | 1.8                                                       | --                                         | --                                                     | 130                                               | 0                                              | 107                                                  | 0                                                                      | 23                                                        | 9.8                                               | .1                                               | --                                        |
| JAN.  |                             |                                                           |                                            |                                                        |                                                   |                                                |                                                      |                                                                        |                                                           |                                                   |                                                  |                                           |
| 04... | 1.8                         | 1.7                                                       | --                                         | --                                                     | 132                                               | 0                                              | 108                                                  | 0                                                                      | 20                                                        | 8.2                                               | .2                                               | .32                                       |
| 10... | 1.9                         | 1.4                                                       | --                                         | --                                                     | 131                                               | 0                                              | 107                                                  | 0                                                                      | 21                                                        | 8.0                                               | .2                                               | --                                        |
| 17... | .2                          | 1.4                                                       | --                                         | --                                                     | 124                                               | 2                                              | 106                                                  | 1                                                                      | 21                                                        | 8.2                                               | .2                                               | --                                        |
| 24... | .5                          | 1.8                                                       | --                                         | --                                                     | 131                                               | 0                                              | 107                                                  | 0                                                                      | 23                                                        | 9.8                                               | .2                                               | --                                        |
| 31... | 1.0                         | 1.7                                                       | --                                         | --                                                     | 130                                               | 0                                              | 107                                                  | 0                                                                      | 20                                                        | 8.2                                               | .2                                               | --                                        |
| FEB.  |                             |                                                           |                                            |                                                        |                                                   |                                                |                                                      |                                                                        |                                                           |                                                   |                                                  |                                           |
| 07... | .2                          | 2.2                                                       | --                                         | --                                                     | 130                                               | 0                                              | 107                                                  | 0                                                                      | 22                                                        | 7.6                                               | .2                                               | --                                        |
| 12... | .5                          | 1.3                                                       | --                                         | --                                                     | 128                                               | 0                                              | 105                                                  | 0                                                                      | 20                                                        | 8.0                                               | .2                                               | --                                        |
| 14... | .4                          | 1.7                                                       | --                                         | --                                                     | 129                                               | 3                                              | 111                                                  | 2                                                                      | 21                                                        | 8.3                                               | .2                                               | --                                        |
| 21... | .2                          | 1.6                                                       | --                                         | --                                                     | 122                                               | 5                                              | 109                                                  | 3                                                                      | 21                                                        | 9.1                                               | .2                                               | --                                        |
| 28... | .3                          | 1.6                                                       | --                                         | --                                                     | 134                                               | 0                                              | 110                                                  | 0                                                                      | 24                                                        | 12                                                | --                                               | --                                        |
| MAR.  |                             |                                                           |                                            |                                                        |                                                   |                                                |                                                      |                                                                        |                                                           |                                                   |                                                  |                                           |
| 06... | .4                          | 1.5                                                       | --                                         | --                                                     | 133                                               | 0                                              | 109                                                  | 0                                                                      | 23                                                        | 9.2                                               | .2                                               | .16                                       |
| 13... | .4                          | 1.4                                                       | --                                         | --                                                     | 133                                               | 0                                              | 109                                                  | 0                                                                      | 22                                                        | 10                                                | .2                                               | --                                        |
| 20... | .7                          | 1.6                                                       | --                                         | --                                                     | 132                                               | 0                                              | 108                                                  | 0                                                                      | 22                                                        | 9.2                                               | .2                                               | --                                        |
| 30... | .9                          | 1.3                                                       | --                                         | --                                                     | 132                                               | 0                                              | 108                                                  | 0                                                                      | 23                                                        | 8.0                                               | .2                                               | --                                        |
| APR.  |                             |                                                           |                                            |                                                        |                                                   |                                                |                                                      |                                                                        |                                                           |                                                   |                                                  |                                           |
| 03... | 1.5                         | 1.3                                                       | --                                         | --                                                     | 133                                               | 0                                              | 109                                                  | 0                                                                      | 22                                                        | 8.3                                               | .2                                               | .30                                       |
| 10... | 1.6                         | 1.2                                                       | --                                         | --                                                     | 128                                               | 3                                              | 110                                                  | 2                                                                      | 22                                                        | 8.1                                               | .2                                               | --                                        |
| 17... | 2.6                         | 1.0                                                       | --                                         | --                                                     | 124                                               | 5                                              | 110                                                  | 3                                                                      | 20                                                        | 8.3                                               | .1                                               | --                                        |
| 24... | 3.2                         | 1.0                                                       | --                                         | --                                                     | 122                                               | 5                                              | 109                                                  | 3                                                                      | 22                                                        | 8.2                                               | .1                                               | --                                        |
| MAY   |                             |                                                           |                                            |                                                        |                                                   |                                                |                                                      |                                                                        |                                                           |                                                   |                                                  |                                           |
| 01... | 3.1                         | 1.0                                                       | --                                         | --                                                     | 126                                               | 3                                              | 108                                                  | 2                                                                      | 22                                                        | 8.2                                               | .2                                               | .25                                       |
| 08... | 3.8                         | 1.1                                                       | --                                         | --                                                     | 122                                               | 5                                              | 108                                                  | 3                                                                      | 21                                                        | 8.0                                               | .1                                               | --                                        |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

191

04086040 LAKE MICHIGAN AT MILWAUKEE, WIS.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE  | DIS-<br>SOLVED<br>AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOLVED<br>NITRATE<br>(N)<br>(MG/L) | PHOS-<br>PHATE<br>(PO4)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>AMMONIA<br>(NH4)<br>(MG/L) | DIS-<br>SOLVED<br>NITRATE<br>(NO3)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | HARD-<br>NESS<br>(CA,MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) |
|-------|-------------------------------------------------------------|--------------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------------------------------|----------------------------------------------|----------------------------------------------|------------------------------------------------------------------|----------------------------------------------------|------------------------------------|---------------------------------------------------|
| OCT.  |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                                  |                                                    |                                    |                                                   |
| 04... | .01                                                         | .23                                        | .00                               | .00                                       | .00                                                      | --                                           | 1.0                                          | 154                                                              | .21                                                | 132                                | 26                                                |
| 11... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.1                                          | 153                                                              | .21                                                | 131                                | 23                                                |
| 18... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | .70                                          | 144                                                              | .20                                                | --                                 | --                                                |
| 25... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | .40                                          | 146                                                              | .20                                                | 130                                | 24                                                |
| NOV.  |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                                  |                                                    |                                    |                                                   |
| 01... | .02                                                         | .30                                        | .00                               | .07                                       | .02                                                      | --                                           | 1.0                                          | 146                                                              | .20                                                | 131                                | 23                                                |
| 08... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | .90                                          | 141                                                              | .19                                                | 130                                | 24                                                |
| 15... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | .90                                          | 141                                                              | .19                                                | 131                                | 23                                                |
| 22... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.0                                          | 152                                                              | .21                                                | 131                                | 23                                                |
| 29... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.4                                          | 152                                                              | .21                                                | 129                                | --                                                |
| DEC.  |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                                  |                                                    |                                    |                                                   |
| 06... | .02                                                         | .20                                        | .00                               | .04                                       | .04                                                      | --                                           | 1.6                                          | 155                                                              | .21                                                | 132                                | 26                                                |
| 13... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.0                                          | 147                                                              | .20                                                | --                                 | --                                                |
| 20... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.1                                          | 151                                                              | .21                                                | 131                                | 21                                                |
| 28... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.2                                          | 149                                                              | .20                                                | 132                                | 26                                                |
| JAN.  |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                                  |                                                    |                                    |                                                   |
| 04... | .04                                                         | .25                                        | .00                               | .66                                       | .06                                                      | --                                           | 1.1                                          | 144                                                              | .20                                                | 133                                | 25                                                |
| 10... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.0                                          | 154                                                              | .21                                                | 131                                | 23                                                |
| 17... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | .90                                          | 148                                                              | .20                                                | 131                                | 26                                                |
| 24... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.2                                          | 162                                                              | .22                                                | 134                                | 27                                                |
| 31... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.0                                          | 148                                                              | .20                                                | 130                                | 24                                                |
| FEB.  |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                                  |                                                    |                                    |                                                   |
| 07... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.0                                          | 155                                                              | .21                                                | 132                                | 26                                                |
| 12... | --                                                          | .32                                        | .10                               | --                                        | --                                                       | --                                           | 1.4                                          | 143                                                              | .19                                                | 134                                | 29                                                |
| 14... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.1                                          | 140                                                              | .19                                                | 134                                | 24                                                |
| 21... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.0                                          | 142                                                              | .19                                                | 133                                | 24                                                |
| 28... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.1                                          | 156                                                              | .21                                                | 136                                | 26                                                |
| MAR.  |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                                  |                                                    |                                    |                                                   |
| 06... | .03                                                         | .20                                        | .00                               | .06                                       | .03                                                      | --                                           | 1.0                                          | 157                                                              | .21                                                | 134                                | 25                                                |
| 13... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.0                                          | 150                                                              | .20                                                | 133                                | 24                                                |
| 20... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.0                                          | 153                                                              | .21                                                | 131                                | 23                                                |
| 30... | --                                                          | --                                         | --                                | --                                        | --                                                       | --                                           | 1.1                                          | 143                                                              | .19                                                | 132                                | 24                                                |
| APR.  |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                                  |                                                    |                                    |                                                   |
| 03... | .02                                                         | .20                                        | .00                               | .02                                       | .01                                                      | .03                                          | .90                                          | 145                                                              | .20                                                | 132                                | 24                                                |
| 10... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.0                                          | 148                                                              | .20                                                | 132                                | 23                                                |
| 17... | --                                                          | .14                                        | .00                               | --                                        | --                                                       | --                                           | .60                                          | 156                                                              | .21                                                | 133                                | 23                                                |
| 24... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.1                                          | 146                                                              | .20                                                | 132                                | 24                                                |
| MAY   |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                                  |                                                    |                                    |                                                   |
| 01... | .00                                                         | .20                                        | .00                               | .02                                       | .02                                                      | .00                                          | .90                                          | 151                                                              | .21                                                | 132                                | 24                                                |
| 08... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | .80                                          | 155                                                              | .21                                                | 128                                | 20                                                |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086040 LAKE MICHIGAN AT MILWAUKEE, WIS.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE  | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TUR-<br>BID-<br>ITY<br>(JTU) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | RIO-<br>CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(MG/L) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | IMME-<br>DIATE<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | METHY-<br>LENE<br>BLUE<br>ACTIVE<br>SUB-<br>STANCE<br>(MG/L) | CARBON<br>DIOXIDE<br>(CO2)<br>(MG/L) |
|-------|----------------------------------------------|------------------------------|------------------------------------------------------------|---------------|-----------------------------------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------|
| OCT.  |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 04... | 1                                            | --                           | 272                                                        | 7.9           | .4                                                  | 8                                                             | 10.4                               | 83                              | 47                                                         | .04                                                          | 2.6                                  |
| 11... | 1                                            | 1                            | --                                                         | 8.1           | .1                                                  | 8                                                             | 10.6                               | 88                              | 36                                                         | --                                                           | --                                   |
| 18... | 1                                            | 1                            | --                                                         | 8.4           | .6                                                  | 10                                                            | 11.2                               | 97                              | 14                                                         | --                                                           | --                                   |
| 25... | 1                                            | 1                            | --                                                         | 8.4           | .6                                                  | 12                                                            | 10.2                               | 97                              | 26                                                         | --                                                           | .7                                   |
| NOV.  |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 01... | 1                                            | 1                            | 271                                                        | 8.1           | .4                                                  | 8                                                             | 10.4                               | 86                              | 16                                                         | .01                                                          | --                                   |
| 08... | 1                                            | 1                            | --                                                         | 8.2           | .2                                                  | 8                                                             | 10.9                               | 91                              | 14                                                         | --                                                           | --                                   |
| 15... | 1                                            | 2                            | --                                                         | 8.4           | .6                                                  | 6                                                             | 11.5                               | 95                              | 28                                                         | --                                                           | --                                   |
| 22... | 1                                            | 7                            | --                                                         | 8.3           | --                                                  | 8                                                             | 11.6                               | 92                              | 22                                                         | --                                                           | --                                   |
| 29... | 1                                            | 5                            | --                                                         | 8.4           | .6                                                  | 9                                                             | 12.2                               | 94                              | 22                                                         | --                                                           | --                                   |
| DEC.  |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 06... | 1                                            | 2                            | --                                                         | 8.3           | .4                                                  | 7                                                             | 12.4                               | 86                              | 44                                                         | .02                                                          | --                                   |
| 13... | 1                                            | 1                            | --                                                         | 8.4           | 1.2                                                 | 9                                                             | 12.6                               | 94                              | 90                                                         | --                                                           | --                                   |
| 20... | --                                           | 3                            | --                                                         | 8.2           | --                                                  | 11                                                            | 12.6                               | 91                              | 530                                                        | --                                                           | --                                   |
| 28... | --                                           | 1                            | --                                                         | 8.1           | --                                                  | 7                                                             | 12.5                               | 90                              | 38                                                         | --                                                           | --                                   |
| JAN.  |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 04... | 1                                            | 4                            | --                                                         | 8.3           | --                                                  | 12                                                            | 12.8                               | 92                              | 16                                                         | .16                                                          | 1.1                                  |
| 10... | 1                                            | 2                            | --                                                         | 8.2           | .1                                                  | 10                                                            | 13.0                               | 94                              | 2                                                          | --                                                           | --                                   |
| 17... | 1                                            | 6                            | --                                                         | 8.4           | .8                                                  | 11                                                            | 13.0                               | 90                              | 20                                                         | --                                                           | --                                   |
| 24... | 1                                            | 3                            | --                                                         | 8.3           | .6                                                  | 8                                                             | 13.2                               | 93                              | 14                                                         | --                                                           | --                                   |
| 31... | 1                                            | 1                            | --                                                         | 8.3           | .3                                                  | 9                                                             | --                                 | --                              | 1                                                          | --                                                           | --                                   |
| FEB.  |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 07... | 1                                            | 1                            | --                                                         | 8.3           | .7                                                  | 11                                                            | 13.5                               | 92                              | 260                                                        | --                                                           | --                                   |
| 12... | 1                                            | 11                           | --                                                         | 8.3           | .5                                                  | 9                                                             | 13.3                               | 92                              | 80                                                         | --                                                           | 1.0                                  |
| 14... | 1                                            | 1                            | --                                                         | 8.4           | .0                                                  | 12                                                            | 14.0                               | 97                              | 1                                                          | --                                                           | --                                   |
| 21... | 1                                            | 3                            | --                                                         | 8.4           | .4                                                  | 10                                                            | 13.7                               | 94                              | 1                                                          | --                                                           | --                                   |
| 28... | 1                                            | 3                            | --                                                         | 8.3           | .5                                                  | 10                                                            | 13.8                               | 96                              | 3                                                          | --                                                           | --                                   |
| MAR.  |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 06... | 1                                            | 2                            | 275                                                        | 8.3           | .6                                                  | 10                                                            | 14.0                               | 96                              | 19                                                         | .03                                                          | --                                   |
| 13... | --                                           | 3                            | --                                                         | 8.3           | .7                                                  | 12                                                            | 13.7                               | 94                              | 6                                                          | --                                                           | --                                   |
| 20... | 1                                            | 2                            | --                                                         | 8.3           | --                                                  | 10                                                            | 13.7                               | 95                              | 4                                                          | --                                                           | --                                   |
| 30... | 1                                            | 4                            | --                                                         | 8.3           | .3                                                  | 10                                                            | 13.6                               | 96                              | 13                                                         | --                                                           | --                                   |
| APR.  |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 03... | 1                                            | 4                            | --                                                         | 8.3           | .5                                                  | 11                                                            | 13.4                               | 96                              | 1                                                          | .08                                                          | --                                   |
| 10... | 1                                            | 6                            | --                                                         | 8.4           | .4                                                  | 12                                                            | 13.7                               | 99                              | 23                                                         | --                                                           | --                                   |
| 17... | 1                                            | 3                            | --                                                         | 8.4           | --                                                  | 10                                                            | 13.2                               | 97                              | 3                                                          | --                                                           | --                                   |
| 24... | 1                                            | 5                            | --                                                         | 8.4           | .3                                                  | 11                                                            | 13.3                               | 99                              | 30                                                         | --                                                           | --                                   |
| MAY   |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 01... | 1                                            | 2                            | --                                                         | 8.4           | .6                                                  | 9                                                             | 13.4                               | 100                             | 11                                                         | .04                                                          | --                                   |
| 08... | 1                                            | 1                            | --                                                         | 8.4           | .7                                                  | 11                                                            | 13.2                               | 101                             | 24                                                         | --                                                           | --                                   |

## 04086040 LAKE MICHIGAN AT MILWAUKEE, WIS.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE  | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>SOLVED<br>SILICA<br>(SiO2)<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAK-<br>BONATE<br>(CO3)<br>(MG/L) | ALKA-<br>LILITY<br>AS<br>CACO3<br>(MG/L) | CARBON-<br>ATE<br>ALKA-<br>LILITY<br>AS<br>CACO3<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | ORGANIC<br>NITRO-<br>GEN<br>(N)<br>(MG/L) |
|-------|-----------------------------|----------------------------------------------|--------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|------------------------------------------|------------------------------------------------------------|----------------------------------------------|---------------------------------------------------|--------------------------------------------------|-------------------------------------------|
| MAY   |                             |                                              |                                            |                                                        |                                      |                                   |                                          |                                                            |                                              |                                                   |                                                  |                                           |
| 15... | 5.4                         | .9                                           | --                                         | --                                                     | 126                                  | 3                                 | 108                                      | 2                                                          | 23                                           | 7.8                                               | .2                                               | --                                        |
| 22... | 5.2                         | .8                                           | --                                         | --                                                     | 113                                  | 5                                 | 109                                      | 3                                                          | 21                                           | 8.0                                               | .2                                               | --                                        |
| 30... | 9.9                         | .7                                           | --                                         | --                                                     | 119                                  | 7                                 | 109                                      | 4                                                          | 22                                           | 7.6                                               | .2                                               | --                                        |
| JUNE  |                             |                                              |                                            |                                                        |                                      |                                   |                                          |                                                            |                                              |                                                   |                                                  |                                           |
| 05... | 8.5                         | .9                                           | 4.4                                        | .8                                                     | 118                                  | 7                                 | 108                                      | 4                                                          | 19                                           | 8.2                                               | .2                                               | .26                                       |
| 12... | 7.1                         | --                                           | --                                         | --                                                     | 117                                  | 7                                 | 107                                      | 4                                                          | 19                                           | 7.8                                               | .1                                               | --                                        |
| 19... | 9.9                         | --                                           | --                                         | --                                                     | 117                                  | 8                                 | 109                                      | 5                                                          | 19                                           | 8.3                                               | .2                                               | --                                        |
| 26... | 10.0                        | .8                                           | --                                         | --                                                     | 117                                  | 8                                 | 109                                      | 5                                                          | 19                                           | 7.8                                               | .2                                               | --                                        |
| JULY  |                             |                                              |                                            |                                                        |                                      |                                   |                                          |                                                            |                                              |                                                   |                                                  |                                           |
| 03... | 11.6                        | .3                                           | --                                         | --                                                     | 118                                  | 8                                 | 110                                      | 5                                                          | 19                                           | 7.7                                               | .2                                               | 1.1                                       |
| 10... | 9.7                         | --                                           | --                                         | --                                                     | --                                   | --                                | 109                                      | --                                                         | 20                                           | --                                                | .1                                               | --                                        |
| 17... | 6.3                         | --                                           | --                                         | --                                                     | 133                                  | 0                                 | 109                                      | 0                                                          | 18                                           | 7.8                                               | .1                                               | --                                        |
| 25... | 6.6                         | --                                           | --                                         | --                                                     | 134                                  | 0                                 | 110                                      | 0                                                          | --                                           | 8.0                                               | --                                               | --                                        |
| 31... | 7.2                         | 1.3                                          | --                                         | --                                                     | 133                                  | 0                                 | 109                                      | 0                                                          | 20                                           | 8.0                                               | .2                                               | --                                        |
| AUG.  |                             |                                              |                                            |                                                        |                                      |                                   |                                          |                                                            |                                              |                                                   |                                                  |                                           |
| 07... | 9.4                         | 1.0                                          | --                                         | --                                                     | --                                   | --                                | 109                                      | --                                                         | 21                                           | 9.0                                               | .1                                               | .32                                       |
| 14... | 10.1                        | --                                           | --                                         | --                                                     | 133                                  | 0                                 | 109                                      | 0                                                          | 20                                           | 8.8                                               | --                                               | --                                        |
| 22... | 8.7                         | .9                                           | --                                         | --                                                     | 129                                  | 0                                 | 106                                      | 0                                                          | 19                                           | 8.0                                               | .1                                               | --                                        |
| 28... | 9.1                         | .8                                           | --                                         | --                                                     | 125                                  | 3                                 | 107                                      | 2                                                          | 20                                           | 8.0                                               | .1                                               | --                                        |
| SEP.  |                             |                                              |                                            |                                                        |                                      |                                   |                                          |                                                            |                                              |                                                   |                                                  |                                           |
| 05... | 16.7                        | .3                                           | --                                         | --                                                     | --                                   | --                                | --                                       | --                                                         | 19                                           | 8.5                                               | .2                                               | .25                                       |
| 11... | 7.0                         | 1.0                                          | --                                         | --                                                     | 127                                  | 0                                 | 104                                      | 0                                                          | 19                                           | 8.0                                               | --                                               | --                                        |
| 18... | 7.9                         | 1.1                                          | --                                         | --                                                     | 127                                  | 0                                 | 104                                      | 0                                                          | 19                                           | 8.8                                               | .1                                               | --                                        |
| 25... | 6.1                         | --                                           | --                                         | --                                                     | 128                                  | 0                                 | 105                                      | 0                                                          | 19                                           | 8.0                                               | .2                                               | --                                        |

| DATE  | DIS-<br>SOLVED<br>AMMONIA<br>NITRO-<br>GEN<br>(N)<br>(MG/L) | DIS-<br>SOLVED<br>NITRATE<br>(N)<br>(MG/L) | PHOS-<br>PHATE<br>(PO4)<br>(MG/L) | TOTAL<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOL-<br>VED-<br>PHOS-<br>PHORUS<br>(P)<br>(MG/L) | DIS-<br>SOLVED<br>AMMONIA<br>(NH4)<br>(MG/L) | DIS-<br>SOLVED<br>NITRATE<br>(NO3)<br>(MG/L) | DIS-<br>SOLVED<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | HARD-<br>NESS<br>(CA+MG)<br>(MG/L) | NDN-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) |
|-------|-------------------------------------------------------------|--------------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------------------------------|----------------------------------------------|----------------------------------------------|--------------------------------------------------------|----------------------------------------------------|------------------------------------|---------------------------------------------------|
| MAY   |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                        |                                                    |                                    |                                                   |
| 15... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.1                                          | 148                                                    | .20                                                | 129                                | 21                                                |
| 22... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | --                                           | 144                                                    | .20                                                | 128                                | 27                                                |
| 30... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | .80                                          | 145                                                    | .20                                                | 130                                | 21                                                |
| JUNE  |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                        |                                                    |                                    |                                                   |
| 05... | .11                                                         | .10                                        | .00                               | .04                                       | .02                                                      | --                                           | .70                                          | 146                                                    | .20                                                | 128                                | 20                                                |
| 12... | --                                                          | --                                         | --                                | --                                        | --                                                       | --                                           | --                                           | 149                                                    | .20                                                | 131                                | 24                                                |
| 19... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | --                                           | 142                                                    | .19                                                | 132                                | 22                                                |
| 26... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | .70                                          | 151                                                    | .21                                                | 132                                | 22                                                |
| JULY  |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                        |                                                    |                                    |                                                   |
| 03... | .04                                                         | .20                                        | .00                               | .17                                       | .04                                                      | .05                                          | .90                                          | 152                                                    | .21                                                | 129                                | 19                                                |
| 10... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | --                                           | 150                                                    | .20                                                | 132                                | --                                                |
| 17... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | --                                           | 152                                                    | .21                                                | 132                                | 23                                                |
| 25... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | --                                           | 144                                                    | .20                                                | 133                                | 22                                                |
| 31... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.1                                          | 156                                                    | .21                                                | 133                                | 24                                                |
| AUG.  |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                        |                                                    |                                    |                                                   |
| 07... | .02                                                         | .20                                        | .00                               | .03                                       | .02                                                      | --                                           | .90                                          | 145                                                    | .20                                                | 134                                | 25                                                |
| 14... | --                                                          | --                                         | --                                | --                                        | --                                                       | --                                           | 1.4                                          | 151                                                    | .21                                                | 134                                | 25                                                |
| 22... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | .90                                          | 153                                                    | .21                                                | 133                                | 28                                                |
| 28... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | --                                           | 159                                                    | .22                                                | 133                                | 23                                                |
| SEP.  |                                                             |                                            |                                   |                                           |                                                          |                                              |                                              |                                                        |                                                    |                                    |                                                   |
| 05... | .10                                                         | .10                                        | .00                               | .06                                       | .02                                                      | --                                           | --                                           | 157                                                    | .21                                                | --                                 | --                                                |
| 11... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | --                                           | 157                                                    | .21                                                | 133                                | 29                                                |
| 18... | --                                                          | --                                         | .00                               | --                                        | --                                                       | --                                           | 1.7                                          | 158                                                    | .21                                                | 133                                | 28                                                |
| 25... | --                                                          | --                                         | --                                | --                                        | --                                                       | --                                           | 1.5                                          | 156                                                    | .21                                                | 130                                | 25                                                |

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086040 LAKE MICHIGAN AT MILWAUKEE, WIS.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE  | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | TUR-<br>BID-<br>ITY<br>(JTU) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | PH<br>(UNITS) | BIO-<br>CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(MG/L) | CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(LOW<br>LEVEL)<br>(MG/L) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | IMME-<br>DIATE<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | METHY-<br>LENE<br>BLUE<br>ACTIVE<br>SUB-<br>STANCE<br>(MG/L) | CARBON<br>DIOXIDE<br>(CO2)<br>(MG/L) |
|-------|----------------------------------------------|------------------------------|------------------------------------------------------------|---------------|-----------------------------------------------------|---------------------------------------------------------------|------------------------------------|---------------------------------|------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------|
| MAY   |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 15... | --                                           | 2                            | --                                                         | 8.5           | .9                                                  | 12                                                            | 12.8                               | 101                             | 37                                                         | --                                                           | --                                   |
| 22... | 1                                            | 1                            | --                                                         | 8.4           | .8                                                  | 10                                                            | 12.8                               | 100                             | 41                                                         | --                                                           | --                                   |
| 30... | 1                                            | 1                            | --                                                         | 8.6           | --                                                  | 10                                                            | 12.3                               | 109                             | 12                                                         | --                                                           | --                                   |
| JUNE  |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 05... | 1                                            | 1                            | 266                                                        | 8.5           | .4                                                  | 9                                                             | 12.3                               | 105                             | 29                                                         | .03                                                          | --                                   |
| 12... | --                                           | 1                            | --                                                         | 8.5           | .6                                                  | 9                                                             | 12.4                               | 102                             | 13                                                         | --                                                           | --                                   |
| 19... | --                                           | 1                            | --                                                         | 8.5           | --                                                  | 9                                                             | 11.7                               | 103                             | 18                                                         | --                                                           | --                                   |
| 26... | --                                           | 1                            | --                                                         | 8.5           | .5                                                  | 8                                                             | 11.4                               | 101                             | 18                                                         | --                                                           | --                                   |
| JULY  |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 03... | --                                           | 1                            | 266                                                        | 8.6           | .4                                                  | 11                                                            | 11.7                               | 107                             | 18                                                         | .00                                                          | --                                   |
| 10... | 1                                            | 1                            | --                                                         | 8.5           | .5                                                  | 8                                                             | 11.3                               | 98                              | 52                                                         | --                                                           | --                                   |
| 17... | 1                                            | 1                            | --                                                         | 8.3           | .8                                                  | 9                                                             | 11.4                               | 109                             | 120                                                        | --                                                           | --                                   |
| 25... | 1                                            | 1                            | --                                                         | 8.2           | --                                                  | 9                                                             | 11.7                               | 96                              | 610                                                        | --                                                           | --                                   |
| 31... | 1                                            | 1                            | --                                                         | 8.2           | .7                                                  | 8                                                             | 11.4                               | 94                              | 36                                                         | --                                                           | --                                   |
| AUG.  |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 07... | 1                                            | 3                            | 270                                                        | 8.4           | 1.1                                                 | 9                                                             | 10.8                               | 94                              | 470                                                        | .04                                                          | --                                   |
| 14... | 1                                            | 1                            | --                                                         | 8.3           | .6                                                  | 9                                                             | 10.7                               | 95                              | 400                                                        | --                                                           | --                                   |
| 22... | 1                                            | 1                            | --                                                         | 8.2           | .7                                                  | 6                                                             | 10.9                               | 94                              | 130                                                        | --                                                           | 1.3                                  |
| 28... | 1                                            | 1                            | --                                                         | 8.5           | .5                                                  | 9                                                             | 9.1                                | 78                              | 1300                                                       | --                                                           | --                                   |
| SEP.  |                                              |                              |                                                            |               |                                                     |                                                               |                                    |                                 |                                                            |                                                              |                                      |
| 05... | --                                           | 1                            | 265                                                        | 8.5           | --                                                  | --                                                            | 9.5                                | 97                              | --                                                         | .01                                                          | --                                   |
| 11... | --                                           | 1                            | --                                                         | 7.9           | .2                                                  | 12                                                            | 10.6                               | 88                              | 1500                                                       | --                                                           | --                                   |
| 18... | 1                                            | 1                            | --                                                         | 8.0           | .5                                                  | 11                                                            | 10.4                               | 87                              | 440                                                        | --                                                           | --                                   |
| 25... | --                                           | 1                            | --                                                         | 8.0           | .6                                                  | 20                                                            | 10.7                               | 86                              | 3500                                                       | --                                                           | --                                   |

## 05401020 TENMILE CREEK DITCH 5, NEAR BANCROFT, WIS.

LOCATION.--Lat 44°18'08", long 89°32'59", in NE 1/4 sec.16, T.21 N., R.8 E., Portage County, temperature recorder at gaging station at bridge on country road, 1.3 miles west of U.S. Highway 51, and 1.7 miles southwest of Bancroft.

DRAINAGE AREA.--8.8 sq mi, approximately.

PERIOD OF RECORD.--Water temperatures: June 1965 to September 1972.

EXTREMES, 1971-72.--Water temperatures: Maximum, 17.0°C May 19, 20, 21; minimum, freezing point on many days during December to February.

EXTREMES, 1965-72.--Water temperatures: Maximum, 21.0°C July 1, 1970; minimum, freezing point on many days during winter months in 1965-67, 1970-72.

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

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

## WISCONSIN RIVER BASIN

05401020 TENMILE CREEK DITCH 5, NEAR BANCROFT, WIS.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972--Continued

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

## 05407920 KICKAPOO RIVER NEAR ROCKTON, WIS.

LOCATION.--Lat 43°36'46", long 90°37'34", in SE 1/4 SW 1/4 sec.9, T.13 N., R.2 W., Vernon County, at bridge on State Highway 131, and 2.0 miles southwest of Rockton.

DRAINAGE AREA.--264 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: November 1971 to September 1972.

Water temperatures: November 1971 to September 1972.

Sediment records: November 1971 to September 1972.

EXTREMES, 1971-72.--Water temperatures: Maximum 25.0°C August 20, 1972; minimum, freezing point on many days during winter period.

Sediment discharges: Maximum daily, 4,300 tons March 20, 1972; minimum daily, 0.65 tons February 18, March 10, 1972.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE  | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO2)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESE<br>(MN)<br>(UG/L) | PH<br>(UNITS) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG)<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) |
|-------|-----------------------------|-------------------------|----------------------------------------------|------------------------------------------|----------------------------------------------------|---------------|------------------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|--------------------------------------------|
| DEC.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |
| 02... | .0                          | --                      | 11                                           | 30                                       | 110                                                | 8.1           | 460                                                        | 59                                               | 28                                                      | 2.7                                        |
| JAN.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |
| 05... | .0                          | 102                     | 14                                           | 20                                       | 86                                                 | 7.6           | 525                                                        | 64                                               | 34                                                      | 3.2                                        |
| FEB.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |
| 03... | .0                          | 104                     | 11                                           | 10                                       | 67                                                 | 7.7           | 428                                                        | 57                                               | 24                                                      | 2.2                                        |
| MAR.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |
| 09... | .0                          | 124                     | 10                                           | 60                                       | 130                                                | 7.4           | 449                                                        | 48                                               | 31                                                      | 2.0                                        |
| APR.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |
| 07... | 6.0                         | 268                     | 7.8                                          | 480                                      | 270                                                | 8.0           | 276                                                        | 28                                               | 17                                                      | 2.7                                        |
| MAY   |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |
| 04... | 13.0                        | 161                     | 8.7                                          | 100                                      | 190                                                | 8.1           | 429                                                        | 43                                               | 32                                                      | 2.9                                        |
| JUNE  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |
| 02... | 17.0                        | 103                     | 7.4                                          | 30                                       | 86                                                 | 7.7           | 438                                                        | 48                                               | 30                                                      | 2.4                                        |
| JULY  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |
| 06... | 17.0                        | 87                      | 7.4                                          | 70                                       | 63                                                 | 8.0           | 436                                                        | 49                                               | 29                                                      | 2.3                                        |
| AUG.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |
| 09... | 14.0                        | 123                     | 11                                           | 20                                       | 44                                                 | 7.9           | 424                                                        | 54                                               | 26                                                      | 2.8                                        |
| SEP.  |                             |                         |                                              |                                          |                                                    |               |                                                            |                                                  |                                                         |                                            |
| 14... | 16.0                        | 269                     | 10                                           | 90                                       | 45                                                 | 7.0           | 360                                                        | 54                                               | 15                                                      | 2.5                                        |

| DATE  | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | PERCENT<br>SODIUM | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) | BICAR-<br>BONATE<br>(HCO3)<br>(MG/L) | CAR-<br>BONATE<br>(CO3)<br>(MG/L) | ALKA-<br>LINITY<br>AS<br>CAC03<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO4)<br>(MG/L) | DIS-<br>SOLVED<br>CHLO-<br>RIDE<br>(CL)<br>(MG/L) | DIS-<br>SOLVED<br>FLUO-<br>RIDE<br>(F)<br>(MG/L) | DIS-<br>SOLVED<br>NITRATE<br>(N)<br>(MG/L) |
|-------|-----------------------------------------|-------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------|------------------------------------------|----------------------------------------------|---------------------------------------------------|--------------------------------------------------|--------------------------------------------|
| DEC.  |                                         |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                            |
| 02... | .1                                      | 2                 | 1.4                                                    | 299                                  | 0                                 | 245                                      | 17                                           | 3.8                                               | .1                                               | .70                                        |
| JAN.  |                                         |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                            |
| 05... | .1                                      | 2                 | 1.2                                                    | 322                                  | 0                                 | 264                                      | 25                                           | 8.0                                               | .2                                               | --                                         |
| FEB.  |                                         |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                            |
| 03... | .1                                      | 2                 | 1.0                                                    | 274                                  | 0                                 | 225                                      | 15                                           | 3.0                                               | .1                                               | .60                                        |
| MAR.  |                                         |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                            |
| 09... | .1                                      | 2                 | 1.2                                                    | 272                                  | 0                                 | 223                                      | 16                                           | 4.0                                               | .2                                               | .80                                        |
| APR.  |                                         |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                            |
| 07... | .1                                      | 4                 | 5.9                                                    | 146                                  | 0                                 | 120                                      | 14                                           | 6.0                                               | .2                                               | 1.2                                        |
| MAY   |                                         |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                            |
| 04... | .1                                      | 3                 | 2.0                                                    | 268                                  | 0                                 | 220                                      | 19                                           | 3.0                                               | .2                                               | .30                                        |
| JUNE  |                                         |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                            |
| 02... | .1                                      | 2                 | 1.5                                                    | 277                                  | 0                                 | 227                                      | 15                                           | 4.0                                               | .2                                               | .30                                        |
| JULY  |                                         |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                            |
| 06... | .1                                      | 2                 | 1.5                                                    | 278                                  | 0                                 | 228                                      | 11                                           | 8.8                                               | .3                                               | .20                                        |
| AUG.  |                                         |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                            |
| 09... | .1                                      | 2                 | 2.7                                                    | 270                                  | 0                                 | 221                                      | 16                                           | 4.0                                               | .2                                               | .60                                        |
| SEP.  |                                         |                   |                                                        |                                      |                                   |                                          |                                              |                                                   |                                                  |                                            |
| 14... | .1                                      | 3                 | 6.6                                                    | 206                                  | 0                                 | 169                                      | 19                                           | 7.0                                               | .2                                               | 1.0                                        |

05407920 KICKAPOO RIVER NEAR ROCKTON, WIS.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE          | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>180 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(SUM OF<br>CONSTI-<br>TUENTS)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>DAY) | DIS-<br>SOLVED<br>SOLIDS<br>(TONS<br>PER<br>AC-FT) | HARD-<br>NESS<br>(CA, MG)<br>(MG/L) | NON-<br>CAR-<br>BONATE<br>HARD-<br>NESS<br>(MG/L) | COLOR<br>(PLAT-<br>INUM-<br>COBALT<br>UNITS) | BIO-<br>CHEM-<br>ICAL<br>OXYGEN<br>DEMAND<br>(MG/L) | IMME-<br>DIATE<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) | FECAL<br>COLI-<br>FORM<br>(COL.<br>PER<br>100 ML) |
|---------------|------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------|-------------------------------------|---------------------------------------------------|----------------------------------------------|-----------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|
| DEC.<br>02... | 276                                                              | 273                                                                 | --                                               | .38                                                | 260                                 | 17                                                | 5                                            | 1.1                                                 | 2000                                                       | 150                                               |
| JAN.<br>05... | 302                                                              | 313                                                                 | 84.6                                             | .41                                                | 300                                 | 36                                                | 10                                           | --                                                  | --                                                         | --                                                |
| FEB.<br>03... | 254                                                              | 252                                                                 | 71.0                                             | .35                                                | 240                                 | 16                                                | 7                                            | 1.0                                                 | 3000                                                       | 60                                                |
| MAR.<br>09... | 245                                                              | 251                                                                 | 82.9                                             | .33                                                | 248                                 | 24                                                | 5                                            | .8                                                  | 1500                                                       | 10                                                |
| APR.<br>07... | 177                                                              | 163                                                                 | 123                                              | .24                                                | 140                                 | 20                                                | 35                                           | 6.8                                                 | 50000                                                      | 700                                               |
| MAY<br>04...  | 228                                                              | 245                                                                 | 103                                              | .31                                                | 240                                 | 19                                                | 5                                            | 1.8                                                 | 100                                                        | <10                                               |
| JUNE<br>02... | 258                                                              | 246                                                                 | 70.0                                             | .35                                                | 240                                 | 16                                                | 4                                            | 1.5                                                 | 2500                                                       | 55                                                |
| JULY<br>06... | 246                                                              | 247                                                                 | 57.8                                             | .33                                                | 240                                 | 13                                                | 5                                            | --                                                  | --                                                         | --                                                |
| AUG.<br>09... | 246                                                              | 253                                                                 | 88.8                                             | .33                                                | 240                                 | 20                                                | 5                                            | --                                                  | 12000                                                      | 400                                               |
| SEP.<br>14... | 216                                                              | 221                                                                 | 159                                              | .29                                                | 200                                 | 26                                                | 25                                           | --                                                  | --                                                         | --                                                |

| DATE          | ALDRIN<br>(UG/L) | ALDRIN<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | LINDANE<br>(UG/L) | LINDANE<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | CHLOR-<br>DANE<br>(UG/L) | CHLOR-<br>DANE<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | DDD<br>(UG/L) | DDD<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | DDE<br>(UG/L) | DDE<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | DOT<br>(UG/L) |
|---------------|------------------|----------------------------------------------------|-------------------|-----------------------------------------------------|--------------------------|------------------------------------------------------------|---------------|-------------------------------------------------|---------------|-------------------------------------------------|---------------|
| JAN.<br>05... | .00              | .0                                                 | .00               | .0                                                  | E.0                      | E.0                                                        | .00           | .0                                              | .00           | .0                                              | .00           |
| APR.<br>06... | .00              | .0                                                 | .00               | .0                                                  | E.0                      | E.0                                                        | .00           | .0                                              | .00           | .0                                              | .00           |

| DATE          | DI-<br>AZINON<br>(UG/L) | METHYL<br>PARA-<br>THION<br>(UG/L) | 2,4-D<br>(UG/L) | 2,4-D<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | 2,4,5-T<br>(UG/L) | 2,4,5-T<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | SILVEX<br>(UG/L) | SILVEX<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | TRI-<br>THION<br>(UG/L) | METHYL<br>TRI-<br>THION<br>(UG/L) |
|---------------|-------------------------|------------------------------------|-----------------|---------------------------------------------------|-------------------|-----------------------------------------------------|------------------|----------------------------------------------------|-------------------------|-----------------------------------|
| JAN.<br>05... | .00                     | .00                                | .00             | .0                                                | .00               | .0                                                  | .00              | .0                                                 | .00                     | .00                               |
| APR.<br>06... | .00                     | .00                                | .00             | --                                                | .00               | --                                                  | .00              | --                                                 | .00                     | .00                               |

| DATE          | DDT<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | DI-<br>ELDRIN<br>(UG/L) | DI-<br>ELDRIN<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | ENDRIN<br>(UG/L) | ENDRIN<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | ETHION<br>(UG/L) | HEPTA-<br>CHLOR<br>(UG/L) | HEPTA-<br>CHLOR<br>IN<br>BOTTOM<br>DE-<br>POSITS<br>(UG/KG) | MALA-<br>THION<br>(UG/L) | PARA-<br>THION<br>(UG/L) |
|---------------|-------------------------------------------------|-------------------------|-----------------------------------------------------------|------------------|----------------------------------------------------|------------------|---------------------------|-------------------------------------------------------------|--------------------------|--------------------------|
| JAN.<br>05... | .0                                              | .00                     | .0                                                        | .00              | .0                                                 | .00              | .00                       | .0                                                          | .00                      | .00                      |
| APR.<br>06... | .0                                              | .00                     | .0                                                        | .00              | .0                                                 | .00              | .00                       | .0                                                          | .00                      | .00                      |

E Estimated value.

05407920 KICKAPOO RIVER NEAR ROCKTON, WIS.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE  | TIME | TEMPER-<br>ATURE<br>(DEG C) | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MHOS) | DIS-<br>SOLVED<br>OXYGEN<br>(MG/L) | PER-<br>CENT<br>SATUR-<br>ATION | PH<br>(UNITS) | TUR-<br>BID-<br>ITY<br>(JTU) |
|-------|------|-----------------------------|------------------------------------------------------------|------------------------------------|---------------------------------|---------------|------------------------------|
| NOV.  |      |                             |                                                            |                                    |                                 |               |                              |
| 24... | 1415 | 1.5                         | 440                                                        | 12.4                               | 89                              | 8.0           | 8                            |
| DEC.  |      |                             |                                                            |                                    |                                 |               |                              |
| 02... | 1100 | .0                          | 470                                                        | 13.2                               | 90                              | 8.1           | 4                            |
| 08... | 1200 | 4.0                         | 450                                                        | 12.6                               | 96                              | 7.9           | 6                            |
| 16... | 1330 | 1.0                         | 320                                                        | 5.4                                | 38                              | 8.2           | 45                           |
| 22... | 0900 | .0                          | 450                                                        | 6.6                                | 45                              | 8.5           | 9                            |
| 31... | 0900 | .0                          | 450                                                        | 11.5                               | 79                              | 8.4           | 6                            |
| JAN.  |      |                             |                                                            |                                    |                                 |               |                              |
| 05... | 1400 | .0                          | 520                                                        | 11.0                               | 78                              | 7.6           | 5                            |
| 12... | 1200 | .5                          | 440                                                        | 10.1                               | 69                              | 8.4           | 6                            |
| 19... | 1630 | .0                          | 405                                                        | 9.1                                | 62                              | 7.4           | 4                            |
| 27... | 1000 | .0                          | 420                                                        | 9.1                                | 62                              | 8.2           | 5                            |
| FEB.  |      |                             |                                                            |                                    |                                 |               |                              |
| 03... | 1000 | .0                          | 430                                                        | 9.6                                | 66                              | 8.1           | 7                            |
| 09... | 1100 | .0                          | 450                                                        | 10.3                               | 71                              | 8.0           | 2                            |
| 16... | 1330 | .0                          | 430                                                        | 10.6                               | 73                              | 7.9           | 3                            |
| 24... | 1130 | .0                          | 430                                                        | 7.6                                | 52                              | 7.8           | 3                            |
| 29... | 1200 | .0                          | 440                                                        | 6.8                                | 47                              | 8.8           | 8                            |
| MAR.  |      |                             |                                                            |                                    |                                 |               |                              |
| 09... | 0930 | .0                          | 440                                                        | 12.4                               | 85                              | 7.1           | 5                            |
| 16... | 1130 | 1.0                         | 260                                                        | 11.3                               | 80                              | 8.4           | 27                           |
| 30... | 1200 | 3.0                         | 440                                                        | 12.6                               | 93                              | 8.6           | 7                            |
| APR.  |      |                             |                                                            |                                    |                                 |               |                              |
| 07... | 1030 | 6.0                         | 276                                                        | 11.1                               | 88                              | 8.0           | 30                           |
| 13... | 0900 | 3.5                         | 200                                                        | 11.0                               | 82                              | 8.6           | 320                          |
| 21... | 1030 | 8.5                         | 420                                                        | 10.4                               | 89                              | 8.0           | 20                           |
| 27... | 0900 | 9.5                         | 460                                                        | 11.1                               | 97                              | 8.6           | 9                            |
| MAY   |      |                             |                                                            |                                    |                                 |               |                              |
| 04... | 1200 | 13.0                        | 470                                                        | 11.2                               | 106                             | 8.3           | 8                            |
| 10... | 1130 | 13.0                        | 440                                                        | 11.2                               | 106                             | 8.2           | 3                            |
| 18... | 1930 | 21.5                        | 435                                                        | 10.0                               | 112                             | 8.1           |                              |
| 24... | 0930 | 22.0                        | 450                                                        | 10.0                               | 114                             | 8.0           |                              |
| JUNE  |      |                             |                                                            |                                    |                                 |               |                              |
| 02... | 1000 | 17.0                        | 470                                                        | 8.7                                | 90                              | 8.2           | 3                            |
| 08... | 1030 | 18.5                        | 440                                                        | 8.3                                | 88                              | 8.1           | 15                           |
| 15... | 1115 | 18.5                        | 390                                                        | 9.3                                | 102                             | 8.3           | 40                           |
| 21... | 1245 | 16.5                        | 450                                                        | 9.6                                | 98                              | 8.1           | 4                            |
| 29... | 1200 | 21.0                        | 420                                                        | 7.9                                | 89                              | 7.6           | 20                           |
| JULY  |      |                             |                                                            |                                    |                                 |               |                              |
| 06... | 0945 | 17.0                        | 436                                                        | 10.6                               | 110                             | 8.0           |                              |
| 07... | --   | --                          | 330                                                        | --                                 | --                              | --            | 5                            |
| 14... | 1245 | 17.0                        | 420                                                        | 8.4                                | 87                              | 8.1           |                              |
| 15... | 1100 | 18.5                        | 390                                                        | 9.3                                | 110                             | 8.3           |                              |
| 18... | 1000 | 18.0                        | 380                                                        | 7.5                                | 79                              | 7.7           | 50                           |
| 28... | 0945 | 16.5                        | 410                                                        | 8.2                                | 84                              | 8.2           | 30                           |
| AUG.  |      |                             |                                                            |                                    |                                 |               |                              |
| 03... | 1300 | 19.0                        | 450                                                        | 8.5                                | 90                              | 7.9           | 10                           |
| 09... | 0900 | 14.0                        | 424                                                        | 9.0                                | 86                              | 7.9           | 6                            |
| 17... | 0945 | 22.0                        | 440                                                        | 7.0                                | 80                              | 7.8           | 10                           |
| 25... | 0930 | 17.0                        | 370                                                        | 8.6                                | 89                              | 7.7           | 20                           |
| 30... | 1230 | 20.5                        | 415                                                        | 7.2                                | 79                              | 8.5           | 15                           |
| SEP.  |      |                             |                                                            |                                    |                                 |               |                              |
| 06... | 1000 | 16.5                        | 370                                                        | 8.8                                | 90                              | 8.1           | 15                           |
| 14... | 1000 | 16.0                        | 300                                                        | 8.4                                | 84                              | 7.9           | 150                          |
| 22... | 1300 | 14.5                        | 340                                                        | 9.1                                | 88                              | 8.1           | 9                            |
| 29... | 1135 | 12.0                        | 205                                                        | 8.5                                | 79                              | 7.8           | 130                          |

## WISCONSIN RIVER BASIN

05407920 KICKAPOO RIVER NEAR ROCKTON, WIS.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

Read once daily

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| 1   | --- | --- | --- | --- | 0.5 | 0.5 | 4.0  | 14.0 | 12.0 | ---  | 18.5 | 18.5 |
| 2   | --- | --- | --- | 1.0 | 0.5 | 0.5 | 3.5  | 11.5 | 15.5 | 20.0 | 18.0 | 17.0 |
| 3   | --- | --- | --- | 0.5 | 0.0 | 0.5 | 3.5  | 14.5 | 18.0 | 17.0 | 18.0 | 14.5 |
| 4   | --- | --- | --- | --- | 0.5 | 0.5 | 3.5  | 13.0 | ---  | ---  | 19.5 | 14.0 |
| 5   | --- | --- | --- | 0.0 | 0.5 | 0.5 | 6.0  | 14.0 | 19.0 | 14.5 | 14.5 | 14.5 |
| 6   | --- | --- | --- | 0.0 | 0.5 | 0.5 | 6.0  | ---  | 17.0 | 14.5 | 18.0 | 15.5 |
| 7   | --- | --- | 4.0 | 1.0 | 0.5 | 0.5 | 1.5  | 11.0 | 17.0 | 15.5 | 18.5 | 18.0 |
| 8   | --- | --- | 4.5 | 1.0 | 0.5 | 0.5 | 4.5  | 14.5 | 17.0 | 14.0 | 16.0 | 16.0 |
| 9   | --- | --- | 4.5 | 1.0 | 0.5 | 0.0 | 3.5  | ---  | 19.5 | ---  | 12.0 | 14.0 |
| 10  | --- | --- | 4.5 | 1.0 | 0.5 | 0.5 | 9.0  | 13.5 | 13.0 | 18.5 | 14.0 | 15.0 |
| 11  | --- | --- | 3.5 | 1.5 | 0.5 | 0.5 | 8.0  | 16.5 | ---  | 19.5 | ---  | 16.0 |
| 12  | --- | --- | 3.0 | 0.5 | 0.5 | 1.5 | ---  | 18.0 | 16.5 | ---  | 18.0 | 15.5 |
| 13  | --- | --- | 2.0 | 0.0 | 0.5 | 1.0 | 3.5  | ---  | 19.0 | ---  | ---  | 16.5 |
| 14  | --- | --- | 1.0 | 0.5 | 0.5 | 2.0 | 5.5  | ---  | 20.5 | 20.0 | 23.0 | 15.0 |
| 15  | --- | --- | 2.0 | 0.5 | 0.5 | 1.0 | 5.5  | 19.0 | 20.5 | 18.0 | 20.0 | 13.5 |
| 16  | --- | --- | 2.0 | 0.5 | 0.5 | 1.0 | 9.0  | 20.0 | 20.5 | 18.5 | 21.0 | 14.5 |
| 17  | --- | --- | 0.5 | 0.5 | 0.5 | 2.0 | 13.0 | 21.0 | 13.5 | 18.5 | 21.5 | 16.0 |
| 18  | --- | --- | 0.5 | 0.5 | 0.5 | 1.0 | 14.0 | 21.5 | ---  | 17.0 | 22.0 | 17.0 |
| 19  | --- | 7.0 | 0.5 | 0.5 | 0.5 | 1.5 | 10.0 | 23.0 | 16.5 | 17.0 | 24.0 | ---  |
| 20  | --- | 5.5 | 0.5 | 0.5 | 0.5 | 1.5 | 11.5 | 18.5 | 19.5 | 20.0 | 25.0 | 18.5 |
| 21  | --- | 3.5 | 0.5 | 0.5 | 0.5 | --- | 8.5  | 18.0 | 14.0 | 21.5 | 21.0 | 16.5 |
| 22  | --- | 1.0 | 0.0 | 0.5 | 0.5 | 1.5 | 5.0  | 18.5 | 13.5 | 23.0 | 20.0 | 12.5 |
| 23  | --- | 0.5 | 0.5 | 0.5 | 0.5 | 3.0 | 5.5  | 18.0 | 13.5 | 21.0 | 18.5 | ---  |
| 24  | --- | --- | 1.0 | 0.5 | --- | 3.0 | 10.0 | 18.5 | 15.0 | 21.0 | 16.5 | 15.0 |
| 25  | --- | 1.5 | 1.0 | 0.5 | 0.5 | 4.5 | 12.0 | 18.0 | 15.5 | 19.5 | 17.0 | 16.0 |
| 26  | --- | 2.0 | 1.0 | 0.5 | 0.5 | 3.0 | ---  | 18.5 | 20.0 | ---  | 16.5 | ---  |
| 27  | --- | 2.0 | 1.0 | 0.0 | 0.5 | 3.0 | 9.5  | 17.0 | 24.0 | 16.0 | 18.0 | ---  |
| 28  | --- | 1.5 | 1.0 | --- | 0.5 | 4.0 | 11.5 | 20.0 | 20.5 | 16.0 | 16.5 | 13.5 |
| 29  | --- | 1.5 | 1.5 | --- | 0.5 | 3.0 | 12.0 | 19.5 | 17.0 | 16.0 | 18.5 | 13.0 |
| 30  | --- | 1.0 | 1.5 | 0.5 | --- | 3.0 | ---  | 15.0 | 18.5 | ---  | 20.5 | 8.5  |
| 31  | --- | --- | 1.0 | 0.5 | --- | 4.0 | ---  | 11.0 | ---  | 19.5 | 20.0 | ---  |

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | NOVEMBER                   |                                 |                                     | DECEMBER                   |                                 |                                     |
|-----|----------------------------|---------------------------------|-------------------------------------|----------------------------|---------------------------------|-------------------------------------|
|     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
| 1   | --                         | --                              | --                                  | --                         | --                              | --                                  |
| 2   | --                         | --                              | --                                  | --                         | --                              | --                                  |
| 3   | --                         | --                              | --                                  | --                         | --                              | --                                  |
| 4   | --                         | --                              | --                                  | --                         | --                              | --                                  |
| 5   | --                         | --                              | --                                  | --                         | --                              | --                                  |
| 6   | --                         | --                              | --                                  | --                         | --                              | --                                  |
| 7   | --                         | --                              | --                                  | 128                        | 20                              | 6.9                                 |
| 8   | --                         | --                              | --                                  | 137                        | 18                              | 6.7                                 |
| 9   | --                         | --                              | --                                  | 146                        | 20                              | 7.9                                 |
| 10  | --                         | --                              | --                                  | 147                        | 26                              | 10                                  |
| 11  | --                         | --                              | --                                  | 163                        | 30                              | 13                                  |
| 12  | --                         | --                              | --                                  | --                         | --                              | --                                  |
| 13  | --                         | --                              | --                                  | 145                        | 12                              | 4.7                                 |
| 14  | --                         | --                              | --                                  | 170                        | 16                              | 7.3                                 |
| 15  | --                         | --                              | --                                  | 261                        | 182                             | 128                                 |
| 16  | --                         | --                              | --                                  | 272                        | 143                             | 105                                 |
| 17  | --                         | --                              | --                                  | --                         | --                              | --                                  |
| 18  | --                         | --                              | --                                  | --                         | --                              | --                                  |
| 19  | 384                        | 24                              | 25                                  | --                         | --                              | --                                  |
| 20  | 260                        | 15                              | 11                                  | --                         | --                              | --                                  |
| 21  | 242                        | 8                               | 5.2                                 | --                         | --                              | --                                  |
| 22  | 307                        | 10                              | 8.3                                 | 147                        | 4                               | 1.6                                 |
| 23  | 322                        | 8                               | 7.0                                 | --                         | --                              | --                                  |
| 24  | 118                        | 34                              | 11                                  | --                         | --                              | --                                  |
| 25  | 256                        | 20                              | 14                                  | --                         | --                              | --                                  |
| 26  | 263                        | 25                              | 18                                  | --                         | --                              | --                                  |
| 27  | 139                        | 43                              | 16                                  | --                         | --                              | --                                  |
| 28  | 125                        | 14                              | 4.7                                 | --                         | --                              | --                                  |
| 29  | 128                        | 42                              | 15                                  | --                         | --                              | --                                  |
| 30  | 125                        | 14                              | 4.7                                 | --                         | --                              | --                                  |
| 31  | --                         | --                              | --                                  | --                         | --                              | --                                  |

05407920 KICKAPOO RIVER NEAR ROCKTON, WIS.--Continued

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | JANUARY                    |                                      |                                     | FEBRUARY                   |                                      |                                     | MARCH                      |                                      |                                     |
|-----|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
|     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
| 1   | --                         | --                                   | --                                  | 105                        | 10                                   | 2.8                                 | 115                        | 12                                   | 3.7                                 |
| 2   | 110                        | 10                                   | 3.0                                 | 105                        | 12                                   | 3.4                                 | 112                        | 6                                    | 1.8                                 |
| 3   | --                         | --                                   | --                                  | 104                        | 7                                    | 2.0                                 | 112                        | 8                                    | 2.4                                 |
| 4   | --                         | --                                   | --                                  | 104                        | 10                                   | 2.8                                 | 112                        | 6                                    | 1.8                                 |
| 5   | 102                        | 16                                   | 4.4                                 | 103                        | 12                                   | 3.3                                 | 120                        | 4                                    | 1.3                                 |
| 6   | 106                        | 18                                   | 5.2                                 | 104                        | 14                                   | 3.9                                 | 128                        | 5                                    | 1.7                                 |
| 7   | 110                        | --                                   | --                                  | 105                        | --                                   | --                                  | 128                        | 2                                    | .69                                 |
| 8   | 118                        | 15                                   | 4.8                                 | 105                        | 23                                   | 6.5                                 | 124                        | 2                                    | .67                                 |
| 9   | 120                        | 24                                   | 7.8                                 | 106                        | 4                                    | 1.1                                 | 124                        | 2                                    | .67                                 |
| 10  | 122                        | 10                                   | 3.3                                 | 107                        | 5                                    | 1.4                                 | 120                        | 2                                    | .65                                 |
| 11  | 120                        | 18                                   | 5.8                                 | 108                        | 6                                    | 1.7                                 | 130                        | 2                                    | .70                                 |
| 12  | 118                        | 16                                   | 5.1                                 | 110                        | 4                                    | 1.2                                 | 140                        | 26                                   | 9.8                                 |
| 13  | 112                        | 54                                   | 16                                  | 112                        | 9                                    | 2.7                                 | 180                        | 31                                   | 15                                  |
| 14  | --                         | --                                   | --                                  | 118                        | 5                                    | 1.6                                 | 250                        | 203                                  | 137                                 |
| 15  | --                         | --                                   | --                                  | 122                        | 4                                    | 1.3                                 | 300                        | 187                                  | 151                                 |
| 16  | 105                        | 88                                   | 25                                  | 124                        | 6                                    | 2.0                                 | 450                        | 217                                  | 264                                 |
| 17  | 115                        | 71                                   | 22                                  | 122                        | 4                                    | 1.3                                 | 580                        | 241                                  | 377                                 |
| 18  | 125                        | 28                                   | 4.5                                 | 120                        | 2                                    | .65                                 | 760                        | 524                                  | 1080                                |
| 19  | 142                        | 22                                   | 8.4                                 | 114                        | 8                                    | 2.5                                 | 960                        | 734                                  | 1900                                |
| 20  | 135                        | 14                                   | 5.1                                 | 110                        | --                                   | --                                  | 1560                       | 1020                                 | 4300                                |
| 21  | 130                        | 18                                   | 6.3                                 | 108                        | 9                                    | 2.6                                 | 1920                       | 544                                  | 2820                                |
| 22  | 122                        | 17                                   | 5.6                                 | 106                        | 6                                    | 1.7                                 | 1470                       | 677                                  | 2690                                |
| 23  | 120                        | 14                                   | 4.5                                 | 106                        | 7                                    | 2.0                                 | 258                        | 134                                  | 93                                  |
| 24  | 118                        | 18                                   | 5.7                                 | 108                        | 6                                    | 1.7                                 | 229                        | 65                                   | 40                                  |
| 25  | 114                        | --                                   | --                                  | 112                        | 5                                    | 1.5                                 | 229                        | 72                                   | 45                                  |
| 26  | 110                        | --                                   | --                                  | 120                        | 10                                   | 3.2                                 | 232                        | 75                                   | 47                                  |
| 27  | 108                        | --                                   | --                                  | 122                        | 5                                    | 1.6                                 | 176                        | 34                                   | 16                                  |
| 28  | 107                        | --                                   | --                                  | 120                        | 5                                    | 1.6                                 | 172                        | 43                                   | 20                                  |
| 29  | 107                        | --                                   | --                                  | 122                        | 10                                   | 3.3                                 | 179                        | 34                                   | 16                                  |
| 30  | 107                        | 14                                   | 4.0                                 | --                         | --                                   | --                                  | 161                        | 24                                   | 10                                  |
| 31  | 106                        | 22                                   | 6.3                                 | --                         | --                                   | --                                  | 159                        | 31                                   | 13                                  |
| DAY | APRIL                      |                                      |                                     | MAY                        |                                      |                                     | JUNE                       |                                      |                                     |
|     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
| 1   | 162                        | 30                                   | 13                                  | 218                        | 98                                   | 58                                  | 104                        | 32                                   | 9.0                                 |
| 2   | 151                        | 31                                   | 13                                  | 216                        | 67                                   | 39                                  | 103                        | 42                                   | 12                                  |
| 3   | 154                        | 22                                   | 9.1                                 | 182                        | 40                                   | 20                                  | 99                         | 46                                   | 12                                  |
| 4   | 147                        | 20                                   | 7.9                                 | 161                        | 32                                   | 14                                  | --                         | --                                   | --                                  |
| 5   | 154                        | 35                                   | 15                                  | 150                        | 26                                   | 11                                  | 107                        | 80                                   | 23                                  |
| 6   | 244                        | 129                                  | 85                                  | --                         | --                                   | --                                  | 118                        | 109                                  | 35                                  |
| 7   | 268                        | 395                                  | 286                                 | 144                        | 20                                   | 7.8                                 | 101                        | 87                                   | 24                                  |
| 8   | 163                        | 74                                   | 33                                  | 131                        | 19                                   | 6.7                                 | 100                        | 93                                   | 25                                  |
| 9   | 210                        | 86                                   | 49                                  | --                         | --                                   | --                                  | 100                        | 96                                   | 26                                  |
| 10  | 177                        | 61                                   | 29                                  | 124                        | 22                                   | 7.4                                 | 108                        | 92                                   | 27                                  |
| 11  | 282                        | 278                                  | 212                                 | 121                        | 22                                   | 7.2                                 | --                         | --                                   | --                                  |
| 12  | --                         | --                                   | --                                  | 124                        | 26                                   | 8.7                                 | 103                        | 85                                   | 24                                  |
| 13  | 1380                       | 2150                                 | 8010                                | --                         | --                                   | --                                  | 120                        | 124                                  | 40                                  |
| 14  | 336                        | 294                                  | 267                                 | --                         | --                                   | --                                  | 145                        | 160                                  | 63                                  |
| 15  | 310                        | 202                                  | 169                                 | 143                        | 42                                   | 16                                  | 162                        | 174                                  | 76                                  |
| 16  | 324                        | 230                                  | 201                                 | 125                        | 30                                   | 10                                  | 119                        | 112                                  | 36                                  |
| 17  | 270                        | 149                                  | 109                                 | 116                        | 30                                   | 9.4                                 | 113                        | 82                                   | 25                                  |
| 18  | 239                        | 131                                  | 85                                  | 114                        | --                                   | --                                  | --                         | --                                   | --                                  |
| 19  | 220                        | 92                                   | 55                                  | 112                        | 30                                   | 9.1                                 | 106                        | 89                                   | 25                                  |
| 20  | 190                        | 60                                   | 31                                  | 111                        | 35                                   | 10                                  | 107                        | 114                                  | 33                                  |
| 21  | 307                        | 72                                   | 60                                  | 111                        | 30                                   | 9.0                                 | 108                        | 77                                   | 22                                  |
| 22  | 678                        | 786                                  | 1440                                | 109                        | 34                                   | 10                                  | 104                        | 78                                   | 22                                  |
| 23  | 310                        | 124                                  | 104                                 | 105                        | 34                                   | 9.6                                 | 100                        | 66                                   | 18                                  |
| 24  | 224                        | 96                                   | 58                                  | 103                        | 36                                   | 10                                  | 100                        | 63                                   | 17                                  |
| 25  | 195                        | 64                                   | 34                                  | 102                        | 40                                   | 11                                  | 99                         | 68                                   | 18                                  |
| 26  | --                         | --                                   | --                                  | 102                        | 32                                   | 8.8                                 | 98                         | 39                                   | 10                                  |
| 27  | 168                        | 54                                   | 24                                  | 101                        | 32                                   | 8.7                                 | 97                         | 26                                   | 6.8                                 |
| 28  | 157                        | 44                                   | 19                                  | 98                         | 22                                   | 5.8                                 | 100                        | 34                                   | 9.2                                 |
| 29  | 162                        | 38                                   | 17                                  | 106                        | 30                                   | 8.6                                 | 121                        | 150                                  | 49                                  |
| 30  | 157                        | 38                                   | 16                                  | 120                        | 68                                   | 22                                  | 113                        | 84                                   | 26                                  |
| 31  | --                         | --                                   | --                                  | 116                        | 40                                   | 13                                  | --                         | --                                   | --                                  |

## WISCONSIN RIVER BASIN

05407920 KICKAPOO RIVER NEAR ROCKTON, WIS.--Continued

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | JULY                       |                                 |                                     | AUGUST                     |                                 |                                     | SEPTEMBER                  |                                 |                                     |
|-----|----------------------------|---------------------------------|-------------------------------------|----------------------------|---------------------------------|-------------------------------------|----------------------------|---------------------------------|-------------------------------------|
|     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
| 1   | --                         | --                              | --                                  | 110                        | 90                              | 27                                  | 124                        | 73                              | 24                                  |
| 2   | 118                        | 87                              | 28                                  | 129                        | 106                             | 37                                  | 122                        | 54                              | 18                                  |
| 3   | 100                        | 65                              | 18                                  | 122                        | 75                              | 25                                  | 115                        | 38                              | 12                                  |
| 4   | --                         | --                              | --                                  | 105                        | 50                              | 14                                  | 113                        | 38                              | 12                                  |
| 5   | 93                         | 52                              | 13                                  | 102                        | 64                              | 18                                  | 113                        | 48                              | 15                                  |
| 6   | 92                         | 56                              | 14                                  | 107                        | 82                              | 24                                  | 111                        | 46                              | 14                                  |
| 7   | 96                         | 58                              | 15                                  | 185                        | 201                             | 100                                 | 111                        | 34                              | 10                                  |
| 8   | 97                         | 61                              | 16                                  | 136                        | 100                             | 37                                  | 111                        | 47                              | 14                                  |
| 9   | --                         | --                              | --                                  | 123                        | 66                              | 22                                  | 108                        | 38                              | 11                                  |
| 10  | 104                        | 72                              | 20                                  | 115                        | 46                              | 14                                  | 105                        | 40                              | 11                                  |
| 11  | 96                         | 57                              | 15                                  | --                         | --                              | --                                  | 112                        | 26                              | 7.9                                 |
| 12  | --                         | --                              | --                                  | 122                        | 80                              | 26                                  | 111                        | 47                              | 14                                  |
| 13  | --                         | --                              | --                                  | 106                        | 56                              | 16                                  | 836                        | 780                             | 1761                                |
| 14  | 116                        | 66                              | 21                                  | 101                        | 34                              | 9.3                                 | 269                        | 235                             | 171                                 |
| 15  | 105                        | 70                              | 20                                  | 109                        | 86                              | 25                                  | 162                        | 99                              | 43                                  |
| 16  | 97                         | 50                              | 13                                  | 108                        | 76                              | 22                                  | 147                        | 68                              | 27                                  |
| 17  | 111                        | 102                             | 31                                  | 102                        | 76                              | 21                                  | 130                        | 51                              | 18                                  |
| 18  | 125                        | 282                             | 95                                  | 99                         | 72                              | 19                                  | 129                        | 58                              | 20                                  |
| 19  | 120                        | 92                              | 30                                  | 162                        | 204                             | 89                                  | --                         | --                              | --                                  |
| 20  | 112                        | 79                              | 24                                  | 130                        | 224                             | 79                                  | 245                        | 256                             | 169                                 |
| 21  | 105                        | 102                             | 29                                  | 483                        | 720                             | 939                                 | 159                        | 84                              | 36                                  |
| 22  | 129                        | 147                             | 51                                  | 158                        | 226                             | 96                                  | 145                        | 55                              | 22                                  |
| 23  | 223                        | 882                             | 531                                 | 151                        | 182                             | 74                                  | --                         | --                              | --                                  |
| 24  | 169                        | 168                             | 77                                  | 131                        | 86                              | 30                                  | 152                        | 33                              | 14                                  |
| 25  | 110                        | 102                             | 30                                  | 129                        | 68                              | 24                                  | 1100                       | 741                             | 2201                                |
| 26  | 270                        | --                              | --                                  | 252                        | 187                             | 127                                 | --                         | --                              | --                                  |
| 27  | 496                        | 382                             | 512                                 | 261                        | 154                             | 109                                 | --                         | --                              | --                                  |
| 28  | 154                        | 125                             | 52                                  | 172                        | 81                              | 38                                  | 427                        | 180                             | 208                                 |
| 29  | 128                        | 84                              | 29                                  | 139                        | 70                              | 26                                  | --                         | 1070                            | --                                  |
| 30  | --                         | --                              | --                                  | 124                        | 57                              | 19                                  | 424                        | 187                             | 214                                 |
| 31  | 112                        | 82                              | 25                                  | 123                        | 68                              | 23                                  | --                         | --                              | --                                  |

| DATE  | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDED<br>SEDIMENT<br>(MG/L) | SUS-<br>PENDED<br>SEDIMENT<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM |
|-------|------|-----------------------------|-------------------------|--------------------------------------|---------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| JAN.  |      |                             |                         |                                      |                                       |                                                             |                                                             |                                                             |
| 13... | --   | .5                          | 112                     | 28                                   | 8.5                                   | 10                                                          | 14                                                          | 21                                                          |
| APR.  |      |                             |                         |                                      |                                       |                                                             |                                                             |                                                             |
| 13... | 1400 | 3.5                         | 1050                    | 1810                                 | 5130                                  | 36                                                          | 50                                                          | 60                                                          |
| JULY  |      |                             |                         |                                      |                                       |                                                             |                                                             |                                                             |
| 14... | 1030 | 17.0                        | 98                      | 71                                   | 19                                    | 24                                                          | 26                                                          | 30                                                          |

| DATE | TIME | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM |
|------|------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
|------|------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|

|       |    |    |    |    |     |    |     |  |
|-------|----|----|----|----|-----|----|-----|--|
| JAN.  |    |    |    |    |     |    |     |  |
| 13... | 29 | 42 | 52 | 61 | 85  | 89 | 100 |  |
| APR.  |    |    |    |    |     |    |     |  |
| 13... | 75 | 93 | 98 | 99 | 100 | -- | --  |  |
| JULY  |    |    |    |    |     |    |     |  |
| 14... | 38 | 65 | 90 | 97 | 100 | -- | --  |  |

| DATE  | TIME | TEMPER-<br>ATURE<br>(DEG C) | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM |
|-------|------|-----------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| JAN.  |      |                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 05... | 1530 | --                          | 1                                                           | 11                                                          | 71                                                          | 97                                                          | 99                                                          | 100                                                         | --                                                          |
| JUNE  |      |                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 04... | 1215 | --                          | 8                                                           | 31                                                          | 65                                                          | 91                                                          | 99                                                          | 99                                                          | 100                                                         |
| JULY  |      |                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 14... | 1030 | 17.0                        | 10                                                          | 18                                                          | 43                                                          | 90                                                          | 99                                                          | 99                                                          | 100                                                         |

05407950 Kickapoo River near LaFarge, Wis.

This station was operated for two months, then moved 2.5 miles upstream to site 05407920 in December 1972. Backwater conditions exist at this station due to a small powerplant downstream.

| DATE       | DIS-CHARGE (CFS)                | TEMPERATURE (°C)                             | SILICA (SiO <sub>2</sub> ) (MG/L)              | DIS-SOLVED IRON (Fe) (UG/L)            | DIS-SOLVED MANGANESE (Mn) (UG/L)       | DIS-SOLVED CALCIUM (Ca) (MG/L)        | SODIUM (Na) (MG/L)                  | PO-TASSIUM (K) (MG/L)             | BICARBONATE (HCO <sub>3</sub> ) (MG/L) | CARBONATE (CO <sub>3</sub> ) (MG/L) | SULFATE (SO <sub>4</sub> ) (MG/L) | CHLORIDE (Cl) (MG/L)            |
|------------|---------------------------------|----------------------------------------------|------------------------------------------------|----------------------------------------|----------------------------------------|---------------------------------------|-------------------------------------|-----------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|---------------------------------|
| OCT. 06... | 13.93                           | 7.0                                          | 13                                             | 40                                     | 56                                     | 62                                    | 1.9                                 | 1.8                               | 290                                    | 0                                   | 15                                | 3.0                             |
| NOV. 04... | 13.22                           | 4.9                                          | 11                                             | 30                                     | 55                                     | 54                                    | 2.4                                 | 3.4                               | 270                                    | 0                                   | 20                                | 5.0                             |
| DATE       | DIS-SOLVED FLUORIDE (F) (MG/L)  | DIS-SOLVED SOLIDS (RESIDUE AT 180° C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | HARDNESS (CA, MG) (MG/L)               | NON-CARBONATE HARDNESS (CA, MG) (MG/L) | COLOR (PLATINUM COBALT UNITS)         | TOTAL KJEL-DAHL NITROGEN (N) (MG/L) | NITRATE (NO <sub>3</sub> ) (MG/L) | TOTAL PHOSPHORUS (P) (MG/L)            | pH                                  |                                   |                                 |
| OCT. 06... | 0.1                             | 253                                          | 265                                            | 250                                    | 12                                     | 3                                     | --                                  | 0.17                              | 0.22                                   | 8.0                                 |                                   |                                 |
| NOV. 04... | 0.2                             | 249                                          | 256                                            | 240                                    | 20                                     | 7                                     | 0.50                                | --                                | 0.24                                   | 7.8                                 |                                   |                                 |
| DATE       | TYPE                            | TIME                                         | DI-AZINON (UG/L)                               | ETHION (UG/L)                          | MALATHION (UG/L)                       | METHYL PARATHION (UG/L)               | METHYL TRI-THION (UG/L)             | PARATHION (UG/L)                  | TRI-THION (UG/L)                       | CHLORDANE (UG/L)                    | ALDRIN (UG/L)                     | DDD (UG/L)                      |
| NOV. 04... | 2                               | 1400                                         | 0.00                                           | 0.00                                   | 0.00                                   | 0.00                                  | 0.00                                | 0.00                              | 0.00                                   | 0.00                                | 0.00                              | 0.00                            |
| DATE       | DDE (UG/L)                      | DDT (UG/L)                                   | DI-ELDRIN (UG/L)                               | ENDRIN (UG/L)                          | HEPTACHLOR (UG/L)                      | LINDANE (UG/L)                        | 2,4-D (UG/L)                        | 2,4,5-T (UG/L)                    | SILVEX (UG/L)                          | ALDRIN IN BOTTOM DE-POSITS (UG/KG)  | DDD IN BOTTOM DE-POSITS (UG/KG)   | DDE IN BOTTOM DE-POSITS (UG/KG) |
| NOV. 04... | 0.00                            | 0.00                                         | 0.00                                           | 0.00                                   | 0.00                                   | 0.00                                  | 0.00                                | 0.00                              | 0.00                                   | 0.00                                | 0.00                              | 0.00                            |
| DATE       | DDT IN BOTTOM DE-POSITS (UG/KG) | DI-ELDRIN IN BOTTOM DE-POSITS (UG/KG)        | ENDRIN IN BOTTOM DE-POSITS (UG/KG)             | HEPTACHLOR IN BOTTOM DE-POSITS (UG/KG) | LINDANE IN BOTTOM DE-POSITS (UG/KG)    | CHLORDANE IN BOTTOM DE-POSITS (UG/KG) |                                     |                                   |                                        |                                     |                                   |                                 |
| NOV. 04... | 0.00                            | 0.30                                         | 0.00                                           | 0.00                                   | 0.00                                   | E3.0                                  |                                     |                                   |                                        |                                     |                                   |                                 |
| DATE       | DIS-SOLVED ARSENIC (AS) (UG/L)  | DIS-SOLVED CADMIUM (Cd) (UG/L)               | DIS-SOLVED CHROMIUM (Cr) (UG/L)                | DIS-SOLVED COBALT (CO) (UG/L)          | DIS-SOLVED COPPER (CU) (UG/L)          | DIS-SOLVED LEAD (PB) (UG/L)           | DIS-SOLVED NICKEL (NI) (UG/L)       | DIS-SOLVED SILVER (AG) (UG/L)     | DIS-SOLVED ZINC (ZN) (UG/L)            | DIS-SOLVED ALUMINUM (AL) (UG/L)     |                                   |                                 |
| OCT. 06... | 0                               | 0                                            | 0                                              | 3                                      | 6                                      | 4                                     | 4                                   | 1                                 | 50                                     | 0                                   |                                   |                                 |

## WISCONSIN RIVER BASIN

05408000 KICKAPOO RIVER AT LA FARGE, WIS.

LOCATION.--Lat 43°34'27", long 90°38'35", temperature recorder on east-west quarter section line in W 1/2 sec. 29, T.13 N., R.2 W., Vernon County, on left bank 10 ft upstream from bridge on State Highway 82, in La Farge, 0.3 mile upstream from Otter Creek, and 1.3 miles downstream from powerplant.

DRAINAGE AREA.--266 sq mi.

PERIOD OF RECORD.--Water temperatures: July 1971 to September 1972.

Sediment records: October 1971 to September 1972.

EXTREMES, 1971-72.--Specific conductance: Maximum daily, 600 micromhos March 7, 1972; minimum daily, 25 micromhos September 24, 1972.

Turbidity: Maximum daily, 390 Jackson Turbidity Units (JTU) September 24, 1972; minimum daily, 2 JTU on many days during water year.

Water temperatures: Maximum daily, 26.5°C July 22, August 18, 1972; minimum daily, freezing point on many days during winter period.

Sediment discharge: Maximum daily, 10,500 tons April 13, 1972; minimum daily, 0 tons December 25, 1971.

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

Continuous recorder

| DAY     | OCTOBER |      |      | NOVEMBER |     |      | DECEMBER |     |      | JANUARY |     |      |
|---------|---------|------|------|----------|-----|------|----------|-----|------|---------|-----|------|
|         | MAX     | MIN  | MEAN | MAX      | MIN | MEAN | MAX      | MIN | MEAN | MAX     | MIN | MEAN |
| 1       | 18.5    | 16.0 | 17.0 | 8.0      | 6.0 | 7.0  | 0.0      | 0.0 | 0.0  | 0.5     | 0.5 | 0.5  |
| 2       | 18.5    | 17.5 | 18.0 | 6.5      | 6.0 | 6.5  | 0.0      | 0.0 | 0.0  | 0.5     | 0.5 | 0.5  |
| 3       | 18.0    | 16.5 | 17.5 | 6.5      | 4.5 | 5.5  | 0.0      | 0.0 | 0.0  | 0.5     | 0.5 | 0.5  |
| 4       | 16.5    | 14.0 | 15.5 | 4.5      | 4.0 | 4.5  | 0.0      | 0.0 | 0.0  | 0.5     | 0.5 | 0.5  |
| 5       | 14.0    | 12.5 | 13.5 | 5.0      | 4.0 | 4.5  | 0.0      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 6       | 12.5    | 11.0 | 12.5 | 4.5      | 2.0 | 3.5  | 2.0      | 0.0 | 1.0  | 0.0     | 0.0 | 0.0  |
| 7       | 11.5    | 10.5 | 11.0 | 1.5      | 0.0 | 1.0  | 3.0      | 2.0 | 2.5  | 0.0     | 0.0 | 0.0  |
| 8       | 11.5    | 10.5 | 11.0 | 0.5      | 0.0 | 0.0  | 3.5      | 3.0 | 3.0  | 0.0     | 0.0 | 0.0  |
| 9       | 11.0    | 10.0 | 10.5 | 2.0      | 0.0 | 1.0  | 3.5      | 3.0 | 3.5  | 0.0     | 0.0 | 0.0  |
| 10      | 10.5    | 9.5  | 10.0 | 3.0      | 1.5 | 2.0  | 3.0      | 2.5 | 3.0  | 0.0     | 0.0 | 0.0  |
| 11      | 10.5    | 9.5  | 10.0 | 3.0      | 1.5 | 2.0  | 3.0      | 2.0 | 2.5  | 0.0     | 0.0 | 0.0  |
| 12      | 9.0     | 8.5  | 8.5  | 3.5      | 2.0 | 3.0  | 2.5      | 0.0 | 1.5  | 0.0     | 0.0 | 0.0  |
| 13      | 9.5     | 7.5  | 8.5  | 4.5      | 3.0 | 4.0  | 0.5      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 14      | 10.5    | 8.0  | 9.0  | 6.5      | 4.0 | 5.0  | 0.5      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 15      | 11.0    | 9.0  | 9.5  | 6.5      | 5.5 | 6.0  | 1.5      | 0.0 | 0.5  | 0.0     | 0.0 | 0.0  |
| 16      | 11.0    | 10.0 | 10.5 | 6.5      | 5.5 | 6.0  | 1.5      | 0.5 | 1.0  | 0.0     | 0.0 | 0.0  |
| 17      | 12.0    | 10.0 | 10.5 | 8.5      | 6.5 | 7.5  | 0.5      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 18      | 13.0    | 11.0 | 11.5 | 9.5      | 8.0 | 9.0  | 0.0      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 19      | 15.0    | 12.5 | 13.5 | 8.0      | 5.0 | 6.5  | 0.0      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 20      | 14.5    | 13.5 | 14.0 | 5.0      | 3.5 | 4.5  | 0.0      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 21      | 14.0    | 13.0 | 13.5 | 3.5      | 1.0 | 2.5  | 0.0      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 22      | 14.5    | 13.5 | 14.0 | 1.0      | 0.0 | 0.5  | 0.0      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 23      | 14.0    | 13.0 | 13.5 | 0.0      | 0.0 | 0.0  | 0.0      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 24      | 13.0    | 12.0 | 12.5 | 1.0      | 0.0 | 0.5  | 0.0      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 25      | 13.0    | 12.0 | 12.5 | 2.0      | 0.5 | 1.5  | 0.5      | 0.0 | 0.5  | 0.0     | 0.0 | 0.0  |
| 26      | 13.5    | 12.5 | 13.0 | 2.5      | 1.5 | 2.0  | 0.0      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 27      | 13.5    | 12.5 | 13.0 | 2.0      | 1.5 | 1.5  | 0.0      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 28      | 12.0    | 10.0 | 11.0 | 1.5      | 1.0 | 1.5  | 0.5      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 29      | 10.0    | 9.5  | 9.5  | 1.0      | 0.5 | 1.0  | 0.5      | 0.0 | 0.0  | 0.0     | 0.0 | 0.0  |
| 30      | 12.0    | 10.0 | 11.0 | 0.5      | 0.0 | 0.5  | 0.5      | 0.5 | 0.5  | 0.0     | 0.0 | 0.0  |
| 31      | 10.5    | 8.5  | 10.0 | ---      | --- | ---  | 0.5      | 0.5 | 0.5  | 0.0     | 0.0 | 0.0  |
| 1 MONTH | 18.5    | 7.5  | 12.0 | 9.5      | 0.0 | 3.5  | 3.5      | 0.0 | 0.5  | 0.5     | 0.0 | 0.0  |

## 05408000 KICKAPOO RIVER AT LA FARGE, WIS.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY     | FEBRUARY |      |      | MARCH |      |      | APRIL  |      |      | MAY       |      |      |
|---------|----------|------|------|-------|------|------|--------|------|------|-----------|------|------|
|         | MAX      | MIN  | MEAN | MAX   | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
| 1       | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 4.5    | 3.0  | 4.0  | 13.0      | 11.0 | 12.0 |
| 2       | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 4.5    | 4.0  | 4.0  | 12.0      | 11.0 | 11.5 |
| 3       | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 4.0    | 3.0  | 3.5  | 13.0      | 10.5 | 12.0 |
| 4       | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 4.0    | 2.0  | 3.0  | 14.0      | 12.0 | 13.0 |
| 5       | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 5.5    | 3.0  | 4.5  | 13.5      | 12.0 | 12.5 |
| 6       | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 6.5    | 5.5  | 6.0  | 13.5      | 12.5 | 13.0 |
| 7       | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 5.5    | 2.5  | 4.0  | 13.5      | 11.5 | 12.5 |
| 8       | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 4.5    | 1.5  | 3.0  | 14.5      | 11.5 | 12.5 |
| 9       | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 5.0    | 4.0  | 4.5  | 14.5      | 12.0 | 13.0 |
| 10      | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 8.0    | 4.5  | 6.0  | 16.0      | 12.5 | 13.5 |
| 11      | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 8.5    | 7.5  | 8.0  | 16.0      | 13.5 | 14.5 |
| 12      | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 7.5    | 6.5  | 7.0  | 17.5      | 14.0 | 15.5 |
| 13      | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 5.5    | 3.5  | 4.0  | 17.5      | 16.0 | 16.0 |
| 14      | 0.0      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 5.0    | 4.0  | 4.5  | 16.5      | 15.0 | 15.5 |
| 15      | 0.0      | 0.0  | 0.0  | 0.5   | 0.0  | 0.0  | 7.0    | 5.0  | 6.0  | 17.0      | 14.5 | 15.5 |
| 16      | 0.0      | 0.0  | 0.0  | 0.5   | 0.0  | 0.5  | 9.5    | 7.0  | 8.0  | 19.0      | 15.5 | 17.0 |
| 17      | 0.0      | 0.0  | 0.0  | 0.5   | 0.5  | 0.5  | 10.5   | 8.0  | 9.5  | 20.5      | 17.0 | 18.5 |
| 18      | 0.0      | 0.0  | 0.0  | 1.5   | 0.5  | 1.0  | 13.0   | 10.5 | 12.0 | 22.0      | 18.5 | 20.0 |
| 19      | 0.0      | 0.0  | 0.0  | 3.0   | 1.0  | 1.5  | 12.5   | 9.5  | 11.0 | 22.5      | 19.5 | 21.0 |
| 20      | 0.0      | 0.0  | 0.0  | 4.0   | 1.5  | 2.5  | 11.0   | 8.5  | 10.0 | 23.0      | 20.0 | 21.5 |
| 21      | 0.0      | 0.0  | 0.0  | 4.0   | 1.5  | 2.0  | 10.0   | 6.5  | 8.5  | 23.5      | 20.5 | 21.5 |
| 22      | 0.0      | 0.0  | 0.0  | 2.5   | 2.0  | 2.0  | 6.0    | 5.0  | 5.0  | 23.5      | 20.5 | 21.5 |
| 23      | 0.0      | 0.0  | 0.0  | 3.0   | 1.0  | 2.0  | 5.5    | 4.5  | 5.0  | 22.5      | 20.5 | 21.5 |
| 24      | 0.0      | 0.0  | 0.0  | 3.5   | 2.0  | 2.5  | 8.5    | 5.5  | 7.0  | 23.0      | 21.0 | 22.0 |
| 25      | 0.0      | 0.0  | 0.0  | 5.0   | 3.0  | 4.0  | 10.0   | 7.5  | 8.5  | 22.0      | 20.5 | 21.0 |
| 26      | 0.0      | 0.0  | 0.0  | 4.5   | 3.5  | 4.0  | 11.0   | 8.0  | 9.5  | 23.0      | 20.0 | 21.5 |
| 27      | 0.0      | 0.0  | 0.0  | 3.5   | 3.0  | 3.5  | 12.0   | 10.0 | 10.5 | 22.5      | 20.5 | 21.5 |
| 28      | 0.0      | 0.0  | 0.0  | 4.5   | 3.0  | 4.0  | 11.0   | 10.5 | 11.0 | 21.5      | 20.0 | 21.0 |
| 29      | 0.0      | 0.0  | 0.0  | 4.5   | 3.5  | 4.0  | 12.0   | 10.0 | 11.0 | 21.0      | 19.5 | 20.5 |
| 30      | ---      | ---  | ---  | 4.5   | 3.0  | 3.5  | 11.5   | 11.0 | 11.0 | 19.5      | 15.5 | 17.5 |
| 31      | ---      | ---  | ---  | 5.0   | 3.5  | 4.0  | ---    | ---  | ---  | 17.0      | 14.5 | 15.5 |
| * MONTH | 0.0      | 0.0  | 0.0  | 5.0   | 0.0  | 1.5  | 13.0   | 1.5  | 7.0  | 23.5      | 10.5 | 17.0 |
| DAY     | JUNE     |      |      | JULY  |      |      | AUGUST |      |      | SEPTEMBER |      |      |
|         | MAX      | MIN  | MEAN | MAX   | MIN  | MEAN | MAX    | MIN  | MEAN | MAX       | MIN  | MEAN |
| 1       | 18.5     | 14.5 | 16.5 | 23.0  | 20.5 | 21.5 | 20.0   | 19.0 | 19.5 | 21.5      | 20.0 | 21.0 |
| 2       | 20.5     | 16.5 | 18.5 | 22.5  | 21.0 | 21.5 | 20.5   | 15.5 | 19.5 | 21.0      | 19.0 | 20.0 |
| 3       | 22.5     | 19.0 | 20.5 | 21.5  | 19.5 | 20.5 | 21.0   | 19.5 | 20.0 | 19.0      | 17.0 | 18.0 |
| 4       | 23.0     | 20.5 | 21.5 | 21.0  | 18.5 | 19.5 | 20.0   | 19.0 | 19.5 | 17.5      | 16.0 | 17.0 |
| 5       | 21.0     | 19.0 | 20.0 | 19.5  | 17.5 | 18.5 | 19.5   | 17.5 | 18.5 | 19.0      | 16.5 | 17.5 |
| 6       | 21.5     | 18.5 | 20.0 | 18.5  | 17.0 | 17.5 | 19.5   | 18.5 | 19.0 | 18.5      | 17.5 | 18.0 |
| 7       | 21.0     | 19.5 | 20.0 | 17.5  | 16.5 | 17.0 | 19.0   | 18.0 | 18.5 | 19.0      | 18.0 | 18.5 |
| 8       | 22.0     | 19.0 | 20.5 | 17.5  | 16.0 | 17.0 | 18.0   | 16.5 | 17.5 | 19.5      | 18.0 | 18.5 |
| 9       | 21.0     | 18.0 | 20.0 | 20.0  | 17.0 | 18.5 | 17.5   | 15.5 | 16.0 | 19.0      | 17.0 | 18.0 |
| 10      | 18.0     | 16.5 | 17.0 | 22.0  | 19.0 | 20.5 | 18.5   | 15.5 | 17.0 | 17.5      | 17.0 | 17.0 |
| 11      | 18.0     | 15.0 | 16.5 | 23.5  | 21.0 | 22.0 | 20.5   | 17.5 | 18.5 | 17.5      | 16.5 | 17.0 |
| 12      | 20.5     | 17.0 | 19.0 | 23.0  | 21.5 | 22.0 | 21.5   | 15.5 | 20.5 | 17.5      | 17.0 | 17.0 |
| 13      | 23.0     | 20.0 | 21.5 | 23.5  | 21.5 | 22.5 | 22.5   | 20.5 | 21.5 | 18.0      | 17.5 | 17.5 |
| 14      | 22.0     | 20.5 | 21.5 | 22.5  | 21.0 | 21.5 | 23.5   | 22.0 | 23.0 | 18.0      | 17.0 | 17.5 |
| 15      | 21.5     | 19.5 | 20.0 | 22.0  | 20.0 | 21.0 | 23.0   | 22.0 | 22.0 | 18.0      | 16.5 | 17.0 |
| 16      | 19.5     | 16.5 | 18.0 | 22.0  | 20.0 | 21.0 | 24.5   | 21.5 | 23.0 | 18.5      | 16.5 | 17.5 |
| 17      | 18.0     | 15.0 | 16.5 | 21.0  | 18.5 | 20.0 | 26.0   | 23.5 | 24.5 | 19.5      | 17.5 | 18.5 |
| 18      | 19.5     | 16.5 | 18.0 | 20.5  | 18.0 | 19.0 | 26.5   | 24.0 | 25.0 | 19.5      | 18.5 | 19.0 |
| 19      | 21.5     | 18.5 | 20.0 | 21.0  | 19.5 | 20.0 | 25.5   | 23.5 | 24.5 | 20.0      | 18.5 | 19.0 |
| 20      | 21.0     | 18.5 | 20.0 | 23.5  | 20.5 | 22.0 | 24.4   | 22.7 | 23.6 | 20.5      | 19.0 | 20.0 |
| 21      | 19.0     | 17.0 | 18.0 | 26.0  | 23.0 | 24.5 | 24.0   | 22.0 | 23.0 | 20.0      | 17.0 | 19.0 |
| 22      | 19.0     | 16.0 | 17.5 | 26.5  | 25.0 | 25.5 | 23.0   | 21.0 | 22.5 | 17.0      | 15.5 | 16.0 |
| 23      | 18.5     | 16.0 | 17.5 | 25.0  | 23.5 | 24.5 | 21.0   | 19.0 | 20.0 | ---       | ---  | ---  |
| 24      | 19.0     | 16.5 | 17.5 | 25.5  | 23.0 | 24.0 | 19.0   | 18.5 | 18.5 | ---       | ---  | ---  |
| 25      | 20.5     | 17.0 | 19.0 | 23.5  | 22.0 | 23.0 | 18.5   | 18.0 | 18.5 | ---       | ---  | ---  |
| 26      | 22.5     | 18.5 | 20.5 | 22.0  | 18.0 | 20.5 | 18.0   | 18.0 | 18.0 | ---       | ---  | ---  |
| 27      | 23.0     | 20.0 | 21.5 | 18.0  | 17.0 | 17.5 | 19.0   | 17.5 | 18.5 | ---       | ---  | ---  |
| 28      | 21.5     | 20.5 | 21.0 | 18.0  | 17.5 | 17.5 | 21.0   | 19.0 | 20.0 | ---       | ---  | ---  |
| 29      | 21.5     | 19.0 | 20.0 | 20.5  | 18.0 | 19.0 | 22.5   | 20.0 | 21.0 | 24.0      | 23.5 | 24.0 |
| 30      | 23.0     | 20.0 | 21.5 | 22.0  | 19.0 | 20.5 | 22.5   | 21.0 | 21.5 | 26.0      | 24.0 | 25.0 |
| 31      | ---      | ---  | ---  | 21.0  | 20.5 | 20.5 | 22.0   | 21.0 | 21.5 | ---       | ---  | ---  |
| * MONTH | 23.0     | 14.5 | 19.5 | 26.5  | 16.0 | 20.5 | 26.5   | 15.5 | 20.5 | 26.0      | 15.5 | 18.5 |

## WISCONSIN RIVER BASIN

05408000 KICKAPOO RIVER AT LA FARGE, WIS.--Continued

Daily Conductivities (Micromhos/cm at 25°C) once daily measurement

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1   | --- | 405 | --- | --- | 460 | 450 | 380 | 420 | 430 | --- | 430 | 350 |
| 2   | --- | 395 | 355 | 465 | 460 | 490 | 395 | 400 | 440 | 410 | 420 | 345 |
| 3   | --- | 355 | 410 | 470 | 440 | 530 | 395 | 410 | --- | 410 | 435 | 300 |
| 4   | --- | 380 | 440 | 485 | 410 | 540 | 395 | 420 | --- | 425 | 425 | 260 |
| 5   | --- | --- | 420 | --- | 430 | 490 | 340 | 410 | 380 | 410 | 430 | 290 |
| 6   | 410 | 420 | --- | 530 | 430 | 540 | 360 | --- | 420 | 410 | 435 | 290 |
| 7   | 420 | 405 | 430 | 475 | --- | 600 | 260 | 410 | 350 | 410 | 365 | 310 |
| 8   | 420 | --- | 440 | 455 | --- | 490 | 300 | 420 | 360 | 425 | 400 | 340 |
| 9   | 400 | 430 | 445 | 440 | 440 | 490 | 370 | --- | 430 | --- | 400 | 320 |
| 10  | 415 | 420 | 445 | 430 | 440 | 470 | 390 | --- | 420 | 410 | 425 | 325 |
| 11  | 405 | 420 | 440 | 435 | 450 | 440 | 310 | 420 | --- | 430 | --- | 250 |
| 12  | 360 | 450 | --- | 435 | 440 | 370 | --- | 420 | 430 | --- | 430 | 230 |
| 13  | 405 | 440 | 455 | 440 | 450 | 365 | 200 | --- | 420 | 400 | 420 | 200 |
| 14  | 400 | 455 | 460 | --- | 450 | 280 | 320 | --- | 390 | 400 | 430 | 260 |
| 15  | 380 | 445 | 425 | --- | 420 | 295 | 350 | 340 | 310 | 400 | 430 | 300 |
| 16  | 350 | 435 | 300 | 510 | 450 | 220 | 370 | 420 | 400 | 400 | 430 | 340 |
| 17  | 360 | --- | 390 | 500 | 460 | 215 | 380 | 420 | 420 | 390 | 430 | 330 |
| 18  | 370 | 440 | --- | 480 | 460 | 175 | 380 | 410 | --- | 360 | 410 | 350 |
| 19  | 410 | 455 | --- | 380 | 460 | 175 | 400 | 420 | 420 | 350 | 405 | --- |
| 20  | 395 | 450 | 480 | --- | --- | 155 | 400 | 380 | 420 | 390 | 295 | 310 |
| 21  | 400 | 450 | 460 | 410 | 470 | 130 | 420 | 400 | 420 | 410 | 195 | 300 |
| 22  | 405 | 455 | 460 | 440 | 470 | 155 | 360 | 410 | 420 | 410 | 320 | 340 |
| 23  | 405 | 455 | 450 | 440 | 470 | 280 | 360 | 400 | 430 | 350 | 380 | --- |
| 24  | 420 | 450 | 455 | 460 | 460 | 340 | 400 | 410 | 320 | 350 | 380 | 25  |
| 25  | 430 | 450 | 455 | --- | 450 | 355 | 400 | 400 | 370 | 390 | 430 | 250 |
| 26  | 430 | 450 | 455 | --- | 470 | 365 | --- | 430 | 360 | --- | 420 | 160 |
| 27  | 410 | 440 | 455 | 470 | 480 | 370 | 400 | 430 | 370 | 350 | 395 | 150 |
| 28  | 420 | 440 | 480 | --- | 450 | 380 | 410 | 440 | 360 | 350 | 410 | 325 |
| 29  | 415 | 440 | 500 | --- | 440 | 390 | 420 | 420 | 360 | 390 | 435 | 260 |
| 30  | 405 | 440 | 475 | 460 | --- | 380 | 420 | 420 | 425 | --- | 350 | 305 |
| 31  | 405 | --- | 460 | 470 | --- | 395 | --- | 420 | --- | 430 | --- | --- |

Daily Turbidities (Jackson Turbidity Units) once daily measurement

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1   | --- | 10  | --- | --- | 5   | 4   | 4   | 10  | 4   | --- | 10  | 7   |
| 2   | --- | 10  | 6   | 5   | 6   | 3   | 6   | 20  | 7   | 8   | 10  | 10  |
| 3   | --- | 30  | 7   | 6   | 8   | 5   | 15  | 15  | 5   | 6   | 6   | 7   |
| 4   | --- | 15  | 5   | 4   | 3   | 6   | 30  | 15  | --- | 2   | 6   | 10  |
| 5   | --- | --- | 6   | --- | 2   | 4   | 7   | 15  | 6   | 8   | 7   | 8   |
| 6   | 7   | 6   | --- | 10  | 2   | 7   | 30  | --- | 20  | 7   | 10  | 9   |
| 7   | 20  | 5   | 6   | 5   | --- | 7   | 100 | 5   | 15  | 3   | 50  | 6   |
| 8   | 8   | --- | 6   | 4   | 3   | 6   | 40  | 4   | 20  | 7   | 20  | 3   |
| 9   | 7   | 4   | 4   | 6   | 3   | 6   | 20  | --- | 7   | --- | 15  | 6   |
| 10  | 7   | 3   | 6   | 7   | 2   | 5   | 35  | 6   | 15  | 3   | 10  | 9   |
| 11  | 8   | 3   | 10  | 6   | 3   | 4   | 50  | 9   | --- | 5   | --- | 10  |
| 12  | 6   | 4   | --- | 6   | 2   | 10  | --- | 4   | 6   | --- | 6   | 8   |
| 13  | 5   | 4   | 7   | 15  | 2   | 20  | 130 | --- | 15  | 3   | 15  | 150 |
| 14  | 5   | 4   | 5   | --- | 5   | 45  | 75  | --- | 15  | 20  | 15  | 40  |
| 15  | 4   | 5   | 15  | --- | 2   | 35  | 30  | 5   | 45  | 20  | 7   | 20  |
| 16  | 7   | 7   | 40  | 4   | 3   | 30  | 50  | 8   | 20  | 10  | 2   | 3   |
| 17  | 5   | --- | 15  | 5   | 3   | 40  | 45  | 5   | 20  | 20  | 5   | 10  |
| 18  | 4   | 10  | --- | 6   | 3   | 55  | 40  | 5   | --- | 30  | 10  | 3   |
| 19  | 25  | 10  | --- | 5   | 3   | 55  | 35  | 4   | 20  | 25  | 15  | --- |
| 20  | 9   | 8   | 5   | --- | --- | 40  | 30  | 5   | 15  | 15  | 50  | 35  |
| 21  | 10  | 8   | 6   | 5   | 3   | 45  | 20  | 6   | 15  | 15  | 55  | 20  |
| 22  | 8   | 5   | 10  | 3   | 3   | 65  | 120 | 8   | 8   | 20  | 45  | 7   |
| 23  | 8   | 5   | 6   | 5   | 3   | 25  | 35  | 7   | 3   | 25  | 35  | 9   |
| 24  | 8   | 4   | 4   | 5   | 3   | 20  | 30  | 7   | 15  | 40  | 25  | 390 |
| 25  | 6   | 3   | 4   | --- | 3   | 3   | 20  | 4   | 9   | 20  | 20  | 150 |
| 26  | 8   | 4   | 3   | --- | 4   | 10  | --- | 4   | 10  | --- | 20  | 170 |
| 27  | 25  | 5   | 4   | 5   | 3   | 8   | 15  | 3   | 9   | 60  | 15  | 160 |
| 28  | 10  | 4   | 4   | --- | 3   | 10  | 10  | 3   | 15  | 35  | 15  | 55  |
| 29  | 4   | 4   | 4   | --- | 3   | 3   | 25  | 3   | 15  | 15  | 15  | 150 |
| 30  | 6   | 5   | 5   | 5   | --- | 20  | 7   | 4   | 4   | --- | 20  | 55  |
| 31  | 9   | --- | 4   | 5   | --- | 20  | --- | 4   | --- | 10  | --- | --- |

## 05408000 KICKAPOO RIVER AT LA FARGE, WIS.--Continued

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | OCTOBER                    |                                 |                                     | NOVEMBER                   |                                 |                                     | DECEMBER                   |                                 |                                     |
|-----|----------------------------|---------------------------------|-------------------------------------|----------------------------|---------------------------------|-------------------------------------|----------------------------|---------------------------------|-------------------------------------|
|     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
| 1   | --                         | --                              | --                                  | 156                        | 28                              | 12                                  | --                         | --                              | --                                  |
| 2   | --                         | --                              | --                                  | 293                        | 44                              | 35                                  | 135                        | 20                              | 7.3                                 |
| 3   | --                         | --                              | --                                  | 258                        | 48                              | 33                                  | 145                        | 14                              | 5.5                                 |
| 4   | --                         | --                              | --                                  | 139                        | 22                              | 8.3                                 | 132                        | 6                               | 2.1                                 |
| 5   | --                         | --                              | --                                  | --                         | --                              | --                                  | 131                        | 8                               | 2.8                                 |
| 6   | 105                        | 24                              | 6.8                                 | 130                        | 8                               | 2.8                                 | 132                        | 8                               | 2.9                                 |
| 7   | 100                        | 119                             | 32                                  | 119                        | 7                               | 2.2                                 | 142                        | 6                               | 2.3                                 |
| 8   | 106                        | 35                              | 10                                  | --                         | --                              | --                                  | 142                        | 10                              | 3.8                                 |
| 9   | 96                         | 20                              | 5.2                                 | 119                        | 4                               | 1.3                                 | --                         | --                              | --                                  |
| 10  | 102                        | 59                              | 16                                  | 119                        | 4                               | 1.3                                 | 168                        | 16                              | 7.3                                 |
| 11  | 110                        | 17                              | 5.0                                 | 119                        | 6                               | 1.9                                 | 207                        | 18                              | 10                                  |
| 12  | 97                         | 20                              | 5.2                                 | 118                        | 6                               | 1.9                                 | --                         | --                              | --                                  |
| 13  | 97                         | 25                              | 6.5                                 | 117                        | 10                              | 3.2                                 | 118                        | 13                              | 4.1                                 |
| 14  | 101                        | 14                              | 3.8                                 | 126                        | 8                               | 2.7                                 | 138                        | 18                              | 6.7                                 |
| 15  | 99                         | 13                              | 3.5                                 | 101                        | 14                              | 3.8                                 | --                         | --                              | --                                  |
| 16  | 100                        | 55                              | 15                                  | 130                        | 17                              | 6.0                                 | 361                        | 103                             | 100                                 |
| 17  | --                         | --                              | --                                  | --                         | --                              | --                                  | 156                        | 10                              | 4.2                                 |
| 18  | 88                         | 17                              | 4.0                                 | 148                        | 39                              | 16                                  | --                         | --                              | --                                  |
| 19  | --                         | --                              | --                                  | 154                        | 22                              | 9.1                                 | --                         | --                              | --                                  |
| 20  | 151                        | 42                              | 17                                  | 142                        | 12                              | 4.6                                 | 165                        | 1                               | .45                                 |
| 21  | 102                        | 26                              | 7.2                                 | --                         | --                              | --                                  | 155                        | 5                               | 2.1                                 |
| 22  | 125                        | 48                              | 16                                  | 116                        | 5                               | 1.6                                 | 128                        | 2                               | .69                                 |
| 23  | 116                        | 24                              | 7.5                                 | 118                        | 4                               | 1.3                                 | 131                        | 2                               | .71                                 |
| 24  | 118                        | 35                              | 11                                  | 123                        | 7                               | 2.3                                 | 139                        | 2                               | .75                                 |
| 25  | 106                        | 20                              | 5.7                                 | 128                        | 9                               | 3.1                                 | 131                        | 0                               | 0                                   |
| 26  | 139                        | 24                              | 9.0                                 | 125                        | 13                              | 4.4                                 | 136                        | 4                               | 1.5                                 |
| 27  | 100                        | 69                              | 19                                  | 170                        | 14                              | 6.4                                 | 136                        | 1                               | .37                                 |
| 28  | 105                        | 36                              | 10                                  | 143                        | 6                               | 2.3                                 | --                         | --                              | --                                  |
| 29  | 119                        | 14                              | 4.5                                 | 144                        | 6                               | 2.3                                 | 120                        | 2                               | .65                                 |
| 30  | 95                         | 19                              | 4.9                                 | 134                        | 10                              | 3.6                                 | 120                        | 3                               | .97                                 |
| 31  | 147                        | 30                              | 12                                  | --                         | --                              | --                                  | 120                        | 1                               | .32                                 |

## WISCONSIN RIVER BASIN

05408000 KICKAPOO RIVER AT LA FARGE, WIS.--Continued

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | JANUARY                    |                                 |                                     | FEBRUARY                   |                                 |                                     | MARCH                      |                                 |                                     |
|-----|----------------------------|---------------------------------|-------------------------------------|----------------------------|---------------------------------|-------------------------------------|----------------------------|---------------------------------|-------------------------------------|
|     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCENTRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
| 1   | --                         | --                              | --                                  | 100                        | 8                               | 2.2                                 | 130                        | 7                               | 2.5                                 |
| 2   | --                         | --                              | --                                  | 100                        | 10                              | 2.7                                 | 120                        | 11                              | 3.6                                 |
| 3   | 110                        | 6                               | 1.8                                 | 100                        | 16                              | 4.3                                 | 110                        | 17                              | 5.0                                 |
| 4   | 100                        | 9                               | 2.4                                 | 100                        | 7                               | 1.9                                 | 110                        | 5                               | 1.5                                 |
| 5   | --                         | --                              | --                                  | 100                        | 8                               | 2.2                                 | 120                        | 4                               | 1.3                                 |
| 6   | 100                        | 16                              | 4.3                                 | 100                        | 6                               | 1.6                                 | 130                        | 6                               | 2.1                                 |
| 7   | 110                        | 8                               | 2.4                                 | --                         | --                              | --                                  | 130                        | 6                               | 2.1                                 |
| 8   | 120                        | 6                               | 1.9                                 | 100                        | 18                              | 4.9                                 | 130                        | 39                              | 14                                  |
| 9   | 120                        | 6                               | 1.9                                 | 100                        | 8                               | 2.2                                 | 120                        | 16                              | 5.2                                 |
| 10  | 120                        | 13                              | 4.2                                 | 100                        | 6                               | 1.6                                 | 120                        | 4                               | 1.3                                 |
| 11  | 120                        | 8                               | 2.6                                 | 100                        | 6                               | 1.6                                 | 130                        | 6                               | 2.1                                 |
| 12  | 120                        | 10                              | 3.2                                 | 100                        | 6                               | 1.6                                 | 180                        | 47                              | 23                                  |
| 13  | 110                        | 50                              | 15                                  | 110                        | 8                               | 2.4                                 | 220                        | 68                              | 40                                  |
| 14  | --                         | --                              | --                                  | 120                        | 6                               | 1.9                                 | 270                        | 172                             | 125                                 |
| 15  | --                         | --                              | --                                  | 120                        | 5                               | 1.6                                 | 350                        | 173                             | 163                                 |
| 16  | 100                        | 40                              | 11                                  | 120                        | 8                               | 2.6                                 | 470                        | 243                             | 308                                 |
| 17  | 120                        | 25                              | 8.1                                 | 120                        | 5                               | 1.6                                 | 600                        | 323                             | 523                                 |
| 18  | 130                        | 23                              | 8.1                                 | 120                        | 6                               | 1.9                                 | 800                        | 671                             | 1450                                |
| 19  | --                         | --                              | --                                  | 120                        | 4                               | 1.3                                 | 1010                       | 981                             | 2680                                |
| 20  | --                         | --                              | --                                  | --                         | --                              | --                                  | 1270                       | 1300                            | 4460                                |
| 21  | 130                        | 20                              | 7.0                                 | 120                        | 6                               | 1.9                                 | 1700                       | 874                             | 4010                                |
| 22  | 120                        | 26                              | 8.4                                 | 120                        | 2                               | .65                                 | --                         | --                              | --                                  |
| 23  | 120                        | 33                              | 11                                  | 120                        | 7                               | 2.3                                 | 288                        | 105                             | 82                                  |
| 24  | 110                        | 26                              | 7.7                                 | 120                        | 9                               | 2.9                                 | 226                        | 61                              | 37                                  |
| 25  | --                         | --                              | --                                  | 130                        | 6                               | 2.1                                 | 202                        | 54                              | 29                                  |
| 26  | --                         | --                              | --                                  | 130                        | 4                               | 1.4                                 | 195                        | 43                              | 23                                  |
| 27  | --                         | --                              | --                                  | --                         | --                              | --                                  | 176                        | 28                              | 13                                  |
| 28  | --                         | --                              | --                                  | 140                        | 8                               | 3.0                                 | 166                        | 33                              | 15                                  |
| 29  | --                         | --                              | --                                  | 140                        | 12                              | 4.5                                 | 167                        | 21                              | 9.5                                 |
| 30  | 100                        | 13                              | 3.5                                 | --                         | --                              | --                                  | 164                        | 73                              | 32                                  |
| 31  | 100                        | 14                              | 3.8                                 | --                         | --                              | --                                  | 145                        | 44                              | 17                                  |

05408000 KICKAPOO RIVER AT LA FARGE, WIS.--Continued

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | APRIL                      |                                      |                                     | MAY                        |                                      |                                     | JUNE                       |                                      |                                     |
|-----|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
|     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
| 1   | 150                        | 20                                   | 8.1                                 | 188                        | 42                                   | 21                                  | 110                        | 20                                   | 5.9                                 |
| 2   | 148                        | 14                                   | 5.6                                 | 220                        | 40                                   | 24                                  | 113                        | 22                                   | 6.7                                 |
| 3   | 146                        | 12                                   | 4.7                                 | 198                        | 28                                   | 15                                  | 98                         | 22                                   | 5.8                                 |
| 4   | 141                        | 139                                  | 53                                  | 169                        | 32                                   | 15                                  | --                         | --                                   | --                                  |
| 5   | 146                        | 20                                   | 7.9                                 | 152                        | 58                                   | 24                                  | 113                        | 45                                   | 14                                  |
| 6   | 233                        | 100                                  | 63                                  | --                         | --                                   | --                                  | 123                        | 47                                   | 16                                  |
| 7   | 440                        | 474                                  | 563                                 | 150                        | 32                                   | 13                                  | 110                        | 42                                   | 12                                  |
| 8   | 177                        | 70                                   | 33                                  | 142                        | 34                                   | 13                                  | 99                         | 55                                   | 15                                  |
| 9   | 196                        | 53                                   | 28                                  | --                         | --                                   | --                                  | 110                        | 57                                   | 17                                  |
| 10  | 169                        | 164                                  | 75                                  | 135                        | 38                                   | 14                                  | 109                        | 60                                   | 18                                  |
| 11  | 330                        | 328                                  | 292                                 | 129                        | 20                                   | 7.0                                 | --                         | --                                   | --                                  |
| 12  | --                         | --                                   | --                                  | 126                        | 21                                   | 7.1                                 | 113                        | 52                                   | 16                                  |
| 13  | 1430                       | 2710                                 | 10500                               | --                         | --                                   | --                                  | 131                        | 68                                   | 24                                  |
| 14  | 360                        | 420                                  | 408                                 | --                         | --                                   | --                                  | 178                        | 66                                   | 32                                  |
| 15  | 280                        | 137                                  | 104                                 | 156                        | 21                                   | 8.8                                 | 173                        | 128                                  | 60                                  |
| 16  | 293                        | 156                                  | 123                                 | 140                        | 34                                   | 13                                  | 120                        | 70                                   | 23                                  |
| 17  | 271                        | 141                                  | 103                                 | 129                        | 25                                   | 8.7                                 | 116                        | 61                                   | 19                                  |
| 18  | 225                        | 187                                  | 114                                 | 125                        | 58                                   | 20                                  | --                         | --                                   | --                                  |
| 19  | 220                        | 121                                  | 72                                  | 117                        | 20                                   | 6.3                                 | 106                        | 68                                   | 19                                  |
| 20  | 189                        | 102                                  | 52                                  | 116                        | 20                                   | 6.3                                 | 99                         | 60                                   | 16                                  |
| 21  | 235                        | 81                                   | 51                                  | 114                        | 20                                   | 6.2                                 | 103                        | 42                                   | 12                                  |
| 22  | 501                        | 636                                  | 860                                 | 113                        | 37                                   | 11                                  | 108                        | 42                                   | 12                                  |
| 23  | 315                        | 58                                   | 49                                  | 111                        | 18                                   | 5.4                                 | 91                         | 43                                   | 11                                  |
| 24  | 230                        | 66                                   | 41                                  | 108                        | 22                                   | 6.4                                 | 89                         | 40                                   | 9.6                                 |
| 25  | 198                        | 68                                   | 36                                  | 104                        | 20                                   | 5.6                                 | 93                         | 38                                   | 9.5                                 |
| 26  | --                         | --                                   | --                                  | 105                        | 12                                   | 3.4                                 | 98                         | 38                                   | 10                                  |
| 27  | 167                        | 44                                   | 20                                  | 104                        | 12                                   | 3.4                                 | 97                         | 25                                   | 6.5                                 |
| 28  | 157                        | 50                                   | 21                                  | 103                        | 9                                    | 2.5                                 | 89                         | 32                                   | 7.7                                 |
| 29  | 159                        | 58                                   | 25                                  | 116                        | 9                                    | 2.8                                 | 123                        | 46                                   | 15                                  |
| 30  | 153                        | 26                                   | 11                                  | 131                        | 18                                   | 6.4                                 | 98                         | 38                                   | 10                                  |
| 31  | --                         | --                                   | --                                  | 129                        | 16                                   | 5.6                                 | --                         | --                                   | --                                  |

## WISCONSIN RIVER BASIN

05408000 KICKAPOO RIVER AT LA FARGE, WIS.--Continued

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DAY | JULY                       |                                      |                                     | AUGUST                     |                                      |                                     | SEPTEMBER                  |                                      |                                     |
|-----|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
|     | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) | MEAN<br>DISCHARGE<br>(CFS) | MEAN<br>CONCEN-<br>TRATION<br>(MG/L) | SEDIMENT<br>DISCHARGE<br>(TONS/DAY) |
| 1   | --                         | --                                   | --                                  | 111                        | 52                                   | 16                                  | 123                        | 38                                   | 13                                  |
| 2   | 120                        | 37                                   | 12                                  | 126                        | 48                                   | 16                                  | 108                        | 29                                   | 8.5                                 |
| 3   | 97                         | 30                                   | 7.9                                 | 122                        | 40                                   | 13                                  | 108                        | 24                                   | 7.0                                 |
| 4   | 89                         | 28                                   | 6.7                                 | 106                        | 33                                   | 9.4                                 | 105                        | 22                                   | 6.2                                 |
| 5   | 91                         | 33                                   | 8.1                                 | 98                         | 44                                   | 12                                  | 106                        | 22                                   | 6.3                                 |
| 6   | 97                         | 34                                   | 8.9                                 | 120                        | 76                                   | 25                                  | 106                        | 24                                   | 6.9                                 |
| 7   | 96                         | 26                                   | 6.7                                 | 188                        | 146                                  | 74                                  | 106                        | 43                                   | 12                                  |
| 8   | 98                         | 24                                   | 6.4                                 | 157                        | 98                                   | 42                                  | 105                        | 24                                   | 6.8                                 |
| 9   | --                         | --                                   | --                                  | 132                        | 38                                   | 14                                  | 100                        | 20                                   | 5.4                                 |
| 10  | 104                        | 28                                   | 7.9                                 | 120                        | 32                                   | 10                                  | 98                         | 18                                   | 4.8                                 |
| 11  | 100                        | 18                                   | 4.9                                 | --                         | --                                   | --                                  | 103                        | 34                                   | 9.5                                 |
| 12  | --                         | --                                   | --                                  | 118                        | 37                                   | 12                                  | 103                        | 22                                   | 6.1                                 |
| 13  | 117                        | 32                                   | 10                                  | 109                        | 32                                   | 9.4                                 | 586                        | 655                                  | 1040                                |
| 14  | 104                        | 21                                   | 5.9                                 | 109                        | 104                                  | 31                                  | 255                        | 173                                  | 119                                 |
| 15  | 102                        | 52                                   | 14                                  | 116                        | 28                                   | 8.8                                 | 157                        | 58                                   | 25                                  |
| 16  | 102                        | 42                                   | 12                                  | 109                        | 28                                   | 8.2                                 | 139                        | 33                                   | 12                                  |
| 17  | 137                        | 78                                   | 29                                  | 106                        | 25                                   | 7.2                                 | 132                        | 78                                   | 28                                  |
| 18  | 215                        | 82                                   | 48                                  | 98                         | 25                                   | 6.6                                 | 129                        | 30                                   | 10                                  |
| 19  | 126                        | 78                                   | 27                                  | 142                        | 38                                   | 15                                  | --                         | --                                   | --                                  |
| 20  | 114                        | 35                                   | 11                                  | 228                        | 86                                   | 53                                  | 218                        | 130                                  | 77                                  |
| 21  | 116                        | 38                                   | 12                                  | 412                        | 723                                  | 804                                 | 167                        | 42                                   | 19                                  |
| 22  | 142                        | 48                                   | 18                                  | 170                        | 104                                  | 48                                  | 150                        | 30                                   | 12                                  |
| 23  | 173                        | 56                                   | 26                                  | 157                        | 107                                  | 45                                  | 131                        | 18                                   | 6.4                                 |
| 24  | 157                        | 92                                   | 39                                  | 131                        | 55                                   | 19                                  | 129                        | 54                                   | 19                                  |
| 25  | 114                        | 46                                   | 14                                  | 126                        | 60                                   | 20                                  | 567                        | 1360                                 | 2080                                |
| 26  | --                         | --                                   | --                                  | 262                        | 55                                   | 39                                  | 1830                       | 1220                                 | 6030                                |
| 27  | 324                        | 276                                  | 241                                 | 250                        | 106                                  | 72                                  | 1590                       | 524                                  | 2250                                |
| 28  | 153                        | 120                                  | 50                                  | 162                        | 44                                   | 19                                  | 520                        | 257                                  | 361                                 |
| 29  | 135                        | 39                                   | 14                                  | 137                        | 36                                   | 13                                  | 925                        | 1260                                 | 3150                                |
| 30  | --                         | --                                   | --                                  | 134                        | 58                                   | 21                                  | 368                        | 254                                  | 252                                 |
| 31  | 117                        | 50                                   | 16                                  | 116                        | 34                                   | 11                                  | --                         | --                                   | --                                  |

| DATE          | TIME | TEMPER-<br>ATURE<br>(DLG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIM-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>MENT<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM |
|---------------|------|-----------------------------|-------------------------|-------------------------------------------|--------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| OCT.<br>06... | 1150 | --                          | 105                     | 20                                        | 5.7                                        | 25                                                          | 34                                                          | 43                                                          |
| JAN.<br>13... | 1400 | .0                          | 110                     | 35                                        | 10                                         | 14                                                          | 18                                                          | 26                                                          |
| APR.<br>13... | 1400 | 3.5                         | 2080                    | 2100                                      | 11800                                      | 49                                                          | 64                                                          | 75                                                          |

| DATE          | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM |
|---------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| OCT.<br>06... | 63                                                          | 82                                                          | 93                                                          | 100                                                         | --                                                          | --                                                          | --                                                          |
| JAN.<br>13... | 34                                                          | 50                                                          | 66                                                          | 78                                                          | 92                                                          | 95                                                          | 100                                                         |
| APR.<br>13... | 85                                                          | 92                                                          | 96                                                          | 98                                                          | 100                                                         | --                                                          | --                                                          |

05408000 KICKAPOO RIVER AT LA FARGE, WIS.--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE          | TIME | TEMPER-<br>ATURE<br>(DEG C) | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>32.0 MM |
|---------------|------|-----------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| JAN.<br>06... | 0845 | --                          | 1                                                           | 3                                                           | 37                                                          | 96                                                          | 99                                                          | 100                                                         | --                                                          | --                                                          | --                                                          | --                                                          |
| APR.<br>06... | 1100 | --                          | 4                                                           | 5                                                           | 14                                                          | 68                                                          | 93                                                          | 97                                                          | 99                                                          | 100                                                         | --                                                          | --                                                          |
| SEP.<br>06... | 1130 | 17.0                        | 4                                                           | 12                                                          | 34                                                          | 71                                                          | 76                                                          | 77                                                          | 77                                                          | 77                                                          | 79                                                          | 88                                                          |

LOCATION.--Lat 43°21'30", long 90°53'49", in NW 1/4 sec.7, T.10 N., R.4 W., Crawford County, on left bank just upstream from bridge on town road, 0.1 mile south of junction of two town roads, and 3.0 miles northwest of Gavs Mills.

PERIOD OF RECORD.--Water temperatures: November 1967 to September 1972.

**EXTREMES, 1967-72.**--Water temperatures: Maximum, 26.5°C June 29, July 2, 1970; minimum, freezing point on many days during winter months.

REMARKS.--Equipment malfunction from November to February.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

[illegible]

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972--Continued

[illegible]

## WISCONSIN RIVER BASIN

05409870 NEDERLO CREEK NEAR GAYS MILLS, WIS.--Continued

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|

05409870 - NEDERLO CR. NR. GAYS MILLS, WIS. (LAT 43 21 30 LONG 090 53 49)

NOV., 1971

|       |      |     |     |    |     |
|-------|------|-----|-----|----|-----|
| 01... | 1115 | --  | 2.3 | 2  | .01 |
| 01... | 1245 | 6.5 | 2.7 | 6  | .04 |
| 01... | 1500 | 7.0 | 3.8 | 28 | .29 |

MAR., 1972

|       |      |    |     |      |      |
|-------|------|----|-----|------|------|
| 14... | 1030 | -- | 5.2 | 42   | .59  |
| 14... | 1045 | -- | 5.2 | 31   | .44  |
| 14... | 1115 | -- | 5.5 | 67   | .99  |
| 14... | 1235 | -- | 7.3 | 183  | 3.6  |
| 14... | 1305 | -- | 113 | 782  | 239  |
| 14... | 1355 | -- | 13  | 223  | 7.8  |
| 14... | 1420 | -- | 22  | 261  | 16   |
| 14... | 1540 | -- | 125 | 2580 | 871  |
| 14... | 1635 | -- | 146 | 2240 | 883  |
| 14... | 1735 | -- | 125 | 1360 | 459  |
| 14... | 1800 | -- | 120 | 927  | 300  |
| 14... | 1805 | -- | 115 | 902  | 280  |
| 14... | 2230 | -- | 28  | 184  | 14   |
| 14... | 2300 | -- | 25  | 127  | 8.6  |
| 15... | 0000 | -- | 20  | 149  | 8.0  |
| 15... | 0030 | -- | 18  | 132  | 6.4  |
| 15... | 1000 | -- | 16  | 119  | 5.1  |
| 15... | 1130 | -- | 14  | 92   | 3.5  |
| 15... | 1330 | -- | 5.7 | 72   | 1.1  |
| 15... | 1345 | -- | 7.6 | 158  | 3.2  |
| 15... | 1347 | -- | 7.9 | 246  | 5.2  |
| 15... | 1350 | -- | 16  | 177  | 7.6  |
| 15... | 1515 | -- | 239 | 2380 | 1540 |
| 15... | 1525 | -- | 239 | 2000 | 1290 |
| 15... | 1530 | -- | 230 | 1850 | 1150 |
| 15... | 1545 | -- | 226 | 1810 | 1100 |
| 16... | 1500 | -- | 74  | 418  | 84   |
| 17... | 1120 | -- | 5.2 | 147  | 2.1  |
| 17... | 1145 | -- | 7.6 | 136  | 2.8  |
| 17... | 1215 | -- | 8.9 | 140  | 3.4  |
| 17... | 1245 | -- | 25  | 275  | 19   |
| 17... | 1315 | -- | 129 | 1310 | 456  |
| 17... | 1345 | -- | 205 | 1850 | 1020 |
| 17... | 1415 | -- | 266 | 2330 | 1670 |
| 17... | 1445 | -- | 340 | 2350 | 2160 |
| 17... | 1515 | -- | 288 | 1690 | 1310 |
| 17... | 1545 | -- | 273 | 1420 | 1050 |
| 17... | 1615 | -- | 178 | 1090 | 524  |
| 17... | 1645 | -- | 141 | 790  | 301  |
| 17... | 1715 | -- | 109 | 701  | 206  |
| 17... | 1745 | -- | 89  | 611  | 147  |
| 17... | 1815 | -- | 69  | 412  | 77   |
| 17... | 1845 | -- | 54  | 327  | 48   |
| 17... | 1915 | -- | 40  | 261  | 28   |
| 17... | 1945 | -- | 31  | 212  | 18   |
| 17... | 2015 | -- | 26  | 170  | 12   |
| 17... | 2045 | -- | 20  | 173  | 9.3  |
| 17... | 2115 | -- | 18  | 139  | 6.8  |
| 17... | 2145 | -- | 14  | 107  | 4.0  |
| 17... | 2215 | -- | 12  | 78   | 2.5  |
| 17... | 2245 | -- | 10  | 54   | 1.5  |
| 17... | 2315 | -- | 8.9 | 50   | 1.2  |
| 17... | 2345 | -- | 8.0 | 39   | .84  |
| 18... | 0015 | -- | 7.3 | 26   | .51  |
| 18... | 0045 | -- | 6.7 | 22   | .40  |
| 18... | 0115 | -- | 6.1 | 46   | .76  |
| 18... | 1330 | -- | 7.0 | 35   | .66  |
| 18... | 1500 | -- | 39  | 306  | 32   |
| 18... | 1530 | -- | 47  | 318  | 40   |
| 18... | 1650 | -- | 50  | 302  | 41   |
| 18... | 1700 | -- | 40  | 244  | 26   |
| 18... | 1730 | -- | 39  | 190  | 20   |
| 18... | 1800 | -- | 34  | 153  | 14   |
| 18... | 1830 | -- | 28  | 123  | 9.3  |
| 18... | 1900 | -- | 24  | 115  | 7.5  |
| 18... | 1930 | -- | 20  | 112  | 6.0  |
| 18... | 2000 | -- | 18  | 102  | 5.0  |
| 18... | 2030 | -- | 15  | 80   | 3.2  |
| 18... | 2100 | -- | 13  | 57   | 2.0  |
| 18... | 2130 | -- | 11  | 71   | 2.1  |
| 18... | 2200 | -- | 8.9 | 65   | 1.6  |
| 18... | 2300 | -- | 7.0 | 42   | .79  |

05409870 NEDERLO CREEK NEAR GAYS MILLS, WIS.--Continued

| DATE       | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
| APR., 1972 |      |                             |                         |                                          |                                                             |
| 06...      | 1530 | --                          | 7.3                     | 155                                      | 3.1                                                         |
| 06...      | 1600 | --                          | 7.6                     | 171                                      | 3.5                                                         |
| 06...      | 1745 | --                          | 7.0                     | 118                                      | 2.2                                                         |
| 06...      | 1815 | --                          | 6.4                     | 101                                      | 1.7                                                         |
| JULY-      |      |                             |                         |                                          |                                                             |
| 14...      | 1100 | --                          | 2.1                     | 4                                        | .02                                                         |
| AUG.       |      |                             |                         |                                          |                                                             |
| 11...      | 1445 | --                          | 6.4                     | 159                                      | 2.7                                                         |
| 11...      | 1515 | --                          | 25                      | 542                                      | 37                                                          |
| 11...      | 1545 | --                          | 17                      | 1470                                     | 67                                                          |
| 11...      | 1615 | --                          | 9.7                     | 1050                                     | 27                                                          |
| 20...      | 2025 | --                          | 6.1                     | 1970                                     | 32                                                          |
| 20...      | 2055 | --                          | 36                      | 1410                                     | 137                                                         |
| 20...      | 2125 | --                          | 45                      | 1670                                     | 203                                                         |
| 20...      | 2155 | --                          | 27                      | 1630                                     | 119                                                         |
| 20...      | 2225 | --                          | 21                      | 1150                                     | 65                                                          |
| 20...      | 2255 | --                          | 15                      | 892                                      | 36                                                          |
| 20...      | 2325 | --                          | 16                      | 603                                      | 26                                                          |
| 20...      | 2355 | --                          | 11                      | 387                                      | 11                                                          |
| 21...      | 0025 | --                          | 8.0                     | 303                                      | 6.5                                                         |
| 21...      | 0055 | --                          | 6.4                     | 256                                      | 4.4                                                         |
| 25...      | 1655 | --                          | 9.7                     | 445                                      | 12                                                          |
| 25...      | 1725 | --                          | 7.3                     | 261                                      | 5.1                                                         |
| SEP.       |      |                             |                         |                                          |                                                             |
| 13...      | 0130 | --                          | 8.2                     | 505                                      | 11                                                          |
| 13...      | 0850 | --                          | 2.7                     | 32                                       | .23                                                         |
| 25...      | 0640 | --                          | 6.1                     | 79                                       | 1.3                                                         |
| 25...      | 0710 | --                          | 8.9                     | 85                                       | 2.0                                                         |
| 25...      | 0740 | --                          | 8.2                     | 94                                       | 2.1                                                         |
| 25...      | 0810 | --                          | 6.7                     | 56                                       | 1.0                                                         |
| 26...      | 0100 | --                          | 6.4                     | 139                                      | 2.4                                                         |
| 26...      | 0130 | --                          | 13                      | 15                                       | .54                                                         |
| 26...      | 0200 | --                          | 12                      | 414                                      | 13                                                          |
| 26...      | 0230 | --                          | 9.3                     | 451                                      | 11                                                          |
| 26...      | 0300 | --                          | 7.6                     | 284                                      | 5.8                                                         |
| 26...      | 0330 | --                          | 6.7                     | 194                                      | 3.5                                                         |
| 26...      | 0400 | --                          | 6.1                     | 139                                      | 2.3                                                         |
| 26...      | 0430 | --                          | 5.5                     | 105                                      | 1.6                                                         |
| 26...      | 0500 | --                          | 6.7                     | 98                                       | 1.8                                                         |
| 26...      | 0530 | --                          | 6.4                     | 87                                       | 1.5                                                         |
| 28...      | 1300 | --                          | 8.0                     | 6510                                     | 141                                                         |
| 28...      | 1330 | --                          | 8.6                     | 512                                      | 12                                                          |
| 28...      | 1400 | --                          | 60                      | 1030                                     | 167                                                         |
| 28...      | 1430 | --                          | 91                      | 4520                                     | 1110                                                        |
| 28...      | 1500 | --                          | 87                      | 2320                                     | 545                                                         |
| 28...      | 1530 | --                          | 54                      | 1820                                     | 265                                                         |
| 28...      | 1600 | --                          | 41                      | 1210                                     | 134                                                         |
| 28...      | 1630 | --                          | 65                      | 829                                      | 145                                                         |
| 28...      | 1730 | --                          | 27                      | 938                                      | 68                                                          |
| 28...      | 1800 | --                          | 19                      | 614                                      | 31                                                          |
| 28...      | 1830 | --                          | 15                      | 480                                      | 19                                                          |
| 28...      | 1900 | --                          | 12                      | 427                                      | 14                                                          |
| 28...      | 1930 | --                          | 10                      | 306                                      | 8.3                                                         |
| 28...      | 2000 | --                          | 9.3                     | 280                                      | 7.0                                                         |
| 28...      | 2030 | --                          | 8.0                     | 242                                      | 5.2                                                         |
| 28...      | 2100 | --                          | 7.3                     | 221                                      | 4.4                                                         |
| 28...      | 2130 | --                          | 6.7                     | 196                                      | 3.5                                                         |
| 28...      | 2200 | --                          | 6.1                     | 160                                      | 2.6                                                         |
| 28...      | 2230 | --                          | 5.7                     | 135                                      | 2.1                                                         |
| 28...      | 2300 | --                          | 5.5                     | 124                                      | 1.8                                                         |

05409870 - NEDERLO CR. NR. GAYS MILLS, WIS. (LAT 43 21 30 LONG 090 53 49)

## WISCONSIN RIVER BASIN

05409870 NEDERLO CREEK NEAR GAYS MILLS, WIS.--Continued

05409870 - NEDERLO CR. NR. GAYS MILLS, WIS. (LAT 43 21 30 LONG 090 53 49)

| DATE       | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDEO<br>SEDI-<br>MENT<br>CHARGE<br>(MG/L) | SUS-<br>PENDEO<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM |
|------------|------|-------------------------|-----------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| MAR., 1972 |      |                         |                                                     |                                                                       |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 14...      | 1355 | 13                      | 223                                                 | 7.8                                                                   | 12                                                          | 16                                                          | 20                                                          | 27                                                          | 41                                                          | 55                                                          | 64                                                          |
| 14...      | 1400 | 120                     | 927                                                 | 300                                                                   | 16                                                          | 23                                                          | 29                                                          | 40                                                          | 61                                                          | 82                                                          | 91                                                          |
| 15...      | 1530 | 230                     | 1450                                                | 1150                                                                  | 13                                                          | 19                                                          | 24                                                          | 34                                                          | 52                                                          | 74                                                          | 87                                                          |

|       | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM |
|-------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| MAR.  |                                                              |                                                              |                                                              |
| 14... | 81                                                           | 98                                                           | 100                                                          |
| 14... | 97                                                           | 100                                                          | --                                                           |
| 15... | 93                                                           | 98                                                           | 100                                                          |

## 05430500 ROCK RIVER AT AFTON, WIS.

LOCATION.--Lat 42°36'33", long 89°04'14", in NE 1/4 sec.28, T.2 N., R.12 E., Rock County, temperature recorder at gaging station on right bank in Afton, 0.3 mile downstream from highway bridge, and 1.1 miles upstream from Bass Creek.

DRAINAGE AREA.--3,300 sq mi, approximately.

PERIOD OF RECORD.--Water temperatures: September 1954 to September 1972.

EXTREMES, 1971-72.--Water temperatures: Maximum, 28.0°C Aug. 19; minimum, freezing point on many days during December to March.

EXTREMES, 1954-72.--Water temperatures: Maximum, 32.0°C July 27-30, Aug. 4, 1955; July 26, 28, 1964; minimum, freezing point on many days during winter months 1954-68, 1971-72.

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

|       | OCTOBER |      | NOVEMBER |      | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
| 1     | 21.0    | 18.5 | 12.0     | 10.5 | 1.5      | 1.0 | 1.0     | 0.5 | 0.0      | 0.0 | 0.5   | 0.0 |
| 2     | 21.0    | 18.0 | 11.0     | 10.5 | 1.0      | 0.5 | 1.0     | 0.5 | 0.0      | 0.0 | 0.0   | 0.0 |
| 3     | 20.5    | 18.5 | 10.5     | 9.0  | 1.0      | 1.0 | 1.0     | 0.5 | 0.5      | 0.0 | 0.5   | 0.0 |
| 4     | 18.5    | 15.5 | 9.0      | 7.0  | 1.0      | 1.0 | 0.5     | 0.5 | 0.5      | 0.0 | 1.0   | 0.0 |
| 5     | 18.0    | 15.5 | 9.0      | 8.0  | 1.0      | 1.0 | 0.5     | 0.5 | 0.0      | 0.0 | 0.0   | 0.0 |
| 6     | 16.5    | 14.5 | 9.0      | 5.5  | 1.0      | 1.0 | 0.5     | 0.0 | 0.0      | 0.0 | 0.0   | 0.0 |
| 7     | 16.0    | 13.0 | 5.5      | 4.0  | 1.5      | 1.0 | 0.0     | 0.0 | 0.0      | 0.0 | 3.0   | 0.0 |
| 8     | 15.0    | 13.5 | 5.0      | 4.5  | 2.0      | 1.5 | 0.0     | 0.0 | 0.0      | 0.0 | 0.5   | 0.0 |
| 9     | 14.0    | 12.0 | 4.5      | 4.5  | 3.0      | 2.0 | 0.5     | 0.0 | 0.0      | 0.0 | 1.5   | 0.0 |
| 10    | 14.5    | 11.5 | 5.5      | 4.0  | 3.5      | 3.0 | 0.5     | 0.0 | 0.0      | 0.0 | 1.0   | 0.0 |
| 11    | 14.0    | 11.5 | 5.5      | 4.5  | 3.5      | 3.0 | 0.5     | 0.0 | 0.0      | 0.0 | 2.0   | 0.0 |
| 12    | 13.5    | 10.5 | 5.5      | 5.0  | 3.5      | 3.0 | 0.5     | 0.0 | 0.0      | 0.0 | 1.0   | 0.0 |
| 13    | 14.5    | 12.0 | 6.0      | 5.5  | 3.0      | 2.0 | 0.5     | 0.0 | 0.0      | 0.0 | 0.5   | 0.5 |
| 14    | 14.5    | 11.5 | 8.5      | 5.5  | 2.0      | 1.5 | 0.5     | 0.5 | 0.0      | 0.0 | 2.0   | 0.5 |
| 15    | 15.0    | 11.5 | 8.5      | 6.0  | 1.5      | 1.5 | 0.5     | 0.5 | 0.5      | 0.0 | 1.5   | 1.0 |
| 16    | 15.0    | 12.0 | 9.0      | 8.0  | 1.5      | 1.5 | 0.5     | 0.5 | 0.0      | 0.0 | 1.5   | 1.0 |
| 17    | 16.0    | 13.0 | 10.0     | 9.0  | 1.5      | 0.5 | 0.5     | 0.0 | 0.5      | 0.0 | 2.0   | 1.0 |
| 18    | 16.5    | 14.0 | 10.0     | 10.0 | 0.5      | 0.5 | 0.0     | 0.0 | 0.5      | 0.0 | 2.0   | 1.5 |
| 19    | 16.5    | 15.5 | 10.0     | 8.5  | 0.5      | 0.0 | 0.0     | 0.0 | 0.0      | 0.0 | 2.0   | 2.0 |
| 20    | 17.0    | 15.5 | 8.5      | 8.0  | 0.0      | 0.0 | 0.0     | 0.0 | 0.0      | 0.0 | 3.0   | 2.0 |
| 21    | 17.0    | 15.5 | 8.0      | 5.5  | 0.0      | 0.0 | 0.0     | 0.0 | 0.5      | 0.0 | 3.5   | 3.0 |
| 22    | 17.0    | 16.0 | 5.5      | 4.0  | 0.0      | 0.0 | 0.0     | 0.0 | 0.0      | 0.0 | 3.5   | 2.0 |
| 23    | 17.0    | 15.0 | 4.5      | 4.0  | 0.0      | 0.0 | 0.0     | 0.0 | 0.0      | 0.0 | 2.0   | 1.5 |
| 24    | 15.0    | 15.0 | 4.0      | 3.5  | 0.0      | 0.0 | 0.0     | 0.0 | 1.0      | 0.0 | 1.5   | 1.0 |
| 25    | 15.5    | 15.0 | 3.5      | 3.0  | 0.5      | 0.0 | 0.0     | 0.0 | 0.5      | 0.0 | 3.0   | 1.5 |
| 26    | 16.5    | 14.0 | 3.0      | 2.0  | 0.5      | 0.5 | 0.0     | 0.0 | 1.0      | 0.0 | 2.0   | 2.0 |
| 27    | 16.0    | 14.5 | 3.0      | 2.0  | 0.5      | 0.5 | 0.0     | 0.0 | 0.5      | 0.0 | 2.0   | 1.5 |
| 28    | 14.5    | 12.0 | 3.0      | 2.0  | 0.5      | 0.0 | 0.0     | 0.0 | 2.0      | 0.0 | 3.0   | 2.0 |
| 29    | 14.5    | 13.0 | 2.0      | 1.5  | 0.0      | 0.0 | 0.0     | 0.0 | 1.0      | 0.5 | 3.0   | 2.0 |
| 30    | 15.5    | 14.0 | 2.0      | 1.0  | 0.0      | 0.0 | 0.0     | 0.0 | ---      | --- | 2.0   | 1.5 |
| 31    | 15.5    | 11.5 | ---      | ---  | 0.5      | 0.0 | 0.0     | 0.0 | ---      | --- | 3.5   | 2.0 |
| MONTH | 21.0    | 10.5 | 12.0     | 1.0  | 3.5      | 0.0 | 1.0     | 0.0 | 2.0      | 0.0 | 3.5   | 0.0 |

## ROCK RIVER BASIN

05430500 ROCK RIVER AT AFTON, WIS.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972--Continued

| DAY   | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
|       | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
| 1     | 3.5   | 3.0  | 11.5 | 11.0 | 20.0 | 17.0 | 24.0 | 20.5 | 23.0   | 22.0 | 24.5      | 23.0 |
| 2     | 3.0   | 3.0  | 11.5 | 11.5 | 21.0 | 18.5 | 23.0 | 21.0 | 22.0   | 20.5 | 23.0      | 21.5 |
| 3     | 3.0   | 3.0  | 11.5 | 11.5 | 24.5 | 19.0 | 23.5 | 20.0 | 22.0   | 20.5 | 21.5      | 20.0 |
| 4     | 3.0   | 2.0  | 11.5 | 11.0 | 24.0 | 20.0 | 22.0 | 19.5 | 23.0   | 19.5 | 20.0      | 17.0 |
| 5     | 3.5   | 2.0  | 13.5 | 11.5 | 21.5 | 19.5 | 23.0 | 19.0 | 22.0   | 20.0 | 20.0      | 18.5 |
| 6     | 4.0   | 3.0  | 13.5 | 13.0 | 23.5 | 20.5 | 22.0 | 20.5 | 23.0   | 21.0 | 19.5      | 19.0 |
| 7     | 3.5   | 2.0  | 13.0 | 11.5 | 23.5 | 20.0 | 22.0 | 20.0 | 22.0   | 20.5 | 19.5      | 19.0 |
| 8     | 2.0   | 1.5  | 11.5 | 10.0 | 24.0 | 20.0 | 23.5 | 19.0 | 20.5   | 19.0 | 19.0      | 19.0 |
| 9     | 3.5   | 1.5  | 10.0 | 10.0 | 24.0 | 20.5 | 23.0 | 20.5 | 21.0   | 16.5 | 19.0      | 18.0 |
| 10    | 4.5   | 3.5  | 11.5 | 10.0 | 21.5 | 19.5 | 25.0 | 20.0 | 21.0   | 18.0 | 18.5      | 17.0 |
| 11    | 4.5   | 4.5  | 13.5 | 11.5 | 20.5 | 18.5 | 26.5 | 22.0 | 20.5   | 18.0 | 18.0      | 17.0 |
| 12    | 4.5   | 4.5  | 14.5 | 13.0 | 21.0 | 18.5 | 25.5 | 23.0 | 21.0   | 19.0 | 17.0      | 17.0 |
| 13    | 5.5   | 4.5  | 14.5 | 13.5 | 23.5 | 19.5 | 25.0 | 23.0 | 24.0   | 20.0 | 18.0      | 17.0 |
| 14    | 5.5   | 5.5  | 14.5 | 14.0 | 23.5 | 21.0 | 25.0 | 23.0 | 24.5   | 21.5 | 19.0      | 18.0 |
| 15    | 5.5   | 4.0  | 15.5 | 14.5 | 24.0 | 20.5 | 25.5 | 23.0 | 24.0   | 22.0 | 20.0      | 18.5 |
| 16    | 4.0   | 3.5  | 16.5 | 15.5 | 23.5 | 20.5 | 26.0 | 23.0 | 24.0   | 22.0 | 19.5      | 18.0 |
| 17    | 3.5   | 2.0  | 19.0 | 16.5 | 23.0 | 19.5 | 25.0 | 23.5 | 25.5   | 23.0 | 20.5      | 19.0 |
| 18    | 8.5   | 3.5  | 19.5 | 18.5 | 23.0 | 19.5 | 24.0 | 23.5 | 27.0   | 24.5 | 20.5      | 19.5 |
| 19    | 8.5   | 8.5  | 20.5 | 19.5 | 23.5 | 19.5 | 24.0 | 23.5 | 28.0   | 25.5 | 20.5      | 19.5 |
| 20    | 9.0   | 8.5  | 22.0 | 20.5 | 23.5 | 21.0 | 26.0 | 23.5 | 27.0   | 25.5 | 20.5      | 19.5 |
| 21    | 9.0   | 8.5  | 23.0 | 21.5 | 23.0 | 20.0 | 28.0 | 25.0 | 26.5   | 25.0 | 20.5      | 19.5 |
| 22    | 8.5   | 6.5  | 24.0 | 23.0 | 22.0 | 20.0 | 29.0 | 26.5 | 26.5   | 25.5 | 19.5      | 19.0 |
| 23    | 6.5   | 6.5  | 24.0 | 23.0 | 21.5 | 19.0 | 29.0 | 26.5 | 26.0   | 24.5 | 19.0      | 18.0 |
| 24    | 6.5   | 6.5  | 23.5 | 21.5 | 21.0 | 19.0 | 28.5 | 26.5 | 24.5   | 23.5 | 18.0      | 18.0 |
| 25    | 8.0   | 6.5  | 23.5 | 21.5 | 21.5 | 19.5 | 28.0 | 25.5 | 24.0   | 22.0 | 18.5      | 18.0 |
| 26    | 9.0   | 8.0  | 24.0 | 23.0 | 23.0 | 19.5 | 26.0 | 22.0 | 22.0   | 21.5 | 18.5      | 18.5 |
| 27    | 10.0  | 9.0  | 24.0 | 23.5 | 24.0 | 20.5 | 23.5 | 22.0 | 21.5   | 21.0 | 18.5      | 17.0 |
| 28    | 10.0  | 10.0 | 24.0 | 23.0 | 23.5 | 21.0 | 23.0 | 21.0 | 24.5   | 21.0 | 17.0      | 16.5 |
| 29    | 10.0  | 10.0 | 23.5 | 22.0 | 23.0 | 20.0 | 24.0 | 21.0 | 24.5   | 22.0 | 16.5      | 16.0 |
| 30    | 11.0  | 10.0 | 23.0 | 19.5 | 26.0 | 20.0 | 24.5 | 21.0 | 25.5   | 24.0 | 16.0      | 14.5 |
| 31    | ---   | ---  | 19.5 | 18.0 | ---  | ---  | 24.0 | 22.0 | 25.5   | 24.5 | ---       | ---  |
| MONTH | 11.0  | 1.5  | 24.0 | 10.0 | 26.0 | 17.0 | 29.0 | 19.0 | 28.0   | 16.5 | 24.5      | 14.5 |

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

219

| DATE | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SiO <sub>2</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(UG/L) | DIS-<br>SOLVED<br>MAN-<br>GANESF<br>(MN)<br>(UG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) |
|------|-----------------------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|
|------|-----------------------------|-------------------------|-----------------------------------------------------------|------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------|

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085161 - MINK RIVER NR. ELLISON BAY, WIS. (LAT 45 14 29 LONG 087 02 45)

|            |      |    |     |    |   |    |    |     |     |
|------------|------|----|-----|----|---|----|----|-----|-----|
| JUNE, 1972 |      |    |     |    |   |    |    |     |     |
| 07...      | 22.0 | -- | 7.8 | 60 | 9 | 64 | 32 | 2.4 | 1.1 |

04085163 - HEINS CREEK NR. BAILEYS HARBOR, WIS. (LAT 45 04 09 LONG 087 10 07)

|            |      |      |    |    |    |    |    |     |     |
|------------|------|------|----|----|----|----|----|-----|-----|
| JUNE, 1972 |      |      |    |    |    |    |    |     |     |
| 06...      | 16.0 | E3.0 | 10 | 40 | 13 | 60 | 33 | 1.6 | 1.4 |

04085171 - LOGAN CREEK NR. JACKSONPORT, WIS. (LAT 44 57 27 LONG 087 13 04)

|            |     |      |     |    |   |    |    |     |     |
|------------|-----|------|-----|----|---|----|----|-----|-----|
| JUNE, 1972 |     |      |     |    |   |    |    |     |     |
| 06...      | 8.5 | E3.0 | 9.9 | 30 | 7 | 56 | 31 | 1.9 | 1.6 |

04085175 - LILLY BAY CR. NR. STURGEON BAY, WIS. (LAT 44 50 59 LONG 087 16 03)

|            |      |      |     |    |   |    |    |     |     |
|------------|------|------|-----|----|---|----|----|-----|-----|
| JUNE, 1972 |      |      |     |    |   |    |    |     |     |
| 07...      | 11.5 | E4.0 | 7.8 | 50 | 0 | 63 | 34 | 2.5 | 1.5 |

04085178 - BEAH CR. NR. STURGEON BAY, WIS. (LAT 44 42 14 LONG 087 21 15)

|            |      |      |    |    |    |    |    |     |     |
|------------|------|------|----|----|----|----|----|-----|-----|
| JUNE, 1972 |      |      |    |    |    |    |    |     |     |
| 07...      | 13.0 | E4.0 | 15 | 80 | 19 | 41 | 35 | 3.6 | 1.4 |

WISCONSIN RIVER BASIN

05390130 - TAMARACK C. NR. CONOVER, WIS. (LAT 46 05 25 LONG 089 18 40)

|            |     |    |    |     |    |    |     |     |    |
|------------|-----|----|----|-----|----|----|-----|-----|----|
| OCT., 1971 |     |    |    |     |    |    |     |     |    |
| 11...      | 9.5 | 10 | 11 | 490 | 20 | 11 | 1.8 | 1.5 | .5 |

05390410 - DEERSKIN RIVER NR. PHELPS, WIS. (LAT 46 02 35 LONG 089 03 13)

|            |      |    |     |     |    |    |     |     |    |
|------------|------|----|-----|-----|----|----|-----|-----|----|
| OCT., 1971 |      |    |     |     |    |    |     |     |    |
| 12...      | 10.0 | 43 | 2.1 | 160 | 20 | 11 | 2.9 | 1.7 | .4 |

05390619 - FICE CREEK NR. FOGLE RIVER, WIS. (LAT 45 56 28 LONG 089 19 27)

|            |     |    |     |     |    |     |     |     |    |
|------------|-----|----|-----|-----|----|-----|-----|-----|----|
| OCT., 1971 |     |    |     |     |    |     |     |     |    |
| 11...      | 9.5 | 37 | 3.6 | 550 | 10 | 9.3 | 2.2 | 1.4 | .4 |

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE | RICAM-<br>MONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CAM-<br>MONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>CHLOR-<br>IDE<br>(CL)<br>(MG/L) | DIS-<br>SOLVED<br>FLUOR-<br>IDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(NO <sub>3</sub> )<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(RESI-<br>DUE AT<br>100 C)<br>(MG/L) | DIS-<br>SOLVED<br>SOLIDS<br>(SOM OF<br>COJSTI-<br>TIENTS)<br>(MG/L) | HARD-<br>NESS<br>(CA+MG)<br>(MG/L) |
|------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|--------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------|
|------|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|--------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------|

STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued

|                                                                               |     |   |    |     |    |    |     |     |     |
|-------------------------------------------------------------------------------|-----|---|----|-----|----|----|-----|-----|-----|
| 04085161 - PINK RIVER NR. ELLISON BAY, WIS. (LAT 45 14 29 LONG 087 02 45)     |     |   |    |     |    |    |     |     |     |
| JUNE, 1972<br>07...                                                           | 328 | 0 | 12 | 0.0 | .3 | -- | 292 | 288 | 290 |
| 04085163 - HEINS CREEK NR. HILLES BARROW, WIS. (LAT 45 04 09 LONG 087 10 07)  |     |   |    |     |    |    |     |     |     |
| JUNE, 1972<br>06...                                                           | 320 | 0 | 12 | 4.0 | .2 | -- | 222 | 285 | 280 |
| 04085171 - LOGAN CREEK NR. JACKSON POINT, WIS. (LAT 44 57 27 LONG 087 13 04)  |     |   |    |     |    |    |     |     |     |
| JUNE, 1972<br>06...                                                           | 294 | 0 | 15 | 5.1 | .2 | -- | 254 | 271 | 260 |
| 04085175 - LILLY BAY CR. NR. STURGEON BAY, WIS. (LAT 44 50 59 LONG 087 15 03) |     |   |    |     |    |    |     |     |     |
| JUNE, 1972<br>07...                                                           | 325 | 0 | 15 | 12  | .2 | -- | 310 | 302 | 300 |
| 04085178 - HFAH CR. NR. STURGEON BAY, WIS. (LAT 44 42 14 LONG 087 21 15)      |     |   |    |     |    |    |     |     |     |
| JUNE, 1972<br>07...                                                           | 252 | 0 | 15 | 5.5 | .2 | -- | 254 | 254 | 250 |

WISCONSIN RIVER BASIN--Continued

|                                                                           |    |   |     |     |    |    |    |    |    |
|---------------------------------------------------------------------------|----|---|-----|-----|----|----|----|----|----|
| 05340130 - TAMARACK C. NR. LUNGER, WIS. (LAT 45 05 25 LONG 089 18 40)     |    |   |     |     |    |    |    |    |    |
| OCT., 1971<br>11...                                                       | 43 | 0 | 5.2 | 1.5 | .0 | -- | 84 | 54 | 35 |
| 05340410 - DEERSKIN RIVER NR. FAYELLS, WIS. (LAT 45 02 15 LONG 089 03 13) |    |   |     |     |    |    |    |    |    |
| OCT., 1971<br>12...                                                       | 45 | 0 | 5.6 | 1.0 | .0 | -- | 45 | 47 | 40 |
| 05340519 - RICE CREEK NR. FAHLER, WIS. (LAT 45 56 24 LONG 089 19 27)      |    |   |     |     |    |    |    |    |    |
| OCT., 1971<br>11...                                                       | 34 | 0 | 4.0 | 1.0 | .0 | -- | 64 | 39 | 30 |

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

221

| DATE | NON-CARBONATE HARDNESS (MG/L) | SPECIFIC CONDUCTANCE (MICRO-MHOS) | PH (UNITS) | DISSOLVED NITRATE (N) (MG/L) | COLOR (PLATINUM-COBALT UNITS) | SODIUM ADSORPTION RATIO | PERCENT SODIUM | CARBON DIOXIDE (CO <sub>2</sub> ) (MG/L) | ALKALINITY AS CaCO <sub>3</sub> (MG/L) |
|------|-------------------------------|-----------------------------------|------------|------------------------------|-------------------------------|-------------------------|----------------|------------------------------------------|----------------------------------------|
|------|-------------------------------|-----------------------------------|------------|------------------------------|-------------------------------|-------------------------|----------------|------------------------------------------|----------------------------------------|

STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued

04085161 - MINK RIVER NR. ELLISON BAY, WIS. (LAT 45 14 29 LONG 087 02 45)

|                     |    |     |     |     |    |    |   |    |     |
|---------------------|----|-----|-----|-----|----|----|---|----|-----|
| JUNE, 1972<br>07... | 20 | 510 | 7.8 | .30 | 40 | .1 | 2 | -- | 269 |
|---------------------|----|-----|-----|-----|----|----|---|----|-----|

04085163 - HEINS CREEK NR. HAILEYS HARBOR, WIS. (LAT 45 04 09 LONG 087 10 07)

|                     |    |     |     |     |    |    |   |    |     |
|---------------------|----|-----|-----|-----|----|----|---|----|-----|
| JUNE, 1972<br>06... | 18 | 520 | 7.8 | .50 | 17 | .0 | 1 | -- | 267 |
|---------------------|----|-----|-----|-----|----|----|---|----|-----|

04085171 - LOGAN CREEK NR. JACKSONPORT, WIS. (LAT 44 57 27 LONG 087 13 04)

|                     |    |     |     |     |   |    |   |    |     |
|---------------------|----|-----|-----|-----|---|----|---|----|-----|
| JUNE, 1972<br>06... | 24 | 500 | 8.1 | 1.1 | 8 | .1 | 2 | -- | 241 |
|---------------------|----|-----|-----|-----|---|----|---|----|-----|

04085175 - LILLY BAY CR. NR. STURGEON BAY, WIS. (LAT 44 50 59 LONG 087 16 03)

|                     |    |     |     |     |    |    |   |    |     |
|---------------------|----|-----|-----|-----|----|----|---|----|-----|
| JUNE, 1972<br>07... | 30 | 515 | 8.0 | 1.0 | 15 | .1 | 2 | -- | 267 |
|---------------------|----|-----|-----|-----|----|----|---|----|-----|

04085178 - BEAR CR. NR. STURGEON BAY, WIS. (LAT 44 42 14 LONG 087 21 15)

|                     |    |     |     |     |    |    |   |    |     |
|---------------------|----|-----|-----|-----|----|----|---|----|-----|
| JUNE, 1972<br>07... | 42 | 434 | 8.2 | .70 | 10 | .1 | 3 | -- | 207 |
|---------------------|----|-----|-----|-----|----|----|---|----|-----|

WISCONSIN RIVER BASIN--Continued

05390130 - TAMARACK C. NR. CONOVER, WIS. (LAT 46 05 25 LONG 089 18 40)

|                     |   |    |     |     |    |    |   |    |    |
|---------------------|---|----|-----|-----|----|----|---|----|----|
| OCT., 1971<br>11... | 0 | 71 | 8.9 | .10 | 50 | .1 | 8 | -- | 35 |
|---------------------|---|----|-----|-----|----|----|---|----|----|

05390410 - DEERSKIN RIVER NR. PHELPS, WIS. (LAT 46 02 35 LONG 089 03 13)

|                     |   |    |     |     |    |    |   |    |    |
|---------------------|---|----|-----|-----|----|----|---|----|----|
| OCT., 1971<br>12... | 2 | 81 | 7.0 | .10 | 10 | .1 | 8 | -- | 37 |
|---------------------|---|----|-----|-----|----|----|---|----|----|

05390619 - FICE CREEK NR. EAGLE RIVER, WIS. (LAT 45 56 28 LONG 089 19 27)

|                     |   |    |     |     |    |    |   |    |    |
|---------------------|---|----|-----|-----|----|----|---|----|----|
| OCT., 1971<br>11... | 2 | 62 | 6.6 | .20 | 60 | .1 | 9 | -- | 28 |
|---------------------|---|----|-----|-----|----|----|---|----|----|

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE                                                                                    | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | DIS-<br>SOLVED<br>SILICA<br>(SI02)<br>(MG/L) | DIS-<br>SOLVED<br>IRON<br>(FE)<br>(MG/L) | DIS-<br>SOLVED<br>MANG-<br>NESE<br>(MN)<br>(MG/L) | DIS-<br>SOLVED<br>CAL-<br>CIUM<br>(CA)<br>(MG/L) | DIS-<br>SOLVED<br>MAG-<br>NE-<br>SIUM<br>(MG/L) | DIS-<br>SOLVED<br>SODIUM<br>(NA)<br>(MG/L) | DIS-<br>SOLVED<br>PO-<br>TAS-<br>SIUM<br>(K)<br>(MG/L) |
|-----------------------------------------------------------------------------------------|-----------------------------|-------------------------|----------------------------------------------|------------------------------------------|---------------------------------------------------|--------------------------------------------------|-------------------------------------------------|--------------------------------------------|--------------------------------------------------------|
| WISCONSIN RIVER BASIN--Continued                                                        |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| 05391088 - PINE LAKE CREEK NR. RHINELANDER, WISCONSIN (LAT 45 41 44 LONG 089 23 04)     |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| OCT., 1971<br>11...                                                                     | 11.0                        | 50                      | 10                                           | 1500                                     | 30                                                | 5.4                                              | 1.8                                             | 1.4                                        | .5                                                     |
| 05391900 - NOISY CREEK NR. RHINELANDER, WISCONSIN (LAT 45 33 21 LONG 089 26 54)         |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| OCT., 1971<br>13...                                                                     | 9.0                         | 44                      | 13                                           | 1100                                     | 65                                                | 11                                               | 2.7                                             | 1.5                                        | .6                                                     |
| 05392150 - MISHKOMACON CREEK NR. WOODRUFF, WISCONSIN (LAT 45 54 41 LONG 089 45 30)      |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| OCT., 1971<br>11...                                                                     | 9.5                         | 23                      | 14                                           | 530                                      | 20                                                | 14                                               | 1.8                                             | .6                                         | .6                                                     |
| 05392295 - WILLOW RIVER NR. TRIPOLI, WIS. (LAT 45 41 59 LONG 089 58 59)                 |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| OCT., 1971<br>12...                                                                     | 10.5                        | 127                     | 6.5                                          | 1400                                     | 20                                                | 9.4                                              | 1.6                                             | 1.2                                        | 6.0                                                    |
| 05392405 - RICE CREEK NR. HARSHAW, WIS. (LAT 45 36 36 LONG 089 36 21)                   |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| OCT., 1971<br>14...                                                                     | 12.5                        | 16                      | 13                                           | 760                                      | 0                                                 | 9.8                                              | 2.7                                             | 2.0                                        | .6                                                     |
| 05392450 - LITTLE RICE RIVER NR. WADSWORTH, WIS. (LAT 45 35 43 LONG 089 49 28)          |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| OCT., 1971<br>13...                                                                     | 7.5                         | 28                      | 9.1                                          | 0                                        | 30                                                | 5.4                                              | 2.0                                             | 1.1                                        | .5                                                     |
| 05393520 - SQUAW CREEK NR. SPIRIT, WISCONSIN (LAT 45 27 23 LONG 089 58 27)              |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| OCT., 1971<br>12...                                                                     | 4.5                         | 7.0                     | 13                                           | 700                                      | 14                                                | 10                                               | 3.4                                             | 2.0                                        | .5                                                     |
| 05393910 - NEW WOOD P. NR. IMMA, WIS. (LAT 45 18 28 LONG 089 53 21)                     |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| OCT., 1971<br>11...                                                                     | 10.0                        | 20                      | 9.4                                          | 520                                      | 0                                                 | 11                                               | 3.6                                             | 2.1                                        | .6                                                     |
| 05394130 - SOUTH FORK COPPER RIVER NR. HAMMURG, WISCONSIN (LAT 45 11 07 LONG 089 53 06) |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| OCT., 1971<br>11...                                                                     | 9.0                         | 6.4                     | 13                                           | 880                                      | 18                                                | 10                                               | 4.1                                             | 2.8                                        | 2.1                                                    |
| 05394250 - PRAIRIE RIVER NR. PARRISH, WISCONSIN (LAT 45 25 05 LONG 089 24 10)           |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| OCT., 1971<br>12...                                                                     | 8.5                         | 32                      | 14                                           | 710                                      | 51                                                | 14                                               | 4.3                                             | 1.8                                        | .5                                                     |
| 05394750 - MEADOW CREEK NR. MERRILL, WISCONSIN (LAT 45 14 09 LONG 089 40 03)            |                             |                         |                                              |                                          |                                                   |                                                  |                                                 |                                            |                                                        |
| OCT., 1971<br>11...                                                                     | 7.0                         | 5.3                     | 22                                           | 380                                      | 68                                                | 32                                               | 8.5                                             | 3.1                                        | 1.0                                                    |

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

223

| DATE                                                                                    | BICARBONATE<br>(HCO <sub>3</sub> )<br>(MG/L) | CARBONATE<br>(CO <sub>3</sub> )<br>(MG/L) | DISSOLVED<br>SULFATE<br>(SO <sub>4</sub> )<br>(MG/L) | DISSOLVED<br>CHLORIDE<br>(CL)<br>(MG/L) | DISSOLVED<br>FLUORIDE<br>(F)<br>(MG/L) | TOTAL<br>NITRATE<br>(NO <sub>3</sub> )<br>(MG/L) | DISSOLVED<br>SOLIDS<br>(RESIDUE AT<br>100 C)<br>(MG/L) | DISSOLVED<br>SOLIDS<br>(SUM OF<br>CONSTITUENTS)<br>(MG/L) | HARDNESS<br>(CA+MG)<br>(MG/L) |
|-----------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------|------------------------------------------------------|-----------------------------------------|----------------------------------------|--------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------|-------------------------------|
| WISCONSIN RIVER BASIN--Continued                                                        |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| 05391088 - PINE LAKE CREEK NR. RHINELANDER, WISCONSIN (LAT 45 41 44 LONG 089 23 04)     |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| OCT.. 1971<br>11...                                                                     | 17                                           | 0                                         | 5.0                                                  | 2.4                                     | .1                                     | --                                               | 68                                                     | 37                                                        | 21                            |
| 05391900 - NOISY CREEK NR. RHINELANDER, WISCONSIN (LAT 45 33 21 LONG 089 26 54)         |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| OCT.. 1971<br>13...                                                                     | 38                                           | 0                                         | 4.8                                                  | 2.8                                     | .2                                     | --                                               | 104                                                    | 57                                                        | 38                            |
| 05392150 - MISHONAGO CREEK NR. WOODRUFF, WISCONSIN (LAT 45 54 41 LONG 089 45 30)        |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| OCT.. 1971<br>11...                                                                     | 50                                           | 0                                         | 3.4                                                  | 1.2                                     | .2                                     | --                                               | 70                                                     | 61                                                        | 42                            |
| 05392295 - WILLOW RIVER NR. TRIPOLI, WIS. (LAT 45 41 59 LONG 089 58 59)                 |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| OCT.. 1971<br>12...                                                                     | 25                                           | 0                                         | 4.8                                                  | 3.0                                     | .2                                     | --                                               | 98                                                     | 42                                                        | 30                            |
| 05392405 - RICE CREEK NR. HARSHMAN, WIS. (LAT 45 35 36 LONG 089 36 21)                  |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| OCT.. 1971<br>14...                                                                     | 40                                           | 0                                         | 5.2                                                  | 1.5                                     | .0                                     | --                                               | 77                                                     | 57                                                        | 36                            |
| 05392450 - LITTLE RICE RIVER NR. HEADLEY, WIS. (LAT 45 35 43 LONG 089 49 28)            |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| OCT.. 1971<br>13...                                                                     | 17                                           | 0                                         | 4.8                                                  | 2.0                                     | .2                                     | --                                               | 101                                                    | 35                                                        | 22                            |
| 05393520 - SQUAW CREEK NR. SPIRIT, WISCONSIN (LAT 45 27 23 LONG 089 58 27)              |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| OCT.. 1971<br>12...                                                                     | 40                                           | 0                                         | 5.8                                                  | 2.0                                     | .2                                     | --                                               | 97                                                     | 58                                                        | 39                            |
| 05393910 - NEW WOOD P. NR. IPMA, WIS. (LAT 45 18 28 LONG 089 53 21)                     |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| OCT.. 1971<br>11...                                                                     | 44                                           | 0                                         | 7.6                                                  | 2.0                                     | .2                                     | --                                               | 105                                                    | 60                                                        | 48                            |
| 05394130 - SOUTH FORK COPPER RIVER NR. HARBURG, WISCONSIN (LAT 45 11 07 LONG 089 53 06) |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| OCT.. 1971<br>11...                                                                     | 46                                           | 0                                         | 5.2                                                  | 4.0                                     | .4                                     | --                                               | 103                                                    | 66                                                        | 42                            |
| 05394250 - PRAIRIE RIVER NR. PARKISH, WISCONSIN (LAT 45 25 05 LONG 089 24 10)           |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| OCT.. 1971<br>12...                                                                     | 57                                           | 0                                         | 6.8                                                  | 1.8                                     | .2                                     | --                                               | 93                                                     | 72                                                        | 52                            |
| 05394750 - MEADOW CREEK NR. MERRILL, WISCONSIN (LAT 45 14 09 LONG 089 40 03)            |                                              |                                           |                                                      |                                         |                                        |                                                  |                                                        |                                                           |                               |
| OCT.. 1971<br>11...                                                                     | 142                                          | 0                                         | 4.8                                                  | 2.0                                     | .2                                     | --                                               | 142                                                    | 144                                                       | 120                           |

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE                                                                                   | NON-<br>CAP-<br>PHOSPHATE<br>HAZARD-<br>HESS | SPF-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(MICRO-<br>MOS) | PHOS-<br>(PPM) | WIS-<br>SOLV-<br>SOLV-<br>(MG/L) | COLO-<br>R-<br>UNIT-<br>(PCU) | SOLID-<br>M-<br>SOL-<br>T-<br>SOL-<br>SOL-<br>(MG/L) | PERCENT-<br>SOLIDS<br>(%) | ALKAL-<br>ITY<br>AS<br>CaCO <sub>3</sub><br>(MG/L) |
|----------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------|----------------|----------------------------------|-------------------------------|------------------------------------------------------|---------------------------|----------------------------------------------------|
| WISCONSIN RIVER BASIN--Continued                                                       |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| 05391088 - PINE LAKE CREEK NR. FINELAND, WISCONSIN (LAT 45 41 44 LONG 089 23 04)       |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| OCT., 1971<br>11...                                                                    | 7                                            | 46                                                        | 6.3            | .05                              | 140                           | .1                                                   | 12                        | -- 14                                              |
| 05391900 - JOEY CREEK NR. FINELAND, WISCONSIN (LAT 45 33 21 LONG 089 25 54)            |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| OCT., 1971<br>13...                                                                    | 8                                            | 72                                                        | 5.7            | .04                              | 150                           | .1                                                   | 0                         | -- 31                                              |
| 05392150 - WISCONSIN CREEK NR. WILSON, WISCONSIN (LAT 45 34 41 LONG 089 45 30)         |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| OCT., 1971<br>11...                                                                    | 2                                            | 24                                                        | 1.1            | .10                              | 50                            | .0                                                   | 3                         | -- 41                                              |
| 05392245 - WILLIAM RIVER NR. FINELAND, WIS. (LAT 45 41 59 LONG 089 58 57)              |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| OCT., 1971<br>12...                                                                    | 10                                           | 22                                                        | 2.4            | .40                              | 240                           | .1                                                   | 0                         | -- 21                                              |
| 05392405 - BLUE CREEK NR. FINELAND, WIS. (LAT 45 40 30 LONG 089 37 21)                 |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| OCT., 1971<br>14...                                                                    | 2                                            | 75                                                        | 0.5            | .30                              | 50                            | .1                                                   | 11                        | -- 33                                              |
| 05392450 - LITTLE RIVER NR. WILSON, WIS. (LAT 45 35 44 LONG 089 49 28)                 |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| OCT., 1971<br>13...                                                                    | 8                                            | 41                                                        | 5.1            | .40                              | 300                           | .1                                                   | 10                        | -- 14                                              |
| 05393520 - SOUTH CREEK NR. SPIRIT, WISCONSIN (LAT 45 27 23 LONG 089 58 27)             |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| OCT., 1971<br>12...                                                                    | 6                                            | 74                                                        | 2.8            | .10                              | 150                           | .1                                                   | 10                        | -- 33                                              |
| 05393910 - NEW WOOD R. NR. FINELAND, WIS. (LAT 45 15 28 LONG 089 53 21)                |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| OCT., 1971<br>11...                                                                    | 6                                            | 24                                                        | 5.3            | .20                              | 100                           | .1                                                   | 10                        | -- 30                                              |
| 05394130 - SOUTH FORK COOPER RIVER NR. WILSON, WISCONSIN (LAT 45 11 07 LONG 089 53 06) |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| OCT., 1971<br>11...                                                                    | 4                                            | 62                                                        | 6.8            | .10                              | 130                           | .2                                                   | 12                        | -- 38                                              |
| 05394250 - PRITCH RIVER NR. WILSON, WISCONSIN (LAT 45 25 05 LONG 089 24 10)            |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| OCT., 1971<br>12...                                                                    | 6                                            | 100                                                       | 5.9            | .05                              | 120                           | .1                                                   | 7                         | -- 47                                              |
| 05394750 - MEADOW CREEK NR. MERRILL, WISCONSIN (LAT 45 14 09 LONG 089 40 03)           |                                              |                                                           |                |                                  |                               |                                                      |                           |                                                    |
| OCT., 1971<br>11...                                                                    | 0                                            | 25                                                        | 1.6            | .10                              | 25                            | .1                                                   | 5                         | -- 110                                             |

## MISCELLANEOUS ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

The following table contains a series of periodic specific conductance measurements obtained as part of water-resources investigations at stream gaging stations in Wisconsin. The purpose of these measurements is to determine the range in specific conductance under various streamflow conditions.

## Specific Conductance (Micromhos/cm at 25°C), October 1971 to September 1972

| Date                                                                                             | Time | Water temperature (°C) | Discharge (cfs) | Specific conductance | Date           | Time | Water temperature (°C) | Discharge (cfs) | Specific conductance |
|--------------------------------------------------------------------------------------------------|------|------------------------|-----------------|----------------------|----------------|------|------------------------|-----------------|----------------------|
| STREAMS TRIBUTARY TO LAKE SUPERIOR                                                               |      |                        |                 |                      |                |      |                        |                 |                      |
| 04025500 BOIS BRULE RIVER AT BRULE, WIS (LAT 46 32 16 LONG 091 35 43)                            |      |                        |                 |                      |                |      |                        |                 |                      |
| Oct. 4, 1971                                                                                     | 1300 | 12.0                   | 208             | 110                  | Apr. 19, 1972  | 1500 | 5.5                    | 423             | 100                  |
| Nov. 9, 1971                                                                                     | 1200 | 3.5                    | 247             | 110                  | May 26, 1972   | 1330 | 16.5                   | 172             | 125                  |
| Dec. 2, 1971                                                                                     | 1200 | 1.0                    | 208             | 100                  | July 6, 1972   | 0830 | 14.5                   | 170             | 120                  |
| Jan. 4, 1972                                                                                     | 1630 | 0.0                    | 152             | 110                  | Aug. 15, 1972  | 1000 | 14.5                   | 169             | 150                  |
| Feb. 7, 1972                                                                                     | 1400 | 0.0                    | 145             | 110                  | Sept. 21, 1972 | 1130 | 11.0                   | -               | 130                  |
| Mar. 15, 1972                                                                                    | 1330 | 2.0                    | 154             | 140                  |                |      |                        |                 |                      |
| 04027000 BAD RIVER NEAR ODANAH, WIS (LAT 46 29 15 LONG 090 41 45)                                |      |                        |                 |                      |                |      |                        |                 |                      |
| Oct. 5, 1971                                                                                     | 1130 | 12.5                   | 631             | 100                  | June 7, 1972   | 1230 | 20.5                   | 219             | 140                  |
| Jan. 5, 1972                                                                                     | 1730 | 0.0                    | 185             | 70                   | July 11, 1972  | 1530 | 20.0                   | 186             | 110                  |
| Feb. 8, 1972                                                                                     | 1200 | 0.0                    | 172             | 80                   | Aug. 17, 1972  | 1530 | 19.0                   | 6,820           | 90                   |
| Mar. 14, 1972                                                                                    | 1100 | 0.0                    | 196             | 110                  | Sept. 20, 1972 | 1300 | 15.5                   | 217             | 120                  |
| Apr. 19, 1972                                                                                    | 1200 | 1.0                    | 3,680           | 100                  |                |      |                        |                 |                      |
| 04027500 WHITE RIVER NEAR ASHLAND, WIS (LAT 46 29 50 LONG 090 54 15)                             |      |                        |                 |                      |                |      |                        |                 |                      |
| Oct. 5, 1971                                                                                     | 1400 | 12.5                   | 331             | 160                  | Apr. 18, 1972  | 1330 | 1.0                    | 1,560           | 75                   |
| Nov. 9, 1971                                                                                     | 1400 | 0.5                    | 149             | 160                  | May 29, 1972   | 1600 | 15.5                   | 213             | 220                  |
| Jan. 5, 1972                                                                                     | 1430 | 0.0                    | 140             | 70                   | July 12, 1972  | 1000 | 21.0                   | 174             | 140                  |
| Feb. 7, 1972                                                                                     | 1730 | 0.0                    | 159             | 110                  | Aug. 15, 1972  | 1700 | 18.5                   | 231             | 210                  |
| Mar. 15, 1972                                                                                    | 0930 | 0.5                    | 151             | 150                  |                |      |                        |                 |                      |
| STREAMS TRIBUTARY TO LAKE MICHIGAN                                                               |      |                        |                 |                      |                |      |                        |                 |                      |
| 04064500 PINE RIVER BELOW PINE RIVER POWERPLANT NEAR FLORENCE, WIS (LAT 45 50 16 LONG 088 13 31) |      |                        |                 |                      |                |      |                        |                 |                      |
| Oct. 8, 1971                                                                                     | 0945 | 10.0                   | 1,310           | 140                  | Apr. 11, 1972  | 0945 | 0.5                    | 318             | 160                  |
| Nov. 4, 1971                                                                                     | 1230 | 4.0                    | 620             | 180                  | May 11, 1972   | 0945 | 11.0                   | 1,320           | 110                  |
| Dec. 7, 1971                                                                                     | 1445 | 5.0                    | 334             | 90                   | June 14, 1972  | 1445 | 18.0                   | 343             | 200                  |
| Jan. 11, 1972                                                                                    | 1515 | 0.0                    | 360             | -                    | July 11, 1972  | 1030 | 17.0                   | 301             | 240                  |
| Feb. 10, 1972                                                                                    | 1600 | 0.0                    | 230             | 180                  | Aug. 16, 1972  | 1130 | 21.0                   | 592             | 160                  |
| Mar. 9, 1972                                                                                     | 1530 | 0.0                    | 204             | 140                  | Sept. 8, 1972  | 1115 | 16.5                   | 455             | 320                  |
| 04066000 MENOMINEE RIVER NEAR PEMBINE, WIS (LAT 45 35 24 LONG 087 46 34)                         |      |                        |                 |                      |                |      |                        |                 |                      |
| Dec. 7, 1971                                                                                     | 1145 | 1.0                    | 2,470           | 120                  | Aug. 15, 1972  | 1430 | 20.5                   | 2,360           | 200                  |
| June 14, 1972                                                                                    | 1345 | 6.5                    | 2,550           | 200                  | Sept. 13, 1972 | 1600 | 14.5                   | 2,240           | 210                  |
| July 10, 1972                                                                                    | 1730 | 21.5                   | 1,470           | 230                  |                |      |                        |                 |                      |
| 04069500 PESHTIGO RIVER AT PESHTIGO, WIS (LAT 45 02 49 LONG 087 44 40)                           |      |                        |                 |                      |                |      |                        |                 |                      |
| Oct. 1, 1971                                                                                     | 1130 | 13.5                   | 866             | 200                  | May 24, 1972   | 1215 | 21.5                   | 914             | 230                  |
| Nov. 16, 1971                                                                                    | 1150 | 3.5                    | 812             | 220                  | June 27, 1972  | 1000 | 21.0                   | 396             | -                    |
| Jan. 21, 1972                                                                                    | 1145 | 0.5                    | 374             | 280                  | July 19, 1972  | 1215 | 20.0                   | 822             | 300                  |
| Feb. 24, 1972                                                                                    | 1200 | 0.5                    | 520             | 180                  | Sept. 8, 1972  | 0900 | 21.0                   | 837             | 200                  |
| Apr. 16, 1972                                                                                    | 1615 | 1.5                    | 4,620           | 280                  |                |      |                        |                 |                      |
| 04071000 OCONTO RIVER NEAR GILLET, WIS (LAT 44 51 53 LONG 088 18 00)                             |      |                        |                 |                      |                |      |                        |                 |                      |
| Oct. 27, 1971                                                                                    | 1100 | 13.5                   | 504             | 275                  | Apr. 19, 1972  | 1800 | 3.5                    | 3,060           | -                    |
| Dec. 28, 1971                                                                                    | 1530 | 0.0                    | 336             | 220                  | May 24, 1972   | 1600 | 22.0                   | 614             | 240                  |
| Jan. 27, 1972                                                                                    | 1330 | 0.0                    | 300             | 250                  | July 27, 1972  | 1330 | 20.0                   | 406             | 240                  |
| Feb. 25, 1972                                                                                    | 1100 | 0.0                    | 360             | 300                  | Aug. 29, 1972  | 1130 | 18.5                   | 958             | 250                  |
| Mar. 30, 1972                                                                                    | 1200 | 0.0                    | 745             | 260                  | Sept. 27, 1972 | 1300 | 13.0                   | 805             | 80                   |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## MISCELLANEOUS ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| Date                                                                       | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance | Date           | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance |
|----------------------------------------------------------------------------|------|----------------------------------------|-------------------------|------------------------------|----------------|------|----------------------------------------|-------------------------|------------------------------|
| STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued                              |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 04072750 LAWRENCE CREEK NEAR WESTFIELD, WIS (LAT 43 53 52 LONG 089 34 43)  |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 6, 1971                                                               | 1100 | 10.0                                   | 16.5                    | 300                          | Mar. 21, 1972  | 1400 | 9.0                                    | 21.2                    | 300                          |
| Nov. 19, 1971                                                              | 1030 | 6.0                                    | 16.5                    | 300                          | Apr. 12, 1972  | 1145 | 8.0                                    | 17.9                    | 300                          |
| Jan. 6, 1972                                                               | 1200 | 3.0                                    | 15.6                    | -                            | May 23, 1972   | 1300 | 12.0                                   | 16.2                    | 310                          |
| Feb. 23, 1972                                                              | 1230 | 4.0                                    | 16.4                    | 320                          | July 11, 1972  | 1700 | 18.5                                   | 15.0                    | 305                          |
| Mar. 9, 1972                                                               | 1530 | 8.5                                    | 16.0                    | -                            | Aug. 23, 1972  | 1700 | 13.5                                   | 15.1                    | 280                          |
| Mar. 20, 1972                                                              | 1615 | -                                      | 30.7                    | -                            |                |      |                                        |                         |                              |
| 04073050 GRAND RIVER NEAR KINGSTON, WIS (LAT 43 41 09 LONG 089 05 09)      |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 11, 1971                                                              | 1400 | 5.0                                    | 16.1                    | 800                          | May 5, 1972    | 1300 | 15.0                                   | 30.0                    | 620                          |
| Dec. 17, 1971                                                              | 1115 | 0.0                                    | 48.7                    | 440                          | June 6, 1972   | 1130 | 20.0                                   | 22.6                    | -                            |
| Jan. 24, 1972                                                              | 1215 | 0.0                                    | 10.8                    | 840                          | July 14, 1972  | 1115 | 20.5                                   | 19.5                    | 650                          |
| Mar. 9, 1972                                                               | 1300 | 0.0                                    | 13.6                    | -                            | Sept. 1, 1972  | 1200 | 19.5                                   | 31.6                    | 745                          |
| Mar. 22, 1972                                                              | 1515 | 0.0                                    | 492                     | 265                          | Sept. 18, 1972 | 1300 | -                                      | 350                     | -                            |
| Mar. 23, 1972                                                              | 1400 | -                                      | 353                     | -                            | Sept. 19, 1972 | 1400 | 18.5                                   | 164                     | 480                          |
| Mar. 30, 1972                                                              | 1030 | -                                      | 35.7                    | -                            |                |      |                                        |                         |                              |
| 04073500 FOX RIVER AT BERLIN, WIS (LAT 43 57 14 LONG 088 57 08)            |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 4, 1971                                                               | 1200 | 15.0                                   | 918                     | 380                          | Apr. 13, 1972  | 1215 | 5.5                                    | 2,260                   | 300                          |
| Dec. 7, 1971                                                               | 1230 | 1.0                                    | 883                     | 420                          | June 6, 1972   | 1600 | 24.0                                   | 599                     | 330                          |
| Feb. 3, 1972                                                               | 1515 | 0.0                                    | 566                     | -                            | July 27, 1972  | 1515 | 20.0                                   | 616                     | 360                          |
| Mar. 9, 1972                                                               | 1115 | 0.0                                    | 538                     | -                            | Sept. 27, 1972 | 1515 | 13.5                                   | 2,090                   | 360                          |
| 04074950 WOLF RIVER AT LANGLADE, WIS (LAT 45 11 24 LONG 088 44 00)         |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 21, 1971                                                              | 1400 | 11.0                                   | 631                     | 200                          | Apr. 28, 1972  | 1300 | 10.0                                   | 1,690                   | 100                          |
| Nov. 15, 1971                                                              | 1200 | 5.5                                    | 393                     | 180                          | May 24, 1972   | 1130 | 20.0                                   | 545                     | 200                          |
| Dec. 6, 1971                                                               | 1330 | 0.5                                    | 377                     | 280                          | June 27, 1972  | 1200 | 21.0                                   | 236                     | 260                          |
| Feb. 3, 1972                                                               | 1100 | 0.0                                    | 318                     | 230                          | July 21, 1972  | 1200 | 21.5                                   | 308                     | 220                          |
| Mar. 8, 1972                                                               | 1300 | 0.0                                    | 298                     | 250                          | Aug. 24, 1972  | 1230 | 12.0                                   | 1,030                   | 140                          |
| Apr. 10, 1972                                                              | 1200 | 1.5                                    | 403                     | 205                          |                |      |                                        |                         |                              |
| 04075200 EVERGREEN CREEK NEAR LANGLADE, WIS (LAT 45 10 11 LONG 088 48 12)  |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 21, 1971                                                              | 1230 | 10.5                                   | 12.2                    | 300                          | Apr. 10, 1972  | 1100 | 1.0                                    | 10.1                    | 360                          |
| Nov. 15, 1971                                                              | 1300 | 6.0                                    | 11.2                    | 320                          | May 9, 1972    | 1130 | 8.5                                    | 13.0                    | 300                          |
| Dec. 6, 1971                                                               | 1200 | 4.5                                    | 11.6                    | 150                          | June 27, 1972  | 1400 | 16.5                                   | 12.9                    | 310                          |
| Jan. 21, 1972                                                              | 1430 | 0.5                                    | 10.3                    | 300                          | July 21, 1972  | 1030 | 15.0                                   | 12.3                    | 320                          |
| Feb. 11, 1972                                                              | 1200 | 0.0                                    | 8.73                    | 370                          | Aug. 23, 1972  | 1200 | 12.0                                   | 13.6                    | 300                          |
| Mar. 8, 1972                                                               | 1130 | 0.0                                    | 10.1                    | 320                          |                |      |                                        |                         |                              |
| 04077000 WOLF RIVER AT KESHENA FALLS, WIS (LAT 44 53 28 LONG 088 39 18)    |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 1, 1971                                                               | 1500 | 16.5                                   | 907                     | 250                          | Apr. 21, 1972  | 1430 | 4.0                                    | 2,580                   | 180                          |
| Nov. 16, 1971                                                              | 1500 | 4.0                                    | 654                     | 250                          | May 24, 1972   | 1400 | 22.0                                   | 840                     | 170                          |
| Jan. 7, 1972                                                               | 1400 | 0.0                                    | 645                     | 260                          | June 29, 1972  | 1200 | 21.0                                   | 489                     | 280                          |
| Feb. 29, 1972                                                              | 1200 | 0.0                                    | 471                     | 280                          | July 27, 1972  | 1100 | 18.5                                   | 587                     | 250                          |
| 04078500 EMBARRASS RIVER NEAR EMBARRASS, WIS (LAT 44 43 29 LONG 088 44 10) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 1, 1971                                                               | 1200 | 17.0                                   | 502                     | 440                          | Apr. 21, 1972  | 1200 | 4.5                                    | 2,690                   | 120                          |
| Nov. 16, 1971                                                              | 1000 | 3.5                                    | 235                     | 360                          | May 30, 1972   | 1500 | 19.5                                   | 218                     | 380                          |
| Dec. 20, 1971                                                              | 1330 | 0.0                                    | 368                     | 280                          | June 26, 1972  | 1330 | 21.0                                   | 136                     | 410                          |
| Feb. 11, 1972                                                              | 1500 | 0.0                                    | 126                     | -                            | Aug. 4, 1972   | 1230 | 20.0                                   | 170                     | 420                          |
| Apr. 6, 1972                                                               | 1100 | 1.0                                    | 275                     | 370                          |                |      |                                        |                         |                              |
| 04079000 WOLF RIVER AT NEW LONDON, WIS (LAT 44 23 32 LONG 088 44 25)       |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 16, 1971                                                              | 1200 | 3.5                                    | 1,570                   | 400                          | May 30, 1972   | 1300 | 19.5                                   | 1,330                   | 415                          |
| Jan. 7, 1972                                                               | 1100 | 0.0                                    | 1,270                   | 400                          | June 26, 1972  | 1600 | 23.5                                   | 1,010                   | 400                          |
| Feb. 11, 1972                                                              | 1200 | 0.0                                    | 1,070                   | -                            | Aug. 4, 1972   | 1400 | 21.0                                   | 1,050                   | 400                          |
| Mar. 7, 1972                                                               | 1400 | 0.0                                    | 818                     | -                            | Sept. 11, 1972 | 1400 | 20.0                                   | 2,310                   | 350                          |
| Apr. 21, 1972                                                              | 1130 | 5.0                                    | 7,690                   | -                            |                |      |                                        |                         |                              |

## MISCELLANEOUS ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| Date                                                                                   | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance | Date           | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance |
|----------------------------------------------------------------------------------------|------|----------------------------------------|-------------------------|------------------------------|----------------|------|----------------------------------------|-------------------------|------------------------------|
| STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued                                          |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 04080950 EMMONS CREEK NEAR RURAL, WIS (LAT 44 18 55 LONG 089 11 34)                    |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 19, 1971                                                                          | 1330 | 12.0                                   | 27.5                    | 370                          | May 16, 1972   | 1115 | 11.0                                   | 27.5                    | 270                          |
| Nov. 16, 1971                                                                          | 1345 | 7.0                                    | 27.3                    | 480                          | June 13, 1972  | 1130 | 13.0                                   | 24.4                    | 360                          |
| Dec. 14, 1971                                                                          | 1400 | 3.5                                    | 27.1                    | 380                          | July 18, 1972  | 1130 | 13.5                                   | 23.7                    | 360                          |
| Feb. 24, 1972                                                                          | 1300 | 4.0                                    | 22.4                    | 340                          | Aug. 15, 1972  | 1130 | 12.0                                   | 24.1                    | 365                          |
| Mar. 22, 1972                                                                          | 1030 | 3.5                                    | 31.9                    | 360                          | Sept. 19, 1972 | 1245 | 11.5                                   | 28.0                    | 350                          |
| Apr. 18, 1972                                                                          | 1245 | 9.5                                    | 31.5                    | 350                          |                |      |                                        |                         |                              |
| 04085200 KEWAUNEE RIVER NEAR KEWAUNEE, WIS (LAT 44 27 30 LONG 087 33 23)               |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 18, 1971                                                                          | 1445 | 13.0                                   | 14.2                    | 530                          | Apr. 17, 1972  | 1430 | 9.5                                    | 333                     | 440                          |
| Nov. 15, 1971                                                                          | 1345 | 7.0                                    | 26.2                    | 660                          | May 15, 1972   | 1445 | 13.5                                   | 53.7                    | 600                          |
| Dec. 13, 1971                                                                          | 1445 | 1.0                                    | 109                     | 480                          | June 12, 1972  | 1345 | 16.5                                   | 37.0                    | 520                          |
| Jan. 18, 1972                                                                          | 1330 | 0.0                                    | 29.4                    | 710                          | July 17, 1972  | 1400 | 21.5                                   | 20.1                    | 690                          |
| Feb. 21, 1972                                                                          | 1345 | 0.0                                    | 31.3                    | 660                          | Aug. 14, 1972  | 1315 | 20.5                                   | 24.9                    | 580                          |
| Mar. 22, 1972                                                                          | 1240 | 0.0                                    | 2.15                    | 170                          | Sept. 18, 1972 | 1500 | 17.0                                   | 58.7                    | 610                          |
| 04086000 SHEBOYGAN RIVER AT SHEBOYGAN, WIS (LAT 43 44 25 LONG 087 45 37)               |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 8, 1971                                                                           | 1300 | 18.5                                   | 39.5                    | 650                          | Apr. 26, 1972  | 1515 | 11.5                                   | 510                     | 430                          |
| Nov. 10, 1971                                                                          | 1415 | 4.5                                    | 63.3                    | 700                          | May 8, 1972    | 1430 | 11.0                                   | 313                     | 640                          |
| Dec. 15, 1971                                                                          | 1500 | 1.5                                    | 826                     | 550                          | June 6, 1972   | 1000 | 17.0                                   | 86.5                    | 650                          |
| Jan. 20, 1972                                                                          | 1530 | 0.0                                    | 83.7                    | 900                          | July 5, 1972   | 1230 | -                                      | 56.9                    | 650                          |
| Feb. 29, 1972                                                                          | 1400 | 0.0                                    | 57.1                    | -                            | Aug. 30, 1972  | 0930 | 21.0                                   | 181                     | 695                          |
| Mar. 22, 1972                                                                          | 1630 | 1.5                                    | 2,250                   | 300                          | Sept. 19, 1972 | 1300 | 17.0                                   | 646                     | 520                          |
| Mar. 31, 1972                                                                          | 1430 | -                                      | 561                     | -                            | Sept. 21, 1972 | 1200 | 14.5                                   | 1,010                   | 640                          |
| 04086150 MILWAUKEE RIVER AT KEWASKUM, WIS (LAT 43 31 02 LONG 088 13 24)                |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 7, 1971                                                                           | 1445 | 15.0                                   | 727                     | 750                          | June 5, 1972   | 1215 | 20.0                                   | 29.4                    | 650                          |
| Jan. 19, 1972                                                                          | 1700 | 0.0                                    | 16.3                    | 750                          | July 12, 1972  | 0945 | 74.0                                   | 32.0                    | 650                          |
| Feb. 29, 1972                                                                          | 1615 | 0.0                                    | 12.5                    | -                            | Sept. 5, 1972  | 1145 | 61.0                                   | 49.6                    | 715                          |
| Apr. 5, 1972                                                                           | 1415 | 4.0                                    | 133                     | -                            | Sept. 6, 1972  | 1515 | 16.0                                   | 298                     | 490                          |
| May 11, 1972                                                                           | 1330 | 14.0                                   | 99.1                    | 640                          | Sept. 21, 1972 | 1500 | 18.0                                   | 1,020                   | 400                          |
| 04086200 EAST BRANCH MILWAUKEE RIVER NEAR NEW FANE, WIS (LAT 43 33 01 LONG 088 11 18)  |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 7, 1971                                                                           | 1600 | 13.5                                   | 6.86                    | 500                          | May 11, 1972   | 1515 | 16.5                                   | 34.1                    | 440                          |
| Jan. 21, 1972                                                                          | 1330 | 0.0                                    | 8.29                    | 500                          | June 5, 1972   | 1315 | 18.0                                   | 16.3                    | 480                          |
| Feb. 29, 1972                                                                          | 1800 | 0.0                                    | 5.36                    | -                            | July 12, 1972  | 1100 | 23.0                                   | 21.7                    | 460                          |
| Mar. 22, 1972                                                                          | 1215 | 0.0                                    | 63.1                    | 330                          | Sept. 5, 1972  | 1515 | 18.0                                   | 16.6                    | 500                          |
| Apr. 5, 1972                                                                           | 1200 | -                                      | 47.5                    | -                            | Sept. 19, 1972 | 1530 | 17.8                                   | 81.0                    | 380                          |
| Apr. 25, 1972                                                                          | 1030 | 6.0                                    | 63.1                    | 410                          | Sept. 21, 1972 | 0915 | 16.0                                   | 130                     | 380                          |
| 04086340 NORTH BRANCH MILWAUKEE RIVER NEAR FILLMORE, WIS (LAT 43 28 58 LONG 088 03 39) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 7, 1971                                                                           | 1230 | 13.5                                   | 20.3                    | 670                          | Apr. 25, 1972  | 1430 | 10.0                                   | 204                     | 470                          |
| Jan. 19, 1972                                                                          | 1415 | 0.0                                    | 22.0                    | 650                          | June 5, 1972   | 1515 | 17.0                                   | 53.1                    | 675                          |
| Feb. 23, 1972                                                                          | 1200 | 0.0                                    | 25.8                    | -                            | July 12, 1972  | 1315 | 24.0                                   | 45.7                    | 640                          |
| Apr. 4, 1972                                                                           | 1715 | -                                      | 166                     | -                            | Sept. 6, 1972  | 0930 | 16.0                                   | 31.1                    | 700                          |
| 04086360 MILWAUKEE RIVER AT WAUBEKA, WIS (LAT 43 28 22 LONG 087 59 23)                 |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 10, 1971                                                                          | 1130 | 2.8                                    | 103                     | 680                          | June 5, 1972   | 1645 | 17.2                                   | 133                     | 700                          |
| Jan. 19, 1972                                                                          | 1200 | 0.0                                    | 71.5                    | 650                          | July 13, 1972  | 0845 | 23.9                                   | 129                     | 630                          |
| Feb. 23, 1972                                                                          | 1530 | -                                      | 88.1                    | 800                          | Aug. 31, 1972  | 1545 | 23.9                                   | 198                     | 695                          |
| Apr. 4, 1972                                                                           | 1445 | -                                      | 422                     | -                            | Sept. 19, 1972 | 1000 | -                                      | 414                     | -                            |
| May 12, 1972                                                                           | 1015 | 13.9                                   | 283                     | 610                          | Sept. 21, 1972 | 1730 | 18.3                                   | 1,720                   | 430                          |
| 04087000 MILWAUKEE RIVER AT MILWAUKEE, WIS (LAT 43 06 00 LONG 087 54 32)               |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 6, 1971                                                                           | 1530 | 17.0                                   | 109                     | 590                          | June 8, 1972   | 1545 | 24.0                                   | 217                     | 680                          |
| Nov. 9, 1971                                                                           | 1430 | 4.5                                    | 166                     | 740                          | June 27, 1972  | 1200 | 21.5                                   | 142                     | 560                          |
| Dec. 14, 1971                                                                          | 1045 | 0.5                                    | 419                     | 700                          | July 11, 1972  | 1230 | 24.0                                   | 274                     | 650                          |
| Jan. 18, 1972                                                                          | 1530 | 0.0                                    | 145                     | 900                          | July 20, 1972  | 1145 | 22.0                                   | 248                     | 650                          |
| Feb. 22, 1972                                                                          | 1145 | 0.0                                    | 125                     | 940                          | Aug. 9, 1972   | 1630 | 19.0                                   | 369                     | 640                          |
| Apr. 6, 1972                                                                           | 1200 | -                                      | 661                     | -                            | Sept. 6, 1972  | 1130 | 20.0                                   | 233                     | 740                          |
| May 12, 1972                                                                           | 1430 | 16.5                                   | 508                     | 690                          | Sept. 27, 1972 | 1615 | 16.0                                   | 1,860                   | 600                          |
| June 2, 1972                                                                           | 1330 | 21.0                                   | 281                     | 750                          |                |      |                                        |                         |                              |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## MISCELLANEOUS ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| Date                                                                       | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance | Date           | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance |
|----------------------------------------------------------------------------|------|----------------------------------------|-------------------------|------------------------------|----------------|------|----------------------------------------|-------------------------|------------------------------|
| STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued                              |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 04087120 MEMOMONEE RIVER AT WAUWATOSA, WIS (LAT 43 02 44 LONG 087 54 32)   |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 6, 1971                                                               | 1245 | 14.5                                   | 17.6                    | 800                          | May 24, 1972   | 1230 | 19.0                                   | 34.7                    | 1,300                        |
| Nov. 9, 1971                                                               | 1615 | 5.0                                    | 24.9                    | 1,250                        | June 2, 1972   | 0945 | 18.0                                   | 33.9                    | 1,200                        |
| Dec. 13, 1971                                                              | 1630 | 1.5                                    | 102                     | 1,200                        | July 11, 1972  | 0930 | 21.0                                   | 22.9                    | 950                          |
| Jan. 18, 1972                                                              | 1200 | -                                      | 26.0                    | -                            | Aug. 9, 1972   | 1415 | 18.5                                   | 47.5                    | 1,100                        |
| Feb. 21, 1972                                                              | 1530 | 0.0                                    | 39.1                    | -                            | Sept. 18, 1972 | 1200 | -                                      | 2,270                   | -                            |
| Apr. 5, 1972                                                               | 1715 | 6.5                                    | 103                     | -                            | Sept. 29, 1972 | 1615 | 15.0                                   | 662                     | 750                          |
| 04087204 OAK CREEK AT SOUTH MILWAUKEE, WIS (LAT 42 55 30 LONG 087 52 12)   |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 15, 1971                                                              | 1515 | 16.0                                   | 1.04                    | 810                          | June 27, 1972  | 1515 | 24.5                                   | 4.47                    | 1,080                        |
| Nov. 18, 1971                                                              | 1315 | 11.0                                   | 1.19                    | 1,040                        | July 19, 1972  | 1415 | 23.0                                   | 20.4                    | 1,100                        |
| Dec. 31, 1971                                                              | 1145 | 0.0                                    | 38.5                    | 2,000                        | Aug. 10, 1972  | 1030 | 14.5                                   | 5.07                    | 1,300                        |
| Feb. 15, 1972                                                              | 1300 | 0.0                                    | 2.42                    | 5,700                        | Sept. 18, 1972 | 1415 | -                                      | 750                     | -                            |
| Mar. 27, 1972                                                              | 1300 | 4.0                                    | 11.9                    | 1,610                        | Sept. 19, 1972 | 0900 | -                                      | 538                     | -                            |
| May 16, 1972                                                               | 1500 | 16.5                                   | 16.9                    | 950                          | Sept. 22, 1972 | 1200 | 11.5                                   | 144                     | 680                          |
| June 7, 1972                                                               | 1730 | 24.5                                   | 2.67                    | 1,260                        | Sept. 29, 1972 | 1200 | 15.0                                   | 249                     | 480                          |
| June 15, 1972                                                              | 0645 | 18.0                                   | 63.6                    | 640                          |                |      |                                        |                         |                              |
| 04087220 ROOT RIVER NEAR FRANKLIN, WIS (LAT 42 52 25 LONG 087 59 45)       |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 15, 1971                                                              | 1345 | 14.0                                   | 1.50                    | 970                          | Apr. 17, 1972  | 1500 | -                                      | 25.3                    | -                            |
| Nov. 2, 1971                                                               | 1800 | 9.5                                    | 1.32                    | 465                          | May 16, 1972   | 1730 | 19.0                                   | 37.9                    | 1,040                        |
| Nov. 18, 1971                                                              | 1600 | 10.5                                   | 4.97                    | 1,130                        | June 8, 1972   | 1100 | 20.0                                   | 5.96                    | 1,300                        |
| Dec. 16, 1971                                                              | 1645 | -                                      | 268                     | -                            | June 27, 1972  | 1730 | 24.0                                   | 7.46                    | 800                          |
| Dec. 30, 1971                                                              | 1400 | 0.0                                    | 65.0                    | 1,210                        | Aug. 10, 1972  | 1330 | 20.0                                   | 13.3                    | 1,160                        |
| Dec. 31, 1971                                                              | 0945 | 0.0                                    | 62.9                    | 2,000                        | Sept. 18, 1972 | 1800 | -                                      | 2,200                   | -                            |
| Feb. 15, 1972                                                              | 1530 | 0.0                                    | 3.48                    | 3,000                        | Sept. 29, 1972 | 1215 | 15.0                                   | 380                     | 570                          |
| Mar. 27, 1972                                                              | 1500 | 5.5                                    | 30.1                    | 1,160                        |                |      |                                        |                         |                              |
| 04087233 ROOT RIVER CANAL NEAR FRANKLIN, WIS (LAT 42 48 55 LONG 087 59 40) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 15, 1971                                                              | 0845 | 10.5                                   | 2.02                    | 1,300                        | June 8, 1972   | 1245 | 18.5                                   | 6.98                    | 1,150                        |
| Nov. 2, 1971                                                               | 1515 | 10.0                                   | 1.96                    | 1,330                        | June 15, 1972  | 1445 | 17.5                                   | 204                     | 550                          |
| Nov. 18, 1971                                                              | 1445 | 7.5                                    | 1.80                    | 1,440                        | June 27, 1972  | 1900 | 19.5                                   | 22.4                    | 970                          |
| Dec. 16, 1971                                                              | 1500 | 4.0                                    | 103                     | 840                          | July 20, 1972  | 1715 | 20.0                                   | 83.6                    | 880                          |
| Feb. 15, 1972                                                              | 1700 | 0.0                                    | 2.80                    | 1,550                        | Aug. 10, 1972  | 1500 | 16.5                                   | 51.7                    | 900                          |
| Mar. 27, 1972                                                              | 1700 | 3.5                                    | 38.2                    | 800                          | Sept. 6, 1972  | 1430 | 17.5                                   | 20.2                    | 1,000                        |
| Apr. 17, 1972                                                              | 1215 | 8.0                                    | 572                     | 425                          | Sept. 18, 1972 | 1600 | -                                      | 651                     | -                            |
| Apr. 20, 1972                                                              | 1145 | 7.5                                    | 204.2                   | 550                          | Sept. 28, 1972 | 1745 | 16.0                                   | 81.7                    | 750                          |
| May 17, 1972                                                               | 1000 | 14.5                                   | 39.7                    | 960                          |                |      |                                        |                         |                              |
| 04087240 ROOT RIVER AT RACINE, WIS (LAT 42 45 05 LONG 087 49 25)           |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 19, 1971                                                              | 1345 | 8.0                                    | 6.24                    | 1,150                        | Apr. 17, 1972  | 1830 | -                                      | 1,210                   | -                            |
| Dec. 16, 1971                                                              | 1215 | 3.5                                    | 380                     | 810                          | Apr. 18, 1972  | 1245 | -                                      | 1,290                   | -                            |
| Dec. 30, 1971                                                              | 1100 | 0.0                                    | 84.6                    | 1,800                        | Apr. 20, 1972  | 1515 | 10.0                                   | 689                     | 510                          |
| Feb. 16, 1972                                                              | 1515 | 0.0                                    | 9.15                    | 2,400                        | May 17, 1972   | 1215 | 16.5                                   | 140                     | 1,000                        |
| Mar. 28, 1972                                                              | 0945 | 3.0                                    | 130                     | 880                          |                |      |                                        |                         |                              |
| 04087257 PIKE RIVER NEAR RACINE, WIS (LAT 42 38 49 LONG 087 51 38)         |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 14, 1971                                                              | 1815 | 13.0                                   | 2.83                    | 520                          | Apr. 16, 1972  | 1915 | -                                      | 1,020                   | -                            |
| Nov. 2, 1971                                                               | 1300 | 13.0                                   | 47.4                    | 350                          | Apr. 17, 1972  | 0915 | -                                      | 365                     | -                            |
| Nov. 3, 1971                                                               | 0915 | 8.0                                    | 0.52                    | 400                          | May 17, 1972   | 1730 | 18.0                                   | 20.8                    | 870                          |
| Nov. 19, 1971                                                              | 0930 | 7.0                                    | 3.34                    | 660                          | June 7, 1972   | 1445 | 20.0                                   | 6.99                    | 760                          |
| Dec. 15, 1971                                                              | 1545 | -                                      | 179                     | -                            | June 15, 1972  | 0930 | 17.0                                   | 625                     | 410                          |
| Dec. 16, 1971                                                              | 0915 | 4.0                                    | 74.2                    | 870                          | June 28, 1972  | 1515 | 19.0                                   | 18.1                    | 910                          |
| Dec. 30, 1971                                                              | 0930 | 2.0                                    | 63.1                    | 630                          | July 21, 1972  | 0945 | 20.5                                   | 46.0                    | 850                          |
| Feb. 16, 1972                                                              | 0945 | 0.0                                    | 6.05                    | 1,650                        | Aug. 11, 1972  | 1245 | 18.0                                   | 66.5                    | 750                          |
| Mar. 28, 1972                                                              | 1445 | 6.0                                    | 16.7                    | 900                          | Sept. 27, 1972 | 1715 | 15.0                                   | 51.2                    | 810                          |

## MISCELLANEOUS ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| Date                                                                                     | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance | Date           | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance |
|------------------------------------------------------------------------------------------|------|----------------------------------------|-------------------------|------------------------------|----------------|------|----------------------------------------|-------------------------|------------------------------|
| ST. CROIX RIVER BASIN                                                                    |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05333500 ST. CROIX RIVER NEAR DANBURY, WIS (LAT 46 04 28 LONG 092 14 50)                 |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 1, 1971                                                                             | 0945 | 16.0                                   | 1,220                   | 120                          | May 25, 1972   | 1400 | 24.5                                   | 1,320                   | 100                          |
| Nov. 8, 1971                                                                             | 1200 | 1.0                                    | 1,790                   | 120                          | July 5, 1972   | 1400 | 18.5                                   | 1,180                   | 150                          |
| Jan. 10, 1972                                                                            | 1300 | 0.0                                    | 1,150                   | 110                          | July 25, 1972  | 1245 | 20.0                                   | 5,360                   | 120                          |
| Feb. 4, 1972                                                                             | 1200 | 0.0                                    | 1,010                   | 140                          | Aug. 11, 1972  | 1430 | 20.5                                   | 1,790                   | 110                          |
| Mar. 16, 1972                                                                            | 1130 | 0.5                                    | -                       | 120                          | Sept. 21, 1972 | 1000 | 14.0                                   | 1,850                   | 120                          |
| Apr. 20, 1972                                                                            | 1230 | 3.0                                    | 4,430                   | 100                          |                |      |                                        |                         |                              |
| 05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WIS (LAT 45 24 25 LONG 092 38 49)           |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 18, 1971                                                                            | 1100 | 5.0                                    | 12,900                  | 135                          | June 27, 1972  | 1130 | 20.5                                   | 5,030                   | 180                          |
| Jan. 3, 1972                                                                             | 1230 | 2.5                                    | 4,700                   | 220                          | July 27, 1972  | 1100 | -                                      | 39,400                  | 170                          |
| May 18, 1972                                                                             | 1200 | 19.5                                   | 7,460                   | 150                          | Sept. 9, 1972  | 1000 | 15.5                                   | 6,060                   | 160                          |
| CHIPPEWA RIVER BASIN                                                                     |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05356000 CHIPPEWA RIVER AT BISHOPS BRIDGE NEAR WINTER, WIS (LAT 45 50 57 LONG 091 04 44) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 7, 1971                                                                             | 0900 | 12.5                                   | 228                     | 115                          | July 6, 1972   | 1830 | 19.5                                   | 618                     | 90                           |
| Dec. 29, 1971                                                                            | 1200 | 1.5                                    | 1,270                   | 70                           | Aug. 10, 1972  | 1530 | 20.5                                   | 390                     | 90                           |
| Feb. 10, 1972                                                                            | 1500 | 1.5                                    | 1,040                   | 80                           | Aug. 21, 1972  | 1300 | 22.0                                   | 5,280                   | 50                           |
| Mar. 10, 1972                                                                            | 1400 | 2.0                                    | 305                     | 90                           | Sept. 18, 1972 | 1100 | 14.5                                   | 560                     | 110                          |
| May 29, 1972                                                                             | 0930 | 13.0                                   | 228                     | 60                           |                |      |                                        |                         |                              |
| 05356500 CHIPPEWA RIVER NEAR BRUCE, WIS (LAT 45 27 08 LONG 091 15 39)                    |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 8, 1971                                                                             | 1100 | 12.0                                   | 838                     | 90                           | May 18, 1972   | 1630 | 18.0                                   | 702                     | 90                           |
| Nov. 17, 1971                                                                            | 1130 | 5.5                                    | 2,080                   | 110                          | July 5, 1972   | 1630 | 20.0                                   | 1,150                   | 90                           |
| Jan. 13, 1972                                                                            | 1400 | 0.0                                    | 1,580                   | 100                          | July 25, 1972  | 1130 | 22.0                                   | 6,000                   | 90                           |
| Feb. 28, 1972                                                                            | 1230 | 0.0                                    | 1,280                   | 100                          | Sept. 14, 1972 | 1430 | 16.5                                   | 1,760                   | 110                          |
| Apr. 14, 1972                                                                            | 1000 | 1.0                                    | 4,870                   | 80                           |                |      |                                        |                         |                              |
| 05358500 FLAMBEAU RIVER AT BABBS ISLAND, NEAR WINTER, WIS (LAT 45 46 07 LONG 090 45 41)  |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 7, 1971                                                                             | 1100 | 11.5                                   | 520                     | 90                           | Apr. 27, 1972  | 1200 | 7.0                                    | 1,490                   | 80                           |
| Nov. 15, 1971                                                                            | 1330 | 4.5                                    | 755                     | 90                           | May 26, 1972   | 1000 | 20.0                                   | 727                     | 100                          |
| Jan. 6, 1972                                                                             | 1330 | 0.0                                    | 1,050                   | 90                           | July 6, 1972   | 1730 | 20.0                                   | 868                     | 115                          |
| Feb. 10, 1972                                                                            | 1300 | 0.0                                    | 889                     | 100                          | July 20, 1972  | 1300 | 22.0                                   | 727                     | 110                          |
| Mar. 10, 1972                                                                            | 1300 | 0.0                                    | 950                     | 90                           | Aug. 18, 1972  | 1500 | 20.5                                   | 5,300                   | 120                          |
| Apr. 14, 1972                                                                            | 1200 | 3.5                                    | 1,260                   | 95                           |                |      |                                        |                         |                              |
| 05359500 SOUTH FORK FLAMBEAU RIVER NEAR PHILLIPS, WIS (LAT 45 42 08 LONG 090 36 58)      |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 7, 1971                                                                             | 1400 | 12.5                                   | 974                     | 90                           | June 20, 1972  | 1100 | 18.0                                   | 908                     | 70                           |
| Nov. 11, 1971                                                                            | 1300 | 3.5                                    | 480                     | 95                           | May 26, 1972   | 1230 | 23.5                                   | 365                     | 70                           |
| Jan. 7, 1972                                                                             | 1100 | 0.0                                    | 325                     | 70                           | July 6, 1972   | 1400 | 20.5                                   | 419                     | 100                          |
| Feb. 10, 1972                                                                            | 1500 | 0.0                                    | 238                     | 125                          | Aug. 10, 1972  | 1300 | 24.5                                   | 554                     | 85                           |
| Apr. 14, 1972                                                                            | 1100 | 3.5                                    | 1,410                   | 90                           | Aug. 21, 1972  | 1530 | 25.5                                   | 3,600                   | 75                           |
| Apr. 20, 1972                                                                            | 1330 | 3.0                                    | 5,380                   | 55                           |                |      |                                        |                         |                              |
| 05360500 FLAMBEAU RIVER NEAR BRUCE, WIS (LAT 45 22 21 LONG 091 12 34)                    |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 8, 1971                                                                             | 1400 | 14.0                                   | 1,120                   | 110                          | July 5, 1972   | 1630 | 20.0                                   | 1,660                   | 100                          |
| Nov. 16, 1971                                                                            | 1600 | 5.0                                    | 1,130                   | 110                          | July 25, 1972  | 1500 | 22.0                                   | 4,340                   | 110                          |
| Jan. 13, 1972                                                                            | 1100 | 0.0                                    | 988                     | 100                          | Aug. 4, 1972   | 1230 | 21.5                                   | 1,630                   | 100                          |
| Feb. 25, 1972                                                                            | 1400 | 0.0                                    | 1,050                   | 150                          | Aug. 23, 1972  | 1130 | 16.5                                   | 7,380                   | 90                           |
| Apr. 4, 1972                                                                             | 1330 | 1.5                                    | 1,780                   | 120                          | Sept. 14, 1972 | 1230 | 18.0                                   | 3,070                   | 75                           |
| May 18, 1972                                                                             | 1130 | 19.0                                   | 1,700                   | 90                           |                |      |                                        |                         |                              |
| 05362000 JUMP RIVER AT SHELDON, WIS (LAT 45 18 29 LONG 090 57 23)                        |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 22, 1971                                                                            | 1500 | 13.5                                   | 316                     | 110                          | Apr. 17, 1972  | 1200 | 4.0                                    | 9,280                   | 70                           |
| Nov. 29, 1971                                                                            | 1000 | 0.0                                    | 302                     | 130                          | Apr. 25, 1972  | 1230 | 6.5                                    | 2,550                   | 70                           |
| Dec. 7, 1971                                                                             | 1200 | 0.0                                    | 303                     | 100                          | May 24, 1972   | 1100 | 23.5                                   | 242                     | 100                          |
| Dec. 28, 1971                                                                            | 1200 | 0.0                                    | 246                     | 100                          | June 21, 1972  | 1330 | 18.5                                   | 187                     | 155                          |
| Jan. 24, 1972                                                                            | 1200 | 0.0                                    | 117                     | 100                          | July 28, 1972  | 1500 | 22.0                                   | 341                     | 120                          |
| Feb. 24, 1972                                                                            | 1300 | 0.0                                    | 96                      | 100                          | Aug. 23, 1972  | 1530 | 19.0                                   | 1,850                   | 100                          |
| Mar. 27, 1972                                                                            | 1230 | 0.0                                    | -                       | 110                          | Sept. 27, 1972 | 1200 | 15.0                                   | 5,410                   | 100                          |
| Apr. 13, 1972                                                                            | 1600 | 0.5                                    | 4,180                   | 65                           |                |      |                                        |                         |                              |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## MISCELLANEOUS ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| Date                                                                         | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance | Date           | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance |
|------------------------------------------------------------------------------|------|----------------------------------------|-------------------------|------------------------------|----------------|------|----------------------------------------|-------------------------|------------------------------|
| CHIPPEWA RIVER BASIN--Continued                                              |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05365500 CHIPPEWA RIVER AT CHIPPEWA FALLS, WIS (LAT 44 55 35 LONG 091 24 33) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 12, 1971                                                                | 1200 | 14.5                                   | 7,910                   | 150                          | July 5, 1972   | 1200 | 20.0                                   | 6,780                   | 160                          |
| Jan. 10, 1972                                                                | 1000 | 1.0                                    | 5,320                   | 140                          | Aug. 4, 1972   | 1030 | 21.5                                   | 7,990                   | 100                          |
| 05367425 RED CEDAR RIVER NEAR CAMERON, WIS (LAT 45 24 05 LONG 091 46 38)     |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Mar. 2, 1972                                                                 |      | 0.0                                    | 249                     | -                            | July 14, 1972  |      | 21.0                                   | 278                     | -                            |
| Apr. 6, 1972                                                                 |      | 3.0                                    | 401                     | 150                          | July 21, 1972  |      | 22.0                                   | 417                     | -                            |
| May 18, 1972                                                                 |      | 23.5                                   | 336                     | 160                          | Aug. 8, 1972   |      | 17.5                                   | 378                     | -                            |
| June 15, 1972                                                                |      | 18.5                                   | 298                     | -                            | Sept. 15, 1972 |      | 15.5                                   | 257                     | 160                          |
| June 28, 1972                                                                |      | 19.0                                   | 663                     | -                            | Sept. 26, 1972 |      | 13.0                                   | 446                     | 190                          |
| July 10, 1972                                                                |      | 21.5                                   | 329                     | -                            |                |      |                                        |                         |                              |
| 05368000 HAY RIVER AT WHEELER, WIS (LAT 45 02 52 LONG 091 54 39)             |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 15, 1971                                                                | 1030 | 8.5                                    | 286                     | 310                          | Mar. 28, 1972  | 1130 | 2.0                                    | 520                     | 260                          |
| Nov. 18, 1971                                                                | 1100 | 6.5                                    | 472                     | 360                          | May 23, 1972   | 1100 | 17.0                                   | 275                     | 340                          |
| Dec. 9, 1971                                                                 | 1200 | 1.0                                    | 293                     | 340                          | June 28, 1972  | 1500 | 17.0                                   | 287                     | 290                          |
| Dec. 30, 1971                                                                | 1300 | 0.0                                    | 260                     | 310                          | July 24, 1972  | 1600 | 23.0                                   | 1,090                   | 280                          |
| Feb. 16, 1972                                                                | 1500 | 0.0                                    | 218                     | 240                          | Aug. 2, 1972   | 1200 | 22.0                                   | 292                     | 300                          |
| Mar. 22, 1972                                                                | 1200 | 1.0                                    | 1,600                   | 160                          | Sept. 7, 1972  | 1630 | 16.0                                   | 349                     | 320                          |
| 05369000 RED CEDAR RIVER AT MENOMONIE, WIS (LAT 44 53 02 LONG 091 55 57)     |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 13, 1971                                                                | 1030 | 12.0                                   | 1,460                   | 150                          | June 28, 1972  | 1230 | 21.0                                   | 1,460                   | 240                          |
| Apr. 4, 1972                                                                 | 0930 | 2.0                                    | 1,480                   | 140                          | July 28, 1972  | 1230 | 21.0                                   | 3,570                   | 190                          |
| May 24, 1972                                                                 | 1330 | 21.0                                   | 2,440                   | 180                          | Sept. 7, 1972  | 1400 | 20.0                                   | 2,870                   | 190                          |
| June 20, 1972                                                                | 1230 | 20.5                                   | 1,860                   | 210                          |                |      |                                        |                         |                              |
| 05369500 CHIPPEWA RIVER AT DURAND, WIS (LAT 44 37 40 LONG 091 58 10)         |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 14, 1971                                                                | 1400 | 13.0                                   | 5,000                   | 150                          | Apr. 3, 1972   | 1330 | 1.0                                    | 12,800                  | 130                          |
| Nov. 17, 1971                                                                | 1200 | 7.0                                    | 7,270                   | 150                          | May 23, 1972   | 1930 | 21.0                                   | 6,290                   | 130                          |
| Jan. 11, 1972                                                                | 1230 | 0.0                                    | -                       | 90                           | June 28, 1972  | 1130 | 20.5                                   | 7,360                   | 180                          |
| Jan. 18, 1972                                                                | 1330 | 0.0                                    | 6,140                   | 110                          | Aug. 3, 1972   | 1300 | 20.0                                   | 8,290                   | 150                          |
| Feb. 29, 1972                                                                | 1430 | 0.0                                    | 7,570                   | 130                          | Sept. 7, 1972  | 1300 | 20.0                                   | 8,750                   | 120                          |
| 05370000 EAU GALLE RIVER AT SPRING VALLEY, WIS (LAT 44 51 10 LONG 092 14 17) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 16, 1971                                                                | 1230 | 6.0                                    | 15.8                    | 340                          | June 20, 1972  | 1500 | 16.5                                   | 14.2                    | 340                          |
| Dec. 21, 1971                                                                | 1100 | 2.0                                    | 13.6                    | 400                          | July 7, 1972   | 1130 | 18.5                                   | 12.0                    | 280                          |
| Mar. 20, 1972                                                                | 1400 | 3.0                                    | 405                     | 900                          | Aug. 2, 1972   | 1430 | 22.0                                   | 14.2                    | 300                          |
| Apr. 4, 1972                                                                 | 1030 | 4.0                                    | 19.1                    | 240                          |                |      |                                        |                         |                              |
| TREMPEALEAU RIVER BASIN                                                      |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05379400 TREMPEALEAU RIVER AT ARCADIA, WIS (LAT 44 15 15 LONG 091 30 25)     |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 13, 1971                                                                | 1415 | 10.5                                   | 325                     | 310                          | Apr. 13, 1972  | 1100 | 7.0                                    | 545                     | 270                          |
| Nov. 16, 1971                                                                | 1445 | 9.0                                    | 326                     | 260                          | May 24, 1972   | 1000 | 16.5                                   | 302                     | 210                          |
| Jan. 5, 1972                                                                 | 1300 | 0.0                                    | 206                     | -                            | July 7, 1972   | 1015 | 14.5                                   | 238                     | 250                          |
| Feb. 16, 1972                                                                | 1215 | 0.0                                    | 249                     | 260                          | Aug. 22, 1972  | 1500 | 20.0                                   | 610                     | 155                          |
| Mar. 20, 1972                                                                | 1945 | 3.0                                    | 2,330                   | 120                          | Sept. 25, 1972 | 1900 | -                                      | 3,200                   | -                            |
| 05379500 TREMPEALEAU RIVER AT DODGE, WIS (LAT 44 07 55 LONG 091 33 14)       |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 13, 1971                                                                | 1545 | 12.0                                   | 350                     | 300                          | Apr. 12, 1972  | 1645 | 7.0                                    | 560                     | 240                          |
| Nov. 16, 1971                                                                | 1600 | 8.5                                    | 323                     | 240                          | May 24, 1972   | 1215 | 20.0                                   | 320                     | 220                          |
| Jan. 5, 1972                                                                 | 1130 | 0.0                                    | 221                     | -                            | July 6, 1972   | 1600 | 17.5                                   | 254                     | 240                          |
| Feb. 16, 1972                                                                | 1045 | 0.0                                    | 298                     | 300                          | Aug. 23, 1972  | 1000 | 19.0                                   | 583                     | 180                          |
| Mar. 21, 1972                                                                | 1015 | 1.0                                    | 2,620                   | 150                          |                |      |                                        |                         |                              |

## MISCELLANEOUS ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| Date                                                                                            | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance | Date           | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance |
|-------------------------------------------------------------------------------------------------|------|----------------------------------------|-------------------------|------------------------------|----------------|------|----------------------------------------|-------------------------|------------------------------|
| BLACK RIVER BASIN                                                                               |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05381000 BLACK RIVER AT NEILLSVILLE, WIS (LAT 44 33 35 LONG 090 36 54)                          |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 14, 1971                                                                                   | 1330 | 11.5                                   | 123                     | -                            | Apr. 17, 1972  | 1645 | -                                      | 10,470                  | -                            |
| Nov. 11, 1971                                                                                   | 1145 | 2.0                                    | 181                     | 260                          | May 30, 1972   | 1215 | 13.5                                   | 78.1                    | 120                          |
| Jan. 10, 1972                                                                                   | 1415 | 0.0                                    | 193                     | 200                          | June 28, 1972  | 1345 | 22.0                                   | 38.5                    | 180                          |
| Feb. 17, 1972                                                                                   | 1130 | 0.0                                    | 67.6                    | 300                          | Aug. 4, 1972   | 1215 | 21.0                                   | 326                     | 120                          |
| Mar. 17, 1972                                                                                   | 1430 | 0.5                                    | 177                     | 200                          | Sept. 19, 1972 | 1315 | 18.0                                   | 134                     | 100                          |
| Apr. 13, 1972                                                                                   | 1630 | 1.5                                    | 6,640                   | 120                          | Sept. 26, 1972 | 1630 | 11.5                                   | 12,700                  | 90                           |
| 05382000 BLACK RIVER NEAR GALESVILLE, WIS (LAT 44 03 42 LONG 091 17 30)                         |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Jan. 5, 1972                                                                                    | 1730 | 0.0                                    | 881                     | -                            | Apr. 25, 1972  | 1300 | 4.5                                    | 9,960                   | -                            |
| Feb. 16, 1972                                                                                   | 1100 | 0.0                                    | 648                     | 125                          | May 24, 1972   | 1630 | 21.0                                   | 751                     | 110                          |
| Apr. 12, 1972                                                                                   | 1400 | 3.0                                    | 4,860                   | 90                           | July 6, 1972   | 1200 | 18.0                                   | 357                     | 120                          |
| Apr. 18, 1972                                                                                   | 1530 | 9.5                                    | 14,500                  | 90                           | Aug. 22, 1972  | 1130 | 23.5                                   | 1,220                   | 105                          |
| WISCONSIN RIVER BASIN                                                                           |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05391000 WISCONSIN RIVER AT RAINBOW LAKE, NEAR LAKE TOMAHAWK, WIS (LAT 45 49 58 LONG 089 32 51) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 5, 1971                                                                                    | 1130 | 14.0                                   | 323                     | 70                           | May 18, 1972   | 1500 | 13.0                                   | 579                     | 70                           |
| Nov. 9, 1971                                                                                    | 1130 | 3.0                                    | 642                     | 80                           | June 28, 1972  | 1400 | 13.0                                   | 648                     | 50                           |
| Mar. 24, 1972                                                                                   | 1130 | 0.5                                    | 925                     | 120                          | Aug. 1, 1972   | 1230 | 22.0                                   | 494                     | 75                           |
| Apr. 13, 1972                                                                                   | 1200 | 1.0                                    | 411                     | 80                           |                |      |                                        |                         |                              |
| 05393500 SPIRIT RIVER AT SPIRIT FALLS, WIS (LAT 45 26 58 LONG 089 58 47)                        |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 14, 1971                                                                                   | 1400 | 9.5                                    | 39.6                    | 85                           | Apr. 18, 1972  | 1330 | 0.5                                    | 1,680                   | 50                           |
| Nov. 10, 1971                                                                                   | 0930 | -                                      | 46.0                    | 100                          | May 22, 1972   | 1300 | -                                      | 36.2                    | 100                          |
| Dec. 14, 1971                                                                                   | 1130 | 0.0                                    | 68.3                    | 100                          | June 22, 1972  | 1100 | 17.0                                   | 9.93                    | 140                          |
| Feb. 8, 1972                                                                                    | 1500 | 0.0                                    | 22.2                    | 100                          | July 21, 1972  | 1000 | 21.5                                   | 12.6                    | 140                          |
| Mar. 13, 1972                                                                                   | 1530 | 0.0                                    | 24.7                    | 100                          | Aug. 31, 1972  | 1400 | 19.0                                   | 79.6                    | 160                          |
| 05394500 PRAIRIE RIVER NEAR MERRILL, WIS (LAT 45 14 09 LONG 089 38 59)                          |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 26, 1971                                                                                   | 1400 | 11.5                                   | 126                     | 160                          | Apr. 18, 1972  | 1000 | 3.0                                    | 2,140                   | 250                          |
| Nov. 17, 1971                                                                                   | 1500 | 4.5                                    | 118                     | 170                          | May 16, 1972   | 1030 | 15.5                                   | 187                     | 140                          |
| Dec. 22, 1971                                                                                   | 1100 | 0.0                                    | 146                     | 140                          | June 6, 1972   | 1330 | 21.0                                   | 91.4                    | 180                          |
| Jan. 5, 1972                                                                                    | 1400 | 0.0                                    | 85.4                    | 110                          | July 26, 1972  | 1330 | 18.0                                   | 121                     | 140                          |
| Feb. 8, 1972                                                                                    | 1430 | 0.0                                    | 84                      | 250                          | Sept. 1, 1972  | 1030 | 18.0                                   | 178                     | 140                          |
| Mar. 15, 1972                                                                                   | 1330 | 0.0                                    | 103                     | 170                          | Sept. 28, 1972 | 1430 | 10.0                                   | 1,160                   | 60                           |
| Apr. 16, 1972                                                                                   | 1630 | 3.0                                    | 1,020                   | 200                          |                |      |                                        |                         |                              |
| 05395000 WISCONSIN RIVER AT MERRILL, WIS (LAT 45 10 41 LONG 089 40 52)                          |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 4, 1971                                                                                    | 1430 | 12.0                                   | 3,240                   | 310                          | Apr. 17, 1972  | 1100 | 3.5                                    | 10,300                  | 100                          |
| Nov. 15, 1971                                                                                   | 1400 | 5.5                                    | 2,170                   | 120                          | May 23, 1972   | 1515 | 19.0                                   | 1,500                   | -                            |
| Dec. 22, 1971                                                                                   | 1430 | 0.5                                    | 2,770                   | 120                          | July 6, 1972   | 1515 | 20.0                                   | 1,770                   | 200                          |
| Jan. 17, 1972                                                                                   | 1415 | 0.0                                    | 2,370                   | 120                          | Aug. 18, 1972  | 0930 | 21.0                                   | 4,790                   | 250                          |
| Mar. 3, 1972                                                                                    | 1415 | 0.0                                    | 2,190                   | 120                          | Sept. 29, 1972 | 1115 | 10.0                                   | 12,550                  | 160                          |
| Apr. 4, 1972                                                                                    | 1430 | 0.5                                    | 1,970                   | 120                          |                |      |                                        |                         |                              |
| 05397500 EAU CLAIRE RIVER AT KELLY, WIS (LAT 44 55 06 LONG 089 33 00)                           |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 8, 1971                                                                                    | 1400 | 0.0                                    | 182                     | 100                          | Apr. 17, 1972  | -    | 3.5                                    | 3,600                   | 60                           |
| Dec. 21, 1971                                                                                   | 1130 | 0.0                                    | 270                     | 130                          | Apr. 18, 1972  | -    | -                                      | 4,620                   | 80                           |
| Jan. 21, 1972                                                                                   | 1300 | 0.0                                    | 106                     | 120                          | May 17, 1972   | 1230 | 18.5                                   | 216                     | 240                          |
| Feb. 22, 1972                                                                                   | 1400 | 0.0                                    | 68                      | -                            | July 7, 1972   | 1200 | 17.0                                   | 80                      | 260                          |
| Apr. 6, 1972                                                                                    | 1400 | 0.5                                    | 224                     | 220                          | Aug. 2, 1972   | 1400 | 21.0                                   | 188                     | 200                          |
| Apr. 16, 1972                                                                                   | -    | 2.0                                    | 2,200                   | 80                           | Sept. 13, 1972 | 1000 | 18.0                                   | 153                     | 180                          |
| 05398000 WISCONSIN RIVER AT ROTHSCILD, WIS (LAT 44 53 09 LONG 089 38 05)                        |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 10, 1971                                                                                   | 1100 | 15.5                                   | 4,970                   | -                            | May 16, 1972   | 1330 | 23.0                                   | 1,900                   | 90                           |
| Apr. 17, 1972                                                                                   | 1500 | 4.0                                    | 34,900                  | 100                          | July 7, 1972   | 1445 | 21.0                                   | 2,340                   | 200                          |

## MISCELLANEOUS ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| Date                                                                            | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance | Date           | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance |
|---------------------------------------------------------------------------------|------|----------------------------------------|-------------------------|------------------------------|----------------|------|----------------------------------------|-------------------------|------------------------------|
| WISCONSIN RIVER BASIN--Continued                                                |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WIS (LAT 44 49 19 LONG 090 04 46) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 6, 1971                                                                    | 1230 | 13.5                                   | 81.9                    | 170                          | May 31, 1972   | 1530 | 20.5                                   | 15.2                    | 160                          |
| Nov. 11, 1971                                                                   | 1615 | 3.0                                    | 39.7                    | 180                          | June 27, 1972  | 1500 | -                                      | 4.76                    | 210                          |
| Jan. 6, 1972                                                                    | 1500 | 0.0                                    | 34.1                    | 120                          | Aug. 9, 1972   | 1400 | 16.0                                   | 495                     | 150                          |
| Feb. 17, 1972                                                                   | 1600 | 0.0                                    | 14.6                    | 275                          | Sept. 20, 1972 | 1500 | 21.0                                   | 198                     | 100                          |
| Mar. 17, 1972                                                                   | 1130 | 0.0                                    | 34.0                    | 240                          | Sept. 26, 1972 | 1315 | 11.0                                   | 12,500                  | 75                           |
| 05400600 LITTLE PLOVER RIVER NEAR ARNOTT, WIS (LAT 44 28 05 LONG 089 29 20)     |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 5, 1971                                                                    | 1230 | 12.0                                   | 3.76                    | 340                          | Apr. 10, 1972  | 1100 | 11.0                                   | 3.58                    | 420                          |
| Nov. 9, 1971                                                                    | 1400 | 8.0                                    | 3.50                    | 350                          | May 17, 1972   | 1500 | 21.5                                   | 5.03                    | 260                          |
| Dec. 14, 1971                                                                   | 1315 | 4.0                                    | 3.99                    | 400                          | June 21, 1972  | 1045 | 11.5                                   | 3.38                    | 320                          |
| Jan. 18, 1972                                                                   | 1100 | 4.0                                    | 3.32                    | 350                          | Aug. 2, 1972   | 1240 | 17.0                                   | 3.83                    | 365                          |
| Feb. 14, 1972                                                                   | 1130 | 3.5                                    | 2.98                    | 340                          | Sept. 14, 1972 | 1300 | 12.0                                   | 5.04                    | 300                          |
| Mar. 13, 1972                                                                   | 1145 | 4.5                                    | 2.47                    | -                            |                |      |                                        |                         |                              |
| 05400650 LITTLE PLOVER RIVER AT PLOVER, WIS (LAT 44 28 26 LONG 089 31 44)       |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 5, 1971                                                                    | 1415 | 11.0                                   | 9.00                    | 300                          | Apr. 10, 1972  | 1215 | 1.5                                    | 10.2                    | 360                          |
| Nov. 9, 1971                                                                    | 1245 | 6.5                                    | 10.2                    | 300                          | May 17, 1972   | 1345 | 15.0                                   | 14.0                    | 260                          |
| Dec. 14, 1971                                                                   | 1145 | 3.0                                    | 10.8                    | 360                          | June 21, 1972  | 0930 | 10.5                                   | 9.58                    | 300                          |
| Jan. 18, 1972                                                                   | 1215 | 4.0                                    | 8.56                    | 250                          | Aug. 2, 1972   | 1100 | 11.0                                   | 10.3                    | 345                          |
| Feb. 14, 1972                                                                   | 1230 | 4.0                                    | 8.18                    | 340                          | Sept. 14, 1972 | 1145 | 11.0                                   | 12.7                    | 340                          |
| Mar. 14, 1972                                                                   | 0930 | 5.0                                    | 8.30                    | 220                          |                |      |                                        |                         |                              |
| 05401020 TENMILE CREEK DITCH 5 NEAR BANCROFT, WIS (LAT 44 18 08 LONG 089 32 59) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 10, 1971                                                                   | 0900 | 4.5                                    | 7.83                    | 300                          | Apr. 11, 1972  | 1015 | 4.0                                    | 16.9                    | 220                          |
| Dec. 14, 1971                                                                   | 1500 | 4.0                                    | 9.24                    | 280                          | May 18, 1972   | 0915 | 12.0                                   | 8.18                    | 320                          |
| Jan. 19, 1972                                                                   | 1015 | 0.0                                    | 6.06                    | 300                          | June 26, 1972  | 1215 | 10.5                                   | 6.26                    | 320                          |
| Feb. 15, 1972                                                                   | 1245 | 2.0                                    | 5.74                    | 280                          | Aug. 3, 1972   | 0900 | 13.0                                   | 3.88                    | 320                          |
| Mar. 14, 1972                                                                   | 1100 | 3.5                                    | 4.98                    | -                            | Sept. 15, 1972 | 0915 | 13.5                                   | 8.73                    | 300                          |
| Mar. 20, 1972                                                                   | 1130 | 5.5                                    | 7.36                    | 330                          |                |      |                                        |                         |                              |
| 05401050 TENMILE CREEK NEAR NEKOOSA, WIS (LAT 44 15 44 LONG 089 48 38)          |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 4, 1971                                                                    | 1045 | 11.5                                   | 49.8                    | 300                          | Apr. 11, 1972  | 1545 | 7.0                                    | 119                     | 320                          |
| Nov. 10, 1971                                                                   | 1430 | 5.0                                    | 64.2                    | 300                          | Apr. 14, 1972  | 1030 | 4.5                                    | 141                     | 320                          |
| Dec. 15, 1971                                                                   | 1345 | 1.5                                    | 91.7                    | 280                          | May 19, 1972   | 1015 | 15.5                                   | 87.4                    | 310                          |
| Jan. 20, 1972                                                                   | 0945 | 0.5                                    | 41.2                    | 250                          | June 27, 1972  | 0930 | 15.0                                   | 46.8                    | 260                          |
| Feb. 16, 1972                                                                   | 1000 | 0.5                                    | 22.6                    | 320                          | Aug. 3, 1972   | 1500 | 18.5                                   | 38.5                    | 280                          |
| Mar. 14, 1972                                                                   | 1345 | 3.5                                    | 29.3                    | 280                          | Sept. 15, 1972 | 1415 | 18.0                                   | 70.2                    | 300                          |
| 05401100 FOURTEENMILE CREEK NEAR NEW ROME, WIS (LAT 44 12 15 LONG 089 48 29)    |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 4, 1971                                                                    | 1200 | 16.5                                   | 12.0                    | 320                          | Apr. 11, 1972  | 1445 | 1.5                                    | 54.9                    | 380                          |
| Nov. 10, 1971                                                                   | 1315 | 4.0                                    | 64.1                    | 300                          | May 18, 1972   | 1530 | 21.0                                   | 45.1                    | 170                          |
| Dec. 15, 1971                                                                   | 1230 | 1.0                                    | 41.5                    | 280                          | June 26, 1972  | 1615 | 13.5                                   | 11.9                    | 300                          |
| Jan. 19, 1972                                                                   | 1345 | 0.5                                    | 29.7                    | 280                          | Aug. 3, 1972   | 1345 | 22.0                                   | 8.05                    | 190                          |
| Feb. 16, 1972                                                                   | 1115 | 0.5                                    | 15.1                    | 320                          | Sept. 15, 1972 | 1300 | 19.0                                   | 41.1                    | 200                          |
| Mar. 14, 1972                                                                   | 1445 | 1.0                                    | 4.87                    | -                            |                |      |                                        |                         |                              |
| 05401535 BIG ROCHE A CRI CREEK NEAR ADAMS, WIS (LAT 44 05 52 LONG 089 46 30)    |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 4, 1971                                                                    | 1345 | 12.0                                   | 49.7                    | 280                          | Apr. 11, 1972  | 1245 | 7.0                                    | 88.0                    | 250                          |
| Nov. 10, 1971                                                                   | 1045 | 4.0                                    | 61.9                    | 240                          | May 18, 1972   | 1230 | 17.0                                   | 74.8                    | 260                          |
| Dec. 15, 1971                                                                   | 1045 | 2.0                                    | 77.0                    | 270                          | June 26, 1972  | 1515 | -                                      | 53.5                    | 240                          |
| Jan. 19, 1972                                                                   | 1245 | 0.5                                    | 50.1                    | 220                          | Aug. 3, 1972   | 1130 | 15.5                                   | 41.6                    | 230                          |
| Feb. 16, 1972                                                                   | 1300 | 1.0                                    | 39.5                    | 250                          | Sept. 15, 1972 | 1100 | 13.0                                   | 59.4                    | 240                          |
| Mar. 14, 1972                                                                   | 1315 | 4.0                                    | 51.8                    | 280                          |                |      |                                        |                         |                              |
| 05402000 YELLOW RIVER AT BABCOCK, WIS (LAT 44 18 05 LONG 090 07 15)             |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 14, 1971                                                                   | 1115 | 9.5                                    | 27.6                    | -                            | Apr. 5, 1972   | 1330 | 1.5                                    | 244                     | 140                          |
| Nov. 11, 1971                                                                   | 1415 | 4.5                                    | 104                     | 160                          | Apr. 12, 1972  | 1345 | 6.0                                    | 2,510                   | 100                          |
| Jan. 4, 1972                                                                    | 1245 | 0.0                                    | 42.5                    | 160                          | May 31, 1972   | 1230 | 15.0                                   | 25.2                    | 150                          |
| Feb. 16, 1972                                                                   | 1515 | 0.0                                    | 44.1                    | 150                          | June 27, 1972  | 1230 | 19.5                                   | 11.0                    | 120                          |
| Mar. 15, 1972                                                                   | 1115 | 0.0                                    | 55.1                    | -                            | Aug. 4, 1972   | 0945 | 18.5                                   | 34.0                    | 130                          |
|                                                                                 |      |                                        |                         |                              | Sept. 20, 1972 | 1145 | 18.0                                   | 88.6                    | 120                          |

## MISCELLANEOUS ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| Date                                                                             | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance | Date           | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance |
|----------------------------------------------------------------------------------|------|----------------------------------------|-------------------------|------------------------------|----------------|------|----------------------------------------|-------------------------|------------------------------|
| WISCONSIN RIVER BASIN--Continued                                                 |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05403500 LEMONWEIR RIVER AT NEW LISBON, WIS (LAT 43 52 47 LONG 090 09 40)        |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 5, 1971                                                                     | 1530 | 16.0                                   | 452                     | 75                           | Apr. 13, 1972  | 1600 | 5.0                                    | 1,140                   | 110                          |
| Nov. 17, 1971                                                                    | 1545 | -                                      | 269                     | 130                          | May 25, 1972   | 1230 | 20.0                                   | 163                     | 145                          |
| Jan. 4, 1972                                                                     | 1345 | 0.0                                    | 315                     | 95                           | July 5, 1972   | 1515 | 19.5                                   | 126                     | 155                          |
| Feb. 15, 1972                                                                    | 1445 | 0.0                                    | 170                     | 165                          | Aug. 24, 1972  | 0945 | 19.5                                   | 839                     | 115                          |
| Mar. 14, 1972                                                                    | 1245 | 0.0                                    | 221                     | 140                          | Sept. 28, 1972 | 1345 | -                                      | 4,200                   | -                            |
| 05404000 WISCONSIN RIVER NEAR WISCONSIN DELLS, WIS (LAT 43 36 22 LONG 089 45 25) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 7, 1971                                                                     | 1215 | 16.0                                   | 9,470                   | 155                          | June 7, 1972   | 1215 | -                                      | 5,850                   | -                            |
| Nov. 18, 1971                                                                    | 1215 | 8.0                                    | 6,350                   | 150                          | July 11, 1972  | 1130 | 24.5                                   | 4,220                   | 120                          |
| Apr. 11, 1972                                                                    | 1445 | 5.5                                    | 9,270                   | 170                          | Aug. 28, 1972  | 1200 | 17.0                                   | 14,500                  | 150                          |
| Apr. 20, 1972                                                                    | 1600 | -                                      | 42,400                  | -                            |                |      |                                        |                         |                              |
| 05405000 BARABOO RIVER NEAR BARABOO, WIS (LAT 43 28 51 LONG 089 38 09)           |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 8, 1971                                                                     | 1100 | 13.0                                   | 176                     | 340                          | Apr. 21, 1972  | 1400 | 9.0                                    | 509                     | 255                          |
| Nov. 19, 1971                                                                    | 1300 | 7.0                                    | 323                     | 330                          | June 7, 1972   | 1530 | 21.0                                   | 156                     | 335                          |
| Jan. 6, 1972                                                                     | 1530 | 0.0                                    | 200                     | -                            | July 13, 1972  | 1200 | 21.5                                   | 184                     | 305                          |
| Feb. 15, 1972                                                                    | 1100 | 0.0                                    | 174                     | -                            | Aug. 29, 1972  | 1530 | 20.5                                   | 1,500                   | 200                          |
| Mar. 16, 1972                                                                    | 1545 | 0.0                                    | 880                     | 240                          |                |      |                                        |                         |                              |
| 05406500 BLACK EARTH CREEK AT BLACK EARTH, WIS (LAT 43 08 03 LONG 089 43 56)     |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 6, 1971                                                                     | 1630 | 11.0                                   | 23.7                    | 520                          | Mar. 12, 1972  | 0945 | -                                      | 58.2                    | -                            |
| Oct. 20, 1971                                                                    | 1545 | 15.0                                   | 25.6                    | 510                          | Mar. 17, 1972  | 1800 | -                                      | 317                     | -                            |
| Nov. 29, 1971                                                                    | 0945 | 3.0                                    | 23.3                    | 500                          | Apr. 24, 1972  | 0915 | 6.0                                    | 40.5                    | 500                          |
| Dec. 16, 1971                                                                    | 0930 | -                                      | 49.1                    | -                            | June 8, 1972   | 1030 | 14.5                                   | 25.6                    | 510                          |
| Jan. 10, 1972                                                                    | 1100 | 4.5                                    | 26.5                    | -                            | July 13, 1972  | 1530 | 20.5                                   | 23.2                    | 500                          |
| Feb. 22, 1972                                                                    | 1630 | 3.5                                    | 22.0                    | 600                          | Aug. 30, 1972  | 1530 | 19.0                                   | 29.6                    | 500                          |
| 05406640 OTTER CREEK NEAR HIGHLAND, WIS (LAT 43 01 40 LONG 090 16 40)            |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 10, 1971                                                                    | 1545 | 8.0                                    | 1.41                    | 480                          | Apr. 24, 1972  | 1130 | 8.0                                    | 12.4                    | -                            |
| Dec. 21, 1971                                                                    | 1115 | 2.0                                    | 1.52                    | 500                          | May 23, 1972   | 1115 | 16.0                                   | 5.79                    | 580                          |
| Jan. 27, 1972                                                                    | 1545 | 0.0                                    | 1.70                    | -                            | June 28, 1972  | 1145 | 0.12                                   | 3.42                    | 580                          |
| Mar. 16, 1972                                                                    | 0730 | 3.0                                    | 24.4                    | 420                          | Aug. 9, 1972   | 1015 | 15.0                                   | 5.53                    | 460                          |
| Mar. 16, 1972                                                                    | 1730 | 3.0                                    | 35.0                    | 220                          | Sept. 21, 1972 | 1730 | -                                      | 8.01                    | -                            |
| 05407000 WISCONSIN RIVER AT MUSCODA, WIS (LAT 43 11 54 LONG 090 26 26)           |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 12, 1971                                                                    | 1445 | 12.0                                   | 7,260                   | 200                          | May 8, 1972    | 1530 | 13.0                                   | 14,800                  | 140                          |
| Nov. 16, 1971                                                                    | 1245 | -                                      | 7,400                   | -                            | June 27, 1972  | 1430 | -                                      | 6,220                   | -                            |
| Jan. 18, 1972                                                                    | 1515 | 0.0                                    | 8,930                   | -                            | Aug. 9, 1972   | 1500 | 21.0                                   | 4,830                   | 210                          |
| Apr. 10, 1972                                                                    | 1445 | -                                      | 13,200                  | -                            |                |      |                                        |                         |                              |
| 05408000 KICKAPOO RIVER AT LA FARGE, WIS (LAT 43 34 27 LONG 090 38 35)           |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 21, 1971                                                                    | 1145 | -                                      | 106                     | -                            | Mar. 21, 1972  | 1030 | 2.0                                    | 1,930                   | -                            |
| Nov. 24, 1971                                                                    | 1700 | -                                      | 45.4                    | -                            | Apr. 26, 1972  | 1445 | 10.5                                   | 196                     | -                            |
| Jan. 19, 1972                                                                    | 1430 | 0.0                                    | 156                     | 370                          | June 2, 1972   | 0830 | -                                      | 107                     | -                            |
| Feb. 24, 1972                                                                    | 1430 | 0.0                                    | 124                     | -                            | July 14, 1972  | 1000 | -                                      | 102                     | -                            |
| Mar. 20, 1972                                                                    | 1500 | 2.0                                    | 1,260                   | -                            | Aug. 25, 1972  | 0745 | -                                      | 129                     | -                            |
| 05410000 KICKAPOO RIVER AT GAYS MILLS, WIS (LAT 43 19 10 LONG 090 51 08)         |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 7, 1971                                                                     | 1445 | 12.0                                   | 242                     | 480                          | Apr. 25, 1972  | 1545 | 10.5                                   | 567                     | 470                          |
| Nov. 10, 1971                                                                    | 1545 | -                                      | 296                     | -                            | May 31, 1972   | 1545 | 18.0                                   | 375                     | 470                          |
| Jan. 19, 1972                                                                    | 1145 | 0.0                                    | 384                     | -                            | July 5, 1972   | 1630 | -                                      | 226                     | -                            |
| Feb. 23, 1972                                                                    | 1545 | 0.0                                    | 372                     | 480                          | Aug. 30, 1972  | 1030 | -                                      | 413                     | -                            |
| Mar. 17, 1972                                                                    | 1315 | 2.0                                    | 1,660                   | 230                          |                |      |                                        |                         |                              |
| 05410500 KICKAPOO RIVER AT STEUBEN, WIS (LAT 43 11 27 LONG 090 52 28)            |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 8, 1971                                                                     | 0945 | -                                      | 326                     | -                            | Apr. 25, 1972  | 1115 | 3.0                                    | 688                     | 390                          |
| Dec. 1, 1971                                                                     | 1345 | -                                      | 383                     | -                            | May 31, 1972   | 1145 | 9.5                                    | 385                     | 430                          |
| Jan. 10, 1972                                                                    | 1600 | -                                      | 346                     | -                            | July 14, 1972  | 1345 | 15.5                                   | 393                     | -                            |
| Mar. 17, 1972                                                                    | 1545 | -                                      | 2,070                   | 220                          | Aug. 24, 1972  | 1430 | -                                      | 504                     | -                            |

## MISCELLANEOUS ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| Date                                                                     | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance | Date           | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance |
|--------------------------------------------------------------------------|------|----------------------------------------|-------------------------|------------------------------|----------------|------|----------------------------------------|-------------------------|------------------------------|
| GRANT RIVER BASIN                                                        |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05413500 GRANT RIVER AT BURTON, WIS (LAT 42 43 13 LONG 090 49 09)        |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 9, 1971                                                             | 1330 | 3.0                                    | 120                     | 550                          | Apr. 11, 1972  | 1215 | 8.0                                    | 150                     | -                            |
| Dec. 16, 1971                                                            | 1200 | 3.0                                    | 301                     | 345                          | Apr. 18, 1972  | 1315 | 11.0                                   | 140                     | -                            |
| Jan. 26, 1972                                                            | 1630 | 0.0                                    | 63.6                    | -                            | May 18, 1972   | 1200 | 19.0                                   | 142                     | 580                          |
| Mar. 6, 1972                                                             | 1400 | 0.0                                    | 88.4                    | 540                          | June 8, 1972   | 1200 | -                                      | 104                     | -                            |
| Mar. 13, 1972                                                            | 1045 | -                                      | 1,820                   | -                            | June 26, 1972  | 1200 | 21.0                                   | 92.3                    | 590                          |
| Apr. 4, 1972                                                             | 0900 | 4.0                                    | 120                     | -                            | Sept. 18, 1972 | 1300 | 20.0                                   | 238                     | 590                          |
| PLATTE RIVER BASIN                                                       |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05414000 PLATTE RIVER NEAR ROCKVILLE, WIS (LAT 42 43 52 LONG 090 38 25)  |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 2, 1971                                                             | 1010 | 12.0                                   | 302                     | -                            | Apr. 18, 1972  | 1415 | 11.0                                   | 94.0                    | -                            |
| Nov. 9, 1971                                                             | 1530 | 4.0                                    | 69.9                    | 560                          | May 18, 1972   | 1330 | 21.0                                   | 102                     | 560                          |
| Dec. 16, 1971                                                            | 1515 | 3.0                                    | 186                     | 400                          | June 8, 1972   | 1430 | 14.0                                   | 70.7                    | -                            |
| Jan. 27, 1972                                                            | 1230 | 0.0                                    | 49.2                    | -                            | June 26, 1972  | 1416 | 22.0                                   | 57.6                    | 550                          |
| Feb. 8, 1972                                                             | 1545 | 0.0                                    | 37.4                    | -                            | July 6, 1972   | 1430 | -                                      | 59.6                    | -                            |
| Mar. 13, 1972                                                            | 1645 | -                                      | 301                     | -                            | Aug. 8, 1972   | 1545 | 18.0                                   | 119                     | 520                          |
| Apr. 4, 1972                                                             | 1100 | -                                      | 76.2                    | -                            | Aug. 29, 1972  | 1400 | 20.0                                   | 78.4                    | -                            |
| Apr. 12, 1972                                                            | 1630 | 8.0                                    | 82.2                    | 510                          | Sept. 18, 1972 | 1530 | 21.0                                   | 101                     | 560                          |
| GALENA RIVER BASIN                                                       |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05415000 GALENA RIVER AT BUNCOMBE, WIS (LAT 42 30 49 LONG 090 22 40)     |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 10, 1971                                                            | 1100 | 3.0                                    | 27.8                    | 820                          | Apr. 13, 1972  | 1030 | 11.0                                   | 52.2                    | 710                          |
| Dec. 20, 1971                                                            | 1345 | 0.0                                    | 50.4                    | 800                          | May 19, 1972   | 1030 | 21.0                                   | 58.0                    | 820                          |
| Feb. 1, 1972                                                             | 1445 | 0.0                                    | 27.3                    | -                            | June 29, 1972  | 1245 | 23.5                                   | 28.8                    | 800                          |
| Mar. 7, 1972                                                             | 1130 | 0.0                                    | 366                     | 400                          | Aug. 11, 1972  | 1200 | 18.0                                   | 464                     | 725                          |
| Mar. 14, 1972                                                            | 1330 | 0.5                                    | 74.2                    | 490                          | Sept. 19, 1972 | 1015 | 18.5                                   | 104                     | 780                          |
| ROCK RIVER BASIN                                                         |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05426000 CRAWFISH RIVER AT MILFORD, WIS (LAT 43 06 00 LONG 088 50 58)    |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 4, 1971                                                             | 1645 | 6.0                                    | 145                     | 600                          | May 4, 1972    | 1730 | 14.5                                   | 831                     | 700                          |
| Dec. 13, 1971                                                            | 1045 | 0.0                                    | 133                     | 650                          | June 1, 1972   | 0945 | 16.0                                   | 138                     | 640                          |
| Jan. 17, 1972                                                            | 1115 | 0.0                                    | 111                     | 900                          | July 10, 1972  | 1000 | 21.0                                   | 83.8                    | 640                          |
| Mar. 1, 1972                                                             | 1400 | 0.0                                    | 101                     | -                            | Aug. 28, 1972  | 1300 | 21.5                                   | 602                     | 580                          |
| Mar. 24, 1972                                                            | 1400 | 0.5                                    | 1,940                   | 575                          |                |      |                                        |                         |                              |
| 05429500 YAHARA RIVER NEAR MC FARLAND, WIS (LAT 43 00 32 LONG 089 18 18) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Oct. 20, 1971                                                            | 1645 | 19.0                                   | 19.8                    | 400                          | May 12, 1972   | 1445 | 14.0                                   | 140                     | 450                          |
| Nov. 12, 1971                                                            | 1530 | 5.5                                    | 132                     | 450                          | June 1, 1972   | 1530 | 24.0                                   | 34.4                    | 420                          |
| Dec. 3, 1971                                                             | 1700 | -                                      | 104                     | -                            | June 13, 1972  | 1515 | 24.0                                   | 116                     | 370                          |
| Dec. 17, 1971                                                            | 1615 | -                                      | 22.9                    | -                            | June 22, 1972  | 1600 | 22.0                                   | 69.6                    | 360                          |
| Jan. 7, 1972                                                             | 1515 | -                                      | 125                     | -                            | July 5, 1972   | 1630 | 21.5                                   | 33.8                    | 400                          |
| Jan. 28, 1972                                                            | 1645 | -                                      | 138                     | -                            | July 19, 1972  | 1600 | 22.5                                   | 41.1                    | 415                          |
| Feb. 17, 1972                                                            | 0915 | 1.0                                    | 144                     | -                            | Aug. 7, 1972   | 1515 | 21.0                                   | 48.7                    | 410                          |
| Mar. 10, 1972                                                            | 1600 | -                                      | 119                     | -                            | Aug. 23, 1972  | 1045 | -                                      | 44.0                    | -                            |
| Mar. 23, 1972                                                            | 1545 | -                                      | 253                     | -                            | Aug. 28, 1972  | 1045 | -                                      | 139                     | -                            |
| Apr. 3, 1972                                                             | 1045 | 3.0                                    | 288                     | 440                          | Sept. 13, 1972 | 1500 | 20.5                                   | 119                     | -                            |
| Apr. 13, 1972                                                            | 1600 | 6.0                                    | 316                     | 420                          | Sept. 26, 1972 | 1030 | 18.5                                   | 164                     | 390                          |
| Apr. 27, 1972                                                            | 1545 | 8.0                                    | 259                     | 420                          |                |      |                                        |                         |                              |

## MISCELLANEOUS ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| Date                                                                                         | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance | Date           | Time | Water<br>tem-<br>per-<br>ature<br>(°C) | Dis-<br>charge<br>(cfs) | Specific<br>conduct-<br>ance |
|----------------------------------------------------------------------------------------------|------|----------------------------------------|-------------------------|------------------------------|----------------|------|----------------------------------------|-------------------------|------------------------------|
| ROCK RIVER BASIN--Continued                                                                  |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05430500 ROCK RIVER AT AFTON, WIS (LAT 42 36 33 LONG 089 04 14)                              |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 11, 1971                                                                                | 1215 | 4.5                                    | 804                     | 700                          | May 15, 1972   | 1200 | 14.5                                   | 3,910                   | 520                          |
| Dec. 28, 1971                                                                                | 1500 | 0.5                                    | 1,670                   | 680                          | June 28, 1972  | 1600 | 21.0                                   | 982                     | 700                          |
| Feb. 10, 1972                                                                                | 1245 | 0.0                                    | 475                     | 800                          | Aug. 8, 1972   | 1345 | 19.0                                   | 676                     | 660                          |
| Mar. 28, 1972                                                                                | 1230 | 2.0                                    | 3,630                   | 480                          | Sept. 26, 1972 | 1130 | 18.5                                   | 4,920                   | 640                          |
| 05431500 TURTLE CREEK NEAR CLINTON, WIS (LAT 42 35 47 LONG 088 51 50)                        |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 11, 1971                                                                                | 1645 | 7.0                                    | 54.2                    | 710                          | May 19, 1972   | 1200 | 19.0                                   | 134                     | 620                          |
| Dec. 28, 1971                                                                                | 1700 | 0.0                                    | 107                     | 740                          | June 29, 1972  | 1215 | 18.5                                   | 71.2                    | 650                          |
| Feb. 10, 1972                                                                                | 1500 | 0.0                                    | 43.6                    | 800                          | Aug. 8, 1972   | 1530 | 17.0                                   | 311                     | 580                          |
| Mar. 28, 1972                                                                                | 1430 | 6.0                                    | 88.4                    | 570                          | Sept. 26, 1972 | 1500 | 18.5                                   | 468                     | 590                          |
| 05432500 PECATONICA RIVER AT DARLINGTON, WIS (LAT 42 40 40 LONG 090 07 07)                   |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 10, 1971                                                                                | 1315 | 3.0                                    | 89.6                    | 600                          | Apr. 24, 1972  | 1330 | -                                      | 229                     | -                            |
| Dec. 21, 1971                                                                                | 1400 | 0.5                                    | 130                     | 580                          | May 19, 1972   | 1215 | 22.0                                   | 135                     | 630                          |
| Feb. 2, 1972                                                                                 | 1015 | 0.0                                    | 74.6                    | 580                          | June 27, 1972  | 1230 | 22.0                                   | 70.9                    | 625                          |
| Mar. 14, 1972                                                                                | 1730 | -                                      | 822                     | -                            | Aug. 10, 1972  | 1300 | 18.0                                   | 116                     | -                            |
| Mar. 16, 1972                                                                                | 1245 | -                                      | 1,610                   | -                            | Sept. 21, 1972 | 0930 | 19.5                                   | 189                     | 610                          |
| 05433000 EAST BRANCH PECATONICA RIVER NEAR BLANCHARDVILLE, WIS (LAT 42 47 10 LONG 089 51 40) |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 12, 1971                                                                                | 0945 | 9.0                                    | 81.3                    | 500                          | May 19, 1972   | 1445 | 21.5                                   | 124                     | 540                          |
| Dec. 17, 1971                                                                                | 1030 | 0.0                                    | 151                     | 440                          | June 27, 1972  | 1500 | 22.0                                   | 77.7                    | 650                          |
| Jan. 31, 1972                                                                                | 1115 | 0.0                                    | 74.7                    | -                            | Aug. 10, 1972  | 1530 | 19.0                                   | 75.5                    | 650                          |
| Mar. 6, 1972                                                                                 | 1730 | 0.0                                    | 78.9                    | 460                          | Sept. 19, 1972 | 1500 | 16.5                                   | 116                     | 535                          |
| Apr. 14, 1972                                                                                | 1315 | 10.5                                   | 124                     | 490                          |                |      |                                        |                         |                              |
| 05434500 PECATONICA RIVER AT MARTINTOWN, WIS (LAT 42 30 34 LONG 089 47 58)                   |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 11, 1971                                                                                | 1430 | 3.5                                    | 361                     | 560                          | May 22, 1972   | 1415 | 23.0                                   | 550                     | 610                          |
| Dec. 17, 1971                                                                                | 1330 | 0.0                                    | 1,371                   | 420                          | June 27, 1972  | 1030 | 21.0                                   | 361                     | 570                          |
| Jan. 31, 1972                                                                                | 1345 | 0.0                                    | 276                     | 560                          | Aug. 10, 1972  | 1100 | -                                      | 589                     | -                            |
| Apr. 13, 1972                                                                                | 1330 | 11.0                                   | 584                     | 450                          | Sept. 20, 1972 | 1430 | -                                      | 942                     | -                            |
| Apr. 18, 1972                                                                                | 1000 | 13.0                                   | 1,470                   | -                            |                |      |                                        |                         |                              |
| 05436500 SUGAR RIVER NEAR BRODHEAD, WIS (LAT 42 36 42 LONG 089 23 53)                        |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 11, 1971                                                                                | 1100 | 4.5                                    | 206                     | 520                          | May 22, 1972   | 1030 | 24.0                                   | 295                     | 540                          |
| Dec. 17, 1971                                                                                | 1530 | 0.0                                    | 741                     | -                            | June 28, 1972  | 1515 | 26.0                                   | 189                     | 530                          |
| Feb. 1, 1972                                                                                 | 1030 | 0.0                                    | 159                     | -                            | Aug. 9, 1972   | 1445 | 19.0                                   | 256                     | 490                          |
| Mar. 7, 1972                                                                                 | 1515 | 0.0                                    | 204                     | 520                          | Sept. 20, 1972 | 1045 | 21.0                                   | 343                     | 540                          |
| Apr. 14, 1972                                                                                | 1100 | 10.5                                   | 328                     | 480                          |                |      |                                        |                         |                              |
| ILLINOIS RIVER BASIN                                                                         |      |                                        |                         |                              |                |      |                                        |                         |                              |
| 05543830 FOX RIVER AT WAUKESHA, WIS (LAT 43 00 17 LONG 088 14 37)                            |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Nov. 9, 1971                                                                                 | 1215 | 4.0                                    | 24.4                    | 1,050                        | June 1, 1972   | 1700 | 20.0                                   | 67.7                    | 900                          |
| Dec. 13, 1971                                                                                | 1445 | 1.0                                    | 140                     | 860                          | July 10, 1972  | 1500 | 23.0                                   | 43.1                    | 750                          |
| Jan. 17, 1972                                                                                | 1530 | 0.0                                    | 30.8                    | -                            | Aug. 9, 1972   | 1145 | 17.0                                   | 74.5                    | 860                          |
| Feb. 21, 1972                                                                                | 1200 | 1.0                                    | 35.1                    | 1,100                        | Sept. 21, 1972 | 1900 | -                                      | 974                     | -                            |
| Apr. 6, 1972                                                                                 | 1545 | -                                      | 155                     | -                            | Sept. 22, 1972 | 1015 | 16.0                                   | 1,010                   | -                            |
| May 24, 1972                                                                                 | 1530 | 24.0                                   | 7.76                    | 850                          | Sept. 27, 1972 | 1245 | 15.5                                   | 509                     | 600                          |
| 05546500 FOX RIVER AT WILMOT, WIS (LAT 42 30 40 LONG 088 10 45)                              |      |                                        |                         |                              |                |      |                                        |                         |                              |
| Mar. 29, 1972                                                                                | 1445 | 2.0                                    | 1,270                   | 560                          | Sept. 27, 1972 | 1500 | 17.0                                   | 2,760                   | 525                          |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|

## STREAMS TRIBUTARY TO LAKE SUPERIOR

04025500 - BOIS BRULE R. AT BRULE, WIS. (LAT 46 32 16 LONG 091 35 43)

OCT., 1971

|       |      |    |     |    |     |
|-------|------|----|-----|----|-----|
| 02... | --   | -- | 240 | 11 | 7.1 |
| 04... | 1200 | -- | 212 | 4  | 2.6 |
| 08... | 1500 | -- | 192 | 10 | 5.2 |
| 15... | 1330 | -- | 169 | 4  | 1.8 |
| 22... | 1015 | -- | 272 | 5  | 3.7 |
| 29... | 1630 | -- | 345 | 6  | 5.6 |

NOV.

|       |      |    |     |    |     |
|-------|------|----|-----|----|-----|
| 05... | 1545 | -- | 350 | 6  | 5.7 |
| 06... | 0800 | -- | 218 | 3  | 1.8 |
| 09... | 1150 | -- | 247 | 13 | 8.7 |
| 11... | 1455 | -- | 263 | 5  | 3.6 |
| 19... | 1620 | -- | 379 | 8  | 8.2 |
| 29... | 0750 | -- | 224 | 4  | 2.4 |

DEC.

|       |      |    |     |   |     |
|-------|------|----|-----|---|-----|
| 02... | 1100 | -- | 208 | 4 | 2.2 |
| 13... | 0820 | -- | 314 | 4 | 3.4 |
| 21... | 0945 | -- | 500 | 1 | 1.3 |

MAR., 1972

|       |      |    |     |    |     |
|-------|------|----|-----|----|-----|
| 15... | 1200 | -- | 154 | 10 | 4.2 |
|-------|------|----|-----|----|-----|

APR.

|       |      |    |     |    |     |
|-------|------|----|-----|----|-----|
| 18... | 1250 | -- | 383 | 16 | 17  |
| 18... | 1505 | -- | 383 | 58 | 60  |
| 19... | 1530 | -- | 469 | 48 | 61  |
| 20... | 1630 | -- | 623 | 74 | 124 |
| 21... | 1605 | -- | 658 | 26 | 46  |
| 22... | 1630 | -- | 558 | 21 | 32  |
| 23... | 1625 | -- | 500 | 16 | 22  |
| 24... | 1625 | -- | 496 | 20 | 27  |
| 25... | 1555 | -- | 492 | 25 | 33  |
| 26... | 1740 | -- | 496 | 20 | 27  |
| 27... | 1604 | -- | 498 | 14 | 19  |

MAY

|       |      |      |     |    |     |
|-------|------|------|-----|----|-----|
| 26... | 1150 | 16.5 | 186 | 10 | 5.0 |
|-------|------|------|-----|----|-----|

JULY

|       |      |      |     |   |     |
|-------|------|------|-----|---|-----|
| 06... | 0830 | 14.5 | 176 | 5 | 2.4 |
|-------|------|------|-----|---|-----|

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM |
|---------------|------|-------------------------|------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| APR.<br>19... | 1530 | 469                     | 48                                       | 61                                                          | 15                                                          | 26                                                          | 33                                                          | 44                                                          | 60                                                          |

| SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM |
|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|

APR.  
19...

| DATE | TIME | 73 | 87 | 96 | 100 | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>32.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>64.0 MM |
|------|------|----|----|----|-----|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
|------|------|----|----|----|-----|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|

|               |      |   |   |   |    |    |    |    |    |     |    |     |
|---------------|------|---|---|---|----|----|----|----|----|-----|----|-----|
| APR.<br>19... | 1210 | 0 | 0 | 4 | 48 | 67 | 76 | 84 | 92 | 100 | -- | --  |
| JULY<br>06... | 1200 | 0 | 0 | 2 | 6  | 8  | 12 | 14 | 19 | 39  | 74 | 100 |

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDEO<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDEO<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|-------------------------------------------|--------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|-------------------------------------------|--------------------------------------------------------------|

## STREAMS TRIBUTARY TO LAKE SUPERIOR--Continued

04026005 - BOIS BRULE RIVER NR. LAKE SUPERIOR, WIS. (LAT 46 42 20 LONG 091 36 07)

|            |      |      |     |    |     |
|------------|------|------|-----|----|-----|
| OCT., 1971 |      |      |     |    |     |
| 04...      | 1400 | --   | 208 | 18 | 10  |
| NOV.       |      |      |     |    |     |
| 09...      | 1320 | --   | 440 | 20 | 24  |
| APR., 1972 |      |      |     |    |     |
| 19...      | 1030 | 6.0  | 749 | 71 | 144 |
| MAY        |      |      |     |    |     |
| 26...      | 0950 | 15.5 | 193 | 14 | 7.3 |
| JULY       |      |      |     |    |     |
| 06...      | 0930 | 15.0 | 192 | 12 | 6.2 |
| AUG.       |      |      |     |    |     |
| 10...      | --   | 18.5 | 194 | 8  | 4.2 |
| SEP.       |      |      |     |    |     |
| 21...      | 0835 | 10.5 | 411 | 98 | 109 |

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDEO<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDEO<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM |
|---------------|------|-------------------------|-------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| APR.<br>19... | 1030 | 749                     | 71                                        | 144                                                          | 18                                                          | 29                                                          | 32                                                          | 39                                                          | 47                                                          |

| DATE          | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM |
|---------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| APR.<br>19... | 78                                                           | 97                                                           | 100                                                          |

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDEO<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDEO<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|-------------------------------------------|--------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|-------------------------------------------|--------------------------------------------------------------|

04026870 - ALDER CREEK NR. UPSON, WIS. (LAT 46 23 09 LONG 090 24 30)

|            |      |      |     |    |     |
|------------|------|------|-----|----|-----|
| MAY , 1972 |      |      |     |    |     |
| 15...      | 1500 | 14.0 | 21  | 2  | .12 |
| JULY       |      |      |     |    |     |
| 07...      | 1130 | 18.5 | 7.4 | 4  | .08 |
| AUG.       |      |      |     |    |     |
| 16...      | 1945 | --   | 270 | 12 | 8.7 |
| 16...      | 2000 | --   | 322 | 15 | 13  |
| 17...      | 0745 | --   | 658 | 14 | 25  |
| 17...      | 0900 | 17.0 | 650 | 6  | 11  |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE                                                                | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(T/DAY) |
|---------------------------------------------------------------------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------|
| STREAMS TRIBUTARY TO LAKE SUPERIOR--Continued                       |      |                             |                         |                                          |                                           |
| 04027000 - BAD RIVER NR. ODANAH, WIS. (LAT 46 29 15 LONG 090 41 45) |      |                             |                         |                                          |                                           |
| OCT., 1971                                                          |      |                             |                         |                                          |                                           |
| 05...                                                               | 1100 | --                          | 595                     | 17                                       | 27                                        |
| NOV.                                                                |      |                             |                         |                                          |                                           |
| 10...                                                               | 1000 | --                          | 433                     | 10                                       | 12                                        |
| 22...                                                               | 1420 | --                          | 842                     | 28                                       | 64                                        |
| DEC.                                                                |      |                             |                         |                                          |                                           |
| 04...                                                               | 0920 | --                          | 585                     | 6                                        | 9.5                                       |
| APR., 1972                                                          |      |                             |                         |                                          |                                           |
| 19...                                                               | 1205 | --                          | 3700                    | 270                                      | 2700                                      |
| 19...                                                               | 1245 | --                          | 3700                    | 346                                      | 3460                                      |
| 19...                                                               | 1300 | --                          | 3700                    | 255                                      | 2550                                      |
| 27...                                                               | 1835 | --                          | 4000                    | 490                                      | 5290                                      |
| 30...                                                               | 1340 | --                          | 4550                    | 468                                      | 5750                                      |
| MAY                                                                 |      |                             |                         |                                          |                                           |
| 07...                                                               | 1425 | --                          | 2200                    | 70                                       | 416                                       |
| 13...                                                               | 1235 | --                          | 715                     | 173                                      | 334                                       |
| 16...                                                               | 1115 | --                          | 580                     | 56                                       | 88                                        |
| 20...                                                               | 1830 | --                          | 360                     | 10                                       | 9.7                                       |
| 21...                                                               | 1340 | --                          | 350                     | 12                                       | 11                                        |
| 24...                                                               | 1315 | --                          | 10                      | 8                                        | .22                                       |
| 30...                                                               | 1425 | --                          | 1070                    | 90                                       | 260                                       |
| JUNE                                                                |      |                             |                         |                                          |                                           |
| 04...                                                               | 1310 | --                          | 260                     | 11                                       | 7.7                                       |
| 07...                                                               | 1035 | --                          | 203                     | 5                                        | 2.7                                       |
| 13...                                                               | 1200 | --                          | 160                     | 17                                       | 7.3                                       |
| 18...                                                               | 1700 | --                          | 243                     | 14                                       | 9.2                                       |
| 25...                                                               | 1700 | --                          | 1370                    | 16                                       | 59                                        |
| 26...                                                               | 1215 | --                          | 1320                    | 15                                       | 53                                        |
| 30...                                                               | 1230 | --                          | 974                     | 33                                       | 87                                        |
| JULY                                                                |      |                             |                         |                                          |                                           |
| 02...                                                               | 2045 | --                          | 974                     | 16                                       | 42                                        |
| 05...                                                               | 1210 | --                          | 285                     | 8                                        | 6.2                                       |
| 08...                                                               | 1335 | --                          | 194                     | 7                                        | 3.7                                       |
| 14...                                                               | 1220 | --                          | 146                     | 40                                       | 16                                        |
| 16...                                                               | 1330 | --                          | 141                     | 8                                        | 3.0                                       |
| 22...                                                               | 1030 | --                          | 5310                    | 1060                                     | 15200                                     |
| 27...                                                               | 1200 | --                          | 348                     | 11                                       | 10                                        |
| 28...                                                               | 1930 | --                          | 1330                    | 84                                       | 302                                       |
| 29...                                                               | 0955 | --                          | 1010                    | 50                                       | 136                                       |
| AUG.                                                                |      |                             |                         |                                          |                                           |
| 02...                                                               | 1405 | --                          | 410                     | 15                                       | 17                                        |
| 14...                                                               | 1210 | --                          | 336                     | 7                                        | 6.4                                       |
| 29...                                                               | 1055 | --                          | 764                     | 26                                       | 54                                        |
| SEP.                                                                |      |                             |                         |                                          |                                           |
| 03...                                                               | 1530 | --                          | 368                     | 38                                       | 38                                        |
| 10...                                                               | 1430 | --                          | 310                     | 10                                       | 8.4                                       |

| DATE  | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM |
|-------|------|-------------------------|------------------------------------------|-------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| APR.  |      |                         |                                          |                                           |                                                             |                                                             |                                                             |                                                             |                                                             |
| 19... | 1245 | 3700                    | 346                                      | 3460                                      | 18                                                          | 23                                                          | 27                                                          | 35                                                          | 45                                                          |

| DATE  | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM |
|-------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| APR.  |                                                              |                                                              |                                                              |                                                              |
| 19... | 65                                                           | 79                                                           | 92                                                           | 100                                                          |

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE                                                                               | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------------------------------------------------------------------------------------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
| STREAMS TRIBUTARY TO LAKE MICHIGAN                                                 |      |                             |                         |                                          |                                                             |
| 04071000 - DCONTO RIVER NR. GILLET, WIS. (LAT 44 51 53 LONG 088 18 00)             |      |                             |                         |                                          |                                                             |
| DCT., 1971                                                                         |      |                             |                         |                                          |                                                             |
| 27...                                                                              | 1130 | --                          | 504                     | 8                                        | 11                                                          |
| FEB., 1972                                                                         |      |                             |                         |                                          |                                                             |
| 25...                                                                              | 1200 | --                          | 360                     | 8                                        | 7.8                                                         |
| JUNE                                                                               |      |                             |                         |                                          |                                                             |
| 29...                                                                              | 1515 | --                          | 384                     | 1                                        | 1.0                                                         |
| JULY                                                                               |      |                             |                         |                                          |                                                             |
| 27...                                                                              | 1415 | --                          | 411                     | 2                                        | 2.2                                                         |
| SEP.                                                                               |      |                             |                         |                                          |                                                             |
| 27...                                                                              | 1400 | 13.0                        | 836                     | 22                                       | 50                                                          |
| 04071858 - PENSAAKEE RIVER NEAR PENSAAKEE, WISCONSIN (LAT 44 49 08 LONG 087 57 12) |      |                             |                         |                                          |                                                             |
| AUG., 1972                                                                         |      |                             |                         |                                          |                                                             |
| 27...                                                                              | 1700 | --                          | 83                      | 24                                       | 5.4                                                         |
| SEP.                                                                               |      |                             |                         |                                          |                                                             |
| 03...                                                                              | 1500 | --                          | 18                      | 19                                       | .92                                                         |
| 09...                                                                              | 1530 | --                          | 120                     | 3                                        | .97                                                         |
| 16...                                                                              | 1500 | --                          | 18                      | 72                                       | 3.5                                                         |
| 30...                                                                              | 1315 | --                          | 580                     | 23                                       | 36                                                          |
| 04073050 - GRAND RIVER NR. KINGSTON, WIS. (LAT 43 41 09 LONG 089 05 09)            |      |                             |                         |                                          |                                                             |
| NOV., 1971                                                                         |      |                             |                         |                                          |                                                             |
| 11...                                                                              | 1300 | 5.0                         | 16                      | 44                                       | 1.9                                                         |
| JAN., 1972                                                                         |      |                             |                         |                                          |                                                             |
| 24...                                                                              | 1230 | --                          | 11                      | 5                                        | .16                                                         |
| MAR.                                                                               |      |                             |                         |                                          |                                                             |
| 21...                                                                              | 1200 | --                          | 485                     | 98                                       | 128                                                         |
| 22...                                                                              | 1520 | --                          | 485                     | 82                                       | 107                                                         |
| 23...                                                                              | 1225 | --                          | 301                     | 259                                      | 210                                                         |
| 23...                                                                              | 1410 | --                          | 329                     | 304                                      | 270                                                         |
| MAY                                                                                |      |                             |                         |                                          |                                                             |
| 05...                                                                              | 1330 | --                          | 30                      | 27                                       | 2.2                                                         |
| JULY                                                                               |      |                             |                         |                                          |                                                             |
| 14...                                                                              | 1100 | --                          | 20                      | 4                                        | .22                                                         |
| SEP.                                                                               |      |                             |                         |                                          |                                                             |
| 01...                                                                              | 1200 | --                          | 32                      | 18                                       | 1.6                                                         |
| 18...                                                                              | 1150 | 17.0                        | 364                     | 252                                      | 248                                                         |
| 18...                                                                              | 1250 | 17.0                        | 360                     | 234                                      | 227                                                         |
| 18...                                                                              | 1420 | 17.0                        | 356                     | 286                                      | 275                                                         |
| 18...                                                                              | 1625 | --                          | 345                     | 274                                      | 255                                                         |
| 19...                                                                              | 1440 | --                          | 164                     | 66                                       | 29                                                          |
| 04074950 - WOLF RIVER AT LANGLADE, WIS. (LAT 45 11 24 LONG 088 44 00)              |      |                             |                         |                                          |                                                             |
| JUNE, 1972                                                                         |      |                             |                         |                                          |                                                             |
| 27...                                                                              | 1255 | --                          | 247                     | 4                                        | 2.7                                                         |
| 04078500 - EMBARRASS RIVER NR. EMBARRASS, WIS. (LAT 44 43 29 LONG 088 44 10)       |      |                             |                         |                                          |                                                             |
| FEB., 1972                                                                         |      |                             |                         |                                          |                                                             |
| 11...                                                                              | 1500 | --                          | 126                     | 2                                        | .68                                                         |
| APR.                                                                               |      |                             |                         |                                          |                                                             |
| 18...                                                                              | 1400 | --                          | 2410                    | 28                                       | 182                                                         |
| 18...                                                                              | 1715 | --                          | 2410                    | 34                                       | 221                                                         |
| JUNE                                                                               |      |                             |                         |                                          |                                                             |
| 26...                                                                              | 1355 | --                          | 132                     | 8                                        | 2.9                                                         |
| AUG.                                                                               |      |                             |                         |                                          |                                                             |
| 04...                                                                              | 1200 | --                          | 162                     | 2                                        | .87                                                         |
| SEP.                                                                               |      |                             |                         |                                          |                                                             |
| 05...                                                                              | 1500 | --                          | 222                     | 7                                        | 4.2                                                         |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

## STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued

04078500 - EMBARRASS RIVER NR. EMBARRAS, WIS. (LAT 44 43 29 LONG 088 44 10)

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIMENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIMENT<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM |
|---------------|------|-------------------------|-------------------------------------|--------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| APR.<br>18... | 1400 | 2410                    | 28                                  | 182                                  | 0                                                           | 6                                                           | 17                                                          | 27                                                          | 35                                                          |

| DATE          | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM |
|---------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| APR.<br>18... | 43                                                           | 53                                                           | 74                                                           | 100                                                          |

| DATE          | TIME | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>32.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>64.0 MM |
|---------------|------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| APR.<br>18... | 1545 | 0                                                           | 0                                                           | 1                                                           | 10                                                          | 14                                                          | 17                                                          | 26                                                          | 42                                                          | 71                                                          | 71                                                          | 100                                                         |

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIMENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIMENT<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|-------------------------------------|--------------------------------------|
|------|------|-----------------------------|-------------------------|-------------------------------------|--------------------------------------|

04085200 - KEWAUNEE RIVER NR. KEWAUNEE, WIS. (LAT 44 27 42 LONG 087 32 40)

|            |      |    |      |     |     |
|------------|------|----|------|-----|-----|
| OCT., 1971 |      |    |      |     |     |
| 18...      | 1340 | -- | 14   | 3   | .12 |
| NOV.       |      |    |      |     |     |
| 15...      | 1230 | -- | 26   | 54  | 3.8 |
| DEC.       |      |    |      |     |     |
| 13...      | 1230 | -- | 109  | 22  | 6.5 |
| JAN., 1972 |      |    |      |     |     |
| 18...      | 1215 | -- | 29   | 168 | 13  |
| MAR.       |      |    |      |     |     |
| 11...      | 1800 | -- | 635  | 50  | 86  |
| 23...      | 1700 | -- | 1910 | 16  | 83  |
| 24...      | 1400 | -- | 2050 | 18  | 100 |
| APR.       |      |    |      |     |     |
| 02...      | 1100 | -- | 272  | 4   | 2.9 |
| 09...      | 1130 | -- | 178  | 6   | 2.9 |
| 17...      | 1500 | -- | 329  | 14  | 12  |
| 18...      | 1730 | -- | 284  | 14  | 11  |
| 22...      | 1100 | -- | 427  | 54  | 62  |
| 22...      | 1900 | -- | 591  | 64  | 102 |
| 23...      | 0800 | -- | 805  | 60  | 130 |
| 23...      | 1900 | -- | 619  | 32  | 53  |
| 24...      | 0900 | -- | 427  | 15  | 17  |
| 30...      | 1000 | -- | 96   | 9   | 2.3 |
| MAY        |      |    |      |     |     |
| 07...      | 1100 | -- | 310  | 2   | 1.7 |
| 27...      | 1000 | -- | 21   | 10  | .57 |
| JUNE       |      |    |      |     |     |
| 04...      | 1100 | -- | 52   | 58  | 8.1 |
| 12...      | 1245 | -- | 37   | 10  | 1.0 |
| 18...      | 1100 | -- | 16   | 12  | .53 |

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------|
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------|

## STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued

04085200 - KEWAUNEE RIVER NR. KEWAUNEE, WIS. (LAT 44 27 42 LONG 087 32 40)

|            |      |    |     |     |     |
|------------|------|----|-----|-----|-----|
| JULY, 1972 |      |    |     |     |     |
| 02...      | 0800 | -- | 16  | 24  | 1.0 |
| 15...      | 1100 | -- | 23  | 27  | 1.7 |
| 17...      | 1300 | -- | 19  | 86  | 4.4 |
| 21...      | 0800 | -- | 50  | 28  | 3.8 |
| 30...      | 1100 | -- | 12  | 12  | .39 |
| AUG.       |      |    |     |     |     |
| 04...      | 1130 | -- | 20  | 10  | .54 |
| 07...      | 1130 | -- | 38  | 34  | 3.5 |
| 08...      | 0800 | -- | 50  | 39  | 5.3 |
| 09...      | 0800 | -- | 91  | 18  | 4.4 |
| 19...      | 0800 | -- | 211 | 72  | 41  |
| 25...      | 1600 | -- | 204 | 44  | 24  |
| SEP.       |      |    |     |     |     |
| 02...      | 1600 | -- | 166 | 100 | 45  |
| 18...      | 1730 | -- | 59  | 22  | 3.5 |
| 26...      | 1600 | -- | 267 | 76  | 55  |
| 29...      | 1600 | -- | 825 | 172 | 383 |
| 30...      | 0930 | -- | 565 | 88  | 134 |

04085281 - EAST TWIN RIVER AT MISHICOT, WIS. (LAT 44 14 13 LONG 087 38 19)

|            |      |    |    |     |     |
|------------|------|----|----|-----|-----|
| JULY, 1972 |      |    |    |     |     |
| 13...      | 1620 | -- | 38 | 14  | 1.4 |
| AUG.       |      |    |    |     |     |
| 31...      | 1130 | -- | 24 | 18  | 1.2 |
| SEP.       |      |    |    |     |     |
| 19...      | 1015 | -- | 25 | 110 | 7.4 |

04086150 - MILWAUKEE RIVER AT KEWASKUM, WIS. (LAT 43 31 02 LONG 088 13 22)

|            |      |      |     |    |     |
|------------|------|------|-----|----|-----|
| OCT., 1971 |      |      |     |    |     |
| 07...      | 1400 | 15.0 | 7.3 | 8  | .16 |
| APR., 1972 |      |      |     |    |     |
| 05...      | 1415 | --   | 132 | 0  | .00 |
| MAY        |      |      |     |    |     |
| 11...      | 1325 | 14.5 | 99  | 7  | 1.9 |
| JUNE       |      |      |     |    |     |
| 05...      | 1205 | --   | 29  | 11 | .86 |
| JULY       |      |      |     |    |     |
| 12...      | 0945 | --   | 32  | 8  | .69 |
| SEP.       |      |      |     |    |     |
| 05...      | 1045 | --   | 49  | 25 | 3.3 |
| 18...      | 1230 | --   | 428 | 53 | 61  |
| 18...      | 1450 | --   | 428 | 38 | 44  |
| 21...      | 1300 | --   | 713 | 49 | 94  |

| DATE  | TIME | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>32.0 MM |
|-------|------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| OCT.  |      |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 07... | --   | 0                                                           | 1                                                           | 2                                                           | 15                                                          | 26                                                          | 33                                                          | 43                                                          | 58                                                          | 77                                                          | 93                                                          |
| SEP.  |      |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 21... | 1215 | 10                                                          | 14                                                          | 24                                                          | 53                                                          | 75                                                          | 86                                                          | 92                                                          | 95                                                          | 97                                                          | 100                                                         |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

SUS-  
PENDE  
SEDI-  
MENT  
DIS-  
CHARGE  
(T/DAY)  
 SUS-  
PENDE  
SEDI-  
MENT  
(MG/L)  
 DIS-  
CHARGE  
(CFS)  
 TEMPER-  
ATURE  
(DEG C)  
 TIME  
 DATE

STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued

04086200 - EAST BRANCH MILWAUKEE R. AT NEW FANE, WIS. (LAT 43 33 01 LONG 088 11 18)

| DATE       | TIME | DIS-<br>CHARGE<br>(CFS) | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>0.062 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>0.125 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>0.250 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>0.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM |
|------------|------|-------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|
| OCT., 1971 |      |                         |                                                              |                                                              |                                                              |                                                              |                                                             |
| 07...      | 1600 | 13.0                    | 6.9                                                          | 8                                                            | .16                                                          |                                                              |                                                             |
| APR., 1972 |      |                         |                                                              |                                                              |                                                              |                                                              |                                                             |
| 25...      | 1055 | --                      | 63                                                           | 6                                                            | 1.0                                                          |                                                              |                                                             |
| JUNE       |      |                         |                                                              |                                                              |                                                              |                                                              |                                                             |
| 05...      | 1315 | --                      | 16                                                           | 10                                                           | .43                                                          |                                                              |                                                             |
| JULY       |      |                         |                                                              |                                                              |                                                              |                                                              |                                                             |
| 12...      | 1110 | --                      | 22                                                           | 2                                                            | .12                                                          |                                                              |                                                             |
| SEP.       |      |                         |                                                              |                                                              |                                                              |                                                              |                                                             |
| 21...      | 1400 | 20.0                    | 65                                                           | 4                                                            | .70                                                          |                                                              |                                                             |

| DATE  | TIME | DIS-<br>CHARGE<br>(CFS) | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>32.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>64.0 MM |
|-------|------|-------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| OCT.  |      |                         |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 07... | --   | 6.8                     | 2                                                           | 3                                                           | 4                                                           | 7                                                           | 11                                                          |                                                             |
| SEP.  |      |                         |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 21... | 1400 | 65                      | 0                                                           | 0                                                           | 0                                                           | 0                                                           | 1                                                           |                                                             |

SUS-  
PENDE  
SEDI-  
MENT  
DIS-  
CHARGE  
(T/DAY)  
 SUS-  
PENDE  
SEDI-  
MENT  
(MG/L)  
 DIS-  
CHARGE  
(CFS)  
 TEMPER-  
ATURE  
(DEG C)  
 TIME  
 DATE

04086340 - NORTH BRANCH MILWAUKEE R. NR. FILLMORE, WIS. (LAT 43 28 58 LONG 088 03 39)

| DATE       | TIME | DIS-<br>CHARGE<br>(CFS) | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>32.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>64.0 MM |
|------------|------|-------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| OCT., 1971 |      |                         |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 07...      | 1200 | 13.0                    | 20                                                          | 36                                                          | 1.9                                                         |                                                             |                                                             |                                                             |
| APR., 1972 |      |                         |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 05...      | 1000 | .0                      | 139                                                         | 4                                                           | 1.5                                                         |                                                             |                                                             |                                                             |
| 25...      | 1450 | --                      | 204                                                         | 6                                                           | 3.3                                                         |                                                             |                                                             |                                                             |
| MAY        |      |                         |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 11...      | 1700 | 16.5                    | 92                                                          | 94                                                          | 23                                                          |                                                             |                                                             |                                                             |
| JUNE       |      |                         |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 05...      | 1300 | --                      | 53                                                          | 44                                                          | 6.3                                                         |                                                             |                                                             |                                                             |
| JULY       |      |                         |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 12...      | 1300 | 24.0                    | 45                                                          | 26                                                          | 3.2                                                         |                                                             |                                                             |                                                             |
| SEP.       |      |                         |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 06...      | 0745 | --                      | 31                                                          | 112                                                         | 9.4                                                         |                                                             |                                                             |                                                             |
| 21...      | 1530 | --                      | 640                                                         | 51                                                          | 88                                                          |                                                             |                                                             |                                                             |

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

## STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued

04086340 - NORTH BRANCH MILWAUKEE R. NR. FILLMORE, WIS. (LAT 43 28 58 LONG 088 03 39)

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM |
|---------------|------|-------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| OCT.<br>07... | --   | 20.3                    | 1                                                           | 2                                                           | 7                                                           | 27                                                          | 37                                                          | 47                                                          | 64                                                          | 89                                                          | 100                                                         |
| SEP.<br>21... | 1500 | 730                     | 2                                                           | 7                                                           | 31                                                          | 74                                                          | 89                                                          | 97                                                          | 99                                                          | 100                                                         | --                                                          |

| DATE                                                                      | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|---------------------------------------------------------------------------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
| 04086360 - MILWAUKEE RIVER AT WAUBEKA, WIS. (LAT 43 28 22 LONG 087 59 23) |      |                             |                         |                                          |                                                             |
| MAR.. 1972                                                                |      |                             |                         |                                          |                                                             |
| 22...                                                                     | 1600 | --                          | 3320                    | 84                                       | 753                                                         |
| SEP.                                                                      |      |                             |                         |                                          |                                                             |
| 19...                                                                     | 1000 | --                          | 424                     | 48                                       | 55                                                          |
| 21...                                                                     | 1730 | --                          | 1720                    | 149                                      | 692                                                         |

04087220 - ROOT RIVER NR. FRANKLIN, WIS. (LAT 42 52 25 LONG 087 59 45)

|            |      |      |     |     |     |
|------------|------|------|-----|-----|-----|
| DEC., 1971 |      |      |     |     |     |
| 30...      | 1355 | --   | 65  | 62  | 11  |
| JAN., 1972 |      |      |     |     |     |
| 21...      | 1400 | --   | 9.2 | 12  | .30 |
| FEB.       |      |      |     |     |     |
| 15...      | 1540 | --   | 3.5 | 10  | .09 |
| MAR.       |      |      |     |     |     |
| 27...      | 1500 | --   | 30  | 10  | .81 |
| APR.       |      |      |     |     |     |
| 17...      | 1515 | --   | 240 | 67  | 44  |
| MAY        |      |      |     |     |     |
| 16...      | 1645 | 19.0 | 38  | 20  | 2.1 |
| JUNE       |      |      |     |     |     |
| 08...      | 1115 | 20.0 | 6.0 | 36  | .58 |
| 15...      | 1520 | --   | 149 | 73  | 29  |
| 27...      | 1735 | 24.0 | 7.5 | 64  | 1.3 |
| JULY       |      |      |     |     |     |
| 20...      | 1535 | 25.0 | 18  | 66  | 3.2 |
| AUG.       |      |      |     |     |     |
| 10...      | 1320 | --   | 13  | 52  | 1.9 |
| SEP.       |      |      |     |     |     |
| 06...      | 1310 | 19.0 | 10  | 100 | 2.8 |
| 21...      | 1250 | --   | 951 | 100 | 257 |
| 29...      | 1010 | 15.0 | 380 | 155 | 159 |

04087233 - ROOT RIVER CANAL NR. FRANKLIN, WIS. (LAT 42 48 55 LONG 087 59 40)

|            |      |    |     |     |     |
|------------|------|----|-----|-----|-----|
| OCT., 1971 |      |    |     |     |     |
| 15...      | 1320 | -- | 1.5 | 45  | .18 |
| NOV.       |      |    |     |     |     |
| 02...      | 1745 | -- | 130 | 280 | 98  |

04087240 - ROOT RIVER AT RACINE, WIS. (LAT 42 45 05 LONG 087 49 25)

|            |      |      |      |     |      |
|------------|------|------|------|-----|------|
| DEC., 1971 |      |      |      |     |      |
| 16...      | 1030 | --   | 380  | 291 | 299  |
| 30...      | 1100 | --   | 85   | 33  | 7.6  |
| FEB., 1972 |      |      |      |     |      |
| 16...      | 1510 | --   | 9.2  | 13  | .32  |
| MAR.       |      |      |      |     |      |
| 28...      | 0845 | --   | 126  | 16  | 5.4  |
| APR.       |      |      |      |     |      |
| 17...      | 1850 | --   | 1200 | 662 | 2150 |
| 18...      | 1215 | --   | 1310 | 399 | 1410 |
| 20...      | 1440 | --   | 689  | 141 | 262  |
| MAY        |      |      |      |     |      |
| 17...      | 1125 | 17.0 | 140  | 21  | 7.9  |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIMENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIMENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|-------------------------------------|--------------------------------------------------------|
|------|------|-----------------------------|-------------------------|-------------------------------------|--------------------------------------------------------|

## STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued

04087240 - ROOT RIVER AT RACINE, WIS. (LAT 42 45 05 LONG 087 49 25)

|       |      |      |      |     |      |
|-------|------|------|------|-----|------|
| JUNE  |      |      |      |     |      |
| 15... | 1235 | 19.5 | 380  | 260 | 267  |
| 28... | 0940 | 20.0 | 60   | 94  | 15   |
| JULY  |      |      |      |     |      |
| 20... | 1815 | 23.0 | 236  | 182 | 116  |
| AUG.  |      |      |      |     |      |
| 10... | 1800 | --   | 124  | 121 | 41   |
| SEP.  |      |      |      |     |      |
| 06... | 1510 | 20.0 | 60   | 136 | 22   |
| 21... | 1600 | --   | 2190 | 182 | 1080 |
| 28... | 1320 | 16.0 | 306  | 44  | 36   |

| DATE  | TIME | DIS-<br>CHARGE<br>(CFS) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.500 MM |
|-------|------|-------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| APR.  |      |                         |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 17... | 1850 | 1200                    | 80                                                          | 91                                                          | 94                                                          | 96                                                          | 97                                                          | 98                                                          | 99                                                          | 100                                                         | --                                                          |
| 18... | 1215 | 1310                    | 75                                                          | 85                                                          | 88                                                          | 92                                                          | 94                                                          | 96                                                          | 97                                                          | 99                                                          | 100                                                         |
| 20... | 1440 | 690                     | 75                                                          | 91                                                          | 91                                                          | 95                                                          | 97                                                          | 98                                                          | 100                                                         | --                                                          | --                                                          |

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIMENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIMENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|-------------------------------------|--------------------------------------------------------|
|------|------|-----------------------------|-------------------------|-------------------------------------|--------------------------------------------------------|

04087257 - PIKE RIVER NR. RACINE, WIS. (LAT 42 38 49 LONG 087 51 38)

|            |      |      |      |      |      |
|------------|------|------|------|------|------|
| NOV.. 1971 |      |      |      |      |      |
| 02...      | 1220 | --   | 48   | 254  | 33   |
| DEC.       |      |      |      |      |      |
| 15...      | 1600 | --   | 179  | 475  | 230  |
| 16...      | 0910 | --   | 74   | 96   | 19   |
| 30...      | 0920 | --   | 63   | 327  | 56   |
| 30...      | 1100 | --   | 85   | 33   | 7.6  |
| FEB., 1972 |      |      |      |      |      |
| 16...      | 0950 | --   | 6.0  | 8    | .13  |
| MAR.       |      |      |      |      |      |
| 28...      | 1435 | --   | 17   | 27   | 1.2  |
| APR.       |      |      |      |      |      |
| 16...      | 1845 | --   | 1020 | 2820 | 7770 |
| 17...      | 0855 | --   | 365  | 516  | 509  |
| MAY        |      |      |      |      |      |
| 17...      | 1735 | 18.0 | 21   | 8    | .45  |
| 24...      | 1915 | --   | 14   | 4    | .16  |
| JUNE       |      |      |      |      |      |
| 01...      | 1930 | --   | 12   | 4    | .13  |
| 07...      | 1345 | 20.0 | 7.0  | 6    | .11  |
| 15...      | 0740 | --   | 293  | 274  | 217  |
| 15...      | 0930 | 18.5 | 590  | 613  | 977  |
| 23...      | 1900 | --   | 48   | 37   | 4.9  |
| 28...      | 1430 | 19.0 | 18   | 31   | 1.5  |
| 29...      | 2000 | --   | 20   | 26   | 1.4  |
| JULY       |      |      |      |      |      |
| 05...      | 1910 | --   | 12   | 18   | .58  |
| 13...      | 2000 | --   | 21   | 22   | 1.2  |
| 15...      | 2010 | --   | 393  | 476  | 505  |
| 21...      | 0915 | 20.5 | 46   | 52   | 6.5  |
| 21...      | 1315 | --   | 28   | 52   | 3.9  |
| 28...      | 1810 | --   | 15   | 26   | 1.1  |
| AUG.       |      |      |      |      |      |
| 10...      | 1750 | --   | 3.0  | 36   | .29  |
| 11...      | 1245 | --   | 66   | 40   | 7.1  |
| 17...      | 1930 | --   | 74   | 70   | 14   |
| 24...      | 1915 | --   | 37   | 38   | 3.8  |
| SEP.       |      |      |      |      |      |
| 02...      | 1330 | --   | 28   | 88   | 6.7  |
| 06...      | 1610 | 19.0 | 17   | 24   | 1.2  |
| 13...      | 1615 | --   | 558  | 234  | 353  |

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|

## STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued

04087257 - PIKE RIVER NR. RACINE, WIS. (LAT 42 38 49 LONG 087 51 38)

SEP., 1972

|       |      |      |    |    |     |
|-------|------|------|----|----|-----|
| 27... | 1630 | 15.5 | 51 | 63 | 8.7 |
| 28... | 1110 | 15.0 | 47 | 42 | 5.3 |

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.500 MM |
|---------------|------|-------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| APR.<br>16... | 1845 | 980                     | 62                                                          | 78                                                          | 88                                                          | 93                                                          | 95                                                          | 98                                                          | 99                                                          | 99                                                          | 100                                                         |
| 17...         | 0855 | 362                     | 71                                                          | 79                                                          | 84                                                          | 92                                                          | 94                                                          | 97                                                          | 97                                                          | 97                                                          | 100                                                         |

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|

## CHIPPEWA RIVER BASIN

05356500 - CHIPPEWA RIVER NR. BRUCE, WIS. (LAT 45 27 08 LONG 091 15 39)

APR., 1972

|       |      |     |      |    |     |
|-------|------|-----|------|----|-----|
| 18... | 1510 | 4.5 | 8220 | 14 | 311 |
|-------|------|-----|------|----|-----|

05359500 - SOUTH FORK FLAMBEAU RIVER NR. PHILLIPS, WIS. (LAT 45 42 08 LONG 090 36 58)

OCT., 1971

|       |      |    |     |   |     |
|-------|------|----|-----|---|-----|
| 07... | 1200 | -- | 974 | 6 | 16  |
| 15... | 1415 | -- | 622 | 9 | 15  |
| 22... | 1515 | -- | 516 | 5 | 7.0 |
| 29... | 1330 | -- | 530 | 6 | 8.6 |

NOV.

|       |      |    |     |   |     |
|-------|------|----|-----|---|-----|
| 05... | 1530 | -- | 938 | 4 | 10  |
| 11... | 1305 | -- | 460 | 1 | 1.2 |
| 12... | 1430 | -- | 439 | 4 | 4.7 |
| 19... | 1435 | -- | 986 | 4 | 11  |
| 26... | 1515 | -- | 686 | 1 | 1.9 |

DEC.

|       |      |    |     |   |     |
|-------|------|----|-----|---|-----|
| 03... | 1500 | -- | 464 | 2 | 2.5 |
| 13... | 1600 | -- | 968 | 5 | 13  |

MAR., 1972

|       |      |    |      |   |     |
|-------|------|----|------|---|-----|
| 06... | 1545 | -- | 1270 | 0 | .00 |
| 14... | 0840 | -- | 1290 | 0 | .00 |
| 20... | 0825 | -- | 676  | 0 | .00 |
| 27... | 0835 | -- | 794  | 1 | 2.1 |

APR.

|       |      |     |      |    |     |
|-------|------|-----|------|----|-----|
| 03... | 0950 | --  | 652  | 0  | .00 |
| 10... | 0820 | --  | 521  | 0  | .00 |
| 14... | 1120 | --  | 1480 | 9  | 36  |
| 17... | 0915 | --  | 2780 | 8  | 60  |
| 19... | 1120 | 3.5 | 5150 | 16 | 222 |
| 24... | 0930 | --  | 3330 | 6  | 54  |
| 24... | 1730 | --  | 2960 | 6  | 48  |

MAY

|       |      |      |      |   |     |
|-------|------|------|------|---|-----|
| 01... | 0900 | --   | 2150 | 6 | 35  |
| 01... | 1600 | --   | 2150 | 5 | 29  |
| 09... | 0725 | --   | 1350 | 7 | 26  |
| 09... | 1600 | --   | 1350 | 4 | 15  |
| 16... | 0830 | --   | 833  | 3 | 6.7 |
| 16... | 1600 | --   | 833  | 3 | 6.7 |
| 23... | 0905 | --   | 430  | 4 | 4.6 |
| 26... | 1230 | 23.5 | 348  | 4 | 3.8 |
| 30... | 1530 | --   | 325  | 6 | 5.3 |

JUNE

|       |      |    |      |   |     |
|-------|------|----|------|---|-----|
| 07... | 1625 | -- | 246  | 6 | 4.0 |
| 20... | 1530 | -- | 856  | 6 | 14  |
| 21... | 1500 | -- | 1070 | 8 | 23  |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|

## CHIPPEWA RIVER BASIN--Continued

05359500 - SOUTH FORK FLAMBEAU RIVER NR. PHILLIPS, WIS. (LAT 45 42 08 LONG 090 36 58)

|            |      |      |      |    |     |
|------------|------|------|------|----|-----|
| JUNE, 1972 |      |      |      |    |     |
| 22...      | 1430 | --   | 950  | 6  | 15  |
| JULY       |      |      |      |    |     |
| 06...      | 1415 | 20.5 | 439  | 6  | 7.1 |
| 11...      | 0900 | --   | 325  | 4  | 3.5 |
| 19...      | 0845 | --   | 447  | 7  | 8.4 |
| 25...      | 0810 | --   | 1480 | 8  | 32  |
| AUG.       |      |      |      |    |     |
| 02...      | 0835 | --   | 481  | 4  | 5.2 |
| 15...      | 0925 | --   | 413  | 3  | 3.3 |
| 19...      | 1700 | --   | 3120 | 8  | 67  |
| 21...      | 1600 | --   | 3850 | 8  | 83  |
| 22...      | 1530 | --   | 2920 | 8  | 63  |
| 23...      | 0825 | --   | 2480 | 8  | 54  |
| 24...      | 1540 | --   | 1900 | 6  | 31  |
| 25...      | 1400 | --   | 1670 | 8  | 36  |
| 26...      | 1430 | --   | 1660 | 30 | 134 |
| SEP.       |      |      |      |    |     |
| 12...      | 0820 | --   | 722  | 12 | 23  |
| 18...      | 1600 | --   | 480  | 7  | 9.1 |
| 27...      | 1600 | --   | .14  | 12 | .00 |

05368000 - HAY RIVER AT WHEELER, WIS. (LAT 45 02 52 LONG 091 54 39)

|            |      |      |      |     |      |
|------------|------|------|------|-----|------|
| OCT., 1971 |      |      |      |     |      |
| 22...      | 0930 | --   | 285  | 48  | 37   |
| DEC.       |      |      |      |     |      |
| 09...      | 1030 | --   | 293  | 6   | 4.7  |
| MAR., 1972 |      |      |      |     |      |
| 20...      | 1200 | --   | 431  | 56  | 65   |
| 21...      | 1740 | --   | 1290 | 177 | 616  |
| 21...      | 1745 | --   | 1360 | 431 | 1580 |
| 22...      | 0945 | --   | 1720 | 192 | 892  |
| 22...      | 1255 | --   | 1780 | 210 | 1010 |
| MAY        |      |      |      |     |      |
| 23...      | 1000 | 17.0 | 292  | 36  | 28   |
| JUNE       |      |      |      |     |      |
| 12...      | 1100 | 18.5 | 238  | 41  | 26   |
| 28...      | 1455 | 17.0 | 250  | 42  | 28   |
| JULY       |      |      |      |     |      |
| 24...      | 1400 | 23.0 | 1330 | 121 | 435  |
| 24...      | 1610 | 23.0 | 1320 | 148 | 527  |
| SEP.       |      |      |      |     |      |
| 07...      | 1530 | 16.0 | 382  | 22  | 23   |

| DATE | TIME  | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.250 MM |                                                             |                                                             |                                                             |
|------|-------|-------------------------|------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| MAR. | 21... | 1745                    | 1360                                     | 431 1580                                                    | 7                                                           | 11                                                          | 13                                                          | 16                                                          | 20                                                          | 24                                                          | 29                                                          | 40                                                          |                                                             |                                                             |                                                             |
| DATE | TIME  |                         |                                          |                                                             | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>32.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>64.0 MM |
| SEP. | 07... | 1200                    | 1                                        | 4 18                                                        | 43                                                          | 57                                                          | 65                                                          | 71                                                          | 79                                                          | 89                                                          | 92                                                          | 100                                                         |                                                             |                                                             |                                                             |

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | OIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
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## TREMPEALEAU RIVER BASIN

05379400 - TREMPEALEAU RIVER AT ARCADIA, WIS. (LAT 44 15 15 LONG 091 30 25)

|            |      |      |      |     |      |
|------------|------|------|------|-----|------|
| MAR., 1972 |      |      |      |     |      |
| 20...      | 1100 | --   | 2210 | 500 | 2980 |
| 20...      | 1435 | --   | 2330 | 607 | 3820 |
| 20...      | 1615 | --   | 2370 | 836 | 5350 |
| 21...      | 0800 | --   | 2560 | 930 | 6430 |
| 22...      | 0930 | --   | 2630 | 462 | 3280 |
| 28...      | 1500 | --   | 498  | 74  | 100  |
| APR.       |      |      |      |     |      |
| 09...      | 1500 | --   | 371  | 46  | 46   |
| 12...      | 0950 | --   | 544  | 155 | 228  |
| 19...      | 1500 | --   | 785  | 966 | 2050 |
| MAY        |      |      |      |     |      |
| 09...      | 2000 | --   | 294  | 89  | 71   |
| 24...      | 1015 | --   | 279  | 102 | 77   |
| JUNE       |      |      |      |     |      |
| 02...      | 1500 | --   | 247  | 74  | 49   |
| 20...      | 1500 | --   | 267  | 128 | 92   |
| 26...      | 1500 | --   | 219  | 79  | 47   |
| JULY       |      |      |      |     |      |
| 07...      | 1020 | --   | 235  | 71  | 45   |
| 12...      | 1500 | --   | 436  | 463 | 545  |
| 22...      | 1500 | --   | 300  | 128 | 104  |
| AUG.       |      |      |      |     |      |
| 03...      | 1500 | --   | 294  | 77  | 61   |
| 06...      | 1215 | 26.0 | 348  | 531 | 499  |
| 09...      | 1715 | --   | 946  | 544 | 1390 |
| 19...      | 1500 | --   | 408  | 934 | 1030 |
| SEP.       |      |      |      |     |      |
| 16...      | 1500 | --   | 300  | 96  | 78   |
| 22...      | 1500 | --   | 3320 | 654 | 5860 |

## WISCONSIN RIVER BASIN

05393500 - SPIRIT RIVER AT SPIRIT FALLS, WIS. (LAT 45 26 58 LONG 089 58 47)

|            |      |      |    |    |     |
|------------|------|------|----|----|-----|
| OCT., 1971 |      |      |    |    |     |
| 14...      | 1335 | 10.0 | 40 | 6  | .65 |
| NOV.       |      |      |    |    |     |
| 10...      | 1000 | --   | 46 | 5  | .62 |
| DEC.       |      |      |    |    |     |
| 14...      | 1200 | --   | 68 | 21 | 3.9 |
| FEB., 1972 |      |      |    |    |     |
| 08...      | 1515 | --   | 22 | 5  | .30 |
| JUNE       |      |      |    |    |     |
| 22...      | 1100 | --   | 10 | 5  | .13 |
| JULY       |      |      |    |    |     |
| 21...      | 1010 | 21.0 | 12 | 4  | .13 |

05394500 - PRAIRIE RIVER NR. MERRILL, WIS. (LAT 45 14 09 LONG 089 38 59)

|            |      |      |      |    |     |
|------------|------|------|------|----|-----|
| APR., 1972 |      |      |      |    |     |
| 16...      | 1650 | --   | 1000 | 16 | 43  |
| JUNE       |      |      |      |    |     |
| 06...      | 1410 | --   | 87   | 3  | .70 |
| SEP.       |      |      |      |    |     |
| 01...      | 1100 | 17.5 | 170  | 8  | 3.7 |
| 28...      | 1505 | --   | 1120 | 9  | 27  |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| WISCONSIN RIVER BASIN--Continued                                         |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| 05397500 - EAU CLAIRE RIVER AT KELLY, WIS. (LAT 44 55 06 LONG 089 33 00) |  |  |  |  |  |  |  |  |  |  |  |  |
| MAR., 1972                                                               |  |  |  |  |  |  |  |  |  |  |  |  |
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## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE                                                                              | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|-----------------------------------------------------------------------------------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
| WISCONSIN RIVER BASIN--Continued                                                  |      |                             |                         |                                          |                                                             |
| 05399500 - BIG EAU PLEINE RIVER NR. STRATFORD, WIS. (LAT 44 49 19 LONG 090 04 46) |      |                             |                         |                                          |                                                             |
| OCT., 1971                                                                        |      |                             |                         |                                          |                                                             |
| 06...                                                                             | 1300 | --                          | 82                      | 11                                       | 2.4                                                         |
| 11...                                                                             | 1050 | --                          | 82                      | 8                                        | 1.8                                                         |
| 25...                                                                             | 0905 | --                          | 38                      | 8                                        | .77                                                         |
| NOV.                                                                              |      |                             |                         |                                          |                                                             |
| 09...                                                                             | 1000 | --                          | 46                      | 6                                        | .75                                                         |
| 11...                                                                             | 1520 | --                          | 40                      | 5                                        | .54                                                         |
| 15...                                                                             | 0920 | --                          | 39                      | 4                                        | .42                                                         |
| FEB., 1972                                                                        |      |                             |                         |                                          |                                                             |
| 17...                                                                             | 1615 | --                          | 15                      | 2                                        | .08                                                         |
| MAR.                                                                              |      |                             |                         |                                          |                                                             |
| 17...                                                                             | 1120 | .5                          | 227                     | 1                                        | .61                                                         |
| APR.                                                                              |      |                             |                         |                                          |                                                             |
| 12...                                                                             | 0800 | --                          | 2480                    | 32                                       | 214                                                         |
| 12...                                                                             | 1530 | 1.0                         | 2030                    | 30                                       | 164                                                         |
| 13...                                                                             | 1045 | --                          | 3350                    | 92                                       | 832                                                         |
| 13...                                                                             | 1205 | 1.0                         | 3220                    | 62                                       | 539                                                         |
| 13...                                                                             | 1715 | --                          | 3470                    | 66                                       | 618                                                         |
| 14...                                                                             | 0800 | --                          | 3900                    | 44                                       | 463                                                         |
| 15...                                                                             | 0745 | --                          | 4350                    | 32                                       | 376                                                         |
| 15...                                                                             | 1645 | --                          | 5200                    | 86                                       | 1210                                                        |
| 16...                                                                             | 0740 | --                          | 6580                    | 55                                       | 977                                                         |
| 17...                                                                             | 0800 | --                          | 6320                    | 46                                       | 785                                                         |
| 17...                                                                             | 1310 | --                          | 4550                    | 26                                       | 319                                                         |
| 18...                                                                             | 0800 | --                          | 3420                    | 24                                       | 222                                                         |
| 18...                                                                             | 1130 | --                          | 3030                    | 16                                       | 131                                                         |
| 19...                                                                             | 0800 | --                          | 5130                    | 210                                      | 2910                                                        |
| 24...                                                                             | 1430 | --                          | 605                     | 5                                        | 8.2                                                         |
| MAY                                                                               |      |                             |                         |                                          |                                                             |
| 01...                                                                             | 0930 | --                          | 165                     | 8                                        | 3.6                                                         |
| 14...                                                                             | 1945 | --                          | 44                      | 5                                        | .59                                                         |
| 23...                                                                             | 1430 | --                          | 19                      | 9                                        | .46                                                         |
| 29...                                                                             | 1935 | --                          | 20                      | 7                                        | .38                                                         |
| 31...                                                                             | 1545 | 20.5                        | 17                      | 2                                        | .09                                                         |
| JUNE                                                                              |      |                             |                         |                                          |                                                             |
| 05...                                                                             | 1100 | --                          | 11                      | 6                                        | .18                                                         |
| 12...                                                                             | 1040 | --                          | 8.5                     | 16                                       | .37                                                         |
| 19...                                                                             | 1455 | --                          | 6.6                     | 8                                        | .14                                                         |
| 26...                                                                             | 1000 | --                          | 6.0                     | 8                                        | .13                                                         |
| 27...                                                                             | 1510 | --                          | 5.2                     | 30                                       | .42                                                         |
| JULY                                                                              |      |                             |                         |                                          |                                                             |
| 03...                                                                             | 1920 | --                          | 13                      | 7                                        | .25                                                         |
| 10...                                                                             | 1435 | --                          | 12                      | 4                                        | .13                                                         |
| 12...                                                                             | 0800 | --                          | 110                     | 46                                       | 14                                                          |
| 12...                                                                             | 1300 | --                          | 149                     | 26                                       | 10                                                          |
| 17...                                                                             | 0810 | --                          | 89                      | 8                                        | 1.9                                                         |
| 23...                                                                             | 1935 | --                          | 39                      | 9                                        | .95                                                         |
| 31...                                                                             | 0930 | --                          | 18                      | 6                                        | .29                                                         |
| AUG.                                                                              |      |                             |                         |                                          |                                                             |
| 06...                                                                             | 2035 | --                          | 343                     | 50                                       | 46                                                          |
| 07...                                                                             | 0740 | --                          | 501                     | 34                                       | 46                                                          |
| 09...                                                                             | 1415 | 16.0                        | 545                     | 20                                       | 29                                                          |
| 14...                                                                             | 0845 | --                          | 50                      | 12                                       | 1.6                                                         |
| 15...                                                                             | 1315 | --                          | 348                     | 22                                       | 21                                                          |
| 22...                                                                             | 1950 | --                          | 143                     | 7                                        | 2.7                                                         |
| 26...                                                                             | 0755 | --                          | 205                     | 34                                       | 19                                                          |
| 28...                                                                             | 1000 | --                          | 562                     | 14                                       | 21                                                          |
| SEP.                                                                              |      |                             |                         |                                          |                                                             |
| 05...                                                                             | 1900 | --                          | 34                      | 1                                        | .09                                                         |
| 11...                                                                             | 0750 | --                          | 23                      | 0                                        | .00                                                         |
| 18...                                                                             | 0840 | --                          | 49                      | 6                                        | .79                                                         |
| 20...                                                                             | 1515 | 21.0                        | 223                     | 15                                       | 9.0                                                         |
| 21...                                                                             | 0845 | --                          | 336                     | 13                                       | 12                                                          |
| 25...                                                                             | 0730 | --                          | 320                     | 25                                       | 22                                                          |
| 26...                                                                             | 1245 | 11.0                        | 12300                   | 79                                       | 2620                                                        |
| 26...                                                                             | 1600 | --                          | 10400                   | 90                                       | 2530                                                        |
| 27...                                                                             | 0745 | --                          | 2900                    | 26                                       | 204                                                         |
| 27...                                                                             | 1245 | --                          | 2100                    | 1                                        | 11                                                          |
| 28...                                                                             | 1650 | --                          | 3110                    | 48                                       | 403                                                         |
| 29...                                                                             | 0800 | --                          | 3180                    | 31                                       | 266                                                         |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

## WISCONSIN RIVER BASIN--Continued

05399500 - BIG EAU PLEINE RIVER NR. STRATFORD, WIS. (LAT 44 49 19 LONG 090 04 46)

|               |      | SUS-<br>PENDE<br>SEDI-<br>MENT<br>CHARGE<br>(MG/L)           | SUS-<br>PENDE<br>SEDI-<br>MENT<br>CHARGE<br>(T/DAY)          | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM |                                                             |                                                             |
|---------------|------|--------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| DATE          | TIME | OIS-<br>CHARGE<br>(CFS)                                      |                                                              |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| APR.<br>18... | 1130 | 3030                                                         | 16                                                           | 131                                                         | 32                                                          | 38                                                          | 50                                                          | 66                                                          | 80                                                          | 92                                                          |                                                             |                                                             |
|               |      | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| APR.<br>18... |      | 95                                                           | 100                                                          |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
|               |      | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM  | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM  | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>32.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>64.0 MM |
| APR.<br>18... | 1045 | 0                                                            | 0                                                            | 1                                                           | 1                                                           | 3                                                           | 5                                                           | 8                                                           | 16                                                          | 33                                                          | 41                                                          | 100                                                         |

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>CHARGE<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|----------------------------------------------------|-------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|----------------------------------------------------|-------------------------------------------------------------|

05400650 - LITTLE PLOVER RIVER AT PLOVER, WIS. (LAT 44 28 26 LONG 089 31 44)

|            |      |      |     |    |     |
|------------|------|------|-----|----|-----|
| OCT., 1971 |      |      |     |    |     |
| 05...      | 1400 | 11.0 | 9.0 | 4  | .10 |
| NOV.       |      |      |     |    |     |
| 09...      | 1300 | --   | 10  | 4  | .11 |
| DEC.       |      |      |     |    |     |
| 14...      | 1200 | --   | 11  | 10 | .30 |
| JAN., 1972 |      |      |     |    |     |
| 18...      | 1200 | --   | 8.6 | 7  | .16 |
| FEB.       |      |      |     |    |     |
| 14...      | 1230 | --   | 8.2 | 5  | .11 |
| MAR.       |      |      |     |    |     |
| 14...      | 0930 | --   | 8.3 | 2  | .04 |
| APR.       |      |      |     |    |     |
| 17...      | 1700 | --   | 27  | 5  | .36 |
| JUNE       |      |      |     |    |     |
| 21...      | 0935 | 10.5 | 9.2 | 8  | .20 |
| AUG.       |      |      |     |    |     |
| 02...      | 1115 | 11.0 | 10  | 10 | .27 |
| SEP.       |      |      |     |    |     |
| 14...      | 1150 | 11.0 | 13  | 5  | .18 |

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

## WISCONSIN RIVER BASIN--Continued

05400650 - LITTLE PLOVER RIVER AT PLOVER, WIS. (LAT 44 28 26 LONG 089 31 44)

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE-<br>SEDIMENT<br>(MG/L) | SUS-<br>PENDE-<br>SEDIMENT<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM |
|---------------|------|-------------------------|--------------------------------------|---------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| APR.<br>17... | 1530 | 141                     | 388                                  | 148                                   | 0                                                           | 1                                                           | 1                                                           | 2                                                           | 2                                                           |

|               | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM |
|---------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| APR.<br>17... | 2                                                            | 4                                                            | 23                                                           | 80                                                           | 100                                                          |

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE-<br>SEDIMENT<br>(MG/L) | SUS-<br>PENDE-<br>SEDIMENT<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|--------------------------------------|---------------------------------------|
|------|------|-----------------------------|-------------------------|--------------------------------------|---------------------------------------|

05401050 - TENMILE CREEK NR. NEKOOSA, WIS. (LAT 44 15 44 LONG 089 48 38)

|            |      |      |     |     |     |
|------------|------|------|-----|-----|-----|
| OCT.. 1971 |      |      |     |     |     |
| 04...      | 1050 | 11.5 | 50  | 13  | 1.8 |
| NOV.       |      |      |     |     |     |
| 10...      | 1445 | --   | 64  | 16  | 2.8 |
| DEC.       |      |      |     |     |     |
| 15...      | 1330 | --   | 92  | 44  | 11  |
| JAN.. 1972 |      |      |     |     |     |
| 20...      | 0945 | --   | 41  | 8   | .89 |
| FEB.       |      |      |     |     |     |
| 16...      | 1000 | --   | 23  | 8   | .50 |
| MAR.       |      |      |     |     |     |
| 14...      | 1545 | --   | 29  | 6   | .47 |
| APR.       |      |      |     |     |     |
| 17...      | 1530 | --   | 141 | 388 | 148 |
| JUNE       |      |      |     |     |     |
| 27...      | 0930 | --   | 43  | 12  | 1.4 |
| AUG.       |      |      |     |     |     |
| 03...      | 1500 | 18.5 | 37  | 8   | .80 |
| SEP.       |      |      |     |     |     |
| 15...      | 1410 | 18.0 | 66  | 24  | 4.3 |
| 28...      | 1740 | --   | 221 | 752 | 449 |

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE-<br>SEDIMENT<br>(MG/L) | SUS-<br>PENDE-<br>SEDIMENT<br>(T/DAY) | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM |
|---------------|------|-------------------------|--------------------------------------|---------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| APR.<br>17... | 1530 | 141                     | 388                                  | 148                                   | 2                                                            | 4                                                            | 23                                                           | 80                                                           | 100                                                          |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|

## WISCONSIN RIVER BASIN--Continued

05401535 - BIG ROCHE A CRI CREEK NR. ADAMS, WIS. (LAT 44 05 52 LONG 089 46 30)

|            |      |      |     |    |     |
|------------|------|------|-----|----|-----|
| OCT., 1971 |      |      |     |    |     |
| 04...      | 1345 | 12.0 | 50  | 4  | .54 |
| NOV.       |      |      |     |    |     |
| 10...      | 1045 | --   | 62  | 6  | 1.0 |
| DEC.       |      |      |     |    |     |
| 15...      | 1000 | --   | 77  | 10 | 2.1 |
| JAN., 1972 |      |      |     |    |     |
| 19...      | 1230 | --   | 50  | 6  | .81 |
| FEB.       |      |      |     |    |     |
| 16...      | 1300 | --   | 40  | 8  | .86 |
| MAR.       |      |      |     |    |     |
| 14...      | 1315 | --   | 52  | 7  | .98 |
| APR.       |      |      |     |    |     |
| 17...      | 1400 | --   | 121 | 6  | 2.0 |
| JUNE       |      |      |     |    |     |
| 26...      | 1500 | --   | 51  | 8  | 1.1 |
| AUG.       |      |      |     |    |     |
| 03...      | 1150 | 15.5 | 44  | 9  | 1.1 |
| SEP.       |      |      |     |    |     |
| 15...      | 1100 | --   | 62  | 6  | 1.0 |
| 28...      | 1700 | 11.0 | 207 | 10 | 5.6 |

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM |
|---------------|------|-------------------------|------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| APR.<br>17... | 1400 | 121                     | 6                                        | 2.0                                                         | 0                                                           | 9                                                           | 19                                                          | 32                                                          | 40                                                          | 49                                                          | 71                                                          |

|                                                              |                                                              |
|--------------------------------------------------------------|--------------------------------------------------------------|
| SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM |
| APR.<br>17...                                                | 91 100                                                       |

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|

05403500 - LEMONWEIR RIVER AT NEW LISBON, WIS. (LAT 43 52 47 LONG 090 09 40)

|            |      |    |      |    |     |
|------------|------|----|------|----|-----|
| NOV., 1971 |      |    |      |    |     |
| 17...      | 1550 | -- | 269  | 6  | 4.4 |
| MAR., 1972 |      |    |      |    |     |
| 14...      | 1100 | -- | 207  | 6  | 3.4 |
| 20...      | 1700 | -- | 1100 | 26 | 77  |
| 21...      | 0700 | -- | 2020 | 42 | 229 |
| 21...      | 1700 | -- | 1750 | 25 | 118 |
| 22...      | 0700 | -- | 2020 | 42 | 229 |
| 22...      | 1700 | -- | 2180 | 26 | 153 |
| 23...      | 0700 | -- | 2130 | 22 | 127 |
| 26...      | 1900 | -- | 1880 | 10 | 51  |
| 27...      | 0700 | -- | 1590 | 12 | 52  |
| 28...      | 0700 | -- | 1400 | 7  | 26  |
| 29...      | 0700 | -- | 1240 | 12 | 40  |
| 30...      | 0700 | -- | 1050 | 4  | 11  |

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|

## WISCONSIN RIVER BASIN--Continued

05403500 - LEMONWEIR RIVER AT NEW LISBON, WIS. (LAT 43 52 47 LONG 090 09 40)

## APR., 1972

|       |      |    |      |    |     |
|-------|------|----|------|----|-----|
| 06... | 0700 | -- | 750  | 6  | 12  |
| 13... | 0700 | -- | 1060 | 52 | 149 |
| 13... | 1445 | -- | 1140 | 86 | 265 |
| 13... | 1700 | -- | 1190 | 72 | 231 |
| 14... | 0700 | -- | 1360 | 54 | 198 |
| 15... | 0700 | -- | 1400 | 33 | 125 |
| 16... | 0700 | -- | 1380 | 8  | 30  |
| 17... | 0700 | -- | 1380 | 7  | 26  |

## MAY

|       |      |      |      |    |     |
|-------|------|------|------|----|-----|
| 19... | 0700 | --   | 333  | 12 | 11  |
| 24... | 1900 | --   | 2130 | 34 | 196 |
| 25... | 1230 | 20.0 | 161  | 6  | 2.6 |
| 25... | 1900 | --   | 2090 | 30 | 169 |
| 26... | 0700 | --   | 151  | 10 | 4.1 |

## JUNE

|       |      |    |     |    |     |
|-------|------|----|-----|----|-----|
| 02... | 0700 | -- | 153 | 6  | 2.5 |
| 09... | 0700 | -- | 116 | 5  | 1.6 |
| 16... | 0700 | -- | 158 | 10 | 4.3 |
| 23... | 0700 | -- | 120 | 10 | 3.2 |
| 30... | 0700 | -- | 88  | 5  | 1.2 |

## JULY

|       |      |    |     |    |     |
|-------|------|----|-----|----|-----|
| 05... | 1515 | -- | 128 | 6  | 2.1 |
| 07... | 0700 | -- | 134 | 7  | 2.5 |
| 14... | 0700 | -- | 145 | 7  | 2.7 |
| 21... | 0700 | -- | 190 | 8  | 4.1 |
| 28... | 0700 | -- | 357 | 26 | 25  |

## AUG.

|       |      |    |      |    |     |
|-------|------|----|------|----|-----|
| 04... | 0700 | -- | 198  | 15 | 8.0 |
| 11... | 0700 | -- | 212  | 9  | 5.2 |
| 24... | 1000 | -- | 839  | 56 | 127 |
| 25... | 0700 | -- | 901  | 8  | 19  |
| 29... | 1900 | -- | 1050 | 7  | 20  |
| 30... | 1800 | -- | 1040 | 6  | 17  |

## SEP.

|       |      |    |      |    |     |
|-------|------|----|------|----|-----|
| 01... | 1800 | -- | 691  | 6  | 11  |
| 08... | 1800 | -- | 220  | 8  | 4.8 |
| 15... | 1800 | -- | 448  | 10 | 12  |
| 20... | 1800 | -- | 1250 | 14 | 47  |
| 21... | 1800 | -- | 1540 | 10 | 42  |
| 22... | 1800 | -- | 1580 | 5  | 21  |
| 23... | 1800 | -- | 1420 | 4  | 15  |
| 24... | 1800 | -- | 1140 | 4  | 12  |
| 26... | 1800 | -- | 2150 | 18 | 104 |
| 27... | 1800 | -- | 3800 | 40 | 410 |
| 28... | 1130 | -- | 4200 | 24 | 272 |
| 28... | 1450 | -- | 5200 | 28 | 393 |
| 28... | 1800 | -- | 5200 | 22 | 309 |
| 29... | 1800 | -- | 4900 | 10 | 132 |
| 30... | 1800 | -- | 3800 | 8  | 82  |

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM |
|---------------|------|-------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| SEP.<br>27... | 1315 | 5340                    | 0                                                           | 2                                                           | 16                                                          | 80                                                          | 86                                                          | 87                                                          | 88                                                          | 90                                                          | 100                                                         |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|

## WISCONSIN RIVER BASIN--Continued

05403630 - HULBERT CR. AT WISCONSIN DELLS, WIS. (LAT 43 37 37 LONG 089 49 36)

|            |      |    |     |    |     |
|------------|------|----|-----|----|-----|
| JULY, 1972 |      |    |     |    |     |
| 12...      | 1100 | -- | 3.3 | 26 | .23 |
| AUG.       |      |    |     |    |     |
| 24...      | 1415 | -- | 3.5 | 12 | .11 |

05406640 - OTTER CREEK NR. HIGHLAND, WIS. (LAT 43 01 40 LONG 090 16 40)

|            |      |    |     |     |     |
|------------|------|----|-----|-----|-----|
| DEC., 1971 |      |    |     |     |     |
| 21...      | --   | -- | 1.5 | 14  | .06 |
| MAR., 1972 |      |    |     |     |     |
| 16...      | 1730 | -- | 24  | 165 | 11  |

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>8.00 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>16.0 MM |
|---------------|------|-------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| DEC.<br>21... | 1100 | 1.5                     | 34                                                          | 41                                                          | 61                                                          | 77                                                          | 81                                                          | 81                                                          | 82                                                          | 82                                                          | 82                                                          |

| DATE          | TIME | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>32.0 MM | BED<br>MAT.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>64.0 MM |
|---------------|------|-------------------------------------------------------------|-------------------------------------------------------------|
| DEC.<br>21... | 83   | 100                                                         |                                                             |

| DATE | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
|------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|

05409830 - NORTH FORK NEDERLO CR. NR. GAYS MILLS, WIS. (LAT 43 21 47 LONG 090 54 34)

|            |      |     |     |      |     |
|------------|------|-----|-----|------|-----|
| NOV., 1971 |      |     |     |      |     |
| 01...      | 1220 | 7.0 | .84 | 4    | .01 |
| 01...      | 1320 | --  | .95 | 4    | .01 |
| 01...      | 1430 | --  | 1.1 | 3    | .01 |
| MAR., 1972 |      |     |     |      |     |
| 14...      | 1010 | --  | 1.2 | 6    | .02 |
| 14...      | 1145 | --  | 1.3 | 6    | .02 |
| 14...      | 1435 | --  | 31  | 1460 | 122 |
| 14...      | 1530 | --  | 39  | 1050 | 111 |
| 14...      | 1700 | --  | 31  | 436  | 36  |
| 15...      | 1430 | --  | 58  | 1760 | 276 |
| 16...      | 1413 | --  | 18  | 192  | 9.3 |
| 17...      | 1145 | --  | 1.5 | 7    | .03 |
| 17...      | 1300 | --  | 42  | 1170 | 133 |
| 17...      | 1347 | --  | 48  | 771  | 100 |

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

## WISCONSIN RIVER BASIN--Continued

05409830 - NORTH FORK NEDERLO CR. NR. GAYS MILLS, WIS. (LAT 43 21 47 LONG 090 54 34)

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L)                     | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY)                    | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM  | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM |
|---------------|------|-------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| MAR.<br>14... | 1435 | 31                      | 1460                                                         | 122                                                          | 16                                                           | 21                                                          | 26                                                          | 36                                                          | 58                                                          | 74                                                          | 83                                                          |
|               |      |                         | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| MAR.<br>14... |      | 89                      |                                                              | 97                                                           | 100                                                          |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |

| DATE          | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY) |
|---------------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------|
| NOV., 1971    |      |                             |                         |                                          |                                           |
| 01...         | 1200 | 6.5                         | 1.6                     | 24                                       | .10                                       |
| 01...         | 1325 | --                          | 2.2                     | 8                                        | .05                                       |
| 01...         | 1430 | 7.0                         | 2.8                     | 28                                       | .21                                       |
| MAR., 1972    |      |                             |                         |                                          |                                           |
| 14...         | 1035 | --                          | 2.9                     | 14                                       | .11                                       |
| 14...         | 1200 | --                          | 3.6                     | 47                                       | .46                                       |
| 14...         | 1445 | --                          | 49                      | 1550                                     | 205                                       |
| 14...         | 1455 | --                          | 49                      | 1660                                     | 220                                       |
| 14...         | 1520 | --                          | 66                      | 2640                                     | 470                                       |
| 14...         | 1715 | --                          | 84                      | 1720                                     | 390                                       |
| 15...         | 1500 | --                          | 105                     | 2020                                     | 573                                       |
| 16...         | 1337 | --                          | 27                      | 205                                      | 15                                        |
| 16...         | 1725 | --                          | 50                      | 101                                      | 14                                        |
| 17...         | 1200 | --                          | 6.8                     | 136                                      | 2.5                                       |
| 17...         | 1310 | --                          | 70                      | 1590                                     | 301                                       |
| 17...         | 1400 | --                          | 106                     | 3120                                     | 893                                       |
| SEP.<br>13... | 0940 | --                          | 1.1                     | 14                                       | .04                                       |

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L)                     | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY)                    | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM  | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM |
|---------------|------|-------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| MAR.<br>14... | 1445 | 49                      | 1550                                                         | 205                                                          | 15                                                           | 21                                                          | 25                                                          | 36                                                          | 51                                                          | 83                                                          | 92                                                          |
| 17...         | 1310 | 70                      | 1590                                                         | 301                                                          | 15                                                           | 20                                                          | 25                                                          | 35                                                          | 58                                                          | 78                                                          | 89                                                          |
|               |      |                         | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | SUS.<br>SED.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| MAR.<br>14... |      | 98                      |                                                              | 100                                                          | --                                                           |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |
| 17...         |      | 95                      |                                                              | 99                                                           | 100                                                          |                                                             |                                                             |                                                             |                                                             |                                                             |                                                             |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

## WISCONSIN RIVER BASIN--Continued

| DATE                                                                      | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) |
|---------------------------------------------------------------------------|------|-----------------------------|-------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|
| 05409890 - NEDERLO CR. NR. GAYS MILLS, WIS. (LAT 43 21 43 LONG 090 S2 44) |      |                             |                         |                                          |                                          |                                          |                                          |                                          |                                          |                                          |
| NOV.. 1971                                                                |      |                             |                         |                                          |                                          |                                          |                                          |                                          |                                          |                                          |
| 01...                                                                     | 1200 | --                          | 4.8                     | 12                                       | .16                                      |                                          |                                          |                                          |                                          |                                          |
| 01...                                                                     | 1335 | --                          | 5.6                     | 20                                       | .30                                      |                                          |                                          |                                          |                                          |                                          |
| 01...                                                                     | 1515 | 6.5                         | 6.5                     | 47                                       | .82                                      |                                          |                                          |                                          |                                          |                                          |
| MAR.. 1972                                                                |      |                             |                         |                                          |                                          |                                          |                                          |                                          |                                          |                                          |
| 14...                                                                     | 0940 | --                          | 6.8                     | 30                                       | .55                                      |                                          |                                          |                                          |                                          |                                          |
| 14...                                                                     | 1310 | --                          | 10                      | 87                                       | 2.3                                      |                                          |                                          |                                          |                                          |                                          |
| 14...                                                                     | 1550 | --                          | 162                     | 3950                                     | 1730                                     |                                          |                                          |                                          |                                          |                                          |
| 14...                                                                     | 1620 | --                          | 175                     | 4140                                     | 1960                                     |                                          |                                          |                                          |                                          |                                          |
| 14...                                                                     | 1820 | --                          | 155                     | 1870                                     | 783                                      |                                          |                                          |                                          |                                          |                                          |
| 15...                                                                     | 1315 | --                          | 11                      | 56                                       | 1.7                                      |                                          |                                          |                                          |                                          |                                          |
| 16...                                                                     | 1600 | --                          | 111                     | 1120                                     | 336                                      |                                          |                                          |                                          |                                          |                                          |
| 17...                                                                     | 1045 | --                          | 53                      | 16                                       | 2.3                                      |                                          |                                          |                                          |                                          |                                          |
| 17...                                                                     | 1525 | --                          | 228                     | 3100                                     | 1910                                     |                                          |                                          |                                          |                                          |                                          |
| SEP.                                                                      |      |                             |                         |                                          |                                          |                                          |                                          |                                          |                                          |                                          |
| 11...                                                                     | 1020 | --                          | 4.2                     | 12                                       | .14                                      |                                          |                                          |                                          |                                          |                                          |
| 13...                                                                     | 0915 | --                          | 5.1                     | 114                                      | 1.6                                      |                                          |                                          |                                          |                                          |                                          |
| 13...                                                                     | 1050 | --                          | 4.9                     | 68                                       | .90                                      |                                          |                                          |                                          |                                          |                                          |
| 13...                                                                     | 1315 | --                          | 4.6                     | 44                                       | .55                                      |                                          |                                          |                                          |                                          |                                          |
| MAR.                                                                      |      |                             |                         |                                          |                                          |                                          |                                          |                                          |                                          |                                          |
| 14...                                                                     | 1550 | 162                         | 3950                    | 1730                                     | 14                                       | 19                                       | 24                                       | 35                                       | 55                                       | 80                                       |
| 17...                                                                     | 1525 | 228                         | 3100                    | 1910                                     | 15                                       | 20                                       | 25                                       | 34                                       | 55                                       | 77                                       |
| MAR.                                                                      |      |                             |                         |                                          |                                          |                                          |                                          |                                          |                                          |                                          |
| 14...                                                                     |      | 97                          | 100                     |                                          |                                          |                                          |                                          |                                          |                                          |                                          |
| 17...                                                                     |      | 95                          | 100                     |                                          |                                          |                                          |                                          |                                          |                                          |                                          |
| MAR.                                                                      |      |                             |                         |                                          |                                          |                                          |                                          |                                          |                                          |                                          |
| 17...                                                                     | 1520 | 220                         | 2                       | 4                                        | 9                                        | 56                                       | 86                                       | 92                                       | 96                                       | 97                                       |

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

## WISCONSIN RIVER BASIN--Continued

05410000 - KICKAPOO RIVER AT GAYS MILLS, WIS. (LAT 43 19 10 LONG 090 51 08)

| DATE       | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY) |
|------------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------|
| DCT., 1971 |      |                             |                         |                                          |                                           |
| 07...      | 1430 | --                          | 242                     | 48                                       | 31                                        |
| NOV.       |      |                             |                         |                                          |                                           |
| 01...      | 1400 | --                          | 339                     | 12                                       | 11                                        |
| 10...      | 1600 | --                          | 296                     | 20                                       | 16                                        |
| FEB., 1972 |      |                             |                         |                                          |                                           |
| 23...      | 1530 | --                          | 272                     | 10                                       | 7.3                                       |
| MAR.       |      |                             |                         |                                          |                                           |
| 14...      | 1330 | --                          | 780                     | 228                                      | 480                                       |
| 14...      | 1840 | --                          | 1180                    | 644                                      | 2050                                      |
| 17...      | 1330 | --                          | 1660                    | 478                                      | 2140                                      |
| JULY       |      |                             |                         |                                          |                                           |
| 07...      | 1300 | --                          | 246                     | 24                                       | 16                                        |
| SEP.       |      |                             |                         |                                          |                                           |
| 09...      | 1330 | 35.0                        | 215                     | 438                                      | 254                                       |

| DATE          | TIME | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY) | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SUS.<br>SED.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.125 MM |
|---------------|------|-------------------------|------------------------------------------|-------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| MAR.<br>14... | 1840 | 1180                    | 644                                      | 2050                                      | 17                                                          | 23                                                          | 28                                                          | 39                                                          | 66                                                          | 90                                                          | 97                                                          |

SUS.  
SED.  
SIEVE  
DIAM.  
% FINER  
THAN  
.250 MM

MAR.  
14... 100

05410500 - KICKAPOO RIVER AT STEUHEN, WIS. (LAT 43 11 27 LONG 090 52 28)

| DATE       | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(MG/L) | SUS-<br>PENDE<br>SEDI-<br>MENT<br>(T/DAY) |
|------------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------|
| DEC., 1971 |      |                             |                         |                                          |                                           |
| 01...      | 1430 | --                          | 382                     | 22                                       | 23                                        |
| FEB., 1972 |      |                             |                         |                                          |                                           |
| 23...      | 1630 | --                          | 417                     | 3                                        | 3.4                                       |
| MAR.       |      |                             |                         |                                          |                                           |
| 17...      | 1500 | --                          | 2250                    | 182                                      | 1110                                      |
| APR.       |      |                             |                         |                                          |                                           |
| 25...      | 1115 | --                          | 681                     | 166                                      | 305                                       |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## SEDIMENT ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

| DATE                                                                          | TIME | TEMPER-<br>ATURE<br>(DEG C) | DIS-<br>CHARGE<br>(CFS) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>(MG/L) | SUS-<br>PENDE<br>SEDIM-<br>ENT<br>DIS-<br>CHARGE<br>(T/DAY) |
|-------------------------------------------------------------------------------|------|-----------------------------|-------------------------|------------------------------------------|-------------------------------------------------------------|
| GRANT RIVER BASIN                                                             |      |                             |                         |                                          |                                                             |
| 05413500 - GRANT RIVER AT HURTON, WIS. (LAT 42 43 13 LONG 090 49 09)          |      |                             |                         |                                          |                                                             |
| DEC., 1971                                                                    |      |                             |                         |                                          |                                                             |
| 16...                                                                         | 1130 | --                          | 301                     | 624                                      | 507                                                         |
| MAR., 1972                                                                    |      |                             |                         |                                          |                                                             |
| 06...                                                                         | 1345 | .0                          | 88                      | 134                                      | 32                                                          |
| 12...                                                                         | 1730 | --                          | 1270                    | 905                                      | 3100                                                        |
| 13...                                                                         | 0825 | --                          | 2000                    | 807                                      | 4360                                                        |
| 13...                                                                         | 1015 | --                          | 1750                    | 802                                      | 3790                                                        |
| APR.                                                                          |      |                             |                         |                                          |                                                             |
| 11...                                                                         | 1215 | --                          | 125                     | 84                                       | 28                                                          |
| MAY                                                                           |      |                             |                         |                                          |                                                             |
| 18...                                                                         | 1130 | 19.0                        | 146                     | 100                                      | 39                                                          |
| JUNE                                                                          |      |                             |                         |                                          |                                                             |
| 26...                                                                         | 1140 | 20.5                        | 94                      | 217                                      | 55                                                          |
| SEP.                                                                          |      |                             |                         |                                          |                                                             |
| 18...                                                                         | 1300 | .5                          | 238                     | 212                                      | 136                                                         |
| ROCK RIVER BASIN                                                              |      |                             |                         |                                          |                                                             |
| 05424000 - F. BR. ROCK R. NR. MAYVILLE, WIS. (LAT 43 31 46 LONG 088 34 00)    |      |                             |                         |                                          |                                                             |
| MAY, 1972                                                                     |      |                             |                         |                                          |                                                             |
| 11...                                                                         | 0910 | 14.0                        | 155                     | 4                                        | 1.7                                                         |
| JUNE                                                                          |      |                             |                         |                                          |                                                             |
| 07...                                                                         | 1100 | --                          | 61                      | 5                                        | .82                                                         |
| JULY                                                                          |      |                             |                         |                                          |                                                             |
| 14...                                                                         | 1230 | --                          | 31                      | 6                                        | .50                                                         |
| AUG.                                                                          |      |                             |                         |                                          |                                                             |
| 29...                                                                         | 1110 | --                          | 217                     | 15                                       | 8.8                                                         |
| 05431500 - TURTLE CR. NR. CLINTON, WIS. (LAT 42 35 47 LONG 088 51 50)         |      |                             |                         |                                          |                                                             |
| MAY, 1972                                                                     |      |                             |                         |                                          |                                                             |
| 19...                                                                         | 1225 | 19.0                        | 134                     | 64                                       | 23                                                          |
| AUG.                                                                          |      |                             |                         |                                          |                                                             |
| 08...                                                                         | 1520 | --                          | 295                     | 128                                      | 102                                                         |
| SEP.                                                                          |      |                             |                         |                                          |                                                             |
| 26...                                                                         | 1350 | 18.5                        | 405                     | 64                                       | 70                                                          |
| 05432500 - PECATONICA RIVER AT DARLINGTON, WIS. (LAT 42 40 40 LONG 090 07 07) |      |                             |                         |                                          |                                                             |
| DEC., 1971                                                                    |      |                             |                         |                                          |                                                             |
| 21...                                                                         | 1410 | --                          | 130                     | 46                                       | 16                                                          |
| FEB., 1972                                                                    |      |                             |                         |                                          |                                                             |
| 02...                                                                         | 1000 | --                          | 75                      | 9                                        | 1.8                                                         |
| MAR.                                                                          |      |                             |                         |                                          |                                                             |
| 16...                                                                         | 1500 | --                          | 1680                    | 443                                      | 2010                                                        |
| APR.                                                                          |      |                             |                         |                                          |                                                             |
| 24...                                                                         | 1325 | 8.0                         | 227                     | 86                                       | 53                                                          |
| MAY                                                                           |      |                             |                         |                                          |                                                             |
| 19...                                                                         | 1325 | 22.0                        | 123                     | 115                                      | 38                                                          |
| JUNE                                                                          |      |                             |                         |                                          |                                                             |
| 27...                                                                         | 1220 | 21.5                        | 69                      | 102                                      | 19                                                          |
| AUG.                                                                          |      |                             |                         |                                          |                                                             |
| 10...                                                                         | 1250 | --                          | 105                     | 114                                      | 32                                                          |
| SEP.                                                                          |      |                             |                         |                                          |                                                             |
| 21...                                                                         | 1030 | --                          | 177                     | 114                                      | 54                                                          |
| ILLINOIS RIVER BASIN                                                          |      |                             |                         |                                          |                                                             |
| 05543830 - FOX RIVER AT WAUKESHA, WIS. (LAT 43 00 17 LONG 088 14 37)          |      |                             |                         |                                          |                                                             |
| APR., 1972                                                                    |      |                             |                         |                                          |                                                             |
| 06...                                                                         | 1550 | --                          | 156                     | 4                                        | 1.7                                                         |
| MAY                                                                           |      |                             |                         |                                          |                                                             |
| 24...                                                                         | 1430 | --                          | 10                      | 14                                       | .39                                                         |
| JUNE                                                                          |      |                             |                         |                                          |                                                             |
| 01...                                                                         | 1700 | --                          | 68                      | 20                                       | 3.7                                                         |
| JULY                                                                          |      |                             |                         |                                          |                                                             |
| 10...                                                                         | 1455 | --                          | 43                      | 4                                        | .46                                                         |
| AUG.                                                                          |      |                             |                         |                                          |                                                             |
| 01...                                                                         | 1145 | --                          | 76                      | 14                                       | 2.9                                                         |
| SEP.                                                                          |      |                             |                         |                                          |                                                             |
| 21...                                                                         | 1920 | --                          | 974                     | 41                                       | 108                                                         |
| 22...                                                                         | 1035 | 16.0                        | 1010                    | 34                                       | 93                                                          |
| 27...                                                                         | --   | 15.5                        | 509                     | 8                                        | 11                                                          |

# INDEX

|                                                              | Page  |                                                           | Page  |
|--------------------------------------------------------------|-------|-----------------------------------------------------------|-------|
| Acre-foot, definition of.....                                | 3     | Partial-record station, definition of.....                | 5     |
| Bed material, definition of.....                             | 3     | Particle size, definition of.....                         | 5     |
| Biochemical oxygen demand, definition of.....                | 3     | Picocurie, definition of.....                             | 7     |
| Cfs-day, definition of.....                                  | 3     | References.....                                           | 20-22 |
| Chemical oxygen demand, definition of.....                   | 3     | Runoff in inches, definition of.....                      | 7     |
| Coliform organisms, definition of.....                       | 3     | Sediment, definition of.....                              | 7     |
| Contents, definition of.....                                 | 3     | Sodium adsorption ratio, definition of.....               | 7     |
| Control, definition of.....                                  | 3     | Solute, definition of.....                                | 7     |
| Cooperation.....                                             | 2     | Special networks and programs.....                        | 9     |
| Cubic feet per second per square mile,<br>definition of..... | 3     | Specific conductance, definition of.....                  | 8     |
| Cubic foot per second, definition of.....                    | 4     | Stage-discharge relation, definition of.....              | 8     |
| Discharge, definition of.....                                | 4     | Station number, definition of.....                        | 9     |
| Drainage area, definition of.....                            | 4     | Surface-water data, collection and<br>computation of..... | 10-14 |
| Gage height, definition of.....                              | 4     | accuracy of.....                                          | 15    |
| Gaging station, definition of.....                           | 4     | other available.....                                      | 16    |
| Hardness, definition of.....                                 | 4     | publication.....                                          | 15    |
| Hydrologic bench-mark station, definition of...              | 9     | Thermograph, definition of.....                           | 8     |
| Hydrologic conditions.....                                   | 25    | Tons per acre-foot, definition of.....                    | 8     |
| graphs of.....                                               | 26-28 | Tons per day, definition of.....                          | 8     |
| Introduction.....                                            | 1     | Water-quality data, collection and<br>examination of..... | 16-19 |
| Map of Wisconsin, gaging stations.....                       | 24    | publication.....                                          | 19,20 |
| Methylene blue active substance,<br>definition of.....       | 4     | sediment.....                                             | 19    |
| Micrograms per liter, definition of.....                     | 4     | solutes.....                                              | 18    |
| Milligrams per liter, definition of.....                     | 5     | temperature.....                                          | 19    |
|                                                              |       | WRD, definition of.....                                   | 8     |
|                                                              |       | WSP, definition of.....                                   | 8     |

## Water Records

|                                                                              |         |                                                                       |         |
|------------------------------------------------------------------------------|---------|-----------------------------------------------------------------------|---------|
| Alder Creek near Upson.....                                                  | 33      | Black River (tributary to Lake Superior)<br>near Chaffey.....         | 155     |
| Allen Creek (tributary to Brule River)<br>tributary near Alvin.....          | 162     | Black River (tributary to Mississippi River),<br>at Neillsville.....  | 94      |
| Allen Creek (tributary to Rock River) near<br>Fort Atkinson.....             | 170     | near Galesville.....                                                  | 95      |
| Amnicon River near Poplar.....                                               | 155     | tributary near Whittlesey.....                                        | 167     |
| Anvil Lake near Eagle River.....                                             | 28,97   | Black River basin, crest-stage partial-<br>record stations in.....    | 167     |
| Apple Creek (tributary to Fox River) near<br>Kaukauna.....                   | 164     | discharge measurements at miscellaneous<br>sites in.....              | 172     |
| Apple Creek (tributary to Potato River)<br>near Upson.....                   | 162     | gaging station records in.....                                        | 94-95   |
| Arkansaw Creek tributary near Arkansaw.....                                  | 166     | water-quality records in.....                                         | 231     |
| Armstrong Creek near Armstrong Creek.....                                    | 163     | Bois Brule River at Brule.....                                        | 30      |
| Ashwaubenon Creek near DePere.....                                           | 157     | Boomer Creek near Saxon.....                                          | 156,162 |
| Bad Axe River, North Fork near Genoa.....                                    | 167     | Branch River near Cato.....                                           | 159     |
| Bad River near Odanah.....                                                   | 34      | Brule Creek at Alvin.....                                             | 158     |
| Bad River, at Mellen.....                                                    | 155     | Brule River near Florence.....                                        | 39      |
| near Mellen.....                                                             | 32      | Buckatabon Lake, contents of.....                                     | 129-130 |
| Baraboo River near Baraboo.....                                              | 119     | Buffalo River tributary near Osseo.....                               | 166     |
| Bashaw Brook near Shell Lake.....                                            | 165     | Burnt Rollways Reservoir, contents of.....                            | 129-130 |
| Bean Brook near Spring Brook.....                                            | 159     | By Golly Creek near Nelson.....                                       | 166     |
| Bear Branch near Platteville.....                                            | 169     | Camp Eight Creek near Cavour.....                                     | 156     |
| Bear Creek near Sugar Bush.....                                              | 157     | Castle Rock Flowage, contents of.....                                 | 130-131 |
| at Stephenville.....                                                         | 158     | Cawley Creek near Neillsville.....                                    | 167     |
| Bear River near Powell.....                                                  | 165     | Cedar Lake near Kiel.....                                             | 27,60   |
| Bearskin Creek near Harshaw.....                                             | 161,168 | Chases Brook near Danbury.....                                        | 160     |
| Beaver Creek, South Branch near Beaver<br>(tributary to Peshtigo River)..... | 156     | Chippanazie Creek at Stanberry.....                                   | 159     |
| tributary near Sparta (tributary to<br>La Crosse River).....                 | 167     | Chippewa River, at Bishops Bridge, near<br>Winter.....                | 77      |
| Big Eau Pleine Reservoir, contents of.....                                   | 130-131 | at Chippewa Falls.....                                                | 84      |
| Big Eau Pleine River near Stratford.....                                     | 105     | at Durand.....                                                        | 89      |
| Big Roche a Cri Creek near Adams.....                                        | 112     | East Fork, near Glidden.....                                          | 160     |
| Big St. Germain Lake, contents of.....                                       | 129,131 | near Bruce.....                                                       | 78      |
| Big Sandy Creek near Wausau.....                                             | 168     | Chippewa River basin, crest-stage partial-<br>record stations in..... | 165-166 |
| Bird Creek at Wautoma.....                                                   | 163     | discharge measurements at miscellaneous<br>sites in.....              | 171-172 |
| Black Creek at Black Creek.....                                              | 158     | gaging station records in.....                                        | 77-90   |
| Black Earth Creek at Black Earth.....                                        | 121     | low-flow partial-record stations in.....                              | 160     |
| Black River (tributary to Lake Superior)<br>near Bessemer, Mich.....         | 36      | reservoirs in.....                                                    | 91      |

## Water Records--Continued

|                                                                           | Page    |                                                                                  | Page            |
|---------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------|-----------------|
| Chippewa River basin, sediment records in.....                            | 245-246 | Hay Creek (tributary to South Fork Jump River) near Prentice.....                | 165             |
| water-quality records in.....                                             | 229-230 | Hay River at Wheeler.....                                                        | 87              |
| Cisco Branch Ontonagon River at Cisco Lake Outlet, Mich.....              | 38      | Hibbard Creek at Jacksonport.....                                                | 157             |
| Cole Creek near Dunbar.....                                               | 163     | Hills Pond Creek near Langlade.....                                              | 157             |
| Copper Creek basin, discharge measurements at miscellaneous sites in..... | 172     | Honey Creek (tributary to Menomonee River) at Milwaukee.....                     | 164             |
| low-flow partial-record station in.....                                   | 160     | Hulbert Creek near Wisconsin Dells.....                                          | 115             |
| Copper Creek near Mt. Sterling.....                                       | 160     | Hunting River near Elcho.....                                                    | 163             |
| Crawfish River at Milford.....                                            | 135     |                                                                                  |                 |
| Crooked Creek near Boscobel.....                                          | 169     | Illinois River basin, crest-stage partial-record stations in.....                | 150-170         |
| Deerskin Lake, contents of.....                                           | 129-130 | discharge measurements at miscellaneous sites in.....                            | 175             |
| Deerskin River near Eagle River.....                                      | 161     | gaging station records in.....                                                   | 154             |
| Dell Creek near Lake Delton.....                                          | 116,168 | sediment records in.....                                                         | 258             |
| Des Plaines River at Russell, Ill.....                                    | 150     | water-quality records in.....                                                    | 235             |
| Devil Creek near Merrill.....                                             | 168     |                                                                                  |                 |
| Devils Lake near Baraboo.....                                             | 27,118  | Jump River, at Sheldon.....                                                      | 26,83           |
| Douglas Creek near Prentice.....                                          | 165     | North Fork, near Phillips.....                                                   | 165             |
| Du Charne Creek at Eastman.....                                           | 167     |                                                                                  |                 |
| Duncan Creek at Bloomer.....                                              | 166     | Kelly Brook near Lena.....                                                       | 157             |
| Eagle Creek near Athelstene.....                                          | 156     | Kenyon Creek near Radisson.....                                                  | 165             |
| Eagle Creek (tributary to Waumandee Creek) near Fountain City.....        | 166     | Kewaunee River near Kewaunee.....                                                | 59              |
| East River, near DePere.....                                              | 157     | Kickapoo River, at Gays Mills.....                                               | 127             |
| tributary at Greenleaf.....                                               | 164     | at Lafarge.....                                                                  | 124,204-211     |
| East Twin River at Mishicot.....                                          | 159     | near Lafarge.....                                                                | 203             |
| Eau Claire River (tributary to Chippewa River) near Fall Creek.....       | 166     | near Rockton.....                                                                | 197-202         |
| Eau Claire River (tributary to Wisconsin River) at Kelly.....             | 103     | at Steuben.....                                                                  | 128             |
| Eau Galle River, at Spring Valley.....                                    | 90      | Killsnake River near Chilton.....                                                | 158             |
| tributary near Hersey.....                                                | 166     | Kinnickinnic River tributary at River Falls...                                   | 165             |
| Elk River near Phillips.....                                              | 160     |                                                                                  |                 |
| Embarrass River near Embarrass.....                                       | 54      | La Crosse River basin, crest-stage partial-record stations in.....               | 167             |
| Emmons Creek near Rural.....                                              | 56      | Lac Vieux Desert, contents of.....                                               | 129-130         |
| Evergreen Creek near Langlade.....                                        | 52      | Lake Chippewa, contents of.....                                                  | 91              |
|                                                                           |         | Lake Dubay, contents of.....                                                     | 130-131         |
| Fish Lake near Sauk City.....                                             | 120     | Lake Mendota at Madison.....                                                     | 136             |
| Flag River near Port Wing.....                                            | 155     | Lake Michigan at Milwaukee.....                                                  | 190-194         |
| Flambeau Flowage, contents of.....                                        | 91      | Lake Michigan, streams tributary to, crest-stage partial-record stations in..... | 162-164         |
| Flambeau River, at Babb's Island, near Winter.....                        | 80      | discharge measurements at miscellaneous sites in.....                            | 171             |
| near Bruce.....                                                           | 82      | gaging-station records in.....                                                   | 39-72           |
| South Fork, near Phillips.....                                            | 81      | low-flow investigations in.....                                                  | 176-181         |
| South Fork tributary, near Park Falls.....                                | 165     | low-flow partial-record stations in.....                                         | 156-159         |
| tributary at Ladysmith.....                                               | 165     | sediment records in.....                                                         | 239-245         |
| Fond du Lac River, East Branch near Fond du Lac.....                      | 157     | water-quality records in.....                                                    | 219-221,225-228 |
| East Branch tributary, near Eden.....                                     | 164     | Lake Monona at Madison.....                                                      | 137             |
| West Branch near Fond du Lac.....                                         | 157     | Lake Nokomis, contents of.....                                                   | 130-131         |
| Fourmile Creek near Three Lakes.....                                      | 167     | Lake Superior, streams tributary to, crest-stage partial-record stations in..... | 162             |
| Fourteenmile Creek near New Rome.....                                     | 111     | gaging-station records in.....                                                   | 30-38           |
| Fox River (tributary to Lake Michigan), at Berlin.....                    | 50      | low-flow investigations in.....                                                  | 176             |
| at Rapide Croche Dam, near Wrightstown.....                               | 58      | low-flow partial-record stations in.....                                         | 155-156         |
| Fox River (tributary to Illinois River) at Waukesha.....                  | 151     | sediment records in.....                                                         | 236-238         |
| at Wilmot.....                                                            | 154     | water-quality records in.....                                                    | 225             |
| French Creek near Ettrick.....                                            | 167     | Lake Wingra Outlet at Madison.....                                               | 140-141         |
| Frog Creek near Minong.....                                               | 159     | Lake Winnebago at Oshkosh.....                                                   | 57              |
|                                                                           |         | Lake Wissota, contents of.....                                                   | 91              |
| Galena River at Buncombe.....                                             | 134     | Lakes and reservoirs:                                                            |                 |
| Galena River basin, crest-stage partial-record stations in.....           | 169     | Anvil Lake near Eagle River.....                                                 | 28,97           |
| gaging-station records in.....                                            | 134     | Big Eau Pleine Reservoir.....                                                    | 130-131         |
| water-quality records in.....                                             | 234     | Big St. Germain Lake.....                                                        | 129,131         |
| Gill Creek near Brooklyn.....                                             | 170     | Buckatabon Lake.....                                                             | 129-130         |
| Goggle-eye Creek near Thorp.....                                          | 166     | Burnt Rollways Reservoir.....                                                    | 129-130         |
| Grand River near Kingston.....                                            | 49      | Castle Rock Flowage.....                                                         | 130-131         |
| Grant River at Burton.....                                                | 132     | Cedar Lake near Kiel.....                                                        | 27,60           |
| Grant River basin, crest-stage partial-record stations in.....            | 169     | Chippewa, Lake.....                                                              | 91              |
| gaging-station records in.....                                            | 132     | Deerskin Lake.....                                                               | 129-130         |
| sediment records in.....                                                  | 250     | Devils Lake near Baraboo.....                                                    | 27,118          |
| water-quality records in.....                                             | 234     | Dubay, Lake.....                                                                 | 130-131         |
| Gudegast Creek, near Rhinelander.....                                     | 161     | Fish Lake near Sauk City.....                                                    | 120             |
| near Starks.....                                                          | 167     | Flambeau Flowage.....                                                            | 91              |
|                                                                           |         | Lac Vieux Desert.....                                                            | 129-130         |
| Hay Creek (tributary to Chippewa River) near Hayward.....                 | 160     | Little St. Germain Lake.....                                                     | 129,131         |
|                                                                           |         | Long Lake near Iron River.....                                                   | 31              |
|                                                                           |         | Long Lake on Deerskin River.....                                                 | 129-130         |
|                                                                           |         | Lower Ninemile Lake.....                                                         | 129-130         |
|                                                                           |         | Mendota, Lake, at Madison.....                                                   | 136             |
|                                                                           |         | Minocqua Lake.....                                                               | 130-131         |
|                                                                           |         | Monona, Lake, at Madison.....                                                    | 137             |

## Water Records--Continued

|                                                 | Page    |                                               | Page        |
|-------------------------------------------------|---------|-----------------------------------------------|-------------|
| Lakes and reservoirs:                           |         | Mud Creek (tributary to Manitowoc River)      |             |
| Moose Lake.....                                 | 91      | near Reedsville.....                          | 159         |
| Nokomis, Lake.....                              | 130-131 | Mukwonago River tributary near Mukwonago..... | 170         |
| North Lake near Elkhorn.....                    | 27,152  | Muskra Creek at Conover.....                  | 160,167     |
| North Pelican Lakes.....                        | 130-131 |                                               |             |
| Petenwell Flowage.....                          | 130-131 | Nakoma Storm Sewer at Madison.....            | 139         |
| Pickerel Lake.....                              | 129,131 | Narrows Creek at Loganville.....              | 168         |
| Rainbow Lake.....                               | 129,131 | Nederlo Creek, near Gays Mills.....           | 126,212-216 |
| Rest Lake.....                                  | 91      | North Fork, near Gays Mills.....              | 125         |
| Rockland Lake near Burlington.....              | 153     | Neshota River tributary near Denmark.....     | 164         |
| Sevenmile Lake.....                             | 129-130 | New Wood River near Merrill.....              | 168         |
| Shell Lake at Shell Lake.....                   | 28,74   | Nippersink Creek, North Branch tributary      |             |
| South Pelican Lake.....                         | 129,131 | near Genoa City.....                          | 170         |
| Spirit River Flowage.....                       | 130-131 | Noisy Creek near Rhinelander.....             | 161         |
| Squirrel Lake.....                              | 130-131 | North Fish Creek near Ashland.....            | 155         |
| Sugar Camp Reservoir.....                       | 129,131 | North Fork Thunder River near Lakewood.....   | 156         |
| Twin Lakes.....                                 | 129-130 | North Lake near Elkhorn.....                  | 27,152      |
| Wheeler Lake near Lakewood.....                 | 28,46   | North Pelican Lakes, contents of.....         | 130-131     |
| Willow Reservoir.....                           | 130-131 |                                               |             |
| Winnebago, Lake, at Oshkosh.....                | 57      | Oak Creek, at South Milwaukee.....            | 68          |
| Wisnosa, Lake.....                              | 91      | near South Milwaukee.....                     | 164         |
| Lawrence Creek near Westfield.....              | 48      | Oconto River, near Gillett.....               | 26,47       |
| Layman Creek near Hurley.....                   | 156     | North Branch near Mountain.....               | 157         |
| Lemonweir River at New Lisbon.....              | 114     | North Branch, near Wabeno.....                | 163         |
| Lightning Creek at Almena.....                  | 166     | One Mile Creek near Mauston.....              | 168         |
| Lily River near Lily.....                       | 163     | Onion River near Waldo.....                   | 159         |
| Little Frog Creek near Minong.....              | 159,164 | Ontonagon River, Cisco Branch at Cisco        |             |
| Little La Crosse River near Leon.....           | 167     | Lake Outlet, Mich.....                        | 38          |
| Little Menomonee River near Freistadt.....      | 164     | Otter Creek (tributary to Wisconsin River)    |             |
| Little Peshtigo River near Coleman.....         | 157     | near Highland.....                            | 122         |
| Little Pine Creek, near Irma.....               | 168     | Ounce River near Gordon.....                  | 159         |
| near Tomahawk.....                              | 161     |                                               |             |
| Little Plover River, at Plover.....             | 107     | Pats Creek near Elk Grove.....                | 169         |
| near Arnott.....                                | 106     | Pearl Creek at Grandview.....                 | 156,162     |
| Little Popple River near Aurora.....            | 163     | Pearson Creek near Maple.....                 | 162         |
| Little Rice River near Bradley.....             | 161     | Pecatonica River, at Darlington.....          | 145         |
| Little River, North Branch, near Coleman.....   | 163     | at Martintown.....                            | 147         |
| Little St. Germain Lake, contents of.....       | 129,131 | East Branch, near Blanchardville.....         | 146         |
| Little Trimble Creek near Bay City.....         | 165     | Pecore Creek near Hayes.....                  | 157         |
| Little Turtle Creek at Allens Grove.....        | 161,170 | Pensaukee River near Pulaski.....             | 158,163     |
| Little West Branch near Neopit.....             | 157     | Peshtigo River, at Peshtigo.....              | 45          |
| Little Wolf River at Galloway.....              | 157     | near Cavour.....                              | 163         |
| Lloyd Creek near Doering.....                   | 168     | North Branch, near Argonne.....               | 156         |
| Long Lake (tributary to Lake Superior), near    |         | Pet Brook tributary near Edgar.....           | 168         |
| Iron River.....                                 | 31      | Petenwell Flowage, contents of.....           | 130-131     |
| Long Lake (Wisconsin River basin), contents     |         | Pickerel Lake, contents of.....               | 129,131     |
| of.....                                         | 129-130 | Pigeon Creek near Lancaster.....              | 169         |
| Lost Creek near Powell.....                     | 160     | North Branch, near Marion.....                | 158         |
| Lower Ninemile Lake, contents of.....           | 129-130 | Pigeon River near Millersville.....           | 159         |
| Lower Ox Creek near Gordon.....                 | 159     | Pike Creek near Kenosha.....                  | 164         |
|                                                 |         | Pike River near Racine.....                   | 72          |
| Manitou Way Storm Sewer at Madison.....         | 138     | Pine Creek (tributary to Flambeau River)      |             |
| Manitowoc River, South Branch near Chilton..... | 158     | near Oxbo.....                                | 79          |
| Marengo River near Marengo.....                 | 156     | Pine Creek (tributary to Red Cedar River),    |             |
| McCall Creek at Wausaukee.....                  | 163     | East Branch tributary, near Dallas.....       | 166         |
| Menominee River, below Koss, Mich.....          | 44      | Pine River (tributary to Menominee River),    |             |
| near Florence.....                              | 40      | below Pine River powerplant, near             |             |
| near McAllister.....                            | 163     | Florence.....                                 | 42          |
| near Pembine.....                               | 43      | near Three Lakes.....                         | 158         |
| Menomonee River at Wauwatosa.....               | 67      | North Branch at Windsor Dam near Alvin.....   | 162         |
| Mill Creek near Pella.....                      | 157     | Platte River near Rockville.....              | 133         |
| Middle River near Poplar.....                   | 155     | Platte River basin, crest-stage partial-      |             |
| Milwaukee River, at Kewaskum.....               | 62      | record stations in.....                       | 169         |
| at Milwaukee.....                               | 66      | gaging station records in.....                | 133         |
| at Waubesa.....                                 | 65      | water-quality records in.....                 | 234         |
| East Branch, near New Fane.....                 | 63      | Poplar River near Owen.....                   | 167         |
| North Branch, near Fillmore.....                | 64      | Popple River, near Fence.....                 | 41,184-189  |
| tributary at Fredonia.....                      | 164     | South Branch, near Fence.....                 | 156         |
| Minocqua Lake, contents of.....                 | 130-131 | near Newald.....                              | 162         |
| Mishonagon Creek near Woodruff.....             | 161,168 | Potato River near Gurney.....                 | 156         |
| Mississippi River at McGregor, Iowa.....        | 96      | Prairie River near Merrill.....               | 101         |
| Monico Creek at Monico.....                     | 161     | Presque Isle River at Marenisco, Mich.....    | 37          |
| Montagne Creek near Florence.....               | 156     | Price Creek near Phillips.....                | 165         |
| Moose Lake, contents of.....                    | 91      |                                               |             |
| Moose River (tributary to Chippewa River)       |         | Raccoon Creek, East Fork tributary, near      |             |
| near Clam Lake.....                             | 160     | Beloit.....                                   | 170         |
| Moose River (tributary to St. Croix River)      |         | Rainbow Lake, contents of.....                | 129,131     |
| near Solon Springs.....                         | 159     | Randall Creek tributary near Abbottsford..... | 168         |
| Mormon Creek near La Crosse.....                | 167     | Rat River near Wabeno.....                    | 156         |
| Morris Creek tributary near Norwalk.....        | 169     | Red Cedar River, at Menomonie.....            | 88          |
| Mud Creek (tributary to Wolf River) near        |         | near Cameron.....                             | 85,86       |
| Nashville.....                                  | 163     | near Colfax.....                              | 166         |

## Water Records--Continued

|                                                | Page        |                                              | Page            |
|------------------------------------------------|-------------|----------------------------------------------|-----------------|
| Reefer Creek near Port Wing.....               | 155         | Sugar Creek basin, discharge measurements    |                 |
| Rest Lake, contents of.....                    | 91          | at miscellaneous sites in.....               | 172             |
| Reservoirs - see Lakes and reservoirs          |             | Sugar River, near Brodhead.....              | 26,148          |
| Richland Creek near Plughtown.....             | 169         | tributary near Pine Bluff.....               | 170             |
| Robbins Creek near Columbus.....               | 169         |                                              |                 |
| Rock Branch near Mineral Point.....            | 170         | Tenmile Creek near Nekoosa.....              | 110             |
| Rockland Lake near Burlington.....             | 153         | ditch 5 near Bancroft.....                   | 109,195-196     |
| Rock River, at Afton.....                      | 143,217-218 | Token Creek near Madison.....                | 170             |
| at Rockton, Ill.....                           | 149         | Tomahawk River at Bradley.....               | 99              |
| East Branch tributary, near Slinger.....       | 169         | Trade River near Frederic.....               | 165             |
| South Branch tributary, near Waupun.....       | 169         | Trappe River tributary near Merrill.....     | 168             |
| tributary near Watertown.....                  | 169         | Trempealeau River, at Arcadia.....           | 92              |
| West Branch, near Waupun.....                  | 169         | at Dodge.....                                | 93              |
| Rock River basin, crest-stage partial-record   |             | Trempealeau River basin, gaging-station      |                 |
| stations in.....                               | 169-170     | records in.....                              | 92-93           |
| discharge measurements at miscellaneous        |             | sediment records in.....                     | 247             |
| sites in.....                                  | 173-175     | water-quality records in.....                | 230             |
| gaging-station records in.....                 | 135-149     | Trout Brook, near Highbridge.....            | 156             |
| low-flow partial-record stations in.....       | 161         | tributary near Marengo.....                  | 162             |
| sediment records in.....                       | 258         | Trout Creek near Peshtigo.....               | 158             |
| water-quality records in.....                  | 234-235     | Turtle Creek near Clinton.....               | 144             |
| Rocky Branch near Richland Center.....         | 169         | Twin Lakes, contents of.....                 | 129-130         |
| Rocky Run Creek near Goodnow.....              | 161         | Tyler Forks River near Upson.....            | 155             |
| Root River, at Racine.....                     | 71          |                                              |                 |
| Canal near Franklin.....                       | 70          | Waupaca River, near Waupaca.....             | 158             |
| near Franklin.....                             | 69          | tributary near Waupaca.....                  | 163             |
| Root River, West Branch Canal tributary        |             | Waupee River near Mountain.....              | 157             |
| near North Cape.....                           | 164         | Weber Creek near Mercer.....                 | 165             |
| Rowan Creek at Poynette.....                   | 169         | Webster Creek at New Lisbon.....             | 168             |
|                                                |             | Wheeler Lake near Lakewood.....              | 28,46           |
| St. Croix River, at St. Croix Falls.....       | 76          | West Twin River near Francis Creek.....      | 159             |
| near Danbury.....                              | 73          | White River (tributary to Bad River) near    |                 |
| St. Croix River basin, crest-stage partial-    |             | Ashland.....                                 | 35              |
| record stations in.....                        | 164-165     | White River (tributary to Illinois Fox       |                 |
| discharge measurements at miscellaneous        |             | River) near Burlington.....                  | 170             |
| sites in.....                                  | 171         | tributary near Burlington.....               | 170             |
| gaging-station records in.....                 | 73-76       | Willow Creek (tributary to Lowe Creek)       |                 |
| low-flow partial-record stations in.....       | 159-160     | near Eau Claire.....                         | 166             |
| water-quality records in.....                  | 229         | Willow Reservoir, contents of.....           | 130-131         |
| Sand River, near Red Cliff.....                | 155         | Willow River (tributary to Wisconsin         |                 |
| tributary near Red Cliff.....                  | 162         | River) near Hazelhurst.....                  | 161             |
| Sawyer Creek (tributary to Fox River) at       |             | tributary near New Richmond.....             | 165             |
| Oshkosh.....                                   | 164         | Wisconsin River, at Merrill.....             | 102             |
| Sawyer Creek (tributary to Yellow River)       |             | at Muscoda.....                              | 123             |
| near Shell Lake.....                           | 164         | at Rainbow Lake, near Lake Tomahawk.....     | 98              |
| Scuppernong Creek near Wales.....              | 170         | at Rothschild.....                           | 104             |
| Seth Creek near Cadott.....                    | 166         | at Wisconsin Rapids.....                     | 106             |
| Sevenmile Lake, contents of.....               | 129-130     | near Wisconsin Dells.....                    | 117             |
| Sheboygan River, at Sheboygan.....             | 61          | tributary at Wisconsin Dells.....            | 168             |
| tributary near Plymouth.....                   | 164         | Wisconsin River basin, crest-stage partial-  |                 |
| Shell Lake at Shell Lake.....                  | 28,74       | record stations in.....                      | 167-169         |
| Silver Creek near Algoma.....                  | 159         | discharge measurements at miscellaneous      |                 |
| Sioux River near Washburn.....                 | 155,162     | sites in.....                                | 173             |
| Skanawan Creek near Tomahawk.....              | 168         | gaging-station records in.....               | 97-128          |
| Skinner Creek tributary near Monroe.....       | 170         | low-flow partial-record stations in.....     | 160-161         |
| Smith Creek near Park Falls.....               | 165         | reservoirs in.....                           | 129-131         |
| Snake River near Pine City, Minn.....          | 75          | sediment records in.....                     | 247-257         |
| Somo River near Tripoli.....                   | 161         | water-quality records in.....                | 219-224,231-233 |
| South Branch Pemebowon River near Pembine..... | 156         | Wolf Creek near St. Croix Falls.....         | 160             |
| South Branch Pike River near Dunbar.....       | 156         | Wolf River, at Langlade.....                 | 51              |
| South Pelican Lake, contents of.....           | 129,131     | at Keshena Falls.....                        | 53              |
| Spaulding Creek near Big Falls.....            | 163         | at New London.....                           | 55              |
| Spillerberg Creek near Cayuga.....             | 155,162     | Woods Creek near Fence.....                  | 163             |
| Spirit River at Spirit Falls.....              | 100         | Wood River, near Siren.....                  | 160             |
| Spirit River Flowage, contents of.....         | 130-131     | North Fork, near Grantsburg.....             | 160             |
| Spring Creek near Durand.....                  | 166         |                                              |                 |
| Springstead Creek near Park Falls.....         | 160         | Yahara River near McFarland.....             | 142             |
| Squaw Creek near Harrison.....                 | 167         | Yellow River (tributary to Chippewa          |                 |
| Squirrel Lake, contents of.....                | 130-131     | River) at Cadott.....                        | 166             |
| Stony Brook near Superior.....                 | 162         | Yellow River (tributary to St. Croix         |                 |
| Stony Creek near Algoma.....                   | 159         | River) at Webster.....                       | 160             |
| Stuntz Brook near Minong.....                  | 159         | Yellow River (tributary to Wisconsin River), |                 |
| Suamico River at Suamico.....                  | 157         | at Babcock.....                              | 113             |
| Sugar Camp Reservoir, contents of.....         | 129,131     | tributary near Pittsville.....               | 168             |
| Sugar Creek at Elkhorn.....                    | 170         | Yellowstone River near Blanchardville.....   | 170             |