

Water Resources Data Wisconsin Water Year 2002

Water-Data Report WI-02-1



U.S. Department of the Interior
U.S. Geological Survey



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

CALENDAR FOR WATER YEAR 2002

2001

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

2002

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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APRIL							MAY							JUNE						
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JULY							AUGUST							SEPTEMBER						
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By R.J. Waschbusch, D.L. Olson, B.R. Ellefson, and P.A. Stark

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



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City of Fort Atkinson
Wisconsin Historical Society, Wade House Historic Site

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Middleton, Wisconsin 53562

PREFACE

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

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

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Jeffrey J. Hanig, Merrill, northeast
Josef Habale, Middleton, southwest

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This report was prepared under the general supervision of Warren A. Gebert, District Chief; Herbert S. Garn, Supervisory Hydrologist; Peter E. Hughes, Supervisory Hydrologist; and James T. Krohelski, Supervisory Hydrologist.

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[Letters after station names designate type of data: (c) chemical, (d) discharge, (g) gage height,
(m) microbiological, (pr) precipitation, (r) radiochemical, (sd) secchi-depth, (s) sediment, (t) water temperature]

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DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

The following continuous-record surface-water discharge stations in Wisconsin have been discontinued. Daily streamflow records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (*) after the station number are currently operated as crest-stage partial-record stations. Some of the discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

Station name	Station number	Drainage area (mi ²)	Period of record
STREAMS TRIBUTARY TO LAKE SUPERIOR			
Tower Avenue at Superior, WI	04024080	0.034	1993-95
Little Balsam Creek at Patzau, WI	04024314	4.89	1976-78
Little Balsam Creek near Patzau, WI	04024315	5.05	1976-78
Little Balsam Creek Tributary near Patzau, WI	04024318	0.60	1976-78
Little Balsam Creek near Foxboro, WI	04024320	6.27	1977-78
Amnicon River near Poplar (Amnicon Falls), WI	04025000	110	1914-16
Bois Brule (Brule) River near Brule, WI	04026000	160	1914-17
Sioux River near Washburn, WI	04026300*	33.9	1965-66
Pine Creek at Moquah, WI	04026347	6.20	1976-78
Pine Creek Tributary at Moquah, WI	04026348	0.48	1976-78
Pine Creek near Moquah, WI	04026349	19.9	1976-78
Bad River near Mellen, WI	04026450*	82.0	1971-75
Bad River at Mellen, WI	04026500	98.3	1948-55
Alder Creek near Upson, WI	04026870	22.2	1972-77
Montreal River near Kimball, WI	04028500	100	1924-26
West Fork Montreal River at Gile, WI	04029000	75.0	1918-26, 1943-47
West Fork Montreal River near Kimball, WI	04029500	86.2	1924-26
STREAMS TRIBUTARY TO LAKE MICHIGAN			
North Branch Pine River at Windsor Dam nr Alvin, WI	04063640*	27.8	1967-68
Pine River near Florence, WI	04064000	510	1914-23
Menominee River, at Mouth, at Marinette, WI	04067651	4,070	1988-90, 1994-95
Peshtigo River at High Falls near Crivitz, WI	04068000	537	1912-57
Pensaukee River near Krakow, WI	04071795	35.8	1993-95
Pensaukee River near Pensaukee, WI	04071858	134	1973-96
Suamico River at Suamico, WI	04072000	60.7	1951-52
Lawrence Creek near Westfield, WI	04072750	13.4	1968-73
Grand River near Kingston, WI	04073050	73.5	1968-75
West Branch White River near Wautoma, WI	04073405	38.9	1964-65
Silver Creek at South Koro Road near Ripon, WI	040734644	36.2	1987-96
Wolf River near White Lake, WI	04075000	485	1935-38
Evergreen Creek near Langlade, WI	04075200*	8.09	1964-73
Wolf River above West Branch Wolf River, WI	04075500	616	1928-62
West Branch Wolf River at Neopit, WI	04076000	93.2	1911-17
West Branch Wolf River near Keshena, WI	04076500	163	1928-32
Wolf River near Shawano, WI	04077400	816	1907-09, 1910-2001
Little Wolf River near Galloway, WI	04079602	22.6	1974-79
Spaulding Creek near Big Falls, WI	04079700*	5.57	1964-66
Little Wolf River at Royalton, WI	04080000	507	1914-70, 1983-85
Tomorrow River near Nelsonville, WI	04080798	44.0	1993-95
Emmons Creek near Rural, WI	04080950	25.1	1968-74
Storm Sewer to Mirror Lake at Waupaca, WI	04080976	0.04	1971-74
Waupaca River near Waupaca, WI	04081000	265	1916-66, 1983-85
Daggets Creek at Butte Des Morts, WI	04081800	10.6	1977
West Branch Fond du Lac River at Fond du Lac, WI	04083000	83.1	1939-54
Parsons Creek, Upstream Site, near Fond du Lac, WI	04083420	5.3	1997-2001
Parsons Creek, Downstream Site, near Fond du Lac, WI	04083425	5.7	1997-2001
East Branch Fond du Lac River near Fond du Lac, WI	04083500	78.4	1939-54
Brothertown Creek at Brothertown, WI	04084200	5.10	1976-77
East River at Midway Road near De Pere, WI	04085109	47.0	1993-95
Bower Creek, at County MM, near De Pere, WI	04085119	14.8	1991-95, 1996-97

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

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Station name	Station number	Drainage area (mi ²)	Period of record
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED			
East Twin River at Mishicot, WI	04085281	110	1972-96
Onion River at Hingham, WI	04085813	37.2	1979-80
Onion River near Sheboygan Falls, WI	04085845	94.1	1979-82
Milwaukee River at Kewaskum, WI	04086150	138	1968-81
East Branch Milwaukee River near New Fane, WI	04086200	54.1	1968-81
North Branch Milwaukee River near Random Lake, WI	040863075	51.4	1993-95
North Branch Milwaukee River near Fillmore, WI	04086340	148	1968-81
Milwaukee River at Waubeka, WI	04086360	432	1968-81, 1994
Mud Lake Outlet near Decker Corner, WI	04086488	7.36	1983-84
Lincoln Creek, at 47th Street, at Milwaukee, WI	040869415	9.56	1993-1995, 1997 ¹
Milwaukee River above North Ave Dam at Milwaukee, WI	04087010	702	1982-84
Menomonee River at Germantown, WI	04087018	19.0	1975-77
Jefferson Park Drainageway at Germantown, WI	04087019	1.82	1976-78
Menomonee River at Butler, WI	04087040	60.6	1975-79
Little Menomonee River near Freistadt, WI	04087050	8.0	1975-79
Noyes Creek at Milwaukee, WI	04087060	1.94	1975-80, 1990
Little Menomonee River at Milwaukee, WI	04087070	19.7	1975-77
Honey Creek at Wauwatosa, WI	04087119	10.3	1975-81
Schoonmaker Creek at Wauwatosa, WI	04087125	1.94	1975-79
Hawley Road Storm Sewer at Milwaukee, WI	04087130	1.83	1975-77
Menomonee River at Milwaukee, WI	04087138	134	1982-84
Kinnickinnic River at Milwaukee, WI	04087160	20.4	1976-83
Milwaukee River at Mouth at Milwaukee, WI	04087170	872	1994-96
ST. CROIX RIVER BASIN			
Namekagon River at Leonards, WI	05331833	126	1996-2001
Namekagon River at Trego, WI	05332000	433	1914-27
Loon Creek near Danbury, WI	05335010	17.6	1970-71
Bashaw Brook near Shell Lake, WI	05335380	26.6	1964-66
Clam River near Webster, WI	05335500	361	1941-42
St. Croix River near Grantsburg, WI	05336000	2,980	1923-70
Wood River near Grantsburg, WI	05339000	185	1939-40
Rice Creek near Balsam Lake, WI	05341375	12.5	1988-89
Balsam Branch at Balsam Lake, WI	05341402	52.8	1988-90
Deer Lake Tributary #1, Upstream Site, near Centuria, WI	05341404	0.04	1998,99,2000-01
Deer Lake Tributary #1, Downstram Site, near Centuria, WI	05341405	0.38	1998-2001
CHIPPEWA RIVER BASIN			
West Fork Chippewa River at Lessards, nr Winter, WI	05355500	474	1912-16
Couderay River near Couderay, WI	05356121	169	1981-83
Flambeau River at Flambeau Flowage (Flambeau Reservoir), WI	05357500	622	1927-61
Flambeau River near Butternut, WI	05358000	688	1914-39
Pine Creek near Oxbo, WI	05358300	38.9	1971-75
Flambeau River at Babbs Island near Winter, WI	05358500	967	1929-75
South Fork Flambeau River near Phillips, WI	05359500	609	1929-75
Price Creek near Phillips, WI	05359600*	16.9	1964-66
Flambeau River near (at) Ladysmith, WI	05360000	1,790	1903-06, 1914-61
Chippewa River near Holcombe, WI	05361000	3,720	1944-49
South Fork Jump River near Ogema, WI	05361500	327	1944-54
Chippewa River at Holcombe, WI	05362500	4,680	1943-49
Fisher River at (near) Holcombe, WI	05363000	81.5	1944-45
O'Neil Creek near Chippewa Falls, WI	05363500	78.1	1944-45
Yellow River near Hannibal, WI	05363700	86.7	1962-63
Yellow River at Cadott, WI	05364000*	364	1943-61
Duncan Creek at Bloomer, WI	05364500*	50.3	1944-52
Duncan Creek Tributary near Tilden, WI	05364850	4.17	1987-89

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
CHIPPEWA RIVER BASIN--CONTINUED			
Duncan Creek at Chippewa Falls, WI	05365000	117	1943-55
Eau Claire River near Augusta, WI	05366000	509	1914-26
Bridge Creek at Augusta, WI	05366300	35.0	1980
Eau Claire River near Fall Creek, WI	05366500*	760	1943-55
Chippewa River at (near) Eau Claire, WI	05367000	6,620	1903-09, 1944-54
Red Cedar River at Cty Trunk Highway D at Birchwood, WI	06367102	70.8	2000-01
Sucker Creek at Loch Lamond Blvd near Birchwood, WI	05367154	12.3	2000-01
Hemlock Creek at Cty Trunk Highway F near Mikana, WI	05367190	20.4	2000-01
Red Cedar River at Red Cedar Lake Outlet at Mikana, WI	05367202	151	2000-01
Red Cedar River near Cameron, WI	05367425	442	1966-70
Red Cedar River near Cameron, WI	05367426	443	1971-73
Red Cedar River near Colfax, WI	05367500	1,100	1914-61, 1990
Eau Galle River at Low-Water Bridge at Spring Valley, WI	05369945	47.9	1982-83, 1986-96
French Creek near Spring Valley, WI	05369955	6.03	1981-83
Lousy Creek near Spring Valley, WI	05369970	5.97	1981-83
Lohn Creek near Spring Valley, WI	05369985	2.53	1981-83
Eau Galle River at Elmwood, WI	05370500	91.6	1943-54
BUFFALO RIVER BASIN			
Buffalo River near Tell, WI	05372000	406	1933-51
WAUMANDEE CREEK BASIN			
Joos Valley Creek near Fountain City, WI	05378183	5.89	1990-96
Eagle Creek, at County Highway G, near Fountain City, WI	05378185	14.3	1990-96
TREMPEALEAU RIVER BASIN			
Bruce Valley Creek near Pleasantville, WI	05379288	10.1	1980
Elk Creek near Independence, WI	05379305	108	1980
Trempealeau River near Trempealeau, WI	05380000	719	1932-34
BLACK RIVER BASIN			
Black River at Medford, WI	05380806	48.1	1984-87
Poplar River near Owen, WI	05380900*	155	1964-66
LA CROSSE RIVER BASIN			
Little LaCrosse River near Leon, WI	05382500	76.9	1934-61, 1979-81
LaCrosse River near West Salem, WI	05383000	396	1914-70
COON CREEK BASIN			
Spring Coulee Creek near Coon Valley, WI	05386490	9.01	1979-81
Coon Creek at Coon Valley, WI	05386500	77.2	1934-40, 1978-81
Coon Creek near Stoddard, WI	05386999	120	1934-40, 1979-81
BAD AXE RIVER BASIN			
North Fork Bad Axe River near Genoa, WI	05387100*	80.8	1964-66
WISCONSIN RIVER BASIN			
Wisconsin River at Conover, WI	05390180	177	1967-71
Pelican River near Rhinelander, WI	05391226	101	1976-79
Wisconsin River at Whirlpool Rapids, nr Rhinelander, WI	05392000	1,220	1906-61
Bearskin Creek near Harshaw, WI	05392350*	31.1	1964-66
Tomahawk River near Bradley, WI	05392400	422	1915-27, 1929
Tomahawk River at Bradley, WI	05393000	544	1930-73
New Wood River near Merrill, WI	05394000	82.2	1953-61
Rib River at Rib Falls, WI	05396000	303	1925-57
Little Rib River near Wausau, WI	05396500	79.1	1914-16
East Branch Eau Claire River near Antigo, WI	05397000	81.5	1949-55

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

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Station name	Station number	Drainage area (mi ²)	Period of record
WISCONSIN RIVER BASIN--CONTINUED			
Eau Claire River near Antigo, WI	05397110	185	1975-81
Bull Junior Creek (Bull Creek Junior) nr Rothschild, WI	05398500	27.4	1944-52
Big Eau Pleine River near Colby, WI	05399000	78.1	1941-54
Hamann Creek near Stratford, WI	05399431	11.3	1977-79
Wisconsin River at Knowlton, WI	05400000	4,530	1921-42
Plover River near Stevens Point, WI	05400500	145	1914-20, 1944-52
Little Plover River near Arnott, WI	05400600	2.24	1959-75
Little Plover River at Plover, WI	05400650	19.0	1959-87
Fourmile Creek near Kellner, WI	05400870	75.0	1964-67
Buena Vista Creek near Kellner, WI	05400853	53.1	1964-67
Tenmile Creek Ditch 5 near Bancroft, WI	05401020	9.73	1964-73
Fourteenmile Creek near New Rome, WI	05401100	91.1	1964-79
Wisconsin River near Necedah, WI	05401500	5,990	1903-14, 1944-50
Big Roche a Cri Creek near Hancock, WI	05401510	9.61	1964-67
Big Roche a Cri Creek near Adams, WI	05401535	52.8	1964-78
Yellow River at Sprague, WI	05402500	392	1927-40
Yellow River at Necedah, WI	05403000	491	1941-57
Lemonweir River at New Lisbon, WI	05403500	507	1944-87, 1994
Hulbert Creek near Wisconsin Dells, WI	05403630	11.2	1971-77
Dell Creek near Lake Delton, WI	05403700	44.9	1957-65, 1971-80
Narrows Creek at Loganville, WI	05404200	40.1	1964-66
Wisconsin River at Prairie du Sac, WI	05406000	9,180	1946-54
Black Earth Creek at Cross Plains, WI	05406460	12.8	1985-86, 1990-93
Black Earth Creek at Mills Street at Cross Plains, WI	05406476	25.5	1990-95
Garfoot Creek near Cross Plains, WI	05406491	5.39	1985-86, 1990-94, 1994-98
Black Earth Creek at South Valley Road nr Black Earth, WI	05406497	40.6	1990-93
Trout Creek at Confluence with Arneson Creek near Barneveld, WI	05406573	8.37	1976-78
Trout Creek at Twin Parks Dam 8 nr Barneveld, WI	05406574	9.02	1976-79
Trout Creek at County Highway T nr Barneveld, WI	05406575	12.1	1976-78
Trout Creek near Ridgeway, WI	05406577	13.5	1976-79
Knight Hollow Creek near Arena, WI	05406590	7.57	1976-78
Otter Creek near Highland, WI	05406640	16.8	1968-69, 1970-75
Kickapoo River at Ontario, WI	05407500	151	1939, 1973-77
Knapp Creek near Bloomingdale, WI	05408500	8.44	1955-69
West Fork Kickapoo River near Readstown, WI	05409000	106	1939
Kickapoo River at Soldiers Grove, WI	05409500	530	1939
North Fork Nederlo Creek near Gays Mills, WI	05409830	2.21	1968-79
Nederlo Creek near Gays Mills, WI	05409890	9.46	1968-80
Kickapoo River at Gays Mills, WI	05410000	617	1914-34, 1964-77
GRANT RIVER BASIN			
Pigeon Creek near Lancaster, WI	05413400*	6.93	1964-66
Kuenster Creek at Muskegon Road nr North Andover, WI	05413435	9.59	1982-96
Rattlesnake Creek near North Andover, WI	05413449	42.4	1987-96
Rattlesnake Creek near Beetown, WI	05413451	45.2	1990-91
GALENA RIVER BASIN			
Little Platte River near Platteville, WI	05414213	79.7	1987-90
Sinsinawa River near Hazel Green, WI	05414800	24.9	1987-90
Pats Creek near Belmont, WI	05414894	5.42	1981-82
Madden Branch Tributary near Belmont, WI	05414915	2.83	1981-82
Madden Branch near Meekers Grove, WI	05414920	15.04	1981-82
Galena River at Buncombe, WI	05415000	125	1939-92
APPLE RIVER BASIN			
Apple River near Shullsburg, WI	05418731	9.34	1981-82

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
ROCK RIVER BASIN			
West Branch Rock River near Waupun, WI	05423000	40.7	1949–70, 1978–81
West Branch Rock River at County Trunk Highway D near Waupun, WI	05423100	43.9	1978–81
West Branch Rock River at State Highway 49 nr Waupun, WI	05423510	113	1997–2000
East Branch Rock River near Mayville, WI	05424000	179	1949–70, 1997–2000
Rubicon River near Slinger, WI	05424095	7.79	1998–2000
Rubicon River at Pike Lake Outlet near Hartford, WI	054240957	12.31	1998–2000
Johnson Creek near Johnson Creek, WI	05425537	1.13	1978–80
Johnson Creek near Johnson Creek, WI	05425539	13.3	1978–80
Pratt Creek near Juneau, WI	05425928	3.54	1978–80
Rock River at Jefferson, WI	05426031	1,850	1978–94 ²
Whitewater Creek near Whitewater, WI	05426500	11.8	1926–28, 1946–54
Whitewater Creek at Millis Road near Whitewater, WI	05426900	20.6	1978–81
Whitewater Creek at Whitewater, WI	05427000	22.8	1926–28, 1946–54
Koshkonong Creek near Rockdale, WI	05427507	150	1977–82
Token Creek near Madison, WI	05427800	24.3	1964–66, 1976–81
Sixmile Creek near Waunakee, WI	05427900	41.1	1976–82
South Fork Pheasant Branch at Highway 14 near Middleton, WI	05427945	5.74	1978–81
Pheasant Branch at Century Avenue at Middleton, WI	05427950	20.8	1977–81
Pheasant Branch at mouth at Middleton, WI	05427952	24.5	1978–81
Willow Creek at Madison, WI	05427970	3.15	1974–83
Olbrich Park Storm Ditch at Madison, WI	05428665	2.57	1976–80
Manitou Way Storm Sewer at Madison, WI	05429040	0.23	1971–77
Nakoma Storm Sewer at Madison, WI	05429050	2.30	1972–77
Lake Wingra Outlet at Madison, WI	05429120	6.00	1971–77
Nine Springs Creek Storm Sewer Tributary at Madison, WI	05429268	0.18	1991–93
Door Creek near Cottage Grove, WI	05429580	15.3	1976–79
Yahara River near Edgerton, WI	05430000	430	1917–18
Oregon Branch at Oregon, WI	05430030	9.93	1979–81
Badfish Creek at County Highway A near Stoughton, WI	05430095	40.9	1956–66, 1986–88
Badfish Creek near Stoughton, WI	05430100	41.3	1956–66
Delavan Lake Trib at South Shore Drive at Delavan, WI	05431018	7.66	1985–86, 1989–91
Jackson Creek at Petrie Road near Elkhorn, WI	05431014	8.96	1984–95
Livingston Branch Pecatonica River nr Livingston, WI	05432055	16.4	1987–91
Yellowstone River near Blanchardville, WI	05433500*	28.5	1954–65, 1978–79
Pecatonica River at Dill, WI	05434000	944	1914–19
Steiner Branch near Waldwick, WI	05433510	5.9	1978–79
Skinner Creek at Skinner Hollow Road near Monroe, WI	05434235	32.6	1978–81
Skinner Creek at Klondyke Road near Monroe, WI	05434240	35.0	1978–81
West Branch Sugar River near Mount Vernon, WI	05435980	32.7	1979–80
Mount Vernon Creek near Mount Vernon, WI	05436000	16.4	1954–65, 1976–80
ILLINOIS RIVER BASIN			
Fox River, at Watertown Road, near Waukesha	05543800	77.4	1992–2000
White River near Burlington, WI	05545300	110	1964–66, 1973–82
Unnamed Lauderdale Lakes Trib No. 2 near Lauderdale, WI	05544793	0.19	1999–2001
Birches Creek at Lackey Lane near Lake Geneva, WI	05545133	2.07	1997–2000

¹ No winter record in water year 1997

² No winter record in water years 1993 and 1994

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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The following daily- or continuous-record surface-water-quality stations were discontinued prior to the 2002 water year. Discontinued stations with less than 1 year of record or where data collection frequency was less than daily are not included. Some of the stations in the list are still in operation for purposes other than collection of daily or continuous water-quality data. Information regarding these stations may be obtained from the District Office at the address given on the back of the title page of this report.

[Type of record: T (water temperature), SC (specific conductance.), DO (dissolved-oxygen concentration), PH (pH), SED (daily sediment discharge), C (daily discharge of one or more chemical constituents)]

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record
STREAMS TRIBUTARY TO LAKE SUPERIOR				
Little Balsam Creek at Patzau, WI	04024314	5.00	SED	1976-78
Little Balsam Creek near Patzau, WI	04024315	4.57	SED	1976-78
Little Balsam Creek Tributary near Patzau, WI	04024318	0.64	SED	1976-78
Little Balsam Creek near Foxboro, WI	04024320	6.27	SED	1977-78
Nemadji River near South Superior, WI	04024430	420	SED	1974-78
North Fish Creek near Benoit, WI	04026346	36	SED	1990-91
Pine Creek at Moquah, WI	04026347	5.90	SED	1976-78
Pine Creek Tributary at Moquah, WI	04026348	0.57	SED	1976-78
Pine Creek near Moquah, WI	04026349	21.5	SED	1976-78
North Fish Creek near Moquah, WI	040263491	65.4	SED	1990-91
North Fish Creek near Ashland, WI	04026350	74.4	SED	1990-91
Bad River near Odanah, WI	04027000	597	T,SC	1976-78
White River near Mason, WI	04027080	--	T	1970-72
Sadjak Springs Trib to White River near Mason, WI	04027086	1.00	T	1970-72
Bad River at Odanah, WI	04027595	970	T,SC	1978-81
STREAMS TRIBUTARY TO LAKE MICHIGAN				
Escanaba River at mouth at Escanaba, MI	040590345	928	SED	1988-90
Popple River near Fence, WI	04063700	139	T	1964-80
Menominee River near McAllister, WI	04067500	3,930	T,SC	1979-80
			SED	1988-90
Menominee River at mouth at Marinette, WI	04067651	4,070	SED	1988-90
Peshtigo River at Peshtigo, WI	04069500	1,080	T	1989-90
			SED	1988-90
Peshtigo River at mouth near Peshtigo, WI	04069530	1,100	SED	1988-90
Oconto River near Oconto, WI	04071765	966	SED	1989-90
Oconto River at mouth at Oconto, WI	04071775	982	SED	1989-90
Duck Creek near Howard, WI	04072150	108	C	1992
Middle Branch Embarrass River near Wittenberg, WI	0407809265	76.3	T	1990-91
Parsons Creek, Upstream Site, near Fond du Lac, WI	04083420	5.3	T	1998-2001
			C	1997-99,2000-01
Parsons Creek, Middle Site, near Fond du Lac, WI	04083423	5.6	C	1997-99,2000-01
Parsons Creek, Downstream Site, near Fond du Lac, WI	04083425	5.7	T	1997-2001
			C	1997-99,2000-01
Fox River at Appleton, WI	04084445	5,950	T	1987-90
			SED	1986-90
Fox River at State Highway 55 at Kaukauna, WI	04084475	5,980	SED	1989-90
Fox River at Wrightstown, WI	04085000	6,050	T,SC	1975-81
Fox River at Little Rapids, WI	04085054	6,100	SED	1989-90
Fox River at De Pere, WI	04085059	6,110	SED	1989-90
Bower Creek at Sunnyview Road near De Pere, WI	04085118	4.82	SED,C	1985-86
Bower Creek at Highway MM near DePete, WI	04085119	14.8	T,C	1991-97 ²
East River at Monroe Street in Green Bay, WI	040851378	144.9	SED,C	1985-86
Fox River at mouth at Green Bay, WI	04085139	6,330	T,SC,DO,PH	1989-90
Manitowoc River at Manitowoc, WI	04085427	526	T,SC	1979-80
Cedar Lake near Kiel, WI	04085500	1.43	T	1974-77
Otter Creek #3A at County Highway J near Plymouth, WI	0408570045	9.10	C	1994-97 ²
Otter Creek at Laack Farm near Plymouth, WI	0408570047	9.16	C	1994-97 ²
Onion River at Hingham, WI	04085813	37.2	T,SC,SED	1979-80
			C	1980

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED				
Onion River near Sheboygan Falls, WI	04085845	94.1	T,SC,SED	1979-80
			C	1980
Parnell Creek near Dundee, WI	04086175	9.35	T	1997
Milwaukee River near Cedarburg, WI	04086600	607	SED	1982-84
Lincoln Creek at 47th Street at Milwaukee, WI	040869415	9.56	T	1993-97 ²
			DO	1994-97 ²
Milwaukee River at Milwaukee, WI	04087000	696	T,SC	1973-80 ²
			SED	1982-84
Milwaukee River above North Avenue Dam at Milwaukee, WI	04087010	702	SED	1982-84
Menomonee River at Germantown, WI	04087018	19	SED	1975-77
Jefferson Park Drain at Germantown, WI	04087019	1.82	SED	1977-78
Menomonee River at Menomonee Falls, WI	04087030	34.7	SED	1975-77, 1982-84
Menomonee River at Butler, WI	04087040	60.64	SED	1975-77
Little Menomonee River near Freistadt, WI	04087050	8.0	SED	1975-77
Noyes Creek at Milwaukee, WI	04087060	1.94	SED	1975-77
Little Menomonee River at Milwaukee, WI	04087070	19.7	SED	1975-77
Underwood Creek at Wauwatosa, WI	04087088	18.2	SED	1975-77
Honey Creek at Wauwatosa, WI	04087119	10.3	SED	1975-77
Menomonee River at Wauwatosa, WI	04087120	123	SED	1975-77, 1982-84
Schoonmaker Creek at Wauwatosa, WI	04087125	1.94	SED	1975-77
Hawley Road Storm Sewer at Wauwatosa, WI	04087130	1.83	SED	1975-77
Menomonee River at Milwaukee, WI	04087138	134	SED	1983-84
Menomonee River at Falk Corp at Milwaukee, WI	04087140	133.82	SED	1975-77, 1982
Kinnickinnic River at South 11th Street at Milwaukee, WI	04087159	20.2	SED	1983-84
ST. CROIX RIVER BASIN				
Round Lake near Gordon, WI	461342091561002	--	T	1981-85
Namekagon River at Leonards, WI	05331833	126	T,SC	1996-2001
St. Croix River at St. Croix Falls, WI	05340500	6,240	SC	1975-81
			SED	1982
Rice Creek near Balsam Lake, WI	05341375	12.5	C	1988-89
Balsam Branch at Balsam Lake, WI	05341402	52.8	C	1988-89
Deer Lake Tributary #1, Downstream Site, near Centuria, WI	05341405	0.38	T	1998,1999-2001
CHIPPEWA RIVER BASIN				
Duncan Creek Tributary near Tilden, WI	05364850	4.17	T,C,SED	1987-89
			DO	1987-88 ¹
Red Cedar River at Cty Trunk Highway D at Birchwood, WI	05367102	70.8	SED,C	2000-01
Sucker Creek at Loch Lamond Blvd near Birchwood, WI	05367154	12.3	SED,C	2000-01
Hemlock Creek near Mikana, WI	05367190	20.4	SED,C	2000-01
Red Cedar River at Mikana, WI	05367202	151	C	2000-01
Red Cedar River near Colfax, WI	05367500	1,090	C	1959, 1990
Hay River at Wheeler, WI	05368000	418	C	1959, 1990
Chippewa River at Durand, WI	05369500	9,010	T,SC	1975-81 ²
			SED	1974-79
Eau Galle River near Woodville, WI	05369900	39.4	T,SC	1978-83 ²
Eau Galle River at Low-Water Bridge at Spring Valley, WI	05369945	47.9	T	1982-83, 1987-93
			SC	1983
Eau Galle River at Spring Valley, WI	05370000	64.1	T,SC	1978-90
WAUMANDEE CREEK BASIN				
Joos Valley Creek near Fountain City, WI	05378183	5.89	T,C	1990-96
			DO	1990-92
Eagle Creek at County Highway G near Fountain City, WI	05378185	14.3	T,C	1990-96
			DO	1990-92
TREMPEALEAU RIVER BASIN				
Bruce Valley Creek near Pleasantville, WI	05379288	10.1	T,SC,SED,C	1980
Elk Creek near Independence, WI	05379305	108	T,SC,SED,C	1980
BLACK RIVER BASIN				
Black River near Galesville, WI	05382000	2,080	SED	1976-79

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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Station name	Station number ^r	Drainage area (mi ²)	Type of record	Period of record
WISCONSIN RIVER BASIN				
Lake Clara near Tomahawk, WI	453100089343002	0.46	T	1982–86
Little Rock Lake near Woodruff, WI	455946089415704	--	T	1984–87
Buena Vista Creek near Kellner, WI	05400853	53.1	T	1965–67
Tenmile Creek Ditch 5 near Bancroft, WI	05401020	9.73	T	1965–72
Dell Creek near Lake Delton, WI	05403700	44.9	T,SED	1958–65
Black Earth Creek at Cross Plains, WI	05406460	12.8	C,SED	1985–86
			T	1985–86, 1990–95
			DO	1984–86, 1989–95
Brewery Creek at Cross Plains, WI	05406470	10.5	SED	1985–86, 1990–98
			DO	1990–91
Black Earth Creek at Mills Street at Cross Plains, WI	05406476	25.5	T,DO	1990–95
Garfoot Creek near Cross Plains, WI	05406491	5.39	SED	1985–86, 1992–98
			DO	1984–85, 1990–98
			T,C	1985–86, 1990–98
Black Earth Creek at South Valley Rd near Black Earth, WI	05406497	40.6	T,DO	1990–98
Black Earth Creek at Black Earth, WI	05406500	45.6	T	1954–65, 1985–86
			DO	1986 ¹
			SED	1956–65, 1985–86
			C	1985–86
Trout Creek Confluence Arneson Creek near Barneveld, WI	05406573	8.37	T,SC	1976–79
Trout Creek at Twin Parks Dam 8 near Barneveld, WI	05406574	9.02	SED	1976–79
Trout Creek at CTH T near Barneveld, WI	05406575	12.1	T,SED	1976–78
Trout Creek near Ridgeway, WI	05406577	13.5	T,SED	1976–79
Wisconsin River at Muscodia, WI	05407000	10,400	T,SC	1975–80 ¹ , 1981
			SED	1975–79
Kickapoo River at Hwy 33 at Ontario, WI	05407470	117	T,SED	1973
Kickapoo River at Ontario, WI	05407500	150	T	1974–77
			SED	1973–77
Kickapoo River near Rockton, WI	05407920	260	T,SED	1972–77
Kickapoo River at LaFarge, WI	05408000	266	T,SC	1971–77
			SED	1972–77
North Fork Nederlo Creek at mouth near Gays Mills, WI	05409842	2.31	T	1970 ¹ , 1974–78
South Fork Nederlo Creek near Gays Mills, WI	05409860	4.11	T	1970 ¹ , 1974–78
Nederlo Creek at Utica Town Hall near Gays Mills, WI	05409870	6.70	T	1968–78
GRANT RIVER BASIN				
Kuenster Creek at Muskellunge Road near North Andover, WI	054134435	9.59	T,DO	1992–96
			C	1993–96
Rattlesnake Creek near North Andover, WI	05413449	42.4	T,DO	1987–96
			C	1992–94
GALENA RIVER BASIN				
Little Platte River near Platteville, WI	05414213	79.7	T	1987–90
			DO	1987–90 ¹
Sinsinawa River near Hazel Green, WI	05414800	24.9	T	1987–90
			DO	1987–90 ¹
Pats Creek near Belmont, WI	05414894	5.42	T,SC,C	1981–82
			DO	1982 ¹
Madden Branch Tributary near Belmont, WI	05414915	2.83	T,SC,C	1981–82
			DO	1981 ¹
Madden Branch near Meekers Grove, WI	05414920	15.06	T,SC,C	1981–82
			DO	1981–82 ¹
			PH	1982 ¹
APPLE RIVER BASIN				
Apple River near Shullsburg, WI	05418731	9.34	T,SC,C	1981–82
			DO	1981 ¹
ROCK RIVER BASIN				
Rubison River near Slinger, WI	05424095	7.79	C	1998–2000
Rubison River at Pike Lake Outlet near Hartford, WI	054240957	12.31	C	1998–2000
Crawfish River at Milford, WI	05426000	762	SED	1980–82

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

Station name	Station number ¹	Drainage area (mi ²)	Type of record	Period of record
ROCK RIVER BASIN--CONTINUED				
Rock River at Indianford, WI	05427570	2,630	T	1975-78
			SC,DO,PH	1976-78
South Fork Pheasant Branch at Hwy 14 near Middleton, WI	05427945	5.74	SED	1978-81
Pheasant Branch at Centruy Avenue at Middleton, WI	05427950	20.8	SED	1978-81
Pheasant Branch at mouth at Middleton, WI	05427952	24.5	SED	1978-81
Willow Creek at Madison, WI	05427970	3.15	SED	1973-84
Rock River at Afton, WI	05430500	3,340	T	1955-83
Jackson Creek at Petrie Road near Elkhorn, WI	05431014	8.96	C,SED	1984-85 1993-95
Delavan Lake Trib at South Shore Drive at Delavan, WI	05431018	9.99	SED,C	1984-85, 1990-91
Livingston Branch Pecatonica River near Livingston, WI	05432055	16.4	T	1987-91
			DO	1987-91 ¹
Yellowstone River near Blanchardville, WI	05433500	28.5	T	1954-60
			SED	1958-60, 1978-79
Steiner Branch near Waldwick, WI	05433510	5.90	T,SC,SED,C	1978-79
Pecatonica River at Martintown, WI	05434500	1,034	SED	1980-82
Mount Vernon Creek near Mount Vernon, WI	05436000	16.4	T	1954-60
			SED	1956-60
Sugar River near Brodhead, WI	05436500	523	SED	1978-86
ILLINOIS RIVER BASIN				
Birches Creek at Lackey Lane near Lake Geneva, WI	05545133	2.07	T	1998-2000
			SED,C	1997-1999
Powers Lake Tributary at Powers Lake, WI	05548163	1.83	C	1987

¹ Seasonal record, non-freezing periods² Numerous periods of missing record³ Station currently in operation for constituents(s) not listed here

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with local, State and Federal agencies, obtains a large amount of data pertaining to the water resources of Wisconsin each year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the state. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Wisconsin." Lake stage and in-lake water-quality data previously published in this series are now published annually in a report series "Water-Quality and Lake-Stage Data for Wisconsin Lakes." This Open-File Report series began in 1994; 2002 water year data for lakes are published in Open-File Report 03-99.

Water-resources data for Wisconsin for the 2002 water year includes records of streamflow at gaging stations, partial-record stations, and miscellaneous sites; stage and contents of lakes and reservoirs; chemical, physical, and biological characteristics of surface and ground water; and water levels in observation wells. Records from several stations in bordering states are also included. This report contains discharge records from 169 gaging stations and peak stage and discharge from 85 crest-stage stations; stage for 8 lakes and contents for 24 reservoirs; water-quality data from 41 streams and from 2 lakes; precipitation from 16 sites; and water-level records from 42 observation wells. Additional water data were collected at various sites not involved in the systematic data-collection program, and are published in this report as miscellaneous measurements.

This series of annual reports for Wisconsin began in the 1961 water year with streamflow data, the 1964 water year with water-quality data, and the 1971 water year with ground-water data. Beginning with the 1975 water year, streamflow, water-quality, and ground-water data for each state were published in present format. These annual reports are for sale, in paper copy or microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Wisconsin were published in U.S. Geological Survey Water-Supply Papers. Records of stream discharges and of water levels in lakes and reservoirs were published annually through 1960 and then for the 5-year periods 1961-65 and 1966-70 in the series "Surface-Water Supply of the United States". Chemical-quality, water-temperature, and suspended-sediment data were published annually, from 1941 to 1970, in the series "Quality of Surface Waters of the United States." Records of ground-water levels were published annually from 1935 to 1974, in the series "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Box 25425, Federal Center, Denver, CO 80225.

Publications similar to this report are published annually by the Geological Survey for all states. These official Survey reports have an identification number consisting of the two-letter state abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report WI-02-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

Additional information, including current prices for ordering specific reports, may be obtained from the District Chief at the address given on the back of the title page, or by telephone (608)828-9901.

Water-resources data, including stage and discharge data at most streamflow-gaging stations, water levels in selected wells, and some water-quality data, are available through the World Wide Web on the Internet. Current and historical data provided in water-data reports are available. The Universal Resource Locator (URL) to the Wisconsin District's home page is: <http://wi.water.usgs.gov/>. Information on all U.S. Geological Survey reports and products (including maps, images, and computerized data) is available by calling **1-888-ASK-USGS**. Additional earth science information is available by accessing the U.S. Geological Survey Home Page at <http://www.usgs.gov>.

COOPERATION

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

Wisconsin Department of Natural Resources, Darrell Bazzel, secretary.

Southeastern Wisconsin Regional Planning Commission, Phillip Evenson, executive director.

Milwaukee Metropolitan Sewerage District

Waukesha County

City of Racine

Kenosha Water Utility

U.S. Army Corps of Engineers.

Wisconsin Department of Transportation, Harold Amundson, chief bridge engineer.

The University of Wisconsin-Extension, Geological and Natural History Survey, James Robertson, state geologist and director.

Dane County Department of Planning and Development, Jeanie Sieling, director.

Dane County Regional Planning Commission, Bill Lane, acting executive director.

City of Madison, Susan Bauman, mayor.

City of Middleton, Dan Ramsey, mayor.

City of Beaver Dam, Robert Sackett, utilities superintendent.

City of Thorp, Roger Hoffman, mayor.
 Madison Metropolitan Sewerage District, Jon Schellpfeffer, chief engineer and director.
 Milwaukee Metropolitan Sewerage District, Ralph Hollman, acting executive director.
 Green Bay Metropolitan Sewerage District, Paul E. Thormodsgard, general manager.
 City of Hillsboro, Greg Kubarski, mayor.
 Illinois Department of Transportation, Melvin Allison, chief, bureau of planning.
 City of Waupun, Dennis Westhuis, manager, public utilities.
 City of Peshtigo, J. F. Dale Berman, mayor.
 Rock County Public Works Department, Thomas G. Kautz, parks and conservation director.
 Village of Wittenberg, Joe Yaeger, president.
 Menominee Indian Tribe of Wisconsin, Betty Jo Wozniak, administrator.
 Oneida Indian Tribe of Wisconsin, Jennifer Hill-Kelley, environmental department.
 Town of Delavan, Wayne Polzon, town chairman.
 Green Lake Sanitary District, Charlie Marks, administrator.
 City of Fond du Lac, Mark O. Lentz, city engineer.
 City of Barron, Rod Peterson, superintendent of utilities.
 Lac du Flambeau Band of Lake Superior Chippewa, Henry St. Germaine, tribal president.
 Stockbridge/Munsee Indian Tribe, Robert Chicks, tribal President.
 Sokaogon Chippewa Community, Mole Lake Band
 City of Sparta, Mark Flock, wastewater plant manager.
 City of Black River Falls, Loren Radcliffe.
 Fontana/Walworth Water Pollution Control Commission, Dean M. Donner, superintendent.
 Bad River Band of Lake Superior Chippewa Indians, Donald Moore, tribal chairman.
 Walworth County Metropolitan Sewerage District, Joseph S. Canestra, administrator.
 City of Muskego, David DeAngelis, mayor.
 Department of Agriculture, Trade and Consumer Protection, Ben Brancel, secretary.
 Milwaukee County, Greg Failey, airport environmental compliance manager.
 Kickapoo Valley Reserve, Marcy West, executive director.
 City of Fort Atkinson, Paul Christenson.
 Wisconsin Historical Society, Wade House Historic Site
 Federal Energy Regulatory Commission Licensees
 Appleton Papers
 Consolidated Paper Company
 Dairyland Power Cooperative
 Northern States Power Company
 Wisconsin Electric Power Company
 Wisconsin Public Service Corporation
 Wisconsin Valley Improvement Company

The following organizations aided in collecting streamflow records: Wisconsin Valley Improvement Co., Wisconsin Public Service Corp., Northern States Power Co., Dairyland Power Cooperative, Wisconsin Electric Power Co., Scott Paper Co., Milwaukee County Park Commission, and Niagara of Wisconsin Paper Corp. Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

The statewide average precipitation for the 2002 water year was 36.22 inches, which was 3.59 inches greater than the normal annual precipitation of 32.64 inches for water years 1971-2000. Average precipitation values affecting streamflow conditions ranged from 93 percent in south-central Wisconsin to 127 percent in north-central Wisconsin with a statewide average of 111 percent (summary tables provided by Ed Hopkins, State Climatology Office, University of Wisconsin, Madison, written commun., 2003).

The year started out with close to normal precipitation for all regions of the state from October through December. The only exception to this was the southeast region of the state, which had precipitation over 150% of the 1970-2000 normal in October and lower than normal precipitation for November and December. Statewide precipitation in January was only 47% of normal but in February, precipitation was 186% of normal. The February precipitation was especially high in the northern, west central and central regions of the state. In March the central regions of the state had close to normal precipitation, the southern regions were dry (77% of normal) and the northern regions were wet (144% of normal). In April, the northern regions of the state were again wetter than normal (184%) particularly the north central region, the central regions were moderately wetter than normal (133%) and the southern regions were slightly wetter than normal (114%). In May, precipitation in the northern part of the state was about normal, slightly below normal (86%) in the southern part and about 70 percent of normal in the central and west central regions. All regions of the state had above normal precipitation in June with the central (176%) and west central (203%) regions well above normal. In July the northern regions of the state had about normal to slightly above normal precipitation while the central and southern portions of the state were slightly dry (west central 85%) to very dry (south central 51%). August precipitation totals were close to normal for most of the state. In September, the northwest and north central parts of the state were above normal, the east central part of the state was below normal and the rest of the state was close to normal.

Runoff for rivers in the state ranged from 74 percent of the average annual runoff (1964-2002) at the Kewaunee River station in the north-east part of the state to 172 percent of the average annual runoff (1914-1925 and 1937-2002) at the Big Eau Pleine station near Stratford in the central part of the state. Runoff in the 2002 water year for stations with drainage areas greater than 150 square miles and at least 20 years of record is shown in figure 1.

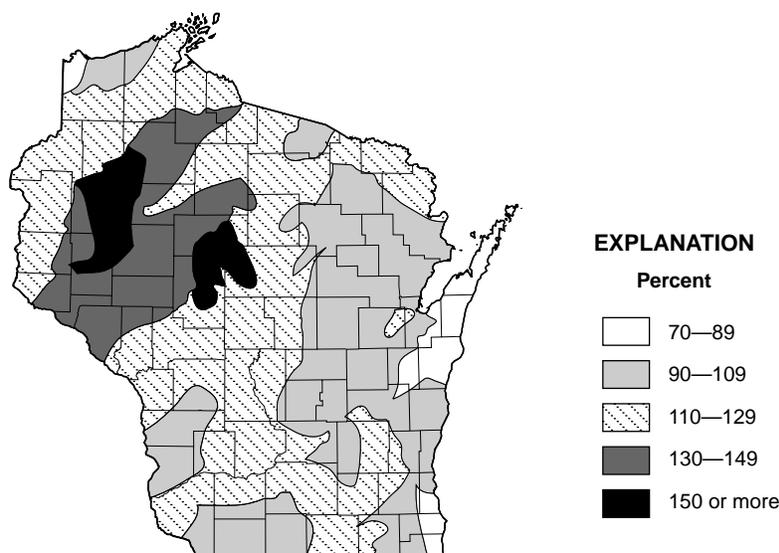


Figure 1. 2002 runoff as percentage of long-term average runoff.

Annual discharges for the individual water years (1916-2002) at the Oconto River near Gillett, Jump River at Sheldon, and Sugar River near Brodhead are shown in Figure 2. Comparisons between the monthly and annual discharges for the 2002 water year and an 85-year period at the same three gaging stations are shown in Figure 3.

Few stations experienced extreme low flows. Low flows occurred at only 2 gaging stations where the annual minimum 7-consecutive day average flows (Q7) had recurrence intervals of 5 or more years. The Q7 values, the date of occurrence and the recurrence intervals of these stations are listed in table 1 below. An additional 18 stations had Q7 recurrence intervals that were between 2 and 5 years.

Station number	Station name	Date	Q7 (ft ³ /s)	Recurrence interval (years)
05360500	Flambeau River near Bruce	Oct. 3	548	5
05544200	Mukwonago River at Mukwonago	July 17	10	8

Beginning about April 12, 2002, and lasting about a week and a half, record high temperatures reaching the mid-to upper eighties by April 16 caused rapid snowmelt and some flooding over much of the northern part of the state (Milwaukee Journal Sentinel 4/19/02). The following rivers had flood crests of note:

- The Pine River near Florence recorded the highest peak flow on record (59 years), with an estimated 135-year recurrence interval.
- The Menominee River at Niagara recorded the highest peak flow on record (11 years), with an estimated 15-year recurrence interval.
- The Montreal River near Saxon recorded a peak flow with an estimated 90-year recurrence interval.
- The Popple River near Fence recorded a peak flow with an estimated 50-year recurrence interval.
- The Yellow River near Barron recorded a peak flow with an estimated 15-year recurrence interval.

Other than the spring flooding, water year 2002 had only a few instances of localized flooding. During the late hours of June 3 and the early morning of June 4, heavy rains hit southwest Wisconsin with up to 5 inches being reported in the Cassville and Richland Center areas causing localized flash flooding and the Grant River at Burton rose above flood stage. Between June 21 and 25 parts of central Wisconsin reported between 5 and 10 inches of precipitation, producing localized flooding (Wisconsin State Journal 7/6/2002). Ten Mile Creek in Nekoosa had about a 25-year flood in response to this precipitation. Seven central Wisconsin counties shared \$472,438 in federal aid for damages caused by the flooding (Wisconsin State Journal 10/5/2002). On August 12, localized heavy rains of over 7 inches were reported in parts of Waukesha County with nearby Milwaukee County receiving about 2 inches causing flooding.

WATER RESOURCES DATA - WISCONSIN, 2002

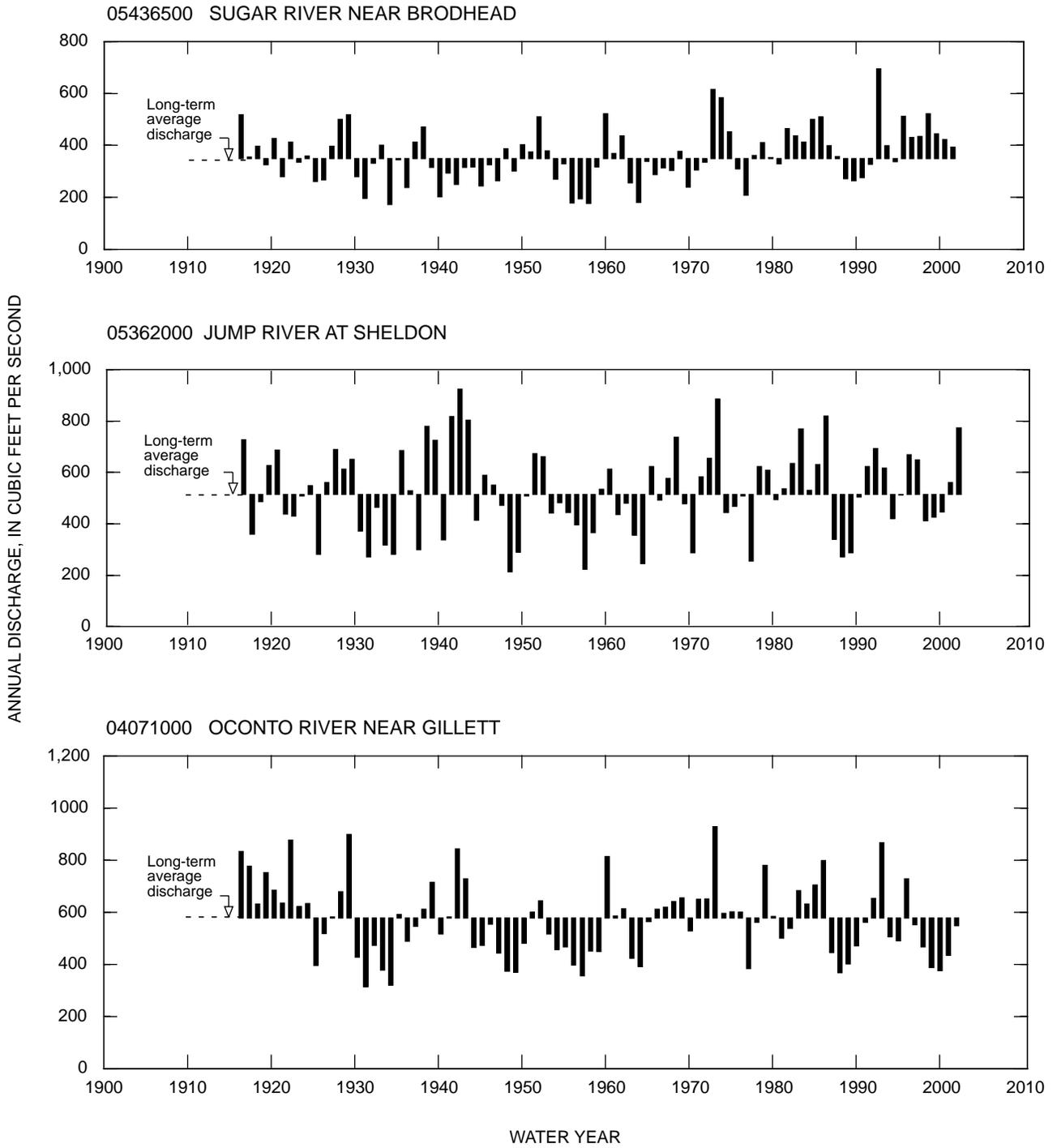
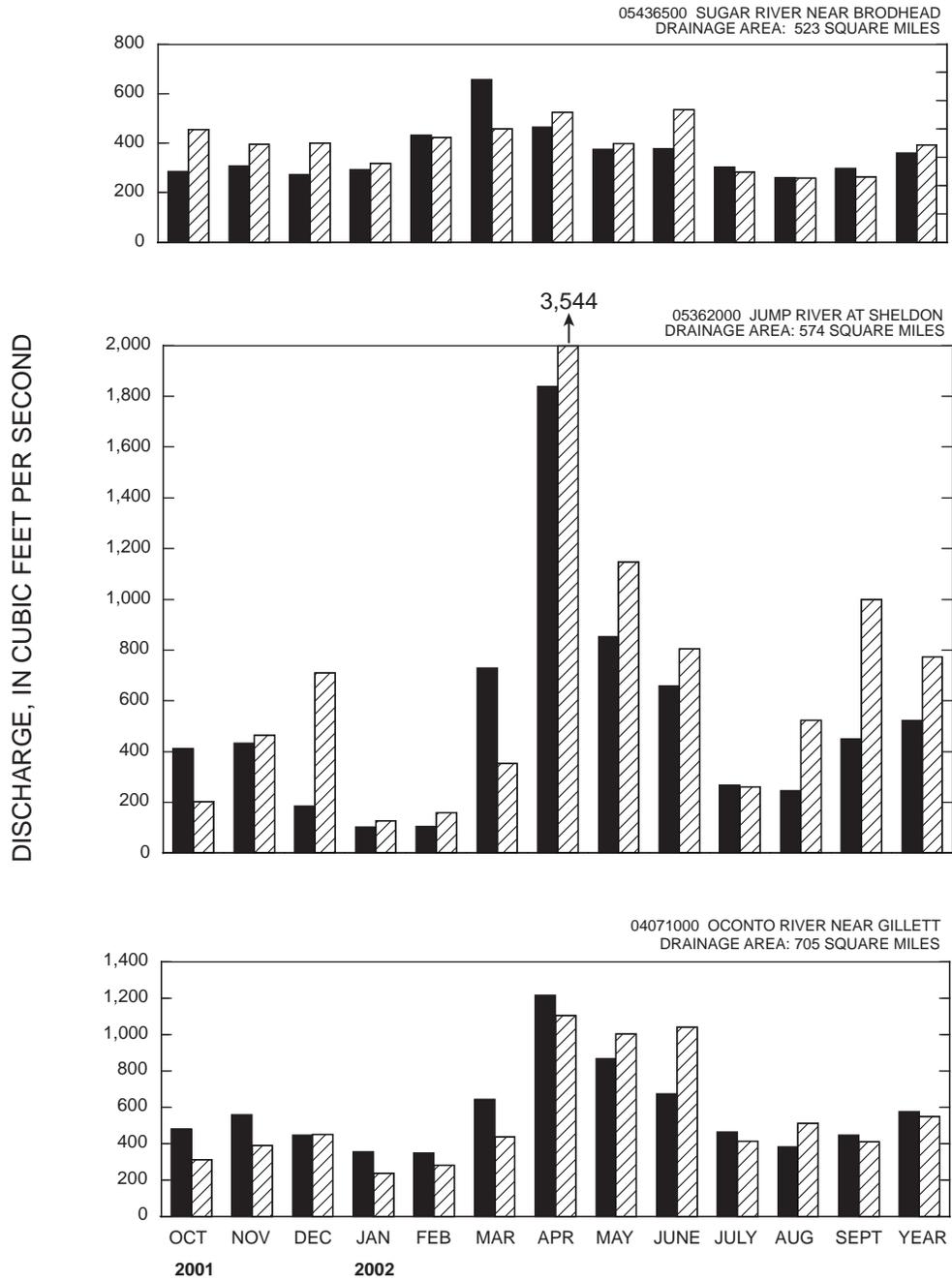


Figure 2. Comparison of annual discharge at representative gaging stations to their long-term average discharge for water years 1916 —2002.



EXPLANATION

- Long-term average monthly and long-term average annual discharge for 1916–2002
- Monthly and annual discharge for 2002 water year

Figure 3. Comparison of discharge at representative gaging stations during 2002 water year with discharge for 1916–2002.

WATER RESOURCES DATA - WISCONSIN, 2002

Stations that recorded a peak discharge that equaled or exceeded the 5-year recurrence interval are listed in table 2 below. Recurrence interval statistics calculated with data through 2000 unless otherwise indicated (* mean daily discharge; **recurrence interval statistics updated with data through water year 2002).

Station number	Station name	Drainage area (mi ²)	Date	Instantaneous peak discharge (ft ³ /s)	Peak of record (yes/no)	Recurrence interval (years)
04025200	Pearson Creek near Maple	4.07	Apr. 11	765	n	8
04025500	Bois Brule River at Brule	118	Apr. 14	1010	n	10
04026450	Bad River near Mellen	82	Apr. 16	2,630	y	90
04027000	Bad River near Odanah	597	Apr. 15	14700	n	15
04027200	Pearl Creek at Grandview	16.9	Apr. 11	417	n	15
04029990	Montreal River at Saxon Falls	262	Apr. 16, 17	8840*	n	90
04063640	North Branch Pine River at Windsor Dam near Alvin	27.8	Apr. 13	121	n	20
04063700	Popple River near Fence	139	Apr. 19	1560	n	50
04064500	Pine River near Florence	533	Apr. 19	4850	y	135
04065106	Menominee River at Niagara	2470	Apr. 18	18900	y	15**
04066003	Menominee River near Pembine	3140	Apr. 19	22300	n	10
04066800	Menominee River at Koss	3700	Apr. 20	23300	n	17
04067500	Menominee River near McAllister	3930	Apr. 20	23600	n	10
04067760	Peshtigo River near Cavour	150	Apr. 19	1,320	y	10
04087100	Honey Creek at Milwaukee	3.26	Aug. 13	2,290	y	500
05332500	Namekagon River near Trego	488	Apr. 14	2420*	n	12
05333500	St. Croix River near Danbury	1580	Apr. 14	7470	n	10
05356000	Chippewa River near Winter	790	Apr. 20, 22	6380	n	19
05356500	Chippewa River near Bruce	1650	Apr. 13	17700	n	15
05357245	Trout River near Boulder Jct	46.2	May. 8	101	y	30**
05357360	Bear River near Powell	120	May. 11	799	n	20
05359600	Price Creek near Phillips	16.9	Apr. 11	257	n	9
05360500	Flambeau River near Bruce	1860	Apr. 15	17400	n	20**
05361420	Douglas Creek near Prentice	25.2	Apr. 11	1,120	n	20
05362000	Jump River at Sheldon	576	Apr. 12	15300	n	10
05365500	Chippewa River at Chippewa Falls	5650	Apr. 14	62200	n	10
053674464	Yellow River at Barron	153	Apr. 12	1930	n	15**
05369500	Chippewa River at Durand	9010	Apr. 15	76100	n	10
05391260	Gudegast Creek near Starks	14	Apr. 19	126	n	40
05392350	Bearskin Creek near Harshaw	31.1	Apr. 12	113	n	9
05393500	Spirit River at Spirit Falls	81.6	Apr. 12	3030	n	25
05401050	Tenmile Creek near Nekoosa	73.3	Jun. 23	358	n	25

References:

- Hopkins, E., Wisconsin State Climatology Office, written communication, 2003, -- Wisconsin rainfall statistics for water year 2002.
- Krug, W.R., Conger, D.H., and Gebert, W.A., 1991, Flood-frequency Characteristics of Wisconsin Streams: U.S. Geological Survey Water Resources Investigations Report 91-4128, 185 p.
- Walker, J.F. U.S. Geological Survey, written communication, 2003, -- updated flood-frequency characteristics of Wisconsin streams through 2000
- Walker, J.F. U.S. Geological Survey, written communication, 2003, -- updated flood-frequency characteristics of selected Wisconsin streams through 2002
- Milwaukee Journal Sentinel, Storm causes power loss, house fire: April 19, 2002.
- , Storm unleashes torrent, causing flash flooding: August 13, 2002.
- Wisconsin Agricultural Statistics Service, 2001, Wisconsin Crop Weather – Review of the 2002 Crop Year: U.S. Department of Agriculture, Wisconsin Agricultural Statistics Service, Madison, Wis., 8 p.
- Wisconsin Agricultural Statistics Service, 2002, Wisconsin Crop Weather – Review of the 2002 Crop Year: U.S. Department of Agriculture, Wisconsin Agricultural Statistics Service, Madison, Wis., 8 p.
- Wisconsin State Journal, Floods damage Cassville homes: June 5, 2002.
- , Heavy rain falls in city: August 13, 2002.
- , Counties to get aid for storms, flooding, October 5, 2002.

Water Quality

Suspended-sediment yields from four watersheds in southern Wisconsin in water year 2002 ranged from 27 to 201 percent of normal, as indicated by loads measured at relatively long-term monitoring sites on these four watersheds. Sediment yields at Grant River in southwestern Wisconsin and Yahara River at Windsor in south-central Wisconsin were 201 and 27 percent of normal, respectively. One large storm in southwestern Wisconsin on June 4 and 5 accounted for about 74 percent of the total annual load at Grant River. Yields at Jackson Creek Tributary near Elkhorn in southeastern Wisconsin and Green Lake Inlet near Green Lake were each 74 percent of normal.

Phosphorus yields in water year 2002 from three watershed in southern Wisconsin, on which there are long-term monitoring sites, ranged from 33 to 68 percent of normal. The phosphorus yield for Yahara River at Windsor was 33 percent of normal, the yield for Jackson Creek Tributary was 59 percent of normal, and the yield for Green Lake Inlet was 68 percent of normal.

Ground-Water Levels

In general, shallow ground-water levels during the 2002 water year were normal to above normal for most of the wells in the State. Wells in Dane, Dodge, and Fond du Lac Counties had below normal ground-water levels at the beginning of the water year, and these levels remained below normal for the entire water year. The large extent of normal and above-normal ground-water levels can be attributed to near normal rainfall during the 2002 water year and normal rainfall during the previous water year.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the affects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program can be found at <http://water.usgs.gov/hbn/>.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations were operated in the Mississippi, Columbia, Colorado, and Rio Grande. From 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program can be found at <http://water.usgs.gov/nasqan/>.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 225 precipitation chemistry monitoring sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as all data from the individual sites, can be found at <http://bqs.usgs.gov/acidrain/>.

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 59 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program can be found at http://water.usgs.gov/nawqa/nawqa_home.html.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are from the 2002 water year that began October 1, 2001, and ended September 30, 2002. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data; stage and content data for lakes and reservoirs; precipitation data; surface and ground water; and ground-water-level data. Figure 4 shows major surface-water drainage basins and an index of hydrologic records. The locations of the stations and wells where the data were collected are shown in basin location maps and figure 5.

The following sections of introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

In this report each data station, whether streamsite or well, is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order number" is used for most surface-water stations on streams and a unique 15-digit number is used for lakes, wells, and precipitation monitoring sites.

Downstream Order and Station Number

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. No station-number distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight- to ten-digit number for each station, such as 04087000, 054310157, or 0407809265, which appears just to the left of the station name, includes the two-digit Part number "04" or "05" plus the six- to eight-digit downstream-order number ("087000", "4310157", or "07809265"). The Part number designates the major river basin; for example, records in this report are in Part 04 (St. Lawrence River basin) or Part 05 (Upper Mississippi River basin).

In some special cases, stations on streams may be identified with the numbering system used for ground-water and lake-data sites described in the following paragraph. This is generally done only for special purpose short-term stations where station density precludes convenient assignment of downstream order numbers.

Numbering System for Ground-Water, Lake, and Precipitation Data Sites

Wells, springs, sites on lakes, and precipitation gages where data are collected are identified by a unique 15-digit number that is a concatenation of the site's latitude, longitude, and a two-digit sequence number. The sequence number is used to distinguish between sites located at the same latitude-longitude designation. The site identification number is permanently assigned to the site; actual latitude and longitude of the site are subject to update and are stored separately. Each ground-water site is also identified by a local number based on the cadastral-survey system of the U.S. Government. The number consists of an abbreviation of the county name, the township, range and section, and a four-digit number assigned to the well.

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained from a continuous stage-recording device by which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained from a continuous stage-recording device, but need not be. Because daily mean discharges are commonly published for such stations, they are referred to as "daily stations." By contrast, partial records consist of discrete measurements, without using a continuous stage-recording device. Two types of surface-water partial-record stations are operated: (1) crest-stage partial-record stations, for which maximum discharge is recorded; and (2) miscellaneous stations, for which periodic discharge measurements and/or limited water-quality analyses are made. Each type of station is presented separately in this report.

Data Collection and Computation

The basic data collected at complete-record gaging stations include stage and discharge measurements of streams, and stage, surface area, and content measurements of lakes and reservoirs. Factors affecting stage-discharge relationships, weather records, and other information supplement the basic data used to determine daily flow. Records of stage are obtained by reading a non-recording gage, from a continuous graph, from a tape punched at selected intervals on a water-stage recorder, or from electronic data logger. Measurements of discharge are made with a current meter by using methods described in "U.S. Geological Survey Techniques of Water Resources Investigations" listed in "Publications on techniques of water-resources investigations."

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

The slope method is used to compute discharge at stream-gaging stations where backwater from lakes or reservoirs, tributary streams, or other sources affect the stage-discharge relationship. Acoustic velocity meters have also been installed at some locations where aforementioned problems occur. The rate of change of stage is used to compute discharge at stations where the stage-discharge relationship is affected by rapid changes in stage. When ice conditions at stream-gaging stations affect the stage-discharge relationship, gage-height records, winter discharge measurements, temperature and precipitation data, and comparable records of discharge for nearby stations are used to compute discharge. At gaging stations where gage-height records are faulty or non-existent for some periods, the daily discharges are estimated based on the recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for nearby stations.

Descriptions of the stations and tabulations of data are included in this report. A table showing daily, monthly, and yearly discharges is given for each gaging station on a stream or canal. A table showing the monthly summary of stage is given for gaging stations on lakes.

Data Presentation

Streamflow data in this report are presented in a format that is considerably different from the format in data reports prior to the 1992 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or stations manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consists of four parts: the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

Station manuscripts

The manuscript provides, under various headings, descriptive information such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages were provided by the U.S. Army Corps of Engineers or other agencies.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of map available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation when the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. All the reports in which revisions have been published for the station and the water years to which the revisions apply are listed under this heading. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to sea level (see definition of terms), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations, or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify an estimated record, this information will be presented as the first entry of the paragraph. The paragraph is also used to present information about the accuracy of the records, special methods of computation, conditions that affect natural flow at the station and any other pertinent items.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.--Information concerning major floods or unusually low flows that occurred outside the stated period of record is included here. The information may or may not have been obtained by the U.S. Geological Survey.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although it is rare, occasionally the records of a discontinued gaging station may need revision. Because there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations, who obtained the record from previously published data reports, may wish to contact the District office to determine if the published records were ever revised after the station was discontinued. If the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

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

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. The RATING TABLE heading has also been deleted. No changes have been made to the data presentation of lake contents.

Data table of daily mean values

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

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS _____ - _____, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period as appropriate. The designated period selected, "WATER YEARS _____ - _____," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (see line headings below), except for the "ANNUAL" 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

MAXIMUM PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

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

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

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that is exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded 90 percent of the time for the designated period.

Data collected at crest-stage partial-record stations are given in a table of annual maximum stages and discharges that follows the information for continuous-record sites. The crest-stage partial-record stations table is followed by a list of discharge measurements made at sites other than continuous-record or partial-record stations. 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 special reasons are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values are identified by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records 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 measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true value; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to the nearest whole number between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

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

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Wisconsin District office. Also, most of the daily mean discharges are in computer-readable form and have been statistically analyzed. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

Records of Surface-Water Quality

Records of stream-water quality ordinarily are obtained at or near streamgaging stations, because interpretation of records of stream-water quality nearly always requires corresponding stream discharge data. The stream discharge shown with a water-quality analysis is the instantaneous value corresponding to the time of sample collection ("Streamflow, Instantaneous") whenever possible. When an instantaneous discharge value is not available, the daily mean discharge ("Discharge, in Cubic Feet per Second") is given if available. Water samples from lakes are collected at locations identified by latitude and longitude; the depth at which the sample was collected is given with each analysis. Records of surface-water quality in this report include a variety of types of data and measurement frequencies.

Classification and Arrangement of Records

The water-quality data collected at surface-water sites fall into two general classifications. Continuous-record stations are sites where data are collected on a regularly scheduled basis as part of a monitoring program or interpretive investigation. Water-quality records for these stations accompany stream-discharge or lake-stage records, where available, in the Surface Water Records section of this report. More limited water-quality data are collected at gaging stations and other sites on streams. These data include measurements of water temperature and specific conductance made at gaging stations and water-quality analyses of samples collected at gaging stations and other sites on streams for reconnaissance and other special purposes. These data are presented separately at the end of the Surface-Water Records section.

On-site Measurements and Sample Collection

In obtaining water-quality data, care is taken to assure that the data obtained represent the quality of the water at the time of sampling. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen concentration, are made on site when the samples are taken. To assure that measurements made in the laboratory also reflect the original quality of the water, prescribed procedures are followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on-site measurements and for collecting, treating, and shipping samples are detailed in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These references are listed in the PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS section of this report. These methods are consistent with ASTM standards and generally follow ISO standards.

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections using depth-integrating samplers to obtain a representative sample needed for an accurate mean concentration and for use in calculating the discharge of suspended and dissolved materials. Water quality in lakes may differ with depth and laterally at a particular depth depending on thermal stratification and other physical and biological factors.

Water-quality data published in this report are considered to be representative values for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis.

For chemical-quality stations equipped with digital monitors, daily maximum, minimum, and mean values for each constituent or property are computed and reported herein. Records of recorded values used in the computations are on file at the U.S. Geological Survey (USGS) Wisconsin District Office.

Transport of suspended and dissolved materials

Samples used for computing discharge of suspended and dissolved materials (suspended sediment, suspended solids, phosphorus, and nitrogen) are collected using a number of sampling methods. Sample types include flow-integrated samples collected using a depth-integrating sampler at multiple locations in a stream cross section (equal-width increment or EWI samples), samples collected using depth-integrating sampler at a single location in a cross section, or point samples collected by an automated sampler from a single point in a cross section. Coefficients are used to compensate for concentration differences between flow-integrated samples and samples collected at single points or single locations.

Samples are collected more frequently during periods of rapidly-changing stream discharge than during stable periods. Discharges of suspended and dissolved materials for days of rapidly-changing stream discharge are computed by the subdivided day (time-discharge weighted average) method. Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3 listed in PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS. These methods are consistent with ASTM standards and generally follow ISO standards. For periods when no samples were collected, discharges of suspended and dissolved material are estimated from stream discharge and constituent concentrations from adjacent time periods and periods with similar stream discharges. Suspended-sediment and suspended-solids discharges of less than 0.005 tons/day are reported as 0.00 tons/day, and phosphorus and nitrogen discharges of less than 0.005 pounds per day (lb/day) are reported as 0.00 lb/day.

In addition to the records of suspended-sediment discharge and concentration, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Samples for suspended-sediment concentration and particle-size determination are analyzed by the USGS Iowa District Sediment Laboratory. Chemical analyses, other than field measurements, are done by the USGS National Water Quality Laboratory unless indicated otherwise in the descriptive heading for the station. Methods used by USGS laboratories to analyze water and sediment samples and to compute sediment records are described in the TWRI Book 5, Chapter C1. Methods used by the U.S. Geological Survey laboratories are given in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

In March 1989, the USGS National Water-Quality Laboratory discovered a bias in their turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and July 1989. The magnitude of the bias differs among stations.

A problem has been identified with total phosphorus and total Kjeldahl nitrogen analyses done by the USGS National Water Quality Laboratory prior to Oct. 1, 1991. Some time after 1975, an error was introduced during a rewrite of the laboratory method for digestion of samples for total phosphorus or total Kjeldahl nitrogen analyses. The error resulted in incomplete digestion of samples causing a negative bias in the total phosphorus and total Kjeldahl nitrogen concentrations reported for many samples. The amount of bias is variable, but it generally increases with increasing concentrations of particulate phosphorus, suspended sediment, or organic carbon in the sample. In the absence of split-sample data, there is no scientifically defensible way to correct for the bias. Total phosphorus loads calculated using concentration data for samples analyzed prior to October 1991 may also have a sizeable negative bias. A new digestion procedure was implemented effective Oct. 1, 1991, that eliminated the bias.

Dissolved Trace-Element Concentrations

Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ($\mu\text{g/L}$) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the $\mu\text{g/L}$ level should be reviewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994. Full implementation of the protocols took place during the 1995 water year.

Sampling Method Codes

Water-quality analyses stored in USGS computer files (WATSTORE) contains codes that identify the sampling method used to collect the sample. Codes in use for Wisconsin data are as follows:

<u>Method</u>	<u>Method Code</u>
Equal Width Increment (EWI)	10
Equal Discharge Increment (EDI)	20
Single Vertical	30
Multiple Vertical	40
Point Sample	50
Weighted Bottle	60
Grab Sample	70
Van Dorn Sampler	100
Submersible Pump	4040
Peristaltic Pump	4080

Collecting and Analyzing Agencies

All water-quality analyses stored in USGS computer files (WATSTORE) contain codes that identify the agencies that collected the sample (collecting agency) and analyzed it (analyzing agency). Codes in use for Wisconsin data are as follows:

<u>Agency</u>	<u>Agency Code</u>
U.S. Geological Survey	1028
U.S. Geological Survey, National Water- Quality Laboratory	80020
Wisconsin State Laboratory of Hygiene	85543
Wisconsin Department of Natural Resources	85545

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, laboratories (if other than USGS), cooperation, and extremes for daily discharges of suspended and dissolved materials. For each station, tables of data collected at less-than-daily frequency are presented first followed by tables of daily values.

The concentrations of some constituents are given as less than a particular value (see "Remark Codes"); that value is the detection for the analytical method used for the analysis. Occasionally these values differ, or an actual concentration is given that is less than a higher detection limit indicated for the constituent in another analysis. These differences are due to differences in analytical methods.

The five-digit numbers in parentheses in column headings in many of the water-quality tables are codes that identify the constituent or property in USGS computer files (WATSTORE).

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of constituents or properties measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for each constituent or property.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature recorder, automated sediment sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records. Laboratories other than USGS laboratories are identified.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximum and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of USGS water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates or check with the District Office to determine if updates were made.

The surface-water-quality records for water-quality partial-record stations are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E, e	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
M	Presence of material verified but not quantified
U	Material specifically analyzed but not detected
V	Analyte was detected in both the environmental and the associated blanks

Records of Ground-Water Levels

Water-level data for 42 wells are given in this report. The locations of these wells are shown in figure 5. These wells are part of a national network of observation wells, and the water-level data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers.

Data in this report represent natural water-table and artesian conditions in the principal aquifers of the State, except in the sandstone aquifer in southeastern Wisconsin where heavy municipal and industrial pumping is causing a continual decline in the water level. Water in this aquifer is under artesian pressure where confined by the overlying Maquoketa Shale.

Although records of water levels for 42 wells are presented in this report, water-level data are currently being collected for a total of 122 wells in Wisconsin through a cooperative program with the Wisconsin Geological and Natural History Survey (WG&NHS). Wells not published in this report are listed after figure 5. Many federal, state, county and local agencies, as well as interested area residents, assist in this program by measuring and reporting water levels. All water level data are placed in computer storage. Data can be accessed from the web site: <http://water.usgs.gov> and clicking on ground water. Reports containing hydrographs, showing water-level changes in all of these wells, are periodically published by the WG&NHS.

The amplitude of water-level changes is typified by seven well hydrographs in this report that show annual maximum and minimum water levels for the period of record.

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are consistently accurate and reliable.

Tables of water-level data are presented by county arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the heading. It is followed by the secondary identification number (the local number), that consists of a two-letter abbreviation of the county name, the township-range-section location of the well, and a four-digit identification number that is unique within the county.

Water-level records are obtained from direct measurements with a steel tape or from a continuous water-level recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. The altitude of the lsd above sea level and the distance of the measuring point (MP) above or below the lsd is given in each well description. Water levels are normally reported to a hundredth of a foot. The absolute value of the depth to water may be in error by a few tenths of a foot, but the error in determining the net change in water level between successive measurements is normally only a hundredth or a few hundredths of a foot.

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well precedes the tabular data. The comments below clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the hydrologic-unit number; and the land owner's name.

AQUIFER.--This entry designates by name the primary aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, and use.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of casing, top of breather pipe, hole in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) sea level; it is reported with a precision dependent on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; daily lows are listed for every fifth day and at the end of the month (eom). For these wells the highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for these wells, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level.

ACCESS TO U.S. GEOLOGICAL SURVEY WATER DATA

The U.S. Geological Survey provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

<http://water.usgs.gov>

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's District offices. (See address on the back of the title page.)

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Definitions of common terms such as algae, water level, and precipitation are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting inch/pound units to International System (SI) units on the inside of the back cover.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an “unfiltered” sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also “Annual runoff”)

Adenosine triphosphate (ATP) is an organic, phosphate-rich compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample. (See also “Biomass” and “Dry weight”)

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a “filtered” sample.

Annual runoff is the total quantity of water that is discharged (“runs off”) from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

Aroclor is the registered trademark for a group of poly-chlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

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

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

Aspect is the direction toward which a slope faces with respect to the compass.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also “Peak flow”)

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bedload is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 foot) that are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

Bed material is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

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

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

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This is also called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

Bottom material (See "Bed material")

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved solids content of the pore water and lithology and porosity of the rock.

Cells/volume refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and are generally reported as cells or units per milliliter (mL) or liter (L).

Cells volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (mm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } \frac{4}{3} \pi r^3 \quad \text{cone } \frac{1}{3} \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi (π) is the ratio of the circumference to the diameter of a circle; pi = 3.14159....

From cell volume, total algal biomass expressed as biovolume ($\mu\text{m}^3/\text{mL}$) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cfs-day (See "Cubic foot per second-day")

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also "Biochemical oxygen demand (BOD)"]

***Clostridium perfringens* (*C. perfringens*)** is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

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.

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure, as used in this report, is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, $[(\text{ft}^3/\text{s})/\text{d}]$) 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, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables are numerically equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

Cubic foot per second per square mile [CFSM, $(\text{ft}^3/\text{s})/\text{mi}^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also "Annual runoff")

Daily mean suspended-sediment concentration is the time-weighted concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

Daily-record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data are usually downloaded from onsite data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or UTM coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, etc., within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved-solids concentration in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO_3) can be converted to carbonate concentration by multiplying by 0.60.

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

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

Drainage area of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

Dry mass refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also "Ash mass," "Biomass," and "Wet mass")

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

Embeddedness is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")

Enterococcus bacteria are commonly found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants. (See also "Bacteria")

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that are generally considered pollution sensitive; the index usually decreases with pollution.

Escherichia coli (*E. coli*) are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) concentration value is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

Euglenoids (*Euglenophyta*) are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

Fecal coliform bacteria are present in the intestines or feces of warmblooded animals. They often are used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C plus or minus 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Fire algae (*Pyrrophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

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

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

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

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat are typically made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA web site:

<http://www.co-ops.nos.noaa.gov/tideglos.html>

Hilsenhoff's Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \sum \frac{(n)(a)}{N},$$

where n is the number of individuals of each taxon, a is the tolerance value of each taxon, and N is the total number of organisms in the sample.

Horizontal datum (See "Datum")

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

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

Inch (IN., in.), as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it. (See also "Annual runoff")

Instantaneous discharge is the discharge at a particular instant of time. (See also "Discharge")

Island, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year on average, and remains stable except during large flood events.

Laboratory reporting level (LRL) is generally equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a “less than” (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. [Note: In several previous NWQL documents (NWQL Technical Memorandum 98.07, 1998), the LRL was called the nondetection value or NDV—a term that is no longer used.]

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Latent heat flux (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

where I_0 is the source light intensity, I is the light intensity at length L (in meters) from the source, l is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-term method detection level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA web site:*

<http://www.co-ops.nos.noaa.gov/tideglos.html>

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Mean concentration of suspended sediment (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also “Daily mean suspended-sediment concentration” and “Suspended-sediment concentration”)

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period. (See also “Discharge”)

Mean high or low tide is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also “Datum”)

Measuring point (MP) is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (UG/G, mg/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per kilogram (UG/KG, mg/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, mg/L) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, mS/cm) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

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

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. See NOAA web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88> (See "North American Vertical Datum of 1988")

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

Nekton are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

Nephelometric turbidity unit (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

North American Vertical Datum of 1988 (NAVD 1988) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and United States first-order terrestrial leveling networks.

Open or screened interval is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or **volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

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

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedigraph) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification, as used in this report, agrees with the recommendation 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	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, most of the organic matter 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.

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

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

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

Phytoplankton is the plant part of the plankton. They are usually microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and commonly are known as algae. (See also "Plankton")

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

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

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

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

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [$\text{mg C}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg C}/(\text{m}^3/\text{time})$] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [$\text{mg O}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg O}/(\text{m}^3/\text{time})$] for phytoplankton. The oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

Recoverable from bed (bottom) material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. (See also "Bed material")

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period (See "Recurrence interval")

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged (“runs off”) from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of pre-cipitation.

Sensible heat flux (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also “Annual 7-day minimum” and “Recurrence interval”)

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at $105 \times C$; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at $25 \times C$. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stable isotope ratio (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage (See “Gage height”)

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

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

Substrate is the physical surface upon which an organism lives.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment ($<2\text{mm}$, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0 no gravel or larger substrate	3 26-50 percent
1 > 75 percent	4 5-25 percent
2 51-75 percent	5 < 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

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

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is defined operationally as the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a

dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of “suspended, recoverable” constituents are made either by directly analyzing the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also “Suspended”)

Suspended sediment is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also “Sediment”)

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also “Sediment” and “Suspended sediment”)

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft³/s) x 0.0027. (See also “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also “Sediment”)

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as “suspended, total.” Determinations of “suspended, total” constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also “Suspended”)

Suspended solids, total residue at 105 °C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Synoptic studies are short-term investigations of specific water-quality conditions during selected seasonal or hydro-logic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

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

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>
Species:	<i>Hexagenia limbata</i>

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term “temperature recorder” is used in the table descriptions and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

Total is the amount of a given constituent in a representative whole-water (unfiltered) sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined at least 95 percent of the constituent in the sample.)

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also "Bacteria")

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total in bottom material is the amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total length (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume")

Total recoverable is the amount of a given constituent in a whole-water sample after a sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also "Bedload," "Bedload discharge," "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Total sediment load or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-sediment load," and "Total load")

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is the reduction in the transparency of a solution due to the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to U.S. EPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of pathlength of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See “Water-table aquifer”)

Vertical datum (See “Datum”)

Volatile organic compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens.

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which the water table is found.

Water year in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2002, is called the “2002 water year.”

WDR is used as an abbreviation for “Water-Data Report” in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for “Water-Resources Data” in reports published prior to 1976.)

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

Wet mass is the mass of living matter plus contained water. (See also “Biomass” and “Dry mass”)

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also “Dry weight”)

WSP is used as an acronym for “Water-Supply Paper” in reference to previously published reports.

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

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The USGS publishes a series of manuals titled the "Techniques of Water-Resources Investigations" that describe procedures for planning and conducting specialized work in water-resources investigations. The material in these manuals is grouped under major subject headings called books and is further divided into sections and chapters. For example, section A of book 3 (Applications of Hydraulics) pertains to surface water. Each chapter then is limited to a narrow field of the section subject matter. This publication format permits flexibility when revision or printing is required.

Manuals in the Techniques of Water-Resources Investigations series, which are listed below, are available online at <http://water.usgs.gov/pubs/twri/>. Printed copies are available for sale from the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (an authorized agent of the Superintendent of Documents, Government Printing Office). Please telephone "1-888-ASK-USGS" for current prices, and refer to the title, book number, section number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Other products can be viewed online at <http://www.usgs.gov/sales.html>, or ordered by telephone or by FAX to (303)236-4693. Order forms for FAX requests are available online at <http://mac.usgs.gov/isb/pubs/forms/>. Prepayment by major credit card or by a check or money order payable to the "U.S. Geological Survey" is required.

Book 1. Collection of Water Data by Direct Measurement**Section D. Water Quality**

- 1-D1. *Water temperature—Influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS-TWRI book 1, chap. D1. 1975. 65 p.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS-TWRI book 1, chap. D2. 1976. 24 p.

Book 2. Collection of Environmental Data**Section D. Surface Geophysical Methods**

- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS-TWRI book 2, chap. D1. 1974. 116 p.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS-TWRI book 2, chap. D2. 1988. 86 p.

Section E. Subsurface Geophysical Methods

- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS-TWRI book 2, chap. E1. 1971. 126 p.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS-TWRI book 2, chap. E2. 1990. 150 p.

Section F. Drilling and Sampling Methods

- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS-TWRI book 2, chap. F1. 1989. 97 p.

Book 3. Applications of Hydraulics**Section A. Surface-Water Techniques**

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS-TWRI book 3, chap. A1. 1967. 30 p.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS-TWRI book 3, chap. A2. 1967. 12 p.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS-TWRI book 3, chap. A3. 1968. 60 p.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS-TWRI book 3, chap. A4. 1967. 44 p.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS-TWRI book 3, chap. A5. 1967. 29 p.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS-TWRI book 3, chap. A6. 1968. 13 p.

- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A7. 1968. 28 p.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A8. 1969. 65 p.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS-TWRI book 3, chap. A9. 1989. 27 p.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A10. 1984. 59 p.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 3, chap. A11. 1969. 22 p.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS-TWRI book 3, chap. A12. 1986. 34 p.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS-TWRI book 3, chap. A13. 1983. 53 p.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS-TWRI book 3, chap. A14. 1983. 46 p.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI book 3, chap. A15. 1984. 48 p.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS-TWRI book 3, chap. A16. 1985. 52 p.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS-TWRI book 3, chap. A17. 1985. 38 p.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS-TWRI book 3, chap. A18. 1989. 52 p.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A19. 1990. 31 p.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS-TWRI book 3, chap. A20. 1993. 38 p.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS-TWRI book 3, chap. A21. 1995. 56 p.

Section B. Ground-Water Techniques

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS-TWRI book 3, chap. B1. 1971. 26 p.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS-TWRI book 3, chap. B2. 1976. 172 p.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS-TWRI book 3, chap. B3. 1980. 106 p.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS-TWRI book 3, chap. B4. 1990. 232 p.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow—Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS-TWRI book 3, chap. B4. 1993. 8 p.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS-TWRI book 3, chap. B5. 1987. 15 p.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS-TWRI book 3, chap. B6. 1987. 28 p.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS-TWRI book 3, chap. B7. 1992. 190 p.
- 3-B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS-TWRI book 3, chap. B8. 2001. 29 p.

Section C. Sedimentation and Erosion Techniques

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS-TWRI book 3, chap. C1. 1970. 55 p.

3–C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.

3–C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

4–A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.

4–A2. *Frequency curves*, by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.

4–A3. *Statistical methods in water resources*, by D.R. Helsel and R.M. Hirsch: USGS–TWRI book 4, chap. A3. 1991. Available only online at <http://water.usgs.gov/pubs/twri/twri4a3/>. (Accessed August 30, 2002.)

Section B. Surface Water

4–B1. *Low-flow investigations*, by H.C. Riggs: USGS–TWRI book 4, chap. B1. 1972. 18 p.

4–B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS–TWRI book 4, chap. B2. 1973. 20 p.

4–B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS–TWRI book 4, chap. B3. 1973. 15 p.

Section D. Interrelated Phases of the Hydrologic Cycle

4–D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

Book 5. Laboratory Analysis

Section A. Water Analysis

5–A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.

5–A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 p.

5–A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.

5–A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.

5–A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 p.

5–A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

Section C. Sediment Analysis

5–C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

Book 6. Modeling Techniques

Section A. Ground Water

6–A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 p.

6–A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 p.

6–A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 p.

6–A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 p.

- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS-TWRI book 6, chap. A5. 1993. 243 p.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS-TWRI book 6, chap. A6. 1996. 125 p.
- 6-A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS-TWRI book 6, chap. A7. 2002. 77 p.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS-TWRI book 7, chap. C1. 1976. 116 p.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS-TWRI book 7, chap. C2. 1978. 90 p.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS-TWRI book 7, chap. C3. 1981. 110 p.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS-TWRI book 8, chap. A1. 1968. 23 p.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS-TWRI book 8, chap. A2. 1983. 57 p.

Section B. Instruments for Measurement of Discharge

- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 8, chap. B2. 1968. 15 p.

Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

- 9-A1. *National field manual for the collection of water-quality data: Preparations for water sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A1. 1998. 47 p.
- 9-A2. *National field manual for the collection of water-quality data: Selection of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A2. 1998. 94 p.
- 9-A3. *National field manual for the collection of water-quality data: Cleaning of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A3. 1998. 75 p.
- 9-A4. *National field manual for the collection of water-quality data: Collection of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A4. 1999. 156 p.
- 9-A5. *National field manual for the collection of water-quality data: Processing of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A5. 1999. 149 p.
- 9-A6. *National field manual for the collection of water-quality data: Field measurements*, edited by F.D. Wilde and D.B. Radtke: USGS-TWRI book 9, chap. A6. 1998. Variously paginated.
- 9-A7. *National field manual for the collection of water-quality data: Biological indicators*, edited by D.N. Myers and F.D. Wilde: USGS-TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9-A8. *National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS-TWRI book 9, chap. A8. 1998. 48 p.
- 9-A9. *National field manual for the collection of water-quality data: Safety in field activities*, by S.L. Lane and R.G. Fay: USGS-TWRI book 9, chap. A9. 1998. 60 p.

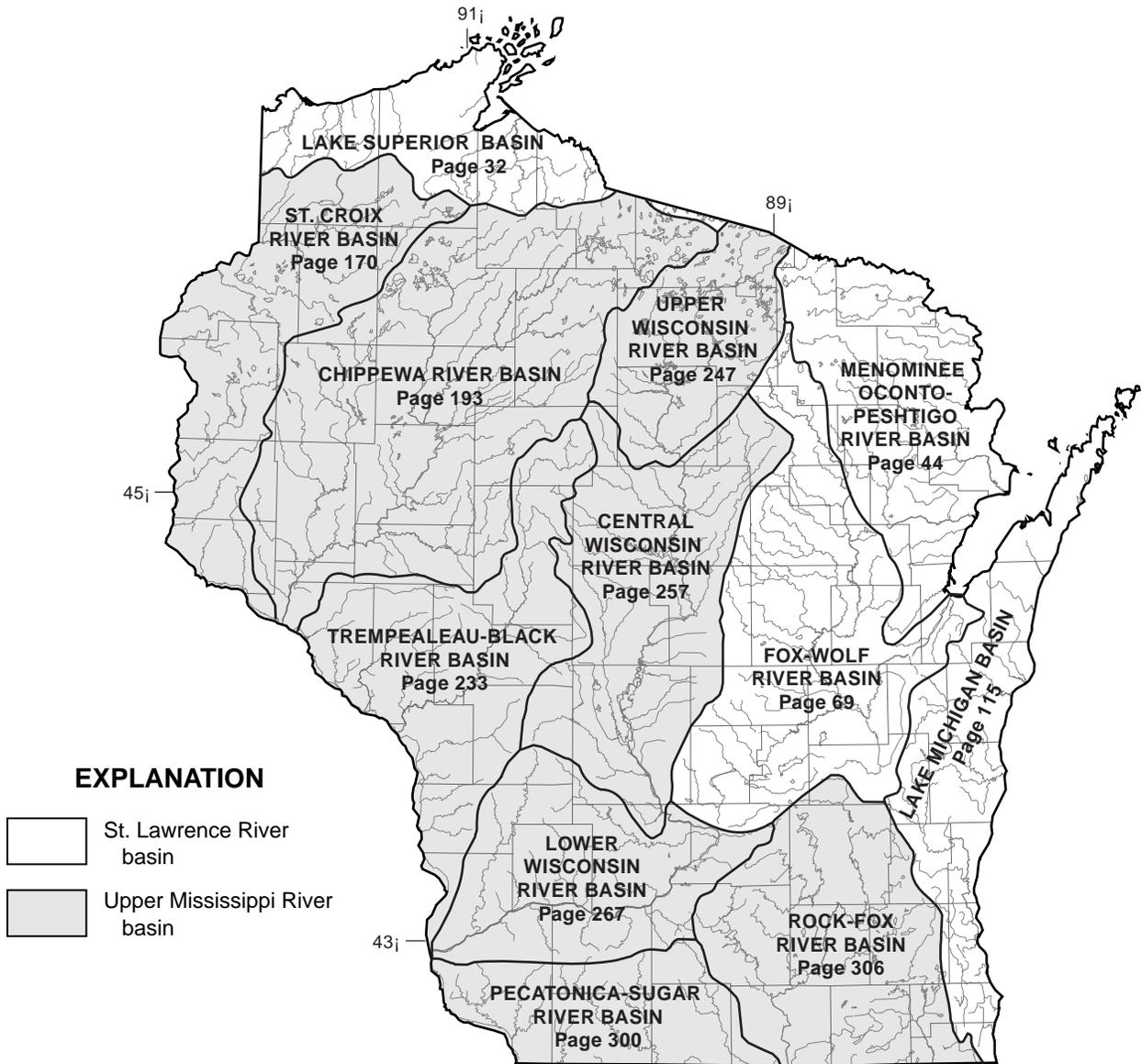
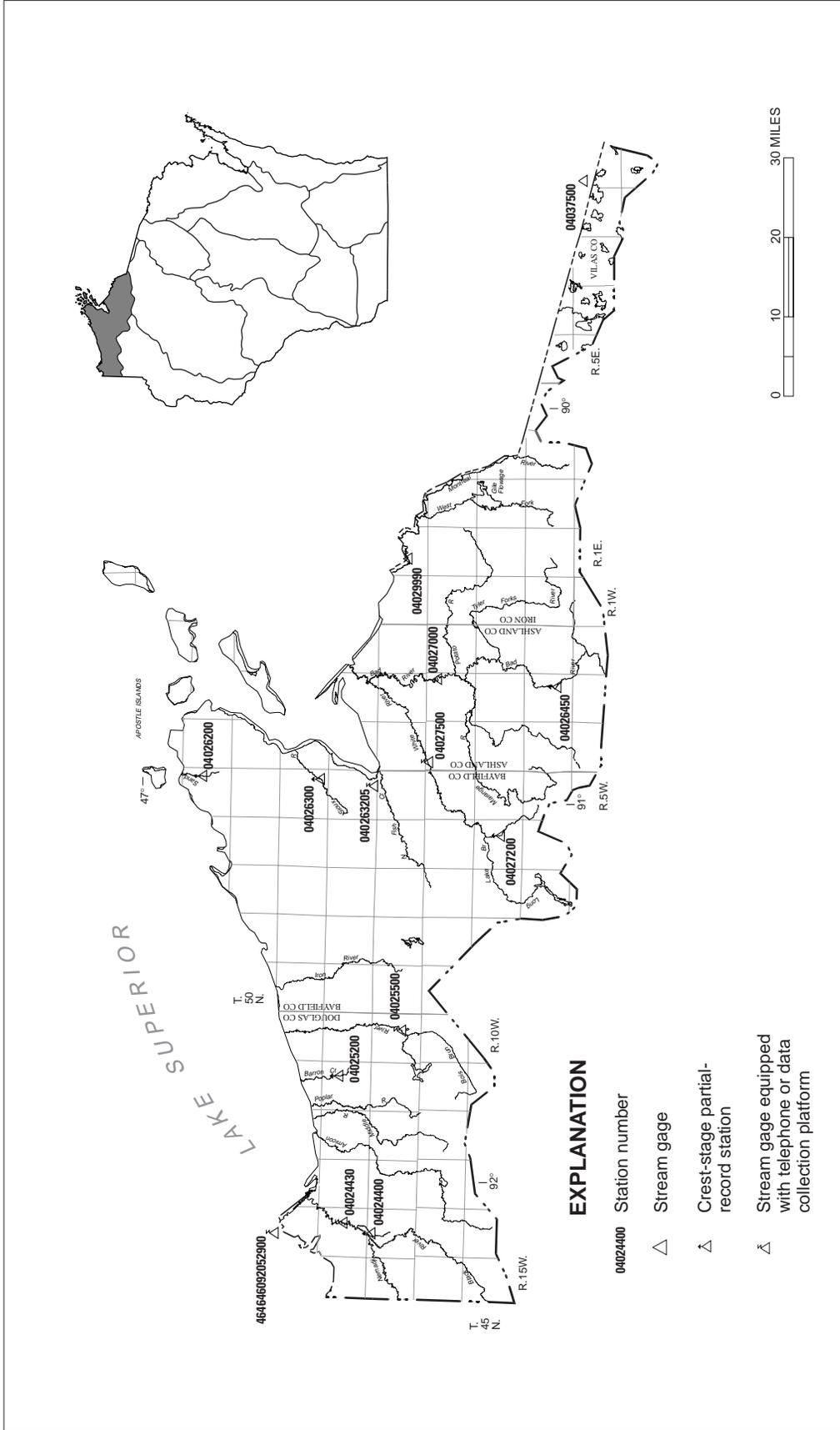


Figure 4. Major surface-water drainage basins and index of hydrologic records.

ST. LAWRENCE RIVER BASIN RECORDS



LAKE SUPERIOR BASIN

STREAMS TRIBUTARY TO LAKE SUPERIOR

464646092052900 SUPERIOR BAY DULUTH SHIP CANAL AT DULUTH, MN

LOCATION.--Lat 46°46'46", long 92°05'29", in SE ¼ SE ¼ sec.27, T.50 N., R.14 W., St. Louis County, Hydrologic Unit 04020300, on left bank about 200 ft downstream from lift bridge on Lake Avenue at Canal Park marine museum in Duluth, MN.

DRAINAGE AREA.--4,200 mi², approximately, equals total drainage area to Superior Bay.

PERIOD OF RECORD.--October 1994 to current year (fragmentary).

REVISED RECORDS.--WDR WI-96-1: Drainage area. WDR WI-01-1: 2000.

GAGE.--Acoustical Velocity Meter (AVM) system. Two-path transducer installation.

REMARKS.--Records fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	275	871	440	2530	1510	1210	885	809	10	4830	2100	38
2	-819	-1330	1220	888	1030	1550	932	-1100	448	4130	2150	989
3	850	328	-258	749	887	2710	781	465	863	1770	1930	38
4	97	-316	1100	127	1680	422	848	890	1370	1560	-271	1480
5	-2500	722	4560	765	103	362	1050	667	546	-974	-175	283
6	-611	-212	-2750	1700	1060	1350	-4.5	1440	115	1020	-1120	312
7	389	1260	579	588	-229	-1060	1050	822	1060	1090	-205	922
8	-181	-2730	-159	272	376	-531	858	2460	222	3350	364	671
9	-17	1180	911	659	312	4380	916	2230	123	3520	1560	81
10	1230	-1270	373	1300	859	93	1400	-1520	721	3650	2030	-586
11	201	48	240	224	1840	503	4820	1360	63	4160	2940	1800
12	462	653	974	1680	-1020	818	4950	2460	1250	3040	2480	1650
13	-423	542	305	-624	876	472	4820	2250	185	2700	3480	1810
14	398	887	614	-853	354	-797	4990	1250	-176	2880	2880	-870
15	-650	246	681	1030	1500	1580	4090	1580	-540	3160	766	1650
16	-571	490	1810	1750	935	267	3800	1480	-623	2960	1000	1240
17	786	433	750	1940	733	809	1950	1190	1140	608	3190	536
18	633	-367	-206	1300	746	869	3460	1240	-85	-988	2020	-869
19	448	-1940	-1140	392	-1040	1140	1660	1720	-178	903	2330	-300
20	508	576	568	86	2250	1390	2570	1590	397	961	2570	1190
21	775	-258	-169	536	1230	1400	3640	986	613	1500	871	699
22	162	409	276	417	-403	1010	2280	2200	583	-924	956	994
23	1200	-332	546	717	1160	100	1750	-632	1820	1840	1330	2050
24	484	955	-541	996	751	1530	892	312	7180	72	893	1450
25	-4620	-1570	1620	239	443	272	-1720	1290	8750	-553	1650	1020
26	-4520	-149	1130	199	1780	745	1480	1140	8030	246	341	848
27	269	4680	1950	1220	563	-313	1050	814	7810	1200	1050	568
28	185	2610	1810	786	1450	981	2400	282	6600	361	1580	-186
29	390	484	2590	677	---	1640	78	848	4900	1690	1140	-326
30	908	1080	2080	1010	---	1390	522	-223	5230	1830	155	471
31	350	---	525	399	---	1310	---	-650	---	339	30	---
TOTAL	-3912	7980	22429	23699	21736	27602	58197.5	29650	58427	51931	42015	19653
MEAN	-126.2	266.0	723.5	764.5	776.3	890.4	1940	956.5	1948	1675	1355	655.1
MAX	1230	4680	4560	2530	2250	4380	4990	2460	8750	4830	3480	2050
MIN	-4620	-2730	-2750	-853	-1040	-1060	-1720	-1520	-623	-988	-1120	-870
CFSM	-0.03	0.06	0.17	0.18	0.18	0.21	0.46	0.23	0.46	0.40	0.32	0.16
IN.	-0.03	0.07	0.20	0.21	0.19	0.24	0.52	0.26	0.52	0.46	0.37	0.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2002, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	640.8	768.8	930.2	978.4	982.3	1021	2874	1472	1275	1009	344.6	311.9				
MAX	1933	1317	1205	1993	1786	1510	7038	3635	1948	1905	1355	655				
(WY)	1996	1997	1997	1996	1996	1995	2001	2001	2002	1996	2002	2002				
MIN	-126	266	724	242	547	726	846	424	809	78.8	-375	46.5				
(WY)	2002	2002	2002	1998	1998	1998	2000	1998	1996	2001	1998	1996				

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1995 - 2002

ANNUAL TOTAL	478385.5	359407.5	
ANNUAL MEAN	1311	984.7	1188
HIGHEST ANNUAL MEAN			1476
LOWEST ANNUAL MEAN			932
HIGHEST DAILY MEAN	14800	Apr 24	8750 Jun 25
LOWEST DAILY MEAN	-4620	Oct 25	-4620 Oct 25
ANNUAL SEVEN-DAY MINIMUM	-1010	Oct 25	-1010 Oct 25
ANNUAL RUNOFF (CFSM)	0.31		0.23
ANNUAL RUNOFF (INCHES)	4.24		3.18
10 PERCENT EXCEEDS	4600		2580
50 PERCENT EXCEEDS	650		822
90 PERCENT EXCEEDS	-494		-535

STREAMS TRIBUTARY TO LAKE SUPERIOR

040263205 WHITTLESEY CREEK NEAR ASHLAND, WI

LOCATION.--Lat 46°35'40", long 90°57'47", in SE ¼ NW ¼ sec.35, T.48 N., R.5 W., Bayfield County, Hydrologic Unit 04010301, at Cherryville road, 3.7 mi west of courthouse in Ashland.

DRAINAGE AREA.--37.6 mi², of which 30.2 mi² is noncontributing (revised).

PERIOD OF RECORD.--April 1999 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 615 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	18	20	18	18	18	21	22	18	18	28	21
2	19	18	20	18	18	18	21	20	18	19	18	27
3	19	18	20	18	18	18	20	20	18	18	18	27
4	20	18	19	18	17	18	20	19	18	18	18	22
5	20	18	31	18	17	18	20	19	18	18	18	24
6	21	18	34	18	18	18	20	20	18	18	18	24
7	33	18	24	18	18	18	24	19	20	18	18	22
8	23	18	21	18	17	18	37	163	21	30	18	22
9	21	17	19	18	17	18	43	75	19	21	19	22
10	21	17	20	18	17	17	140	30	19	20	19	35
11	21	18	18	18	18	17	262	24	20	19	19	24
12	21	17	18	18	18	18	165	45	19	19	20	21
13	23	17	18	18	18	18	142	29	20	19	20	21
14	22	17	18	18	18	18	142	25	20	19	20	20
15	20	17	18	18	18	18	87	23	19	19	21	20
16	19	17	19	18	18	18	69	21	18	18	21	20
17	18	18	19	18	18	18	54	20	18	18	27	20
18	18	18	19	17	18	18	51	20	18	19	22	20
19	17	18	19	17	19	18	33	19	19	19	21	21
20	17	18	18	18	20	18	26	19	19	19	20	21
21	17	18	18	18	18	18	23	19	19	25	24	20
22	17	18	19	18	18	18	24	19	19	21	23	20
23	18	18	19	18	e18	18	24	19	20	19	22	23
24	18	22	18	18	e19	18	23	19	20	19	21	24
25	18	22	19	18	18	18	22	19	20	21	21	25
26	17	20	19	18	18	18	21	19	19	20	21	24
27	17	21	19	18	18	18	20	19	19	20	21	21
28	18	22	18	18	18	19	25	18	19	20	20	20
29	18	21	18	18	---	20	29	19	18	20	21	20
30	18	20	18	18	---	21	26	19	18	19	20	21
31	18	---	18	18	---	21	---	18	---	26	20	---
TOTAL	606	555	615	556	503	565	1634	859	568	616	637	672
MEAN	19.55	18.50	19.84	17.94	17.96	18.23	54.47	27.71	18.93	19.87	20.55	22.40
MAX	33	22	34	18	20	21	262	163	21	30	28	35
MIN	17	17	18	17	17	17	20	18	18	18	18	20
CFSM	2.64	2.50	2.68	2.42	2.43	2.46	7.36	3.74	2.56	2.69	2.78	3.03
IN.	3.05	2.79	3.09	2.80	2.53	2.84	8.21	4.32	2.86	3.10	3.20	3.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	1999	2000	2001	2002	1999	2000	2001	2002	1999	2000	2001	2002
MEAN	19.41	20.90	18.76	17.83	19.04	20.32	43.66	22.27	20.13	23.74	20.34	20.49
MAX	19.7	25.1	19.8	18.0	21.4	23.5	76.5	27.7	22.6	36.6	22.8	22.4
(WY)	2000	2001	2002	2000	2000	2000	2001	2002	1999	1999	1999	2002
MIN	18.9	18.5	18.0	17.5	17.7	18.2	19.2	19.4	18.9	17.8	18.7	18.5
(WY)	2001	2002	2000	2001	2001	2002	2000	1999	2002	2001	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1999 - 2002
ANNUAL TOTAL	8723	8386	
ANNUAL MEAN	23.90	22.98	22.34
HIGHEST ANNUAL MEAN			24.3
LOWEST ANNUAL MEAN			19.8
HIGHEST DAILY MEAN	370	262	370
LOWEST DAILY MEAN	16	17	16
ANNUAL SEVEN-DAY MINIMUM	17	17	17
MAXIMUM PEAK FLOW		580	777
MAXIMUM PEAK STAGE		5.60	(c)6.44
INSTANTANEOUS LOW FLOW		(d)	16
ANNUAL RUNOFF (CFSM)	3.23	3.10	3.02
ANNUAL RUNOFF (INCHES)	43.85	42.16	41.01
10 PERCENT EXCEEDS	24	24	24
50 PERCENT EXCEEDS	18	19	19
90 PERCENT EXCEEDS	17	18	18

- (a) Also occurred many additional days
 (b) Also occurred Feb. 17, 2000, estimated
 (c) 7.18 ft, July 5, 1999, from crest-stage gage
 (d) Not accurately determined due to shifting control
 (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE SUPERIOR

040263491 NORTH FISH CREEK NEAR MOQUAH, WI

LOCATION.--Lat 46°32'56", long 91°03'43", in SW ¼ SE ¼ sec.13, T.47 N., R.6 W., Bayfield County, Hydrologic Unit 04010301, on left bank just downstream from bridge on old U.S. Highway 2, and 1.3 mi southeast of Moquah.

DRAINAGE AREA.--65.4 mi².

PERIOD OF RECORD.--October 1989 to September 1991, October 1994 to September 1997, July 2000 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 660 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	59	68	56	55	58	80	82	54	54	106	53
2	57	58	68	56	55	58	77	74	54	54	68	59
3	58	58	67	56	55	57	74	69	54	54	58	58
4	57	58	68	56	54	60	71	68	55	54	56	53
5	57	58	121	56	55	57	70	69	54	54	55	53
6	57	58	157	56	55	56	73	71	54	54	56	52
7	57	59	106	56	55	57	103	67	56	54	54	52
8	58	58	83	56	55	58	163	846	62	64	52	51
9	58	58	73	56	55	59	207	443	58	55	51	51
10	59	58	69	58	55	56	790	133	56	54	52	62
11	58	58	65	59	55	56	1230	96	63	54	51	57
12	58	58	63	58	54	57	908	223	59	53	53	53
13	64	58	62	57	54	60	793	124	63	53	51	52
14	63	58	60	57	55	61	734	95	64	52	51	51
15	60	58	59	56	55	61	454	82	60	52	53	51
16	59	57	60	56	55	58	288	75	57	52	51	51
17	59	58	65	56	55	58	202	69	55	52	64	51
18	61	58	65	54	56	59	240	65	55	52	54	51
19	60	58	62	56	67	61	151	63	57	51	52	53
20	59	58	59	56	72	60	110	61	55	51	51	52
21	58	58	58	56	64	59	93	60	55	67	63	51
22	58	58	58	55	61	59	94	60	55	59	61	50
23	60	58	58	55	61	59	101	59	57	55	57	57
24	59	67	57	55	65	58	89	57	59	54	55	62
25	61	68	57	55	62	58	85	57	58	55	54	68
26	59	65	57	55	61	58	76	57	57	53	52	76
27	59	72	57	55	60	59	73	57	56	53	51	64
28	59	67	57	55	59	63	96	56	55	52	51	58
29	58	66	56	55	---	76	112	56	55	52	52	56
30	59	69	56	55	---	84	104	56	54	51	51	57
31	59	---	56	55	---	83	---	54	---	61	51	---
TOTAL	1824	1809	2127	1733	1620	1883	7741	3504	1706	1685	1737	1665
MEAN	58.84	60.30	68.61	55.90	57.86	60.74	258.0	113.0	56.87	54.35	56.03	55.50
MAX	64	72	157	59	72	84	1230	846	64	67	106	76
MIN	56	57	56	54	54	56	70	54	54	51	51	50
CFSM	0.90	0.92	1.05	0.85	0.88	0.93	3.95	1.73	0.87	0.83	0.86	0.85
IN.	1.04	1.03	1.21	0.99	0.92	1.07	4.40	1.99	0.97	0.96	0.99	0.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	70.64	68.47	56.39	54.88	56.03	92.57	197.5	83.27	69.71	77.58	57.94	73.32	
MAX	110	102	68.6	63.7	64.1	141	374	113	97.6	155	74.4	135	
(WY)	1991	1997	2002	1997	1997	1990	2001	2002	1991	1996	1990	1990	
MIN	50.7	53.1	49.0	49.4	49.7	59.3	87.8	59.6	56.8	51.2	52.1	51.6	
(WY)	1995	1995	2001	2001	2001	2001	1990	1990	1990	1995	1991	2000	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1990 - 2002

ANNUAL TOTAL	30777	29034		
ANNUAL MEAN	84.32	79.55	80.35	
HIGHEST ANNUAL MEAN			87.9	1996
LOWEST ANNUAL MEAN			67.5	1995
HIGHEST DAILY MEAN	1960	Apr 23	1230	Apr 11
LOWEST DAILY MEAN	48	(a)Jan 2	50	Sep 22
ANNUAL SEVEN-DAY MINIMUM	49	Feb 15	51	Sep 16
MAXIMUM PEAK FLOW			2290	Apr 11
MAXIMUM PEAK STAGE			14.27	Apr 11
INSTANTANEOUS LOW FLOW			47	Mar 4
ANNUAL RUNOFF (CFSM)	1.29		1.22	1.23
ANNUAL RUNOFF (INCHES)	17.51		16.51	16.69
10 PERCENT EXCEEDS	92		82	103
50 PERCENT EXCEEDS	56		58	58
90 PERCENT EXCEEDS	50		52	51

- (a) Also occurred Feb. 10,16,17,20,21,27
- (b) Also occurred Jan. 2, 1995, estimated
- (c) Also occurred Dec. 29, 1994, estimated
- (d) Result of freezeup
- (f) Also occurred Feb. 21, 2001

STREAMS TRIBUTARY TO LAKE SUPERIOR

04027000 BAD RIVER NEAR ODANAH, WI

LOCATION.--Lat 46°29'15", long 90°41'45", in SE ¼ sec.2, T.46 N., R.3 W., Ashland County, Hydrologic Unit 04010302, Bad River Indian Reservation, on left bank just downstream from Elm Hoist bridge, 5.0 mi downstream from Potato River, 8.5 mi south of Odanah, and 23 mi from mouth.

DRAINAGE AREA.--597 mi².

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

REVISED RECORDS.--WSP 1337: 1922. WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 668.30 ft above NGVD of 1929. May 17, 1948, to Nov. 6, 1959, and Oct. 19, 1960, to Nov. 23, 1961, water-stage recorder. Nov. 7, 1959, to Oct. 18, 1960, and Nov. 24, 1961, to July 12, 1962, nonrecording gage. Prior to Nov. 11, 1922, water-stage recorder at site 2 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	662	e670	e220	e160	e270	e700	1070	255	201	251	141
2	140	671	e600	e230	e160	e260	e650	929	234	182	289	163
3	166	572	e600	e230	e150	e260	e600	807	215	209	260	338
4	200	474	649	e240	e150	e220	e550	715	211	222	252	269
5	195	401	1220	e240	e150	e220	e520	719	244	213	280	230
6	181	360	2870	e240	e160	e210	e500	774	270	187	248	240
7	168	335	2230	e220	e160	e190	e600	828	253	170	214	365
8	160	317	1650	e210	e170	e200	e1000	2630	548	207	190	380
9	157	299	e1100	e220	e170	e210	e1100	7250	849	338	171	321
10	159	287	e1000	e230	e180	e230	e2300	5240	709	301	157	319
11	166	272	e700	e240	e170	e260	e7000	3130	558	256	146	321
12	175	259	e620	e240	e170	e430	e9000	2290	470	212	138	267
13	190	250	e520	e220	e170	e500	e9500	1880	496	183	132	230
14	415	248	e400	e200	e170	e550	12100	1480	905	163	126	207
15	531	245	e360	e200	e180	e600	14100	1220	1080	148	123	190
16	470	239	e370	e190	e180	e560	14200	1040	913	136	131	178
17	402	231	e400	e180	e180	e600	13600	908	696	129	175	167
18	357	232	e370	e170	e180	e580	9950	771	521	159	256	161
19	346	271	e350	e160	e220	e560	6510	674	411	179	225	275
20	336	331	e280	e170	e280	e530	3870	601	375	153	187	505
21	309	331	e250	e170	e290	e490	2590	540	340	238	192	427
22	285	310	e260	e170	e300	e460	1980	489	315	486	313	359
23	274	289	e270	e170	e310	e430	1830	451	318	532	343	321
24	289	314	e240	e170	e320	e410	1700	417	345	405	299	424
25	312	728	e230	e160	e320	e380	1700	382	378	323	255	440
26	359	e870	e230	e160	e300	e370	1470	361	356	276	221	599
27	373	e800	e240	e160	e280	e350	1230	347	321	239	194	700
28	375	e730	e240	e160	e270	e380	1110	323	285	219	175	611
29	436	e700	e240	e160	---	e500	1090	306	251	228	168	505
30	516	e670	e230	e160	---	e700	1170	290	223	208	177	436
31	540	---	e220	e160	---	e800	---	278	---	194	150	---
TOTAL	9117	12698	19609	6050	5900	12710	124220	39140	13345	7296	6438	10089
MEAN	294.1	423.3	632.5	195.2	210.7	410.0	4141	1263	444.8	235.4	207.7	336.3
MAX	540	870	2870	240	320	800	14200	7250	1080	532	343	700
MIN	135	231	220	160	150	190	500	278	211	129	123	141
CFSM	0.49	0.71	1.06	0.33	0.35	0.69	6.94	2.11	0.75	0.39	0.35	0.56
IN.	0.57	0.79	1.22	0.38	0.37	0.79	7.74	2.44	0.83	0.45	0.40	0.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)
MEAN	459.9	517.3	294.6	190.1	200.1	672.5	2230	1046	642.3	485.5	302.1	349.7
MAX	1861	2151	638	410	713	2494	4320	2752	2054	2311	1565	1775
(WY)	1986	1992	1992	1992	1984	1973	2001	1950	1951	1949	1972	1977
MIN	67.1	95.2	107	95.0	69.3	113	513	202	121	77.9	68.2	74.3
(WY)	1949	1949	1977	1917	1964	1917	1987	1998	1948	1964	1948	1976

STREAMS TRIBUTARY TO LAKE SUPERIOR

04027000 BAD RIVER NEAR ODANAH, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1914 - 2002	
ANNUAL TOTAL	247334		266612			
ANNUAL MEAN	677.6		730.4		617.9	
HIGHEST ANNUAL MEAN					942 1983	
LOWEST ANNUAL MEAN					346 1990	
HIGHEST DAILY MEAN	10500	Apr 24	14200	Apr 16	22000	Apr 24 1960
LOWEST DAILY MEAN	115	Sep 6	123	Aug 15	52	(a) Oct 1 1948
ANNUAL SEVEN-DAY MINIMUM	121	Sep 1	136	Aug 10	54	Feb 19 1964
MAXIMUM PEAK FLOW			14700	Apr 15	(b) 27700	Apr 24 1960
MAXIMUM PEAK STAGE			15.71	Apr 15	(c) 21.70	Apr 24 1960
INSTANTANEOUS LOW FLOW			119	Aug 15	(d) 34	Nov 8 1976
ANNUAL RUNOFF (CFSM)	1.14		1.22		1.03	
ANNUAL RUNOFF (INCHES)	15.41		16.61		14.06	
10 PERCENT EXCEEDS	1110		1070		1430	
50 PERCENT EXCEEDS	272		299		275	
90 PERCENT EXCEEDS	146		163		120	

(a) Also occurred Aug. 6, 7, 1964

(b) From rating curve extended above 12,000 ft³/s and a comparison with contracted-opening measurement of peak flow 45,600 ft³/s at Odanah, drainage area, 990 mi²

(c) From floodmarks

(d) Result of freezeup

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE SUPERIOR

04027500 WHITE RIVER NEAR ASHLAND, WI

LOCATION.--Lat 46°29'50", long 90°54'15", in NE ¼ sec.6, T.46 N., R.4 W., Ashland County, Hydrologic Unit 04010302, at downstream end of powerplant of Lake Superior District Power Co., 0.3 mi downstream from bridge on State Highway 112 over dam, and 4.5 mi south of Ashland city limits.

DRAINAGE AREA.--301 mi².

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

REVISED RECORDS.--WDR WI-82-1: Drainage area. WDR WI-92-1: 1952-53(M), 1960(M), 1967(M), 1972(M), and 1978(M).

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

REMARKS.--Records good (see page 11). Diurnal fluctuation caused by hydroelectric plant at gage. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	194	334	176	173	183	315	374	176	155	242	188
2	168	193	327	176	174	176	292	332	166	128	212	202
3	188	189	315	179	165	193	280	293	174	143	230	238
4	195	186	300	194	175	177	266	281	178	147	206	233
5	190	184	892	202	166	180	245	260	183	173	214	191
6	167	183	855	195	192	225	243	260	189	151	203	243
7	168	185	705	193	192	188	271	251	192	154	188	208
8	168	178	639	166	191	177	500	1180	198	173	203	206
9	186	185	490	189	188	181	609	1310	224	184	184	204
10	159	187	415	228	173	186	1460	1090	219	210	186	213
11	189	185	328	240	189	203	2900	1110	213	183	205	233
12	183	188	277	217	173	228	2820	1070	217	176	187	221
13	187	183	267	212	161	218	3010	703	220	158	188	206
14	212	182	236	194	190	242	3050	581	258	178	189	202
15	263	188	228	194	191	204	2690	505	256	160	207	196
16	244	187	235	193	180	202	2480	376	236	162	189	184
17	225	182	256	179	184	236	2250	330	196	180	223	191
18	218	186	223	142	174	214	2130	288	179	204	264	188
19	192	201	235	130	221	243	1690	269	180	185	266	179
20	206	201	225	164	219	241	1310	240	178	177	235	208
21	200	194	144	213	197	228	942	221	175	245	242	179
22	176	191	196	187	194	199	625	220	164	263	260	195
23	184	190	229	192	221	216	542	216	184	236	246	197
24	198	206	172	181	210	233	482	187	189	232	248	243
25	209	324	138	187	203	208	471	209	180	191	254	243
26	212	368	143	186	216	208	408	177	212	183	214	260
27	215	374	161	187	161	191	384	200	173	209	205	279
28	205	305	161	188	185	240	339	179	169	192	205	257
29	199	317	172	183	---	272	387	177	165	192	184	225
30	195	345	173	162	---	348	412	190	158	177	204	225
31	193	---	176	173	---	333	---	179	---	215	204	---
TOTAL	6062	6561	9647	5802	5258	6773	33803	13258	5801	5716	6687	6437
MEAN	195.5	218.7	311.2	187.2	187.8	218.5	1127	427.7	193.4	184.4	215.7	214.6
MAX	263	374	892	240	221	348	3050	1310	258	263	266	279
MIN	159	178	138	130	161	176	243	177	158	128	184	179
CFSM	0.65	0.73	1.03	0.62	0.62	0.73	3.74	1.42	0.64	0.61	0.72	0.71
IN.	0.75	0.81	1.19	0.72	0.65	0.84	4.18	1.64	0.72	0.71	0.83	0.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2002, BY WATER YEAR (WY)

	MEAN	233.8	248.8	203.4	186.8	194.4	306.5	595.3	358.6	283.1	266.8	227.9	236.1
MAX	445	509	311	248	318	666	1330	867	707	697	744	635	
(WY)	1983	1992	2002	1952	1984	1973	2001	1950	1952	1953	1972	1960	
MIN	152	160	150	146	136	178	231	175	140	142	147	146	
(WY)	1949	1977	1964	1991	1968	1965	2000	1998	1948	1988	1948	1948	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1948 - 2002

ANNUAL TOTAL	111064	111805	
ANNUAL MEAN	304.3	306.3	279.1
HIGHEST ANNUAL MEAN			426
LOWEST ANNUAL MEAN			210
HIGHEST DAILY MEAN	3590	Apr 23	4100
LOWEST DAILY MEAN	138	Dec 25	61
ANNUAL SEVEN-DAY MINIMUM	144	Jul 10	68
MAXIMUM PEAK FLOW			4060
MAXIMUM PEAK STAGE			5.58
ANNUAL RUNOFF (CFSM)	1.01		1.02
ANNUAL RUNOFF (INCHES)	13.73		13.82
10 PERCENT EXCEEDS	377		379
50 PERCENT EXCEEDS	193		202
90 PERCENT EXCEEDS	162		173

(a) From rating curve extended above 3,000 ft³/s

STREAMS TRIBUTARY TO LAKE SUPERIOR

04029990 MONTREAL RIVER AT SAXON FALLS NEAR SAXON, WI

LOCATION.--Lat 46°32'13", long 90°22'47", in SW ¼ NW ¼ sec.21, T.47 N., R.1 E., Iron County, Hydrologic Unit 04010302, at Saxon Falls powerhouse, 3.4 mi northeast of Saxon, and 3.8 mi upstream from mouth.

DRAINAGE AREA.--262 mi².

PERIOD OF RECORD.--September 1938 to September 1970, October 1986 to current year. Published as "Montreal River near Saxon" (04030000), September 1938 to September 1970.

REVISED RECORDS.--WSP 894: 1938-39. WSP 924: 1939-40. WSP 1307: 1948(M). WSP 1627: 1958.

GAGE.--Headwater and tailwater gages read by Northern States Power Company. September 1938 to September 1970, water-stage recorder at site 1.8 mi downstream at elevation of 760 ft above NGVD of 1929 (from Power Company data).

REMARKS.--Diurnal fluctuation caused by Saxon Falls powerplant. Flow regulated by Gile Reservoir on West Branch Montreal River (capacity 1,290,000,000 ft³/s) since April 1941.

COOPERATION.--Records were provided by Northern States Power Company and reviewed by the Geological Survey.

DISCHARGE (POWER PLANT), CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	290	240	143	131	190	245	685	203	205	475	125
2	50	303	240	155	149	178	245	560	203	215	475	125
3	50	214	226	149	149	178	245	420	190	375	271	200
4	66	214	226	155	149	155	210	325	200	375	271	134
5	75	172	310	161	143	161	215	325	225	225	190	108
6	75	166	840	161	143	183	195	335	230	215	190	155
7	75	136	858	161	155	167	195	345	215	215	190	140
8	59	124	660	161	169	167	325	370	290	225	190	140
9	71	125	660	155	145	155	370	3565	290	260	190	136
10	71	122	323	178	145	155	467	3350	326	225	190	145
11	71	127	225	167	155	215	1500	2170	270	215	190	180
12	88	100	243	167	161	225	2650	2170	240	205	190	155
13	82	105	210	167	149	225	3960	1365	240	211	190	115
14	82	105	175	155	149	255	3960	825	400	211	190	120
15	165	106	120	155	161	235	8550	720	585	215	150	120
16	142	100	120	161	161	215	8840	560	585	215	163	105
17	145	100	195	173	161	215	8840	445	315	205	145	105
18	130	100	178	167	155	240	8100	350	230	220	145	100
19	125	156	155	143	161	235	5460	350	225	215	120	100
20	125	166	120	143	197	225	4060	270	225	215	115	232
21	125	148	101	155	167	195	4060	235	225	215	115	205
22	110	148	131	155	173	195	1880	220	225	185	149	205
23	94	148	131	155	208	220	1350	225	225	290	139	183
24	100	136	131	143	178	220	970	195	225	205	115	323
25	118	136	131	137	178	195	970	205	255	225	115	285
26	155	302	134	143	178	185	870	205	310	232	120	330
27	172	325	149	143	173	185	750	205	310	210	120	420
28	172	268	149	149	185	185	750	200	290	210	115	350
29	172	258	143	149	---	185	649	205	255	225	125	350
30	225	240	143	143	---	245	745	190	255	215	125	205
31	225	---	143	143	---	245	---	195	---	215	125	---
TOTAL	3474	5140	7810	4792	4528	6229	71626	21785	8262	7089	5593	5596
MEAN	112.1	171.3	251.9	154.6	161.7	200.9	2388	702.7	275.4	228.7	180.4	186.5
MAX	225	325	858	178	208	255	8840	3560	585	375	475	420
MIN	50	100	101	137	131	155	195	190	190	185	115	100
CFSM	0.43	0.65	0.96	0.59	0.62	0.77	9.11	2.68	1.05	0.87	0.69	0.71
IN.	0.49	0.73	1.11	0.68	0.64	0.88	10.17	3.09	1.17	1.01	0.79	0.79

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2002, BY WATER YEAR (WY)

MEAN	194.9	244.7	176.6	160.0	160.0	314.6	1010	518.8	361.7	287.4	194.3	191.2
MAX	495	800	391	295	321	888	2388	1180	1172	1068	432	894
(WY)	1942	1992	1952	1969	1969	1945	2002	1954	1939	1992	1953	1941
MIN	38.2	34.2	38.1	27.8	21.0	55.4	21.3	127	101	74.1	36.1	33.6
(WY)	1949	1949	1949	1949	1949	1940	1987	1941	1987	1987	1987	1939

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1938 - 2002

ANNUAL TOTAL	130647	151924	
ANNUAL MEAN	357.9	416.2	317.3
HIGHEST ANNUAL MEAN			487
LOWEST ANNUAL MEAN			85.7
HIGHEST DAILY MEAN	5490	Apr 24	8840
LOWEST DAILY MEAN	50	Oct 2,3	50
ANNUAL SEVEN-DAY MINIMUM	58	Sep 27	64
ANNUAL RUNOFF (CFSM)	1.37		1.59
ANNUAL RUNOFF (INCHES)	18.55		21.57
10 PERCENT EXCEEDS	455		509
50 PERCENT EXCEEDS	166		190
90 PERCENT EXCEEDS	95		117

STREAMS TRIBUTARY TO LAKE SUPERIOR

04037500 CISCO BRANCH ONTONAGON RIVER AT CISCO LAKE OUTLET, MI

LOCATION.--Lat 46°15'12", long 89°27'05", in NE ¼ sec.32, T.45 N., R.41 W., Gogebic County, Hydrologic Unit 04020102, on left bank 80 ft downstream from Cisco Lake Dam, 2.5 mi upstream from Langford Creek, 5.0 mi upstream from U.S. Highway 2, and 13 mi west of Watersmeet.

DRAINAGE AREA.--50.7 mi².

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

REVISED RECORDS.--WSP 1911: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,672.69 ft above NGVD of 1929. Prior to Oct. 1, 1968, nonrecording gage at same site and at datum 4.00 ft higher.

REMARKS.--Records good except for discharges below 3.0 ft³/s, which are poor (see page 11). Flow regulated by Cisco Lake (station 04037400). Several measurements of water temperature were made during the year. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.41	2.8	28	52	57	30	44	200	17	14	24	0.70
2	0.42	2.5	29	39	68	11	44	194	12	7.7	66	31
3	44	2.3	28	27	65	12	44	190	12	2.1	74	67
4	92	2.2	28	14	64	11	44	180	11	1.9	73	37
5	71	2.1	80	2.6	52	12	44	174	12	1.7	42	e46
6	48	1.9	131	2.6	42	12	43	174	28	1.4	33	e70
7	47	1.9	127	34	27	12	43	169	69	1.3	32	e70
8	28	1.9	125	90	7.4	48	43	177	90	9.4	12	e70
9	6.9	1.8	125	88	2.8	81	43	192	89	21	12	e37
10	1.7	1.7	74	50	2.6	81	47	189	65	21	11	19
11	1.3	1.8	15	16	6.1	107	123	189	45	17	11	20
12	1.3	36	3.3	3.7	12	125	177	187	46	5.7	11	20
13	1.2	78	3.0	3.7	13	121	177	184	68	1.3	7.9	19
14	1.2	77	3.0	15	28	88	182	179	137	1.2	3.7	19
15	28	87	3.0	27	37	59	190	176	173	1.1	0.90	19
16	52	99	2.8	38	22	71	209	166	169	0.96	0.81	14
17	64	97	9.2	59	22	70	224	162	138	0.95	0.82	4.8
18	62	95	15	73	34	69	233	103	77	0.90	0.76	0.82
19	39	71	34	71	46	67	242	66	34	0.94	0.69	26
20	24	23	67	69	49	59	240	44	18	0.84	0.63	67
21	25	1.6	75	68	89	47	238	22	14	1.2	40	89
22	25	1.5	74	66	95	33	237	32	14	29	74	85
23	25	1.3	73	45	70	20	235	64	15	90	73	48
24	39	1.4	50	16	69	20	231	47	45	120	71	7.3
25	49	1.5	25	6.8	69	20	226	21	124	117	69	1.1
26	75	29	19	2.1	68	21	222	21	135	58	47	12
27	139	116	2.6	2.1	56	21	218	21	56	9.6	21	35
28	170	175	2.6	2.1	44	35	213	21	18	1.6	20	46
29	98	148	2.6	2.1	---	47	210	11	14	6.6	15	45
30	15	75	2.7	12	---	46	205	9.9	14	6.8	6.1	58
31	3.2	---	28	34	---	45	---	20	---	1.3	0.99	---
TOTAL	1276.63	1236.2	1284.8	1030.8	1216.9	1501	4671	3584.9	1759	553.49	854.30	1083.72
MEAN	41.18	41.21	41.45	33.25	43.46	48.42	155.7	115.6	58.63	17.85	27.56	36.12
MAX	170	175	131	90	95	125	242	200	173	120	74	89
MIN	0.41	1.3	2.6	2.1	2.6	11	43	9.9	11	0.84	0.63	0.70
CFSM	0.81	0.81	0.82	0.66	0.86	0.96	3.07	2.28	1.16	0.35	0.54	0.71
IN.	0.94	0.91	0.94	0.76	0.89	1.10	3.43	2.63	1.29	0.41	0.63	0.80

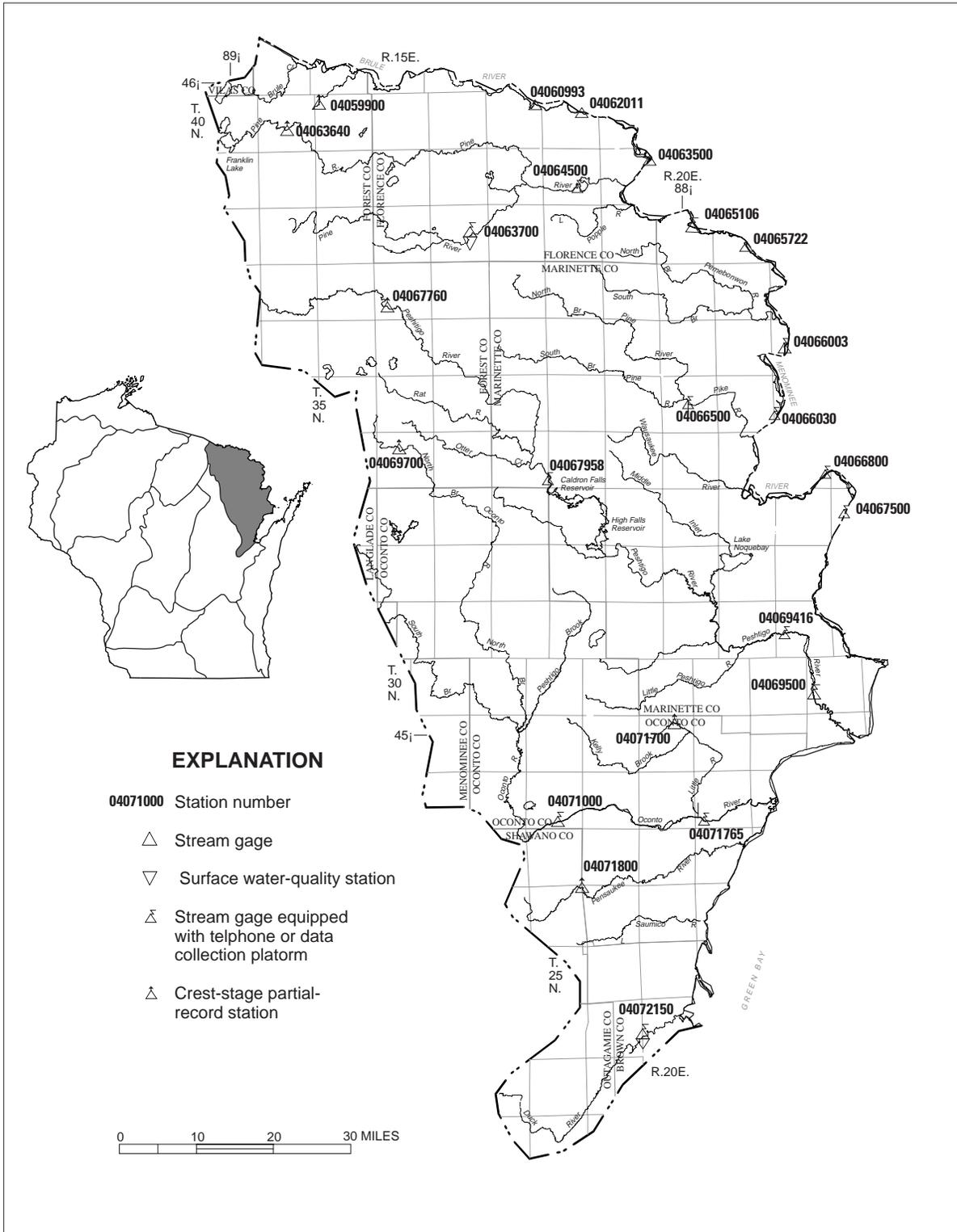
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2002, BY WATER YEAR (WY)

	MEAN	66.82	65.90	47.21	38.89	35.06	43.95	62.86	47.66	45.07	32.36	25.35	36.59
MAX	151	116	84.1	62.6	81.0	92.1	156	160	123	113	99.7	104	
(WY)	1986	1968	1961	1983	1945	1973	2002	1996	1953	1953	1978	1977	
MIN	13.1	14.5	23.5	23.1	20.6	24.1	2.02	0.17	0.11	0.25	0.15	0.23	
(WY)	1958	1945	1990	1959	1950	1956	1948	1977	1977	1977	1970	1976	

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1945 - 2002
ANNUAL TOTAL	13767.87	20052.74	
ANNUAL MEAN	37.72	54.94	45.65
HIGHEST ANNUAL MEAN			65.9
LOWEST ANNUAL MEAN			25.2
HIGHEST DAILY MEAN	178	Apr 24	288
LOWEST DAILY MEAN	0.40	Sep 28	0.08
ANNUAL SEVEN-DAY MINIMUM	0.41	Sep 25	0.98
MAXIMUM PEAK FLOW		245	Apr 18
MAXIMUM PEAK STAGE		5.87	Apr 18
ANNUAL RUNOFF (CFSM)	0.74	1.08	0.90
ANNUAL RUNOFF (INCHES)	10.10	14.71	12.23
10 PERCENT EXCEEDS	97	169	103
50 PERCENT EXCEEDS	24	35	37
90 PERCENT EXCEEDS	0.52	1.7	0.90

(a) Present datum
(e) Estimated



Base from U.S. Geological Survey 1:100,000 digital data, modified by Wisconsin Department of Natural Resources. Wisconsin Transverse Mercator projection.

MENOMINEE-OCONTO-PESHTIGO BASIN

STREAMS TRIBUTARY TO LAKE MICHIGAN

04062011 BRULE RIVER NEAR COMMONWEALTH, WI

LOCATION.--Lat 45°56'51" long 88°12'55", in NW ¼ sec.14, T.40 N., R.18 E., Wisconsin Meridian, Florence County, Hydrologic Unit 04030106, on right bank 900 ft downstream from Brule Island Dam, 1.5 mi upstream from confluence with Michigamme River, and 2.8 mi north of Commonwealth, WI.

DRAINAGE AREA.--1,020 mi².

PERIOD OF RECORD.--October 1989 to current year.

REVISED RECORD.--WDR MI-91-1: 1990(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,130 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good (see page 11). Flow regulated by powerplant 900 ft upstream and by Lower Paint Dam 8.2 mi upstream. Records not adjusted for diversion to Michigamme River by Paint River Diversion Canal. Gage-height telemeter at station.

COOPERATION.--Gage-height record was provided by Wisconsin Electric Power Co., under general supervision of the Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	293	433	439	438	470	440	483	1660	702	695	661	525
2	301	385	394	436	366	429	498	1560	661	618	967	519
3	490	342	406	443	435	402	508	1220	640	644	1300	551
4	429	363	449	421	438	391	498	1030	657	522	1680	543
5	373	324	701	429	416	419	485	981	711	639	1520	497
6	312	364	1020	471	434	422	469	1050	650	554	809	533
7	325	334	1080	428	438	403	512	1410	628	557	647	536
8	337	387	932	449	440	405	537	1740	673	608	552	563
9	338	373	665	442	431	428	614	2740	557	671	534	548
10	397	343	682	487	414	444	683	3440	620	612	591	505
11	430	354	641	484	389	425	1170	3330	784	617	498	504
12	427	324	549	456	453	462	1850	2160	1040	562	508	535
13	348	340	547	457	407	426	3180	1420	948	503	541	503
14	378	359	502	447	396	456	5250	1470	1060	559	549	506
15	375	343	452	427	473	476	6430	1510	1440	574	528	513
16	345	301	505	439	435	437	8540	1150	1330	542	524	545
17	385	378	509	461	408	436	10500	956	970	547	527	500
18	324	303	544	357	444	481	10100	919	827	616	528	507
19	354	365	509	377	437	445	8320	868	842	631	527	505
20	299	308	451	432	485	447	7230	824	807	593	525	533
21	353	387	411	452	447	453	5400	847	864	587	529	747
22	347	316	526	433	409	407	3620	768	752	866	851	580
23	311	352	576	436	446	419	2330	789	771	717	745	763
24	387	378	435	438	479	464	2230	685	689	646	681	836
25	421	418	423	416	447	409	2410	750	745	608	587	552
26	414	420	406	437	422	445	2250	731	950	643	530	558
27	412	431	382	451	450	446	2060	744	1000	643	551	674
28	409	457	451	430	384	479	2100	720	849	573	481	651
29	383	403	429	444	---	477	1870	714	750	680	533	594
30	368	413	426	391	---	525	1710	714	631	849	549	645
31	409	---	439	416	---	490	---	680	---	733	517	---
TOTAL	11474	10998	16881	13525	12093	13688	93837	39580	24548	19409	21070	17071
MEAN	370.1	366.6	544.5	436.3	431.9	441.5	3128	1277	818.3	626.1	679.7	569.0
MAX	490	457	1080	487	485	525	10500	3440	1440	866	1680	836
MIN	293	301	382	357	366	391	469	680	557	503	481	497

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	405.8	392.0	355.3	337.3	343.6	430.4	1150	856.0	500.7	468.8	384.1	375.8	
MAX	712	571	545	436	432	634	3128	2757	818	887	680	569	
(WY)	1991	1993	2002	2002	2002	1998	2002	1996	2002	1999	2002	2002	
MIN	276	307	270	259	270	327	322	355	334	272	296	285	
(WY)	1990	1990	1990	1991	1991	2001	1990	1998	1992	1990	1990	1998	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1990 - 2002

ANNUAL TOTAL	171750	294174	
ANNUAL MEAN	470.5	806.0	500.0
HIGHEST ANNUAL MEAN			810
LOWEST ANNUAL MEAN			325
HIGHEST DAILY MEAN	4430	Apr 14	10500
LOWEST DAILY MEAN	240	Aug 30	293
ANNUAL SEVEN-DAY MINIMUM	264	Aug 30	335
MAXIMUM PEAK FLOW			11200
MAXIMUM PEAK STAGE			15.67
10 PERCENT EXCEEDS	580		1190
50 PERCENT EXCEEDS	354		507
90 PERCENT EXCEEDS	288		374

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

LOCATION.--Lat 45°45'49", long 88°27'47", in NW ¼ NW ¼ sec.23, T.38 N., R.16 E., Florence County, Hydrologic Unit 04030108, on left bank 20 ft upstream from bridge on U. S. Forest Service Road 2159, 1.8 mi downstream from Mud Creek, 2.6 mi northwest of Fence, and 11.5 mi upstream from mouth.

DRAINAGE AREA.--139 mi².

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,406.16 ft above NGVD of 1929. Prior to June 18, 1964, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	73	94	e48	e29	e28	e52	478	144	113	78	50
2	36	75	92	e46	e29	e28	e52	460	129	100	94	52
3	34	74	89	e44	e28	e28	e50	425	119	90	80	66
4	35	70	94	e43	e28	e28	e50	388	117	82	71	68
5	36	63	136	e44	e29	e29	e50	354	126	74	66	64
6	36	57	237	e44	e30	e31	e50	363	123	65	60	64
7	35	55	274	e45	e30	e33	e50	361	113	58	56	65
8	34	66	256	45	e28	e33	e52	357	108	72	55	56
9	34	69	e210	46	e28	e35	e60	446	104	92	50	51
10	39	64	e190	49	e28	e36	e78	495	97	94	49	49
11	46	61	e170	50	e27	e38	e150	500	123	84	44	49
12	47	58	e150	50	e26	e40	e220	457	169	73	42	47
13	47	55	131	48	e27	e38	e420	422	169	67	44	46
14	47	54	e120	e45	e27	e38	e540	379	233	62	47	45
15	49	53	e110	e44	e27	e38	687	344	311	56	46	48
16	49	52	e100	e43	e26	e39	815	319	320	53	44	49
17	49	51	e94	e40	e26	e40	1020	288	276	56	50	45
18	49	50	e84	e38	e26	e40	1200	258	240	78	54	44
19	48	53	e76	e36	e27	e40	1500	228	200	74	52	44
20	47	57	e69	e35	e30	e40	1460	202	196	64	47	49
21	47	57	e68	e35	e32	e40	1360	181	202	64	54	78
22	45	56	e66	e35	e32	e40	1210	169	195	82	93	81
23	44	56	e64	e34	e30	e40	1020	160	166	83	103	74
24	46	60	e62	e34	e29	e39	893	151	164	73	96	81
25	59	89	e62	e32	e28	e39	811	145	152	68	84	81
26	70	100	e60	e32	e28	e40	698	150	176	68	71	96
27	72	101	e58	e32	e28	e42	583	163	182	63	62	116
28	72	102	e56	e32	e28	e44	518	155	196	62	57	106
29	69	97	e52	e32	---	e47	478	145	171	61	55	98
30	68	94	e50	e31	---	e50	473	143	130	59	53	101
31	69	---	e48	e30	---	e52	---	153	---	59	52	---
TOTAL	1496	2022	3422	1242	791	1173	16600	9239	5151	2249	1909	1963
MEAN	48.26	67.40	110.4	40.06	28.25	37.84	553.3	298.0	171.7	72.55	61.58	65.43
MAX	72	102	274	50	32	52	1500	500	320	113	103	116
MIN	34	50	48	30	26	28	50	143	97	53	42	44
CFSM	0.35	0.48	0.79	0.29	0.20	0.27	3.98	2.14	1.24	0.52	0.44	0.47
IN.	0.40	0.54	0.92	0.33	0.21	0.31	4.44	2.47	1.38	0.60	0.51	0.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

MEAN	112.5	109.8	65.46	47.67	47.06	85.90	310.4	216.1	142.3	81.86	65.60	104.6
MAX	265	220	116	86.6	107	356	613	617	345	260	147	356
(WY)	1972	1986	1992	1969	1984	1973	1979	1965	1993	1999	1978	1980
MIN	25.0	30.9	23.9	24.6	26.0	30.5	54.6	52.0	21.2	17.5	23.1	16.4
(WY)	1990	1977	1990	1977	1982	1964	1990	1998	1988	1988	1989	1989

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002	
ANNUAL TOTAL	33550		47257			
ANNUAL MEAN	91.92		129.5		115.7	
HIGHEST ANNUAL MEAN					175 1973	
LOWEST ANNUAL MEAN					64.3 1988	
HIGHEST DAILY MEAN	660	Apr 14	1500	Apr 19	1610	Apr 25 1979
LOWEST DAILY MEAN	21	Sep 5,6	(a)26	Feb 12,16-18	10	Aug 12 1989
ANNUAL SEVEN-DAY MINIMUM	25	Aug 31	(a)26	Feb 12	12	(b)Jul 3 1988
MAXIMUM PEAK FLOW			1560	Apr 19	(c)1640	Apr 25 1979
MAXIMUM PEAK STAGE			4.81	Apr 19	4.81	Apr 19 2002
INSTANTANEOUS LOW FLOW			26	Feb 12,16-18	(d)5.9	Oct 28 1976
ANNUAL RUNOFF (CFSM)	0.66		0.93		0.83	
ANNUAL RUNOFF (INCHES)	8.98		12.65		11.31	
10 PERCENT EXCEEDS	198		297		251	
50 PERCENT EXCEEDS	51		60		70	
90 PERCENT EXCEEDS	34		32		33	

- (a) Ice affected
 (b) Also occurred Sept. 20, 1989
 (c) Gage height, 4.52 ft
 (d) Result of temporary storage from beaver dam
 (e) Estimated due to ice effect or missing record

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

WATER-QUALITY RECORD

PERIOD OF RECORD.--June 1964 to September 1997, October 2000 to current year. National Water-Quality Assessment Program sampling April 1993 to October 1996, and May to September 2001.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June to September 2002.
SPECIFIC CONDUCTANCE: June to September 2002.

INSTRUMENTATION.--Continuous water temperature recorder and specific conductance recorder since June 2002. Sensor located near midstream.

REMARKS.--Records represent water temperature at sensor within 0.5°C. Records for water temperature and specific conductance were faulty Aug. 1-12.

EXTREMES FOR CURRENT PERIOD (JUNE-SEPTEMBER).--

WATER TEMPERATURE: Maximum, 30.0°C, July 1; minimum, 9.0°C, Sept. 24 and 28.
SPECIFIC CONDUCTANCE: Maximum, 244 µS/cm, July 11; minimum, 131 µS/cm, June 28.

DAY	WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002											
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	30.0	25.0	27.5	---	---	---	23.0	19.0	21.0
2	---	---	---	29.5	25.0	27.5	---	---	---	22.0	20.0	21.0
3	---	---	---	28.5	25.0	26.5	---	---	---	21.5	17.5	19.5
4	---	---	---	27.0	22.0	24.5	---	---	---	21.5	16.5	19.0
5	---	---	---	26.0	20.0	23.0	---	---	---	20.0	17.0	18.0
6	---	---	---	26.5	20.5	23.5	---	---	---	17.5	16.5	17.0
7	---	---	---	28.0	23.0	25.5	---	---	---	22.5	16.5	19.0
8	---	---	---	26.5	22.5	24.5	---	---	---	24.0	18.5	21.5
9	---	---	---	26.5	22.0	24.5	---	---	---	25.0	20.0	22.5
10	---	---	---	24.5	20.5	22.0	---	---	---	23.5	18.5	21.0
11	---	---	---	25.0	18.0	21.5	---	---	---	20.0	16.0	18.0
12	---	---	---	25.0	18.5	22.0	---	---	---	20.0	15.5	18.0
13	---	---	---	25.5	19.5	22.5	23.0	20.5	21.5	19.5	16.5	18.0
14	---	---	---	26.5	20.5	23.5	23.0	18.5	21.0	19.0	16.0	17.5
15	---	---	---	28.0	22.0	25.0	22.5	19.0	21.0	18.0	13.5	15.5
16	---	---	---	28.0	23.0	25.5	23.5	18.5	21.0	17.5	12.5	15.5
17	---	---	---	28.0	23.5	25.5	22.5	19.0	21.0	19.0	14.0	16.5
18	---	---	---	25.0	22.0	23.0	21.5	16.5	19.0	18.0	15.5	17.0
19	---	---	---	25.5	19.0	22.5	21.0	17.0	19.0	19.0	17.0	18.0
20	---	---	---	26.0	20.5	23.5	21.5	16.0	19.0	18.5	17.0	17.5
21	---	---	---	27.0	22.5	24.5	20.5	17.0	18.0	17.0	15.0	16.0
22	---	---	---	27.0	22.5	24.5	20.0	17.0	18.0	15.0	13.0	14.0
23	---	---	---	24.5	19.5	22.5	18.5	17.5	17.5	13.0	10.0	11.0
24	---	---	---	24.5	19.5	22.0	21.5	17.0	19.0	12.5	9.0	10.5
25	---	---	---	23.0	19.5	20.5	22.5	17.0	20.0	11.0	10.0	10.5
26	---	---	---	25.0	19.0	21.5	23.5	17.5	20.5	11.0	9.5	10.0
27	---	---	---	26.0	20.5	23.0	21.5	18.5	20.0	12.5	9.5	11.0
28	24.5	21.0	22.5	27.5	22.0	24.5	22.5	18.0	20.0	11.0	9.0	10.0
29	25.5	21.5	23.5	26.5	23.0	25.0	23.0	19.0	21.0	11.0	10.5	10.5
30	28.0	23.0	25.5	28.0	21.5	25.0	23.5	18.5	21.0	14.5	11.0	13.0
31	---	---	---	26.5	23.0	24.0	23.0	19.0	21.0	---	---	---
MONTH	---	---	---	30.0	18.0	23.9	---	---	---	25.0	9.0	16.2

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

SPECIFIC CONDUCTANCE, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	JUNE			JULY			AUGUST			SEPTEMBER		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	234	170	197	218	216	218	236	231	234			
2	---	---	---	241	193	227	218	218	218	235	221	232			
3	---	---	---	242	144	212	218	218	218	229	196	227			
4	---	---	---	240	197	231	218	218	218	228	222	225			
5	---	---	---	242	166	224	218	218	218	225	222	223			
6	---	---	---	236	184	224	218	218	218	226	223	225			
7	---	---	---	215	153	178	218	218	218	227	222	225			
8	---	---	---	175	165	170	218	218	218	228	225	226			
9	---	---	---	211	173	184	218	218	218	231	226	229			
10	---	---	---	238	169	200	218	218	218	232	228	230			
11	---	---	---	244	182	209	218	218	218	232	201	229			
12	---	---	---	200	186	189	238	218	226	232	228	230			
13	---	---	---	195	191	193	239	232	237	235	230	233			
14	---	---	---	200	194	198	234	232	233	236	230	233			
15	---	---	---	206	200	204	236	233	235	232	228	231			
16	---	---	---	212	205	210	237	235	236	232	224	230			
17	---	---	---	216	202	211	238	231	233	233	229	232			
18	---	---	---	207	198	203	238	232	235	238	217	235			
19	---	---	---	200	194	198	236	234	235	240	214	237			
20	---	---	---	206	197	202	238	236	237	240	228	236			
21	---	---	---	211	205	208	238	220	230	229	221	225			
22	---	---	---	210	205	207	220	206	215	221	203	214			
23	---	---	---	206	203	204	206	199	201	204	196	201			
24	---	---	---	213	205	208	204	201	202	197	173	179			
25	---	---	---	214	208	211	208	204	206	178	169	176			
26	---	---	---	215	210	213	214	208	211	177	159	169			
27	---	---	---	216	213	215	215	212	214	159	146	153			
28	158	131	134	220	214	217	220	215	218	152	145	149			
29	217	132	156	219	191	217	223	218	222	154	151	152			
30	195	143	171	223	218	221	229	223	227	156	143	150			
31	---	---	---	226	210	220	233	229	231	---	---	---			
MONTH	---	---	---	244	144	207	239	199	222	240	143	212			

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)
OCT 2001													
11...	1030	47	10	724	9.0	7.6	219	10.2	24.3	12.5	.90	1.72	108
NOV 07...	0910	54	10	734	11.0	7.5	167	4.3	--	--	--	--	83
DEC 06...	1015	243	10	722	12.4	7.3	115	2.2	--	--	--	--	48
JAN 2002													
09...	1015	46	10	707	10.7	7.1	226	.0	--	--	--	--	109
FEB 06...	1115	30	20	721	12.1	7.7	240	.0	--	--	--	--	115
MAR 06...	1040	56	20	725	11.6	7.4	253	.0	--	--	--	--	120
APR 09...	1145	60	20	728	13.0	7.4	203	.0	--	--	--	--	92
MAY 09...	1000	452	10	716	9.8	6.5	62	6.4	--	--	--	--	23
JUN 06...	0900	122	10	730	8.2	7.7	153	15.0	--	--	--	--	75
JUL 11...	0800	94	10	732	7.2	7.7	183	18.2	--	--	--	--	91
23...	1020	84	70	739	7.3	7.8	202	20.3	--	--	--	--	--
AUG 13...	0915	56	20	724	6.3	7.7	235	20.9	--	--	--	--	116
SEP 09...	1000	50	10	729	6.8	7.7	232	20.0	--	--	--	--	121

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,PAR TICULATE WAT FLT SUSP (MG/L AS N) (49570)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)
OCT 2001													
11...	132	1.91	<.1	9.92	6.5	138	<.04	.33	.32	<.05	<.008	--	.006
NOV													
07...	101	1.93	--	--	5.3	--	<.04	--	.49	<.05	<.008	<.02	--
DEC													
06...	58	1.34	--	--	7.6	--	<.04	--	.84	.45	<.008	.18	--
JAN 2002													
09...	133	1.88	--	--	7.6	--	E.03	--	.40	.14	<.008	<.02	--
FEB													
06...	141	1.81	--	--	7.2	--	E.04	--	.30	.17	<.008	<.02	--
MAR													
06...	146	1.87	--	--	7.0	--	.04	--	.25	.17	<.008	<.02	--
APR													
09...	111	1.68	--	--	6.3	--	.07	--	.34	.22	<.008	<.02	--
MAY													
09...	29	.41	--	--	4.2	--	<.04	--	.61	E.05	<.008	<.02	--
JUN													
06...	91	1.09	--	--	4.4	--	<.04	--	.55	E.02	<.008	.04	--
JUL													
11...	111	1.18	--	--	4.1	--	<.04	--	.71	E.03	E.004	--	--
23...	--	--	--	--	4.2	--	--	--	--	--	--	--	--
AUG													
13...	142	2.10	--	--	5.5	--	<.04	--	.38	<.05	<.008	.05	--
SEP													
09...	147	2.23	--	--	4.7	--	<.04	--	.44	<.05	<.008	.03	--

Date	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, INORG + ORGANIC TOTAL (MG/L AS C) (00694)	CARBON, INOR- GANIC, TOTAL (MG/L AS C) (00688)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY WATER, FLTRD (NG/L) (50287)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)
OCT 2001													
11...	<.02	.014	--	--	--	--	112	42.0	--	--	--	--	--
NOV													
07...	<.02	.012	.2	--	15.6	--	--	--	--	<.002	<.004	<.002	<.005
DEC													
06...	<.02	.049	2.1	--	20.7	--	--	--	--	--	--	--	--
JAN 2002													
09...	<.02	.013	.3	--	9.1	--	--	--	--	<.006	<.006	<.004	<.005
FEB													
06...	<.02	.010	.2	--	5.0	--	--	--	--	--	--	--	--
MAR													
06...	<.02	.012	.2	--	4.7	--	--	--	--	<.006	<.006	<.004	<.005
APR													
09...	<.02	.016	.3	--	7.2	--	--	--	--	<.006	<.006	<.004	<.005
MAY													
09...	<.02	.020	.4	--	19.9	--	--	--	--	<.006	.007	<.004	<.005
JUN													
06...	<.02	.021	.4	--	15.2	--	--	--	--	<.006	<.006	<.004	<.005
JUL													
11...	<.02	.035	--	--	--	--	--	--	--	<.006	<.006	<.004	<.005
23...	--	--	--	--	13.7	--	--	--	2.78	--	--	--	--
AUG													
13...	<.02	.021	.5	<.1	7.3	.4	--	--	--	<.006	<.006	<.004	<.005
SEP													
09...	<.02	.019	.4	<.1	11.0	.4	--	--	--	--	--	--	--

E Estimated

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ-INON D10 SRG 0.7 U GF, REC (91063)	DI-AZINON, SOLVED (UG/L) (39572)	DI-ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
OCT 2001 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	100	<.005	<.005	<.02
DEC 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 09...	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	84.0	<.005	<.005	<.02
FEB 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.002	107	<.005	<.005	<.02
APR 09...	E.004	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	114	<.005	<.005	<.02
MAY 09...	.028	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.008	85.5	<.005	<.005	<.02
JUN 06...	.011	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.005	97.2	<.005	<.005	<.02
JUL 11... 23...	E.005 --	<.010 --	<.002 --	<.041 --	<.020 --	<.005 --	<.018 --	<.003 --	E.003 --	120 --	<.005 --	<.005 --	<.02 --
AUG 13...	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	102	<.005	<.005	<.02
SEP 09...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER REC (UG/L) (04095)	HCH ALPHA D6 SRG 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS- SOLVED (UG/L) (39532)	MERCURY METHYL, WATER FLTRD REC, (NG/L) (50285)	METHYL AZIN-PHOS WAT FLD 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLD 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN WATER DISSOLV (UG/L) (82630)
OCT 2001 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	<.002	<.009	<.005	<.003	83.0	<.004	<.035	<.027	--	<.050	<.006	<.013	<.006
DEC 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 09...	<.002	<.009	<.005	<.003	81.0	<.004	<.035	<.027	--	<.050	<.006	<.013	<.006
FEB 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	<.002	<.009	<.005	<.003	96.3	<.004	<.035	<.027	--	<.050	<.006	<.013	<.006
APR 09...	<.002	<.009	<.005	<.003	92.9	<.004	<.035	<.027	--	<.050	<.006	E.004	<.006
MAY 09...	<.002	<.009	<.005	<.003	87.5	<.004	<.035	<.027	--	<.050	<.006	E.004	<.006
JUN 06...	<.002	<.009	<.005	<.003	105	<.004	<.035	<.027	--	<.050	<.006	<.013	<.006
JUL 11... 23...	<.002 --	<.009 --	<.005 --	<.003 --	91.1 --	<.004 --	<.035 --	<.027 --	-- .32	<.050 --	<.006 --	E.002 --	<.006 --
AUG 13...	<.002	<.009	<.005	<.003	110	<.004	<.035	<.027	--	<.050	<.006	<.013	<.006
SEP 09...	--	--	--	--	--	--	--	--	--	--	--	--	--

E Estimated

STREAMS TRIBUTARY TO LAKE MICHIGAN

04064500 PINE RIVER BELOW PINE RIVER POWERPLANT NEAR FLORENCE, WI

LOCATION.--Lat 45°50'16", long 88°13'31", in SW ¼ SE ¼ sec.22, T.39 N., R.18 E., Florence County, Hydrologic Unit 04030108, on left bank 60 ft upstream from bridge on County Trunk Highway N, 1.9 mi downstream from powerplant of Wisconsin-Michigan Power Co., 6.0 mi south of Florence, and 7.0 mi downstream from Popple River.

DRAINAGE AREA.--533 mi².

PERIOD OF RECORD.--October 1923 to December 1975, October 1996 to current year.

REVISED RECORDS.--WDR WI-97-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,098.84 ft above mean NGVD of 1929. Prior to October 1968, record obtained from Pine River Powerplant 1.9 mi upstream with a drainage area of 528 mi².

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow regulated by Pine River Powerplant 1.9 mi upstream; since storage capacity is small, monthly flows are not affected appreciably. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	317	421	e210	e200	e210	e270	1590	518	351	359	189
2	201	332	375	e230	e190	e220	e260	1510	444	355	431	209
3	194	290	389	e220	e200	e220	e270	1330	412	308	370	248
4	191	286	402	e220	e200	e210	e260	1210	405	291	353	254
5	191	265	511	e210	e200	e210	e250	1100	437	278	326	249
6	186	245	930	e220	e200	e210	e260	1140	394	251	306	241
7	161	231	973	e230	e180	e210	256	1110	410	252	256	296
8	170	262	893	e220	e190	e210	259	1120	362	247	248	293
9	185	294	677	e210	e190	e220	280	1640	351	366	246	249
10	193	242	643	e220	e180	e230	350	1750	362	324	194	245
11	272	267	592	e230	e200	e240	707	1620	408	284	199	220
12	285	252	544	e240	e200	e240	1400	1520	518	265	198	223
13	284	235	504	e230	e200	e250	1890	1400	549	237	199	186
14	278	241	400	e240	e190	e260	2330	1230	825	226	190	227
15	274	241	356	e220	e200	e250	2800	1110	1040	205	199	232
16	276	224	454	e220	e200	e250	3120	1040	997	214	210	199
17	263	231	408	e210	e210	e250	3470	911	878	191	225	205
18	248	222	383	e210	e200	e260	3650	842	739	271	240	209
19	237	250	363	e200	e200	e260	4440	762	614	264	187	197
20	225	256	301	e210	e230	e260	3960	701	589	257	206	218
21	227	241	263	e200	e220	e250	3420	623	629	263	230	344
22	198	247	309	e190	e230	e250	2950	615	601	372	371	360
23	210	248	376	e210	e230	e240	2560	564	561	340	442	302
24	227	277	e260	e190	e220	e240	2290	546	533	301	400	397
25	298	398	e250	e200	e230	e230	2210	514	488	319	393	308
26	328	426	e250	e190	e230	e250	1920	533	539	313	312	321
27	313	441	e230	e200	e220	e250	1650	548	553	281	270	430
28	302	419	e240	e210	e210	e250	1520	516	545	272	244	421
29	280	432	e240	e220	---	e230	1470	497	496	260	251	382
30	322	402	e250	e200	---	e280	1540	528	429	272	207	423
31	327	---	e230	e200	---	e290	---	573	---	249	224	---
TOTAL	7506	8714	13417	6610	5750	7430	52012	30693	16626	8679	8486	8277
MEAN	242.1	290.5	432.8	213.2	205.4	239.7	1734	990.1	554.2	280.0	273.7	275.9
MAX	328	441	973	240	230	290	4440	1750	1040	372	442	430
MIN	160	222	230	190	180	210	250	497	351	191	187	186
CFSM	0.45	0.54	0.81	0.40	0.39	0.45	3.25	1.86	1.04	0.53	0.51	0.52
IN.	0.52	0.61	0.94	0.46	0.40	0.52	3.63	2.14	1.16	0.61	0.59	0.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2002, BY WATER YEAR (WY)

	MEAN	369.5	384.9	259.4	216.5	197.7	314.7	954.9	798.7	544.3	384.2	301.7	362.8
MAX	1017	694	433	473	351	1188	1882	2127	1424	1000	760	1115	
(WY)	1929	1946	2002	1939	1969	1973	1967	1965	1939	1999	1938	1928	
MIN	100	185	139	120	80.7	74.5	325	209	190	117	80.3	108	
(WY)	1949	1964	1964	1964	1964	1964	1931	1998	1948	1934	1933	1998	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1924 - 2002

ANNUAL TOTAL	130286	174200	
ANNUAL MEAN	356.9	477.3	424.6
HIGHEST ANNUAL MEAN			658
LOWEST ANNUAL MEAN			210
HIGHEST DAILY MEAN	1890	Apr 14	4440
LOWEST DAILY MEAN	94	Sep 6	160
ANNUAL SEVEN-DAY MINIMUM	122	Aug 31	182
MAXIMUM PEAK FLOW			(b)4850
MAXIMUM PEAK STAGE			9.37
ANNUAL RUNOFF (CFSM)	0.67		0.90
ANNUAL RUNOFF (INCHES)	9.09		12.16
10 PERCENT EXCEEDS	649		1010
50 PERCENT EXCEEDS	250		262
90 PERCENT EXCEEDS	166		200

(a) No flow at times during 1924, 1926-27, 1930-31, 1933, 1940

(b) From rating curve extended above 3,600 ft³/s

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04065106 MENOMINEE RIVER AT NIAGARA, WI

LOCATION.--Lat 45°46'04", long 87°58'50", in NE ¼ NE ¼ sec.15, T.38 N., R.20 E., Marinette County, Hydrologic Unit 04030108, on right bank 0.7 mi downstream from Little Quinnesec Falls Dam, at Niagara.

DRAINAGE AREA.--2,470 mi².

PERIOD OF RECORD.--October 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 880 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow regulated by powerplants, by Michigamme Reservoir, capacity, 119,950 acre-ft, by Peavy Pond, capacity, 33,860 acre-ft, on Michigamme River, and by smaller reservoirs upstream of gage. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	1840	1410	e1600	e1900	e1800	1720	6180	2420	2630	2280	1330
2	1060	1670	1390	e1700	e1800	e1700	1780	6620	2290	2180	3880	1700
3	1560	1450	1600	e1700	e1600	e1800	1760	5620	2380	2010	3850	1790
4	1650	1370	1720	e1700	e1600	e1800	1780	4870	2270	1850	4660	1840
5	1590	1290	1780	e1700	e1700	e1700	1670	4590	2180	1640	4580	1860
6	1130	1350	2880	e1600	e1600	e1700	1720	4570	2000	1490	3520	1840
7	1080	1240	3790	e1700	e1600	e1900	1570	4770	1950	1530	2340	1900
8	1100	1230	3970	e1700	e1700	e2100	1860	5530	2020	1740	2060	2100
9	1170	1240	3200	e1800	e1700	e2100	1890	7340	1990	1890	2260	1950
10	1180	1250	2390	e1900	e1500	e2100	1940	10600	2050	1900	2330	1730
11	1150	1270	2400	1970	e1600	e2000	2990	9190	2180	1770	1880	1700
12	1260	1310	2400	1880	e1600	2320	4840	7990	2480	1710	1820	1570
13	1160	1250	2370	1720	e1600	1860	5630	5510	2950	1680	1850	1710
14	1190	1280	2160	1890	e1600	2040	7870	6180	3580	1560	1880	1600
15	1200	1310	1990	1690	e1600	2220	10000	5370	4920	1470	1790	1590
16	1320	1120	1780	1890	e1700	2030	12700	5140	5120	1520	1860	1590
17	1180	1110	2160	1780	e1700	2260	15800	4320	4240	1400	1940	1670
18	1360	1080	2180	e1800	e1500	2090	18100	4160	3460	1840	1910	1670
19	1210	1090	2170	e1600	e1700	2130	18400	3710	3090	1880	1740	1700
20	1100	1130	2040	e1600	e1800	2170	17200	3520	3210	1870	1690	1780
21	1170	1210	1660	e1500	1900	2260	15600	2940	2960	1810	1820	1960
22	1270	1190	1640	e1600	1790	2310	12400	2680	2920	2260	2070	2050
23	1280	1170	1820	e1500	1770	2200	10300	2610	3020	2420	2310	1890
24	1280	1340	1830	e1700	1800	2180	9550	2600	2780	2210	2270	1940
25	1340	1720	1570	e1800	1670	2130	9320	2480	2710	1990	2080	1740
26	1270	1640	e1600	e1700	e1700	1690	9040	2490	2890	2070	1840	1790
27	1180	1780	e1600	e1700	e1700	1620	7580	2470	3110	2250	1320	1950
28	1240	1950	e1400	e1600	e1700	1760	6960	2230	3120	1940	1320	2080
29	1560	1710	e1600	e1700	---	1780	6140	2420	2680	1990	1320	1970
30	1620	1760	e1700	e1600	---	1800	6180	2400	2850	2180	1520	2000
31	1550	---	e1600	e1700	---	1630	---	2290	---	2130	1250	---
TOTAL	39450	41350	63800	53020	47130	61180	224290	143390	85820	58810	69240	53990
MEAN	1273	1378	2058	1710	1683	1974	7476	4625	2861	1897	2234	1800
MAX	1650	1950	3970	1970	1900	2320	18400	10600	5120	2630	4660	2100
MIN	1040	1080	1390	1500	1500	1620	1570	2230	1950	1400	1250	1330

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2002, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
MEAN	1638	1689	1736	1734	1876	2083	3877	3625	2530	2134	1685	1645
MAX	2810	2531	2458	2258	2286	2800	7476	7555	4184	3547	2290	2225
(WY)	1996	1993	1993	1993	1997	2000	2002	1996	1993	1999	1996	1994
MIN	1151	1245	1161	1369	1391	1553	1953	1175	1587	1264	1080	1248
(WY)	2001	2001	2001	1995	1995	2001	1994	1998	1998	1998	1998	1998

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1993 - 2002
ANNUAL TOTAL	684510	941470	
ANNUAL MEAN	1875	2579	2187
HIGHEST ANNUAL MEAN			3135
LOWEST ANNUAL MEAN			1707
HIGHEST DAILY MEAN	7210	Apr 14	18400
LOWEST DAILY MEAN	1030	Sep 30	1040
ANNUAL SEVEN-DAY MINIMUM	1060	Sep 1	1130
MAXIMUM PEAK FLOW			18900
MAXIMUM PEAK STAGE		16.22	Apr 18
10 PERCENT EXCEEDS	3050		4620
50 PERCENT EXCEEDS	1600		1820
90 PERCENT EXCEEDS	1120		1280

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04065722 MENOMINEE RIVER NEAR VULCAN, MI

LOCATION.--Lat 45°44'12", long 87°51'48", sec.34, T.39 N., R.29 W., Michigan Meridian, Dickinson County, Hydrologic Unit 04030108, on left bank 0.35 mi downstream from Sturgeon Falls Dam, 3.0 mi south of Vulcan, and at mile 78.7.

DRAINAGE AREA.--2,900 mi².

PERIOD OF RECORD.--December 1987 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 820 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good (see page 11). Flow regulated by powerplants, by Michigamme Reservoir, capacity, 119,950 acre-ft, by Peavy Pond, capacity, 33,860 acre-ft, on Michigamme River, and by smaller reservoirs upstream from station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	2050	1770	1840	2090	2130	2170	7880	3190	3220	2510	1360
2	1130	1940	1760	1880	2060	1960	2260	8270	3150	2600	4330	1820
3	1600	1670	2000	1920	1800	2020	2250	7180	2980	2420	4520	1920
4	1880	1560	2020	1910	1810	2040	2190	6260	2960	2190	5280	1850
5	1680	1470	2120	1890	1980	1860	2080	5790	2770	1850	5140	1980
6	1220	1580	3160	1960	1870	1930	2080	5850	2600	1730	4090	1920
7	1210	1330	4430	1870	1850	2120	1990	5980	2510	1750	2790	1960
8	1210	1380	4750	1870	2010	2360	2270	6860	2510	1960	2320	2270
9	1310	1410	4090	1940	1990	2360	2370	8600	2480	2130	2560	2060
10	1310	1410	2970	2060	1730	2360	2500	11700	2420	2140	2590	1920
11	1260	1410	2960	2170	1830	2260	3880	11100	2610	1920	2120	1780
12	1390	1500	2930	2060	1860	2660	6580	9760	2960	1850	2030	1640
13	1300	1420	2920	1960	1790	2190	8110	6840	3450	1840	1990	1750
14	1370	1470	2660	2030	1800	2340	10500	7550	4210	1730	2080	1700
15	1440	1480	2450	1880	1820	2620	12800	6670	6010	1550	1910	1670
16	1490	1270	2120	2150	1910	2270	15400	6260	6240	1590	1930	1690
17	1400	1280	2530	2010	1970	2550	18900	5330	5370	1480	2040	1770
18	1500	1240	2610	1990	1780	2490	21800	5080	4380	1990	2030	1760
19	1350	1280	2620	1850	1920	2440	22800	4550	3860	1980	1890	1810
20	1240	1300	2380	1910	2170	2560	21300	4260	3880	2100	1770	1970
21	1310	1380	1980	1810	2150	2560	19300	3670	3500	2050	2010	2090
22	1400	1370	1910	1820	2040	2690	15100	3340	3420	2530	2290	2290
23	1420	1380	2050	1780	1960	2540	12700	3200	3520	2680	2530	2170
24	1450	1450	2130	1970	2030	2520	11200	3140	3230	2450	2390	2240
25	1470	2090	1900	2040	1960	2460	11100	3040	3140	2160	2300	1920
26	1450	2050	1860	1940	1920	1950	11100	3030	3290	2390	1980	2040
27	1350	2170	1800	1950	1900	1910	9570	3090	3710	2500	1480	2080
28	1400	2370	1660	1860	1970	2020	8750	2720	3740	2200	1430	2350
29	1750	2160	1720	1910	---	2060	7810	3010	3340	2300	1400	2190
30	1810	2120	1960	1890	---	2210	7910	2930	3430	2450	1560	2250
31	1780	---	1800	1920	---	2080	---	2970	---	2360	1300	---
TOTAL	43990	47990	76020	60040	53970	70520	278770	175910	104860	66020	76590	58220
MEAN	1419	1600	2452	1937	1928	2275	9292	5675	3495	2130	2471	1941
MAX	1880	2370	4750	2170	2170	2690	22800	11700	6240	3220	5280	2350
MIN	1110	1240	1660	1780	1730	1860	1990	2720	2420	1480	1300	1360

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1870	2152	2107	1990	2039	2505	4597	3867	2856	2223	1726	1834			
MAX	3401	4412	3008	2533	2548	3701	9292	8850	4832	4196	2598	2456			
(WY)	1996	1989	1989	1993	1997	2000	2002	1996	1993	1999	1996	1994			
MIN	1081	1382	1376	1489	1442	1855	1356	1344	1062	1100	1184	1223			
(WY)	1990	1990	2001	1995	1995	2001	1990	1998	1988	1988	1998	1989			

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1988 - 2002	
ANNUAL TOTAL	796090		1112900			
ANNUAL MEAN	2181		3049		2519	
HIGHEST ANNUAL MEAN					3781	
LOWEST ANNUAL MEAN					1864	
HIGHEST DAILY MEAN	8900	Apr 14	22800	Apr 19	22800	Apr 19 2002
LOWEST DAILY MEAN	1020	Sep 5	1110	Oct 1	846	Aug 3 1988
ANNUAL SEVEN-DAY MINIMUM	1060	Sep 1	1270	Oct 6	932	Oct 1 1989
MAXIMUM PEAK FLOW			23000	Apr 19	23000	Apr 19 2002
MAXIMUM PEAK STAGE			17.72	Apr 19	17.72	Apr 19 2002
INSTANTANEOUS LOW FLOW			990	(a)	603	Aug 1 1992
10 PERCENT EXCEEDS	3610		5810		4110	
50 PERCENT EXCEEDS	1840		2060		2050	
90 PERCENT EXCEEDS	1190		1430		1320	

(a) Feb. 6, Mar. 4,5

STREAMS TRIBUTARY TO LAKE MICHIGAN

04066003 MENOMINEE RIVER BELOW PEMENE CREEK NEAR PEMBINE, WI

LOCATION.--Lat 45°34'46", long 87°47'13", in NE ¼, sec.29, T. 37 N., R.28 W., Michigan Meridian, Menominee County, MI, Hydrologic Unit 04030108, on left bank 40 ft downstream from County Trunk Z bridge, 0.9 mi downstream from Pemene Creek, 3.9 mi west of Nathan, MI, 10.6 mi southeast of Pembine, and at mile 64.3.

DRAINAGE AREA.--3,140 mi².

PERIOD OF RECORD.--October 1949 to current year. Published as "near Pembine" (04066000) prior to August 1982. Monthly discharges for some periods published in WSP 1307.

GAGE.--Water-stage recorder. Elevation of gage is 740 ft above NGVD of 1929, from topographic map. October 1949 to Oct. 27, 1972, water-stage recorder at site 1.0 mi upstream at elevation 745, from river-profile map, and Oct. 28, 1972, to August 1982, water-stage recorder at site 1.5 mi upstream at elevation 770, from river-profile map.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). 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. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	1930	1960	e1900	e1900	e1900	2260	8710	3410	3400	2720	1280
2	1160	1900	2000	e1900	e1900	e1900	2370	8680	3480	2850	4050	1450
3	1350	1770	1960	e2000	e2000	e1900	2450	8120	3100	2620	4710	1950
4	1900	1600	e2100	e2000	e1700	e1900	2420	6850	3290	2430	5220	1830
5	1700	1630	e2400	e2200	e1800	e1900	2300	6110	3060	1990	5440	1850
6	1480	1640	e2500	e2100	e2100	e2000	2130	6280	2960	1940	4420	1910
7	1240	1520	e4700	e2000	e2000	e2100	2320	6330	2770	1870	3100	1930
8	1250	1490	e5000	e2000	e2000	e2200	2190	7280	2740	1980	2350	2240
9	1310	1460	e4700	e2200	e2000	e2500	2570	8550	2710	2220	2580	1960
10	1420	1540	e3200	e2300	e2100	e2600	2750	12000	2660	2290	2600	1900
11	1360	1430	e3100	e2300	e2000	e2500	3750	12600	2910	2100	2170	1710
12	1390	1550	e3100	e2300	e1900	e2600	6380	10900	2930	2010	2050	1560
13	1460	1510	e3000	e2200	e1900	e2700	8760	7750	3710	1900	1890	1760
14	1470	1480	2560	e2100	e1900	e2400	11000	7890	4020	1840	2010	1700
15	1470	1500	2530	e2100	e1900	e2900	13400	7320	6270	1680	2010	1700
16	1550	1390	2200	e2100	e1900	e2600	15300	6730	6810	1660	1750	1680
17	1560	1290	2570	e2100	e2100	e2600	18100	5680	6250	1630	2020	1670
18	1450	1290	2580	e2000	1940	e2600	20600	5510	4850	1960	2040	1750
19	1500	1360	2560	e1900	1800	2510	22100	4870	4200	2090	1950	1750
20	1400	1400	2490	e1900	2330	2620	21400	4520	4100	2280	1680	1990
21	1280	1410	2060	e1900	2260	e2600	19800	4160	3740	e2400	1820	2070
22	1470	1460	1990	e2000	2200	e2700	16400	3620	3550	e2500	2370	2400
23	1450	1470	2200	e1900	1940	e2700	14000	3290	3570	e2800	2670	2220
24	1560	1490	2270	e2000	2080	2600	12300	3400	3590	e2800	2540	2240
25	1590	2100	e2000	e2000	2110	2550	12200	3330	3310	2270	2340	1900
26	1620	2150	e1800	e2000	1930	2130	12400	3220	3460	2570	2000	2010
27	1400	2210	e1800	e2100	e2000	1860	10900	3410	3830	2850	1830	2080
28	1460	2200	e1700	e2100	e2000	2100	9560	3090	3860	2460	1420	2280
29	1650	2200	e1600	e1900	---	2090	8940	3240	3640	2450	1380	2180
30	1880	2170	e1700	e1800	---	2390	8360	3130	3460	2770	1340	2380
31	1860	---	e1900	e2100	---	2360	---	3220	---	2380	1490	---
TOTAL	45810	49540	78230	63400	55690	73010	289410	189790	112240	70990	77960	57330
MEAN	1478	1651	2524	2045	1989	2355	9647	6122	3741	2290	2515	1911
MAX	1900	2210	5000	2300	2330	2900	22100	12600	6810	3400	5440	2400
MIN	1160	1290	1600	1800	1700	1860	2130	3090	2660	1630	1340	1280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2002, BY WATER YEAR (WY)

MEAN	2426	2569	2277	2115	2103	2625	5602	4772	3356	2536	2082	2280
MAX	5660	5766	3939	3035	3810	7461	10000	12100	6118	6523	3505	5335
(WY)	1986	1986	1986	1986	1984	1973	1967	1960	1953	1953	1952	1968
MIN	1028	1043	1167	1080	1201	1461	1432	1341	1152	1201	1003	1009
(WY)	1977	1977	1977	1977	1964	1964	1990	1987	1988	1988	1977	1976

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1950 - 2002

ANNUAL TOTAL	830430	1163400	
ANNUAL MEAN	2275	3187	2895
HIGHEST ANNUAL MEAN			4318
LOWEST ANNUAL MEAN			1778
HIGHEST DAILY MEAN	9480	Apr 14	26700
LOWEST DAILY MEAN	1070	Sep 3	840
ANNUAL SEVEN-DAY MINIMUM	1110	Sep 1	914
MAXIMUM PEAK FLOW			22300
MAXIMUM PEAK STAGE		15.81	Apr 19
10 PERCENT EXCEEDS	3820	6260	(a)26900
50 PERCENT EXCEEDS	1900	2130	(b)18.94
90 PERCENT EXCEEDS	1280	1490	Dec 17 1985

- (a) Gage height, 13.90 ft, site and datum then in use
- (b) Ice affected
- (c) Estimated due to ice effect or missing record

04066030 MENOMINEE RIVER AT WHITE RAPIDS DAM NEAR BANAT, MI

LOCATION.--Lat 45°28'55", long 87°48'08", in SE ¼ SE ¼, sec.30, T. 36 N., R.28 W., Michigan Meridian, Menominee County, Hydrologic Unit 04030108, on left bank at powerplant at White Rapids Dam, 5.7 mi southwest of Banat, MI.

DRAINAGE AREA.--3,190 mi².

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 680.00 ft above NGVD of 1929 (levels by Wisconsin Electric Power Company).

REMARKS.--Records good (see page 11). Flow regulated by powerplants, by Michigamme Reservoir, capacity, 119,950 acre-ft, by Peavy Pond, capacity, 33,860 acre-ft, on the Michigamme River, and by many smaller reservoirs above station. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1330	2080	2340	1990	2010	e2100	2350	8570	3350	3660	2720	1550
2	1290	2080	2120	1850	2080	e2000	2420	8270	3660	3030	3940	1450
3	1290	2060	1990	1940	2320	e2000	2450	8520	3240	2660	4620	2210
4	1780	1860	2220	2010	1820	e2000	2510	7030	3150	2610	5030	2120
5	1980	1290	2430	2260	1870	1960	2510	6150	3370	2140	5670	1940
6	1630	1610	3050	2110	2270	2130	2170	6380	3130	1810	4440	1910
7	1140	1550	4570	1940	2010	2240	2420	6630	2740	2050	3330	2170
8	1170	1550	4710	1960	2060	2480	2430	7250	2650	2000	2460	2420
9	1210	1430	4500	2240	1940	2570	2550	8380	2890	2490	2610	2410
10	1550	1700	3090	2240	2170	2670	3030	11100	2670	2310	2820	2050
11	1450	1340	3370	2310	1980	2540	3670	12200	3040	2400	2490	1910
12	1270	1740	3120	2330	1930	2570	6510	10300	3240	2000	2290	1870
13	1430	1690	2970	2190	1930	2790	8710	7810	3680	2080	2320	1640
14	1590	1610	3130	2130	1910	2330	10600	7880	4260	2090	1860	1870
15	1400	1600	2570	2090	1890	2930	12900	7380	6450	1540	2400	1900
16	1580	1530	2360	2110	1980	2640	14700	6520	6780	1770	2060	1870
17	1680	1270	2570	2150	2150	2520	17300	5920	6420	1610	1870	1800
18	1520	1270	2700	2070	2190	2780	19900	5550	5100	2060	2460	1840
19	1380	1280	2880	2010	1880	2710	20800	4990	4210	2230	2190	1940
20	1480	1330	2770	1920	2060	2680	20500	4520	4000	2350	1980	2380
21	1420	1590	2080	1950	2530	2710	18800	4470	3940	2350	1890	2310
22	1230	1440	1940	2080	2310	2630	15800	3660	3760	2460	2840	2490
23	1510	1410	2120	1790	2080	2970	13300	3300	3620	2810	2570	2540
24	1520	1630	2520	2030	2080	2740	12000	3600	3780	2840	2940	2500
25	1640	2140	2120	2130	2250	2690	11600	3240	3680	2520	2450	2300
26	1650	2370	1900	2170	2050	2300	11900	3410	3480	2550	2460	2020
27	1640	2550	1890	2090	1850	1980	10900	3550	3920	2850	1730	2380
28	1480	2540	1740	2160	2110	1960	9080	3270	4080	2770	1710	2520
29	1590	2280	1610	1930	---	2450	9080	3130	3810	2430	1730	2310
30	1810	2420	e1900	1680	---	2240	8290	3330	3400	2720	1480	2360
31	2010	---	e1900	2240	---	2770	---	3410	---	2620	1540	---
TOTAL	46650	52240	81180	64100	57710	76080	281180	189720	115500	73810	82900	62980
MEAN	1505	1741	2619	2068	2061	2454	9373	6120	3850	2381	2674	2099
MAX	2010	2550	4710	2330	2530	2970	20800	12200	6780	3660	5670	2540
MIN	1140	1270	1610	1680	1820	1960	2170	3130	2650	1540	1480	1450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	1999	2000	2001	2002	1999	2000	2001	2002	1999	2000	2001	2002
MEAN	1519	1714	1826	1934	2216	2856	5444	4231	2963	2808	2092	1840
MAX	1597	1741	2619	2068	2345	4118	9373	6120	3850	4584	2674	2237
(WY)	2000	2002	2002	2002	1999	2000	2002	2002	2002	1999	2002	2000
MIN	1417	1659	1493	1774	2061	2065	3147	2156	2087	1679	1436	1410
(WY)	2001	1999	2001	1999	2002	2001	2000	2000	2000	2001	2001	2001

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1999 - 2002	
ANNUAL TOTAL	860340		1184050			
ANNUAL MEAN	2357		3244		2619	
HIGHEST ANNUAL MEAN					3244	
LOWEST ANNUAL MEAN					2253	
HIGHEST DAILY MEAN	9640	Apr 14	20800	Apr 19	20800	Apr 19 2002
LOWEST DAILY MEAN	1040	Sep 5	1140	Oct 7	1040	Sep 5 2001
ANNUAL SEVEN-DAY MINIMUM	1110	Sep 2	1320	Oct 7	1110	Sep 2 2001
MAXIMUM PEAK FLOW			22200		22200	
MAXIMUM PEAK STAGE			14.98	Apr 18	14.98	Apr 18 2002
10 PERCENT EXCEEDS	3900		6400		4220	
50 PERCENT EXCEEDS	2010		2310		2080	
90 PERCENT EXCEEDS	1270		1570		1370	

(e) Estimated due to ice effect

STREAMS TRIBUTARY TO LAKE MICHIGAN

04066500 PIKE RIVER AT AMBERG, MI

LOCATION.--Lat 45°30'00", long 88°00'00", in SE ¼ SE ¼, sec.16, T. 35 N., R.20 E., Meridian 4, Marinette County, MI, Hydrologic Unit 04030108, on right bank 35 ft upstream from bridge on County Trunk Highway V, 0.4 mi southwest of Amberg.

DRAINAGE AREA.--255 mi².

PERIOD OF RECORD.--February 1914 to September 1970, June 2000 to current year.

REVISED RECORDS.--WSP 699: 1927. WSP 1207: Drainage area. WSP 1337: 1914(M), 1916-19(M), 1921-24(M), 1926(M), 1928(M), 1929, 1930(M), 1931, 1932-33(M), 1935, 1936-37(M), 1938, 1939-36(M).

GAGE.--Water-stage recorder. Elevation of gage is 860 ft above NGVD of 1929, from topographic map. Oct. 7, 1946 to Sept. 30, 1970, water-stage recorder at site 0.5 mi downstream at elevation 865 ft above mean NGVD of 1929 (from survey level line along railroad). See WSP 1727 for history of changes prior to Oct. 7, 1946.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	154	200	e100	e98	e100	e170	755	472	233	199	133
2	127	150	201	e100	e96	e98	e170	719	409	215	230	135
3	115	139	188	e100	e98	e96	e160	624	325	200	239	140
4	114	131	182	e100	e98	e96	e160	533	294	198	216	134
5	110	126	196	e100	e98	e100	e150	448	326	190	197	126
6	107	122	260	e100	e100	e100	e150	501	341	179	181	128
7	105	121	274	e100	e100	e100	e170	633	325	174	167	126
8	105	124	239	e100	e100	e100	194	645	300	206	158	123
9	110	126	199	e110	e100	e130	237	661	271	252	152	118
10	122	122	e180	e110	e100	e150	290	731	253	245	145	115
11	141	119	e170	e110	e98	e140	415	691	309	211	140	114
12	140	118	164	e110	e96	e150	722	594	328	187	139	112
13	136	118	e160	e110	e96	e150	941	539	318	174	142	108
14	145	121	e150	e100	e100	e160	1000	497	611	165	144	111
15	145	122	150	e100	e100	e150	902	451	872	158	141	123
16	132	119	e160	e100	e100	e150	789	431	955	153	137	123
17	125	116	e160	e96	e98	e150	731	413	704	147	140	118
18	113	116	e150	e90	e100	e150	661	380	520	176	144	113
19	111	130	e140	e96	e110	e160	667	347	405	206	138	117
20	109	137	e130	e98	e120	e160	631	319	334	185	132	142
21	110	131	e130	e100	e120	e150	551	306	298	166	151	181
22	108	125	e140	e100	e110	e140	476	294	283	185	241	196
23	110	123	e130	e100	e110	e150	436	282	278	187	252	180
24	116	150	e120	e100	e110	e150	510	270	454	168	237	179
25	147	229	e110	e100	e110	e140	697	267	476	168	225	178
26	165	244	e110	e100	e110	e140	710	290	439	267	206	171
27	155	215	e110	e100	e110	e150	592	310	384	317	178	173
28	144	193	e100	e100	e100	e150	543	301	330	274	160	175
29	135	179	e100	e100	---	e160	580	282	287	238	155	166
30	130	182	e100	e100	---	e160	677	298	257	227	148	202
31	137	---	e100	e100	---	e160	---	421	---	203	139	---
TOTAL	3880	4302	4903	3130	2886	4240	15082	14233	12158	6254	5373	4260
MEAN	125.2	143.4	158.2	101.0	103.1	136.8	502.7	459.1	405.3	201.7	173.3	142.0
MAX	165	244	274	110	120	160	1000	755	955	317	252	202
MIN	105	116	100	90	96	96	150	267	253	147	132	108
CFSM	0.49	0.56	0.62	0.40	0.40	0.54	1.97	1.80	1.59	0.79	0.68	0.56
IN.	0.57	0.63	0.72	0.46	0.42	0.62	2.20	2.08	1.77	0.91	0.78	0.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

	MEAN	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	176.7	205.7	157.9	132.4	123.4	211.2	461.8	339.8	269.1	181.4	154.7	171.4
MAX	454	422	296	215	194	503	1016	820	699	525	365	452
(WY)	1942	1920	1929	1939	1942	1921	1922	1960	1916	1914	1914	1941
MIN	83.2	119	93.5	82.7	78.1	98.8	188	181	111	90.2	80.3	89.1
(WY)	1949	1954	1918	1964	1948	1964	1931	1925	1948	1948	1934	1948

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1914 - 2002

ANNUAL TOTAL	59621	80701	
ANNUAL MEAN	163.3	221.1	214.9
HIGHEST ANNUAL MEAN			344
LOWEST ANNUAL MEAN			133
HIGHEST DAILY MEAN	1000	Apr 9	2620
LOWEST DAILY MEAN	74	Aug 11	26
ANNUAL SEVEN-DAY MINIMUM	79	Aug 7	(a)53
MAXIMUM PEAK FLOW			(b)2800
MAXIMUM PEAK STAGE			(c)(d)7.80
INSTANTANEOUS LOW FLOW			(a) 26
ANNUAL RUNOFF (CFSM)	0.64	0.87	0.84
ANNUAL RUNOFF (INCHES)	8.70	11.77	11.45
10 PERCENT EXCEEDS	260	476	396
50 PERCENT EXCEEDS	120	150	161
90 PERCENT EXCEEDS	93	100	100

- (a) Ice affected
- (b) From rating curve extended above 1,100 ft³/s
- (c) Site and datum then in use
- (d) From graph based on gage readings
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04066800 MENOMINEE RIVER AT KOSS, MI

LOCATION.--Lat 45°23'14", long 87°42'07", in NE ¼, sec.36, T. 35 N., R.28 W., Michigan Meridian, Menominee County, MI, Hydrologic Unit 04030108, on left upstream bank 30 ft from river and 18 ft west of County Trunk JJ (Koss) bridge, 0.3 mi southeast of Koss and 3.4 mi upstream of Grand Rapids Dam.

DRAINAGE AREA.--3,700 mi².

PERIOD OF RECORD.--July 1907 to March 1909 monthly discharge only (published as "at Koss"), July 1913 to September 1981 (published as 04067000 Menominee River below Koss, MI), June 1998 to current year. Records prior to October 1913 published in WSP 244, 264, and 384.

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

GAGE.--Water-stage recorder. Elevation of gage is 665 ft above NGVD of 1929, from topographic map. June 1913 to September 1981, headwater and tailwater gages and generation data entered hourly in daily log sheet by Wisconsin Public Service Corp. employees at powerplant 4 mi downstream. Records of daily discharge furnished by Wisconsin Public Service Corp. Prior to June 1913, chain gage on railroad bridge at Koss.

REMARKS.--Records good except those for estimated daily discharges and Dec. 11-24 and Mar. 29 to Apr. 10, which are fair (see page 11). 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. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1360	2060	2680	e2100	e2000	e2100	2870	10600	3740	3750	2750	1670
2	1360	1950	2550	e1900	e1900	e2000	2870	10500	3910	3710	3330	1630
3	1330	2030	2270	e1900	e2000	e1900	2720	10300	4030	2890	4680	1800
4	1440	1920	2370	e2000	e1900	e2000	2890	9390	3350	2890	5020	2180
5	1950	1600	2610	e2300	e1700	e2000	2820	8000	3680	2720	5670	1950
6	1970	1440	2890	e2300	e2000	e2100	2740	7230	3700	2220	5630	1940
7	1370	1570	4010	e2300	e2200	e2200	2530	7760	3260	2130	4400	1990
8	1360	1440	5050	e2000	e2100	e2300	2800	8070	2890	2320	3080	2130
9	1330	1570	5190	e2200	e2100	e2500	2850	9020	2910	2600	2490	2290
10	1400	1500	4190	e2400	e2100	e2600	3280	10600	2990	2680	2900	2120
11	1520	1570	3310	e2400	e2100	e2800	3800	13400	3250	2510	2730	1830
12	1440	1530	3430	e2400	e2000	e3000	6190	13700	3830	2410	2400	1910
13	1460	1650	3170	e2400	e1900	e3100	9220	12000	3820	2110	2280	1730
14	1520	1610	3200	e2300	e1900	e3100	11100	9350	4950	2400	2150	1750
15	1550	1560	3000	e2200	e2000	e3000	13100	9230	6530	1940	2040	1900
16	1500	1620	2610	e2300	e2000	e3200	15100	8060	8270	1900	2270	1890
17	1640	1590	2550	e2100	e2100	e2900	16900	7450	8270	1880	1970	1840
18	1610	1510	2790	e2100	e2200	e3000	19400	6530	7020	2040	2090	1870
19	1490	1510	2910	e2000	e2200	e3100	21800	6040	5650	2430	2330	1880
20	1480	1550	2980	e2000	e2000	e3000	23000	5390	4680	2440	2060	2040
21	1490	1640	2660	e2000	e2400	e2900	22700	5090	4530	2460	1970	2440
22	1430	1670	2020	e2100	e2500	e2600	21300	4470	4210	2510	2780	2430
23	1410	1680	2250	e2100	e2400	e3100	18100	3780	3920	2800	3140	2730
24	1520	1730	e2300	e1900	e2200	e3100	15500	3660	4420	3140	3350	2480
25	1560	2110	e2400	e2100	e2200	e3000	14700	3770	4630	2890	3200	2490
26	1580	2470	e1700	e2200	e2400	e2800	14600	3640	4450	2690	2840	1980
27	1630	2730	e1700	e2200	e2000	e2600	14400	3770	4450	3030	2200	2130
28	1600	2760	e1800	e2100	e2000	e2400	13000	3840	4670	3200	1890	2450
29	1530	2610	e1700	e2000	---	e2400	11500	3350	4500	2810	1830	2290
30	1650	2610	e1700	e1800	---	2680	10700	3570	3900	2700	1800	2220
31	1880	---	e2000	e1900	---	2960	---	3650	---	2950	1690	---
TOTAL	47360	54790	85990	66000	58500	82440	324480	225210	134410	81150	88960	61980
MEAN	1528	1826	2774	2129	2089	2659	10820	7265	4480	2618	2870	2066
MAX	1970	2760	5190	2400	2500	3200	23000	13700	8270	3750	5670	2730
MIN	1330	1440	1700	1800	1700	1900	2530	3350	2890	1880	1690	1630

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2002, BY WATER YEAR (WY)

MEAN	2525	2796	2198	1987	1890	2716	6634	5702	3868	2759	2157	2416
MAX	6178	5597	3588	3174	3176	7973	13650	13180	10780	6159	3800	5538
(WY)	1929	1917	1919	1969	1969	1973	1916	1960	1916	1953	1972	1928
MIN	1131	1170	1166	989	864	1199	2479	2220	1708	1111	731	1013
(WY)	1977	1977	1931	1926	1926	1934	1964	1977	1977	1934	1934	1933

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1913 - 2002
ANNUAL TOTAL	950290	1311270	
ANNUAL MEAN	2604	3593	3143
HIGHEST ANNUAL MEAN			5262
LOWEST ANNUAL MEAN			1642
HIGHEST DAILY MEAN	11000	23000	33000
LOWEST DAILY MEAN	1150	1330	162
ANNUAL SEVEN-DAY MINIMUM	1190	1410	402
MAXIMUM PEAK FLOW		23300	
MAXIMUM PEAK STAGE		17.25	
10 PERCENT EXCEEDS	4300	7320	5900
50 PERCENT EXCEEDS	2200	2400	2330
90 PERCENT EXCEEDS	1350	1600	1390

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04067500 MENOMINEE RIVER NEAR MC ALLISTER, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1945 - 2002	
ANNUAL TOTAL	1007090		1376660			
ANNUAL MEAN	2759		3772		3366	
HIGHEST ANNUAL MEAN					5496 1960	
LOWEST ANNUAL MEAN					2118 1948	
HIGHEST DAILY MEAN	11100	Apr 15	23300	Apr 20	31800	May 9 1960
LOWEST DAILY MEAN	1150	Aug 11	1250	Oct 8	810	Oct 26 1948
ANNUAL SEVEN-DAY MINIMUM	1220	Sep 2	1470	Oct 7	952	Oct 24 1948
MAXIMUM PEAK FLOW			23600	Apr 20	32500	May 9 1960
MAXIMUM PEAK STAGE			18.34	Apr 20	(a)20.00	May 9 1960
INSTANTANEOUS LOW FLOW					(b)538	Oct 6 1946
10 PERCENT EXCEEDS	4650		7660		6000	
50 PERCENT EXCEEDS	2300		2560		2600	
90 PERCENT EXCEEDS	1420		1750		1630	

- (a) From graph based on gage readings
(b) Observed
(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04067958 PESHTIGO RIVER NEAR WABENO, WI

LOCATION.--Lat 45°23'16", long 88°18'18", in NW ¼ NW ¼ sec.31, T.34 N., R.18 E., Marinette County, Hydrologic Unit 04030105, on left upstream bank 50 ft from river's edge and 12 ft north of County Trunk C, 12.2 mi west of Athelstane and 17.7 mi east of Wabeno.

DRAINAGE AREA.--447 mi².

PERIOD OF RECORD.--June 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 980 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	305	365	e190	e170	e160	e260	1270	619	514	318	248
2	196	317	358	e190	e170	e160	e260	1340	554	440	347	260
3	197	303	348	e190	e170	e160	e250	1330	485	394	342	272
4	191	284	341	e200	e170	e160	e260	1230	457	374	354	271
5	190	270	370	e190	e180	e160	e240	1110	496	353	334	277
6	189	261	501	e190	e180	e160	e280	1160	500	332	309	282
7	186	257	643	e200	e180	e170	e250	1250	479	315	289	284
8	182	259	673	e200	e170	e180	e250	1250	436	355	273	275
9	185	258	574	e200	e160	e190	e280	1330	410	490	262	267
10	202	256	520	e200	e160	e210	e330	1530	389	542	253	256
11	223	250	469	e200	e160	e220	e450	1610	527	524	246	247
12	235	243	438	e200	e160	e220	e800	1550	652	444	245	240
13	244	242	e400	e200	e160	e220	e1400	1400	742	383	246	236
14	250	241	e330	e200	e170	e220	1740	1260	969	344	246	239
15	246	243	e270	e200	e170	e220	2160	1120	1090	317	244	251
16	250	243	e340	e190	e170	e230	2300	1030	1130	301	241	257
17	248	240	e350	e180	e170	e230	2340	952	1050	287	249	253
18	241	240	e350	e180	e170	e240	2340	870	918	271	254	244
19	233	257	e320	e190	e180	e240	2310	790	774	263	253	245
20	222	261	e300	e180	e190	e240	2250	726	658	257	248	266
21	215	267	e290	e180	e180	e230	2300	664	577	265	271	344
22	210	262	e300	e180	e180	e230	2070	615	561	296	446	376
23	210	255	e310	e180	e180	e220	1770	577	542	318	466	381
24	219	282	e290	e180	e190	e220	1550	538	864	339	481	371
25	260	354	e280	e190	e180	e220	1500	517	965	346	448	357
26	286	408	e260	e180	e170	e230	1390	526	961	477	394	354
27	300	425	e230	e180	e170	e230	1280	544	902	425	344	357
28	301	392	e210	e180	e170	e240	1150	539	818	404	311	382
29	300	369	e210	e180	---	e240	1100	528	701	370	288	387
30	279	361	e210	e170	---	e250	1160	551	594	351	272	434
31	292	---	e190	e170	---	e250	---	607	---	330	260	---
TOTAL	7187	8605	11040	5840	4830	6550	36020	30314	20820	11421	9534	8913
MEAN	231.8	286.8	356.1	188.4	172.5	211.3	1201	977.9	694.0	368.4	307.5	297.1
MAX	301	425	673	200	190	250	2340	1610	1130	542	481	434
MIN	182	240	190	170	160	160	240	517	389	257	241	236
CFSM	0.52	0.64	0.80	0.42	0.39	0.47	2.69	2.19	1.55	0.82	0.69	0.66
IN.	0.60	0.72	0.92	0.49	0.40	0.55	3.00	2.52	1.73	0.95	0.79	0.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
MEAN	217.0	260.4	228.1	177.7	191.4	318.9	761.9	559.2	412.9	339.5	228.7	255.2			
MAX	232	287	356	195	209	542	1201	978	694	481	308	422			
(WY)	2002	2002	2002	2001	1999	2000	2002	2002	2002	1999	2002	2000			
MIN	210	221	184	154	172	211	400	288	267	183	176	160			
(WY)	2001	2000	2001	1999	2002	2002	2000	2000	1998	1998	1998	1998			

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1998 - 2002

ANNUAL TOTAL	121539	161074		
ANNUAL MEAN	333.0	441.3	338.7	
HIGHEST ANNUAL MEAN			441	2002
LOWEST ANNUAL MEAN			299	1999
HIGHEST DAILY MEAN	1740	Apr 13	2340	Apr 17,18 2002
LOWEST DAILY MEAN	154	Sep 6	(a)160 (b)Feb 9	(a)130 Jan 5 1999
ANNUAL SEVEN-DAY MINIMUM	166	Aug 31	(a)161 (b)Feb 28	137 Jul 30 1998
MAXIMUM PEAK FLOW			2370	Apr 17 2002
MAXIMUM PEAK STAGE			7.17	Apr 17 2002
INSTANTANEOUS LOW FLOW			(a)160 (b)Feb 9	(c)124 Dec 9 1998
ANNUAL RUNOFF (CFSM)	0.74		0.99	0.76
ANNUAL RUNOFF (INCHES)	10.11		13.40	10.29
10 PERCENT EXCEEDS	558		1040	578
50 PERCENT EXCEEDS	243		272	238
90 PERCENT EXCEEDS	180		180	166

- (a) Ice affected
- (b) Also occurred Feb. 10-13 and Mar. 1-6
- (c) Result of freezeup
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04069416 PESHTIGO RIVER AT PORTERFIELD, WI

LOCATION.--Lat 45°08'36", long 87°48'02", in SE ¼ NE ¼ sec.19, T.31 N., R.22 E., Marinette County, Hydrologic Unit 04030105, on right bank 15 ft upstream from County Trunk E bridge, 0.8 mi south of Porterfield.

DRAINAGE AREA.--1,020 mi².

PERIOD OF RECORD.--June 1998 to current year. Prior to October 2000, published as "near Porterfield".

GAGE.--Water-stage recorder. Elevation of gage is 625 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Diurnal fluctuation caused by powerplant upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	354	871	965	e340	e360	e360	593	2810	1360	1330	686	584
2	413	846	908	e340	e370	e310	592	2800	1230	1220	648	616
3	367	800	905	e330	e370	e340	726	2640	1070	1080	500	689
4	331	828	807	e280	e350	e370	725	2410	880	955	479	675
5	319	718	776	e340	e370	e410	512	2250	942	796	546	467
6	321	574	836	e350	e410	e440	611	1980	945	676	549	491
7	291	549	952	e350	e400	e420	658	1900	905	672	556	530
8	358	571	1080	e330	e390	e410	710	2110	956	727	383	519
9	392	568	1070	e350	e350	e540	838	2310	949	833	324	518
10	406	506	928	e380	e370	e980	942	2390	817	864	448	503
11	408	531	794	e440	e390	e880	1070	2420	842	852	468	533
12	429	475	733	e440	e350	e880	1500	2470	1480	863	411	537
13	446	469	820	e440	e360	e880	2110	2480	1310	742	582	499
14	506	486	812	e440	e320	e960	2400	2250	1800	566	527	495
15	538	507	629	e440	e330	e980	2710	2080	2930	492	403	536
16	531	436	481	e420	e360	e960	3500	1730	3070	553	377	590
17	511	416	648	e380	e390	e900	3710	1540	3050	522	420	560
18	759	419	789	e360	e360	e800	3640	1300	2550	380	525	556
19	918	430	684	e350	e310	e680	3680	1400	1950	441	411	584
20	901	461	e580	e360	e410	e600	3600	1220	1550	493	366	628
21	897	432	e450	e420	e680	e580	3220	1160	1330	480	510	704
22	924	494	e480	e390	e640	e540	3030	1080	1090	533	1010	768
23	813	485	e500	e390	e560	e470	2960	797	1210	584	1320	767
24	762	535	e560	e390	e540	e440	2500	863	3130	555	1480	805
25	823	750	e500	e380	e540	e410	3510	841	4120	478	1400	867
26	848	717	e350	e360	e540	385	3680	962	3460	743	1180	795
27	836	815	e350	e370	e440	392	3300	1190	3160	716	950	742
28	883	902	e470	e350	e400	412	3190	1310	2370	709	861	719
29	890	838	e410	e330	---	438	3250	1190	1780	710	826	668
30	881	825	e300	e380	---	505	2810	1130	1500	728	758	694
31	766	---	e360	e380	---	572	---	1360	---	579	554	---
TOTAL	18822	18254	20927	11600	11660	18244	66277	54373	53726	21872	20458	18639
MEAN	607.2	608.5	675.1	374.2	416.4	588.5	2209	1754	1791	705.5	659.9	621.3
MAX	924	902	1080	440	680	980	3710	2810	4120	1330	1480	867
MIN	291	416	300	280	310	310	512	797	817	380	324	467
CFSM	0.60	0.60	0.66	0.37	0.41	0.58	2.17	1.72	1.76	0.69	0.65	0.61
IN.	0.69	0.67	0.76	0.42	0.43	0.67	2.42	1.98	1.96	0.80	0.75	0.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002		
MEAN	479.0	538.3	453.6	381.7	425.0	746.6	1453	1057	889.9	591.7	456.3	505.6
MAX	607	608	675	434	526	1027	2209	1754	1791	844	660	762
(WY)	2002	2002	2002	1999	1999	2000	2002	2002	2002	1999	2002	2000
MIN	432	429	347	351	368	589	774	587	518	330	353	316
(WY)	2000	2000	2000	2000	2001	2002	2000	2000	2000	2001	1998	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1998 - 2002
ANNUAL TOTAL	245130	334852	
ANNUAL MEAN	671.6	917.4	680.4
HIGHEST ANNUAL MEAN			917
LOWEST ANNUAL MEAN			568
HIGHEST DAILY MEAN	3570	Apr 14	4120
LOWEST DAILY MEAN	247	Jul 20	(a)280
ANNUAL SEVEN-DAY MINIMUM	277	Aug 6	(a)327
MAXIMUM PEAK FLOW			4380
MAXIMUM PEAK STAGE		12.08	Jun 25
ANNUAL RUNOFF (CFSM)	0.66	0.90	0.67
ANNUAL RUNOFF (INCHES)	8.94	12.21	9.06
10 PERCENT EXCEEDS	1150	2250	1180
50 PERCENT EXCEEDS	480	629	500
90 PERCENT EXCEEDS	320	360	340

(a) Ice affected

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04071000 OCONTO RIVER NEAR GILLETT, WI

LOCATION.--Lat 44°51'53", long 88°18'00", in NW ¼ sec.34, T.28 N., R.18 E., Oconto County, Hydrologic Unit 04030104, on left bank 300 ft upstream from County Trunk Highway BB bridge, 2.0 mi upstream from Christy Brook, 2.0 mi south of Gillett, and at mile 29.

DRAINAGE AREA.--705 mi².

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	372	660	e240	e240	e230	585	1640	956	654	465	436
2	279	382	679	e250	e230	e230	581	1560	969	597	451	475
3	275	381	682	e250	e240	e230	565	1470	893	528	395	478
4	267	369	641	e240	e240	e230	547	1370	820	485	376	507
5	266	360	609	e220	e240	e240	520	1270	845	462	364	483
6	260	352	594	e230	e230	e230	494	1200	845	432	349	437
7	253	348	591	e230	e240	e240	488	1120	837	406	320	414
8	252	345	605	e230	e240	e340	524	1090	773	396	317	380
9	256	343	570	e230	e240	e360	580	1140	695	420	313	371
10	273	351	535	e230	e240	e500	644	1160	627	434	308	360
11	283	346	496	e230	e240	e530	727	1160	697	435	308	356
12	300	337	467	e230	e240	e500	897	1160	993	444	382	348
13	304	335	474	e240	e230	e600	1040	1110	1480	415	465	337
14	315	326	480	e240	e230	e670	1230	1090	1650	368	582	333
15	331	332	474	e240	e220	e580	1530	1050	1640	352	550	337
16	355	344	455	e240	e230	e640	1620	988	1770	339	448	354
17	337	342	454	e240	e230	e600	1570	925	1780	326	422	360
18	324	337	469	e240	e250	e550	1530	861	1620	318	446	348
19	317	344	462	e240	e280	e570	1480	795	1430	312	430	341
20	311	349	450	e220	e380	e580	1400	753	1270	307	391	351
21	291	359	e390	e230	e380	e500	1320	718	1100	306	400	430
22	294	349	e350	e240	e380	e410	1260	670	973	322	574	528
23	306	346	e400	e240	e380	e430	1200	635	902	326	792	522
24	314	367	e290	e240	e350	e410	1180	605	852	312	944	468
25	344	407	e260	e240	e380	e410	1190	584	792	321	1070	450
26	374	460	e230	e240	e360	e420	1350	583	782	354	1060	438
27	390	532	e210	e240	e360	e410	1770	729	805	494	839	424
28	390	571	e220	e240	e300	e420	1870	861	865	507	634	412
29	378	605	e230	e240	---	e420	1720	939	848	473	532	403
30	354	633	e250	e240	---	506	1670	944	730	455	492	393
31	357	---	e250	e240	---	556	---	922	---	463	462	---
TOTAL	9633	11624	13927	7340	7800	13542	33082	31102	31239	12763	15881	12274
MEAN	310.7	387.5	449.3	236.8	278.6	436.8	1103	1003	1041	411.7	512.3	409.1
MAX	390	633	682	250	380	670	1870	1640	1780	654	1070	528
MIN	252	326	210	220	220	230	488	583	627	306	308	333
CFSM	0.44	0.55	0.64	0.34	0.40	0.62	1.56	1.42	1.48	0.58	0.73	0.58
IN.	0.51	0.61	0.73	0.39	0.41	0.71	1.75	1.64	1.65	0.67	0.84	0.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 2002, BY WATER YEAR (WY)

MEAN	481.5	559.3	446.6	356.1	348.8	644.3	1216	866.5	673.1	461.8	382.2	447.9
MAX	1216	1377	900	700	643	1867	3435	2185	1744	1022	742	1347
(WY)	1942	1986	1907	1907	1984	1973	1922	1960	1916	1922	1960	1928
MIN	199	259	216	206	204	240	379	357	197	226	158	190
(WY)	1949	1934	1990	1957	1948	1934	1931	1931	1988	1988	1934	1933

STREAMS TRIBUTARY TO LAKE MICHIGAN

04071000 OCONTO RIVER NEAR GILLETT, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1906 - 2002	
ANNUAL TOTAL	167788	200207	574.2	
ANNUAL MEAN	459.7	548.5	930	1973
HIGHEST ANNUAL MEAN			315	1931
LOWEST ANNUAL MEAN			6790	Apr 10 1922
HIGHEST DAILY MEAN	2340 Apr 13	1870 Apr 28	95	Jun 3 1907
LOWEST DAILY MEAN	198 (a)Jul 27	(b)210 Dec 27	137	Aug 9 1908
ANNUAL SEVEN-DAY MINIMUM	204 Aug 8	(b)229 Jan 5	8400	Apr 10 1922
MAXIMUM PEAK FLOW		1910 Apr 28	(c)11.20	Apr 10 1922
MAXIMUM PEAK STAGE		3.73 Apr 28	(d)93	Nov 26 1941
INSTANTANEOUS LOW FLOW		(b)210 Dec 27	0.81	
ANNUAL RUNOFF (CFSM)	0.65	0.78	11.07	
ANNUAL RUNOFF (INCHES)	8.85	10.56	1060	
10 PERCENT EXCEEDS	795	1110	438	
50 PERCENT EXCEEDS	324	414	257	
90 PERCENT EXCEEDS	240	240		

- (a) Also occurred Aug. 12
- (b) Ice affected
- (c) From floodmarks, caused by failure of a dam at Pulcifer 4 mi above station
- (d) Result of freezeup
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04071765 OCONTO RIVER NEAR OCONTO, WI

LOCATION.--Lat 44°51'38", long 87°59'02", in NW ¼ NW ¼ sec.32, T.28 N., R.21 E., Oconto County, Hydrologic Unit 04030104, on left bank 30 ft upstream from County Highway J bridge, 0.7 mi downstream from mouth of Little River, and 4.6 mi west of Oconto.

DRAINAGE AREA.--966 mi².

PERIOD OF RECORD.--October 1988 to September 1990, October 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 583.14 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Flow regulated by Machickanee Flowage (capacity, 556 acre-ft) 3.9 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	345	431	1020	e340	e330	e420	e890	2190	1680	635	458	489
2	364	437	895	e390	e320	e370	e890	1960	1530	579	478	666
3	321	420	868	e340	e330	e370	e850	1770	1360	537	424	649
4	294	419	788	e330	e340	e360	e770	1720	1240	449	368	602
5	313	402	737	e330	e340	e360	e730	1380	1250	434	370	591
6	296	396	710	e320	e340	e360	e660	1480	1200	451	329	522
7	290	388	700	e320	e340	e370	e670	1420	1100	407	314	484
8	290	386	691	e320	e340	e420	e740	1210	1020	396	298	452
9	296	388	645	e320	e330	e880	868	1570	819	415	320	396
10	339	368	599	314	e320	e990	953	1520	749	417	287	409
11	319	381	571	305	e330	e1000	1070	1440	929	423	308	396
12	350	371	541	e320	e340	e990	1340	1440	1210	423	520	384
13	384	380	596	e330	e330	e1100	1480	1360	1550	444	555	373
14	405	371	603	e330	e310	e1300	1670	1290	2560	377	611	372
15	384	366	581	e310	e290	e1200	1810	1260	2810	317	620	375
16	411	371	564	e310	e270	e1200	1940	1140	2500	319	519	388
17	406	381	553	e310	e330	e1100	1840	1060	2240	296	526	411
18	389	376	576	e310	e380	1070	1780	976	1990	289	524	404
19	365	392	574	e310	408	1140	1770	877	1670	274	505	436
20	359	398	532	e290	807	1100	1690	825	1430	274	455	542
21	339	388	369	e310	727	e1000	1490	763	1310	301	614	748
22	325	379	353	e320	700	e910	1460	713	1050	304	1270	714
23	362	382	531	e320	656	e820	1420	688	1010	297	1340	672
24	393	437	e380	e320	551	e750	1470	652	970	286	1390	593
25	411	514	e360	e320	605	e710	2270	643	891	337	1350	555
26	421	518	e310	e330	621	e690	1890	706	799	378	1350	536
27	445	725	e260	e330	588	e660	2200	1120	809	432	1130	496
28	447	786	e310	e330	e520	e630	2860	1480	792	539	749	500
29	427	782	e320	e330	---	e700	2730	1340	889	501	624	485
30	416	873	e380	e340	---	e810	2370	1350	766	453	567	479
31	419	---	e360	e340	---	e860	---	1910	---	629	526	---
TOTAL	11325	13606	17277	10039	12093	24640	44571	39253	40123	12613	19699	15119
MEAN	365.3	453.5	557.3	323.8	431.9	794.8	1486	1266	1337	406.9	635.5	504.0
MAX	447	873	1020	390	807	1300	2860	2190	2810	635	1390	748
MIN	290	366	260	290	270	360	660	643	749	274	287	372
CFSM	0.38	0.47	0.58	0.34	0.45	0.82	1.54	1.31	1.38	0.42	0.66	0.52
IN.	0.44	0.52	0.67	0.39	0.47	0.95	1.72	1.51	1.55	0.49	0.76	0.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	333.4	414.1	339.2	298.0	364.1	791.8	1056	772.7	851.8	448.6	386.3	464.8		
MAX	574	556	557	344	565	1132	1807	1266	1439	751	635	1044		
(WY)	1998	1989	2002	1998	1998	1990	2001	2002	1990	2000	2002	1990		
MIN	240	280	251	240	263	459	423	448	370	260	261	196		
(WY)	2000	2000	1990	2000	1990	2001	1990	1998	1999	1989	1989	1999		

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1989 - 2002

ANNUAL TOTAL	213953	260358		
ANNUAL MEAN	586.2	713.3	543.1	
HIGHEST ANNUAL MEAN			713	2002
LOWEST ANNUAL MEAN			433	2000
HIGHEST DAILY MEAN	3540	Apr 12	2860	(a)4700 Mar 31 1998
LOWEST DAILY MEAN	211	Jul 27	(b)260	Dec 27 1999
ANNUAL SEVEN-DAY MINIMUM	231	Aug 8	289	Jul 18 (c)Jul 30 1998
MAXIMUM PEAK FLOW			3130	Jun 14 (d)5300 Mar 28 1989
MAXIMUM PEAK STAGE			8.15	Jun 14 (b)11.24 Mar 13 1990
ANNUAL RUNOFF (CFSM)	0.61		0.74	0.56
ANNUAL RUNOFF (INCHES)	8.24		10.03	7.64
10 PERCENT EXCEEDS	1170		1440	1060
50 PERCENT EXCEEDS	382		519	374
90 PERCENT EXCEEDS	274		320	232

- (a) Estimated, discharge measurement of 4,700 ft³/s on Mar. 31, 1998
 (b) Ice affected
 (c) Also occurred Sept. 3, 1999
 (d) Estimated, gage height, 10.91 ft, backwater from ice
 (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04072150 DUCK CREEK NEAR HOWARD, WI

LOCATION.--Lat 42°32'09", long 88°07'47", in SW ¼ SW ¼ sec.19, T.24 N., R.20 E., Brown County, Hydrologic Unit 04030103, on left bank upstream from County Trunk Highway FF bridge 2.2 mi southwest of Howard, and about 9 mi (revised) upstream from mouth.

DRAINAGE AREA.--108 mi².

PERIOD OF RECORD.--May 1988 to current year.

GAGE.--Continuous water-stage recorder since April 1988. Elevation of gage is 605 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges and discharges less than 0.5 ft³/s, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.9	7.8	e2.0	e1.3	e38	94	252	142	18	1.5	0.95
2	1.4	3.0	7.7	e2.0	e1.2	e30	81	189	98	13	1.1	2.0
3	1.4	2.6	7.8	e2.0	e1.2	e22	81	173	262	11	0.89	2.7
4	1.5	2.3	7.0	e2.1	e1.1	e18	87	133	848	10	1.2	1.2
5	1.5	2.3	e7.4	e2.1	e1.1	e16	80	106	616	8.4	1.0	0.75
6	1.5	2.3	e8.4	e1.9	e1.2	e14	68	91	383	6.3	0.56	0.91
7	1.4	2.3	12	e1.8	e1.3	e11	64	197	243	5.3	0.28	1.4
8	1.3	2.2	12	e1.9	e1.4	e21	92	348	151	e5.7	0.18	1.3
9	1.6	2.0	8.9	e2.0	e1.5	e110	202	189	107	e7.1	0.12	1.3
10	1.4	1.6	7.0	e2.1	e1.4	e700	207	175	91	e4.6	0.11	1.1
11	1.3	1.5	5.6	e2.1	e1.3	e840	136	139	246	3.4	0.10	0.97
12	1.1	1.7	5.0	e2.0	e1.4	e800	112	112	443	e3.1	0.84	0.75
13	1.1	2.3	6.8	e1.8	e1.3	e630	103	113	341	e2.6	32	0.46
14	2.0	2.2	7.1	e1.7	e1.6	e600	87	109	331	e2.2	20	0.38
15	1.7	2.0	9.0	e1.5	e1.9	e440	72	94	308	e1.8	7.7	0.33
16	1.5	2.3	8.9	e1.4	e2.1	e300	59	79	246	1.6	4.4	0.23
17	1.4	2.3	8.3	e1.2	e2.3	e220	48	67	176	1.4	3.5	0.15
18	1.5	2.1	8.0	e1.1	e3.0	e170	43	56	132	1.4	2.4	0.11
19	1.6	2.5	8.0	e0.96	e20	e170	51	46	96	1.6	1.9	0.20
20	1.7	2.5	e7.6	e1.1	e90	e170	50	39	71	1.6	1.6	2.9
21	1.6	2.6	e6.9	e1.1	e380	e150	38	34	58	1.4	3.6	2.9
22	1.4	2.3	e6.1	e1.2	e330	e140	39	30	79	1.2	4.9	2.1
23	1.9	2.7	e5.6	e1.2	e150	e130	55	27	243	0.87	4.1	2.2
24	2.1	3.7	e4.8	e1.1	e100	e110	86	24	220	0.49	4.4	1.7
25	2.6	4.2	e4.1	e1.2	e110	e88	288	32	117	0.60	3.6	1.4
26	2.3	3.3	e3.7	e1.3	e130	e77	287	51	85	2.6	2.6	1.4
27	2.3	5.3	e3.2	e1.4	e83	e69	158	79	63	1.6	2.5	1.2
28	2.3	6.1	e2.8	e1.4	e54	e64	408	77	46	1.2	2.3	0.98
29	2.1	7.4	e2.5	e1.2	---	e83	751	73	33	2.4	1.8	0.75
30	2.2	9.1	e2.2	e1.2	---	112	429	64	24	2.2	1.3	0.64
31	3.0	---	e2.0	e1.2	---	111	---	163	---	2.6	1.1	---
TOTAL	53.0	91.6	204.2	48.26	1474.6	6454	4356	3361	6299	127.26	113.58	35.36
MEAN	1.710	3.053	6.587	1.557	52.66	208.2	145.2	108.4	210.0	4.105	3.664	1.179
MAX	3.0	9.1	12	2.1	380	840	751	348	848	18	32	2.9
MIN	1.1	1.5	2.0	0.96	1.1	11	38	24	24	0.49	0.10	0.11
CFSM	0.02	0.03	0.06	0.01	0.49	1.93	1.34	1.00	1.94	0.04	0.03	0.01
IN.	0.02	0.03	0.07	0.02	0.51	2.22	1.50	1.16	2.17	0.04	0.04	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

MEAN	9.496	29.45	16.64	6.613	28.23	146.4	164.2	51.73	107.6	31.10	6.535	7.796
MAX	52.7	207	93.5	36.8	102	250	318	109	370	295	28.1	36.8
(WY)	1996	1993	1993	1996	1998	1991	1994	1990	1990	1993	1994	1990
MIN	0.14	1.02	0.59	0.11	0.51	16.4	9.40	2.79	0.000	0.000	0.000	0.000
(WY)	2000	2000	1990	1990	1989	2000	1990	1988	1988	1988	1988	1989

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1988 - 2002

ANNUAL TOTAL	20569.16	22617.86	
ANNUAL MEAN	56.35	61.97	51.56
HIGHEST ANNUAL MEAN			123
LOWEST ANNUAL MEAN			14.5
HIGHEST DAILY MEAN	976	Apr 12	848 Jun 4
LOWEST DAILY MEAN	0.05	Aug 8	0.10 Aug 11
ANNUAL SEVEN-DAY MINIMUM	0.06	Aug 6	0.27 Sep 13
MAXIMUM PEAK FLOW			(a)895 Jun 4
MAXIMUM PEAK STAGE			(b)16.49 Mar 12
INSTANTANEOUS LOW FLOW			0.09 Aug 11
ANNUAL RUNOFF (CFSM)	0.52		0.57
ANNUAL RUNOFF (INCHES)	7.08		7.79
10 PERCENT EXCEEDS	177	175	117
50 PERCENT EXCEEDS	5.6	3.6	6.9
90 PERCENT EXCEEDS	0.97	1.1	0.46

- (a) Gage height, 15.05 ft
- (b) Ice affected
- (c) Based on rating curve extended above 1,500 ft³/s on basis of contracted-opening measurement of peak flow
- (d) Estimated from floodmarks
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04072150 DUCK CREEK NEAR HOWARD, WI--Ccontinued--Continued
(HYDROLOGIC BENCHMARK STATION)

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN									
1	22.9	18.3	20.3	30.1	25.5	27.5	28.5	24.5	26.0	23.5	18.0	21.0
2	19.8	16.8	18.2	30.7	26.1	28.0	27.0	21.0	24.5	24.0	20.0	22.0
3	16.8	10.9	13.3	29.0	26.0	27.2	27.0	21.0	24.0	23.0	19.5	21.0
4	11.4	10.6	11.0	28.3	23.5	25.5	28.0	22.5	25.0	22.5	17.5	20.0
5	13.3	11.4	12.3	26.6	21.0	23.4	26.0	21.5	24.5	23.0	17.5	20.5
6	16.3	12.8	14.3	26.1	20.7	22.9	24.5	19.0	21.5	22.0	17.5	20.0
7	18.9	14.8	16.6	29.2	21.6	25.2	24.5	17.5	21.0	24.5	19.0	21.5
8	19.7	16.8	18.1	---	---	---	26.0	19.0	22.5	24.5	19.5	22.0
9	21.4	17.3	19.1	---	---	---	27.0	19.0	23.0	26.0	20.5	23.5
10	23.1	17.6	20.1	---	---	---	27.0	19.5	23.5	24.0	19.0	22.0
11	21.0	19.7	20.3	---	---	---	29.5	20.0	24.0	21.5	16.5	19.0
12	20.0	18.9	19.7	---	---	---	26.5	21.0	24.0	21.5	16.0	18.5
13	19.4	17.2	18.5	---	---	---	24.5	22.5	23.5	22.5	16.5	19.5
14	17.2	16.1	16.8	---	---	---	24.5	21.0	22.5	19.5	17.5	18.5
15	17.5	15.5	16.4	---	---	---	25.5	21.0	23.0	19.5	14.5	17.0
16	17.6	15.6	16.5	29.0	23.0	26.0	26.5	21.0	23.5	19.0	12.5	16.0
17	19.3	15.6	17.2	30.0	23.0	26.5	25.0	21.0	23.0	21.0	14.0	17.5
18	20.1	15.6	17.6	26.5	22.5	24.0	23.5	18.0	20.5	19.0	16.0	17.5
19	19.1	16.4	17.8	26.0	20.5	23.5	23.0	18.5	20.5	23.0	17.5	20.0
20	22.2	17.8	19.8	27.0	20.0	23.5	23.0	17.0	20.0	20.5	19.0	20.0
21	20.9	18.4	19.4	30.5	23.5	27.0	20.0	18.5	19.0	19.0	16.5	18.0
22	20.8	18.3	19.4	29.0	24.5	26.5	21.5	20.0	20.5	16.5	14.0	15.5
23	21.4	18.9	20.2	25.5	20.0	23.0	20.5	19.5	20.0	14.0	11.5	13.0
24	24.3	20.7	22.3	26.0	19.5	22.5	25.0	19.0	21.5	13.5	10.5	12.5
25	26.0	21.6	23.6	24.5	20.0	21.5	25.0	20.0	22.5	15.0	11.5	13.5
26	26.2	22.0	24.0	28.0	20.5	24.0	25.5	19.5	22.5	15.0	13.0	14.0
27	24.2	21.8	23.1	28.5	23.0	25.5	22.5	20.0	21.0	14.5	12.5	13.0
28	25.6	20.7	23.2	30.5	23.5	27.0	22.5	18.5	20.0	15.0	10.5	12.5
29	25.7	22.0	24.1	28.5	24.5	26.0	23.5	17.5	20.5	17.5	13.5	15.5
30	27.7	23.1	25.4	30.0	23.0	26.5	23.5	17.5	20.5	19.5	15.0	17.0
31	---	---	---	28.0	23.5	26.0	23.0	18.0	20.5	---	---	---
MONTH	27.7	10.6	19.0	---	---	---	29.5	17.0	22.2	26.0	10.5	18.1

SPECIFIC CONDUCTANCE, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

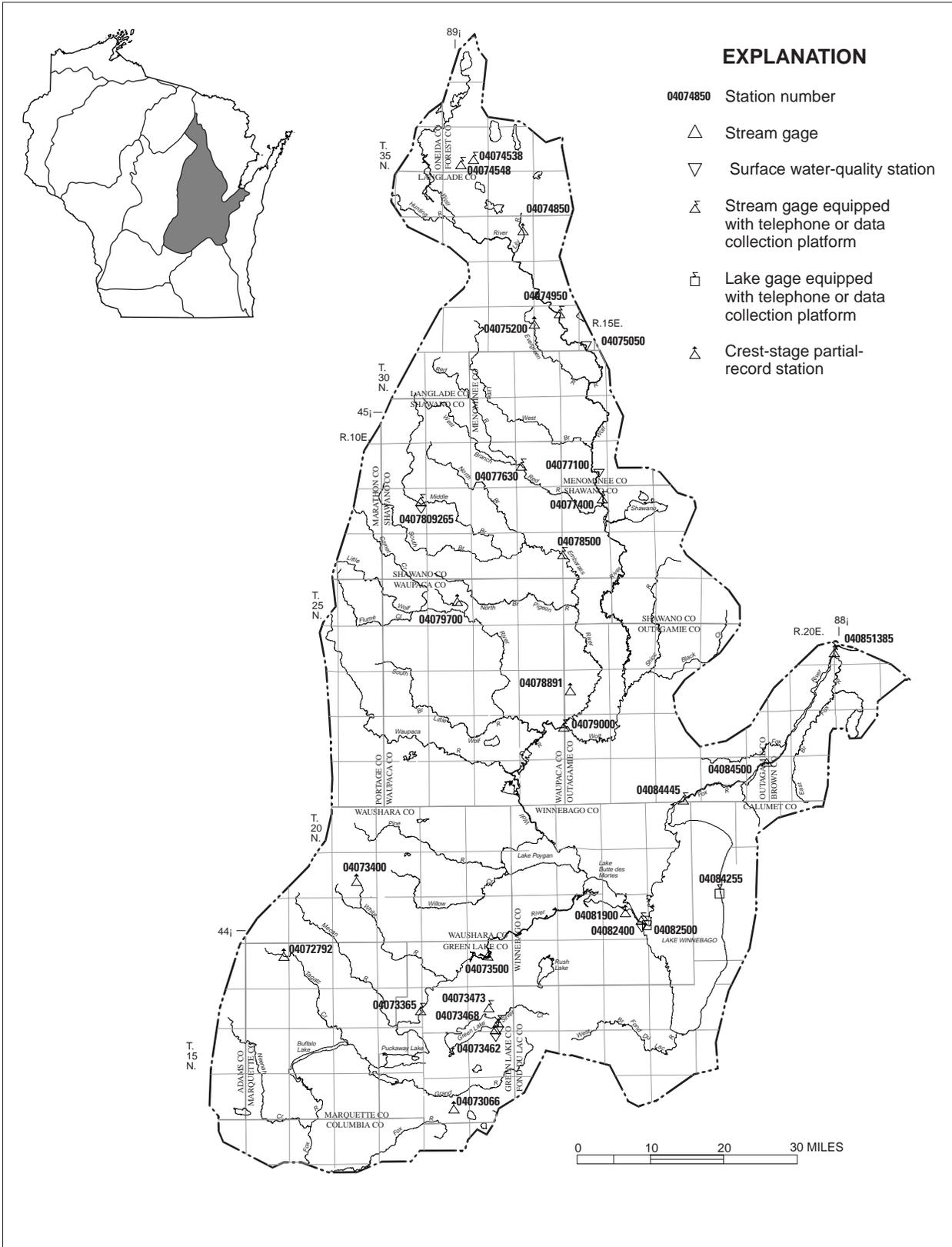
DAY	MAX	MIN	MEAN									
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	811	782	799
19	---	---	---	---	---	---	---	---	---	824	791	810
20	---	---	---	---	---	---	---	---	---	824	799	811
21	---	---	---	---	---	---	---	---	---	828	770	812
22	---	---	---	---	---	---	---	---	---	827	784	811
23	---	---	---	---	---	---	---	---	---	839	483	815
24	---	---	---	---	---	---	---	---	---	845	789	821
25	---	---	---	---	---	---	---	---	---	826	787	802
26	---	---	---	---	---	---	---	---	---	836	797	815
27	---	---	---	---	---	---	---	---	---	810	724	791
28	---	---	---	---	---	---	---	---	---	787	756	774
29	---	---	---	---	---	---	---	---	---	793	705	776
30	---	---	---	---	---	---	---	---	---	800	767	786
31	---	---	---	---	---	---	---	---	---	803	468	626

STREAMS TRIBUTARY TO LAKE MICHIGAN

04072150 DUCK CREEK NEAR HOWARD, WI--Continued--Continued
(HYDROLOGIC BENCHMARK STATION)

SPECIFIC CONDUCTANCE, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	677	523	616	888	866	880	811	785	798	667	634	650
2	687	675	681	896	868	878	816	785	801	662	605	630
3	677	360	558	896	860	880	822	788	808	667	629	649
4	403	340	363	897	855	879	822	769	788	672	656	664
5	522	402	461	897	850	878	807	767	788	683	650	668
6	610	522	572	899	836	873	802	774	789	674	653	664
7	672	610	640	879	846	864	813	767	794	671	640	653
8	726	672	700	---	---	---	815	769	794	677	654	664
9	764	724	742	---	---	---	812	763	791	697	677	686
10	778	707	760	---	---	---	810	753	785	704	681	694
11	740	491	611	---	---	---	813	736	780	702	690	695
12	491	458	469	---	---	---	747	711	730	707	690	698
13	567	479	522	---	---	---	1010	742	885	711	682	699
14	560	492	546	---	---	---	1080	667	903	716	689	705
15	621	560	594	---	---	---	667	514	558	720	693	705
16	686	621	657	858	813	836	514	484	499	710	687	700
17	735	685	713	855	807	834	507	476	493	712	691	703
18	766	720	734	854	826	842	518	491	504	716	693	707
19	794	766	779	851	814	834	530	498	511	724	578	679
20	817	794	806	854	824	840	532	507	519	681	610	661
21	826	799	819	868	822	849	549	455	520	713	681	704
22	823	799	815	860	823	842	555	534	546	709	647	675
23	820	526	635	872	832	846	577	536	554	715	661	692
24	689	532	617	855	834	844	599	569	586	729	712	717
25	782	689	737	863	791	840	623	599	611	765	718	739
26	818	776	797	824	785	803	625	603	615	808	764	788
27	833	818	824	832	805	820	642	616	629	836	808	822
28	857	833	843	838	793	815	648	617	633	842	825	833
29	880	857	872	817	770	789	655	637	646	856	826	842
30	891	867	882	817	759	799	665	639	651	859	827	847
31	---	---	---	793	763	775	673	638	652	---	---	---
MONTH	891	340	679	---	---	---	1080	455	676	859	578	708



EXPLANATION

- 04074850 Station number
- △ Stream gage
- ▽ Surface water-quality station
- ⊠ Stream gage equipped with telephone or data collection platform
- Lake gage equipped with telephone or data collection platform
- △ Crest-stage partial-record station

Base from U.S. Geological Survey 1:100,000 digital data; modified by Wisconsin Department of Natural Resources. Wisconsin Transverse Mercator projection.

FOX-WOLF RIVER BASIN

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073365 FOX RIVER AT PRINCETON, WI

LOCATION.--Lat 43°51'04", long 89°08'00", in SE ¼ NW ¼ SE ¼ sec.24, T.16 N., R.11 E., Green Lake County, Hydrologic Unit 04030201, on right bank at upstream side of bridge on State Highway 23 at Princeton, and at mile 105.

DRAINAGE AREA.--962 mi².

PERIOD OF RECORD.--July 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 754.57 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Occasional regulation by dams upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	832	766	844	e620	639	1070	1100	1490	651	1030	488	423
2	812	736	855	e620	e620	e1000	1070	1510	623	978	444	446
3	799	718	854	e610	e620	e990	1060	1530	661	916	449	448
4	771	698	860	e610	e580	e980	1050	1530	795	839	459	444
5	741	696	914	e620	e580	e990	1040	1520	904	757	443	446
6	725	702	957	e630	e620	e1000	1030	1500	993	722	424	452
7	802	672	930	e650	e660	1060	1040	1470	1090	693	434	449
8	951	642	936	e670	e680	1090	1030	1440	1110	663	438	439
9	969	684	949	e680	695	1180	1050	1450	1120	634	436	431
10	953	661	951	e700	647	1210	1100	1460	1130	610	432	410
11	906	653	927	e700	677	1190	1140	1410	1180	599	427	420
12	844	656	921	e690	637	1150	1160	1390	1170	600	413	430
13	835	666	942	e670	609	1130	1170	1380	1170	590	404	428
14	837	658	948	e660	691	1120	1190	1370	1170	569	408	421
15	823	657	965	e640	666	1120	1190	1370	1150	552	425	406
16	767	642	973	e630	635	1150	1200	1350	1120	544	396	422
17	769	644	954	e620	652	1160	1180	1310	1100	532	403	419
18	776	656	953	e630	679	1160	1160	1280	1070	506	388	419
19	746	638	930	e650	716	1170	1180	1250	1050	490	362	509
20	732	671	919	e670	790	1200	1180	1210	1010	492	374	549
21	714	681	899	e680	853	1180	1160	1170	1000	505	389	561
22	702	678	938	e700	930	1180	1210	1140	1050	481	413	565
23	711	675	910	e780	1010	1210	1260	1100	1090	459	416	566
24	725	677	e770	e770	1040	1220	1320	1010	1080	470	434	550
25	854	721	e770	708	1040	1170	1390	973	1080	480	442	545
26	765	686	e840	683	1040	1160	1390	996	1110	472	438	522
27	729	692	e760	672	1030	1160	1390	964	1130	465	418	498
28	781	737	e700	652	1090	1170	1400	897	1130	465	414	515
29	728	760	e650	639	---	1150	1450	671	1120	487	427	529
30	694	781	e630	634	---	1140	1470	677	1080	494	427	539
31	743	---	e620	648	---	1130	---	654	---	481	427	---
TOTAL	24536	20604	26969	20536	21126	34990	35760	38472	31137	18575	13092	14201
MEAN	791.5	686.8	870.0	662.5	754.5	1129	1192	1241	1038	599.2	422.3	473.4
MAX	969	781	973	780	1090	1220	1470	1530	1180	1030	488	566
MIN	694	638	620	610	580	980	1030	654	623	459	362	406
CFSM	0.82	0.71	0.90	0.69	0.78	1.17	1.24	1.29	1.08	0.62	0.44	0.49
IN.	0.95	0.80	1.04	0.79	0.82	1.35	1.38	1.49	1.20	0.72	0.51	0.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
MEAN	791.5	686.8	870.0	662.5	754.5	1129	1192	1241	1038	815.3	501.8	633.4
MAX	791	687	870	662	754	1129	1192	1241	1038	1031	581	793
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001	2001	2001
MIN	791	687	870	662	754	1129	1192	1241	1038	599	422	473
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 2001 - 2002

ANNUAL TOTAL	299998	
ANNUAL MEAN	821.9	821.9
HIGHEST ANNUAL MEAN		822
LOWEST ANNUAL MEAN		822
HIGHEST DAILY MEAN	1530	May 3, 4
LOWEST DAILY MEAN	362	Aug 19
ANNUAL SEVEN-DAY MINIMUM	389	Aug 16
MAXIMUM PEAK FLOW	1540	May 4
MAXIMUM PEAK STAGE	7.32	May 4
INSTANTANEOUS LOW FLOW	350	Aug 19
ANNUAL RUNOFF (CFSM)	0.85	
ANNUAL RUNOFF (INCHES)	11.60	
10 PERCENT EXCEEDS	1190	1200
50 PERCENT EXCEEDS	743	729
90 PERCENT EXCEEDS	439	449

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073462 WHITE CREEK AT SPRING GROVE ROAD NEAR GREEN LAKE, WI

LOCATION.--Lat 43°48'58", long 88°55'42", in SE ¼ SE ¼ NW ¼ sec.34, T.16 N., R.13 E., Green Lake County, Hydrologic Unit 04030201, at culvert on Spring Grove Road at Forest Glen Beach, 2.6 mi southeast of Green Lake.

DRAINAGE AREA.--3.05 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1981 to June 1988, October 1996 to current year. Prior to October 2000, published as "at Forest Glen Beach".

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

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	0.84	0.60	e0.46	0.45	3.0	3.1	5.0	3.4	3.1	1.6	0.71
2	1.1	0.73	0.54	e0.46	0.43	2.9	3.1	5.2	3.3	3.0	1.5	0.91
3	1.1	0.66	0.52	e0.46	0.40	2.7	2.9	4.9	4.0	2.8	1.4	1.1
4	1.1	0.65	0.52	e0.46	e0.39	e2.5	2.8	5.0	3.8	2.7	1.5	0.87
5	1.1	0.64	0.79	e0.48	e0.38	2.4	2.8	5.0	3.6	2.7	1.4	0.74
6	1.1	0.64	0.64	e0.48	e0.39	2.4	2.7	5.2	3.4	2.6	1.4	0.71
7	1.1	0.63	0.60	0.50	0.40	2.3	2.8	5.1	3.3	2.6	1.4	0.66
8	1.2	0.64	0.58	0.52	0.41	3.1	3.1	5.2	3.2	2.7	1.3	0.62
9	1.2	0.62	0.58	0.50	0.75	22	2.9	5.4	3.2	2.5	1.3	0.55
10	1.2	0.61	0.61	e0.48	1.4	8.5	2.7	5.1	3.1	2.4	1.2	0.51
11	1.1	0.61	0.58	e0.46	1.1	6.2	2.8	5.1	3.1	2.5	1.2	0.47
12	1.0	0.62	0.64	e0.45	0.83	5.6	2.9	5.4	3.1	2.5	1.2	0.44
13	1.2	0.59	0.79	e0.43	0.75	5.3	2.8	5.1	3.2	2.4	1.1	0.41
14	1.3	0.58	0.61	e0.42	0.75	5.1	3.0	5.0	3.2	2.4	1.1	0.42
15	1.2	0.54	0.60	0.41	0.86	4.7	3.0	4.9	3.1	2.4	1.1	0.41
16	1.1	0.50	0.62	0.42	1.0	4.2	3.1	4.8	3.0	2.3	1.1	0.38
17	1.0	0.50	0.60	0.41	1.0	3.9	2.9	4.5	3.0	2.2	1.1	0.36
18	1.1	0.55	0.58	0.39	1.0	3.5	3.1	4.4	2.7	2.1	0.98	0.36
19	1.0	0.66	0.56	e0.38	7.1	3.6	3.1	4.2	2.7	2.1	0.98	2.2
20	1.0	0.49	0.52	e0.38	6.5	5.2	3.0	4.0	2.8	2.1	0.97	1.0
21	0.96	0.46	0.57	e0.40	5.1	4.9	3.1	3.9	2.7	2.1	1.1	0.79
22	1.0	0.45	0.70	0.40	4.2	4.5	3.3	3.8	4.3	2.1	0.96	0.71
23	1.1	0.42	0.65	0.41	3.8	4.3	3.2	3.8	3.8	2.0	1.0	0.61
24	1.2	0.60	e0.56	0.40	4.0	4.0	3.7	3.7	3.7	1.9	0.95	0.48
25	1.2	0.52	e0.54	0.41	4.0	3.7	3.6	4.1	3.6	1.9	0.91	0.45
26	1.1	0.44	e0.54	0.43	3.7	3.7	3.4	3.8	3.7	1.9	0.85	0.43
27	0.92	0.56	e0.52	0.46	3.4	3.5	3.8	3.7	3.6	1.8	0.80	0.43
28	0.87	0.53	e0.52	0.44	3.2	3.5	4.9	3.6	3.5	1.8	0.77	0.40
29	0.83	0.51	e0.50	0.43	---	3.4	4.6	3.6	3.3	1.8	0.76	0.44
30	0.82	0.71	e0.48	0.42	---	3.3	4.8	3.6	3.2	1.7	0.77	0.40
31	0.87	---	e0.48	0.45	---	3.2	---	3.5	---	1.6	0.74	---
TOTAL	33.17	17.50	18.14	13.60	57.69	141.1	97.0	139.6	99.6	70.7	34.44	18.97
MEAN	1.070	0.583	0.585	0.439	2.060	4.552	3.233	4.503	3.320	2.281	1.111	0.632
MAX	1.3	0.84	0.79	0.52	7.1	22	4.9	5.4	4.3	3.1	1.6	2.2
MIN	0.82	0.42	0.48	0.38	0.38	2.3	2.7	3.5	2.7	1.6	0.74	0.36
CFSM	0.35	0.19	0.19	0.14	0.68	1.49	1.06	1.48	1.09	0.75	0.36	0.21
IN.	0.40	0.21	0.22	0.17	0.70	1.72	1.18	1.70	1.21	0.86	0.42	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2002, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	2.877	3.050	2.547	1.755	3.278	6.889	7.488	4.926	4.628	3.354	2.413	3.110									
MAX	12.9	12.7	7.47	5.28	9.29	16.1	15.7	10.9	12.3	5.69	4.39	18.5									
(WY)	1987	1986	1986	1983	1984	1986	1998	2001	2001	2001	1986	1986									
MIN	0.31	0.30	0.21	0.16	0.96	1.59	0.96	1.96	1.29	1.40	0.83	0.45									
(WY)	1999	1988	1999	2000	2001	2000	2000	2000	1988	1987	1987	1998									

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1982 - 2002

ANNUAL TOTAL	1675.40	741.51	
ANNUAL MEAN	4.590	2.032	4.058
HIGHEST ANNUAL MEAN			7.94
LOWEST ANNUAL MEAN			2.03
HIGHEST DAILY MEAN	18	Apr 7	22
LOWEST DAILY MEAN	0.41	Jan 28	0.36
ANNUAL SEVEN-DAY MINIMUM	(a)0.44	Jan 22	0.39
MAXIMUM PEAK FLOW			74
MAXIMUM PEAK STAGE			5.10
ANNUAL RUNOFF (CFSM)	1.50		0.67
ANNUAL RUNOFF (INCHES)	20.43		9.04
10 PERCENT EXCEEDS	12		4.2
50 PERCENT EXCEEDS	1.8		1.2
90 PERCENT EXCEEDS	0.54		0.44

- (a) Ice affected
- (b) Also occurred Feb. 19-21 and ice-affected days, Feb. 17 and 18, 2000
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1981 to June 1988, October 1996 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1981 to June 1988, October 1996 to current year.

TOTAL AMMONIA-NITROGEN DISCHARGE: October 1981 to June 1988.

TOTAL-PHOSPHORUS DISCHARGE: October 1981 to June 1988, October 1996 to current year.

INSTRUMENTATION.--Automatic pumping sampler since December 1981.

REMARKS.--Records are fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 51,300 mg/L, Apr. 3, 1982; minimum observed, 1 mg/L, Sept. 26, 1981, Nov. 28, 1984, Sept. 5, 1985, Jan. 14, 1987, Aug. 12, 1998, and Sept. 2, 1998.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,420 tons, Apr. 3, 1982; minimum daily, 0.00 ton, on many days during 1982, 1987, 1988, 1997, 1998, 1999, and 2000 water years.

TOTAL AMMONIA-NITROGEN CONCENTRATIONS: Maximum observed, 8.4 mg/L, Apr. 3, 1982; minimum observed, <0.01 mg/L, many days.

TOTAL AMMONIA-NITROGEN DISCHARGE.--Maximum daily, 490 lb, Apr. 3, 1982; minimum daily, 0.01 lb, Nov. 27, Dec. 2-4, 1987.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 7.6 mg/L, May 31, 1987; minimum observed, <0.01 mg/L, many days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,130 lb, Sept. 10, 1986; minimum daily, 0.04 lb, Oct. 26 and Dec. 25-26, 1998.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 2,030 mg/L, Sept. 19; minimum observed, 9 mg/L, Apr. 9.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 117 tons, Mar. 9; minimum daily, 0.01 ton, Nov. 16, 17, 23, 29, Jan. 15 to Feb. 8, and Sept. 17-18.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 2.02 mg/L, Sept. 19; minimum observed, 0.03 mg/L, Oct. 8.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 192 lb, Mar. 9; minimum daily, 0.08 lb, Dec. 23-26, Feb. 5.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002)
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.04	0.03	0.02	0.02	0.01	0.08	0.17	0.23	0.23	0.23	0.08	0.03
2	0.04	0.03	0.02	0.02	0.01	0.08	0.16	0.43	0.20	0.22	0.08	0.07
3	0.04	0.02	0.02	0.02	0.01	0.07	0.15	0.21	0.38	0.21	0.07	0.06
4	0.04	0.02	0.02	0.02	0.01	0.07	0.14	0.22	0.27	0.20	0.09	0.05
5	0.04	0.02	0.09	0.02	0.01	0.07	0.12	0.22	0.20	0.19	0.07	0.04
6	0.04	0.02	0.03	0.02	0.01	0.06	0.12	0.22	0.19	0.18	0.07	0.04
7	0.04	0.02	0.03	0.02	0.01	0.06	0.12	0.22	0.18	0.18	0.07	0.03
8	0.04	0.02	0.02	0.02	0.01	0.09	0.22	0.22	0.16	0.21	0.07	0.03
9	0.04	0.02	0.02	0.02	0.04	117	0.11	0.37	0.16	0.19	0.06	0.03
10	0.04	0.02	0.02	0.02	0.10	17.0	0.07	0.20	0.15	0.18	0.06	0.02
11	0.04	0.02	0.02	0.02	0.06	6.3	0.07	0.25	0.14	0.18	0.06	0.02
12	0.03	0.02	0.03	0.02	0.04	1.5	0.07	0.48	0.13	0.18	0.05	0.02
13	0.06	0.02	0.05	0.02	0.03	0.42	0.07	0.24	0.19	0.17	0.05	0.02
14	0.07	0.02	0.03	0.02	0.02	0.30	0.07	0.22	0.25	0.16	0.05	0.02
15	0.05	0.02	0.03	0.01	0.02	0.27	0.08	0.21	0.23	0.16	0.05	0.02
16	0.04	0.01	0.03	0.01	0.03	0.24	0.08	0.19	0.22	0.15	0.05	0.02
17	0.04	0.01	0.03	0.01	0.03	0.22	0.08	0.17	0.20	0.14	0.05	0.01
18	0.04	0.02	0.02	0.01	0.03	0.19	0.08	0.16	0.17	0.13	0.04	0.01
19	0.03	0.04	0.02	0.01	3.2	0.37	0.08	0.15	0.17	0.13	0.04	4.4
20	0.03	0.03	0.02	0.01	1.8	3.4	0.08	0.13	0.16	0.13	0.04	0.12
21	0.03	0.02	0.02	0.01	0.69	1.6	0.08	0.12	0.16	0.13	0.06	0.08
22	0.03	0.02	0.03	0.01	0.22	0.90	0.09	0.11	0.69	0.12	0.04	0.07
23	0.04	0.01	0.03	0.01	0.15	0.61	0.09	0.11	0.35	0.11	0.04	0.06
24	0.05	0.03	0.02	0.01	0.15	0.41	0.19	0.10	0.30	0.11	0.04	0.04
25	0.05	0.02	0.02	0.01	0.14	0.30	0.15	0.35	0.29	0.11	0.04	0.04
26	0.04	0.02	0.02	0.01	0.12	0.28	0.13	0.35	0.29	0.10	0.03	0.03
27	0.04	0.02	0.02	0.01	0.11	0.25	0.20	0.33	0.28	0.10	0.03	0.03
28	0.03	0.02	0.02	0.01	0.09	0.24	0.45	0.31	0.27	0.09	0.03	0.02
29	0.03	0.01	0.02	0.01	---	0.22	0.18	0.31	0.25	0.11	0.03	0.03
30	0.03	0.03	0.02	0.01	---	0.20	0.19	0.29	0.24	0.09	0.03	0.02
31	0.03	---	0.02	0.01	---	0.19	---	0.25	---	0.09	0.03	---
TOTAL	1.23	0.63	0.81	0.45	7.15	152.99	3.89	7.37	7.10	4.68	1.60	5.48
WIR YR 2002	TOTAL 193.38											

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.26	0.20	0.16	0.12	0.10	0.96	1.0	1.3	0.84	0.88	0.44	0.19
2	0.26	0.17	0.13	0.12	0.10	0.90	0.88	1.7	0.81	0.85	0.40	0.27
3	0.25	0.15	0.12	0.11	0.09	0.82	0.74	1.6	1.2	0.78	0.37	0.31
4	0.23	0.15	0.12	0.11	0.09	0.77	0.63	1.7	1.1	0.75	0.46	0.25
5	0.21	0.15	0.36	0.12	0.08	0.73	0.54	1.7	0.95	0.73	0.41	0.21
6	0.20	0.15	0.21	0.12	0.09	0.71	0.47	1.7	0.89	0.71	0.40	0.20
7	0.19	0.14	0.18	0.12	0.09	0.68	0.54	1.6	0.85	0.69	0.38	0.19
8	0.20	0.14	0.16	0.13	0.09	1.2	0.99	1.6	0.81	0.81	0.37	0.17
9	0.19	0.14	0.16	0.12	0.22	192	0.80	1.9	0.79	0.75	0.36	0.15
10	0.19	0.14	0.18	0.12	0.46	20	0.62	1.6	0.76	0.71	0.34	0.14
11	0.17	0.14	0.16	0.11	0.35	9.4	0.61	1.6	0.74	0.73	0.32	0.13
12	0.17	0.14	0.22	0.11	0.25	4.8	0.80	1.9	0.72	0.72	0.31	0.12
13	0.31	0.13	0.35	0.10	0.22	2.6	0.67	1.6	0.89	0.69	0.31	0.11
14	0.45	0.13	0.19	0.10	0.21	2.1	0.66	1.5	0.87	0.69	0.30	0.11
15	0.35	0.12	0.18	0.10	0.22	1.9	0.63	1.4	0.72	0.67	0.29	0.11
16	0.30	0.11	0.18	0.10	0.26	1.7	0.60	1.3	0.70	0.64	0.28	0.10
17	0.28	0.11	0.17	0.10	0.26	1.6	0.55	1.2	0.67	0.61	0.32	0.10
18	0.28	0.13	0.16	0.09	0.25	1.4	0.70	1.1	0.59	0.59	0.26	0.10
19	0.26	0.20	0.15	0.09	25	1.4	0.71	1.0	0.60	0.60	0.26	13
20	0.25	0.11	0.14	0.09	22	14	0.61	0.94	0.61	0.59	0.25	1.0
21	0.22	0.10	0.15	0.09	8.8	10	0.66	0.87	0.61	0.58	0.38	0.55
22	0.27	0.09	0.18	0.09	3.2	6.2	0.76	0.83	1.5	0.57	0.29	0.43
23	0.41	0.09	0.17	0.09	2.3	4.7	0.70	0.79	1.2	0.53	0.29	0.35
24	0.42	0.21	0.15	0.09	2.2	3.6	1.1	0.79	1.1	0.52	0.27	0.26
25	0.37	0.15	0.14	0.09	2.0	2.8	0.91	1.2	1.1	0.51	0.26	0.22
26	0.33	0.11	0.14	0.10	1.6	2.5	0.83	1.0	1.1	0.50	0.24	0.21
27	0.27	0.16	0.13	0.10	1.3	2.1	0.97	0.99	1.1	0.48	0.23	0.19
28	0.24	0.15	0.13	0.10	1.1	1.9	1.5	0.95	0.99	0.46	0.21	0.17
29	0.21	0.13	0.13	0.10	---	1.6	1.1	0.94	0.93	0.55	0.21	0.17
30	0.20	0.23	0.12	0.09	---	1.4	1.2	0.93	0.91	0.48	0.21	0.15
31	0.20	---	0.12	0.10	---	1.2	---	0.88	---	0.46	0.20	---
TOTAL	8.14	4.27	5.24	3.22	72.93	297.67	23.48	40.11	26.65	19.83	9.62	19.66
MEAN	0.26	0.14	0.17	0.10	2.6	9.6	0.78	1.3	0.89	0.64	0.31	0.66
MAX	0.45	0.23	0.36	0.13	25	192	1.5	1.9	1.5	0.88	0.46	13
MIN	0.17	0.09	0.12	0.09	0.08	0.68	0.47	0.79	0.59	0.46	0.20	0.10

WTR YR 2002 TOTAL 530.82

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
OCT 2001					
01...	1604	1.1	10	.045	14
08...	0015	1.2	50	.030	58
22...	2305	1.8	50	.093	15
24...	1555	1.8	50	.078	32
31...	1525	.87	10	.043	14
NOV					
21...	1305	.47	10	.039	18
24...	1240	1.1	50	.107	23
30...	0840	.99	50	.078	26
DEC					
05...	0745	1.2	50	.102	80
12...	2325	1.4	50	.119	58
JAN 2002					
09...	0925	.50	10	.045	14
FEB					
15...	1520	.80	10	.048	9.7
20...	1445	8.3	10	.644	116
22...	1315	4.1	10	.124	16
MAR					
01...	1548	3.0	50	.058	10
11...	0820	6.3	50	.302	458
12...	0820	5.4	50	.175	110
13...	1510	5.6	10	.080	22
20...	1355	7.7	50	.193	150
20...	1545	9.1	50	1.16	561
20...	1547	9.0	10	1.17	548
21...	0745	4.9	50	.376	109
APR					
08...	1910	3.5	50	.087	34
09...	1300	2.9	10	.043	8.8
24...	1445	3.7	50	.063	29
28...	0210	5.3	50	.079	39
29...	0215	4.6	50	.045	14
MAY					
24...	0940	3.8	10	.037	10
29...	2015	3.6	50	--	31
JUN					
03...	0705	5.2	50	--	66
22...	0035	5.1	50	--	119
JUL					
26...	1610	1.8	10	.049	20
AUG					
30...	1156	.78	10	.051	13
SEP					
19...	0350	1.6	50	.836	577
19...	0430	7.6	50	1.23	967
19...	0505	13	50	2.02	2030
19...	0630	5.8	50	1.89	1030
19...	0740	2.1	50	1.30	558
19...	1058	1.6	10	.239	57
19...	1100	1.6	50	.262	46
23...	2230	.61	50	.154	--
30...	1025	.40	10	.068	20

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073468 GREEN LAKE INLET AT COUNTY TRUNK HIGHWAY A NEAR GREEN LAKE, WI

LOCATION.--Lat 43°49'28", long 88°55'36", in NE ¼ SE ¼ SE ¼ sec.27, T.16 N., R.13 E., Green Lake County, Hydrologic Unit 04030201, on left bank at downstream side of County Trunk Highway A, 2.3 mi southeast of Green Lake.

DRAINAGE AREA.--53.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1987 to current year.

GAGE.--Nortek Easy-Q doppler velocity meter installed Aug. 16, 2000. Acoustical Velocity Meter (AVM) installed on June 6, 1990 and used to Aug. 3, 2000. Datum of gage is 790.00 ft above NGVD of 1929 (from Wisconsin Department of Natural Resources benchmark).

REMARKS.--Records fair (see page 11). Flows fluctuate due to seiche from Green Lake. Gage-height telemeter at station.

DISCHARGE , FROM PRIMARY, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	30	55	19	21	48	63	90	20	45	23	12
2	22	23	41	17	16	32	56	101	24	44	21	17
3	23	29	38	19	22	44	56	82	52	38	e19	40
4	22	27	40	18	18	40	58	79	59	36	e25	25
5	23	27	32	18	19	36	54	62	55	32	e22	18
6	26	28	69	21	18	36	52	68	47	27	e20	15
7	27	20	44	22	20	34	61	66	39	28	e20	12
8	16	26	36	21	20	44	87	50	36	36	e19	12
9	22	24	35	20	20	130	90	40	27	128	e19	11
10	14	30	37	21	22	114	86	74	12	77	e19	9.1
11	32	21	30	24	15	102	88	59	28	74	e18	9.5
12	22	21	31	20	26	108	94	70	26	65	e21	9.1
13	20	27	42	21	26	120	84	66	25	50	e18	8.7
14	25	25	38	17	29	84	73	61	29	43	e16	13
15	33	23	33	20	32	98	69	53	28	37	e15	6.6
16	28	21	36	20	32	85	61	62	26	35	e13	8.7
17	29	20	32	22	31	74	59	50	28	32	e18	7.4
18	28	23	34	21	31	74	45	48	21	33	e11	11
19	14	36	24	18	90	71	83	46	14	23	e11	50
20	32	25	24	19	113	94	69	42	23	22	e10	40
21	27	35	27	21	92	88	58	37	31	24	e12	36
22	31	25	15	19	79	69	75	32	253	26	e35	24
23	29	29	36	20	73	75	71	32	177	29	e26	10
24	14	35	28	21	78	81	68	31	127	26	e22	20
25	27	48	22	21	78	59	92	42	123	23	e23	13
26	48	42	23	22	70	57	75	47	107	26	e21	16
27	37	41	21	22	59	55	79	36	76	22	21	8.8
28	28	48	24	22	50	65	113	25	62	25	17	13
29	34	44	21	17	---	64	106	25	56	23	17	11
30	23	42	21	16	---	64	103	15	48	21	17	10
31	21	---	19	17	---	65	---	27	---	23	14	---
TOTAL	804	895	1008	616	1200	2210	2228	1618	1679	1173	583	496.9
MEAN	25.94	29.83	32.52	19.87	42.86	71.29	74.27	52.19	55.97	37.84	18.81	16.56
MAX	48	48	69	24	113	130	113	101	253	128	35	50
MIN	14	20	15	16	15	32	45	15	12	21	10	6.6
CFSM	0.48	0.56	0.61	0.37	0.80	1.33	1.39	0.98	1.05	0.71	0.35	0.31
IN.	0.56	0.62	0.70	0.43	0.83	1.54	1.55	1.13	1.17	0.82	0.41	0.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2002, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	21.35	26.66	21.54	16.46	26.44	65.71	67.91	44.20	48.62	35.61	24.77	21.91				
MAX	64.1	71.3	47.5	46.1	60.7	107	185	112	156	190	67.5	57.4				
(WY)	1996	1996	1993	1996	1996	1997	1993	2001	1993	1993	1990	2000				
MIN	7.00	12.2	5.73	6.66	6.71	24.5	27.8	16.1	4.57	3.78	5.03	9.01				
(WY)	1989	2000	1990	1989	1989	1999	2000	1988	1988	1988	1988	1988				

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1987 - 2002

ANNUAL TOTAL	19394	14510.9		
ANNUAL MEAN	53.13	39.76		
HIGHEST ANNUAL MEAN			35.72	
LOWEST ANNUAL MEAN			79.9	1993
HIGHEST DAILY MEAN	230	Apr 7	18.7	1988
LOWEST DAILY MEAN	10	Sep 6	705	May 31 1989
ANNUAL SEVEN-DAY MINIMUM	19	Jan 23	-6.9	Apr 5 2000
ANNUAL RUNOFF (CFSM)	0.99		2.1	Jul 27 1988
ANNUAL RUNOFF (INCHES)	13.49		0.67	
10 PERCENT EXCEEDS	115		0.74	
50 PERCENT EXCEEDS	33		10.09	
90 PERCENT EXCEEDS	21		79	
			76	
			23	
			16	
			8.1	

(e) Estimated due to missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073468 GREEN LAKE INLET AT COUNTY TRUNK HIGHWAY A NEAR GREEN LAKE, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1987 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: February 1987 to current year.

TOTAL-PHOSPHORUS DISCHARGE: February 1987 to current year.

INSTRUMENTATION.--Automatic pumping sampler from March 1997; manual samples February 1987 to February 1997.

REMARKS.--Records are fair. Phosphorus analyses by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 701 mg/L, May 30, 1989; minimum observed, 0 mg/L, Mar. 25, 1988.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 456 tons, May 31, 1989; minimum daily, -3.1 ton, Apr. 5, 2000.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.45 mg/L, May 30, 1989; minimum observed, <0.02 mg/L, Oct. 10, 1991.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 3,230 lb, May 31, 1989; minimum daily, -13 lb, Apr. 5, 2000.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 77 mg/L, May 9; minimum observed, 2 mg/L, Jan. 28.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 31 tons, June 22; minimum daily, 0.09 tons, Jan. 30.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.203 mg/L, Apr. 16; minimum observed, 0.039 mg/L, Nov. 17.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 238 lb, June 22; minimum daily, 3.6 lb, Sept. 15.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.6	1.7	0.51	0.13	0.52	1.7	7.6	1.5	4.4	1.5	0.55
2	1.7	1.0	0.83	0.42	0.10	0.35	1.6	12.0	1.9	4.4	1.3	1.1
3	1.7	1.1	0.60	0.43	0.14	0.47	1.6	9.4	4.4	3.8	1.2	3.5
4	1.5	0.96	0.60	0.37	0.12	0.43	1.8	7.6	5.0	3.7	1.5	2.2
5	1.5	0.90	0.46	0.34	0.13	0.39	1.8	5.0	4.5	3.4	1.3	1.5
6	1.6	0.88	0.94	0.36	0.13	0.39	1.8	4.8	3.8	2.9	1.3	1.2
7	1.8	0.60	0.58	0.34	0.15	0.37	2.2	5.7	3.1	3.0	1.2	0.89
8	1.2	0.73	0.45	0.30	0.16	0.47	3.3	5.4	2.8	4.2	1.1	0.84
9	1.8	0.63	0.41	0.26	0.16	2.8	3.9	6.5	2.0	20.0	1.1	0.73
10	1.2	0.74	0.42	0.25	0.18	2.1	4.2	12.0	0.88	12.0	1.1	0.57
11	2.3	0.49	0.32	0.26	0.13	1.2	4.9	6.9	2.1	12.0	1.0	0.57
12	1.1	0.46	0.32	0.20	0.23	1.3	5.9	5.7	1.9	9.9	1.2	0.51
13	0.69	0.56	0.41	0.19	0.24	1.6	6.0	4.0	1.9	7.5	1.0	0.47
14	0.85	0.49	0.36	0.14	0.27	1.2	6.0	4.2	2.1	6.3	0.90	0.66
15	1.2	0.42	0.29	0.16	0.31	1.5	6.4	4.5	1.9	5.3	0.88	0.32
16	1.1	0.36	0.31	0.15	0.32	1.4	6.4	6.1	1.7	4.9	0.72	0.40
17	1.2	0.33	0.26	0.16	0.32	1.3	6.8	4.8	1.8	4.1	0.99	0.35
18	1.2	0.43	0.30	0.15	0.34	1.4	5.6	4.2	1.8	3.8	0.63	0.78
19	0.63	0.77	0.23	0.13	1.0	1.4	11.0	3.7	1.6	2.4	0.58	5.2
20	1.6	0.62	0.26	0.13	1.4	1.8	9.6	3.2	3.4	2.0	0.55	4.0
21	1.5	0.99	0.32	0.14	1.2	1.7	8.3	2.6	4.3	2.0	0.69	3.7
22	2.0	0.82	0.19	0.12	1.0	1.4	11.0	2.1	31.0	2.0	2.7	2.6
23	2.1	1.1	0.51	0.12	0.91	1.5	11.0	1.9	20.0	2.0	2.0	1.2
24	1.1	1.5	0.43	0.13	0.91	1.7	11.0	1.7	14.0	1.7	1.5	2.2
25	2.5	2.2	0.37	0.12	0.85	1.2	13.0	2.1	14.0	1.5	1.5	1.2
26	5.0	2.0	0.43	0.13	0.76	1.2	8.9	2.2	12.0	1.7	1.2	1.2
27	4.2	2.0	0.43	0.12	0.64	1.2	8.2	1.8	8.3	1.4	1.2	0.58
28	2.8	2.5	0.54	0.12	0.54	1.4	8.5	1.3	6.6	1.6	0.86	0.72
29	2.9	2.3	0.52	0.10	---	1.5	5.1	1.4	5.8	1.5	0.80	0.52
30	1.7	1.7	0.57	0.09	---	1.5	6.2	0.94	4.8	1.3	0.74	0.41
31	1.3	---	0.55	0.10	---	1.6	---	1.8	---	1.5	0.60	---
TOTAL	55.17	31.18	14.91	6.54	12.77	38.29	183.7	143.14	170.88	138.2	34.84	40.67

WTR YR 2002 TOTAL 870.29

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073468 GREEN LAKE INLET AT COUNTY TRUNK HIGHWAY A NEAR GREEN LAKE, WI--Continued

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	9.7	22	5.5	5.6	24	22	60	13	39	18	6.3
2	9.9	7.0	14	4.8	4.3	16	20	76	15	39	16	10
3	10	8.3	11	5.3	6.1	21	20	62	33	34	14	27
4	9.7	7.6	12	4.9	5.1	19	20	57	37	33	18	17
5	10	7.4	9.2	4.8	5.5	16	19	43	34	30	16	12
6	11	7.5	19	5.5	5.2	16	18	46	28	26	14	9.9
7	12	5.3	12	5.7	5.9	15	22	51	22	28	14	7.8
8	6.7	6.7	9.8	5.4	6.0	19	32	45	20	37	13	7.6
9	9.0	6.0	9.3	5.0	6.2	75	37	39	15	130	12	6.8
10	5.6	7.4	9.6	5.2	6.9	64	40	64	6.4	77	12	5.5
11	12	5.1	7.7	5.8	4.8	46	47	44	15	73	11	5.7
12	7.1	4.9	7.8	4.8	8.4	48	58	45	15	63	13	5.3
13	5.7	6.2	10	5.0	8.6	54	60	38	14	48	11	5.0
14	7.0	5.6	9.2	4.0	9.8	38	59	37	17	40	9.5	7.3
15	9.1	5.1	7.8	4.7	11	44	64	36	16	34	9.1	3.6
16	7.7	4.5	8.3	4.7	11	38	65	45	15	32	7.5	4.7
17	7.9	4.3	7.3	5.2	11	33	63	35	16	29	10	4.0
18	7.6	5.1	7.8	5.0	12	33	47	31	12	30	6.4	7.2
19	3.8	8.5	5.7	4.3	40	31	83	28	8.3	21	5.8	39
20	9.0	6.3	5.7	4.5	62	40	67	24	14	20	5.5	30
21	8.1	9.3	6.6	5.0	62	36	55	20	21	22	6.6	27
22	9.9	7.1	3.7	4.6	63	28	68	16	238	24	22	19
23	9.8	8.7	9.1	4.8	52	29	63	15	174	26	16	8.2
24	5.1	11	7.2	5.1	48	31	58	16	126	23	13	16
25	10	16	5.8	5.1	42	22	77	23	123	20	14	9.2
26	20	14	6.1	5.4	36	20	58	28	107	22	12	10
27	16	14	5.7	5.4	30	19	55	22	75	19	12	5.1
28	12	17	6.6	5.5	25	22	69	16	59	21	9.3	6.8
29	13	16	5.9	4.3	---	22	57	16	52	19	9.1	5.2
30	8.4	17	6.0	4.1	---	22	60	9.5	43	17	8.8	4.3
31	7.2	---	5.5	4.5	---	22	---	17	---	18	7.2	---
TOTAL	292.3	258.6	273.4	153.9	593.4	963	1483	1104.5	1383.7	1094	365.8	332.5

WTR YR 2002 TOTAL 8298.1

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073468 GREEN LAKE INLET AT COUNTY TRUNK HIGHWAY A NEAR GREEN LAKE, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
OCT 2001					
06...	1230	26	50	.080	22
10...	2015	14	50	.074	34
13...	1215	20	50	.052	12
19...	2045	14	50	.050	17
27...	1245	37	50	.081	44
NOV					
03...	1215	29	50	.053	14
17...	1200	20	50	.039	5.9
24...	1230	35	50	.059	16
29...	1000	44	50	.069	20
DEC					
01...	1215	55	50	.077	12
02...	2215	41	50	.056	5.6
17...	1215	32	50	.042	2.6
31...	1200	19	50	.054	11
JAN 2002					
14...	1200	17	50	.043	3.2
28...	1200	22	50	.046	1.7
FEB					
18...	1200	31	50	.067	4.4
22...	1115	79	50	.153	5.1
25...	1200	78	50	.098	3.5
MAR					
09...	1030	130	50	.079	4.3
09...	2300	130	50	.186	22
10...	1200	114	50	.083	4.2
18...	1200	74	50	.083	6.6
28...	1200	65	50	.063	7.6
APR					
08...	1200	87	50	.066	14
16...	1615	61	50	.203	40
19...	1138	83	50	.186	50
24...	2230	68	50	.157	58
25...	1145	92	50	.157	50
28...	0030	113	50	.123	36
29...	1200	106	50	.096	16
MAY					
02...	1900	101	50	.144	48
06...	1200	68	50	.123	25
09...	0400	40	50	.182	47
09...	2045	40	50	.177	77
13...	1200	66	50	.103	21
16...	1245	62	50	.137	38
23...	1100	32	50	.085	22
26...	1645	47	50	.113	17
JUN					
03...	1230	52	50	.120	32
10...	1200	12	50	.097	27
13...	2130	25	50	.109	28
17...	1200	28	50	--	23
20...	1215	23	50	--	58
22...	0015	253	50	.171	--
23...	1300	177	50	.183	40
26...	0515	107	50	.186	42
26...	1930	107	50	.186	41
JUL					
01...	1215	45	50	.159	36
08...	1215	36	50	.191	41
16...	1215	35	50	.169	52
23...	1215	29	50	.168	25
AUG					
30...	1230	17	50	.096	16
SEP					
19...	1100	50	50	.149	41
20...	1715	40	50	.134	36
23...	2230	10	50	.154	44
30...	1014	10	50	.079	15

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073473 PUCHYAN RIVER DOWNSTREAM NORTH LAWSON DRIVE NEAR GREEN LAKE, WI

LOCATION.--Lat 43°51'27", long 88°56'47", in NE ¼ SE ¼ sec.16, T.16 N., R.13 E., Green Lake County, Hydrologic Unit 04030201, on right bank 220 ft downstream from bridge on North Lawson Drive, 1.0 mi northeast of dam at outlet of Green Lake at Green Lake.

DRAINAGE AREA.--105 mi².

PERIOD OF RECORD.--November 1996 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 777.47 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Flow regulated by dams 1.1 mi and 180 ft upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	28	43	32	31	55	86	168	53	130	45	20
2	46	27	41	32	31	59	87	175	51	126	41	23
3	45	25	41	32	30	63	90	167	76	113	40	20
4	42	25	49	32	29	62	88	165	119	89	42	16
5	39	25	64	31	29	60	85	160	127	76	41	16
6	37	26	65	30	29	60	89	168	120	72	40	16
7	34	24	61	31	28	59	87	175	111	70	39	16
8	33	23	60	31	28	65	92	174	104	76	39	16
9	33	24	60	30	27	81	97	180	96	84	39	16
10	35	22	60	31	28	80	117	169	92	80	38	17
11	33	22	55	31	31	77	126	167	99	75	36	17
12	31	23	55	30	29	79	130	172	93	74	35	17
13	33	23	61	29	28	83	142	176	91	73	34	17
14	35	23	58	31	30	81	135	182	89	71	33	18
15	34	24	59	33	28	87	135	183	87	70	32	17
16	30	23	59	34	28	88	135	170	85	68	28	17
17	30	24	57	33	28	87	134	163	84	67	27	16
18	29	25	57	32	29	89	133	155	70	64	23	18
19	28	27	54	33	40	91	146	149	63	61	22	31
20	28	29	50	32	46	101	147	139	66	61	21	28
21	27	30	48	31	51	100	144	137	71	61	24	26
22	27	28	52	30	53	99	152	135	e170	65	25	23
23	29	29	52	29	56	100	146	103	e130	60	20	20
24	31	32	46	29	56	96	145	71	86	59	18	17
25	37	37	45	30	55	93	151	78	91	58	18	17
26	28	31	43	29	55	92	145	85	96	56	18	17
27	25	33	41	29	56	92	143	76	98	54	18	17
28	28	35	39	28	58	94	156	70	109	52	18	16
29	25	35	37	27	---	92	161	56	124	51	18	14
30	24	39	35	27	---	92	165	58	125	49	19	14
31	27	---	34	27	---	89	---	54	---	46	18	---
TOTAL	1007	821	1581	946	1047	2546	3789	4280	2876	2211	909	553
MEAN	32.48	27.37	51.00	30.52	37.39	82.13	126.3	138.1	95.87	71.32	29.32	18.43
MAX	46	39	65	34	58	101	165	183	170	130	45	31
MIN	24	22	34	27	27	55	85	54	51	46	18	14
CFSM	0.31	0.26	0.49	0.29	0.36	0.78	1.20	1.31	0.91	0.68	0.28	0.18
IN.	0.36	0.29	0.56	0.34	0.37	0.90	1.34	1.52	1.02	0.78	0.32	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	24.04	16.07	20.61	24.24	39.75	78.54	155.4	123.8	121.9	75.88	44.94	41.56
MEAN	24.04	16.07	20.61	24.24	39.75	78.54	155.4	123.8	121.9	75.88	44.94	41.56
MAX	44.2	30.5	51.0	36.6	56.0	184	256	214	240	136	72.4	103
(WY)	2001	2001	2002	1997	1997	1997	2001	2001	2001	1999	1999	2000
MIN	6.99	6.60	10.4	11.6	15.0	30.4	61.6	89.5	59.6	46.8	28.2	13.7
(WY)	1999	1999	1999	2000	2000	2000	2000	2000	1998	2000	1998	1998

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1997 - 2002

ANNUAL TOTAL	33763	22566	
ANNUAL MEAN	92.50	61.82	63.02
HIGHEST ANNUAL MEAN			91.3
LOWEST ANNUAL MEAN			49.1
HIGHEST DAILY MEAN	423	Apr 12	183
LOWEST DAILY MEAN	22	Nov 10,11	14
ANNUAL SEVEN-DAY MINIMUM	23	Nov 8	16
MAXIMUM PEAK FLOW			318
MAXIMUM PEAK STAGE			(a)5.12
ANNUAL RUNOFF (CFSM)	0.88		0.59
ANNUAL RUNOFF (INCHES)	11.96		7.99
10 PERCENT EXCEEDS	264		135
50 PERCENT EXCEEDS	49		46
90 PERCENT EXCEEDS	27		22
			423
			2.8
			3.3
			498
			(b)5.60
			0.60
			8.15
			149
			38
			12

- (a) Crest-stage peak adjusted for drawdown
- (b) Discharge 423 ft³/s
- (e) Estimated

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073500 FOX RIVER AT BERLIN, WI

LOCATION.--Lat 43°57'14", long 88°57'08", in NE ¼ sec.16, T.17 N., R.13 E., Green Lake County, Hydrologic Unit 04030201, on left bank, 0.4 mi downstream from government dam, 1.0 mi south of Huron Street bridge in Berlin, 2.5 mi upstream from Barnes Creek, and at mile 89.0.

DRAINAGE AREA.--1,340 mi².

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Usually less than about 10 ft³/s was diverted into the basin from the Wisconsin River at Portage Canal throughout the year. Data-collection platform and gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	1030	1200	e860	e880	1470	1600	2330	1030	2220	715	558
2	1130	1050	1230	e860	e900	e1400	1600	2360	970	2090	735	602
3	1100	1020	1240	e880	e920	e1400	1580	2350	1010	1950	670	678
4	1080	991	1240	e880	e950	e1400	1550	2330	1170	1780	679	651
5	1060	965	1260	e880	e980	e1400	1530	2310	1300	1580	719	678
6	998	959	1340	e860	e1000	e1500	1500	2290	1390	1380	677	637
7	982	961	1380	e840	e1100	e1500	1490	2260	1460	1230	656	669
8	1080	943	1380	e840	1150	1600	1530	2210	1530	1130	652	624
9	1160	918	1370	e860	1200	1660	1590	2190	1550	1100	626	590
10	1190	941	1350	e890	1140	1680	1650	2150	1540	1040	611	603
11	1200	911	1330	e900	1000	1630	1710	2110	1600	988	606	562
12	1170	905	1310	e880	971	1670	1780	2120	1620	958	578	553
13	1130	919	1330	e860	968	1760	1820	2100	1640	941	573	564
14	1110	936	1340	e820	1080	1760	1850	2070	1670	895	558	565
15	1110	929	1350	e800	1000	1760	1870	2040	1660	844	558	582
16	1110	920	1360	e780	939	1730	1860	2020	1630	818	565	573
17	1050	906	1360	e760	925	1730	1850	1980	1580	792	535	554
18	1030	919	1340	e760	937	1720	1840	1940	1530	773	532	554
19	1020	941	1330	e760	1050	1720	1870	1880	1460	736	504	658
20	1000	926	1300	e770	1240	1730	1860	1820	1410	726	488	805
21	981	958	1260	e780	1360	1760	1870	1760	1400	717	506	869
22	971	964	1220	e800	1400	1750	1900	1700	1780	759	567	866
23	993	958	e1200	e820	1440	1730	1920	1640	1990	741	597	835
24	1020	964	e1100	e840	1490	1730	2000	1570	2140	700	619	799
25	1040	1000	e1100	e860	1540	1700	2150	1490	2250	705	592	768
26	1110	1040	e1000	e900	1550	1650	2190	1440	2340	706	636	763
27	1070	1050	e950	e940	1500	1620	2210	1410	2410	692	622	734
28	1040	1100	e910	e960	1480	1610	2310	1370	2420	677	579	706
29	1040	1130	e880	e920	---	1610	2340	1280	2390	767	572	726
30	997	1160	e870	e900	---	1610	2340	1190	2320	777	572	725
31	1000	---	e860	e880	---	1610	---	1120	---	754	565	---
TOTAL	33122	29314	37690	26340	32090	50600	55160	58830	50190	31966	18664	20051
MEAN	1068	977.1	1216	849.7	1146	1632	1839	1898	1673	1031	602.1	668.4
MAX	1200	1160	1380	960	1550	1760	2340	2360	2420	2220	735	869
MIN	971	905	860	760	880	1400	1490	1120	970	677	488	553
CFSM	0.80	0.73	0.91	0.63	0.86	1.22	1.37	1.42	1.25	0.77	0.45	0.50
IN.	0.92	0.81	1.05	0.73	0.89	1.40	1.53	1.63	1.39	0.89	0.52	0.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2002, BY WATER YEAR (WY)

	MEAN	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	981.4	1073	897.2	698.8	770.0	1752	2219	1476	1208	931.1	802.1	894.3
MAX	3819	2463	1871	1631	1803	4272	4225	3801	4230	4072	2540	3491
(WY)	1987	1986	1986	1939	1966	1973	1979	1973	1905	1993	1993	1938
MIN	347	380	369	311	318	495	667	600	367	384	346	364
(WY)	1959	1977	1977	1959	1959	1964	1902	1934	1988	1988	1958	1958

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1898 - 2002

ANNUAL TOTAL		536100		444017								
ANNUAL MEAN		1469		1216						1145		
HIGHEST ANNUAL MEAN										2203		1993
LOWEST ANNUAL MEAN										559		1964
HIGHEST DAILY MEAN			3290	Apr 14		2420	Jun 28			6900	Mar 17	1946
LOWEST DAILY MEAN			(a)660	Jan 1-5		488	Aug 20			217	Jun 27	1988
ANNUAL SEVEN-DAY MINIMUM			(a)666	Jan 1		527	Aug 15			(a)266	Jan 30	1900
MAXIMUM PEAK FLOW						2420	Jun 28			6900	Mar 17	1946
MAXIMUM PEAK STAGE						11.99	Jun 28			15.50	Mar 17	1946
INSTANTANEOUS LOW FLOW						482	Aug 20			210	Jun 27	1988
ANNUAL RUNOFF (CFSM)			1.10			0.91				0.85		
ANNUAL RUNOFF (INCHES)			14.88			12.33				11.61		
10 PERCENT EXCEEDS			2720			1930				2170		
50 PERCENT EXCEEDS			1130			1080				873		
90 PERCENT EXCEEDS			762			637				504		

(a) Ice affected

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04074538 SWAMP CREEK ABOVE RICE LAKE AT MOLE LAKE, WI

LOCATION.--Lat 45°29'18", long 88°57'49", in SW ¼ NW ¼ sec.26, T.35 N., R.12 E., Forest County, Hydrologic Unit 04030202, on right bank approximately 200 ft upstream from bridge on State Highway 55, on Mole Lake Indian Reservation.

DRAINAGE AREA.--46.3 mi².

PERIOD OF RECORD.--August 1977 to September 1983. October 1984 to December 1986. July 2001 to current year.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,532.28 ft above NGVD of 1929 (levels by Wisconsin Department of Transportation).

REMARKS.--Records good (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	31	26	18	18	21	26	88	37	36	30	18
2	14	24	24	18	19	21	27	89	33	33	38	25
3	14	22	23	17	20	21	25	72	33	39	28	24
4	14	22	25	18	19	21	24	58	40	40	28	20
5	14	18	37	19	20	21	24	53	43	32	26	20
6	13	17	64	19	19	21	24	83	37	29	23	23
7	13	17	50	19	19	20	25	108	33	28	21	21
8	22	20	36	19	19	21	28	83	31	44	21	20
9	14	19	27	19	19	24	34	102	31	74	19	19
10	22	18	29	21	19	29	43	121	30	49	19	19
11	22	18	25	21	18	30	73	89	60	39	19	19
12	18	17	25	21	19	28	134	74	65	34	20	17
13	18	18	24	20	16	28	161	72	48	31	20	17
14	20	18	23	20	18	28	162	64	58	29	19	19
15	20	18	21	20	19	26	146	57	71	28	16	22
16	18	18	25	20	19	27	130	61	55	27	17	19
17	17	17	24	19	18	26	117	58	44	26	20	18
18	18	17	23	19	19	27	96	52	39	25	19	17
19	16	20	22	19	21	27	105	47	35	24	16	18
20	17	19	18	19	23	27	97	43	52	23	14	27
21	16	18	16	19	23	25	71	41	51	45	23	47
22	16	18	22	19	22	24	58	40	45	83	63	32
23	16	18	24	19	24	26	59	41	41	69	56	25
24	20	22	20	19	23	24	60	39	59	39	38	28
25	30	31	21	19	23	23	66	41	68	32	28	24
26	23	27	21	19	19	24	55	41	61	33	22	26
27	22	27	21	19	21	24	47	45	54	30	20	32
28	20	30	21	20	21	26	44	41	46	30	19	28
29	21	24	19	18	---	25	64	38	42	29	18	27
30	20	24	19	19	---	28	70	43	39	27	17	31
31	31	---	18	19	---	28	---	45	---	25	19	---
TOTAL	573	627	793	594	557	771	2095	1929	1381	1132	756	702
MEAN	18.48	20.90	25.58	19.16	19.89	24.87	69.83	62.23	46.03	36.52	24.39	23.40
MAX	31	31	64	21	24	30	162	121	71	83	63	47
MIN	13	17	16	17	16	20	24	38	30	23	14	17
CFSM	0.40	0.45	0.55	0.41	0.43	0.54	1.51	1.34	0.99	0.79	0.53	0.51
IN.	0.46	0.50	0.64	0.48	0.45	0.62	1.68	1.55	1.11	0.91	0.61	0.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	32.38	29.27	25.66	22.56	21.38	31.38	60.99	46.78	41.01	32.24	23.65	28.07														
MAX	52.9	52.9	39.2	31.3	28.1	48.4	79.8	64.0	57.8	48.6	40.1	40.3														
(WY)	1987	1986	1986	1986	1986	1983	1979	1983	1981	1978	1978	1977														
MIN	18.5	14.5	14.3	14.9	15.4	18.3	47.3	31.0	22.6	18.2	14.3	13.2														
(WY)	2002	1982	1982	1982	1982	1978	1980	1980	1982	2001	1981	1981														

SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 1977 - 2002

ANNUAL TOTAL	11910		
ANNUAL MEAN	32.63	32.95	
HIGHEST ANNUAL MEAN		38.5	1986
LOWEST ANNUAL MEAN		24.8	1982
HIGHEST DAILY MEAN	162	Apr 14	212 Jun 15 1981
LOWEST DAILY MEAN	13	Oct 6,7	8.3 Aug 25 1977
ANNUAL SEVEN-DAY MINIMUM	14	Oct 1	9.2 Aug 13 1982
MAXIMUM PEAK FLOW	173	Apr 13	228 Jun 15 1981
MAXIMUM PEAK STAGE	3.11	Apr 13	(a)3.82 Jun 15 1981
INSTANTANEOUS LOW FLOW	12	Oct 7	6.8 Aug 25 1977
ANNUAL RUNOFF (CFSM)	0.70		0.71
ANNUAL RUNOFF (INCHES)	9.57		9.67
10 PERCENT EXCEEDS	60		56
50 PERCENT EXCEEDS	24		27
90 PERCENT EXCEEDS	18		17

(a) Site and datum then in use

STREAMS TRIBUTARY TO LAKE MICHIGAN

04074548 SWAMP CREEK BELOW RICE LAKE AT MOLE LAKE, WI

LOCATION.--Lat 45°28'46", long 88°59'52", in NE ¼ NW ¼ sec.33, T.35 N., R.12 E., Forest County, Hydrologic Unit 04030202, on left bank approximately 100 ft downstream from bridge on County Trunk Highway M, 0.9 mi west of Mole Lake.

DRAINAGE AREA.--56.8 mi².

PERIOD OF RECORD.--August 1977 to September 1979. April 1982 to June 1985. July 2001 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 1,529.66 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Transportation). Prior to July 1985, water-stage recorder at same site and approximately 1.0 ft higher datum.

REMARKS.--Records fair except for periods of estimated record, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	44	41	e28	e28	e31	e44	102	42	46	41	32
2	25	42	41	e28	e28	e31	e42	113	35	42	46	37
3	24	36	38	e28	e28	e31	e40	109	32	42	47	38
4	23	33	38	e28	e28	e31	e39	91	32	47	47	37
5	21	29	46	e28	e28	e31	e39	79	36	43	46	36
6	21	27	84	e28	e29	e31	e39	97	32	38	42	37
7	20	27	96	e28	e30	e33	e39	121	27	36	39	e35
8	22	27	73	e28	e30	e33	e40	123	28	47	36	e33
9	25	27	e56	e29	e30	e37	e43	125	26	70	33	e31
10	29	27	45	e30	e30	e41	e56	149	24	73	32	31
11	35	26	40	e32	e29	e44	e86	145	56	62	30	30
12	31	25	38	e32	e29	e45	e130	125	83	52	32	28
13	28	25	37	e32	e28	e45	e170	106	75	44	34	27
14	29	27	35	e32	e26	e45	e190	94	72	38	33	28
15	30	27	e33	e31	e28	e45	e200	80	80	33	32	30
16	29	28	e32	e31	e29	e44	e200	83	77	29	30	30
17	25	26	36	e31	e29	e43	e190	79	66	26	31	29
18	24	26	36	e29	e29	e40	e170	71	55	24	32	27
19	23	29	e34	e29	e31	e38	e150	67	49	22	30	27
20	21	29	e32	e29	e33	e38	e150	61	55	19	27	31
21	22	30	e28	e30	e35	e38	e140	56	65	33	32	45
22	21	28	e25	e30	e35	e38	e110	52	62	59	50	52
23	21	27	e33	e30	e34	e38	e92	51	56	70	63	49
24	23	31	e34	e30	e35	e38	86	53	61	65	e66	46
25	30	43	e30	e30	e35	e36	87	48	73	56	e60	43
26	42	48	e31	e30	e35	e36	85	48	78	50	e54	45
27	36	43	e31	e30	e30	e37	76	53	74	46	e48	49
28	31	45	e31	e30	e31	e39	75	48	64	45	43	49
29	32	43	e31	e30	---	e41	78	44	56	44	39	48
30	30	40	e29	e30	---	e42	88	43	50	43	36	51
31	40	---	e29	e30	---	e43	---	47	---	41	33	---
TOTAL	840	965	1243	921	850	1183	2974	2563	1621	1385	1244	1111
MEAN	27.10	32.17	40.10	29.71	30.36	38.16	99.13	82.68	54.03	44.68	40.13	37.03
MAX	42	48	96	32	35	45	200	149	83	73	66	52
MIN	20	25	25	28	26	31	39	43	24	19	27	27
CFSM	0.48	0.57	0.71	0.52	0.53	0.67	1.75	1.46	0.95	0.79	0.71	0.65
IN.	0.55	0.63	0.81	0.60	0.56	0.77	1.95	1.68	1.06	0.91	0.81	0.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002, BY WATER YEAR (WY)

	1977	1978	1979	2001	2002
MEAN	47.96	43.27	40.45	34.20	35.90
MAX	67.8	53.4	45.5	38.2	50.7
(WY)	1984	1983	1985	1983	1984
MIN	27.1	32.1	32.0	29.7	28.3
(WY)	2002	2002	1979	2002	1978

SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 1977 - 2002

ANNUAL TOTAL	16900	
ANNUAL MEAN	46.30	49.35
HIGHEST ANNUAL MEAN		57.1
LOWEST ANNUAL MEAN		44.1
HIGHEST DAILY MEAN	(a)200	209
LOWEST DAILY MEAN	19	15
ANNUAL SEVEN-DAY MINIMUM	22	15
MAXIMUM PEAK FLOW	(a)200	210
MAXIMUM PEAK STAGE	(b)4.43	(b)4.43
INSTANTANEOUS LOW FLOW	18	15
ANNUAL RUNOFF (CFSM)	0.82	0.87
ANNUAL RUNOFF (INCHES)	11.07	11.81
10 PERCENT EXCEEDS	79	79
50 PERCENT EXCEEDS	36	41
90 PERCENT EXCEEDS	27	28

- (a) Ice affected
- (b) Backwater from ice
- (c) Also occurred July 20,21
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04074950 WOLF RIVER AT LANGLADE, WI

LOCATION.--Lat 45°11'24", long 88°44'00", in SE ¼ SW ¼ sec.3, T.31 N., R.14 E., Langlade County, Hydrologic Unit 04030202, on left bank, upstream of bridge on State Highway 64 at Langlade, 1.5 mi east of White Lake, 3.0 mi upstream from White Lake Creek, and at about mile 170 above mouth.

DRAINAGE AREA.--463 mi².

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

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

GAGE.--Water-stage recorder. Elevation of gage is 1,240 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1976, nonrecording gage 50 ft downstream at same elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	232	396	443	e290	e270	e290	e380	1240	525	489	374	279
2	229	437	435	e290	e270	e270	e370	1220	499	463	350	333
3	232	443	438	e280	e280	e260	e370	1180	493	434	345	373
4	274	377	441	e290	e280	e280	e350	1100	500	339	369	410
5	275	343	474	e290	e280	e290	e370	1040	554	297	364	375
6	272	322	550	e290	e290	e280	e370	1200	560	315	334	332
7	232	318	572	e290	e290	e280	353	1300	531	315	302	333
8	215	329	596	e300	e280	e290	375	1230	496	336	286	324
9	218	319	e600	e310	e280	e330	418	1290	452	393	261	312
10	271	313	e620	e310	e280	e390	459	1400	441	445	241	303
11	324	309	e580	e310	e280	e380	581	1340	595	450	241	301
12	356	304	501	e310	e270	e370	1060	1290	669	399	293	290
13	317	305	478	e310	e290	e370	1180	1230	631	352	304	281
14	330	306	464	e300	e290	e400	1240	1160	711	328	325	286
15	330	316	e450	e300	e290	e380	1330	1070	751	311	315	280
16	319	309	e440	e300	e290	e370	1420	1050	738	298	318	270
17	326	313	413	e290	e280	e360	1470	967	691	288	329	258
18	334	317	394	e280	e280	e350	1450	894	599	272	329	268
19	286	359	e380	e290	e300	e350	1590	847	503	254	318	266
20	277	365	e340	e290	e330	e350	1500	809	453	239	291	325
21	273	356	e340	e290	e320	e320	1370	770	481	260	318	410
22	268	365	e390	e290	e310	e310	1300	760	501	330	595	444
23	268	365	e410	e290	e300	e320	1250	702	493	378	601	399
24	286	399	e350	e290	e320	e330	1280	656	479	442	577	348
25	321	494	e270	e290	e300	e320	1340	611	462	483	539	341
26	326	486	e320	e290	e290	e320	1220	584	473	459	479	342
27	325	460	e320	e290	e290	e330	1150	564	503	376	427	357
28	329	431	e310	e290	e290	e340	1130	532	517	347	388	401
29	326	407	e300	e280	---	e360	1140	498	514	365	332	423
30	330	420	e290	e280	---	e370	1190	514	505	384	309	487
31	369	---	e290	e280	---	e380	---	527	---	403	290	---
TOTAL	9070	10983	13199	9080	8120	10340	29006	29575	16320	11244	11144	10151
MEAN	292.6	366.1	425.8	292.9	290.0	333.5	966.9	954.0	544.0	362.7	359.5	338.4
MAX	369	494	620	310	330	400	1590	1400	751	489	601	487
MIN	215	304	270	280	270	260	350	498	441	239	241	258
CFSM	0.63	0.79	0.92	0.63	0.63	0.72	2.09	2.06	1.17	0.78	0.78	0.73
IN.	0.73	0.88	1.06	0.73	0.65	0.83	2.33	2.38	1.31	0.90	0.90	0.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2002, BY WATER YEAR (WY)

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002				
MEAN	429.7	437.4	365.3	313.4	314.1	462.8	815.7	609.7	481.9	370.3	325.6	401.8																													
MAX	813	788	578	548	482	1227	1330	1312	1013	874	632	813																													
(WY)	1986	1986	1986	1969	1984	1973	1976	1973	1991	1968	1972	1968																													
MIN	196	204	226	191	213	278	263	289	173	183	188	171																													
(WY)	1977	1977	1977	1999	1982	1982	1990	1998	1988	1989	1989	1989																													

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1966 - 2002

ANNUAL TOTAL	137078	168232	
ANNUAL MEAN	375.6	460.9	445.2
HIGHEST ANNUAL MEAN			666
LOWEST ANNUAL MEAN			326
HIGHEST DAILY MEAN	1360	Apr 13	2420
LOWEST DAILY MEAN	191	(a)Aug 11	137
ANNUAL SEVEN-DAY MINIMUM	199	Jul 12	245
MAXIMUM PEAK FLOW			1610
MAXIMUM PEAK STAGE			9.68
INSTANTANEOUS LOW FLOW			211
ANNUAL RUNOFF (CFSM)	0.81	1.00	0.96
ANNUAL RUNOFF (INCHES)	11.01	13.52	13.06
10 PERCENT EXCEEDS	589	923	750
50 PERCENT EXCEEDS	316	348	369
90 PERCENT EXCEEDS	228	280	240

(a) Also occurred Sept. 6
(b) Result of freezeup
(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04077630 RED RIVER, AT MORGAN ROAD, NEAR MORGAN, WI

LOCATION.--Lat 44°53'53", long 88°50'39", in NW ¼ NE ¼ sec.19, T.28 N., R.14 E., Shawano County, Hydrologic Unit 04030202, on left bank 1.7 mi northwest of Morgan, 1.1 mi downstream of the confluence with the West Branch of the Red River, and 2.2 mi upstream of Smith Creek.

DRAINAGE AREA.--114 mi².

PERIOD OF RECORD.--October 1992 to current year.

REVISED RECORDS.--WDR WI-95-1: 1993(M).

GAGE.--Water-stage recorder. Elevation of gage is 990 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	119	146	e84	e78	e88	122	216	138	107	125	88
2	88	114	148	e82	e80	e82	115	200	123	103	109	124
3	87	106	133	e82	e80	e86	111	183	170	100	98	153
4	87	101	124	e84	e80	e84	106	166	219	102	105	133
5	86	98	123	e84	e78	e82	105	150	250	98	107	110
6	83	98	144	e82	e82	e82	103	170	228	96	99	102
7	77	97	153	e82	e82	e84	107	207	181	94	92	97
8	82	97	135	e80	e82	e84	113	190	152	99	90	91
9	86	97	e110	e84	e80	e100	130	175	137	110	89	86
10	100	97	e110	e86	e78	e160	151	171	129	104	87	83
11	116	96	e110	e88	e78	e140	181	158	274	98	87	82
12	119	94	e110	e86	e78	e120	325	163	308	95	120	79
13	111	97	e110	e84	e76	e120	366	173	268	95	144	78
14	110	100	e100	e82	e78	e140	315	162	254	91	133	85
15	109	101	e98	e80	e78	e130	284	149	250	87	119	97
16	100	99	e100	e80	e76	e120	243	143	223	87	107	96
17	99	98	e100	e82	e76	e130	237	138	173	84	134	87
18	97	96	e100	e84	e78	e130	229	130	144	86	123	83
19	96	101	e98	e88	e90	e130	231	125	131	90	106	83
20	95	106	e96	e92	e110	e120	228	123	126	88	98	95
21	94	105	e96	e90	e120	e120	181	119	123	88	136	133
22	94	102	e98	e88	e100	e110	167	118	166	96	327	142
23	92	100	e100	e88	e100	e130	167	115	183	98	343	117
24	97	113	e96	e86	e96	e120	214	114	156	91	240	105
25	110	154	e94	e88	e86	e120	294	117	136	91	165	100
26	111	154	e92	e90	e82	e110	251	129	150	121	123	99
27	108	148	e90	e88	e76	e110	208	200	151	112	107	96
28	102	144	e90	e88	e80	e110	204	261	134	100	99	95
29	98	130	e88	e86	---	116	243	247	123	102	96	94
30	97	129	e88	e84	---	136	238	206	113	106	92	103
31	111	---	e86	e82	---	136	---	162	---	126	92	---
TOTAL	3029	3291	3366	2634	2358	3530	5969	5080	5313	3045	3992	3016
MEAN	97.71	109.7	108.6	84.97	84.21	113.9	199.0	163.9	177.1	98.23	128.8	100.5
MAX	119	154	153	92	120	160	366	261	308	126	343	153
MIN	77	94	86	80	76	82	103	114	113	84	87	78
CFSM	0.86	0.96	0.95	0.75	0.74	1.00	1.75	1.44	1.55	0.86	1.13	0.88
IN.	0.99	1.07	1.10	0.86	0.77	1.15	1.95	1.66	1.73	0.99	1.30	0.98

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2002, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
MEAN	122.7	128.5	105.4	94.59	99.94	124.4	208.2	161.4	166.6	128.1	124.7	115.9
MAX	175	221	164	126	124	170	331	254	313	217	209	160
(WY)	1996	1993	1993	1993	1998	1998	1996	1993	1996	1996	1995	1993
MIN	79.6	84.6	73.7	63.5	79.3	97.7	111	106	97.0	78.8	86.6	72.7
(WY)	2000	2000	1999	1999	1995	2001	2000	2000	1999	1995	1999	1999

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1993 - 2002

	2001	2002	1993-2002
ANNUAL TOTAL	42267	44623	
ANNUAL MEAN	115.8	122.3	131.7
HIGHEST ANNUAL MEAN			184
LOWEST ANNUAL MEAN			104
HIGHEST DAILY MEAN	433	Apr 12	952 Jun 18 1996
LOWEST DAILY MEAN	77	Oct 7	(a)56 Jan 11 1999
ANNUAL SEVEN-DAY MINIMUM	82	Aug 31	(a)77 Feb 11 (a)58 Jan 7 1999
MAXIMUM PEAK FLOW			(b)387 Apr 13 1060 Jun 18 1996
MAXIMUM PEAK STAGE			(c)7.72 Jan 2 8.88 Jun 18 1996
INSTANTANEOUS LOW FLOW			72 (d)Feb 28 (f)31 Dec 13 1997
ANNUAL RUNOFF (CFSM)	1.02	1.07	1.16
ANNUAL RUNOFF (INCHES)	13.79	14.56	15.70
10 PERCENT EXCEEDS	161	186	205
50 PERCENT EXCEEDS	98	103	110
90 PERCENT EXCEEDS	84	82	81

- (a) Ice affected
- (b) Gage height, 7.23 ft
- (c) Ice jam
- (d) Also occurred Mar. 22
- (e) Estimated due to ice effect or missing record
- (f) Result of freezeup

STREAMS TRIBUTARY TO LAKE MICHIGAN

0407809265 MIDDLE BRANCH EMBARRASS RIVER NEAR WITTENBERG, WI

LOCATION.--Lat 44°49'31", long 89°07'05", in NW ¼ NW ¼ sec.13, T.27 N., R.11 E., Shawano County, Hydrologic Unit 04030202, on right bank 60 ft upstream from Cardinal Lane, 2.5 mi east of Wittenberg, and 2.5 mi upstream from Wilson Creek.

DRAINAGE AREA.--76.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,118.24 ft above NGVD of 1929 (levels by Wisconsin Department of Transportation).

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Flow affected by pumping for irrigation many times during summer months. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	50	75	e23	e22	e32	58	177	80	56	44	36
2	28	49	81	e21	e20	e24	54	152	66	51	41	45
3	28	43	67	e20	e20	e23	49	130	103	47	39	82
4	27	40	58	e19	e20	e22	45	109	175	46	39	72
5	27	37	58	e18	e21	e22	44	97	220	45	35	52
6	27	35	74	e18	e23	e21	42	113	202	45	33	45
7	27	34	80	e18	e23	e21	45	150	144	32	36	41
8	27	34	67	e18	e23	e24	52	137	93	27	36	41
9	27	33	e47	e19	e23	e52	66	123	76	46	36	36
10	33	33	e44	e22	e23	e65	93	121	69	46	33	33
11	46	32	e42	e26	e24	e73	133	100	88	38	30	32
12	53	32	e42	e26	e21	e67	259	102	171	35	32	31
13	45	32	e43	e26	e23	e72	323	114	268	34	30	31
14	45	33	e44	e26	e22	e94	341	104	215	33	39	31
15	54	35	e35	e26	e24	e83	274	91	205	31	40	31
16	50	35	e39	e26	e24	e70	229	85	197	28	37	31
17	42	33	e43	e22	e23	e64	207	79	123	32	39	33
18	39	33	e46	e21	e24	e61	195	73	89	34	37	35
19	37	34	e43	e21	e31	e62	202	69	76	37	36	35
20	36	38	e38	e23	e53	e59	188	65	69	40	34	36
21	34	40	e36	e23	e60	e57	168	62	65	34	39	37
22	33	37	e33	e23	e57	e57	128	59	106	32	78	50
23	32	36	e34	e23	e44	e54	119	57	172	39	143	50
24	33	39	e36	e23	e40	e51	126	55	154	38	157	43
25	37	60	e34	e24	e40	e49	165	55	107	33	84	42
26	46	77	e32	e24	e41	e44	188	61	97	39	55	42
27	45	73	e30	e25	e37	e44	148	112	98	45	46	42
28	41	69	e30	e25	e36	e44	135	180	80	40	41	42
29	38	60	e28	e24	---	e45	171	215	69	40	36	36
30	36	57	e26	e23	---	57	185	177	62	40	35	32
31	38	---	e24	e22	---	64	---	107	---	41	36	---
TOTAL	1139	1273	1409	698	842	1577	4432	3331	3739	1204	1476	1225
MEAN	36.74	42.43	45.45	22.52	30.07	50.87	147.7	107.5	124.6	38.84	47.61	40.83
MAX	54	77	81	26	60	94	341	215	268	56	157	82
MIN	27	32	24	18	20	21	42	55	62	27	30	31
CFSM	0.48	0.56	0.60	0.30	0.39	0.67	1.94	1.41	1.63	0.51	0.62	0.54
IN.	0.56	0.62	0.69	0.34	0.41	0.77	2.16	1.62	1.82	0.59	0.72	0.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	49.19	53.40	37.13	28.33	32.07	65.17	137.9	92.00	91.05	49.33	47.22	51.53	
MAX	94.7	128	73.3	45.7	44.1	116	241	167	222	96.3	100	97.9	
(WY)	1996	1993	1993	1996	1998	1990	1996	1993	1993	1996	1995	1992	
MIN	23.2	27.2	13.5	15.4	18.5	35.9	40.4	46.7	31.6	21.9	25.1	23.4	
(WY)	1990	1990	1990	2000	1995	2001	1990	1998	1995	1995	1998	1999	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1990 - 2002

ANNUAL TOTAL	19307	22345	
ANNUAL MEAN	52.90	61.22	61.17
HIGHEST ANNUAL MEAN			100
LOWEST ANNUAL MEAN			43.0
HIGHEST DAILY MEAN	406	Apr 9	341
LOWEST DAILY MEAN	(a)16	Sep 5	(b)18
ANNUAL SEVEN-DAY MINIMUM	25	Sep 1	(b)19
MAXIMUM PEAK FLOW			364
MAXIMUM PEAK STAGE			2.93
ANNUAL RUNOFF (CFSM)	0.69		0.80
ANNUAL RUNOFF (INCHES)	9.41		10.89
10 PERCENT EXCEEDS	89		134
50 PERCENT EXCEEDS	35		41
90 PERCENT EXCEEDS	27		23

- (a) Result of pumping
- (b) Ice affected
- (c) Recorded gage height, 5.09 ft, result of drawdown; outside crest-gage peak 5.29 ft
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

0407809265 MIDDLE BRANCH EMBARRASS RIVER NEAR WITTENBERG, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: December 1989 to current year.

INSTRUMENTATION.--Continuous water temperature recorder since December 1989. Sensor located at midstream.

REMARKS.--Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 31.0°C, Aug. 7, 8, 2001; minimum, 0.0°C, on many days during winter.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 29.0°C, July 1, 2, 7, 17, 21; minimum, 0.0°C, many days in winter.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.5	12.0	14.0	10.0	7.5	8.5	3.5	2.5	3.0	0.5	0.0	0.0
2	17.0	12.0	14.5	10.0	8.0	9.0	3.0	2.0	2.5	0.5	0.0	0.0
3	15.0	13.5	14.5	9.5	7.0	8.5	3.5	2.0	2.5	0.5	0.0	0.0
4	14.0	12.0	13.0	9.0	6.0	7.5	5.0	2.5	3.5	0.5	0.0	0.0
5	13.0	10.0	11.5	8.5	5.5	6.5	6.5	4.0	5.5	0.5	0.0	0.0
6	11.0	8.0	9.5	9.0	6.0	7.5	6.0	4.5	5.0	0.5	0.0	0.0
7	11.0	6.0	8.5	7.5	6.5	7.0	4.5	3.5	4.0	0.5	0.0	0.0
8	10.5	6.5	9.0	7.5	4.5	6.5	3.5	1.0	2.5	0.5	0.0	0.0
9	11.5	9.5	10.5	7.0	4.5	5.5	2.5	0.5	1.5	0.5	0.0	0.0
10	12.0	10.5	11.5	6.5	4.5	5.5	3.0	1.0	2.0	0.0	0.0	0.0
11	13.5	10.0	11.5	6.0	4.0	5.0	2.5	0.5	1.5	0.5	0.0	0.0
12	13.0	10.0	11.0	6.0	3.0	4.5	2.5	1.0	2.0	0.0	0.0	0.0
13	11.5	9.5	11.0	6.0	4.0	5.5	2.0	1.0	1.5	0.5	0.0	0.0
14	12.0	10.0	11.0	7.0	5.0	6.0	2.0	0.0	1.0	0.0	0.0	0.0
15	11.0	9.5	10.0	9.5	6.5	8.0	2.0	0.0	1.0	0.5	0.0	0.0
16	10.0	7.5	9.0	8.5	6.0	7.0	2.0	2.0	2.0	0.0	0.0	0.0
17	10.0	6.5	8.0	9.0	6.0	7.5	2.0	1.0	1.5	0.5	0.0	0.0
18	9.5	7.0	8.0	10.0	8.0	9.0	3.0	1.0	1.5	0.5	0.0	0.0
19	9.5	6.0	8.0	9.0	5.0	7.0	2.0	0.5	1.5	0.0	0.0	0.0
20	9.5	6.5	8.0	6.0	4.5	5.0	1.5	0.0	0.5	0.0	0.0	0.0
21	10.0	6.5	8.0	5.5	3.5	4.5	1.5	0.0	0.5	0.5	0.0	0.0
22	10.0	6.5	8.5	5.0	3.0	4.0	2.0	0.5	1.5	0.5	0.0	0.0
23	11.0	8.5	9.5	6.0	4.0	5.0	1.5	0.0	0.5	0.5	0.0	0.0
24	10.0	8.0	9.5	7.0	5.5	6.0	0.5	0.0	0.0	0.5	0.0	0.0
25	8.0	5.5	6.5	7.0	6.0	6.5	0.5	0.0	0.0	0.5	0.0	0.0
26	6.0	4.5	5.0	6.0	5.0	5.5	0.5	0.0	0.0	0.5	0.0	0.0
27	6.0	3.5	4.5	5.0	3.5	4.0	0.5	0.0	0.0	0.5	0.0	0.0
28	7.0	3.5	5.0	3.5	2.5	3.0	0.5	0.0	0.0	0.0	0.0	0.0
29	7.5	5.0	6.0	3.0	2.5	2.5	0.5	0.0	0.0	0.0	0.0	0.0
30	7.0	5.0	6.0	3.5	3.0	3.0	0.5	0.0	0.0	0.0	0.0	0.0
31	9.0	6.5	7.5	---	---	---	0.5	0.0	0.0	0.0	0.0	0.0
MONTH	17.0	3.5	9.3	10.0	2.5	6.0	6.5	0.0	1.6	0.5	0.0	0.0

STREAMS TRIBUTARY TO LAKE MICHIGAN

0407809265 MIDDLE BRANCH EMBARRASS RIVER NEAR WITTENBERG, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
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	4.0	0.5	1.5	9.0	7.0	8.0
2	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	1.5	9.5	7.0	8.5
3	0.5	0.0	0.0	0.0	0.0	0.0	3.5	0.0	1.5	11.0	6.0	8.0
4	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	1.0	12.5	7.0	9.5
5	0.5	0.0	0.0	0.0	0.0	0.0	4.5	0.0	1.5	13.5	8.5	11.0
6	0.5	0.0	0.0	0.0	0.0	0.0	6.5	0.0	2.5	13.0	10.5	11.5
7	0.5	0.0	0.0	0.0	0.0	0.0	2.5	0.0	1.5	13.5	10.5	12.0
8	0.5	0.0	0.0	0.0	0.0	0.0	3.0	2.0	2.5	11.0	10.0	10.5
9	0.0	0.0	0.0	0.0	0.0	0.0	6.5	1.5	3.5	11.0	8.5	10.0
10	0.0	0.0	0.0	0.0	0.0	0.0	5.0	2.0	3.5	11.5	7.0	9.0
11	0.0	0.0	0.0	0.0	0.0	0.0	5.0	3.0	3.5	10.0	8.0	9.0
12	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.5	3.0	8.5	7.5	8.0
13	0.5	0.0	0.0	0.0	0.0	0.0	4.0	2.5	3.0	9.5	7.0	8.0
14	0.0	0.0	0.0	0.0	0.0	0.0	4.5	4.0	4.0	12.0	7.5	9.0
15	0.5	0.0	0.0	0.0	0.0	0.0	6.5	4.0	5.0	13.0	8.5	10.5
16	0.0	0.0	0.0	1.5	0.0	0.0	12.0	6.0	9.0	15.0	11.0	12.0
17	0.5	0.0	0.0	1.5	0.0	0.5	15.0	12.0	13.5	15.0	10.0	12.0
18	0.0	0.0	0.0	3.0	0.0	0.5	13.5	11.5	12.5	13.0	9.0	11.0
19	0.0	0.0	0.0	0.0	0.0	0.0	12.5	10.0	11.5	11.5	9.0	10.0
20	0.0	0.0	0.0	3.0	0.0	0.5	11.0	8.5	10.0	14.0	7.5	10.5
21	0.0	0.0	0.0	0.5	0.0	0.0	8.5	4.5	6.5	16.0	8.0	11.5
22	0.0	0.0	0.0	0.5	0.0	0.0	6.0	3.5	4.5	17.0	10.0	13.5
23	0.0	0.0	0.0	1.5	0.0	0.5	7.0	3.0	5.0	18.5	13.0	15.5
24	1.0	0.0	0.5	2.5	0.0	0.5	6.5	5.0	6.0	19.0	13.0	15.5
25	1.5	0.0	0.5	2.5	0.0	0.5	6.5	4.0	5.0	13.5	11.5	12.5
26	0.0	0.0	0.0	4.0	0.0	1.0	7.0	4.0	5.5	15.0	10.5	12.5
27	0.5	0.0	0.0	5.0	0.0	1.5	6.0	3.0	5.5	13.0	11.5	12.5
28	0.0	0.0	0.0	3.0	0.0	0.5	4.5	2.5	3.5	14.5	12.0	13.5
29	---	---	---	5.0	0.0	1.5	5.5	2.5	4.0	18.0	14.5	16.5
30	---	---	---	4.5	0.0	1.5	8.0	4.0	6.0	21.5	18.0	19.5
31	---	---	---	3.0	0.5	1.5	---	---	---	23.5	19.0	21.0
MONTH	1.5	0.0	0.0	5.0	0.0	0.3	15.0	0.0	4.9	23.5	6.0	11.7
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	24.0	18.5	21.0	29.0	23.0	25.5	25.5	22.5	23.5	23.0	18.5	20.0
2	20.0	17.0	19.0	29.0	23.5	26.0	25.5	20.5	22.5	21.5	19.0	20.0
3	17.0	13.0	15.0	28.0	24.0	25.5	24.0	19.5	21.5	21.5	19.0	20.0
4	13.0	11.5	12.0	28.0	22.5	25.0	25.5	20.5	22.5	21.0	18.0	19.0
5	15.0	11.5	13.0	26.0	21.0	23.0	25.0	21.0	22.5	20.5	17.5	18.5
6	17.5	14.0	15.5	26.0	21.0	23.0	23.5	18.5	20.5	20.0	17.5	18.5
7	19.5	16.5	18.0	29.0	21.5	24.5	24.5	18.0	20.5	22.5	17.5	19.5
8	20.0	18.0	19.0	26.0	22.0	23.5	25.0	18.5	21.0	23.5	18.0	20.5
9	21.5	17.5	19.5	27.0	22.5	24.5	25.5	19.0	22.0	24.5	19.5	21.5
10	23.0	18.5	20.0	23.0	20.5	22.0	25.0	20.0	22.5	21.5	19.0	21.0
11	22.5	19.5	21.0	25.5	19.0	21.5	26.5	20.0	23.0	21.5	17.5	19.5
12	20.5	18.5	19.5	25.5	17.5	21.0	25.0	21.0	22.5	21.0	16.5	18.5
13	18.5	18.0	18.5	26.5	18.5	22.0	22.5	20.5	21.5	20.5	17.0	18.5
14	18.0	16.0	17.0	26.5	19.5	22.5	24.0	19.0	21.0	18.0	16.5	17.5
15	17.0	15.0	16.0	28.0	21.0	24.0	24.0	19.0	21.0	18.5	14.5	16.5
16	17.5	15.0	16.5	28.0	21.0	24.0	24.0	19.0	21.0	18.5	13.5	16.0
17	19.5	15.5	17.0	29.0	22.5	25.5	23.0	19.5	21.0	19.0	14.0	16.5
18	20.0	15.5	17.5	25.0	22.5	23.0	23.0	17.5	20.0	18.0	15.5	16.5
19	19.5	17.5	18.0	27.0	21.0	23.5	22.5	17.5	19.5	18.5	16.5	17.5
20	23.0	17.5	20.0	26.0	20.5	23.0	23.0	16.5	19.5	18.0	17.0	17.5
21	20.0	19.0	19.5	29.0	22.5	25.0	18.5	18.0	18.0	17.0	14.5	16.5
22	20.5	18.5	19.0	28.5	23.0	25.0	19.0	17.5	18.0	15.5	13.0	14.5
23	20.5	18.5	19.5	26.0	21.0	23.0	18.0	17.0	17.5	13.0	11.5	12.5
24	23.0	19.0	20.5	26.0	21.0	23.0	20.0	17.0	18.5	13.5	10.0	11.5
25	25.0	20.5	22.5	21.5	20.5	21.0	21.5	18.0	19.5	13.0	11.0	12.0
26	25.0	21.0	23.0	25.0	20.0	22.0	23.0	18.0	20.0	12.5	11.5	12.0
27	23.5	21.0	22.0	25.5	20.5	23.0	20.5	18.0	19.5	14.0	11.0	12.5
28	24.0	20.0	22.0	28.0	21.5	24.5	20.5	18.0	19.0	13.5	10.5	12.0
29	25.0	20.5	22.0	27.0	22.5	24.5	22.5	17.5	19.5	13.5	12.0	12.5
30	27.0	21.5	23.5	28.0	22.0	24.5	22.5	16.5	19.0	16.0	13.0	14.0
31	---	---	---	25.5	22.5	23.5	22.5	18.0	19.5	---	---	---
MONTH	27.0	11.5	18.9	29.0	17.5	23.6	26.5	16.5	20.5	24.5	10.0	16.8

STREAMS TRIBUTARY TO LAKE MICHIGAN

04078500 EMBARRASS RIVER NEAR EMBARRASS, WI

LOCATION.--Lat 44°43'29", long 88°44'10", in SW ¼ SW ¼ sec.18, T.26 N., R.15 E., Shawano County, Hydrologic Unit 04030202, on right bank 40 ft downstream from bridge on county road, 1.3 mi downstream from Mill Creek, and 4.0 mi northwest of Embarrass.

DRAINAGE AREA.--384 mi².

PERIOD OF RECORD.--June 1919 to September 1985, December 1993 to current year.

REVISED RECORDS.--WSP 1337: 1920-26(M), 1928, 1929-30(M), 1933-34, 1936-37, 1938(M), 1940. WDR WI-80-1: Drainage area.

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

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Slight diurnal fluctuation caused by powerplants above station. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	182	343	e110	e120	e160	e370	803	396	229	183	138
2	122	188	362	e100	e120	e140	e320	654	319	211	173	174
3	124	185	343	e96	e120	e130	e280	605	387	192	160	321
4	121	174	302	e96	e110	e120	e260	511	837	173	154	369
5	122	162	278	e96	e110	e110	e240	433	958	168	153	314
6	119	154	270	e100	e120	e100	e230	399	925	162	150	235
7	116	152	293	e100	e130	e100	248	506	745	157	137	189
8	113	152	302	e110	e130	e100	289	573	466	162	130	174
9	120	150	270	e110	e140	e170	353	531	371	177	127	161
10	128	148	226	e120	e130	e270	443	491	298	179	123	151
11	154	143	e180	e120	e130	e290	554	440	445	174	121	138
12	185	142	e180	e120	e130	e290	941	429	855	157	153	133
13	186	145	e190	e120	e130	e300	1400	425	762	142	195	128
14	181	154	e190	e120	e120	e320	1390	414	704	135	204	130
15	174	160	e190	e120	e120	e310	1220	381	599	130	179	136
16	177	159	209	e110	e120	e280	987	350	479	125	156	142
17	176	155	224	e100	e130	e260	851	323	436	120	153	140
18	164	151	243	e95	e140	e250	762	303	366	133	201	135
19	154	158	235	e95	153	e250	741	281	275	254	207	143
20	149	166	e190	e100	279	e250	664	252	260	277	168	158
21	144	167	e170	e110	e270	e240	616	246	251	200	159	193
22	140	166	e170	e120	e250	e230	539	239	316	185	256	217
23	141	164	e180	e120	e240	e230	487	231	532	181	473	202
24	148	196	e160	e120	e220	e230	508	221	600	168	461	191
25	182	254	e150	e120	e200	e220	721	218	585	167	388	176
26	198	308	e130	e130	e200	e210	815	240	441	190	268	166
27	189	335	e130	e130	e180	e210	689	424	455	189	214	162
28	180	398	e130	e130	e170	e220	704	762	382	184	183	158
29	168	384	e120	e130	---	e230	872	774	301	175	167	156
30	161	344	e120	e130	---	e300	906	714	258	191	156	171
31	167	---	e120	e120	---	e370	---	564	---	186	143	---
TOTAL	4726	5896	6600	3498	4412	6890	19400	13737	15004	5473	6095	5401
MEAN	152.5	196.5	212.9	112.8	157.6	222.3	646.7	443.1	500.1	176.5	196.6	180.0
MAX	198	398	362	130	279	370	1400	803	958	277	473	369
MIN	113	142	120	95	110	100	230	218	251	120	121	128
CFSM	0.40	0.51	0.55	0.29	0.41	0.58	1.68	1.15	1.30	0.46	0.51	0.47
IN.	0.46	0.57	0.64	0.34	0.43	0.67	1.88	1.33	1.45	0.53	0.59	0.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2002, BY WATER YEAR (WY)

MEAN	261.7	284.3	195.0	150.1	158.1	386.2	751.7	438.2	357.3	217.6	188.3	239.1
MAX	1324	932	908	377	517	1386	1892	1324	1105	826	579	886
(WY)	1987	1986	1987	1939	1986	1973	1922	1973	1943	1978	1928	1938
MIN	86.8	89.5	67.3	52.8	57.8	98.5	151	148	111	75.5	44.5	59.5
(WY)	1949	1934	1934	1959	1959	1931	1931	1931	1977	1932	1931	1933

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1919 - 2002

ANNUAL TOTAL	94119	97132	
ANNUAL MEAN	257.9	266.1	297.1
HIGHEST ANNUAL MEAN			515 1973
LOWEST ANNUAL MEAN			126 1931
HIGHEST DAILY MEAN	1740	Apr 12	1400 Apr 13 6280 Apr 10 1922
LOWEST DAILY MEAN	102	Sep 6	(a)95 Jan 18,19 24 Aug 3 1931
ANNUAL SEVEN-DAY MINIMUM	106	Aug 9	(a)100 Jan 1 27 Aug 2 1931
MAXIMUM PEAK FLOW			1590 Apr 13 (b)7080 Apr 12 1965
MAXIMUM PEAK STAGE			5.94 Apr 13 (b)12.13 Apr 12 1965
ANNUAL RUNOFF (CFSM)	0.67		0.69 0.77
ANNUAL RUNOFF (INCHES)	9.12		9.41 10.51
10 PERCENT EXCEEDS	468		535 620
50 PERCENT EXCEEDS	164		183 188
90 PERCENT EXCEEDS	124		120 95

(a) Ice affected

(b) Affected by failure of dam near Pella, 9.2 mi above station

(c) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04079000 WOLF RIVER AT NEW LONDON, WI

LOCATION.--Lat 44°23'32", long 88°44'25", in NE ¼ SE ¼ sec.12, T.22 N., R.14 E., Waupaca County, Hydrologic Unit 04030202, on right bank 100 ft downstream from Pearl Street bridge in New London, 0.2 mi downstream from Embarrass River, and at mile 56.3.

DRAINAGE AREA.--2,260 mi².

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

REVISED RECORDS.--WSP 1114: 1943(M). WSP 1337: 1931. WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 747.94 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 4, 1951, nonrecording gage.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter and data-collection platform at station.

COOPERATION.--Values prior to October 1913 taken from House Document 276, 72nd Congress, First Session (computed by Corps of Engineers).

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	943	1110	1910	e920	e800	e1300	2330	4620	2550	2190	929	1070
2	916	1150	1910	e880	e780	e1200	2330	4780	2540	1980	921	977
3	885	1150	1930	e840	e780	e1000	2320	4790	2710	1770	930	1080
4	856	1150	1930	e860	e780	e980	2290	4730	2960	1560	954	1210
5	834	1150	1910	e850	e800	e980	2230	4630	3180	1390	927	1320
6	812	1160	1910	e830	e830	e1000	2150	4520	3360	1280	896	1390
7	789	1150	1870	e830	e860	e1100	2060	4510	3490	1170	868	1350
8	794	1120	1820	e840	e900	e1100	2020	4440	3520	1060	834	1250
9	818	1080	1790	e880	e920	e1200	2110	4420	3490	1000	791	1150
10	827	1050	1780	e880	e910	e1300	2210	4360	3430	992	752	1030
11	860	1010	1750	e890	e890	e1500	2290	4280	3490	998	721	963
12	850	997	1710	e870	e880	e1700	2400	4210	3500	972	738	929
13	905	995	1680	e850	e870	e1900	2540	4100	3440	956	813	897
14	981	996	1670	e830	e900	e2100	2670	3970	3410	934	978	866
15	1020	1020	1690	e800	e930	e2400	2800	3830	3330	888	1040	848
16	1040	1050	1700	e780	e940	e2600	2900	3700	3280	846	1040	857
17	1030	1060	1680	e750	e930	e2700	3010	3570	3220	807	1020	866
18	1040	1040	1660	e730	e950	e2900	3150	3420	3150	777	920	870
19	1040	1030	1660	e730	e980	e3200	3310	3280	3060	769	891	890
20	1010	1020	1630	e750	e1100	e3400	3450	3140	2940	813	898	933
21	980	1030	1520	e780	e1400	e3600	3570	2990	2830	875	919	1000
22	959	1050	1370	e820	e1500	e3700	3670	2860	2880	864	953	1090
23	955	1060	e1300	e820	e1500	e3700	3690	2730	2980	820	997	1160
24	962	1100	e1300	e810	e1600	3600	3740	2600	3000	802	1240	1210
25	1010	1190	e1200	e820	e1700	3380	3830	2480	2970	807	1470	1250
26	1020	1280	e1200	e840	e1700	3110	3860	2410	2920	819	1570	1250
27	1000	1430	e1100	e850	e1600	2840	3870	2360	2840	871	1610	1190
28	1040	1590	e1100	e840	e1500	2620	4010	2370	2760	943	1590	1140
29	1080	1750	e1000	e830	---	2450	4200	2440	2620	1000	1550	1120
30	1080	1850	e970	e830	---	2380	4420	2500	2430	982	1440	1100
31	1090	---	e930	e820	---	2350	---	2540	---	958	1260	---
TOTAL	29426	34818	48580	25650	30230	69290	89430	111580	92280	32893	32460	32256
MEAN	949.2	1161	1567	827.4	1080	2235	2981	3599	3076	1061	1047	1075
MAX	1090	1850	1930	920	1700	3700	4420	4790	3520	2190	1610	1390
MIN	789	995	930	730	780	980	2020	2360	2430	769	721	848
CFSM	0.42	0.51	0.69	0.37	0.48	0.99	1.32	1.59	1.36	0.47	0.46	0.48
IN.	0.48	0.57	0.80	0.42	0.50	1.14	1.47	1.84	1.52	0.54	0.53	0.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 2002, BY WATER YEAR (WY)

MEAN	1473	1609	1224	952	932	2127	3943	2777	2163	1479	1142	1332
MAX	4761	4738	2892	2149	2003	7566	9169	7452	5764	5005	2845	4544
(WY)	1987	1986	1993	1960	1984	1973	1922	1960	1993	1993	1924	1938
MIN	533	617	555	523	523	679	1157	901	595	581	443	429
(WY)	1949	1934	1934	1959	1936	1964	1931	1931	1988	1988	1933	1933

STREAMS TRIBUTARY TO LAKE MICHIGAN

04079000 WOLF RIVER AT NEW LONDON, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1896 - 2002	
ANNUAL TOTAL	634813		628893			
ANNUAL MEAN	1739		1723		1769	
HIGHEST ANNUAL MEAN					3200 1973	
LOWEST ANNUAL MEAN					866 1931	
HIGHEST DAILY MEAN	8400	Apr 16	4790	May 3	15500	Apr 13 1922
LOWEST DAILY MEAN	679	Aug 12	721	Aug 11	216	Aug 27 1931
ANNUAL SEVEN-DAY MINIMUM	691	Aug 10	760	Jan 15	337	Sep 3 1933
MAXIMUM PEAK FLOW			4800			
MAXIMUM PEAK STAGE			7.87		(a) 11.83	
ANNUAL RUNOFF (CFSM)	0.77		0.76		0.78	
ANNUAL RUNOFF (INCHES)	10.45		10.35		10.63	
10 PERCENT EXCEEDS	3420		3470		3500	
50 PERCENT EXCEEDS	1040		1150		1280	
90 PERCENT EXCEEDS	800		830		714	

(a) Backwater from ice

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04082400 FOX RIVER AT OSHKOSH, WI

LOCATION.--Lat 44°00'49", long 88°32'27" in SW ¼ SW ¼ sec.24, T.18 N., R.16 E., Winnebago County, Hydrologic Unit 04030201, on right bank about 400 ft downstream from U.S. Highway 45 and State Highway 26 bridge, at Oshkosh.

DRAINAGE AREA.--5,310 mi².

PERIOD OF RECORD.--October 1991 to current year.

GAGE.--Acoustical Velocity Meter (AVM) system. Single-path transducer installation.

REMARKS.--Records fair, except those for estimated daily discharges and days with negative mean daily flow, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE , FROM PRIMARY, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2720	4330	5680	2440	2820	3690	3480	8140	3870	7590	4110	3280
2	1900	4940	2320	2490	1450	4480	5870	13000	1670	7080	1040	3890
3	5000	1370	4470	2400	2740	2170	7450	7340	4230	5920	e1200	4500
4	2020	3120	4350	2440	1860	2250	5600	9040	7900	852	e3700	473
5	4330	2110	4840	2560	2190	3490	5580	8410	7230	4160	e2600	1200
6	2390	3480	4560	2720	2080	3670	1350	9740	6130	5140	e1700	1930
7	-1260	1380	3980	2090	2320	3560	5890	8290	6460	4270	e3300	3900
8	-365	5840	6660	2340	2160	3920	6760	5690	7200	3020	e1300	2830
9	4590	1600	2520	2940	2030	6200	5880	16600	5480	823	e2400	3150
10	3250	3050	4920	2790	3280	3070	4170	10000	7450	2050	2850	4320
11	3080	2550	3140	2390	1720	3430	5470	-232	8610	4390	1070	873
12	2510	2180	5120	3170	3940	4840	7000	11400	6600	4120	2860	2470
13	1300	3320	6380	1260	1250	6070	4560	10900	7490	2380	2400	862
14	5760	2920	2830	2990	2010	4020	5450	8960	8360	3180	1750	2660
15	2300	3520	2640	3000	3330	7760	6340	7080	8240	2040	1930	564
16	4710	843	5070	2550	3380	6380	5580	7500	7970	3140	2280	2850
17	-931	3900	6160	2340	1060	5660	8020	7260	3880	2800	4520	362
18	3510	3010	3710	2310	2360	7210	e5000	8490	3470	928	591	1260
19	2630	7380	7870	2160	2920	6860	e5400	5970	6960	2090	2230	2740
20	2220	-1540	1040	2250	4090	6790	e5000	7060	8250	2260	-1070	3030
21	2430	2840	2130	2420	4490	10900	e8200	7160	6170	3270	2170	3520
22	431	2070	2610	2150	3460	4430	e6600	4260	7480	4320	1660	3140
23	4110	2050	6360	2780	3590	6470	e8000	7840	9010	-1470	3120	1610
24	4540	960	2610	2370	4790	5170	e11000	2750	8690	962	3250	-222
25	12100	8130	1380	2160	5730	7150	12500	6200	8970	2700	1710	2470
26	810	-2270	2210	2320	5950	7510	4700	5940	9600	3620	2770	2450
27	-5020	5360	2330	2450	3460	6340	-930	3040	8310	1040	813	2830
28	975	5860	2480	2290	4330	6040	13000	3570	7950	3110	3480	705
29	2430	4090	2500	2790	---	7260	12100	5350	7060	3860	2730	2890
30	904	3860	2400	2320	---	7400	10700	5380	7810	2770	2260	1070
31	3650	---	2460	2180	---	6860	---	5310	---	1370	654	---
TOTAL	79024	92253	117730	75860	84790	171050	195720	227438	208500	93785	67378	67607
MEAN	2549	3075	3798	2447	3028	5518	6524	7337	6950	3025	2173	2254
MAX	12100	8130	7870	3170	5950	10900	13000	16600	9600	7590	4520	4500
MIN	-5020	-2270	1040	1260	1060	2170	-930	-232	1670	-1470	-1070	-222
CFSM	0.48	0.58	0.72	0.46	0.57	1.04	1.23	1.38	1.31	0.57	0.41	0.42
IN.	0.55	0.65	0.82	0.53	0.59	1.20	1.37	1.59	1.46	0.66	0.47	0.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2002, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	3150	3888	3410	2613	2938	5058	8084	6352	5738	4679	3318	3081
MAX	6411	6201	6811	3673	3930	6348	12870	11050	11980	13440	5915	5541
(WY)	1996	1996	1993	1992	1999	1992	1993	1993	1993	1993	1993	2000
MIN	1875	2520	2031	1907	1870	3594	3928	3333	2645	1939	2032	1581
(WY)	1999	1998	1999	1999	1995	1999	2000	1998	1994	1995	1998	1998

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1992 - 2002

ANNUAL TOTAL	1556339	1481135	
ANNUAL MEAN	4264	4058	4360
HIGHEST ANNUAL MEAN			7221
LOWEST ANNUAL MEAN			3289
HIGHEST DAILY MEAN	15000	Apr 16	16600
LOWEST DAILY MEAN	-5020	Oct 27	-5020
ANNUAL SEVEN-DAY MINIMUM	1150	Oct 26	1150
ANNUAL RUNOFF (CFSM)	0.80		0.76
ANNUAL RUNOFF (INCHES)	10.90		10.38
10 PERCENT EXCEEDS	8390		7850
50 PERCENT EXCEEDS	3060		3570
90 PERCENT EXCEEDS	1510		1520

(e) Estimated

STREAMS TRIBUTARY TO LAKE MICHIGAN

04082500 LAKE WINNEBAGO AT OSHKOSH, WI

LOCATION.--Lat 44°00'35", long 88°31'38", in NE ¼ NE ¼ sec.25, T.18 N., R.16 E., Winnebago County, Hydrologic Unit 04030203, at 905 Bay Shore Drive, 800 ft east of mouth of the upper Fox River.

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

PERIOD OF RECORD.--October 1938 to current year in reports of Geological Survey. Records from July 1882 to September 1938 in files of Geological Survey and U.S. Army Corps of Engineers. A report on Fox River by U.S. Army 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.

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

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

REMARKS.--Lake elevations controlled by dams at Menasha and Neenah, which are operated in the interest of navigation. Crests of both dams are at elevation 746.73 ft. Present limits of regulation are from 21 ¼ in. above the crest of Menasha dam to crest during navigation season, plus additional 18 in. below crest during winter. Oshkosh staff gage gives true level of lake, while Deuchman gage readings are affected by loss of head in the channel between lake and dam. Data-collection platform and gage-height telemeter at station.

EXTREMES FOR 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.

EXTREMES FOR CURRENT YEAR.--Maximum daily mean gage height, 3.18 ft, June 22, 23; minimum recorded, 1.61 ft, Feb. 10.

GAGE HEIGHT, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.95	2.70	2.32	1.99	1.69	1.94	2.17	3.04	3.11	2.98	2.86	2.91
2	2.94	2.69	2.36	1.97	1.69	1.95	2.18	2.97	3.10	2.95	2.89	2.90
3	2.91	2.71	2.36	1.95	1.67	1.96	2.15	3.04	3.15	2.96	2.88	2.98
4	2.91	2.69	2.36	1.93	1.67	1.95	2.17	2.96	3.14	3.01	2.90	2.98
5	2.89	2.68	2.35	1.92	1.66	1.93	2.16	2.94	3.14	2.97	2.95	2.96
6	2.86	2.65	2.39	1.90	1.66	1.91	2.19	2.89	3.13	2.94	2.93	2.96
7	2.84	2.65	2.40	1.88	1.65	1.89	2.14	2.94	3.09	2.94	2.90	2.95
8	2.80	2.60	2.35	1.86	1.65	1.89	2.21	2.92	3.08	2.95	2.88	2.96
9	2.77	2.59	2.34	1.85	1.64	1.88	2.29	2.68	3.09	3.02	2.86	2.97
10	2.77	2.59	2.30	1.83	1.65	1.90	2.33	2.81	3.07	3.01	2.83	2.96
11	2.80	2.56	2.31	1.82	1.66	1.90	2.37	2.91	3.10	2.95	2.84	2.96
12	2.82	2.53	2.28	1.80	1.66	1.87	2.42	2.82	3.16	2.92	2.82	2.94
13	2.80	2.49	2.28	1.79	1.65	1.86	2.49	2.80	3.14	2.92	2.83	2.93
14	2.78	2.49	2.30	1.79	1.65	1.89	2.52	2.84	3.17	2.92	2.82	2.91
15	2.79	2.46	2.26	1.80	1.63	1.87	2.59	2.83	3.16	2.92	2.77	2.93
16	2.79	2.45	2.24	1.79	1.65	1.91	2.64	2.86	3.15	2.91	2.79	2.89
17	2.79	2.42	2.23	1.78	1.66	1.93	2.67	2.87	3.16	2.90	2.73	2.90
18	2.73	2.40	2.23	1.77	1.65	1.93	2.72	2.84	3.11	2.92	2.78	2.88
19	2.75	2.39	2.16	1.75	1.69	1.96	2.83	2.85	3.04	2.90	2.78	2.91
20	2.74	2.39	2.19	1.74	1.74	2.01	2.87	2.82	3.01	2.86	2.78	2.95
21	2.75	2.36	2.19	1.72	1.82	1.99	2.89	2.80	3.06	2.85	2.76	2.98
22	2.76	2.34	2.18	1.70	1.84	2.04	2.81	2.81	3.18	2.87	2.86	2.96
23	2.75	2.32	2.10	1.68	1.86	2.06	2.85	2.81	3.18	2.91	2.87	2.90
24	2.74	2.33	2.05	1.68	1.87	2.14	2.78	2.92	3.17	2.85	2.90	2.94
25	2.59	2.27	2.12	1.68	1.89	2.12	2.81	2.95	3.15	2.81	2.91	2.92
26	2.79	2.38	2.11	1.66	1.92	2.11	2.94	2.97	3.12	2.84	2.91	2.94
27	2.78	2.31	2.09	1.66	1.94	2.13	2.98	3.04	3.13	2.86	2.94	2.94
28	2.70	2.32	2.07	1.65	1.94	2.13	2.94	3.06	3.10	2.86	2.92	2.94
29	2.74	2.34	2.05	1.65	---	2.14	2.94	3.08	3.07	2.89	2.92	2.95
30	2.74	2.35	2.03	1.65	---	2.13	2.98	3.10	3.02	2.89	2.93	2.95
31	2.72	---	2.01	1.66	---	2.13	---	3.12	---	2.90	2.92	---
MEAN	2.79	2.48	2.23	1.78	1.73	1.98	2.57	2.91	3.12	2.92	2.86	2.94
MAX	2.95	2.71	2.40	1.99	1.94	2.14	2.98	3.12	3.18	3.02	2.95	2.98
MIN	2.59	2.27	2.01	1.65	1.63	1.86	2.14	2.68	3.01	2.81	2.73	2.88

STREAMS TRIBUTARY TO LAKE MICHIGAN

101

04084255 LAKE WINNEBAGO NEAR STOCKBRIDGE, WI

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

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

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

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

REMARKS.--Lake elevations controlled by dams at Menasha and Neenah, which are operated in the interest of navigation. Crests of both dams are at elevation 746.73 ft. Present limits of regulation are from 21 ¹/₄ in. above the crest of Menasha dam to crest during navigation season, plus additional 18 in. below crest during winter. Data-collection platform and gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily mean gage height, 3.85 ft, July 9, 11, 1993; minimum observed, 0.30 ft, Mar. 1, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum daily mean gage height, 3.15 ft, June 23; minimum recorded, 1.56 ft, Feb. 11 and 18.

GAGE HEIGHT, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.92	2.71	2.40	1.96	1.67	1.90	2.12	2.94	3.08	2.97	2.90	2.86
2	2.91	2.73	2.34	1.94	1.64	1.92	2.09	3.05	2.99	2.98	2.85	2.95
3	2.93	2.67	2.32	1.91	1.64	1.95	2.14	2.99	3.00	2.97	2.82	3.01
4	2.92	2.66	2.33	1.89	1.64	1.91	2.14	2.92	3.06	2.92	2.86	2.93
5	2.90	2.64	2.43	1.88	1.63	1.88	2.14	2.85	3.08	2.86	2.84	2.90
6	2.93	2.64	2.41	1.86	1.62	1.87	2.12	2.82	3.07	2.88	2.78	2.89
7	2.83	2.59	2.34	1.84	1.62	1.84	2.13	2.80	3.06	2.90	2.80	2.90
8	2.75	2.63	2.35	1.82	1.61	1.84	2.15	2.76	3.03	2.93	2.81	2.91
9	2.77	2.63	2.38	1.80	1.61	1.89	2.23	2.95	3.02	2.90	2.81	2.92
10	2.80	2.54	2.34	1.80	1.62	1.91	2.27	2.97	3.02	2.84	2.82	2.93
11	2.79	2.51	2.27	1.78	1.62	1.84	2.31	2.75	3.09	2.84	2.80	2.91
12	2.73	2.49	2.25	1.77	1.64	1.82	2.38	2.67	3.09	2.86	2.80	2.93
13	2.75	2.49	2.31	1.75	1.61	1.81	2.43	2.74	3.08	2.88	2.80	2.89
14	2.85	2.45	2.26	1.76	1.60	1.78	2.47	2.79	3.11	2.88	2.81	2.87
15	2.87	2.44	2.23	1.77	1.61	1.82	2.53	2.80	3.13	2.87	2.81	2.82
16	2.77	2.40	2.20	1.76	1.62	1.85	2.59	2.77	3.14	2.88	2.77	2.86
17	2.78	2.38	2.22	1.75	1.61	1.85	2.65	2.75	3.10	2.89	2.81	2.84
18	2.77	2.38	2.21	1.74	1.59	1.89	2.69	2.75	3.02	2.83	2.78	2.82
19	2.75	2.43	2.23	1.71	1.64	1.91	2.77	2.74	2.99	2.81	2.72	2.87
20	2.75	2.44	2.22	1.69	1.71	1.97	2.72	2.74	2.99	2.83	2.71	2.95
21	2.71	2.36	2.14	1.68	1.79	2.01	2.64	2.77	3.01	2.84	2.70	3.00
22	2.70	2.31	2.14	1.65	1.80	2.07	2.75	2.80	3.12	2.88	2.76	3.00
23	2.71	2.28	2.24	1.65	1.80	2.05	2.80	2.83	3.15	2.77	2.79	2.98
24	2.79	2.25	2.20	1.65	1.82	2.02	2.84	2.80	3.13	2.76	2.85	2.91
25	3.13	2.35	2.13	1.63	1.86	2.02	2.97	2.85	3.12	2.76	2.85	2.88
26	2.95	2.25	2.09	1.63	1.89	2.07	2.90	2.99	3.14	2.80	2.86	2.85
27	2.78	2.20	2.07	1.62	1.91	2.08	2.76	2.97	3.09	2.82	2.82	2.84
28	2.75	2.26	2.04	1.63	1.90	2.09	2.73	2.98	3.07	2.83	2.85	2.86
29	2.65	2.29	2.03	1.63	---	2.10	2.93	3.03	3.03	2.88	2.86	2.88
30	2.64	2.29	2.01	1.62	---	2.13	2.96	3.08	2.99	2.89	2.86	2.91
31	2.69	---	1.98	1.63	---	2.13	---	3.10	---	2.87	2.85	---
MEAN	2.81	2.46	2.23	1.75	1.69	1.94	2.51	2.86	3.07	2.87	2.81	2.90
MAX	3.13	2.73	2.43	1.96	1.91	2.13	2.97	3.10	3.15	2.98	2.90	3.01
MIN	2.64	2.20	1.98	1.62	1.59	1.78	2.09	2.67	2.99	2.76	2.70	2.82

STREAMS TRIBUTARY TO LAKE MICHIGAN

040844215 Little Lake Butte Des Morts Tributary at Neenah, WI

LOCATION.--Lat 44°12'04", long 88°28'37" in NE ¼ NW ¼ sec.21, T.20 N., R.17 E., Winnebago County, Hydrologic Unit 04030204, on right bank 14 ft upstream from Lake Street, 1,000 ft upstream from Little Lake Butte des Morts.

DRAINAGE AREA.--3.03 mi².

PERIOD OF RECORD.--June 2001 to May 2002 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 735 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	0.84	0.73	2.1	0.58
2	---	---	---	---	---	---	---	---	0.89	0.74	0.73	0.60
3	---	---	---	---	---	---	---	---	0.82	0.84	0.69	0.64
4	---	---	---	---	---	---	---	---	0.75	1.0	0.67	0.62
5	---	---	---	---	---	---	---	---	0.75	0.78	0.67	0.52
6	---	---	---	---	---	---	---	---	0.74	0.67	0.67	0.68
7	---	---	---	---	---	---	---	---	0.73	0.73	0.68	0.98
8	---	---	---	---	---	---	---	---	0.73	0.77	0.67	1.1
9	---	---	---	---	---	---	---	---	0.73	0.86	0.70	1.2
10	---	---	---	---	---	---	---	---	1.6	0.86	0.67	0.59
11	---	---	---	---	---	---	---	---	2.8	0.82	0.67	0.58
12	---	---	---	---	---	---	---	---	0.91	0.81	1.9	0.59
13	---	---	---	---	---	---	---	---	0.73	0.83	0.63	0.53
14	---	---	---	---	---	---	---	---	0.76	0.83	0.60	0.52
15	---	---	---	---	---	---	---	---	0.77	0.86	0.74	0.53
16	---	---	---	---	---	---	---	---	0.77	0.84	0.91	0.53
17	---	---	---	---	---	---	---	---	0.76	1.1	0.64	0.55
18	---	---	---	---	---	---	---	---	0.76	0.80	1.2	0.51
19	---	---	---	---	---	---	---	---	0.77	0.80	1.1	0.85
20	---	---	---	---	---	---	---	---	0.77	0.80	0.68	0.54
21	---	---	---	---	---	---	---	---	1.1	0.81	0.67	0.53
22	---	---	---	---	---	---	---	---	0.87	1.2	1.0	0.52
23	---	---	---	---	---	---	---	---	0.77	1.1	0.74	0.59
24	---	---	---	---	---	---	---	---	0.75	0.80	0.71	0.46
25	---	---	---	---	---	---	---	---	0.90	0.77	1.5	0.44
26	---	---	---	---	---	---	---	---	0.69	0.73	0.68	0.46
27	---	---	---	---	---	---	---	---	0.70	0.75	0.73	0.43
28	---	---	---	---	---	---	---	---	0.71	0.82	0.64	0.45
29	---	---	---	---	---	---	---	---	0.72	0.78	0.65	0.44
30	---	---	---	---	---	---	---	---	0.75	0.76	0.67	0.45
31	---	---	---	---	---	---	---	---	---	0.80	0.59	---
TOTAL	---	---	---	---	---	---	---	---	26.34	25.79	25.90	18.01
MEAN	---	---	---	---	---	---	---	---	0.878	0.832	0.835	0.600
MAX	---	---	---	---	---	---	---	---	2.8	1.2	2.1	1.2
MIN	---	---	---	---	---	---	---	---	0.69	0.67	0.59	0.43
CFSM	---	---	---	---	---	---	---	---	0.29	0.27	0.28	0.20
IN.	---	---	---	---	---	---	---	---	0.32	0.32	0.32	0.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2001, BY WATER YEAR (WY)

	2001	2001	2001	2001
MEAN	---	---	---	---
MAX	---	---	---	---
(WY)	---	---	---	---
MIN	---	---	---	---
(WY)	---	---	---	---

SUMMARY STATISTICS

FOR 2001 WATER YEAR
(JUNE-SEPTEMBER)

ANNUAL TOTAL	96.04
ANNUAL MEAN	0.787
HIGHEST DAILY MEAN	2.8 Jun 11
LOWEST DAILY MEAN	0.43 Sep 27
ANNUAL SEVEN-DAY MINIMUM	0.45 Sep 24
MAXIMUM PEAK STAGE	3.12 Jun 11
ANNUAL RUNOFF (CFSM)	0.26
ANNUAL RUNOFF (INCHES)	1.18
10 PERCENT EXCEEDS	1.1
50 PERCENT EXCEEDS	0.74
90 PERCENT EXCEEDS	0.53

040844215 Little Lake Butte Des Morts Tributary at Neenah, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.46	0.51	0.46	e0.37	e0.31	e0.29	e0.38	e0.44	---	---	---	---
2	0.47	0.50	0.43	e0.36	e0.29	e0.28	e0.48	e1.2	---	---	---	---
3	0.48	0.47	0.43	e0.35	e0.28	e0.27	e0.42	e0.60	---	---	---	---
4	0.48	0.48	0.44	e0.35	e0.27	e0.27	e0.40	e0.45	---	---	---	---
5	0.44	0.49	1.3	e0.34	e0.28	e0.26	e0.39	e0.42	---	---	---	---
6	0.46	0.46	0.50	e0.35	e0.30	e0.26	e0.39	e0.42	---	---	---	---
7	0.49	0.46	0.48	e0.36	e0.29	e0.25	e0.45	e0.46	---	---	---	---
8	0.58	0.55	0.47	e0.35	e0.27	0.74	e0.50	e0.42	---	---	---	---
9	0.69	0.46	0.46	e0.34	e0.27	1.6	e0.56	e0.50	---	---	---	---
10	0.79	0.42	0.45	e0.32	e0.28	0.52	e0.44	e0.42	---	---	---	---
11	0.51	0.42	e0.47	e0.31	e0.30	e0.51	e0.42	e0.40	---	---	---	---
12	0.49	0.43	e0.50	e0.30	e0.31	e0.50	e0.40	e0.56	---	---	---	---
13	0.94	0.43	e0.48	e0.29	e0.33	e0.49	e0.44	e0.44	---	---	---	---
14	0.56	0.38	e0.47	e0.28	e0.31	e0.48	e0.42	e0.38	---	---	---	---
15	0.50	0.38	e0.46	e0.28	e0.30	e0.48	e0.42	e0.34	---	---	---	---
16	0.51	0.35	e0.46	e0.29	e0.29	e0.47	e0.40	e0.33	---	---	---	---
17	0.53	0.35	e0.46	e0.28	e0.28	e0.43	e0.40	e0.32	---	---	---	---
18	0.59	0.36	e0.45	e0.27	e0.28	e0.42	e0.66	0.29	---	---	---	---
19	0.59	0.75	e0.44	e0.26	0.82	e0.54	e0.46	0.32	---	---	---	---
20	0.58	0.41	e0.43	e0.25	1.5	e0.46	e0.42	0.25	---	---	---	---
21	0.54	0.39	e0.42	e0.25	e0.52	e0.42	e0.42	0.23	---	---	---	---
22	0.77	0.37	e0.41	e0.26	e0.42	e0.41	e0.44	0.23	---	---	---	---
23	0.54	0.36	e0.41	e0.26	e0.37	e0.40	e0.42	0.29	---	---	---	---
24	0.86	0.70	e0.40	e0.27	e0.35	e0.40	e0.42	0.30	---	---	---	---
25	0.50	0.48	e0.40	e0.28	e0.34	e0.39	e0.74	0.66	---	---	---	---
26	0.67	0.39	e0.45	e0.31	e0.32	e0.38	e1.2	0.36	---	---	---	---
27	0.92	0.87	e0.41	e0.32	e0.30	e0.38	e0.80	0.42	---	---	---	---
28	0.84	0.43	e0.40	e0.33	e0.29	e0.40	e0.50	0.43	---	---	---	---
29	0.55	0.45	e0.39	e0.31	---	e0.39	e0.44	0.46	---	---	---	---
30	0.63	0.62	e0.39	e0.29	---	e0.38	e0.46	0.92	---	---	---	---
31	0.50	---	e0.38	e0.30	---	e0.38	---	0.50	---	---	---	---
TOTAL	18.46	14.12	14.50	9.48	10.47	13.85	14.69	13.76	---	---	---	---
MEAN	0.595	0.471	0.468	0.306	0.374	0.447	0.490	0.444	---	---	---	---
MAX	0.94	0.87	1.3	0.37	1.5	1.6	1.2	1.2	---	---	---	---
MIN	0.44	0.35	0.38	0.25	0.27	0.25	0.38	0.23	---	---	---	---
CFSM	0.20	0.16	0.15	0.10	0.12	0.15	0.16	0.15	---	---	---	---
IN.	0.23	0.17	0.18	0.12	0.13	0.17	0.18	0.17	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	2001	2002	2002	2002	2002	2002	2002	2001	2001	2001	2001	
MEAN	0.595	0.471	0.468	0.306	0.374	0.447	0.490	0.444	0.878	0.832	0.835	0.600
MAX	0.60	0.47	0.47	0.31	0.37	0.45	0.49	0.44	0.88	0.83	0.84	0.60
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2001	2001	2001	2001
MIN	0.60	0.47	0.47	0.31	0.37	0.45	0.49	0.44	0.88	0.83	0.84	0.60
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR (JUNE-DECEMBER)		FOR 2002 WATER YEAR (OCTOBER-MAY)		WATER YEARS 2001 - 2002	
ANNUAL TOTAL	143.12		109.33			
ANNUAL MEAN	0.669		0.450		0.563	
HIGHEST ANNUAL MEAN					0.79 2001	
LOWEST ANNUAL MEAN					0.45 2002	
HIGHEST DAILY MEAN	2.8 Jun 11		1.6 Mar 9		2.8 Jun 11 2001	
LOWEST DAILY MEAN	0.35 Nov 16-17		0.23 May 21-22		0.23 May 21-22 2002	
ANNUAL SEVEN-DAY MINIMUM	0.38 Nov 12		0.26 Jan 18		0.26 Jan 18 2002	
MAXIMUM PEAK STAGE			2.78 May 30		3.12 Jun 11 2001	
ANNUAL RUNOFF (CFSM)	0.22		0.15		0.19	
ANNUAL RUNOFF (INCHES)	1.76		1.34		2.52	
10 PERCENT EXCEEDS	0.90		0.63		0.84	
50 PERCENT EXCEEDS	0.63		0.42		0.48	
90 PERCENT EXCEEDS	0.42		0.28		0.29	

(e) Estimated

STREAMS TRIBUTARY TO LAKE MICHIGAN

040844215 Little Lake Butte Des Morts Tributary at Neenah, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 2001 to May 2002 (discontinued).

REMARKS.--Chemical analyses of some constituents for Wisconsin District program samples were done by the Wisconsin State Laboratory of Hygiene and National Water-Quality Laboratory.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	SOLIDS, VOLA-TILE ON IGNI-TION, TOTAL (MG/L) (00505)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	ORTHO-PHOS-DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)
MAY 2001												
02...	0750	--	10	88	200	404	.078	<.14	.570	--	.325	<6.0
JUN												
10...	1220	9.5	50	284	1240	1600	.460	7.7	.628	.009	1.54	22.9
10...	1325	16	50	64	248	412	.143	1.6	.276	.039	.352	4.3
10...	1435	2.9	50	42	75	196	.119	.80	.355	.077	.211	<3.0
JUL												
05...	1403	.67	10	198	2	886	<.013	.18	2.63	--	.017	<2.0
17...	0905	2.6	50	--	74	726	.123	1.4	2.05	--	.176	--
17...	0920	6.3	50	--	192	552	.402	4.1	1.47	--	.559	--
22...	1400	13	50	--	763	1070	.304	5.5	.912	--	.937	--
22...	1435	5.4	50	--	102	--	.417	1.6	1.10	--	.173	--
23...	1200	7.2	50	--	--	430	.380	1.5	.739	--	.228	--
23...	1300	2.4	50	--	--	280	.372	.87	1.22	--	.087	--
AUG												
01...	1120	.82	10	--	<2	740	<.013	.19	1.84	.009	.018	--
19...	0040	2.6	10	--	8	292	.026	.27	.712	--	.042	--
21...	0936	.67	10	--	<2	798	<.013	--	1.98	--	.014	--
SEP												
07...	2135	.67	50	--	27	220	.148	.79	.696	--	.094	--
08...	0300	.64	50	--	113	338	.093	1.2	.613	--	.205	--
20...	1010	.67	10	--	<2	790	<.013	.15	1.81	.011	.017	--

040844215 Little Lake Butte Des Morts Tributary at Neenah, WI--Continued

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)
OCT 2001												
22...	2230	--	1.3	50	26	660	.014	.62	1.04	--	.104	--
22...	2240	--	2.7	50	73	636	<.013	1.1	.819	--	.226	--
22...	2245	--	4.6	50	142	514	.038	1.6	.576	--	.306	--
22...	2250	--	6.3	50	24	168	.052	.43	.359	--	.080	--
23...	0000	--	1.6	50	5	304	.018	.24	.554	--	.048	--
23...	0100	--	1.0	50	32	350	.251	.82	.782	--	.103	--
24...	1500	--	4.1	50	43	448	.139	.96	.940	.024	.118	--
24...	1700	--	1.6	50	16	180	.113	.48	.459	.036	.086	--
NOV												
19...	0120	--	1.9	50	86	298	<.013	.18	1.38	--	.016	--
19...	0305	--	1.8	50	57	176	<.013	.23	1.36	--	.016	--
19...	0315	--	2.9	50	14	190	.184	.55	1.52	--	.024	--
19...	0355	--	4.1	50	68	552	.202	1.3	.955	--	.154	--
19...	0500	--	1.5	50	14	--	.407	.76	.790	--	.055	--
24...	1030	--	4.9	50	352	776	.165	1.5	.834	.009	.203	--
24...	1135	--	2.9	50	25	158	.165	.47	.394	.017	.070	--
24...	1240	--	1.5	50	9	184	.130	.32	.450	.021	.049	--
25...	0325	--	1.3	50	7	512	.071	.25	.791	.011	.034	--
27...	0255	--	1.6	50	21	416	.253	.78	1.23	--	.092	--
27...	0335	--	3.8	50	47	244	.397	1.1	1.15	--	.124	--
27...	0345	--	6.4	50	122	264	.425	6.1	1.06	--	.225	--
27...	0420	--	2.6	50	21	156	.375	.80	.977	--	.063	--
27...	0525	--	2.3	50	17	208	.296	1.0	1.08	--	.078	--
27...	0630	--	1.5	50	5	218	.374	.60	1.15	--	.049	--
DEC												
05...	0605	--	3.0	50	98	736	.111	1.3	1.20	--	.212	--
05...	0610	--	4.1	50	97	568	.195	1.4	.910	--	.206	--
05...	0655	--	7.2	50	136	392	.153	1.5	.663	--	.247	--
05...	0700	--	9.7	50	465	638	.184	4.3	.414	--	.715	--
05...	0745	--	4.6	50	127	294	.105	.92	.413	--	.207	--
05...	0850	--	1.8	50	22	284	.086	.51	.568	--	.089	--
13...	1020	.27	--	50	<2	720	.015	.19	1.74	--	.021	<2.0
FEB 2002												
20...	1140	--	13	50	874	1590	.129	7.3	1.32	--	1.20	--
20...	1200	--	14	50	--	--	.182	11	.933	--	1.66	--
20...	1245	--	7.2	50	182	448	.117	1.3	.484	--	.311	--
20...	1305	--	4.2	50	106	440	.122	1.2	.557	--	.267	--
20...	1410	--	3.3	50	73	374	.106	1.0	.723	--	.223	--
20...	1725	--	.86	50	21	442	.089	.59	.825	--	.111	--
MAR												
08...	0540	--	1.0	50	117	1260	.701	2.1	1.74	--	.237	--
08...	0655	--	3.2	50	416	2300	.797	4.8	1.49	--	.543	--
08...	0700	--	6.1	50	672	2670	.854	6.9	1.31	--	.872	--
08...	0730	--	2.7	50	190	1540	.691	1.8	.971	--	.213	--
08...	1005	--	.78	50	21	1180	.509	1.0	1.43	--	.228	--
09...	0730	--	1.3	50	56	662	.323	.93	1.04	--	.125	--
09...	0935	--	2.7	50	127	892	.266	1.5	.849	--	.259	--
09...	1000	--	8.1	50	188	808	.240	1.9	.867	--	.324	--
09...	1105	--	7.2	50	69	522	.215	1.1	.755	--	.198	--
09...	1210	--	4.6	50	41	468	.195	.94	.662	--	.166	--
09...	1415	--	1.4	50	16	522	.156	.76	.940	--	.132	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

04084445 FOX RIVER AT APPLETON, WI

LOCATION.--Lat 44°14'53", long 88°25'23" in NW ¼ SE ¼ sec.34, T.21 N., R.17 E., Outagamie County, Hydrologic Unit 04030204, on left bank at south end of Lutz Park, approximately 2,600 ft upstream of Memorial Drive bridge at Appleton.

DRAINAGE AREA.--5,950 mi².

PERIOD OF RECORD.--July 1986 to current year.

GAGE.--Acoustical Velocity Meter (AVM) system. Two-path transducer installation.

REMARKS.--Records good, except for estimated daily discharges, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE , FROM PRIMARY, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3200	3970	4190	3790	2790	4490	6220	9070	5660	9060	1970	1820
2	3200	3850	4180	3850	2760	4470	6200	9670	5550	7120	1680	2070
3	3200	3720	4190	3830	2750	4540	6150	11300	6380	4920	1710	2430
4	3110	3690	4190	3830	2740	4660	e5620	12600	7190	3720	1880	3300
5	3010	3700	5050	3810	2750	5350	e5470	12300	7740	3380	1810	2740
6	2950	3750	5730	3800	2740	5620	e5570	11300	8050	3430	1640	1930
7	2960	3610	5460	3780	2740	5930	5580	9920	7930	3530	1670	1950
8	3040	3990	5470	e3770	2730	6520	5070	10000	7500	3570	1740	1930
9	3050	4600	5540	3640	e2690	6760	4070	9980	7360	3480	1790	1940
10	3050	4510	5640	3690	e2740	6820	3550	9870	6600	3340	1810	1890
11	2970	4250	e5610	3700	2770	6580	3410	9980	5970	3430	1740	1780
12	2770	4360	e5720	3700	2720	6510	3130	9620	6690	2680	1820	1860
13	3010	4430	5710	3670	2750	6240	3020	8790	7560	1980	1850	1840
14	2980	4340	5660	3690	2740	5900	3080	7870	7910	1920	1760	1820
15	2810	4340	e5670	3830	2730	5890	3140	8130	8090	1800	1890	1560
16	2670	4270	e5620	3750	2730	5890	3230	7590	8000	1770	1730	1680
17	2760	4270	e5570	3710	2750	5880	3900	7060	8100	1790	1800	1770
18	3040	4280	5570	3680	2720	5950	5010	7020	8130	1710	1660	1760
19	2710	4230	e5300	3670	2830	5960	5920	7120	7770	1610	1580	1910
20	2790	4260	4690	3650	2900	6070	6240	6590	7100	1710	1590	2000
21	2750	4330	4080	3650	3390	5970	6120	5850	7100	1880	1630	e2050
22	2840	4220	4130	3620	3890	6100	6490	4800	9190	1790	1700	1940
23	2780	4180	4130	3290	3820	6090	6940	3370	9950	1440	1670	1970
24	2800	4240	3950	e2780	e3760	6080	7170	2570	9890	1550	1760	1840
25	3080	4240	3780	2720	3830	5830	7160	2650	9990	1750	1800	1950
26	2800	4080	3770	e2760	e3960	6000	7930	e2850	10500	1770	1800	1830
27	2720	4030	3820	e2740	4230	6210	8800	e2990	10700	1780	1720	1710
28	2960	4020	3820	2740	4510	6320	8790	3020	10400	1740	1740	1800
29	2910	4080	e3800	2730	---	6250	9090	3120	10000	1780	1780	1850
30	2650	4090	3820	2760	---	6250	9050	4150	9910	1870	1780	1950
31	2940	---	3780	2710	---	6250	---	5220	---	1890	1820	---
TOTAL	90510	123930	147640	107340	86460	183380	171120	226370	242910	85190	54320	58870
MEAN	2920	4131	4763	3463	3088	5915	5704	7302	8097	2748	1752	1962
MAX	3200	4600	5730	3850	4510	6820	9090	12600	10700	9060	1970	3300
MIN	2650	3610	3770	2710	2690	4470	3020	2570	5550	1440	1580	1560
CFSM	0.49	0.69	0.80	0.58	0.52	0.99	0.96	1.23	1.36	0.46	0.29	0.33
IN.	0.57	0.77	0.92	0.67	0.54	1.15	1.07	1.42	1.52	0.53	0.34	0.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2002, BY WATER YEAR (WY)

MEAN	3842	4611	4140	3752	3815	4913	6495	5687	5649	3949	2933	3249
MAX	13510	7863	7509	5575	5422	7702	11920	11900	13300	15110	6259	8899
(WY)	1987	1996	1993	1987	1987	1994	1993	1993	1993	1993	1993	1986
MIN	1413	2312	2541	2535	2312	2445	2688	2682	1243	944	971	1226
(WY)	2000	2000	1990	1990	1995	2000	1990	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1986 - 2002
ANNUAL TOTAL	1664880	1578040	
ANNUAL MEAN	4561	4323	4380
HIGHEST ANNUAL MEAN			8107
LOWEST ANNUAL MEAN			2995
HIGHEST DAILY MEAN	12700	Apr 23	18000 Jul 6 1993
LOWEST DAILY MEAN	1490	Aug 17	840 Aug 17 1988
ANNUAL SEVEN-DAY MINIMUM	1620	Aug 14	899 Jul 9 1988
ANNUAL RUNOFF (CFSM)	0.77		0.74
ANNUAL RUNOFF (INCHES)	10.41		10.00
10 PERCENT EXCEEDS	9410	7890	8400
50 PERCENT EXCEEDS	3870	3760	3660
90 PERCENT EXCEEDS	1850	1790	1700

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

LOCATION.--Lat 44°19'03", long 88°11'50", in SE ¼ sec.4, T.21 N., R.19 E., Outagamie County, Hydrologic Unit 04030204, at Rapide Croche Dam, 2.0 mi upstream from Wrightstown, and 18 mi upstream from mouth.

DRAINAGE AREA.--6,010 mi².

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

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

GAGE.--Recording headwater and tailwater gages and electric generation are read 24 times a day and used to compute the discharge records.

REMARKS.--Flow regulated by storage in Lake Winnebago (see sta. 04082500 and 04084255). Daily discharges determined from records of flow through turbines, head, gate openings, and lockages through navigation canal. Usually less than about 20 ft³/s is diverted into basin from Wisconsin River at Portage Canal throughout the year.

COOPERATION.--Figures of daily discharge furnished by Kaukauna Electric and Water Department. Records reviewed by Geological Survey.

DISCHARGE (POWER PLANT), CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3310	3950	4460	3520	2850	4950	6950	10100	5910	9640	1730	1690
2	3300	4170	4450	3710	2720	4980	6950	10500	5860	7230	1560	2130
3	3380	3940	4460	3660	2720	4500	6950	12200	7400	5340	1660	2170
4	3210	3910	4480	3800	2570	5150	6790	11000	8010	3930	1700	3590
5	2980	3750	5060	3710	2590	6060	6440	10800	8360	3440	1730	3140
6	2950	3850	6100	3630	2850	6330	6330	10400	8420	3240	1450	1950
7	3170	3730	5680	3450	2630	6230	6380	10800	8380	3340	1500	1760
8	3100	3640	5800	3820	2720	7120	6410	10700	8020	3450	1700	1940
9	3180	4620	5790	3450	2690	7680	4950	10900	8150	3480	1670	1900
10	3140	4670	5840	3670	2640	6950	3980	10700	6940	3200	1580	2000
11	3000	4500	6250	3580	2800	7060	3540	10700	7380	3200	1580	1570
12	2880	4310	6110	3580	2620	6970	3410	10600	6520	2790	1720	1730
13	3030	4550	5920	3540	2570	6880	3180	9160	7650	1570	1740	1760
14	2960	4480	5890	3570	2850	6210	3560	7770	8380	1530	1640	1790
15	2810	4540	5860	3540	2620	6140	2900	8470	8380	1480	1610	1370
16	2740	4620	5930	3780	2630	6070	3370	7800	8060	1510	1780	1490
17	2850	4500	5830	3230	2730	6060	3720	7610	7940	1650	1920	1700
18	3160	4430	5800	3310	2700	6150	5110	7420	8170	1440	1520	1910
19	2830	4580	5620	3410	3030	6290	6270	7460	7660	1420	1420	1910
20	2710	4420	5120	3320	3090	6560	6540	6960	7090	1410	1360	2180
21	2730	4520	3890	3520	3410	6540	6500	6290	6690	1820	1510	2090
22	2750	4500	4130	3490	4550	6520	6610	5310	10800	1670	1600	1870
23	3000	4350	4190	3090	4510	6630	7090	3620	10400	1220	1490	1980
24	2710	4470	3990	2420	4300	6590	7570	2520	10200	1330	1610	1770
25	3020	4630	3320	2380	4360	6330	7930	2740	10600	1500	1710	1740
26	2920	4260	3440	2450	4330	6260	8850	3000	11000	1610	1720	1820
27	2700	4250	3670	2390	4540	6820	10000	3020	11200	1520	1570	1510
28	3010	4090	3610	2540	5030	6980	10800	3010	11100	1540	1640	1620
29	3040	4280	3450	2600	---	7070	10400	3230	10600	1680	1700	1660
30	2340	4300	3500	2710	---	7030	10400	3610	10500	1640	1620	1570
31	3250	---	3500	2590	---	7020	---	5380	---	1900	1630	---
TOTAL	92160	128810	151140	101460	89650	198130	189880	233780	255770	81720	50370	57310
MEAN	2973	4294	4875	3273	3202	6391	6329	7541	8526	2636	1625	1910
MAX	3380	4670	6250	3820	5030	7680	10800	12200	11200	9640	1920	3590
MIN	2340	3640	3320	2380	2570	4500	2900	2520	5860	1220	1360	1370

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 2002, BY WATER YEAR (WY)

MEAN	3303	3972	3993	3989	4061	4942	7187	6086	5109	3467	2679	2834
MAX	13230	8127	7450	5501	5649	8317	12400	13000	13330	15600	7223	6456
(WY)	1987	1996	1993	1987	1987	1994	1993	1993	1993	1993	1993	1993
MIN	1315	2276	2603	2597	2478	2633	2856	2871	1375	1029	1083	1345
(WY)	2000	2000	1990	1990	1995	2000	1990	1998	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1896 - 2002
ANNUAL TOTAL	1738920	1630180	
ANNUAL MEAN	4764	4466	4310
HIGHEST ANNUAL MEAN			8427
LOWEST ANNUAL MEAN			1626
HIGHEST DAILY MEAN	14000	12200	24000
LOWEST DAILY MEAN	1090	1220	138
ANNUAL SEVEN-DAY MINIMUM	1430	1470	499
10 PERCENT EXCEEDS	10300	8100	8680
50 PERCENT EXCEEDS	3920	3620	3790
90 PERCENT EXCEEDS	1780	1640	1690

STREAMS TRIBUTARY TO LAKE MICHIGAN

040851385 FOX RIVER, AT OIL TANK DEPOT, AT GREEN BAY, WI

LOCATION.--Lat 44°31'43", long 88°00'36" in NE ¼ NE ¼ sec. 25, T.24 N., R.20 E., Brown County, Hydrologic Unit 04030204, about 0.5 mi upstream of Interstate Highway 43 bridge in Green Bay, and 0.8 mi upstream from mouth.

DRAINAGE AREA.--6,330 mi².

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Acoustical Velocity Meter (AVM) system. Two-path transducer installation.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

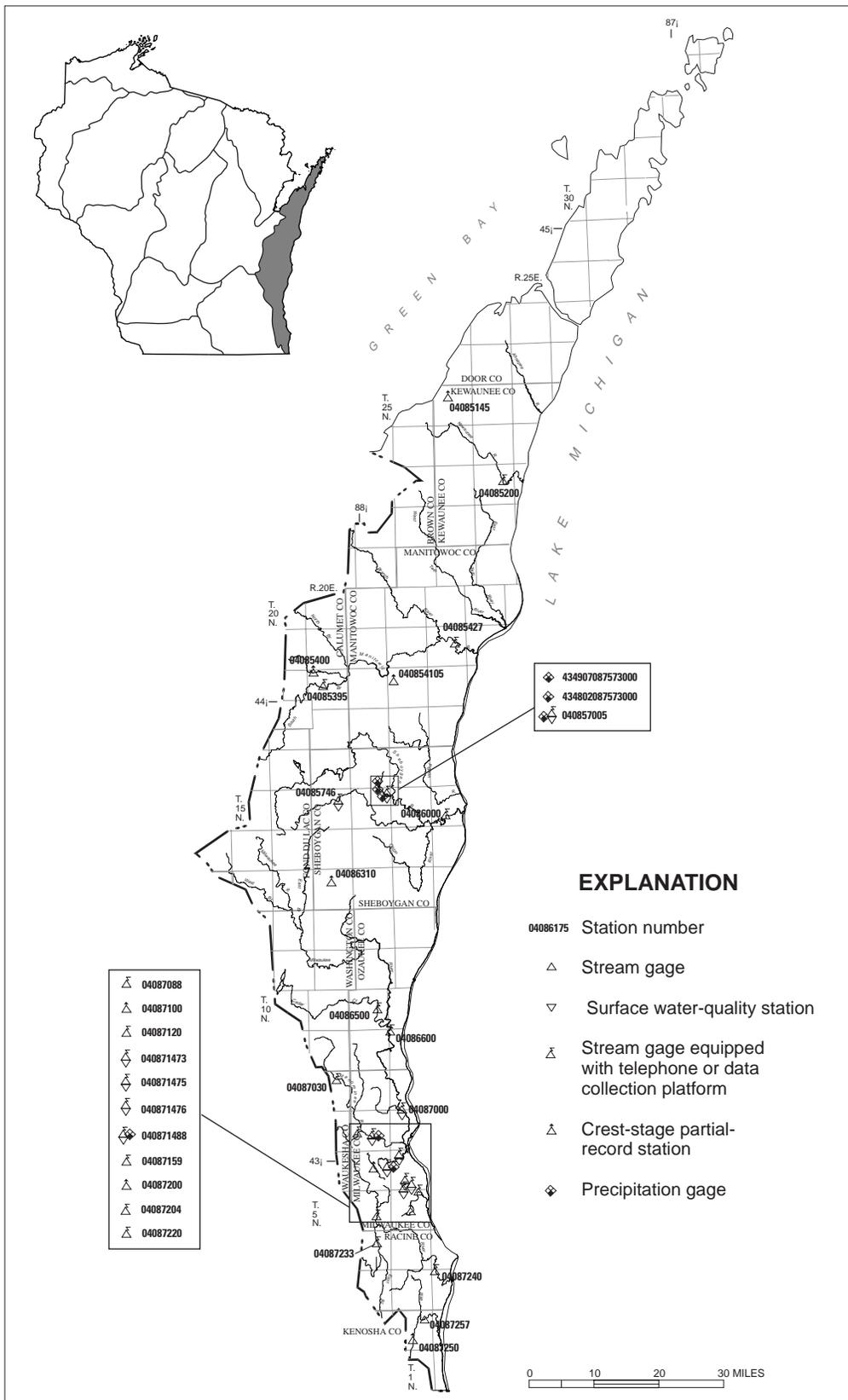
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3590	4070	4510	3650	4140	4600	6420	9080	5740	e9600	e1830	3840
2	3710	3820	4380	4470	3060	4490	6460	10100	5080	e7550	e1780	2880
3	3650	4050	3960	4070	2860	4780	6500	11500	8770	e5220	e1810	2060
4	3890	3830	4350	3760	2600	4320	6370	12500	9010	e3940	e1990	2880
5	3210	3330	5700	4060	3390	4990	5650	12400	8270	e3580	e1920	2840
6	3400	3700	5170	3980	2460	5950	5710	11300	8490	e3640	e1740	2260
7	3160	3710	5320	4550	2730	5780	5580	11400	8280	e3740	e1770	2060
8	3500	4010	5580	3860	3160	7360	6220	10200	6980	e3790	e1850	2650
9	3590	4460	5910	4030	2920	8150	6440	11500	7220	e3690	e1900	3820
10	3650	4290	4750	3840	3380	8170	4400	9550	6590	e3540	e1920	3380
11	3460	4450	5890	3980	3500	7310	4040	9610	6650	e3640	e1850	1300
12	2460	4150	5490	3680	3060	7250	3980	9910	6930	e2840	e1930	2370
13	3100	4590	6060	3710	2220	7300	3550	9270	7500	e2100	e1960	2220
14	3890	4120	5700	3770	2990	6530	3640	8210	8190	e2040	e1870	e2240
15	2530	4510	5400	4210	3030	7020	3880	7750	8590	e1910	e2000	2260
16	2590	4240	5570	3990	2890	6320	3950	7600	8200	e1880	e1830	1570
17	3100	4150	5820	4020	3370	6160	4000	7240	7960	e1900	e1910	1820
18	2880	4430	5370	3650	3270	6490	5400	7470	7720	e1810	e1760	2020
19	3140	4200	5810	3450	3430	6120	6350	6850	7770	e1710	e1680	1650
20	3240	4050	4830	3700	3050	5930	6250	7190	6910	e1810	e1690	2300
21	2720	4070	3960	3510	5060	7710	6130	6340	6900	e1990	e1730	1510
22	2690	4480	3940	4510	4690	6460	7490	5180	9830	e1900	e1260	1440
23	3590	4360	4820	3730	4140	5940	7160	3090	10300	e1530	e1700	2180
24	3620	4590	4240	3220	3860	6130	7780	3580	9500	e1640	1200	1970
25	3340	4430	3490	3220	4980	6070	7860	2570	9350	e1860	1780	e1860
26	2370	4270	3750	2350	4680	6260	8070	3480	9250	e1880	e1860	e1720
27	2440	3680	3620	3280	4300	6180	7730	3680	10000	e1890	e1620	e1580
28	3030	5080	3570	3040	4830	6350	12100	3370	9820	e1850	1260	1430
29	2780	4190	4070	3070	---	6590	11100	3350	e10600	e1890	1560	1510
30	2950	4230	3980	3350	---	6450	10100	4230	e10500	e1980	1720	2450
31	3170	---	3850	2720	---	6570	---	5840	---	e2000	2090	---
TOTAL	98440	125540	148860	114430	98050	195730	190310	235340	246900	90340	54770	66070
MEAN	3175	4185	4802	3691	3502	6314	6344	7592	8230	2914	1767	2202
MAX	3890	5080	6060	4550	5060	8170	12100	12500	10600	9600	2090	3840
MIN	2370	3330	3490	2350	2220	4320	3550	2570	5080	1530	1200	1300
CFSM	0.50	0.66	0.76	0.58	0.55	1.00	1.00	1.20	1.30	0.46	0.28	0.35
IN.	0.58	0.74	0.87	0.67	0.58	1.15	1.12	1.38	1.45	0.53	0.32	0.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)

MEAN	3351	4806	4448	3869	3914	5700	7519	6448	6878	4667	3427	3278
MAX	8504	8668	9446	6092	5814	7827	13660	13220	14780	15620	6855	6172
(WY)	1996	1993	1993	1993	1996	1994	1993	1993	1993	1993	1993	1993
MIN	1019	2037	2977	2768	2070	2394	3010	2710	2484	2140	1767	1355
(WY)	2000	2000	1990	1990	1995	2000	1990	1998	1994	1995	2002	1998

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1989 - 2002	
ANNUAL TOTAL	1842870		1664780			
ANNUAL MEAN	5049		4561		4858	
HIGHEST ANNUAL MEAN					9102	
LOWEST ANNUAL MEAN					3512	
HIGHEST DAILY MEAN	16600	Apr 12	12500	May 4	33800	Jun 23 1990
LOWEST DAILY MEAN	1580	Aug 17	1200	Aug 24	-3260	Nov 4 1990
ANNUAL SEVEN-DAY MINIMUM	1710	Aug 14	1530	Aug 22	203	Jul 27 2000
ANNUAL RUNOFF (CFSM)	0.80		0.72		0.77	
ANNUAL RUNOFF (INCHES)	10.83		9.78		10.43	
10 PERCENT EXCEEDS	10500		8160		9300	
50 PERCENT EXCEEDS	4070		3950		3930	
90 PERCENT EXCEEDS	1960		1860		1870	

(e) Estimated due to missing record



- △ 04087088
- △ 04087100
- △ 04087120
- ▽ 040871473
- ▽ 040871475
- ▽ 040871476
- ◇ 040871488
- △ 04087159
- △ 04087200
- △ 04087204
- △ 04087220

- ◇ 434907087573000
- ◇ 434802087573000
- ◇ 040857005

EXPLANATION

- 04086175 Station number
- △ Stream gage
- ▽ Surface water-quality station
- △ Stream gage equipped with telephone or data collection platform
- △ Crest-stage partial-record station
- ◇ Precipitation gage

Base from U.S. Geological Survey 1:100,000 digital data; modified by Wisconsin Department of Natural Resources. Wisconsin Transverse Mercator projection.

LAKE MICHIGAN BASIN

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085200 KEWAUNEE RIVER NEAR KEWAUNEE, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002	
ANNUAL TOTAL	22479		22299.0			
ANNUAL MEAN	61.59		61.09		83.08	
HIGHEST ANNUAL MEAN					178	1993
LOWEST ANNUAL MEAN					27.8	2000
HIGHEST DAILY MEAN	915	Apr 12	762	Apr 29	5950	Jun 23 1990
LOWEST DAILY MEAN	(a)(b)11	Jan 1	9.5	Sep 13	5.9	Jul 30 1965
ANNUAL SEVEN-DAY MINIMUM	(a)11	Jan 6	9.7	Sep 12	6.3	Aug 22 1970
MAXIMUM PEAK FLOW			926	Apr 29	(c)8570	Jun 23 1990
MAXIMUM PEAK STAGE			(d)11.38	Apr 29	(f)16.03	Mar 30 1960
INSTANTANEOUS LOW FLOW			7.9	Sep 16	(g)3.8	Dec 15 1997
ANNUAL RUNOFF (CFSM)	0.48		0.48		0.65	
ANNUAL RUNOFF (INCHES)	6.58		6.53		8.89	
10 PERCENT EXCEEDS	130		134		165	
50 PERCENT EXCEEDS	31		26		31	
90 PERCENT EXCEEDS	14		13		13	

- (a) Ice affected
- (b) Also occurred Jan. 8-12, 25-29
- (c) Gage height, 16.00 ft, from crest-stage gage
- (d) Also occurred Mar. 10 from ice affect
- (e) Estimated due to ice effect or missing record
- (f) Backwater from ice
- (g) Result of freezep

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085395 SOUTH BRANCH MANITOWOC RIVER AT HAYTON, WI

LOCATION.--Lat 44°01'29", long 88°07'05", in SW ¼ SW ¼ sec.16, T.18 N., R.20 E., Calumet County, Hydrologic Unit 04030101, on left bank 100 ft downstream from Weeks Road bridge, at Hayton.

DRAINAGE AREA.--109 mi².

PERIOD OF RECORD.--July 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 808 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	27	42	e12	e12	e42	77	116	35	26	12	6.9
2	16	25	40	e12	e11	e34	80	119	29	24	9.5	13
3	15	24	37	e11	e11	e28	85	115	66	23	9.3	24
4	14	23	35	e11	e11	e29	84	102	99	22	17	15
5	14	22	49	e12	e11	e34	79	91	93	21	13	12
6	14	22	57	e12	e11	e36	73	96	77	21	11	12
7	13	22	52	e12	e12	e38	76	169	61	21	10	12
8	13	21	46	e12	e13	e46	115	125	50	28	9.4	9.6
9	16	22	41	e13	e14	e70	176	107	43	31	8.7	8.8
10	20	20	37	15	e15	e180	177	90	38	26	7.6	9.3
11	17	19	35	16	e15	e160	154	79	39	24	6.1	7.9
12	16	19	35	e16	e15	156	146	91	37	21	7.9	7.3
13	20	19	52	e15	e14	170	145	94	35	20	9.9	6.2
14	26	19	53	e14	e15	199	137	84	36	19	12	5.7
15	23	19	47	e13	e16	208	130	76	39	18	9.6	6.8
16	21	18	45	e12	e17	188	121	67	37	17	6.5	7.6
17	21	18	48	e11	e17	176	110	62	33	16	7.0	6.2
18	20	18	48	e10	e19	160	108	56	30	16	5.4	5.3
19	19	27	44	e10	e27	145	134	53	27	16	5.4	13
20	18	29	36	e11	e75	147	126	50	26	14	5.3	19
21	17	26	35	e11	e80	136	111	48	30	14	12	18
22	17	24	35	e12	e72	109	102	45	94	15	24	12
23	24	23	e28	e13	e68	96	97	42	102	14	14	11
24	28	27	e20	e13	e66	104	90	39	72	13	13	9.7
25	42	34	e13	e12	e70	76	88	46	51	14	18	9.5
26	33	32	e17	e12	e64	73	82	56	43	17	13	9.3
27	30	32	e16	e13	e58	73	77	50	41	13	11	9.2
28	27	38	e15	e13	e46	72	138	43	35	12	11	8.9
29	24	39	e14	e12	---	76	165	46	31	13	10	11
30	24	40	e13	e12	---	79	143	49	28	12	9.3	10
31	26	---	e13	e12	---	79	---	42	---	13	7.9	---
TOTAL	644	748	1098	385	875	3219	3426	2348	1457	574	325.8	316.2
MEAN	20.77	24.93	35.42	12.42	31.25	103.8	114.2	75.74	48.57	18.52	10.51	10.54
MAX	42	40	57	16	80	208	177	169	102	31	24	24
MIN	13	18	13	10	11	28	73	39	26	12	5.3	5.3
CFSM	0.19	0.23	0.32	0.11	0.29	0.95	1.05	0.69	0.45	0.17	0.10	0.10
IN.	0.22	0.26	0.37	0.13	0.30	1.10	1.17	0.80	0.50	0.20	0.11	0.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2002, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
MEAN	18.60	22.81	17.32	13.32	44.89	102.0	131.7	67.20	70.97	58.52	21.14	26.37
MAX	40.0	47.5	35.4	21.6	86.7	189	328	128	170	232	49.4	137
(WY)	2001	1996	2002	1997	1999	1997	2001	2001	1996	1993	1999	2000
MIN	7.17	10.9	8.74	6.21	6.42	54.5	48.2	30.1	12.1	2.46	8.48	4.02
(WY)	1995	1995	1995	1995	1995	1999	1995	1995	1995	1995	1995	1998

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1993 - 2002

ANNUAL TOTAL	27300.5	15416.0	
ANNUAL MEAN	74.80	42.24	49.07
HIGHEST ANNUAL MEAN			99.8
LOWEST ANNUAL MEAN			17.3
HIGHEST DAILY MEAN	755	Apr 12	208
LOWEST DAILY MEAN	7.7	Aug 12	5.3
ANNUAL SEVEN-DAY MINIMUM	9.1	Aug 6	6.4
MAXIMUM PEAK FLOW			(a)209
MAXIMUM PEAK STAGE			(b)4.81
INSTANTANEOUS LOW FLOW			5.3 (d)Aug 20
ANNUAL RUNOFF (CFSM)	0.69		0.39
ANNUAL RUNOFF (INCHES)	9.32		5.26
10 PERCENT EXCEEDS	201		105
50 PERCENT EXCEEDS	28		24
90 PERCENT EXCEEDS	15		10

- (a) Gage height, 4.41 ft
- (b) Ice affected
- (c) Also occurred July 31 to Aug. 1, 1995
- (d) Also occurred Sept. 18
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085427 MANITOWOC RIVER AT MANITOWOC, WI

LOCATION.--Lat 44°06'26", long 87°42'55", in NE ¼ NW ¼ sec.23, T.19 N., R.23 E., Manitowoc County, Hydrologic Unit 04030101, on right bank 300 ft upstream from bridge on County Trunk Highway JJ, just west of the Manitowoc city limits and 6.6 mi upstream from mouth.

DRAINAGE AREA.--526 mi².

PERIOD OF RECORD.--July 1972 to September 1996, December 1997 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 610.12 ft above NGVD of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor, and period of gage-height painting, Oct. 1 to May 29, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	70	144	e82	e63	e370	470	845	356	e290	e52	30
2	57	77	150	e82	e62	e340	454	840	299	e240	e47	34
3	55	81	137	e81	e62	e320	449	834	562	e190	e44	38
4	56	70	133	e86	e58	e300	447	782	666	e170	e41	41
5	55	63	153	e91	e63	e320	434	734	688	e150	e40	44
6	48	60	199	e87	e66	e350	418	721	741	e140	e38	39
7	49	60	205	e81	e73	e400	404	950	682	e130	e35	39
8	50	61	202	e87	e78	e480	479	904	612	e130	e35	36
9	45	63	197	e93	e84	e580	692	910	546	e130	e35	37
10	39	63	185	e84	e82	e540	695	964	481	e120	e34	35
11	44	58	165	e79	e78	e600	716	903	471	e110	e34	33
12	51	54	157	e73	e81	e680	730	853	451	e100	e34	33
13	58	53	173	e68	e78	e820	732	865	443	e92	42	30
14	62	55	191	e69	e85	e940	699	842	492	e79	41	29
15	67	59	191	e64	e94	e940	684	797	487	e68	36	29
16	73	61	189	e59	e91	874	660	735	444	e62	35	26
17	67	60	195	e55	e84	819	633	688	419	e57	32	27
18	64	59	206	e51	e96	808	615	642	390	e53	31	26
19	58	67	199	e50	e140	798	687	593	350	e52	31	32
20	56	77	e170	e53	e210	823	665	546	310	e50	30	38
21	55	84	e140	e56	e290	821	619	495	282	e49	29	46
22	54	83	e150	e59	e300	e670	608	342	398	e48	33	48
23	56	81	e140	e61	e360	e670	604	294	481	e47	34	47
24	69	88	e100	e59	e440	690	579	262	552	e46	38	43
25	101	91	e140	e61	e440	622	567	250	592	e48	42	40
26	143	117	e130	e64	e430	581	548	267	e550	e49	42	35
27	112	116	e130	e68	e430	552	506	278	e520	e47	38	29
28	79	117	e110	e65	e400	520	712	263	e460	e46	37	30
29	66	133	e100	e62	---	504	752	312	e420	e46	35	29
30	63	135	e90	e60	---	504	777	387	e360	e48	33	28
31	63	---	e82	e61	---	490	---	459	---	e50	32	---
TOTAL	1974	2316	4853	2151	4818	18726	18035	19557	14505	2937	1140	1051
MEAN	63.68	77.20	156.5	69.39	172.1	604.1	601.2	630.9	483.5	94.74	36.77	35.03
MAX	143	135	206	93	440	940	777	964	741	290	52	48
MIN	39	53	82	50	58	300	404	250	282	46	29	26
CFSM	0.12	0.15	0.30	0.13	0.33	1.15	1.14	1.20	0.92	0.18	0.07	0.07
IN.	0.14	0.16	0.34	0.15	0.34	1.32	1.28	1.38	1.03	0.21	0.08	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2002, BY WATER YEAR (WY)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
MEAN	188.7	241.6	178.6	112.3	192.8	822.9	959.9	393.9	295.5	140.9	73.41	140.3							
MAX	1465	1367	575	503	1104	1951	2672	991	1396	1071	343	1711							
(WY)	1987	1986	1983	1973	1984	1985	1979	1978	1993	1993	1986	1986							
MIN	18.8	23.1	16.3	20.4	20.8	226	181	53.8	18.1	13.6	13.7	14.9							
(WY)	1977	1977	1977	1977	1977	1980	2000	1977	1988	1988	1988	1976							

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1972 - 2002

ANNUAL TOTAL	112477	92063		
ANNUAL MEAN	308.2	252.2	314.0	
HIGHEST ANNUAL MEAN			728	1986
LOWEST ANNUAL MEAN			82.7	1977
HIGHEST DAILY MEAN	2290	Apr 12	964	May 10
LOWEST DAILY MEAN	34	Aug 10	26	Sep 16,18
ANNUAL SEVEN-DAY MINIMUM	36	Aug 8	28	Sep 13
MAXIMUM PEAK FLOW			(a)1010	May 7
MAXIMUM PEAK STAGE			(c)8.80	Mar 15
INSTANTANEOUS LOW FLOW			26	(f)Aug 21
ANNUAL RUNOFF (CFSM)	0.59	0.48		6.8 (g)Jul 8 1988
ANNUAL RUNOFF (INCHES)	7.95	6.51		8.11
10 PERCENT EXCEEDS	866	689		820
50 PERCENT EXCEEDS	102	94		120
90 PERCENT EXCEEDS	49	37		31

- (a) Gage height, 7.05 ft
- (b) Gage height, 13.24 ft
- (c) Ice affected
- (d) From floodmarks
- (e) Estimated due to ice effect or missing record
- (f) Also occurred Sept. 16-18
- (g) Also occurred Oct. 3-5, 1989

STREAMS TRIBUTARY TO LAKE MICHIGAN

434907087573000 OTTER CREEK RAIN GAGE #2 NEAR PLYMOUTH, WI

LOCATION.--Lat 43°49'07", long 87°57'30", in NE ¼ NW ¼ sec.35, T.16 N., R.21 E., Sheboygan County, Hydrologic Unit 04030101, on Garton Road, 0.5 mi east of junction with CTH E, near Plymouth.

PERIOD OF RECORD.--January 1991 to September 2002 (discontinued); non-frozen precipitation.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Jan. 9, 1991. Rainfall estimated to be 0.00 for Jan. 14-15, 22, and Feb. 10 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.61 in., Aug. 6, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.06 in., Aug. 21.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.14	0.02	0.00	0.00	0.70
3	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	1.03	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.48	0.00
5	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00
8	0.14	0.04	0.01	0.00	0.00	0.40	0.66	0.01	0.00	1.76	0.00	0.00
9	0.01	0.00	0.00	0.00	0.00	0.31	0.06	0.13	0.00	0.00	0.00	0.00
10	0.06	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.34	0.00	0.00	0.02
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.51	0.00	0.00	0.00
12	0.24	0.00	0.39	0.00	0.00	0.00	0.06	0.15	0.00	0.00	0.58	0.00
13	0.53	0.00	0.06	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.14	0.00
14	0.03	0.00	0.00	0.31	0.00	0.02	0.06	0.00	0.17	0.00	0.01	0.02
15	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
16	0.04	0.00	0.20	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
18	0.00	0.04	0.00	0.00	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.14
19	0.00	0.15	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.01	0.23	1.08
20	0.26	0.00	0.00	0.00	0.39	0.17	0.00	0.00	0.00	0.00	0.00	0.59
21	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.00	0.27	0.00	2.06	0.01
22	0.73	0.00	0.05	0.01	0.00	0.00	0.03	0.00	1.27	0.06	0.02	0.00
23	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00
24	0.34	0.47	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.16	0.00
25	0.02	0.04	0.00	0.00	0.03	0.00	0.00	0.44	0.00	0.11	0.00	0.00
26	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.00	0.00
27	0.00	0.20	0.00	0.00	0.00	0.00	0.56	0.01	0.00	0.02	0.00	0.00
28	0.00	0.03	0.00	0.00	0.00	0.05	0.40	0.00	0.00	0.06	0.00	0.07
29	0.00	0.05	0.00	0.00	---	0.00	0.01	0.47	0.00	0.02	0.00	0.18
30	0.10	0.11	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.01	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	2.53	1.31	0.89	0.36	1.14	1.06	3.68	2.11	3.89	2.13	3.83	2.81

STREAMS TRIBUTARY TO LAKE MICHIGAN

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434802087573000 OTTER CREEK RAIN GAGE #1 NEAR PLYMOUTH, WI

LOCATION.--Lat 43°48'02", long 87°57'30", in SE ¼ NW ¼ sec.2, T.15 N., R.21 E., Sheboygan County, Hydrologic Unit 04030101, on Green Tree Road, 0.45 mi east of junction with CTH E, near Plymouth.

PERIOD OF RECORD.--January 1991 to September 2002 (discontinued); non-frozen precipitation.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Jan. 9, 1991. Rainfall estimated to be 0.00 for Jan. 14-15, 22, and Feb. 10 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.84 in., Aug. 6, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.73 in., Aug. 21.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.13	0.02	0.00	0.00	0.66
3	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.97	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.09	0.00
5	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.00
8	0.11	0.05	0.00	0.00	0.00	0.34	0.62	0.00	0.00	1.42	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.29	0.05	0.16	0.00	0.00	0.00	0.00
10	0.06	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.15	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.52	0.00	0.00	0.00
12	0.25	0.00	0.39	0.00	0.00	0.00	0.02	0.14	0.00	0.00	0.58	0.00
13	0.51	0.01	0.06	0.01	0.00	0.00	0.00	0.00	0.03	0.00	0.21	0.00
14	0.04	0.00	0.00	0.28	0.00	0.02	0.05	0.00	0.16	0.00	0.01	0.04
15	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.03	0.00	0.18	0.00	0.03	0.00	0.00	0.00	0.08	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
18	0.00	0.03	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.11
19	0.00	0.14	0.00	0.00	0.58	0.06	0.00	0.00	0.00	0.00	0.17	0.98
20	0.21	0.00	0.00	0.00	0.40	0.18	0.00	0.00	0.00	0.00	0.00	0.51
21	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.20	0.00	1.73	0.00
22	0.76	0.00	0.04	0.02	0.00	0.00	0.02	0.00	0.94	0.05	0.03	0.00
23	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00
24	0.32	0.43	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.15	0.00
25	0.01	0.02	0.00	0.00	0.01	0.00	0.00	0.42	0.00	0.01	0.00	0.00
26	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.11	0.00	0.00
27	0.00	0.25	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.01	0.00	0.00
28	0.00	0.04	0.00	0.00	0.00	0.04	0.45	0.00	0.00	0.01	0.00	0.01
29	0.00	0.05	0.00	0.00	---	0.00	0.01	0.49	0.00	0.00	0.00	0.16
30	0.07	0.13	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.01	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	2.39	1.31	0.89	0.39	1.07	0.93	3.51	2.10	3.25	1.61	3.08	2.47

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI

LOCATION.--Lat 43°47'20", long 87°55'20", in NW ¼ NW ¼ sec.7, T.15 N., R.22 E., Sheboygan County, Hydrologic Unit 04030101, on left bank downstream from bridge on Willow Road, 900 ft upstream from the Sheboygan River, and 4.2 mi northeast of Plymouth.

DRAINAGE AREA.--9.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1990 to September 2002 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 760 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	5.3	8.3	e3.5	e4.3	e8.5	6.8	11	4.2	2.7	2.1	2.2
2	3.8	5.0	6.8	e3.4	e4.2	e6.5	7.9	18	4.1	2.7	2.1	2.6
3	3.4	4.6	6.3	e3.3	e4.0	e6.0	8.7	13	12	2.6	2.1	2.8
4	3.3	4.5	5.8	e3.4	e3.8	e5.8	7.9	9.5	14	2.5	2.4	2.5
5	3.5	4.2	6.5	e3.7	e3.6	e5.6	6.8	7.6	11	2.5	2.2	2.4
6	3.5	4.2	7.6	e3.6	e3.8	e5.4	6.0	7.5	7.6	2.5	2.1	2.4
7	3.2	4.1	6.1	e3.5	e4.1	e5.2	7.9	7.2	6.0	2.5	2.0	2.3
8	3.4	4.1	5.8	e3.3	e4.3	e9.0	22	6.6	5.2	5.8	2.0	2.3
9	3.6	4.0	5.4	e3.7	e5.0	53	43	7.4	5.1	9.4	1.9	2.2
10	3.8	3.9	5.1	e4.0	e7.0	e36	21	6.3	4.9	6.0	1.9	2.1
11	3.8	3.7	4.5	e3.7	e5.4	20	14	6.1	7.8	4.6	1.9	2.1
12	4.5	3.7	4.6	e3.6	e5.2	17	12	11	7.0	3.8	2.0	2.1
13	6.2	3.7	12	e3.5	e5.1	21	10	9.9	6.0	3.5	2.6	2.0
14	9.2	3.7	8.8	e3.6	e5.5	20	8.5	7.8	5.7	3.2	2.5	2.1
15	6.9	3.7	6.6	e3.7	e6.0	16	8.0	6.5	5.8	3.1	2.3	2.2
16	5.6	3.7	7.5	e3.6	6.8	13	7.1	5.9	5.0	2.7	2.1	2.2
17	5.0	3.7	9.0	e3.6	6.3	11	6.3	5.7	4.6	2.6	2.1	2.0
18	4.7	3.7	7.4	e3.5	6.4	11	6.6	5.3	4.0	2.6	2.0	2.2
19	4.6	4.4	6.4	e3.4	19	10	17	5.0	3.8	2.5	2.1	3.8
20	3.7	4.2	5.6	e3.3	37	14	13	4.8	3.5	2.5	2.0	3.6
21	4.2	4.0	e4.7	e3.5	30	13	9.7	4.7	3.7	2.6	3.0	3.6
22	4.8	3.9	e4.6	e3.7	e18	e11	9.7	4.5	14	2.6	5.8	3.0
23	18	3.9	e5.0	e3.8	13	e8.6	8.4	4.1	12	2.6	4.4	2.7
24	15	7.4	e4.9	4.1	13	6.8	7.2	4.1	7.0	2.3	3.7	2.6
25	14	8.6	e4.7	4.4	14	e6.4	7.2	5.4	5.0	2.3	3.4	2.5
26	9.2	6.9	e4.5	4.9	11	e5.9	6.1	5.8	4.1	2.5	3.0	2.4
27	6.9	8.8	e4.2	5.4	e11	5.4	6.9	4.8	3.7	2.6	2.8	2.5
28	6.1	8.2	e4.0	5.7	e10	6.1	39	4.4	3.4	2.5	2.6	2.5
29	5.5	7.9	e3.8	4.9	---	6.7	23	6.8	3.2	2.3	2.5	2.6
30	5.1	8.8	e3.7	e4.2	---	7.2	15	6.0	3.0	2.3	2.4	2.4
31	5.4	---	e3.6	e4.2	---	7.1	---	5.0	---	2.2	2.4	---
TOTAL	183.9	150.5	183.8	119.7	266.8	378.2	372.7	217.7	186.4	97.1	78.4	74.9
MEAN	5.932	5.017	5.929	3.861	9.529	12.20	12.42	7.023	6.213	3.132	2.529	2.497
MAX	18	8.8	12	5.7	37	53	43	18	14	9.4	5.8	3.8
MIN	3.2	3.7	3.6	3.3	3.6	5.2	6.0	4.1	3.0	2.2	1.9	2.0
CFSM	0.62	0.53	0.62	0.41	1.00	1.28	1.31	0.74	0.65	0.33	0.27	0.26
IN.	0.72	0.59	0.72	0.47	1.04	1.48	1.46	0.85	0.73	0.38	0.31	0.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)

	2001	2002	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	3.250	4.631	4.620	4.410	7.999	13.62	13.30	6.216	7.786	4.603	3.813	3.341
MAX	5.93	8.67	11.5	8.15	13.9	25.4	35.6	9.77	17.3	12.9	11.4	8.99
(WY)	2002	1993	1992	1999	1994	1993	1993	1999	1996	1993	2001	2000
MIN	2.11	2.47	2.34	2.63	2.09	6.35	6.24	3.60	2.39	2.18	2.15	1.58
(WY)	1995	1998	1998	2000	1995	2000	1997	1992	1994	1995	1996	1995

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1991 - 2002

ANNUAL TOTAL	3031.3	2310.1	6.445
ANNUAL MEAN	8.305	6.329	10.9
HIGHEST ANNUAL MEAN			3.41
LOWEST ANNUAL MEAN			186
HIGHEST DAILY MEAN	110	Apr 11	Mar 31 1998
LOWEST DAILY MEAN	2.0	Jul 16	1.3 Sep 15 1995
ANNUAL SEVEN-DAY MINIMUM	2.1	Jul 14	1.4 Sep 11 1995
MAXIMUM PEAK FLOW		97	Mar 9 261
MAXIMUM PEAK STAGE		6.20	Mar 9 (a)8.26
INSTANTANEOUS LOW FLOW		1.6	(b)Aug 7 1.3 (c)Sep 14 1995
ANNUAL RUNOFF (CFSM)	0.87	0.67	0.68
ANNUAL RUNOFF (INCHES)	11.87	9.05	9.22
10 PERCENT EXCEEDS	15	12	12
50 PERCENT EXCEEDS	5.5	4.6	3.7
90 PERCENT EXCEEDS	2.6	2.4	2.1

(a) Backwater from ice

(b) Also occurred Aug. 8-9, 11-12

(c) Also occurred Sept. 15-18, Oct. 2, 1995, Oct. 20-21, 1996, and Sept. 11, 22, 1998

(e) Estimated due to ice effect or missing record

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1990 to September 2002 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1990 to September 2002.
 DISSOLVED OXYGEN: October 1990 to October 1997, open-water periods.
 SUSPENDED-SOLIDS DISCHARGE: October 1990 to September 1997, August 1999 to September 2002.
 TOTAL-PHOSPHORUS DISCHARGE: October 1990 to September 1997, August 1999 to September 2002.

INSTRUMENTATION.--Continuous water-temperature recorder since October 1990.

REMARKS.--Chemical analyses are by the Wisconsin State Laboratory of Hygiene. Samples are equal-width increment (EWI) samples unless otherwise indicated. Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 31.5°C, Aug. 12, 2000; minimum observed, 0.0°C, many days during winter period.
 DISSOLVED OXYGEN: Maximum observed, 20.0 mg/L, May 25-28, 1996; minimum observed, 0.2 mg/L, Sept. 18, 1992.
 SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 140 tons, Apr. 11, 2001; minimum daily, 0.01 ton, many days during 1992, 1993 and 2002 water years.
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 647 lb, Apr. 11, 2001; minimum daily, 0.19 lb, Oct. 9-10, 1996.

EXTREMES FOR CURRENT PERIOD.--

WATER TEMPERATURE: Maximum observed, 29.0°C, July 1; minimum observed, 0.0°C, many days during winter period.
 SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 23 tons, Mar. 9; minimum daily, 0.01 ton, many days.
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 133 lb, Mar. 9; minimum daily, 0.62 lb, Aug. 9.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.1	12.4	14.4	11.8	9.6	10.6	6.5	4.5	5.8	0.0	0.0	0.0
2	17.8	11.6	14.7	11.5	8.1	9.9	6.4	4.4	5.3	0.0	0.0	0.0
3	17.5	13.8	15.5	10.7	6.4	8.4	7.9	4.9	6.3	0.0	0.0	0.0
4	14.8	12.7	13.8	10.2	6.5	8.2	9.6	6.8	8.2	0.0	0.0	0.0
5	12.7	9.7	11.3	9.2	4.8	6.9	12.5	8.9	10.4	0.0	0.0	0.0
6	10.3	6.9	8.6	10.7	5.4	8.1	9.4	5.3	6.6	0.0	0.0	0.0
7	10.8	5.2	7.8	10.0	8.4	9.0	5.8	4.0	4.9	0.0	0.0	0.0
8	12.5	7.1	9.8	9.5	5.6	8.4	5.7	3.1	4.6	0.0	0.0	0.0
9	14.1	11.0	12.4	7.9	4.3	6.1	4.0	1.6	2.8	0.0	0.0	0.0
10	15.0	12.8	13.8	8.8	5.4	7.0	4.7	1.7	3.0	0.5	0.0	0
11	15.0	11.1	12.9	8.0	5.0	6.4	4.6	1.6	3.1	2.2	0.5	1.3
12	12.4	11.2	11.8	7.9	3.7	5.8	5.7	3.2	4.5	1.6	0.4	1.2
13	12.6	10.5	11.7	8.4	5.5	7.1	5.6	3.4	4.7	1.5	0.0	0.7
14	13.6	10.7	12.2	10.9	8.4	9.8	3.7	2.2	3.2	1.9	0.7	1.4
15	11.8	9.1	10.4	13.7	10.7	11.9	4.2	1.7	2.9	2.6	0.7	1.6
16	11.4	8.1	9.7	11.2	6.9	9.3	5.7	4.2	5.1	1.5	0.0	0.8
17	10.7	6.4	8.4	10.2	5.7	7.8	5.7	3.9	5.1	0.0	0.0	0.0
18	10.6	6.9	8.7	10.5	7.4	9.1	5.3	2.8	4.0	0.0	0.0	0.0
19	11.6	7.8	9.6	10.6	5.1	8.3	4.1	1.1	3.3	0.0	0.0	0.0
20	11.1	8.1	9.7	6.1	3.6	4.9	2.0	0.0	0.9	0.1	0.0	0.0
21	12.6	9.4	10.6	7.4	3.7	5.4	2.1	0.0	0.9	0.0	0.0	0.0
22	11.4	7.4	9.6	7.5	4.3	5.9	4.4	1.2	2.9	0.1	0.0	0.0
23	12.1	10.6	11.4	8.3	5.1	6.8	4.4	0.1	1.7	1.6	0.0	0.6
24	12.1	9.7	11.5	9.9	8.1	9.0	0.1	0.0	0.0	3.2	1.0	1.9
25	9.7	6.1	7.4	9.1	6.4	8.1	0.0	0.0	0.0	3.4	0.3	1.7
26	7.0	5.4	6.1	6.9	5.9	6.4	0.0	0.0	0.0	4.5	1.3	2.6
27	8.3	5.4	6.4	7.6	6.4	6.9	0.0	0.0	0.0	5.1	2.0	3.2
28	8.7	4.2	6.5	6.5	5.6	6.1	0.0	0.0	0.0	2.8	1.3	2.2
29	10.4	7.0	8.3	6.4	5.5	6.0	0.0	0.0	0.0	1.3	0.1	0.5
30	8.9	6.9	7.9	7.0	6.1	6.5	0.0	0.0	0.0	1.6	0.0	0.7
31	10.7	8.3	9.5	---	---	---	0.0	0.0	0.0	1.3	0.0	0.6
MONTH	17.8	4.2	10.4	13.7	3.6	7.7	12.5	0.0	3.2	5.1	0.0	0.7

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1.0	0.0	0.1	2.0	0.0	0.6	6.1	1.3	3.7	12.6	8.3	10.1
2	0.1	0.0	0.0	0.0	0.0	0.0	4.6	2.1	3.1	12.1	7.0	9.1
3	1.7	0.0	0.3	0.0	0.0	0.0	6.4	1.1	3.5	15.1	6.1	10.1
4	0.1	0.0	0.0	0.0	0.0	0.0	6.1	1.8	3.7	16.5	6.1	11.1
5	0.1	0.0	0.0	0.0	0.0	0.0	6.7	1.3	4.0	17.9	9.7	13.2
6	0.1	0.0	0.0	0.0	0.0	0.0	9.4	1.0	4.8	18.4	11.0	14.2
7	0.7	0.0	0.1	0.0	0.0	0.0	4.6	2.5	3.8	15.1	10.3	13.0
8	4.3	0.3	1.9	0.4	0.0	0	5.6	3.8	4.6	11.1	8.8	10
9	4.0	1.5	2.3	0.7	0.0	0.3	9.4	3.6	6.0	14.9	9.0	11.7
10	2.5	0.0	1.4	0.2	0.0	0.0	10.2	3.9	6.8	16.2	6.6	11.1
11	0.5	0.0	0.1	3.0	0.1	1.4	10.6	6.1	8.1	11.4	8.3	9.3
12	2.6	0.0	0.8	5.5	0.2	2.3	9.9	7.4	8.9	9.4	7.8	8.5
13	0.7	0.0	0.1	5.6	1.6	3.1	14.8	5.2	9.6	12.8	7.8	10.2
14	3.4	0.0	1.3	3.3	1.5	2.2	14.6	7.0	10.8	17.0	8.1	12.3
15	3.3	1.4	2.2	3.0	1.5	2.3	19.3	9.0	13.8	19.3	8.3	13.7
16	3.9	1.2	2.3	6.7	0.3	3.0	21.8	13.3	17.2	15.3	9.9	13.4
17	4.4	0.2	1.9	5.0	0.9	2.7	22.4	15.6	18.3	11.8	7.4	9.4
18	5.1	0.0	2.4	5.2	2.3	3.5	18.6	12.7	15.7	15.1	6.0	10.2
19	3.2	1.6	2.3	4.8	1.3	3.1	15.4	10.8	13.5	15.5	7.3	10.9
20	2.3	0.6	1.7	4.1	2.0	3.0	14.2	8.6	10.9	12.7	7.1	10.1
21	1.5	0.0	0.8	3.4	0.0	1.3	9.0	5.9	7.3	17.2	6.1	11.3
22	3.2	0.0	1.0	1.6	0.0	0.4	8.7	5.4	6.9	18.7	8.2	13.1
23	3.0	0.1	1.6	6.0	0.0	2.3	13.2	4.6	8.4	19.8	11.5	15.2
24	5.5	1.7	3.2	4.4	0.0	2.0	15.3	6.8	10.4	18.1	11.2	14.3
25	3.2	1.2	2.4	3.2	0.0	1.0	12.9	5.1	8.6	12.0	8.9	9.8
26	1.9	0.0	0.7	5.1	0.0	2.0	14.6	5.0	9.4	19.5	7.9	13.5
27	1.8	0.0	0.5	9.0	0.1	4.1	9.0	6.2	7.1	20.8	13.5	16.8
28	1.4	0.0	0.4	5.6	1.9	3.7	6.5	5.3	5.9	22.9	12.8	17.6
29	---	---	---	7.7	2.5	4.7	11.3	6.1	8.2	20.9	15.1	17.6
30	---	---	---	9.2	2.5	5.3	15.0	6.8	10.6	22.7	15.1	19.1
31	---	---	---	7.5	2.3	4.6	---	---	---	24.2	17.6	20.5
MONTH	5.5	0.0	1.1	9.2	0.0	1.9	22.4	1.0	8.5	24.2	6.0	12.6
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.9	15.8	19.8	29.0	21.9	25.3	26.0	21.2	23.6	22.6	16.8	19.7
2	18.0	13.2	15.6	28.4	22.1	25.2	24.7	19.4	22.2	21.9	17.7	19.8
3	13.2	10.9	12.0	28.1	22.0	25.0	24.1	17.7	21.0	21.8	17.6	19.7
4	15.0	12.6	13.6	26.0	21.2	23.8	23.0	19.6	21.2	22.3	15.8	18.9
5	15.3	13.0	13.8	22.9	17.8	20.3	22.1	19.3	21.0	21.9	15.5	18.6
6	20.9	11.2	15.7	23.3	17.5	20.2	21.4	16.5	18.9	21.1	15.3	18.4
7	22.1	12.9	17.2	26.0	18.7	22.3	21.4	15.6	18.6	23.8	17.4	20.3
8	23.4	15.3	18.8	23.6	20.6	22.1	22.9	16.3	19.5	23.8	17.0	20.3
9	24.8	16.5	20.2	26.2	20.3	22.6	23.4	16.8	20.1	24.7	18.1	21.3
10	24.5	16.7	20.5	22.0	18.7	20.3	23.7	17.1	20.5	22.1	17.4	20.2
11	22.0	18.9	20.3	23.7	16.9	20.0	25.3	18.8	22.1	20.4	14.9	17.5
12	19.1	16.5	17.7	24.1	16.3	20.0	24.8	19.7	22.0	20.1	14.1	17.0
13	19.0	14.9	16.6	24.6	16.6	20.6	22.4	19.6	21.1	20.7	15.0	17.8
14	---	---	---	25.0	17.6	21.3	23.0	18.7	20.6	18.0	16.1	17.2
15	21.9	14.1	17.5	26.3	19.2	22.7	23.5	17.1	20.4	18.1	14.1	16.1
16	21.3	14.1	17.4	26.2	20.2	23.2	23.9	19.1	21.6	18.3	11.9	15.1
17	22.5	14.1	18.0	26.2	20.3	23.3	23.6	19.5	21.3	19.5	13.4	16.4
18	22.4	14.4	18.1	24.1	21.1	22.7	21.7	16.4	19.1	18.6	14.9	16.7
19	19.9	15.1	17.7	25.0	19.6	22.1	21.5	17.3	19.3	20.6	17.2	18.8
20	24.3	17.1	20.5	24.3	17.8	21.3	21.2	15.9	18.6	19.6	17.5	18.7
21	23.3	18.3	20.6	27.6	21.1	24.1	20.4	16.4	18.5	19.0	15.6	17.2
22	22.4	17.5	19.7	25.6	22.0	23.8	20.3	19.2	19.6	16.7	13.6	15.2
23	25.7	19.3	22.3	22.7	18.2	20.6	19.9	18.6	19.2	14.3	11.0	12.8
24	26.6	20.0	23.1	23.2	16.9	19.9	23.8	18.1	20.6	14.9	10.1	12.4
25	27.6	19.8	23.6	21.2	17.6	19.4	23.8	18.8	21.0	16.4	10.6	13.3
26	26.8	20.9	23.6	24.1	18.5	21.2	23.8	16.7	20.1	17.8	12.6	15.0
27	22.9	19.6	21.2	22.2	19.6	20.9	21.2	17.9	19.6	15.4	11.9	13.9
28	25.8	17.9	21.7	26.4	19.4	22.7	22.4	16.5	19.4	15.9	10.2	13.0
29	25.6	19.2	22.3	24.8	21.4	23.1	21.3	15.6	18.4	18.4	13.7	15.7
30	27.6	19.8	23.5	26.8	20.0	23.4	21.6	15.1	18.4	20.3	15.1	17.5
31	---	---	---	26.1	20.4	23.4	22.8	16.6	19.7	---	---	---
MONTH	---	---	---	29.0	16.3	22.2	26.0	15.1	20.2	24.7	10.1	17.1

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--Continued

SOLIDS, RESIDUE AT 105 DEG C, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	0.08	0.34	0.05	0.11	0.27	0.19	0.34	0.08	0.03	0.03	0.03
2	0.03	0.08	0.18	0.05	0.10	0.20	0.22	0.88	0.07	0.03	0.02	0.04
3	0.03	0.07	0.14	0.04	0.09	0.18	0.24	0.44	0.37	0.03	0.02	0.04
4	0.03	0.06	0.11	0.05	0.09	0.17	0.21	0.28	0.52	0.03	0.02	0.03
5	0.03	0.05	0.15	0.05	0.08	0.16	0.18	0.22	0.31	0.03	0.02	0.03
6	0.03	0.05	0.26	0.05	0.09	0.15	0.16	0.21	0.13	0.03	0.01	0.03
7	0.03	0.05	0.10	0.05	0.11	0.14	0.41	0.20	0.10	0.03	0.01	0.03
8	0.03	0.04	0.09	0.04	0.12	1.5	4.7	0.18	0.08	0.99	0.01	0.03
9	0.03	0.04	0.08	0.05	0.15	23	9.5	0.20	0.08	2.0	0.01	0.03
10	0.03	0.04	0.07	0.05	0.23	4.4	1.4	0.17	0.08	0.51	0.01	0.03
11	0.03	0.04	0.05	0.05	0.18	1.3	0.58	0.16	0.15	0.20	0.01	0.03
12	0.06	0.04	0.07	0.05	0.16	1.4	0.36	0.29	0.12	0.11	0.01	0.03
13	0.22	0.04	1.7	0.05	0.15	2.2	0.28	0.25	0.09	0.09	0.02	0.03
14	0.30	0.04	0.29	0.05	0.16	2.0	0.21	0.19	0.08	0.08	0.02	0.03
15	0.17	0.04	0.12	0.05	0.16	1.3	0.18	0.16	0.08	0.07	0.02	0.03
16	0.22	0.04	0.25	0.05	0.17	0.50	0.14	0.14	0.07	0.06	0.02	0.03
17	0.07	0.04	0.47	0.05	0.15	0.42	0.12	0.14	0.06	0.06	0.02	0.03
18	0.05	0.04	0.24	0.05	0.14	0.38	0.17	0.12	0.05	0.06	0.02	0.07
19	0.05	0.05	0.15	0.05	0.86	0.35	2.8	0.12	0.05	0.05	0.02	0.32
20	0.04	0.05	0.08	0.05	8.9	0.47	0.52	0.11	0.05	0.05	0.02	0.18
21	0.05	0.04	0.06	0.06	2.9	0.41	0.18	0.11	0.05	0.05	0.08	0.15
22	0.28	0.04	0.06	0.09	0.88	0.35	0.16	0.10	0.52	0.05	0.70	0.06
23	4.3	0.04	0.07	0.12	0.49	0.27	0.14	0.09	0.37	0.05	0.16	0.04
24	3.3	0.24	0.07	0.17	0.62	0.21	0.12	0.09	0.12	0.04	0.12	0.04
25	2.6	0.39	0.06	0.19	0.72	0.20	0.11	0.11	0.06	0.04	0.10	0.04
26	0.64	0.19	0.06	0.21	0.45	0.18	0.09	0.12	0.05	0.04	0.08	0.04
27	0.14	0.42	0.06	0.25	0.37	0.16	0.16	0.10	0.04	0.04	0.07	0.04
28	0.12	0.33	0.05	0.24	0.33	0.18	6.4	0.09	0.04	0.04	0.06	0.04
29	0.10	0.29	0.05	0.19	---	0.19	0.95	0.13	0.04	0.03	0.05	0.04
30	0.09	0.42	0.05	0.14	---	0.21	0.47	0.11	0.03	0.03	0.05	0.04
31	0.09	---	0.05	0.12	---	0.20	---	0.09	---	0.03	0.04	---
TOTAL	13.22	3.38	5.58	2.76	18.96	43.05	31.35	5.94	3.94	4.98	1.85	1.63

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.7	5.1	1.1	1.4	3.0	2.1	3.5	1.3	1.2	1.1	1.1
2	1.0	1.6	3.2	1.1	1.3	2.2	2.9	10	1.3	1.2	0.99	1.2
3	0.91	1.5	2.6	1.0	1.2	2.0	3.4	5.6	4.8	1.1	0.92	1.3
4	0.89	1.4	2.1	1.1	1.2	1.8	2.6	2.8	6.4	1.0	0.97	1.1
5	0.94	1.3	2.8	1.1	1.1	1.7	2.1	2.2	4.1	0.98	0.86	1.0
6	0.94	1.3	4.1	1.1	1.2	1.6	1.9	2.2	2.4	0.91	0.75	1.0
7	0.89	1.2	2.0	1.1	1.3	1.4	5.1	2.1	1.9	0.86	0.67	0.99
8	0.93	1.2	1.9	1.0	1.4	11	30	1.9	1.6	4.2	0.65	0.98
9	1.0	1.2	1.8	1.1	1.7	133	64	2.1	1.6	6.3	0.63	0.94
10	1.1	1.1	1.7	1.2	2.5	51	14	1.7	1.5	3.1	0.63	0.90
11	1.1	1.1	1.5	1.1	1.9	19	6.3	1.6	2.8	3.0	0.62	0.90
12	1.3	1.1	1.6	1.1	1.8	14	4.7	3.0	2.4	2.9	0.67	0.89
13	5.6	1.1	17	1.1	1.7	20	3.8	2.7	1.9	2.7	1.1	0.87
14	11	1.1	4.2	1.1	1.9	18	3.1	2.1	1.8	2.5	1.3	0.91
15	3.6	1.1	2.8	1.1	2.0	8.5	2.8	1.8	1.8	2.3	1.1	0.93
16	2.0	1.1	4.0	1.1	2.2	6.0	2.4	1.6	1.6	2.0	1.0	0.92
17	1.5	1.1	6.4	1.1	2.0	4.5	2.1	1.6	1.4	1.9	0.94	0.87
18	1.4	1.1	3.9	1.0	2.2	3.8	2.6	1.5	1.2	1.8	0.83	1.1
19	1.4	1.3	2.7	1.0	15	3.7	18	1.4	1.2	1.8	0.83	4.4
20	1.1	1.2	1.9	0.97	68	6.6	5.7	1.4	1.1	1.7	0.76	3.8
21	1.3	1.2	1.5	1.1	41	5.2	3.1	1.4	1.2	1.8	1.3	2.9
22	3.3	1.1	1.5	1.3	14	4.0	2.9	1.3	8.4	1.7	5.5	1.8
23	40	1.1	1.6	1.5	5.9	3.0	2.3	1.2	6.3	1.7	3.0	1.4
24	35	3.8	1.6	1.8	8.3	2.3	1.8	1.2	2.4	1.5	2.4	1.2
25	30	5.6	1.5	1.9	9.5	2.1	1.7	1.6	2.4	1.5	2.1	1.0
26	11	3.3	1.4	2.0	6.1	1.9	1.6	1.7	2.0	1.5	1.8	0.94
27	2.5	5.9	1.3	2.0	5.2	1.7	2.4	1.4	1.8	1.6	1.7	0.95
28	2.1	5.0	1.3	2.0	3.7	1.9	50	1.3	1.6	1.4	1.5	0.95
29	1.9	4.6	1.2	1.6	---	2.1	14	2.1	1.5	1.3	1.4	0.97
30	1.7	5.9	1.2	1.4	---	2.3	6.0	1.9	1.4	1.3	1.3	0.88
31	1.8	---	1.1	1.3	---	2.3	---	1.5	---	1.2	1.2	---
TOTAL	170.30	62.3	88.5	39.47	206.7	341.6	265.4	69.4	73.1	59.95	40.52	39.09

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C., SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)
OCT 2001								
03...	0922	3.5	10	3	<.013	.050	<2.0	1200
11...	1542	3.7	10	3	.021	.052	<2.0	580
12...	1200	5.0	50	5	<.013	.055	--	--
13...	2130	11	50	34	.281	.397	--	--
14...	0930	9.2	50	9	.120	.206	--	--
15...	2130	6.4	50	9	.032	.071	--	--
17...	0930	5.0	50	4	.019	.056	--	--
22...	2300	12	50	87	.046	.361	--	--
23...	0035	19	50	170	.218	.704	--	--
23...	0235	27	50	210	.105	.574	--	--
23...	1405	16	50	30	.045	.324	--	--
24...	0205	13	50	18	.032	.153	--	--
24...	1000	12	10	9	.042	.124	--	5400
NOV								
08...	1104	4.2	10	4	.044	.054	<2.0	280
28...	0946	8.4	10	13	.161	.124	<2.0	1900
DEC								
13...	0020	6.9	50	35	.120	.151	2.5	3200
13...	0305	13	50	122	.355	.504	9.6	71000
13...	1555	11	50	29	.155	.197	2.6	5500
13...	1556	11	10	29	.155	.194	2.3	8400
JAN 2002								
24...	1306	4.0	10	16	.130	.084	<2.0	90
FEB								
20...	0905	29	50	45	.654	.329	--	--
20...	1415	38	50	156	.279	.390	--	--
20...	1940	50	50	123	.262	.383	--	--
21...	0610	33	50	35	.244	.260	--	--
21...	1810	26	50	23	.153	.224	--	--
MAR								
08...	0555	12	50	14	.079	.060	--	--
09...	0700	30	50	144	.441	.417	--	--
09...	0940	52	50	281	.463	.611	--	--
09...	1055	65	50	344	.408	.667	--	--
09...	1235	81	50	305	.427	.623	--	--
09...	1355	94	50	--	.393	.553	--	--
09...	2240	53	50	31	.274	.300	--	--
10...	1620	39	50	57	.215	.257	--	--
11...	1334	18	10	20	.159	.165	<2.0	120
11...	1335	18	50	18	.148	.166	--	--
20...	1032	14	70	12	.182	.090	<2.0	790
APR								
04...	1644	7.9	10	10	.016	.059	2.9	190
07...	2355	15	50	48	.383	.294	--	--
08...	1155	18	50	19	.152	.112	--	--
08...	2140	36	50	131	.064	.291	--	--
08...	2300	47	50	221	.185	.530	--	--
09...	0155	61	50	190	.243	.450	--	--
09...	1110	42	50	38	.072	.205	--	--
11...	1800	13	50	13	.015	.068	2.1	--
11...	1802	14	10	12	.026	.073	2.2	600
18...	2205	7.1	50	15	.206	.093	--	--
19...	0050	14	50	79	.150	.293	--	--
19...	0240	22	50	119	.297	.339	--	--
19...	1440	17	50	37	.068	.133	--	--
20...	1440	12	50	12	.031	.073	--	--
21...	1440	9.5	50	6	.041	.058	--	--
25...	0956	7.1	10	6	<.013	.043	<2.0	410
27...	1850	7.1	50	5	.039	.052	--	--
28...	0225	22	50	79	.143	.258	--	--
28...	1010	53	50	93	.101	.321	--	--
28...	1915	36	50	28	.024	.167	--	--
29...	1330	22	50	12	.021	.092	--	--
29...	1332	22	10	12	.020	.096	--	800
JUL								
02...	1024	2.9	10	4	<.013	.083	<2.0	--
08...	1740	3.5	50	73	.025	.159	--	--
08...	1905	7.9	50	109	.028	.379	--	--
08...	1945	16	50	97	.016	.159	--	--
09...	0755	9.5	50	79	.022	.144	--	--
09...	2000	7.1	50	76	.021	.084	--	--
12...	1220	3.8	10	10	<.013	.147	<2.0	1600
16...	1855	2.6	10	32	.048	.154	2.4	7500
24...	1111	2.4	10	61	.021	.147	4.3	1200
31...	1148	2.1	10	5	.030	.104	<2.0	1440

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
AUG 2002								
07...	1206	2.1	10	2	.018	.061	<2.0	800
14...	1336	2.5	10	3	.027	.097	<2.0	4200
21...	0820	2.5	10	140	.027	.115	<3.0	1100
21...	2110	6.9	50	10	.045	.104	--	--
22...	0910	5.5	50	58	.102	.221	--	--
22...	2110	5.0	50	16	.094	.158	--	--
23...	0910	4.4	50	13	.077	.123	--	--
28...	1120	2.6	10	33	.019	.115	<2.0	4100
SEP								
05...	1135	2.5	10	4	.040	.081	<2.0	2000
12...	1255	2.1	10	5	.030	.079	<2.0	2000
18...	1050	2.2	10	14	.048	.100	<2.0	5200
19...	1510	6.1	50	48	1.16	.269	--	--
20...	0310	3.2	50	19	.092	.213	--	--
20...	1510	3.7	50	11	.061	.162	--	--
21...	0310	4.2	50	20	.071	.170	--	--
22...	1515	2.9	50	6	.022	.101	--	--
26...	1044	2.6	10	6	.026	.071	<2.0	1400

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--Continued

PRECIPITATION QUANTITY

PERIOD OF RECORD.--October 1990 to September 2002 (discontinued); non-frozen precipitation.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Oct. 1, 1990. Rainfall estimated to be 0.00 for Jan. 14-16, Feb. 10 and Apr. 1 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 5.41 in., Aug. 6, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.90 in., July 8.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.31	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.14	0.01	0.00	0.00	0.72
3	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.95	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.42	0.00
5	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.00
8	0.09	0.02	0.01	0.00	0.00	0.29	0.66	0.01	0.00	1.90	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.28	0.07	0.19	0.00	0.00	0.00	0.00
10	0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.69	0.00	0.00	0.00
12	0.24	0.00	0.38	0.00	0.01	0.00	0.00	0.10	0.00	0.00	0.41	0.00
13	0.58	0.01	0.07	0.05	0.00	0.00	0.00	0.00	0.04	0.00	0.12	0.00
14	0.03	0.00	0.00	0.35	0.00	0.01	0.03	0.00	0.19	0.00	0.01	0.04
15	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
16	0.02	0.00	0.12	0.02	0.03	0.00	0.00	0.02	0.09	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.02	0.00
18	0.00	0.02	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.08
19	0.01	0.11	0.00	0.00	0.48	0.09	0.00	0.00	0.00	0.00	0.07	1.39
20	0.18	0.00	0.00	0.00	0.34	0.17	0.00	0.00	0.00	0.00	0.00	0.15
21	0.01	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.21	0.00	1.21	0.01
22	0.73	0.00	0.03	0.00	0.00	0.00	0.02	0.00	0.87	0.02	0.02	0.00
23	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
24	0.32	0.32	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.14	0.00
25	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.41	0.00	0.15	0.01	0.00
26	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.26	0.00	0.00
27	0.00	0.17	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.02	0.00	0.00
28	0.00	0.03	0.00	0.00	0.00	0.04	0.53	0.00	0.00	0.04	0.00	0.01
29	0.00	0.04	0.00	0.00	---	0.02	0.00	0.56	0.00	0.03	0.00	0.17
30	0.07	0.13	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	2.31	0.98	0.78	0.44	0.98	0.91	3.10	2.10	3.33	2.42	2.53	2.57

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085746 MULLET RIVER AT OLD WADE HOUSE AT GREENBUSH, WI

LOCATION.--Lat 43°46'39", long 88°05'07", in SE ¼ SE ¼ sec.10, T.15 N., R.20 E., Sheboygan County, Hydrologic Unit 04030101, on right bank about 300 ft upstream of Plank Road bridge in Greenbush, located in Old Wade House Historic site.

DRAINAGE AREA.--24.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 963.96 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Flow partly regulated by sawmill at Old Wade House, May-September. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	19	19	6.1	6.9	21	24	30	7.5	9.4	2.3	2.0
2	9.4	18	18	5.4	7.4	12	25	34	6.7	8.8	1.9	2.9
3	9.4	18	17	4.9	7.1	12	26	33	12	7.9	1.7	4.7
4	9.7	17	17	4.7	6.5	11	26	30	16	6.7	3.3	3.8
5	9.6	17	17	5.0	6.1	10	25	27	16	5.7	2.9	3.1
6	9.1	17	17	5.0	5.7	9.9	23	25	16	5.0	2.4	2.6
7	8.5	16	16	4.8	5.8	9.2	24	22	15	4.4	2.1	2.0
8	8.3	15	15	4.6	6.0	e14	32	20	14	5.8	1.9	1.7
9	8.1	13	15	5.0	6.8	e37	46	20	12	12	1.6	1.6
10	7.9	12	14	5.5	7.9	e50	51	18	10	11	1.3	2.1
11	7.8	11	13	6.0	7.3	e51	53	17	10	9.2	1.2	2.2
12	7.5	10	13	6.3	7.3	e49	54	20	9.3	8.5	1.8	1.8
13	7.5	9.6	16	6.1	6.6	e46	54	19	8.2	8.5	4.4	1.7
14	8.8	9.4	15	6.6	7.0	e40	52	18	8.2	7.8	7.0	1.6
15	7.9	8.5	15	6.6	7.4	e38	49	17	8.4	6.6	5.5	1.6
16	7.7	7.7	15	6.5	7.7	e38	45	16	7.9	5.8	4.5	1.4
17	9.1	7.7	16	6.0	7.5	e34	41	15	7.3	4.9	3.8	1.7
18	9.3	8.0	15	6.0	7.6	e32	38	15	7.9	4.4	2.8	1.7
19	8.5	9.1	15	5.5	18	e30	42	14	7.8	3.8	1.7	3.1
20	8.0	8.9	13	5.2	33	e38	38	13	7.6	3.4	1.8	4.2
21	8.5	8.8	12	5.2	34	e36	35	12	8.7	3.3	2.5	3.9
22	8.5	8.6	14	5.4	28	e35	34	11	17	3.4	6.0	2.9
23	15	8.6	14	6.0	35	28	31	9.7	15	2.9	4.9	2.4
24	18	10	11	6.6	42	30	29	8.8	12	2.6	4.9	2.2
25	23	12	14	6.7	41	26	27	10	11	2.4	6.2	2.0
26	19	11	14	7.3	34	22	24	11	12	3.8	3.6	2.3
27	16	13	12	8.4	23	22	23	10	12	5.1	3.1	2.2
28	17	15	11	9.2	20	23	34	9.2	12	5.0	3.0	2.2
29	18	17	9.5	8.2	---	22	33	11	12	4.4	2.8	2.6
30	18	18	8.0	7.9	---	23	31	10	11	3.5	2.5	2.5
31	19	---	6.8	7.7	---	23	---	8.8	---	2.8	2.3	---
TOTAL	351.8	373.9	437.3	190.4	432.6	872.1	1069	534.5	330.5	178.8	97.7	72.7
MEAN	11.35	12.46	14.11	6.142	15.45	28.13	35.63	17.24	11.02	5.768	3.152	2.423
MAX	23	19	19	9.2	42	51	54	34	17	12	7.0	4.7
MIN	7.5	7.7	6.8	4.6	5.7	9.2	23	8.8	6.7	2.4	1.2	1.4
CFSM	0.47	0.51	0.58	0.25	0.64	1.16	1.47	0.71	0.45	0.24	0.13	0.10
IN.	0.54	0.57	0.67	0.29	0.66	1.34	1.64	0.82	0.51	0.27	0.15	0.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	2001	2002	2002	2002	2002	2002	2002	2002	2001	2002	2002	
MEAN	11.35	12.46	14.11	6.142	15.45	28.13	35.63	17.24	13.68	4.677	5.769	7.238
MAX	11.3	12.5	14.1	6.14	15.5	28.1	35.6	17.2	16.3	5.77	8.39	12.1
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2001	2002	2001	2001
MIN	11.3	12.5	14.1	6.14	15.5	28.1	35.6	17.2	11.0	3.59	3.15	2.42
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 2001 - 2002

ANNUAL TOTAL	4941.3	
ANNUAL MEAN	13.54	13.54
HIGHEST ANNUAL MEAN		13.5 2002
LOWEST ANNUAL MEAN		13.5 2002
HIGHEST DAILY MEAN	54	Apr 12 2002
LOWEST DAILY MEAN	1.2	Aug 11 2002
ANNUAL SEVEN-DAY MINIMUM	1.6	Sep 12 Aug 9 2001
MAXIMUM PEAK FLOW	56	Apr 12 2002
MAXIMUM PEAK STAGE	4.30	Apr 12 2002
ANNUAL RUNOFF (CFSM)	0.56	0.56
ANNUAL RUNOFF (INCHES)	7.56	7.57
10 PERCENT EXCEEDS	32	32
50 PERCENT EXCEEDS	9.4	9.4
90 PERCENT EXCEEDS	2.6	2.6

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085746 MULLET RIVER AT OLD WADE HOUSE AT GREENBUSH, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	11.5	10.0	11.0
2	---	---	---	---	---	---	---	---	---	11.0	8.0	9.5
3	---	---	---	---	---	---	---	---	---	12.5	7.0	9.5
4	---	---	---	---	---	---	---	---	---	14.0	8.0	11.0
5	---	---	---	---	---	---	---	---	---	16.5	11.5	13.5
6	---	---	---	---	---	---	---	---	---	18.0	13.0	15.0
7	---	---	---	---	---	---	---	---	---	16.5	13.5	15.0
8	---	---	---	---	---	---	---	---	---	13.5	11.0	12.0
9	---	---	---	---	---	---	---	---	---	14.5	11.5	12.5
10	---	---	---	---	---	---	---	---	---	14.5	9.0	12.0
11	---	---	---	---	---	---	---	---	---	12.5	9.0	10.5
12	---	---	---	---	---	---	---	---	---	9.0	8.0	8.5
13	---	---	---	---	---	---	---	---	---	10.5	7.5	9.0
14	---	---	---	---	---	---	---	---	---	14.5	8.5	11.5
15	---	---	---	---	---	---	---	---	---	17.0	10.0	13.5
16	---	---	---	---	---	---	---	---	---	15.5	12.0	14.0
17	---	---	---	---	---	---	---	---	---	12.0	10.0	11.0
18	---	---	---	---	---	---	---	---	---	12.5	7.5	10.0
19	---	---	---	---	---	---	---	---	---	12.5	8.5	10.5
20	---	---	---	---	---	---	---	---	---	12.0	8.5	10.0
21	---	---	---	---	---	---	---	---	---	15.0	7.5	11.0
22	---	---	---	---	---	---	---	---	---	16.5	10.0	13.0
23	---	---	---	---	---	---	---	---	---	18.0	12.5	15.0
24	---	---	---	---	---	---	---	---	---	16.5	13.0	14.5
25	---	---	---	---	---	---	---	---	---	13.5	9.5	11.0
26	---	---	---	---	---	---	---	---	---	17.0	8.5	12.5
27	---	---	---	---	---	---	---	---	---	18.5	13.5	16.0
28	---	---	---	---	---	---	---	---	---	20.5	14.0	17.0
29	---	---	---	---	---	---	---	---	---	19.5	16.0	17.5
30	---	---	---	---	---	---	---	---	---	21.5	16.5	19.0
31	---	---	---	---	---	---	---	---	---	22.5	18.0	20.0
MONTH	---	---	---	---	---	---	---	---	---	22.5	7.0	12.8
	JUNE			JULY			AUGUST			SEPTEMBER		
1	23.0	17.0	20.0	27.5	23.0	25.0	26.0	23.0	24.5	---	---	---
2	19.5	15.0	17.0	27.5	23.5	25.5	24.5	21.0	23.0	---	---	---
3	15.0	12.0	12.5	27.0	23.5	25.5	24.0	19.5	21.5	---	---	---
4	14.0	12.0	13.0	26.5	23.0	25.0	23.5	21.0	22.0	---	---	---
5	14.5	12.5	13.5	23.5	20.0	22.0	22.5	20.0	22.0	---	---	---
6	17.5	11.5	14.5	23.0	19.5	21.5	21.0	17.5	19.5	---	---	---
7	19.5	14.0	16.5	25.5	20.5	23.0	20.0	16.0	18.5	---	---	---
8	20.5	16.5	18.5	24.5	22.0	23.5	21.5	17.0	19.0	---	---	---
9	22.0	18.0	20.0	24.5	21.0	22.5	23.0	18.0	20.5	---	---	---
10	22.5	18.5	20.5	22.5	19.5	21.0	23.5	19.0	21.5	---	---	---
11	21.5	20.0	20.5	22.0	18.5	20.0	25.5	20.5	23.0	---	---	---
12	20.0	17.5	18.5	22.5	17.5	20.0	26.0	21.5	23.0	---	---	---
13	18.0	16.0	17.0	23.0	18.0	20.5	23.0	20.5	21.5	---	---	---
14	18.5	16.0	17.0	24.0	19.0	21.5	21.5	19.0	20.0	---	---	---
15	19.0	15.0	17.0	25.0	20.5	22.5	22.0	18.0	20.5	---	---	---
16	20.0	15.5	17.5	25.5	21.5	23.5	23.0	19.5	21.5	---	---	---
17	20.5	16.0	18.0	25.5	21.5	23.5	23.5	20.0	21.5	---	---	---
18	20.5	16.0	18.0	25.5	22.5	23.5	21.0	17.5	19.5	---	---	---
19	20.0	17.5	18.5	25.0	21.5	23.0	21.0	18.0	19.5	---	---	---
20	22.0	18.5	20.0	23.5	19.5	22.0	20.0	16.5	18.5	---	---	---
21	21.5	19.0	20.0	27.0	22.5	25.0	20.5	17.5	19.0	---	---	---
22	20.5	18.0	19.5	26.0	23.5	24.5	20.0	18.5	19.5	---	---	---
23	23.5	19.0	21.0	23.5	20.0	22.0	19.0	18.0	18.5	---	---	---
24	24.5	20.5	22.0	22.5	18.5	20.5	21.5	18.0	20.0	---	---	---
25	25.0	21.0	23.0	22.0	19.0	20.5	21.5	18.5	20.0	---	---	---
26	24.5	22.0	23.0	24.0	20.0	22.0	21.0	17.5	19.5	---	---	---
27	23.0	21.0	21.5	22.5	20.5	21.5	20.0	18.0	19.0	---	---	---
28	23.5	19.5	21.5	24.5	20.5	22.5	20.5	17.5	19.0	---	---	---
29	24.0	20.5	22.5	24.5	22.0	23.5	19.5	16.5	18.5	---	---	---
30	26.0	21.5	23.5	25.5	21.0	23.5	19.5	16.0	18.0	---	---	---
31	---	---	---	25.0	22.0	23.5	20.5	17.5	19.0	---	---	---
MONTH	26.0	11.5	18.9	27.5	17.5	22.7	26.0	16.0	20.3	---	---	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085746 MULLET RIVER AT OLD WADE HOUSE AT GREENBUSH, WI--Continued

OXYGEN DISSOLVED, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.9	10.8	11.7	10.5	9.1	9.6	---	---	---	---	---	---
2	12.1	9.8	11.1	11.0	9.0	9.9	---	---	---	---	---	---
3	11.3	9.4	10.0	11.7	9.7	10.5	---	---	---	---	---	---
4	11.0	9.3	10	11.6	9.8	10.7	---	---	---	---	---	---
5	12.4	9.8	10.9	12.3	10.5	11.3	---	---	---	---	---	---
6	12.5	10.8	11.6	11.7	10.1	10.9	---	---	---	---	---	---
7	13.1	11.4	12.1	11.8	10.0	10.7	---	---	---	---	---	---
8	12.8	10.4	11.6	10.8	9.4	10.1	---	---	---	---	---	---
9	11.5	9.3	10.3	12.3	10.5	11.3	---	---	---	---	---	---
10	10.7	8.4	9.2	12.6	10.6	11.4	---	---	---	---	---	---
11	11.4	8.3	9.4	13.2	10.8	12.0	---	---	---	---	---	---
12	11.1	8.7	9.5	13.8	11.7	12.5	---	---	---	---	---	---
13	9.2	7.6	8.6	---	---	---	---	---	---	---	---	---
14	10.3	7.6	8.7	---	---	---	---	---	---	---	---	---
15	10.6	8.5	9.3	---	---	---	---	---	---	---	---	---
16	10.8	8.8	9.7	---	---	---	---	---	---	---	---	---
17	12.0	9.6	10.4	---	---	---	---	---	---	---	---	---
18	11.7	9.8	10.5	---	---	---	---	---	---	---	---	---
19	11.9	9.6	10.4	---	---	---	---	---	---	---	---	---
20	11.7	9.4	10.2	---	---	---	---	---	---	---	---	---
21	11.7	9.0	10.0	---	---	---	---	---	---	---	---	---
22	12.3	9.0	10.2	---	---	---	---	---	---	---	---	---
23	9.6	8.4	8.8	---	---	---	---	---	---	---	---	---
24	8.6	7.6	8.2	---	---	---	---	---	---	---	---	---
25	9.6	7.6	8.7	---	---	---	---	---	---	---	---	---
26	11.1	9.5	10.4	---	---	---	---	---	---	---	---	---
27	12.0	10.6	11.1	---	---	---	---	---	---	---	---	---
28	12.2	10.8	11.4	---	---	---	---	---	---	---	---	---
29	11.9	10.6	11.1	---	---	---	---	---	---	---	---	---
30	11.6	10.3	10.9	---	---	---	---	---	---	---	---	---
31	11.3	9.5	10.4	---	---	---	---	---	---	---	---	---
MONTH	13.1	7.6	10.2	---	---	---	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	10.2	9.2	9.7
2	---	---	---	---	---	---	---	---	---	10.6	9.1	9.9
3	---	---	---	---	---	---	---	---	---	10.9	9.8	10.3
4	---	---	---	---	---	---	---	---	---	10.6	9.3	10.0
5	---	---	---	---	---	---	---	---	---	9.8	8.8	9.3
6	---	---	---	---	---	---	---	---	---	9.2	8.1	8.7
7	---	---	---	---	---	---	---	---	---	13.8	7.8	10.5
8	---	---	---	---	---	---	---	---	---	14.3	8.7	10.9
9	---	---	---	---	---	---	---	---	---	13.7	8.7	10.3
10	---	---	---	---	---	---	---	---	---	10.4	9.3	9.7
11	---	---	---	---	---	---	---	---	---	10.1	9.3	9.8
12	---	---	---	---	---	---	---	---	---	10.3	9.5	9.9
13	---	---	---	---	---	---	---	---	---	10.7	9.9	10.3
14	---	---	---	---	---	---	---	---	---	11.0	9.3	10
15	---	---	---	---	---	---	---	---	---	10.3	8.4	9.5
16	---	---	---	---	---	---	---	---	---	9.4	8.4	8.8
17	---	---	---	---	---	---	---	---	---	10.8	9.1	10.1
18	---	---	---	---	---	---	---	---	---	11.3	10.0	10.6
19	---	---	---	---	---	---	---	---	---	11.3	10.0	10.6
20	---	---	---	---	---	---	---	---	---	11.5	10.1	10.7
21	---	---	---	---	---	---	---	---	---	11.6	9.4	10.6
22	---	---	---	---	---	---	---	---	---	12.7	8.7	10
23	---	---	---	---	---	---	---	---	---	10.7	8.1	9.3
24	---	---	---	---	---	---	---	---	---	11.5	8.1	9.5
25	---	---	---	---	---	---	---	---	---	13.4	9.1	10.5
26	---	---	---	---	---	---	---	---	---	11.3	8.6	10.1
27	---	---	---	---	---	---	---	---	---	10.4	7.9	9.2
28	---	---	---	---	---	---	---	---	---	10.4	7.6	9.0
29	---	---	---	---	---	---	---	---	---	9.7	7.4	8.3
30	---	---	---	---	---	---	---	---	---	10.0	7.2	8.4
31	---	---	---	---	---	---	---	---	---	10.0	7.1	8.1
MONTH	---	---	---	---	---	---	---	---	---	14.3	7.1	9.8

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086600 MILWAUKEE RIVER NEAR CEDARBURG, WI

LOCATION.--Lat 43°16'49", long 87°56'34", in NW ¼ NW ¼ sec.6, T.9 N., R.22 E., Ozaukee County, Hydrologic Unit 04040003, on right bank 60 ft downstream from Pioneer Road bridge, 2.6 mi southeast of Cedarburg, 1.0 mi west of I-43, and 26.25 mi upstream from mouth.

DRAINAGE AREA.--607 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 653.56 ft above NGVD of 1929 (Southeastern Wisconsin Regional Planning Commission bench mark).

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340	470	434	e200	e220	e420	479	766	154	133	120	135
2	307	405	412	e200	e220	e360	498	746	129	124	103	200
3	274	361	396	e200	e220	e260	521	719	279	118	96	410
4	236	332	380	e200	e220	e280	528	621	678	105	113	526
5	216	303	372	e200	e220	e380	514	557	862	99	107	357
6	198	301	384	e200	e220	e480	479	535	842	88	131	259
7	167	285	373	e210	e230	e460	470	543	762	90	124	207
8	147	270	362	e210	e240	e530	715	531	634	125	118	176
9	154	256	345	e210	e240	1100	1520	525	461	317	105	162
10	159	247	325	e210	e250	1520	1740	534	388	465	99	146
11	168	236	302	e210	e280	1650	1650	471	364	397	90	137
12	199	232	289	e210	e290	1450	1460	773	613	331	102	130
13	241	232	352	e210	e290	1310	1280	1040	704	317	247	119
14	302	235	460	e210	e290	1240	1110	931	623	295	291	114
15	354	249	434	e220	e300	1140	987	790	597	264	278	111
16	319	249	418	e220	e320	1020	905	647	518	228	193	111
17	288	234	435	e230	e330	926	799	551	435	195	150	103
18	266	226	449	e230	e330	845	699	491	367	175	116	105
19	245	226	424	e230	e460	767	710	421	302	181	123	134
20	228	227	391	e220	e740	750	696	360	237	231	104	264
21	214	238	324	e210	e1000	765	641	402	222	200	118	286
22	230	236	319	e210	e980	678	664	307	287	171	276	303
23	549	230	330	e210	e940	644	658	264	263	154	414	244
24	857	258	e280	e220	e860	589	613	240	272	143	301	216
25	875	337	e250	e220	e760	513	552	270	245	134	258	193
26	859	368	e170	e220	e660	485	513	384	220	137	219	172
27	789	381	e180	e220	e580	471	474	361	200	140	193	143
28	710	404	e190	e220	e520	499	734	316	178	166	169	126
29	627	416	e190	e220	---	480	995	270	158	170	161	147
30	559	425	e190	e230	---	473	874	249	145	138	151	147
31	514	---	e200	e240	---	485	---	211	---	125	142	---
TOTAL	11591	8869	10360	6650	12210	22970	24478	15826	12139	5956	5212	5883
MEAN	373.9	295.6	334.2	214.5	436.1	741.0	815.9	510.5	404.6	192.1	168.1	196.1
MAX	875	470	460	240	1000	1650	1740	1040	862	465	414	526
MIN	147	226	170	200	220	260	470	211	129	88	90	103
CFSM	0.62	0.49	0.55	0.35	0.72	1.22	1.34	0.84	0.67	0.32	0.28	0.32
IN.	0.71	0.54	0.63	0.41	0.75	1.41	1.50	0.97	0.74	0.37	0.32	0.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2002, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	302.2	444.3	360.5	256.7	443.9	895.5	954.0	500.1	502.0	268.1	217.6	299.0									
MAX	1157	1565	757	406	997	1793	2501	902	1887	767	349	1593									
(WY)	1987	1986	1983	1985	1984	1986	1993	1999	1996	1993	1987	1986									
MIN	99.8	158	120	120	115	417	453	219	89.5	69.7	69.5	108									
(WY)	1998	1998	1990	1994	1995	1995	1994	1988	1988	1988	1988	1994									

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1982 - 2002

ANNUAL TOTAL	174921	142144	
ANNUAL MEAN	479.2	389.4	453.3
HIGHEST ANNUAL MEAN			720
LOWEST ANNUAL MEAN			247
HIGHEST DAILY MEAN	2450	Apr 12	1740
LOWEST DAILY MEAN	86	Aug 14	88
ANNUAL SEVEN-DAY MINIMUM	(e)99	Aug 9	107
MAXIMUM PEAK FLOW			1790
MAXIMUM PEAK STAGE			8.40
INSTANTANEOUS LOW FLOW			81
ANNUAL RUNOFF (CFSM)	0.79		0.64
ANNUAL RUNOFF (INCHES)	10.72		8.71
10 PERCENT EXCEEDS	975		766
50 PERCENT EXCEEDS	370		285
90 PERCENT EXCEEDS	160		135

(a) Also occurred Aug. 12
(e) Estimated due to ice effect or missing record

STREAMS TREIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI
(NATIONAL WATER-QUALITY ASSESSMENT PROGRAM STATION)

LOCATION.--Lat 43°06'00", long 87°54'32", in NE ¼ NE ¼, sec.5, T.7 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, on left bank near northeast limits of Milwaukee in Estabrook Park, 2,000 ft downstream from Port Washington Road bridge and 6.6 mi upstream from mouth.

DRAINAGE AREA.--696 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 564: 1918(M). WSP 924: 1940. WSP 1207: 1936(M). WSP 1337: 1915-17(M), 1918, 1919-21(M), 1922, 1923(M), 1924, 1925-33(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 607.23 ft above NGVD of 1929 (levels by U. S. Army Corps of Engineers). Prior to Apr. 6, 1929, nonrecording gage near present site at different datum. Apr. 6, 1929, to Jan. 8, 1934, nonrecording gage at bridge 0.5 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Occasional regulation caused by recreation dam approximately 1,200 ft upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	320	744	487	e220	e240	e440	518	929	375	252	125	160
2	285	481	477	e220	e240	e380	566	907	344	229	118	412
3	255	445	458	e220	e240	e320	581	869	1680	215	107	491
4	236	403	442	e220	e240	e300	592	801	1290	200	139	486
5	219	374	430	e220	e240	401	581	719	1240	176	124	404
6	207	354	442	e220	e240	502	558	659	1090	165	109	305
7	196	340	446	e230	e250	478	567	669	965	152	117	241
8	181	318	438	e230	e260	541	916	658	825	202	112	207
9	163	301	418	e230	e260	1140	2030	607	671	591	107	185
10	225	290	391	e230	e270	1620	2030	441	650	462	102	167
11	234	276	371	e230	e300	1670	1870	665	627	450	97	154
12	232	267	356	e230	e310	1650	1660	996	567	386	590	147
13	369	281	454	e230	e310	1500	1450	1220	823	345	525	137
14	423	281	486	e230	e310	1380	1260	1160	855	337	437	129
15	394	288	509	e240	e320	1280	1120	988	733	307	243	125
16	382	284	486	e240	e340	1160	1000	843	679	277	209	119
17	341	275	497	e250	e370	1030	911	726	610	239	165	122
18	311	266	500	e250	e390	931	812	650	534	214	143	178
19	292	268	500	e250	e480	851	831	595	457	196	139	291
20	270	257	470	e240	e760	839	791	547	396	197	138	220
21	254	258	427	e230	e1100	830	736	507	559	220	271	271
22	402	266	375	e230	e1000	785	720	471	470	179	651	279
23	723	266	371	e230	e960	695	704	428	455	170	414	258
24	861	348	372	e240	e880	656	679	403	413	150	383	221
25	896	363	261	e240	e780	610	661	539	396	147	296	201
26	871	424	e190	e240	e680	567	661	533	374	202	261	185
27	808	434	e200	e240	e600	529	626	549	349	145	236	173
28	723	443	e210	e240	e540	505	839	492	320	148	216	158
29	656	480	e210	e240	---	503	1090	676	291	201	201	265
30	591	498	e210	e250	---	499	1050	442	268	157	191	172
31	548	---	e220	e260	---	507	---	404	---	135	175	---
TOTAL	12868	10573	12104	7270	12910	25099	28410	21093	19306	7446	7141	6863
MEAN	415.1	352.4	390.5	234.5	461.1	809.6	947.0	680.4	643.5	240.2	230.4	228.8
MAX	896	744	509	260	1100	1670	2030	1220	1680	591	651	491
MIN	163	257	190	220	240	300	518	403	268	135	97	119
CFSM	0.60	0.51	0.56	0.34	0.66	1.16	1.36	0.98	0.92	0.35	0.33	0.33
IN.	0.69	0.57	0.65	0.39	0.69	1.34	1.52	1.13	1.03	0.40	0.38	0.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

MEAN	279.1	349.6	299.7	254.3	396.4	1038	975.8	514.4	413.4	229.7	210.9	268.9
MAX	1316	1956	981	864	2200	3545	3024	1720	2007	1200	2936	2304
(WY)	1987	1986	1929	1916	1938	1929	1993	1973	1996	1952	1924	1938
MIN	52.8	62.4	40.7	45.8	47.4	181	237	86.4	56.3	25.0	19.4	27.4
(WY)	1947	1950	1964	1959	1959	1940	1958	1958	1934	1936	1934	1932

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1914 - 2002

ANNUAL TOTAL		192376		171083								
ANNUAL MEAN		527.1		468.7						434.9		
HIGHEST ANNUAL MEAN										874		1986
LOWEST ANNUAL MEAN										112		1958
HIGHEST DAILY MEAN		2880		Apr 12		2030		Apr 9,10		14800		Mar 20 1918
LOWEST DAILY MEAN		67		Aug 15		97		Aug 11		(a)0.00		Sep 8 1943
ANNUAL SEVEN-DAY MINIMUM		94		Aug 9		110		Aug 5		8.3		Aug 3 1936
MAXIMUM PEAK FLOW						4060		Aug 12		16500		Jun 21 1997
MAXIMUM PEAK STAGE						5.42		Aug 12		10.00		Jun 21 1997
INSTANTANEOUS LOW FLOW						(a)22		Oct 8		(a)0.00		Sep 8 1943
ANNUAL RUNOFF (CFSM)		0.76				0.67				0.62		
ANNUAL RUNOFF (INCHES)		10.28				9.14				8.49		
10 PERCENT EXCEEDS		1010				900				983		
50 PERCENT EXCEEDS		424				374				230		
90 PERCENT EXCEEDS		187				173				72		

(a) Result of regulation
(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--Continued
(NATIONAL WATER-QUALITY ASSESSMENT PROGRAM STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967-69, 1971, 1973 to current year. National Stream-Quality Accounting Network data collection began in January 1973 and was discontinued September 1994. National Water-Quality Assessment Program sampling began in April 1993.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: May to September 2002.
SPECIFIC CONDUCTANCE: May to September 2002.

INSTRUMENTATION.--Continuous water temperature recorder and specific conductance recorder since May 2002. Sensor located at the left edge of water.

REMARKS.--Chemical analyses of some constituents for Wisconsin District program samples were done by the Wisconsin State Laboratory of Hygiene and National Water-Quality Laboratory. Records represent water temperature at sensor within 0.5°C. Record for water temperature was faulty June 4-19 and Sept. 24, 27, and 28. Record for specific conductance was faulty June 4-19, July 6-8, 24-28, July 30 to Aug. 6, and Sept. 24, 27, and 28.

EXTREMES FOR CURRENT PERIOD (MAY-SEPTEMBER).--
WATER TEMPERATURE: Maximum, 32.5°C, Aug. 1; minimum, 11.0°C, May 18.
SPECIFIC CONDUCTANCE: Maximum, 835 µS/cm, May 25; minimum, 208 µS/cm, Aug. 13.

DAY	WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002											
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	15.5	11.5	13.0
16	---	---	---	---	---	---	---	---	---	15.5	14.5	15.0
17	---	---	---	---	---	---	---	---	---	14.5	12.5	13.0
18	---	---	---	---	---	---	---	---	---	12.5	11.0	12.0
19	---	---	---	---	---	---	---	---	---	13.0	11.5	12.0
20	---	---	---	---	---	---	---	---	---	13.0	12.0	12.5
21	---	---	---	---	---	---	---	---	---	13.5	12.5	13.0
22	---	---	---	---	---	---	---	---	---	15.5	13.0	14.0
23	---	---	---	---	---	---	---	---	---	17.0	14.0	15.5
24	---	---	---	---	---	---	---	---	---	17.5	15.0	16.0
25	---	---	---	---	---	---	---	---	---	15.5	12.5	14.0
26	---	---	---	---	---	---	---	---	---	15.0	12.0	13.5
27	---	---	---	---	---	---	---	---	---	16.5	15.0	16.0
28	---	---	---	---	---	---	---	---	---	18.0	16.5	17.5
29	---	---	---	---	---	---	---	---	---	19.0	17.5	18.5
30	---	---	---	---	---	---	---	---	---	22.0	18.5	20.5
31	---	---	---	---	---	---	---	---	---	24.0	21.0	22.5

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--Continued
(NATIONAL WATER-QUALITY ASSESSMENT PROGRAM STATION)

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	MAX	MIN	MEAN									
1	25.0	22.0	23.0	29.5	26.5	27.5	32.5	25.0	28.0	25.5	23.5	24.0
2	23.0	20.5	22.5	30.0	27.0	28.5	27.5	21.5	24.0	24.0	23.0	23.5
3	20.5	13.0	16.0	30.0	27.5	28.5	29.0	20.0	24.0	24.0	22.0	23.0
4	---	---	---	29.5	27.5	28.5	27.0	23.0	25.5	23.5	22.5	23.0
5	---	---	---	27.5	26.0	27.0	27.0	20.5	24.0	24.0	22.0	23.0
6	---	---	---	26.5	24.5	25.5	26.0	19.0	22.5	24.0	21.5	22.5
7	---	---	---	26.5	23.5	25.0	25.5	23.0	24.0	24.5	22.0	23.0
8	---	---	---	30.0	24.5	26.5	25.5	23.0	23.5	24.5	22.5	23.5
9	---	---	---	27.0	25.0	26.0	25.5	23.0	23.5	25.5	23.5	24.5
10	---	---	---	25.5	24.0	25.0	26.0	23.0	24.5	25.5	23.5	24.5
11	---	---	---	24.0	23.5	24.0	27.0	24.0	25.0	25.0	23.0	23.5
12	---	---	---	24.5	23.0	23.5	27.5	24.0	25.5	23.5	22.0	22.5
13	---	---	---	25.5	23.0	24.0	24.5	23.0	24.0	22.5	21.0	21.5
14	---	---	---	26.0	23.0	24.5	24.5	23.0	23.5	22.5	20.5	21.5
15	---	---	---	26.5	24.0	25.0	25.5	23.0	24.0	22.5	20.0	21.0
16	---	---	---	27.5	25.5	26.5	26.0	24.0	24.5	22.5	19.5	20.5
17	---	---	---	29.0	26.0	27.0	26.0	24.0	25.0	22.0	19.5	20.5
18	---	---	---	28.0	27.0	27.5	26.0	23.5	24.5	21.5	20.0	20.5
19	---	---	---	27.5	26.5	27.0	25.0	23.5	24.0	22.0	20.5	21.5
20	23.5	20.5	22.0	27.0	25.5	26.0	24.5	23.0	24.0	22.0	21.0	21.5
21	24.5	22.5	23.5	28.5	26.0	27.0	24.5	23.0	23.5	21.9	20.3	21.0
22	25.5	23.5	24.5	28.0	26.5	27.5	24.0	22.0	23.0	20.8	19.2	19.9
23	27.0	24.5	26.0	27.0	24.0	25.5	22.0	22.0	22.0	19.2	16.9	18.3
24	28.0	25.5	26.5	24.5	21.0	23.0	23.5	22.0	22.5	---	---	---
25	28.5	26.0	27.0	23.5	21.5	22.5	24.5	22.5	23.5	17.3	15.7	16.3
26	28.5	26.5	27.0	26.0	23.0	24.5	24.5	22.5	23.5	18.0	16.0	16.7
27	27.5	26.0	26.5	25.0	23.0	24.0	24.5	23.0	23.5	---	---	---
28	26.5	24.5	25.5	30.5	23.5	26.5	25.0	23.0	24.0	---	---	---
29	27.0	25.0	26.0	27.0	25.5	26.0	24.5	23.0	23.5	18.0	16.8	17.2
30	27.5	25.5	26.5	29.0	25.5	27.0	24.5	23.0	23.5	20.0	17.4	18.6
31	---	---	---	32.0	23.5	27.0	25.0	23.5	24.0	---	---	---
MONTH	---	---	---	32.0	21.0	25.9	32.5	19.0	24.0	---	---	---

SPECIFIC CONDUCTANCE, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	MAX	MIN	MEAN									
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	671	640	658
16	---	---	---	---	---	---	---	---	---	684	670	677
17	---	---	---	---	---	---	---	---	---	694	684	691
18	---	---	---	---	---	---	---	---	---	705	694	700
19	---	---	---	---	---	---	---	---	---	715	704	711
20	---	---	---	---	---	---	---	---	---	720	711	715
21	---	---	---	---	---	---	---	---	---	735	716	726
22	---	---	---	---	---	---	---	---	---	743	731	735
23	---	---	---	---	---	---	---	---	---	751	732	738
24	---	---	---	---	---	---	---	---	---	753	735	745
25	---	---	---	---	---	---	---	---	---	835	703	745
26	---	---	---	---	---	---	---	---	---	746	712	725
27	---	---	---	---	---	---	---	---	---	742	711	724
28	---	---	---	---	---	---	---	---	---	733	712	723
29	---	---	---	---	---	---	---	---	---	712	524	603
30	---	---	---	---	---	---	---	---	---	718	662	686
31	---	---	---	---	---	---	---	---	---	735	713	720

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--Continued
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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT 2001													
19...	0745	300	10	742	9.2	8.5	763	9.5	323	383	5	74.6	--
NOV													
14...	1305	281	10	746	12.9	8.7	788	8.4	294	335	12	77.7	--
14...	1320	281	10	--	--	--	--	--	--	--	--	--	--
DEC													
11...	1455	365	10	750	17.9	8.8	754	2.7	300	359	4	70.5	--
JAN 2002													
08...	1120	230	10	--	--	--	--	--	--	--	--	--	--
08...	1130	230	10	745	17.5	8.5	939	-1	353	404	13	96.7	--
FEB													
13...	1025	310	10	752	19.8	8.3	918	-1	278	336	2	126	--
MAR													
13...	1420	1460	10	--	--	--	--	--	--	--	--	--	--
13...	1422	1460	30	739	19.3	8.3	577	2.5	212	255	1	49.7	--
20...	1415	831	10	747	14.4	8.4	636	5.1	240	285	3	--	--
20...	1420	831	10	--	--	--	--	--	--	--	--	--	--
APR													
03...	1320	581	10	752	15.4	8.8	724	5.1	--	--	--	--	--
03...	1330	581	10	752	15.4	8.8	711	5.1	258	300	7	78.0	--
15...	1320	1100	10	--	--	--	--	--	--	--	--	--	--
15...	1345	1100	10	738	12.4	8.3	613	15.2	278	332	3	--	--
MAY													
08...	1120	675	10	--	--	--	--	--	--	--	--	--	--
08...	1130	675	10	742	8.4	8.2	691	14.5	273	322	5	58.1	--
14...	1105	1170	10	743	10.8	8.1	641	10.4	256	307	3	--	--
14...	1120	1170	10	--	--	--	--	--	--	--	--	--	--
22...	1305	461	10	750	9.6	8.4	719	14.4	285	334	7	--	--
22...	1320	461	10	--	--	--	--	--	--	--	--	--	--
28...	1300	492	10	746	10.2	8.4	710	17.5	--	--	--	--	--
JUN													
05...	1320	1090	10	--	--	--	--	--	--	--	--	--	--
05...	1335	1090	10	746	9.8	7.9	625	13.7	214	257	2	53.5	--
10...	1120	544	10	742	8.5	8.0	747	22.6	--	--	--	--	--
19...	1320	457	10	--	--	--	--	--	--	--	--	--	--
19...	1350	457	10	748	8.7	8.1	706	21.5	271	321	5	--	--
24...	1140	413	10	738	7.7	8.1	738	27.4	--	--	--	--	--
JUL													
01...	1520	248	10	--	--	--	--	--	--	--	--	--	--
01...	1540	248	10	747	8.1	8.2	776	29.6	303	347	10	75.0	--
17...	1310	233	10	747	8.2	8.2	744	28.2	245	282	8	--	--
17...	1320	233	10	--	--	--	--	--	--	--	--	--	--
22...	1615	178	70	732	8.5	8.4	763	28.2	--	--	--	--	--
AUG													
19...	1320	139	10	--	--	--	--	--	--	--	--	--	--
19...	1330	139	10	744	8.2	8.3	724	24.5	202	228	9	98.2	7.30
SEP													
10...	1145	173	10	742	9.0	8.3	701	25.6	208	240	7	78.4	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

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Date	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,PAR TICULATE WAT FLT SUSP (MG/L AS N) (49570)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L AS C) (00694)	CARBON, INOR- GANIC, PARTIC. TOTAL (MG/L AS C) (00688)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 2001													
19...	32.1	<.04	.70	.98	.008	--	.02	.053	--	--	--	--	--
NOV													
14...	33.2	<.04	.84	1.10	.011	.20	E.01	.069	1.7	--	9.0	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	31.1	E.02	.72	1.72	.009	.06	.03	.059	.7	--	8.5	--	--
JAN 2002													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	40.3	E.03	.54	3.32	.023	--	.03	.048	--	--	6.3	--	--
FEB													
13...	36.6	<.04	.83	2.45	.017	.08	E.01	.077	.7	--	7.3	--	--
MAR													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	23.8	.07	.98	2.37	.009	.09	.04	.125	1.2	--	8.4	--	--
20...	--	<.04	.64	1.50	E.006	--	E.02	.053	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	28.2	<.04	.51	1.40	.012	.11	<.02	.031	.7	<.1	7.1	.7	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	<.04	.92	.86	.009	--	E.01	.095	--	--	--	--	--
MAY													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	22.6	<.04	1.1	.55	.022	.30	<.02	.108	2.5	<.1	10.3	2.5	--
14...	--	<.04	.95	1.24	.015	--	.02	.093	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	<.04	.76	1.06	.020	--	E.01	.077	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	21.1	<.04	1.2	2.17	.045	.17	.04	.146	1.9	<.1	9.3	1.9	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	<.04	1.1	1.25	.020	--	.05	.148	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	22.7	<.04	1.1	.69	.014	.26	.06	.173	2.0	<.1	10.0	2.0	--
17...	--	<.04	1.2	.63	.013	--	.07	.173	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	26.9	--	--	--	--	--	--	--	--	--	9.7	--	--
AUG													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	31.4	<.04	1.0	<.05	<.008	.66	.02	.180	4.7	<.1	7.3	4.7	13
SEP													
10...	33.1	<.04	1.4	.33	.012	.47	<.02	.18	3.0	<.1	7.7	3.0	--

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	2,4,5-T SURROG WATER FLTRD REC PERCENT (99958)	2,4-D METHYL ESTER, WATER FLTRD REC (50470)	2,4-D, DIS- SOLVED (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (38746)	2,6-DI- ETHYL ANILINE WAT FLT GF, REC (82660)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (49308)	3-KETO CARBO- FURAN FLTRD REC (50295)	ACETO- CHLOR ESA FLTRD GF REC (61029)	ACETO- CHLOR OA FLTRD GF REC (61030)	ACETO- CHLOR, WATER, FLTRD, GF 0.7U REC (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (49315)	ALA- CHLOR OA FLTRD GF REC (61031)	ALA- CHLOR ESA WAT FLT GF 0.7U REC (50009)
OCT 2001													
19...	86.4	<.009	.04	<.02	<.002	<.006	<2	--	--	<.004	<.007	--	--
NOV													
14...	85.6	<.009	.05	<.02	<.002	<.006	<2	.08	<.05	<.004	<.007	<.05	<.05
14...	--	--	--	--	--	--	--	.08	<.05	--	--	<.05	<.05
DEC													
11...	99.7	<.009	<.02	<.02	<.002	<.006	<2	--	--	<.004	<.007	--	--
JAN 2002													
08...	--	--	--	--	--	--	--	<.05	<.05	--	--	<.05	.06
08...	88.6	<.009	E.01	<.02	<.006	<.006	<2	<.05	<.05	<.006	<.007	<.05	.06
FEB													
13...	84.8	<.009	.03	<.02	<.006	<.006	<2	--	--	<.006	<.007	--	--
MAR													
13...	--	--	--	--	--	--	--	<.05	<.05	--	--	<.05	.06
13...	87.7	<.009	<.02	<.02	<.006	<.006	<2	--	--	<.006	<.007	--	--
20...	85.0	<.009	<.02	<.02	<.006	<.006	<2	--	--	<.006	<.100	--	--
20...	--	--	--	--	--	--	--	<.05	<.05	--	--	<.05	.05
APR													
03...	--	--	--	--	--	--	--	<.05	<.05	--	--	<.05	.06
03...	86.6	<.009	<.02	<.02	<.006	<.006	<2	--	--	<.006	<.118	--	--
15...	--	--	--	--	--	--	--	<.05	<.05	--	--	<.05	<.05
15...	66.9	<.009	.03	<.02	<.006	<.006	<2	--	--	<.006	<.007	--	--
MAY													
08...	--	--	--	--	--	--	--	.07	<.05	--	--	<.05	<.05
08...	65.6	<.009	.12	<.02	<.006	<.006	<2	--	--	.024	<.007	--	--
14...	66.8	.022	.31	<.02	<.006	<.006	<2	--	--	.091	<.007	--	--
14...	--	--	--	--	--	--	--	<.05	<.05	--	--	<.05	<.05
22...	78.9	<.009	.07	<.02	<.006	<.006	<2	--	--	.013	<.007	--	--
22...	--	--	--	--	--	--	--	<.05	<.05	--	--	<.05	.11
28...	--	--	--	--	--	--	--	<.05	<.05	--	--	<.05	.07
JUN													
05...	--	--	--	--	--	--	--	.35	.58	--	--	<.05	.06
05...	68.0	<.009	.55	<.02	<.006	<.006	<2	--	--	.927	<.007	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	.18	.22	--	--	<.05	.06
19...	59.2	<.009	.09	<.02	<.006	<.006	<2	--	--	.041	<.007	--	--
24...	--	--	--	--	--	--	--	.13	.17	--	--	<.05	<.05
JUL													
01...	--	--	--	--	--	--	--	.07	.06	--	--	<.05	<.05
01...	63.0	<.009	<.02	<.02	<.006	<.006	<2	--	--	<.006	<.007	--	--
17...	63.4	<.009	.12	<.02	<.006	<.006	<2	--	--	<.006	<.007	--	--
17...	--	--	--	--	--	--	--	.11	.08	--	--	<.05	<.05
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
19...	--	--	--	--	--	--	--	<.05	<.05	--	--	<.05	<.05
19...	69.6	<.009	.07	<.02	<.006	<.006	<2	--	--	<.006	<.007	--	--
SEP													
10...	44.2	<.009	.09	<.02	<.006	<.006	<2	--	--	<.006	<.007	--	--

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Date	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, REC (UG/L) (39632)	BARBAN SURROG- ATE WTR FLT SCD 2060, 9060 RE PERCENT (90640)	BENDIO- CARB, WATER FLTRD REC (UG/L) (50299)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENOMYL WATER FLTRD REC (UG/L) (50300)	BEN- SUL- FURON METHYL WAT FLT REC (UG/L) (61693)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)
OCT 2001													
19...	<.002	<.02	<.008	<.04	<.005	.016	116	<.03	<.010	<.004	<.02	M	<.03
NOV													
14...	<.002	<.02	<.008	<.04	<.005	.014	E65.9	<.03	<.010	<.004	<.02	<.01	<.03
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	<.002	<.02	<.008	<.04	<.005	E.008	107	<.03	<.010	<.004	<.02	E.01	<.03
JAN 2002													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.004	<.02	<.008	<.04	<.005	.020	E124	<.03	<.010	<.004	<.02	M	<.03
FEB													
13...	<.004	<.02	<.008	<.04	<.005	.021	99.9	<.03	<.010	<.004	<.02	<.01	<.03
MAR													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	<.004	<.02	<.008	<.04	<.005	.016	68.2	<.03	<.010	<.004	<.02	<.01	<.03
20...	<.004	<.02	<.008	<.04	<.005	.018	115	<.03	<.010	<.004	<.02	<.01	<.03
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	<.004	<.02	<.008	<.04	<.005	.018	66.8	<.03	<.010	<.004	<.02	<.01	<.03
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	<.004	<.02	<.008	<.04	<.005	.028	29.6	<.03	<.010	<.004	<.02	<.01	<.03
MAY													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.004	<.02	<.008	<.04	<.005	.056	49.4	<.03	<.010	<.004	<.02	<.01	<.03
14...	<.004	<.02	<.008	<.04	<.005	.136	39.5	<.03	<.010	<.004	<.02	<.01	<.03
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	<.004	<.02	<.008	<.04	<.005	.044	69.4	<.03	<.010	<.004	<.02	<.01	<.03
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	.025	<.02	<.008	<.04	<.005	.588	55.8	<.03	<.010	.004	<.02	<.01	<.03
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	.007	<.02	<.008	<.04	<.005	.656	112	<.03	<.010	<.004	<.02	E.01	<.03
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	<.004	<.02	<.008	<.04	<.005	.234	29.1	<.03	<.010	<.004	<.02	<.01	<.03
17...	<.004	<.02	<.008	<.04	<.005	.237	53.0	<.03	<.010	<.004	<.02	E.01	<.03
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.004	<.02	<.008	<.04	<.005	.027	57.4	<.03	<.010	<.004	<.02	<.01	<.03
SEP													
10...	<.004	<.02	<.008	<.04	<.005	.025	29.3	<.03	<.010	<.004	<.02	<.01	<.03

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Date	BRO-MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAF- FEINE, WATER FLTRD REC (UG/L) (50305)	CAF- FEINE- C13 SURROG, WAT FLT REC (99959)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (49310)	CAR- BARYL WATER FLTRD GF, REC (UG/L) (82680)	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO- FURAN WATER FLTRD GF, REC (UG/L) (82674)	CHLOR- AMBEN, METHYL ESTER WATER FLTRD (UG/L) (61188)	CHLORI- MURON, WATER FLTRD REC (UG/L) (50306)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)
OCT 2001													
19...	<.02	<.002	.027	85.9	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
NOV													
14...	<.02	<.002	.065	74.2	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	<.02	<.002	<.010	110	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
JAN 2002													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.02	<.002	<.010	70.8	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
FEB													
13...	<.02	<.002	.038	95.6	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
MAR													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	<.02	<.002	<.010	87.0	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
20...	<.02	<.002	.025	72.6	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	<.02	<.002	.031	79.1	<.03	E.009	<.006	<.020	<.02	<.010	<.04	<.005	<.01
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	<.02	<.002	.018	73.1	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
MAY													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.02	<.002	<.010	60.5	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
14...	<.02	<.002	<.010	57.2	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	<.02	<.002	<.010	67.0	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	<.02	<.002	<.010	62.4	<.03	E.006	<.006	<.020	<.02	<.010	<.04	<.005	.14
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.02	<.002	<.010	80.1	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	<.02	<.002	<.010	55.7	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
17...	<.02	<.002	<.010	69.9	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.02	<.002	<.010	137	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01
SEP													
10...	<.02	<.002	<.010	75.9	<.03	<.041	<.006	<.020	<.02	<.010	<.04	<.005	<.01

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04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--Continued
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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	CY- CLOATE, WATER, DISS, REC (UG/L) (04031)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DEETHYL DEISO- PROPYL ATRAZIN WATER, DISS, REC (UG/L) (04039)	DEISO- PROPYL ATRAZIN WATER, DISS, REC (UG/L) (04038)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DIMETH- ENAMID OA, WATER FLT, REC (UG/L) (62482)
OCT 2001													
19...	<.018	<.01	--	<.003	E.02	<.01	E.02	95.4	E.004	<.01	<.01	<.005	--
NOV													
14...	<.018	<.01	<.01	<.003	E.02	E.07	E.01	114	<.005	<.01	<.01	<.005	<.05
14...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
DEC													
11...	<.018	<.01	<.01	<.003	E.01	<.01	<.04	103	<.005	<.01	<.01	<.005	--
JAN 2002													
08...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
08...	<.018	<.01	<.01	<.003	E.024	E.07	E.01	86.8	<.005	<.01	<.01	<.005	<.05
FEB													
13...	<.018	<.01	<.01	<.003	E.026	E.10	<.04	112	<.005	<.01	<.01	<.005	--
MAR													
13...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
13...	<.018	<.01	<.01	<.003	E.010	<.01	<.04	110	<.005	<.01	<.01	<.005	--
20...	<.018	<.01	<.01	<.003	E.010	E.05	<.04	113	<.005	<.01	<.01	<.005	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
APR													
03...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
03...	<.018	<.01	<.01	<.003	E.014	E.04	E.01	88.9	<.005	<.01	<.01	<.005	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
15...	<.018	<.01	<.01	<.003	E.007	<.01	<.04	98.1	<.005	<.01	<.01	<.005	--
MAY													
08...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
08...	<.018	<.01	<.01	<.003	E.028	E.02	E.02	104	E.003	<.01	<.01	<.005	--
14...	<.018	<.01	<.01	<.003	E.033	<.01	E.03	116	.010	<.01	<.01	<.005	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
22...	<.018	<.01	<.01	<.003	E.027	<.01	E.03	108	.009	<.01	<.01	<.005	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
28...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
JUN													
05...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
05...	.089	M	<.01	<.003	E.067	E.02	<.04	101	.013	E.20	<.01	<.005	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
19...	.019	<.01	<.01	<.003	E.061	E.07	E.04	108	.008	.05	<.01	<.005	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
JUL													
01...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
01...	<.018	<.01	<.01	<.003	E.055	<.01	E.04	109	E.005	<.01	<.01	<.005	--
17...	<.018	<.01	<.01	<.003	E.051	<.01	E.03	142	.006	<.01	<.01	<.005	--
17...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
19...	--	--	--	--	--	--	--	--	--	--	--	--	<.05
19...	<.018	<.01	<.01	<.003	E.024	E.08	<.04	89.4	.011	<.01	<.01	<.005	--
SEP													
10...	<.018	<.01	<.01	<.003	E.022	<.01	E.02	94.4	.008	<.01	<.01	<.005	--

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	DIMETH- ENAMID, ESA, WAT FLT (UG/L) (61951)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DIPHEN- AMID, WATER, DISS, REC (UG/L) (04033)	DISUL- FOTON WATER FLTRD GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUFEN- ACET, ESA, WAT FLT (UG/L) (61952)	FLUFE- NACET OA, WATER FLT, REC (UG/L) (62483)	FLUMET- SULAM WATER FLTRD REC (UG/L) (61694)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)
OCT 2001													
19...	--	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03
NOV													
14...	<.05	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	<.05	<.05	<.01	<.03
14...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
DEC													
11...	--	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03
JAN 2002													
08...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
08...	<.05	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	<.05	<.05	<.01	<.03
FEB													
13...	--	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03
MAR													
13...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
13...	--	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03
20...	--	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03
20...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
APR													
03...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
03...	--	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03
15...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
15...	--	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03
MAY													
08...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
08...	--	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03
14...	--	<.01	<.03	<.02	E.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03
14...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
22...	--	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03
22...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
28...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
JUN													
05...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
05...	--	<.01	<.03	<.02	E.07	E.002	<.009	<.005	<.03	--	--	<.01	<.03
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
19...	--	<.01	<.03	<.02	.03	<.002	<.009	<.005	<.03	--	--	E.05	<.03
24...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
JUL													
01...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
01...	--	<.01	<.03	<.02	E.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03
17...	--	<.01	<.03	<.02	.02	<.002	<.009	<.005	<.03	--	--	E.03	<.03
17...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
19...	<.05	--	--	--	--	--	--	--	--	<.05	<.05	--	--
19...	--	<.01	<.03	<.02	.05	<.002	<.009	<.005	<.03	--	--	<.01	<.03
SEP													
10...	--	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	--	--	<.01	<.03

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Date	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	HYDROXY ATRA- ZINE WATER FLTRD REC (UG/L) (50355)	IMAZ- AQUIN WATER FLTRD REC (UG/L) (50356)	IMAZE- THAPYR WATER FLTRD REC (UG/L) (50407)	IMID- ACLOP- RID WATER FLTRD REC (UG/L) (61695)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	MERCURY METHYL, WATER, FLTRD REC, (NG/L) (50285)
OCT 2001													
19...	<.003	98.2	E.075	E.01	<.02	<.007	<.004	<.01	<.035	<.027	E.01	<.01	--
NOV													
14...	<.003	89.9	E.049	E.26	<.02	<.007	<.004	<.01	<.035	<.027	<.02	<.01	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	<.003	71.3	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027	<.02	<.01	--
JAN 2002													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.003	81.9	E.050	E.02	<.02	<.007	<.004	.03	<.035	<.027	<.02	<.01	--
FEB													
13...	<.003	91.9	E.054	E.11	<.02	<.007	<.004	<.01	<.035	<.027	<.02	<.01	--
MAR													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	<.003	86.2	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027	<.02	<.01	--
20...	<.003	106	E.055	E.20	<.02	<.007	<.004	<.01	<.035	<.027	<.08	<.01	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	<.003	94.9	E.039	<.02	<.02	<.007	<.004	<.01	<.035	<.027	<.11	<.01	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	<.003	90.3	<.008	<.02	E.04	<.007	<.004	<.01	<.035	<.027	<.02	<.01	--
MAY													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.003	106	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027	<.02	<.01	--
14...	<.003	122	<.008	<.02	E.02	<.007	<.004	<.01	<.035	<.027	.03	<.01	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	<.003	102	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027	<.02	<.01	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	<.003	98.1	E.029	<.02	E.03	<.007	<.004	<.01	<.035	<.027	.05	<.01	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.003	110	E.205	<.02	E.01	<.007	<.004	<.01	<.035	<.027	.03	<.01	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	<.003	105	E.072	<.02	<.02	<.007	<.004	<.01	<.035	<.027	<.02	<.01	--
17...	<.003	100	E.128	<.02	<.02	<.007	<.004	<.01	<.035	<.027	<.02	<.01	--
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	.04
AUG													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.003	96.5	E.066	<.02	<.02	<.007	<.004	<.01	<.035	<.027	<.02	<.01	--
SEP													
10...	<.003	102	E.048	<.02	<.02	<.007	<.004	<.01	<.035	<.027	<.02	<.01	--

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	METAL-AXYL WATER FLTRD REC (UG/L) (50359)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH-OMYL OXIME WATER FLTRD REC (UG/L) (61696)	METH-OMYL WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METOLA-CHLOR ESA FLTRD 0.7 UM GF REC (UG/L) (61043)	METOLA-CHLOR OA FLTRD 0.7 UM GF REC (UG/L) (61044)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN WATER DISSOLV (UG/L) (82630)	MET-SUL-FURON WAT FLT REC (UG/L) (61697)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)
OCT 2001													
19...	<.02	<.008	<.01	<.004	<.050	<.006	--	--	E.004	<.006	<.03	<.002	<.007
NOV													
14...	<.02	<.008	<.01	<.004	<.050	<.006	.11	<.05	E.004	<.006	<.03	<.002	<.007
14...	--	--	--	--	--	--	.11	<.05	--	--	--	--	--
DEC													
11...	<.02	<.008	--	<.004	<.050	<.006	--	--	E.003	<.006	<.03	<.002	<.007
JAN 2002													
08...	--	--	--	--	--	--	.11	<.05	--	--	--	--	--
08...	M	<.008	--	<.004	<.050	<.006	.11	<.05	<.013	<.006	E.09	<.002	<.007
FEB													
13...	<.02	<.008	--	<.004	<.050	<.006	--	--	E.004	<.006	<.03	<.002	<.007
MAR													
13...	--	--	--	--	--	--	.11	.05	--	--	--	--	--
13...	<.02	<.008	--	<.004	<.050	<.006	--	--	E.007	<.006	<.03	<.002	<.007
20...	<.02	<.008	--	<.004	<.050	<.006	--	--	E.004	<.006	<.03	<.002	<.007
20...	--	--	--	--	--	--	.11	<.05	--	--	--	--	--
APR													
03...	--	--	--	--	--	--	.11	<.05	--	--	--	--	--
03...	<.02	<.008	--	<.004	<.050	<.006	--	--	E.007	<.006	<.03	<.002	<.007
15...	--	--	--	--	--	--	.10	.05	--	--	--	--	--
15...	<.02	<.008	--	<.004	<.050	<.006	--	--	E.005	<.006	<.03	<.002	<.007
MAY													
08...	--	--	--	--	--	--	.11	<.05	--	--	--	--	--
08...	<.02	<.008	--	<.004	<.050	<.006	--	--	.015	<.006	<.03	<.002	<.007
14...	<.02	<.008	--	<.004	<.050	<.006	--	--	.067	<.006	<.03	<.002	<.007
14...	--	--	--	--	--	--	<.10	<.05	--	--	--	--	--
22...	<.02	<.008	--	<.004	<.050	<.006	--	--	.018	<.006	<.03	<.002	<.007
22...	--	--	--	--	--	--	.17	<.05	--	--	--	--	--
28...	--	--	--	--	--	--	.13	<.05	--	--	--	--	--
JUN													
05...	--	--	--	--	--	--	.12	.05	--	--	--	--	--
05...	<.02	<.008	--	<.004	<.050	<.006	--	--	.170	.018	<.03	<.002	<.007
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	.11	<.05	--	--	--	--	--
19...	<.02	<.008	--	<.004	<.050	<.006	--	--	.070	.010	<.03	<.002	<.007
24...	--	--	--	--	--	--	.10	<.05	--	--	--	--	--
JUL													
01...	--	--	--	--	--	--	.10	<.05	--	--	--	--	--
01...	<.02	<.008	--	<.004	<.050	<.006	--	--	.026	<.006	<.03	<.002	<.007
17...	<.02	<.008	--	<.004	<.050	<.006	--	--	.042	<.006	<.03	<.002	<.007
17...	--	--	--	--	--	--	.16	.06	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
19...	--	--	--	--	--	--	.06	<.05	--	--	--	--	--
19...	<.02	<.008	--	<.004	<.050	<.006	--	--	E.009	<.006	<.03	<.002	<.007
SEP													
10...	<.02	<.008	--	<.004	<.050	<.006	--	--	E.006	<.006	<.03	<.002	<.007

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--Continued
(NATIONAL WATER-QUALITY ASSESSMENT PROGRAM STATION)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NICOSUL FURON WATER FLTRD REC (UG/L) (50364)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL OXIME WATER FLTRD REC (UG/L) (50410)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THON, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT GF, REC (UG/L) (82687)	PHORATE WATER FLTRD GF, REC (UG/L) (82664)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)
OCT 2001													
19...	<.01	<.01	<.02	<.02	<.01	<.01	<.003	<.007	<.002	<.010	<.006	<.011	<.02
NOV													
14...	<.01	<.01	<.02	<.02	<.01	<.01	<.003	<.007	<.002	<.010	<.006	<.011	<.02
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.007	<.002	<.010	<.006	<.011	<.02
JAN 2002													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
FEB													
13...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
MAR													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
20...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
MAY													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
14...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	.21
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.01	E.04	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
17...	<.01	E.03	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
SEP													
10...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--Continued
(NATIONAL WATER-QUALITY ASSESSMENT PROGRAM STATION)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR ESA, WAT FLT GF 0.7U REC (UG/L) (62766)	PROPA-CHLOR OA, WAT FLT GF 0.7U REC (UG/L) (62767)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PROP-ICONA-ZOLE, WATER, FLTRD, REC (UG/L) (50471)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	SIDURON WATER FLTRD REC (UG/L) (38548)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	SULFO-MET-RURON METHYL WTR FLT REC (UG/L) (50337)
OCT 2001													
19...	E.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	E.005	<.009
NOV													
14...	E.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	E.007	<.009
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	E.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	E.005	<.009
JAN 2002													
08...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
08...	M	<.004	<.05	<.05	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	<.009
FEB													
13...	E.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	<.009
MAR													
13...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
13...	<.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.005	<.009
20...	E.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	<.009
20...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
APR													
03...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
03...	M	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.006	<.009
15...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
15...	<.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.019	<.009
MAY													
08...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
08...	E.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.022	<.009
14...	<.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.563	<.009
14...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
22...	E.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.249	<.009
22...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
28...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
JUN													
05...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
05...	E.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.117	<.009
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
19...	E.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.033	<.009
24...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
JUL													
01...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
01...	E.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.030	<.009
17...	<.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.114	<.009
17...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
19...	--	--	<.05	<.05	--	--	--	--	--	--	--	--	--
19...	.02	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.016	<.009
SEP													
10...	E.01	<.004	--	--	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.019	<.009

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--Continued
(NATIONAL WATER-QUALITY ASSESSMENT PROGRAM STATION)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD DISS, REC (UG/L) (04032)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER-BUTHYL-AZINE, WATER, DISS, REC (UG/L) (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-BENURON METHYL FLTRD (UG/L) (61159)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	UREA 3(4-CHLOROPHENYL METHYL REC (UG/L) (61692)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDEd (MG/L) (80154)
OCT 2001													
19...	<.006	<.010	<.034	<.02	U	<.005	<.002	<.009	<.02	<.009	<.02	91	119
NOV													
14...	<.006	<.010	<.034	<.02	U	<.005	<.002	<.009	<.02	<.009	<.02	96	110
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	<.006	<.010	<.034	<.02	U	<.005	<.002	<.009	<.02	<.009	<.02	91	149
JAN 2002													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.02	<.010	<.034	<.02	U	<.005	<.002	--	<.02	<.009	<.02	75	212
FEB													
13...	<.02	<.010	<.034	<.02	U	<.005	<.002	--	<.02	<.009	<.02	79	167
MAR													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
13...	<.02	<.010	<.034	<.02	U	<.005	<.002	--	<.04	<.009	<.02	85	115
20...	<.02	<.010	<.034	<.02	U	<.005	<.002	--	<.02	<.009	<.02	89	109
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	<.02	<.010	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	91	74
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	<.02	<.010	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	87	110
MAY													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.02	<.010	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	92	83
14...	<.02	<.010	<.034	<.02	--	<.005	<.002	--	.09	<.009	<.02	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	63	14
22...	<.02	<.010	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	54	73
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	<.02	<.010	<.034	<.02	--	<.005	<.002	--	.09	<.009	<.02	83	20
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	E.01	<.010	<.034	<.02	--	<.005	<.002	--	E.02	<.009	<.02	72	27
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	<.02	<.010	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	52	12
17...	<.02	<.010	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	73	17
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	15	65
AUG													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	E.01	<.010	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	--	--
SEP													
10...	E.01	<.010	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087030 MEMOMONEE RIVER AT MEMOMONEE FALLS, WI

LOCATION.--Lat 43°10'22", long 88°06'14", in SE ¼ NE ¼ sec.10, T.8 N., R.20 E., Waukesha County, Hydrologic Unit 04040003, on right bank, 150 ft upstream from Pilgrim Road (County Trunk Highway YY) bridge in Menomonee Falls, at mile 21.1.

DRAINAGE AREA.--34.7 mi².

PERIOD OF RECORD.--November 1974 to September 1977, July 1979 to current year.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 755.51 ft above NGVD of 1929 (Wisconsin Department of Transportation benchmark). Prior to Aug. 20, 1996, water-stage recorder at present site at datum 2.01 ft lower.

REMARKS.--Records fair except those for estimated daily discharges and those for discharges less than 5 ft³/s, which are poor (see page 11). Occasional regulation caused by dam in Menomonee Falls, about 1.0 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	25	29	e6.4	e8.0	e11	24	43	10	6.6	2.1	3.6
2	10	23	27	e6.4	e7.6	e11	29	54	9.0	5.7	1.9	54
3	9.7	21	24	e6.4	e7.6	e9.6	30	43	274	4.8	1.8	55
4	9.3	19	23	e6.5	e7.5	e9.0	30	33	364	4.2	3.3	23
5	9.2	18	24	e6.5	e7.8	e8.0	28	29	342	3.8	2.7	12
6	8.8	17	25	e6.4	e8.0	e9.0	24	29	267	3.5	2.3	8.5
7	8.3	17	23	e6.3	e8.2	e9.2	42	27	166	3.7	2.0	6.5
8	8.7	17	24	e7.0	e8.2	e9.2	142	24	87	15	2.1	5.6
9	9.3	16	23	e7.3	e8.8	e39	261	25	45	32	1.8	4.9
10	13	16	21	e7.0	e17	e160	257	22	32	17	1.5	4.3
11	13	15	19	e6.8	e19	138	190	26	47	9.0	1.4	3.9
12	13	14	21	e6.8	e17	101	126	82	55	6.2	10	3.2
13	20	16	40	e7.0	e14	84	82	76	39	5.1	41	3.0
14	28	20	34	e8.6	e12	73	59	54	44	4.6	20	2.8
15	21	22	29	e9.0	e12	61	54	38	49	4.5	8.2	2.9
16	17	19	29	e8.8	e11	49	44	29	34	4.3	4.7	3.2
17	15	17	37	e7.4	e10	40	36	25	25	3.4	3.4	3.1
18	14	16	33	e6.8	e10	37	33	22	20	3.1	2.9	9.1
19	12	17	29	e6.4	e15	33	48	20	16	2.7	3.0	11
20	11	17	25	e6.4	e22	43	36	18	15	2.5	2.6	9.6
21	11	16	22	e6.6	e25	41	33	17	46	2.5	27	6.9
22	37	15	22	e7.0	e21	32	42	15	29	2.5	101	5.2
23	124	14	e20	e8.0	e18	29	36	14	21	2.4	44	4.1
24	125	26	e12	e8.2	e16	27	33	13	16	2.0	24	3.6
25	100	33	e8.8	e8.0	e16	24	35	36	12	2.0	13	2.9
26	66	28	e8.2	e8.0	e16	22	30	36	11	5.7	7.6	3.0
27	46	26	e8.0	e8.4	e13	21	33	24	11	3.7	6.7	2.7
28	34	24	e7.4	e9.3	e12	24	83	19	9.8	3.0	6.4	2.8
29	30	26	e7.0	e9.5	---	25	74	18	8.8	5.4	4.6	9.3
30	27	28	e6.8	e8.8	---	24	54	15	7.6	3.7	4.3	6.0
31	26	---	e6.6	e8.0	---	22	---	12	---	3.0	3.3	---
TOTAL	888.3	598	667.8	230.0	367.7	1225.0	2028	938	2112.2	177.6	360.6	275.7
MEAN	28.65	19.93	21.54	7.419	13.13	39.52	67.60	30.26	70.41	5.729	11.63	9.190
MAX	125	33	40	9.5	25	160	261	82	364	32	101	55
MIN	8.3	14	6.6	6.3	7.5	8.0	24	12	7.6	2.0	1.4	2.7
CFSM	0.83	0.57	0.62	0.21	0.38	1.14	1.95	0.87	2.03	0.17	0.34	0.26
IN.	0.95	0.64	0.72	0.25	0.39	1.31	2.17	1.01	2.26	0.19	0.39	0.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2002, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	19.90	27.47	23.18	18.13	34.57	58.29	65.48	33.42	33.51	19.18	14.42	19.24																	
MAX	94.3	137	70.4	72.8	95.9	124	193	133	142	86.1	34.9	151																	
(WY)	1982	1986	1985	1988	2001	1976	1993	2000	1997	1994	1986	1986																	
MIN	3.31	3.38	3.00	2.29	4.04	18.3	21.6	3.80	3.33	1.55	1.47	1.86																	
(WY)	1977	1977	1977	1977	1977	1980	1994	1977	1988	1988	1988	1976																	

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1975 - 2002

ANNUAL TOTAL	15095.2	9868.9
ANNUAL MEAN	41.36	27.04
HIGHEST ANNUAL MEAN		53.4
LOWEST ANNUAL MEAN		7.32
HIGHEST DAILY MEAN	(a)380	Feb 9
LOWEST DAILY MEAN	2.8	Aug 14
ANNUAL SEVEN-DAY MINIMUM	3.5	Aug 9
MAXIMUM PEAK FLOW		518
MAXIMUM PEAK STAGE		5.86
ANNUAL RUNOFF (CFSM)	1.19	0.78
ANNUAL RUNOFF (INCHES)	16.18	11.88
10 PERCENT EXCEEDS	98	49
50 PERCENT EXCEEDS	25	16
90 PERCENT EXCEEDS	6.4	3.4
		4.4

- (a) Ice affected
- (b) From rating curve extended above 717 ft³/s
- (c) From floodmarks
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087088 UNDERWOOD CREEK AT WAUWATOSA, WI

LOCATION.--Lat 43°03'17", long 88°02'46", in SW ¼ NW ¼ sec.20, T.7 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, at U.S. Highway 45, on right bank, just downstream of the Chicago, Milwaukee, St. Paul and Pacific Railroad bridge, on Milwaukee County Park Commission property, at Wauwatosa, and 0.8 mi upstream from mouth.

DRAINAGE AREA.--18.2 mi².

PERIOD OF RECORD.--November 1974 to November 1979, July 1980 to current year. Unpublished daily discharge records from November 1974 to February 1975 in District files.

REVISED RECORDS.--WDR WI-77-1: Drainage area. WRD WI-85-1: 1984. WRD WI-94-1: 1993(M). WRD WI-98-1: 1978(M, date).

GAGE.--Water-stage recorder, crest-stage gage, and steel plate weir. Datum of gage is 683.78 ft above NGVD of 1929 (Southeastern Wisconsin Regional Planning Commission bench mark). Prior to Sept. 10, 1993, the orifice was located 10 ft downstream from Chicago, Milwaukee, St. Paul and Pacific Railroad bridge. The orifice was moved to 30 ft upstream from Chicago, Milwaukee, St. Paul and Pacific Railroad bridge on Sept. 10, 1993, and is at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	5.8	7.1	e3.9	13	e6.0	11	13	7.6	4.3	4.4	6.1
2	4.5	5.4	5.9	e3.8	6.3	e5.7	19	28	7.3	4.1	3.4	71
3	4.2	5.1	5.5	e3.8	e4.7	e5.4	9.7	11	65	4.4	3.5	47
4	4.9	4.9	5.2	e3.7	e4.0	e5.3	7.6	9.4	104	4.4	13	13
5	4.1	4.7	8.6	e3.7	e3.8	e5.2	7.1	8.6	38	4.2	4.5	8.5
6	4.0	4.7	7.1	e3.7	e3.8	e5.2	6.6	8.4	21	4.1	3.7	7.2
7	3.6	4.7	5.1	e3.7	e4.2	5.2	27	9.5	15	4.1	3.3	6.6
8	3.5	4.6	12	e3.9	e5.0	37	117	8.7	12	39	3.2	5.8
9	3.5	4.2	5.7	e4.5	5.7	77	145	19	10	48	3.1	5.7
10	22	4.3	5.0	4.1	35	25	45	8.0	10	8.5	3.1	5.4
11	9.4	4.5	4.7	3.8	12	15	26	28	13	6.1	3.1	4.8
12	11	4.5	8.4	3.5	7.9	13	20	91	8.8	5.2	183	4.9
13	42	15	25	3.6	6.9	12	16	25	8.3	4.5	261	5.2
14	19	8.7	8.8	9.7	5.9	12	19	16	37	4.1	97	5.5
15	8.1	6.0	6.7	7.3	5.7	10	19	13	18	4.0	32	4.9
16	5.9	5.0	7.6	4.8	5.4	8.4	13	11	11	3.8	14	4.7
17	5.0	4.6	7.9	4.3	4.7	7.9	11	9.0	8.4	3.7	13	4.8
18	4.7	4.8	6.4	e3.4	4.5	7.6	16	8.9	7.5	3.7	8.5	21
19	4.4	5.6	8.9	e3.2	29	7.6	24	8.3	6.5	3.6	9.4	36
20	4.1	4.6	5.9	e3.2	26	13	11	8.1	5.9	4.8	7.1	16
21	6.5	4.4	5.4	e3.2	17	8.8	13	7.7	5.8	6.1	53	8.1
22	56	4.3	6.5	e3.4	10	7.2	14	7.4	5.9	3.9	112	5.7
23	73	7.6	6.5	e4.2	8.3	6.6	9.7	7.1	5.3	3.5	33	4.9
24	48	18	e5.5	4.5	7.7	6.3	15	6.3	4.9	3.7	18	4.8
25	18	10	e5.3	4.4	7.7	5.9	12	45	4.9	3.4	12	4.7
26	11	5.9	e5.2	4.1	7.1	5.7	9.1	15	11	47	9.4	4.6
27	8.2	8.2	e4.9	4.3	6.4	5.6	23	9.7	6.6	7.5	7.8	4.5
28	7.1	5.3	e4.6	4.4	6.4	8.5	29	8.3	4.8	5.4	7.1	4.3
29	6.5	9.8	e4.3	4.2	---	8.4	14	55	4.5	29	7.0	41
30	6.3	13	e4.1	3.7	---	6.3	11	13	4.4	6.2	6.8	9.3
31	6.0	---	e3.9	7.0	---	6.9	---	9.1	---	5.2	6.8	---
TOTAL	419.1	198.2	213.7	133.0	264.1	359.7	719.8	525.5	472.4	289.5	946.2	376.0
MEAN	13.52	6.607	6.894	4.290	9.432	11.60	23.99	16.95	15.75	9.339	30.52	12.53
MAX	73	18	25	9.7	35	77	145	91	104	48	261	71
MIN	3.5	4.2	3.9	3.2	3.8	5.2	6.6	6.3	4.4	3.4	3.1	4.3
CFSM	0.74	0.36	0.38	0.24	0.52	0.64	1.32	0.93	0.87	0.51	1.68	0.69
IN.	0.86	0.41	0.44	0.27	0.54	0.74	1.47	1.07	0.97	0.59	1.93	0.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2002, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	8.966	11.07	10.34	8.836	14.29	22.97	27.79	17.51	17.60	13.20	16.73	13.21																
MAX	26.9	42.2	27.2	39.1	37.9	73.4	73.6	56.9	68.8	37.5	98.1	56.0																
(WY)	1987	1986	1983	1988	2001	1979	1993	2000	1997	1999	1998	1986																
MIN	2.43	1.81	1.57	0.031	1.83	6.74	6.24	2.28	4.80	3.29	3.49	3.06																
(WY)	1976	1977	1977	1977	1977	1981	1977	1977	1976	1976	1976	1982																

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1975 - 2002	
ANNUAL TOTAL	6571.1		4917.2			
ANNUAL MEAN	18.00		13.47		15.24	
HIGHEST ANNUAL MEAN					23.2	
LOWEST ANNUAL MEAN					4.21	
HIGHEST DAILY MEAN	405	Jun 12	261	Aug 13	1420	Aug 6 1998
LOWEST DAILY MEAN	3.4	Aug 15	3.1	Aug 9-11	0.00	(a)
ANNUAL SEVEN-DAY MINIMUM	4.0	Oct 3	3.4	Aug 5	0.00	Jan 11 1977
MAXIMUM PEAK FLOW			1510	Aug 13	(b)7500	Aug 6 1998
MAXIMUM PEAK STAGE			7.23	Aug 13	13.10	Aug 6 1998
ANNUAL RUNOFF (CFSM)	0.99		0.74		0.84	
ANNUAL RUNOFF (INCHES)	13.43		10.05		11.38	
10 PERCENT EXCEEDS	36		27		31	
50 PERCENT EXCEEDS	9.4		6.6		7.1	
90 PERCENT EXCEEDS	4.6		3.9		3.2	

(a) No flow on all or part of many days during 1977 winter period

(b) From rating curve extended above 96 ft³/s based on slope-area measurement of peak flow

(c) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087120 MENOMONEE RIVER AT WAUWATOSA, WI

LOCATION.--Lat 43°02'44", long 87°59'59", in NE ¼ NW ¼ sec.27, T.7 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, on left bank near upstream side of 70th Street bridge in Wauwatosa, 800 ft downstream from Honey Creek, and at mile 6.2.

DRAINAGE AREA.--123 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 628.86 ft above NGVD of 1929. Prior to Nov. 1, 1974, nonrecording gage at present site and datum then in use. Prior to June 21, 1997 at 0320, datum was 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	49	62	e29	98	e53	65	109	41	27	18	23
2	28	45	53	e29	e47	e50	121	211	37	25	16	368
3	25	43	47	e29	e43	e45	76	109	755	23	14	346
4	26	40	44	e30	e35	e43	64	82	1170	21	56	109
5	24	36	58	e30	e34	e42	59	69	764	19	22	62
6	21	35	57	e29	e36	e43	52	66	506	19	16	44
7	20	34	44	e29	e39	46	161	75	326	17	14	35
8	19	33	78	e29	e42	238	624	206	206	116	14	31
9	19	32	49	e35	50	764	1120	108	132	287	14	28
10	96	30	41	e33	273	515	580	60	172	65	13	27
11	64	29	38	e31	156	325	378	149	180	38	12	24
12	61	28	49	28	108	218	263	479	129	28	590	23
13	228	75	173	25	98	174	185	196	102	23	1170	21
14	166	51	78	61	87	148	161	140	219	21	669	20
15	69	46	62	67	65	125	163	105	196	20	141	18
16	49	39	64	43	62	101	115	84	128	21	68	17
17	40	34	83	e38	58	84	92	70	81	20	56	17
18	37	32	68	e35	54	76	100	61	66	19	35	123
19	33	38	73	e32	203	68	184	55	56	18	44	216
20	28	33	55	e31	289	112	94	51	50	19	30	132
21	32	30	47	e31	253	84	94	47	160	28	185	56
22	234	29	46	e38	166	68	121	47	136	16	784	33
23	571	38	53	44	127	62	88	44	83	17	280	25
24	379	117	e40	42	104	57	105	41	61	16	127	22
25	224	83	e39	39	96	51	98	256	48	15	73	21
26	140	55	e38	40	88	47	71	112	66	257	48	20
27	99	64	e37	45	73	45	130	70	49	27	37	19
28	75	47	e34	53	e60	58	249	56	34	20	33	18
29	62	73	e32	52	---	62	165	248	31	97	30	197
30	55	91	e31	45	---	51	128	63	28	25	27	42
31	52	---	e30	50	---	50	---	49	---	21	26	---
TOTAL	3006	1409	1703	1172	2844	3905	5906	3374	6012	1385	4662	2137
MEAN	96.97	46.97	54.94	37.81	101.6	126.0	196.9	108.8	200.4	44.68	150.4	71.23
MAX	571	117	173	67	289	764	1120	479	1170	287	1170	368
MIN	19	28	30	25	34	42	52	41	28	15	12	17
CFSM	0.79	0.38	0.45	0.31	0.83	1.02	1.60	0.88	1.63	0.36	1.22	0.58
IN.	0.91	0.43	0.52	0.35	0.86	1.18	1.79	1.02	1.82	0.42	1.41	0.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

MEAN	64.63	78.86	75.83	58.66	100.7	199.4	208.2	115.9	115.1	78.37	77.93	84.17
MAX	232	422	222	191	277	582	715	419	566	257	278	562
(WY)	1982	1986	1988	1974	2001	1979	1993	2000	1997	1964	1998	1986
MIN	7.15	11.9	4.65	4.45	4.18	17.5	28.7	17.1	12.6	10.6	10.5	6.50
(WY)	1964	1963	1964	1963	1963	1968	1963	1977	1962	1963	1962	1963

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1962 - 2002

ANNUAL TOTAL	47620	37515	
ANNUAL MEAN	130.5	102.8	104.7
HIGHEST ANNUAL MEAN			195
LOWEST ANNUAL MEAN			24.0
HIGHEST DAILY MEAN	1730	Feb 9	7520
LOWEST DAILY MEAN	12	Aug 15	(a)2.8
ANNUAL SEVEN-DAY MINIMUM	21	Jul 10	(a)3.1
MAXIMUM PEAK FLOW			3990
MAXIMUM PEAK STAGE			10.37
ANNUAL RUNOFF (CFSM)	1.06		0.84
ANNUAL RUNOFF (INCHES)	14.40		11.35
10 PERCENT EXCEEDS	291		218
50 PERCENT EXCEEDS	74		52
90 PERCENT EXCEEDS	25		21

- (a) Ice affected
- (b) From rating curve extended above 6,000 ft³/s on basis of slope-area measurement of peak flow, gage height, 13.92 ft, datum then in use
- (c) Also occurred June 21, 1997, discharge determined from rating curve extended above 9,430 ft³/s on basis of slope-area measurement of peak flow
- (d) High-water mark on gage-house door was 18.87 ft
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871473 WILSON PARK CREEK AT GMIA INFALL AT MILWAUKEE, WI

LOCATION.--Lat 42°56'33", long 87°53'10", in SW ¼ SW ¼ sec.27, T.6 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, 150 ft northwest of Grange Avenue gate on General Mitchell International Airport property, at Milwaukee.

DRAINAGE AREA.--0.89 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1996 to May 1997, November 1997 to current year.

REVISED RECORDS.--WDR WI-98-1: 1997 (M, February monthly).

GAGE.--Water-stage recorder. Elevation of gage is 670 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.18	0.33	0.53	e0.36	1.2	0.52	1.1	1.2	0.86	0.59	0.29	0.00
2	0.16	0.30	0.43	e0.34	0.54	0.63	1.9	2.3	0.89	0.59	0.22	6.0
3	0.15	0.24	0.50	e0.36	0.58	0.53	0.78	0.80	7.0	0.56	0.38	0.31
4	0.37	0.21	0.45	e0.36	0.46	0.44	0.64	0.76	7.4	0.53	1.5	0.01
5	0.15	0.24	0.43	e0.34	0.46	e0.38	0.75	0.76	1.5	0.58	0.20	0.00
6	0.14	0.20	0.53	e0.34	0.42	e0.40	0.68	0.84	1.1	0.59	0.16	0.00
7	0.09	0.19	e0.50	e0.36	0.46	0.43	2.4	0.80	0.99	0.51	0.16	0.00
8	0.10	e0.18	1.1	e0.36	0.48	3.1	8.9	0.94	1.0	1.3	0.18	0.00
9	0.10	e0.17	0.45	e0.40	0.49	4.5	7.0	1.9	0.98	5.5	0.21	0.00
10	0.53	e0.16	e0.40	e0.40	3.0	0.89	1.3	0.81	1.2	0.54	0.22	0.00
11	0.22	0.15	e0.42	e0.38	0.62	0.78	1.1	2.1	2.0	0.50	0.18	0.00
12	3.2	0.17	0.62	0.35	0.59	0.78	1.0	2.0	0.88	0.45	2.1	0.00
13	8.9	2.1	1.2	0.30	0.52	0.77	0.95	0.88	0.96	0.42	4.4	0.00
14	3.4	0.59	0.61	0.65	0.52	0.62	1.1	0.85	2.3	0.42	0.25	0.00
15	0.83	0.27	0.37	0.60	0.52	0.72	1.1	0.84	1.7	0.50	0.00	0.00
16	0.55	0.16	0.37	0.49	0.53	0.86	0.92	2.0	0.96	0.44	0.00	0.00
17	0.43	0.20	0.36	0.47	0.49	0.82	0.85	0.90	0.77	0.35	0.02	0.00
18	0.42	0.15	0.33	0.34	0.50	0.75	1.1	0.99	0.79	0.31	0.00	0.64
19	0.32	0.17	0.58	e0.32	2.4	0.68	1.2	0.95	0.77	0.28	0.00	1.0
20	0.24	0.20	0.50	e0.30	1.6	0.90	0.94	0.91	0.76	0.32	0.00	0.20
21	0.21	0.15	e0.50	0.38	0.83	0.62	1.8	0.90	1.2	0.33	1.4	0.01
22	2.5	0.14	e0.52	0.62	0.59	0.64	1.3	0.91	0.74	0.24	4.0	0.00
23	7.6	0.13	e0.52	0.56	0.56	0.63	0.92	0.94	0.60	0.19	0.01	0.00
24	8.1	1.0	e0.48	0.33	0.55	0.61	0.96	0.87	0.60	0.19	0.03	0.00
25	1.7	0.59	e0.42	0.34	0.53	0.61	0.93	2.6	0.69	0.23	0.00	0.00
26	e0.80	0.26	e0.40	0.35	0.50	0.56	0.85	0.86	0.99	5.0	0.00	0.00
27	0.55	0.48	e0.42	0.44	0.50	0.59	1.8	0.85	1.2	0.20	0.00	0.00
28	0.52	0.24	e0.44	0.41	0.48	0.56	1.6	0.85	0.67	0.20	0.00	0.00
29	e0.46	0.79	e0.42	0.46	---	0.73	0.87	0.85	0.67	0.49	0.00	2.1
30	0.39	2.0	e0.40	0.38	---	0.63	0.85	0.88	0.63	0.25	0.00	0.02
31	0.38	---	e0.38	0.64	---	0.66	---	0.90	---	0.26	0.00	---
TOTAL	43.69	12.16	15.58	12.73	20.92	26.34	47.59	34.94	42.80	22.86	15.91	10.29
MEAN	1.409	0.405	0.503	0.411	0.747	0.850	1.586	1.127	1.427	0.737	0.513	0.343
MAX	8.9	2.1	1.2	0.65	3.0	4.5	8.9	2.6	7.4	5.5	4.4	6.0
MIN	0.09	0.13	0.33	0.30	0.42	0.38	0.64	0.76	0.60	0.19	0.00	0.00
CFSM	1.58	0.46	0.56	0.46	0.84	0.95	1.78	1.27	1.60	0.83	0.58	0.39
IN.	1.83	0.51	0.65	0.53	0.87	1.10	1.99	1.46	1.79	0.96	0.67	0.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	0.535	0.350	0.216	0.438	1.104	0.732
MAX	1.41	0.72	0.50	1.08	2.47	1.48
(WY)	2002	1999	2002	1999	2001	1998
MIN	0.18	0.094	0.078	0.056	0.43	0.36
(WY)	2001	2000	2001	2000	2000	1999

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1997 - 2002

ANNUAL TOTAL	360.12	305.81		
ANNUAL MEAN	0.987	0.838	0.900	
HIGHEST ANNUAL MEAN			1.04	2000
LOWEST ANNUAL MEAN			0.84	2002
HIGHEST DAILY MEAN	28	Feb 9	8.9	(a)Oct 13
LOWEST DAILY MEAN	0.02	Jan 1	0.00	Many days
ANNUAL SEVEN-DAY MINIMUM	0.03	Jan 1	0.00	Many periods
MAXIMUM PEAK FLOW			25	Oct 13
MAXIMUM PEAK STAGE			12.76	Oct 13
INSTANTANEOUS LOW FLOW			0.00	Many days
ANNUAL RUNOFF (CFSM)	1.11		0.94	
ANNUAL RUNOFF (INCHES)	15.05		12.78	13.74
10 PERCENT EXCEEDS	2.7		1.7	
50 PERCENT EXCEEDS	0.32		0.52	0.29
90 PERCENT EXCEEDS	0.08		0.02	0.02

(a) Also occurred Apr. 8
(e) Estimated due to ice effect or missing record

040871473 WILSON PARK CREEK AT GMIA INFALL AT MILWAUKEE, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1996 to May 1997, November 1997 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1996 to May 1997, November 1997 to current year.

INSTRUMENTATION.--Stage-activated water-quality sampler since November 1996. Continuous water-temperature recorder since November 1996.

REMARKS.--Chemical analyses are by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated. Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 25.5°C, Aug. 6, 1998, Aug. 8-9, 2001; minimum observed, 0.0°C, many days during winter.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 24.5°C, Aug. 25 and 27; minimum observed, 3.0°C, Mar. 3-5, 10 and 11.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	15.0	13.5	14.5	11.5	10.5	11.0	8.5	8.0	8.5	5.5	4.5	5.0
2	16.0	14.0	15.0	11.5	10.5	11.5	9.0	8.0	8.5	5.5	5.0	5.5
3	16.0	15.0	15.5	10.5	9.5	10.0	9.5	8.5	9.0	5.5	4.5	5.0
4	15.5	14.5	15.0	10.5	9.0	10.0	11.0	9.0	10.0	6.0	4.5	5.0
5	14.5	12.5	13.5	9.0	8.0	8.5	12.0	10.5	11.0	6.5	5.5	6.0
6	13.0	10.5	11.5	9.5	8.0	9.0	11.5	9.5	10.0	6.5	5.5	6.0
7	10.5	9.5	10.0	10.5	9.5	10.0	9.5	8.5	9.0	6.0	5.0	5.5
8	12.0	10.0	11.0	10.5	8.5	10.0	9.0	7.5	8.5	6.5	5.0	5.5
9	13.5	11.5	12.5	8.5	7.5	8.0	7.5	7.0	7.5	7.5	6.0	6.5
10	14.5	13.0	13.5	9.0	7.5	8.0	8.0	6.5	7.5	7.5	6.5	7.0
11	14.5	13.5	14.0	8.5	7.5	8.0	8.0	7.0	7.5	7.5	6.5	7.0
12	14.0	13.0	13.5	8.0	7.0	7.5	9.0	7.5	8.5	7.0	6.5	6.5
13	14.0	13.0	13.5	9.0	7.5	8.0	9.0	7.5	8.0	7.0	6.0	6.5
14	14.0	13.5	14.0	11.0	9.0	9.5	8.0	7.0	7.5	7.5	6.5	6.5
15	13.5	12.0	12.5	12.0	10.5	11.0	8.5	7.0	7.5	7.0	6.0	6.5
16	12.5	11.5	12.0	11.5	9.5	11.0	9.0	8.0	8.5	6.5	5.5	6.0
17	11.5	10.0	10.5	10.0	8.5	9.5	9.0	8.0	8.5	6.0	5.0	5.5
18	11.0	9.5	10.0	10.5	9.5	10.0	8.5	7.0	7.5	5.5	4.5	5.0
19	11.5	10.5	11.0	11.0	8.5	10.0	8.5	6.0	7.5	5.5	4.5	5.0
20	11.5	10.5	11.0	8.5	6.5	7.5	7.5	5.5	6.5	5.5	5.0	5.0
21	12.0	11.0	11.5	7.5	6.0	7.0	8.0	7.0	7.5	6.0	5.0	5.5
22	12.0	10.5	11.5	8.0	6.5	7.5	8.5	7.5	8.0	6.5	5.5	5.5
23	13.0	12.0	12.5	8.5	7.5	8.0	8.5	6.5	7.0	6.5	5.5	6.5
24	13.5	12.5	13.0	10.0	8.5	9.5	7.0	6.0	6.0	7.0	6.0	6.5
25	12.5	9.0	10.5	10.0	8.5	9.0	6.5	5.5	6.0	7.0	6.0	6.5
26	9.0	8.0	8.5	8.5	7.5	8.0	6.0	5.5	5.5	7.5	6.0	6.5
27	8.5	7.5	8.0	9.0	8.0	8.5	6.5	5.0	5.5	7.5	6.5	7.0
28	8.5	7.5	8.0	8.0	7.5	7.5	6.5	5.5	6.0	7.5	7.0	7.5
29	9.0	8.0	8.5	8.5	7.5	8.0	5.5	4.5	5.0	7.0	6.0	6.5
30	9.0	8.5	9.0	8.5	8.0	8.5	5.0	4.5	4.5	6.5	6.0	6.0
31	10.5	9.0	10.0	---	---	---	5.0	4.0	4.5	6.0	5.0	5.5
MONTH	16.0	7.5	11.8	12.0	6.0	9.0	12.0	4.0	7.5	7.5	4.5	6.0

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871473 WILSON PARK CREEK AT GMIA INFALL AT MILWAUKEE, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	6.0	5.0	5.5	5.5	4.5	5.0	8.0	7.0	7.5	11.0	9.5	10.0
2	6.0	5.0	5.5	5.5	4.0	5.0	7.0	6.0	6.5	10.5	9.0	9.5
3	6.0	5.0	5.5	4.5	3.0	4.0	7.0	6.0	6.5	11.0	9.0	10.0
4	6.0	4.0	5.0	4.0	3.0	3.5	7.0	6.0	6.5	11.5	9.0	10.0
5	5.0	4.0	4.5	4.5	3.0	3.5	7.5	6.0	7.0	12.0	10.5	11.0
6	5.5	4.5	5.0	5.0	4.0	4.5	7.5	6.5	7.0	12.5	11.0	11.5
7	5.5	4.5	5.0	5.0	4.5	4.5	7.5	6.5	7.0	12.5	11.5	12.0
8	6.0	5.0	5.5	5.0	4.0	4.5	7.0	6.0	6.5	11.5	10.5	11.0
9	6.0	5.0	5.5	4.5	3.5	4.0	7.0	6.0	6.5	12.0	10.5	11.0
10	6.0	3.5	4.5	4.0	3.0	3.0	8.5	6.5	7.0	12.0	10.0	11.0
11	5.0	3.5	4.0	4.5	3.0	4.0	9.5	8.0	8.5	12.0	10.0	11.0
12	5.5	4.5	5.0	5.5	4.0	4.5	10.0	9.5	9.5	10.0	9.5	9.5
13	5.0	4.0	4.5	7.0	5.0	6.0	10.5	8.5	9.5	10.5	9.5	10.0
14	5.5	4.5	5.0	6.5	5.5	6.0	11.5	9.5	10.5	12.0	9.5	10.5
15	6.0	5.0	5.5	6.0	5.5	5.5	13.0	10.5	11.5	12.5	10.0	11.0
16	6.0	5.5	5.5	7.0	5.5	6.0	14.0	12.0	13.0	12.5	11.5	12.0
17	6.0	5.0	5.5	7.0	6.0	6.5	14.5	13.0	14.0	11.5	10.0	10.5
18	6.5	5.0	5.5	7.5	6.5	7.0	14.0	12.5	13.0	11.5	9.5	10.0
19	6.5	5.5	5.5	7.5	6.5	7.0	14.0	12.5	13.5	11.5	10.0	11.0
20	6.0	5.0	5.5	7.5	7.0	7.5	12.5	10.5	11.5	11.5	10.0	10.5
21	5.5	4.5	5.0	7.5	6.5	7.0	11.0	9.0	10.0	12.0	10.0	10.5
22	5.5	4.0	4.5	6.5	5.5	6.0	9.0	8.5	9.0	12.5	10.0	11.0
23	5.5	4.5	5.0	7.0	6.0	6.5	10.5	8.5	9.0	12.5	11.0	11.5
24	7.0	5.0	6.0	7.0	6.5	7.0	11.5	9.5	10.0	12.0	11.0	12.0
25	7.0	5.5	6.5	6.5	5.5	6.0	11.0	9.5	10.0	12.0	10.0	11.0
26	6.0	5.0	5.5	6.5	5.5	6.0	10.5	9.0	10.0	13.0	10.0	11.0
27	5.5	4.5	5.0	8.0	6.0	7.0	10.5	9.0	9.5	13.5	11.5	12.5
28	5.0	4.5	5.0	7.5	7.0	7.5	9.0	8.5	8.5	13.5	12.0	13.0
29	---	---	---	7.5	7.0	7.5	10.5	8.5	9.0	14.0	12.5	13.0
30	---	---	---	8.5	6.5	7.5	11.0	9.5	10.0	15.0	12.5	13.5
31	---	---	---	8.5	7.0	8.0	---	---	---	15.0	14.0	14.5
MONTH	7.0	3.5	5.2	8.5	3.0	5.7	14.5	6.0	9.2	15.0	9.0	11.2
	JUNE			JULY			AUGUST			SEPTEMBER		
1	15.0	13.5	14.0	17.0	15.0	16.0	20.5	16.0	18.0	23.0	19.5	21.0
2	14.5	13.0	13.5	17.0	15.5	16.5	20.0	16.5	18.0	21.5	19.5	20.5
3	13.5	12.0	12.5	17.0	15.5	16.5	19.5	14.5	17.0	21.5	19.5	20.5
4	13.0	12.0	12.5	17.0	15.5	16.0	21.5	15.5	19.0	22.5	18.0	20.0
5	12.5	12.0	12.5	16.5	15.0	15.5	19.5	16.5	18.0	22.5	17.5	19.5
6	13.5	11.5	12.5	16.0	15.0	15.5	18.5	15.5	16.5	22.5	17.5	20.0
7	14.0	12.5	13.0	16.0	14.5	15.0	18.5	14.5	16.0	22.5	18.5	20.5
8	15.0	13.0	13.5	16.5	15.0	15.5	18.5	14.0	16.0	23.0	19.0	21.0
9	15.5	13.5	14.5	18.0	16.5	17.5	18.5	14.0	16.0	24.0	20.5	22.0
10	15.5	14.0	14.5	17.0	15.5	16.0	18.5	14.5	16.5	23.0	20.0	22.0
11	16.5	15.0	16.0	16.0	15.0	15.5	19.0	15.0	17.0	21.0	17.5	19.0
12	16.0	14.5	15.0	16.0	14.5	15.0	21.0	17.0	18.5	20.5	16.5	18.5
13	15.0	13.5	14.0	16.0	14.0	15.0	22.0	19.0	20.5	20.0	16.5	18.0
14	14.5	13.0	13.5	16.0	14.0	15.0	22.5	20.0	21.0	20.0	16.5	18.0
15	15.0	13.5	14.0	16.5	14.0	15.0	23.5	18.5	20.5	19.5	16.0	17.5
16	15.0	13.5	14.5	17.5	14.0	15.5	24.0	20.0	21.5	17.5	13.5	15.5
17	15.0	13.0	14.0	18.0	14.0	16.0	23.0	20.5	21.5	18.5	14.0	16.0
18	15.5	13.5	14.5	18.5	15.0	17.0	23.5	18.0	20.5	20.5	16.5	18.5
19	15.0	13.5	14.5	18.5	15.5	17.0	23.5	19.0	21.0	21.5	19.0	20.5
20	16.5	14.0	15.0	18.5	14.5	16.5	23.0	17.5	20.0	21.0	19.5	20.5
21	17.0	15.0	15.5	21.0	17.5	19.0	23.0	18.5	20.5	21.5	17.5	19.5
22	17.0	15.0	16.0	18.0	16.0	17.0	22.5	19.5	21.0	19.5	16.5	18.0
23	17.0	15.0	16.0	19.0	15.0	16.5	21.0	19.0	20.0	17.0	14.0	15.5
24	17.0	15.5	16.0	19.5	14.0	16.0	22.5	19.5	21.0	16.5	12.5	14.5
25	17.0	15.0	16.0	17.0	14.0	15.5	24.5	19.5	21.5	16.0	12.5	14.0
26	16.5	15.5	16.0	21.5	15.0	19.0	24.0	18.5	21.0	17.5	13.5	15.5
27	17.0	16.0	16.5	18.5	15.5	17.0	24.5	19.5	21.5	16.5	15.0	16.0
28	16.5	15.0	15.5	20.0	16.0	18.0	23.5	19.5	21.0	17.0	13.0	14.5
29	16.0	14.5	15.5	19.5	17.0	18.5	23.5	18.5	20.5	18.5	16.0	17.0
30	16.5	14.5	15.5	19.5	15.5	17.5	23.5	18.0	20.5	19.5	17.5	18.5
31	---	---	---	20.0	15.5	17.5	23.5	19.0	21.0	---	---	---
MONTH	17.0	11.5	14.6	21.5	14.0	16.4	24.5	14.0	19.4	24.0	12.5	18.4

040871473 WILSON PARK CREEK AT GMIA INFALL AT MILWAUKEE, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	POTAS-SIUM, TOTAL RECOVER-ABLE (MG/L) (00939)	ALKA-LINITY WAT.DIS FET LAB (MG/L) CACO3 (29801)	ANC WATER UNFLTRD FET LAB (MG/L AS CACO3) (00417)	CHLO-RIDE, DIS-SOLVED (MG/L) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N (00608)	NITRO-GEN, AM-MONIA + ORG-ANIC TOTAL (MG/L) AS N (00625)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)
FEB 2002 05...	1128	.48	10	8.0	1150	3.0	326	326	51.6	--	.149	.48	<2.0
APR 04...	1402	.67	10	8.1	1150	4.0	--	328	66.5	3	.065	.26	3.4

Date	OXYGEN DEMAND, BIO-CHEM-ICAL, (LOW LEVEL) (MG/L) (00335)	1,2,-ETHANE-DIOL, WATER, UNFLTRD REC (MG/L) (91075)	1,2,-PROP-ANEDIOL, WATER, UNFLTRD REC (MG/L) (91080)
FEB 05...	23	<18.0	<18.0
APR 04...	14	<18.0	<18.0

COMPOSITE SAMPLES

BEGIN-NING DATE	BEGIN-NING TIME	ENDING DATE	ENDING TIME	RUNOFF VOLUME THOUSANDS OF CUBIC FEET (99904)	SAM-PLING METHOD, CODES (82398)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	POTAS-SIUM, TOTAL RECOVER-ABLE (MG/L) (00939)	ALKA-LINITY WAT.DIS FET LAB (MG/L) CACO3 (29801)	ANC WATER UNFLTRD FET LAB (MG/L AS CACO3) (00417)	CHLO-RIDE, DIS-SOLVED (MG/L) AS CL (00940)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N (00608)	NITRO-GEN, AM-MONIA + ORG-ANIC TOTAL (MG/L) AS N (00625)
20020114	0605	20020114	1515	21	50	8.1	1300	4.0	--	302	115	.245	1.2
20020216	1415	20020117	0115	22	50	8.0	1280	3.0	--	310	85.8	.145	.69
20020131	0540	20020201	1050	94	50	8.2	2140	5.0	--	285	433	.199	1.5
20020221	0540	20020221	1250	21	50	8.1	1220	24.0	248	258	156	.191	.91
20020301	2155	20020302	2215	55	50	8.3	1980	4.0	--	300	361	.124	.72

Date	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	OXYGEN DEMAND, CHEM-ICAL, (LOW LEVEL) (MG/L) (00335)	1,2,-ETHANE-DIOL, WATER, UNFLTRD REC (MG/L) (91075)	1,2,-PROP-ANEDIOL, WATER, UNFLTRD REC (MG/L) (91080)
JAN 14-14	6.0	33	<18.0	<18.0
JAN 16-17	<3.0	30	<18.0	<18.0
JAN 31-	4.3	32	<18.0	<18.0
FEB 01	39.3	93	<18.0	60.0
FEB 21-21	2.4	11	<18.0	29.0
MAR 01-02				

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871475 WILSON PARK CREEK AT GMIA OUTFALL #7 AT MILWAUKEE, WI

LOCATION.--Lat 42°57'24", long 87°54'25", in NW ¼ NW ¼ sec.28, T.6 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, 200 ft upstream of Howell Avenue culverts on General Mitchell International Airport property, at Milwaukee.

DRAINAGE AREA.--2.25 mi².

PERIOD OF RECORD.--November 1996 to May 1997, October 1997 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1996 to May 1997, October 1997 to current year.
 DISSOLVED OXYGEN: October 1997 to November 1998 (discontinued).

INSTRUMENTATION.--Stage-activated water-quality sampler since November 1996. Continuous water-temperature recorder since November 1996.

REMARKS.--Chemical analyses are by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated. Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 27.5°C, Aug. 9, 2001; minimum observed, 0.5°C, Feb. 18, 21, 1997, Jan. 22-23, 1999, and Feb. 8-10, 24-25, 2001.
 DISSOLVED OXYGEN: Maximum observed, 14.1 mg/L, Feb. 27, 1998; minimum observed, 0.0 mg/L, June 27 and July 7, 1998.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 25.5°C, Aug. 13; minimum observed, 2.5°C, Feb. 10, Mar. 8 and 10.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	15.5	15.0	15.5	12.5	11.5	12.0	10.0	9.5	10.0	5.5	4.5	5.0
2	15.5	15.5	15.5	12.5	12.0	12.0	9.5	9.0	9.5	5.5	5.0	5.5
3	16.0	15.5	15.5	12.0	12.0	12.0	10.0	9.5	10.0	6.0	4.5	5.5
4	16.5	15.5	15.5	12.0	11.5	12.0	10.5	10.0	10.0	6.0	5.5	5.5
5	15.5	14.5	15.0	12.0	11.5	11.5	12.0	10.5	11.0	7.0	6.0	6.0
6	15.0	14.0	14.5	11.5	11.5	11.5	11.5	10.5	11.0	7.0	6.0	6.5
7	15.0	14.0	14.5	11.5	11.5	11.5	10.5	9.5	10.0	6.5	5.0	6.0
8	14.5	14.0	14.5	11.5	11.0	11.5	10.5	7.0	9.0	6.5	5.5	6.0
9	14.5	14.0	14.5	11.5	11.0	11.0	9.5	8.5	9.0	7.5	6.0	6.5
10	16.0	14.5	15.0	11.0	10.5	11.0	9.0	8.5	9.0	7.5	6.5	7.0
11	15.5	15.0	15.0	11.0	10.5	10.5	9.5	8.5	9.0	7.5	6.5	7.0
12	15.0	12.5	14.0	11.0	11.0	11.0	9.5	8.0	9.0	7.5	6.5	7.0
13	15.5	14.5	15.0	11.0	9.5	10.5	9.5	8.5	9.0	7.0	6.5	6.5
14	15.0	14.0	14.5	11.5	10.5	11.0	9.5	8.0	8.5	7.5	6.5	7.0
15	14.5	13.5	14.0	11.5	11.5	11.5	9.0	8.5	8.5	7.0	6.0	6.5
16	14.0	13.0	13.5	11.5	11.5	11.5	9.5	9.0	9.0	6.5	6.0	6.5
17	13.5	12.5	13.0	11.5	11.0	11.5	9.5	9.0	9.5	6.5	5.5	6.0
18	13.0	12.5	13.0	11.5	11.0	11.5	9.0	8.5	9.0	6.5	5.5	5.5
19	13.0	12.5	13.0	11.5	10.0	11.0	9.0	7.5	8.0	5.5	5.0	5.5
20	13.0	13.0	13.0	11.5	10.0	10.5	8.0	7.0	7.5	6.0	5.5	5.5
21	13.5	13.0	13.0	11.0	10.0	10.5	8.0	7.5	8.0	6.5	5.5	6.0
22	13.5	13.0	13.0	10.5	10.0	10.5	9.0	8.0	8.5	6.5	5.5	6.0
23	14.0	13.5	13.5	10.5	10.0	10.5	9.0	7.5	8.0	7.0	6.0	6.5
24	14.5	12.5	13.5	11.5	10.5	11.0	7.5	6.0	6.5	7.5	6.0	6.5
25	12.5	10.5	11.5	11.0	10.5	10.5	6.5	5.5	6.0	7.0	6.0	6.5
26	11.0	10.0	10.5	10.5	10.5	10.5	6.5	6.0	6.0	7.5	6.0	6.5
27	11.0	10.5	11.0	11.0	10.0	10.5	6.5	6.0	6.0	7.5	6.5	7.0
28	11.0	11.0	11.0	10.5	10.0	10.0	6.5	6.0	6.5	8.0	7.0	7.5
29	11.0	10.5	11.0	10.5	9.0	10.0	6.5	5.0	5.5	7.5	6.0	6.5
30	11.5	11.0	11.0	10.0	8.5	9.5	5.0	4.5	5.0	6.5	6.0	6.0
31	12.0	11.5	11.5	---	---	---	5.0	4.5	4.5	6.5	3.0	5.5
MONTH	16.5	10.0	13.5	12.5	8.5	11.0	12.0	4.5	8.3	8.0	3.0	6.2

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871475 WILSON PARK CREEK AT GMIA OUTFALL #7 AT MILWAUKEE, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.0	3.0	4.5	5.5	4.5	5.0	8.0	4.0	6.5	10.5	8.5	10.0
2	5.5	4.5	5.0	5.5	3.5	5.0	5.5	3.5	5.0	10.0	8.0	9.0
3	6.0	5.5	5.5	4.5	3.5	4.0	7.0	5.5	6.0	11.0	9.0	9.5
4	5.5	4.0	4.5	4.5	3.5	4.0	7.0	6.0	6.5	11.0	9.0	10.0
5	5.0	4.5	5.0	4.5	4.0	4.5	7.5	6.5	7.0	11.5	10.0	10.5
6	5.5	5.0	5.5	5.5	4.5	5.0	8.5	6.5	7.0	12.0	10.5	11.0
7	5.5	5.0	5.5	5.5	5.0	5.0	8.0	4.0	6.0	12.0	11.0	11.5
8	5.5	5.0	5.0	5.5	2.5	3.5	8.0	5.5	6.5	12.0	10.5	11.0
9	5.5	5.0	5.0	6.0	3.0	4.0	7.5	5.5	6.0	11.5	10.5	11.0
10	5.0	2.5	3.5	4.0	2.5	3.0	8.5	6.0	7.0	11.5	9.5	10.5
11	4.5	3.5	4.0	5.0	4.0	4.5	---	---	---	12.0	9.5	10.5
12	5.0	4.5	4.5	6.5	4.5	5.0	---	---	---	10.0	9.0	9.5
13	5.0	4.5	4.5	7.0	5.5	6.0	---	---	---	10.5	9.5	10.0
14	5.5	4.5	5.0	7.0	5.5	6.0	---	---	---	11.5	10.0	10.5
15	5.5	5.5	5.5	6.0	5.5	5.5	---	---	---	12.0	10.0	11.0
16	5.5	5.5	5.5	7.5	6.0	6.5	---	---	---	13.5	11.0	12.0
17	6.0	5.0	5.5	7.0	6.5	6.5	13.0	11.0	12.0	11.0	10.0	10.5
18	6.0	5.5	5.5	8.0	7.0	7.0	16.5	11.0	12.0	11.5	9.5	10.0
19	6.5	4.0	5.0	8.0	7.0	7.5	15.0	11.5	12.0	11.5	10.0	11.0
20	6.0	5.0	5.5	8.0	6.0	7.0	12.0	9.5	10.5	11.5	10.0	10.5
21	5.0	4.5	4.5	7.5	5.5	6.5	11.0	7.0	9.0	12.0	10.0	11.0
22	5.5	4.0	5.0	6.5	4.5	5.5	9.0	7.0	8.0	12.5	10.5	11.0
23	6.0	5.0	5.5	7.5	5.5	6.5	10.5	8.5	9.0	12.5	11.0	11.5
24	7.0	5.5	6.0	7.5	6.5	7.0	11.0	9.0	10.0	12.5	11.0	11.5
25	7.0	6.0	6.5	7.0	5.5	6.0	10.5	9.0	9.5	12.0	9.5	10.5
26	6.0	5.0	5.5	7.0	6.0	6.0	10.5	9.0	9.5	13.0	10.0	11.0
27	5.5	4.5	5.0	8.0	6.5	7.0	10.5	8.0	9.5	13.0	11.0	12.0
28	5.5	4.5	5.0	8.0	6.5	7.0	8.5	8.0	8.5	13.5	11.5	12.5
29	---	---	---	8.0	6.0	7.0	10.0	8.5	9.0	13.5	12.0	12.5
30	---	---	---	8.5	7.0	7.5	10.5	9.0	10.0	14.5	12.0	13.0
31	---	---	---	8.5	6.5	7.5	---	---	---	14.5	13.0	14.0
MONTH	7.0	2.5	5.1	8.5	2.5	5.7	---	---	---	14.5	8.0	11.0
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.0	12.5	13.5	---	---	---	19.5	18.0	18.5	19.0	18.5	19.0
2	15.0	13.0	13.5	---	---	---	19.5	18.5	19.0	20.5	18.5	20.0
3	13.0	12.0	12.5	18.0	15.5	17.0	19.0	18.0	18.5	22.0	20.0	20.5
4	13.5	12.5	13.5	18.0	16.0	17.0	22.5	18.0	20.5	20.0	19.5	19.5
5	13.0	12.5	12.5	18.0	15.0	16.5	21.0	19.0	19.5	19.5	19.0	19.5
6	14.5	12.0	13.0	17.5	15.5	16.0	19.5	18.0	18.5	19.5	19.0	19.0
7	14.5	12.5	13.5	17.5	15.0	16.0	18.5	17.5	18.0	19.0	19.0	19.0
8	15.0	12.5	13.5	24.5	15.5	17.0	18.5	17.5	18.0	19.5	19.0	19.0
9	15.5	13.0	14.0	23.5	18.5	20.5	18.0	17.5	18.0	19.5	19.0	19.0
10	20.0	13.5	15.5	---	---	---	18.0	17.0	17.5	19.0	19.0	19.0
11	18.5	16.0	17.0	---	---	---	18.0	17.5	18.0	19.0	18.0	18.5
12	16.0	14.0	15.0	---	---	---	23.0	17.5	19.0	18.5	18.0	18.5
13	15.0	13.5	14.0	---	---	---	25.5	20.0	21.5	19.0	18.5	18.5
14	16.0	13.5	14.5	---	---	---	22.5	21.0	21.5	19.0	18.5	18.5
15	17.0	13.5	14.5	---	---	---	21.5	20.0	20.5	18.5	18.0	18.0
16	15.5	13.5	14.5	---	---	---	20.0	19.5	20.0	18.0	17.5	17.5
17	15.5	13.0	14.0	---	---	---	20.0	19.5	19.5	18.0	18.0	18.0
18	15.5	13.5	14.5	---	---	---	19.5	19.0	19.0	20.0	18.0	19.0
19	15.5	13.5	14.5	---	---	---	19.5	19.0	19.0	22.0	18.5	20.0
20	16.5	14.0	15.0	23.5	16.5	17.5	19.0	18.5	19.0	20.5	19.5	20.0
21	17.5	15.0	16.0	23.5	18.0	18.5	24.0	18.5	19.5	19.5	18.5	19.5
22	17.5	15.0	16.0	18.5	18.0	18.5	23.0	20.5	22.0	18.5	17.5	18.0
23	---	---	---	---	---	---	20.5	20.0	20.5	18.0	17.5	17.5
24	---	---	---	---	---	---	20.0	19.5	20.0	17.5	16.0	16.5
25	---	---	---	---	---	---	20.0	19.5	19.5	17.0	17.0	17.0
26	---	---	---	22.0	17.0	20.0	19.5	19.5	19.5	17.5	17.0	17.0
27	---	---	---	20.0	18.0	19.0	19.5	19.0	19.5	17.5	17.0	17.0
28	---	---	---	18.5	18.0	18.5	19.5	19.0	19.0	17.0	16.5	16.5
29	---	---	---	21.5	18.5	19.5	19.0	19.0	19.0	18.0	16.5	17.5
30	---	---	---	19.5	18.0	18.5	19.0	19.0	19.0	18.0	18.0	18.0
31	---	---	---	19.0	18.0	18.5	19.0	18.5	19.0	---	---	---
MONTH	---	---	---	---	---	---	25.5	17.0	19.3	22.0	16.0	18.5

040871475 WILSON PARK CREEK AT GMIA OUTFALL #7 AT MILWAUKEE, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	1,2,- ETHANE- DIOL, WATER, UNFLTRD REC (MG/L) (91075)	1,2,- PROP- ANEDIOL WATER, UNFLTRD REC (MG/L) (91080)
OCT 24-24	<18.0	<18.0
DEC 13-20	--	--
DEC 27 2001-	--	--
JAN 03 2002	--	--
JAN 03-05	--	--
JAN 09-17	--	--
JAN 14-14	<18.0	73.0
JAN 16-17	22.0	30.0
JAN 17-20	--	--
JAN 24-31	--	--
JAN 31- FEB 01	110	1400
JAN 31- FEB 05	--	--
FEB 07-13	--	--
FEB 13-20	--	--
FEB 20-28	--	--
FEB 21-21	<18.0	180
FEB 28- MAR 03	--	--
MAR 01-02	220	1500
MAR 07-07	--	--
MAR 07-09	--	--
MAR 09-13	--	--
MAR 13-21	--	--
MAR 21-28	--	--
MAR 28- APR 04	--	--
APR 04-08	--	--
APR 10-18	--	--
APR 18-24	--	--
APR 24- MAY 01	--	--
MAY 01-09	--	--

Date	Time	SAM- PLING METHOD, CODES (82398)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	POTAS- SIUM, TOTAL RECOVER -ABLE (MG/L) (00939)	ANC WATER UNFLTRD FET LAB MG/L AS CACO3 (00417)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	OXYGEN DEMAND, CHEM- ICAL LEVEL) (MG/L) (00335)	1,2,- ETHANE- DIOL, WATER, UNFLTRD REC (MG/L) (91075)
FEB 2002 05...	1018	10	8.2	1380	36.0	392	90.1	--	.636	1.2	166	350	<18.0
APR 04...	0824	10	8.1	1320	35.0	391	102	4	.882	1.4	136	210	<18.0

Date	1,2,- PROP- ANEDIOL WATER, UNFLTRD REC (MG/L) (91080)
FEB 2002 05...	51.0
APR 04...	<18.0

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871476 HOLMES AVENUE CREEK TRIB AT GMIA OUTFALL #1 AT MILWAUKEE, WI

LOCATION.--Lat 42°56'30", long 87°54'37", in NE 1/4 NE 1/4 sec.32, T.6 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, 100 ft west of intersection at corner of Air Cargo Way and Howell Avenue, at Milwaukee.

DRAINAGE AREA.--0.03 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1996 through May 1997, November 1997 to current year.

GAGE.--Water-stage recorder in culvert. Elevation of gage is 700 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.13	0.00	0.11	0.17	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.02	0.05	0.12	0.09	0.00	0.00	0.00	0.75
3	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.71	0.00	0.00	0.13
4	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.11	0.00
5	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.04	0.01	0.43	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.09	0.00	0.05	0.32	0.73	0.02	0.00	0.52	0.00	0.00
9	0.00	0.00	0.00	0.00	0.05	0.33	0.19	0.18	0.00	0.08	0.00	0.00
10	0.10	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.08	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.23	0.07	0.00	0.00	0.00
12	0.34	0.00	0.08	0.00	0.01	0.01	0.00	0.09	0.00	0.00	0.95	0.00
13	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.00
14	0.03	0.01	0.00	0.25	0.00	0.00	0.02	0.00	0.05	0.00	0.05	0.00
15	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
16	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.16	e0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.01	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	e0.00	0.00	0.00	0.16
19	0.00	0.00	0.05	0.00	0.29	0.01	0.02	0.00	e0.00	0.00	0.00	0.15
20	0.00	0.00	0.00	0.00	0.16	0.04	0.00	0.00	e0.00	0.00	0.00	0.02
21	0.00	0.00	0.00	0.00	0.03	0.01	0.16	0.00	e0.03	0.00	0.41	0.00
22	0.64	0.00	0.04	0.02	0.00	0.00	0.02	0.00	e0.00	0.00	0.56	0.00
23	0.21	0.00	0.01	0.04	0.00	0.00	0.00	0.00	e0.00	0.00	0.09	0.00
24	0.54	0.06	0.00	0.02	0.00	0.00	0.01	0.00	e0.00	0.00	0.00	0.00
25	0.00	0.06	0.00	0.01	0.00	0.00	0.00	0.24	e0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.10	0.68	0.00	0.00
27	0.00	0.02	0.00	0.00	0.00	0.00	0.26	0.00	e0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.00	0.00	0.00	0.00	0.00
29	0.00	0.03	0.00	0.00	---	0.05	0.00	0.00	0.00	0.02	0.00	0.49
30	0.00	0.12	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.01
31	0.00	---	0.00	0.14	---	0.01	---	0.00	---	0.00	0.00	---
TOTAL	2.57	0.43	0.35	0.68	1.19	0.88	2.26	1.18	1.62	1.30	3.02	1.71
MEAN	0.083	0.014	0.011	0.022	0.043	0.028	0.075	0.038	0.054	0.042	0.097	0.057
MAX	0.68	0.13	0.09	0.25	0.38	0.33	0.73	0.24	0.71	0.68	0.95	0.75
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	0.033	0.024	0.014	0.032	0.057	0.033
MAX	0.083	0.047	0.041	0.057	0.12	0.061
(WY)	2002	2001	1997	1999	2001	1998
MIN	0.008	0.007	0.001	0.002	0.012	0.004
(WY)	2000	2000	2001	2000	2000	1999

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1997 - 2002

ANNUAL TOTAL	25.11	17.19	
ANNUAL MEAN	0.069	0.047	0.057
HIGHEST ANNUAL MEAN			0.066 2000
LOWEST ANNUAL MEAN			0.047 2002
HIGHEST DAILY MEAN	1.2 Feb 9	0.95 Aug 12	2.9 Jul 2 2000
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Many days	0.00 Many days
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Many periods	0.00 Many periods
MAXIMUM PEAK STAGE		3.14 Aug 12	4.45 Jul 2 2000
INSTANTANEOUS LOW FLOW		0.00 Many days	0.00 Many days
10 PERCENT EXCEEDS	0.19	0.13	0.14
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

(e) Estimated due to missing record

040871476 HOLMES AVENUE CREEK TRIB AT GMIA OUTFALL #1 AT MILWAUKEE, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1996 to May 1997, November 1997 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1996 to May 1997, November 1997 to Sept. 6, 1999, November 2000 to September 2001.

INSTRUMENTATION.--Stage-activated water-quality sampler since November 1996. Continuous water-temperature recorder from November 1996 to September 1999.

REMARKS.--Chemical analyses are by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated. Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 29.5°C, July 20-21, 2001; minimum observed, 0.0°C, many days during winter.

EXTREMES FOR CURRENT YEAR.-- WATER TEMPERATURE; Maximum observed, 27.0°C, Aug. 13 and 22; minimum observed, 1.0°C, Mar. 8.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.5	14.5	14.5	14.0	13.0	13.0	11.5	10.5	10.5	9.5	8.0	8.0
2	16.0	15.0	15.0	14.0	13.0	13.0	12.0	10.5	10.5	8.5	7.5	7.5
3	16.0	15.0	15.0	13.5	12.5	12.5	12.0	11.0	11.0	9.5	8.0	8.0
4	16.0	15.0	15.0	13.5	12.0	12.0	12.0	11.0	11.0	9.5	8.5	8.5
5	16.0	14.5	14.5	12.5	11.5	11.5	14.5	12.0	12.0	8.5	8.0	8.0
6	15.0	14.0	14.0	13.5	12.0	12.0	12.5	11.5	11.5	9.5	7.5	7.5
7	15.0	13.5	13.5	13.5	12.0	12.0	12.0	9.5	9.5	8.5	7.0	7.0
8	15.0	14.0	14.0	13.5	11.5	11.5	10.5	7.5	7.5	9.0	8.0	8.0
9	15.5	14.5	14.5	13.0	11.5	11.5	11.0	9.5	9.5	9.5	8.5	8.5
10	17.0	15.0	15.0	12.5	10.5	10.5	10.5	9.5	9.5	9.5	8.5	8.5
11	16.0	15.0	15.0	11.5	10.0	10.0	11.0	10.0	10.0	9.5	8.5	8.5
12	15.5	13.0	13.0	12.5	11.0	11.0	11.5	10.0	10.0	10.0	8.5	8.5
13	16.0	14.0	14.0	12.0	9.5	9.5	10.0	8.0	8.0	10.0	8.5	8.5
14	15.0	13.5	13.5	13.0	11.5	11.5	11.0	10.0	10.0	10.0	4.5	4.5
15	15.0	14.0	14.0	13.5	12.5	12.5	11.5	10.0	10.0	7.5	4.0	4.0
16	15.0	13.0	13.0	13.5	11.5	11.5	11.5	9.5	9.5	8.5	4.5	4.5
17	14.5	13.0	13.0	13.0	12.0	12.0	11.0	9.5	9.5	8.0	5.5	5.5
18	14.0	13.0	13.0	13.5	12.5	12.5	11.5	10.5	10.5	8.0	7.0	7.0
19	14.5	13.5	13.5	13.0	12.0	12.0	10.0	6.5	6.5	8.0	7.0	7.0
20	14.0	13.0	13.0	12.0	11.0	11.0	10.5	9.0	9.0	8.5	7.0	7.0
21	14.0	13.0	13.0	12.5	11.0	11.0	10.0	9.0	9.0	9.0	7.0	7.0
22	15.0	13.0	13.0	12.0	11.0	11.0	11.0	9.0	9.0	9.0	7.0	7.0
23	14.5	13.0	13.0	12.0	11.5	11.5	10.0	8.5	8.5	7.5	4.5	4.5
24	15.0	12.5	12.5	13.0	11.5	11.5	10.5	9.5	9.5	8.0	6.0	6.0
25	13.5	12.5	12.5	12.5	10.5	10.5	10.5	9.0	9.0	8.0	6.0	6.0
26	14.0	12.5	12.5	12.0	11.0	11.0	10.0	8.5	8.5	8.0	6.5	6.5
27	12.5	11.5	11.5	12.5	10.0	10.0	10.5	8.5	8.5	8.5	7.0	7.0
28	14.0	12.5	12.5	12.5	11.0	11.0	10.5	9.0	9.0	8.5	7.0	7.0
29	14.0	12.0	12.0	10.0	8.0	8.0	10.0	9.0	9.0	7.0	6.0	6.0
30	14.0	12.0	12.0	11.0	8.0	8.0	10.5	9.5	9.5	7.0	5.5	5.5
31	14.0	13.0	13.0	---	---	---	10.0	9.0	9.0	7.5	3.5	3.5
MONTH	17.0	11.5	13.5	14.0	8.0	11.2	14.5	6.5	9.5	10.0	3.5	6.8

040871476 HOLMES AVENUE CREEK TRIB AT GMIA OUTFALL #1 AT MILWAUKEE, WI--Continued

COMPOSITE SAMPLES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

BEGIN- NING DATE	BEGIN- NING TIME	ENDING DATE	ENDING TIME	RUNOFF VOLUME THOUSANDS OF CUBIC FEET (99904)	SAM- PLING METHOD, CODES (82398)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	POTAS- SIUM, TOTAL RECOVER -ABLE (MG/L) (00939)	ANC WATER UNFLTRD FET LAB MG/L AS CACO3 (00417)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) AS N) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)
20011024	0036	20011024	0147	11	50	7.8	251	--	93	1.4	.299	.85	6.6
20020114	0554	20020114	1352	8.1	50	7.5	610	21.0	102	91.2	.765	4.8	930
20020116	1405	20020117	0351	1.1	50	7.7	--	55.0	180	23800	2.36	4.2	1180
20020131	0535	20020201	1230	20	50	7.4	1630	204	293	242	.701	4.1	4080
20020221	0526	20020221	1259	1.0	50	7.3	1970	119	305	386	.585	4.1	6150
20020301	2147	20020303	0510	4.7	50	7.3	5630	55.0	199	1730	1.29	5.6	5390

Date	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	1,2,- ETHANE- DIOL, WATER, UNFLTRD REC (MG/L) (91075)	1,2,- PROP- ANEDIOL WATER, UNFLTRD REC (MG/L) (91080)
OCT 24-24	20	<18.0	<18.0
JAN 14-14	1700	23.0	770
JAN 16-17	2700	<18.0	960
JAN 31- FEB 01	8800	<18.0	3700
FEB 21-21	11000	<18.0	5600
MAR 01-03	11000	30.0	3600

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI

LOCATION.--Lat 42°59'16", long 87°57'07", in SE ¼ SE ¼ sec.12, T.6 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, on left bank 50 ft upstream from the Kinnickinnic River and 100 ft upstream of Kinnickinnic River Parkway bridge, at Milwaukee.

DRAINAGE AREA.--11.34 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1996 to May 1997, November 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 640 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	6.9	7.1	2.9	18	4.4	11	18	5.6	3.9	e5.3	3.1
2	4.7	6.2	5.8	3.2	5.9	10	24	39	5.8	3.6	e4.7	99
3	4.3	5.9	5.5	3.1	5.3	7.5	7.3	8.1	89	4.2	4.1	20
4	7.4	5.7	5.3	3.3	4.0	4.9	5.7	6.8	98	4.0	15	4.8
5	5.0	5.8	6.7	3.5	3.8	4.6	5.3	6.2	14	3.9	4.8	3.7
6	4.6	5.7	7.0	3.5	4.5	5.5	4.8	6.6	9.0	3.6	3.3	3.1
7	4.1	5.9	5.7	3.8	5.9	5.7	36	5.9	7.3	3.6	3.5	2.8
8	e4.4	5.5	18	3.8	6.7	62	137	7.9	6.4	27	3.8	2.6
9	e5.0	5.1	5.8	4.7	7.4	73	105	32	6.2	51	4.0	2.5
10	e20	5.0	5.3	4.9	51	12	17	6.4	19	6.5	3.8	2.6
11	e7.0	4.6	5.1	3.6	9.8	9.5	12	35	19	5.2	3.8	2.4
12	42	4.4	8.9	3.1	8.0	8.8	10	44	7.5	e4.5	119	2.3
13	101	22	24	3.0	7.0	8.9	8.7	11	7.0	e4.1	170	2.4
14	35	9.1	6.9	7.9	6.2	8.3	13	8.1	20	e3.7	21	2.4
15	11	5.5	4.9	7.7	5.3	7.1	12	7.2	11	e3.9	8.0	2.3
16	7.9	4.6	6.3	5.0	4.9	6.7	7.9	17	7.1	e4.3	5.5	2.2
17	7.1	4.4	6.1	4.5	4.4	6.3	7.0	7.2	5.4	e4.0	5.3	2.2
18	6.7	4.4	4.7	3.2	4.3	5.9	17	6.0	4.9	e3.8	3.8	27
19	6.1	4.5	11	3.2	34	5.8	18	5.6	4.9	e3.9	3.9	25
20	5.1	4.0	5.3	3.0	32	9.6	6.8	5.5	4.4	4.0	3.3	9.1
21	4.7	3.6	4.6	3.6	16	6.5	18	5.8	7.1	6.3	45	4.5
22	61	3.3	5.4	5.6	8.2	5.2	16	6.1	6.3	4.2	90	2.7
23	93	3.7	5.9	5.7	6.9	5.0	7.2	6.2	4.2	3.9	9.9	2.5
24	111	18	4.3	4.2	6.7	4.7	7.9	5.1	3.8	4.2	6.0	2.2
25	21	11	3.8	3.7	6.3	4.5	6.9	43	4.3	4.8	4.1	2.1
26	12	5.0	3.7	3.6	5.8	4.6	6.2	6.8	9.8	96	3.9	2.1
27	9.4	8.5	3.7	3.9	5.3	4.4	29	5.4	10	6.3	3.8	2.2
28	8.9	5.3	3.2	3.8	4.9	5.6	24	5.1	4.3	5.3	3.5	2.0
29	8.1	11	3.1	3.6	---	10	9.1	5.5	3.7	12	4.2	49
30	7.3	22	2.7	3.3	---	5.4	7.7	5.3	3.5	e5.5	3.4	3.9
31	7.6	---	2.7	8.2	---	5.6	---	6.1	---	e5.2	3.1	---
TOTAL	637.2	216.6	198.5	130.1	288.5	328.0	597.5	383.9	408.5	306.4	572.8	294.7
MEAN	20.55	7.220	6.403	4.197	10.30	10.58	19.92	12.38	13.62	9.884	18.48	9.823
MAX	111	22	24	8.2	51	73	137	44	98	96	170	99
MIN	4.1	3.3	2.7	2.9	3.8	4.4	4.8	5.1	3.5	3.6	3.1	2.0
CFSM	1.81	0.64	0.56	0.37	0.91	0.93	1.76	1.09	1.20	0.87	1.63	0.87
IN.	2.09	0.71	0.65	0.43	0.95	1.08	1.96	1.26	1.34	1.01	1.88	0.97

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	10.52	7.728	5.276	10.29	17.90	11.63
MAX	20.6	12.2	6.40	21.9	31.7	22.3
(WY)	2002	1999	2002	1999	2001	1998
MIN	5.05	3.67	3.89	3.75	9.96	7.40
(WY)	2000	2000	2001	2000	2000	1999

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1997 - 2002

ANNUAL TOTAL	6078.2	4362.7	
ANNUAL MEAN	16.65	11.95	15.51
HIGHEST ANNUAL MEAN			17.6
LOWEST ANNUAL MEAN			11.8
HIGHEST DAILY MEAN	295	Feb 9	170
LOWEST DAILY MEAN	2.7	Dec 30	2.0
ANNUAL SEVEN-DAY MINIMUM	3.3	Dec 25	2.3
MAXIMUM PEAK FLOW			1120
MAXIMUM PEAK STAGE			17.70
INSTANTANEOUS LOW FLOW			1.5
ANNUAL RUNOFF (CFSM)	1.47		1.05
ANNUAL RUNOFF (INCHES)	19.94		14.31
10 PERCENT EXCEEDS	41		23
50 PERCENT EXCEEDS	6.9		5.6
90 PERCENT EXCEEDS	4.0		3.3

(e) Estimated

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1996 to April 1997, November 1997 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1996 to April 1997, November 1997 to current year.
 DISSOLVED OXYGEN: November, 1996 to April 1997, November 1997 to current year.
 SPECIFIC CONDUCTANCE: January to current year.

INSTRUMENTATION.--Stage-activated water-quality sampler since November 1996. Continuous water-temperature recorder since November 1996. Dissolved-oxygen recorder since November 1996. Specific conductance recorder since January 2001.

REMARKS.--Chemical analyses are by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated. Dissolved-oxygen concentrations greater than 30 mg/L are out of calibration range of meter. Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 29.5°C, July 30, 1999; minimum observed, 0.0°C, many days during winter.
 DISSOLVED OXYGEN: Maximum observed, 22.7 mg/L, Oct. 14, 2000; minimum observed, 0.0 mg/L, Feb. 24, 1997.
 SPECIFIC CONDUCTANCE: Maximum observed, 18,400 µS/cm, Jan. 31, 2002; minimum observed, 38 µS/cm, Aug. 13, 2002.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 28.5°C, July 3; minimum observed, 0.0°C, many days during winter.
 DISSOLVED OXYGEN: Maximum observed, 20.6 mg/L, Nov. 22; minimum observed, 3.0 mg/L, Apr. 14.
 SPECIFIC CONDUCTANCE: Maximum observed, 18,400 µS/cm, Jan. 31; minimum observed, 38 µS/cm, Aug. 13.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	9.0	6.0	7.5	1.5	0.0	0.5
2	---	---	---	---	---	---	8.5	5.5	7.0	2.0	0.0	0.5
3	19.5	14.5	17.0	13.0	9.0	10.5	9.5	6.5	8.0	1.5	0.0	0.5
4	---	---	---	12.5	8.5	10.5	11.5	8.5	10.5	2.0	0.0	0.5
5	---	---	---	12.0	6.5	9.0	14.0	11.0	12.5	1.5	0.0	1.0
6	11.5	9.0	10.5	12.5	7.5	10.0	11.0	7.0	8.5	2.5	0.0	1.0
7	---	---	---	---	---	---	8.0	5.5	7.0	1.0	0.0	0.5
8	---	---	---	---	---	---	8.5	5.0	7.0	2.0	0.0	1.0
9	---	---	---	10.0	6.0	8.5	6.5	3.5	4.5	5.0	0.0	2.0
10	---	---	---	10.0	6.5	8.5	6.0	2.5	4.5	5.0	0.5	2.0
11	---	---	---	10.5	6.0	8.0	7.0	1.0	5.0	4.5	1.5	2.5
12	---	---	---	---	---	---	8.5	5.0	6.5	4.0	1.5	2.5
13	---	---	---	---	---	---	8.5	6.0	7.0	3.5	0.5	2.0
14	---	---	---	---	---	---	7.0	4.5	5.5	4.0	0.0	3.0
15	---	---	---	---	---	---	6.5	4.5	5.5	5.0	2.5	3.5
16	---	---	---	---	---	---	8.0	6.0	7.0	3.5	0.5	2.0
17	12.5	6.5	10.0	---	---	---	8.0	6.0	7.5	2.5	0.0	1.0
18	13.0	8.0	11.0	---	---	---	7.0	4.5	6.0	1.5	0.0	0.5
19	13.5	8.5	12.0	---	---	---	6.5	3.0	5.0	1.0	0.0	0.5
20	14.0	9.5	12.0	9.0	4.5	6.5	4.0	2.0	3.0	1.0	0.0	0.5
21	---	---	---	9.5	5.0	7.0	5.0	1.5	3.0	2.0	0.5	1.0
22	---	---	---	9.5	6.5	7.5	7.0	3.5	5.0	4.0	0.5	1.5
23	---	---	---	10.5	7.5	9.0	7.0	1.5	3.5	4.5	2.0	3.5
24	---	---	---	12.0	10.0	11.0	2.0	0.0	0.5	5.0	2.0	3.5
25	13.5	7.5	9.0	11.0	8.0	9.5	1.5	0.0	0.5	5.0	0.5	2.5
26	8.5	7.0	7.5	9.0	7.5	8.0	1.0	0.0	0.0	6.0	2.0	4.0
27	10.5	7.0	8.5	10.5	7.5	9.0	1.5	0.0	0.5	7.0	3.0	4.5
28	10.5	7.0	8.5	8.5	7.0	7.5	1.0	0.0	0.5	5.0	3.0	4.0
29	11.5	8.5	9.5	8.5	7.5	8.0	1.0	0.0	0.5	3.0	1.5	2.5
30	---	---	---	9.5	7.5	8.5	1.0	0.0	0.5	3.0	0.5	2.0
31	---	---	---	---	---	---	1.5	0.0	0.5	3.0	0.5	1.5
MONTH	---	---	---	---	---	---	14.0	0.0	4.8	7.0	0.0	1.9

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	5.5	1.0	2.5	4.0	0.0	1.5	8.0	3.0	4.5	---	---	---
2	3.0	0.0	1.0	2.5	0.0	1.0	5.0	2.5	4.0	---	---	---
3	5.0	0.0	2.0	1.5	0.0	0.5	6.5	2.0	4.5	15.0	6.5	10.5
4	2.0	0.0	0.5	1.0	0.0	0.5	6.5	2.0	4.0	16.5	7.0	11.5
5	2.0	0.0	0.5	0.5	0.0	0.5	7.5	2.0	4.5	17.0	10.0	13.0
6	1.5	0.0	0.5	3.0	0.0	1.0	9.0	2.0	5.0	19.0	11.5	15.0
7	5.0	0.0	2.0	3.0	1.0	2.0	6.0	3.5	4.5	16.0	11.0	14.0
8	5.0	1.0	3.0	4.5	1.5	3.0	9.0	5.0	7.0	---	---	---
9	5.5	2.0	3.5	6.5	0.0	4.0	9.5	5.5	7.0	---	---	---
10	4.0	0.0	2.5	3.5	0.0	1.0	12.0	4.5	8.0	16.0	8.0	12.0
11	3.0	0.0	1.5	5.0	0.5	2.5	14.0	6.5	10.0	---	---	---
12	4.5	0.5	2.0	8.5	1.5	5.0	11.0	8.0	10.0	---	---	---
13	4.0	0.0	1.5	9.5	3.0	6.5	15.0	6.0	10.5	---	---	---
14	4.5	0.5	2.5	6.0	4.0	5.0	17.0	8.0	12.0	15.5	8.0	12.0
15	4.5	2.5	3.5	5.0	3.5	4.5	19.5	11.0	15.0	18.5	9.0	14.0
16	4.0	2.0	3.0	8.0	2.5	5.0	21.5	13.5	17.0	15.0	9.5	13.5
17	5.5	0.5	2.5	5.5	3.0	4.5	21.5	15.0	17.5	10.5	7.5	9.0
18	6.0	1.0	3.5	8.0	4.0	5.5	21.0	12.0	16.5	15.0	6.0	10.5
19	5.0	4.0	4.5	8.0	3.0	5.5	17.0	11.5	14.0	14.5	8.0	11.5
20	7.0	2.5	5.0	7.0	4.5	5.5	13.0	7.5	10.5	15.0	7.5	11.0
21	4.5	0.5	3.0	5.0	0.0	3.0	---	---	---	16.5	7.5	12.0
22	6.0	0.0	2.5	5.0	0.0	2.0	---	---	---	18.0	9.0	13.0
23	5.0	1.5	3.0	7.5	0.5	4.0	---	---	---	17.0	11.5	14.0
24	9.0	3.0	5.5	5.5	1.5	3.5	16.5	6.5	11.5	16.0	10.5	13.0
25	7.0	2.5	5.0	3.5	0.0	1.5	14.0	7.0	10.0	---	---	---
26	3.5	0.0	2.0	6.0	1.0	3.0	14.5	6.0	10.0	---	---	---
27	4.0	0.0	1.5	9.0	1.5	5.0	---	---	---	19.5	11.5	16.0
28	3.0	0.0	1.0	7.0	3.0	5.0	---	---	---	---	---	---
29	---	---	---	7.5	4.0	5.5	---	---	---	---	---	---
30	---	---	---	10.0	3.0	6.5	13.5	8.0	10.5	---	---	---
31	---	---	---	8.0	3.5	5.5	---	---	---	---	---	---
MONTH	9.0	0.0	2.5	10.0	0.0	3.5	---	---	---	---	---	---
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	28.0	22.5	25.0	26.5	21.0	24.0	24.5	19.0	22.0
2	---	---	---	28.0	22.0	24.5	26.5	20.5	23.0	23.5	19.0	21.0
3	---	---	---	28.5	22.0	25.0	26.5	19.5	23.0	24.0	18.5	21.5
4	---	---	---	26.0	19.5	23.5	26.0	21.5	23.5	24.0	18.0	20.5
5	---	---	---	26.0	18.5	21.5	26.0	20.0	23.0	---	---	---
6	---	---	---	25.5	20.0	22.0	23.0	17.5	20.5	---	---	---
7	---	---	---	26.5	20.5	23.5	25.0	17.0	20.5	25.5	18.5	22.0
8	---	---	---	27.0	21.5	24.0	25.0	18.0	21.5	25.5	19.0	22.0
9	23.0	15.5	19.5	25.0	20.5	23.5	26.0	18.5	22.0	26.0	21.0	23.0
10	24.5	17.0	21.0	22.5	19.0	21.0	26.0	19.5	22.5	24.0	18.5	22.0
11	22.5	19.0	20.5	23.0	17.0	20.5	27.0	21.0	23.5	22.0	17.0	19.5
12	19.5	16.5	18.0	25.0	17.5	21.5	27.0	21.5	24.0	22.0	16.5	19.5
13	---	---	---	25.5	18.0	21.5	25.5	21.0	23.0	21.5	16.5	19.0
14	---	---	---	25.5	18.0	21.5	24.5	20.5	22.0	21.5	16.5	19.5
15	---	---	---	27.0	19.5	23.0	25.0	18.5	22.0	20.0	16.5	18.5
16	20.0	13.5	17.0	27.0	21.5	24.0	25.0	20.5	22.5	21.0	15.0	18.5
17	21.0	14.0	17.5	27.0	21.5	24.0	26.0	20.5	22.5	---	---	---
18	22.0	15.5	19.0	27.0	22.5	24.0	25.0	18.0	20.5	---	---	---
19	21.0	16.5	19.0	26.0	21.0	23.0	24.0	18.5	20.5	---	---	---
20	25.0	18.0	21.5	26.0	20.0	23.0	23.5	17.5	20.0	22.0	18.5	20.5
21	25.0	19.5	22.5	28.0	22.5	25.5	25.0	17.5	21.5	---	---	---
22	26.0	18.0	22.5	26.0	23.0	24.5	25.5	19.5	22.0	19.0	16.0	17.5
23	25.5	20.0	23.0	23.0	19.0	21.0	---	---	---	18.0	13.0	16.0
24	26.0	20.5	23.0	24.5	19.0	22.0	---	---	---	18.0	11.5	15.0
25	25.5	20.5	23.5	23.5	20.0	21.5	25.5	19.0	22.0	---	---	---
26	25.5	20.5	23.0	---	---	---	24.0	18.0	21.5	---	---	---
27	23.5	20.0	21.5	24.5	20.5	23.0	---	---	---	---	---	---
28	26.5	18.0	22.0	27.5	21.5	24.5	---	---	---	---	---	---
29	25.5	19.5	22.5	---	---	---	---	---	---	---	---	---
30	27.5	20.5	24.0	27.0	20.5	24.0	---	---	---	22.5	17.5	19.5
31	---	---	---	27.0	21.5	24.5	27.0	19.0	22.5	---	---	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI--Continued

OXYGEN DISSOLVED, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	13.0	6.7	9.2	16.1	8.6	11.6	---	---	---
2	---	---	---	17.2	6.4	10.1	16.1	10.4	12.1	---	---	---
3	16.3	6.4	9.9	17.9	8.0	11.4	16.7	9.8	12.1	---	---	---
4	14.0	5.0	8.1	18.2	8.1	11.6	15.4	7.5	10.3	---	---	---
5	13.6	5.0	8.4	19.3	9.1	12.1	16.5	7.1	10.0	---	---	---
6	15.0	7.5	10.9	19.9	8.3	12.0	17.3	6.7	10.7	---	---	---
7	15.4	8.9	11.4	18.9	7.2	11.0	16.5	10.0	12.0	---	---	---
8	---	---	---	---	---	---	13.2	9.5	11.0	---	---	---
9	---	---	---	17.4	9.4	12.2	---	---	---	---	---	---
10	---	---	---	17.6	8.9	12.2	---	---	---	14.1	12.3	13.3
11	---	---	---	18.1	9.6	12.4	---	---	---	15.0	12.3	13.4
12	9.2	6.8	8.2	18.5	10.0	12.6	15.6	9.8	11.8	14.7	12.6	13.4
13	10.2	7.6	8.4	10.4	7.7	9.3	12.8	9.7	11.0	15.4	12.7	14.0
14	12.2	6.9	9.1	10.2	5.8	8.0	15.0	10.3	12.0	13.0	9.8	11.3
15	13.8	7.1	10.1	14.8	5.8	9.4	16.2	10.9	12.6	12.3	9.8	10.5
16	14.2	8.3	10.6	16.1	7.7	10.7	13.0	8.7	11.0	12.5	9.7	10.8
17	15.8	9.0	11.3	17.8	8.6	11.6	12.4	7.2	10	---	---	---
18	15.9	8.5	11.3	16.0	8.5	10.9	16.9	10.7	12.8	---	---	---
19	17.8	7.8	11.5	17.9	8.6	11.8	12.0	9.4	10.7	12.4	10.6	11.4
20	18.3	8.2	11.9	19.8	10.8	13.8	14.3	9.4	11.2	12.8	10.9	11.6
21	19.0	8.3	11.8	19.6	10.5	13.4	15.4	9.6	11.9	12.0	10.0	11.0
22	19.0	8.3	11.2	20.6	10.1	13.4	16.4	7.7	11.9	11.8	8.9	10.5
23	10.1	8.2	8.9	20.1	8.8	12.7	15.5	7.7	11.7	10.8	8.4	9.3
24	9.8	8.1	8.6	10.0	7.5	8.4	---	---	---	10.7	8.3	9.2
25	12.5	9.0	10.5	14.2	7.4	10.4	---	---	---	11.2	8.9	9.9
26	13.9	10.3	11.6	16.2	9.7	11.8	---	---	---	11.0	8.8	9.8
27	16.3	9.5	12.0	13.9	7.6	10.2	---	---	---	12.1	8.8	10.1
28	16.3	9.0	11.8	15.3	9.5	11.4	---	---	---	12.3	9.0	10.3
29	16.8	9.5	11.9	13.4	7.8	10.3	---	---	---	13.2	10.5	11.7
30	16.9	8.6	11.4	11.0	8.6	9.6	---	---	---	14.2	11.3	12.5
31	18.5	8.0	11.6	---	---	---	---	---	---	12.8	9.2	11.4
	FEBRUARY			MARCH			APRIL			MAY		
1	11.1	9.9	10.5	---	---	---	12.1	6.8	9.8	13.8	7.6	10.5
2	11.7	9.7	10.8	---	---	---	12.2	9.1	10.4	13.8	8.9	11.3
3	11.8	9.2	10.4	---	---	---	11.8	8.2	10.3	12.1	8.8	10.6
4	15.6	10.6	11.3	---	---	---	12.9	8.1	10.0	13.6	7.9	11.0
5	---	---	---	---	---	---	12.4	7.7	10.0	14.2	7.0	10.6
6	12.3	9.8	11.0	---	---	---	---	---	---	14.5	4.0	10.1
7	11.6	8.1	10.2	10.4	8.1	9.4	---	---	---	17.5	6.2	12.4
8	10.7	7.9	9.5	12.0	8.0	10.9	---	---	---	13.9	9.4	11.7
9	11.4	8.6	9.6	13.0	10.7	11.4	---	---	---	---	---	---
10	12.5	8.7	11.5	13.8	11.7	12.9	---	---	---	12.1	9.3	10.9
11	14.0	11.2	12.4	12.8	9.1	11.5	---	---	---	17.0	9.4	12.9
12	12.6	10.4	11.5	11.3	7.6	9.6	14.3	7.5	11.1	17.8	13.0	15.2
13	12.3	10.7	11.6	11.0	6.2	8.7	16.5	7.8	12.0	14.4	10.9	13.0
14	15.6	10.7	11.8	11.5	6.4	9.2	13.2	3.0	10.0	15.4	10.1	12.9
15	19.0	10.7	12.9	12.3	8.0	10.0	10.0	5.9	7.6	17.8	5.7	13.2
16	17.3	10.9	12.9	12.7	8.8	10.6	11.8	7.2	9.6	15.5	5.3	8.8
17	16.9	11.4	13.2	13.2	8.8	11.0	12.9	5.4	9.4	17.2	8.7	13.0
18	15.2	10.8	12.9	12.8	9.2	10.8	14.4	5.0	9.6	18.3	9.1	13.6
19	---	---	---	13.2	8.7	10.9	11.5	5.8	9.2	18.9	8.7	13.6
20	11.0	3.2	10.1	10.0	7.4	8.7	14.9	8.8	11.9	18.8	4.3	13.0
21	11.6	10.2	10.7	12.4	7.3	10.4	13.2	8.5	10.7	18.0	8.5	13.0
22	12.8	9.2	11.0	10.7	8.3	9.5	11.3	7.8	9.6	17.1	4.9	11.9
23	12.8	8.7	10.8	11.6	6.9	9.2	10.9	5.9	8.7	15.9	6.8	10.9
24	---	---	---	11.7	6.8	9.6	10.3	5.2	7.4	16.2	6.1	11.1
25	---	---	---	13.6	9.8	11.5	8.9	5.8	7.8	10.3	7.8	8.8
26	---	---	---	13.1	8.4	10.7	11.4	7.0	9.1	13.5	7.2	10.4
27	---	---	---	12.8	7.9	10.2	13.1	7.0	10.1	14.0	7.2	10.4
28	13.2	11.0	12.2	12.8	6.0	9.5	11.0	7.8	9.3	14.0	7.1	10.3
29	---	---	---	11.0	6.0	7.7	8.8	5.1	7.3	12.6	6.7	9.2
30	---	---	---	11.5	6.4	9.1	12.8	5.7	8.1	12.2	5.9	8.9
31	---	---	---	12.1	6.5	8.6	---	---	---	13.2	5.5	9.2

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI--Continued

OXYGEN DISSOLVED, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN									
1	12.9	6.2	9.2	13.7	6.0	9.1	12.7	6.9	9.3	12.6	7.9	9.8
2	13.5	6.2	9.9	12.2	5.5	8.6	13.6	6.7	9.8	9.6	7.0	8.2
3	---	---	---	13.4	5.8	9.1	12.5	6.2	9.2	12.8	6.3	9.1
4	---	---	---	12.5	5.3	9.0	9.3	4.8	6.8	13.6	7.3	9.6
5	---	---	---	12.3	7.0	9.5	13.2	5.6	9.0	12.8	7.3	9.5
6	13.6	8.1	11.1	12.2	6.8	8.9	13.1	7.3	9.9	14.0	7.3	9.8
7	15.0	7.0	11.2	11.8	6.2	8.7	13.2	7.0	9.8	13.5	7.0	9.6
8	15.8	6.8	11.3	11.9	6.0	8.6	13.6	6.9	9.5	13.2	6.9	9.3
9	17.1	6.6	11.6	11.0	5.3	7.7	13.3	6.8	9.6	13.0	6.5	9.0
10	17.1	4.4	11.1	12.9	6.9	9.9	12.1	6.2	8.8	12.1	6.5	8.9
11	12.8	4.2	7.4	13.3	6.9	10.6	11.9	6.6	8.7	12.4	7.5	9.6
12	15.5	5.7	10.4	14.3	7.2	10.5	13.4	6.6	9.2	13.0	7.3	9.5
13	15.0	6.6	10.7	13.6	7.1	10.1	10.3	6.6	7.7	12.7	7.0	9.3
14	---	---	---	13.9	7.1	10.3	11.5	6.8	8.6	12.5	6.7	8.9
15	---	---	---	14.9	6.6	10.5	12.5	7.1	9.7	11.9	6.9	9.0
16	---	---	---	14.2	6.5	9.9	14.3	7.3	10.2	12.3	7.6	9.3
17	15.5	7.6	11.4	15.6	5.5	10.1	14.8	7.3	10.2	12.8	8.0	9.9
18	16.2	7.4	11.8	14.3	6.0	9.6	---	---	---	9.8	6.9	8.1
19	16.6	7.5	12.0	13.5	6.3	9.7	---	---	---	12.0	6.5	8.2
20	17.2	7.7	11.9	12.8	4.9	9.4	---	---	---	8.7	6.5	7.7
21	17.5	6.2	10.8	13.8	3.7	7.9	---	---	---	11.9	7.3	9.1
22	15.9	4.4	10.3	12.3	5.4	8.6	---	---	---	12.2	8.8	10.0
23	16.6	6.8	11.4	13.4	6.7	9.6	---	---	---	12.9	9.5	10.7
24	16.4	7.2	11.4	12.5	6.7	9.3	13.5	7.9	10.4	12.8	8.8	10.9
25	16.4	7.3	11.7	11.2	6.2	8.4	14.1	7.6	10.5	12.7	8.8	10.4
26	13.6	5.7	10	9.1	6.4	7.6	14.8	7.6	10.8	12.9	8.8	10.4
27	14.2	3.5	9.0	12.8	7.0	9.4	14.9	7.8	10.8	13.2	8.8	10.3
28	16.9	7.5	12.0	13.2	7.0	9.8	15.2	8.0	10.8	13.4	8.9	10.8
29	17.1	7.5	12.2	13.8	5.1	8.9	13.9	7.9	10.5	10.9	7.5	9.3
30	16.5	7.1	11.7	13.6	7.0	9.6	13.6	7.9	10.2	14.5	8.4	10.7
31	---	---	---	13.1	6.9	9.7	12.9	7.9	10.2	---	---	---
MONTH	---	---	---	15.6	3.7	9.3	---	---	---	14.5	6.3	9.5

SPECIFIC CONDUCTANCE, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	1290	971	1200	1120	832	1040	---	---	---
2	---	---	---	1310	1210	1270	1200	1100	1160	---	---	---
3	1170	1020	1110	1300	1180	1250	1220	1130	1190	---	---	---
4	1180	654	959	1290	1140	1250	1200	1110	1160	---	---	---
5	1140	757	998	1290	1110	1220	1230	512	1080	---	---	---
6	1180	1100	1150	1240	1090	1180	1140	709	988	---	---	---
7	1150	1060	1090	1230	1000	1170	1200	746	1100	---	---	---
8	---	---	---	---	---	---	1110	294	708	---	---	---
9	---	---	---	1210	1120	1180	---	---	---	---	---	---
10	---	---	---	1220	1060	1160	---	---	---	1220	814	1030
11	---	---	---	1160	840	1080	---	---	---	1450	1140	1220
12	1070	167	562	1150	999	1080	1250	401	1050	1280	1160	1230
13	998	144	604	1140	272	735	1030	288	679	1310	1160	1270
14	831	372	640	900	557	772	1170	636	1040	7050	1230	4410
15	1100	706	948	1130	900	1040	1260	988	1180	12700	3910	7540
16	1140	1040	1090	1380	1100	1170	1260	872	1130	9950	3150	5140
17	1170	977	1100	1220	1100	1180	1180	981	1090	13600	7880	10500
18	1190	1080	1130	1210	1120	1170	1240	1140	1200	12500	3030	6900
19	1200	1080	1150	1220	1090	1170	1250	611	873	3030	1990	2530
20	1290	1150	1220	1210	1110	1150	1240	842	1090	2490	1730	1960
21	1310	1130	1260	1220	1110	1170	1310	1180	1260	3000	1730	2030
22	1290	160	966	1220	1120	1180	1300	1090	1240	3180	1860	2410
23	943	174	637	1240	848	1140	1290	926	1110	2930	2150	2450
24	943	210	478	1240	187	646	---	---	---	2410	1830	2150
25	1100	719	983	933	403	694	---	---	---	2080	1700	1880
26	1180	1080	1150	1150	927	1050	---	---	---	1980	1700	1830
27	1220	1050	1170	1110	675	847	---	---	---	1990	1550	1770
28	1270	1090	1190	1110	858	1050	---	---	---	1970	1700	1870
29	1250	1120	1200	961	515	761	---	---	---	1830	1520	1700
30	1260	1180	1230	961	332	646	---	---	---	3800	1490	1640
31	1280	1000	1210	---	---	---	---	---	---	18400	1690	8760

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI--Continued

SPECIFIC CONDUCTANCE, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	14500	5720	9340	5680	1480	1930	2230	1410	1820	1600	404	1470
2	5940	3910	5060	17100	1940	7600	2390	1340	1800	1390	329	973
3	4250	2560	3420	15500	2780	9250	2330	2120	2210	1560	1390	1490
4	3440	2500	3060	12800	4630	7740	2300	1940	2180	1560	1480	1530
5	---	---	---	6580	3600	4750	2170	1910	2040	1560	1470	1530
6	2290	1980	2150	---	---	---	---	---	---	1570	1420	1510
7	2290	1920	2060	7560	3900	4940	---	---	---	1500	1400	1470
8	2320	1760	2030	5670	1930	3170	---	---	---	1520	483	1350
9	2360	1910	2060	2160	1010	1720	---	---	---	---	---	---
10	3640	1050	1930	2560	2160	2330	---	---	---	1440	1170	1340
11	2300	2040	2190	2340	2120	2240	---	---	---	1480	226	998
12	2160	1980	2110	2240	2030	2160	1640	1520	1580	1230	52	784
13	2140	1880	2030	2150	1960	2060	1610	1530	1570	1380	1230	1330
14	2150	1750	1950	2090	1920	2040	1610	293	1450	1420	1340	1380
15	2160	1810	1930	2040	1900	2000	1010	117	754	1600	1370	1410
16	2010	1750	1930	2000	1830	1920	1640	920	1050	1440	351	1040
17	1960	1800	1860	1930	1830	1890	1680	946	1340	1300	777	1120
18	1850	1680	1780	1940	1730	1860	1710	331	1390	1340	1080	1250
19	2260	798	1240	1810	1480	1750	1670	270	1180	1370	1040	1300
20	1540	755	1250	1840	1260	1600	1720	1400	1650	1360	1220	1300
21	4860	1370	3060	5450	1790	3660	1730	583	1400	1320	1120	1190
22	2610	1830	2140	4370	2160	2710	1640	744	1280	1200	879	1100
23	1920	1770	1880	2180	1890	2060	1750	1630	1700	1260	962	1130
24	---	---	---	2030	1830	1950	1740	853	1610	1270	1150	1220
25	---	---	---	1970	1760	1880	1700	1510	1590	1290	156	733
26	---	---	---	1830	1640	1760	1670	1510	1570	1310	835	1100
27	---	---	---	1800	1460	1700	1670	471	1200	1350	1160	1290
28	2640	1730	2160	7440	1650	3120	1520	561	1110	1370	1160	1300
29	---	---	---	5240	1540	2430	1620	1510	1590	1320	934	1190
30	---	---	---	2080	1610	1940	1620	1560	1580	1390	1210	1270
31	---	---	---	2150	1560	1940	---	---	---	1230	949	1100
	JUNE			JULY			AUGUST			SEPTEMBER		
1	1100	1020	1060	1140	956	1080	794	658	729	1070	895	999
2	1140	681	1070	1160	991	1090	868	712	775	1030	105	538
3	---	---	---	1190	1050	1130	827	578	732	998	231	711
4	---	---	---	1130	889	1060	823	239	486	1100	997	1060
5	---	---	---	1190	1060	1160	767	543	652	1150	978	1050
6	1340	1210	1300	1180	1070	1150	804	642	746	1140	992	1080
7	1400	1280	1350	1200	1090	1170	799	683	738	1140	986	1060
8	1440	1250	1370	1200	103	1060	810	573	686	1140	917	1050
9	1440	1280	1350	966	124	603	696	561	649	1140	914	1030
10	1450	149	1220	1170	956	1080	701	505	645	1120	947	1040
11	992	434	705	1150	584	1040	687	604	652	1080	942	1020
12	1270	992	1170	1160	1030	1110	703	52	556	1170	880	1060
13	1380	1170	1260	1150	988	1090	554	38	299	1150	707	962
14	---	---	---	1130	934	1060	624	266	529	1040	709	909
15	---	---	---	1080	846	1000	723	615	678	1130	908	1030
16	---	---	---	1030	803	937	738	623	697	1130	966	1040
17	1260	1190	1220	1080	826	953	716	504	661	1100	971	1050
18	1250	1120	1190	1130	803	956	---	---	---	1050	170	547
19	1260	925	1200	1150	860	1010	---	---	---	828	166	581
20	1300	1090	1220	958	655	877	---	---	---	646	469	553
21	1260	370	1040	950	657	752	---	---	---	934	569	713
22	1120	844	970	967	807	884	---	---	---	997	904	950
23	1220	1020	1140	923	741	842	---	---	---	1020	865	947
24	1230	1090	1170	948	774	883	919	841	886	997	868	946
25	1220	1030	1150	940	733	851	988	856	922	1050	929	990
26	1190	128	945	828	83	497	1030	886	960	1040	916	988
27	985	499	760	925	662	846	1010	829	909	1000	916	965
28	1140	974	1060	932	846	889	1030	883	955	1000	819	904
29	1190	1030	1110	918	336	633	997	837	932	988	108	447
30	1160	959	1100	869	715	798	1090	897	979	945	631	803
31	---	---	---	869	683	791	1110	925	1030	---	---	---
MONTH	---	---	---	1200	83	945	---	---	---	1170	105	901

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	POTAS-SIUM, TOTAL RECOVER -ABLE (MG/L) (00939)	ANC WATER UNFLTRD FET LAB MG/L AS CACO3 (00417)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)
FEB 2002 05...	0742	3.5	10	8.0	2670	19.0	318	614	--	.067	.58	<60.0	120
APR 04...	1256	6.1	10	8.2	2130	14.0	303	465	3	.016	.50	25.0	57

Date	1,2,-ETHANE-DIOL, WATER, UNFLTRD REC (MG/L) (91075)	1,2,-PROP-ANEDIOL, WATER, UNFLTRD REC (MG/L) (91080)
FEB 2002 05...	<18.0	33.0
APR 04...	<18.0	<18.0

COMPOSITE SAMPLES

BEGINNING DATE	BEGINNING TIME	ENDING DATE	ENDING TIME	RUNOFF VOLUME THOUSANDS OF CUBIC FEET (99904)	SAM-PLING METHOD, CODES (82398)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	POTAS-SIUM, TOTAL RECOVER -ABLE (MG/L) (00939)	ANC WATER UNFLTRD FET LAB MG/L AS CACO3 (00417)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)
20011024	0050	20011024	0330	1700	50	7.5	88	--	33	39.9	.219	1.9	8.7
20020114	0910	20020114	1835	330	50	7.8	5700	1.0	187	1770	.690	2.4	23.1
20020116	1710	20020117	0605	230	50	8.1	8950	14.0	235	2920	.196	.75	32.2
20020131	0940	20020201	1515	1700	50	7.6	--	23.0	177	3930	.280	1.9	173
20020221	0855	20020221	1835	460	50	8.1	3970	13.0	239	1100	.026	.76	36.2
20020302	0805	20020303	0650	900	50	7.6	9150	15.0	199	3060	.295	2.0	372

Date	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	1,2,-ETHANE-DIOL, WATER, UNFLTRD REC (MG/L) (91075)	1,2,-PROP-ANEDIOL, WATER, UNFLTRD REC (MG/L) (91080)
OCT 24-24	74	<18.0	<18.0
JAN 14-14	100	<18.0	<18.0
JAN 16-17	110	<18.0	25.0
JAN 31-FEB 01	330	<18.0	180
FEB 21-21	93	<18.0	23.0
MAR 02-03	700	27.0	160

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

LOCATION.--Lat 42°59'51", long 87°55'35", in SW ¼ NW ¼ sec.8, T.6 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, on left bank 150 ft upstream from footbridge on South 11th Street, 3.2 mi upstream from mouth, at Milwaukee.

DRAINAGE AREA.--18.8 mi².

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

REVISED RECORDS.--WDR WI-97-1: Drainage area.

GAGE.--Water-stage recorder and steel plate weir. Elevation of gage is 590 ft above NGVD of 1929, from river-profile map.

REMARKS.--Records good except those for estimated daily discharges, which are poor, and those for discharges greater than 500 ft³/s, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	10	9.3	e4.3	36	e7.0	20	21	7.5	6.6	7.6	5.5
2	9.0	9.5	7.7	e4.9	9.0	e13	45	71	8.8	6.8	7.0	208
3	9.1	9.0	7.5	e4.7	e7.6	e9.0	11	11	182	6.6	6.1	45
4	14	8.3	7.2	e5.0	e6.4	e7.0	8.4	9.2	169	6.4	25	9.7
5	7.7	7.3	10	e5.3	e6.0	e7.5	7.6	8.7	24	5.7	7.9	8.3
6	6.7	7.2	9.5	e5.7	e7.0	e8.0	7.0	8.9	13	5.5	6.1	7.2
7	6.3	7.0	7.6	e6.0	e9.0	8.6	63	8.4	11	5.6	6.8	6.5
8	6.8	7.1	30	7.8	10	100	244	12	9.1	57	7.3	6.0
9	8.2	6.6	7.7	8.3	12	121	188	51	8.2	108	7.1	6.0
10	39	6.4	7.0	6.1	87	21	31	9.0	104	8.2	8.3	6.9
11	12	6.3	6.8	5.5	14	14	21	58	41	7.2	9.9	6.0
12	69	7.0	12	4.9	11	13	16	117	11	6.7	394	5.6
13	188	44	44	4.7	9.0	13	13	16	10	6.0	509	5.9
14	57	14	9.6	14	8.2	11	20	11	37	5.8	43	6.2
15	16	7.9	7.9	12	8.6	9.9	21	9.9	17	6.6	12	5.7
16	11	6.7	10	7.3	7.5	9.2	11	23	11	7.3	8.3	5.3
17	9.3	6.1	10	7.0	6.8	8.2	10	10	8.5	6.9	10	6.4
18	8.4	6.0	7.3	e5.1	6.5	8.4	31	8.5	8.0	6.2	6.4	61
19	7.7	6.3	20	e4.9	62	8.4	35	8.2	7.6	6.4	10	53
20	6.9	6.2	7.9	e4.6	54	17	9.6	7.8	6.9	7.8	6.4	21
21	6.9	6.0	7.0	e5.4	27	9.2	28	7.7	12	11	104	8.4
22	126	6.2	8.1	e7.5	13	9.0	29	8.0	9.7	7.2	186	5.9
23	195	8.2	9.6	e8.5	10	7.2	11	9.2	6.5	6.2	17	5.6
24	177	38	e5.8	6.5	9.6	6.7	17	8.7	6.3	6.4	12	5.1
25	34	17	e5.7	5.7	9.6	7.1	10	85	6.8	7.0	7.8	4.9
26	17	6.9	e5.6	5.5	8.7	6.6	8.2	10	23	206	7.2	5.1
27	12	14	e5.4	5.8	8.0	6.4	50	7.6	20	9.9	6.7	5.2
28	11	7.3	e5.0	6.5	e7.5	9.7	42	7.3	7.0	7.3	6.7	4.8
29	10	19	e4.6	5.8	---	17	12	16	6.0	19	6.9	92
30	9.2	35	e4.2	5.6	---	7.8	10	7.6	5.8	7.5	6.1	7.9
31	10	---	e4.0	19	---	8.8	---	8.2	---	7.3	5.6	---
TOTAL	1108.9	346.5	304.0	209.9	471.0	509.7	1029.8	654.9	797.7	578.1	1464.2	630.1
MEAN	35.77	11.55	9.806	6.771	16.82	16.44	34.33	21.13	26.59	18.65	47.23	21.00
MAX	195	44	44	19	87	121	244	117	182	206	509	208
MIN	6.3	6.0	4.0	4.3	6.0	6.4	7.0	7.3	5.8	5.5	5.6	4.8
CFSM	1.90	0.61	0.52	0.36	0.89	0.87	1.83	1.12	1.41	0.99	2.51	1.12
IN.	2.19	0.69	0.60	0.42	0.93	1.01	2.04	1.30	1.58	1.14	2.90	1.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2002, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	20.19	24.19	17.25	15.22	22.13	24.36	35.92	26.88	30.97	28.90	35.94	26.57								
MAX	60.5	67.8	48.9	43.7	56.3	44.9	104	79.2	81.6	66.8	82.3	69.5								
(WY)	1992	1986	1983	1988	2001	1993	1993	2000	1999	2000	1986	2000								
MIN	6.81	7.87	3.96	4.72	5.27	8.87	14.1	9.07	11.4	12.6	11.8	8.41								
(WY)	1995	2000	1990	1994	1995	1996	1989	1992	1985	1996	1999	1995								

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1983 - 2002

ANNUAL TOTAL	10912.1	8096.1	
ANNUAL MEAN	29.90	22.18	25.70
HIGHEST ANNUAL MEAN			39.8
LOWEST ANNUAL MEAN			18.9
HIGHEST DAILY MEAN	550	509	1630
LOWEST DAILY MEAN	(a)4.0	(a)4.0	(a)2.9
ANNUAL SEVEN-DAY MINIMUM	(a)4.9	(a)4.5	(a)3.0
MAXIMUM PEAK FLOW		3390	(b)10600
MAXIMUM PEAK STAGE		11.88	(c)14.41
ANNUAL RUNOFF (CFSM)	1.59	1.18	1.37
ANNUAL RUNOFF (INCHES)	21.59	16.02	18.57
10 PERCENT EXCEEDS	71	44	49
50 PERCENT EXCEEDS	10	8.3	9.5
90 PERCENT EXCEEDS	6.5	5.7	5.8

- (a) Ice affected
- (b) From rating curve extended above 600 ft³/s on basis of step-backwater analysis at peak gage height
- (c) From inside gage, 16.01 ft, from floodmarks
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087204 OAK CREEK AT SOUTH MILWAUKEE, WI

LOCATION.--Lat 42°55'30", long 87°52'12", in SW ¼ NW ¼ sec.2, T.5 N., R.22 E., Milwaukee County, Hydrologic Unit 04040002, on left bank 25 ft downstream from 15th Avenue bridge in South Milwaukee and 2.8 mi upstream from mouth.

DRAINAGE AREA.--25.0 mi².

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

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 631.40 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges and periods of flow less than 4.0 ft³/s, which are poor (see page 11). Low flows may occasionally be affected by construction and activity at gravel pit upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	16	20	e4.1	19	10	12	20	7.0	4.4	3.3	2.1
2	6.9	13	12	e4.3	14	e9.8	33	68	6.5	3.5	2.0	83
3	6.4	11	10	4.6	9.4	e9.5	26	33	89	3.4	1.6	29
4	6.2	10	9.3	4.8	8.8	e9.5	18	23	236	3.1	15	9.8
5	7.4	9.4	8.8	4.6	7.2	e9.8	15	19	121	2.8	9.1	5.2
6	5.7	8.9	8.9	4.5	5.9	9.7	13	17	49	2.9	3.1	3.8
7	4.7	8.6	8.3	4.0	7.0	9.8	40	16	31	2.7	2.1	3.2
8	4.3	8.1	10	3.9	10	81	208	15	22	10	1.7	2.6
9	4.1	7.5	9.8	4.6	14	208	398	40	17	71	1.5	2.2
10	6.7	7.3	7.6	4.5	95	69	127	23	14	12	1.3	2.2
11	12	6.7	6.8	4.0	42	36	59	29	26	6.1	1.2	2.0
12	45	6.5	7.5	4.8	23	28	39	85	16	4.9	4.6	1.9
13	110	18	22	3.8	17	26	31	39	11	3.9	70	1.6
14	184	23	13	4.8	13	24	26	27	12	3.3	65	1.5
15	50	13	8.7	7.4	13	21	24	21	17	2.9	12	1.5
16	29	9.6	8.2	6.7	12	18	21	32	24	3.1	5.6	1.3
17	20	8.1	9.1	4.9	11	16	18	31	9.8	3.0	5.0	1.2
18	16	7.6	8.4	e3.8	9.6	16	18	19	9.1	2.6	4.3	14
19	13	7.3	14	e3.3	40	14	27	16	6.4	2.5	3.1	27
20	13	6.8	12	e3.3	75	17	17	14	6.4	2.3	2.8	26
21	9.6	6.6	8.1	e3.6	63	15	21	13	33	2.8	9.0	8.0
22	22	6.4	7.9	4.1	31	12	42	10	18	2.3	105	3.9
23	213	6.4	9.6	6.0	24	11	24	9.7	9.4	1.8	29	2.6
24	184	12	7.6	6.2	21	11	21	9.7	7.5	1.5	11	1.9
25	137	19	e6.4	5.2	19	9.4	18	35	7.7	1.5	6.3	1.8
26	50	10	e5.5	5.1	17	9.1	16	26	7.7	52	4.5	1.8
27	32	10	e5.2	5.5	14	8.7	24	14	8.9	13	3.6	1.8
28	25	9.2	e5.0	6.8	12	8.9	58	11	7.6	4.7	3.4	1.3
29	20	12	e4.5	7.1	---	12	28	9.9	6.3	5.7	3.3	44
30	17	27	e4.0	5.6	---	15	21	8.6	5.9	4.1	2.5	16
31	16	---	e3.9	5.9	---	11	---	7.9	---	2.8	2.2	---
TOTAL	1277.7	325.0	282.1	151.8	646.9	765.2	1443	741.8	842.2	242.6	394.1	304.2
MEAN	41.22	10.83	9.100	4.897	23.10	24.68	48.10	23.93	28.07	7.826	12.71	10.14
MAX	213	27	22	7.4	95	208	398	85	236	71	105	83
MIN	4.1	6.4	3.9	3.3	5.9	8.7	12	7.9	5.9	1.5	1.2	1.2
CFSM	1.65	0.43	0.36	0.20	0.92	0.99	1.92	0.96	1.12	0.31	0.51	0.41
IN.	1.90	0.48	0.42	0.23	0.96	1.14	2.15	1.10	1.25	0.36	0.59	0.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	
MEAN	12.12	17.48	18.65	14.81	26.03	47.09	49.70	26.12	24.32	15.68	14.57	17.96								
MAX	48.4	85.3	65.3	77.3	84.5	149	151	96.7	85.8	95.8	52.7	110								
(WY)	1992	1986	1983	1974	2001	1979	1993	2000	1968	1969	1986	1972								
MIN	1.86	1.83	0.79	0.021	1.91	2.24	9.14	2.15	2.15	3.34	1.89	1.78								
(WY)	1976	1977	1977	1977	1964	1968	1968	1977	1988	1988	1970	1982								

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1964 - 2002

ANNUAL TOTAL	11740.7	7416.6	
ANNUAL MEAN	32.17	20.32	23.65
HIGHEST ANNUAL MEAN			41.7
LOWEST ANNUAL MEAN			6.67
HIGHEST DAILY MEAN	642	Feb 9	398
LOWEST DAILY MEAN	2.7	Jul 15,16	1.2
ANNUAL SEVEN-DAY MINIMUM	3.1	Jul 10	1.6
MAXIMUM PEAK FLOW			511
MAXIMUM PEAK STAGE			6.86
INSTANTANEOUS LOW FLOW			
ANNUAL RUNOFF (CFSM)	1.29		0.81
ANNUAL RUNOFF (INCHES)	17.47		11.04
10 PERCENT EXCEEDS	71		40
50 PERCENT EXCEEDS	14		9.7
90 PERCENT EXCEEDS	5.3		2.8

- (a) Also occurred Sept. 17
- (b) Several days during 1977
- (c) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087220 ROOT RIVER NEAR FRANKLIN, WI

LOCATION.--Lat 42°52'25", long 87°59'45", in SW ¼ SE ¼ sec.22, T.5 N., R.21 E., Milwaukee County, Hydrologic Unit 04040002, on right bank 400 ft upstream from State Highway 100, 2.1 mi upstream from Root River Canal, 2.4 mi southeast of Franklin, 5.5 mi southeast of Hales Corners, and about 24 mi upstream from mouth.

DRAINAGE AREA.--49.2 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 674.5 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Flow affected by urbanization in the drainage basin. Gage-height telemeter at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	22	28	e7.5	20	e20	19	31	20	8.2	5.8	7.0
2	12	22	20	e7.5	37	e19	33	88	17	6.4	4.8	70
3	10	19	18	e8.0	e15	e18	47	62	88	5.6	3.9	112
4	9.3	17	17	e8.4	e13	e18	30	38	304	5.3	10	32
5	15	16	16	e8.6	e12	e17	24	31	335	5.4	13	15
6	13	15	16	e8.0	e11	e17	22	29	120	5.1	4.6	13
7	8.7	16	16	7.7	e11	17	36	28	64	5.7	4.0	11
8	9.0	15	15	7.3	e12	51	207	26	38	5.2	4.2	9.4
9	9.4	15	20	9.0	e14	303	662	38	26	38	3.5	8.6
10	10	13	16	11	85	270	399	35	21	15	3.0	6.7
11	34	13	14	8.6	110	89	138	30	78	7.4	3.2	6.6
12	30	13	13	8.4	44	58	92	127	35	6.2	3.4	5.4
13	70	13	35	7.8	34	47	68	103	22	6.4	223	5.1
14	215	32	34	8.9	26	43	52	49	21	5.9	560	4.9
15	85	24	22	13	21	38	56	37	48	5.2	209	4.9
16	42	17	18	e12	20	29	46	33	69	4.6	34	6.8
17	27	15	19	e10	19	26	37	35	31	4.3	21	5.9
18	21	14	20	e8.0	18	25	31	28	23	5.1	18	12
19	20	14	19	e7.0	43	24	59	26	18	4.1	14	24
20	18	13	21	e6.8	100	25	40	25	15	3.7	12	50
21	17	13	17	7.3	106	26	31	23	14	5.8	9.7	21
22	16	12	15	7.9	61	21	48	22	15	5.4	189	11
23	289	12	16	10	41	19	37	21	13	3.5	185	7.6
24	330	17	e15	12	34	19	30	22	11	3.6	47	7.9
25	250	35	e13	11	32	18	32	42	11	3.5	25	7.0
26	101	22	e12	11	27	17	28	63	12	71	18	6.4
27	58	17	e10	11	24	17	26	30	18	43	14	5.9
28	37	17	e9.3	12	e22	18	71	25	11	13	12	5.5
29	30	18	e9.0	12	---	19	55	35	7.6	15	10	44
30	25	23	e8.0	11	---	22	36	34	8.8	13	9.7	51
31	23	---	e7.7	12	---	18	---	23	---	7.1	7.9	---
TOTAL	1847.4	524	529.0	290.7	1012	1368	2492	1239	1514.4	336.7	1681.7	577.6
MEAN	59.59	17.47	17.06	9.377	36.14	44.13	83.07	39.97	50.48	10.86	54.25	19.25
MAX	330	35	35	13	110	303	662	127	335	71	560	112
MIN	8.7	12	7.7	6.8	11	17	19	21	7.6	3.5	3.0	4.9
CFSM	1.21	0.36	0.35	0.19	0.73	0.90	1.69	0.81	1.03	0.22	1.10	0.39
IN.	1.40	0.40	0.40	0.22	0.77	1.03	1.88	0.94	1.15	0.25	1.27	0.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
MEAN	24.00	30.91	34.94	31.62	49.29	91.23	90.01	46.77	46.60	28.20	26.67	32.19
MAX	95.5	151	118	190	161	315	316	148	164	142	72.3	214
(WY)	1992	1986	1983	1974	1971	1979	1973	2000	1999	1969	1987	1972
MIN	2.38	4.26	2.02	2.47	2.75	13.6	21.5	5.32	3.55	3.09	3.82	3.05
(WY)	1964	1964	1964	1977	1977	1968	1977	1977	1988	1988	1971	1971

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1964 - 2002

ANNUAL TOTAL	19661.2	13412.5	
ANNUAL MEAN	53.87	36.75	44.27
HIGHEST ANNUAL MEAN			84.0
LOWEST ANNUAL MEAN			12.7
HIGHEST DAILY MEAN	660	Jun 13	2390
LOWEST DAILY MEAN	3.4	Aug 7	0.44
ANNUAL SEVEN-DAY MINIMUM	5.1	Jul 10	3.7
MAXIMUM PEAK FLOW			780
MAXIMUM PEAK STAGE			7.78
INSTANTANEOUS LOW FLOW			2.8
ANNUAL RUNOFF (CFSM)	1.09		0.75
ANNUAL RUNOFF (INCHES)	14.87		10.14
10 PERCENT EXCEEDS	125		69
50 PERCENT EXCEEDS	25		18
90 PERCENT EXCEEDS	9.0		6.3

- (a) Gage height, 9.31 ft
- (d) Discharge, 2,420 ft³/s
- (e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087240 ROOT RIVER AT RACINE, WI

LOCATION.--Lat 42°45'05", long 87°49'25", in NW ¼ NE ¼ sec.6, T.3 N., R.23 E., Racine County, Hydrologic Unit 04040002, on left bank 30 ft downstream from State Highway 38 bridge in Racine, 350 ft downstream from Horlick Dam, and 5.2 mi upstream from mouth.

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

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

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

GAGE.--Water-stage recorder. Elevation of gage is 610 ft above NGVD of 1929, from topographic map. Prior to Feb. 5, 1964, nonrecording gage on bridge 30 ft upstream.

REMARKS.--Records good except those for estimated daily discharges and Apr. 9-13, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	151	123	29	52	94	74	131	69	24	22	18
2	50	131	137	27	54	e90	82	141	59	26	17	26
3	44	112	114	26	68	74	119	200	75	24	14	93
4	37	100	98	25	54	e73	141	161	642	21	12	135
5	34	91	91	26	49	e72	117	124	1130	18	12	65
6	34	84	84	27	47	e71	101	110	1230	17	15	36
7	34	78	78	29	43	e71	108	101	1070	16	16	27
8	30	75	73	27	46	180	393	93	671	17	13	24
9	27	72	66	27	58	567	1200	98	349	24	10	21
10	26	67	68	29	149	814	1210	114	213	34	8.8	18
11	28	61	63	33	293	786	1150	117	163	37	7.8	14
12	60	57	59	32	308	459	809	214	181	26	6.8	12
13	183	64	68	30	195	300	478	356	137	22	8.4	11
14	587	85	86	31	139	248	323	323	115	18	96	9.6
15	553	119	96	32	118	211	250	202	107	15	228	8.2
16	568	119	79	34	106	178	214	157	129	14	271	7.5
17	341	97	72	34	96	150	177	145	126	13	91	7.3
18	205	84	69	29	87	134	155	137	95	12	42	9.4
19	147	75	73	e28	103	123	147	116	81	9.8	34	12
20	120	70	74	e27	232	115	159	102	73	9.4	29	36
21	103	68	74	26	410	113	137	95	70	9.3	26	64
22	91	66	67	26	421	110	145	92	77	8.5	57	44
23	254	58	64	28	309	96	160	92	64	8.2	172	25
24	751	61	62	32	219	89	140	88	53	8.8	184	16
25	1010	70	44	36	184	80	121	98	43	8.4	84	13
26	989	91	e42	37	160	74	113	134	39	27	49	12
27	862	88	e40	38	137	72	103	162	34	61	36	11
28	469	77	e38	41	116	70	134	113	38	70	30	11
29	294	75	e36	44	---	74	188	93	35	34	27	19
30	223	90	35	45	---	78	164	87	28	27	23	32
31	176	---	32	38	---	78	---	90	---	25	20	---
TOTAL	8387	2536	2205	973	4253	5744	8812	4286	7196	684.4	1661.8	837.0
MEAN	270.5	84.53	71.13	31.39	151.9	185.3	293.7	138.3	239.9	22.08	53.61	27.90
MAX	1010	151	137	45	421	814	1210	356	1230	70	271	135
MIN	26	57	32	25	43	70	74	87	28	8.2	6.8	7.3
CFSM	1.43	0.45	0.38	0.17	0.80	0.98	1.56	0.73	1.27	0.12	0.28	0.15
IN.	1.65	0.50	0.43	0.19	0.84	1.13	1.74	0.84	1.42	0.13	0.33	0.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

	MEAN	69.20	105.2	123.0	97.82	181.1	334.3	353.6	188.2	152.5	86.75	65.51	91.41
MAX	335	454	568	401	641	1149	1071	649	493	485	237	683	
(WY)	1987	1986	1983	1974	2001	1979	1993	1990	1996	1969	1987	1972	
MIN	2.79	8.90	3.08	2.21	3.98	30.6	61.8	8.73	7.75	5.18	6.60	2.58	
(WY)	1964	1964	1964	1977	1977	1968	1977	1977	1988	1988	1971	1963	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1963 - 2002

ANNUAL TOTAL		78814		47575.2									
ANNUAL MEAN		215.9		130.3						153.8			
HIGHEST ANNUAL MEAN										268			1993
LOWEST ANNUAL MEAN										23.3			1977
HIGHEST DAILY MEAN				2150	Feb 11		1230	Jun 6		4010	Mar 5		1974
LOWEST DAILY MEAN				10	Aug 8		6.8	Aug 12		0.00	Jul 9-15		1988
ANNUAL SEVEN-DAY MINIMUM				14	Aug 2		8.9	Jul 19		0.00	Jul 9		1988
MAXIMUM PEAK FLOW							(a)1400	Apr 10		4500	Mar 5		1974
MAXIMUM PEAK STAGE							(b)4.92	Jun 6		8.54	Mar 5		1974
INSTANTANEOUS LOW FLOW							6.4	Aug 12		0.00	Jul 9-15		1988
ANNUAL RUNOFF (CFSM)		1.14					0.69			0.81			
ANNUAL RUNOFF (INCHES)		15.53					9.38			11.07			
10 PERCENT EXCEEDS		539					261			400			
50 PERCENT EXCEEDS		111					73			55			
90 PERCENT EXCEEDS		25					16			9.6			

- (a) Gage height, 4.80 ft
- (b) Discharge, 1,270 ft³/s, shifting control
- (c) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087257 PIKE RIVER NEAR RACINE, WI

LOCATION.--Lat 42°38'49", long 87°51'38", in SE ¼ NE ¼ sec.11, T.2 N., R.22 E., Kenosha County, Hydrologic Unit 04040002, on right bank just downstream from unnamed tributary, 1.7 mi downstream from Pike Creek, 6.8 mi southwest of Racine Post Office and 9.0 mi upstream from mouth.

DRAINAGE AREA.--38.5 mi².

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

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 620.09 ft above NGVD of 1929 (Southeastern Wisconsin Regional Planning Commission).

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Low flows considerably affected by effluent discharge in upper portion of basin, and by occasional regulation of small recreation dam 1.1 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	40	36	e11	e19	e21	20	25	16	14	13	10
2	15	34	28	e11	e17	e20	34	31	15	14	12	117
3	14	32	27	e11	e16	e20	31	23	63	14	11	70
4	15	30	26	e11	e16	e20	25	21	540	12	19	33
5	16	29	25	e11	e16	e20	22	19	335	11	15	23
6	14	29	26	e11	e16	e20	21	22	162	12	12	19
7	13	27	25	e11	e16	e21	48	23	99	11	12	17
8	13	26	22	e11	e17	116	262	21	62	12	11	16
9	14	26	21	e11	25	232	521	30	45	31	11	16
10	16	25	22	e12	72	108	194	21	38	16	10	15
11	18	23	22	e12	52	65	119	31	40	14	11	14
12	41	23	22	12	40	54	79	88	31	13	12	14
13	176	34	44	12	32	50	58	53	26	12	31	13
14	395	40	30	e13	28	44	47	40	28	11	49	13
15	142	36	20	e13	25	39	42	32	25	11	17	13
16	80	28	19	e13	23	33	36	43	20	12	14	13
17	58	24	21	e13	21	28	32	43	20	12	13	13
18	46	23	19	e12	21	29	30	30	38	11	12	31
19	38	25	24	e11	35	27	45	26	25	11	13	43
20	34	23	21	e11	68	28	31	23	20	11	13	47
21	31	22	17	e11	85	25	31	22	23	11	13	25
22	32	20	17	e12	55	22	41	21	21	11	99	19
23	176	19	17	15	44	22	33	21	17	11	33	17
24	641	24	15	14	39	21	30	21	17	11	20	15
25	312	29	e13	14	35	20	28	32	16	11	17	14
26	148	24	e12	14	31	20	22	22	20	58	15	14
27	97	23	e11	14	e26	19	26	19	16	18	14	14
28	72	22	e11	15	e23	19	45	18	16	14	14	13
29	56	25	e10	15	---	24	34	19	15	17	13	27
30	48	41	e10	15	---	23	28	18	14	15	12	17
31	43	---	e10	e15	---	19	---	18	---	13	11	---
TOTAL	2829	826	643	387	913	1229	2015	876	1823	455	572	725
MEAN	91.26	27.53	20.74	12.48	32.61	39.65	67.17	28.26	60.77	14.68	18.45	24.17
MAX	641	41	44	15	85	232	521	88	540	58	99	117
MIN	13	19	10	11	16	19	20	18	14	11	10	10
CFSM	2.37	0.72	0.54	0.32	0.85	1.03	1.74	0.73	1.58	0.38	0.48	0.63
IN.	2.73	0.80	0.62	0.37	0.88	1.19	1.95	0.85	1.76	0.44	0.55	0.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2002, BY WATER YEAR (WY)

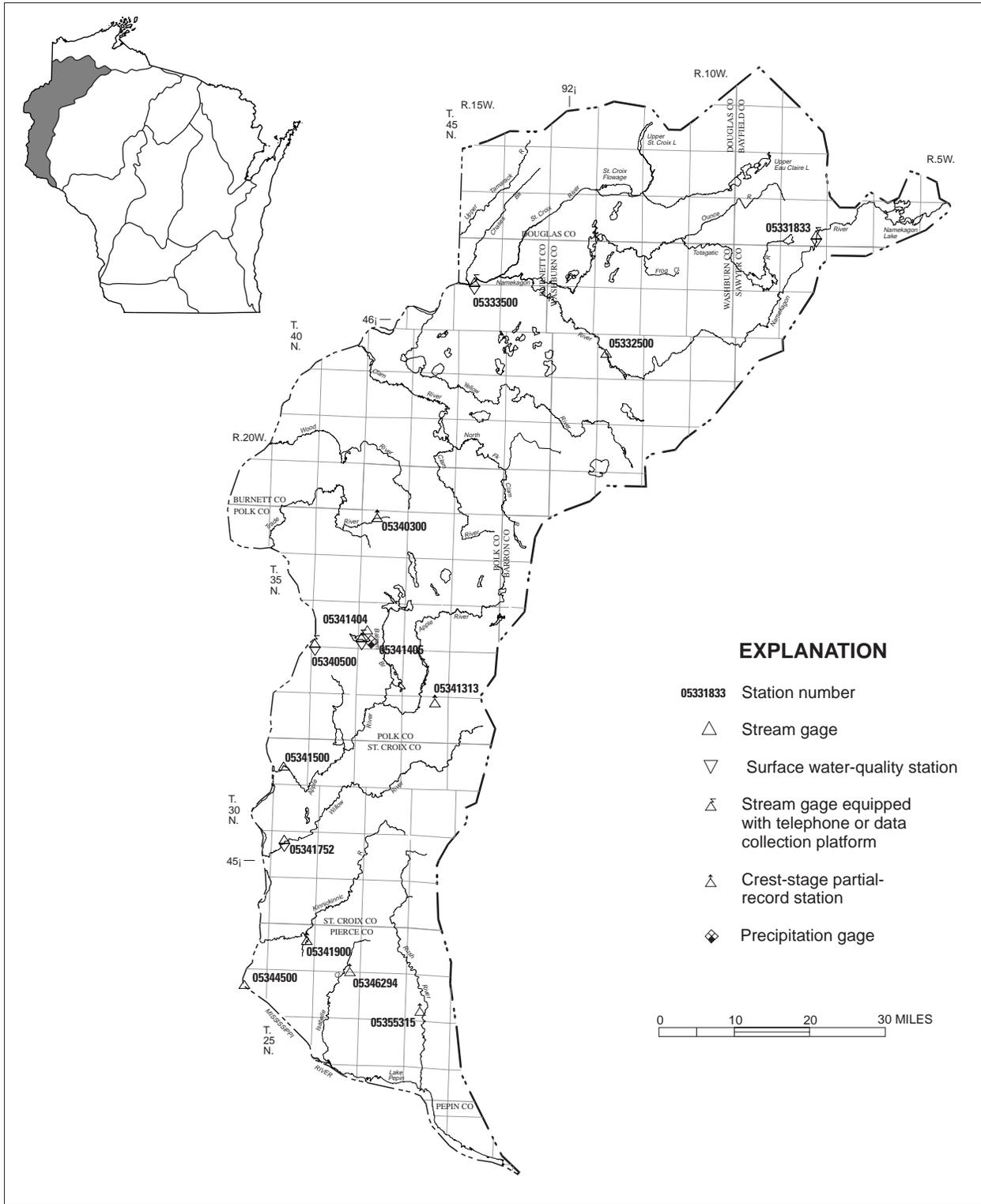
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	19.99	29.81	32.73	26.90	40.12	69.89	73.80	45.29	39.57	20.97	20.43	27.04																				
MAX	91.3	126	101	97.1	109	258	185	157	150	129	92.5	131																				
(WY)	2002	1986	1983	1974	2001	1979	1993	2000	2000	1978	1978	1986																				
MIN	4.40	3.62	2.35	2.05	3.74	14.3	12.1	4.57	8.32	4.93	4.35	3.25																				
(WY)	1972	1972	1977	1977	1977	1996	1977	1977	1988	1976	1976	1976																				

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1972 - 2002

ANNUAL TOTAL	17917.7	13293	
ANNUAL MEAN	49.09	36.42	37.13
HIGHEST ANNUAL MEAN			59.0
LOWEST ANNUAL MEAN			8.10
HIGHEST DAILY MEAN	784	Jun 12	1140
LOWEST DAILY MEAN	9.8	Sep 16	0.35
ANNUAL SEVEN-DAY MINIMUM	11	Jul 26	1.7
MAXIMUM PEAK FLOW			1580
MAXIMUM PEAK STAGE			(c)9.14
ANNUAL RUNOFF (CFSM)	1.28		0.96
ANNUAL RUNOFF (INCHES)	17.31		13.10
10 PERCENT EXCEEDS	96		82
50 PERCENT EXCEEDS	27		16
90 PERCENT EXCEEDS	12		5.8

- (a) Also occurred Aug. 10, Sept. 1
- (b) Ice affected
- (c) Backwater from ice
- (e) Estimated due to ice effect or missing record

UPPER MISSISSIPPI RIVER BASIN RECORDS



Base from U.S. Geological Survey 1:100,000 digital data; modified by Wisconsin Department of Natural Resources. Wisconsin Transverse Mercator projection.

ST. CROIX RIVER BASIN

05332500 NAMEKAGON RIVER NEAR TREGO, WI

LOCATION.--Lat 45°56'53", long 91°53'17", in NW ¼ SW ¼ sec.17, T.40 N., R.12 W., Washburn County, Hydrologic Unit 07030002, at powerplant of Northern States Power Co., 4.0 mi downstream from Potato Creek, and 4.4 mi northwest of Trego.

DRAINAGE AREA.--488 mi².

PERIOD OF RECORD.--October 1927 to September 1970. October 1987 to current year.

REVISED RECORD.--WDR WI-88-1: Drainage area.

GAGE.--Headwater and tailwater read hourly.

REMARKS.--Diurnal fluctuation caused by Trego powerplant.

COOPERATION.--Records of daily discharge furnished by Northern States Power Company and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	362	400	625	531	431	359	431	824	521	764	680	462
2	362	400	625	431	431	359	464	824	521	764	680	692
3	362	400	625	431	431	359	464	824	625	764	680	692
4	362	400	625	431	431	285	464	824	625	764	680	692
5	362	400	625	431	360	285	464	824	625	764	680	692
6	362	400	625	431	360	285	464	824	625	764	680	885
7	362	400	625	431	360	431	464	824	625	764	680	885
8	362	400	625	431	431	431	477	1030	625	1120	680	885
9	362	400	625	431	431	431	477	1460	625	1120	680	766
10	362	400	625	431	431	431	615	1700	625	1120	680	766
11	362	400	625	431	431	431	1530	1920	764	1430	680	766
12	362	400	625	431	431	431	1800	1920	764	1430	680	766
13	362	400	615	431	431	431	1800	1400	764	1430	680	766
14	362	400	615	431	397	512	2420	1400	764	1430	680	766
15	615	400	615	431	397	512	2210	1400	764	1430	680	766
16	400	400	615	431	397	512	2320	1400	764	1430	680	486
17	400	400	615	431	397	512	2320	951	764	1430	680	487
18	400	400	531	431	397	512	2260	951	764	680	680	487
19	400	400	531	431	431	512	1940	951	764	680	680	487
20	400	400	531	431	431	472	1940	850	764	680	680	487
21	400	400	531	431	431	472	1500	850	764	680	680	487
22	400	400	531	431	431	431	1500	641	764	680	680	487
23	400	400	531	431	431	431	1410	641	764	680	680	591
24	400	400	531	431	431	421	1410	641	764	680	680	591
25	400	400	531	431	431	431	999	641	764	680	680	591
26	400	400	531	431	431	431	999	641	764	680	680	793
27	400	625	531	431	359	431	999	641	764	680	680	793
28	400	625	531	431	359	431	999	641	764	680	680	793
29	400	625	531	431	---	431	1030	615	764	680	680	793
30	400	625	531	431	---	431	824	521	764	680	462	591
31	400	---	531	431	---	431	---	521	---	680	462	---
TOTAL	12083	12900	18009	13461	11541	13265	36994	30095	21322	28238	20644	20191
MEAN	389.8	430.0	580.9	434.2	412.2	427.9	1233	970.8	710.7	910.9	665.9	673.0
MAX	615	625	625	531	431	512	2420	1920	764	1430	680	885
MIN	362	400	531	431	359	285	431	521	680	462	462	462
CFSM	0.80	0.88	1.19	0.89	0.84	0.88	2.53	1.99	1.46	1.87	1.36	1.38
IN.	0.92	0.98	1.37	1.03	0.88	1.01	2.82	2.29	1.63	2.15	1.57	1.54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2002, BY WATER YEAR (WY)

	MEAN	440.0	444.7	388.9	353.7	349.2	444.4	731.8	645.0	558.9	495.9	421.0	477.8
MAX	893	814	581	531	512	778	1827	1156	1093	1026	728	1834	1834
(WY)	1969	1997	2002	1969	1969	1945	2001	1950	1944	1958	1999	1941	1941
MIN	252	288	251	245	241	282	408	389	276	235	195	214	214
(WY)	1949	1934	1933	1933	1933	1934	1931	1934	1934	1934	1933	1933	1933

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1928 - 2002
ANNUAL TOTAL	226898	238743	
ANNUAL MEAN	621.6	654.1	479.4
HIGHEST ANNUAL MEAN			654
LOWEST ANNUAL MEAN			300
HIGHEST DAILY MEAN	3620	Apr 25	5200
LOWEST DAILY MEAN	362	(a) Aug 31	113
ANNUAL SEVEN-DAY MINIMUM	362	Aug 31	159
ANNUAL RUNOFF (CFSM)	1.27	1.34	0.98
ANNUAL RUNOFF (INCHES)	17.30	18.20	13.35
10 PERCENT EXCEEDS	940	999	734
50 PERCENT EXCEEDS	437	531	418
90 PERCENT EXCEEDS	382	400	288

(a) Also occurred Sept. 1-9, 17-20, and Sept. 24 to Oct. 14

(b) Also occurred Sept. 7, 1930

05333500 ST. CROIX RIVER NEAR DANBURY, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1995 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April to September 1997, December 1999 to current year.

INSTRUMENTATION.--Continuous water temperature recorder April to September 1997 and December 1999 to current year.

REMARKS.--Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum temperature, 30.5°C, Aug. 6, 2001; minimum, 0.0°C on many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum temperature, 30.0°C, July 1; minimum 0.0° on many days.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

***** NOTE: DAILY VALUES ARE NOT FLAGGED "APPROVED" IN THE DATABASE *****

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	15.5	11.5	13.5	9.5	7.5	8.5	2.0	1.0	2.0	0.0	0.0	0.0
2	14.0	12.0	13.0	8.5	6.0	7.5	1.0	0.0	0.5	0.0	0.0	0.0
3	13.5	12.5	13.0	6.5	4.5	5.5	1.5	0.0	1.0	0.0	0.0	0.0
4	12.5	10.5	11.5	6.5	4.5	6.0	3.0	1.0	2.0	0.0	0.0	0.0
5	10.5	8.5	9.5	7.0	4.0	6.0	4.0	2.5	3.5	0.0	0.0	0.0
6	9.5	6.5	8.0	9.0	6.5	7.5	2.5	0.5	1.5	0.0	0.0	0.0
7	9.5	5.5	7.5	8.0	6.5	7.5	0.5	0.0	0.0	0.0	0.0	0.0
8	9.0	7.0	8.0	7.5	5.0	6.5	1.5	0.0	1.0	0.0	0.0	0.0
9	11.5	8.0	9.5	6.0	4.0	5.0	0.5	0.0	0.0	0.0	0.0	0.0
10	12.5	11.0	12.0	5.5	4.0	5.0	1.5	0.5	1.0	0.0	0.0	0.0
11	12.5	10.0	11.0	6.0	4.0	5.0	1.0	0.0	0.5	0.0	0.0	0.0
12	12.0	9.0	10.5	6.0	3.5	5.0	1.5	0.5	1.0	0.0	0.0	0.0
13	10.5	9.5	10.0	8.0	6.0	7.0	1.0	0.0	0.5	0.0	0.0	0.0
14	9.5	8.5	9.0	9.0	7.5	8.0	0.0	0.0	0.0	0.0	0.0	0.0
15	10.0	8.5	9.0	9.5	8.0	9.0	1.0	0.0	0.5	0.0	0.0	0.0
16	9.0	7.5	8.5	8.0	6.0	7.0	2.5	1.0	2.0	0.0	0.0	0.0
17	8.5	6.0	7.0	8.0	5.0	6.5	2.0	1.0	1.5	0.0	0.0	0.0
18	8.5	7.5	8.0	8.5	7.5	8.0	1.0	0.0	0.5	0.0	0.0	0.0
19	8.5	6.0	7.5	7.5	4.0	5.5	0.5	0.0	0.0	0.0	0.0	0.0
20	9.5	6.5	7.5	4.0	3.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0
21	8.5	6.0	7.5	4.5	2.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
22	8.5	5.5	7.5	5.0	3.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0
23	10.5	8.0	9.0	5.5	4.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
24	9.5	7.0	9.0	6.5	5.5	6.0	0.0	0.0	0.0	0.0	0.0	0.0
25	7.0	5.0	6.0	6.5	4.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0
26	5.0	4.5	4.5	4.5	0.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
27	6.0	4.5	5.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	7.0	4.5	5.5	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
29	7.0	5.5	6.5	2.5	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0
30	6.0	5.5	6.0	2.5	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
31	7.5	6.0	6.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	15.5	4.5	8.6	9.5	0.0	5.4	4.0	0.0	0.6	0.0	0.0	0.0

05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI

LOCATION.--Lat 45°24'25", long 92°38'49", in SW ¼ NW ¼ sec.30, T.34 N., R.18 W., Polk County, Hydrologic Unit 07030005, St. Croix National Scenic Riverway, on left bank, 1,500 ft downstream from powerplant of Northern States Power Co., in St. Croix Falls, and at mile 52.2.

DRAINAGE AREA.--6,240 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1902 to current year. Prior to January 1910, monthly discharge only, published in WSP 1308. Prior to October 1939, published as "near St. Croix Falls."

REVISED RECORDS.--WSP 1115: 1929. WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 689.94 ft above NGVD of 1929. Prior to July 1905, gage heights and discharge measurements were used by Loweth and Wolff, consulting engineers of St. Paul, Minn., to determine the flow. July 1905 to February 1940, records were computed from power generation at the St. Croix Falls Powerplant. February 1940 to Sept. 30, 1979, water-stage recorder at site 300 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Diurnal fluctuation caused by St. Croix Falls Powerplant 1,500 ft upstream. Gage-height telemeter and data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2360	2920	4300	e2700	2510	e2600	5210	9910	4190	5110	5110	4050
2	2200	2790	4130	e2700	e2400	e2600	5540	8090	3920	4610	4960	5290
3	2100	2960	4110	2660	e2300	e2500	5190	7720	3840	4250	4600	6900
4	2180	2660	4070	2690	e2400	2460	5450	7500	3700	3820	6080	7110
5	2410	2690	4240	2820	e2400	2370	4890	7220	3720	3460	7150	6790
6	2140	2520	4680	2860	2230	2590	4860	7010	3430	3220	6590	7870
7	2090	2470	5430	e2700	1940	2690	5180	6820	3620	3240	5930	7490
8	2150	2730	5490	2770	2220	2510	6150	7210	3570	4080	5500	7440
9	2220	2720	4950	2650	2410	e2500	7040	9570	3630	7490	5190	7170
10	2420	2820	5050	2820	2240	e2200	9310	12900	3550	11000	4990	7210
11	2380	2620	4840	2940	2450	2670	15100	15900	3700	13700	4880	7320
12	2600	2590	4760	2530	2300	2660	22900	17100	3800	16400	4330	7150
13	3000	2560	4510	3020	2440	2930	28300	17200	3610	17100	4540	6680
14	2500	2580	4130	2710	2510	e2800	31500	17200	3470	15500	4320	6370
15	3120	2630	3920	2610	2530	e2800	32300	16800	3250	13300	4340	6260
16	2900	2820	4190	2610	2290	e2700	32300	15800	3260	11700	4240	5940
17	3010	2560	4180	e2600	2400	2840	31300	14400	3180	10100	4140	5310
18	3100	2590	4100	e2500	2530	3070	29100	13000	3100	8940	4810	5060
19	3070	3040	3840	e2300	2620	3050	26200	11400	3340	8210	6230	4690
20	3000	2390	2900	2500	2920	3040	23800	9840	3400	7460	6790	4460
21	2780	2700	2410	2290	2850	3130	21700	8850	4100	6910	6670	4710
22	2630	2740	2880	2510	3070	2880	19500	8120	4830	6460	7010	4560
23	2780	2790	3210	2480	3040	3100	17200	7570	4850	6280	6770	4530
24	3070	3010	2650	2460	3210	2610	15100	7030	5240	5300	6810	4390
25	2740	3250	2010	2460	2970	2930	13200	6650	6280	5540	6470	4460
26	3030	3610	1870	2510	2990	2820	11700	5890	6900	5570	6070	4870
27	2950	3990	2450	2640	2730	2800	10500	5500	7130	5090	5380	5140
28	2940	3970	2560	2690	2900	3170	10100	5230	6920	5370	4880	5320
29	2790	4020	2560	2430	---	4050	9540	5100	6730	5780	4630	5210
30	2850	4330	2790	2300	---	4970	9430	4730	5930	5900	4320	5130
31	2810	---	e2800	2470	---	5560	---	4320	---	5220	4210	---
TOTAL	82320	88070	116010	80930	71800	91600	469590	301580	130190	236110	167940	174880
MEAN	2655	2936	3742	2611	2564	2955	15650	9728	4340	7616	5417	5829
MAX	3120	4330	5490	3020	3210	5560	32300	17200	7130	17100	7150	7870
MIN	2090	2390	1870	2290	1940	2200	4860	4320	3100	3220	4140	4050
CFSM	0.43	0.47	0.60	0.42	0.41	0.47	2.51	1.56	0.70	1.22	0.87	0.93
IN.	0.49	0.53	0.69	0.48	0.43	0.55	2.80	1.80	0.78	1.41	1.00	1.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 2002, BY WATER YEAR (WY)

MEAN	3735	3497	2600	2196	2170	4239	10357	7498	5704	4176	2946	3512
MAX	14270	11910	5821	4279	6021	14420	29600	21840	19510	17260	9777	14590
(WY)	1969	1972	1984	1984	1984	1945	2001	1950	1944	1952	1955	1941
MIN	1380	1342	1288	1157	1257	1538	2212	2430	1481	1014	839	1152
(WY)	1933	1911	1911	1911	1913	1912	1902	1934	1934	1934	1934	1933

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1902 - 2002
ANNUAL TOTAL	2227060	2011020	
ANNUAL MEAN	6102	5510	4398
HIGHEST ANNUAL MEAN			8569
LOWEST ANNUAL MEAN			1754
HIGHEST DAILY MEAN	59500	Apr 26	59500
LOWEST DAILY MEAN	1770	Aug 29	75
ANNUAL SEVEN-DAY MINIMUM	2070	Feb 26	754
MAXIMUM PEAK FLOW		32500	60900
MAXIMUM PEAK STAGE		15.05	25.88
ANNUAL RUNOFF (CFSM)	0.98	0.88	0.70
ANNUAL RUNOFF (INCHES)	13.28	11.99	9.57
10 PERCENT EXCEEDS	12000	9990	8960
50 PERCENT EXCEEDS	2760	3990	2790
90 PERCENT EXCEEDS	2170	2460	1580

(e) Estimated due to ice effect or missing record

ST. CROIX RIVER BASIN

05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: January 2000 to current year.

INSTRUMENTATION.--Water temperature recorder since January 21, 2000, provides 15-minute readings.

REMARKS.--Records represent water temperature at sensor, within 0.5°C, located near the orifice.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 30.5°C, Aug. 7-9, 2001; minimum 0.0°C on many days.

EXTREMES FOR CURRENT PERIOD.--

WATER TEMPERATURE: Maximum, 29.5°C, July 2; minimum 0.0°C on many days.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.5	13.0	13.5	7.5	6.0	7.0	1.5	0.5	1.0	0.0	0.0	0.0
2	15.0	13.0	14.0	8.5	7.0	8.0	1.5	0.5	1.0	0.5	0.0	0.0
3	15.0	14.0	14.5	9.0	7.5	8.0	1.5	0.5	1.0	0.5	0.0	0.0
4	15.0	14.0	14.5	8.5	6.5	7.5	2.0	0.5	1.0	0.5	0.0	0.0
5	14.5	12.0	13.5	8.5	7.0	7.5	3.0	1.5	2.0	0.5	0.0	0.0
6	12.5	10.5	12.0	8.5	7.0	7.5	3.5	2.0	2.5	0.0	0.0	0.0
7	11.5	9.5	10.5	8.5	7.0	8.0	2.5	0.5	1.5	0.5	0.0	0.0
8	9.5	8.5	9.0	8.5	7.0	8.0	1.0	0.0	0.5	0.5	0.0	0.0
9	9.0	8.0	8.5	8.0	6.5	7.5	0.5	0.0	0.0	1.0	0.0	0.0
10	9.5	8.5	9.0	7.0	5.5	6.5	0.5	0.0	0.0	0.5	0.0	0.0
11	11.5	9.5	10.5	6.5	5.0	6.0	0.5	0.0	0.0	0.5	0.0	0.0
12	12.5	11.0	11.5	6.5	5.5	6.0	1.0	0.0	0.5	0.5	0.0	0.0
13	12.0	11.0	11.5	7.0	5.5	6.0	1.0	0.0	0.5	0.5	0.0	0.0
14	12.0	10.5	11.5	7.5	6.0	7.0	0.5	0.0	0.0	0.0	0.0	0.0
15	11.0	9.5	10.5	8.5	7.0	8.0	0.5	0.0	0.0	0.0	0.0	0.0
16	9.5	8.5	9.5	9.0	8.0	8.5	1.0	0.0	0.5	0.5	0.0	0.0
17	9.5	8.5	8.5	9.5	8.0	8.5	2.0	1.0	1.5	0.5	0.0	0.0
18	8.5	7.5	8.0	9.0	8.5	8.5	2.5	1.0	1.5	0.5	0.0	0.0
19	8.5	7.5	8.0	9.0	7.0	8.5	1.5	0.0	1.0	0.5	0.0	0.0
20	9.0	7.5	8.0	7.5	5.5	7.0	1.0	0.0	0.0	0.5	0.0	0.0
21	8.5	7.5	8.0	6.0	4.0	5.0	0.5	0.0	0.0	0.5	0.0	0.0
22	9.0	8.0	8.5	5.0	3.5	4.0	0.5	0.0	0.0	1.5	0.0	0.0
23	9.5	8.0	8.5	4.5	3.5	4.0	0.0	0.0	0.0	0.5	0.0	0.0
24	9.5	8.5	9.0	5.5	4.0	4.5	0.0	0.0	0.0	0.5	0.0	0.0
25	9.5	7.5	8.5	5.5	4.5	5.0	0.5	0.0	0.0	1.0	0.0	0.0
26	7.5	5.0	6.5	5.0	3.5	4.5	0.0	0.0	0.0	1.0	0.0	0.0
27	5.5	4.5	5.0	3.5	0.5	2.5	0.5	0.0	0.0	0.5	0.0	0.0
28	5.5	4.5	5.0	1.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0
29	6.0	5.0	5.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0
30	6.0	5.5	6.0	1.0	0.0	0.5	0.5	0.0	0.0	0.5	0.0	0.0
31	6.5	6.0	6.0	---	---	---	0.0	0.0	0.0	0.5	0.0	0.0
MONTH	15.0	4.5	9.4	9.5	0.0	6.0	3.5	0.0	0.5	1.5	0.0	0.0

05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI--Continued

DAY	WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002											
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	0.5	0.0	0.0	1.0	0.0	0.0	1.0	0.5	0.5	9.5	8.0	9.0
2	0.5	0.0	0.0	1.0	0.0	0.0	1.5	0.0	1.0	10.0	8.5	9.0
3	0.5	0.0	0.0	1.0	0.0	0.0	1.5	0.5	1.0	10.0	9.0	9.5
4	1.0	0.0	0.0	1.0	0.0	0.0	1.5	0.5	1.0	10.5	9.5	10.0
5	1.0	0.0	0.0	1.0	0.0	0.0	1.5	0.5	1.0	10.5	9.5	10.0
6	1.0	0.0	0.0	0.5	0.0	0.0	2.5	1.0	1.5	10.5	10.0	10.5
7	1.0	0.0	0.0	0.5	0.0	0.0	3.0	1.0	2.0	10.5	9.5	10.0
8	1.0	0.0	0.5	0.5	0.0	0.0	2.5	1.5	2.0	10.0	8.5	9.5
9	0.5	0.0	0.0	0.5	0.0	0.0	4.0	1.5	2.5	9.0	7.5	8.5
10	0.5	0.0	0.0	1.0	0.0	0.0	5.0	3.5	4.5	8.0	7.0	7.5
11	0.5	0.0	0.0	1.0	0.0	0.5	4.0	2.5	3.0	8.5	7.5	8.0
12	0.5	0.0	0.0	1.5	0.0	0.5	3.5	2.0	2.5	9.0	7.5	8.0
13	1.0	0.0	0.5	1.0	0.0	0.5	4.5	2.5	3.5	9.0	8.0	8.5
14	1.0	0.0	0.5	0.5	0.0	0.5	6.0	3.5	5.0	10.5	8.5	9.5
15	1.0	0.0	0.5	1.0	0.0	0.0	8.0	5.5	7.0	11.5	10.0	11.0
16	1.0	0.0	0.5	1.0	0.0	0.5	10.5	7.5	9.0	13.0	11.0	12.0
17	1.5	0.0	0.5	1.0	0.0	0.5	12.0	9.5	11.0	14.0	12.5	13.5
18	1.5	0.0	0.5	1.5	0.0	0.5	12.5	11.0	12.0	14.5	13.0	13.5
19	1.0	0.0	0.5	1.0	0.0	0.5	13.0	11.5	12.0	14.0	13.0	13.5
20	0.5	0.0	0.5	1.0	0.0	0.5	12.5	11.0	11.5	14.5	12.5	13.5
21	1.0	0.0	0.5	1.0	0.0	0.5	11.5	9.0	10.5	15.0	13.5	14.0
22	1.0	0.0	0.5	1.0	0.0	0.5	9.5	7.5	8.5	15.0	14.0	14.5
23	1.0	0.0	0.5	1.5	0.0	0.5	8.5	7.0	8.0	16.0	14.5	15.0
24	1.0	0.0	0.5	1.5	0.0	0.5	9.5	8.5	9.0	16.0	15.0	15.5
25	0.5	0.0	0.0	2.0	0.0	0.5	9.0	8.0	8.5	15.5	15.0	15.0
26	0.5	0.0	0.0	2.0	0.0	1.0	9.0	7.5	8.5	16.0	14.5	15.0
27	1.0	0.0	0.0	2.5	0.0	1.0	9.0	7.5	8.0	16.0	14.5	15.5
28	0.5	0.0	0.0	2.5	0.5	1.0	7.5	6.0	7.0	18.0	15.5	17.0
29	---	---	---	2.5	1.0	1.5	8.0	6.0	7.0	19.5	17.5	18.5
30	---	---	---	2.0	0.5	1.5	9.0	7.5	8.0	21.5	18.5	20.5
31	---	---	---	1.5	0.0	1.0	---	---	---	23.0	20.5	22.0
MONTH	1.5	0.0	0.2	2.5	0.0	0.5	13.0	0.0	5.9	23.0	7.0	12.5
DAY	WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002											
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	23.5	21.5	22.5	29.0	26.5	28.0	26.5	25.0	26.0	24.0	20.5	22.5
2	22.5	21.0	22.0	29.5	27.5	28.5	25.5	24.0	25.0	23.0	21.5	22.0
3	21.0	18.5	20.0	29.0	27.0	28.0	25.0	21.5	23.5	21.5	20.0	21.0
4	18.5	15.5	17.0	29.0	26.5	27.5	22.5	20.5	21.5	21.0	19.5	20.0
5	16.5	15.0	15.5	27.5	26.0	26.5	22.0	20.5	21.0	21.0	20.0	20.5
6	17.5	15.0	16.0	26.5	25.0	25.5	22.0	21.0	21.5	22.0	19.5	21.0
7	19.5	17.0	18.0	27.0	25.5	26.0	22.0	21.0	21.5	23.0	21.5	22.0
8	20.0	18.5	19.0	27.0	26.0	26.5	23.0	21.5	22.5	23.5	22.5	23.0
9	20.5	19.0	19.5	26.5	25.0	26.0	24.0	22.0	23.0	24.0	23.0	23.5
10	21.5	19.5	20.0	26.0	23.0	24.5	24.5	22.5	23.5	24.5	22.5	23.5
11	22.0	20.5	21.0	23.0	22.0	22.5	25.0	23.0	24.0	23.0	21.5	22.5
12	22.0	21.0	21.5	23.0	21.5	22.0	25.0	23.0	24.0	22.0	21.0	21.5
13	22.0	20.5	21.5	23.0	21.5	22.5	24.0	22.0	23.5	21.5	20.0	21.0
14	21.5	20.5	21.0	24.0	22.0	23.0	23.5	22.0	22.5	20.5	19.0	20.0
15	22.0	20.5	21.0	25.0	22.5	23.5	23.0	21.5	22.0	19.5	18.5	19.0
16	22.5	21.0	21.5	25.5	23.5	24.5	22.5	20.5	21.5	19.0	17.5	18.5
17	22.5	21.5	21.5	26.5	24.5	25.5	22.0	20.5	21.0	19.5	17.5	18.5
18	22.5	21.5	22.0	26.0	25.0	25.5	21.0	20.0	20.5	20.0	18.0	19.0
19	22.5	21.0	22.0	25.0	24.0	24.5	21.0	19.5	20.0	20.5	19.0	19.5
20	23.0	21.5	22.0	25.0	23.5	24.0	20.5	19.5	20.0	20.0	19.0	19.5
21	23.0	21.5	22.5	25.5	24.5	25.0	20.5	19.0	20.0	19.0	17.5	18.5
22	22.5	21.5	22.0	25.5	24.5	25.0	20.5	19.5	20.0	18.0	15.5	17.0
23	24.0	22.0	23.0	24.5	23.5	24.5	20.5	19.5	20.0	15.5	13.5	15.0
24	24.0	22.5	23.5	24.0	22.0	23.5	21.0	19.5	20.5	14.0	12.5	13.5
25	23.0	22.0	22.5	22.5	21.5	22.0	22.0	20.5	21.0	13.5	12.0	12.5
26	24.5	22.5	23.5	23.0	21.5	22.0	22.5	21.5	22.0	12.5	11.5	12.0
27	25.0	24.0	24.5	25.0	22.5	24.0	23.0	21.5	22.5	13.0	11.5	12.0
28	25.5	24.0	24.5	25.0	23.5	24.0	23.5	22.0	22.5	13.0	11.5	12.5
29	26.0	24.5	25.5	25.5	23.5	24.5	23.0	21.5	22.5	12.5	11.5	12.0
30	27.0	25.5	26.5	26.0	24.5	25.0	23.5	21.5	22.5	13.5	12.0	12.5
31	---	---	---	27.0	25.0	26.0	23.0	21.5	22.5	---	---	---
MONTH	27.0	15.0	21.4	29.5	21.5	24.8	26.5	19.0	22.1	24.5	11.5	18.5

ST. CROIX RIVER BASIN

185

05341500 APPLE RIVER NEAR SOMERSET, WI

LOCATION.--Lat 45°09'27", long 92°42'59", in NE ¼ SE ¼ sec.21, T.31 N., R.19 W., St. Croix County, Hydrologic Unit 07030005, at powerplant of Northern States Power Co., 3.5 mi downstream from Somerset.

DRAINAGE AREA.--579 mi².

PERIOD OF RECORD.--January 1901 to June 1914 (monthly discharge only), July 1914 to September 1970, October 1986 to current year.

REVISED RECORDS.--WSP 1388: 1929, 1933. WDR-87-1: Drainage area.

GAGE.--Headwater and tailwater gages read hourly.

REMARKS.--Records of daily discharge computed on the basis of gate openings, head, and plant efficiency. Flow regulated by many powerplants upstream, but service ponds are small and monthly flows are only slightly affected.

COOPERATION.--Records of daily discharge furnished by Northern States Power Company and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	339	390	479	322	358	345	816	1100	406	636	433	518
2	345	390	378	359	330	354	769	1000	392	636	504	375
3	339	390	414	334	324	309	712	847	454	580	439	627
4	360	370	394	360	288	286	660	777	597	472	474	788
5	303	435	532	383	252	364	465	751	630	398	529	752
6	311	314	505	352	365	393	450	833	627	404	610	816
7	333	374	479	348	380	367	421	738	591	434	724	823
8	284	307	491	355	352	375	461	761	632	417	823	1105
9	300	319	496	363	356	394	453	948	576	352	759	1075
10	287	372	490	364	353	299	597	1220	548	326	710	1121
11	327	372	517	363	359	372	801	1390	566	495	710	1165
12	356	359	545	353	340	437	872	1470	589	445	603	1113
13	361	400	515	365	320	375	1300	1490	578	344	560	953
14	413	380	424	376	359	374	1400	1330	601	375	554	803
15	497	447	401	357	340	414	1400	1210	542	339	457	817
16	473	360	374	361	351	503	1380	1160	555	400	345	762
17	419	381	376	330	338	384	1410	1170	515	313	396	768
18	380	377	454	270	347	396	1420	1040	547	348	398	718
19	394	315	348	272	352	457	1350	942	492	329	341	563
20	385	325	341	355	361	440	1060	865	631	350	343	552
21	397	271	369	400	387	388	1080	720	582	309	409	572
22	415	363	369	373	356	372	1050	738	598	304	670	566
23	365	421	371	373	320	431	951	728	582	323	685	586
24	412	442	336	358	360	391	884	658	665	338	807	566
25	414	571	266	359	415	340	830	659	811	351	678	535
26	420	525	364	371	375	357	837	663	931	458	700	531
27	390	514	347	338	353	347	713	661	778	443	721	559
28	390	515	363	363	405	405	595	573	887	379	677	537
29	390	582	350	351	---	478	578	661	787	504	655	579
30	390	526	309	358	---	568	572	509	563	521	628	573
31	424	---	329	353	---	777	---	397	---	549	576	---
TOTAL	11613	12107	12726	10939	9796	12492	26287	28009	18253	12872	17918	21818
MEAN	374.6	403.6	410.5	352.9	349.9	403.0	876.2	903.5	608.4	415.2	578.0	727.3
MAX	497	582	545	400	415	777	1420	1490	931	636	823	1160
MIN	284	271	266	270	252	286	421	397	392	304	341	375
CFSM	0.65	0.70	0.71	0.61	0.60	0.70	1.51	1.56	1.05	0.72	1.00	1.26
IN.	0.75	0.78	0.82	0.70	0.63	0.80	1.69	1.80	1.17	0.83	1.15	1.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 2002, BY WATER YEAR (WY)

	MEAN	289	290	255	238	244	387	565	433	390	287	247	297
MAX	713	727	616	519	479	730	1361	1000	1030	576	704	808	
(WY)	1996	1997	1997	1997	2000	1946	2001	1906	1905	1993	1995	1962	
MIN	104	135	123	124	120	151	197	140	81.7	69.9	74.2	89.8	
(WY)	1933	1934	1934	1938	1934	1934	1930	1934	1934	1934	1934	1933	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 1901 - 2002		
ANNUAL TOTAL	188564			194830					
ANNUAL MEAN	516.6			533.8			326		
HIGHEST ANNUAL MEAN							563		
LOWEST ANNUAL MEAN							144		
HIGHEST DAILY MEAN	2650			Apr 26			1490		
LOWEST DAILY MEAN	212			Jan 20			252		
ANNUAL SEVEN-DAY MINIMUM	253			Feb 21			306		
ANNUAL RUNOFF (CFSM)	0.89						0.92		
ANNUAL RUNOFF (INCHES)	12.11						12.52		
10 PERCENT EXCEEDS	1070						841		
50 PERCENT EXCEEDS	364						431		
90 PERCENT EXCEEDS	273						335		
							547		
							259		
							148		

(a) Also occurred Sept. 30, 1929, July 19, 1932, and Aug. 2, 3, 1933

ST. CROIX RIVER BASIN

05342000 KINNICKINNICK RIVER NEAR RIVER FALLS, WI

LOCATION.--Lat 44°49'51", long 92°43'59", in NE ¼ NW ¼ sec.18, T.27 N., R.19 W., Pierce County, Hydrologic Unit 07030005, on left bank, 50 ft upstream from County Trunk Highway F, 1.9 mi upstream from mouth, 4.8 mi downstream from Lake Louise Dam, and 5.5 mi west of River Falls.

DRAINAGE AREA.--165 mi².

PERIOD OF RECORD.--October 1916 to September 1921 (monthly discharge for some periods published in WSP 1308), October 1998 to September 1999, July to September 2002.

REVISED RECORDS.--WSP 1308. WDR WI-99-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 690 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1921, recording gage near present site at different datum.

REMARKS.--Records good (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	101	100	104
2	---	---	---	---	---	---	---	---	---	96	96	141
3	---	---	---	---	---	---	---	---	---	96	130	140
4	---	---	---	---	---	---	---	---	---	96	209	109
5	---	---	---	---	---	---	---	---	---	96	119	120
6	---	---	---	---	---	---	---	---	---	96	104	244
7	---	---	---	---	---	---	---	---	---	98	101	269
8	---	---	---	---	---	---	---	---	---	103	99	133
9	---	---	---	---	---	---	---	---	---	96	98	119
10	---	---	---	---	---	---	---	---	---	132	97	115
11	---	---	---	---	---	---	---	---	---	147	96	112
12	---	---	---	---	---	---	---	---	---	107	97	111
13	---	---	---	---	---	---	---	---	---	105	96	110
14	---	---	---	---	---	---	---	---	---	103	95	121
15	---	---	---	---	---	---	---	---	---	101	95	117
16	---	---	---	---	---	---	---	---	---	100	96	112
17	---	---	---	---	---	---	---	---	---	99	183	110
18	---	---	---	---	---	---	---	---	---	114	112	110
19	---	---	---	---	---	---	---	---	---	105	101	110
20	---	---	---	---	---	---	---	---	---	121	100	111
21	---	---	---	---	---	---	---	---	---	107	526	110
22	---	---	---	---	---	---	---	---	---	102	424	107
23	---	---	---	---	---	---	---	---	---	99	156	107
24	---	---	---	---	---	---	---	---	---	98	128	107
25	---	---	---	---	---	---	---	---	---	108	117	120
26	---	---	---	---	---	---	---	---	---	104	112	141
27	---	---	---	---	---	---	---	---	---	100	109	131
28	---	---	---	---	---	---	---	---	---	100	107	118
29	---	---	---	---	---	---	---	---	---	104	108	117
30	---	---	---	---	---	---	---	---	---	99	106	118
31	---	---	---	---	---	---	---	---	---	104	105	---
TOTAL	---	---	---	---	---	---	---	---	---	3237	4222	3794
MEAN	---	---	---	---	---	---	---	---	---	104.4	136.2	126.5
MAX	---	---	---	---	---	---	---	---	---	147	526	269
MIN	---	---	---	---	---	---	---	---	---	96	95	104
CFSM	---	---	---	---	---	---	---	---	---	0.63	0.83	0.77
IN.	---	---	---	---	---	---	---	---	---	0.73	0.95	0.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2002, BY WATER YEAR (WY)

	MEAN	92.25	98.74	86.39	74.57	75.47	232.9	96.41	88.34	114.1	79.13	85.18	81.85
MAX	136	131	122	102	115	469	122	111	167	104	136	126	
(WY)	1999	1999	2000	1999	1999	1919	1919	1999	1920	2002	2002	2002	
MIN	65.2	62.5	72.9	60.0	55.0	87.9	78.8	69.1	74.3	43.5	27.4	41.9	
(WY)	1918	1917	1917	1918	1918	1921	1918	1917	1921	1920	1920	1920	

SUMMARY STATISTICS

FOR 2002 WATER YEAR
(JULY-SEPTEMBER)

WATER YEARS 1917 - 2002

ANNUAL TOTAL	11253		
ANNUAL MEAN	122.3	99.78	
HIGHEST ANNUAL MEAN		133	2000
LOWEST ANNUAL MEAN		74.3	1921
HIGHEST DAILY MEAN	526	Aug 21	2870
LOWEST DAILY MEAN	95	Aug 14, 15	13
ANNUAL SEVEN-DAY MINIMUM	96	Aug 10	19
MAXIMUM PEAK FLOW	774	Aug 21	(a)4760
MAXIMUM PEAK STAGE	12.53	Aug 21	(b)7.98
INSTANTANEOUS LOW FLOW	78	Aug 12	11
ANNUAL RUNOFF (CFSM)	0.74		0.60
ANNUAL RUNOFF (INCHES)	2.54		8.22
10 PERCENT EXCEEDS	141		124
50 PERCENT EXCEEDS	107		82
90 PERCENT EXCEEDS	96		57

(a) From rating curve extended above 1,000 ft³/s, based on contracted-opening measurement of peak flow
(b) Datum then in use

05344500 MISSISSIPPI RIVER AT PRESCOTT, WI

LOCATION.--Lat 44°44'45", long 92°48'00", in sec. 9, T.26 N., R.20 W., Pierce County, Hydrologic Unit 07040001, on left bank at Prescott, 200 ft downstream from St. Croix River, 300 ft south of Chicago, Burlington & Quincy Railroad bridge, 800 ft south of bridge on U.S. Highway 10, and at mile 811.4 upstream from Ohio River.

DRAINAGE AREA.--44,800 mi² (approximately).

PERIOD OF RECORD.--June 1928 to current year.

REVISED RECORDS.--WSP 1508: 1941. WRD MN-74: 1973.

GAGE.--Water-stage recorder. Datum of gage is 649.50 ft above sea level (NGVD of 1929). Prior to Aug. 2, 1932, nonrecording gage at railroad bridge 300 ft upstream at following datums: June 3, 1928 to Sept. 30, 1929, 19.27 ft higher; Oct. 1, 1929 to Sept. 30, 1930, 17.68 ft higher; Oct. 1, 1930 to Aug. 1, 1932, 19.28 ft higher. Aug. 2, 1932 to Oct. 30, 1938, water-stage recorder at present site at datum 19.28 ft higher; Nov. 1, 1938 to Sept. 7, 1971, water-stage recorder at present site at datum 50.00 ft lower. Auxiliary water-stage recorder 10.7 mi downstream from base gage.

REMARKS.--Records good to fair except those for estimated daily discharge, which are poor (see page 12). Some regulation by reservoirs, navigation dams, and power plants at low and medium stages. Discharges below a stage of about 27 ft are computed by routing flows from the Mississippi River at St. Paul (05331000) and St. Croix River at St. Croix Falls, WI (05340500).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6070	8620	15100	e8820	e8630	e8030	13800	172000	63400	49800	e16500	9580
2	5890	10100	15400	e8940	e8570	e8080	14500	163000	62300	44800	e16200	9450
3	5890	11500	14600	e8780	e8380	e8100	16100	152000	59700	41000	e16100	9160
4	6170	12300	12600	e8960	e8410	e8650	20200	141000	57500	38100	15600	8970
5	5770	12500	11500	e9180	e8510	e8110	25600	130000	55600	33800	15200	8880
6	5630	13000	12800	e9090	e8710	e8420	e35300	120000	52800	32100	14500	8560
7	6140	14400	10600	e9300	e8700	e8400	35700	112000	49700	29200	14700	8770
8	6090	16000	e10100	e9370	e8830	e8560	48700	104000	46800	27000	13300	8810
9	6140	17900	e8870	e9380	e8770	e8580	67400	98300	44400	26300	13200	9130
10	6320	20400	e9130	e9220	e8710	e8610	90600	93600	42700	24800	12600	9180
11	6100	21900	e9830	e9060	e8760	e8160	116000	89700	41700	23900	12300	9710
12	6130	21600	e9380	e9100	e8820	e8460	135000	86300	42400	22000	11500	9380
13	6070	21100	e8650	e9420	e8750	e8590	146000	83400	42900	19900	11300	9150
14	6270	21500	e9130	e9440	e8330	e8540	159000	80200	45500	18900	11000	8540
15	6310	22300	e9050	e9650	e8640	e8430	171000	77200	47400	18100	10500	8460
16	6380	22600	e9350	e9600	e8470	e8830	177000	74000	51700	17000	10400	8330
17	6600	22500	e9480	e9680	e8670	e9090	177000	70800	57700	16900	10600	8020
18	6630	22000	e9530	e9170	e8360	e9510	176000	66700	62900	16500	10600	8120
19	6660	21300	e9660	e9220	e8450	e9130	173000	63500	67600	17200	10700	8200
20	6500	20400	e9530	e9150	e8650	e9500	168000	60400	72100	17100	11400	7940
21	7060	19100	e9470	e8880	e8270	e9690	161000	58300	76500	15900	11200	8490
22	7190	17200	e9660	e8730	e8570	e9990	155000	56700	80500	15900	10600	8000
23	7470	15500	e9410	e9030	e8320	e10500	153000	56400	82000	16000	10500	8650
24	7520	14600	e9530	e8710	e8380	e10600	156000	56700	81400	16600	10200	8950
25	7900	13900	e9380	e8720	e8640	e10900	168000	57400	78600	17300	10200	8500
26	8070	13900	e9160	e8870	e8550	e10600	180000	59800	75300	17600	9590	8590
27	8620	14600	e9080	e8910	e8360	e11100	186000	62300	70500	18300	9720	8050
28	8710	15100	e8960	e9000	e8260	e11000	186000	64000	65100	19200	9630	7990
29	8950	15300	e8980	e8340	---	e11200	183000	65000	60200	17900	9010	8570
30	8900	15200	e8840	e8830	---	e11600	178000	64800	55300	18200	8320	8530
31	8910	---	e8720	e8630	---	e12400	---	64300	---	17700	9480	---
TOTAL	213060	508320	315480	281180	239470	291360	3671900	2703800	1792200	725000	366650	260660
MEAN	6873	16940	10180	9070	8552	9399	122400	87220	59740	23390	11830	8689
MAX	8950	22600	15400	9680	8830	12400	186000	172000	82000	49800	16500	9710
MIN	5630	8620	8650	8340	8260	8030	13800	56400	41700	15900	8320	7940
AC-FT	422600	1008000	625800	557700	475000	577900	7283000	5363000	3555000	1438000	727300	517000
CFSM	.15	.38	.23	.20	.19	.21	2.73	1.95	1.33	.52	.26	.19
IN.	.18	.42	.26	.23	.20	.24	3.05	2.25	1.49	.60	.30	.22

UPPER MISSISSIPPI RIVER MAIN STEM

05344500 MISSISSIPPI RIVER AT PRESCOTT, WI--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2001, BY WATER YEAR (WY)

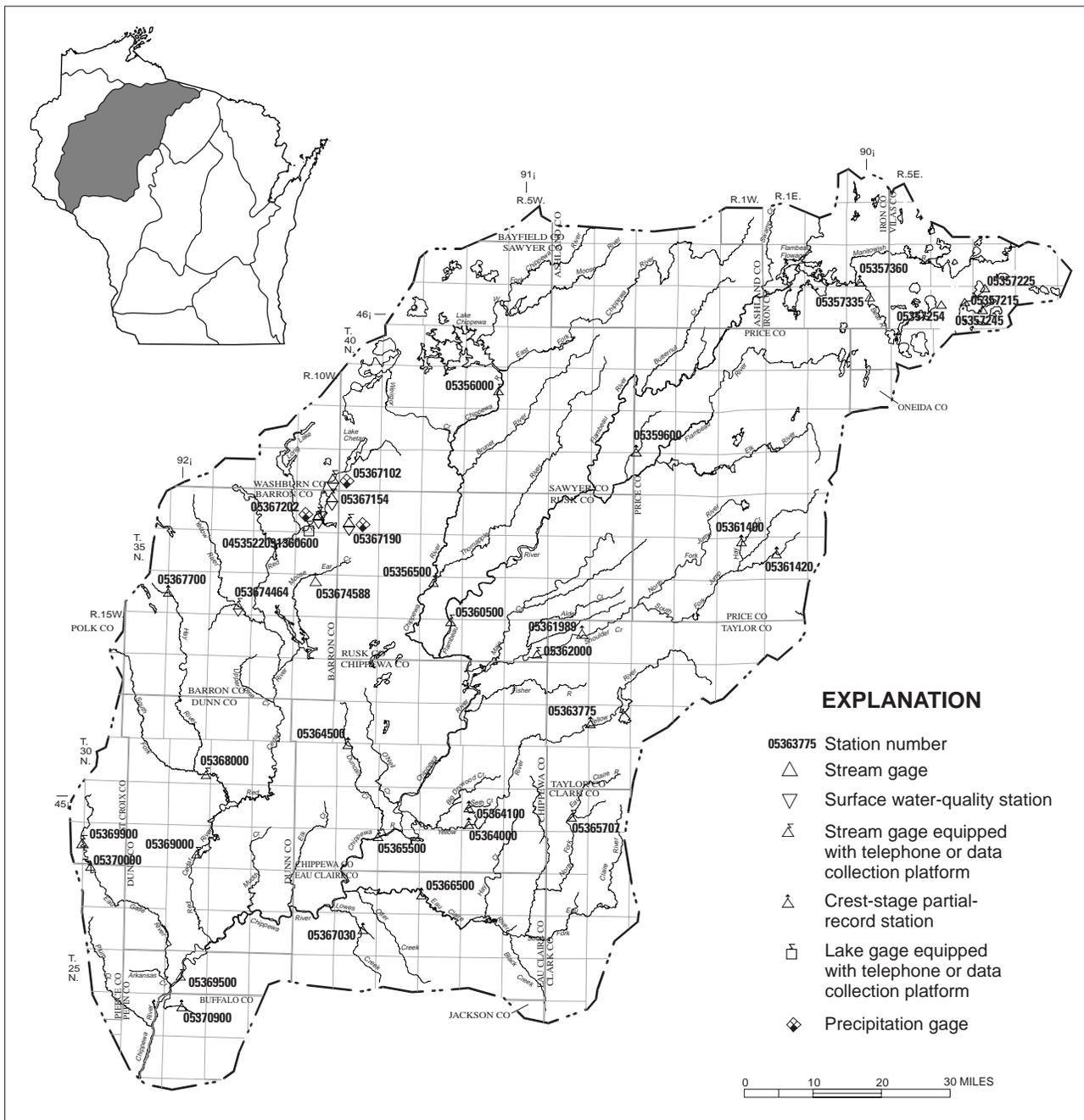
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13460	13430	10070	8347	8263	17360	42270	32820	26270	20670	13460	12770
MAX	49740	40360	21460	16060	21390	55010	122400	90100	69890	87420	48350	45950
(WY)	1987	1972	1983	1983	1966	1983	2001	1986	1993	1993	1993	1986
MIN	3526	3874	3379	3153	3519	4369	7215	6304	4185	3197	2366	3002
(WY)	1933	1977	1934	1935	1934	1934	1931	1931	1934	1934	1934	1976

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1928 - 2001

ANNUAL TOTAL		5136890		11369080						(a)18310		
ANNUAL MEAN		14040		31150						38540		1986
HIGHEST ANNUAL MEAN										4367		1934
LOWEST ANNUAL MEAN										226000		Apr 18 1965
HIGHEST DAILY MEAN				31800	Jul 16		186000	Apr 27		1380		Jul 13 1940
LOWEST DAILY MEAN				5630	Oct 6		5630	Oct 6		2190		Aug 11 1936
ANNUAL SEVEN-DAY MINIMUM				5890	Sep 23		5940	Oct 1		228000		Apr 18 1965
MAXIMUM PEAK FLOW							187000	Apr 27		43.11		Apr 18 1965
MAXIMUM PEAK STAGE							40.87	Apr 27		13260000		
ANNUAL RUNOFF (AC-FT)			10190000				22550000			.41		
ANNUAL RUNOFF (CFSM)			.31				.70			5.55		
ANNUAL RUNOFF (INCHES)			4.27				9.44					
10 PERCENT EXCEEDS			24700				80900			39400		
50 PERCENT EXCEEDS			12600				10600			12000		
90 PERCENT EXCEEDS			6650				8140			5180		

(a) Median of annual mean discharges is 18,500 ft³/s

(e) Estimated due to ice effect or missing record



Base from U.S. Geological Survey 1:100,000 digital data; modified by Wisconsin Department of Natural Resources. Wisconsin Transverse Mercator projection.

CHIPPEWA RIVER BASIN

CHIPPEWA RIVER BASIN

05356000 CHIPPEWA RIVER AT BISHOPS BRIDGE, NEAR WINTER, WI

LOCATION.--Lat 45°50'57", long 91°04'44", in SW ¼ NE ¼ sec.23, T.39 N., R.6 W., Sawyer County, Hydrologic Unit 07050001, on right bank 15 ft upstream from highway bridge on County Trunk Highway G, 3.2 mi downstream from Lake Chippewa Dam, and 3.7 mi northwest of Winter.

DRAINAGE AREA.--790 mi².

PERIOD OF RECORD.--February 1912 to current year. March, April, 1912, and December 1912 to April 1913, monthly discharge only published in WSP 1308. Unpublished daily discharges stored from February 1912 to April 1913 from District records.

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

GAGE.--Water-stage recorder. Datum of gage is 1,256.78 ft above NGVD of 1929 (levels by Wilhelm Engineering Co.). See WSP 1708 or 1728 for history of changes prior to July 23, 1930.

REMARKS.--Records good (see page 11). Flow regulated by Moose Lake and Lake Chippewa. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	234	264	502	1530	665	461	546	1540	752	604	487	500
2	235	264	499	1530	668	459	537	1130	752	604	486	510
3	234	264	499	1530	671	460	525	922	749	603	493	507
4	233	262	598	1520	671	462	527	1020	749	604	496	500
5	227	264	699	1510	671	457	526	1020	746	610	486	592
6	221	264	698	1500	670	456	527	1030	746	609	483	880
7	226	425	676	1280	667	457	528	1030	745	608	603	931
8	227	505	671	860	667	460	534	1620	726	761	747	910
9	227	504	803	858	673	465	539	4690	721	842	747	1100
10	230	509	1040	857	671	463	583	5250	723	840	746	1370
11	230	509	1460	857	675	463	787	5210	719	840	744	1450
12	229	507	1620	856	670	463	850	5190	718	839	742	1450
13	237	508	1620	856	670	462	818	5180	725	837	735	1430
14	234	507	1610	856	668	463	820	5160	725	836	597	1430
15	231	506	1610	855	567	465	746	5140	720	833	498	1430
16	228	506	1610	855	467	463	1460	4130	717	836	499	1430
17	221	510	1600	857	468	463	3530	2400	712	836	507	1420
18	234	515	1600	856	468	462	4630	1230	714	835	504	1420
19	252	514	1600	856	463	463	5410	1230	719	834	504	1420
20	251	514	1590	849	463	463	6330	1240	717	833	502	1420
21	251	511	1590	847	461	463	6330	1240	715	834	515	1420
22	251	510	1580	845	463	463	6340	1240	603	923	501	1410
23	252	511	1580	842	462	462	6300	1120	606	807	498	1290
24	251	527	1570	846	461	461	6250	937	605	808	498	1050
25	255	529	1570	843	461	462	4820	1100	604	808	498	948
26	252	523	1570	839	462	462	2620	1010	604	647	498	952
27	251	477	1560	839	462	463	1800	1010	604	402	498	681
28	256	498	1560	748	462	463	1810	1010	604	313	498	492
29	255	498	1550	667	---	509	1330	1000	604	361	498	492
30	257	499	1540	665	---	547	1100	857	604	486	498	493
31	262	---	1540	665	---	547	---	750	---	488	498	---
TOTAL	7434	13704	39815	30174	15967	14532	69453	66636	20748	21921	17104	31328
MEAN	239.8	456.8	1284	973.4	570.2	468.8	2315	2150	691.6	707.1	551.7	1044
MAX	262	529	1620	1530	675	547	6340	5250	752	923	747	1450
MIN	221	262	499	665	461	456	525	750	603	313	483	492

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2002, BY WATER YEAR (WY)

	MEAN	830.0	970.5	900.8	765.8	448.2	570.9	785.4	793.8	684.3	620.5	699.8
MAX	2896	1884	1910	1770	1550	1097	3453	2823	2950	2122	2235	3769
(WY)	1986	1992	1992	1983	1928	1920	1922	1954	1939	1996	1972	1941
MIN	43.6	143	234	201	194	117	20.0	24.2	39.8	40.3	146	140
(WY)	1925	1925	2000	1922	1918	1923	1925	1923	1925	1925	1970	1970

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1912 - 2002

ANNUAL TOTAL	302500	348816	
ANNUAL MEAN	828.8	955.7	726.5
HIGHEST ANNUAL MEAN			1174
LOWEST ANNUAL MEAN			258
HIGHEST DAILY MEAN	4290	Apr 23	6340
LOWEST DAILY MEAN	221	Oct 6,17	221
ANNUAL SEVEN-DAY MINIMUM	227	Oct 5	227
MAXIMUM PEAK FLOW			6380
MAXIMUM PEAK STAGE			10.18
INSTANTANEOUS LOW FLOW			219
10 PERCENT EXCEEDS	1570	1570	1400
50 PERCENT EXCEEDS	665	668	580
90 PERCENT EXCEEDS	251	264	173

(a) Also occurred May 1-5, 1925

(b) Also occurred Oct. 16-18

05356500 CHIPPEWA RIVER NEAR BRUCE, WI

LOCATION.--Lat 45°27'08", long 91°15'39", in SW 1/4 SE 1/4 sec.5, T.34 N., R.7 W., Rusk County, Hydrologic Unit 07050001, on right bank 1.0 mi east of Bruce and 1.0 mi downstream from Thornapple River.

DRAINAGE AREA.--1,650 mi².

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Flow from 48 percent of the drainage area regulated by Moose Lake and Lake Chippewa. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	488	794	1360	e2300	e720	e600	e3000	3780	1400	1140	1030	977
2	494	743	1250	e2300	e680	e580	e2700	3510	1480	1190	1010	1440
3	498	704	1270	e2200	e770	e520	2130	2480	1330	1190	940	1910
4	481	676	1290	e2100	e620	e480	1480	2230	1500	1130	2040	1560
5	463	647	1820	e2400	e650	e520	1200	2250	1730	1170	2080	1450
6	456	624	4230	e2300	e690	e620	1160	2580	1690	1080	1430	4710
7	456	620	3700	e1800	e760	e610	1270	3010	1570	1040	1190	7050
8	465	822	2910	e1300	e820	e600	1650	3470	1470	2230	1240	5030
9	472	889	2270	e1000	e860	e800	2440	8810	1490	5270	1270	3470
10	516	863	e1900	e1000	e880	e900	3990	12700	1450	3310	1190	3060
11	538	871	e2000	e970	e800	e1000	8590	10900	1750	2450	1170	3070
12	517	844	e2400	e940	e820	e1100	15400	9050	1960	2000	1290	2750
13	563	872	e2300	e900	e650	e1200	17300	8310	1720	1790	1360	2470
14	876	860	e2200	e930	e800	e1200	15100	7670	2100	1620	1240	2350
15	909	865	e2100	e950	e890	e1000	13100	7170	2110	1510	1020	2290
16	841	873	e2200	e930	e800	e1200	10700	6860	1790	1430	917	2190
17	748	882	e2200	e900	e580	e1300	9340	5270	1610	1380	1200	2110
18	687	864	e2200	e830	e580	e1300	e9490	3080	1490	1350	1270	2050
19	610	896	e2100	e750	e700	e1300	e9720	2410	1410	1340	1100	2070
20	646	903	e2000	e840	e980	e1100	9540	2300	1420	1290	1020	2110
21	646	881	e2100	e940	e1000	e1000	9210	2230	1430	1300	1830	2230
22	629	878	e2100	e920	e920	e960	8660	2220	2400	1610	3700	2140
23	613	866	e2100	e1000	e1100	e1000	8420	2150	2990	1650	2760	2050
24	613	1070	e1900	e950	e1000	e1000	8270	1880	2210	1390	2060	1830
25	626	1940	e2000	e920	e960	e900	8350	1850	2000	1300	1530	1620
26	678	1920	e2700	e1000	e800	e1100	6270	1850	1650	1300	1310	1990
27	653	1710	e2900	e1000	e700	e1200	3460	1740	1630	1170	1170	2340
28	648	1570	e2700	e1000	e740	e1300	3710	1760	1440	840	1090	1830
29	644	1530	e2600	e790	---	e2200	4400	1700	1330	1010	1040	1410
30	640	1390	e2500	e710	---	e2800	4250	1770	1260	904	1020	1450
31	775	---	e2300	e700	---	e3100	---	1660	---	988	982	---
TOTAL	18889	29867	69600	37570	22270	34490	204300	128650	50810	48372	43499	73007
MEAN	609.3	995.6	2245	1212	795.4	1113	6810	4150	1694	1560	1403	2434
MAX	909	1940	4230	2400	1100	3100	17300	12700	2990	5270	3700	7050
MIN	456	620	1250	700	580	480	1160	1660	1260	840	917	977

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

	MEAN	1255	1413	1377	1190	1064	1459	2766	1966	1739	1278	1057	1361
MAX	5666	3662	2842	2200	2100	3964	8007	5971	7483	3990	2915	7423	
(WY)	1986	1992	1992	1942	1971	1973	1916	1954	1943	1968	1972	1941	
MIN	296	459	442	356	338	404	590	390	411	317	364	338	
(WY)	1934	1990	1990	1922	1918	1923	1987	1925	1949	1925	1964	1976	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1914 - 2002

ANNUAL TOTAL		681111		761324									
ANNUAL MEAN		1866		2086						1491			
HIGHEST ANNUAL MEAN										2290			1986
LOWEST ANNUAL MEAN										666			1934
HIGHEST DAILY MEAN			15000	Apr 29		17300	Apr 13			24900	Sep 1		1941
LOWEST DAILY MEAN			438	Sep 29		456	Oct 6,7			155	Jun 10		1932
ANNUAL SEVEN-DAY MINIMUM			470	Oct 3		470	Oct 3			218	Aug 3		1925
MAXIMUM PEAK FLOW						17700	Apr 13			(a)29000	Sep 17		1994
MAXIMUM PEAK STAGE						15.10	Apr 13			(b)20.46	Sep 1		1941
INSTANTANEOUS LOW FLOW						456	Oct 5-8			155	Jun 10		1932
10 PERCENT EXCEEDS			3520			3700				2700			
50 PERCENT EXCEEDS			1300			1330				1110			
90 PERCENT EXCEEDS			613			648				501			

(a) From rating curve extended above 25,100 ft³/s, gage height 18.12 ft
 (b) From floodmarks
 (c) Estimated due to ice effect or missing record

05357215 ALLEQUASH CREEK AT CTH M, NEAR BOULDER JUNCTION, WI

LOCATION.--Lat 46°01'25", long 89°39'10", in NW¹/₄ NW¹/₄ sec.20, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07050002, on right bank approximately 400 ft downstream from County Trunk Highway M, 6.1 mi south of Boulder Junction.

DRAINAGE AREA.--8.43 mi².

PERIOD OF RECORD.--May 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,620 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	9.7	13	9.3	8.7	e9.8	e11	17	8.2	7.7	13	11
2	6.8	9.5	12	9.1	8.8	9.6	e12	15	23	7.2	14	12
3	7.9	9.5	11	9.1	8.7	e9.4	e11	15	29	7.2	12	12
4	7.8	9.2	11	9.0	8.6	e9.2	e12	14	22	7.1	13	11
5	7.6	8.9	13	8.8	8.5	e9.0	e11	14	19	6.8	12	12
6	7.4	8.6	13	8.9	8.4	e8.8	e10	15	15	6.5	11	14
7	7.2	8.7	13	8.7	8.4	e9.0	e9.4	16	14	6.5	11	20
8	7.2	8.8	16	8.7	8.3	e11	e10	19	14	7.6	11	27
9	7.3	8.6	18	8.7	8.2	e14	11	19	13	8.0	10	22
10	8.2	8.7	16	8.7	8.0	e14	14	19	11	7.6	10	19
11	8.2	16	14	8.7	8.1	e12	18	19	13	7.3	10	14
12	8.3	21	14	8.7	e8.1	e12	21	19	12	7.1	9.9	10
13	8.5	15	13	8.7	e8.2	e11	21	17	11	6.7	10	9.1
14	8.6	12	12	9.0	8.0	e13	22	17	13	6.5	9.7	8.6
15	8.3	12	11	9.0	8.2	e16	22	15	12	6.5	9.5	8.1
16	8.5	11	11	8.8	8.3	e14	24	15	11	6.5	10	7.3
17	8.4	10	11	9.1	8.3	e13	24	14	11	7.5	11	7.0
18	8.3	9.8	11	9.1	8.2	e12	25	14	11	9.9	11	6.7
19	8.3	10	10	9.2	8.8	e12	27	13	10	9.4	10	7.6
20	8.2	9.8	10	9.0	13	e11	24	12	10	8.9	9.7	9.0
21	8.3	9.6	10	9.0	14	e14	23	12	11	12	13	9.3
22	8.3	9.5	9.9	8.8	14	e13	21	10	10	15	15	8.7
23	8.4	9.2	10	8.7	13	e12	20	10	11	14	14	8.9
24	8.6	11	10	8.7	13	e13	19	10	10	14	14	8.8
25	8.5	12	10	8.7	13	e12	19	9.9	10	21	14	8.7
26	11	12	10	8.5	13	e13	18	9.6	10	25	13	13
27	11	14	10	8.3	11	e12	18	9.6	10	20	12	12
28	10	14	9.9	8.3	10	e11	18	9.5	9.8	16	11	12
29	9.9	13	9.7	8.2	---	e11	17	9.2	9.1	13	11	12
30	9.7	13	9.6	8.2	---	e12	17	8.6	8.3	12	11	12
31	9.9	---	9.5	8.3	---	e12	---	8.4	---	13	11	---
TOTAL	262.3	334.1	361.6	272.0	272.8	364.8	529.4	424.8	381.4	323.5	356.8	352.8
MEAN	8.461	11.14	11.66	8.774	9.743	11.77	17.65	13.70	12.71	10.44	11.51	11.76
MAX	11	21	18	9.3	14	16	27	19	29	25	15	27
MIN	6.8	8.6	9.5	8.2	8.0	8.8	9.4	8.4	8.2	6.5	9.5	6.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	11.31	12.36	11.17	10.23	9.987	10.99	14.33	12.36	11.11	12.35	9.565	9.684
MAX	22.7	20.2	14.5	14.9	12.8	15.8	18.3	19.3	14.9	17.1	12.4	14.8
(WY)	1992	1992	1998	1998	1998	1997	1992	1996	1993	1997	1997	1994
MIN	4.84	8.55	8.36	8.77	8.80	8.53	9.50	6.75	6.53	8.34	6.91	4.53
(WY)	2000	1999	2000	2002	1992	1999	1999	2000	2001	1998	1998	1999

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1991 - 2002
ANNUAL TOTAL	3493.9	4236.3	
ANNUAL MEAN	9.572	11.61	11.28
HIGHEST ANNUAL MEAN			14.4
LOWEST ANNUAL MEAN			9.15
HIGHEST DAILY MEAN	26	29	56
LOWEST DAILY MEAN	(e)5.0	6.5	0.93
ANNUAL SEVEN-DAY MINIMUM	(e)5.3	6.9	1.1
MAXIMUM PEAK FLOW		(a)38	(b)79
MAXIMUM PEAK STAGE		(c)2.11	(c)2.77
INSTANTANEOUS LOW FLOW		5.9	0.69
10 PERCENT EXCEEDS	13	17	16
50 PERCENT EXCEEDS	9.0	10	10
90 PERCENT EXCEEDS	6.8	8.2	7.3

- (a) Gage height, 1.87 ft
- (b) Gage height, 2.36 ft
- (c) Ice jam
- (e) Estimated due to beaver activity, ice effect, or missing record

05357225 STEVENSON CREEK, AT COUNTY TRUNK HIGHWAY M, NEAR BOULDER JUNCTION, WI

LOCATION.--Lat 46°03'41", long 89°38'47", in NW ¼ SE ¼ sec.5, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07050002, at County Highway M, 3.6 mi south of Boulder Junction.

DRAINAGE AREA.--7.96 mi².

PERIOD OF RECORD.--May 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,620 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	3.2	3.1	e2.4	e2.2	2.4	e2.8	4.9	3.7	3.9	5.4	3.5
2	2.6	3.0	3.1	e2.4	e2.4	2.4	e2.8	4.5	3.7	3.7	5.5	4.2
3	3.6	2.8	3.1	e2.5	e2.5	e2.4	e2.7	4.4	3.7	3.6	4.9	3.9
4	2.9	2.7	3.2	e2.7	e2.5	e2.3	e2.8	4.3	3.9	3.5	5.1	3.8
5	2.9	2.6	5.4	e2.8	e2.4	e2.3	2.9	4.5	4.1	3.3	4.8	4.3
6	2.9	2.6	4.6	e2.6	e2.3	e2.4	2.9	5.2	4.1	3.2	4.6	5.1
7	2.7	2.6	3.6	e2.5	e2.3	e2.4	3.0	4.9	4.2	3.2	4.4	4.5
8	2.6	2.7	3.3	e2.6	e2.2	e2.7	3.3	7.4	4.6	3.5	4.3	4.2
9	2.6	2.6	3.1	e2.5	e2.3	e3.8	3.4	8.2	4.5	3.6	4.2	4.0
10	3.2	2.6	3.1	e2.5	e2.3	e4.2	5.3	5.9	4.5	3.4	4.1	4.1
11	3.0	2.5	3.0	e2.4	e2.2	e3.0	7.5	5.5	4.9	3.3	3.9	3.9
12	2.9	2.5	e2.9	e2.3	e2.3	e3.1	8.1	5.7	4.7	3.1	3.9	3.9
13	2.9	2.6	e2.8	e2.3	e2.3	e3.1	7.3	5.4	4.6	3.0	3.9	3.9
14	3.1	2.5	e2.7	e2.4	2.3	e3.0	7.7	5.1	6.7	3.0	3.8	3.8
15	3.0	2.6	2.6	e2.3	2.3	e3.3	7.8	5.0	5.7	3.0	3.8	3.8
16	2.8	2.5	2.8	e2.3	2.3	e3.5	8.0	5.0	5.1	2.9	3.8	3.2
17	2.8	2.4	2.7	e2.3	2.3	e3.6	7.1	4.8	4.9	4.0	4.1	2.1
18	2.9	2.5	2.6	e2.2	2.3	e3.6	7.2	4.5	4.7	6.3	3.7	1.8
19	2.9	2.8	2.6	e2.2	2.5	e3.4	7.5	4.4	4.6	4.5	3.5	2.0
20	2.8	2.6	e2.5	e2.3	2.8	e3.2	5.5	4.3	4.9	4.2	3.4	2.1
21	2.7	2.6	e2.5	e2.3	2.8	e3.1	5.3	4.2	4.6	7.5	5.2	2.1
22	2.6	2.5	e2.5	e2.3	2.6	e3.3	5.5	4.1	4.7	8.2	4.9	1.8
23	2.7	2.6	e2.5	e2.3	2.6	e3.4	5.4	4.1	4.8	5.7	4.2	1.8
24	2.8	3.4	e2.6	e2.2	2.6	e3.3	5.7	3.9	4.7	5.2	4.1	1.9
25	3.0	3.7	e2.6	e2.2	2.6	e3.3	5.5	3.8	4.5	5.2	3.9	1.7
26	3.4	3.2	e2.6	e2.3	2.5	e3.3	5.1	3.8	4.7	5.3	3.8	2.7
27	3.1	3.4	e2.6	e2.3	2.5	e3.0	4.8	3.8	4.4	5.0	3.7	2.3
28	3.2	3.3	e2.6	e2.1	2.5	e2.8	5.0	3.8	4.3	4.9	3.7	1.9
29	3.3	3.1	e2.6	e2.1	---	e2.9	5.2	3.8	4.2	4.8	3.6	1.9
30	3.2	3.1	e2.6	e2.1	---	e2.9	5.2	4.1	4.0	4.6	3.6	2.1
31	3.5	---	e2.5	e2.1	---	e2.8	---	3.8	---	4.6	3.4	---
TOTAL	90.8	83.8	91.0	72.8	67.7	94.2	158.3	147.1	136.7	133.2	129.2	92.3
MEAN	2.929	2.793	2.935	2.348	2.418	3.039	5.277	4.745	4.557	4.297	4.168	3.077
MAX	3.6	3.7	5.4	2.8	2.8	4.2	8.1	8.2	6.7	8.2	5.5	5.1
MIN	2.2	2.4	2.5	2.1	2.2	2.3	2.7	3.8	3.7	2.9	3.4	1.7
CFSM	0.37	0.35	0.37	0.30	0.30	0.38	0.66	0.60	0.57	0.54	0.52	0.39
IN.	0.42	0.39	0.43	0.34	0.32	0.44	0.74	0.69	0.64	0.62	0.60	0.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	3.149	3.340	2.722	2.578	2.713	2.942	3.291	3.474	3.297	3.334	3.249	3.968
MAX	4.02	6.28	3.54	3.53	3.87	4.34	5.28	6.18	6.73	4.89	4.84	6.85
(WY)	1996	1994	1998	1998	1998	1992	2002	1997	1991	1996	1997	1992
MIN	1.35	1.24	1.65	1.93	1.70	1.58	1.29	1.34	1.47	2.27	1.62	2.53
(WY)	2000	2000	2001	1999	1997	1995	1995	2000	1992	1998	1994	1995

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1991 - 2002

ANNUAL TOTAL	1075.7	1297.1		
ANNUAL MEAN	2.947	3.554	3.121	
HIGHEST ANNUAL MEAN			3.68	1997
LOWEST ANNUAL MEAN			2.61	1995
HIGHEST DAILY MEAN	9.5	Apr 12	8.2 (a)	May 9
LOWEST DAILY MEAN	1.2	May 9	1.7	Sep 25
ANNUAL SEVEN-DAY MINIMUM	1.4	May 3	1.9	Sep 19
MAXIMUM PEAK FLOW			11	Apr 18
MAXIMUM PEAK STAGE			8.59	Apr 18
INSTANTANEOUS LOW FLOW			1.4	Sep 25
ANNUAL RUNOFF (CFSM)	0.37	0.45	0.39	
ANNUAL RUNOFF (INCHES)	5.03	6.06	5.33	
10 PERCENT EXCEEDS	4.3	5.2	4.8	
50 PERCENT EXCEEDS	2.7	3.2	2.9	
90 PERCENT EXCEEDS	2.0	2.3	1.6	

(a) Also occurred July 22

(b) Gage height, 9.62 ft

(c) Beaver dam

(e) Estimated due to ice effect or missing record

CHIPPEWA RIVER BASIN

05357245 TROUT RIVER AT TROUT LAKE NEAR BOULDER JUNCTION, WI

LOCATION.--Lat 46°02'08", long 89°42'20", in NE 1/4 NE 1/4 sec.14, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07050002, on right bank 20 ft upstream from U.S. Highway 51 bridge, approximately 500 ft downstream from outlet of Trout Lake, 6.0 mi southwest of Boulder Junction.

DRAINAGE AREA.--46.2 mi².

PERIOD OF RECORD.--May 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,620 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	27	45	33	e29	e29	38	81	55	49	52	35
2	15	27	44	33	e29	e29	e38	78	54	47	53	39
3	19	27	43	32	e29	e29	e38	75	54	46	52	38
4	18	26	41	32	29	e28	e37	73	55	44	53	37
5	17	26	44	32	29	e28	e36	73	55	40	52	40
6	15	26	45	32	29	e28	e36	77	53	37	49	44
7	15	27	45	32	29	e28	e37	77	54	37	46	44
8	14	27	44	31	28	e32	38	89	56	39	44	44
9	15	26	43	31	28	e36	38	96	55	40	43	44
10	18	26	43	31	28	e37	42	92	54	37	42	45
11	19	25	42	31	e27	e36	49	91	58	34	40	44
12	18	26	42	31	e27	e37	54	92	57	33	38	42
13	19	27	41	31	e27	e38	54	90	56	31	38	41
14	20	27	41	31	27	e38	56	87	63	31	37	40
15	20	28	40	31	27	e42	57	84	63	30	35	39
16	21	28	40	31	27	e43	58	80	61	29	35	37
17	21	28	40	e30	27	e42	59	77	59	31	36	36
18	20	29	40	e30	27	e41	69	74	57	39	35	35
19	20	31	39	e30	28	e41	87	73	56	38	34	36
20	20	30	38	e30	33	e41	86	70	57	36	33	38
21	20	29	38	30	34	e40	86	68	57	47	40	37
22	20	29	e38	30	e32	e39	88	65	57	55	44	35
23	21	29	37	30	e31	e38	86	64	57	52	43	34
24	22	33	37	29	e30	e37	90	64	58	50	42	33
25	23	37	36	29	e30	e37	88	63	56	49	42	33
26	25	38	35	29	e30	e37	84	61	57	49	41	37
27	26	44	35	29	e30	e38	84	60	56	49	40	37
28	26	44	35	29	e30	e39	86	60	53	48	38	36
29	26	43	35	28	---	40	83	58	52	47	38	36
30	26	44	34	28	---	40	83	59	50	46	37	37
31	27	---	34	28	---	39	---	57	---	49	36	---
TOTAL	619	914	1234	944	811	1127	1865	2308	1685	1289	1288	1153
MEAN	19.97	30.47	39.81	30.45	28.96	36.35	62.17	74.45	56.17	41.58	41.55	38.43
MAX	27	44	45	33	34	43	90	96	63	55	53	45
MIN	13	25	34	28	27	28	36	57	50	29	33	33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)

	1996	1997	1992	1997	1992	2002	2002	1996	1996	1996	1996	1997
MEAN	30.28	35.61	38.49	38.85	37.04	36.71	45.28	50.26	44.22	44.54	34.44	29.74
MAX	45.2	55.4	58.1	60.1	47.9	44.9	62.2	74.5	59.6	57.0	49.7	44.4
(WY)	1996	1997	1992	1997	1997	1992	2002	2002	1996	1996	1996	1997
MIN	12.2	16.2	22.5	25.8	28.1	23.8	31.9	27.6	28.4	29.5	20.3	14.4
(WY)	2000	2000	2000	1999	1999	1999	1999	2000	2000	2001	1998	1998

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1991 - 2002

ANNUAL TOTAL	11783	15237	
ANNUAL MEAN	32.28	41.75	38.54
HIGHEST ANNUAL MEAN			49.8 1996
LOWEST ANNUAL MEAN			29.2 2000
HIGHEST DAILY MEAN		96	96 May 9 2002
LOWEST DAILY MEAN	10	13	9.9 Oct 25,26 1999
ANNUAL SEVEN-DAY MINIMUM	12	16	10 Oct 22 1999
MAXIMUM PEAK FLOW		101	101 May 8 2002
MAXIMUM PEAK STAGE		1.98	1.99 May 19 1996
INSTANTANEOUS LOW FLOW		12	8.3 Oct 7,25 1999
10 PERCENT EXCEEDS	47	64	54
50 PERCENT EXCEEDS	33	38	38
90 PERCENT EXCEEDS	18	26	23

(e) Estimated due to ice effect or missing record

05357254 TROUT RIVER AT COUNTY HIGHWAY H NEAR BOULDER JUNCTION, WI

LOCATION.--Lat 46°02'02", long 89°46'21", in SE ¼ NW ¼ sec.17, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07050002, on left bank 18 ft upstream from County Trunk Highway H, 8.3 mi southwest of Boulder Junction.

DRAINAGE AREA.--58.9 mi².

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,610 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges and period of variable backwater, Oct. 1 to Nov. 1 and June 10 to Sept. 30, which are poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	35	50	e40	e35	e42	e60	98	74	72	67	62
2	36	33	49	e40	e35	e42	e60	95	72	71	68	63
3	38	32	47	e40	e35	e41	e60	93	71	70	68	63
4	36	31	48	e39	e36	e40	e60	91	71	70	69	62
5	34	29	56	e39	e36	e40	e60	91	72	69	70	62
6	34	29	63	e38	e35	e41	e60	98	70	67	69	64
7	29	29	57	e38	e35	e42	e60	98	71	66	68	64
8	27	37	57	e38	e35	e44	e62	115	72	67	66	63
9	27	54	e52	e38	e35	e48	e64	135	72	67	65	61
10	31	48	e49	e37	e34	e54	e66	127	71	66	64	61
11	30	42	47	e37	e34	e56	e68	118	74	64	63	59
12	30	39	45	e37	e33	e56	e76	116	75	62	63	57
13	31	37	43	e37	e33	e58	e86	111	73	60	63	55
14	33	37	42	e38	e33	e58	e98	108	81	58	63	55
15	31	36	e41	e38	e33	e60	e110	103	83	56	62	54
16	30	35	e40	e37	e33	e62	125	101	80	57	61	51
17	30	33	e39	e37	e33	e62	121	97	78	59	63	49
18	30	35	e38	e36	e33	e62	119	93	75	63	63	48
19	30	33	e38	e36	e34	e62	143	90	74	64	62	49
20	28	30	e37	e36	e38	e60	130	86	75	62	62	50
21	31	e30	e37	e36	e43	e60	116	84	75	66	66	50
22	28	e30	e37	e36	e44	e58	114	81	75	77	70	48
23	26	31	e38	e36	e44	e58	110	80	75	74	70	46
24	27	37	e38	e36	e44	e58	109	80	76	68	69	45
25	29	49	e39	e35	e43	e56	108	77	76	67	67	45
26	39	46	e40	e35	e43	e56	104	77	77	67	66	48
27	35	53	e40	e35	e43	e56	100	76	77	66	65	49
28	32	51	e40	e35	e43	e56	102	73	75	66	64	47
29	33	48	e40	e35	---	e58	102	74	74	66	63	46
30	32	48	e40	e35	---	e58	102	75	73	65	62	45
31	37	---	e40	e35	---	e60	---	76	---	65	62	---
TOTAL	979	1137	1367	1145	1035	1664	2755	2917	2237	2037	2023	1621
MEAN	31.58	37.90	44.10	36.94	36.96	53.68	91.83	94.10	74.57	65.71	65.26	54.03
MAX	39	54	63	40	44	62	143	135	83	77	70	64
MIN	26	29	37	35	33	40	60	73	70	56	61	45
CFSM	0.54	0.64	0.75	0.63	0.63	0.91	1.56	1.60	1.27	1.12	1.11	0.92
IN.	0.62	0.72	0.86	0.72	0.65	1.05	1.74	1.84	1.41	1.29	1.28	1.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	1999	2000	2001	2002	1999	2000	2001	2002	1999	2000	2001	2002
MEAN	26.74	31.77	33.88	36.56	43.59	48.44	64.35	60.40	58.18	72.83	67.94	46.12
MAX	34.6	37.9	44.1	42.0	48.4	53.7	91.8	94.1	74.6	83.8	85.3	54.0
(WY)	2001	2002	2002	2001	2000	2002	2002	2002	2002	2000	2001	2002
MIN	20.0	23.2	27.2	32.9	37.0	40.5	49.1	41.3	49.4	61.5	55.5	35.5
(WY)	2000	2000	1999	1999	2002	1999	1999	2000	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1999 - 2002
ANNUAL TOTAL	19501	20917	
ANNUAL MEAN	53.43	57.31	49.27
HIGHEST ANNUAL MEAN			57.3
LOWEST ANNUAL MEAN			41.9
HIGHEST DAILY MEAN	109	143	143
LOWEST DAILY MEAN	26	26	(e)16
ANNUAL SEVEN-DAY MINIMUM	28	28	17
MAXIMUM PEAK FLOW		(b)145	(b)145
MAXIMUM PEAK STAGE		(c)6.94	(c)6.98
INSTANTANEOUS LOW FLOW		26	15
ANNUAL RUNOFF (CFSM)	0.91	0.97	0.84
ANNUAL RUNOFF (INCHES)	12.32	13.21	11.36
10 PERCENT EXCEEDS	80	88	76
50 PERCENT EXCEEDS	47	56	45
90 PERCENT EXCEEDS	35	33	28

(a) Also occurred Oct. 27-29, 1999; these days were not estimated

(b) Gage height, 6.12 ft

(c) Backwater affects from Wild Rice Lake

(d) Also occurred Oct. 28, 29, 1999; may have been less during estimated period from Oct. 1-23, 1998

(e) Estimated due to ice effect or missing record

CHIPPEWA RIVER BASIN

05357335 BEAR RIVER NEAR MANITOWISH WATERS, WI

LOCATION.--Lat 46°02'56", long 89°59'04", in SE ¼ NW ¼ sec.10, T.41 N., R.4 E., Iron County, Hydrologic Unit 07050002, on right bank 10 ft upstream from East River Trail bridge, 2.3 mi upstream from Little Bear Creek, 7.7 mi southwest of Manitowish Waters, and 5.3 mi upstream from mouth.

DRAINAGE AREA.--81.3 mi².

PERIOD OF RECORD.--May 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,580 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	145	174	e43	e31	e40	e170	231	110	76	54	47
2	25	153	166	e42	e30	e40	e170	219	104	73	56	54
3	32	158	157	e42	e30	e40	e170	210	100	69	55	56
4	33	158	156	e41	e31	e39	e170	201	101	66	60	56
5	34	156	192	e41	e31	e38	e170	198	107	64	60	61
6	31	156	251	e40	e33	e39	e170	207	103	61	59	77
7	29	148	e240	e39	e33	e42	e180	211	99	59	58	86
8	26	146	e210	e39	e33	e47	e180	257	104	62	56	87
9	24	145	e200	e40	e31	e54	e190	368	101	63	53	86
10	27	138	e180	e40	e31	e70	e200	400	98	63	49	88
11	33	132	e160	e39	e31	e82	e220	397	108	62	46	87
12	38	126	e140	e37	e31	e90	e260	380	112	60	45	82
13	39	122	e130	e36	e31	e98	e310	361	106	58	42	76
14	46	120	e110	e35	e32	e110	e360	333	124	54	40	73
15	47	118	e100	e35	e33	e120	392	312	133	50	38	68
16	48	115	e100	e35	e33	e130	443	284	128	46	36	61
17	44	113	e96	e34	e33	e130	448	274	121	42	41	57
18	41	112	e100	e33	e33	e140	421	249	113	38	41	53
19	40	119	e94	e33	e33	e150	429	225	105	34	39	69
20	37	121	e84	e32	e33	e160	403	208	102	31	36	87
21	42	115	e76	e32	e33	e170	360	194	100	37	44	103
22	45	110	e70	e32	e35	e170	321	181	99	48	52	100
23	50	107	e68	e33	e38	e170	303	165	97	49	53	94
24	60	124	e64	e33	e45	e170	290	154	98	48	53	87
25	60	158	e58	e32	e44	e160	279	146	94	50	52	81
26	79	164	e54	e33	e43	e160	268	140	93	53	51	103
27	120	171	e52	e34	e41	e160	256	134	92	53	50	109
28	117	174	e48	e34	e41	e160	247	130	88	53	49	107
29	116	182	e47	e32	---	e160	243	125	83	52	49	103
30	116	179	e45	e31	---	e160	239	125	80	50	48	117
31	129	---	e44	e31	---	e170	---	118	---	51	47	---
TOTAL	1635	4185	3666	1113	957	3469	8262	7137	3103	1675	1512	2415
MEAN	52.74	139.5	118.3	35.90	34.18	111.9	275.4	230.2	103.4	54.03	48.77	80.50
MAX	129	182	251	43	45	170	448	400	133	76	60	117
MIN	24	107	44	31	30	38	170	118	80	31	36	47
CFSM	0.65	1.72	1.45	0.44	0.42	1.38	3.39	2.83	1.27	0.66	0.60	0.99
IN.	0.75	1.91	1.68	0.51	0.44	1.59	3.78	3.27	1.42	0.77	0.69	1.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2002, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	53.33	69.30	60.66	49.97	56.53	80.11	138.9	115.1	82.12	79.89	69.02	56.00
MAX	130	151	118	105	110	187	275	230	129	131	198	159
(WY)	1995	1992	2002	1992	1992	1992	2002	2002	1993	2001	2001	1994
MIN	6.13	8.52	8.20	7.92	12.2	26.6	44.1	36.9	54.4	46.6	8.08	4.60
(WY)	1999	1999	1999	1999	1999	1999	1999	1998	1992	1998	1998	1998

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1992 - 2002
ANNUAL TOTAL	39211	39129	
ANNUAL MEAN	107.4	107.2	75.94
HIGHEST ANNUAL MEAN			107
LOWEST ANNUAL MEAN			34.3
HIGHEST DAILY MEAN	324	Apr 13	570
LOWEST DAILY MEAN	24	Oct 9	4.0 (a)
ANNUAL SEVEN-DAY MINIMUM	29	Oct 4	4.0
MAXIMUM PEAK FLOW		463	(b)589
MAXIMUM PEAK STAGE		3.62	3.62
INSTANTANEOUS LOW FLOW		23	(c)3.9
ANNUAL RUNOFF (CFSM)	1.32	1.32	0.93
ANNUAL RUNOFF (INCHES)	17.94	17.90	12.69
10 PERCENT EXCEEDS	209	214	145
50 PERCENT EXCEEDS	88	81	60
90 PERCENT EXCEEDS	44	33	23

- (a) Also occurred Sept. 19-23
 (b) Gage height, 3.47 ft
 (c) May have been less during period Sept. 21-23, 25, 1998
 (e) Estimated due to ice effect or missing record

05360500 FLAMBEAU RIVER NEAR BRUCE, WI

LOCATION.--Lat 45°22'21", long 91°12'34", in Lot 7 of SE ¼ NW ¼ sec.2, T.33 N., R.7 W., Rusk County, Hydrologic Unit 07050002, on right bank 2.5 mi downstream from Thornapple Powerplant, 6.0 mi upstream from mouth, and 7.0 mi southeast of Bruce.

DRAINAGE AREA.--1,860 mi².

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

REVISED RECORDS.--WDR WI-78-1: 1971. WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,056.34 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow regulated by several powerplants above station and by Rest Lake and Flambeau Flowage Reservoirs. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	580	1370	1890	e1300	e1200	1140	1320	5150	1810	1080	1410	1120
2	632	1460	1510	e1200	e1200	1110	1270	4970	1490	1240	1450	1740
3	518	1420	1450	e1400	e1100	e1100	1310	4390	1580	1300	1600	2180
4	564	1240	1570	e1500	e1000	e1000	1410	3680	1850	1180	2120	2410
5	573	1300	2260	e1600	e1100	e1100	1450	3940	1770	1040	1890	2210
6	488	979	4200	e1500	e1100	e1100	1380	3860	1930	870	2030	4620
7	548	1030	5000	e1300	e1100	e1000	1420	4310	1550	855	2070	6500
8	537	1180	3720	e1400	e1200	e1100	1430	4990	1550	1810	1510	5650
9	606	938	3360	e1400	e1200	e1200	2300	7780	1350	2990	1380	4090
10	718	1040	3400	e1300	e1100	e1300	2880	9870	1470	3630	1470	2820
11	645	1040	2560	e1400	e1000	e1300	5570	9210	1820	2750	1360	2550
12	712	1160	2540	e1300	e930	e1400	11600	7580	2250	1580	1430	2450
13	934	1090	2540	e1200	e980	e1400	14300	7540	2130	1510	1350	1870
14	1050	928	1980	e1000	e1100	e1300	15000	6200	1810	1400	1000	1800
15	1070	821	2030	e1000	e1100	e1300	16900	6720	1920	1150	1220	1670
16	727	1090	2410	e1100	e1000	e1200	16700	5830	1990	1020	1410	1860
17	970	983	2120	e1100	e1000	e1200	16700	4690	1870	1110	1760	1550
18	1030	995	1870	e1200	e1100	1240	15200	4170	1790	1180	1560	1430
19	895	1330	1930	e1100	e1200	1360	13400	3860	1320	1120	1510	1140
20	913	1010	1580	e1200	e1300	1390	12300	3240	1340	1090	1480	1440
21	891	1020	1650	e1200	1280	1490	10700	3240	1350	1030	1750	2240
22	629	931	1420	e1200	1160	1440	9530	3220	2490	1550	3880	2460
23	694	1010	1730	e1400	1240	1310	7020	3070	1610	2380	4000	2610
24	842	1200	1700	e1200	1250	1210	7110	2820	2120	2230	3050	1980
25	821	1530	1270	e1200	1170	1250	6710	2830	2020	1860	2610	1410
26	872	2540	1380	e1200	1280	1090	5150	1830	2390	1460	1660	2360
27	806	2330	1240	e1100	1210	1060	5360	1620	2010	1260	1580	2650
28	1130	2340	e1200	e1200	1070	1000	5270	2040	1650	1650	1520	3160
29	732	2150	e1200	e1100	---	1290	5350	1890	1570	1770	1440	3240
30	1110	1720	e1200	e1200	---	1520	5330	1640	1440	1600	1110	2740
31	1140	---	e1100	e1300	---	1440	---	1830	---	1400	1270	---
TOTAL	24377	39175	65010	38800	31670	38340	221370	138010	53240	48095	54880	75950
MEAN	786.4	1306	2097	1252	1131	1237	7379	4452	1775	1551	1770	2532
MAX	1140	2540	5000	1600	1300	1520	16900	9870	2490	3630	4000	6500
MIN	488	821	1100	1000	930	1000	1270	1620	1320	855	1000	1120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

MEAN	1711	1637	1288	1133	1149	1697	3687	2609	2040	1640	1465	1801
MAX	5616	4404	2542	2006	2411	5490	7379	6082	6066	4339	3765	5089
(WY)	1986	1992	1992	1973	1969	1973	2002	1954	1968	1968	1972	1994
MIN	363	430	382	451	474	971	1013	758	572	596	553	420
(WY)	1977	1977	1977	1977	1977	1959	1990	1987	1988	1988	1998	1998

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1951 - 2002
ANNUAL TOTAL	653911	828917	
ANNUAL MEAN	1792	2271	1818
HIGHEST ANNUAL MEAN			2900
LOWEST ANNUAL MEAN			993
HIGHEST DAILY MEAN	11700	Apr 13	23200
LOWEST DAILY MEAN	488	Oct 6	(a)190
ANNUAL SEVEN-DAY MINIMUM	548	Oct 3	309
MAXIMUM PEAK FLOW		17400	24100
MAXIMUM PEAK STAGE		10.41	12.44
10 PERCENT EXCEEDS	3470	4480	3370
50 PERCENT EXCEEDS	1090	1420	1350
90 PERCENT EXCEEDS	730	998	751

(a) Ice affected

(e) Estimated due to ice effect or missing record

05362000 JUMP RIVER AT SHELDON, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1915 - 2002	
ANNUAL TOTAL	229695		281872			
ANNUAL MEAN	629.3		772.3		522.1	
HIGHEST ANNUAL MEAN					923 1942	
LOWEST ANNUAL MEAN					214 1948	
HIGHEST DAILY MEAN	9020	Apr 13	14400	Apr 12	40800	Aug 31 1941
LOWEST DAILY MEAN	52	Sep 5,6	65	Oct 7	(a)11	Dec 18 1943
ANNUAL SEVEN-DAY MINIMUM	57	Aug 31	69	Oct 3	14	(b)Jan 25 1924
MAXIMUM PEAK FLOW			15300	Apr 12	(c)46000	Aug 31 1941
MAXIMUM PEAK STAGE			12.85	Apr 12	(d)18.80	Aug 31 1941
INSTANTANEOUS LOW FLOW			63	Oct 8	(a)11	Dec 18 1943
ANNUAL RUNOFF (CFSM)	1.09		1.34		0.91	
ANNUAL RUNOFF (INCHES)	14.83		18.20		12.32	
10 PERCENT EXCEEDS	1620		1810		1300	
50 PERCENT EXCEEDS	203		295		160	
90 PERCENT EXCEEDS	78		120		47	

(a) Result of freezeup

(b) Jan. 25, 1924, ice-affected, also occurred July 11, 1936

(c) From rating curve extended above 13,000 ft³/s on basis of contracted-opening measurement of peak flow

(d) From floodmark

(e) Estimated due to ice effect or missing record

CHIPPEWA RIVER BASIN

05365500 CHIPPEWA RIVER AT CHIPPEWA FALLS, WI

LOCATION.--Lat 44°55'37", long 91°24'33", in Lot 1, NE ¼ NE ¼ sec.12, T.28 N., R.9 W., Chippewa County, Hydrologic Unit 07050005, on right bank at Chippewa Falls, 1.0 mi downstream from Duncan Creek.

DRAINAGE AREA.--5,650 mi².

PERIOD OF RECORD.--June 1888 to September 1983, October 1986 to current year. Monthly discharge for some periods published in WSP 1308.

REVISED RECORDS.--WSP 785: 1934(M). WSP 1508: 1897, 1905, 1918(M), 1924(M). WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 798.46 ft above NGVD of 1929. Prior to January 1914, nonrecording gage, and January 1914 to June 19, 1932, water-stage recorder at site 1 mi upstream at different datum. June 19, 1932, to current year, water-stage recorder at present site and datum.

REMARKS.--Records good (see page 11). Considerable regulation by Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota Reservoirs. Diurnal fluctuation caused by hydroelectric plant 1.1 mi upstream. Gage-height telemeter at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--A stage of 26.94 ft occurred Sept. 10, 1884, site and datum in use June 1932.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1670	3330	6460	3070	2790	2630	9040	23100	4760	5070	3670	3170
2	1680	4140	5330	3770	2190	2470	8250	18500	4420	4520	3480	7130
3	1700	3270	6070	4200	2410	2330	7470	13100	5560	4300	3460	8650
4	1330	2870	5490	5350	1920	2110	7210	9430	7710	3470	5700	9470
5	1360	3050	7260	3880	2190	2560	5490	9270	6640	4090	7290	9450
6	1070	2980	13200	4030	3340	3440	4930	11200	6800	4440	5680	12100
7	1090	2700	15700	3910	2760	2960	6810	12200	6330	3260	4750	27300
8	1170	2000	15600	4000	2650	3090	8900	14400	6290	4200	4030	25100
9	1990	3260	12600	3170	2090	2480	9790	19300	4960	8610	2720	19100
10	2460	3170	9270	3550	2270	3350	13200	27200	3200	11200	3120	10600
11	1930	2760	8410	3500	2730	2900	30400	27900	5100	9570	3620	6490
12	2000	2690	6900	3390	3380	3910	50200	26400	7670	5570	4060	8520
13	3870	3030	7470	3320	2580	4840	60500	22300	8920	5080	3790	8460
14	3200	2980	6840	4910	3530	4790	58100	20700	6380	5020	3770	5980
15	3560	2270	5210	3920	2770	3810	53300	17200	8340	3380	2880	6000
16	3340	2290	7230	2850	1930	2780	48400	17700	8370	3390	3130	6010
17	2610	3450	6900	3390	2080	2900	41900	13900	8560	3380	4710	5880
18	3630	2840	5660	2860	2520	3720	37000	11400	5980	3420	4290	5320
19	1650	2750	5890	1680	3570	4520	30600	10300	5250	3750	4350	5070
20	2610	3210	5660	1730	5200	5370	29600	7950	5040	3370	4120	5110
21	2840	3320	4580	3710	5950	4940	27600	6420	4630	3390	6280	7460
22	2360	2990	5050	3750	5190	3490	24700	7500	7010	3410	12900	8950
23	1960	3060	4400	3960	3150	2650	18200	7600	21700	4580	16200	7870
24	2350	4500	4480	4420	2600	2780	18000	6200	12200	5170	15300	6690
25	2560	5520	2770	2480	3850	3160	21600	6660	13100	4150	9310	5030
26	2860	9610	2920	2630	4540	3820	20300	5320	14500	4040	5180	5980
27	2290	10900	3270	2740	3450	4130	15900	5080	13800	3780	4680	8990
28	2860	8880	3990	2640	3290	4510	14000	5240	10400	3380	3870	9420
29	2590	5280	4470	2760	---	7670	14400	5400	7610	2980	4390	9390
30	2270	6460	4280	3560	---	7670	22400	5310	5890	4580	4220	8220
31	3110	---	3780	3090	---	9950	---	4710	---	4060	3400	---
TOTAL	71970	119560	207140	106220	86920	121730	718190	398890	237120	142610	168350	272910
MEAN	2322	3985	6682	3426	3104	3927	23940	12870	7904	4600	5431	9097
MAX	3870	10900	15700	5350	5950	9950	60500	27900	21700	11200	16200	27300
MIN	1070	2000	2770	1680	1920	2110	4930	4710	3200	2980	2720	3170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1888 - 2002, BY WATER YEAR (WY)

MEAN	4183	4197	3010	2590	2654	5356	11819	8546	6871	4336	3429	4457
MAX	15570	15990	7897	5305	6569	17630	28900	22700	30570	13620	9805	23030
(WY)	1901	1992	1992	1973	1969	1973	1916	1903	1943	1968	1900	1941
MIN	798	800	950	831	800	1210	2210	1688	1162	1172	1124	929
(WY)	1977	1890	1893	1917	1895	1890	1895	1987	1988	1988	1894	1976

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1888 - 2002	
ANNUAL TOTAL	2218270		2651610			
ANNUAL MEAN	6077		7265		5117	
HIGHEST ANNUAL MEAN					8833	
LOWEST ANNUAL MEAN					2453	
HIGHEST DAILY MEAN	49900		60500		95500	
LOWEST DAILY MEAN	1070		1070		40	
ANNUAL SEVEN-DAY MINIMUM	1340		1340		308	
MAXIMUM PEAK FLOW			62200		102000	
MAXIMUM PEAK STAGE			20.17		24.80	
10 PERCENT EXCEEDS	13100		14800		11200	
50 PERCENT EXCEEDS	3450		4520		3550	
90 PERCENT EXCEEDS	1700		2500		1320	

(a) Ice affected

05365707 NORTH FORK EAU CLAIRE RIVER NEAR THORP, WI

LOCATION.--Lat 44°58'25", long 90°50'57", in NW ¼ NE ¼ sec.27, T.29 N., R.4 W., Clark County, Hydrologic Unit 07050006, on left bank 15 ft downstream from town road, 0.3 mi downstream from Goggle-Eye Creek, and 2.6 mi northwest of Thorp.

DRAINAGE AREA.--51.0 mi².

PERIOD OF RECORD.--April 1986 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,115 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	25	102	e9.4	e4.7	e4.8	174	84	e20	20	183	13
2	6.6	22	76	e9.2	e4.3	e5.2	114	58	e17	14	77	243
3	5.5	18	64	e9.1	e4.1	e4.7	88	44	e110	12	40	206
4	5.9	15	71	e9.5	e4.3	e4.1	71	36	178	26	80	144
5	5.6	14	192	e9.9	e4.6	e4.8	58	31	262	16	61	114
6	5.4	14	326	e10	e4.9	e5.5	64	304	112	11	37	373
7	5.3	13	191	e9.6	e5.3	e6.9	97	194	56	9.1	25	256
8	5.2	11	101	e9.8	e5.2	e10	227	112	34	25	18	120
9	5.7	10	e62	e10	e5.2	e23	273	97	24	62	14	62
10	17	9.6	e45	e11	e5.1	e20	424	73	18	44	11	44
11	25	9.4	e36	e11	e4.9	e28	937	54	18	26	9.5	34
12	20	9.0	e32	e10	e4.8	e38	1100	116	18	17	413	26
13	19	10	e29	e9.6	e4.7	e67	597	95	18	12	822	22
14	38	12	e23	e9.4	e4.7	e64	320	70	209	9.0	568	21
15	45	13	e24	e9.2	e4.9	e34	224	55	225	7.0	187	23
16	38	12	24	e8.7	e5.0	e19	151	63	115	5.5	66	21
17	28	11	30	e8.3	e4.8	e23	116	53	53	4.5	199	16
18	22	12	e23	e7.8	e4.8	e29	95	40	31	3.9	148	14
19	19	31	e21	e7.9	e25	e33	85	31	21	3.7	74	17
20	16	31	e15	e8.1	e47	e30	65	26	45	3.3	45	59
21	14	24	e11	e8.3	e33	e20	53	22	69	7.6	510	98
22	13	20	e12	e8.9	e26	e21	55	18	1020	103	845	51
23	13	18	e12	e9.2	e23	e24	79	16	1030	120	453	35
24	12	86	e11	e8.9	e20	e25	85	14	689	49	196	27
25	13	283	e10	e8.4	e12	e30	83	13	202	22	74	25
26	16	191	e9.8	e8.4	e9.1	e40	60	23	144	15	48	39
27	16	118	e9.6	e7.8	e7.6	e70	50	89	81	12	35	51
28	16	100	e9.4	e7.2	e6.2	241	179	62	53	12	27	39
29	15	85	e9.3	e6.6	---	414	235	39	38	52	22	36
30	14	79	e9.5	e5.7	---	421	142	e27	27	32	18	148
31	21	---	e9.4	e5.4	---	305	---	e23	---	264	14	---
TOTAL	501.0	1306.0	1600.0	272.3	295.2	2065.0	6301	1982	4937	1019.6	5319.5	2377
MEAN	16.16	43.53	51.61	8.784	10.54	66.61	210.0	63.94	164.6	32.89	171.6	79.23
MAX	45	283	326	11	47	421	1100	304	1030	264	845	373
MIN	5.2	9.0	9.3	5.4	4.1	4.1	50	13	17	3.3	9.5	13
CFSM	0.32	0.85	1.01	0.17	0.21	1.31	4.12	1.25	3.23	0.64	3.36	1.55
IN.	0.37	0.95	1.17	0.20	0.22	1.51	4.60	1.45	3.60	0.74	3.88	1.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2002, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	23.64	44.20	15.57	5.792	13.69	97.98	130.2	53.15	73.27	21.16	48.73	48.44					
MAX	123	262	79.7	31.4	86.6	181	332	184	338	49.4	172	420					
(WY)	1987	1992	1992	1997	1998	1989	2001	1993	1993	1986	2002	1986					
MIN	2.17	3.57	0.56	0.28	0.45	9.95	25.9	5.29	1.34	0.31	0.37	0.81					
(WY)	1990	1990	1990	1990	1990	1996	1987	1987	1988	1988	1988	1988					

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1986 - 2002

ANNUAL TOTAL	25164.2	27975.6															
ANNUAL MEAN	68.94	76.65								46.17							
HIGHEST ANNUAL MEAN										93.0							1993
LOWEST ANNUAL MEAN										23.0							1999
HIGHEST DAILY MEAN	1900	Aug 1					1100	Apr 12	3670				Sep 22				1986
LOWEST DAILY MEAN	1.3	Sep 5					3.3	Jul 20		0.03			Jul 31				1988
ANNUAL SEVEN-DAY MINIMUM	1.8	Aug 31					(a)4.6	Feb 1		0.07			Jul 28				1988
MAXIMUM PEAK FLOW							1970	Jun 22		(b)9050			Sep 22				1986
MAXIMUM PEAK STAGE							7.07	Jun 22		10.13			Sep 22				1986
INSTANTANEOUS LOW FLOW							(c)0.79	Mar 1		0.02			Jul 30,31				1988
ANNUAL RUNOFF (CFSM)	1.35						1.50			0.91							
ANNUAL RUNOFF (INCHES)	18.36						20.41			12.30							
10 PERCENT EXCEEDS	159						195			99							
50 PERCENT EXCEEDS	13						24			9.8							
90 PERCENT EXCEEDS	4.2						5.7			1.7							

- (a) Ice affected
- (b) From rating curve extended above 2,500 ft³/s on basis of step-backwater measurement of peak flow
- (c) Result of freezeup
- (e) Estimated due to ice effect or missing record

CHIPPEWA RIVER BASIN

053674464 YELLOW RIVER AT BARRON, WI

LOCATION.--Lat 45°23'43", long 91°49'48", in SE ¼ SE ¼ sec.27, T.34 N., R.12 W., Barron County, Hydrologic Unit 07050007, on left bank 1.0 mi southeast of intersection of U.S. Highway 8 and State Highway 25 in Barron, 0.5 mi downstream from Quaderer Creek, in Becker Park, and 7.3 mi upstream from mouth.

DRAINAGE AREA.--153 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,090 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow is regulated occasionally at small dam upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	109	118	86	87	85	310	289	96	88	88	100
2	98	105	115	85	82	91	235	224	96	84	89	147
3	98	99	112	83	90	77	185	186	118	86	131	148
4	97	98	112	84	75	84	157	171	125	86	586	124
5	95	97	140	87	87	87	140	163	136	79	616	e113
6	93	97	196	89	86	87	143	169	120	78	246	e549
7	93	97	224	83	90	85	198	171	112	79	167	882
8	94	99	160	86	88	88	429	242	110	88	134	708
9	97	97	130	91	88	126	519	841	106	98	117	277
10	104	97	121	92	88	109	693	922	101	94	106	212
11	104	96	117	91	86	114	1220	521	110	90	96	177
12	101	96	112	92	89	103	1640	401	102	87	98	158
13	114	103	109	91	81	111	1040	329	102	83	91	145
14	135	105	105	91	90	132	706	291	101	81	89	142
15	125	102	102	91	89	105	599	257	99	79	89	138
16	111	98	103	90	90	117	487	227	94	79	89	128
17	106	98	105	86	87	119	433	172	91	78	110	120
18	105	100	104	82	90	108	333	179	88	78	102	115
19	104	103	101	87	110	108	346	171	98	78	91	113
20	102	99	89	90	142	105	335	159	111	77	85	111
21	101	97	94	90	119	98	281	149	109	80	232	109
22	100	97	96	88	100	91	252	142	128	90	329	106
23	102	99	97	90	105	98	235	151	129	93	353	103
24	103	136	88	89	106	97	226	139	117	80	204	102
25	104	164	87	88	103	91	204	131	117	83	137	108
26	103	139	92	89	97	94	180	129	111	87	127	134
27	99	134	92	90	83	94	171	126	101	90	117	130
28	98	129	91	89	95	123	200	120	96	101	108	116
29	98	123	85	87	---	391	270	115	94	129	102	113
30	99	118	88	87	---	756	340	109	91	108	96	114
31	107	---	85	86	---	637	---	105	---	95	94	---
TOTAL	3189	3231	3470	2730	2623	4611	12507	7501	3209	2706	5119	5742
MEAN	102.9	107.7	111.9	88.06	93.68	148.7	416.9	242.0	107.0	87.29	165.1	191.4
MAX	135	164	224	92	142	756	1640	922	136	129	616	882
MIN	93	96	85	82	75	77	140	105	88	77	85	100
CFSM	0.67	0.70	0.73	0.58	0.61	0.97	2.72	1.58	0.70	0.57	1.08	1.25
IN.	0.78	0.79	0.84	0.66	0.64	1.12	3.04	1.82	0.78	0.66	1.24	1.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	97.11	114.2	84.67	77.23	93.20	140.3	254.8	129.4	120.8	103.9	115.1	107.3
MAX	204	184	112	88.2	179	226	587	242	222	146	170	191
(WY)	1996	2001	2002	1997	2000	1995	2001	2002	1993	2000	1995	2002
MIN	74.4	74.2	72.0	63.2	64.0	84.6	99.9	85.7	73.9	80.6	67.5	75.1
(WY)	1992	1995	2000	1995	1995	2001	2000	1998	1994	1994	1994	1998

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1991 - 2002

ANNUAL TOTAL	56889	56638		
ANNUAL MEAN	155.9	155.2		
HIGHEST ANNUAL MEAN			119.2	2001
LOWEST ANNUAL MEAN			158	1994
HIGHEST DAILY MEAN	1660	Apr 8	1660	Apr 8 2001
LOWEST DAILY MEAN	(a)72	(b)Jan 20,27	75	Feb 4 (c)23 Sep 11,15 1993
ANNUAL SEVEN-DAY MINIMUM	(a)74	Feb 17	78	Jul 15 Aug 18 1994
MAXIMUM PEAK FLOW			1930	Apr 12 (d)2010 Apr 12 2001
MAXIMUM PEAK STAGE			7.50	Apr 12 2002
INSTANTANEOUS LOW FLOW			(c)34	Feb 27 (c)7.3 Sep 11 1993
ANNUAL RUNOFF (CFSM)	1.02		1.01	0.78
ANNUAL RUNOFF (INCHES)	13.83		13.77	10.58
10 PERCENT EXCEEDS	256		254	171
50 PERCENT EXCEEDS	101		103	89
90 PERCENT EXCEEDS	79		86	70

- (a) Ice affected
 (b) Also occurred Feb. 22,23
 (c) Result of regulation
 (d) Gage height, 7.22 ft
 (e) Estimated due to missing record

053674464 YELLOW RIVER AT BARRON, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1991 to current year.

INSTRUMENTATION.--Continuous water temperature recorder since Aug. 30, 1991.

REMARKS.--Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum temperature, 29.0°C, July 25, 30, 1999; minimum, 0.0°C, for many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum temperature, 27.5°C, July 3; minimum, 0.5°C, on many days.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	13.5	12.0	12.5	9.0	7.5	8.5	3.0	2.5	2.5	1.0	0.5	1.0
2	14.0	12.5	13.0	9.0	8.5	8.5	3.0	2.0	2.5	1.0	0.5	0.5
3	14.0	13.0	13.5	9.0	8.0	8.5	3.0	2.5	3.0	1.0	0.5	1.0
4	13.0	12.5	13.0	9.0	8.0	8.5	3.5	3.0	3.5	1.5	0.5	1.0
5	12.5	11.0	11.5	8.5	7.5	8.0	5.5	3.5	4.5	1.5	1.0	1.0
6	11.0	9.5	10.5	9.0	8.0	8.0	4.5	4.0	4.5	1.0	0.5	1.0
7	10.0	9.0	9.5	8.5	7.5	8.0	4.0	2.5	3.0	1.5	0.5	1.0
8	9.5	8.5	9.0	8.0	7.0	7.5	2.5	1.5	2.0	1.5	0.5	1.0
9	9.5	8.5	9.0	7.5	6.5	7.0	2.5	1.5	2.0	2.0	1.0	1.5
10	10.5	9.5	10.0	7.5	6.5	6.5	2.5	1.5	2.0	1.5	1.0	1.5
11	11.5	10.0	10.5	7.0	6.0	6.5	2.5	1.5	2.0	2.0	1.0	1.5
12	12.0	11.0	11.5	6.5	5.5	6.0	2.5	2.0	2.0	1.5	1.0	1.5
13	11.5	11.0	11.5	7.5	6.5	7.0	2.0	1.5	2.0	1.5	1.0	1.0
14	11.0	10.0	10.5	8.5	7.5	8.0	2.0	1.5	2.0	1.5	1.0	1.0
15	10.0	9.0	9.5	9.5	8.5	9.0	2.5	1.5	2.0	1.0	1.0	1.0
16	9.0	8.0	8.5	10.0	9.0	9.5	2.5	2.0	2.0	1.0	0.5	1.0
17	8.5	7.5	8.0	10.0	9.0	9.5	2.5	2.0	2.0	1.5	0.5	1.0
18	8.5	7.5	8.0	10.0	9.0	10.0	3.0	2.0	2.5	1.0	0.5	0.5
19	8.5	7.0	7.5	9.0	6.5	8.0	3.0	2.0	2.5	1.5	0.5	1.0
20	9.0	7.5	8.0	6.5	5.5	6.0	2.5	1.5	2.0	1.0	0.5	1.0
21	9.0	8.0	8.5	6.0	5.0	5.5	2.0	1.5	2.0	1.5	0.5	1.0
22	9.5	8.0	9.0	5.5	5.0	5.0	2.0	1.5	2.0	2.0	0.5	1.0
23	10.0	9.0	9.5	6.0	4.5	5.0	1.5	1.0	1.5	1.5	1.0	1.0
24	10.5	9.0	10.0	7.0	6.0	6.5	1.5	0.5	1.0	1.5	0.5	1.0
25	9.0	6.5	7.5	6.5	6.0	6.5	1.5	1.0	1.0	2.0	1.0	1.5
26	6.5	5.5	6.0	6.0	4.0	5.5	1.0	1.0	1.0	2.0	1.0	1.5
27	6.0	4.5	5.0	4.0	2.5	3.0	1.5	1.0	1.0	2.0	1.0	1.5
28	6.0	4.5	5.5	2.5	2.0	2.0	1.0	0.5	1.0	1.5	1.0	1.5
29	6.5	5.5	6.0	2.0	1.5	2.0	1.0	0.5	0.5	1.5	1.0	1.5
30	6.5	6.0	6.5	2.5	2.0	2.0	1.0	0.5	1.0	2.0	1.0	1.5
31	7.5	6.5	7.0	---	---	---	1.0	0.5	0.5	1.5	1.0	1.0
MONTH	14.0	4.5	9.2	10.0	1.5	6.7	5.5	0.5	2.0	2.0	0.5	1.1

CHIPPEWA RIVER BASIN

053674464 YELLOW RIVER AT BARRON, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1.5	0.5	1.0	2.0	1.0	1.5	1.5	0.5	1.0	10.5	8.5	9.5
2	2.0	0.5	1.0	2.0	0.5	1.0	2.0	1.0	1.5	10.5	9.0	9.5
3	1.5	0.5	1.0	2.0	0.5	1.0	2.5	1.5	2.0	11.0	9.0	10.0
4	2.0	0.5	1.0	2.0	0.5	1.0	3.0	2.5	2.5	11.0	10.5	11.0
5	2.0	0.5	1.0	2.5	1.0	1.5	4.0	2.5	3.0	12.0	10.0	11.0
6	2.0	0.5	1.0	2.0	0.5	1.0	4.5	3.0	3.5	11.5	10.5	11.0
7	2.0	1.0	1.5	2.0	0.5	1.0	4.0	3.5	3.5	11.5	10.0	10.5
8	2.5	1.0	1.5	2.0	0.5	1.0	4.0	2.5	3.5	10.5	9.5	9.5
9	1.5	1.0	1.5	1.0	0.5	0.5	3.5	2.0	3.0	9.5	7.5	8.0
10	2.0	1.0	1.0	1.5	0.5	1.0	3.5	2.0	3.0	9.5	6.5	8.0
11	2.0	1.0	1.5	2.0	0.5	1.0	2.0	1.5	1.5	10.0	9.0	9.5
12	2.0	1.0	1.5	2.5	0.5	1.5	3.5	1.0	2.0	9.0	8.0	8.5
13	2.5	1.0	1.5	2.5	1.0	1.5	6.0	2.5	4.5	9.5	7.5	8.5
14	2.5	1.0	1.5	1.5	0.5	1.0	7.5	6.0	6.5	11.0	8.5	9.5
15	2.5	1.5	2.0	2.5	0.5	1.5	11.0	7.5	9.0	13.0	10.5	11.5
16	2.5	1.5	2.0	2.5	0.5	1.0	14.5	11.0	13.0	15.0	12.5	13.5
17	3.0	1.5	2.0	2.0	0.5	1.0	16.0	14.5	15.0	15.5	13.0	14.0
18	3.5	2.0	2.5	2.5	1.0	1.5	16.0	14.5	15.0	15.0	14.0	14.5
19	2.5	2.0	2.5	2.5	1.0	1.5	15.5	13.5	14.5	14.5	13.5	14.0
20	2.5	2.0	2.0	3.5	1.5	2.0	13.5	12.0	12.5	15.0	12.5	13.5
21	2.5	1.5	2.0	3.0	1.5	2.5	12.0	8.5	10.0	15.0	13.5	14.0
22	2.5	1.5	1.5	3.0	1.0	2.0	8.5	7.5	8.0	16.0	14.5	15.0
23	3.0	1.5	2.0	3.0	1.0	1.5	10.0	7.0	8.5	17.5	15.5	16.5
24	2.0	1.5	2.0	2.5	1.0	1.5	10.0	9.5	10.0	17.5	15.5	16.5
25	3.0	1.5	2.0	3.0	1.0	2.0	9.5	8.5	9.0	16.5	15.5	16.0
26	2.5	1.0	2.0	3.5	1.5	2.5	10.0	7.5	9.0	16.0	15.0	15.5
27	2.5	1.0	1.5	4.0	1.5	2.5	10.0	6.0	8.5	17.0	15.0	16.0
28	2.0	1.0	1.5	4.5	2.5	3.0	6.5	5.5	6.0	18.0	16.0	17.0
29	---	---	---	4.0	2.0	3.0	8.5	5.0	6.5	20.5	17.5	19.0
30	---	---	---	2.0	1.0	1.5	10.0	7.5	8.5	22.0	19.5	20.5
31	---	---	---	1.0	0.5	1.0	---	---	---	23.0	21.0	22.0
MONTH	3.5	0.5	1.6	4.5	0.5	1.5	16.0	0.5	6.8	23.0	6.5	13.0
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	23.5	21.5	22.5	27.0	25.0	26.0	25.0	23.5	24.0	22.0	20.5	21.5
2	22.0	20.0	21.5	26.5	25.5	26.0	24.0	23.0	23.5	21.5	20.5	21.0
3	20.0	17.5	18.5	27.5	25.5	26.5	23.0	21.0	22.0	20.5	19.5	20.0
4	17.5	15.0	16.5	27.0	25.0	26.0	21.5	19.5	20.5	20.5	19.5	20.0
5	16.5	14.5	15.5	25.0	23.5	24.5	21.5	19.5	20.5	e20.0	e20.0	e20.0
6	17.5	15.5	16.5	25.0	23.0	23.5	21.5	19.5	20.5	e20.0	e20.0	e20.0
7	18.5	17.0	18.0	25.0	23.0	24.0	21.5	20.0	21.0	21.5	19.5	20.5
8	19.5	18.5	19.0	25.5	23.5	24.5	22.0	20.5	21.5	22.5	20.5	21.5
9	20.5	19.0	19.5	26.0	24.0	25.0	23.0	21.5	22.0	23.0	21.0	22.0
10	21.0	20.0	20.5	24.5	22.0	23.5	23.5	22.5	23.0	23.0	21.5	22.0
11	21.5	20.0	21.0	22.5	21.0	22.0	24.0	22.5	23.0	21.5	20.5	21.0
12	21.5	19.5	20.5	23.5	21.0	22.0	23.5	22.5	23.0	20.5	20.0	20.0
13	21.0	19.5	20.0	23.0	21.0	22.0	23.0	22.0	22.5	20.0	19.0	19.5
14	20.5	19.0	19.5	23.5	21.5	22.5	22.5	21.5	22.0	19.0	17.5	18.5
15	21.0	19.0	20.0	24.0	22.0	23.0	22.0	21.0	21.5	18.0	17.0	17.5
16	21.0	19.0	19.5	24.5	22.5	23.5	21.5	20.5	21.0	17.5	16.5	17.0
17	21.0	19.0	20.0	25.5	23.5	24.0	20.5	20.0	20.5	18.0	17.0	17.5
18	21.0	19.5	20.0	24.5	24.0	24.5	20.0	19.0	19.5	18.5	17.5	18.0
19	21.0	20.0	20.5	25.0	23.5	24.0	21.0	19.0	20.0	18.5	18.0	18.5
20	22.5	20.5	21.5	24.0	23.0	23.5	20.5	19.0	20.0	18.5	18.0	18.0
21	22.0	21.0	21.5	24.5	23.0	24.0	20.0	19.0	19.5	18.0	16.5	17.0
22	22.0	20.5	21.5	24.5	23.5	24.0	19.0	18.0	18.5	16.5	14.5	15.5
23	22.0	21.5	22.0	23.5	22.5	23.0	19.5	18.5	19.0	14.5	12.5	13.5
24	22.0	21.5	21.5	23.0	22.0	22.5	20.5	18.5	19.5	12.5	11.5	12.5
25	23.0	21.5	22.0	22.0	21.0	21.5	21.0	19.5	20.0	12.5	11.5	12.0
26	24.0	22.0	23.0	22.5	21.0	21.5	22.0	20.5	21.0	11.5	11.0	11.5
27	24.0	22.5	23.0	23.0	21.5	22.0	22.0	21.0	21.5	12.0	10.5	11.5
28	24.5	23.0	23.5	23.5	21.5	22.5	21.5	21.0	21.5	12.0	11.5	11.5
29	25.0	23.0	24.0	24.0	22.5	23.5	21.5	21.0	21.0	12.0	11.5	11.5
30	26.0	24.0	25.0	24.5	23.0	23.5	22.0	21.0	21.0	13.0	12.0	12.5
31	---	---	---	24.5	23.5	24.0	22.0	20.5	21.0	---	---	---
MONTH	26.0	14.5	20.6	27.5	21.0	23.6	25.0	18.0	21.1	23.0	10.5	17.4

e Estimated

05368000 HAY RIVER AT WHEELER, WI

LOCATION.--Lat 45°02'52", long 91°54'39", in SW ¼ SW ¼ sec.25, T.30 N., R.13 W., Dunn County, Hydrologic Unit 07050007, on right bank 25 ft downstream from highway bridge in Wheeler, 1.8 mi upstream from Otter Creek, and 2.4 mi downstream from South Fork Hay River.

DRAINAGE AREA.--418 mi².

PERIOD OF RECORD.--October 1950 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 889.30 ft above NGVD of 1929. Prior to Mar. 25, 1951, nonrecording gage.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Maximum stage since 1915, 16.6 ft April 1934, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	264	274	349	e250	e230	e240	1040	836	353	429	322	313
2	262	269	343	e250	e220	e230	648	623	346	402	309	622
3	259	265	335	e260	e230	e210	523	529	520	392	289	861
4	257	263	332	e270	e200	e220	461	482	680	393	357	513
5	254	270	396	e270	e210	e240	443	459	761	369	507	413
6	251	272	745	e270	e210	e250	460	606	620	356	612	785
7	249	268	631	e260	e220	e250	572	678	472	351	458	2020
8	250	261	457	e270	e230	e250	814	629	434	360	375	2140
9	253	257	398	e270	235	387	941	1320	413	366	349	1070
10	263	261	370	e270	234	e350	904	2110	395	347	327	738
11	266	261	353	e260	224	e360	1280	1420	405	346	313	628
12	262	254	342	262	238	e320	1990	942	401	336	307	563
13	278	258	331	257	222	e350	2360	804	401	326	307	510
14	361	264	316	258	240	e430	1480	736	396	319	299	494
15	339	261	304	253	234	e390	1060	677	371	313	293	490
16	314	257	301	249	238	e360	869	623	348	307	290	450
17	299	253	303	e240	234	354	763	569	331	303	337	428
18	293	254	297	e240	234	324	717	527	321	301	331	374
19	289	267	290	e250	277	328	674	498	413	302	298	405
20	280	267	e270	e260	425	329	591	473	728	303	269	399
21	274	277	e270	e250	368	312	575	456	528	309	444	388
22	271	278	e280	e250	296	284	539	446	750	313	944	374
23	272	278	e260	248	291	285	533	448	873	304	672	363
24	274	327	e250	243	315	283	523	437	709	288	534	357
25	273	472	e240	240	310	265	504	422	641	291	416	360
26	275	411	e240	241	e260	266	467	415	955	306	382	413
27	276	380	e250	240	e240	275	450	413	1050	295	355	449
28	282	363	e240	239	e250	552	547	402	747	303	340	399
29	276	352	e230	233	---	1540	758	391	533	321	332	391
30	267	350	e240	233	---	2080	987	378	468	323	326	388
31	271	---	e240	231	---	1840	---	366	---	315	318	---
TOTAL	8554	8744	10203	7817	7115	14154	24473	20115	16363	10289	12012	18098
MEAN	275.9	291.5	329.1	252.2	254.1	456.6	815.8	648.9	545.4	331.9	387.5	603.3
MAX	361	472	745	270	425	2080	2360	2110	1050	429	944	2140
MIN	249	253	230	231	200	210	443	366	321	288	269	313
CFSM	0.66	0.70	0.79	0.60	0.61	1.09	1.95	1.55	1.30	0.79	0.93	1.44
IN.	0.76	0.78	0.91	0.70	0.63	1.26	2.18	1.79	1.46	0.92	1.07	1.61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

	MEAN	261.6	262.7	227.5	202.3	230.0	480.5	643.1	366.2	352.0	273.1	270.8	286.5
MAX	579	704	470	412	657	1021	2054	767	778	667	568	762	
(WY)	1986	1971	1966	1981	1981	1983	1965	1954	1993	1979	2001	1986	
MIN	139	138	122	97.2	85.2	155	166	153	153	135	126	141	
(WY)	1959	1959	1959	1959	1959	1956	1959	1958	1959	1964	1964	1958	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1951 - 2002

ANNUAL TOTAL	154444	157937	
ANNUAL MEAN	423.1	432.7	321.3
HIGHEST ANNUAL MEAN			433
LOWEST ANNUAL MEAN			152
HIGHEST DAILY MEAN	3880	Apr 13	13000
LOWEST DAILY MEAN	(a)180	Jan 21	80
ANNUAL SEVEN-DAY MINIMUM	(a)189	Jan 18	82
MAXIMUM PEAK FLOW			(b)13600
MAXIMUM PEAK STAGE			10.09
INSTANTANEOUS LOW FLOW			(a)
ANNUAL RUNOFF (CFSM)	1.01	1.04	(c)55
ANNUAL RUNOFF (INCHES)	13.74	14.06	10.45
10 PERCENT EXCEEDS	690	737	494
50 PERCENT EXCEEDS	282	331	241
90 PERCENT EXCEEDS	200	240	152

- (a) Ice affected
- (b) From rating curve extended above 9,000 ft³/s
- (c) Result of freezeup
- (e) Estimated due to ice effect or missing record

CHIPPEWA RIVER BASIN

05369000 RED CEDAR RIVER AT MENOMONIE, WI

LOCATION.--Lat 44°53'02", long 91°55'57", in NW ¼ NW ¼ sec.26, T.28 N., R.13 W., Dunn County, Hydrologic Unit 07050007, on right bank at Menomonie, 900 ft downstream from powerplant of Northern States Power Co., and 1,000 ft downstream from Wilson Creek.

DRAINAGE AREA.--1,770 mi².

PERIOD OF RECORD.--June 1907 to September 1908, May 1913 to current year. Monthly discharge only for June 1907 to September 1908, published in WSP 1308. Unpublished daily discharge from June 1907 to September 1908 in District files.

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

GAGE.--Water-stage recorder. Datum of gage is 780 ft above NGVD of 1929 (Northern States Power Co. bench mark). Prior to Sept. 3, 1908, nonrecording gage at site 1 mi downstream at different datum. May 9, 1913, to Sept. 30, 1923, water-stage recorder at same site at datum 0.42 ft lower than present datum.

REMARKS.--Records good (see page 11). Flow regulated by powerplants at Menomonie and Cedar Falls. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	1290	1630	1080	1210	1270	5130	3210	1690	1740	1450	1370
2	1120	1450	1620	1160	977	1190	3770	3480	1460	1350	1210	2580
3	1270	1090	1470	1330	1150	1120	2580	3670	2250	1570	1390	2720
4	1000	1210	1610	1240	1060	837	2350	3190	3040	1610	1440	2870
5	1090	1240	2480	1210	970	937	2010	2670	2690	1540	2850	2440
6	1070	1100	2880	1240	1060	1200	1940	2530	2750	1380	2600	2970
7	1090	1100	2800	1310	1250	1270	2230	2890	2670	1450	2420	4560
8	1010	1090	2290	1130	1320	1450	2930	3000	2170	1510	2330	6650
9	1190	1160	1930	1250	1320	1840	3720	3370	2060	1490	1920	6700
10	1190	1180	1790	1410	1310	1600	4160	4980	1760	1870	1420	5120
11	1230	1210	1760	1270	1120	1510	4960	6420	2000	1630	1490	3830
12	1130	1210	1980	1470	1210	1980	7320	5590	1870	1920	1450	3090
13	1390	1300	1660	1340	1140	2170	9240	4620	1880	1860	1490	2700
14	1490	1090	1810	1440	1200	2310	9230	4650	1910	1650	1150	2580
15	1430	1180	1660	1220	1260	2010	7370	3900	1810	1410	1330	2340
16	1450	1230	1500	1360	1360	1970	6620	3290	1830	1430	1360	1400
17	1400	1190	1610	1330	1260	1970	6160	2940	1450	1340	1560	642
18	1420	1200	1480	972	1320	1800	5480	3190	1660	1260	1460	1020
19	1390	1110	1390	996	1860	1690	4980	2910	1950	1240	1560	1970
20	1440	1240	1320	1190	2080	1690	4600	3030	2200	1330	1480	1890
21	1580	1250	1030	1310	2090	1660	4240	2610	2830	1290	2310	1710
22	1240	1230	1390	1320	1600	1290	3760	2080	2490	1320	3090	1710
23	1190	1240	1550	1280	1620	1480	3730	671	3010	1420	3710	1670
24	1210	1600	1390	1350	1850	1440	3410	752	3030	1240	3130	1620
25	1240	1860	810	1300	1560	1400	2880	1810	2600	1350	2430	1810
26	1240	2130	945	1290	1540	1430	2810	1880	4050	1380	2360	1930
27	1220	1800	1200	1280	1110	1430	2980	2060	3120	1250	1640	2070
28	1180	1750	1130	1210	1270	2120	2880	1670	2790	1320	1900	2240
29	1380	1560	1200	1210	---	3620	2940	1770	2240	1510	1460	1790
30	1290	1520	1100	1330	---	4740	2990	1830	1900	1470	1260	1970
31	1200	---	999	1210	---	5830	---	1510	---	1650	1340	---
TOTAL	38900	39810	49414	39038	38077	58254	129400	92173	69160	45780	57990	77962
MEAN	1255	1327	1594	1259	1360	1879	4313	2973	2305	1477	1871	2599
MAX	1580	2130	2880	1470	2090	5830	9240	6420	4050	1920	3710	6700
MIN	1000	1090	810	972	970	837	1940	671	1450	1240	1150	642

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 2002, BY WATER YEAR (WY)

	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1141	1170	987	905	973	1915	2351	1511	1490	1134	1001	1208																																																																																				
MAX	2806	2521	2316	1317	2047	4142	6819	2973	3702	2926	2237	3091																																																																																				
(WY)	1969	1992	1966	1973	1966	1973	1965	2002	1943	1968	1995	1938																																																																																				
MIN	528	566	541	532	536	921	664	612	425	421	383	493																																																																																				
(WY)	1933	1937	1933	1959	1959	1956	1930	1934	1934	1934	1934	1933																																																																																				

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1907 - 2002
ANNUAL TOTAL	686434	735958	
ANNUAL MEAN	1881	2016	1315
HIGHEST ANNUAL MEAN			2016
LOWEST ANNUAL MEAN			711
HIGHEST DAILY MEAN	10500	Apr 14	29000
LOWEST DAILY MEAN	644	Aug 13	100
ANNUAL SEVEN-DAY MINIMUM	939	Aug 10	310
MAXIMUM PEAK FLOW		12000	Apr 12
MAXIMUM PEAK STAGE		7.54	Apr 12
10 PERCENT EXCEEDS	3610	3390	2200
50 PERCENT EXCEEDS	1310	1540	1070
90 PERCENT EXCEEDS	1050	1130	640

(a) From rating curve extended above 27,000 ft³/s on basis of computed flow over Cedar Falls Dam, 6 mi upstream
(b) From floodmarks

05369500 CHIPPEWA RIVER AT DURAND, WI

LOCATION.--Lat 44°37'42", long 91°58'08"(revised), in SE ¼ SW ¼ sec.21, T.25 N., R.13 W., Pepin County, Hydrologic Unit 07050005, on left bank in Durand, 75 ft downstream from bridge on U.S. Highway 10, and 9.5 mi downstream from Red Cedar River.

DRAINAGE AREA.--9,010 mi².

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 785: 1930, 1934(M). WSP 875: 1930 (monthly and yearly runoff). WSP 925: 1938. WSP 1508: 1929(M), 1932. WDR WI-82-1: Drainage area. WDR WI-99-1: 1995(m).

GAGE.--Water-stage recorder. Datum of gage is 694.59 ft above NGVD of 1929. Prior to Dec. 9, 1930, nonrecording gage at bridge 400 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow regulated by powerplants, Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota on Chippewa and Flambeau Rivers. Gage-height telemeter and data-collection platform at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--A stage of 18.4 ft, from flood marks (levels by U.S. Army Corps of Engineers) occurred Sept. 12, 1884, and has not been exceeded since.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3520	5140	10200	e6000	e5600	5610	17500	28400	7780	9780	6520	6410
2	3440	5910	10000	e5300	e5000	e5000	15200	27400	7670	8300	6210	8490
3	3440	5710	8970	e6400	e4100	e4600	13600	22800	8320	7600	5350	12600
4	3270	5370	8920	e7200	e4500	e4200	11100	18000	10900	7390	6590	14600
5	3340	4670	9200	e8000	e3800	e3800	11100	14700	16300	6470	9720	14700
6	2930	4950	13600	e6500	e4300	e4500	8960	15300	15400	6460	10900	15500
7	2960	5020	17200	e6800	e5600	5370	8820	16900	15100	7090	9120	20200
8	2720	4450	19100	e6700	e5000	5690	12200	19700	12500	6300	8270	31300
9	2830	3860	18100	e6500	5160	5850	14200	21700	11100	7500	7030	30900
10	3570	4910	14000	e5800	4380	5560	15700	27300	8920	12200	5810	24500
11	4560	4980	12600	e6200	4270	5690	22900	34300	8070	13600	5270	15400
12	3800	4710	10400	e6000	4600	6150	34800	35700	9310	11600	6120	13400
13	3910	4520	11600	e6000	5200	8000	50400	31900	12300	8310	6230	13400
14	6610	4920	9030	e6000	4390	9530	69400	28500	11500	7800	5900	12300
15	5540	4820	10100	e8000	5570	9530	73600	26300	10600	7240	6070	10500
16	5920	4200	7950	e6000	4720	8100	65200	23000	12500	6260	5850	9890
17	5760	4220	9650	e5500	4320	7610	59900	22300	11600	5710	6250	8250
18	5030	5090	9430	e6000	4140	7330	52600	17700	11300	5610	7140	8560
19	5780	4870	8100	e4700	4490	8220	46500	16700	9320	5520	7130	8530
20	4110	4520	8510	e3500	7230	8460	39600	15000	8740	5650	7080	8500
21	5100	5110	7320	e3800	9820	9650	37100	12100	9380	5620	8380	8540
22	4820	5200	6510	e6300	10300	8760	34200	11400	9810	5660	15800	11700
23	4190	4750	7600	e6300	8940	6960	29900	10400	15800	5750	21900	11700
24	4000	5740	7030	e6800	7200	6460	23200	9890	23400	7340	23300	11200
25	3810	7630	6670	e7200	6610	5910	26100	9040	17200	7160	20500	10000
26	4760	9250	e4400	e4900	8200	6310	26400	9930	21700	6660	13700	8990
27	4620	14500	e4900	e5000	6750	6550	24800	8950	20400	6260	9900	10400
28	4050	14500	e5800	e5000	6580	7290	21500	8740	17800	5840	8270	12900
29	4890	10300	e6700	e4900	---	10000	19900	8950	14300	6340	7650	13000
30	4460	9300	e7200	e5000	---	14200	21800	9390	11200	5560	7680	12200
31	4160	---	e6800	e5800	---	16800	---	8580	---	7450	6830	---
TOTAL	131900	183120	297590	184100	160770	227690	908180	570970	380220	226030	282470	398560
MEAN	4255	6104	9600	5939	5742	7345	30270	18420	12670	7291	9112	13290
MAX	6610	14500	19100	8000	10300	16800	73600	35700	23400	13600	23300	31300
MIN	2720	3860	4400	3500	3800	3800	8820	8580	7670	5520	5270	6410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)
1928	6444	20360	1986	2103	1977	6831	20190	1992	2209	1977	5393	11600	1966	2335	1934
1929	4794	8181	1984	2289	1934	5097	11160	1984	2404	1990	9619	25120	1973	3645	1931
1930	16150	34170	1954	4718	1931	10550	28220	1954	3336	1931	9418	37730	1943	2699	1934
1931	6378	19070	1968	2271	1934	5229	12180	1995	2026	1934	7068	27950	1941	1954	1948

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1928 - 2002
ANNUAL TOTAL	3324670	3951600	
ANNUAL MEAN	9109	10830	7739
HIGHEST ANNUAL MEAN			11550
LOWEST ANNUAL MEAN			3992
HIGHEST DAILY MEAN	65400	Apr 14	117000
LOWEST DAILY MEAN	(a)2400	Jan 29	1100
ANNUAL SEVEN-DAY MINIMUM	3070	Oct 3	1580
MAXIMUM PEAK FLOW		76100	123000
MAXIMUM PEAK STAGE		14.41	16.93
INSTANTANEOUS LOW FLOW		2640	1020
10 PERCENT EXCEEDS	18100	21700	14400
50 PERCENT EXCEEDS	5600	7650	5600
90 PERCENT EXCEEDS	3500	4480	3000

(a) Ice affected

(e) Estimated due to ice effect or missing record

CHIPPEWA RIVER BASIN

05369900 EAU GALLE RIVER NEAR WOODVILLE, WI

LOCATION.--Lat 44°55'18", long 92°15'51", in SW ¼ SE ¼ sec.13, T.28 N., R.15 W., St. Croix County, Hydrologic Unit 07050005, on left bank 20 ft downstream from bridge on County Trunk Highway N, 1.3 mi downstream from Carr Creek, and 2.9 mi south of Woodville.

DRAINAGE AREA.--39.4 mi².

PERIOD OF RECORD.--July 1978 to September 1983, July 2001 to current year.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,058.65 ft above NGVD of 1929. July 1978 to September 1983, incorrectly published as 1,508.66 ft.

REMARKS.--Records good (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	3.1	13	3.2	2.5	3.4	18	21	5.7	11	6.2	5.9
2	3.9	2.9	11	3.1	2.5	3.1	14	14	5.7	10	5.7	409
3	3.9	2.7	11	3.1	2.4	e3.0	11	11	9.4	9.6	5.8	54
4	3.9	2.6	22	3.3	2.3	2.8	10	9.4	96	9.1	6.6	16
5	3.5	2.7	131	3.4	2.4	2.6	11	9.1	102	8.9	6.6	10
6	3.4	2.8	86	3.3	2.5	2.4	48	74	21	8.7	5.9	484
7	3.4	2.8	25	3.3	2.4	2.4	84	33	14	8.5	5.7	95
8	3.5	2.6	14	3.4	2.4	3.0	78	60	12	8.4	5.4	24
9	3.6	2.7	11	3.4	2.5	110	48	298	8.1	8.1	5.1	15
10	3.6	2.6	8.8	3.1	2.2	32	154	41	7.0	8.7	5.2	12
11	3.3	2.6	8.0	3.0	2.5	24	306	21	11	8.6	5.0	10
12	3.3	2.6	7.4	3.2	2.3	28	160	52	14	7.7	5.2	9.6
13	4.1	2.9	7.7	3.5	2.3	114	51	30	11	7.6	5.1	9.0
14	14	2.7	6.7	3.2	2.6	89	59	37	16	7.4	5.1	9.4
15	6.3	2.8	5.9	2.7	2.4	23	46	21	9.0	7.3	4.9	13
16	7.0	2.7	5.8	2.6	2.6	15	30	15	6.2	7.2	4.9	10
17	5.9	2.4	6.9	2.7	3.6	11	28	12	5.6	7.1	6.6	8.9
18	4.6	2.5	6.4	2.6	3.4	12	24	10	5.3	7.1	5.5	8.6
19	4.5	3.4	5.5	2.8	27	31	19	9.2	15	7.0	5.2	8.5
20	4.5	4.2	4.9	2.7	51	31	13	8.3	39	7.1	4.9	8.1
21	5.0	3.3	4.5	2.7	15	30	11	8.0	226	6.9	347	7.8
22	4.0	3.1	4.6	2.7	9.9	13	13	7.9	212	7.0	135	7.4
23	4.0	2.9	4.3	2.6	12	8.4	27	8.0	405	6.6	27	7.2
24	3.9	24	3.9	2.6	40	6.9	22	7.9	87	6.7	15	7.0
25	3.9	48	3.9	2.7	15	5.5	17	7.4	161	7.3	9.8	7.4
26	3.3	14	3.9	2.6	8.6	6.7	11	7.2	203	7.0	7.7	18
27	3.7	11	3.9	2.6	6.0	82	10	7.0	39	6.7	6.9	26
28	3.5	10	3.7	2.6	4.3	347	81	7.0	19	6.5	6.6	12
29	2.9	10	3.5	2.6	---	178	126	6.8	14	6.5	6.3	11
30	2.9	13	3.3	2.4	---	85	50	6.4	12	6.2	6.0	12
31	3.2	---	3.3	2.5	---	40	---	6.2	---	6.2	5.8	---
TOTAL	134.5	195.6	440.8	90.2	234.6	1345.2	1580	865.8	1791.0	238.7	683.7	1335.8
MEAN	4.339	6.520	14.22	2.910	8.379	43.39	52.67	27.93	59.70	7.700	22.05	44.53
MAX	14	48	131	3.5	51	347	306	298	405	11	347	484
MIN	2.9	2.4	3.3	2.4	2.2	2.4	10	6.2	5.3	6.2	4.9	5.9
CFSM	0.11	0.17	0.36	0.07	0.21	1.10	1.34	0.71	1.52	0.20	0.56	1.13
IN.	0.13	0.18	0.42	0.09	0.22	1.27	1.49	0.82	1.69	0.23	0.65	1.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

	5.316	8.859	5.790	1.826	10.23	62.57	45.65	21.75	28.49	13.37	16.84	19.10
MEAN	5.316	8.859	5.790	1.826	10.23	62.57	45.65	21.75	28.49	13.37	16.84	19.10
MAX	9.96	34.3	14.2	2.91	42.7	95.7	76.7	28.6	72.5	46.6	47.0	84.0
(WY)	1983	1983	2002	2002	1981	1982	1983	1982	1980	1978	1980	1980
MIN	2.51	1.23	0.84	0.69	0.80	20.8	18.5	3.48	3.08	2.44	2.38	1.90
(WY)	1982	1982	1982	1982	1979	1981	1981	1980	1982	1981	1982	1981

SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 1978 - 2002

ANNUAL TOTAL	8935.9		
ANNUAL MEAN	24.48	19.74	
HIGHEST ANNUAL MEAN		27.9	1980
LOWEST ANNUAL MEAN		11.0	1981
HIGHEST DAILY MEAN	484	Sep 6	1540 Mar 30 1982
LOWEST DAILY MEAN	2.2	Feb 10	(a)0.60 Dec 30 1981
ANNUAL SEVEN-DAY MINIMUM	2.4	Feb 7	(a)0.63 Jan 5 1982
MAXIMUM PEAK FLOW	1260	Sep 6	(b)5280 Jun 7 1980
MAXIMUM PEAK STAGE	8.29	Sep 6	(c)11.07 Jun 7 1980
INSTANTANEOUS LOW FLOW	2.1	(d)Nov 19	(f)0.55 Dec 30,31 1981
ANNUAL RUNOFF (CFSM)	0.62		0.50
ANNUAL RUNOFF (INCHES)	8.44		6.81
10 PERCENT EXCEEDS	51		32
50 PERCENT EXCEEDS	7.1		3.5
90 PERCENT EXCEEDS	2.7		1.1

(a) Ice affected

(b) From rating curve extended above 1,000 ft³/s, based on contracted-opening measurement of peak flow

(c) From floodmarks

(d) Also occurred Feb. 4,5,9,10,12,13

(e) Estimated due to ice effect or missing record

(f) Result of freezeup

CHIPPEWA RIVER BASIN

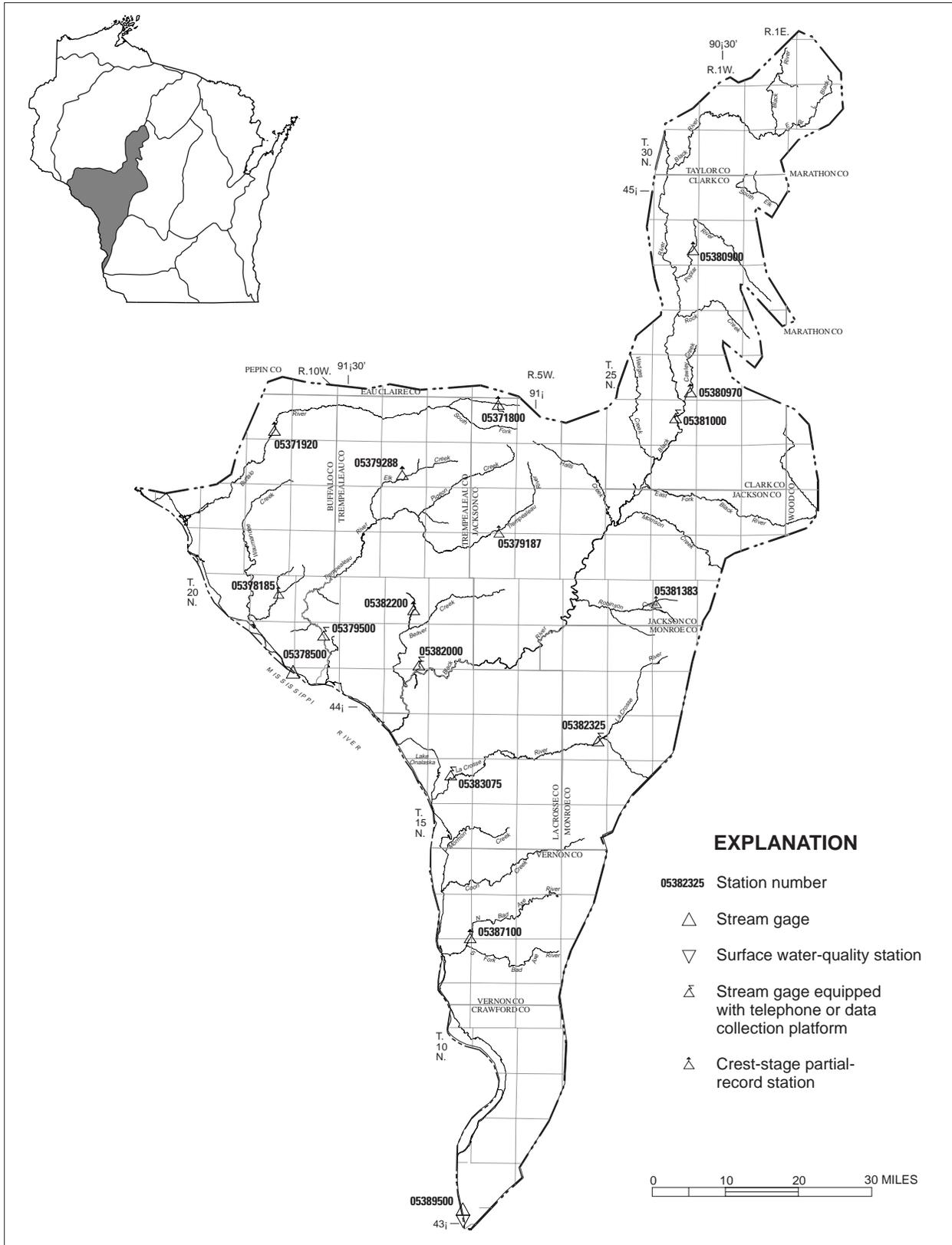
05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1969 - 2002	
ANNUAL TOTAL	20823.9		16087			
ANNUAL MEAN	57.05		44.07		35.27	
HIGHEST ANNUAL MEAN					56.1 2001	
LOWEST ANNUAL MEAN					21.2 1988	
HIGHEST DAILY MEAN	1240	Apr 12	454	Sep 6	2190	Mar 28 1989
LOWEST DAILY MEAN	(a)4.9	Sep 21	15	Feb 12	(b)0.00	Aug 12-16 1971
ANNUAL SEVEN-DAY MINIMUM	12	Feb 16	16	Feb 10	(a)0.91	Sep 15 1969
MAXIMUM PEAK FLOW			970	Sep 6	(c)3030	Jun 7 1980
MAXIMUM PEAK STAGE			16.48	Sep 6	(c)19.90	Jun 7 1980
INSTANTANEOUS LOW FLOW			(a)9.7	Sep 18	0.00	Aug 11-16 1971
10 PERCENT EXCEEDS	120		79		49	
50 PERCENT EXCEEDS	22		23		19	
90 PERCENT EXCEEDS	13		17		12	

(a) Result of work at dam

(b) Flow shut off at flood-control dam upstream due to request by Wisconsin Department of Natural Resources for eradication of rough fish to improve sport fishing

(c) Peak discharge and stage prior to construction of flood-control reservoir occurred Apr. 15, 1954, and was 7,000 ft³/s and 12.50 ft (datum then in use), respectively



Base from U.S. Geological Survey 1:100,000 digital data; modified by Wisconsin Department of Natural Resources. Wisconsin Transverse Mercator projection.

TREMPEALEAU-BLACK RIVER BASIN

UPPER MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN

LOCATION.--Lat 44°03'21", long 91°38'16", in sec. 23, T.107 N., R.7 W., Winona County, Hydrologic Unit 07040003, on right bank at Winona pumping station in Winona, 9.5 mi upstream from Trempealeau River, and at mile 725.7 upstream from the Ohio River.

DRAINAGE AREA.--59,200 mi² (approximately).

PERIOD OF RECORD.--June 1928 to current year. Gage-height records collected in this vicinity since 1878 are contained in reports of Mississippi River Commission.

GAGE.--Water-stage recorder. Datum of gage is 639.64 ft above sea level (NGVD of 1929). June 10, 1928 to Apr. 15, 1931, nonrecording gage at site 800 ft upstream. Prior to Oct. 1, 1929, at datum 0.20 ft higher and Oct. 1, 1929 to Apr. 15, 1931, at datum 0.12 ft lower. Apr. 16, 1931 to Nov. 12, 1934, nonrecording gage at present site and datum. Since Mar. 31, 1937, auxiliary water-stage recorder 2.7 mi upstream at tailwater of navigation dam 5A.

REMARKS.-- Records good except those for estimated daily discharges, which are fair to poor (see page 11). Some regulation by reservoirs, navigation dams and power plants at low and medium stages. Daily discharges for some estimated days furnished by the U.S. Army Corps of Engineers from Lock and Dam 5A.

EXTREMES FOR PERIOD OF RECORD.--Minimum gage height, -3.38 ft, Aug. 31, 1934 (prior to dam construction in 1936); minimum gage height since 1938, after completion of dam, 1.95 ft, Jan. 27, 1944.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15500	22100	33000	17000	18100	17400	35300	67400	41200	65800	42100	47000
2	15600	22500	31000	18000	18500	17600	38000	66200	39500	64600	41800	46700
3	15000	22100	28000	19000	17800	17900	41500	65300	40100	64700	41200	45500
4	15400	20600	30000	20000	17500	20300	40900	62700	46000	63400	43000	46300
5	15300	19100	32000	20000	16600	20800	39200	61400	47300	59900	45800	47700
6	15200	18700	33000	21000	16600	19300	38800	56600	50000	56800	46800	49300
7	14200	19200	33000	21000	16500	18300	37100	54300	51400	56300	49500	50900
8	12400	18500	34000	23000	18300	18100	38200	53000	52000	54900	50800	53200
9	12000	19200	39000	24000	19000	18400	39600	54100	52000	52500	50600	57100
10	16300	18800	40000	27000	18300	19400	40900	55200	51000	50700	49100	60800
11	18100	19300	38000	25000	18500	20600	43700	58300	50500	50800	48100	61200
12	18100	19000	37000	24000	17500	21900	50200	63600	50600	53300	47900	57600
13	18100	18700	36000	22900	18100	26100	57000	69300	49200	55100	47800	55000
14	18700	18700	33000	22200	17500	27700	66100	73400	47700	56000	45700	52900
15	19800	18600	31000	22300	17100	27700	82100	74000	47500	57400	43000	52300
16	20600	18900	31000	21900	17000	27900	101000	74100	43500	58100	41600	49100
17	21300	18700	31000	21900	17600	26700	115000	73900	42800	57400	40500	46700
18	21400	19100	30000	21000	17600	25800	121000	73000	42600	57300	40800	44600
19	20800	19600	29000	19600	19000	25200	124000	71400	41800	57100	40800	44200
20	20100	19400	27000	18900	22500	25300	122000	68600	41000	55900	40900	42100
21	19400	19400	24000	17800	23500	25600	117000	65900	42500	55700	41300	40200
22	19800	19700	22000	17800	23800	26100	111000	61700	46000	55500	47700	37500
23	20000	19500	23000	18800	24000	26500	105000	57800	52000	53200	53900	36000
24	20100	19800	24000	20100	24900	25600	99100	56800	56000	51100	56300	36000
25	19700	23300	22000	20200	24900	22700	92900	53800	57700	48900	57600	36400
26	19300	24600	16000	20100	24400	21600	84800	51700	60600	48600	58200	37100
27	18500	24300	13000	19700	22600	22100	78900	50700	64000	47500	57800	37400
28	16100	30000	13000	19600	19200	21600	76700	48400	66600	45000	55700	36900
29	15200	37000	14000	19300	---	24000	74100	46500	66800	43400	53000	37500
30	17000	37000	17000	19100	---	28200	69800	42600	66600	44100	51600	37000
31	20300	---	17000	18400	---	31400	---	42000	---	43900	48500	---
TOTAL	549300	645400	861000	640600	546900	717800	2180900	1873700	1506500	1684900	1479400	1382200
MEAN	17720	21510	27770	20660	19530	23150	72700	60440	50220	54350	47720	46070
MAX	21400	37000	40000	27000	24900	31400	124000	74100	66800	65800	58200	61200
MIN	12000	18500	13000	17000	16500	17400	35300	42000	39500	43400	40500	36000
AC-FT	1090000	1280000	1708000	1271000	1085000	1424000	4326000	3716000	2988000	3342000	2934000	2742000
CFSM	0.30	0.36	0.47	0.35	0.33	0.39	1.23	1.02	0.85	0.92	0.81	0.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2002, BY WATER YEAR (WY)

MEAN	22370	23050	17870	15460	15740	30500	62660	49650	40070	32330	21990	22630
MAX	85950	50040	40440	30480	35900	86420	152600	119800	100200	118800	67560	69490
(WY)	1987	1972	1992	1983	1984	1983	1965	2001	1993	1993	1993	1986
MIN	6774	7367	6286	6742	7874	9023	12810	11930	8450	7063	5391	6790
(WY)	1934	1934	1934	1940	1977	1934	1931	1931	1934	1934	1934	1933

05378500 MISSISSIPPI RIVER AT WINONA, MN--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1928 - 2002	
ANNUAL TOTAL	17268900		14068600			
ANNUAL MEAN	47310		38540		29560	
HIGHEST ANNUAL MEAN					56850	1986
LOWEST ANNUAL MEAN					9742	1934
HIGHEST DAILY MEAN	236000	Apr 17	124000	Apr 19	264000	Apr 20 1965
LOWEST DAILY MEAN	12000	Oct 9	12000	Oct 9	2250	Dec 29 1933
ANNUAL SEVEN-DAY MINIMUM	14200	Oct 3	14200	Oct 3	3210	Dec 27 1933
MAXIMUM PEAK FLOW			124000	Apr 19	268000	Apr 19 1965
MAXIMUM PEAK STAGE			13.51	Apr 19	(a)20.77	Apr 19 1965
INSTANTANEOUS LOW FLOW					(b)1940	Dec 12 1980
ANNUAL RUNOFF (AC-FT)	34250000		27910000		21410000	
ANNUAL RUNOFF (CFSM)	0.80		0.65		0.50	
10 PERCENT EXCEEDS	106000		63800		60700	
50 PERCENT EXCEEDS	23000		37000		21300	
90 PERCENT EXCEEDS	17700		18000		10000	

(a) From highwater mark

(b) Result of ice jam upstream

TREMPEALEAU RIVER BASIN

053793305 TRAVERSE VALLEY CREEK, NORTH TRIBUTARY, NEAR INDEPENDENCE, WI

LOCATION.--Lat 44°23'55", long 91°33'05" in NE 1/4 SE 1/4 sec.11, T.22 N., R.10 W., Buffalo County, Hydrologic Unit 07040005, 100 ft upstream of culvert crossing at County Highway X at Bragger family farm, 6.7 mi west-northwest of Independence.

DRAINAGE AREA.--0.65 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 2001 to September 2002.

GAGE.--Water-stage recorder. Water levels are controlled by a 4.5 ft H flume. Elevation of gage is 970 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	e0.196
2	---	---	---	---	---	---	---	---	---	---	---	e0.195
3	---	---	---	---	---	---	---	---	---	---	---	0.190
4	---	---	---	---	---	---	---	---	---	---	---	0.185
5	---	---	---	---	---	---	---	---	---	---	---	0.182
6	---	---	---	---	---	---	---	---	---	---	---	0.185
7	---	---	---	---	---	---	---	---	---	---	---	0.185
8	---	---	---	---	---	---	---	---	---	---	---	0.204
9	---	---	---	---	---	---	---	---	---	---	---	0.176
10	---	---	---	---	---	---	---	---	---	---	---	0.173
11	---	---	---	---	---	---	---	---	---	---	---	0.172
12	---	---	---	---	---	---	---	---	---	---	---	0.173
13	---	---	---	---	---	---	---	---	---	---	---	0.170
14	---	---	---	---	---	---	---	---	---	---	---	0.167
15	---	---	---	---	---	---	---	---	---	---	---	0.173
16	---	---	---	---	---	---	---	---	---	---	---	0.172
17	---	---	---	---	---	---	---	---	---	---	---	0.184
18	---	---	---	---	---	---	---	---	---	---	---	0.179
19	---	---	---	---	---	---	---	---	---	---	---	0.183
20	---	---	---	---	---	---	---	---	---	---	---	0.180
21	---	---	---	---	---	---	---	---	---	---	---	0.189
22	---	---	---	---	---	---	---	---	---	---	---	0.194
23	---	---	---	---	---	---	---	---	---	---	---	0.240
24	---	---	---	---	---	---	---	---	---	---	---	0.183
25	---	---	---	---	---	---	---	---	---	---	---	0.175
26	---	---	---	---	---	---	---	---	---	---	---	0.174
27	---	---	---	---	---	---	---	---	---	---	---	0.174
28	---	---	---	---	---	---	---	---	---	---	---	0.171
29	---	---	---	---	---	---	---	---	---	---	---	0.170
30	---	---	---	---	---	---	---	---	---	---	---	0.174
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	5.468
MEAN	---	---	---	---	---	---	---	---	---	---	---	0.182
MAX	---	---	---	---	---	---	---	---	---	---	---	0.240
MIN	---	---	---	---	---	---	---	---	---	---	---	0.167
CFSM	---	---	---	---	---	---	---	---	---	---	---	0.28
IN.	---	---	---	---	---	---	---	---	---	---	---	0.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2001, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	---	---	---	---	---	0.181
MAX (WY)	---	---	---	---	---	---	---	---	---	---	---	0.18
MIN (WY)	---	---	---	---	---	---	---	---	---	---	---	2001
MIN (WY)	---	---	---	---	---	---	---	---	---	---	---	0.18
MIN (WY)	---	---	---	---	---	---	---	---	---	---	---	2001

SUMMARY STATISTICS

FOR 2001 WATER YEAR (SEPTEMBER)

ANNUAL TOTAL	5.468
ANNUAL MEAN	0.182
HIGHEST DAILY MEAN	0.240 Sep 23
LOWEST DAILY MEAN	0.167 Sep 14
ANNUAL SEVEN-DAY MINIMUM	0.174 Sep 24
MAXIMUM PEAK FLOW	0.522 Sep 23
MAXIMUM PEAK STAGE	0.401 Sep 23
INSTANTANEOUS LOW FLOW	0.163 Sep 14
ANNUAL RUNOFF (CFSM)	0.28
ANNUAL RUNOFF (INCHES)	0.31
10 PERCENT EXCEEDS	0.20
50 PERCENT EXCEEDS	0.18
90 PERCENT EXCEEDS	0.17

e Estimated

053793305 TRAVERSE VALLEY CREEK, NORTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.176	0.173	0.182	0.161	0.151	0.162	0.168	0.202	0.185	0.245	0.194	0.188
2	0.174	0.167	0.177	0.160	0.148	0.161	0.170	0.193	0.476	0.241	0.186	1.16
3	0.175	0.166	0.176	0.157	0.145	0.145	0.165	0.187	4.52	0.239	0.205	0.193
4	0.168	0.166	0.179	0.156	0.139	0.145	0.161	0.188	0.720	0.232	0.237	0.183
5	0.161	0.168	0.254	0.159	0.142	0.153	0.163	0.197	0.431	0.228	0.196	0.179
6	0.155	0.172	0.230	0.157	0.147	0.154	0.169	0.239	0.349	0.229	0.189	0.186
7	0.154	0.172	0.204	0.155	0.162	0.154	0.177	0.197	0.323	0.228	0.186	0.178
8	0.155	0.166	0.193	0.171	0.240	0.254	0.178	0.308	0.303	0.232	0.186	0.175
9	0.178	0.164	0.186	0.194	0.217	0.713	0.173	0.303	0.292	0.229	0.186	0.175
10	0.183	0.164	0.182	0.176	0.204	0.218	0.178	0.241	0.285	0.227	0.185	0.172
11	0.164	0.161	0.177	0.172	0.171	0.204	0.434	0.230	0.335	0.222	0.185	0.166
12	0.162	0.163	0.178	0.171	0.165	0.353	0.356	0.224	0.281	0.221	0.192	0.164
13	0.237	0.176	0.174	0.165	0.164	0.609	0.270	0.220	0.275	0.220	0.194	0.166
14	0.203	0.172	0.169	0.165	0.203	0.272	0.258	0.213	0.262	0.220	0.186	0.178
15	0.188	0.173	0.167	0.160	0.190	0.389	0.242	0.211	0.248	0.218	0.182	0.164
16	0.176	0.169	0.170	0.157	0.178	0.452	0.235	0.206	0.242	0.213	0.180	0.160
17	0.171	0.170	0.168	0.152	0.167	0.265	0.229	0.194	0.236	0.212	0.188	0.160
18	0.173	0.189	0.167	0.145	0.396	0.266	0.220	0.191	0.229	0.213	0.174	0.163
19	0.171	0.172	0.161	0.152	0.565	0.238	0.205	0.186	0.229	0.215	0.171	0.180
20	0.169	0.164	0.157	0.154	0.345	0.258	0.194	0.183	0.223	0.227	0.168	0.181
21	0.168	0.164	0.156	0.155	0.226	0.216	0.197	0.184	0.513	0.243	0.227	0.165
22	0.170	0.165	0.201	0.164	0.201	0.199	0.196	0.187	0.274	0.236	0.195	0.157
23	0.176	0.167	0.181	0.158	0.242	0.195	0.196	0.189	0.260	0.219	0.188	0.152
24	0.173	0.231	0.171	0.155	0.214	0.186	0.201	0.182	0.246	0.217	0.183	0.153
25	0.166	0.213	0.165	0.170	0.197	0.177	0.187	0.182	0.249	0.232	0.179	0.162
26	0.160	0.193	0.163	0.266	0.184	0.178	0.182	0.245	0.556	0.212	0.177	0.170
27	0.160	0.253	0.165	0.256	0.175	0.184	0.206	0.197	0.271	0.202	0.176	0.161
28	0.164	0.226	0.165	0.180	0.172	0.192	0.248	0.192	0.258	0.209	0.177	0.155
29	0.162	0.200	0.164	0.163	---	0.185	0.225	0.191	0.252	0.212	0.175	0.165
30	0.163	0.190	0.163	0.154	---	0.179	0.210	0.191	0.249	0.194	0.172	0.338
31	0.168	---	0.162	0.155	---	0.171	---	0.187	---	0.196	0.170	---
TOTAL	5.323	5.389	5.507	5.215	5.850	7.627	6.393	6.440	13.572	6.883	5.789	6.249
MEAN	0.172	0.180	0.178	0.168	0.209	0.246	0.213	0.208	0.452	0.222	0.187	0.208
MAX	0.237	0.253	0.254	0.266	0.565	0.713	0.434	0.308	4.52	0.245	0.237	1.16
MIN	0.154	0.161	0.156	0.145	0.139	0.145	0.161	0.182	0.185	0.194	0.168	0.152
CFSM	0.26	0.28	0.27	0.26	0.32	0.38	0.33	0.32	0.70	0.34	0.29	0.32
IN.	0.30	0.31	0.32	0.30	0.33	0.44	0.37	0.37	0.78	0.39	0.33	0.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

MEAN	0.171	0.179	0.178	0.168	0.208	0.245	0.214	0.207	0.452	0.222	0.187	0.194
MAX	0.17	0.18	0.18	0.17	0.21	0.25	0.21	0.21	0.45	0.22	0.19	0.21
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	0.17	0.18	0.18	0.17	0.21	0.25	0.21	0.21	0.45	0.22	0.19	0.18
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR (SEPTEMBER-DECEMBER)	FOR 2002 WATER YEAR	WATER YEARS 2001 - 2002 (SEPTEMBER-SEPTEMBER)
ANNUAL TOTAL	21.687	80.237	
ANNUAL MEAN	0.178	0.220	0.217
HIGHEST ANNUAL MEAN			0.22 2002
LOWEST ANNUAL MEAN			0.18 2001
HIGHEST DAILY MEAN	0.254 Dec 5	4.52 Jun 3	4.52 Jun 3 2002
LOWEST DAILY MEAN	0.154 Oct 7	0.139 Feb 4	0.139 Feb 4 2002
ANNUAL SEVEN-DAY MINIMUM	0.163 Oct 2	0.147 Jan 31	0.147 Jan 31 2002
MAXIMUM PEAK FLOW		104.2 Jun 3	104.2 Jun 3 2002
MAXIMUM PEAK STAGE		4.73 Jun 3	4.73 Jun 3 2002
INSTANTANEOUS LOW FLOW		0.119 Feb 4	0.119 Feb 4 2002
ANNUAL RUNOFF (CFSM)	0.27	0.34	0.33
ANNUAL RUNOFF (INCHES)	1.24	4.59	4.53
10 PERCENT EXCEEDS	0.20	0.26	0.26
50 PERCENT EXCEEDS	0.17	0.18	0.18
90 PERCENT EXCEEDS	0.16	0.16	0.16

TREMPEALEAU RIVER BASIN

053793305 TRAVERSE VALLEY CREEK, NORTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: September 2001 to September 2002.

INSTRUMENTATION.--Continuous water temperature recorder and water-quality sampler since September 2001.

REMARKS.--Records represent water temperature at sensor within 0.5°C. Record was complete in the 2002 water year. Chemical analyses by the Wisconsin State Laboratory of Hygiene. Samples collected during periods of non-stormflow are grab samples. Samples during storms are composite samples collected by an automatic point sampler. The sample volume is the stream discharge that occurs between the time of the first sample and the last sample. The storm volume is the stream discharge that occurs between the start of the storm and the end of the storm. A storm load (in pounds) can be computed by multiplying the storm volume (in thousands of cubic feet) by the constituent concentration (in mg/L) by a factor of 0.0624.

EXTREMES FOR CURRENT PERIOD.--

WATER TEMPERATURE.-- SEPTEMBER 2001: Maximum temperature, 20.0°C, Sept. 6; minimum 8.5°C, Sept. 25 and 30.
2002 WATER YEAR: Maximum temperature, 19.0°C, June 30 and July 1; minimum 0.5°C, Mar. 3-4, 9-10, 21.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	e18.0	e12.5	e14.5
2	---	---	---	---	---	---	---	---	---	e18.5	e13.5	e15.0
3	---	---	---	---	---	---	---	---	---	18.0	13.0	14.5
4	---	---	---	---	---	---	---	---	---	17.5	12.0	14.0
5	---	---	---	---	---	---	---	---	---	18.0	12.0	14.5
6	---	---	---	---	---	---	---	---	---	20.0	12.5	14.0
7	---	---	---	---	---	---	---	---	---	17.5	13.5	14.5
8	---	---	---	---	---	---	---	---	---	14.5	12.0	13.5
9	---	---	---	---	---	---	---	---	---	13.5	11.5	12.5
10	---	---	---	---	---	---	---	---	---	16.0	11.0	12.5
11	---	---	---	---	---	---	---	---	---	17.0	10.5	13.0
12	---	---	---	---	---	---	---	---	---	16.0	11.5	13.0
13	---	---	---	---	---	---	---	---	---	15.5	11.0	12.5
14	---	---	---	---	---	---	---	---	---	14.0	10.0	11.5
15	---	---	---	---	---	---	---	---	---	15.5	11.0	12.5
16	---	---	---	---	---	---	---	---	---	13.5	11.0	12.0
17	---	---	---	---	---	---	---	---	---	13.0	11.5	12.0
18	---	---	---	---	---	---	---	---	---	15.5	11.5	12.0
19	---	---	---	---	---	---	---	---	---	14.0	11.5	12.5
20	---	---	---	---	---	---	---	---	---	15.0	10.5	12.5
21	---	---	---	---	---	---	---	---	---	15.0	11.5	12.5
22	---	---	---	---	---	---	---	---	---	14.5	10.5	12.0
23	---	---	---	---	---	---	---	---	---	13.0	10.0	11.5
24	---	---	---	---	---	---	---	---	---	13.5	9.0	10.5
25	---	---	---	---	---	---	---	---	---	13.5	8.5	10.5
26	---	---	---	---	---	---	---	---	---	14.0	9.0	11.0
27	---	---	---	---	---	---	---	---	---	14.5	9.0	11.0
28	---	---	---	---	---	---	---	---	---	13.0	9.0	10.5
29	---	---	---	---	---	---	---	---	---	11.5	9.0	10.0
30	---	---	---	---	---	---	---	---	---	14.0	8.5	11.0
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	20.0	8.5	12.4

e Estimated

TREMPEALEAU RIVER BASIN

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053793305 TRAVERSE VALLEY CREEK, NORTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	15.0	10.0	12.0	13.0	9.0	10.5	7.0	5.0	6.5	3.5	2.0	2.5
2	15.0	9.5	12.0	11.0	7.5	9.0	7.5	4.5	6.0	3.5	1.5	2.0
3	12.0	10.5	11.5	11.5	7.0	8.5	8.0	5.0	6.5	2.5	1.0	2.0
4	12.0	9.5	10.5	11.0	7.0	8.5	10.0	7.5	8.5	4.5	2.5	3.5
5	12.5	8.0	9.5	11.0	6.5	8.5	11.0	6.5	9.0	5.5	3.5	4.5
6	11.5	7.0	8.5	12.5	8.5	9.5	8.0	5.5	7.0	4.5	1.5	3.5
7	11.5	6.0	8.5	12.0	8.5	10.0	7.0	4.5	6.0	3.5	1.0	2.5
8	10.5	8.0	9.5	10.0	6.5	8.5	7.5	4.0	5.5	6.0	2.5	4.0
9	11.0	9.5	10.5	10.0	6.0	7.5	6.5	4.0	5.0	6.5	4.0	5.0
10	12.5	10.0	11.5	10.5	6.5	8.0	7.5	4.5	5.5	5.5	3.5	4.5
11	13.5	9.0	10.5	10.0	6.0	7.5	7.0	4.5	5.5	6.5	3.5	4.5
12	13.5	8.5	10.0	10.0	5.5	7.5	7.0	5.0	6.5	6.0	3.0	4.5
13	11.5	9.5	10.5	11.0	8.5	9.5	6.5	5.0	5.5	5.0	3.0	3.5
14	11.5	9.0	10.0	11.0	9.5	10.0	5.5	4.0	4.5	4.5	3.0	4.0
15	10.5	8.5	9.5	12.5	9.0	10.5	7.0	4.0	5.5	4.5	3.5	4.0
16	11.0	7.5	9.0	11.5	8.0	9.0	7.5	6.0	7.0	4.5	1.5	3.0
17	11.0	6.5	8.5	12.0	8.0	10.0	7.0	5.0	6.0	4.0	1.0	2.0
18	11.0	8.0	9.0	11.0	8.5	10.0	7.5	4.5	5.5	2.0	1.0	1.5
19	11.0	7.5	9.0	9.0	6.0	7.5	5.5	3.5	4.5	3.5	1.0	2.0
20	10.0	7.5	8.5	8.0	5.0	6.5	6.0	3.0	4.0	4.5	2.0	3.0
21	12.0	8.0	9.0	9.5	6.0	7.5	5.0	2.5	3.5	5.0	2.5	3.5
22	11.0	7.5	9.0	9.5	6.5	7.5	6.0	4.0	4.5	6.0	3.0	4.0
23	12.5	10.0	10.5	10.0	8.0	9.0	4.5	2.5	3.5	5.0	3.5	4.0
24	11.0	7.5	9.5	10.0	9.0	9.5	3.5	1.5	2.5	5.5	2.5	3.5
25	8.0	7.0	7.5	9.5	7.0	8.0	3.5	1.5	2.5	7.0	2.5	4.5
26	8.0	6.5	7.0	7.0	5.0	6.5	3.5	1.5	2.5	7.0	3.0	4.0
27	9.5	6.5	7.5	7.5	5.0	7.0	4.5	2.0	3.0	7.0	4.0	4.5
28	11.0	6.5	8.5	7.0	6.5	7.0	4.0	1.5	2.5	5.0	3.5	4.5
29	10.5	8.0	9.0	8.0	6.5	7.0	2.5	1.0	1.5	4.0	3.0	3.5
30	8.5	7.5	8.0	7.5	6.5	7.0	3.0	1.5	2.0	4.5	3.0	3.5
31	11.0	8.5	10.0	---	---	---	2.5	1.0	1.5	4.0	1.5	3.0
MONTH	15.0	6.0	9.5	13.0	5.0	8.4	11.0	1.0	4.8	7.0	1.0	3.5
	FEBRUARY			MARCH			APRIL			MAY		
1	5.0	1.0	2.5	4.5	1.0	2.0	4.5	2.5	3.5	11.5	6.0	8.0
2	4.0	1.0	2.5	3.5	1.0	2.0	6.0	3.5	4.5	11.0	5.0	7.5
3	5.0	1.0	2.5	3.0	0.5	1.0	9.5	2.5	4.5	14.5	4.0	8.5
4	3.0	1.0	1.5	2.5	0.5	1.5	8.0	2.0	4.5	13.5	5.5	8.5
5	5.0	1.0	2.5	3.5	1.5	2.5	10.5	2.0	5.0	15.5	5.0	10.0
6	6.0	1.0	3.0	5.0	2.0	3.5	10.5	2.0	5.5	16.5	9.0	11.5
7	7.5	2.5	4.0	5.0	2.5	3.5	7.5	4.5	6.0	12.0	7.0	9.5
8	7.5	2.5	4.0	5.5	1.0	3.5	8.0	5.0	6.5	13.5	7.5	9.5
9	6.0	3.5	4.5	2.5	0.5	1.5	13.0	3.5	7.0	10.0	6.5	8.5
10	6.5	2.5	4.0	5.0	0.5	2.5	12.0	5.5	8.0	14.0	6.0	9.0
11	5.0	2.0	3.0	7.0	2.0	4.0	9.0	7.0	8.0	8.5	7.0	7.5
12	6.0	1.5	3.5	8.5	2.0	4.0	13.0	6.0	8.5	9.0	7.5	8.0
13	6.5	1.0	3.0	6.5	2.5	3.5	14.5	5.5	9.0	13.5	6.0	9.0
14	7.0	3.0	4.0	4.0	3.0	3.5	14.5	7.5	9.5	15.0	7.0	9.5
15	8.0	3.5	5.0	7.0	2.5	4.0	17.5	7.5	11.5	15.5	6.5	10.0
16	8.0	3.5	5.0	8.0	2.0	3.5	17.0	10.5	13.5	16.0	7.5	10.5
17	7.5	2.0	4.0	6.5	3.0	4.5	16.5	8.5	12.0	14.5	6.0	9.5
18	6.5	1.5	4.0	8.5	4.0	5.5	17.5	8.5	12.0	13.5	6.0	8.5
19	5.5	2.5	4.0	6.0	4.0	5.0	14.0	7.5	10.0	13.5	6.0	9.0
20	5.0	3.0	4.0	9.5	3.0	5.0	14.0	6.0	9.0	15.0	5.5	9.0
21	7.0	2.5	4.0	6.5	0.5	2.5	7.5	3.5	5.5	16.0	6.0	10.0
22	7.0	1.5	4.0	7.5	1.0	3.0	8.5	5.0	6.5	16.0	7.0	11.0
23	8.5	4.0	5.5	8.5	1.5	4.0	14.5	4.5	9.0	17.0	9.5	12.0
24	7.5	4.5	5.5	8.5	1.5	4.0	10.0	5.5	8.5	15.0	8.5	10.5
25	6.5	2.5	4.0	8.5	1.0	3.5	12.5	4.5	7.5	13.5	8.0	10.0
26	4.0	1.5	2.5	10.0	1.5	4.5	14.0	4.0	8.0	15.0	8.0	10.5
27	6.0	1.0	2.5	10.5	2.0	5.5	6.5	3.0	6.0	16.5	9.0	11.5
28	6.5	1.5	3.0	11.5	4.0	6.5	9.0	4.5	6.5	17.0	9.0	12.0
29	---	---	---	12.0	4.0	6.5	15.0	6.0	9.0	18.0	9.5	12.5
30	---	---	---	9.5	4.0	6.0	15.0	5.5	9.0	18.5	10.0	13.0
31	---	---	---	6.5	3.5	4.5	---	---	---	17.5	10.0	12.5
MONTH	8.5	1.0	3.6	12.0	0.5	3.8	17.5	2.0	7.8	18.5	4.0	9.9

TREMPEALEAU RIVER BASIN

053793305 TRAVERSE VALLEY CREEK, NORTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	18.0	10.0	12.5	19.0	13.0	15.0	16.5	12.0	14.0	15.5	12.0	13.5
2	15.0	10.0	11.5	18.5	13.0	14.5	16.5	11.5	13.5	17.5	12.5	15.0
3	11.5	9.5	10.0	16.5	12.0	14.0	14.5	11.5	13.0	16.5	12.0	13.5
4	12.0	9.5	10.5	17.5	11.5	13.5	16.0	12.5	13.5	17.0	11.5	13.5
5	15.0	8.5	11.0	17.0	11.5	13.5	15.5	12.5	13.5	16.5	12.0	13.5
6	16.0	9.0	11.5	17.0	12.0	13.5	15.5	12.0	13.0	17.0	13.0	14.0
7	17.0	10.0	12.5	18.0	11.5	14.0	16.0	11.0	13.0	17.5	12.5	14.0
8	14.0	10.0	11.5	17.5	12.5	14.0	16.0	11.5	13.0	17.5	12.0	14.0
9	17.0	9.5	12.5	18.0	12.0	14.0	16.0	12.0	13.5	17.5	13.0	14.5
10	15.5	10.0	12.5	14.5	12.5	13.0	15.5	12.0	13.5	15.5	12.0	13.5
11	16.5	11.0	13.0	17.0	11.5	13.5	16.5	12.0	13.5	15.5	11.5	13.0
12	16.5	10.0	12.5	17.0	11.0	13.0	15.0	12.5	13.5	16.0	11.0	13.0
13	15.0	10.0	12.0	16.5	11.0	13.0	14.0	12.0	12.5	15.0	12.0	13.0
14	15.0	10.0	11.5	17.5	11.0	13.5	16.0	11.5	13.0	13.5	12.0	12.5
15	16.5	9.5	12.0	17.0	11.5	13.5	15.0	12.0	13.0	15.0	10.5	12.0
16	17.0	9.5	12.0	17.0	11.5	13.5	16.0	11.5	13.0	15.5	10.0	12.0
17	17.0	10.5	12.5	17.5	12.0	14.0	16.0	11.5	13.5	15.5	11.0	12.5
18	17.0	10.0	12.5	15.0	12.0	13.0	15.0	11.0	12.5	14.0	12.0	13.0
19	15.0	12.0	13.0	15.0	12.0	13.0	15.0	11.0	12.5	14.5	12.5	13.5
20	18.0	11.5	14.0	14.5	12.0	13.0	15.5	10.5	12.5	13.0	11.5	12.5
21	16.0	11.5	12.5	18.5	12.5	15.0	13.5	12.5	12.5	12.5	10.5	11.5
22	18.0	11.5	13.5	17.0	12.5	14.0	13.5	12.5	13.0	13.0	10.0	11.0
23	15.5	11.5	13.0	16.0	12.0	13.5	13.0	12.0	12.5	12.5	9.0	10.5
24	18.0	11.0	14.0	15.0	12.0	13.0	15.0	11.5	13.0	13.0	8.5	10.5
25	17.0	12.5	14.0	13.0	12.0	12.5	15.0	11.5	13.0	12.0	10.5	11.0
26	17.5	11.5	14.5	16.5	11.5	13.5	15.5	11.5	13.0	11.0	10.5	10.5
27	16.0	11.0	13.0	16.5	12.0	13.5	15.5	12.0	13.0	13.5	10.0	11.0
28	16.5	11.0	13.0	17.0	12.0	14.0	15.0	12.0	13.5	11.0	9.0	10.5
29	18.0	11.0	14.0	16.0	12.5	14.0	15.5	12.0	13.0	13.0	11.0	11.5
30	19.0	12.0	14.5	18.0	12.0	14.0	15.0	11.5	13.0	14.5	11.5	12.5
31	---	---	---	17.0	12.5	14.0	15.5	12.0	13.0	---	---	---
MONTH	19.0	8.5	12.6	19.0	11.0	13.6	16.5	10.5	13.1	17.5	8.5	12.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	ANC WATER UNFLTRD FET LAB MG/L AS CACO3 (00417)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 2001													
11...	1245	.20	70	--	--	--	--	5	--	316	<.013	.15	.23
NOV													
29...	1300	.20	70	8.1	507	243	6.2	4	<2	320	<.013	.20	<.14
DEC													
27...	1150	.17	70	8.1	507	240	5.9	4	<2	310	<.013	.50	<.14
JAN 2002													
24...	1615	.16	70	8.2	503	240	6.1	5	<2	318	.016	<.14	<.14
FEB													
14...	1045	.17	70	8.1	503	240	6.0	10	2	314	<.013	.26	.52
MAR													
12...	1010	.20	70	8.2	494	235	6.0	5	3	296	<.013	<.14	.69
APR													
13...	1450	.26	70	--	--	--	--	8	--	--	<.013	--	.20
MAY													
16...	1145	.21	70	--	--	--	--	3	--	298	<.013	<.14	<.14
JUN													
14...	1130	.26	70	8.3	504	245	6.1	<3	<2	316	<.013	<.14	<.14
JUL													
18...	0955	.21	70	8.2	507	246	6.5	<2	<2	320	<.013	.30	<.14
AUG													
23...	1045	.19	70	8.2	504	243	6.1	4	1	322	<.013	.58	<.14
SEP													
25...	0740	.16	70	8.2	505	245	6.2	5	<2	318	<.013	.29	<.14

053793305 TRAVERSE VALLEY CREEK, NORTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	TRIAZIN SCREEN (ELISA) WAT,WH REC,AS ATRAZIN (UG/L) (34757)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 2001							
11...	2.77	.017	.015	.026	100	--	4.3
NOV							
29...	2.70	.017	.013	.022	10	--	4.4
DEC							
27...	2.62	.016	.009	.017	<10	--	5.0
JAN 2002							
24...	2.56	.013	--	.021	170	--	7.0
FEB							
14...	2.56	.013	--	.028	--	.2	11
MAR							
12...	2.66	.017	--	.027	<10	--	4.0
APR							
13...	2.47	.013	--	.025	--	--	--
MAY							
16...	2.21	.017	--	.022	--	.1	--
JUN							
14...	2.36	.013	--	.017	--	.1	--
JUL							
18...	2.22	.011	--	.018	--	--	--
AUG							
23...	2.39	.019	--	.027	--	--	--
SEP							
25...	2.44	.018	--	.028	--	--	--

COMPOSITE SAMPLES

Begin- ning Date	Begin- ning Time	Ending Date	Ending Time	RUNOFF VOLUME THOUSANDS OF CUBIC FEET (99904)	SAM- PLING METHOD, CODES (82398)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ANC WATER UNFLTRD FET LAB MG/L AS CACO3 (00417)	CHLO- RIDE, DIS- SOLVED AS CL) (MG/L AS CL) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, DIS- SOLVED AMMONIA (MG/L AS N) (00608)
20011009	2011	20011009	2351	3.041	50	--	--	--	--	8	--	316	<.013
20011013	1031	20011013	2118	11.794	50	--	--	--	--	15	--	308	<.013
20011205	1241	20011205	1811	7.465	50	8.0	411	195	15.8	760	130	1020	.049
20020126	1325	20020126	2120	11.984	50	8.2	343	154	5.4	54	13	312	.206
20020127	1241	20020127	2032	10.835	50	8.2	356	163	5.1	30	8	260	.166
20020218	1620	20020219	1629	50.898	50	7.8	295	131	4.5	109	20	300	.407
20020308	2014	20020309	1254	58.052	50	8.1	245	104	3.6	78	13	238	.492
20020411	1015	20020412	0847	43.667	50	--	--	--	--	227	--	--	.044
20020508	2058	20020509	0225	14.964	50	7.5	438	196	14.0	5010	355	5180	3.22
20020526	1613	20020526	1801	5.193	50	7.2	491	133	19.5	5040	620	5190	7.94
20020602	2317	20020603	0040	47.563	50	7.1	220	78	6.3	7130	795	6990	1.02
20020611	0431	20020611	0734	5.288	50	8.2	459	213	6.6	123	17	416	.065
20020621	0356	20020621	1714	33.169	50	7.7	314	152	4.4	3090	340	3250	.180
20020625	2356	20020626	0413	26.343	50	7.3	240	103	4.2	4490	420	4700	.149
20020721	1834	20020722	0045	6.938	50	8.3	473	226	6.6	6	2	298	.032
20020803	2234	20020804	0548	8.994	50	8.2	452	214	6.1	30	6	322	.022
20020821	1846	20020821	2222	4.795	50	8.1	437	208	5.5	39	--	294	.021
20020929	2329	20020930	0333	15.111	50	7.6	252	117	3.7	2320	280	2630	.107

TREMPEALEAU RIVER BASIN

053793305 TRAVERSE VALLEY CREEK, NORTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	TRIAZIN SCREEN (ELISA) WAT, WH REC, AS ATRAZIN (UG/L) (34757)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 2001									
09-09	.77	.51	2.57	.052	.044	.077	--	--	7.2
OCT									
13-13	.32	.56	2.64	.078	--	.107	--	--	14
DEC									
05-05	.56	4.3	2.37	.065	.052	1.43	2000	--	758
JAN 2002									
26-26	.93	1.6	2.17	.197	--	.321	--	--	53
JAN									
27-27	.74	1.2	2.03	.168	--	.265	--	--	31
FEB									
18-19	1.2	2.1	1.63	.324	--	.499	300	.1	112
MAR									
08-09	1.0	1.6	1.90	.255	--	.351	--	--	82
APR									
11-12	--	1.5	2.93	.066	--	.408	--	--	--
MAY									
08-09	7.1	25	2.39	1.24	--	6.99	--	.4	--
MAY									
26-26	10	35	12.4	.299	--	5.31	--	--	4590
JUN									
02-03	2.1	31	6.96	.463	--	6.31	--	--	7090
JUN									
11-11	.55	1.2	3.00	.090	--	.327	--	--	--
JUN									
21-21	.66	11	1.91	.195	--	3.23	--	--	3170
JUN									
25-26	.86	16	3.42	.251	--	4.46	--	--	4500
JUL									
21-22	.66	.37	2.26	.044	--	.063	--	--	--
AUG									
03-04	.29	.56	2.25	.078	--	.136	--	--	28
AUG									
21-21	.54	.43	1.99	.074	--	.130	--	--	31
SEP									
29-30	.61	12	1.67	.346	--	3.53	--	--	2500

STORM BEGIN- NING DATE	STORM BEGIN- NING TIME	STORM ENDING DATE	STORM ENDING TIME	STORM RUNOFF VOLUME, THOUSANDS OF CUBIC FEET	PEAK DISCHARGE (CFS)	NUMBER OF SUBSAMPLES
10-09-01	1925	10-10-01	0210	5.210	0.25	7
10-13-01	0830	10-13-01	1845	11.007	0.56	23
12-05-01	1200	12-05-01	1845	8.856	0.63	13
01-26-02	1215	01-26-02	2040	12.787	0.67	26
01-27-02	1130	01-27-02	1950	11.249	0.54	18
02-18-02	1315	02-19-02	1655	53.421	2.04	46
03-08-02	1900	03-09-02	1445	61.698	2.17	48
04-11-02	0830	04-12-02	0850	45.213	1.04	38
05-08-02	2000	05-09-02	0315	17.176	3.55	10
05-26-02	1545	05-26-02	1815	6.238	2.86	6
06-02-02	2250	06-03-02	0135	56.246	17.91	48
06-11-02	0120	06-11-02	0830	10.135	0.73	18
06-21-02	0130	06-21-02	1715	35.580	7.86	44
06-25-02	2330	06-26-02	0330	26.153	7.54	24
07-21-02	1730	07-22-02	0030	7.716	0.36	10
08-03-02	2200	08-04-02	0340	7.690	0.49	12
08-21-02	1800	08-21-02	2230	5.573	0.56	8
09-29-02	2230	09-30-02	0240	14.964	5.73	22

053793305 TRAVERSE VALLEY CREEK, NORTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

PRECIPITATION QUANTITY

PERIOD OF RECORD.--September 2001 to September 2002.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established September 2001. Rainfall estimated Sept. 1-6, 18-19, 2001, based on National Weather Service gage in Eau Claire; rainfall estimated to be 0.00 for Nov. 30, 2001, Jan. 22, Mar. 6, 11, 15-16, 18-19, Apr. 2-7, 22, 28, 2002, because recorded precipitation interpreted as collector snowmelt; rainfall estimated July 28-30, Sept. 1-2, 6, 10-11, and 19, 2002, due to equipment malfunction.

EXTREMES FOR CURRENT PERIOD.--

SEPTEMBER 2001: Maximum daily rainfall, 0.54 in., Sept. 8.

2002 WATER YEAR: Maximum daily rainfall, 2.36 in., June 3.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	e0.0
2	---	---	---	---	---	---	---	---	---	---	---	e0.0
3	---	---	---	---	---	---	---	---	---	---	---	e0.0
4	---	---	---	---	---	---	---	---	---	---	---	e0.0
5	---	---	---	---	---	---	---	---	---	---	---	e0.0
6	---	---	---	---	---	---	---	---	---	---	---	e0.39
7	---	---	---	---	---	---	---	---	---	---	---	0.07
8	---	---	---	---	---	---	---	---	---	---	---	0.54
9	---	---	---	---	---	---	---	---	---	---	---	0.0
10	---	---	---	---	---	---	---	---	---	---	---	0.0
11	---	---	---	---	---	---	---	---	---	---	---	0.0
12	---	---	---	---	---	---	---	---	---	---	---	0.0
13	---	---	---	---	---	---	---	---	---	---	---	0.0
14	---	---	---	---	---	---	---	---	---	---	---	0.0
15	---	---	---	---	---	---	---	---	---	---	---	0.03
16	---	---	---	---	---	---	---	---	---	---	---	0.0
17	---	---	---	---	---	---	---	---	---	---	---	0.22
18	---	---	---	---	---	---	---	---	---	---	---	e0.05
19	---	---	---	---	---	---	---	---	---	---	---	e0.03
20	---	---	---	---	---	---	---	---	---	---	---	0.24
21	---	---	---	---	---	---	---	---	---	---	---	0.08
22	---	---	---	---	---	---	---	---	---	---	---	0.53
23	---	---	---	---	---	---	---	---	---	---	---	0.43
24	---	---	---	---	---	---	---	---	---	---	---	0.0
25	---	---	---	---	---	---	---	---	---	---	---	0.0
26	---	---	---	---	---	---	---	---	---	---	---	0.0
27	---	---	---	---	---	---	---	---	---	---	---	0.0
28	---	---	---	---	---	---	---	---	---	---	---	0.0
29	---	---	---	---	---	---	---	---	---	---	---	0.0
30	---	---	---	---	---	---	---	---	---	---	---	0.0
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	2.61

e Estimated

TREMPEALEAU RIVER BASIN

053793305 TRAVERSE VALLEY CREEK, NORTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	e0.78
2	0.0	0.0	0.0	0.0	0.0	0.0	e0.0	0.0	1.52	0.0	0.0	e1.11
3	0.01	0.0	0.0	0.0	0.0	0.0	e0.0	0.0	2.36	0.0	0.92	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	e0.0	0.0	0.97	0.0	0.39	0.0
5	0.0	0.0	0.75	0.0	0.0	0.0	e0.0	0.80	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	e0.0	e0.0	0.18	0.0	0.0	0.0	e0.33
7	0.0	0.0	0.0	0.0	0.0	0.0	e0.0	0.0	0.06	0.0	0.0	0.0
8	0.0	0.02	0.0	0.0	0.0	0.03	0.02	1.04	0.0	0.08	0.0	0.0
9	0.75	0.0	0.0	0.0	0.0	0.01	0.0	0.01	0.0	0.0	0.0	0.0
10	0.20	0.0	0.0	0.0	0.03	0.0	0.08	0.0	0.0	0.0	0.0	e0.10
11	0.0	0.0	0.0	0.0	0.0	e0.0	1.50	0.25	0.91	0.0	0.0	e0.11
12	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.03	0.01	0.0	0.20	0.0
13	0.96	0.25	0.0	0.0	0.0	0.0	0.0	0.04	0.19	0.0	0.18	0.0
14	0.01	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.02	0.0	0.01	0.37
15	0.10	0.0	0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.0	0.0	0.01
16	0.0	0.0	0.02	0.0	0.02	e0.0	0.0	0.0	0.14	0.0	0.03	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.02	0.0	0.35	0.0
18	0.0	0.55	0.0	0.0	0.42	e0.0	0.10	0.0	0.0	0.05	0.01	0.0
19	0.06	0.0	0.0	0.0	0.73	e0.0	0.0	0.0	0.11	0.0	0.0	e0.46
20	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.11	0.26	0.02	0.39
21	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	1.51	1.06	1.33	0.0
22	0.0	0.0	0.57	e0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.14	0.0	0.0	0.01	0.0	0.0	0.0	0.26	0.0	0.06	0.01
24	0.01	0.89	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.03	0.0	0.22
25	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.73	0.39	0.0	0.19
26	0.0	0.35	0.0	0.0	0.0	0.0	0.0	1.01	0.25	0.0	0.0	0.39
27	0.0	0.44	0.0	0.0	0.0	0.0	0.68	0.03	0.0	0.0	0.0	0.03
28	0.0	0.0	0.0	0.0	0.0	0.05	e0.0	0.07	0.0	e0.42	0.0	0.13
29	0.0	0.0	0.0	0.0	---	0.0	0.0	0.0	0.0	e0.22	0.01	0.76
30	0.0	e0.0	0.0	0.0	---	0.05	0.0	0.0	0.0	e0.04	0.0	0.19
31	0.0	---	0.0	0.0	---	0.0	---	0.0	---	0.02	0.0	---
TOTAL	2.11	2.64	1.36	0.0	1.34	0.14	3.09	3.56	9.17	2.57	3.51	5.58

e Estimated

053793306 TRAVERSE VALLEY CREEK, SOUTH TRIBUTARY, NEAR INDEPENDENCE, WI

LOCATION.--Lat 44°23'44", long 91°33'13" in SE 1/4 SE 1/4 sec.11, T.22 N., R.10 W., Buffalo County, Hydrologic Unit 07040005, 1,300 ft upstream of confluence with north unnamed tributary at Bragger family farm, 6.7 mi west-northwest of Independence.

DRAINAGE AREA.--0.35 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 2001 to September 2002.

GAGE.--Water-stage recorder. Water levels are controlled by a 3.0 ft H flume. Elevation of gage is 965 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	e0.049
2	---	---	---	---	---	---	---	---	---	---	---	e0.049
3	---	---	---	---	---	---	---	---	---	---	---	e0.047
4	---	---	---	---	---	---	---	---	---	---	---	e0.046
5	---	---	---	---	---	---	---	---	---	---	---	e0.045
6	---	---	---	---	---	---	---	---	---	---	---	e0.046
7	---	---	---	---	---	---	---	---	---	---	---	e0.046
8	---	---	---	---	---	---	---	---	---	---	---	e0.051
9	---	---	---	---	---	---	---	---	---	---	---	e0.047
10	---	---	---	---	---	---	---	---	---	---	---	e0.046
11	---	---	---	---	---	---	---	---	---	---	---	e0.045
12	---	---	---	---	---	---	---	---	---	---	---	e0.044
13	---	---	---	---	---	---	---	---	---	---	---	e0.043
14	---	---	---	---	---	---	---	---	---	---	---	e0.042
15	---	---	---	---	---	---	---	---	---	---	---	e0.043
16	---	---	---	---	---	---	---	---	---	---	---	e0.042
17	---	---	---	---	---	---	---	---	---	---	---	e0.046
18	---	---	---	---	---	---	---	---	---	---	---	e0.045
19	---	---	---	---	---	---	---	---	---	---	---	e0.045
20	---	---	---	---	---	---	---	---	---	---	---	0.045
21	---	---	---	---	---	---	---	---	---	---	---	0.048
22	---	---	---	---	---	---	---	---	---	---	---	0.053
23	---	---	---	---	---	---	---	---	---	---	---	0.072
24	---	---	---	---	---	---	---	---	---	---	---	0.043
25	---	---	---	---	---	---	---	---	---	---	---	0.041
26	---	---	---	---	---	---	---	---	---	---	---	0.041
27	---	---	---	---	---	---	---	---	---	---	---	0.040
28	---	---	---	---	---	---	---	---	---	---	---	0.039
29	---	---	---	---	---	---	---	---	---	---	---	0.039
30	---	---	---	---	---	---	---	---	---	---	---	0.039
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	1.367
MEAN	---	---	---	---	---	---	---	---	---	---	---	0.046
MAX	---	---	---	---	---	---	---	---	---	---	---	0.072
MIN	---	---	---	---	---	---	---	---	---	---	---	0.039
CFSM	---	---	---	---	---	---	---	---	---	---	---	0.13
IN.	---	---	---	---	---	---	---	---	---	---	---	0.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2001, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	---	---	---	---	---	0.045
MAX	---	---	---	---	---	---	---	---	---	---	---	0.045
(WY)	---	---	---	---	---	---	---	---	---	---	---	2001
MIN	---	---	---	---	---	---	---	---	---	---	---	0.045
(WY)	---	---	---	---	---	---	---	---	---	---	---	2001

SUMMARY STATISTICS

FOR 2001 WATER YEAR
(SEPTEMBER)

ANNUAL TOTAL	1.367
ANNUAL MEAN	0.046
HIGHEST DAILY MEAN	0.072 Sep 23
LOWEST DAILY MEAN	0.039 Sep 28-30
ANNUAL SEVEN-DAY MINIMUM	0.040 Sep 24
MAXIMUM PEAK FLOW	0.224 Sep 23
MAXIMUM PEAK STAGE	0.293 Sep 23
INSTANTANEOUS LOW FLOW	0.037 Sep 28
ANNUAL RUNOFF (CFSM)	0.13
ANNUAL RUNOFF (INCHES)	0.15
10 PERCENT EXCEEDS	0.05
50 PERCENT EXCEEDS	0.05
90 PERCENT EXCEEDS	0.04

e Estimated

TREMPEALEAU RIVER BASIN

053793306 TRAVERSE VALLEY CREEK, SOUTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.039	0.045	0.050	0.025	0.028	0.035	0.038	0.053	0.050	0.063	0.049	0.056
2	0.039	0.044	0.047	0.025	0.028	0.035	0.041	0.050	0.093	0.062	0.047	0.193
3	0.040	0.044	0.046	0.025	0.027	0.033	0.039	0.052	1.23	0.063	0.065	0.044
4	0.038	0.044	0.045	0.026	0.027	0.031	0.037	0.052	0.204	0.062	0.084	0.040
5	0.038	0.046	0.074	0.026	0.027	0.031	0.039	0.058	0.151	0.062	0.053	0.038
6	0.038	0.047	0.055	0.026	0.028	0.032	0.042	0.077	0.121	0.062	0.049	0.044
7	0.039	0.048	0.050	0.025	0.029	0.032	0.049	0.055	0.135	0.062	0.049	0.039
8	0.040	0.047	0.047	0.029	0.031	0.073	0.047	0.097	0.084	0.066	0.049	0.038
9	0.055	0.047	0.045	0.031	0.033	0.183	0.042	0.091	0.079	0.063	0.049	0.038
10	0.056	0.046	0.045	0.027	0.033	0.051	0.045	0.071	0.073	0.062	0.049	0.039
11	0.046	0.046	0.044	0.027	0.030	0.054	0.142	0.073	0.106	0.059	0.047	0.038
12	0.044	0.046	0.047	0.028	0.030	0.092	0.099	0.069	0.072	0.060	0.052	0.038
13	0.079	0.051	0.044	0.028	0.029	0.148	0.072	0.066	0.077	0.059	0.054	0.039
14	0.051	0.046	0.043	0.027	0.033	0.065	0.069	0.063	0.072	0.059	0.050	0.048
15	0.048	0.046	0.046	0.027	0.035	0.079	0.060	0.062	0.070	0.059	0.047	0.041
16	0.045	0.045	0.044	0.027	0.032	0.096	0.057	0.059	0.071	0.058	0.047	0.041
17	0.044	0.046	0.043	0.026	0.029	0.063	0.060	0.055	0.070	0.057	0.054	0.041
18	0.045	0.058	0.044	0.026	0.080	0.074	0.055	0.055	0.065	0.061	0.046	0.043
19	0.045	0.048	0.041	0.025	0.154	0.059	0.050	0.054	0.065	0.061	0.046	0.055
20	0.045	0.046	0.038	0.026	0.115	0.076	0.048	0.052	0.061	0.065	0.046	0.055
21	0.044	0.047	0.036	0.027	0.065	0.050	0.055	0.053	0.145	0.081	0.091	0.045
22	0.044	0.048	0.058	0.028	0.055	0.048	0.054	0.054	0.080	0.066	0.058	0.044
23	0.046	0.049	0.042	0.027	0.071	0.051	0.051	0.054	0.078	0.058	0.052	0.045
24	0.046	0.079	0.040	0.027	0.059	0.045	0.052	0.052	0.068	0.059	0.048	0.047
25	0.044	0.058	0.033	0.028	0.048	0.044	0.046	0.054	0.067	0.072	0.046	0.053
26	0.042	0.059	0.029	0.029	0.043	0.047	0.045	0.111	0.126	0.060	0.044	0.058
27	0.042	0.081	0.028	0.036	0.041	0.055	0.063	0.061	0.074	0.056	0.043	0.052
28	0.044	0.063	0.027	0.031	0.038	0.065	0.066	0.058	0.070	0.059	0.043	0.050
29	0.043	0.055	0.026	0.029	---	0.050	0.056	0.057	0.067	0.059	0.042	0.054
30	0.044	0.053	0.025	0.029	---	0.044	0.053	0.054	0.064	0.049	0.041	0.095
31	0.045	---	0.025	0.029	---	0.040	---	0.052	---	0.051	0.040	---
TOTAL	1.398	1.528	1.307	0.852	1.278	1.881	1.672	1.924	3.788	1.895	1.580	1.551
MEAN	0.045	0.051	0.042	0.027	0.046	0.061	0.056	0.062	0.126	0.061	0.051	0.052
MAX	0.079	0.081	0.074	0.036	0.154	0.183	0.142	0.111	1.23	0.081	0.091	0.193
MIN	0.038	0.044	0.025	0.025	0.027	0.031	0.037	0.050	0.050	0.049	0.040	0.038
CFSM	0.13	0.15	0.12	0.08	0.13	0.17	0.16	0.18	0.36	0.17	0.15	0.15
IN.	0.15	0.16	0.14	0.09	0.14	0.20	0.18	0.20	0.40	0.20	0.17	0.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

MEAN	0.044	0.052	0.042	0.030	0.046	0.061	0.056	0.062	0.126	0.061	0.051	0.048
MAX	0.044	0.052	0.042	0.030	0.046	0.061	0.056	0.062	0.13	0.061	0.051	0.052
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	0.044	0.052	0.042	0.030	0.046	0.061	0.056	0.062	0.13	0.061	0.051	0.045
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR (SEPTEMBER-DECEMBER) FOR 2002 WATER YEAR WATER YEARS 2001 - 2002 (SEPTEMBER-SEPTEMBER)

ANNUAL TOTAL	5.600	20.654	
ANNUAL MEAN	0.046	0.057	
HIGHEST ANNUAL MEAN			0.056
LOWEST ANNUAL MEAN			0.057
HIGHEST DAILY MEAN			0.045
LOWEST DAILY MEAN	0.081 Nov 27	1.23 Jun 3	2001
ANNUAL SEVEN-DAY MINIMUM	0.025 Dec 30-31	(a)0.025 Dec 30	1.23 Jun 3 2002
MAXIMUM PEAK FLOW	0.028 Dec 25	0.025 Dec 29	(a)0.025 Dec 30 2001
MAXIMUM PEAK STAGE		31.9 Jun 3	0.025 Dec 29 2001
INSTANTANEOUS LOW FLOW		3.04 Jun 3	31.9 Jun 3 2002
ANNUAL RUNOFF (CFSM)		(a)0.024 Dec 30	3.04 Jun 3 2002
ANNUAL RUNOFF (INCHES)	0.13		(a)0.024 Dec 30 2001
10 PERCENT EXCEEDS	0.60		0.16
50 PERCENT EXCEEDS	0.05		2.17
90 PERCENT EXCEEDS	0.05		0.07
	0.04		0.05
			0.03

(a) Also occurred Dec. 31, 2001, and Jan. 1-3, 7,19, 2002

053793306 TRAVERSE VALLEY CREEK, SOUTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2001 to September 2002.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 2001 to September 2002.

INSTRUMENTATION.--Continuous water temperature recorder and water-quality sampler since October 2001.

REMARKS.--Records represent water temperature at sensor within 0.5°C. Record was complete in the 2002 water year. Chemical analyses by the Wisconsin State Laboratory of Hygiene. Samples collected during periods of non-stormflow are grab samples. Samples during storms are composite samples collected by an automatic point sampler. The sample volume is the stream discharge that occurs between the time of the first sample and the last sample. The storm volume is the stream discharge that occurs between the start of the storm and the end of the storm. A storm load (in pounds) can be computed by multiplying the storm volume (in thousands of cubic feet) by the constituent concentration (in mg/L) by a factor of 0.0624.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum temperature, 19.5°C, June 26, 30, and July 21; minimum 0.5°C, Feb. 18-19 and Mar. 8-9.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	e13.0	e9.5	e10.5	11.5	9.0	10.0	6.0	4.5	5.5	5.0	4.0	4.5
2	13.0	9.0	10.5	9.5	7.0	8.0	6.0	4.5	5.0	5.0	3.5	4.0
3	11.5	10.5	11.0	9.5	6.5	7.5	7.0	4.5	5.5	5.0	3.0	4.0
4	11.5	8.5	10.0	9.5	6.5	7.5	9.0	7.0	8.0	6.0	4.5	5.0
5	10.5	7.5	9.0	9.5	6.0	7.5	11.0	6.5	8.5	6.5	5.0	5.5
6	10.0	6.5	8.0	10.5	7.5	8.5	7.0	4.5	6.0	5.5	3.5	5.0
7	9.5	5.5	7.5	11.0	8.0	9.0	5.5	4.0	5.0	5.0	3.5	4.5
8	10.0	7.0	8.5	9.5	6.0	8.0	5.5	4.0	4.5	7.0	4.5	5.5
9	11.0	9.0	10.0	8.5	5.5	7.0	5.5	4.0	4.5	6.5	5.0	5.5
10	12.0	9.5	11.0	8.5	6.0	7.0	5.5	4.0	4.5	6.5	5.0	6.0
11	12.0	9.0	10.0	8.0	5.5	6.5	5.0	4.0	4.5	6.5	5.0	5.5
12	11.5	8.0	9.5	8.0	5.0	6.5	5.5	5.0	5.0	6.5	5.0	5.5
13	11.0	9.0	10.0	10.0	7.5	8.5	5.0	4.5	4.5	6.0	4.5	5.5
14	10.0	8.5	9.5	10.0	8.5	9.5	5.0	4.0	4.5	6.0	4.5	5.5
15	10.5	8.0	9.0	11.0	8.5	9.5	5.5	4.0	5.0	6.0	5.0	5.5
16	9.5	7.0	8.0	10.0	7.5	8.5	6.5	5.0	6.0	5.5	3.5	5.0
17	9.5	6.0	7.5	10.5	7.5	9.0	6.0	4.5	5.0	5.5	3.5	4.0
18	10.0	7.0	8.5	10.0	8.0	9.5	5.5	4.5	5.0	4.5	3.0	3.5
19	10.0	6.5	8.0	8.0	5.0	6.5	4.5	3.5	4.0	5.5	3.5	4.5
20	9.5	7.0	8.0	7.0	5.0	6.0	5.0	3.5	4.0	6.0	4.0	5.0
21	10.0	7.5	8.0	7.5	5.0	6.0	5.5	3.5	4.5	6.0	4.0	5.0
22	10.0	6.5	8.5	8.0	5.5	6.5	5.0	1.5	4.0	7.0	4.5	5.5
23	11.5	9.0	10.0	9.0	7.0	8.0	4.5	3.5	4.0	6.5	5.0	5.5
24	10.5	7.0	9.0	10.0	8.5	9.0	4.0	3.0	3.5	5.5	4.5	5.0
25	7.5	6.5	7.0	9.0	6.5	7.5	4.5	3.5	4.0	6.5	4.5	5.5
26	7.5	6.5	7.0	6.5	3.5	6.0	5.0	4.0	4.5	7.0	5.0	5.5
27	8.0	6.0	7.0	6.0	4.0	5.5	5.5	4.5	5.0	7.5	3.5	5.5
28	9.5	6.0	7.5	6.0	5.5	6.0	5.5	4.0	4.5	6.0	5.0	5.5
29	9.5	7.5	8.0	7.0	5.0	6.0	4.5	3.5	4.0	5.5	4.5	5.0
30	8.5	7.0	8.0	7.0	5.5	6.0	5.0	3.5	4.5	6.0	4.5	5.0
31	10.0	8.5	9.5	---	---	---	4.5	3.5	4.0	6.0	4.0	5.0
MONTH	13.0	5.5	8.8	11.5	3.5	7.5	11.0	1.5	4.9	7.5	3.0	5.1

TREMPEALEAU RIVER BASIN

053793306 TRAVERSE VALLEY CREEK, SOUTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

DAY	WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002											
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	6.0	3.5	4.5	5.5	3.0	4.0	5.5	4.0	4.5	11.5	6.0	8.0
2	6.5	3.0	4.5	5.0	3.0	4.0	6.5	4.0	5.0	11.0	5.5	7.5
3	6.0	3.0	4.5	5.0	2.0	3.0	9.0	3.5	5.0	14.5	4.5	8.5
4	5.0	3.0	3.5	5.0	2.0	3.5	9.0	3.5	5.5	13.0	6.0	8.5
5	5.5	3.5	4.0	5.5	3.0	4.5	9.5	3.5	5.5	15.0	5.0	10.0
6	6.5	3.5	4.5	7.0	4.0	5.0	10.0	3.5	6.0	17.0	9.0	11.5
7	7.0	4.5	5.5	6.5	4.0	5.0	7.0	5.0	6.0	12.5	7.5	9.5
8	7.5	4.5	5.5	6.0	0.5	4.0	7.5	5.5	6.5	13.0	7.5	9.5
9	7.0	4.5	5.5	2.5	0.5	1.5	12.5	4.5	7.5	11.0	6.5	8.5
10	6.0	4.0	5.0	5.5	1.5	3.5	11.5	6.0	8.0	14.5	5.5	9.0
11	6.5	4.0	5.0	6.5	2.5	4.0	8.5	6.5	8.0	9.0	7.0	7.5
12	6.0	3.5	5.0	7.0	1.5	3.5	13.0	6.0	8.5	9.5	7.0	8.0
13	6.5	3.5	4.5	6.0	1.0	3.0	14.5	5.0	8.5	14.5	6.0	9.0
14	7.0	4.0	5.5	4.5	3.0	3.5	14.5	7.5	9.5	15.5	7.0	10.0
15	7.0	4.0	5.5	6.5	2.0	4.0	16.5	8.0	11.0	16.0	7.0	10.5
16	6.5	4.5	5.5	7.0	2.5	4.0	15.5	9.5	12.0	16.0	8.0	11.0
17	7.0	4.0	5.0	6.0	3.0	4.5	15.5	8.5	11.5	15.0	6.0	9.5
18	7.5	0.5	4.5	7.5	3.5	5.0	16.0	8.5	11.5	13.5	6.0	9.0
19	4.0	0.5	2.5	6.0	4.0	5.0	13.5	7.5	9.5	13.5	5.5	9.0
20	3.5	1.0	2.5	8.0	3.5	5.0	13.5	6.0	9.0	15.5	5.0	9.5
21	5.0	3.0	3.5	6.0	2.5	3.5	7.5	4.0	5.5	16.0	6.0	10.0
22	5.5	3.0	4.0	6.5	3.0	4.0	8.0	5.0	6.5	16.5	7.0	11.0
23	6.5	2.5	4.5	7.5	3.0	4.5	14.0	5.0	9.0	17.0	9.5	12.0
24	6.0	4.0	4.5	7.5	3.0	4.5	10.0	6.0	8.5	16.0	8.5	11.0
25	6.0	4.0	4.5	7.0	3.0	4.5	12.0	5.0	7.5	15.0	8.0	10.5
26	5.0	3.5	4.0	7.5	3.5	4.5	13.5	4.0	8.0	15.0	8.0	11.0
27	5.5	3.0	4.0	8.0	3.5	5.0	7.0	1.5	5.5	18.0	9.5	12.5
28	6.5	3.5	4.5	9.0	4.5	6.0	9.0	3.5	6.0	17.5	9.5	12.5
29	---	---	---	10.5	4.5	6.5	14.5	6.0	8.5	19.0	10.5	13.5
30	---	---	---	9.0	4.5	6.0	14.5	5.5	9.0	19.0	11.0	13.5
31	---	---	---	6.5	4.0	5.0	---	---	---	18.0	10.5	13.0
MONTH	7.5	0.5	4.5	10.5	0.5	4.3	16.5	1.5	7.8	19.0	4.5	10.1
DAY	WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002											
	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.0	10.5	13.0	19.0	14.0	15.5	16.0	12.5	14.5	19.0	12.5	14.0
2	15.5	10.0	11.5	18.5	14.0	15.5	15.0	12.0	13.0	17.5	13.0	15.0
3	12.0	10.0	11.0	18.0	13.0	15.5	18.0	11.5	13.5	14.0	12.5	13.0
4	11.5	10.0	10.5	18.0	12.5	14.5	18.0	14.0	15.0	14.0	11.5	12.5
5	16.5	9.0	12.5	17.5	12.5	14.0	15.5	13.0	14.0	14.0	12.5	13.0
6	17.5	9.5	13.0	18.0	13.0	15.0	14.5	12.0	13.0	15.0	12.5	14.0
7	18.5	11.0	13.5	19.0	13.0	15.5	14.5	11.5	13.0	14.5	13.0	13.5
8	15.5	11.5	13.0	18.0	14.0	15.5	15.0	12.0	13.5	14.5	12.5	13.5
9	18.0	11.0	14.0	19.0	14.0	15.5	15.0	12.5	13.5	14.5	13.0	13.5
10	16.0	11.5	13.5	15.0	13.0	14.0	15.0	12.5	13.5	14.0	12.0	13.5
11	17.5	12.5	14.5	17.0	12.0	14.0	15.5	12.5	13.5	13.5	11.5	12.5
12	17.5	11.0	13.5	17.5	11.5	13.5	15.0	13.5	14.0	13.5	11.0	12.0
13	16.5	11.0	13.0	17.0	11.5	13.5	14.5	13.0	13.5	13.5	12.0	12.5
14	16.5	10.5	12.0	17.0	12.0	14.0	14.5	12.0	13.0	14.0	12.5	13.0
15	16.5	10.5	12.5	17.0	12.5	14.5	14.5	12.5	13.0	13.0	10.5	11.5
16	16.5	10.0	12.5	17.0	12.5	14.5	14.5	12.0	13.0	13.0	9.5	11.5
17	17.0	11.0	13.0	17.0	13.0	14.5	14.5	11.5	13.5	13.5	10.5	12.0
18	17.0	11.0	13.0	16.0	13.5	14.5	14.0	11.0	12.0	13.5	12.0	12.5
19	15.0	12.5	13.0	16.0	13.5	14.5	14.0	11.0	12.5	15.0	13.0	13.5
20	17.5	12.0	14.0	16.0	13.0	14.5	14.0	10.0	12.0	14.0	12.0	13.0
21	16.0	12.0	14.0	19.5	14.0	16.0	17.0	12.5	14.0	12.0	10.5	11.5
22	19.0	13.0	15.0	17.5	13.0	15.0	14.0	13.0	13.5	11.5	9.5	10.5
23	17.5	13.0	14.5	15.5	12.5	13.5	14.0	13.0	13.5	11.0	8.5	9.5
24	18.5	12.5	15.0	15.0	12.5	13.0	14.5	13.0	13.5	11.0	8.0	9.5
25	17.5	13.0	15.0	15.0	13.0	13.5	14.5	12.5	13.5	11.5	10.5	11.0
26	19.5	13.5	16.0	16.5	13.0	14.0	15.0	12.0	13.5	11.0	10.0	10.5
27	17.5	12.5	14.5	16.0	13.0	14.5	14.5	12.5	13.5	12.0	9.5	10.5
28	18.0	12.5	14.5	18.0	13.5	15.0	14.5	13.0	13.5	11.0	8.5	10.0
29	19.0	13.0	15.5	16.5	13.5	15.0	15.0	12.5	13.5	13.0	11.0	11.5
30	19.5	13.5	16.0	16.5	13.0	14.5	14.5	12.0	13.0	14.5	11.5	13.0
31	---	---	---	16.5	13.0	14.5	14.5	12.5	13.0	---	---	---
MONTH	19.5	9.0	13.6	19.5	11.5	14.5	18.0	10.0	13.4	19.0	8.0	12.2

e Estimated

053793306 TRAVERSE VALLEY CREEK, SOUTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	ANC WATER UNFLTRD FET LAB MG/L AS CACO3 (00417)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 2001													
11...	1225	.05	70	--	--	--	--	2	--	330	.017	<.14	.20
NOV 29...	1025	.05	70	8.0	529	260	6.3	3	<2	342	.114	1.5	1.8
DEC 27...	1250	.03	70	8.1	529	260	6.2	<2	<2	322	<.013	.44	<.14
JAN 2002													
24...	1635	.03	70	7.9	528	257	5.9	<2	<2	320	.020	<.14	<.14
FEB 14...	1110	.03	70	8.0	529	258	5.7	<2	<2	316	<.013	.31	.49
MAR 12...	1045	.05	70	8.1	524	254	6.5	<2	<2	314	<.013	<.14	<.14
APR 13...	1530	.07	70	--	--	--	--	<2	--	--	<.013	--	.21
MAY 16...	1015	.06	70	--	--	--	--	3	--	322	.019	.22	<.14
JUN 03...	0151	.95	50	--	--	--	--	--	--	--	--	--	--
03...	0245	.56	50	--	--	--	--	--	--	--	--	--	--
03...	0331	4.7	50	--	--	--	--	--	--	--	--	--	--
03...	0347	32	50	--	--	--	--	--	--	--	--	--	--
14...	1235	.07	70	8.2	541	267	6.8	5	<2	334	.034	.18	.27
JUL 18...	1005	.06	70	8.1	536	266	6.0	9	<2	340	.028	.37	<.14
AUG 23...	1200	.05	70	8.1	529	263	5.8	12	3	328	.022	.36	.16
SEP 25...	1040	.05	70	8.2	524	261	5.8	3	<2	333	.024	.29	.14

Date	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	TRIAZIN SCREEN (ELISA) WAT, WH REC, AS ATRAZIN (UG/L) (34757)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 2001							
11...	1.28	.042	.036	.066	120	--	<2.0
NOV 29...	1.51	.044	.035	.049	720	--	<2.0
DEC 27...	1.77	.021	.019	.027	30	--	<2.0
JAN 2002							
24...	1.69	.023	--	.030	<10	--	<2.0
FEB 14...	1.68	.023	--	.032	--	<.1	<2.0
MAR 12...	1.68	.029	--	.040	<10	--	<2.0
APR 13...	2.51	.037	--	.048	--	--	--
MAY 16...	1.65	.035	--	.053	--	<.1	--
JUN 03...	--	--	.336	3.01	--	--	2130
03...	--	--	.310	1.60	--	--	789
03...	--	--	.380	4.61	--	--	3840
03...	--	--	.164	7.30	--	--	9630
14...	1.90	.035	--	.076	--	<.1	--
JUL 18...	1.73	.038	--	.085	--	--	--
AUG 23...	1.74	.046	--	.098	--	--	--
SEP 25...	1.56	.037	--	.062	--	--	--

TREMPEALEAU RIVER BASIN

053793306 TRAVERSE VALLEY CREEK, SOUTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

COMPOSITE SAMPLES

Begin- ning Date	Begin- ning Time	Ending Date	Ending Time	RUNOFF VOLUME THOUSAND OF CUBIC FEET (99904)	SAM- PLING METHOD, CODES (82398)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ANC WATER UNFLTRD FET LAB MG/L AS CACO3 (00417)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
20011009	1956	20011010	0103	1.668	50	--	--	--	--	27	--	342	<.013
20011013	1030	20011013	1741	3.620	50	--	--	--	--	72	--	352	<.013
20011205	1240	20011205	1638	2.350	50	7.9	373	176	11.1	440	105	724	.290
20020218	1728	20020219	1551	10.601	50	7.9	355	164	5.4	77	17	312	.426
20020219	1729	20020220	0326	9.971	50	7.8	307	137	4.9	99	20	304	.541
20020220	1136	20020222	0611	10.679	50	8.4	507	247	6.3	4	<2	320	.041
20020308	2031	20020309	2340	18.939	50	8.1	267	117	3.8	52	8	220	.314
20020411	1004	20020412	0740	13.928	50	--	--	--	--	36	--	--	.039
20020508	2052	20020509	0334	5.797	50	8.0	350	169	4.4	940	68	1150	.295
20020526	1605	20020526	1855	4.933	50	7.3	265	119	4.3	2090	308	2190	.839
20020602	2323	20020603	0125	6.385	50	7.2	211	95	3.0	2240	336	2340	.376
20020611	0427	20020611	0718	2.134	50	8.2	459	223	6.1	155	29	436	.110
20020621	0335	20020621	1620	8.899	50	7.9	400	193	5.4	470	80	732	.066
20020625	2358	20020626	0342	4.743	50	7.6	337	160	4.9	1150	205	1360	.158
20020721	1807	20020722	0045	3.249	50	8.1	482	227	9.0	141	30	428	.259
20020803	2233	20020804	0616	5.011	50	7.8	378	172	6.7	464	84	740	.072
20020821	1836	20020821	2329	3.344	50	7.9	385	183	6.0	362	76	592	.041
20020901	2214	20020902	0558	14.567	50	7.5	222	102	3.9	1790	280	1910	.196
20020929	2335	20020930	0247	3.637	50	7.8	307	140	4.7	650	125	858	.042

053793306 TRAVERSE VALLEY CREEK, SOUTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	TRIAZIN SCREEN (ELISA) WAT, WH REC, AS ATRAZIN (UG/L) (34757)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 2001									
09-10	.82	.99	.893	.330	.294	.471	--	--	25
OCT 13-13	.48	1.2	.878	.293	.070	.610	--	--	87
DEC 05-05	1.1	4.5	1.03	.348	.062	.789	110000	--	474
FEB 2002									
18-19	1.4	2.3	1.05	.365	--	.596	500	--	78
FEB 19-20	1.4	2.5	.966	.466	--	.732	--	<.1	101
FEB 20-22	.28	.26	1.62	.065	--	.083	--	--	6.0
MAR 08-09	.84	1.2	1.35	.237	--	.352	--	--	50
APR 11-12	--	.83	3.13	.101	--	.186	--	--	--
MAY 08-09	.87	6.3	1.37	.203	--	1.70	--	.2	930
MAY 26-26	1.9	13	1.92	.270	--	2.86	--	--	2020
JUN 02-03	1.3	13	1.97	.470	--	3.24	--	--	2170
JUN 11-11	.55	2.0	1.32	.148	--	.525	--	--	--
JUN 21-21	.51	3.4	1.18	.198	--	.511	--	--	464
JUN 25-26	.76	7.9	1.39	.285	--	2.13	--	--	1140
JUL 21-22	<.14	2.2	1.72	.172	--	.610	--	--	--
AUG 03-04	.67	4.2	1.50	.266	--	1.49	--	--	484
AUG 21-21	.61	3.3	1.13	.283	--	1.23	--	--	354
SEP 01-02	1.0	11	1.01	.448	--	3.12	--	--	1730
SEP 29-30	.62	5.5	1.32	.383	--	1.97	--	--	668

STORM BEGIN- NING DATE	STORM BEGIN- NING TIME	STORM ENDING DATE	STORM ENDING TIME	STORM RUNOFF VOLUME, THOUSANDS OF CUBIC FEET	PEAK DISCHARGE (CFS)	NUMBER OF SUBSAMPLES
10-09-01	1920	10-10-01	0155	1.979	0.11	10
10-13-01	0830	10-13-01	1800	4.130	0.21	18
12-05-01	1200	12-05-01	1650	2.730	0.27	11
02-18-02	1545	02-19-02	1655	11.197	0.48	26
02-19-02	1655	02-20-02	0630	11.534	0.60	22
02-20-02	0630	02-22-02	0611	12.528	0.11	25
03-08-02	1855	03-09-02	1030	15.803	0.68	42
04-11-02	0800	04-12-02	0400	12.969	0.33	22
05-08-02	1945	05-09-02	0205	5.616	0.92	10
05-26-02	1540	05-26-02	1850	5.227	1.89	12
06-02-02	2250	06-03-02	0130	6.826	2.02	19
06-11-02	0115	06-11-02	0815	3.879	0.26	6
06-21-02	0130	06-21-02	1630	9.625	0.75	20
06-25-02	2330	06-26-02	0430	5.365	1.06	13
07-21-02	1730	07-22-02	0030	3.326	0.18	11
08-03-02	2200	08-04-02	0410	4.657	0.38	16
08-21-02	1800	08-21-02	2230	3.292	0.40	11
09-01-02	2115	09-02-02	0530	14.688	5.18	44
09-29-02	2230	09-30-02	0235	3.828	0.88	13

TREMPEALEAU RIVER BASIN

053793306 TRAVERSE VALLEY CREEK, SOUTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

PRECIPITATION QUANTITY

PERIOD OF RECORD.--September 2001 to September 2002.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established September 2001. Rainfall estimated Sept. 1-19, 2001, based on National Weather Service gage in Eau Claire; rainfall estimated to be 0.00 for Nov. 30, 2001, Jan. 22, Feb. 6, 21-22, Mar. 6-7, 11-12, 15-16, 18-19, Apr. 2-3, 5, 7, 22-23, 28-29, 2002, because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR CURRENT PERIOD.--

SEPTEMBER 2001: Maximum daily rainfall, 0.57 in., Sept. 22.

2002 WATER YEAR: Maximum daily rainfall, 2.31 in., June 3.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	e0.0
2	---	---	---	---	---	---	---	---	---	---	---	e0.0
3	---	---	---	---	---	---	---	---	---	---	---	e0.0
4	---	---	---	---	---	---	---	---	---	---	---	e0.0
5	---	---	---	---	---	---	---	---	---	---	---	e0.0
6	---	---	---	---	---	---	---	---	---	---	---	e0.39
7	---	---	---	---	---	---	---	---	---	---	---	e0.07
8	---	---	---	---	---	---	---	---	---	---	---	e0.54
9	---	---	---	---	---	---	---	---	---	---	---	e0.0
10	---	---	---	---	---	---	---	---	---	---	---	e0.0
11	---	---	---	---	---	---	---	---	---	---	---	e0.0
12	---	---	---	---	---	---	---	---	---	---	---	e0.0
13	---	---	---	---	---	---	---	---	---	---	---	e0.0
14	---	---	---	---	---	---	---	---	---	---	---	e0.0
15	---	---	---	---	---	---	---	---	---	---	---	e0.03
16	---	---	---	---	---	---	---	---	---	---	---	e0.0
17	---	---	---	---	---	---	---	---	---	---	---	e0.22
18	---	---	---	---	---	---	---	---	---	---	---	e0.05
19	---	---	---	---	---	---	---	---	---	---	---	e0.03
20	---	---	---	---	---	---	---	---	---	---	---	0.25
21	---	---	---	---	---	---	---	---	---	---	---	0.08
22	---	---	---	---	---	---	---	---	---	---	---	0.57
23	---	---	---	---	---	---	---	---	---	---	---	0.46
24	---	---	---	---	---	---	---	---	---	---	---	0.0
25	---	---	---	---	---	---	---	---	---	---	---	0.0
26	---	---	---	---	---	---	---	---	---	---	---	0.0
27	---	---	---	---	---	---	---	---	---	---	---	0.0
28	---	---	---	---	---	---	---	---	---	---	---	0.0
29	---	---	---	---	---	---	---	---	---	---	---	0.0
30	---	---	---	---	---	---	---	---	---	---	---	0.0
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	2.69

e Estimated

053793306 TRAVERSE VALLEY CREEK, SOUTH TRIBUTARY, NEAR INDEPENDENCE, WI--Continued

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.01	0.84
2	0.0	0.0	0.0	0.0	0.0	0.0	e0.0	0.0	1.35	0.0	0.0	1.25
3	0.0	0.0	0.0	0.0	0.0	0.0	e0.0	0.0	2.31	0.0	1.04	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.98	0.0	0.40	0.0
5	0.0	0.0	0.79	0.0	0.0	0.0	e0.0	0.79	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	e0.0	e0.0	0.0	0.18	0.0	0.0	0.0	0.29
7	0.0	0.0	0.0	0.0	0.0	e0.0	e0.0	0.0	0.07	0.0	0.0	0.0
8	0.0	0.03	0.0	0.0	0.0	0.0	0.03	1.09	0.0	0.08	0.0	0.0
9	0.72	0.0	0.0	0.0	0.0	0.01	0.0	0.03	0.0	0.01	0.0	0.0
10	0.19	0.0	0.0	0.0	0.04	0.0	0.08	0.0	0.0	0.0	0.0	0.10
11	0.21	0.0	0.0	0.0	0.0	e0.0	1.56	0.19	0.98	0.0	0.0	0.11
12	0.0	0.0	0.01	0.0	0.0	e0.0	0.0	0.02	0.0	0.0	0.22	0.0
13	1.02	0.22	0.0	0.0	0.0	0.0	0.0	0.04	0.22	0.0	0.18	0.0
14	0.01	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.03	0.0	0.01	0.41
15	0.10	0.0	0.0	0.0	0.0	e0.0	0.0	0.0	0.0	0.0	0.0	0.01
16	0.0	0.0	0.01	0.0	0.03	e0.0	0.0	0.0	0.14	0.0	0.01	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.02	0.0	0.37	0.0
18	0.0	0.61	0.0	0.0	0.40	e0.0	0.08	0.0	0.0	0.04	0.0	0.01
19	0.08	0.0	0.0	0.0	0.74	e0.0	0.0	0.0	0.10	0.0	0.0	0.52
20	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.12	0.23	0.01	0.41
21	0.0	0.0	0.0	0.0	e0.0	0.0	0.07	0.0	1.52	1.13	1.38	0.0
22	0.0	0.0	0.55	e0.0	e0.0	0.0	e0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.12	0.0	0.0	0.01	0.0	e0.0	0.0	0.24	0.0	0.07	0.01
24	0.01	0.84	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.02	0.0	0.23
25	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.06	0.63	0.43	0.0	0.21
26	0.0	0.28	0.0	0.0	0.0	0.0	0.0	1.02	0.28	0.0	0.0	0.43
27	0.0	0.44	0.0	0.0	0.0	0.0	0.57	0.03	0.0	0.0	0.0	0.04
28	0.0	0.0	0.0	0.0	0.0	0.04	e0.0	0.07	0.0	0.44	0.0	0.12
29	0.0	0.0	0.0	0.0	---	0.0	e0.0	0.0	0.0	0.22	0.0	0.83
30	0.0	e0.0	0.0	0.0	---	0.06	0.0	0.0	0.0	0.03	0.01	0.21
31	0.0	---	0.0	0.0	---	0.0	---	0.0	---	0.03	0.0	---
TOTAL	2.34	2.55	1.37	0.0	1.39	0.11	3.03	3.56	8.99	2.66	3.71	6.03

e Estimated

TREMPEALEAU RIVER BASIN

442405091333300 TRAVERSE VALLEY CREEK TRIBUTARY, RAIN GAGE #1, NEAR INDEPENDENCE, WI

LOCATION.--Lat 44°24'05", long 91°33'33", in NE ¼ NW ¼ sec.11, T.22 N., R.10 W., Buffalo County, Hydrologic Unit 07040005, at hilltop of point 0.5 mi northwest of Bragger family farm and 7.0 mi west-northwest of Independence.

PERIOD OF RECORD.--May to September 2002.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established May 17, 2002. Rainfall for May 1-17 estimated from rain gages at Traverse Valley Creek, North and South Tributaries.

EXTREMES FOR CURRENT PERIOD.--Maximum daily rainfall, 2.20 in., June 3.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e0.04	0.0	0.0	0.0	0.80
2	---	---	---	---	---	---	---	e0.00	1.53	0.0	0.0	1.12
3	---	---	---	---	---	---	---	e0.00	2.20	0.0	1.02	0.0
4	---	---	---	---	---	---	---	e0.00	0.99	0.0	0.39	0.0
5	---	---	---	---	---	---	---	e0.79	0.0	0.0	0.0	0.0
6	---	---	---	---	---	---	---	e0.18	0.0	0.0	0.0	0.29
7	---	---	---	---	---	---	---	e0.00	0.05	0.0	0.0	0.0
8	---	---	---	---	---	---	---	e1.08	0.0	0.09	0.0	0.0
9	---	---	---	---	---	---	---	e0.03	0.0	0.0	0.0	0.0
10	---	---	---	---	---	---	---	e0.00	0.0	0.0	0.0	0.04
11	---	---	---	---	---	---	---	e0.20	0.92	0.0	0.0	0.0
12	---	---	---	---	---	---	---	e0.02	0.0	0.0	0.14	0.0
13	---	---	---	---	---	---	---	e0.03	0.18	0.0	0.21	0.0
14	---	---	---	---	---	---	---	e0.00	0.03	0.0	0.01	0.40
15	---	---	---	---	---	---	---	e0.00	0.0	0.0	0.0	0.0
16	---	---	---	---	---	---	---	e0.00	0.14	0.0	0.02	0.0
17	---	---	---	---	---	---	---	e0.00	0.01	0.0	0.33	0.0
18	---	---	---	---	---	---	---	0.0	0.0	0.04	0.02	0.0
19	---	---	---	---	---	---	---	0.0	0.09	0.0	0.0	0.46
20	---	---	---	---	---	---	---	0.0	0.09	0.26	0.04	0.40
21	---	---	---	---	---	---	---	0.0	1.72	0.98	1.50	0.0
22	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0
23	---	---	---	---	---	---	---	0.0	0.22	0.0	0.05	0.0
24	---	---	---	---	---	---	---	0.0	0.0	0.02	0.01	0.23
25	---	---	---	---	---	---	---	0.06	0.78	0.42	0.0	0.20
26	---	---	---	---	---	---	---	0.91	0.24	0.0	0.0	0.44
27	---	---	---	---	---	---	---	0.04	0.0	0.0	0.0	0.04
28	---	---	---	---	---	---	---	0.06	0.0	0.39	0.0	0.11
29	---	---	---	---	---	---	---	0.0	0.0	0.22	0.0	0.91
30	---	---	---	---	---	---	---	0.0	0.0	0.04	0.0	0.18
31	---	---	---	---	---	---	---	0.0	---	0.02	0.0	---
TOTAL	---	---	---	---	---	---	---	3.44	9.19	2.48	3.74	5.62

e Estimated

442436091331800 TRAVERSE VALLEY CREEK TRIBUTARY, RAIN GAGE #2, NEAR INDEPENDENCE, WI

LOCATION.--Lat 44°24'36", long 91°33'18", in NE ¼ SE ¼ sec.2, T.22 N., R.10 W., Buffalo County, Hydrologic Unit 07040005, in hillside rock quarry at end of small gravel road intersecting with Schneider Road, 1.0 mi north-northwest of Bragger family farm and 7.1 mi west-northwest of Independence.

PERIOD OF RECORD.--May to September 2002.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established May 17, 2002. Rainfall for May 1-17 estimated from rain gages at Traverse Valley Creek, North and South Tributaries.

EXTREMES FOR CURRENT PERIOD.--Maximum daily rainfall, 2.09 in., June 3.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e0.04	0.0	0.0	0.01	0.76
2	---	---	---	---	---	---	---	e0.00	1.74	0.0	0.0	1.10
3	---	---	---	---	---	---	---	e0.00	2.09	0.0	0.99	0.0
4	---	---	---	---	---	---	---	e0.00	0.97	0.0	0.40	0.0
5	---	---	---	---	---	---	---	e0.80	0.02	0.0	0.0	0.0
6	---	---	---	---	---	---	---	e0.18	0.0	0.01	0.0	0.39
7	---	---	---	---	---	---	---	e0.00	0.05	0.0	0.0	0.0
8	---	---	---	---	---	---	---	e1.05	0.0	0.09	0.0	0.0
9	---	---	---	---	---	---	---	e0.01	0.0	0.0	0.0	0.0
10	---	---	---	---	---	---	---	e0.00	0.0	0.0	0.0	0.04
11	---	---	---	---	---	---	---	e0.23	0.89	0.0	0.0	0.0
12	---	---	---	---	---	---	---	e0.03	0.02	0.0	0.15	0.0
13	---	---	---	---	---	---	---	e0.04	0.18	0.0	0.16	0.0
14	---	---	---	---	---	---	---	e0.00	0.02	0.0	0.0	0.39
15	---	---	---	---	---	---	---	e0.00	0.0	0.0	0.0	0.0
16	---	---	---	---	---	---	---	e0.00	0.12	0.0	0.03	0.0
17	---	---	---	---	---	---	---	e0.00	0.03	0.0	0.31	0.0
18	---	---	---	---	---	---	---	0.0	0.0	0.05	0.0	0.01
19	---	---	---	---	---	---	---	0.0	0.09	0.0	0.01	0.46
20	---	---	---	---	---	---	---	0.0	0.09	0.34	0.10	0.42
21	---	---	---	---	---	---	---	0.0	1.74	0.89	1.59	0.0
22	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0
23	---	---	---	---	---	---	---	0.0	0.18	0.0	0.06	0.0
24	---	---	---	---	---	---	---	0.0	0.0	0.02	0.0	0.22
25	---	---	---	---	---	---	---	0.06	0.91	0.44	0.0	0.22
26	---	---	---	---	---	---	---	0.67	0.19	0.0	0.0	0.39
27	---	---	---	---	---	---	---	0.01	0.0	0.0	0.0	0.03
28	---	---	---	---	---	---	---	0.07	0.0	0.44	0.0	0.11
29	---	---	---	---	---	---	---	0.01	0.0	0.22	0.0	1.00
30	---	---	---	---	---	---	---	0.0	0.0	0.03	0.0	0.12
31	---	---	---	---	---	---	---	0.0	---	0.01	0.0	---
TOTAL	---	---	---	---	---	---	---	3.20	9.33	2.54	3.81	5.66

e Estimated

TREMPEALEAU RIVER BASIN

05379400 TREMPEALEAU RIVER AT ARCADIA, WI

LOCATION.--Lat 44°15'15", long 91°30'19" in SW 1/4 sec.32, T.21 N., R.9 W., Trempealeau County, Hydrologic Unit 07040005, on upstream side of River Street bridge, 300 ft north of State Highway 95 and 93 bridge, on left bank in village of Arcadia.

DRAINAGE AREA.--552 mi².

PERIOD OF RECORD.--July 1960 to September 1977, July 2001 to September 2002.

REVISED RECORDS.--WDR WI-70-1: 1968-69: 1975-77(M).

GAGE.--Water-stage recorder. Datum of gage is 719.59 ft above NGVD of 1929. July 1960 to September 1977, non-recording gage at site 300 ft downstream at datum 0.02 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	343	350
2	---	---	---	---	---	---	---	---	---	---	346	320
3	---	---	---	---	---	---	---	---	---	---	340	298
4	---	---	---	---	---	---	---	---	---	---	337	280
5	---	---	---	---	---	---	---	---	---	---	326	275
6	---	---	---	---	---	---	---	---	---	---	318	280
7	---	---	---	---	---	---	---	---	---	---	314	338
8	---	---	---	---	---	---	---	---	---	---	309	746
9	---	---	---	---	---	---	---	---	---	---	302	1140
10	---	---	---	---	---	---	---	---	---	---	293	1250
11	---	---	---	---	---	---	---	---	---	---	286	997
12	---	---	---	---	---	---	---	---	---	---	285	647
13	---	---	---	---	---	---	---	---	---	---	320	479
14	---	---	---	---	---	---	---	---	---	---	319	430
15	---	---	---	---	---	---	---	---	---	---	319	406
16	---	---	---	---	---	---	---	---	---	---	315	394
17	---	---	---	---	---	---	---	---	---	---	345	381
18	---	---	---	---	---	---	---	---	---	---	385	369
19	---	---	---	---	---	---	---	---	---	---	378	364
20	---	---	---	---	---	---	---	---	---	---	355	359
21	---	---	---	---	---	---	---	---	---	---	353	422
22	---	---	---	---	---	---	---	---	---	---	346	499
23	---	---	---	---	---	---	---	---	---	---	447	628
24	---	---	---	---	---	---	---	---	---	---	962	700
25	---	---	---	---	---	---	---	---	---	---	615	541
26	---	---	---	---	---	---	---	---	---	---	559	444
27	---	---	---	---	---	---	---	---	---	---	467	400
28	---	---	---	---	---	---	---	---	---	---	406	369
29	---	---	---	---	---	---	---	---	---	---	383	358
30	---	---	---	---	---	---	---	---	---	---	362	354
31	---	---	---	---	---	---	---	---	---	---	349	---
TOTAL	---	---	---	---	---	---	---	---	---	---	9952	14818
MEAN	---	---	---	---	---	---	---	---	---	---	321.0	493.9
MAX	---	---	---	---	---	---	---	---	---	---	426	1250
MIN	---	---	---	---	---	---	---	---	---	---	273	275
CFSM	---	---	---	---	---	---	---	---	---	---	0.58	0.89
IN.	---	---	---	---	---	---	---	---	---	---	0.67	1.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2001, BY WATER YEAR (WY)

	306.3	313.2	269.5	249.1	291.8	719.9	667.7	437.0	381.2	323.7	322.3	360.6
MEAN	306.3	313.2	269.5	249.1	291.8	719.9	667.7	437.0	381.2	323.7	322.3	360.6
MAX	634	625	402	565	663	1437	1839	1203	679	654	1060	817
(WY)	1973	1973	1973	1973	1976	1973	1965	1973	1973	1968	1975	1972
MIN	175	190	148	157	153	250	259	228	165	139	124	190
(WY)	1965	1965	1968	1968	1968	1964	1964	1964	1964	1964	1964	1977

SUMMARY STATISTICS

FOR 2001 WATER YEAR
(JULY 13 TO SEPTEMBER 30)

WATER YEARS 1960 - 2001

ANNUAL TOTAL	32755		
ANNUAL MEAN	409.4	385.7	
HIGHEST ANNUAL MEAN		703	1973
LOWEST ANNUAL MEAN		206	1964
HIGHEST DAILY MEAN	1250	Sep 10	8010
LOWEST DAILY MEAN	273	(a)Aug 14	112
ANNUAL SEVEN-DAY MINIMUM	286	Aug 18	115
MAXIMUM PEAK FLOW	1270	Sep 10	(b)12000
MAXIMUM PEAK STAGE	5.18	Sep 10	8.64
INSTANTANEOUS LOW FLOW	266	(c)Aug 14	110
ANNUAL RUNOFF (CFSM)	0.74		0.70
ANNUAL RUNOFF (INCHES)	2.21		9.49
10 PERCENT EXCEEDS	627		600
50 PERCENT EXCEEDS	352		285
90 PERCENT EXCEEDS	280		189

- (a) Also occurred Aug. 21, 24
- (b) Based on calculation by USACE
- (c) Also occurred Aug. 15, 21, 22, 24, 25
- (d) Also occurred Aug. 9, 19, 1964

05379400 TREMPEALEAU RIVER AT ARCADIA, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	348	351	474	e300	e270	423	476	570	403	498	463	355
2	346	344	474	e310	e260	e400	455	528	375	477	450	606
3	342	334	456	e310	e260	e380	442	498	1270	461	422	611
4	341	330	438	e310	e280	e360	428	473	1710	444	587	506
5	340	328	473	e310	e300	e380	425	454	1650	429	659	435
6	336	323	647	e320	e310	e400	455	565	1530	425	530	408
7	338	323	577	e320	e320	e430	514	612	1150	484	466	406
8	342	323	502	e320	e330	e490	551	543	810	450	439	396
9	363	324	456	e320	e330	e530	545	1190	700	491	431	389
10	515	322	430	e340	e340	e580	519	1120	644	461	415	379
11	607	322	414	e360	e340	e620	607	927	790	433	406	366
12	520	322	406	e360	e330	e690	1190	748	922	417	420	351
13	514	342	404	e360	329	e900	1020	673	748	409	423	340
14	707	357	398	e360	326	1060	837	633	721	403	426	344
15	582	346	389	e360	341	747	707	587	679	393	410	349
16	487	329	392	e360	342	762	653	543	639	380	390	338
17	436	322	394	e360	336	720	625	502	607	377	388	319
18	400	324	390	e320	330	592	616	467	575	369	379	311
19	379	378	373	e300	732	633	570	451	554	447	368	330
20	368	368	362	e330	1160	566	526	438	535	425	367	369
21	366	335	354	e350	866	572	500	435	643	444	397	454
22	370	313	358	e370	624	504	500	429	908	589	545	418
23	375	306	e360	e380	527	482	552	428	777	623	507	357
24	381	360	e360	e400	577	470	587	412	683	562	450	331
25	378	547	e350	e400	560	454	539	409	581	486	415	348
26	369	552	e340	e420	516	449	473	422	748	472	390	379
27	363	574	e320	e370	457	451	453	497	644	457	375	433
28	348	692	e290	e360	459	481	688	489	565	447	367	432
29	336	601	e260	e340	---	538	831	470	535	498	363	402
30	334	505	e280	e300	---	530	708	468	516	488	357	486
31	343	---	e300	e290	---	513	---	463	---	476	352	---
TOTAL	12574	11497	12421	10610	12152	17107	17992	17444	23612	14215	13357	11948
MEAN	405.6	383.2	400.7	342.3	434.0	551.8	599.7	562.7	787.1	458.5	430.9	398.3
MAX	707	692	647	420	1160	1060	1190	1190	1710	623	659	611
MIN	334	306	260	290	260	360	425	409	375	369	352	311
CFSM	0.73	0.69	0.73	0.62	0.79	1.00	1.09	1.02	1.43	0.83	0.78	0.72
IN.	0.85	0.77	0.84	0.72	0.82	1.15	1.21	1.18	1.59	0.96	0.90	0.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002, BY WATER YEAR (WY)

MEAN	311.8	317.1	276.8	254.3	299.6	710.6	663.9	444.0	403.8	330.5	327.8	362.5
MAX	634	625	402	565	663	1437	1839	1203	787	654	1060	817
(WY)	1973	1973	1973	1973	1976	1973	1965	1973	2002	1968	1975	1972
MIN	175	190	148	157	153	250	259	228	165	139	124	190
(WY)	1965	1965	1968	1968	1968	1964	1964	1964	1964	1964	1964	1977

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR
(JULY 13 TO DECEMBER 31)

FOR 2002 WATER YEAR

WATER YEARS 1960 - 2002

ANNUAL TOTAL	69247	174929										
ANNUAL MEAN	402.6	479.3								390.8		
HIGHEST ANNUAL MEAN										703		1973
LOWEST ANNUAL MEAN										206		1964
HIGHEST DAILY MEAN	1250	Sep 10					1710	Jun 4		8010	Apr 7	1965
LOWEST DAILY MEAN	(a)260	Dec 29					(a)260	(b)Dec 29		112	Aug 9	1964
ANNUAL SEVEN-DAY MINIMUM	286	Aug 18					(a)280	Jan 30		115	Aug 4	1964
MAXIMUM PEAK FLOW							1810	Jun 4		(c)12000	Aug 23	1975
MAXIMUM PEAK STAGE							6.30	Jun 4		8.64	Aug 23	1975
INSTANTANEOUS LOW FLOW										110	(d)Aug 8	1964
ANNUAL RUNOFF (CFSM)	0.73						0.87			0.71		
ANNUAL RUNOFF (INCHES)	4.67						11.79			9.62		
10 PERCENT EXCEEDS	570						685			612		
50 PERCENT EXCEEDS	358						429			293		
90 PERCENT EXCEEDS	294						324			189		

(a) Ice affected

(b) Also occurred Feb. 2,3

(c) Based on calculation by USACE

(d) Also occurred Aug. 9,19, 1964

(e) Estimated due to ice effect or missing record

TREMPEALEAU RIVER BASIN

05379500 TREMPEALEAU RIVER AT DODGE, WI

LOCATION.--Lat 44°07'54", long 91°33'12" (revised) in NE ¼ SE ¼ sec.10, T.19 N., R.10 W., Trempealeau County, Hydrologic Unit 07040005, near left bank on downstream side of County Trunk Highways J and P bridge in Dodge, 9.0 mi upstream from mouth.

DRAINAGE AREA.--643 mi².

PERIOD OF RECORD.--December 1913 to September 1919, April 1934 to current year.

REVISED RECORDS.--WSP 1238: Drainage area. WSP 1388: 1919(M). WSP 1438: 1914, 1915-18(M), 1934-44(M), 1946-49(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 661.42 ft above NGVD of 1929. Prior to July 14, 1977, nonrecording gage at same site and datum. Prior to Sept. 16, 1966, datum 2.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter and data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	443	445	582	e340	e330	503	547	687	489	537	480	410
2	440	441	565	e340	e320	e480	533	604	465	514	465	562
3	434	435	551	e360	e320	e450	528	564	813	498	455	682
4	429	430	529	e360	e320	e420	518	538	1430	487	538	586
5	426	427	531	e360	e320	e440	516	520	1680	474	695	506
6	420	426	687	e360	e330	e470	526	548	1800	470	597	471
7	417	422	701	e360	e350	e500	566	658	1780	499	513	458
8	417	420	610	e370	e370	e580	611	599	1420	502	472	446
9	429	418	559	e380	e400	e620	618	956	909	495	458	434
10	537	418	532	e410	e460	e680	599	1220	759	509	452	428
11	621	417	516	e420	e480	e780	648	1130	768	477	442	421
12	597	416	507	e430	e480	e900	1070	958	975	457	445	413
13	561	437	503	e420	463	e1300	1260	800	867	447	460	405
14	711	458	498	e420	455	e1200	1050	764	773	440	456	410
15	718	443	491	e430	458	1110	879	704	718	434	445	419
16	590	432	485	e430	466	905	764	649	659	427	430	414
17	540	423	484	e430	463	862	722	596	621	422	430	406
18	514	424	483	e380	462	765	695	566	589	417	426	406
19	497	473	476	e360	646	719	652	542	565	432	417	426
20	488	496	465	e400	1140	729	600	525	548	509	409	464
21	482	480	465	e420	1260	684	571	512	607	497	437	504
22	473	461	476	e460	879	631	578	506	877	528	633	542
23	468	447	e460	e470	650	581	596	499	905	672	587	482
24	468	475	e430	e480	619	559	652	491	800	597	531	450
25	463	603	e310	e480	633	538	646	486	664	529	482	456
26	459	666	e320	e480	580	523	585	483	946	493	460	466
27	451	679	e330	e480	529	515	547	519	834	477	443	510
28	446	781	e330	e480	525	522	694	544	664	462	431	518
29	443	755	e340	e410	---	555	881	514	595	515	426	501
30	441	648	e340	e370	---	576	824	521	564	511	421	493
31	446	---	e340	e350	---	564	---	517	---	492	414	---
TOTAL	15269	14696	14896	12640	14708	20661	20476	19720	26084	15220	14750	14089
MEAN	492.5	489.9	480.5	407.7	525.3	666.5	682.5	636.1	869.5	491.0	475.8	469.6
MAX	718	781	701	480	1260	1300	1260	1220	1800	672	695	682
MIN	417	416	310	340	320	420	516	483	465	417	409	405
CFSM	0.77	0.76	0.75	0.63	0.82	1.04	1.06	0.99	1.35	0.76	0.74	0.73
IN.	0.88	0.85	0.86	0.73	0.85	1.20	1.18	1.14	1.51	0.88	0.85	0.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	378.4	392.6	327.5	284.9	341.8	805.4	687.6	492.2	512.3	428.0	371.8	413.9																																																																													
MAX	1314	856	953	679	878	2325	2146	1320	1516	1332	1050	1239																																																																													
(WY)	1955	1992	1983	1973	1981	1936	1965	1973	1993	1993	1975	1992																																																																													
MIN	169	180	139	117	119	289	301	195	183	163	138	153																																																																													
(WY)	1951	1950	1959	1959	1959	1968	1964	1934	1964	1964	1964	1948																																																																													

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1914 - 2002

ANNUAL TOTAL	200874	203209	
ANNUAL MEAN	550.3	556.7	454.1
HIGHEST ANNUAL MEAN			813
LOWEST ANNUAL MEAN			237
HIGHEST DAILY MEAN	2120	Apr 14	1800
LOWEST DAILY MEAN	(a)270	Jan 2	(a)310
ANNUAL SEVEN-DAY MINIMUM	(a)307	Jan 1	(a)327
MAXIMUM PEAK FLOW			(c)1830
MAXIMUM PEAK STAGE			(d)9.09
ANNUAL RUNOFF (CFSM)	0.86		0.87
ANNUAL RUNOFF (INCHES)	11.62		11.76
10 PERCENT EXCEEDS	854		776
50 PERCENT EXCEEDS	468		496
90 PERCENT EXCEEDS	340		410
			740
			350
			200
			1973
			1964
			Apr 4 1956
			(a)98
			Jan 10 1938
			(a)106
			Jan 7 1938
			17400
			Apr 4 1956
			(b)10.35
			Apr 4 1956
			9.59

- (a) Ice affected
- (b) Datum then in use
- (c) Gage height, 8.56 ft
- (d) Result of ice jam
- (e) Estimated due to ice effect or missing record

05381000 BLACK RIVER AT NEILLSVILLE, WI

LOCATION.--Lat 44°33'35", long 90°36'54" (revised), in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.24 N., R.2 W., Clark County, Hydrologic Unit 07040007, on right bank at downstream side of bridge on Business U.S. Highway 10 in Neillsville, 1.0 mi downstream from O'Neill Creek, and 2.6 mi upstream from Cunningham Creek.

DRAINAGE AREA.--749 mi².

PERIOD OF RECORD.--April 1905 to March 1909, October 1913 to September 1999, October 2000 to current year. Monthly discharge for some periods published in WSP 1308. Unfinalized 2000 water year records in District data files.

REVISED RECORDS.--WSP 1308: 1914. WSP 1438: 1905, 1906-8(M), 1914-17(M), 1918-19, 1920-25(M), 1926-27, 1928-29(M), 1930, 1931(M), 1932, 1933(M), 1934, 1935(M), 1936. WSP 1508: 1950. WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 962.34 ft above NGVD of 1929. Prior to Oct. 24, 1934, nonrecording gage; Oct. 24, 1934, to June 16, 1977, water-stage recorder; June 17, 1977, to Nov. 19, 1977, nonrecording gage at site 150 ft downstream at datum 1.58 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	216	1160	e80	e82	e250	2200	1800	351	443	2240	250
2	98	273	1270	e80	e80	e210	1640	1620	293	359	1020	2390
3	93	304	1060	e80	e82	e170	1180	1300	4490	301	570	2970
4	90	271	869	e80	e82	e140	889	995	2820	264	501	3010
5	86	235	1030	e85	e78	e130	706	759	3350	268	604	2040
6	82	213	3100	e86	e80	e130	692	2860	2070	235	559	1380
7	80	202	2760	e89	e80	e130	854	3180	1240	209	412	1260
8	83	190	1950	e92	e80	e130	1330	2140	790	264	321	1010
9	84	180	1290	e110	e80	e150	2350	4610	559	434	263	755
10	182	170	876	e130	e84	e260	2770	3020	428	688	231	607
11	212	166	645	e100	e90	e600	4810	1650	717	556	199	495
12	289	159	534	e80	e100	895	11200	1320	660	398	203	410
13	350	163	469	e64	e100	1430	9520	1540	547	302	4000	354
14	454	169	425	e65	e100	1980	6790	1370	938	245	3310	328
15	557	173	360	e65	e93	1480	4940	1050	2700	210	1450	314
16	669	179	345	e66	e93	1290	3580	835	1860	186	757	295
17	535	182	350	e70	e100	1360	2800	787	1050	166	595	286
18	425	183	351	e70	e120	1160	2200	732	699	152	1020	266
19	343	235	331	e70	e220	1400	2850	615	524	140	932	269
20	292	263	248	e70	e900	1100	2380	516	430	132	610	321
21	256	298	230	e73	1940	1150	1590	449	626	145	513	489
22	228	289	266	e76	1100	858	1310	397	5830	1460	5280	523
23	209	259	315	e76	999	696	1360	359	14500	1170	5790	455
24	198	495	251	e80	1010	557	1230	326	7250	683	3150	405
25	191	2160	223	e80	1250	445	1150	303	3060	395	1680	350
26	189	2680	e190	e85	838	400	1050	295	1920	273	1000	340
27	188	2310	e160	e90	597	401	939	636	1400	220	632	424
28	187	1850	e130	e100	472	803	1320	938	1020	193	469	521
29	188	1240	e100	e100	---	1890	2130	794	716	191	379	550
30	191	1000	e85	e96	---	2740	2130	579	550	218	319	1610
31	200	---	e80	e82	---	2820	---	442	---	784	278	---
TOTAL	7334	16707	21453	2570	10930	27155	79890	38217	63388	11684	39287	24677
MEAN	236.6	556.9	692.0	82.90	390.4	876.0	2663	1233	2113	376.9	1267	822.6
MAX	669	2680	3100	130	1940	2820	11200	4610	14500	1460	5790	3010
MIN	80	159	80	64	78	130	692	295	293	132	199	250
CFSM	0.32	0.74	0.92	0.11	0.52	1.17	3.56	1.65	2.82	0.50	1.69	1.10
IN.	0.36	0.83	1.07	0.13	0.54	1.35	3.97	1.90	3.15	0.58	1.95	1.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2002, BY WATER YEAR (WY)

MEAN	386.8	456.8	193.8	108.5	135.4	1238	1993	866.9	830.0	310.4	259.4	527.2
MAX	2101	2345	1133	615	1348	3960	5025	3538	4689	1538	1293	4304
(WY)	1983	1992	1966	1973	1984	1973	1951	1973	1905	1978	1928	1938
MIN	20.7	27.1	35.9	10.0	5.00	56.7	270	77.4	43.0	14.9	10.5	5.77
(WY)	1934	1977	1934	1918	1918	1940	1946	1934	1964	1933	1933	1933

BLACK RIVER BASIN

05381000 BLACK RIVER AT NEILLSVILLE, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1905 - 2002	
ANNUAL TOTAL	284185		343292		605.5	
ANNUAL MEAN	778.6		940.5		1213	
HIGHEST ANNUAL MEAN					1942	
LOWEST ANNUAL MEAN					160	
HIGHEST DAILY MEAN	14100	Apr 7	14500	Jun 23	38200	Sep 10 1938
LOWEST DAILY MEAN	55	Sep 5	(a)64	Jan 13	0.70(b)	Aug 10 1936
ANNUAL SEVEN-DAY MINIMUM	65	Aug 31	(a)67	Jan 13	1.0	Aug 10 1936
MAXIMUM PEAK FLOW			16400	Jun 23	48800	Sep 10 1938
MAXIMUM PEAK STAGE			14.81	Jun 23	23.80	Sep 10 1938
INSTANTANEOUS LOW FLOW					0.60	Aug 15 1936
ANNUAL RUNOFF (CFSM)	1.04		1.26		0.81	
ANNUAL RUNOFF (INCHES)	14.11		17.05		10.98	
10 PERCENT EXCEEDS	1970		2330		1500	
50 PERCENT EXCEEDS	190		425		150	
90 PERCENT EXCEEDS	97		85		37	

(a) Ice affected

(b) Also occurred Aug. 11, 14-16, 1936

(e) Estimated due to ice effect or missing record

05382000 BLACK RIVER NEAR GALESVILLE, WI

LOCATION.--Lat 44°03'37", long 91°17'14" in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.1, T.18 N., R.8 W., LaCrosse County, Hydrologic Unit 07040007, on left bank 1,000 ft upstream from bridge on U.S. Highway 53, 3.5 mi southeast of Galesville, and 4.8 mi downstream from Fleming Creek.

DRAINAGE AREA.--2,080 mi².

PERIOD OF RECORD.--December 1931 to current year.

REVISED RECORDS.--WSP 1438: 1932-34, 1935-36(M). WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 658.43 ft above NGVD of 1929. Prior to Apr. 2, 1941, nonrecording gage on bridge 1,000 ft downstream at same datum. Apr. 3, 1941, to Oct. 1, 1971, water-stage recorder at site 1,030 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow partly regulated by Hatfield Dam Powerplant where drainage area is 1,290 mi² and storage capacity is 272,000,000 ft³. Water diverted periodically from basin into Lemonweir River basin for cranberry culture. Gage-height telemeter and data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	715	750	3150	e620	e710	e1900	4340	5880	1660	2650	974	1070
2	697	753	2920	e600	e690	e1500	4170	5690	1390	2240	2000	1080
3	663	731	3030	e640	e630	e1300	3590	4810	1430	2000	2210	2160
4	626	792	2860	e650	e620	e1000	2960	4070	3500	1650	1750	3650
5	629	805	2530	e660	e620	e950	2550	3310	6870	1600	1550	3980
6	637	802	2350	e680	e630	e920	2240	2980	10300	1550	1430	3510
7	618	768	3620	e680	e630	e930	2220	3400	11300	1370	1460	2720
8	612	697	4560	e680	e620	e970	2330	5180	9690	1180	1220	2220
9	607	682	4050	e700	e620	e1000	2870	5180	6210	1080	1120	2130
10	635	671	3130	e820	e620	e1600	3630	5520	4030	1150	998	1680
11	659	668	2540	e920	e640	e3300	4130	7430	3170	1420	976	1500
12	785	675	2130	e600	e690	e3200	5030	6520	3090	1510	941	1320
13	984	667	1860	e500	e750	e3700	6620	4620	3540	1400	923	1100
14	965	660	1610	e500	e750	3990	12900	4060	3080	1210	1990	1050
15	1150	669	1510	e520	e720	4590	15800	3780	2880	1110	3880	1050
16	1230	674	1400	e520	e700	4590	12000	3300	3820	1060	3010	1020
17	1380	703	1340	e510	e700	3980	9520	2870	4200	1000	2130	902
18	1370	686	1250	e510	e720	3880	7250	2470	3610	974	1480	858
19	1200	671	1230	e510	e800	3650	5800	2210	2800	934	1460	900
20	1140	647	1220	e520	e1200	3780	5140	2110	2360	919	1740	969
21	946	775	1160	e550	3390	3490	4960	1840	2190	929	1550	997
22	882	871	1100	e600	4480	3440	4310	1730	2450	1120	1610	1090
23	870	870	e940	e600	3880	3040	3570	1570	4240	1680	2890	1320
24	858	889	e800	e590	3270	2610	3500	1460	6660	2350	5190	1240
25	838	982	e720	e600	3190	2360	3590	1400	13100	2030	5560	1290
26	787	2590	e800	e600	3370	1910	3350	1290	14500	1530	4000	1230
27	785	4040	e900	e620	3080	1650	3060	1250	8690	1190	2690	1190
28	772	4210	e900	e670	2510	1630	3260	1310	5310	1090	2100	1120
29	762	4320	e880	e720	---	1960	4020	1910	3960	1100	1600	1140
30	762	3720	e780	e720	---	2920	5290	2130	3190	1050	1350	1280
31	771	---	e660	e720	---	3760	---	1950	---	1020	1140	---
TOTAL	26335	37438	57930	19330	41230	79500	154000	103230	153220	43096	62922	46766
MEAN	849.5	1248	1869	623.5	1472	2565	5133	3330	5107	1390	2030	1559
MAX	1380	4320	4560	920	4480	4590	15800	7430	14500	2650	5560	3980
MIN	607	647	660	500	620	920	2220	1250	1390	919	923	858
CFSM	0.41	0.60	0.90	0.30	0.71	1.23	2.47	1.60	2.46	0.67	0.98	0.75
IN.	0.47	0.67	1.04	0.35	0.74	1.42	2.75	1.85	2.74	0.77	1.13	0.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2002, BY WATER YEAR (WY)

MEAN	1260	1407	988.4	729.0	779.2	2981	4684	2528	2334	1277	953.4	1517
MAX	5231	4401	3468	2661	3664	9521	12210	7993	11880	4361	4421	9373
(WY)	1987	1935	1992	1932	1984	1973	1967	1960	1993	1978	1995	1938
MIN	277	337	320	268	263	406	1269	591	427	322	293	306
(WY)	1959	1949	1959	1959	1959	1934	2000	1934	1988	1933	1964	1948

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1932 - 2002
ANNUAL TOTAL	741929	824997	
ANNUAL MEAN	2033	2260	1786
HIGHEST ANNUAL MEAN			3456
LOWEST ANNUAL MEAN			699
HIGHEST DAILY MEAN	23400	15800	62000
LOWEST DAILY MEAN	(a)480	(a)500	180
ANNUAL SEVEN-DAY MINIMUM	(a)554	(a)510	218
MAXIMUM PEAK FLOW		17300	(b)65500
MAXIMUM PEAK STAGE		12.49	16.64
INSTANTANEOUS LOW FLOW			180
ANNUAL RUNOFF (CFSM)	0.98	1.09	0.86
ANNUAL RUNOFF (INCHES)	13.27	14.75	11.66
10 PERCENT EXCEEDS	4520	4400	3950
50 PERCENT EXCEEDS	858	1400	885
90 PERCENT EXCEEDS	580	649	390

(a) Ice affected

(b) Gage height, 14.63 ft, at location 1,000 ft downstream

(e) Estimated due to ice effect or missing record

LA CROSSE RIVER BASIN

05382325 LA CROSSE RIVER AT SPARTA, WI

LOCATION.--Lat 43°56'15", long 90°48'38", in SE ¼ NE ¼ sec.23, T.17 N., R.4 W., Monroe County, Hydrologic Unit 07040006, on left bank, 800 ft downstream from bridge on South Water Street, in Sparta, 0.35 mi downstream from Beaver Creek.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--July 1992 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 760.73 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Gage-height telemeter at station. Occasional regulation from two dams upstream from gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	131	161	e120	132	134	148	178	133	141	137	130
2	126	129	148	e120	125	137	152	199	137	138	133	186
3	126	125	149	e120	e120	e120	152	183	547	138	131	176
4	126	125	141	123	e120	e100	148	171	553	139	164	157
5	124	131	152	130	e120	e120	149	166	339	145	146	142
6	123	131	148	132	e120	e130	154	168	247	175	140	133
7	123	131	141	127	127	141	180	161	197	148	136	130
8	124	124	138	132	129	144	201	158	176	142	132	125
9	130	129	134	130	135	242	191	159	168	140	130	123
10	159	121	136	132	157	187	171	155	163	135	128	127
11	149	119	135	132	142	170	177	157	179	135	125	128
12	138	127	136	132	134	175	240	169	171	131	126	124
13	150	135	137	131	129	183	201	164	172	132	153	123
14	168	129	135	135	131	175	182	159	190	132	146	125
15	151	125	134	135	137	165	175	155	179	127	134	129
16	147	121	133	132	137	159	166	154	164	125	127	123
17	141	119	133	130	135	157	160	150	162	121	136	118
18	139	120	133	e110	138	158	156	148	155	122	130	119
19	138	127	132	e110	237	161	157	147	151	128	128	136
20	145	122	129	e120	225	164	155	145	150	137	131	178
21	141	120	127	131	190	163	162	145	270	144	162	156
22	137	118	136	131	164	153	174	140	319	186	279	139
23	137	118	143	133	158	151	177	140	211	161	250	130
24	136	148	135	131	160	149	173	139	175	138	191	127
25	136	166	126	131	131	144	165	143	160	135	161	130
26	134	146	e120	136	129	148	157	146	194	133	151	129
27	132	160	e120	136	128	152	168	150	177	132	146	132
28	130	154	e120	136	141	153	240	146	160	130	142	127
29	129	147	e110	132	---	155	219	142	151	190	140	139
30	128	151	e110	129	---	152	189	139	148	182	137	132
31	129	---	e120	130	---	148	---	136	---	146	133	---
TOTAL	4224	3949	4152	3989	4031	4790	5239	4812	6298	4408	4605	4073
MEAN	136.3	131.6	133.9	128.7	144.0	154.5	174.6	155.2	209.9	142.2	148.5	135.8
MAX	168	166	161	136	237	242	240	199	553	190	279	186
MIN	123	118	110	110	120	100	148	136	133	121	125	118
CFSM	0.82	0.79	0.80	0.77	0.86	0.93	1.05	0.93	1.26	0.85	0.89	0.81
IN.	0.94	0.88	0.92	0.89	0.90	1.07	1.17	1.07	1.40	0.98	1.03	0.91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2002, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	148.8	148.8	136.6	130.5	142.8	170.1	196.5	181.4	212.9	173.2	156.9	156.0
MAX	184	179	160	142	168	213	324	279	323	288	205	216
(WY)	1996	1996	1995	1995	1994	1996	1993	1993	1993	1993	1998	1994
MIN	122	124	117	113	121	133	126	153	140	130	111	112
(WY)	2001	1998	2001	1998	2001	2000	2000	2000	1997	1997	1992	1996

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR 1999 WATER YEAR	FOR 2000 WATER YEAR	FOR 2001 WATER YEAR
ANNUAL TOTAL	56988	54570			
ANNUAL MEAN	156.1	149.5	163.1		
HIGHEST ANNUAL MEAN			211		1993
LOWEST ANNUAL MEAN			142		1997
HIGHEST DAILY MEAN	685	Jun 12	1050	Jun 4	Jun 28 1998
LOWEST DAILY MEAN	103	Feb 2	(a)100	Mar 4	(b)72 May 10 2000
ANNUAL SEVEN-DAY MINIMUM	116	Feb 15	117	Dec 26	(b)84 May 4 2000
MAXIMUM PEAK FLOW			708	Jun 3	1270 Jun 28 1998
MAXIMUM PEAK STAGE			6.40	Jun 3	8.94 Jun 28 1998
ANNUAL RUNOFF (CFSM)	0.93	0.90			0.98
ANNUAL RUNOFF (INCHES)	12.69	12.16			13.27
10 PERCENT EXCEEDS	204	178			210
50 PERCENT EXCEEDS	139	138			149
90 PERCENT EXCEEDS	121	123			120

- (a) Ice affected
 (b) Regulation at dam upstream
 (c) Estimated due to ice effect or missing record

05383075 LA CROSSE RIVER NEAR LA CROSSE WI

LOCATION.--Lat 43°51'39", long 91°12'37", in NE ¼ SE ¼ sec.16, T.16 N., R.7 W., La Crosse County, Hydrologic Unit 07040006, on left bank just downstream from Great River State Trail, 3.9 mi northeast of post office in La Crosse.

DRAINAGE AREA.--471 mi².

PERIOD OF RECORD.--October 1999 to current year. Published as "at La Crosse" prior to October 2000.

GAGE.--Water-stage recorder. Elevation of gage is 650 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	276	278	432	e260	e280	383	355	522	260	299	422	264
2	275	323	334	e260	e270	332	364	391	260	343	274	379
3	321	290	470	e260	e260	e290	353	491	549	291	265	343
4	301	300	300	e270	e260	e260	431	484	726	269	326	468
5	273	337	345	e280	e260	e270	299	356	830	337	329	285
6	272	403	354	e280	e260	284	327	360	893	294	417	314
7	272	254	432	e280	e270	e320	438	362	744	266	267	306
8	272	269	326	e280	e280	e380	365	432	501	339	302	270
9	274	315	326	e280	291	438	489	343	488	282	291	272
10	352	287	408	e280	355	522	485	348	483	335	263	284
11	479	270	327	e280	e320	616	417	347	400	283	258	274
12	350	312	292	e280	e300	498	590	365	369	261	246	269
13	422	345	317	e280	292	399	624	354	492	260	279	266
14	391	338	331	e290	342	508	541	346	418	260	321	268
15	378	287	422	e290	305	505	494	351	341	260	262	265
16	478	318	279	e280	344	386	387	328	417	259	309	263
17	346	328	312	e270	334	452	500	334	337	259	281	262
18	340	271	295	e240	355	375	392	317	343	259	265	262
19	346	320	336	e240	462	387	373	277	347	259	265	290
20	307	334	321	e250	553	452	335	322	364	264	264	377
21	287	286	297	249	649	378	443	288	439	272	274	380
22	346	272	334	309	525	417	357	319	508	401	349	425
23	371	317	298	405	e480	411	365	292	504	461	374	274
24	358	342	e290	334	e440	331	476	268	692	341	484	324
25	300	353	e270	293	e380	359	343	269	475	347	476	289
26	339	472	e260	281	e340	367	347	312	374	284	464	352
27	308	486	e260	281	368	359	502	297	474	269	291	277
28	284	347	e250	e300	383	367	471	322	379	269	266	264
29	332	429	e240	e280	---	361	506	282	389	355	306	355
30	348	341	e240	e280	---	359	548	306	377	336	279	293
31	299	---	e250	e280	---	345	---	267	---	327	264	---
TOTAL	10297	9824	9948	8722	9958	12111	12917	10652	14173	9341	9733	9214
MEAN	332.2	327.5	320.9	281.4	355.6	390.7	430.6	343.6	472.4	301.3	314.0	307.1
MAX	479	486	470	405	649	616	624	522	893	461	484	468
MIN	272	254	240	240	260	260	299	267	260	259	246	262

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	322.6	328.3	299.6	288.4	331.8	389.3	433.7	409.9	554.2	359.7	324.4	334.3
MAX	332	330	321	308	356	421	561	481	651	463	354	385
(WY)	2002	2000	2002	2001	2002	2001	2001	2001	2000	2000	2000	2001
MIN	304	327	277	276	291	356	310	344	472	301	305	307
(WY)	2001	2001	2001	2000	2001	2000	2000	2002	2002	2002	2001	2002

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 2000 - 2002

ANNUAL TOTAL	139496	126890	
ANNUAL MEAN	382.2	347.6	364.4
HIGHEST ANNUAL MEAN			376 2001
LOWEST ANNUAL MEAN			348 2002
HIGHEST DAILY MEAN	1060	893 Jun 6	1180 May 20 2000
LOWEST DAILY MEAN	(a)240	Dec 29	(a)210 Dec 12 2000
ANNUAL SEVEN-DAY MINIMUM	(a)253	Dec 25	(a)244 Dec 7 2000
MAXIMUM PEAK FLOW		1170 Jun 5	2070 Jun 29 1998
MAXIMUM PEAK STAGE		6.71 Jun 5	9.18 Jun 29 1998
INSTANTANEOUS LOW FLOW		186 Sep 27	124 Oct 28 1999
10 PERCENT EXCEEDS	542	479	508
50 PERCENT EXCEEDS	334	327	324
90 PERCENT EXCEEDS	275	264	268

- (a) Ice affected
- (b) Also occurred Dec. 30, Jan. 18,19
- (e) Estimated due to ice effect or missing record

05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1936 - 2002	
ANNUAL TOTAL	19521500		15896300			
ANNUAL MEAN	53480		43550		37300	
HIGHEST ANNUAL MEAN					64720 1993	
LOWEST ANNUAL MEAN					17400 1977	
HIGHEST DAILY MEAN	247000	Apr 21	122000	Apr 22	276000	Apr 24 1965
LOWEST DAILY MEAN	12200	Oct 9	12200	Oct 9	6200	Dec 9 1936
ANNUAL SEVEN-DAY MINIMUM	16600	Oct 4	16600	Oct 4	6490	Dec 7 1936
MAXIMUM PEAK FLOW			121000	Apr 22	276000	Apr 24 1965
MAXIMUM PEAK STAGE			17.17	Apr 22	25.38	Apr 24 1965
ANNUAL RUNOFF (AC-FT)	38720000		31530000		27020000	
ANNUAL RUNOFF (CFSM)	0.79		0.65		0.55	
ANNUAL RUNOFF (INCHES)	10.76		8.76		7.51	
10 PERCENT EXCEEDS	110000		75600		75900	
50 PERCENT EXCEEDS	28300		40600		27800	
90 PERCENT EXCEEDS	20200		21100		13300	

(e) Estimated due to ice effect or missing record

MISSISSIPPI RIVER BASIN

05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected from right bank dock 1.2 mi upstream from discharge station. Prior to April 1981, and March 7 to Sept. 30, 1997, samples collected at bridge on U.S. Highway 18, 1.2 mi upstream from gage. April 1981 to March 6, 1997, samples collected from right bank dock, 0.3 mi downstream from discharge station.

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to current year.

WATER TEMPERATURES: July 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: July 1975 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 633 microsiemens Nov. 3, 1996; minimum daily, 190 microsiemens Sept. 29, 1980.

WATER TEMPERATURES: Maximum daily, 31.0°C June 28, 2002; minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,350 mg/L Mar. 19, 1986; minimum daily mean, 1 mg/L on many days in 1977-92 and 1999.

SEDIMENT LOADS: Maximum daily, 363,000 tons Mar. 19, 1986; minimum daily, 31 tons Dec. 25, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 430 microsiemens July 10; minimum daily, 301 microsiemens Apr. 30.

WATER TEMPERATURES: Maximum daily, 31.0°C, June 28; minimum daily, 1.0°C Dec. 24.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 58 mg/L Apr. 17; minimum daily mean, 3.2 mg/L Jan. 6, 7.

SEDIMENT LOADS: Maximum daily, 13,400 tons Apr. 17, 18; minimum daily, 206 tons Jan. 6.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	TEMPER- ATURE WATER (DEG C) (00010)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, DIS- SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 2001						
10...	1000	11.0	16500	12	535	97
NOV						
14...	1230	50.0	23200	13	814	97
MAR 2002						
25...	1300	4.3	43300	38	4440	97
APR						
30...	1145	11.7	109000	25	7360	96
JUN						
11...	1730	24.4	75100	4.0	811	81
JUL						
16...	1340	27.7	57400	30	4650	88
SEP						
18...	1230	--	42100	15	1710	99

SPECIFIC CONDUCTANCE, in MICROSIEMENS/CM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	385	---	405	---	---	373	303	---	388	---	---
2	---	---	---	401	---	---	---	---	---	402	---	---
3	383	---	---	---	---	---	---	---	374	416	---	376
4	376	---	---	---	388	392	---	---	373	---	---	372
5	376	---	---	---	323	394	393	---	376	---	339	369
6	---	380	339	---	---	394	372	304	---	---	337	---
7	---	---	351	398	368	---	374	304	---	---	340	---
8	---	386	352	400	---	---	388	310	---	425	---	---
9	375	---	---	392	---	---	414	---	---	426	---	352
10	371	382	357	---	---	---	403	---	359	430	---	346
11	382	---	358	---	421	406	---	---	346	---	---	348
12	---	---	352	---	412	401	---	---	350	---	344	---
13	---	379	---	---	416	400	---	329	---	---	350	---
14	---	386	---	381	---	---	---	326	---	423	358	---
15	343	388	---	372	---	---	386	325	---	416	---	---
16	377	---	---	371	---	---	359	---	---	390	---	352
17	373	---	334	---	---	---	328	---	417	400	---	358
18	---	---	300	---	372	378	---	---	421	---	---	358
19	---	383	348	---	414	408	---	---	---	---	371	---
20	---	383	---	---	412	406	---	357	---	---	370	---
21	---	---	---	---	---	---	---	362	---	---	364	---
22	380	386	---	392	---	---	312	373	---	394	---	---
23	380	---	---	310	---	---	316	---	---	378	---	357
24	316	---	363	300	---	---	313	---	394	372	---	360
25	---	---	378	---	408	415	---	---	396	---	---	364
26	---	386	384	---	400	410	---	---	---	---	356	---
27	---	388	---	358	400	408	---	378	390	---	341	---
28	---	---	---	---	---	---	---	382	389	---	330	---
29	380	388	---	405	---	---	302	384	---	355	---	---
30	385	---	---	380	---	---	301	---	---	326	---	336
31	---	---	400	---	---	---	---	---	---	330	---	---

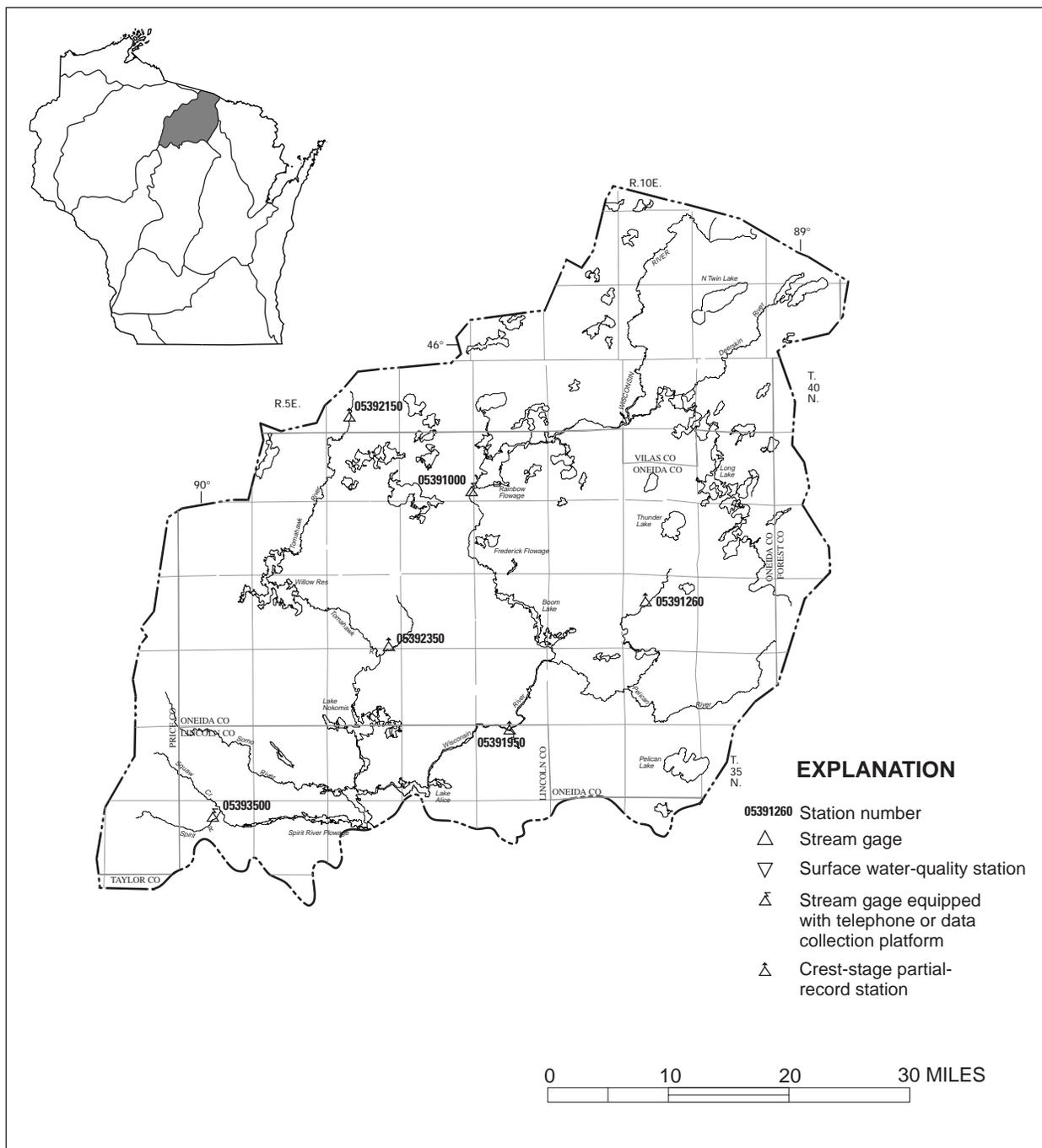
05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	10.0	---	3.0	---	---	5.0	11.0	---	29.0	---	---
2	---	---	---	3.0	---	---	---	---	---	30.0	---	---
3	18.0	---	---	---	---	---	---	---	19.0	30.0	---	26.0
4	18.0	---	---	---	3.0	4.0	---	---	18.0	---	---	26.0
5	16.0	---	---	---	3.0	4.0	5.0	---	18.0	---	28.0	26.0
6	---	12.0	9.0	---	---	4.0	5.0	15.0	---	---	27.0	---
7	---	---	8.0	3.0	4.0	---	6.0	15.0	---	---	27.0	---
8	---	12.0	7.0	3.0	---	---	6.0	16.0	---	30.0	---	---
9	16.0	---	---	4.0	---	---	7.0	---	---	30.0	---	27.0
10	15.0	10.0	5.0	---	---	---	9.0	---	20.0	29.0	---	26.0
11	15.0	---	5.0	---	4.0	5.0	---	---	22.0	---	---	25.0
12	---	---	5.0	---	4.0	4.0	---	---	25.0	---	28.0	---
13	---	11.0	---	---	4.0	4.0	---	12.0	---	---	26.0	---
14	---	11.0	---	4.0	---	---	---	13.0	---	26.0	26.0	---
15	14.0	13.0	---	3.0	---	---	14.0	14.0	---	27.0	---	---
16	12.0	---	---	2.0	---	---	15.0	---	---	27.7	---	24.0
17	11.0	---	5.0	---	---	---	16.0	---	24.0	28.0	---	24.0
18	---	---	6.0	---	5.0	7.0	---	---	25.0	---	---	24.0
19	---	11.0	5.0	---	5.0	4.0	---	---	---	---	25.0	---
20	---	10.0	---	---	5.0	5.0	---	14.0	---	---	25.0	---
21	---	---	---	---	---	---	---	15.0	---	---	26.0	---
22	12.0	9.0	---	4.0	---	---	10.0	15.0	---	29.0	---	---
23	13.0	---	---	3.0	---	---	11.0	---	---	29.0	---	19.0
24	12.0	---	1.0	4.0	---	---	10.0	---	28.0	27.0	---	19.0
25	---	---	2.0	---	6.0	3.0	---	---	28.0	---	---	19.0
26	---	9.0	3.0	---	5.0	4.0	---	---	---	---	27.0	---
27	---	9.0	---	4.0	5.0	5.0	---	18.0	30.0	---	27.0	---
28	---	---	---	---	---	---	---	20.0	31.0	---	26.0	---
29	9.0	8.0	---	3.0	---	---	10.0	21.0	---	29.0	---	---
30	10.0	---	---	3.0	---	---	11.0	---	---	29.0	---	20.0
31	---	---	3.0	---	---	---	---	---	---	29.0	---	---

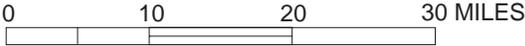
SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)	
	LOAD (TONS/DAY)		LOAD (TONS/DAY)		LOAD (TONS/DAY)		LOAD (TONS/DAY)		LOAD (TONS/DAY)		LOAD (TONS/DAY)	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	17	799	27	1840	27	3070	4.2	253	9.6	567	8.5	620
2	18	846	26	2190	27	2900	4.0	259	9.4	536	7.7	505
3	20	1010	24	1880	22	2080	3.8	244	9.2	509	6.9	367
4	22	1090	21	1440	23	2020	3.6	228	9.0	488	6.2	288
5	24	1210	19	1170	26	2390	3.4	214	8.1	448	6.7	380
6	23	1170	17	878	28	2770	3.2	206	7.1	389	6.2	388
7	22	1090	18	972	27	2930	3.2	210	6.3	344	6.3	424
8	21	760	20	1220	25	2850	5.2	382	6.8	357	6.7	458
9	20	659	18	1140	24	2810	6.1	492	8.0	441	7.1	506
10	23	981	15	877	23	2740	7.2	605	11	694	7.2	500
11	26	1710	15	840	16	1960	7.5	630	8.6	600	8.0	525
12	26	1840	16	879	16	1930	6.7	539	6.5	437	8.9	644
13	27	1650	17	939	16	1890	5.9	443	7.6	500	9.8	944
14	27	1570	18	1060	15	1550	5.1	375	8.3	543	11	1110
15	28	1590	20	1200	14	1360	4.3	316	8.7	545	11	1270
16	27	1860	20	1210	14	1250	4.8	353	8.6	497	12	1370
17	23	1710	20	1190	13	1250	6.0	434	7.5	397	13	1420
18	22	1560	19	1180	14	1420	6.8	490	6.4	340	14	1420
19	20	1330	19	1170	13	1230	6.2	434	7.5	443	18	1590
20	19	1270	22	1360	13	1220	5.5	347	7.3	533	18	1620
21	18	1310	21	1300	15	1230	4.8	290	8.4	722	20	1760
22	17	1180	19	1170	17	1180	4.3	245	10	931	22	1970
23	17	1100	19	1150	19	1330	6.1	354	12	1130	24	2190
24	19	1220	20	1230	20	1440	13	821	12	1180	26	2390
25	19	1240	21	1490	13	972	15	1030	9.6	908	28	2550
26	19	1160	23	1780	8.0	536	15	1060	9.0	797	26	2150
27	18	1030	30	2510	6.7	431	15	1050	9.7	767	22	1540
28	18	914	28	2460	6.3	389	14	939	9.3	695	21	1220
29	18	870	25	2700	5.9	308	13	820	---	---	30	2430
30	22	1000	25	2900	5.5	274	11	648	---	---	31	2860
31	25	1140	---	---	5.0	267	9.8	587	---	---	36	3620
TOTAL	---	37869	---	43325	---	49977	---	15298	---	16738	---	41029



EXPLANATION

- 05391260 Station number
- △ Stream gage
- ▽ Surface water-quality station
- ⚡ Stream gage equipped with telephone or data collection platform
- ⚡ Crest-stage partial-record station



Base from U.S. Geological Survey 1:100,000 digital data; modified by Wisconsin Department of Natural Resources. Wisconsin Transverse Mercator projection.

UPPER WISCONSIN RIVER BASIN

WISCONSIN RIVER BASIN

05391000 WISCONSIN RIVER AT RAINBOW LAKE, NEAR LAKE TOMAHAWK, WI

LOCATION.--Lat 45°49'50", long 89°33'08", in NE ¼ NE ¼ sec.36, T.39 N., R.7 E., Oneida County, Hydrologic Unit 07070001, on right bank 500 ft downstream from Gilmore Creek, 0.4 mi downstream from Rainbow Lake, and 2.3 mi northeast of Lake Tomahawk.

DRAINAGE AREA.--757 mi².

PERIOD OF RECORD.--July 1936 to current year. Prior to October 1955, published as "at Rainbow Reservoir, near Lake Tomahawk."

REVISED RECORDS.--WSP 895: 1937(M). WSP 1508: 1944. WDR WI-83-1: Drainage area. WDR WI-80-1: Datum.

GAGE.--Water-stage recorder. Datum of gage is 1,569.05 ft above NGVD of 1929 (levels by Wisconsin Valley Improvement Co.).

REMARKS.--Records good (see page 11). Flow regulated by Rainbow Lake and 12 smaller reservoirs upstream from station. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	465	430	570	686	656	744	678	1830	678	597	520	617
2	460	429	570	686	656	736	675	1730	669	603	e580	641
3	465	429	570	688	654	734	674	1500	663	603	e580	579
4	469	428	570	686	656	738	675	1360	648	583	e530	529
5	452	429	580	686	654	733	669	1340	640	566	526	529
6	451	427	568	685	652	729	665	1330	646	559	528	556
7	451	427	563	686	649	726	662	1330	654	555	533	564
8	460	424	570	686	647	726	656	1470	665	567	537	566
9	447	425	575	685	644	730	631	1550	666	572	579	563
10	431	424	584	683	639	728	495	1390	603	575	604	545
11	427	424	591	684	645	750	334	1420	469	573	600	602
12	424	472	591	684	637	770	283	1670	411	573	604	637
13	424	513	589	685	642	760	287	1760	420	566	603	642
14	421	509	591	684	638	754	295	1680	433	566	584	630
15	418	509	591	685	634	748	308	1540	449	567	568	613
16	415	509	591	685	633	733	319	1490	457	565	556	601
17	415	509	647	684	628	733	414	1390	582	525	555	595
18	416	510	694	676	671	728	501	1240	791	499	553	594
19	416	534	694	669	757	725	511	1120	872	492	558	634
20	416	561	690	665	763	724	664	1010	872	492	563	654
21	417	552	686	665	765	718	866	961	876	508	596	630
22	431	548	687	665	778	717	1070	815	875	534	471	612
23	440	549	690	664	785	713	1370	676	874	447	387	616
24	440	553	688	671	768	710	1640	644	873	374	394	618
25	436	556	694	683	762	706	1740	648	722	419	400	627
26	434	556	694	677	758	702	1760	648	638	447	528	577
27	434	561	693	664	757	700	1800	644	641	445	596	537
28	433	563	691	656	755	693	1820	645	637	441	611	540
29	429	563	690	656	---	685	1830	640	613	440	618	543
30	431	567	687	656	---	683	1840	643	596	437	611	560
31	431	---	688	656	---	681	---	664	---	436	610	---
TOTAL	13499	14890	19577	20971	19283	22457	26132	36778	19633	16126	17083	17751
MEAN	435.5	496.3	631.5	676.5	688.7	724.4	871.1	1186	654.4	520.2	551.1	591.7
MAX	469	567	694	688	785	770	1840	1830	876	603	618	654
MIN	415	424	563	656	628	681	283	640	411	374	387	529

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2002, BY WATER YEAR (WY)

	MEAN	648.9	691.0	774.0	823.0	815.7	646.3	414.7	711.8	726.9	670.2	587.0	598.4
MAX	1445	1250	1178	1108	1161	1044	1330	1798	1863	1387	1472	1282	
(WY)	1952	1939	1955	1943	1952	1939	1973	1973	1939	1968	1938	1980	
MIN	263	170	330	371	417	316	138	173	228	237	243	268	
(WY)	1988	1949	1949	1990	1977	2000	1949	1949	1987	1988	1988	1948	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1936 - 2002
ANNUAL TOTAL	191833	244180	
ANNUAL MEAN	525.6	669.0	675.9
HIGHEST ANNUAL MEAN			1062
LOWEST ANNUAL MEAN			359
HIGHEST DAILY MEAN	776	1840	2820
LOWEST DAILY MEAN	274	283	35
ANNUAL SEVEN-DAY MINIMUM	297	320	107
MAXIMUM PEAK FLOW		1880	3570
MAXIMUM PEAK STAGE		4.72	7.59
10 PERCENT EXCEEDS	687	868	1030
50 PERCENT EXCEEDS	523	628	649
90 PERCENT EXCEEDS	382	430	311

(e) Estimated

05393500 SPIRIT RIVER AT SPIRIT FALLS, WI

LOCATION.--Lat 45°26'58", long 89°58'47", in NW ¼ sec.10, T.34 N., R.4 E., Lincoln County, Hydrologic Unit 07070001, on right bank 40 ft downstream of bridge 0.2 mi south of Spirit Falls, 0.6 mi upstream from Squaw Creek, and 2.0 mi downstream from Richie Creek.

DRAINAGE AREA.--81.6 mi².

PERIOD OF RECORD.--April 1942 to current year.

REVISED RECORDS.--WSP 1308: 1943(M), 1948-50(M). WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,461.63 ft above NGVD of 1929. Prior to Oct. 4, 1982, nonrecording gage 40 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	97	152	e31	e20	e21	e66	785	36	65	25	28
2	18	77	147	e29	e19	e20	e64	608	32	53	23	124
3	16	67	138	e28	e19	e20	e60	416	33	45	20	239
4	16	59	148	e27	e19	e20	e58	297	42	44	40	193
5	16	50	288	e25	e19	e20	e52	235	59	40	51	126
6	15	46	647	e24	e19	e20	e50	380	55	34	33	206
7	15	43	501	e23	e19	e20	e54	552	42	29	25	360
8	15	42	280	e22	e20	e21	e66	442	36	41	21	255
9	16	42	e180	e23	e21	e24	e100	468	33	77	18	141
10	60	42	e170	e25	e21	e36	e200	402	31	55	16	102
11	84	39	e100	e25	e20	e47	e700	283	247	39	15	84
12	61	37	e90	e25	e20	e50	e2800	248	489	32	24	67
13	49	37	e86	e25	e19	e50	e2180	242	261	26	38	57
14	119	42	e80	e25	e19	e48	1790	203	353	23	38	52
15	126	43	e78	e25	e19	e47	1520	170	418	20	30	61
16	105	41	e74	e25	e20	e45	1190	182	248	17	26	54
17	80	37	e68	e24	e20	e44	891	164	151	17	48	45
18	66	36	e64	e22	e21	e44	725	133	106	18	68	39
19	59	53	e58	e22	e22	e43	1090	112	80	25	46	37
20	54	61	e54	e22	e25	e42	743	97	87	21	35	53
21	51	53	e50	e22	e29	e42	484	85	89	19	85	78
22	47	48	e46	e22	e32	e42	373	75	105	48	290	61
23	45	46	e44	e23	e33	e41	331	69	171	41	241	51
24	43	110	e41	e23	e31	e41	352	63	130	28	135	51
25	45	342	e39	e23	e28	e39	395	56	92	24	90	49
26	53	315	e38	e22	e25	e39	319	54	243	22	67	58
27	56	228	e37	e22	e23	e39	242	61	299	20	53	110
28	55	190	e36	e22	e22	e44	236	58	164	23	45	88
29	53	166	e34	e22	---	e50	318	51	112	26	39	73
30	52	151	e34	e21	---	e55	638	46	83	25	35	110
31	94	---	e32	e21	---	e70	---	41	---	24	31	---
TOTAL	1602	2640	3834	740	624	1184	18087	7078	4327	1021	1751	3052
MEAN	51.68	88.00	123.7	23.87	22.29	38.19	602.9	228.3	144.2	32.94	56.48	101.7
MAX	126	342	647	31	33	70	2800	785	489	77	290	360
MIN	15	36	32	21	19	20	50	41	31	17	15	28
CFSM	0.63	1.08	1.52	0.29	0.27	0.47	7.39	2.80	1.77	0.40	0.69	1.25
IN.	0.73	1.20	1.75	0.34	0.28	0.54	8.25	3.23	1.97	0.47	0.80	1.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2002, BY WATER YEAR (WY)

	MEAN	72.06	74.72	39.08	20.53	20.15	108.4	328.6	149.5	98.77	47.28	38.28	75.61
MAX	306	338	293	71.8	69.8	467	697	408	398	209	359	396	
(WY)	1986	1992	1976	1960	1984	1946	1951	1973	1943	1968	1995	1942	
MIN	4.05	5.31	4.07	3.00	3.61	14.6	55.6	23.0	6.01	4.09	3.13	3.05	
(WY)	1977	1977	1977	1977	1977	1956	1946	1987	1988	1964	1944	1976	

SUMMARY STATISTICS

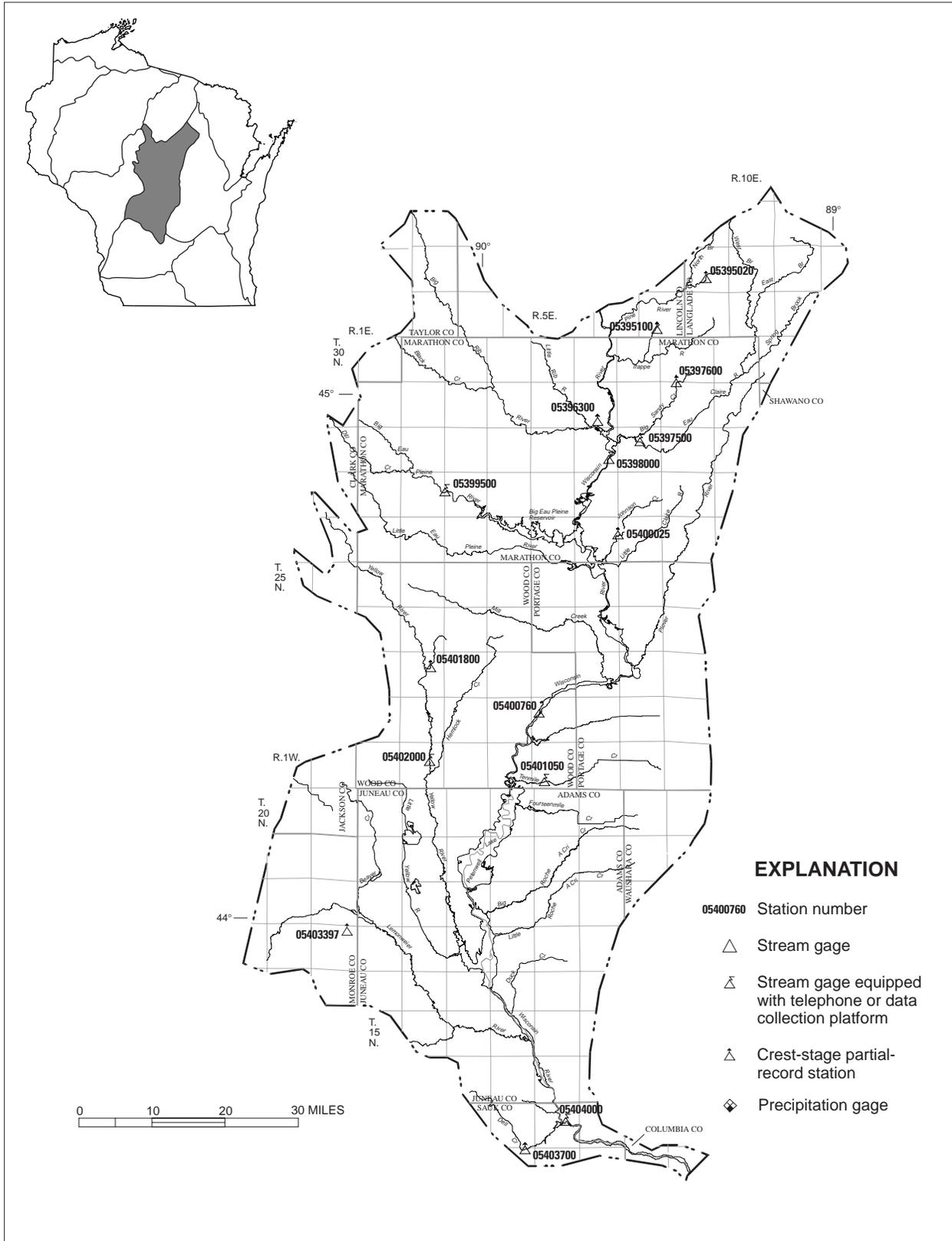
FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1942 - 2002

ANNUAL TOTAL		41817.0		45940									
ANNUAL MEAN		114.6		125.9						88.72			
HIGHEST ANNUAL MEAN										140			1973
LOWEST ANNUAL MEAN										36.3			1957
HIGHEST DAILY MEAN				2180	Apr 12	(a)2800		Apr 12		3290	Sep 18		1942
LOWEST DAILY MEAN				8.1	Jul 16	15		(b)Oct 6-8		1.0	Aug 11		1964
ANNUAL SEVEN-DAY MINIMUM				10	Jul 11	16		Oct 3		1.4	Aug 5		1964
MAXIMUM PEAK FLOW						(c)3030		Apr 12		(d)4180	Sep 18		1942
MAXIMUM PEAK STAGE						(f)9.62		Apr 11		10.00	Sep 18		1942
INSTANTANEOUS LOW FLOW						14		(b)Oct 6-8		1.0	Aug 11		1964
ANNUAL RUNOFF (CFSM)		1.40				1.54				1.09			
ANNUAL RUNOFF (INCHES)		19.06				20.94				14.77			
10 PERCENT EXCEEDS				260		293				214			
50 PERCENT EXCEEDS				40		48				28			
90 PERCENT EXCEEDS				16		20				8.5			

- (a) Ice affected
- (b) Also occurred Aug. 11
- (c) Gage height, 7.75 ft
- (d) From rating curve extended above 2,500 ft³/s
- (e) Estimated due to ice effect or missing record
- (f) Ice jam



Base from U.S. Geological Survey 1:100,000 digital data; modified by Wisconsin Department of Natural Resources. Wisconsin Transverse Mercator projection.

CENTRAL WISCONSIN RIVER BASIN

05394500 PRAIRIE RIVER NEAR MERRILL, WI

LOCATION.--Lat 45°14'09", long 89°38'59", in SW ¼ SW ¼ sec. 20, T.32 N., R.7 E., Lincoln County, Hydrologic Unit 07070002, on left bank 40 ft upstream from bridge on County Trunk Highway C, 1.5 mi upstream from Meadow Creek, 4.5 mi northeast of Merrill, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--184 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1914 to September 1931, August 1939 to current year. Monthly discharge for some periods published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1915-17(M), 1919-21(M), 1923-31(M), 1942-43(M), 1945(M), 1948-50(M). WDR WI-77-1: Drainage area. WDR WI-79-1: 1972.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,297.22 ft above NGVD of 1929. Prior to Oct. 9, 1968, nonrecording gage 40 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	149	177	e86	e66	e84	158	691	156	110	102	100
2	86	136	173	e84	e74	e76	156	648	142	104	95	177
3	85	123	161	e80	e80	e74	135	529	158	104	92	231
4	84	114	165	e80	e70	e80	121	413	175	100	102	183
5	84	108	230	e86	e72	e78	116	337	202	95	101	150
6	82	104	456	e90	e74	e82	112	576	188	92	94	164
7	80	103	489	e86	e82	e76	130	805	162	91	89	160
8	81	108	392	e84	e80	e78	200	825	145	108	86	139
9	83	105	e260	90	e82	e120	317	1200	138	138	89	126
10	123	102	e210	93	82	117	465	1070	132	127	84	120
11	150	99	e180	95	73	136	901	748	248	109	108	113
12	142	97	167	92	e76	121	1750	591	300	99	244	107
13	127	101	158	85	e70	131	1810	518	245	93	250	103
14	142	106	e140	90	e80	136	1520	443	248	90	205	108
15	142	107	e120	88	83	125	1320	371	230	88	161	121
16	133	107	e140	87	e80	e120	1140	380	199	85	135	115
17	122	103	140	e76	e74	e110	1010	346	170	84	143	106
18	113	103	134	e72	e80	e110	871	296	149	85	143	101
19	109	123	e120	e70	e100	116	827	259	137	84	127	103
20	105	128	e86	e80	160	115	834	231	131	83	111	144
21	101	119	e100	e84	129	e110	675	213	130	85	187	197
22	98	112	e110	83	e110	e110	517	199	173	107	447	173
23	98	108	e110	87	e110	e110	431	187	179	104	394	147
24	101	130	e96	86	104	e100	403	177	160	93	305	167
25	e108	205	e100	81	104	e94	469	170	142	91	228	154
26	e105	220	e100	88	e94	e94	453	177	182	92	172	165
27	e104	194	e96	87	e90	e100	371	196	174	89	142	204
28	e109	173	e94	87	e92	111	356	188	145	86	127	190
29	e112	159	e90	e74	---	151	460	176	128	95	117	165
30	e121	157	e86	e76	---	240	654	176	117	100	110	197
31	136	---	e86	e78	---	203	---	171	---	130	103	---
TOTAL	3354	3803	5166	2605	2471	3508	18682	13307	5185	3041	4893	4430
MEAN	108.2	126.8	166.6	84.03	88.25	113.2	622.7	429.3	172.8	98.10	157.8	147.7
MAX	150	220	489	95	160	240	1810	1200	300	138	447	231
MIN	80	97	86	70	66	74	112	170	117	83	84	100
CFSM	0.59	0.69	0.91	0.46	0.48	0.62	3.38	2.33	0.94	0.53	0.86	0.80
IN.	0.68	0.77	1.04	0.53	0.50	0.71	3.78	2.69	1.05	0.61	0.99	0.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

MEAN	165.3	167.5	112.8	92.16	90.34	187.0	434.2	257.5	209.0	137.3	131.8	171.4
MAX	527	388	199	169	158	676	899	723	598	401	494	656
(WY)	1942	1920	1992	1960	1930	1973	1916	1960	1993	1978	1926	1941
MIN	70.8	76.7	66.1	60.5	65.6	68.2	106	98.8	70.6	68.3	68.1	65.1
(WY)	1990	1951	1990	1925	1959	1956	1990	1931	1988	1989	1957	1989

WISCONSIN RIVER BASIN

05394500 PRAIRIE RIVER NEAR MERRILL, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1914 - 2002	
ANNUAL TOTAL	56261		70445			
ANNUAL MEAN	154.1		193.0		179.5	
HIGHEST ANNUAL MEAN					272	1942
LOWEST ANNUAL MEAN					108	1931
HIGHEST DAILY MEAN	1470	Apr 13	1810	Apr 13	4200	Aug 31 1941
LOWEST DAILY MEAN	65	Sep 5	(a)66	Feb 1	35	Oct 26 1947
ANNUAL SEVEN-DAY MINIMUM	(a)68	Feb 11	(a)73	Jan 31	52	Dec 28 1948
MAXIMUM PEAK FLOW			1930	Apr 12	(b)5800	Aug 31 1941
MAXIMUM PEAK STAGE			6.59	Apr 12	(c)9.45	Aug 31 1941
INSTANTANEOUS LOW FLOW			53	(d)Feb 5	34	Oct 26 1947
ANNUAL RUNOFF (CFSM)	0.84		1.05		0.98	
ANNUAL RUNOFF (INCHES)	11.37		14.24		13.26	
10 PERCENT EXCEEDS	261		393		344	
50 PERCENT EXCEEDS	100		117		115	
90 PERCENT EXCEEDS	70		82		76	

- (a) Ice affected
 (b) Based on rating curve extended above 2,200 ft³/s
 (c) From floodmarks
 (d) Also occurred Feb. 11,13, and 17
 (e) Estimated due to ice effect or missing record

05394500 PRAIRIE RIVER NEAR MERRILL, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

WATER TEMPERATURE: October 1998 to current year.

GAGE.--Tipping bucket rain gage with electronic datalogger.

INSTRUMENTATION.--Continuous water temperature recorder since October 1998. Sensor located near midstream.

REMARKS.--Records represent water temperature at sensor within 0.5°C. Record was complete in the 2001 water year.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum temperature, 28.5°C, Aug. 7, 2001; minimum, 0.0°C on many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum temperature, 28.5°C, Aug. 7; minimum 0.0°C, many days in winter.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.5	12.5	14.0	11.0	8.0	9.5	1.5	.0	.5	1.0	.5	.5
2	14.5	11.5	13.0	11.5	8.5	10.5	1.0	.0	.5	1.0	.0	.5
3	11.5	9.5	10.5	8.5	5.0	6.5	1.0	.0	.5	.5	.5	.5
4	11.5	8.0	10.0	6.5	3.5	5.0	.5	.0	.0	.5	.5	.5
5	9.5	8.0	8.5	6.5	3.0	5.0	.5	.0	.0	1.0	.5	.5
6	8.0	5.0	6.5	8.0	6.5	7.0	.5	.0	.5	1.0	.5	.5
7	6.5	3.5	5.0	8.0	6.0	7.0	1.0	.0	.5	1.0	.5	.5
8	7.5	4.5	5.5	6.0	3.5	4.5	1.0	.0	.5	1.0	.5	.5
9	8.0	3.0	5.5	4.0	3.0	3.5	.5	.0	.5	1.5	.5	.5
10	8.5	3.5	6.0	5.0	3.0	4.0	1.0	.0	.5	1.5	.5	.5
11	9.0	4.0	6.5	4.5	1.5	3.0	.5	.0	.5	1.0	.5	.5
12	10.5	5.0	8.0	3.5	2.5	3.0	1.0	.0	.5	1.0	.5	.5
13	13.5	9.5	11.5	4.0	3.0	3.5	.5	.0	.0	1.0	.5	.5
14	15.5	12.0	13.5	3.0	2.0	2.5	1.0	.0	.5	1.0	.5	.5
15	12.0	10.5	11.0	2.0	.5	1.5	.5	.0	.5	1.0	.5	.5
16	12.0	9.0	10.5	2.5	1.0	1.5	.5	.5	.5	1.0	.5	.5
17	11.0	7.0	8.5	1.0	.0	.5	1.0	.5	.5	1.0	.5	.5
18	11.5	7.5	9.5	.5	.0	.0	.5	.5	.5	1.0	.5	.5
19	11.5	6.5	9.0	.5	.0	.0	1.0	.5	.5	1.0	.5	.5
20	13.0	9.5	11.0	.5	.0	.0	.5	.5	.5	1.5	.0	.5
21	10.5	7.0	8.5	.5	.0	.0	.5	.5	.5	1.5	.5	.5
22	11.0	7.0	9.0	.5	.0	.0	.5	.0	.5	1.5	.5	.5
23	11.0	10.0	10.5	.5	.0	.0	.5	.0	.5	1.0	.5	.5
24	12.0	10.5	11.5	1.0	.0	.0	1.0	.0	.5	1.0	.5	.5
25	12.5	11.5	12.0	1.0	.0	.5	1.0	.0	.5	1.5	.5	.5
26	14.0	12.0	13.0	.5	.0	.5	.5	.5	.5	1.0	.5	.5
27	13.5	9.0	11.5	.5	.5	.5	1.0	.0	.5	1.5	.5	.5
28	9.5	6.5	8.0	.5	.5	.5	1.0	.0	.5	1.5	.5	.5
29	8.0	5.0	6.5	1.5	.5	1.0	1.0	.5	.5	1.0	.5	.5
30	7.5	4.5	6.5	2.0	1.0	1.5	1.0	.5	.5	1.0	.5	.5
31	10.5	6.5	8.5	---	---	---	.5	.5	.5	1.0	.5	.5
MONTH	15.5	3.0	9.3	11.5	.0	2.8	1.5	.0	.5	1.5	.0	.5

WISCONSIN RIVER BASIN

05394500 PRAIRIE RIVER NEAR MERRILL, WI--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1.0	.5	.5	1.5	.5	1.0	7.0	1.0	3.5	18.5	15.5	16.5
2	1.5	.5	.5	1.5	.5	1.0	3.0	.5	1.5	17.0	14.5	15.5
3	1.0	.5	.5	1.5	.5	1.0	6.5	1.0	3.5	14.5	13.0	13.5
4	1.0	.5	.5	1.5	.5	1.0	6.5	1.5	4.0	16.5	12.0	14.0
5	1.0	.5	.5	1.5	.5	1.0	3.5	2.5	3.0	15.0	13.0	13.5
6	1.5	.5	.5	1.5	.5	1.0	3.5	2.0	2.5	15.0	11.5	13.0
7	1.0	.5	.5	1.5	.5	.5	3.0	2.0	2.5	15.5	12.5	13.5
8	.5	.5	.5	1.0	.5	.5	5.0	2.0	3.5	16.0	11.5	13.5
9	1.0	.5	.5	1.5	.5	1.0	4.0	3.0	3.0	17.5	11.0	14.5
10	1.5	.5	.5	1.0	.5	.5	6.0	2.5	4.0	18.5	14.5	16.5
11	1.5	.0	.5	1.5	.5	1.0	6.0	5.0	5.5	16.0	12.5	14.5
12	1.0	.5	.5	.5	.5	.5	5.5	4.5	5.0	16.0	10.0	13.0
13	.5	.5	.5	1.5	.5	.5	7.5	3.5	5.5	16.0	12.0	14.0
14	1.0	.5	.5	1.0	.5	.5	10.0	6.5	8.0	14.5	13.0	13.5
15	1.5	.5	.5	1.5	.5	.5	9.5	6.5	8.0	20.5	12.5	16.0
16	1.0	.5	.5	1.5	.5	.5	6.5	4.0	5.0	23.0	17.0	19.5
17	1.5	.5	.5	2.0	.5	1.0	7.0	2.5	4.5	21.0	16.0	18.5
18	1.5	.5	.5	2.0	.5	1.0	9.0	4.0	6.5	20.5	14.0	17.0
19	1.0	.5	.5	2.5	.5	1.0	10.5	6.0	8.5	21.5	13.5	17.5
20	1.0	.5	.5	3.0	.5	1.5	10.0	9.0	9.5	20.0	16.0	18.0
21	1.5	.5	.5	5.0	1.5	3.0	11.0	9.0	10.0	17.5	13.0	15.0
22	1.0	.5	.5	4.0	.5	2.5	10.5	8.5	9.0	14.0	12.0	12.5
23	1.5	.5	1.0	4.5	1.0	2.5	12.5	8.5	10.0	12.5	10.5	11.5
24	1.0	.5	.5	3.0	.5	1.0	12.0	8.0	10.0	11.5	10.5	11.0
25	1.0	.5	.5	1.5	.5	.5	14.0	8.5	11.5	13.0	10.5	11.5
26	1.0	.5	.5	4.0	.5	2.0	16.0	11.0	13.0	13.0	11.0	12.0
27	1.5	.5	.5	6.5	.5	3.5	16.5	10.5	13.5	14.0	11.0	12.5
28	1.0	.0	.5	6.0	.5	3.5	16.5	11.5	14.0	16.5	11.0	13.5
29	---	---	---	4.5	2.0	3.5	18.0	12.0	15.0	18.5	13.5	16.0
30	---	---	---	4.5	2.0	3.0	19.0	14.0	16.5	18.5	12.5	15.5
31	---	---	---	5.0	2.5	3.5	---	---	---	17.0	13.0	15.0
MONTH	1.5	.0	.5	6.5	.5	1.5	19.0	.5	7.3	23.0	10.0	14.6
	JUNE			JULY			AUGUST			SEPTEMBER		
1	14.5	12.5	13.5	22.0	17.0	19.5	22.5	19.5	20.5	18.0	11.5	15.0
2	13.0	10.5	11.5	17.5	14.0	16.0	24.5	19.5	21.5	20.5	13.0	16.5
3	12.5	9.5	11.0	21.5	14.0	17.5	25.0	19.0	22.0	21.5	16.5	18.5
4	13.0	10.5	12.0	23.0	16.0	19.5	26.0	19.0	22.5	20.5	13.5	17.0
5	13.5	10.5	12.0	22.0	15.0	18.5	26.0	20.5	23.0	20.5	14.0	17.0
6	14.5	11.5	13.0	18.0	14.0	16.5	27.0	21.5	24.0	20.0	15.0	17.5
7	15.5	12.5	14.0	21.5	15.5	18.5	28.5	22.0	25.0	19.5	17.5	18.5
8	18.0	12.5	15.5	23.5	16.0	19.5	28.0	21.5	24.5	19.0	17.5	18.0
9	21.0	13.5	17.0	24.5	17.0	21.0	25.0	20.0	22.5	17.5	14.5	16.0
10	19.0	16.0	17.0	24.5	18.0	21.0	22.0	16.5	19.0	15.0	13.0	14.0
11	22.5	15.5	19.0	22.0	15.5	19.0	21.5	14.5	18.0	16.0	12.0	14.0
12	19.5	17.5	18.5	22.5	15.0	19.0	20.5	14.5	17.5	17.5	14.0	15.5
13	20.5	17.5	18.5	23.5	15.0	19.0	20.5	14.0	17.5	16.0	13.0	14.0
14	20.5	18.0	19.0	22.5	16.0	19.5	21.5	14.0	17.5	14.0	10.5	12.5
15	19.0	17.0	18.0	22.5	17.5	20.0	18.0	15.5	16.0	15.5	10.5	13.0
16	20.5	15.0	17.5	24.5	18.0	21.0	18.0	15.0	16.0	15.5	11.0	13.0
17	20.5	14.5	17.5	24.5	18.5	21.0	20.5	14.5	17.5	13.5	12.5	13.0
18	18.5	16.0	17.0	26.5	19.0	22.5	17.5	15.5	16.5	14.0	12.5	13.0
19	20.0	15.5	17.5	26.0	21.0	23.0	20.0	14.0	17.0	14.0	12.5	13.0
20	18.5	15.0	17.0	26.5	20.5	23.0	21.5	14.0	17.5	16.0	11.5	13.5
21	18.0	15.5	16.5	26.5	20.5	23.5	21.0	14.5	18.0	16.5	12.5	14.5
22	19.5	13.5	16.5	23.5	21.0	22.5	23.5	17.0	20.0	17.0	12.5	14.5
23	21.0	13.5	17.5	23.5	19.5	21.0	23.5	18.5	21.0	14.5	10.0	13.0
24	21.0	15.0	18.0	23.5	18.5	21.0	22.0	17.5	19.5	12.0	8.0	10.0
25	24.5	16.5	20.5	24.0	17.5	20.5	19.5	17.0	18.5	12.0	7.0	9.5
26	26.0	19.5	23.0	22.5	16.0	19.5	21.5	15.0	18.0	13.5	8.5	10.5
27	26.0	21.0	23.0	20.5	15.5	18.0	22.0	16.5	19.0	13.0	8.0	10.5
28	25.5	18.5	22.0	18.0	16.0	16.5	21.0	14.5	18.0	12.5	8.5	10.0
29	24.5	19.5	22.0	21.5	16.5	18.5	20.5	15.0	18.0	11.0	7.5	9.0
30	25.0	20.0	22.5	19.5	17.5	18.5	21.5	16.5	18.5	12.5	7.5	10.0
31	---	---	---	25.0	17.0	20.5	19.0	15.0	17.0	---	---	---
MONTH	26.0	9.5	17.2	26.5	14.0	19.8	28.5	14.0	19.4	21.5	7.0	13.8

05395000 WISCONSIN RIVER AT MERRILL, WI

LOCATION.--Lat 45°10'41", long 89°40'52", on line between secs.12 and 13, T.31 N., R.6 E., Lincoln County, Hydrologic Unit 07070002, on left bank 300 ft downstream from U.S. Highway 51 bridge at east end of Merrill, and 0.5 mi downstream from Prairie River.

DRAINAGE AREA.--2,760 mi².

PERIOD OF RECORD.--December 1902 to current year. Monthly discharge data for some periods from December 1902 to September 1909 published in WSP 1308. Mostly seasonal unpublished daily discharge records from December 1902 to September 1905 in District files.

REVISED RECORDS.--WSP 1308: 1904-7, 1909-11, 1913. WSP 1508: 1908, 1915-16(M), 1917, 1920-21(M), 1925(M), 1930, 1935-36. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,228.85 ft above NGVD of 1929. Prior to June 18, 1903, nonrecording gage at different datum. June 18, 1903, to Sept. 10, 1914, non recording gage at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow regulated by 20 reservoirs and 9 powerplants upstream from station. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1510	1590	e2400	e2000	e1900	e1900	2580	10500	2240	1680	1890	1860
2	1550	1670	e2300	2080	e2000	e1900	2480	9990	2300	2200	1950	2840
3	1510	1660	e2200	2180	e1800	e1900	2170	8450	2260	2090	1920	3160
4	1420	1320	2250	e2100	e1900	e2000	2240	6990	2690	1930	2400	2910
5	1370	1580	2850	e2200	e2000	e1900	2190	6010	2930	2070	2030	2730
6	1300	1670	5350	e2100	e1900	e1900	1960	7590	2490	2200	2250	2620
7	1430	1580	e5600	e1900	e1800	e1900	2080	9010	2450	1990	1970	2640
8	1350	1810	e4600	e2200	e1900	e2000	2470	8590	2110	2620	1950	3030
9	1570	1530	e3100	e2300	e1900	e2500	3060	9870	2040	2730	1860	2610
10	1680	1400	2850	e1900	e1900	e2000	4190	9350	2220	2520	1540	2110
11	1820	1460	e2700	e2100	e1900	e2100	7970	7870	5700	2210	2070	2170
12	1480	1770	2670	e2200	e1900	e2300	16000	7120	4910	2040	3210	2310
13	1420	1960	e2300	e2100	e1800	e2400	19900	7320	3800	2100	1830	2150
14	1500	1880	e2200	e2100	e1800	e2500	17400	6650	3810	2170	1930	2100
15	1640	1750	e2100	e2000	e1800	e2400	15600	6080	4040	2080	2290	2290
16	1750	1910	2200	e2100	e2000	e2200	12800	6080	3320	2030	2070	2250
17	1530	1830	e2200	e2000	e1800	e2100	11500	5590	3360	2040	2050	2140
18	1450	1790	e2200	e2000	1780	e2400	10400	4980	2700	1960	2070	2300
19	1490	2230	e2200	e2200	2310	e2200	13600	4460	2730	2010	2270	2000
20	1670	1970	1960	e1900	e3000	e2200	12000	3990	2450	1570	1840	2230
21	1570	1840	1930	e2000	e2400	e2100	10700	3650	2510	1640	2690	2780
22	1360	1780	2490	e1900	e2000	e2100	8520	3360	3170	2750	3510	2180
23	1200	1660	e2200	e2000	e2300	e2000	7820	2960	3550	2510	3040	1880
24	1850	1980	1930	e1900	e2200	e1900	8530	2630	3480	2490	2860	2440
25	1220	3480	2220	e1800	e2200	e2100	8880	2660	3040	2010	1990	2180
26	1740	2610	e2300	e1900	e2000	e1900	8250	2580	3200	2050	2170	2520
27	1900	e2800	e2200	e1800	e2100	e1900	7720	2600	3010	1680	1740	2750
28	1640	e2200	e2200	e2000	e2000	e2100	8260	2520	3020	1870	1630	2100
29	1630	2360	e2000	e1900	---	e2300	8380	2530	2460	2130	1960	2090
30	1500	2250	e1900	e1800	---	2980	9250	2410	2110	2020	1920	2760
31	1750	---	e1900	e1900	---	2870	---	2450	---	2120	1920	---
TOTAL	47800	57320	79500	62560	56290	66950	248900	176840	90100	65510	66820	72130
MEAN	1542	1911	2565	2018	2010	2160	8297	5705	3003	2113	2155	2404
MAX	1900	3480	5600	2300	3000	2980	19900	10500	5700	2750	3510	3160
MIN	1200	1320	1900	1800	1780	1900	1960	2410	2040	1570	1540	1860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2002, BY WATER YEAR (WY)

MEAN	2522	2390	2087	1984	1933	2585	4750	3665	3091	2348	2084	2534
MAX	8654	4632	3887	3138	3063	6275	11500	8931	9923	5862	5451	9069
(WY)	1912	1939	1992	1939	1932	1935	1916	1904	1905	1968	1912	1903
MIN	760	775	913	957	961	1071	1348	1082	810	724	719	873
(WY)	1977	1977	1977	1990	1990	1908	1990	1987	1988	1988	1934	1987

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1903 - 2002

ANNUAL TOTAL	845130	1090720										
ANNUAL MEAN	2315	2988								2651		
HIGHEST ANNUAL MEAN										4558		1905
LOWEST ANNUAL MEAN										1348		1977
HIGHEST DAILY MEAN	16400	Apr 13	19900	Apr 13	36400	Sep 1	1941					
LOWEST DAILY MEAN	1200	Oct 23	1200	Oct 23	90	Sep 26	1908					
ANNUAL SEVEN-DAY MINIMUM	1420	Oct 2	1420	Oct 2	194	Sep 21	1908					
MAXIMUM PEAK FLOW			20700	Apr 13	(a)49400	Aug 31	1941					
MAXIMUM PEAK STAGE			12.27	Apr 13	18.26	Aug 31	1941					
10 PERCENT EXCEEDS	3370		5820		4430							
50 PERCENT EXCEEDS	1800		2150		2100							
90 PERCENT EXCEEDS	1480		1670		1280							

(a) From rating curve extended above 20,000 ft³/s
(e) Estimated due to ice effect or missing record

WISCONSIN RIVER BASIN

05397500 EAU CLAIRE RIVER AT KELLY, WI

LOCATION.--Lat 44°55'06", long 89°33'00", on line between secs.9 and 10, T.28 N., R.8 E., Marathon County, Hydrologic Unit 07070002, on right bank 50 ft downstream from County Highway SS bridge, 0.7 mi northeast of Kelly, 1.3 mi upstream from Big Sandy Creek, 4.5 mi upstream from mouth, and 5.0 mi southeast of Wausau.

DRAINAGE AREA.--375 mi².

PERIOD OF RECORD.--January 1914 to November 1926, August 1939 to current year.

REVISED RECORDS.--WSP 1508: 1915, 1916-17(M), 1919-26(M), 1940(M), 1945(M), 1950(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,177.88 ft above NGVD of 1929. Prior to Sept. 17, 1953, nonrecording gage at site 50 ft upstream at datum 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	154	322	e100	e78	e150	e390	826	369	143	94	99
2	76	170	301	e79	e77	e150	e330	789	266	130	85	168
3	75	150	284	e77	e78	e150	e270	645	411	121	84	262
4	75	134	263	e75	e78	e140	e230	488	517	119	89	279
5	73	123	261	e74	e81	e150	e210	393	587	113	87	216
6	72	117	344	e76	e87	e160	e200	552	488	105	83	171
7	72	114	382	e76	e94	e190	e209	832	347	100	75	151
8	72	113	377	e75	e99	e210	e269	922	269	102	72	139
9	73	115	e290	e81	e110	e380	e434	916	227	112	68	126
10	101	116	e230	e92	e120	e480	e605	850	218	121	65	116
11	140	107	e200	e96	e120	e510	e841	995	1040	107	66	107
12	154	101	e180	e95	e120	e450	e1740	818	578	97	102	103
13	132	97	e160	e90	e120	e460	e2350	656	349	91	137	98
14	131	106	e140	e87	e130	e670	e2280	569	425	86	124	100
15	145	113	e130	e87	e140	e700	e1670	488	412	80	102	112
16	143	115	e120	e85	e140	e650	e1280	428	332	78	93	112
17	131	119	e110	e82	e140	e570	e1070	406	265	75	99	103
18	122	114	e100	e78	e160	e500	e973	366	217	117	98	96
19	116	129	e98	e77	e190	e470	e1230	324	185	111	94	103
20	110	147	e97	e77	e290	e420	e1080	291	175	82	87	115
21	105	148	e100	e78	e550	e390	e871	255	241	74	100	191
22	101	136	e110	e80	e540	e410	e656	242	499	114	700	213
23	99	129	e170	e80	e380	e260	e601	225	586	93	592	178
24	113	138	e190	e80	e280	e200	e624	210	380	80	452	154
25	117	268	e220	e80	e240	e170	e827	202	283	76	320	153
26	118	358	e230	e82	e190	e140	e661	216	275	76	235	154
27	120	348	e240	e86	e160	e110	e515	420	288	81	180	154
28	118	311	e240	e86	e150	e110	e510	620	233	76	145	162
29	114	269	e200	e85	---	e160	e679	429	190	81	128	160
30	112	252	e180	e81	---	e250	e790	426	162	82	116	214
31	126	---	e130	e79	---	e380	---	581	---	93	106	---
TOTAL	3333	4811	6399	2556	4942	10140	24395	16380	10814	3016	4878	4509
MEAN	107.5	160.4	206.4	82.45	176.5	327.1	813.2	528.4	360.5	97.29	157.4	150.3
MAX	154	358	382	100	550	700	2350	995	1040	143	700	279
MIN	72	97	97	74	77	110	200	202	162	74	65	96
CFSM	0.29	0.43	0.55	0.22	0.47	0.87	2.17	1.41	0.96	0.26	0.42	0.40
IN.	0.33	0.48	0.63	0.25	0.49	1.01	2.42	1.62	1.07	0.30	0.48	0.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

	MEAN	203.8	230.6	138.5	90.22	90.23	348.8	741.3	363.2	299.5	161.1	151.3	206.4
MAX	900	784	650	217	227	1456	1672	1146	1119	691	789	1095	
(WY)	1942	1920	1966	1946	1981	1973	1922	1960	1943	1978	1926	1941	
MIN	46.9	68.6	48.2	31.5	41.0	51.1	149	94.4	52.8	64.6	51.9	48.5	
(WY)	1949	1977	1926	1926	1957	1956	1990	1977	1988	1989	1948	1989	

WISCONSIN RIVER BASIN

05397500 EAU CLAIRE RIVER AT KELLY, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1914 - 2002	
ANNUAL TOTAL	77404		96173		251.4	
ANNUAL MEAN	212.1		263.5		440	
HIGHEST ANNUAL MEAN					131	
LOWEST ANNUAL MEAN					1925	
HIGHEST DAILY MEAN	2320	Apr 9	2350	Apr 13	7180	Aug 21 1926
LOWEST DAILY MEAN	61	Sep 5	65	Aug 10	(a)25	(b)Jan 6 1926
ANNUAL SEVEN-DAY MINIMUM	66	Aug 21	73	Oct 3	(a)26	Jan 10 1926
MAXIMUM PEAK FLOW			2590	Apr 13	(c)8300	Aug 21 1926
MAXIMUM PEAK STAGE			5.51	Apr 13	(d)10.14	Mar 24 1991
INSTANTANEOUS LOW FLOW			55	Aug 2	(f)8.0	Jul 17 1944
ANNUAL RUNOFF (CFSM)	0.57		0.70		0.67	
ANNUAL RUNOFF (INCHES)	7.68		9.54		9.11	
10 PERCENT EXCEEDS	395		589		528	
50 PERCENT EXCEEDS	113		148		129	
90 PERCENT EXCEEDS	74		80		60	

- (a) Ice affected
- (b) Also occurred Jan. 10-15, 17, 18, 1926, ice affected, and Oct. 3, 1948
- (c) From rating curve extended above 6,000 ft³/s, gage height, 8.4 ft, from graph based on gage readings
- (d) Ice jam
- (e) Estimated due to ice effect or missing record
- (f) Probably result of temporary regulation

WISCONSIN RIVER BASIN

05398000 WISCONSIN RIVER AT ROTHSCHILD, WI

LOCATION.--Lat 44°53'09", long 89°38'05", in sec.26, T.28 N., R.7 E., Marathon County, Hydrologic Unit 07070002, on left bank at Rothschild, 0.5 mi downstream from Rothschild Dam, 1.7 mi north of bridge on U.S. Highway 51, 2.0 mi downstream from Eau Claire River, and 5.0 mi upstream from Black Creek.

DRAINAGE AREA.--4,020 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,125.86 ft above NGVD of 1929. Prior to Oct. 1, 1975, at datum 10.00 ft higher. Auxiliary water-stage recorder in Mosinee Pond 8 mi downstream. Prior to July 23, 1964, nonrecording auxiliary gage at same site and datum, read hourly.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow regulated by 20 reservoirs and 12 powerplants upstream from station. Gage-height telemeter at station.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Flood of Sept. 1, 1941, reached stage of 22.3 ft, datum then in use, from tailwater data at Rothschild dam, discharge, 75,000 ft³/s from rating curve extended above 45,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1620	2520	4840	2140	e2200	e2500	5040	14400	3890	3520	2460	2200
2	1830	2240	4380	2290	2070	2190	4410	13300	3180	2790	2480	3850
3	1630	2410	3900	e2300	2200	2160	e3600	11300	4640	2940	2160	5440
4	1740	1760	3650	e2400	2070	2180	e3400	9440	5820	2470	2870	5590
5	1520	2010	4340	e2400	2070	e2300	e3200	8130	6180	2480	2470	4130
6	1500	2060	8530	e2500	e2300	e2200	e3000	10700	5180	2670	2530	3650
7	1620	2000	9060	2480	e2300	2100	e3100	14500	4200	2460	2430	3490
8	1550	2050	7540	2240	2020	2340	4300	12600	3650	3000	2220	3990
9	1770	2260	5440	e2500	e2200	e3500	5900	14700	3220	3390	2210	3550
10	2340	1740	4290	2490	1970	e4400	8050	16000	3440	3230	1790	2920
11	2620	1770	3930	2290	e2200	3950	12600	11700	9850	2850	2140	2720
12	2290	2030	3820	e2500	e2200	3890	26900	10500	12400	2710	3750	2850
13	2090	2470	3670	2400	1960	4220	34400	10600	6880	2350	3620	2720
14	2030	2280	3240	2400	2080	e5200	28900	9430	6660	2580	2790	2690
15	2480	2250	2960	e2400	2100	4840	24500	8280	6850	2390	2960	2820
16	2430	2260	2910	2320	2150	3970	19500	7850	5680	2480	2810	2860
17	2320	2330	e3200	e2400	2170	3730	16600	7560	5000	2320	2700	2640
18	1940	2180	e3100	2080	2000	3720	14800	6720	4290	2520	2690	2670
19	1970	2830	3120	2260	2530	e4000	20100	6050	3730	2540	2780	2730
20	1980	2850	2570	e2400	5520	3970	19300	5380	3800	2080	2340	3270
21	2090	2420	2360	2090	5290	3710	14800	5100	3910	1760	3640	4800
22	1850	2350	e2600	e2200	e3400	3510	12100	4610	6330	2830	7850	3920
23	1500	2280	e3100	2210	e3300	3270	10400	4330	7670	3190	7110	3000
24	2090	2610	e2400	2340	e3200	2870	11000	3490	6930	2860	5380	3150
25	1820	5590	e2400	2270	e3300	e2800	12200	3550	5940	2500	3730	3120
26	1940	5390	e2500	2180	e3000	e2700	10900	3750	5880	2270	3040	3190
27	2560	5210	2330	e2300	e2800	e2700	10000	4890	5890	2190	2840	3710
28	2120	4050	2300	2120	e2700	3230	10300	5300	5390	1860	2310	3480
29	2030	3830	2180	e2200	---	4570	12000	4390	4920	2610	2360	2860
30	1970	3710	2090	2210	---	6450	13900	4200	4080	2560	2420	4890
31	2270	---	2180	2070	---	6230	---	4410	---	2720	2360	---
TOTAL	61510	81740	114930	71380	73300	109400	379200	257160	165480	81120	95240	102900
MEAN	1984	2725	3707	2303	2618	3529	12640	8295	5516	2617	3072	3430
MAX	2620	5590	9060	2500	5520	6450	34400	16000	12400	3520	7850	5590
MIN	1500	1740	2090	2070	1960	2100	3000	3490	3180	1760	1790	2200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2002, BY WATER YEAR (WY)

MEAN	3196	3259	2717	2443	2388	4160	7562	4652	3849	2822	2476	3161
MAX	10020	7262	5484	3787	4051	13300	14640	13930	11920	7219	6973	9079
(WY)	1986	1986	1992	1973	1984	1973	1967	1960	1993	1978	1995	1980
MIN	837	863	973	1025	1024	1613	2081	1515	924	933	932	1000
(WY)	1949	1977	1977	1990	1977	1956	1990	1987	1988	1988	1988	1989

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1945 - 2002	
ANNUAL TOTAL	1250460		1593360			
ANNUAL MEAN	3426		4365		3556	
HIGHEST ANNUAL MEAN					5953	
LOWEST ANNUAL MEAN					1686	
HIGHEST DAILY MEAN	31400		34400		44500	
LOWEST DAILY MEAN	(a)1400		1500		575	
ANNUAL SEVEN-DAY MINIMUM	1590		1620		757	
MAXIMUM PEAK FLOW			35600		49200	
MAXIMUM PEAK STAGE			25.58		(c)18.46	
10 PERCENT EXCEEDS	5670		8740		6530	
50 PERCENT EXCEEDS	2240		2850		2600	
90 PERCENT EXCEEDS	1720		2070		1500	

- (a) Ice affected
 (b) Also occurred Mar. 31, 1967
 (c) Datum then in use
 (e) Estimated due to ice effect or missing record

05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI

LOCATION.--Lat 44°49'19", long 90°04'46", on line between sec.13, T.27 N., R.3 E., and sec.18, T.27 N., R.4 E., Marathon County, Hydrologic Unit 07070002, on left bank 15 ft upstream from bridge on State Highway 97, 1.0 mi north of Stratford, and 1.4 mi downstream from small tributary.

DRAINAGE AREA.--224 mi².

PERIOD OF RECORD.--July 1914 to December 1925, April 1937 to current year. Monthly discharge for some periods published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1917, 1920-22, 1926, 1946, 1948, 1950. WSP 1508: 1915-25(M), 1937, 1946(M), 1948(M).

GAGE.--Water-stage recorder. Datum of gage is 1,154.24 ft above NGVD of 1929. July 24, 1914, to Dec. 31, 1925, nonrecording gage at site 0.5 mi upstream at different datum. Apr. 30, 1937, to Sept. 15, 1938, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of June 5, 1914, reached a stage of 20.7 ft, from floodmarks; discharge, 40,000 ft³/s, former site and datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	52	686	e15	e15	e66	e360	326	66	60	488	37
2	14	63	431	e15	e15	e60	e270	230	54	48	180	1340
3	13	52	279	e15	e15	e54	210	169	676	41	99	2760
4	12	45	253	e15	e15	e40	170	132	534	36	129	463
5	12	40	499	e15	e14	e32	130	112	938	37	117	263
6	11	35	1960	e16	e15	e28	129	1730	399	32	79	161
7	10	36	678	e16	e16	e26	212	869	226	27	55	115
8	9.9	34	361	e16	e17	e30	604	369	151	101	43	88
9	12	30	220	e17	e18	e500	810	1980	112	266	36	70
10	24	31	e150	e18	e20	e700	824	901	89	128	30	58
11	37	28	e100	e19	e22	e600	1860	382	1020	77	36	50
12	75	26	e80	e18	e20	e470	4720	352	468	58	6220	47
13	61	26	e66	e18	e18	e700	1460	397	207	44	2320	42
14	80	27	e58	e17	e17	e1200	742	265	363	36	844	49
15	166	29	e50	e16	e18	e560	698	194	481	31	319	53
16	119	31	e45	e16	e21	e400	455	156	231	27	176	45
17	88	30	e39	e15	e22	e450	359	130	138	26	245	37
18	68	29	e35	e15	e22	e350	515	110	100	29	341	38
19	54	38	e31	e15	e100	e320	3350	94	79	27	158	59
20	46	79	e28	e15	e1100	e260	766	81	70	23	99	229
21	40	73	e26	e15	e520	e240	371	71	74	23	1200	309
22	35	55	e26	e16	e160	e200	268	61	7690	427	5570	192
23	31	49	e27	e16	e130	e140	346	58	2140	254	1380	132
24	30	194	e26	e16	e120	e100	285	53	805	92	525	98
25	34	1520	e22	e15	e170	e86	262	50	310	58	256	80
26	33	912	e19	e17	e130	e70	192	61	265	47	147	86
27	33	478	e18	e19	e100	e90	153	331	252	34	101	138
28	33	353	e17	e20	e80	e300	313	321	138	28	82	139
29	30	277	e16	e20	---	e660	1160	176	96	41	65	106
30	28	275	e16	e17	---	e1000	595	116	75	86	50	1380
31	31	---	e15	e16	---	e700	---	86	---	992	42	---
TOTAL	1284.9	4947	6277	509	2930	10432	22589	10363	18247	3236	21432	8664
MEAN	41.45	164.9	202.5	16.42	104.6	336.5	753.0	334.3	608.2	104.4	691.4	288.8
MAX	166	1520	1960	20	1100	1200	4720	1980	7690	992	6220	2760
MIN	9.9	26	15	15	14	26	129	50	54	23	30	37
CFSM	0.19	0.74	0.90	0.07	0.47	1.50	3.36	1.49	2.72	0.47	3.09	1.29
IN.	0.21	0.82	1.04	0.08	0.49	1.73	3.75	1.72	3.03	0.54	3.56	1.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
MEAN	106.1	128.9	48.44	19.79	35.05	408.0	597.4	231.5	217.2	76.99	81.57	163.7
MAX	728	695	446	138	372	1202	1551	1016	1203	642	691	1572
(WY)	1942	1992	1966	1973	1984	1976	1951	1973	1980	1978	2002	1938
MIN	2.26	4.34	2.50	0.40	0.51	8.77	51.7	15.8	5.16	2.71	2.58	1.50
(WY)	1954	1954	1990	1977	1977	1956	1946	1977	1988	1988	1937	1953

WISCONSIN RIVER BASIN

05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1914 - 2002	
ANNUAL TOTAL	83764.3		110910.9			
ANNUAL MEAN	229.5		303.9		176.8	
HIGHEST ANNUAL MEAN					355 1980	
LOWEST ANNUAL MEAN					47.6 1977	
HIGHEST DAILY MEAN	6670	Apr 7	7690	Jun 22	26100	Sep 9 1938
LOWEST DAILY MEAN	9.5	Jul 16	9.9	Oct 8	(a)0.00	(b)Jan 22 1961
ANNUAL SEVEN-DAY MINIMUM	11	Oct 3	11	Oct 3	(a)0.00	Jan 22 1961
MAXIMUM PEAK FLOW			12600	Jun 22	(c)41000	Sep 9 1938
MAXIMUM PEAK STAGE			18.01	Jun 22	(d)24.50	Sep 9 1938
INSTANTANEOUS LOW FLOW			9.3	Oct 8	0.00	(f)Aug 17 1947
ANNUAL RUNOFF (CFSM)	1.02		1.36		0.79	
ANNUAL RUNOFF (INCHES)	13.91		18.42		10.73	
10 PERCENT EXCEEDS	476		700		370	
50 PERCENT EXCEEDS	33		79		25	
90 PERCENT EXCEEDS	15		16		4.9	

- (a) Occurred during ice-affected period
 (b) Also occurred Jan. 23 to Feb. 5, 1961
 (c) Based on rating curve extended above 24,000 ft³/s
 (d) From floodmarks
 (e) Estimated due to ice effect or missing record
 (f) Also occurred Jan. 22 to Feb. 5, 1961, ice-affected period

05400664 MILL CREEK NEAR HEWITT, WI

LOCATION.--Lat 44°37'50", long 90°07'12" in SE ¼ NE ¼ SE ¼ sec.22, T.25 N., R.3 E., Wood County, Hydrologic Unit 07070003, on left bank upstream of Stadt Road bridge, 0.3 mi north of State Highway 10, 1.5 mi southwest of Hewitt.

DRAINAGE AREA.--9.7 mi².

PERIOD OF RECORD.--December 2001 to November 2002 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 1,210 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good (see page 11). Flow is affected by effluent discharge of wastewater utility plant 0.75 mi upstream of gage. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	12	3.5	3.5	4.1	14	11	6.0	12	6.5	6.6
2	---	---	11	3.6	3.5	3.9	15	9.6	5.9	13	6.1	174
3	---	---	9.0	3.7	3.4	3.7	13	7.5	212	15	5.8	27
4	---	---	7.6	3.7	3.4	3.7	12	6.4	72	14	47	11
5	---	---	12	3.6	3.4	3.5	12	5.8	63	14	7.7	8.5
6	---	---	17	3.6	3.5	3.6	14	86	15	15	7.2	8.1
7	---	---	9.2	3.7	3.5	3.7	17	18	8.4	15	7.5	7.8
8	---	---	7.3	3.6	3.7	10	21	9.8	7.0	26	6.1	7.6
9	---	---	6.2	3.8	4.0	110	19	54	6.6	13	5.7	8.0
10	---	---	6.0	4.0	4.4	44	21	15	6.8	11	5.5	8.1
11	---	---	5.8	4.0	4.2	22	47	11	43	12	5.4	7.5
12	---	---	5.7	3.8	3.6	22	140	14	10	10	163	7.6
13	---	---	5.8	3.8	3.5	54	25	11	11	9.8	22	8.0
14	---	---	5.6	3.9	3.6	35	24	9.3	64	9.2	9.3	12
15	---	---	5.3	3.8	4.0	22	22	8.4	17	10	7.7	8.7
16	---	---	5.5	3.6	4.2	27	18	10	8.9	9.1	6.4	7.9
17	---	---	5.8	3.5	4.0	24	17	7.4	8.1	8.9	52	8.1
18	---	---	5.5	3.5	4.8	22	17	6.9	8.0	7.3	8.7	8.1
19	---	---	5.2	3.4	48	20	20	6.7	11	7.0	6.7	26
20	---	---	5.1	3.3	58	22	13	6.7	9.6	6.6	6.0	167
21	---	---	4.7	3.6	11	21	13	6.7	79	8.4	63	122
22	---	---	7.7	3.6	7.4	13	18	7.0	402	27	32	14
23	---	---	6.7	3.7	7.0	11	16	6.7	186	6.7	9.5	12
24	---	---	5.2	3.6	13	11	17	6.4	22	6.3	7.5	10
25	---	---	4.2	3.7	15	9.9	15	7.8	16	6.4	6.8	9.9
26	---	---	4.1	4.1	7.0	11	12	11	76	7.6	6.8	11
27	---	---	4.2	4.5	5.3	14	13	41	15	9.9	6.7	14
28	---	---	4.1	4.3	4.5	31	73	11	12	6.0	6.7	10
29	---	---	3.9	3.7	---	33	50	7.9	11	11	6.6	9.9
30	---	---	3.6	3.6	---	24	18	7.1	11	7.8	6.7	84
31	---	---	3.8	3.6	---	17	---	6.5	---	13	6.6	---
TOTAL	---	---	204.8	115.4	244.4	656.1	746	433.6	1423.3	348.0	551.2	824.4
MEAN	---	---	6.606	3.723	8.729	21.16	24.87	13.99	47.44	11.23	17.78	27.48
MAX	---	---	17	4.5	58	110	140	86	402	27	163	174
MIN	---	---	3.6	3.3	3.4	3.5	12	5.8	5.9	6.0	5.4	6.6
CFSM	---	---	0.68	0.38	0.90	2.18	2.56	1.44	4.89	1.16	1.83	2.83
IN.	---	---	0.79	0.44	0.94	2.52	2.86	1.66	5.46	1.33	2.11	3.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

	---	---	6.606	3.723	8.729	21.16	24.87	13.99	47.44	11.23	17.78	27.48
MEAN	---	---	6.606	3.723	8.729	21.16	24.87	13.99	47.44	11.23	17.78	27.48
MAX	---	---	6.61	3.72	8.73	21.2	24.9	14.0	47.4	11.2	17.8	27.5
(WY)	---	---	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	---	---	6.61	3.72	8.73	21.2	24.9	14.0	47.4	11.2	17.8	27.5
(WY)	---	---	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR
(DECEMBER-SEPTEMBER)

HIGHEST DAILY MEAN	402	Jun 22
LOWEST DAILY MEAN	3.3	Jan 20
SEVEN-DAY MINIMUM	3.5	Feb 1
MAXIMUM PEAK FLOW	546	Jun 22
MAXIMUM PEAK STAGE	9.44	Jun 22
INSTANTANEOUS LOW FLOW	1.1	Feb 13
10 PERCENT EXCEEDS	34	
50 PERCENT EXCEEDS	8.6	
90 PERCENT EXCEEDS	3.7	

WISCONSIN RIVER BASIN

05400664 MILL CREEK NEAR HEWITT, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	11	---	---	---	---	---	---	---	---	---	---
2	12	11	---	---	---	---	---	---	---	---	---	---
3	12	11	---	---	---	---	---	---	---	---	---	---
4	255	11	---	---	---	---	---	---	---	---	---	---
5	78	12	---	---	---	---	---	---	---	---	---	---
6	27	12	---	---	---	---	---	---	---	---	---	---
7	18	11	---	---	---	---	---	---	---	---	---	---
8	20	11	---	---	---	---	---	---	---	---	---	---
9	15	11	---	---	---	---	---	---	---	---	---	---
10	26	11	---	---	---	---	---	---	---	---	---	---
11	16	11	---	---	---	---	---	---	---	---	---	---
12	15	11	---	---	---	---	---	---	---	---	---	---
13	13	10	---	---	---	---	---	---	---	---	---	---
14	11	10	---	---	---	---	---	---	---	---	---	---
15	11	10	---	---	---	---	---	---	---	---	---	---
16	10	9.9	---	---	---	---	---	---	---	---	---	---
17	10	9.8	---	---	---	---	---	---	---	---	---	---
18	13	10	---	---	---	---	---	---	---	---	---	---
19	12	10	---	---	---	---	---	---	---	---	---	---
20	10	10	---	---	---	---	---	---	---	---	---	---
21	14	10	---	---	---	---	---	---	---	---	---	---
22	26	9.9	---	---	---	---	---	---	---	---	---	---
23	22	9.5	---	---	---	---	---	---	---	---	---	---
24	19	8.8	---	---	---	---	---	---	---	---	---	---
25	40	8.7	---	---	---	---	---	---	---	---	---	---
26	53	8.4	---	---	---	---	---	---	---	---	---	---
27	19	8.4	---	---	---	---	---	---	---	---	---	---
28	15	8.0	---	---	---	---	---	---	---	---	---	---
29	13	8.3	---	---	---	---	---	---	---	---	---	---
30	13	7.8	---	---	---	---	---	---	---	---	---	---
31	12	---	---	---	---	---	---	---	---	---	---	---
TOTAL	852	301.5	---	---	---	---	---	---	---	---	---	---
MEAN	27.48	10.05	---	---	---	---	---	---	---	---	---	---
MAX	255	12	---	---	---	---	---	---	---	---	---	---
MIN	10	7.8	---	---	---	---	---	---	---	---	---	---
CFSM	2.83	1.04	---	---	---	---	---	---	---	---	---	---
IN.	3.27	1.16	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	2002	2003	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MEAN	27.48	10.05	6.606	3.723	8.729	21.16	24.87	13.99	47.44	11.23	17.78	27.48
MAX	27.5	10.0	6.61	3.72	8.73	21.2	24.9	14.0	47.4	11.2	17.8	27.5
(WY)	2003	2003	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	27.5	10.0	6.61	3.72	8.73	21.2	24.9	14.0	47.4	11.2	17.8	27.5
(WY)	2003	2003	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR (JANUARY-NOVEMBER)		FOR 2003 WATER YEAR (OCTOBER-NOVEMBER)		WATER YEARS 2002 - 2003	
	HIGHEST DAILY MEAN	402	Jun 22	255	Oct 4	402
LOWEST DAILY MEAN	3.3	Jan 20	7.8	Nov 30	3.3	Jan 20 2002
SEVEN-DAY MINIMUM	3.5	Feb 1	8.3	Nov 24	3.5	Feb 1 2002
MAXIMUM PEAK FLOW			386	Oct 4	546	Jun 22 2002
MAXIMUM PEAK STAGE			8.28	Oct 4	9.44	Jun 22 2002
INSTANTANEOUS LOW FLOW			6.5	Nov 27,28,30	1.1	Feb 13 2002
RUNOFF (CFSM)	2.01		1.95		1.89	
RUNOFF (INCHES)	24.91		4.42		25.71	
10 PERCENT EXCEEDS	38		26		31	
50 PERCENT EXCEEDS	10		11		9.9	
90 PERCENT EXCEEDS	3.7		8.7		3.7	

05400705 MILL CREEK NEAR JUNCTION CITY, WI

LOCATION.--Lat 44°34'13", long 89°43'58" in SE ¼ SW ¼ SE ¼ sec.12, T.24 N., R.6 E., Portage County, Hydrologic Unit 07070003, on right bank 60 ft upstream from bridge on North Elm Road, 2.1 mi southeast of Junction City.

DRAINAGE AREA.--83.3 mi².

PERIOD OF RECORD.--December 2001 to November 2002 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 1,100 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	71	e9.8	e9.8	e47	208	330	35	40	19	13
2	---	---	83	e9.8	e9.8	e29	134	209	30	32	20	30
3	---	---	108	e9.6	e9.6	e26	83	132	85	28	17	95
4	---	---	84	e9.8	e9.6	e22	68	92	265	25	17	219
5	---	---	58	e10	e9.4	e19	63	65	676	22	18	277
6	---	---	52	e10	e9.2	e18	59	66	604	21	32	164
7	---	---	67	e10	e9.4	e17	63	117	402	18	23	46
8	---	---	97	e11	e9.6	e20	91	349	233	19	16	29
9	---	---	70	e12	e9.8	e54	141	308	89	21	15	25
10	---	---	49	e12	e10	e170	174	209	47	25	15	22
11	---	---	42	e12	e11	e420	174	326	48	23	13	21
12	---	---	40	e13	e12	e440	279	211	60	17	33	20
13	---	---	e37	e13	e12	e350	645	114	135	15	54	19
14	---	---	e35	e12	e12	e380	415	91	214	15	79	18
15	---	---	e33	e11	e11	e450	259	74	139	14	80	19
16	---	---	e33	e11	e15	e390	193	57	150	13	31	20
17	---	---	e33	e10	e17	e310	165	49	139	12	22	22
18	---	---	e32	e10	e18	e330	127	45	56	13	22	19
19	---	---	e29	e10	e23	e330	109	41	39	13	36	19
20	---	---	e25	e10	e96	e250	103	37	35	12	29	22
21	---	---	e24	e9.8	e220	e230	99	35	40	12	21	32
22	---	---	e22	e10	e390	e240	72	33	1710	15	28	47
23	---	---	e18	e10	e300	e200	68	31	e3400	16	54	101
24	---	---	e15	e10	e190	e120	92	30	1310	24	79	123
25	---	---	e14	e10	e120	e78	102	29	634	17	38	40
26	---	---	e14	e11	e110	e62	79	30	373	14	24	27
27	---	---	e11	e12	e120	e54	62	48	255	14	19	24
28	---	---	e10	e13	e96	71	79	73	302	13	17	23
29	---	---	e10	e14	---	155	233	100	241	23	16	26
30	---	---	e9.8	e13	---	266	452	69	92	18	14	30
31	---	---	e9.6	e11	---	266	---	43	---	20	14	---
TOTAL	---	---	1235.4	339.8	1869.2	5814	4891	3443	11838	584	915	1592
MEAN	---	---	39.85	10.96	66.76	187.5	163.0	111.1	394.6	18.84	29.52	53.07
MAX	---	---	108	14	390	450	645	349	3400	40	80	277
MIN	---	---	9.6	9.6	9.2	17	59	29	30	12	13	13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

MEAN	---	---	39.85	10.96	66.83	187.5	163.0	111.1	394.6	18.84	29.52	53.07
MAX	---	---	39.9	11.0	66.8	188	163	111	395	18.8	29.5	53.1
(WY)	---	---	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	---	---	39.9	11.0	66.8	188	163	111	395	18.8	29.5	53.1
(WY)	---	---	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR
(DECEMBER-SEPTEMBER)

HIGHEST DAILY MEAN	3400	Jun 23
LOWEST DAILY MEAN	(a)9.2	Feb 6
SEVEN-DAY MINIMUM	(a)9.5	Feb 2
MAXIMUM PEAK FLOW	(b)4650	Jun 23
MAXIMUM PEAK STAGE	(c)11.53	Jun 23
INSTANTANEOUS LOW FLOW	(a)	
10 PERCENT EXCEEDS	275	
50 PERCENT EXCEEDS	34	
90 PERCENT EXCEEDS	11	

- (a) Ice affected
 (b) From rating curve extended above 1,400 ft³/s
 (c) From floodmarks
 (e) Estimated due to ice effect or missing record

WISCONSIN RIVER BASIN

05400705 MILL CREEK NEAR JUNCTION CITY, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	51	---	---	---	---	---	---	---	---	---	---
2	83	43	---	---	---	---	---	---	---	---	---	---
3	126	39	---	---	---	---	---	---	---	---	---	---
4	200	38	---	---	---	---	---	---	---	---	---	---
5	572	37	---	---	---	---	---	---	---	---	---	---
6	709	36	---	---	---	---	---	---	---	---	---	---
7	454	36	---	---	---	---	---	---	---	---	---	---
8	282	37	---	---	---	---	---	---	---	---	---	---
9	188	36	---	---	---	---	---	---	---	---	---	---
10	138	35	---	---	---	---	---	---	---	---	---	---
11	116	34	---	---	---	---	---	---	---	---	---	---
12	102	33	---	---	---	---	---	---	---	---	---	---
13	105	32	---	---	---	---	---	---	---	---	---	---
14	84	31	---	---	---	---	---	---	---	---	---	---
15	68	30	---	---	---	---	---	---	---	---	---	---
16	52	29	---	---	---	---	---	---	---	---	---	---
17	42	27	---	---	---	---	---	---	---	---	---	---
18	40	26	---	---	---	---	---	---	---	---	---	---
19	40	25	---	---	---	---	---	---	---	---	---	---
20	43	25	---	---	---	---	---	---	---	---	---	---
21	47	25	---	---	---	---	---	---	---	---	---	---
22	48	25	---	---	---	---	---	---	---	---	---	---
23	65	25	---	---	---	---	---	---	---	---	---	---
24	126	25	---	---	---	---	---	---	---	---	---	---
25	187	e24	---	---	---	---	---	---	---	---	---	---
26	211	23	---	---	---	---	---	---	---	---	---	---
27	234	22	---	---	---	---	---	---	---	---	---	---
28	261	21	---	---	---	---	---	---	---	---	---	---
29	211	21	---	---	---	---	---	---	---	---	---	---
30	126	21	---	---	---	---	---	---	---	---	---	---
31	72	---	---	---	---	---	---	---	---	---	---	---
TOTAL	5074	912	---	---	---	---	---	---	---	---	---	---
MEAN	163.7	30.40	---	---	---	---	---	---	---	---	---	---
MAX	709	51	---	---	---	---	---	---	---	---	---	---
MIN	40	21	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	2002	2003	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MEAN	163.7	30.40	39.85	10.96	66.83	187.5	163.0	111.1	394.6	18.84	29.52	53.07
MAX	164	30.4	39.9	11.0	66.8	188	163	111	395	18.8	29.5	53.1
(WY)	2003	2003	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	164	30.4	39.9	11.0	66.8	188	163	111	395	18.8	29.5	53.1
(WY)	2003	2003	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR
(JANUARY-NOVEMBER)

FOR 2003 WATER YEAR
(OCTOBER-NOVEMBER)

WATER YEARS 2002 - 2003

HIGHEST DAILY MEAN	3400	Jun 23	709	Oct 6	3400	Jun 23 2002
LOWEST DAILY MEAN	(a)9.2	Feb 6	21	Nov 28-30	(a)9.2	Feb 6 2002
SEVEN-DAY MINIMUM	(a)9.5	Feb 2	(a)22	Nov 24	(a)9.5	Feb 2 2002
MAXIMUM PEAK FLOW			825	Oct 5,6	4650	Jun 23 2002
MAXIMUM PEAK STAGE			6.60	Oct 5,6	11.53	Jun 23 2002
INSTANTANEOUS LOW FLOW			17	Nov 30		
10 PERCENT EXCEEDS	272		229		263	
50 PERCENT EXCEEDS	37		42		36	
90 PERCENT EXCEEDS	12		24		11	

(a) Ice affected

(e) Estimated due to ice effect or missing record

05400760 WISCONSIN RIVER AT WISCONSIN RAPIDS, WI

LOCATION.--Lat 44°23'41", long 89°49'31", in SW ¼ sec.8, T.22 N., R.6 E., Wood County, Hydrologic Unit 07070003, at Consolidated Water Power Company, 0.2 mi upstream from U.S. Highway 13 bridge in Wisconsin Rapids.

DRAINAGE AREA.--5,420 mi².

PERIOD OF RECORD.--May 1914 to March 1950 published as Wisconsin River near Nekoosa (05400980), October 1957 to current year. October 1957 to September 1981, published under station number 05400800 with same name.

REVISED RECORDS.--WSP 1308: 1915(M).

GAGE.--Water-stage recorders on headwater and tailwater. Elevation of powerplant pond is 1,010 ft and datum of powerplant gages is 0.00 ft above NGVD of 1929 (levels by Wisconsin Valley Improvement Co.). May 1914 to March 1950, at site 9.6 mi downstream at different datum. March 1950 to Sept. 30, 1981, at Centralia Powerplant at Nekoosa Papers, Inc., 2.6 mi downstream. March 1950 to Dec. 31, 1973, datum was 887.83 ft above NGVD of 1929. Jan. 1, 1974, changed to present datum.

REMARKS.--Discharge computed from powerplant records on basis of load-discharge rating of hydroelectric units as developed by manufacturer and tainter-gate ratings based on theoretical formulas. Flow regulated by 22 reservoirs and many powerplants upstream from station. Water diverted periodically from pond on Wisconsin Rapids powerplant into Cranberry Creek, a tributary of Yellow River, for cranberry culture. Mean monthly diversions, in cubic feet per second, for water year October 2001 to September 2002 were as follows: August, 67.4, and September, 56.0.

COOPERATION.--Figures of daily discharges were provided by Consolidated Water Power Company and Wisconsin Valley Improvement Company. Records were reviewed by the Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2730	3400	4700	2780	2900	4260	7770	19500	4980	4550	2950	3000
2	2520	3260	5670	2740	2910	3590	7610	17200	3980	4470	2660	7540
3	2420	2550	5450	2960	2610	3110	5700	15300	7240	3820	2600	9440
4	2420	2470	4960	3440	2930	3070	6250	13000	10300	3850	3090	7210
5	2340	2340	3540	3260	2840	2580	5380	9720	11300	3890	3450	6110
6	2060	2280	8680	3100	2570	2460	5070	13200	10300	3770	2710	4260
7	1970	2290	11400	3060	3150	3280	5250	17200	8150	3400	2730	4140
8	1840	3410	9160	2790	3070	3300	5320	18700	6460	3480	3280	4220
9	1720	3060	5810	2820	2690	4520	6150	19400	4500	3610	2790	4150
10	2470	2760	4650	3400	2770	5220	8530	22400	4040	3610	2420	4130
11	2940	2010	4300	3000	2920	5110	14100	18400	11300	3410	2760	3080
12	2950	1890	4090	2790	2920	5090	29600	14600	17400	2820	12000	2850
13	2540	2210	5030	2940	2890	5780	40400	13300	12100	2830	9420	2910
14	2300	3070	3810	3170	2620	6030	38300	13800	9090	2740	4700	3140
15	2710	3200	3710	3360	2680	6840	33300	11200	8560	2780	3920	3120
16	2710	3090	3680	3230	3100	7220	28500	8850	8200	2770	3920	3000
17	2420	2820	3670	2530	3000	7280	21900	7520	6240	3120	3960	3130
18	2620	2660	3680	2140	2740	6930	19700	7490	4960	2620	3630	2940
19	2540	3080	3680	1990	3030	6780	23200	7540	4310	2630	3010	3280
20	2340	3420	3290	2860	5020	6450	27100	5800	4400	2620	3080	3480
21	2280	2270	2750	3240	5580	5160	21100	5220	4040	2840	4030	5210
22	1910	2760	2740	3140	4600	4600	15600	4580	20400	3080	14000	5720
23	1980	3040	3210	3340	3950	4600	13500	4660	29700	2960	12000	3570
24	2150	3180	3340	3330	5240	4550	14300	4390	18100	2930	7730	3600
25	2440	5780	2860	3160	4690	4100	13500	3780	15400	3790	4830	3880
26	2320	7060	2130	2830	4620	3940	16100	3590	14000	3010	3260	3760
27	2260	6020	2350	3130	3710	3800	12900	6760	11100	2670	3150	3680
28	2450	5320	3000	3300	4200	3680	14700	7670	7950	2690	3220	3680
29	3030	4250	3130	3210	---	5330	16700	6490	7120	3050	3020	3500
30	2820	4640	2870	3420	---	5640	19700	5250	6090	2930	2850	6170
31	3240	---	2740	3120	---	7180	---	5990	---	2950	2890	---
TOTAL	75440	99590	134080	93580	95950	151480	497230	332500	291710	99690	140060	127900
MEAN	2434	3320	4325	3019	3427	4886	16570	10730	9724	3216	4518	4263
MAX	3240	7060	11400	3440	5580	7280	40400	22400	29700	4550	14000	9440
MIN	1720	1890	2130	1990	2570	2460	5070	3590	3980	2620	2420	2850

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

	MEAN	4071	4341	3304	3034	3156	6319	11070	6905	6099	3551	3159	4316
MAX	13070	10270	7928	5589	6368	19180	25940	19730	19560	10820	9199	17670	
(WY)	1987	1920	1966	1973	1984	1973	1922	1960	1943	1978	1926	1938	
MIN	1075	1072	1141	1272	1333	1547	2579	1669	1308	1123	1173	1227	
(WY)	1977	1977	1990	1990	1977	1924	1990	1987	1988	1988	1934	1976	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1914 - 2002	
ANNUAL TOTAL	1682560		2139210			
ANNUAL MEAN	4610		5861		4935	
HIGHEST ANNUAL MEAN					8499	
LOWEST ANNUAL MEAN					2107	
HIGHEST DAILY MEAN	45400	Apr 13	40400	Apr 13	63600	Jun 21 1993
LOWEST DAILY MEAN	1600	Aug 18	1720	Oct 9	165	Aug 12 1934
ANNUAL SEVEN-DAY MINIMUM	2110	Oct 3	2110	Oct 3	790	Jun 18 1988
MAXIMUM PEAK FLOW			42400		(a)70400	
10 PERCENT EXCEEDS	8660		13400		9590	Sep 12 1938
50 PERCENT EXCEEDS	2830		3610		3350	
90 PERCENT EXCEEDS	2240		2540		1790	

(a) From rating curve extended above 58,000 ft³/s

WISCONSIN RIVER BASIN

05401050 TENMILE CREEK NEAR NEKOOSA, WI

LOCATION.--Lat 44°15'45", long 89°48'37" in NE ¼ NE ¼ sec.32, T.21 N., R.6 E., Wood County, Hydrologic Unit 07070003, on left bank upstream from bridge on State Highway 13, 5.8 mi southeast of Nekoosa.

DRAINAGE AREA.--73.3 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1962-63. October 1963 to September 1979, October 1987 to September 1994, February 1998 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 967.39 ft above NGVD of 1929. Prior to May 13, 1964, and June 2, 1988 to May 2, 1989, non-recording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Approximately 40 mi of drainage ditches and 22 check dams are used to control the water table in the basin. Sprinkler irrigation from ground-water sources affects natural flow of creek. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	45	55	33	32	e56	89	121	71	164	69	51
2	41	44	55	32	e32	e56	93	126	69	153	67	59
3	50	43	55	31	e33	e56	90	110	93	147	65	58
4	51	42	56	32	34	e48	88	113	107	140	71	56
5	46	42	57	37	36	e54	89	106	109	133	68	55
6	44	42	56	42	36	e60	87	108	107	127	66	54
7	43	43	57	39	36	65	88	108	101	122	64	52
8	42	43	58	40	41	70	91	103	97	119	63	51
9	42	42	56	46	43	87	94	104	93	117	62	51
10	44	43	56	44	44	84	78	101	90	114	61	50
11	44	42	56	44	40	101	83	96	94	109	61	50
12	44	41	60	45	46	93	112	100	99	105	60	49
13	44	43	59	44	34	96	113	100	96	101	61	49
14	45	44	55	45	44	109	130	95	101	97	61	49
15	46	44	55	45	45	108	118	92	100	93	60	49
16	48	43	55	44	44	101	110	93	94	91	59	47
17	45	42	56	39	43	101	105	88	90	89	62	47
18	46	43	55	38	43	105	103	84	87	87	60	47
19	46	44	54	e34	52	102	96	82	83	82	60	48
20	46	43	51	34	67	96	96	81	81	81	58	48
21	44	43	46	41	78	95	94	79	89	79	59	48
22	44	44	51	41	76	94	90	79	231	82	61	45
23	44	44	53	42	75	106	90	80	335	79	61	43
24	44	46	45	42	73	101	92	79	312	75	60	43
25	42	48	39	42	71	93	79	77	252	76	59	45
26	41	49	e38	43	63	73	66	77	237	75	57	46
27	38	51	e36	44	52	93	81	82	228	73	56	46
28	39	52	35	44	e52	100	95	80	207	72	55	44
29	43	53	33	44	---	100	113	79	189	75	53	44
30	44	54	33	41	---	98	117	76	175	72	52	46
31	45	---	32	40	---	95	---	73	---	70	52	---
TOTAL	1366	1342	1558	1252	1365	2696	2870	2872	4117	3099	1883	1470
MEAN	44.06	44.73	50.26	40.39	48.75	86.97	95.67	92.65	137.2	99.97	60.74	49.00
MAX	51	54	60	46	78	109	130	126	335	164	71	59
MIN	38	41	32	31	32	48	66	73	69	70	52	43
CFSM	0.60	0.61	0.69	0.55	0.67	1.19	1.31	1.26	1.87	1.36	0.83	0.67
IN.	0.69	0.68	0.79	0.64	0.69	1.37	1.46	1.46	2.09	1.57	0.96	0.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

	51.23	52.29	48.17	35.70	35.12	66.74	103.0	90.23	80.20	62.99	48.41	52.33
MEAN	51.23	52.29	48.17	35.70	35.12	66.74	103.0	90.23	80.20	62.99	48.41	52.33
MAX	129	100	107	79.8	90.5	192	170	205	156	139	98.1	100
(WY)	1973	1973	1966	1973	1966	1973	1979	1973	1993	1993	1990	1965
MIN	21.5	19.5	14.6	12.6	11.2	16.1	47.3	44.7	37.4	23.6	17.4	23.0
(WY)	1977	1977	1965	1965	1965	1964	1964	1977	1964	1988	1964	1976

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1964 - 2002

ANNUAL TOTAL	23270	25890	
ANNUAL MEAN	63.75	70.93	60.72
HIGHEST ANNUAL MEAN			113
LOWEST ANNUAL MEAN			30.2
HIGHEST DAILY MEAN	201	Apr 13	427
LOWEST DAILY MEAN	23	Feb 23	10
ANNUAL SEVEN-DAY MINIMUM	24	Feb 23	10
MAXIMUM PEAK FLOW			358
MAXIMUM PEAK STAGE			6.82
INSTANTANEOUS LOW FLOW		(b)23	9.5
ANNUAL RUNOFF (CFSM)	0.87	0.97	0.83
ANNUAL RUNOFF (INCHES)	11.81	13.14	11.26
10 PERCENT EXCEEDS	122	107	107
50 PERCENT EXCEEDS	51	58	52
90 PERCENT EXCEEDS	29	41	24

(a) Also occurred Feb. 14, 15, Feb. 22 to Mar. 2, 1964, and Feb. 2-4, 11, 12, 1965

(b) Result of freezeup

(e) Estimated due to ice effect or missing record

05402000 YELLOW RIVER AT BABCOCK, WI

LOCATION.--Lat 44°18'08", long 90°07'19" in SE ¼ NE ¼ sec.15, T.21 N., R.3 E., Wood County, Hydrologic Unit 07070003, on right bank, 600 ft upstream of bridge on State Highway 80 at Babcock, 2.0 mi upstream from Hemlock Creek.

DRAINAGE AREA.--215 mi².

PERIOD OF RECORD.--March 1944 to September 1996, September 1997 to current year.

REVISED RECORDS.--WSP 1308: 1944(M), 1946-47(M), 1949(M). WDR WI-77-1: Drainage area. WDR WI-82-1: 1981 (P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 954.75 ft above NGVD of 1929. Prior to Oct. 28, 1948, nonrecording gage at site 600 ft downstream at same datum. Oct. 28, 1948 to Apr. 9, 1996, water-stage recorder at site 600 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). There is a large recreation dam about 5.0 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	29	236	e16	e16	e120	443	886	99	121	24	30
2	15	29	304	e16	e16	e84	316	494	72	95	21	42
3	15	30	260	e16	e16	e56	250	327	223	76	19	256
4	15	32	182	e17	e15	e47	198	216	2110	62	25	288
5	14	36	165	e17	e15	e44	181	169	2340	51	37	264
6	13	31	165	e17	e17	e43	162	158	1690	45	44	200
7	12	29	282	e17	e18	e41	163	772	968	40	44	126
8	11	28	317	e17	e19	e42	218	827	503	39	40	103
9	9.5	29	257	e19	e19	e60	323	634	260	42	33	79
10	11	23	183	e21	e19	e220	393	1270	164	39	29	62
11	18	24	140	e22	e21	e300	407	792	130	36	25	50
12	27	22	107	e19	e22	e580	1240	425	337	61	29	39
13	38	22	86	e15	e23	e600	2390	317	213	72	42	33
14	44	25	82	e14	e24	e700	1430	243	226	52	48	29
15	42	25	77	e14	e24	e600	859	197	387	38	55	30
16	43	25	70	e14	e25	e520	592	164	318	29	43	27
17	52	24	68	e14	e26	616	430	129	201	24	35	24
18	47	24	66	e13	e30	572	341	101	130	21	31	23
19	42	28	65	e12	e35	440	302	92	115	19	29	24
20	37	30	60	e13	e80	461	282	84	98	18	41	30
21	33	25	e57	e14	e260	415	483	75	95	17	39	211
22	30	30	50	e15	e480	470	342	67	559	22	52	266
23	28	35	e48	e15	e340	329	251	61	4040	26	99	208
24	27	42	e44	e15	e320	257	270	57	3470	21	128	121
25	28	128	e40	e16	e310	196	247	51	1530	18	116	102
26	30	392	e35	e17	e290	126	223	51	812	19	100	81
27	30	321	e30	e18	e230	125	191	60	764	22	88	66
28	23	275	e24	e19	e180	129	257	99	372	23	72	55
29	25	325	e19	e19	---	230	986	191	195	27	56	53
30	27	235	e16	e18	---	507	1200	184	145	28	45	56
31	27	---	e15	e16	---	555	---	141	---	26	35	---
TOTAL	828.5	2353	3550	505	2890	9485	15370	9334	22566	1229	1524	2978
MEAN	26.73	78.43	114.5	16.29	103.2	306.0	512.3	301.1	752.2	39.65	49.16	99.27
MAX	52	392	317	22	480	700	2390	1270	4040	121	128	288
MIN	9.5	22	15	12	15	41	162	51	72	17	19	23
CFSM	0.12	0.36	0.53	0.08	0.48	1.42	2.38	1.40	3.50	0.18	0.23	0.46
IN.	0.14	0.41	0.61	0.09	0.50	1.64	2.66	1.61	3.90	0.21	0.26	0.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2002, BY WATER YEAR (WY)

MEAN	103.9	112.9	63.15	26.34	46.82	378.8	552.2	235.1	195.0	67.90	52.69	125.4
MAX	561	508	374	132	373	1353	1319	1183	1516	453	371	1169
(WY)	1987	1983	1966	1973	1966	1973	1952	1973	1993	1978	1980	1986
MIN	3.68	4.62	7.35	5.03	4.79	8.13	85.9	28.0	8.56	4.68	4.01	2.23
(WY)	1949	1977	1951	1945	1945	1956	1946	1977	1988	1988	1988	1948

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1944 - 2002

ANNUAL TOTAL	70962.5	72612.5										
ANNUAL MEAN	194.4	198.9								163.1		
HIGHEST ANNUAL MEAN										376		1973
LOWEST ANNUAL MEAN										37.4		1977
HIGHEST DAILY MEAN	3690	Apr 8	4040	Jun 23	10300	Apr 2	1952					
LOWEST DAILY MEAN	7.9	Aug 16	9.5	Oct 9	1.4	(a)	Sep 14	1948				
ANNUAL SEVEN-DAY MINIMUM	8.7	Aug 13	12	Oct 4	1.4		Sep 13	1948				
MAXIMUM PEAK FLOW			4620	Jun 23	11600	Apr 2	1952					
MAXIMUM PEAK STAGE			13.37	(b)	Jun 23	17.38	Apr 2	1952				
INSTANTANEOUS LOW FLOW			9.1	Oct 9	0.94		Aug 11	1985				
ANNUAL RUNOFF (CFSM)	0.90		0.93		0.76							
ANNUAL RUNOFF (INCHES)	12.28		12.56		10.31							
10 PERCENT EXCEEDS	374		474		366							
50 PERCENT EXCEEDS	32		53		32							
90 PERCENT EXCEEDS	15		17		8.2							

(a) Also occurred Sept. 15-19, 25, 26, 1948

(b) Also occurred June 24

(e) Estimated due to ice effect or missing record

WISCONSIN RIVER BASIN

05404000 WISCONSIN RIVER NEAR WISCONSIN DELLS, WI

LOCATION.--Lat 43°36'22", long 89°45'25" in NW $\frac{1}{4}$ sec.14, T.13 N., R.6 E., Sauk County, Hydrologic Unit 07070003, on right bank 0.5 mi downstream from Dell Creek and 1.8 mi southeast of Wisconsin Dells.

DRAINAGE AREA.--8,090 mi².

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

REVISED RECORDS.--WSP 1728: 1936(M). WSP 1914: 1951, 1953-55. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 801.48 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1963, water-stage recorder at same site at datum 5.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow regulated by 24 reservoirs above station. In 1938, when the maximum of record occurred, there were 21 reservoirs above station, the two large reservoirs, Petenwell and Castle Rock, were not in existence. Diurnal fluctuation is caused by powerplant of Wisconsin Power and Light Company at Wisconsin Dells. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3860	4240	6970	e4400	5390	6580	7270	22300	9170	10200	4630	4060
2	3930	4540	6720	4840	6320	6570	8030	22500	8170	8700	3870	4730
3	3890	4710	6530	5680	6060	6540	7970	22400	8240	7520	4650	6890
4	3820	4190	7450	e5600	5490	5890	8200	21800	13100	7060	4770	11900
5	3670	3830	8120	e5400	5650	4950	7740	19900	15500	7660	4850	8840
6	3530	3740	6270	e6000	5470	4420	7770	12700	17200	7150	5420	8560
7	3020	3530	9960	e6200	5360	5080	8050	14800	18800	5660	4720	7320
8	2900	4020	13100	e6500	5540	5550	7690	20600	16800	5430	3690	5940
9	3020	4220	12600	e4800	6100	6130	8040	20700	15500	6670	3920	6550
10	2790	4530	7810	e4100	6110	7100	8120	20600	13100	6010	4350	5650
11	3690	4350	6200	5140	6080	7900	9110	20400	13800	5640	3650	5330
12	4120	3820	5900	5590	6460	8130	9200	20400	19100	5130	4430	5090
13	4580	3650	6010	4690	e4000	8160	21500	20200	21900	4580	8540	4360
14	4130	3720	6210	4940	e3500	8650	32900	16900	14700	4180	13900	4200
15	3680	4300	5410	5710	e3800	8130	38300	16500	14200	4140	6480	4490
16	3800	4320	5680	6100	e4100	8980	38300	16100	12600	4290	5250	5450
17	4230	4270	5540	5460	e4400	9270	36200	11600	11600	4040	5060	4100
18	4080	4290	5430	4690	e4100	9360	31500	9110	10700	4440	6050	4120
19	3880	4310	5390	e3700	4640	9430	28300	8170	8410	4260	5700	4820
20	4160	4290	5770	e4200	6210	9220	27900	8330	6300	4160	5180	5300
21	4150	4300	5540	4610	7740	9200	27700	8240	6740	4140	3970	5810
22	4070	4080	4910	6040	8150	9190	25000	7970	12000	4960	6750	6150
23	3960	4070	4710	5950	7680	8320	15700	6690	24200	5400	14800	6870
24	3930	4260	4790	5790	6270	6540	13400	7520	33100	5120	14800	4920
25	3310	4920	e3500	5580	7570	7260	13200	7960	26200	3660	9440	5490
26	3470	7060	e3900	5620	8620	5770	13000	6380	20800	4670	7490	4720
27	3460	8990	e3500	5040	8230	4800	16600	5190	23200	5240	4660	5810
28	3100	8250	e3400	5720	7050	4570	21300	7930	20700	4070	4820	5880
29	3370	7750	e3300	6140	---	4500	22100	8280	16900	4500	5610	5170
30	4360	6880	e4000	6160	---	6390	22200	8250	11200	5700	5180	5800
31	4210	---	e4100	5640	---	7350	---	9120	---	5280	4220	---
TOTAL	116170	143430	188720	166030	166090	219930	542290	429540	463930	169660	190850	174320
MEAN	3747	4781	6088	5356	5932	7095	18080	13860	15460	5473	6156	5811
MAX	4580	8990	13100	6500	8620	9430	38300	22500	33100	10200	14800	11900
MIN	2790	3530	3300	3700	3500	4420	7270	5190	6300	3660	3650	4060

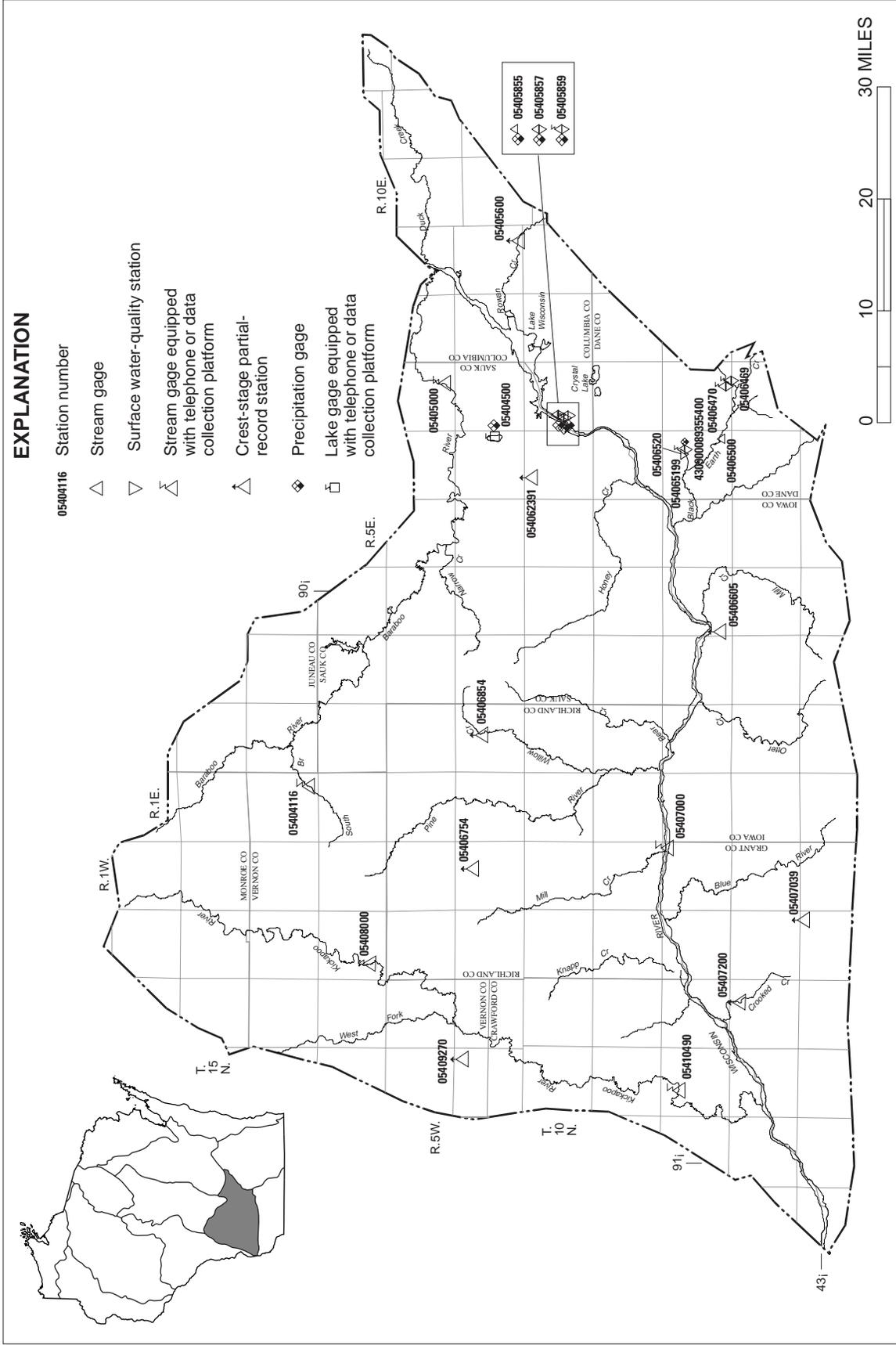
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2002, BY WATER YEAR (WY)

	MEAN	5822	6206	5087	4780	5053	8095	13040	9500	8723	5404	4394	5899
MAX	19120	13900	10740	7831	9614	25620	25050	26990	27090	13350	10700	25900	
(WY)	1987	1983	1966	1992	1984	1973	1951	1960	1993	1978	1995	1938	
MIN	1683	1688	1746	2434	2432	2945	2939	3361	1826	1713	1634	1754	
(WY)	1977	1977	1990	1945	1945	1940	1964	1977	1988	1988	1988	1976	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1935 - 2002

ANNUAL TOTAL	2521880	2970960	
ANNUAL MEAN	6909	8140	6829
HIGHEST ANNUAL MEAN			12420
LOWEST ANNUAL MEAN			2993
HIGHEST DAILY MEAN	39100	Apr 15	71200
LOWEST DAILY MEAN	(a)2780	Jul 15	1060
ANNUAL SEVEN-DAY MINIMUM	(a)3230	Oct 5	1210
MAXIMUM PEAK FLOW			72200
MAXIMUM PEAK STAGE		14.45	29.83
10 PERCENT EXCEEDS	13700	16800	12200
50 PERCENT EXCEEDS	4460	5810	5200
90 PERCENT EXCEEDS	3400	3910	2900

- (a) Regulation at dam upstream
(b) Present datum
(c) Estimated due to ice effect or missing record



EXPLANATION

- 05404116 Station number
- △ Stream gage
- ▽ Surface water-quality station
- △ Lake gage equipped with telephone or data collection platform
- △ Crest-stage partial-record station
- ◆ Precipitation gage
- Lake gage equipped with telephone or data collection platform

LOWER WISCONSIN RIVER BASIN

Base from U.S. Geological Survey 1:100,000 digital data; modified by Wisconsin Department of Natural Resources. Wisconsin Transverse Mercator projection.

WISCONSIN RIVER BASIN

05404116 SOUTH BRANCH BARABOO RIVER AT HILLSBORO, WI

LOCATION.--Lat 43°39'10", long 90°20'09", in NE ¼ NE ¼ sec.35, T.14 N., R.1 E., Vernon County, Hydrologic Unit 07070004, on left bank 220 ft upstream from County Highway FF at Hillsboro, and 6.3 mi upstream from mouth.

DRAINAGE AREA.--39.1 mi².

PERIOD OF RECORD.--July 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 927.28 ft above NGVD of 1929 (levels by Mid-State Associates, Baraboo, WI).

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	18	26	e13	16	17	19	37	17	17	15	15
2	21	17	23	e13	15	17	20	47	18	17	14	85
3	21	17	22	e13	16	17	20	29	102	16	14	20
4	20	16	22	14	14	15	19	26	62	17	28	17
5	20	16	26	16	14	17	20	24	31	17	18	16
6	19	16	28	16	15	17	20	24	21	20	16	16
7	19	17	23	15	16	16	21	23	18	18	15	16
8	19	17	22	15	17	21	29	22	16	17	14	16
9	18	16	21	17	20	110	32	39	16	17	14	16
10	24	16	21	16	33	27	24	24	17	16	14	16
11	24	16	20	16	19	25	24	25	30	16	14	16
12	20	16	20	16	17	26	55	29	19	16	13	15
13	21	19	24	16	16	27	29	25	19	15	46	15
14	22	19	21	16	18	25	26	23	27	15	17	16
15	20	17	20	16	20	23	26	22	20	15	15	16
16	19	17	21	16	18	22	24	20	17	15	15	16
17	19	16	21	15	17	22	22	20	16	14	43	16
18	18	17	19	e13	17	23	145	20	16	14	16	16
19	18	19	19	e14	57	24	129	19	15	15	23	19
20	18	17	18	15	52	26	46	19	15	15	16	22
21	18	16	17	16	28	25	43	19	28	17	34	20
22	18	16	19	16	21	21	49	19	32	38	39	17
23	19	16	21	16	22	21	40	19	18	16	20	16
24	20	56	18	16	25	20	36	18	16	15	20	16
25	19	41	17	16	24	19	34	21	20	15	17	16
26	17	25	e15	16	20	19	31	21	93	16	16	16
27	17	32	e14	16	18	19	36	19	24	17	16	16
28	17	26	e14	17	18	21	146	18	20	16	15	16
29	17	24	e13	16	---	21	47	19	17	40	15	38
30	18	25	e13	15	---	20	40	19	18	17	15	19
31	18	---	e13	16	---	19	---	19	---	16	15	---
TOTAL	599	616	611	477	603	742	1252	728	798	545	602	590
MEAN	19.32	20.53	19.71	15.39	21.54	23.94	41.73	23.48	26.60	17.58	19.42	19.67
MAX	24	56	28	17	57	110	146	47	102	40	46	85
MIN	17	16	13	13	14	15	19	18	15	14	13	15
CFSM	0.49	0.53	0.50	0.39	0.55	0.61	1.07	0.60	0.68	0.45	0.50	0.50
IN.	0.57	0.59	0.58	0.45	0.57	0.71	1.19	0.69	0.76	0.52	0.57	0.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	15.07	17.39	14.06	13.80	18.98	33.94	36.04	25.65	33.67	18.85	16.43	21.97			
MAX	26.1	28.6	22.9	26.8	31.5	50.8	70.9	52.5	75.3	52.3	28.2	95.3			
(WY)	1994	1993	1993	1996	1999	1989	1993	1993	1990	1993	1993	1992			
MIN	6.79	8.14	4.42	8.95	6.91	14.5	8.47	13.2	8.38	5.83	6.69	6.12			
(WY)	1990	1991	1990	1991	1989	2000	1990	1989	1989	1989	1988	1990			

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1988 - 2002
ANNUAL TOTAL	9740.7	8163	
ANNUAL MEAN	26.69	22.36	22.31
HIGHEST ANNUAL MEAN			35.1
LOWEST ANNUAL MEAN			13.0
HIGHEST DAILY MEAN	394	Apr 11	1190
LOWEST DAILY MEAN	7.2	Aug 3	(c)1.2
ANNUAL SEVEN-DAY MINIMUM	10	Jan 20	(a)13
MAXIMUM PEAK FLOW		477	Apr 18
MAXIMUM PEAK STAGE		11.25	Apr 18
ANNUAL RUNOFF (CFSM)	0.68	0.57	0.57
ANNUAL RUNOFF (INCHES)	9.27	7.77	7.75
10 PERCENT EXCEEDS	41	31	34
50 PERCENT EXCEEDS	19	18	15
90 PERCENT EXCEEDS	12	15	8.1

- (a) Ice affected
 (b) Also occurred Jan. 1-3,18,19
 (c) Result of closing dam gates to fill lake 0.35 mi upstream
 (d) From rating curve extended above 1,100 ft³/s, on basis of contracted-area measurement
 (e) Estimated due to ice effect or missing record
 (f) From floodmark on gage house

05404500 DEVILS LAKE NEAR BARABOO, WI

LOCATION.--Lat 43°25'35", long 89°43'40", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.13, T.11 N., R.6 E., Sauk County, Hydrologic Unit 07070004, in Devils Lake State Park, 3.5 mi south of Baraboo; prior to Nov. 19, 1996, at lat 43°25'18", long 89°43'38".

DRAINAGE AREA.--4.79 mi². Area of Devils Lake, 361 acres.

GAGE-HEIGHT RECORD

PERIOD OF RECORD.--June 1922 to August 1930, June to August 1932, June 1934 to September 1981 (fragmentary). October 1981 to September 1984, data unpublished in district files. October 1984 to current year.

REVISED RECORDS.--WDR WI-78-1: Drainage area.

GAGE.--Water-stage recorder installed July 17, 1991. Datum of gage is 955.00 ft, above NGVD of 1929.

REMARKS.--Lake has no surface outlet. Water removed from lake by pumping or siphon June 12 to Aug. 12, Aug. 22-25, and Aug. 29 to Sept. 30.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 14.13 ft, July 18, 1993; minimum observed, 1.49 ft Feb. 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 12.69 ft, May 15; minimum recorded, 9.43 ft, Sept. 30.

GAGE HEIGHT, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.89	10.45	10.34	10.33	10.23	10.60	10.93	12.19	12.50	12.14	11.12	10.69
2	10.89	10.44	10.34	10.32	10.22	10.65	10.95	12.25	12.48	12.09	11.07	10.70
3	10.86	10.43	10.33	10.31	10.22	10.67	10.95	12.26	12.54	12.05	11.04	10.65
4	10.85	10.42	10.33	10.31	10.21	10.67	10.95	12.26	12.62	12.01	11.06	10.60
5	10.82	10.41	10.38	10.30	10.20	10.67	10.94	12.25	12.65	11.96	11.03	10.56
6	10.79	10.39	10.41	10.29	10.20	10.67	10.94	12.27	12.64	11.92	10.99	10.51
7	10.77	10.38	10.40	10.29	10.19	10.66	10.95	12.30	12.63	11.88	10.95	10.45
8	10.75	10.36	10.40	10.28	10.19	10.68	11.02	12.30	12.61	11.85	10.92	10.41
9	10.72	10.35	10.40	10.27	10.18	10.73	11.08	12.51	12.60	11.81	10.88	10.36
10	10.73	10.33	10.38	10.27	10.22	10.76	11.10	12.57	12.59	11.77	10.84	10.32
11	10.72	10.32	10.38	10.27	10.22	10.77	11.12	12.61	12.63	11.72	10.81	10.27
12	10.71	10.30	10.37	10.26	10.20	10.78	11.17	12.66	12.62	11.67	10.79	10.22
13	10.70	10.31	10.42	10.26	10.20	10.79	11.19	12.67	12.61	11.63	10.79	10.17
14	10.70	10.31	10.42	10.26	10.19	10.81	11.21	12.67	12.62	11.59	10.77	10.12
15	10.68	10.30	10.42	10.26	10.18	10.81	11.22	12.67	12.60	11.55	10.74	10.07
16	10.66	10.30	10.42	10.26	10.18	10.82	11.24	12.66	12.58	11.52	10.71	10.02
17	10.64	10.29	10.42	10.27	10.17	10.82	11.25	12.65	12.56	11.48	10.71	9.97
18	10.62	10.29	10.42	10.26	10.17	10.83	11.33	12.63	12.52	11.44	10.69	9.92
19	10.60	10.30	10.41	10.26	10.22	10.85	11.56	12.61	12.49	11.41	10.67	9.93
20	10.59	10.29	10.40	10.25	10.34	10.90	11.60	12.60	12.45	11.39	10.64	9.92
21	10.57	10.27	10.40	10.25	10.48	10.91	11.65	12.58	12.43	11.37	10.66	9.88
22	10.57	10.26	10.40	10.24	10.51	10.92	11.70	12.56	12.40	11.40	10.90	9.83
23	10.59	10.25	10.40	10.23	10.53	10.92	11.72	12.54	12.37	11.36	10.97	9.77
24	10.59	10.31	10.39	10.23	10.55	10.92	11.77	12.52	12.33	11.32	10.95	9.71
25	10.57	10.34	10.38	10.22	10.57	10.92	11.85	12.54	12.29	11.28	10.92	9.65
26	10.54	10.33	10.38	10.21	10.58	10.92	11.87	12.56	12.31	11.30	10.90	9.60
27	10.52	10.34	10.37	10.20	10.59	10.92	11.91	12.54	12.28	11.28	10.88	9.56
28	10.50	10.34	10.36	10.20	10.60	10.93	12.08	12.53	12.25	11.25	10.86	9.51
29	10.48	10.33	10.35	10.19	---	10.93	12.14	12.55	12.21	11.22	10.83	9.49
30	10.47	10.34	10.34	10.19	---	10.93	12.17	12.54	12.17	11.19	10.79	9.46
31	10.47	---	10.33	10.20	---	10.92	---	12.52	---	11.16	10.74	---
MEAN	10.66	10.34	10.38	10.26	10.30	10.81	11.39	12.50	12.49	11.58	10.86	10.08
MAX	10.89	10.45	10.42	10.33	10.60	10.93	12.17	12.67	12.65	12.14	11.12	10.70
MIN	10.47	10.25	10.33	10.19	10.17	10.60	10.93	12.19	12.17	11.16	10.64	9.46

WISCONSIN RIVER BASIN

05404500 DEVILS LAKE NEAR BARABOO, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--October 1996 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on July 17, 1991. Prior to Oct. 1, 1996, record was not published. Rainfall estimated to be 0.00 for Jan. 14, 21, Feb. 1, 6, 12, 22, 23, and Mar. 5 because recorded precipitation interpreted as snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 5.01 in., June 1, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.57 in., Aug. 21.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.50	0.0	0.0	0.01	0.0
2	0.0	0.01	0.0	0.0	0.0	0.0	0.01	0.02	0.0	0.0	0.0	0.95
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05	0.0	0.73	0.0
5	0.0	0.0	0.49	0.0	0.0	0.0	0.0	0.01	0.0	0.01	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.63	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.01	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.27	0.43	0.40	0.0	0.04	0.0	0.0
9	0.01	0.0	0.0	0.0	0.03	0.29	0.0	1.05	0.0	0.0	0.0	0.0
10	0.20	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.17
11	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.40	0.0	0.0	0.02	0.0
12	0.0	0.0	0.49	0.0	0.0	0.0	0.24	0.11	0.0	0.0	0.01	0.0
13	0.19	0.12	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.0
14	0.0	0.0	0.0	0.0	0.0	0.01	0.01	0.0	0.0	0.0	0.01	0.06
15	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0
16	0.01	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.01	0.0	0.0	0.0	0.01	0.0	0.01	0.0	0.26	0.0
18	0.0	0.26	0.0	0.0	0.13	0.11	1.54	0.0	0.0	0.0	0.04	0.0
19	0.05	0.12	0.0	0.0	0.34	0.23	0.0	0.0	0.04	0.0	0.02	0.73
20	0.01	0.0	0.0	0.0	0.94	0.34	0.0	0.0	0.0	0.52	0.0	0.28
21	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.36	0.17	1.57	0.0
22	0.42	0.0	0.09	0.0	0.0	0.0	0.36	0.0	0.0	0.71	1.06	0.0
23	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0
24	0.19	0.73	0.0	0.0	0.0	0.0	0.61	0.0	0.0	0.0	0.01	0.0
25	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.81	0.0	0.51	0.0	0.0
26	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.01	0.0	0.0
27	0.0	0.15	0.0	0.0	0.0	0.0	0.65	0.0	0.0	0.06	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.10	0.63	0.30	0.0	0.0	0.0	0.09
29	0.0	0.0	0.0	0.0	---	0.0	0.0	0.01	0.0	0.01	0.0	0.19
30	0.09	0.23	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.01	---	0.0	0.0	---	0.0	---	0.0	---	0.0	0.0	---
TOTAL	1.19	1.80	1.13	0.0	1.53	1.35	5.14	4.25	2.24	2.04	4.14	2.47

05405000 BARABOO RIVER NEAR BARABOO, WI

LOCATION.--Lat 43°28'51", long 89°38'09", in NW ¼ NW ¼ sec.35, T.12 N., R.7 E., Sauk County, Hydrologic Unit 07070004, on left bank 50 ft downstream from highway bridge, 0.3 mi downstream from Rowley Creek and 5.3 mi east of Baraboo.

DRAINAGE AREA.--609 mi².

PERIOD OF RECORD.--December 1913 to March 1922. September 1942 to current year.

REVISED RECORDS.--WSP 455: 1915. WSP 505: 1917(M). WSP 1438: 1914, 1915(M), 1916-17, 1918-20(M), 1944(M), 1949(M). WSP 1914: 1948, 1950, 1956. WDR WI-75-1: 1968. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 788.21 ft above NGVD of 1929. Dec. 18, 1913, to Mar. 31, 1922, nonrecording gage at bridge 2.3 mi upstream at datum 7.6 ft higher. Sept. 24, 1942, to June 10, 1963, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Dam upstream removed October 2001. Gage-height telemeter at station.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Flood of Aug. 6, 1935, reached a stage of 15.8 ft from floodmarks, site and datum in use in 1922, discharge, 5,100 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	353	325	499	e250	294	446	470	1070	349	465	399	265
2	342	329	478	e250	254	e330	457	1160	333	387	323	347
3	335	327	465	e250	e250	e290	446	1030	457	353	276	481
4	323	321	442	251	e240	e300	441	858	813	329	290	616
5	314	310	446	252	e260	e300	438	746	1090	323	291	585
6	310	300	529	255	e280	e310	429	645	1090	346	326	438
7	303	293	607	262	e290	e310	437	617	1020	419	335	331
8	302	293	567	271	e300	e380	535	565	830	371	296	300
9	297	292	496	276	316	723	692	1040	570	347	266	290
10	328	292	437	282	355	1000	762	1650	457	320	258	286
11	369	287	399	300	411	1090	755	1630	511	305	250	280
12	413	283	379	308	465	1040	719	1360	685	291	246	280
13	432	292	431	309	428	1020	669	1060	726	282	257	278
14	410	303	451	307	362	891	712	834	711	272	302	275
15	387	325	449	307	344	768	761	709	745	266	426	272
16	402	339	428	308	379	687	693	617	739	262	391	273
17	394	330	407	300	410	603	605	549	650	259	322	269
18	368	315	399	e280	413	555	593	506	530	255	283	263
19	346	339	393	e270	487	547	781	466	452	255	313	348
20	337	335	375	e280	831	625	859	439	419	264	353	349
21	330	347	351	e290	1250	738	977	419	427	272	357	346
22	331	339	334	e290	1210	721	1100	403	504	353	413	348
23	378	323	339	292	1100	642	1110	391	686	369	489	332
24	415	386	358	296	945	564	999	379	765	405	580	300
25	419	538	e250	300	752	502	927	419	659	372	488	271
26	404	648	e260	303	665	466	739	462	561	314	384	258
27	384	705	e280	314	610	437	650	454	565	287	340	253
28	358	675	e270	330	528	433	891	427	670	286	308	254
29	333	568	e260	330	---	460	1000	406	732	289	284	273
30	319	522	e250	316	---	481	1050	379	643	295	275	291
31	321	---	e250	305	---	481	---	369	---	340	270	---
TOTAL	11057	11281	12279	8934	14429	18140	21697	22059	19389	9953	10391	9752
MEAN	356.7	376.0	396.1	288.2	515.3	585.2	723.2	711.6	646.3	321.1	335.2	325.1
MAX	432	705	607	330	1250	1090	1110	1650	1090	465	580	616
MIN	297	283	250	250	240	290	429	369	333	255	246	253
CFSM	0.59	0.62	0.65	0.47	0.85	0.96	1.19	1.17	1.06	0.53	0.55	0.53
IN.	0.68	0.69	0.75	0.55	0.88	1.11	1.33	1.35	1.18	0.61	0.63	0.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

	MEAN	282.4	328.7	247.3	248.5	338.7	798.9	718.1	445.6	450.6	325.2	264.5	317.0
MAX	842	942	519	945	1135	1759	2588	1518	1455	1495	1018	1285	
(WY)	1973	1986	1993	1946	1966	1948	1993	1973	2000	1993	1980	1965	
MIN	117	116	76.2	78.3	89.3	170	253	138	112	112	95.8	100	
(WY)	1959	1959	1959	1959	1959	1964	1946	1958	1958	1965	1958	1958	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1914 - 2002

ANNUAL TOTAL	196958	169361	
ANNUAL MEAN	539.6	464.0	396.8
HIGHEST ANNUAL MEAN			824
LOWEST ANNUAL MEAN			158
HIGHEST DAILY MEAN	2220	Apr 13	1650
LOWEST DAILY MEAN	222	Jan 28	(a)240
ANNUAL SEVEN-DAY MINIMUM	(a)231	Jan 23	(a)250
MAXIMUM PEAK FLOW			1780
MAXIMUM PEAK STAGE			13.45
ANNUAL RUNOFF (CFSM)	0.89		0.76
ANNUAL RUNOFF (INCHES)	12.03		10.35
10 PERCENT EXCEEDS	1190		766
50 PERCENT EXCEEDS	372		375
90 PERCENT EXCEEDS	252		271

(a) Ice affected
 (b) Gage height, 17.50 ft, estimated, site and datum then in use, from rating curve extended above 6,000 ft³/s
 (c) Estimated due to ice effect or missing record

WISCONSIN RIVER BASIN

05405855 LAKE WISCONSIN TRIBUTARY #3 NEAR PRAIRIE DU SAC, WI

LOCATION.--Lat 43°20'10", long 89°42'23", in NW ¼ NE ¼ sec.19, T.10 N., R.7 E., Sauk County, Hydrologic Unit 07070005, on USDA Dairy Forage Research station, 2.7 mi northeast of Prairie du Sac.

DRAINAGE AREA.--0.0028 mi² (1.78 acres).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1997 to current year.

GAGE.--Water-stage recorder and a 3-inch Parshall flume. Elevation of gage is 835 ft above NGVD of 1929, from topographic map.

REMARKS.--Records are good (see page 11). Periods of flow are reported; for all other periods, there was no flow.

START DATE	START TIME	END DATE	END TIME	VOLUME (cubic feet)	PEAK DISCHARGE (ft ³ /s)
02/20/02	1145	02/20/02	1245	17.3	0.0096
03/09/02	0330	03/09/02	0615	233	0.0422
06/03/02	0610	06/03/02	0620	0.864	0.0070

05405855 LAKE WISCONSIN TRIBUTARY #3 NEAR PRAIRIE DU SAC, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1997 to current year.

INSTRUMENTATION.--Water-quality sampler November 1997 to current year.

REMARKS.-- Chemical analyses by the Wisconsin State Laboratory of Hygiene. Samples are storm-composite samples collected by an automatic point sampler.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

COMPOSITE SAMPLES

BEGIN- NING DATE	BEGIN- NING TIME	ENDING DATE	ENDING TIME	RUNOFF VOLUME MILLIONS OF CUBIC FEET (99905)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	RESIDUE VOLA- TILE, SUS- PENDED (MG/L) (00535)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
20020309	0339	20020309	0600	233X10 ⁻⁶	94	27	5.75	14	.532	3.06	3.75

WISCONSIN RIVER BASIN

05405855 LAKE WISCONSIN TRIBUTARY #3 NEAR PRAIRIE DU SAC, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--November 1997 to current year.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established Nov. 1, 1997. Rainfall estimated to be 0.00 for Dec. 25, 28, Jan. 14-16, 21, 31, Feb. 1, 10-11, 21, 26-27, and Mar. 3, 5 because recorded precipitation interpreted as collector snowmelt. Missing record June 6 to Aug. 8.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.97 in., June 1, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.61 in., Aug. 22.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.05	0.0	0.0	0.0	0.0	0.02	0.60	0.0	---	---	0.0
2	0.01	0.02	0.0	0.0	0.0	0.0	0.34	0.01	0.33	---	---	0.71
3	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	1.40	---	---	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.85	---	---	0.0
5	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0	---	---	0.01
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	---	---	---	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.0	---	---	---	0.0
8	0.01	0.0	0.0	0.0	0.0	0.08	0.44	0.69	---	---	---	0.0
9	0.08	0.0	0.0	0.0	0.08	0.21	0.0	0.97	---	---	0.0	0.0
10	0.29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	0.0	0.02
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49	---	---	0.01	0.0
12	0.0	0.0	0.57	0.0	0.0	0.0	0.24	0.11	---	---	0.05	0.0
13	0.31	0.18	0.02	0.0	0.0	0.0	0.01	0.0	---	---	0.28	0.0
14	0.01	0.05	0.0	0.0	0.0	0.01	0.05	0.0	---	---	0.0	0.05
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	0.02	0.01
16	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	---	---	0.01	0.0
17	0.0	0.0	0.0	0.0	0.0	0.02	0.01	0.0	---	---	0.35	0.0
18	0.0	0.50	0.01	0.0	0.20	0.14	0.62	0.0	---	---	0.0	0.0
19	0.0	0.10	0.0	0.0	0.67	0.41	0.0	0.0	---	---	0.01	0.57
20	0.0	0.0	0.0	0.0	1.03	0.08	0.01	0.0	---	---	0.0	0.22
21	0.0	0.0	0.0	0.0	0.0	0.07	0.48	0.0	---	---	0.92	0.01
22	0.52	0.0	0.08	0.0	0.0	0.0	0.05	0.0	---	---	1.61	0.0
23	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.0	---	---	0.02	0.0
24	0.25	0.70	0.0	0.0	0.0	0.0	0.94	0.0	---	---	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.71	---	---	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	0.01	0.0
27	0.0	0.20	0.0	0.0	0.0	0.0	0.63	0.0	---	---	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.15	0.16	0.28	---	---	0.0	0.10
29	0.0	0.0	0.0	0.0	---	0.0	0.0	0.06	---	---	0.01	0.22
30	0.15	0.20	0.0	0.0	---	0.0	0.0	0.0	---	---	0.0	0.0
31	0.01	---	0.0	0.0	---	0.01	---	0.0	---	---	0.0	---
TOTAL	1.64	2.20	1.24	0.0	1.98	1.18	4.61	4.14	---	---	---	1.92

WISCONSIN RIVER BASIN

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05405857 LAKE WISCONSIN TRIBUTARY #2 NEAR PRAIRIE DU SAC, WI

LOCATION.--Lat 43°20'06", long 89°42'20", in NW ¼ NE ¼ sec.19, T.10 N., R.7 E., Sauk County, Hydrologic Unit 07070005, on
USDA Dairy Forage Research station, 2.6 mi northeast of Prairie du Sac.

DRAINAGE AREA.--0.0089 mi² (5.71 acres).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1997 to current year.

GAGE.--Water-stage recorder and a 3-inch Parshall flume. Elevation of gage is 840 ft above NGVD of 1929, from topographic map.

REMARKS.--Records are good (see page 11). Periods of flow are reported; for all other periods, there was no flow.

START DATE	START TIME	END DATE	END TIME	VOLUME (cubic feet)	PEAK DISCHARGE (ft ³ /s)
12/12/01	2110	12/12/01	2305	43.2	0.0096
01/22/02	1400	01/22/02	1915	112	0.0162
01/23/02	1215	01/23/02	1600	25.9	0.004
01/25/02	1300	01/25/02	1500	8.64	0.004
02/07/02	1400	02/07/02	1815	138	0.020
02/08/02	1145	02/08/02	1745	147	0.0129
02/09/02	1200	02/09/02	1645	69.1	0.0096
02/09/02	2330	02/10/02	0345	294	0.0034
02/12/02	1615	02/12/02	1830	17.3	0.0026
02/14/02	1245	02/14/02	1830	173	0.0200
02/15/02	1430	02/15/02	1645	14.3	0.0044
02/16/02	1400	02/16/02	1630	8.64	0.0026
02/18/02	2335	02/19/02	0800	484	0.0422
02/20/02	0725	02/20/02	1545	1840	0.2592
03/09/02	0300	03/09/02	0945	570	0.1620
03/09/02	1000	03/10/02	0200	4,398	0.1702
03/10/02	0900	03/10/02	2000	4,683	0.1955
03/11/02	0745	03/11/02	1145	1,676	0.2221
03/12/02	1230	03/12/02	1415	8.64	0.0026
04/24/02	1335	04/24/02	1400	43.2	0.0640
06/03/02	0600	06/03/02	0610	0.864	0.0070
06/26/02	0350	06/26/02	0410	17.3	0.0326
08/21/02	1805	08/21/02	1820	69.1	0.1462

WISCONSIN RIVER BASIN

05405857 LAKE WISCONSIN TRIBUTARY #2 NEAR PRAIRIE DU SAC, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1997 to current year.

INSTRUMENTATION.--Water-quality sampler November 1997 to current year.

REMARKS.-- Chemical analyses by the Wisconsin State Laboratory of Hygiene. Samples are storm-composite samples collected by an automatic point sampler.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

COMPOSITE SAMPLES

BEGIN- NING DATE	BEGIN- NING TIME	ENDING DATE	ENDING TIME	RUNOFF VOLUME MILLIONS OF CUBIC FEET (99905)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
20020122	1534	20020122	1915	112X10 ⁻⁶	484	92	1.80	14	1.44	.970	1.69
20020207	1444	20020207	1531	138X10 ⁻⁶	88	39	6.61	30	.276	2.66	4.03
20020208	1349	20020208	1456	147X10 ⁻⁶	87	21	3.06	11	1.48	1.61	2.04
20020209	1344	20020209	1511	69.1X10 ⁻⁶	178	30	2.75	12	.825	1.41	2.00
20020210	0049	20020210	0211	294X10 ⁻⁶	220	48	3.27	14	1.34	2.13	2.99
20020214	1339	20020214	1511	173X10 ⁻⁶	102	16	2.45	8.2	.606	1.60	1.90
20020219	0029	20020219	0556	484X10 ⁻⁶	1100	180	2.05	14	.825	1.30	2.89
20020220	0800	20020220	1620	1.84X10 ⁻³	5400	860	3.33	48	.766	3.08	9.20
20020308	1210	20020309	0600	570X10 ⁻⁶	230	36	.989	4.8	.592	1.21	1.55
20020309	0945	20020309	1431	4.40X10 ⁻⁶	31	7	.620	2.1	.379	--	.549
20020424	1335	20020424	1405	43.2X10 ⁻⁶	7020	790	.715	66	1.53	3.43	13.6
20020821	1805	20020821	1820	69.1X10 ⁻⁶	244	46	.230	2.9	.426	--	1.47

05405857 LAKE WISCONSIN TRIBUTARY #2 NEAR PRAIRIE DU SAC, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--November 1997 to current year.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established Nov. 6, 1997. Rainfall estimated to be 0.00 for Jan. 14-16, 31, Feb. 1, 10, 21, 26, and Mar. 5 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.30 in., Apr. 3, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.58 in., Aug. 22.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.06	0.01	0.0	0.0	0.0	0.05	0.56	0.0	0.0	0.0	0.0
2	0.01	0.02	0.01	0.0	0.0	0.0	0.27	0.02	0.32	0.0	0.0	0.71
3	0.0	0.0	0.01	0.0	0.0	0.0	0.03	0.0	1.33	0.0	0.0	0.0
4	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.87	0.0	0.60	0.0
5	0.0	0.0	0.56	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.01
6	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.01	0.0
7	0.0	0.0	0.01	0.0	0.0	0.0	0.55	0.0	0.0	0.01	0.0	0.0
8	0.02	0.0	0.0	0.0	0.0	0.09	0.42	0.60	0.0	0.19	0.0	0.0
9	0.09	0.0	0.06	0.0	0.06	0.21	0.0	1.01	0.0	0.0	0.0	0.0
10	0.34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.14
11	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.44	0.71	0.0	0.01	0.0
12	0.0	0.0	0.53	0.0	0.0	0.0	0.22	0.11	0.0	0.0	0.04	0.0
13	0.32	0.19	0.02	0.0	0.0	0.0	0.01	0.0	0.49	0.0	0.28	0.0
14	0.0	0.05	0.0	0.0	0.0	0.0	0.05	0.0	0.02	0.0	0.0	0.05
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.01	0.0
16	0.0	0.02	0.06	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.01	0.01
17	0.01	0.0	0.0	0.0	0.0	0.02	0.01	0.0	0.03	0.0	0.34	0.0
18	0.0	0.54	0.01	0.0	0.18	0.11	0.54	0.0	0.0	0.0	0.0	0.0
19	0.0	0.09	0.0	0.0	0.64	0.38	0.0	0.0	0.08	0.0	0.01	0.64
20	0.0	0.0	0.0	0.0	0.97	0.07	0.01	0.0	0.0	0.40	0.0	0.24
21	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.26	0.0	0.76	0.0
22	0.51	0.0	0.09	0.0	0.0	0.0	0.01	0.0	0.0	0.80	1.58	0.0
23	0.01	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0
24	0.25	0.63	0.0	0.0	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0
25	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.69	0.0	0.12	0.0	0.0
26	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.89	0.02	0.0	0.0
27	0.0	0.11	0.0	0.0	0.01	0.0	0.39	0.0	0.0	0.13	0.01	0.0
28	0.0	0.02	0.0	0.0	0.0	0.16	0.16	0.31	0.0	0.0	0.0	0.11
29	0.0	0.0	0.0	0.0	---	0.0	0.0	0.04	0.0	0.03	0.01	0.23
30	0.14	0.21	0.0	0.0	---	0.0	0.0	0.0	0.0	0.02	0.0	0.0
31	0.0	---	0.0	0.0	---	0.01	---	0.0	---	0.0	0.0	---
TOTAL	1.70	2.18	1.42	0.0	1.86	1.05	4.02	4.00	5.30	1.87	3.69	2.14

WISCONSIN RIVER BASIN

05405859 LAKE WISCONSIN TRIBUTARY #1 NEAR PRAIRIE DU SAC, WI

LOCATION.--Lat 43°19'59", long 89°42'23", in SW ¼ NE ¼ sec.19, T.10 N., R.7 E., Sauk County, Hydrologic Unit 07070005, on USDA Dairy Forage Research station, 2.5 mi northeast of Prairie du Sac.

DRAINAGE AREA.--0.0037 mi² (2.38 acres).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1997 to current year.

GAGE.--Water-stage recorder and a 3-inch Parshall flume. Elevation of gage is 830 ft above NGVD of 1929, from topographic map.

REMARKS.--Records are good (see page 11). Periods of flow are reported; for all other periods, there was no flow. Gage-height telemeter at station.

START DATE	START TIME	END DATE	END TIME	VOLUME (cubic feet)	PEAK DISCHARGE (ft ³ /s)
02/09/02	1300	02/10/02	0400	276	0.016
02/10/02	1345	02/10/02	1600	8.6	0.004
02/18/02	2335	02/19/02	0615	268	0.024
02/20/02	0825	02/20/02	1245	147	0.024
03/09/02	0455	03/09/02	1000	156	0.033
06/03/02	0555	06/03/02	0640	60	0.064
06/11/02	0550	06/11/02	0615	8.6	0.016
06/26/02	0355	06/26/02	0405	0.86	0.004
08/21/02	1800	08/21/02	1830	34.6	0.076
08/22/02	1205	08/22/02	1230	8.6	0.004

05405859 LAKE WISCONSIN TRIBUTARY #1 NEAR PRAIRIE DU SAC, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1997 to current year.

INSTRUMENTATION.--Water-quality sampler November 1997 to current year.

REMARKS.-- Chemical analyses by the Wisconsin State Laboratory of Hygiene. Samples are storm-composite samples collected by an automatic point sampler.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

COMPOSITE SAMPLES

BEGIN- NING DATE	BEGIN- NING TIME	ENDING DATE	ENDING TIME	RUNOFF VOLUME MILLIONS OF CUBIC FEET (99905)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	RESIDUE VOLA- TILE, SUS- PENDED (MG/L) (00535)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
20020210	0024	20020210	0121	181X10 ⁻⁶	55	12	.217	1.6	.640	.174	.297
20020219	0054	20020219	0231	268X10 ⁻⁶	92	16	.037	2.0	.130	.101	.266
20020220	0900	20020220	1245	147X10 ⁻⁶	538	88	<.013	3.9	.088	.051	.592
20020309	0505	20020309	1000	156X10 ⁻⁶	119	18	.094	1.6	.248	.092	.265
20020309	1310	20020309	1701	--	33	6	.108	.97	.286	--	.149
20020603	0555	20020603	0635	60.5X10 ⁻⁶	795	83	.151	5.4	1.07	.508	.672

WISCONSIN RIVER BASIN

05405859 LAKE WISCONSIN TRIBUTARY #1 NEAR PRAIRIE DU SAC, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--November 1997 to current year.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established Nov. 1, 1997. Rainfall estimated to be 0.00 for Jan. 14-15, 20-21, 24, 31, Feb. 1-2, 10, 23, and Mar. 4-5 because recorded precipitation interpreted as collector snowmelt. Precipitation deleted July 1-31 because rain gage was plugged with debris.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 5.30 in., Aug. 2, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.62 in., Aug. 22.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.06	0.0	0.0	0.0	0.0	0.07	0.62	0.0	---	0.0	0.0
2	0.01	0.02	0.0	0.0	0.0	0.0	0.27	0.02	0.35	---	0.0	0.78
3	0.0	0.0	0.01	0.0	0.0	0.0	0.03	0.0	1.49	---	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.94	---	0.70	0.01
5	0.0	0.0	0.66	0.0	0.0	0.0	0.0	0.0	0.0	---	0.01	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	---	0.0	0.01
7	0.0	0.0	0.0	0.0	0.0	0.01	0.61	0.0	0.0	---	0.0	0.0
8	0.03	0.0	0.0	0.0	0.0	0.09	0.45	0.66	0.0	---	0.0	0.0
9	0.11	0.0	0.0	0.0	0.07	0.25	0.0	1.11	0.0	---	0.0	0.0
10	0.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	---	0.01	0.15
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.47	0.57	---	0.01	0.0
12	0.0	0.01	0.59	0.0	0.0	0.0	0.26	0.11	0.0	---	0.05	0.0
13	0.35	0.22	0.02	0.0	0.0	0.0	0.0	0.0	0.0	---	0.31	0.0
14	0.0	0.06	0.0	0.0	0.0	0.0	0.06	0.0	0.02	---	0.0	0.05
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	0.01	0.0
16	0.0	0.01	0.06	0.0	0.0	0.0	0.0	0.0	0.01	---	0.01	0.01
17	0.01	0.0	0.0	0.0	0.0	0.01	0.03	0.0	0.01	---	0.44	0.0
18	0.0	0.60	0.01	0.0	0.20	0.11	0.65	0.0	0.0	---	0.0	0.0
19	0.0	0.10	0.0	0.0	0.70	0.43	0.0	0.0	0.0	---	0.01	0.67
20	0.0	0.0	0.0	0.0	1.12	0.07	0.01	0.0	0.01	---	0.0	0.26
21	0.0	0.0	0.0	0.0	0.01	0.0	0.42	0.0	0.14	---	0.87	0.01
22	0.56	0.0	0.09	0.0	0.0	0.0	0.01	0.0	0.0	---	1.62	0.0
23	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	0.02	0.0
24	0.29	0.64	0.0	0.0	0.0	0.0	1.07	0.0	0.0	---	0.0	0.0
25	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.77	0.0	---	0.0	0.0
26	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.82	---	0.0	0.0
27	0.0	0.11	0.0	0.0	0.0	0.0	0.46	0.0	0.0	---	0.01	0.0
28	0.0	0.01	0.0	0.0	0.0	0.17	0.16	0.33	0.0	---	0.0	0.11
29	0.0	0.0	0.0	0.0	---	0.0	0.0	0.03	0.0	---	0.0	0.24
30	0.14	0.26	0.0	0.0	---	0.0	0.0	0.0	0.0	---	0.01	0.0
31	0.01	---	0.0	0.0	---	0.02	---	0.0	---	---	0.0	---
TOTAL	1.90	2.31	1.44	0.0	2.10	1.16	4.56	4.37	4.42	---	4.09	2.30

05406469 BREWERY CREEK, UPSTREAM SITE, AT CROSS PLAINS, WI

LOCATION.--Lat 43°07'31", long 89°38'06", in NE ¼ SW ¼ sec.35, T.8 N., R.7 E., Dane County, Hydrologic Unit 07070005, on left bank in field, 1.3 mi upstream from Black Earth Creek.

DRAINAGE AREA.--10.1 mi², of which 2.80 mi² is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1999 to September 2002 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 900 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.9	3.6	2.6	2.8	2.8	3.0	3.3	2.5	2.2	2.2	2.2
2	2.9	2.8	3.4	2.6	2.7	2.9	3.1	4.8	2.5	2.2	2.2	3.3
3	2.8	2.7	3.4	2.6	2.7	2.9	3.0	3.5	8.2	2.3	2.2	2.8
4	e2.9	2.7	3.2	2.6	2.6	3.1	2.9	3.2	12	2.4	2.6	2.4
5	e2.9	2.7	3.5	2.7	2.6	2.7	2.8	3.0	6.0	2.4	2.3	2.3
6	e2.9	2.7	3.4	2.7	2.6	2.7	2.8	3.0	4.0	2.4	2.2	2.3
7	e2.9	2.7	3.2	2.6	2.8	2.7	3.6	3.2	3.3	2.3	2.1	2.2
8	e2.8	2.7	3.1	2.6	2.9	4.8	6.7	3.0	3.0	2.3	2.1	2.2
9	e2.8	2.7	3.0	2.9	3.0	9.4	6.1	7.0	2.8	2.2	2.0	2.2
10	3.0	2.7	3.0	2.8	4.0	4.1	4.1	3.8	2.8	2.2	2.0	2.3
11	2.9	2.7	2.9	2.9	3.0	3.5	3.7	4.1	3.0	2.3	2.7	2.3
12	2.8	2.7	3.1	2.9	3.0	3.5	3.7	8.6	2.8	2.4	5.3	2.3
13	3.1	2.9	4.8	2.8	2.8	3.5	3.3	4.6	2.9	2.4	3.2	e2.2
14	3.1	2.8	3.5	2.9	3.0	3.3	3.2	3.7	3.0	2.5	2.9	e2.1
15	2.9	2.8	3.3	2.8	3.0	3.2	3.2	3.3	2.9	2.2	2.6	e2.2
16	2.9	2.8	3.3	2.8	3.0	3.0	3.0	3.1	2.7	2.1	2.5	e2.1
17	2.8	2.7	3.2	2.8	2.9	2.9	2.9	2.9	2.6	2.0	2.6	e2.0
18	2.9	2.8	3.2	2.7	2.9	2.9	3.1	2.8	2.4	1.9	2.5	e2.0
19	2.9	3.1	3.2	2.7	7.5	3.0	3.9	2.7	2.5	2.0	2.3	e2.3
20	2.8	2.8	2.9	2.7	11	3.4	3.1	2.7	2.6	2.1	2.3	e2.2
21	2.8	2.8	2.8	2.7	6.3	3.1	3.3	2.7	2.8	2.2	2.4	e2.0
22	3.6	2.8	3.2	2.8	4.3	2.9	3.4	2.6	2.7	3.1	3.1	e1.9
23	6.4	2.8	3.1	2.9	4.1	3.0	3.1	2.6	2.6	2.4	3.3	e1.9
24	4.3	5.0	2.9	2.8	4.1	3.1	3.7	2.6	2.5	2.2	2.9	e1.8
25	3.7	3.9	2.8	2.8	3.7	2.8	3.5	e3.8	2.5	2.2	2.8	e1.8
26	3.2	3.2	2.7	2.9	3.3	2.8	3.1	e3.1	2.8	2.2	2.5	e1.8
27	3.0	3.7	2.8	3.0	3.2	2.8	3.3	e2.8	2.6	2.2	2.5	e1.8
28	2.9	3.2	2.9	2.9	3.0	3.0	5.0	e2.7	2.5	2.3	2.3	e1.8
29	2.8	3.1	2.7	2.8	---	2.9	3.8	3.1	2.5	2.3	2.3	e2.5
30	2.8	3.9	2.7	2.7	---	3.0	3.4	2.7	2.3	2.4	2.3	e2.1
31	2.9	---	2.6	2.8	---	3.0	---	2.6	---	2.2	2.3	---
TOTAL	96.4	89.8	97.4	85.8	102.8	102.7	106.8	107.6	100.3	70.5	79.5	65.3
MEAN	3.110	2.993	3.142	2.768	3.671	3.313	3.560	3.471	3.343	2.274	2.565	2.177
MAX	6.4	5.0	4.8	3.0	11	9.4	6.7	8.6	12	3.1	5.3	3.3
MIN	2.8	2.7	2.6	2.6	2.6	2.7	2.8	2.6	2.3	1.9	2.0	1.8
CFSM	0.43	0.41	0.43	0.38	0.50	0.45	0.49	0.48	0.46	0.31	0.35	0.30
IN.	0.49	0.46	0.50	0.44	0.52	0.52	0.54	0.55	0.51	0.36	0.41	0.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	2.634	2.572	2.444	2.326	3.260	3.067	3.097	4.320	5.459	2.206	5.358	2.966
MAX	3.11	2.99	3.14	2.77	3.67	3.53	3.56	6.56	9.51	2.54	11.0	3.89
(WY)	2002	2002	2002	2002	2002	2001	2002	2000	2000	2000	2001	2001
MIN	2.27	2.08	1.92	1.88	2.95	2.36	2.56	2.93	3.34	1.80	2.55	2.18
(WY)	2000	2000	2000	2000	2001	2000	2000	2001	2002	2001	2000	2002

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 2000 - 2002

ANNUAL TOTAL	1351.8	1104.9	
ANNUAL MEAN	3.704	3.027	3.307
HIGHEST ANNUAL MEAN			3.55
LOWEST ANNUAL MEAN			3.03
HIGHEST DAILY MEAN	238	12	238
LOWEST DAILY MEAN	1.6 (a)Jul 15	1.8	1.6
ANNUAL SEVEN-DAY MINIMUM	1.7	1.8	1.7
MAXIMUM PEAK FLOW		27	349
MAXIMUM PEAK STAGE		4.42	8.76
INSTANTANEOUS LOW FLOW		1.8 (b)Jul 17	1.4
ANNUAL RUNOFF (CFSM)	0.51	0.41	0.45
ANNUAL RUNOFF (INCHES)	6.89	5.63	6.16
10 PERCENT EXCEEDS	4.3	3.7	3.8
50 PERCENT EXCEEDS	2.7	2.8	2.5
90 PERCENT EXCEEDS	2.0	2.2	1.9

(a) Also occurred on July 16, 30, 31

(b) Also occurred on Sept. 24-28

(e) Estimated based on station 05406470

WISCONSIN RIVER BASIN

05406469 BREWERY CREEK, UPSTREAM SITE, AT CROSS PLAINS, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1999 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1999 to current year.

SUSPENDED-SOLIDS DISCHARGE: October 1999 to September 2001.

INSTRUMENTATION.--Water-quality sampler October 1999 to current year; continuous water temperature recorder October 1999 to current year.

REMARKS.-- Chemical analyses by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated. Records represent water temperature at sensor within 0.5°C. Water temperature data missing Aug. 23-31.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 24.0°C, Aug. 2, 9, 2001; minimum observed 0.0°C, on many days during 2000, 2001 and 2002 winter periods.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 582 tons, Aug. 2, 2001; minimum daily, 0.05 ton, Aug. 16, 2000.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 21.5°C, June 23, 25, 30, and July 1-2; minimum observed, 0.0°C, many days during winter period.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.5	11.0	12.5	12.0	9.0	10.0	7.0	5.5	6.0	2.0	0.0	0.5
2	15.5	10.0	12.5	10.0	7.0	8.5	8.0	5.5	6.5	2.0	0.0	0.5
3	14.0	11.5	13.0	10.0	5.5	8.0	8.0	5.0	6.5	1.5	0.0	0.5
4	12.5	11.0	11.5	9.5	6.0	7.5	10.5	7.5	9.0	3.0	0.0	1.5
5	11.0	8.5	10.0	9.5	5.0	7.0	11.0	7.0	10.0	5.0	2.5	3.5
6	10.0	7.5	8.5	11.0	6.0	8.5	7.5	5.5	6.5	3.5	0.5	2.5
7	10.0	5.5	8.0	12.0	9.0	10.0	6.5	4.5	5.5	2.0	0.0	1.0
8	12.0	8.0	9.5	10.0	5.5	8.5	7.0	4.0	5.5	4.5	0.5	2.5
9	13.0	10.5	11.5	8.5	4.5	6.5	5.0	2.5	4.0	6.0	3.5	4.5
10	13.5	11.5	12.5	9.0	5.5	7.0	6.0	3.0	4.5	5.0	2.5	4.0
11	13.0	9.0	11.0	8.5	4.5	6.5	5.5	3.0	4.0	5.0	2.5	3.5
12	13.0	9.5	11.0	8.5	4.5	6.5	6.5	4.5	6.0	4.5	2.0	3.0
13	11.5	10.0	11.0	9.0	7.0	8.0	6.0	4.0	5.0	4.5	1.5	3.0
14	11.5	9.5	10.5	11.0	8.5	10.0	5.5	4.0	4.5	4.5	3.0	3.5
15	10.5	8.0	9.5	12.5	8.5	10.5	6.0	4.5	5.0	3.5	2.0	3.0
16	10.0	7.5	9.0	11.0	7.5	9.0	6.5	5.5	6.0	3.0	1.0	2.0
17	10.0	5.5	8.0	10.5	6.5	8.5	6.5	3.5	6.0	2.5	0.0	1.0
18	11.0	7.5	9.0	11.0	8.0	9.5	6.0	3.5	5.0	1.0	0.0	0.0
19	11.5	7.0	9.0	10.0	5.0	7.5	5.5	2.5	4.0	2.5	0.0	1.0
20	11.0	7.0	9.0	7.0	4.0	5.5	4.5	2.0	3.0	3.5	0.5	1.5
21	12.0	8.5	10.0	8.5	5.0	6.5	4.0	1.5	2.5	4.0	1.5	2.5
22	10.5	7.0	9.0	8.5	5.0	7.0	5.5	3.0	4.0	5.5	1.0	3.0
23	11.0	9.5	10.5	9.0	6.5	8.0	3.5	1.5	2.0	5.5	2.0	3.5
24	11.0	8.0	10.0	10.5	9.0	9.5	2.0	0.5	1.5	4.5	2.0	3.0
25	8.0	6.0	6.5	9.0	6.5	7.5	2.5	0.0	1.0	5.5	1.0	3.0
26	7.5	6.0	6.5	7.0	6.0	6.5	2.0	0.0	0.5	6.5	2.5	3.5
27	9.0	6.0	7.5	7.5	6.0	7.0	3.0	1.0	1.5	6.5	3.0	4.0
28	9.5	5.5	7.5	7.0	6.0	6.5	2.5	0.5	1.5	3.5	2.5	3.0
29	10.5	7.0	8.5	6.5	6.0	6.0	0.5	0.0	0.0	2.5	1.5	2.0
30	9.5	7.0	8.5	7.0	6.0	6.5	1.0	0.0	0.0	3.5	1.5	2.5
31	11.0	8.5	9.5	---	---	---	1.0	0.0	0.5	3.0	0.5	1.5
MONTH	15.5	5.5	9.7	12.5	4.0	7.8	11.0	0.0	4.1	6.5	0.0	2.4

05406469 BREWERY CREEK, UPSTREAM SITE, AT CROSS PLAINS, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4.0	0.0	1.5	4.5	0.0	1.5	4.5	2.0	2.5	9.5	6.0	7.5
2	3.5	0.0	1.0	1.0	0.0	0.0	4.5	2.0	3.0	12.5	5.0	8.0
3	5.0	0.0	2.0	3.5	0.0	1.0	6.5	1.5	3.5	15.0	3.5	8.0
4	3.0	0.0	1.0	0.5	0.0	0.0	6.0	1.0	3.0	16.0	4.5	9.5
5	4.0	0.0	1.5	4.0	0.0	1.5	8.0	1.0	3.5	17.0	7.0	10.5
6	5.5	0.0	2.0	4.0	1.0	2.0	11.0	0.5	4.5	19.5	9.0	12.5
7	6.5	1.0	3.0	4.5	1.5	2.5	5.0	3.0	4.0	14.5	7.5	10.5
8	7.0	1.5	3.5	4.5	2.5	3.5	5.5	4.0	4.5	16.0	7.0	10.5
9	7.0	2.0	4.0	3.0	0.0	1.5	10.5	3.5	6.0	13.0	6.5	10.5
10	4.0	0.5	2.0	4.5	0.0	1.5	12.0	3.0	7.0	15.0	5.5	9.5
11	4.0	0.0	1.5	5.5	1.0	2.5	12.0	5.5	8.5	8.0	6.5	7.5
12	5.0	0.5	2.5	9.0	0.5	4.0	12.0	5.5	8.0	8.0	6.5	7.0
13	5.0	0.0	1.5	7.0	2.5	4.5	15.0	4.0	8.5	10.5	6.5	8.0
14	6.0	1.0	3.0	4.0	2.0	3.0	14.0	5.0	9.0	14.5	6.0	9.0
15	5.0	2.0	3.0	4.5	2.0	3.0	19.0	6.0	11.5	16.5	5.5	10.5
16	6.0	2.0	3.5	9.0	1.0	4.0	19.0	9.0	13.5	12.5	8.5	10.5
17	6.5	1.0	3.0	4.5	1.5	3.0	18.0	8.0	13.0	12.5	6.0	8.5
18	6.5	1.5	3.5	9.0	2.5	4.5	15.0	8.0	11.0	12.5	4.5	8.5
19	4.0	2.0	3.0	4.5	2.0	3.5	13.0	8.0	10.0	11.0	5.0	8.0
20	3.5	1.0	2.5	9.0	3.0	4.5	11.5	5.5	8.0	11.5	5.5	8.0
21	2.5	1.0	1.5	5.5	0.0	2.0	6.0	3.5	4.5	16.0	4.0	9.0
22	6.0	0.0	2.5	6.5	0.0	2.0	8.0	4.5	5.5	15.5	5.5	10.0
23	6.5	2.0	3.5	8.5	0.0	3.5	14.5	4.0	8.5	14.0	8.5	11.0
24	9.0	3.0	5.0	6.5	0.0	3.0	13.5	5.0	8.5	e13.0	e8.0	10.0
25	4.0	2.0	3.0	6.5	0.0	2.0	12.5	4.0	7.0	e9.0	e6.5	8.0
26	3.0	0.5	1.5	8.5	0.0	3.0	14.5	3.5	8.0	e17.5	e6.5	11.5
27	5.0	0.0	1.5	10.5	0.5	4.5	5.5	5.0	5.5	e18.5	e8.5	12.5
28	3.5	0.0	1.5	8.5	2.5	4.5	6.5	5.0	5.5	e19.0	e8.5	13.0
29	---	---	---	11.0	2.0	5.0	14.0	5.5	8.5	18.5	10.0	13.5
30	---	---	---	10.0	2.0	5.0	13.0	5.0	8.5	20.5	9.5	14.5
31	---	---	---	9.0	1.5	4.5	---	---	---	17.5	10.0	13.5
MONTH	9.0	0.0	2.4	11.0	0.0	2.9	19.0	0.5	7.1	20.5	3.5	10.0
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	20.5	8.5	13.5	21.5	12.5	17.0	18.0	14.5	16.0	15.5	11.5	13.5
2	14.0	9.5	11.0	21.5	13.5	17.0	16.5	13.0	14.5	16.5	13.0	14.5
3	12.0	8.5	10.5	21.0	13.0	17.0	16.0	12.0	14.0	15.5	12.5	14.0
4	12.5	10.0	11.5	20.5	13.0	16.5	15.5	13.5	14.5	15.0	11.0	13.0
5	14.5	10.0	12.0	17.0	12.0	14.5	15.5	13.5	14.0	15.0	11.0	13.0
6	17.5	8.5	12.0	18.0	12.5	15.0	16.0	12.5	14.0	15.5	11.0	13.0
7	19.0	9.0	13.0	20.0	12.5	16.0	15.5	11.5	13.5	16.0	12.0	13.5
8	19.5	10.0	13.5	21.0	13.0	17.0	15.5	11.5	13.5	16.0	11.5	13.5
9	20.0	9.5	14.0	20.0	14.5	17.0	16.0	12.0	13.5	16.5	12.5	14.0
10	19.0	10.5	14.0	16.5	13.0	14.0	16.0	12.0	13.5	14.0	12.0	13.0
11	18.0	12.0	14.0	15.0	12.5	13.5	16.5	12.0	14.5	14.0	10.5	12.0
12	18.0	11.0	13.5	17.5	10.5	14.0	17.5	15.0	16.5	13.5	10.0	12.0
13	17.0	11.0	13.0	17.5	11.0	14.0	15.0	14.0	14.5	13.0	10.0	11.5
14	16.0	10.0	12.0	18.0	11.5	14.5	e16.5	e12.5	14.0	12.0	11.5	12.0
15	17.5	9.5	13.0	18.0	12.0	15.0	16.5	12.5	14.5	13.5	11.0	12.0
16	18.0	9.0	13.0	18.5	12.5	15.5	16.0	12.5	14.5	13.0	9.0	11.0
17	15.5	10.0	12.0	18.0	12.5	15.0	16.5	13.5	15.0	13.5	9.5	11.5
18	20.0	10.0	14.0	17.0	13.0	15.0	15.0	11.5	13.0	14.0	11.0	12.5
19	15.0	11.5	12.5	16.0	13.5	15.0	15.5	12.0	13.5	15.0	12.5	14.0
20	19.5	12.0	15.0	17.0	12.5	14.5	15.0	11.0	13.0	13.5	12.5	13.0
21	19.0	11.5	14.5	19.5	14.0	16.5	16.0	12.5	14.0	13.0	11.0	12.0
22	20.5	12.0	15.5	17.5	15.0	16.0	15.0	14.0	14.5	12.5	10.0	11.0
23	21.5	11.5	16.0	16.5	13.0	14.5	14.5	13.5	14.0	11.0	8.0	9.5
24	21.0	11.0	15.5	16.0	12.0	14.0	16.0	13.0	14.0	11.0	7.5	9.5
25	21.5	11.5	16.0	15.5	13.0	14.0	16.0	12.5	14.0	12.5	9.0	10.5
26	19.0	12.5	15.0	17.5	13.0	14.5	16.0	12.0	14.0	12.5	9.5	11.0
27	19.5	12.0	15.0	15.5	13.5	14.5	16.0	12.0	14.0	11.5	9.5	10.5
28	18.5	11.0	14.5	17.5	13.5	15.5	16.0	13.0	14.0	11.5	7.5	10.0
29	19.5	11.0	15.0	16.0	14.0	15.0	15.0	11.5	13.0	14.0	11.0	12.0
30	21.5	12.5	16.5	18.0	12.5	15.0	15.0	11.0	13.0	15.5	12.0	13.5
31	---	---	---	18.0	14.0	16.0	15.5	11.5	13.5	---	---	---
MONTH	21.5	8.5	13.7	21.5	10.5	15.2	18.0	11.0	14.1	16.5	7.5	12.2

e Estimated

WISCONSIN RIVER BASIN

05406469 BREWERY CREEK, UPSTREAM SITE, AT CROSS PLAINS, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 2001						
17...	0855	2.7	10	74	528	.132
NOV						
07...	1200	2.6	10	47	504	.103
DEC						
11...	0925	2.8	10	77	536	.143
JAN 2001						
18...	1105	2.7	10	44	490	.096
MAR						
05...	1300	2.7	10	31	488	.084
APR						
16...	1345	3.1	10	44	476	--
MAY						
28...	1320	2.6	10	61	510	--
JUN						
21...	0900	3.1	10	42	476	--
JUL						
03...	0900	2.3	10	39	496	--
17...	1350	2.2	10	40	486	--
AUG						
02...	1445	2.2	10	46	518	--
21...	1306	2.3	10	18	438	--

COMPOSITE SAMPLES

Begin- ning Date	Begin- ning Time	Ending Date	Ending Time	RUNOFF VOLUME THOUSANDS OF CUBIC FEET (99904)	SAM- PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
20011022	1800	20011024	1200	870	50	90	520	.489
20011124	0300	20011125	1930	650	50	119	574	.404
20011212	1930	20011214	0630	550	50	141	586	.379
20020218	1430	20020222	1000	2400	50	199	600	.763
20020308	0445	20020309	2230	1200	50	206	592	.585
20020407	0645	20020409	0325	920	50	154	558	--
20020418	1845	20020419	1000	240	50	153	602	--
20020424	1330	20020425	0252	210	50	103	530	--
20020427	1515	20020428	2202	560	50	74	534	--
20020501	2200	20020502	1520	320	50	92	526	--
20020509	0015	20020509	1150	330	50	442	796	--
20020511	1130	20020512	1450	760	50	337	696	--
20020528	2215	20020529	1135	160	50	75	522	--
20020603	0600	20020603	1725	530	50	1160	1430	--
20020604	0115	20020605	1040	1300	50	228	600	--
20020722	0530	20020722	2333	220	50	47	498	--
20020811	1630	20020812	2250	560	50	94	460	--
20020821	1815	20020823	0722	410	50	38	516	--
20020902	0600	20020903	1300	370	50	67	540	--

05406470 BREWERY CREEK AT CROSS PLAINS, WI

LOCATION.--Lat 43°07'09", long 89°38'25", in SW ¼ SW ¼ sec.35, T.8 N., R.7 E., Dane County, Hydrologic Unit 07070005, on right bank 60 ft upstream of culvert on Brewery Road, 0.75 mi upstream from Black Earth Creek.

DRAINAGE AREA.--10.5 mi², of which 2.80 mi² is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1986, October 1989 to September 1998, May 1999 to September 2002 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 900 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.2	3.5	2.7	2.7	2.8	2.8	3.5	2.8	2.3	2.2	2.3
2	2.8	3.0	3.2	e2.6	e2.7	e2.8	2.9	4.8	2.7	2.3	2.2	3.7
3	2.8	2.9	3.1	e2.6	2.7	e2.8	2.9	3.6	9.0	2.3	2.0	3.0
4	2.9	2.9	3.0	2.7	e2.6	e2.8	2.8	3.3	13	2.3	2.5	2.6
5	2.9	2.8	3.3	2.8	e2.6	2.6	2.8	3.2	6.2	2.2	2.4	2.6
6	2.8	2.8	3.2	2.8	2.6	2.6	2.8	3.2	4.4	2.3	2.3	2.5
7	2.9	2.8	3.0	2.7	2.7	2.6	3.7	3.4	3.7	2.3	2.2	2.5
8	3.1	2.7	2.9	2.7	2.8	4.6	6.6	3.2	3.3	2.3	2.1	2.3
9	3.2	2.6	2.8	3.0	2.9	9.6	6.0	7.4	3.1	2.3	2.1	2.3
10	3.3	2.6	2.8	2.9	3.8	4.1	4.2	3.9	3.1	2.2	2.1	2.3
11	3.2	2.6	2.7	3.0	2.8	3.5	3.8	4.2	3.2	2.2	3.4	2.4
12	3.0	2.6	3.0	3.0	2.8	3.4	3.8	9.5	2.9	2.1	5.8	2.3
13	3.2	2.9	4.5	2.9	2.6	3.4	3.4	4.8	2.9	2.1	3.5	2.2
14	3.2	2.7	3.6	3.1	2.8	3.2	3.4	4.0	3.1	2.1	3.1	2.2
15	3.0	2.9	3.4	3.0	2.8	3.1	3.3	3.6	2.9	2.1	2.8	2.3
16	3.0	2.7	3.3	3.0	2.8	2.9	3.2	3.4	2.7	2.1	2.6	2.1
17	2.9	2.7	3.3	2.9	2.7	2.9	3.0	3.3	2.7	2.1	2.8	2.1
18	2.9	2.7	3.2	e2.8	2.7	3.0	3.3	3.2	2.6	2.1	2.7	2.1
19	2.8	3.1	3.2	e2.8	7.3	3.0	3.9	3.1	2.7	2.1	2.8	2.4
20	2.8	2.8	3.1	2.7	12	3.4	3.2	3.0	2.6	2.3	2.6	2.2
21	2.8	2.8	3.0	2.6	6.4	3.1	3.4	3.0	2.7	2.4	2.8	2.1
22	3.8	2.7	3.3	2.7	4.4	2.9	3.4	2.9	2.6	3.4	3.7	2.0
23	7.3	2.7	3.3	2.8	4.1	3.0	3.1	2.9	2.4	2.6	3.4	2.0
24	4.8	4.8	3.1	2.7	4.1	2.9	3.7	2.9	2.3	2.4	3.0	1.9
25	4.4	3.8	3.0	2.7	3.8	2.8	3.5	4.0	2.3	2.3	2.8	1.9
26	3.9	3.2	2.9	2.8	3.4	2.8	3.1	3.3	2.7	2.4	2.7	1.9
27	3.7	3.7	2.9	2.9	3.2	2.8	3.4	3.0	2.4	2.4	2.6	1.9
28	3.5	3.3	2.9	2.9	3.1	2.9	5.1	3.0	2.4	2.5	2.5	1.9
29	3.3	3.1	e2.8	2.8	---	2.9	3.9	3.4	2.3	2.4	2.4	2.6
30	3.2	3.8	e2.8	2.7	---	2.8	3.5	3.0	2.3	2.4	2.4	2.2
31	3.3	---	2.8	2.7	---	2.8	---	2.8	---	2.3	2.3	---
TOTAL	103.6	89.9	96.9	87.0	101.9	100.8	107.9	115.8	104.0	71.6	84.8	68.8
MEAN	3.342	2.997	3.126	2.806	3.639	3.252	3.597	3.735	3.467	2.310	2.735	2.293
MAX	7.3	4.8	4.5	3.1	12	9.6	6.6	9.5	13	3.4	5.8	3.7
MIN	2.8	2.6	2.7	2.6	2.6	2.6	2.8	2.8	2.3	2.1	2.0	1.9
CFSM	0.43	0.39	0.41	0.36	0.47	0.42	0.47	0.49	0.45	0.30	0.36	0.30
IN.	0.50	0.43	0.47	0.42	0.49	0.49	0.52	0.56	0.50	0.35	0.41	0.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	2.103	2.265	1.815	1.864	2.909	3.843	2.607	2.614	3.330	3.326	2.834	2.351						
MAX	4.10	4.73	3.82	3.22	5.43	10.5	3.66	6.90	10.0	13.4	11.6	5.15						
(WY)	1994	1986	1994	1994	1985	1993	1993	2000	2000	1993	2001	1993						
MIN	0.25	0.16	0.12	0.011	0.15	1.08	0.64	0.47	0.40	0.22	0.22	0.11						
(WY)	1991	1991	1991	1991	1991	1992	1990	1992	1991	1990	1990	1990						

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1985 - 2002
ANNUAL TOTAL	1399.8	1133.0	
ANNUAL MEAN	3.835	3.104	2.649
HIGHEST ANNUAL MEAN			4.30
LOWEST ANNUAL MEAN			0.58
HIGHEST DAILY MEAN	257	13	257
LOWEST DAILY MEAN	1.6	1.9	0.00
ANNUAL SEVEN-DAY MINIMUM	1.7	1.9	0.00
MAXIMUM PEAK FLOW		30	420
MAXIMUM PEAK STAGE		9.93	15.05
INSTANTANEOUS LOW FLOW		1.8	0.00
ANNUAL RUNOFF (CFSM)	0.50	0.40	0.34
ANNUAL RUNOFF (INCHES)	6.76	5.47	4.68
10 PERCENT EXCEEDS	4.2	3.8	3.9
50 PERCENT EXCEEDS	2.7	2.9	2.1
90 PERCENT EXCEEDS	2.0	2.3	0.39

(a) Occurred on many days July to September 1991
(b) Also occurred many days during 1991 water year
(c) Estimated due to ice effect or missing record

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to September 1986, October 1989 to September 1998, October 1999 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1984 to September 1986, October 1989 to September 1998, October 1999 to current year.
 DISSOLVED OXYGEN: April 1990 to June 30, 1991.
 SUSPENDED-SOLIDS DISCHARGE: October 1989 to September 1991, October 1999 to September 2001.
 TOTAL-NITROGEN DISCHARGE: October 1984 to June 1986.
 SUSPENDED-SEDIMENT DISCHARGE: October 1984 to June 1986, October 1989 to September 1998.
 TOTAL-PHOSPHORUS DISCHARGE: October 1984 to June 1986, October 1989 to September 1998.

INSTRUMENTATION.--Water-quality sampler December 1984 to June 1986, October 1989 to September 1998, October 1999 to current year; continuous water temperature recorder November 1984 to September 1986, October 1989 to September 1998, October 1999 to current year; dissolved oxygen recorder April 1990 to June 1991.

REMARKS.-- Chemical analyses by the Wisconsin State Laboratory of Hygiene. Suspended-sediment analyses by U.S. Geological Survey Laboratory. Samples are point samples unless otherwise indicated. The 1997 water year total phosphorus discharge records published in the 1997 water year data report were incorrectly labeled as 1996 water year records. Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 33.0°C, May 28 and July 22, 1991; minimum observed, 0.0°C, on many days during 1985, 1986, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, and 2002 winter periods.
 DISSOLVED OXYGEN: Maximum observed, 21.8 mg/L, Apr. 5, 1990; minimum observed, 0.0 mg/L, Aug. 19, 1990.
 SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 788 tons, Aug. 2, 2001; minimum daily, 0.00 ton, Aug. 23 to Sept. 9, 1990; Dec. 25-31, 1990, Jan. 1-31, Feb. 1-8, 10-20, May 20, 22-23, June 12-13, 28-30, July 12-20, 23-27, 30-31, Aug. 1-6, Aug. 18 to Sept. 11, Sept. 13, 21-22, and 24-30, 1991.
 TOTAL-NITROGEN DISCHARGE: Maximum daily, 4,550 lb, July 25, 1985; minimum daily, 10 lb, May 24-25, 1985.
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 917 tons, July 5, 1993; minimum daily, 0.0 ton Oct. 1-2, 1991, and Dec. 6, 1992.
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 2,450 lb, July 5, 1993; minimum daily, 0.00 lb, July 20, 24-27, 31, Aug. 1-6, 22-29, 31, Sept. 1-2, and 4-10, 1991.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 23.5°C, Aug. 1; minimum observed, 0.0°C, many days during winter period.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.0	11.0	13.0	12.0	9.0	10.5	7.0	5.5	6.0	0.00	0.00	0.00
2	16.0	10.0	13.0	10.5	7.5	9.0	7.5	5.0	6.5	0.00	0.00	0.00
3	15.0	12.0	13.5	10.0	6.0	8.0	7.5	5.0	6.5	0.00	0.00	0.00
4	12.5	11.0	12.0	9.5	6.0	7.5	10.5	7.5	9.5	2.0	0.00	0.00
5	11.0	8.5	10.0	9.0	4.5	7.0	11.5	8.0	10.5	4.0	2.0	3.0
6	10.0	6.5	8.0	11.0	6.0	8.5	8.0	5.0	6.5	3.0	0.00	1.5
7	9.5	4.5	7.5	12.0	9.0	10.5	6.0	4.0	5.5	0.50	0.00	0.00
8	11.5	8.0	9.5	10.0	6.0	8.5	7.0	3.5	5.5	4.0	0.00	2.0
9	13.0	10.5	11.5	8.0	4.5	6.0	5.0	2.0	3.5	6.0	3.0	4.0
10	14.0	11.5	13.0	9.0	5.5	7.0	6.0	2.5	4.0	4.5	2.0	3.5
11	13.0	9.5	11.0	8.0	4.5	6.0	6.0	2.0	4.0	5.0	1.0	3.0
12	14.0	9.5	11.5	8.5	4.0	6.0	6.5	4.0	5.5	4.5	1.0	2.5
13	12.0	10.5	11.5	9.5	7.0	8.0	6.5	4.0	5.0	4.0	0.00	2.0
14	12.0	9.5	10.5	11.5	8.5	10.0	5.0	4.0	4.5	4.0	2.5	3.5
15	10.0	8.0	9.5	13.0	9.5	11.0	6.0	4.0	5.0	3.0	1.0	2.0
16	9.5	7.5	9.0	12.0	7.5	9.5	6.5	5.5	6.0	2.0	0.00	1.0
17	10.5	5.5	8.0	11.0	6.0	8.5	6.5	3.5	6.0	0.50	0.00	0.00
18	11.0	7.0	9.0	11.0	8.0	10.0	6.0	3.5	4.5	0.00	0.00	0.00
19	11.5	7.0	9.0	10.5	4.5	7.5	5.0	2.0	4.0	1.0	0.00	0.00
20	11.0	7.5	9.0	6.0	3.0	4.5	4.0	1.0	2.0	2.5	0.00	1.0
21	12.5	8.5	10.0	8.5	4.0	6.0	3.5	0.00	2.0	3.5	0.00	2.0
22	10.5	7.0	9.0	8.0	4.5	6.5	5.5	2.5	4.0	4.5	0.00	2.0
23	11.5	10.0	10.5	9.0	6.0	8.0	4.0	0.50	1.5	5.5	1.5	3.5
24	11.0	8.5	10.5	10.5	9.0	9.5	1.5	0.00	0.50	4.5	1.5	2.5
25	8.5	6.0	6.5	9.0	6.5	7.5	0.50	0.00	0.00	5.0	0.00	2.5
26	7.0	6.0	6.5	7.0	6.0	6.5	0.00	0.00	0.00	6.0	1.5	3.5
27	9.0	6.5	7.5	7.5	6.0	7.0	2.0	0.00	0.50	6.5	2.0	4.0
28	9.5	5.5	7.0	7.0	6.0	6.5	1.5	0.00	0.50	3.5	2.0	2.5
29	10.5	7.0	8.5	6.5	5.5	6.0	0.00	0.00	0.00	2.0	0.50	1.0
30	9.5	7.0	8.0	7.5	6.0	6.5	0.00	0.00	0.00	2.5	0.50	1.5
31	11.0	8.5	9.5	---	---	---	0.00	0.00	0.00	2.0	0.00	1.0
MONTH	16.0	4.5	9.8	13.0	3.0	7.8	11.5	0.00	3.9	6.5	0.00	1.8

05406470 BREWERY CREEK AT CROSS PLAINS, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3.5	0.00	1.0	3.5	0.00	1.0	4.0	1.5	2.5	10.5	6.0	8.0
2	1.5	0.00	0.50	0.00	0.00	0.00	4.0	1.5	3.0	13.0	5.5	8.5
3	3.5	0.00	1.0	2.0	0.00	0.50	6.0	1.0	3.5	16.0	3.5	9.0
4	0.50	0.00	0.00	0.00	0.00	0.00	6.0	0.50	3.0	17.0	4.5	10.0
5	2.5	0.00	0.50	2.0	0.00	0.50	8.5	0.00	3.5	18.5	7.0	12.0
6	4.5	0.00	1.5	3.5	0.50	1.5	11.0	0.00	4.5	21.0	9.5	14.0
7	6.0	0.00	2.5	4.0	1.0	2.0	5.5	3.0	4.0	15.0	8.5	11.5
8	7.0	0.00	3.0	4.5	2.0	3.5	6.0	4.0	5.0	16.5	7.5	11.0
9	7.0	1.5	4.0	3.5	0.00	2.0	11.5	4.0	6.5	13.5	7.0	11.0
10	4.0	0.50	2.5	4.0	0.00	1.0	13.0	3.5	7.5	16.0	6.0	10.0
11	3.5	0.00	1.0	5.5	0.50	2.5	13.0	6.0	9.0	9.0	7.0	7.5
12	4.5	0.00	2.5	9.0	0.00	4.0	12.0	6.5	8.5	8.5	6.5	7.5
13	3.5	0.00	1.0	7.5	2.5	4.5	16.5	4.5	9.5	11.0	6.5	8.5
14	6.0	0.00	2.5	4.0	2.0	3.0	14.5	5.5	10.0	14.5	6.0	9.5
15	4.5	2.0	3.0	4.5	2.0	3.0	20.5	7.0	12.5	18.0	6.0	11.5
16	5.5	2.0	3.5	9.5	0.50	4.0	21.0	10.5	15.0	13.5	9.5	11.0
17	6.0	0.00	2.5	4.5	1.5	3.0	21.0	10.0	15.0	12.5	6.5	9.0
18	6.5	0.50	3.5	9.0	3.0	5.0	17.5	9.0	12.5	13.0	4.5	8.5
19	4.0	2.5	3.5	4.5	2.0	3.5	14.0	8.5	11.0	11.5	5.0	8.5
20	3.5	1.5	3.0	9.0	3.0	5.0	12.0	6.0	8.5	11.5	5.5	8.0
21	3.0	1.0	2.0	5.0	0.00	2.0	7.0	4.0	5.0	16.5	4.0	9.5
22	6.0	0.00	2.5	6.5	0.00	2.0	8.0	4.5	5.5	16.5	5.5	10.5
23	6.5	2.0	4.0	8.5	0.00	3.5	16.0	4.0	9.0	15.0	9.0	11.5
24	9.0	3.0	5.5	6.5	0.00	2.5	14.0	6.0	9.0	14.0	8.0	10.5
25	4.5	1.5	3.5	6.0	0.00	1.5	13.5	4.0	7.5	9.5	6.5	8.0
26	3.0	0.00	1.5	8.0	0.00	2.5	15.5	3.5	8.5	19.0	6.5	12.0
27	4.5	0.00	1.5	11.0	0.00	4.5	6.5	5.5	5.5	20.0	9.0	13.5
28	3.0	0.00	1.0	8.5	2.0	4.5	7.0	5.0	6.0	20.5	9.0	14.0
29	---	---	---	11.0	2.5	5.5	15.0	5.5	9.0	20.0	11.0	14.5
30	---	---	---	10.5	2.0	5.0	14.5	5.5	9.0	21.5	10.0	15.5
31	---	---	---	9.5	1.5	4.5	---	---	---	18.5	11.5	15.0
MONTH	9.0	0.00	2.3	11.0	0.00	2.8	21.0	0.00	7.6	21.5	3.5	10.6
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	22.0	9.5	15.0	23.0	14.5	19.0	23.5	16.0	18.5	17.5	12.5	14.5
2	15.0	10.0	12.0	23.0	15.0	19.0	20.5	13.5	16.5	16.5	14.0	15.5
3	12.5	9.0	10.5	22.5	14.5	19.0	21.0	12.5	16.0	17.0	13.5	15.0
4	12.5	10.5	11.5	22.5	14.5	18.0	17.0	15.0	16.0	16.0	11.5	14.0
5	15.0	11.0	12.0	18.0	13.5	16.0	17.5	14.0	15.5	16.5	12.0	14.0
6	18.0	8.5	13.0	19.0	14.0	16.0	18.0	12.5	15.0	18.0	12.0	14.5
7	19.5	9.5	14.0	22.0	14.0	17.5	18.5	12.0	14.5	18.0	12.5	15.0
8	20.5	10.5	15.0	23.0	14.5	19.0	19.0	12.5	15.0	18.5	12.5	15.0
9	21.0	10.5	15.5	22.5	16.0	19.0	20.0	12.5	15.0	19.0	13.0	15.5
10	20.0	11.5	15.5	17.5	14.5	15.5	19.5	12.5	15.5	16.0	12.5	14.0
11	18.5	14.0	15.5	16.0	13.5	14.5	20.5	13.0	16.0	16.0	11.0	13.0
12	18.5	12.0	15.0	19.5	11.5	15.0	18.5	15.5	17.0	15.5	10.5	12.5
13	17.0	11.5	14.0	20.5	11.5	15.5	16.5	14.5	15.5	14.5	10.5	12.5
14	15.5	10.5	13.0	20.5	12.5	16.0	17.5	13.5	15.0	13.0	12.0	12.5
15	18.5	10.0	14.0	21.0	13.0	17.0	18.5	13.0	15.5	15.0	11.0	12.5
16	18.5	9.5	13.5	21.5	14.0	17.5	18.5	13.5	15.5	15.5	9.0	11.5
17	15.5	10.5	12.5	22.0	14.0	17.5	19.0	14.5	16.0	15.5	10.0	12.0
18	21.0	10.5	15.5	22.5	14.5	17.5	17.0	12.0	14.5	15.5	11.5	13.0
19	15.5	12.0	13.5	19.5	15.0	16.5	17.5	13.0	14.5	16.5	13.5	15.0
20	21.0	12.5	16.5	22.5	13.5	16.5	16.5	11.5	14.0	14.5	13.0	14.0
21	20.0	12.5	16.0	23.0	14.5	18.5	19.0	13.5	15.5	15.0	11.5	12.5
22	21.5	13.0	17.0	19.0	16.0	17.5	16.0	15.0	15.5	14.5	9.5	11.5
23	22.5	12.5	17.5	19.5	13.5	16.0	15.0	14.0	14.5	11.5	8.0	9.5
24	22.5	12.5	17.5	20.0	13.0	15.5	17.5	13.5	15.0	12.5	7.5	9.5
25	23.0	12.5	18.0	19.0	14.0	15.5	17.5	13.5	15.0	14.0	9.0	11.0
26	20.0	13.5	16.5	20.5	13.5	16.5	18.0	13.0	15.0	15.0	9.5	11.5
27	21.0	13.0	16.5	19.5	14.5	16.0	17.5	13.0	15.0	12.0	9.5	11.0
28	19.5	12.5	16.0	20.5	14.5	17.0	18.0	13.5	15.0	12.5	8.0	10.0
29	21.0	12.5	16.5	18.0	15.0	16.5	17.0	12.0	14.0	14.5	11.0	13.0
30	23.0	13.5	18.5	22.5	13.5	17.0	16.5	11.5	14.0	16.5	12.5	14.5
31	---	---	---	23.0	15.0	18.0	17.5	12.5	14.5	---	---	---
MONTH	23.0	8.5	14.9	23.0	11.5	17.0	23.5	11.5	15.3	19.0	7.5	13.0

WISCONSIN RIVER BASIN

05406470 BREWERY CREEK AT CROSS PLAINS, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 2001							
17...	0845	--	2.8	10	47	502	.107
NOV							
07...	1150	--	2.7	10	51	508	.103
DEC							
11...	0920	--	2.7	10	70	526	.129
JAN 2002							
18...	1055	2.8	--	10	42	488	.094
MAR							
05...	1240	--	2.7	10	19	468	.067
APR							
16...	1320	--	3.2	10	21	458	--
MAY							
28...	1245	--	2.9	10	50	512	--
JUN							
21...	0850	--	2.7	10	53	500	--
JUL							
03...	0855	--	2.3	10	46	520	--
17...	1345	--	2.1	10	24	470	--
AUG							
02...	1430	--	2.2	10	15	486	--
21...	1256	--	2.6	10	19	452	--

COMPOSITE SAMPLES

Begin- ning Date	Begin- ning Time	Ending Date	Ending Time	RUNOFF VOLUME THOUSANDS OF CUBIC FEET (99904)	SAM- PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
20011022	1525	20011024	1200	1000	50	110	526	.481
20011124	0855	20011125	0600	400	50	136	576	.496
20011212	1940	20011214	0630	540	50	102	536	.335
20020209	1500	20020211	0430	470	50	108	554	.395
20020218	1445	20020222	1000	2500	50	234	632	.746
20020308	0500	20020309	2220	1100	50	188	582	.541
20020407	0650	20020409	0330	920	50	123	536	--
20020418	1930	20020419	1000	230	50	144	562	--
20020424	1340	20020425	0241	220	50	79	506	--
20020427	1715	20020429	0145	620	50	57	496	--
20020501	2125	20020502	1450	320	50	70	484	--
20020509	0020	20020509	1330	440	50	409	734	--
20020511	1135	20020512	1625	870	50	332	688	--
20020528	2215	20020529	0945	150	50	76	512	--
20020603	0615	20020603	1855	610	50	1130	1370	--
20020604	0030	20020605	0820	1400	50	251	594	--
20020722	0535	20020723	0041	250	50	96	498	--
20020811	1640	20020813	0005	670	50	127	452	--
20020821	1810	20020823	1340	560	50	42	494	--
20020902	0430	20020903	1340	440	50	50	490	--

05406470 BREWERY CREEK AT CROSS PLAINS, WI--Continued

PRECIPITATION QUANTITY

PERIOD OF RECORD.--October 1999 to current year.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established October 1999.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 6.25 in., Aug. 2, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.74 in., Aug. 11.

PRECIPITATION , TIPPING BUCKET, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.02	0.0	0.01	0.31	0.0	0.02	0.54	0.0	0.0	0.01	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.02	0.12	0.0	0.0	1.05
3	0.0	0.0	0.01	0.01	0.0	0.0	0.07	0.0	e0.96	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	e1.23	0.0	0.73	0.01
5	0.0	0.0	0.26	0.0	0.0	0.20	0.0	0.01	0.0	0.01	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.01	0.04	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.01	0.77	0.0	0.0	0.0	0.0	0.0
8	0.0	0.01	0.0	0.0	0.0	0.16	0.58	0.05	0.0	e0.11	0.0	0.0
9	0.04	0.0	0.0	0.0	0.11	0.29	0.01	0.73	0.0	0.0	0.0	0.0
10	0.20	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.14	0.01	0.0	0.16
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.02	0.0	1.74	0.0
12	0.0	0.0	0.56	0.0	0.0	0.0	0.16	e0.48	0.0	0.0	0.20	0.0
13	0.20	0.24	0.02	0.0	0.0	0.0	0.01	0.0	0.09	0.0	0.28	0.0
14	0.05	0.07	0.0	0.05	0.0	0.0	0.19	0.0	0.10	0.0	0.0	0.04
15	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0
16	0.02	0.01	0.04	0.01	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0
17	0.0	0.0	0.0	0.01	0.0	0.04	0.0	0.0	0.01	0.0	0.32	0.0
18	0.0	0.19	0.01	0.0	0.19	0.0	0.66	0.0	0.0	0.0	0.02	0.0
19	0.0	0.09	0.0	0.0	0.66	0.20	0.0	0.0	0.06	0.0	0.02	0.52
20	0.0	0.0	0.0	0.0	0.83	0.0	0.07	0.0	0.0	0.55	0.0	0.28
21	0.0	0.0	0.0	0.01	0.02	0.0	0.30	0.0	0.05	0.0	0.46	0.01
22	1.17	0.0	0.23	0.0	0.06	0.0	0.02	0.0	0.0	1.16	0.47	0.0
23	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.25	0.80	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.0
25	0.0	0.01	0.0	0.0	0.04	0.0	0.0	0.76	0.0	0.01	0.0	0.0
26	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.0	0.0	0.0
27	0.0	0.17	0.0	0.0	0.0	0.0	0.43	0.0	0.09	0.33	0.0	0.0
28	0.0	0.03	0.0	0.0	0.0	0.09	0.27	0.28	0.01	0.01	0.0	0.07
29	0.0	0.01	0.0	0.0	---	0.0	0.0	0.02	0.0	0.09	0.0	0.64
30	0.0	0.28	0.0	0.0	---	0.0	0.0	0.0	0.0	0.06	0.01	0.0
31	0.0	---	0.0	0.04	---	0.07	---	0.0	---	0.0	0.0	---
TOTAL	1.93	2.09	1.13	0.17	2.61	1.06	4.20	3.82	3.33	2.38	4.26	2.78

e Estimated

WISCONSIN RIVER BASIN

054064775 BLACK EARTH CREEK TRIBUTARY AT COUNTY TRUNK HIGHWAY KP AT CROSS PLAINS, WI

LOCATION.--Lat 43°06'43", long 89°39'26" in SW ¼ NW ¼ sec.3, T.7 N., R.7 E., Dane County, Hydrologic Unit 07070005, 0.7 mi east of Garfoot Road and 0.2 mi west of Bourbon Road at Cross Plains.

DRAINAGE AREA.--0.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1998 to September 2002.

GAGE.--Water-stage recorder in a 2-ft H-flume. Elevation of gage is 900 ft above NGVD of 1929. Unpublished discharge data from June 1998 to September 1999 available in district office.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.02	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.25	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.70	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.06	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.03	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10
23	0.0	0.0	0.0	0.0	0.41	0.0	0.0	0.0	0.0	0.0	0.0	0.05
24	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	---	0.0	0.0	0.18	0.0	0.0	0.0	0.0
31	0.0	---	0.0	0.0	---	0.0	---	1.4	---	0.0	0.0	---
TOTAL	0.0	0.0	0.0	0.0	0.77	0.0	0.34	5.12	5.31	0.12	0.32	0.26
MEAN	0.000	0.000	0.000	0.000	0.027	0.000	0.011	0.165	0.177	0.004	0.010	0.009
MAX	0.00	0.00	0.00	0.00	0.41	0.00	0.18	3.2	2.6	0.05	0.25	0.10
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFSM	0.00	0.00	0.00	0.00	0.13	0.00	0.06	0.83	0.89	0.02	0.05	0.04
IN.	0.00	0.00	0.00	0.00	0.14	0.00	0.06	0.95	0.99	0.02	0.06	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2000, BY WATER YEAR (WY)

	1998	1999	2000	1998	1999	2000	1998	1999	2000	1998	1999	2000
MEAN	0.000	0.000	0.000	0.000	0.023	0.001	0.011	0.083	0.089	0.005	0.005	0.003
MAX	0.000	0.000	0.000	0.000	0.027	0.002	0.011	0.17	0.18	0.011	0.010	0.009
(WY)	1999	1999	1999	1999	2000	1999	2000	2000	2000	1999	2000	2000
MIN	0.000	0.000	0.000	0.000	0.019	0.000	0.011	0.000	0.000	0.000	0.001	0.000
(WY)	1999	1999	1999	1999	1999	2000	1999	1999	1999	1998	1998	1998

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1998 - 2000

ANNUAL TOTAL	1.33	12.24	
ANNUAL MEAN	0.004	0.033	0.019
HIGHEST ANNUAL MEAN			0.033 2000
LOWEST ANNUAL MEAN			0.004 1999
HIGHEST DAILY MEAN	0.33 Apr 23	3.2 May 18	3.2 May 18 2000
LOWEST DAILY MEAN	0.00 Many days	0.00 Many days	0.00 Many days
ANNUAL SEVEN-DAY MINIMUM	0.00 Many days	0.00 Many days	0.00 Many days
MAXIMUM PEAK FLOW		22 May 18	69 Mar 20 1999
MAXIMUM PEAK STAGE		1.77 May 18	2.85 Mar 20 1999
ANNUAL RUNOFF (CFSM)	0.018	0.17	0.093
ANNUAL RUNOFF (INCHES)	0.25	2.28	1.27
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

054064775 BLACK EARTH CREEK TRIBUTARY AT COUNTY TRUNK HIGHWAY KP AT CROSS PLAINS, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	e0.75	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	e8.2	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24
9	0.0	0.0	0.0	0.0	0.20	0.0	0.12	0.0	0.0	0.0	0.0	0.12
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.02
11	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.13	0.19	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	1.3	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
21	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.44	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	1.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.01	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	---	0.0	0.01	---	0.0	---	0.0	---	0.0	0.0	---
TOTAL	0.0	0.0	0.0	0.02	0.20	0.0	0.64	0.66	1.69	0.0	8.96	1.70
MEAN	0.000	0.000	0.000	0.001	0.007	0.000	0.021	0.021	0.056	0.000	0.289	0.057
MAX	0.00	0.00	0.00	0.01	0.20	0.00	0.40	0.44	1.3	0.00	8.2	1.0
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFSM	0.00	0.00	0.00	0.00	0.04	0.00	0.11	0.11	0.28	0.00	1.45	0.28
IN.	0.00	0.00	0.00	0.00	0.04	0.00	0.12	0.12	0.31	0.00	1.67	0.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

	1999	1999	1999	2001	2000	2001	2001	2000	2000	1999	2001	1998
MEAN	0.000	0.000	0.000	0.000	0.018	0.003	0.015	0.062	0.078	0.004	0.074	0.016
MAX	0.000	0.000	0.000	0.001	0.027	0.007	0.021	0.17	0.18	0.011	0.28	0.057
(WY)	1999	1999	1999	2001	2000	2001	2001	2000	2000	1999	2001	2001
MIN	0.000	0.000	0.000	0.000	0.007	0.000	0.011	0.000	0.000	0.000	0.001	0.000
(WY)	1999	1999	1999	1999	2001	2000	1999	1999	1999	1998	1998	1998

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1998 - 2001	
ANNUAL TOTAL	12.24		13.87			
ANNUAL MEAN	0.033		0.038		0.025	
HIGHEST ANNUAL MEAN					0.038	
LOWEST ANNUAL MEAN					0.004	
HIGHEST DAILY MEAN	3.2 May 18		(a)8.2 Aug 2		(a)8.2 Aug 2 2001	
LOWEST DAILY MEAN	0.00 Many days		0.00 Many days		0.00 Many days	
ANNUAL SEVEN-DAY MINIMUM	0.00 Many days		0.00 Many days		0.00 Many days	
MAXIMUM PEAK FLOW			64 Aug 2		64 Aug 2 2001	
MAXIMUM PEAK STAGE			2.69 Aug 2		2.69 Aug 2 2001	
ANNUAL RUNOFF (CFSM)	0.17		0.19		0.13	
ANNUAL RUNOFF (INCHES)	2.28		2.58		1.70	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

(a) Discharge estimated due to overtopping of H-flume
(e) Estimated

WISCONSIN RIVER BASIN

054064775 BLACK EARTH CREEK TRIBUTARY AT COUNTY TRUNK HIGHWAY KP AT CROSS PLAINS, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.74	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.22	0.06	0.31	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.04	0.05	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.0	0.0	0.0	0.0
13	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	---	0.0	0.0	---	0.0	---	0.0	---	0.0	0.0	---
TOTAL	0.07	0.12	0.03	0.0	0.65	0.27	0.19	0.76	0.86	0.0	0.0	0.0
MEAN	0.002	0.004	0.001	0.000	0.023	0.009	0.006	0.025	0.029	0.000	0.000	0.000
MAX	0.06	0.11	0.03	0.00	0.39	0.22	0.11	0.45	0.74	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFSM	0.01	0.02	0.00	0.00	0.12	0.04	0.03	0.12	0.14	0.00	0.00	0.00
IN.	0.01	0.02	0.01	0.00	0.12	0.05	0.04	0.14	0.16	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	1998	1999	2000	2001	2002
MEAN	0.001	0.001	0.000	0.000	0.019
MAX	0.002	0.004	0.001	0.001	0.027
(WY)	2002	2002	2002	2001	2002
MIN	0.000	0.000	0.000	0.000	0.007
(WY)	1999	1999	1999	1999	2001

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1998 - 2002

ANNUAL TOTAL	14.09	2.95		
ANNUAL MEAN	0.039	0.008		0.021
HIGHEST ANNUAL MEAN				0.039
LOWEST ANNUAL MEAN				0.004
HIGHEST DAILY MEAN	(a)8.2	Aug 2	0.74	Jun 4
LOWEST DAILY MEAN	0.00	Many days	0.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00	Many days	0.00	Oct 1
MAXIMUM PEAK FLOW				69
MAXIMUM PEAK STAGE				2.85
ANNUAL RUNOFF (CFSM)	0.19		0.040	0.10
ANNUAL RUNOFF (INCHES)	2.62		0.55	1.42
10 PERCENT EXCEEDS	0.00		0.00	0.00
50 PERCENT EXCEEDS	0.00		0.00	0.00
90 PERCENT EXCEEDS	0.00		0.00	0.00

(a) Discharge estimated due to overtopping of H-flume

054064775 BLACK EARTH CREEK TRIBUTARY AT COUNTY TRUNK HIGHWAY KP AT CROSS PLAINS, WI--Continued

PRECIPITATION QUANTITY

PERIOD OF RECORD.--July 1998 to current year.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established July 1998. Heating coils installed on rain gage Dec. 15, 2000, and removed Mar. 20, 2001.

EXTREMES FOR CURRENT PERIOD.--

2000 WATER YEAR: Maximum daily rainfall, 3.19 in., May 18.

2001 WATER YEAR: Maximum daily rainfall, 6.25 in., Aug. 2.

2002 WATER YEAR: Maximum daily rainfall, 1.33 in., June 4.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.14	0.0	0.0	0.01	0.0	0.0	0.0	0.02	2.11	0.0	0.17	0.0
2	0.24	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.94	0.0	0.0
3	0.25	0.0	0.32	0.0	0.01	0.0	0.0	0.0	0.10	0.0	0.0	0.32
4	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.72	0.0	0.0	0.0
5	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.14	0.01	1.84	0.0
6	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.03	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.01	0.0
8	0.08	0.0	0.0	0.0	0.0	0.14	0.09	0.20	0.0	0.0	0.0	0.0
9	0.01	0.0	0.17	0.03	0.0	0.15	0.0	0.13	0.0	0.45	0.0	0.0
10	0.0	0.73	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.72	0.01	0.03
11	0.0	0.0	0.0	0.0	0.0	0.01	0.02	0.15	0.0	0.01	0.0	1.08
12	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.07	0.43	0.0	0.13	0.0
13	0.06	0.01	0.01	0.0	0.0	0.04	0.0	0.0	0.86	0.0	0.11	0.0
14	0.0	0.0	0.0	0.0	0.08	0.06	0.0	0.0	0.33	0.0	0.0	0.24
15	0.0	0.0	0.03	0.02	0.09	0.15	0.0	0.0	0.0	0.0	0.0	0.0
16	0.31	0.0	0.0	0.0	0.0	0.0	0.02	0.03	0.14	0.0	0.06	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.01	1.90	0.0	0.0	0.92	0.0
18	0.0	0.0	0.0	0.0	0.0	0.01	0.0	3.19	0.02	e0.0	0.0	0.0
19	0.0	0.06	0.0	0.0	0.01	0.23	0.56	0.0	0.0	0.0	0.01	0.55
20	0.0	0.0	0.0	0.0	0.05	0.08	1.01	0.0	0.32	0.09	0.0	0.01
21	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.01	0.01	0.0	0.0
22	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.02	0.0	0.0	0.05	0.63
23	0.0	1.00	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.01	0.0
24	0.0	0.0	0.0	0.0	0.29	0.12	0.0	0.0	0.33	0.0	0.01	0.0
25	0.0	0.0	0.0	0.0	0.55	0.0	0.0	0.0	0.05	0.0	0.0	0.01
26	0.0	0.05	0.03	0.0	0.21	0.14	e0.0	0.14	0.11	0.05	0.40	0.0
27	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.36	0.0	0.0	0.01	0.0
28	0.0	0.0	0.0	0.01	0.0	0.0	0.07	0.79	0.28	0.29	0.0	0.0
29	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.06	0.03	0.0
30	0.0	0.0	0.0	0.0	---	0.0	0.0	0.79	0.01	0.10	0.0	0.0
31	0.0	---	0.0	0.0	---	0.0	---	1.99	---	0.01	0.0	---
TOTAL	1.12	1.85	0.68	0.24	1.35	1.20	2.33	9.78	5.96	2.74	3.77	2.87

e Estimated

WISCONSIN RIVER BASIN

054064775 BLACK EARTH CREEK TRIBUTARY AT COUNTY TRUNK HIGHWAY KP AT CROSS PLAINS, WI--Continued

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.18	0.54	0.01	3.16	0.01
2	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	6.52	0.0
3	0.20	0.0	0.01	0.0	0.07	0.0	0.0	0.21	0.0	0.0	0.01	0.0
4	0.0	0.0	0.01	0.0	0.04	0.0	0.0	0.28	0.0	0.0	0.0	0.0
5	0.18	0.0	0.0	0.0	0.0	0.0	0.39	0.08	0.67	0.0	0.0	0.0
6	0.0	0.81	0.0	0.0	0.0	0.0	e0.03	0.04	0.01	0.0	0.0	0.12
7	0.02	0.03	0.0	0.0	0.13	0.0	e0.0	0.45	0.08	0.0	0.0	0.67
8	0.0	0.03	0.0	0.0	0.36	0.0	e0.03	0.0	0.0	0.0	0.0	0.98
9	0.0	0.07	0.0	0.0	0.94	0.0	e0.70	0.0	0.14	0.0	0.01	0.65
10	0.0	0.0	0.0	0.0	0.0	0.11	0.09	0.89	0.12	0.0	0.01	0.01
11	0.0	0.0	0.0	0.0	0.0	0.0	0.76	0.03	e1.52	0.0	0.0	0.0
12	0.0	0.03	0.0	0.0	0.0	0.15	0.06	0.0	e0.81	0.0	0.04	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0
14	0.0	0.0	0.0	0.24	0.03	0.03	0.0	0.0	0.13	0.0	0.0	0.0
15	0.0	0.0	0.44	0.01	0.0	0.01	0.08	0.0	0.02	0.0	0.36	0.01
16	0.0	0.22	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0
17	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	e0.46	0.0	0.50
18	0.0	0.0	0.27	0.0	0.0	e0.0	0.0	0.0	0.0	0.81	0.0	0.02
19	0.0	0.01	0.04	0.0	0.0	e0.0	0.0	0.0	0.0	0.0	0.07	1.01
20	0.0	0.0	0.16	0.0	0.0	e0.0	0.49	0.04	0.0	0.0	0.0	0.25
21	0.0	0.0	0.03	0.0	0.0	0.0	0.42	1.70	0.0	0.0	0.04	0.01
22	0.0	0.0	0.0	0.0	0.02	0.0	0.01	0.07	0.0	0.01	0.20	0.10
23	0.29	0.01	0.12	0.0	0.0	0.0	0.01	0.38	0.0	0.01	0.01	1.56
24	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.02	0.0	0.12	0.12	0.0
25	0.0	0.0	0.02	0.0	0.07	0.0	0.13	0.03	0.0	0.03	0.81	0.0
26	0.0	0.0	0.0	0.04	0.03	0.0	0.0	0.0	0.0	0.0	0.01	0.0
27	0.01	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0
28	0.0	0.11	0.12	0.0	0.0	0.05	0.0	0.0	0.0	0.03	0.0	0.0
29	0.01	0.11	0.14	0.76	---	0.03	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	---	0.0	0.0	---	0.23	---	0.27	---	0.0	0.0	---
TOTAL	0.74	1.49	1.47	1.06	1.89	0.61	3.20	4.67	4.09	1.48	11.74	5.90

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.51	0.0	0.0	0.0	0.0
2	0.01	0.0	0.0	0.0	0.0	0.0	0.17	0.01	0.19	0.0	0.0	0.58
3	0.0	0.0	0.01	0.0	0.08	0.0	0.06	0.0	1.05	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	1.33	0.0	0.60	0.0
5	0.0	0.0	0.27	0.0	0.0	0.01	0.0	0.01	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.01	0.06	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.24	0.55	0.01	0.0	0.05	0.0	0.0
9	0.03	0.0	0.0	0.0	0.11	0.29	0.0	1.08	0.0	0.0	0.0	0.0
10	0.19	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.28	0.01	0.0	0.16
11	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.52	0.09	0.0	0.63	0.01
12	0.0	0.0	0.56	0.0	0.0	0.0	0.15	0.58	0.0	0.0	0.19	0.0
13	0.17	0.22	0.02	0.0	0.0	0.0	0.0	0.0	0.36	0.0	0.24	0.0
14	0.04	0.08	0.0	0.03	0.0	0.0	0.25	0.0	0.12	0.0	0.01	0.03
15	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.03	0.01	0.03	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0
17	0.0	0.0	0.01	0.0	0.0	0.02	0.0	0.0	0.01	0.0	0.17	0.0
18	0.0	0.18	0.0	0.0	0.20	0.01	0.64	0.0	0.0	0.0	0.0	0.0
19	0.0	0.07	0.0	0.0	0.62	0.19	0.0	0.0	0.09	0.0	0.03	0.46
20	0.0	0.0	0.0	0.05	0.72	0.0	0.03	0.0	0.0	0.37	0.0	0.19
21	0.0	0.0	0.0	0.03	0.0	0.0	0.24	e0.0	0.05	0.0	0.25	0.01
22	1.21	0.0	0.22	0.0	0.02	0.0	0.01	e0.0	0.0	0.85	0.32	0.0
23	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.25	0.97	0.0	0.0	0.0	0.0	0.37	0.0	0.0	0.0	0.0	0.0
25	0.0	0.01	0.0	0.0	0.03	0.0	0.0	0.69	0.0	0.0	0.0	e0.0
26	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.54	0.01	0.0	0.0
27	0.0	0.17	0.0	0.0	0.0	0.0	0.39	0.0	0.03	0.28	0.0	0.0
28	0.0	0.03	0.0	0.0	0.0	0.09	0.26	0.14	0.0	0.02	0.0	0.09
29	0.0	0.0	0.0	0.0	---	0.0	0.0	0.01	0.0	0.07	0.0	0.31
30	0.0	0.24	0.0	0.0	---	0.0	0.0	0.0	0.0	0.06	0.01	0.0
31	0.0	---	0.0	0.0	---	0.05	---	0.0	---	0.0	0.0	---
TOTAL	1.93	2.14	1.12	0.11	2.07	0.90	3.92	3.97	4.18	1.78	2.45	1.84

e Estimated

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI

LOCATION.--Lat 43°11'53", long 90°26'36", in SE ¼ NW ¼ sec.1, T.8 N., R.1 W., Grant County, Hydrologic Unit 07070005, on left bank at bridge on State Highway 80, 0.5 mi upstream from Eagle Mill Creek and 1.0 mi north of Muscoda.

DRAINAGE AREA.--10,400 mi².

PERIOD OF RECORD.--December 1902 to December 1903, gage height and discharge measurements only, October 1913 to current year. Monthly discharge for October and November 1913 published in WSP 1308. Gage-height records collected at same site November 1908 to December 1912 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 785: 1921(M). WSP 875: 1921. WSP 1308: 1915(M), 1917-18(M), 1920-21(M), 1924(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 666.77 ft above NGVD of 1929. Prior to Nov. 22, 1929, nonrecording gage on bridge 200 ft upstream at same datum. Nov. 22, 1929, to Mar. 15, 1930, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges and Oct. 25-27, Mar. 9, 10, Apr. 19 to May 28, June 28 to July 4, July 7 and 8, which are fair (see page 11). Flow regulated by 24 reservoirs and many powerplants upstream from station. In 1938 when the maximum of record occurred, there were 21 reservoirs upstream from station, the two large reservoirs, Petenwell and Castle Rock were not yet in existence. Usually flows less than 20 ft³/s were diverted out of the basin through Portage Canal to the Fox River throughout the year. Gage-height telemeter and data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5030	4970	9640	e4500	7760	9920	8800	23700	10300	19400	7400	6620
2	5630	6230	8620	e5700	6760	9240	9820	24500	10500	14200	6600	5930
3	5430	5480	9250	e5700	7080	e7500	9540	24600	11300	13100	6210	6790
4	5530	6360	7910	e6400	8020	e6300	9770	24300	12100	11200	5550	6820
5	5310	5610	9370	e7300	6660	e5700	10300	24800	12800	10500	6640	9460
6	5470	5590	9470	e7400	6720	e5300	9960	24500	15900	9640	6670	11500
7	4750	4990	9890	e7400	7230	e6500	9780	21300	17800	10200	6170	10000
8	5280	5080	10000	e7800	7680	7360	9970	16800	18400	9530	6890	9910
9	4110	4770	11300	e7900	7120	8200	11000	19900	19200	8030	5810	8630
10	4430	5140	11900	e8600	7370	11300	10500	22700	18500	8580	4990	7360
11	4560	5680	12700	e6500	7820	9040	10700	23500	18400	8930	5090	8110
12	4510	5530	11200	e5600	7840	8940	10900	24300	15700	8040	6000	7250
13	5430	5560	9110	e7400	7670	11800	12200	24100	16700	7400	4970	6480
14	5350	5050	8420	e7400	7790	12100	12400	22900	19700	7350	6360	6400
15	5750	4900	8470	e6000	5530	11500	19300	21500	21700	6280	10300	5900
16	5920	5110	8220	e7000	5790	10700	25500	19400	18200	6240	11700	5720
17	4970	5850	7320	e8200	5830	11000	33000	18000	16000	6160	8520	5650
18	5340	5550	7700	e8300	5700	11000	40100	17300	14400	6130	6640	6660
19	5340	5540	7620	e7400	6630	11600	40800	14200	13200	5940	7020	5430
20	5390	5860	7020	e5000	7200	11700	39300	11600	12900	6030	7450	5940
21	5710	5690	7650	e4500	8440	12000	34900	11000	10400	6160	7300	6240
22	5230	5660	7400	e6500	9400	11200	32200	10600	9010	6550	6760	7140
23	6030	5790	e6800	e6200	10800	11600	31100	10300	9480	7260	7610	6700
24	5950	5480	e5900	e8700	10700	11700	28400	9480	14200	7300	10400	7620
25	5640	6730	e4900	e8400	10500	10300	21300	9150	20000	7150	13400	7650
26	4700	5400	e4900	e8200	8910	8720	18300	9840	25500	6730	15200	6420
27	5940	7860	e3000	e8000	10300	9530	17000	10800	30100	5610	10700	6810
28	5130	8930	e3400	7690	10600	7670	17800	7820	26000	6790	8800	6320
29	4830	10600	e4900	6720	---	7170	18600	8030	24100	7450	6570	6990
30	4810	10200	e3800	7450	---	6920	22100	10100	23600	e5190	6670	7700
31	4800	---	e4000	7690	---	7020	---	9560	---	6530	7050	---
TOTAL	162300	181190	241780	217550	219850	290530	585340	530580	506090	255600	237440	216150
MEAN	5235	6040	7799	7018	7852	9372	19510	17120	16870	8245	7659	7205
MAX	6030	10600	12700	8700	10800	12100	40800	24800	30100	19400	15200	11500
MIN	4110	4770	3000	4500	5530	5300	8800	7820	9010	5190	4970	5430

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)
1914	7322	25460	1987	2638	1977	7702	17130	1986	2662	1977	6533	13100	1966	2616	1977	6097	11400	1973	3209	1924
1915	6097	11400	1973	3209	1924	6654	12020	1966	3113	1924	10720	30400	1973	4788	1934	16840	37650	1922	4788	1964
1916	16840	37650	1922	4788	1964	11920	32270	1960	4621	1977	10670	28840	1993	2754	1988	7378	17780	1978	2754	1988
1917	7378	17780	1978	2754	1988	5980	11610	1924	2567	1988	7203	31280	1938	2651	1976	16840	32270	1960	4621	1977
1918	16840	32270	1960	4621	1977	10670	28840	1993	2754	1988	7378	17780	1978	2754	1988	5980	11610	1924	2567	1988
1919	7378	17780	1978	2754	1988	5980	11610	1924	2567	1988	7203	31280	1938	2651	1976	16840	32270	1960	4621	1977
1920	16840	32270	1960	4621	1977	10670	28840	1993	2754	1988	7378	17780	1978	2754	1988	5980	11610	1924	2567	1988
1921	7378	17780	1978	2754	1988	5980	11610	1924	2567	1988	7203	31280	1938	2651	1976	16840	32270	1960	4621	1977

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1914 - 2002
ANNUAL TOTAL	3291990	3644400	
ANNUAL MEAN	9019	9985	8747
HIGHEST ANNUAL MEAN			16030
LOWEST ANNUAL MEAN			4145
HIGHEST DAILY MEAN	44100	Apr 16	79500
LOWEST DAILY MEAN	(a)3000	Dec 27	1460
ANNUAL SEVEN-DAY MINIMUM	(a)4130	Dec 25	1900
MAXIMUM PEAK FLOW			80800
MAXIMUM PEAK STAGE		7.92	11.48
10 PERCENT EXCEEDS	16900		15300
50 PERCENT EXCEEDS	6600		6930
90 PERCENT EXCEEDS	4840		3970

(a) Ice affected

(e) Estimated due to ice effect or missing record

054070396 FENNIMORE FORK AT HOMER ROAD NEAR CASTLE ROCK, WI

LOCATION.--Lat 42°02'16", long 90°33'40", in NE ¼ SW ¼ sec.36, T.7 N., R.2 W., Grant County, Hydrologic Unit 07070005, on right bank just downstream from bridge on Homer Road, 1.7 mi southwest of Castle Rock, and 6.2 mi northeast of Fennimore.

DRAINAGE AREA.--21.7 mi².

PERIOD OF RECORD.--July 2001 to September 2002.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 820 ft, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	8.7	8.4	4.5
2	---	---	---	---	---	---	---	---	---	8.5	21	4.5
3	---	---	---	---	---	---	---	---	---	8.6	7.2	4.3
4	---	---	---	---	---	---	---	---	---	8.7	6.3	4.4
5	---	---	---	---	---	---	---	---	---	8.6	5.9	4.4
6	---	---	---	---	---	---	---	---	---	8.9	5.8	4.8
7	---	---	---	---	---	---	---	---	---	9.2	5.7	9.8
8	---	---	---	---	---	---	---	---	---	9.2	5.4	11
9	---	---	---	---	---	---	---	---	---	9.3	5.4	6.4
10	---	---	---	---	---	---	---	---	---	8.9	5.2	5.9
11	---	---	---	---	---	---	---	---	---	9.0	5.2	5.1
12	---	---	---	---	---	---	---	---	---	9.0	5.2	4.8
13	---	---	---	---	---	---	---	---	---	9.1	5.1	4.7
14	---	---	---	---	---	---	---	---	---	9.3	5.0	4.7
15	---	---	---	---	---	---	---	---	---	9.6	5.5	4.7
16	---	---	---	---	---	---	---	---	---	9.9	7.2	4.7
17	---	---	---	---	---	---	---	---	---	10	5.4	6.4
18	---	---	---	---	---	---	---	---	---	19	5.5	5.3
19	---	---	---	---	---	---	---	---	---	10	5.7	11
20	---	---	---	---	---	---	---	---	---	10	5.1	6.6
21	---	---	---	---	---	---	---	---	---	18	5.1	8.8
22	---	---	---	---	---	---	---	---	---	10	5.5	5.8
23	---	---	---	---	---	---	---	---	---	9.6	5.4	22
24	---	---	---	---	---	---	---	---	---	9.3	5.0	9.9
25	---	---	---	---	---	---	---	---	---	9.8	5.5	7.6
26	---	---	---	---	---	---	---	---	---	8.8	5.4	6.8
27	---	---	---	---	---	---	---	---	---	8.4	5.2	6.2
28	---	---	---	---	---	---	---	---	---	8.3	4.9	5.8
29	---	---	---	---	---	---	---	---	---	7.7	4.7	5.5
30	---	---	---	---	---	---	---	---	---	7.1	4.7	5.5
31	---	---	---	---	---	---	---	---	---	6.5	4.6	---
TOTAL	---	---	---	---	---	---	---	---	---	297.0	187.2	201.9
MEAN	---	---	---	---	---	---	---	---	---	9.581	6.039	6.730
MAX	---	---	---	---	---	---	---	---	---	19	21	22
MIN	---	---	---	---	---	---	---	---	---	6.5	4.6	4.3
CFSM	---	---	---	---	---	---	---	---	---	0.44	0.28	0.31
IN.	---	---	---	---	---	---	---	---	---	0.51	0.32	0.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2001, BY WATER YEAR (WY)

	2001	2001	2001
MEAN	---	---	---
MAX	---	---	---
(WY)	---	---	---
MIN	---	---	---
(WY)	---	---	---

SUMMARY STATISTICS

FOR 2001 WATER YEAR
(JULY-SEPTEMBER)

HIGHEST DAILY MEAN	22	Sep 23
LOWEST DAILY MEAN	4.3	Sep 3
ANNUAL SEVEN-DAY MINIMUM	4.5	Aug 30
MAXIMUM PEAK FLOW	64	Jul 21
MAXIMUM PEAK STAGE	6.57	Jul 21
INSTANTANEOUS LOW FLOW	4.0	Sep 4
10 PERCENT EXCEEDS	10	
50 PERCENT EXCEEDS	6.4	
90 PERCENT EXCEEDS	4.7	

WISCONSIN RIVER BASIN

054070396 FENNIMORE FORK AT HOMER ROAD NEAR CASTLE ROCK, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	4.6	4.6	e1.6	2.5	e2.3	3.2	7.2	5.1	8.1	6.0	4.2
2	5.3	4.4	4.4	e1.6	e1.7	e2.1	3.5	9.0	5.3	8.0	5.7	8.4
3	5.1	4.3	4.4	1.6	e1.8	e2.0	3.2	6.9	21	8.3	5.7	4.9
4	5.2	4.3	4.3	1.7	e1.7	e1.9	3.1	6.5	70	8.2	12	4.5
5	5.0	4.3	5.0	2.0	e1.8	e1.9	3.1	6.3	29	8.1	6.2	4.3
6	4.9	4.3	5.4	2.2	2.5	e2.1	3.0	6.3	18	42	5.4	4.3
7	4.8	4.3	4.6	2.3	2.8	2.9	3.5	5.7	14	10	5.1	4.2
8	4.8	4.1	4.4	2.4	2.9	5.8	4.9	5.6	12	8.7	4.9	4.0
9	4.9	4.1	4.3	2.7	3.6	e30	5.1	34	10	8.2	4.9	4.0
10	6.1	4.2	4.3	2.8	17	8.0	4.0	11	9.7	7.8	4.7	4.3
11	5.2	4.0	4.1	2.8	4.3	7.9	4.0	11	16	7.8	4.7	4.3
12	4.9	4.1	4.3	2.8	3.9	7.1	4.5	10	10	7.6	4.8	4.0
13	6.3	4.8	5.3	2.8	3.0	6.1	4.0	8.6	30	7.5	6.0	4.0
14	6.0	4.3	4.3	2.9	3.5	5.3	3.8	8.2	16	7.4	5.1	4.2
15	5.1	4.0	4.1	2.7	4.0	4.9	3.7	7.6	12	7.4	4.9	4.2
16	4.9	3.8	4.5	2.6	3.5	4.4	3.4	7.2	10	7.3	4.8	4.0
17	4.8	3.8	4.2	e2.2	3.0	4.3	3.2	6.6	9.7	7.5	5.0	3.9
18	4.8	3.8	4.0	e1.9	3.1	4.3	6.6	6.4	8.9	7.5	4.8	4.0
19	4.7	4.8	3.9	e2.0	15	4.3	17	6.0	9.1	7.9	4.8	4.8
20	4.6	4.0	3.3	2.7	7.3	4.9	8.5	5.8	8.3	7.7	4.6	6.0
21	4.6	4.0	3.6	2.7	5.0	4.1	8.0	5.7	8.1	7.8	5.4	4.8
22	5.5	4.0	5.1	2.7	4.0	3.6	7.3	5.5	8.1	15	7.9	4.1
23	9.5	3.8	4.5	2.8	4.3	4.1	6.3	5.5	7.8	7.6	5.6	3.9
24	6.1	6.8	3.6	2.6	4.2	4.0	6.0	5.3	7.8	7.2	5.2	3.9
25	5.3	5.6	2.7	2.7	3.9	3.5	5.5	6.8	7.6	7.3	4.9	3.8
26	5.1	4.7	e2.3	2.7	3.1	3.5	5.2	5.7	9.6	7.9	4.7	3.7
27	4.8	5.2	e2.2	2.8	2.8	3.4	5.6	5.3	8.3	8.1	4.5	3.7
28	4.8	4.6	e2.0	2.6	e2.5	3.8	11	5.1	8.2	9.4	4.5	3.7
29	4.6	4.6	e2.0	2.5	---	3.5	7.8	5.8	8.2	7.9	4.5	4.2
30	4.6	4.9	e1.9	2.4	---	3.3	7.4	5.2	8.0	6.9	4.3	3.8
31	4.7	---	e1.7	2.5	---	3.2	---	5.1	---	6.1	4.2	---
TOTAL	162.5	132.5	119.3	75.3	118.7	152.5	165.4	236.9	405.8	284.2	165.8	130.1
MEAN	5.242	4.417	3.848	2.429	4.239	4.919	5.513	7.642	13.53	9.168	5.348	4.337
MAX	9.5	6.8	5.4	2.9	17	30	17	34	70	42	12	8.4
MIN	4.6	3.8	1.7	1.6	1.7	1.9	3.0	5.1	5.1	6.1	4.2	3.7
CFSM	0.24	0.20	0.18	0.11	0.20	0.23	0.25	0.35	0.62	0.42	0.25	0.20
IN.	0.28	0.23	0.20	0.13	0.20	0.26	0.28	0.41	0.70	0.49	0.28	0.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
MEAN	5.242	4.417	3.848	2.429	4.239	4.919	5.513	7.642	13.53	9.374	5.694	5.533
MAX	5.24	4.42	3.85	2.43	4.24	4.92	5.51	7.64	13.5	9.58	6.04	6.73
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001	2001	2001
MIN	5.24	4.42	3.85	2.43	4.24	4.92	5.51	7.64	13.5	9.17	5.35	4.34
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 2001 - 2002

ANNUAL TOTAL	2149.0	
ANNUAL MEAN	5.888	5.888
HIGHEST ANNUAL MEAN		5.89
LOWEST ANNUAL MEAN		5.89
HIGHEST DAILY MEAN	70	70
LOWEST DAILY MEAN	(a)1.6	(a)1.6
ANNUAL SEVEN-DAY MINIMUM	(a)1.7	(a)1.7
MAXIMUM PEAK FLOW	202	202
MAXIMUM PEAK STAGE	7.85	7.85
INSTANTANEOUS LOW FLOW	0.67	0.67
ANNUAL RUNOFF (CFSM)	0.27	0.27
ANNUAL RUNOFF (INCHES)	3.69	3.69
10 PERCENT EXCEEDS	8.5	9.6
50 PERCENT EXCEEDS	4.7	5.1
90 PERCENT EXCEEDS	2.7	2.8

(a) Ice affected

(e) Estimated due to ice effect or missing record

05407470 KICKAPOO RIVER AT HWY 33 AT ONTARIO, WI

LOCATION.--Lat 43°43'18", long 90°35'15", IN SW ¼ NW ¼ sec.2, T.14 N., R.2 W., Vernon County, Hydrologic Unit 07070006, on right bank 85 ft downstream from Highway 33 bridge at Ontario.

DRAINAGE AREA.--117 mi².

PERIOD OF RECORD.--October 2001 to September 2002.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 850 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges and mid-June to Sept. 30 during bridge construction, which are fair (see page 11). Recorded gage heights are available from June 15, 2001 to Sept. 30, 2001. Sediment loads are available from November 1972 to Sept. 1973. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	55	72	e52	e50	61	72	93	53	74	54	44
2	55	57	64	e52	e50	53	75	118	54	73	51	79
3	55	55	62	e53	e49	e50	74	89	209	72	49	53
4	55	54	62	e52	e48	e46	73	84	109	70	72	42
5	54	54	66	e53	e49	e46	75	80	91	75	54	47
6	53	55	69	e53	e50	e48	80	79	69	76	51	45
7	54	55	62	e56	e51	51	87	75	62	71	49	45
8	54	55	60	57	53	63	111	74	62	70	47	43
9	56	54	58	60	56	374	108	75	60	70	46	44
10	70	54	58	57	82	120	90	70	59	68	45	46
11	66	53	57	55	59	104	90	72	67	67	44	46
12	61	53	58	55	56	120	142	84	63	66	45	45
13	62	56	60	55	53	128	102	75	70	64	65	45
14	70	57	58	55	57	106	95	71	91	62	52	46
15	62	57	57	50	66	92	91	70	74	60	47	47
16	62	54	58	48	63	90	87	66	66	59	45	46
17	59	52	58	e45	58	88	88	63	66	58	52	45
18	59	53	57	e45	57	88	95	62	65	57	49	46
19	59	57	56	e46	249	93	90	62	65	57	50	71
20	59	53	53	e50	189	96	80	62	66	60	46	104
21	60	53	56	54	91	93	83	60	392	58	92	68
22	57	53	58	54	69	81	96	59	138	86	114	56
23	57	53	64	55	70	79	92	61	96	49	70	53
24	59	73	57	53	79	77	85	59	86	45	74	51
25	59	81	e54	58	77	71	83	61	81	44	56	50
26	57	63	e52	57	64	70	76	60	283	43	51	50
27	54	81	e52	57	65	70	82	58	99	42	49	51
28	54	70	e52	57	64	75	232	57	86	41	48	50
29	53	65	e50	54	---	77	120	57	80	199	48	85
30	53	66	e50	52	---	75	100	55	77	63	46	59
31	54	---	e50	51	---	73	---	54	---	57	45	---
TOTAL	1797	1751	1800	1651	2024	2758	2854	2165	2939	2056	1706	1602
MEAN	57.97	58.37	58.06	53.26	72.29	88.97	95.13	69.84	97.97	66.32	55.03	53.40
MAX	70	81	72	60	249	374	232	118	392	199	114	104
MIN	53	52	50	45	48	46	72	54	53	41	44	42
CFSM	0.50	0.50	0.50	0.46	0.62	0.76	0.81	0.60	0.84	0.57	0.47	0.46
IN.	0.57	0.56	0.57	0.52	0.64	0.88	0.91	0.69	0.93	0.65	0.54	0.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

MEAN	57.97	58.37	58.06	53.26	72.29	88.97	95.13	69.84	97.97	66.32	55.03	53.40
MAX	58.0	58.4	58.1	53.3	72.3	89.0	95.1	69.8	98.0	66.3	55.0	53.4
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	58.0	58.4	58.1	53.3	72.3	89.0	95.1	69.8	98.0	66.3	55.0	53.4
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

ANNUAL TOTAL	25103	
ANNUAL MEAN	68.78	
HIGHEST DAILY MEAN	392	Jun 21
LOWEST DAILY MEAN	41	Jul 28
ANNUAL SEVEN-DAY MINIMUM	(a)45	Sep 4
MAXIMUM PEAK FLOW	826	Jun 21
MAXIMUM PEAK STAGE	12.36	Jun 21
INSTANTANEOUS LOW FLOW	(a)28	Sep 4
ANNUAL RUNOFF (CFSM)	0.59	
ANNUAL RUNOFF (INCHES)	7.98	
10 PERCENT EXCEEDS	91	
50 PERCENT EXCEEDS	59	
90 PERCENT EXCEEDS	48	

(a) Result of bridge construction

(e) Estimated due to ice effect or missing record

WISCONSIN RIVER BASIN

05408000 KICKAPOO RIVER AT LA FARGE, WI

LOCATION.--Lat 43°34'27", long 90°38'35", on east-west quarter section line in W 1/2 sec.29, T.13 N., R.2 W., Vernon County, Hydrologic Unit 07070006, on left bank 10 ft upstream from bridge on State Highway 82, in La Farge, 0.3 mi upstream from Otter Creek, and 1.3 mi downstream from powerplant.

DRAINAGE AREA.--266 mi².

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1388: 1951(M), 1954(M). WSP 1438: 1944-45(M), 1946, 1948, 1950(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 781.54 ft above NGVD of 1929. Prior to Dec. 4, 1939, nonrecording gage on highway bridge at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	147	189	e130	e120	e150	157	257	148	161	152	129
2	157	146	176	e130	e120	e150	164	305	147	151	143	271
3	156	139	166	e130	e130	e140	163	265	329	144	134	213
4	155	138	161	e130	e130	e140	159	231	432	143	180	153
5	153	137	168	e130	e140	e150	157	219	292	160	179	144
6	151	138	191	e130	e150	e160	165	213	212	180	148	140
7	150	139	170	e130	e150	e170	171	204	182	164	137	138
8	151	136	162	e130	e140	e190	208	198	170	146	133	133
9	151	135	156	e140	e140	e500	258	209	163	e144	131	131
10	e179	136	154	e140	e170	e300	202	193	156	e142	130	132
11	182	135	151	e140	e160	260	192	188	177	139	131	142
12	158	133	149	e140	e130	252	350	214	176	135	128	134
13	156	142	157	e140	e120	281	258	206	160	133	165	130
14	178	148	153	e140	e130	249	216	195	212	131	177	132
15	166	143	147	e140	e150	207	211	184	185	128	139	135
16	159	138	148	e140	e140	195	190	179	165	128	132	129
17	155	134	150	e140	e130	186	181	171	158	128	181	127
18	152	135	147	e130	e130	189	229	167	153	127	162	127
19	152	148	145	e130	e300	203	277	165	148	129	160	165
20	151	144	139	e130	e400	212	197	165	148	134	141	221
21	151	140	143	e130	e260	223	188	164	266	163	148	233
22	148	141	e140	e140	e180	175	228	161	559	241	318	161
23	151	141	e140	e150	e170	186	211	161	230	184	200	145
24	154	169	e140	e140	e180	177	195	161	187	140	201	140
25	157	254	e140	e140	e190	161	195	162	168	136	170	136
26	149	192	e140	e130	e160	161	178	175	389	137	151	135
27	143	201	e140	e130	e150	159	185	164	328	134	143	136
28	141	206	e140	e130	e150	166	527	157	201	138	137	134
29	141	176	e140	e130	---	179	390	163	179	336	135	224
30	140	172	e140	e120	---	170	285	157	169	264	133	193
31	145	---	e130	e120	---	163	---	156	---	163	130	---
TOTAL	4790	4583	4712	4150	4620	6204	6687	5909	6589	4883	4849	4663
MEAN	154.5	152.8	152.0	133.9	165.0	200.1	222.9	190.6	219.6	157.5	156.4	155.4
MAX	182	254	191	150	400	500	527	305	559	336	318	271
MIN	140	133	130	120	120	140	157	156	147	127	128	127
CFSM	0.58	0.57	0.57	0.50	0.62	0.75	0.84	0.72	0.83	0.59	0.59	0.58
IN.	0.67	0.64	0.66	0.58	0.65	0.87	0.94	0.83	0.92	0.68	0.68	0.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	145.3	153.5	132.7	127.5	159.7	298.5	275.4	196.3	197.6	164.0	144.4	160.1																																																				
MAX	317	337	336	421	499	761	723	580	445	838	446	539																																																				
(WY)	1960	1983	1985	1946	1966	1961	1965	1973	1947	1978	1980	1965																																																				
MIN	73.4	78.5	62.0	61.3	62.2	114	126	80.4	80.9	77.8	60.4	72.7																																																				
(WY)	1959	1940	1959	1959	1959	1957	1942	1958	1958	1958	1958	1940																																																				

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL TOTAL	74567		62639			
ANNUAL MEAN	204.3		171.6		179.5	
HIGHEST ANNUAL MEAN					282	
LOWEST ANNUAL MEAN					97.1	
HIGHEST DAILY MEAN	1660	Apr 12	559	Jun 22	7730	Feb 9 1966
LOWEST DAILY MEAN	(a)110	Jan 20-22	(a)120	(b)Jan 30	36	Nov 3 1939
ANNUAL SEVEN-DAY MINIMUM	(a)116	Jan 16	(a)124	Jan 27	(a)49	Jan 3 1968
MAXIMUM PEAK FLOW			(c)887	Jun 22	14300	Jul 1 1978
MAXIMUM PEAK STAGE			(d)7.38	Mar 9	14.92	Jul 1 1978
ANNUAL RUNOFF (CFSM)	0.77		0.65		0.67	
ANNUAL RUNOFF (INCHES)	10.43		8.76		9.17	
10 PERCENT EXCEEDS	315		228		261	
50 PERCENT EXCEEDS	153		154		135	
90 PERCENT EXCEEDS	120		130		88	

- (a) Ice affected
- (b) Also occurred Jan. 31 to Feb. 2
- (c) Gage height, 6.61 ft
- (d) Backwater from ice
- (e) Estimated due to ice effect or missing record

05410490 KICKAPOO RIVER AT STEUBEN, WI

LOCATION.--Lat 43°10'58", long 90°51'30", in NE ¼ SW ¼ sec.9, T.8 N., R.4 W., Crawford County, Hydrologic Unit 07070006, on right bank at upstream corner of town road bridge at Steuben and 18.6 mi upstream from mouth.

DRAINAGE AREA.--687 mi².

PERIOD OF RECORD.--May 1933 to current year. Prior to October 1982, all records published under station number 05410500.

REVISED RECORDS.--WSP 855: Drainage area. WSP 1438: 1933-38. WDR WI-79-1: 1978(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 657.00 ft above NGVD of 1929. May 1933 to Oct. 19, 1938, nonrecording gage at same site at datum 1.7 ft higher. Oct. 20, 1938 to September 1982, recording gage at site 1.2 mi downstream at datum 0.36 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Data-collection platform and gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	570	519	569	e470	477	e510	531	785	484	499	535	446
2	564	522	571	e460	461	e510	527	736	478	482	478	451
3	557	516	571	e460	e430	e500	527	731	573	468	457	500
4	554	504	553	e460	e430	e480	528	725	796	458	461	609
5	551	494	551	e470	e430	e480	519	667	968	450	492	502
6	541	492	561	e470	e450	e500	509	642	844	457	523	463
7	536	493	576	e460	e470	e530	512	625	699	550	478	453
8	532	493	570	e470	e480	557	534	620	605	526	452	448
9	533	489	545	e480	486	618	574	1150	565	485	440	443
10	551	487	535	e490	533	891	631	824	546	466	433	439
11	583	484	529	e500	607	971	612	704	590	458	429	437
12	594	483	526	e510	600	737	621	688	589	450	427	437
13	582	492	531	515	521	690	711	683	586	443	459	437
14	572	501	534	509	495	681	738	668	564	437	516	433
15	579	506	533	495	487	678	658	638	582	433	526	435
16	578	501	526	489	504	638	633	601	586	429	477	434
17	557	491	525	485	517	605	612	569	541	425	469	433
18	546	484	524	e450	505	592	613	552	518	422	512	430
19	541	489	521	e450	534	590	706	535	507	424	536	439
20	538	495	514	e450	684	601	779	524	497	424	483	474
21	535	501	506	e450	890	616	699	517	488	424	486	545
22	533	494	497	e470	790	622	657	509	508	513	552	569
23	538	493	526	e500	649	594	664	507	760	558	649	514
24	540	511	549	500	599	570	659	503	667	551	665	469
25	544	565	e520	484	605	562	633	503	541	468	557	455
26	537	626	e500	473	609	546	611	508	534	446	543	451
27	526	633	e490	478	590	530	599	510	568	447	500	450
28	513	597	e490	484	549	530	690	502	745	455	478	449
29	508	607	e480	485	---	534	874	495	582	469	466	453
30	506	586	e480	483	---	544	945	493	523	580	458	467
31	512	---	e470	473	---	541	---	493	---	726	452	---
TOTAL	16951	15548	16373	14823	15382	18548	19106	19207	18034	14823	15389	13965
MEAN	546.8	518.3	528.2	478.2	549.4	598.3	636.9	619.6	601.1	478.2	496.4	465.5
MAX	594	633	576	515	890	971	945	1150	968	726	665	609
MIN	506	483	470	450	430	480	509	493	478	422	427	430
CFSM	0.80	0.75	0.77	0.70	0.80	0.87	0.93	0.90	0.88	0.70	0.72	0.68
IN.	0.92	0.84	0.89	0.80	0.83	1.00	1.03	1.04	0.98	0.80	0.83	0.76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2002, BY WATER YEAR (WY)

	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	421.0	437.8	384.4	363.3	427.8	766.8	705.2	532.6	525.7	491.9	430.2	454.7																																																										
MAX	798	858	781	846	1276	1856	1748	1415	1480	1901	1180	1331																																																										
(WY)	1973	1983	1985	1946	1966	1946	1959	1973	2000	1978	1935	1938																																																										
MIN	206	222	172	172	184	252	351	228	223	189	188	199																																																										
(WY)	1959	1938	1959	1959	1959	1934	1942	1934	1934	1936	1936	1937																																																										

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1933 - 2002

ANNUAL TOTAL	222968	198149	
ANNUAL MEAN	610.9	542.9	496.0
HIGHEST ANNUAL MEAN			792
LOWEST ANNUAL MEAN			273
HIGHEST DAILY MEAN	2100	Apr 15	1150
LOWEST DAILY MEAN	(a)360	Jan 26,27	422
ANNUAL SEVEN-DAY MINIMUM	(a)367	Jan 23	426
MAXIMUM PEAK FLOW			1310
MAXIMUM PEAK STAGE			10.84
INSTANTANEOUS LOW FLOW			(c)14.81
ANNUAL RUNOFF (CFSM)	0.89	0.79	0.72
ANNUAL RUNOFF (INCHES)	12.07	10.73	9.81
10 PERCENT EXCEEDS	838	666	749
50 PERCENT EXCEEDS	538	520	410
90 PERCENT EXCEEDS	410	450	261

- (a) Ice affected
- (b) Also occurred Jan. 4-9, Feb. 5-7, 1959, ice affected
- (c) Site and datum then in use
- (e) Estimated due to ice effect or missing record

The 24 reservoirs listed below are used to stabilize the flow of the Wisconsin and Tomahawk Rivers for power generation and are also used for recreational purposes. The first 21 reservoirs are owned and operated by the Wisconsin Valley Improvement Co., which furnishes the gage heights and capacity tables. Revised capacity tables for all 21 reservoirs were received from the Company in April 1957 and were used to compute month-end usable contents beginning Sept. 30, 1955. Another revised capacity table for Burnt Rollways Reservoir was used to compute month-end usable contents beginning Sept. 30, 1964. Lake Dubay is owned by the Consolidated Water Power Co. Petenwell and Castle Rock are owned and operated by the Wisconsin River Power Co., which furnished the gage heights and capacity tables for those two reservoirs. Month-end contents are computed by the U.S. Geological Survey. The usable capacity of these reservoirs is usually less in summer than in winter because the allowable summer drawdown is limited by the Department of Natural Resources in the interest of riparian property owners. There are occasionally formal or informal changes in capacity and in minimum drawdown levels. Usable capacity figures listed below are for winter regulation.

- 05390100 Lac Vieux Desert on Wisconsin River, lat 46°07'18", long 89°09'07", in SE 1/4 NW 1/4 sec.17, T.42 N., R.11 E., Vilas County, 4.8 mi northwest of Phelps, used as a reservoir since 1908, has a usable capacity of 652,000,000 ft³. Drainage area, 34.4 mi².
- 05390150 Twin Lakes on Twin River, lat 46°01'20", long 89°10'05", in SW 1/4 NE 1/4 sec.19, T.41 N., R.11 E., Vilas County, 5.0 mi southwest of Phelps, used as a reservoir since 1908, has a usable capacity of 313,000,000 ft³. Drainage area, 26 mi².
- 05390200 Buckatabon Lakes on Buckatabon Creek, lat 46°01'18", long 89°18'40", in SE 1/4 NE 1/4 sec.24, T.41 N., R.9 E., Vilas County, 3.3 mi southwest of Conover, used as a reservoir since 1908, has a usable capacity of 130,000,000 ft³. Drainage area, 16.9 mi².
- 05390250 Sevenmile Lake on Sevenmile Creek, lat 45°52'30", long 89°04'07", in SE 1/4 NE 1/4 sec.11, T.39 N., R.11 E., Oneida County, 9.1 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 93,000,000 ft³. Drainage area, 12.1 mi².
- 05390300 Lower Ninemile Lake on Ninemile Creek, lat 45°53'37", long 89°07'15", in NE 1/4 NW 1/4 sec.4, T.39 N., R.11 E., Oneida County, 6.6 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 121,000,000 ft³. Drainage area, 28.8 mi².
- 05390350 Burnt Rollways Reservoir on Eagle River, lat 45°53'40", long 89°08'28", in NE 1/4 NW 1/4 sec.5, T.39 N., R.11 E., Oneida County, 5.3 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 779,000,000 ft³. This reservoir includes 18 lakes controlled by the same dam. Drainage area, 142 mi².
- 05390400 Long Lake on Deerskin River, lat 46°02'37", long 89°02'44", in NW 1/4 SE 1/4 sec.7, T.41 N., R.12 E., Vilas County, 2.5 mi southeast of Phelps, used as a reservoir since 1908, has a usable capacity of 400,000,000 ft³. Drainage area, 22.9 mi².
- 05390600 Deerskin Lake on Little Deerskin River, lat 45°59'07", long 89°09'40", in SE 1/4 sec.31, T.41 N., R.11 E., Vilas County, 6.3 mi northeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 22,000,000 ft³. Drainage area, 2.47 mi².
- 05390650 Sugar Camp Reservoir on Sugar Camp Creek, lat 45°52'19", long 89°23'40", in NE 1/4 sec.17, T.39 N., R.9 E., Oneida County, 7.6 mi southwest of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 471,000,000 ft³. Drainage area, 48.4 mi².
- 05390700 Little St. Germain Lake on Little St. Germain Creek, lat 45°53'55", long 89°27'10", in SE 1/4 sec.35, T.40 N., R.8 E., Vilas County, 9.6 mi west of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 79,000,000 ft³. Drainage area, 19 mi².
- 05390750 Big St. Germain Lake on St. Germain River, lat 45°55'06", long 89°31'55", in SE 1/4 sec.30, T.40 N., R.8 E., Vilas County, 5.0 mi south of Sayner, used as a reservoir since 1908, has a usable capacity of 202,000,000 ft³. Drainage area, 73.1 mi².
- 05390800 Pickerel Lake on St. Germain River, lat 45°52'22", long 89°31'47", in NE 1/4 sec.18, T.39 N., R.8 E., Oneida County, 5.0 mi northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 338,000,000 ft³. Drainage area, 86.2 mi².
- 05390900 Rainbow Lake on Wisconsin River, lat 45°50'02", long 89°32'42", in SW 1/4 sec.30, T.39 N., R.8 E., Oneida County, 800 ft upstream from U.S. Geological Survey river gaging station, 2.7 mi northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 2,181,000,000 ft³. Drainage area, 744 mi².
- 05391100 South Pelican Lake on Pelican River, lat 45°31'37", long 89°12'24", in S 1/2 sec.11, T.35 N., R.10 E., Oneida County, 2.8 mi northwest of town of Pelican Lake, used as a reservoir since 1909, has a usable capacity of 305,000,000 ft³. Drainage area, 19.8 mi².
- 05391300 North Pelican Lake (includes Moen Lakes) on North Branch Pelican River, lat 45°38'05", long 89°14'38", in SE 1/4 sec.4, T.36 N., R.10 E., Oneida County, 0.2 mi below Twin Lakes Creek and 8.0 mi east of Rhinelander city limits, used as a reservoir since 1908, has a usable capacity of 218,000,000 ft³. Drainage area, 95 mi².
- 05392100 Minocqua Lake on Tomahawk River, lat 45°52'35", long 89°43'38", on line between secs.10 and 15, T.39 N., R.6 E., Oneida County, 1.0 mi west of Minocqua, used as a reservoir since 1910, has a usable capacity of 628,000,000 ft³. Drainage area, 72.5 mi².
- 05392200 Squirrel Lake on Squirrel River, lat 45°50'37", long 89°54'13", in NE 1/4 sec.30, T.39 N., R.5 E., Oneida County, 9.4 mi west of Minocqua, used as a reservoir since 1908, has a usable capacity of 182,000,000 ft³. Drainage area, 15.2 mi².
- 05392300 Willow Reservoir on Tomahawk River, lat 45°42'45", long 89°50'38", in NE 1/4 sec.10, T.37 N., R.5 E., Oneida County, 8.8 mi southwest of Hazelhurst, used as a reservoir since 1927, has a usable capacity of 3,302,000,000 ft³. Drainage area, 310 mi².
- 05392500 Lake Nokomis on Tomahawk River, lat 45°32'20", long 89°44'48", in NW 1/4 sec.9, T.35 N., R.6 E., Lincoln County, at U.S. Geological Survey river gaging station, 0.5 mi east of Bradley, used as a reservoir since 1912, has a usable capacity of 1,808,000,000 ft³. Drainage area, 544 mi².
- 05393600 Spirit River Flowage on Spirit River, lat 45°26'18", long 89°44'30", in NE 1/4 sec.16, T.34 N., R.6 E., Lincoln County, 2.0 mi south of Tomahawk, used as a reservoir since 1923, has a usable capacity of 756,000,000 ft³. Drainage area, 158 mi².
- 05399600 Big Eau Pleine Reservoir on Big Eau Pleine River, lat 44°43'52", long 89°45'35", in SW 1/4 sec.14, T.26 N., R.6 E., Marathon County, 3.0 mi northeast of Dancy, used as a reservoir since 1937, has a capacity of 4,457,000,000 ft³. Drainage area, 363 mi².

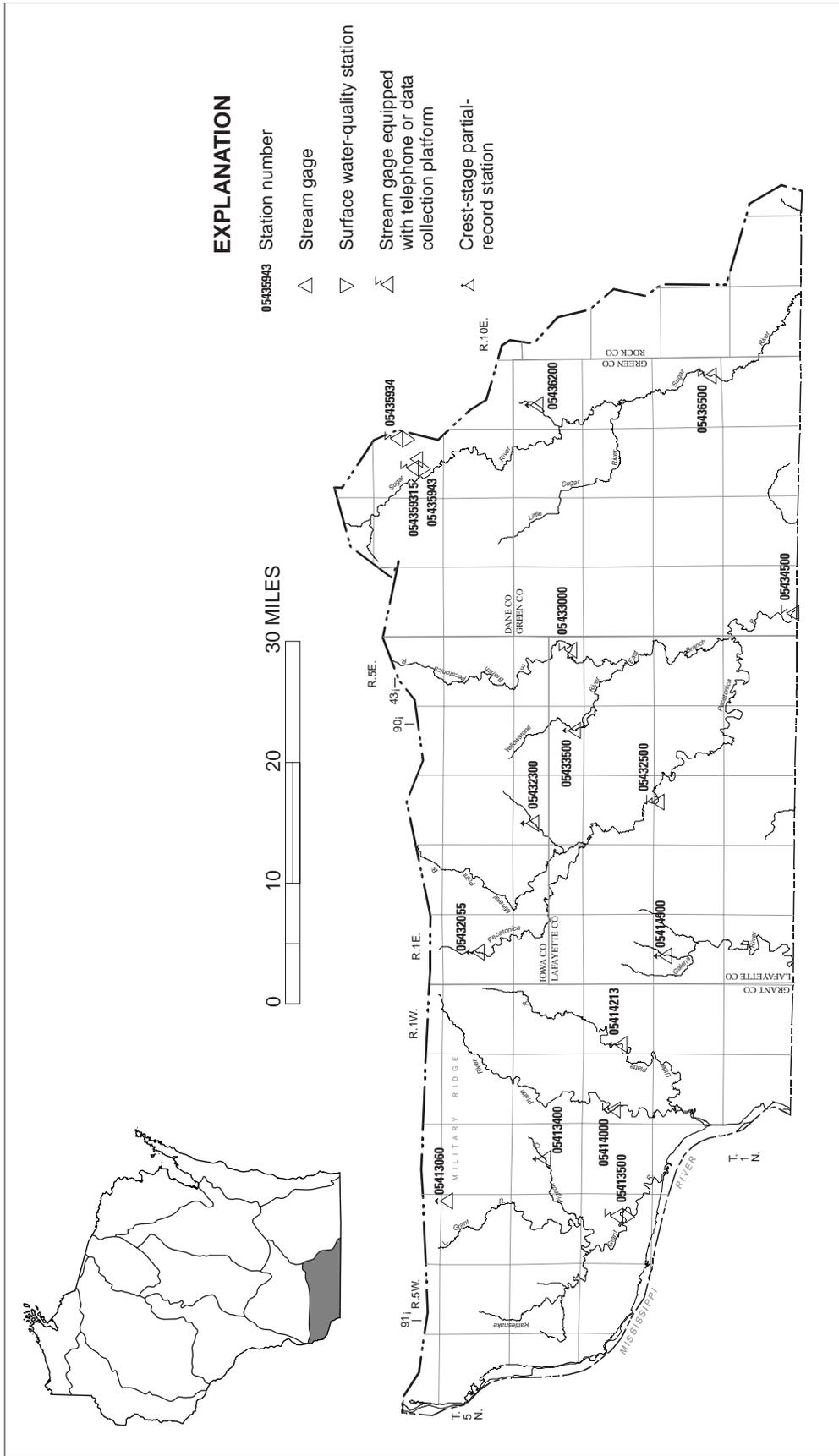
- 05400295 Lake Dubai on Wisconsin River, lat 44°39'54", long 89°39'03", in sec.10, T.25 N., R.7 E., Wood County, 1.5 mi downstream of Little Eau Pleine River and 10.5 mi northwest of Stevens Point, has a usable capacity of 2,117,000,000 ft³. Drainage area, 4,900 mi².
- 05401400 Petenwell Flowage on Wisconsin River, lat 44°03'26", long 90°01'18", in SE 1/4 sec.4, T.18 N., R.4 E., Adams County, 5.2 mi upstream from Roche a Cri Creek, 2.4 mi west of Strongs Prairie, and 3.5 mi northeast of Necedah, used as a reservoir since 1950, has a total capacity of 19,880,000,000 ft³. Drainage area, 5,970 mi².
- 05403200 Castle Rock Flowage on Wisconsin River, lat 43°51'48", long 89°57'38", in sec.13, T.16 N., R.4 E., Adams County, 4.5 mi upstream from Duck Creek, and 2.0 mi south of Germantown, and 7.0 mi northeast of Mauston, used as a reservoir since 1950, has a total capacity of 7,630,000,000 ft³. Drainage area, 7,056 mi².

MONTH-END CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

	LAC VIEUX DESERT	TWIN LAKES	BUCKATABON LAKE	SEVENMILE LAKE	LOWER NINEMILE LAKE	BURNT ROLLWAYS RESERVOIR	LONG LAKE	DEERSKIN LAKE
Sept. 30	240	258	115	47	96	594	142	14
Oct. 31	279	280	115	51	96	601	144	19
Nov. 30	226	269	109	36	83	499	146	9
Dec. 31	123	190	91	0	42	270	161	5
Jan. 31	58	130	63	0	21	4	149	4
Feb. 29	33	98	48	0	32	0	150	4
Mar. 31	23	76	38	0	69	30	161	6
Apr. 30	299	258	114	65	91	588	307	14
May 31	377	296	115	65	98	542	251	15
June 30	402	299	113	66	100	562	248	16
July 31	398	303	116	65	96	533	229	16
Aug. 31	377	278	116	65	96	530	210	17
Sept. 30	384	292	116	67	97	594	189	14

	SUGAR CAMP RESERVOIR	LITTLE ST. GERMAIN LAKE	BIG ST. GERMAIN LAKE	PICKEREL LAKE	RAINBOW LAKE	SOUTH PELICAN LAKE	NORTH PELICAN LAKE	MINOCQUA LAKE
Sept. 30	406	54	160	270	1,103	286	140	482
Oct. 31	412	64	176	279	1,220	305	139	493
Nov. 30	365	66	152	254	1,578	275	138	409
Dec. 31	348	56	116	240	2,081	232	66	203
Jan. 31	306	37	82	226	1,882	176	11	110
Feb. 29	138	31	66	221	1,516	145	14	45
Mar. 31	8	26	67	187	1,004	122	22	40
Apr. 30	431	73	169	276	2,144	320	183	356
May 31	396	73	167	281	2,090	297	140	482
June 30	399	72	148	272	2,079	297	138	522
July 31	407	75	158	281	1,942	295	136	499
Aug. 31	398	72	171	276	1,758	289	139	499
Sept. 30	397	72	173	278	1,635	289	139	516

	SQUIRREL LAKE	WILLOW RESERVOIR	LAKE NOKOMIS	SPIRIT RIVER FLOWAGE	BIG EAU PLEINE RESERVOIR	LAKE DUBAY	PETENWELL FLOWAGE	CASTLE ROCK FLOWAGE
Sept. 30	167	1,547	916	375	3,130	4,166	17,641	5,883
Oct. 31	170	1,607	974	382	2,688	4,163	17,703	5,890
Nov. 30	141	1,897	1,121	558	2,700	4,135	17,650	5,837
Dec. 31	77	2,666	1,331	666	3,255	3,867	17,474	5,903
Jan. 31	4	2,220	987	426	2,603	3,360	15,486	5,639
Feb. 29	17	1,835	744	271	2,764	3,346	14,706	4,816
Mar. 31	15	1,584	582	197	4,196	3,753	16,142	5,863
Apr. 30	158	3,129	1,739	740	4,433	4,113	18,248	5,831
May 31	172	3,126	1,707	705	4,427	4,150	18,468	6,569
June 30	166	3,172	1,760	742	4,391	4,150	17,597	5,929
July 31	172	2,755	1,570	626	4,268	4,122	17,518	5,831
Aug. 31	166	2,674	1,422	686	4,367	4,138	17,553	5,837
Sept. 30	170	2,939	1,684	667	4,394	4,144	17,597	6,611



GRANT RIVER BASIN

05413500 GRANT RIVER AT BURTON, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1935 - 2002	
ANNUAL TOTAL	70770		68209			
ANNUAL MEAN	193.9		186.9		170.4	
HIGHEST ANNUAL MEAN					351 1993	
LOWEST ANNUAL MEAN					59.3 1958	
HIGHEST DAILY MEAN	608	May 11	5370	Jun 4	10700	Jun 13 1947
LOWEST DAILY MEAN	(a)110	Jan 13	(a)110	Feb 1-4	30	(b)Aug 5 1936
ANNUAL SEVEN-DAY MINIMUM	(a)110	Jan 13	(a)114	Jan 29	31	(c)Aug 3 1936
MAXIMUM PEAK FLOW			9090	Jun 4	(d)25000	Jul 16 1950
MAXIMUM PEAK STAGE			21.77	Jun 4	24.82	Jul 16 1950
INSTANTANEOUS LOW FLOW					(f)21	Mar 4 1954
ANNUAL RUNOFF (CFSM)	0.72		0.69		0.63	
ANNUAL RUNOFF (INCHES)	9.79		9.43		8.61	
10 PERCENT EXCEEDS	292		215		258	
50 PERCENT EXCEEDS	168		157		120	
90 PERCENT EXCEEDS	130		130		60	

(a) Ice affected

(b) Also occurred Aug. 8, 9, 1936, Sept. 22, 1937, and Feb. 19, 20, 1959, ice affected

(c) also occurred Jan. 4, 1959, ice affected

(d) From rating curve extended above 18,000 ft³/s on basis of slope-area measurement of peak flow

(e) Estimated due to ice effect or missing record

(f) Result of freezeup

05413500 GRANT RIVER AT BURTON, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1978 to current year. National Stream-Quality Accounting Network data collection October 1986 to September 1994.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water years 1978 to current year, April-September monthly totals only published for 1983 water year, but daily load estimates are available for the entire year.

INSTRUMENTATION.--Automatic pumping sampler since June 21, 1999.

REMARKS.--Sediment records for periods of no ice cover are fair to good. Records for high-flow periods during ice cover are poor. Monthly and annual load values are fair. Most samples are point samples.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 13,600 mg/L, July 13, 1979; minimum observed, 6 mg/L, Dec. 8, 1997.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 95,300 tons, June 17, 1978; minimum daily, 1.5 tons, Mar. 1, 2, 1978.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 10,400 mg/L, June 5; minimum observed, 11 mg/L, Mar. 26.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 91,200 tons, June 4; minimum daily, 4.4 tons, Mar. 26.

SEDIMENT DISCHARGE, SUSPENDED, (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.0	20.0	49.0	12.0	7.2	9.2	10.0	65.0	24.0	54.0	103	31.0
2	16.0	18.0	38.0	11.0	8.0	8.5	13.0	88.0	22.0	49.0	90.0	59.0
3	15.0	16.0	30.0	11.0	8.8	8.6	14.0	29.0	152	45.0	84.0	71.0
4	15.0	15.0	24.0	10.0	8.7	8.7	15.0	24.0	91200	42.0	263	32.0
5	15.0	14.0	24.0	9.5	9.4	8.7	15.0	22.0	11600	37.0	329	24.0
6	15.0	13.0	50.0	9.3	9.2	9.4	15.0	21.0	578	6240	150	20.0
7	14.0	12.0	45.0	9.1	9.7	9.8	18.0	19.0	310	1850	123	17.0
8	14.0	11.0	30.0	8.8	9.3	21.0	32.0	18.0	267	122	110	14.0
9	14.0	10.0	27.0	9.2	9.6	304	48.0	182	244	79.0	96.0	12.0
10	15.0	9.7	24.0	9.1	148	207	32.0	128	233	70.0	76.0	10.0
11	15.0	8.9	22.0	8.4	112	116	21.0	92.0	1220	64.0	61.0	12.0
12	14.0	8.2	27.0	8.4	32.0	67.0	25.0	161	682	57.0	49.0	24.0
13	14.0	9.5	72.0	8.4	34.0	40.0	26.0	113	172	52.0	63.0	23.0
14	15.0	12.0	55.0	8.4	38.0	27.0	23.0	94.0	3700	47.0	70.0	23.0
15	14.0	11.0	30.0	8.4	29.0	24.0	21.0	79.0	1310	43.0	42.0	22.0
16	13.0	9.6	27.0	8.4	21.0	21.0	19.0	68.0	731	39.0	31.0	20.0
17	13.0	8.5	39.0	8.4	16.0	20.0	17.0	58.0	642	36.0	33.0	19.0
18	13.0	8.5	26.0	7.8	12.0	18.0	18.0	50.0	579	42.0	35.0	20.0
19	13.0	12.0	17.0	7.8	28.0	17.0	30.0	44.0	535	134	37.0	37.0
20	13.0	11.0	12.0	8.4	38.0	17.0	23.0	38.0	503	102	35.0	48.0
21	13.0	10.0	12.0	8.4	28.0	15.0	25.0	33.0	416	61.0	40.0	52.0
22	22.0	9.2	18.0	9.1	21.0	10.0	37.0	29.0	324	494	153	30.0
23	366	8.4	57.0	9.7	19.0	9.4	31.0	26.0	246	526	71.0	25.0
24	119	19.0	43.0	9.0	17.0	7.2	26.0	23.0	186	358	148	23.0
25	39.0	78.0	29.0	8.9	15.0	5.5	23.0	41.0	143	332	76.0	21.0
26	32.0	44.0	20.0	8.1	13.0	4.4	19.0	74.0	119	288	54.0	20.0
27	29.0	57.0	16.0	7.9	11.0	4.8	23.0	37.0	96.0	245	48.0	19.0
28	27.0	49.0	14.0	7.8	9.2	5.7	108	25.0	72.0	243	45.0	19.0
29	25.0	34.0	13.0	7.0	---	6.8	138	55.0	65.0	190	43.0	290
30	22.0	44.0	13.0	6.9	---	7.6	86.0	35.0	59.0	151	39.0	133
31	21.0	---	12.0	7.0	---	8.7	---	27.0	---	122	35.0	---
TOTAL	998.0	590.5	915.0	271.6	721.1	1047.0	951.0	1798.0	116430.0	12214.0	2632.0	1170.0
WTR YR 2002	TOTAL 139738.2											

GRANT RIVER BASIN

05413500 GRANT RIVER AT BURTON, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
OCT 2001					
01...	1010	--	173	10	24
01...	1050	--	173	30	25
01...	1643	--	174	50	34
25...	0500	--	193	50	75
NOV					
08...	0500	--	153	50	28
19...	1545	--	169	10	29
19...	1555	--	169	50	21
19...	1615	--	169	30	27
22...	0500	--	149	50	--
DEC					
06...	0500	--	166	50	71
20...	0500	--	150	50	30
27...	0500	140	--	50	42
JAN 2002					
04...	0950	130	--	10	30
04...	1000	130	--	50	28
10...	0500	140	--	50	24
24...	0500	140	--	50	24
31...	0500	120	--	50	21
FEB					
03...	1200	110	--	50	30
07...	0500	130	--	50	28
10...	1215	--	244	50	98
11...	0905	--	230	50	142
12...	0900	--	159	10	76
12...	1000	--	160	10	63
14...	0500	--	137	50	110
19...	1945	--	244	50	68
21...	0500	--	203	50	55
28...	0500	--	130	50	26
MAR					
06...	0530	130	--	50	27
10...	0515	220	--	50	392
14...	0500	--	172	50	59
21...	0500	--	160	50	37
26...	1515	--	143	10	11
26...	1520	--	143	50	26
APR					
04...	0500	--	139	50	41
12...	0500	--	167	50	50
19...	0500	--	170	50	71
26...	0500	--	150	50	49
MAY					
03...	0500	--	196	50	54
09...	1545	--	314	10	464
09...	1555	--	320	50	310
10...	0500	--	219	50	254
24...	0500	--	156	50	--
31...	0500	--	150	50	--
JUN					
03...	2330	--	271	50	5120
04...	0245	--	607	50	--
04...	0415	--	1040	50	--
04...	0545	--	3070	50	--
04...	1235	--	8490	50	--
04...	1245	--	8500	10	4470
04...	1435	--	8780	50	6400
05...	0115	--	2300	50	10400
05...	0800	--	1370	10	1360
05...	0814	--	1360	50	--
05...	1940	--	861	10	616
05...	1945	--	859	50	--
05...	2245	--	780	50	--
06...	0910	--	608	10	345
06...	0919	--	608	50	442
07...	0500	--	461	50	258
10...	0515	--	294	50	293
13...	0530	--	284	50	173
14...	0115	--	662	50	1050
14...	0500	--	962	50	2450
14...	1615	--	437	50	2820
21...	0500	--	220	50	757
28...	0500	--	192	50	143

05413500 GRANT RIVER AT BURTON, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
JUL 2002				
05...	0500	163	50	88
06...	1315	491	50	668
06...	1430	883	50	2150
06...	1630	1340	50	4880
06...	2330	753	50	5210
07...	1430	271	50	907
08...	1145	203	10	164
08...	1200	204	50	183
12...	0500	175	50	--
19...	0500	176	50	265
22...	1030	260	50	204
26...	0500	165	50	724
AUG				
02...	0500	158	50	216
05...	0515	339	50	464
09...	0500	160	50	237
16...	0500	153	50	73
19...	1450	149	10	95
19...	1455	149	50	24
22...	0700	260	50	327
23...	0500	204	50	160
30...	0500	147	50	104
SEP				
11...	0959	145	50	23
12...	0500	137	50	69
20...	0500	158	50	135
27...	0500	135	50	51
29...	1330	454	50	550

PLATTE RIVER BASIN

05414000 PLATTE RIVER NEAR ROCKVILLE, WI

LOCATION.--Lat 42°43'52", long 90°38'25", in SW ¼ sec.17, T.3 N., R.2 W., Grant County, Hydrologic Unit 07060003, on right bank just downstream from bridge on County Trunk Highway B, 0.8 mi upstream from Blakely Branch, 2.2 mi east of Rockville, 4.5 mi northeast of Potosi, and 15.2 mi upstream from mouth.

DRAINAGE AREA.--142 mi².

PERIOD OF RECORD.--October 1934 to current year. Monthly discharge for October and November 1934 published in WSP 1308.

REVISED RECORDS.--WSP 1438: 1935-36, 1937(M), 1939(M), 1941-43(M), 1946(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 642.50 ft above NGVD of 1929. Prior to Oct. 1, 1941, nonrecording gage at site 1.3 mi upstream at datum 12.55 ft higher. Oct. 1, 1941, to June 29, 1949, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	87	86	e67	e66	e73	83	106	95	115	103	80
2	92	85	82	e66	e60	e71	87	119	94	111	100	123
3	91	81	82	e66	e60	e70	85	108	143	109	97	105
4	90	81	83	e66	e62	e70	82	102	1340	108	116	86
5	89	79	88	e66	e63	e70	81	101	570	107	116	83
6	87	80	94	e65	e64	e72	80	102	338	156	102	81
7	85	79	88	e65	e65	e73	87	99	265	176	96	80
8	84	79	86	e67	e66	e80	110	96	228	125	94	78
9	83	77	84	e69	e68	339	126	171	204	118	93	77
10	102	78	84	e69	147	157	112	141	189	115	92	79
11	102	76	83	e69	99	144	108	135	237	113	92	82
12	89	76	84	e69	84	125	112	160	193	109	91	78
13	88	82	99	e69	75	117	107	138	206	107	98	77
14	91	82	90	e67	77	109	103	131	243	105	97	79
15	86	79	86	e67	76	104	101	124	197	103	90	80
16	84	77	87	e66	74	97	98	121	178	102	88	77
17	82	75	88	e65	72	94	94	117	168	101	87	76
18	82	77	86	e66	72	94	95	114	160	100	86	78
19	82	87	85	e67	114	93	101	110	158	103	84	87
20	81	80	82	e67	125	98	93	107	153	101	82	103
21	80	78	79	e66	110	92	100	105	146	100	107	92
22	91	77	87	e66	92	83	113	103	143	284	149	81
23	156	76	94	e66	92	92	100	103	138	159	102	78
24	116	87	e75	e67	91	89	100	101	134	119	94	76
25	108	97	e83	68	91	84	98	115	130	112	88	76
26	99	86	e87	69	86	84	95	113	135	110	86	76
27	93	89	e82	69	e77	84	99	101	134	122	84	76
28	90	85	e74	70	e75	87	124	98	127	138	83	76
29	89	84	e68	69	---	88	114	105	124	121	83	183
30	86	86	e67	69	---	84	107	101	121	111	81	102
31	87	---	e67	71	---	82	---	98	---	105	81	---
TOTAL	2859	2442	2590	2088	2303	3099	2995	3545	6691	3765	2942	2605
MEAN	92.23	81.40	83.55	67.35	82.25	99.97	99.83	114.4	223.0	121.5	94.90	86.83
MAX	156	97	99	71	147	339	126	171	1340	284	149	183
MIN	80	75	67	65	60	70	80	96	94	100	81	76
CFSM	0.65	0.57	0.59	0.47	0.58	0.70	0.70	0.81	1.57	0.86	0.67	0.61
IN.	0.75	0.64	0.68	0.55	0.60	0.81	0.78	0.93	1.75	0.99	0.77	0.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2002, BY WATER YEAR (WY)

	MEAN	70.42	76.47	63.85	76.63	105.9	174.2	114.2	106.0	133.7	107.2	89.44	79.02
MAX	146	372	155	315	379	483	291	328	586	660	348	202	
(WY)	1962	1962	1973	1946	1938	1959	1993	1960	1947	1993	1943	1942	
MIN	25.3	29.2	23.7	22.1	24.3	33.4	42.0	36.1	34.3	24.0	30.3	33.7	
(WY)	1951	1938	1959	1959	1959	1957	1990	1958	1936	1936	1937	1989	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1935 - 2002

ANNUAL TOTAL	38677	37924	
ANNUAL MEAN	106.0	103.9	99.70
HIGHEST ANNUAL MEAN			234
LOWEST ANNUAL MEAN			40.8
HIGHEST DAILY MEAN	290	Aug 2	1340
LOWEST DAILY MEAN	(a)50	Jan 16-25	(a)60
ANNUAL SEVEN-DAY MINIMUM	(a)50	Jan 16	(a)63
MAXIMUM PEAK FLOW			2140
MAXIMUM PEAK STAGE			9.42
INSTANTANEOUS LOW FLOW			
ANNUAL RUNOFF (CFSM)	0.75	0.73	0.70
ANNUAL RUNOFF (INCHES)	10.13	9.94	9.54
10 PERCENT EXCEEDS	162	138	156
50 PERCENT EXCEEDS	91	89	68
90 PERCENT EXCEEDS	68	69	36

- (a) Ice affected
- (b) From rating curve extended above 7,000 ft³/s on basis of slope-area measurement of peak flow
- (c) Result of freezeup
- (e) Estimated due to ice effect or missing record

05414850 GALENA RIVER AT U.W. PLATTEVILLE FARMS NEAR PLATTEVILLE, WI

LOCATION.--Lat 42°42'39", long 90°23'58", in NE ¼ NE ¼ NW ¼ sec.29, T.1 N., R.1 E., Lafayette County, Hydrologic Unit 07060005, on right bank 110 ft downstream from College Farm Road bridge.

DRAINAGE AREA.--2.94 mi².

PERIOD OF RECORD.--August to September 2002.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 990 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	2.3	2.1
2	---	---	---	---	---	---	---	---	---	---	2.3	4.9
3	---	---	---	---	---	---	---	---	---	---	2.3	2.3
4	---	---	---	---	---	---	---	---	---	---	2.4	2.2
5	---	---	---	---	---	---	---	---	---	---	2.4	2.2
6	---	---	---	---	---	---	---	---	---	---	2.4	2.2
7	---	---	---	---	---	---	---	---	---	---	e2.3	2.2
8	---	---	---	---	---	---	---	---	---	---	e2.3	2.2
9	---	---	---	---	---	---	---	---	---	---	e2.3	2.3
10	---	---	---	---	---	---	---	---	---	---	e2.2	2.3
11	---	---	---	---	---	---	---	---	---	---	e2.2	2.3
12	---	---	---	---	---	---	---	---	---	---	e2.2	2.2
13	---	---	---	---	---	---	---	---	---	---	e2.3	2.2
14	---	---	---	---	---	---	---	---	---	---	e2.3	2.2
15	---	---	---	---	---	---	---	---	---	---	e2.2	2.2
16	---	---	---	---	---	---	---	---	---	---	e2.2	2.2
17	---	---	---	---	---	---	---	---	---	---	e2.1	2.1
18	---	---	---	---	---	---	---	---	---	---	e2.1	2.2
19	---	---	---	---	---	---	---	---	---	---	e2.1	3.0
20	---	---	---	---	---	---	---	---	---	---	e2.1	2.5
21	---	---	---	---	---	---	---	---	---	---	2.3	2.5
22	---	---	---	---	---	---	---	---	---	---	3.0	2.3
23	---	---	---	---	---	---	---	---	---	---	2.4	2.3
24	---	---	---	---	---	---	---	---	---	---	2.3	2.3
25	---	---	---	---	---	---	---	---	---	---	2.2	2.3
26	---	---	---	---	---	---	---	---	---	---	2.2	2.3
27	---	---	---	---	---	---	---	---	---	---	2.2	2.3
28	---	---	---	---	---	---	---	---	---	---	2.2	2.3
29	---	---	---	---	---	---	---	---	---	---	2.2	3.7
30	---	---	---	---	---	---	---	---	---	---	2.2	2.5
31	---	---	---	---	---	---	---	---	---	---	2.2	---
TOTAL	---	---	---	---	---	---	---	---	---	---	70.4	72.8
MEAN	---	---	---	---	---	---	---	---	---	---	2.271	2.427
MAX	---	---	---	---	---	---	---	---	---	---	3.0	4.9
MIN	---	---	---	---	---	---	---	---	---	---	2.1	2.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

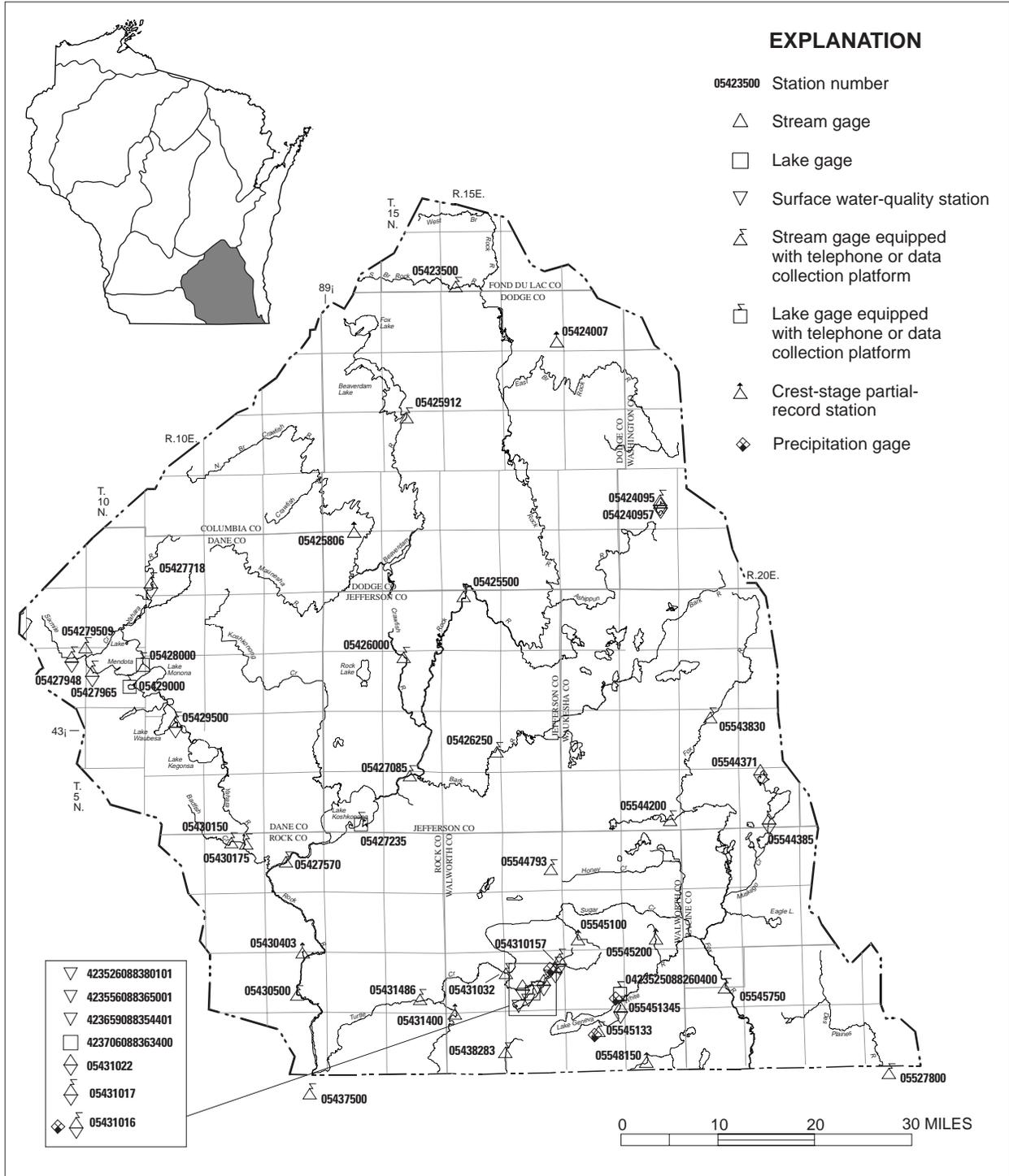
MEAN	---	---	---	---	---	---	---	---	---	---	2.271	2.427
MAX	---	---	---	---	---	---	---	---	---	---	2.27	2.43
(WY)	---	---	---	---	---	---	---	---	---	---	2002	2002
MIN	---	---	---	---	---	---	---	---	---	---	2.27	2.43
(WY)	---	---	---	---	---	---	---	---	---	---	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR
(AUGUST-SEPTEMBER)

HIGHEST DAILY MEAN	4.9	Sep 2
LOWEST DAILY MEAN	2.1	(a) Aug 17-20
ANNUAL SEVEN-DAY MINIMUM	2.2	Aug 14
MAXIMUM PEAK FLOW	16	Sep 2
MAXIMUM PEAK STAGE	4.54	Sep 2
INSTANTANEOUS LOW FLOW	2.0	(b) Aug 20-21, Sep 1
10 PERCENT EXCEEDS	2.5	
50 PERCENT EXCEEDS	2.3	
90 PERCENT EXCEEDS	2.1	

- (a) Also occurred Sept. 1,17
- (b) May also have occurred Aug. 17-19 during missing record
- (e) Estimated due to missing record



Base from U.S. Geological Survey 1:100,000 digital data; modified by Wisconsin Department of Natural Resources. Wisconsin Transverse Mercator projection.

ROCK-FOX RIVER BASIN

ROCK RIVER BASIN

05423500 SOUTH BRANCH ROCK RIVER AT WAUPUN, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1949 - 2002	
ANNUAL TOTAL	16809.2		9793.1			
ANNUAL MEAN	46.05		26.83		29.53	
HIGHEST ANNUAL MEAN					94.1	
LOWEST ANNUAL MEAN					2.47	
HIGHEST DAILY MEAN	246	Jun 13	128	Mar 9	1280	Apr 4 1959
LOWEST DAILY MEAN	6.9	Jan 1	1.4	Sep 24	0.00	(a)
ANNUAL SEVEN-DAY MINIMUM	(b)7.4	Jan 1	1.9	Sep 10	0.00	(c)Sep 7 1958
MAXIMUM PEAK FLOW			160	Mar 9	(d)1500	Apr 3 1959
MAXIMUM PEAK STAGE			3.48	Mar 9	7.97	Apr 3 1959
INSTANTANEOUS LOW FLOW			0.96	Sep 24	0.00	(f)
ANNUAL RUNOFF (CFSM)	0.72		0.42		0.46	
ANNUAL RUNOFF (INCHES)	9.83		5.73		6.31	
10 PERCENT EXCEEDS	106		62		70	
50 PERCENT EXCEEDS	26		17		11	
90 PERCENT EXCEEDS	12		4.2		1.0	

(a) Many days in 1958-59, 1963-64

(b) Ice affected

(c) Also occurred in 1959

(d) From rating curve extended above 650 ft³/s

(e) Estimated due to ice effect or missing record

(f) No flow at times in 1949, 1953-54, 1958-59, 1963-64

05424057 ROCK RIVER AT HORICON, WI

LOCATION.--Lat 43°27'01", long 88°37'56", in NW ¼ SE ¼ sec.6, T.11 N., R.16 E., Dodge County, Hydrologic Unit 07090001, on left bank downstream side of State Highway 33, 1,700 ft upstream of dam, at Horicon.

DRAINAGE AREA.--456 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1997 to December 2000, November 2001 to September 2002.

GAGE.--Accoustical Velocity Meter (AVM) system. Single-path transducer installation. Elevation of gage is 860 ft, from topographic map.

REMARKS.--Records poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e210	e300	168	88	647	215	535	72	78	e22	e10
2	---	e210	e260	143	163	647	289	535	78	e70	e21	e10
3	---	e200	e220	126	183	545	268	517	192	65	e25	e12
4	---	e190	e190	124	189	641	228	480	364	e60	e20	e20
5	---	e180	e170	122	202	679	249	509	472	e57	e17	e30
6	---	e170	e150	129	205	644	e270	441	416	e56	e15	e29
7	---	e170	e170	134	250	635	370	422	331	e54	e13	e27
8	---	e180	e180	143	295	636	382	246	388	e54	e12	e20
9	---	e180	e170	156	289	703	561	402	328	e60	e12	e16
10	---	e170	e140	146	308	789	712	430	207	e57	e11	e11
11	---	e180	149	148	278	932	784	364	168	e50	e12	e10
12	---	e180	160	148	308	1060	948	481	273	e48	e13	e10
13	---	e200	212	145	270	1110	933	457	293	e41	e12	e9.0
14	---	e220	229	150	280	1120	877	469	387	e37	e10	e9.0
15	---	e230	217	149	302	1130	749	346	353	e35	e10	e9.0
16	---	e270	226	144	304	1130	651	499	343	e32	e10	e9.0
17	---	e290	300	145	306	1060	739	495	304	e30	e12	e8.0
18	---	e290	270	143	302	959	653	483	194	e28	e13	e10
19	---	e270	264	147	433	975	860	437	125	e26	e11	e11
20	---	e260	232	154	968	937	879	399	141	e29	e10	e12
21	---	e230	219	157	996	1090	825	297	146	e32	e12	e14
22	---	e220	237	167	825	1120	829	212	206	e37	e16	e17
23	---	e230	251	171	794	1140	751	182	159	e30	e18	e23
24	---	e230	258	168	788	882	701	182	136	e27	e19	e23
25	---	e250	216	159	818	777	735	116	138	e25	e18	e21
26	---	e270	163	170	795	816	690	150	134	e24	e16	e24
27	---	e290	156	92	659	650	587	145	122	e25	e14	e27
28	---	e290	167	78	747	370	786	100	98	e25	e11	e25
29	---	e300	159	83	---	346	667	90	87	e24	e10	e26
30	---	e300	160	85	---	204	641	83	87	e24	e9.0	e27
31	---	---	167	90	---	241	---	126	---	e23	e9.0	---
TOTAL	---	6860	6362	4284	12345	24615	18829	10630	6742	1263	433.0	509.0
MEAN	---	228.7	205.2	138.2	440.9	794.0	627.6	342.9	224.7	40.74	13.97	16.97
MAX	---	300	300	171	996	1140	948	535	472	78	25	30
MIN	---	170	140	78	88	204	215	83	72	23	9.0	8.0
CFSM	---	0.50	0.45	0.30	0.97	1.74	1.38	0.75	0.49	0.09	0.03	0.04
IN.	---	0.56	0.52	0.35	1.01	2.01	1.54	0.87	0.55	0.10	0.04	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002		
MEAN	88.25	162.5	125.7	97.15	311.9	478.0	688.5	389.8	287.6	210.2	145.3	92.02
MAX	106	229	205	138	441	794	1194	538	470	573	448	166
(WY)	1999	2002	2002	2002	2002	2002	1998	1999	2000	1999	1999	1999
MIN	62.3	107	67.0	72.5	150	246	286	310	110	40.7	14.0	17.0
(WY)	2001	2000	1998	2000	2000	1999	2000	1998	1998	2002	2002	2002

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR
(NOVEMBER-DECEMBER)

FOR 2002 WATER YEAR
(NOVEMBER-SEPTEMBER)

WATER YEARS 1998 - 2002

ANNUAL TOTAL	13222	92872.0		
ANNUAL MEAN	216.8	278.1	255.5	
HIGHEST ANNUAL MEAN			324	1999
LOWEST ANNUAL MEAN			101	2001
HIGHEST DAILY MEAN	300	Nov 29	1140	Mar 23
LOWEST DAILY MEAN	140	Dec 10	8.0	Sep 17
ANNUAL SEVEN-DAY MINIMUM	160	Dec 6	9.1	Sep 11
ANNUAL RUNOFF (CFSM)	0.48		0.61	0.56
ANNUAL RUNOFF (INCHES)	1.08		7.58	7.61
10 PERCENT EXCEEDS	290		764	633
50 PERCENT EXCEEDS	217		180	151
90 PERCENT EXCEEDS	160		14	32

(e) Estimated due to ice effect or missing record

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1997 to December 2000, November 2001 to November 2002 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SOLIDS DISCHARGE: December 1997 to December 2000, November 2001 to November 2002 (discontinued).
TOTAL-PHOSPHORUS DISCHARGE: December 1997 to December 2000, November 2001 to November 2002 (discontinued).

REMARKS.--Chemical analyses by the Wisconsin State Laboratory of Hygiene. Samples are equal-width increment samples collected by U.S. Geological Survey personnel.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 459 tons, Apr. 13, 1998; minimum daily, 0.00 ton, Nov. 10, 1998, Mar. 31, and Oct. 14, 27, 1999, result of reverse streamflow from wind setup.
TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 4,600 lb, July 31, 1999; minimum daily, 0.00 lb, Nov. 10, 1998, result of reverse streamflow from wind setup.

EXTREMES FOR CURRENT PERIOD.--

2002 WATER YEAR.--

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 177 tons, Apr. 12; minimum daily, 0.85 ton, Sept. 17.
TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,800 lb, Mar. 22; minimum daily, 16.1 lb, Aug. 30.

OCTOBER-NOVEMBER 2003:

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 14.9 tons, Nov. 1; minimum daily, 2.59 ton, Nov. 30.
TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 136 lb, Nov. 23; minimum daily, 43.6 lb, Nov. 30.

SOLIDS, RESIDUE AT 105 DEG C, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	31.4	40.3	6.84	1.19	14.0	10.5	95.3	12.5	14.3	3.17	1.18
2	---	31.8	28.3	5.55	2.20	14.0	13.3	91.2	14.9	12.8	2.95	1.18
3	---	30.2	19.3	4.64	2.47	11.8	11.7	84.5	40.4	11.6	3.43	1.43
4	---	28.7	13.5	4.38	2.55	13.8	9.53	75.1	80.0	10.5	2.68	2.51
5	---	27.2	9.82	4.08	2.72	14.7	11.3	76.2	87.0	9.78	2.23	3.97
6	---	25.7	8.54	4.13	2.77	13.9	13.8	63.4	86.0	9.39	1.92	3.81
7	---	25.7	10.4	4.08	3.38	13.7	21.2	58.1	63.2	8.86	1.62	3.42
8	---	27.2	11.5	4.14	3.98	13.7	26.4	32.5	77.3	8.67	1.46	2.45
9	---	27.4	10.0	4.32	3.90	15.6	53.3	51.2	69.5	9.42	1.43	1.89
10	---	26.1	7.53	3.86	4.16	26.2	105	54.8	46.7	8.76	1.28	1.25
11	---	27.8	7.37	3.73	3.75	47.3	163	46.7	39.4	7.52	1.36	1.09
12	---	28.0	7.98	3.54	4.15	53.2	177	62.0	65.6	7.06	1.44	1.06
13	---	31.4	10.7	3.30	3.65	48.8	149	60.8	67.8	5.90	1.31	0.95
14	---	34.8	11.2	3.26	3.78	49.7	120	73.6	85.5	5.21	1.07	0.95
15	---	36.6	13.8	3.09	4.08	52.0	88.0	65.4	74.8	4.84	1.06	0.95
16	---	43.3	19.2	2.86	4.10	53.4	73.4	109	69.5	4.44	1.04	0.95
17	---	46.9	31.7	2.72	4.14	51.3	91.2	105	59.0	4.18	1.23	0.85
18	---	47.1	23.8	2.57	5.32	48.0	88.4	96.6	36.4	3.93	1.31	1.09
19	---	44.1	18.2	2.52	13.5	50.2	127	82.7	23.3	3.67	1.09	1.24
20	---	42.7	13.1	2.51	48.5	49.7	136	71.5	26.2	4.12	0.98	1.39
21	---	38.0	13.5	2.44	42.0	59.4	124	50.9	27.1	4.57	1.15	1.68
22	---	36.5	16.5	2.48	32.8	62.9	123	36.1	38.2	5.32	1.51	2.11
23	---	38.3	19.6	2.42	27.3	65.9	121	31.0	29.5	4.35	1.66	2.95
24	---	38.5	18.7	2.28	23.1	52.6	125	31.0	25.2	3.93	1.76	3.02
25	---	42.1	13.6	2.15	20.4	47.6	144	19.8	25.5	3.67	1.69	2.68
26	---	45.7	9.00	2.30	17.4	51.5	148	25.5	24.8	3.54	1.54	2.95
27	---	49.3	8.08	1.25	14.3	41.7	124	24.7	22.5	3.71	1.48	3.21
28	---	49.3	8.22	1.06	16.1	22.7	159	17.0	18.1	3.73	1.27	2.87
29	---	51.0	7.46	1.12	---	22.0	129	15.3	16.0	3.61	1.17	2.88
30	---	49.1	7.15	1.14	---	11.2	119	14.1	16.0	3.62	1.05	2.80
31	---	---	7.12	1.22	---	12.4	---	21.5	---	3.40	1.06	---
TOTAL	---	1101.9	445.17	95.98	317.69	1104.9	2805.03	1742.5	1367.9	198.40	49.40	60.76

05424057 ROCK RIVER AT HORICON, WI--Continued

PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	294	376	139	82.8	719	213	1000	117	155	51.1	18.4
2	---	292	309	119	152	720	283	1000	129	139	48.4	19.3
3	---	273	247	105	171	608	261	972	321	127	57.2	28.7
4	---	255	202	104	175	715	220	904	609	116	45.6	60.5
5	---	237	171	103	187	758	238	961	770	108	38.5	113
6	---	220	147	110	190	720	256	837	846	104	33.7	120
7	---	216	169	115	230	711	347	802	610	98.9	29.0	121
8	---	225	181	123	271	714	356	470	758	97.2	26.6	96.8
9	---	222	174	136	265	796	528	767	661	106	26.4	83.4
10	---	207	145	128	282	1040	819	816	427	99.2	24.0	61.9
11	---	217	155	131	253	1460	1130	688	358	85.6	26.0	60.6
12	---	214	155	131	279	1600	1580	903	596	80.8	28.0	63.9
13	---	246	191	129	245	1410	1560	855	625	67.9	25.7	53.2
14	---	284	209	135	253	1420	1400	880	803	60.2	21.3	48.1
15	---	312	206	135	272	1470	1140	653	713	56.3	21.1	43.4
16	---	384	223	131	272	1500	968	942	674	52.5	21.0	39.2
17	---	433	305	132	274	1430	1130	925	582	50.5	25.0	31.5
18	---	436	270	132	269	1330	1040	890	364	48.4	26.9	35.5
19	---	384	257	137	382	1390	1410	794	235	46.1	22.6	35.3
20	---	349	220	144	907	1390	1460	714	265	52.7	20.4	34.8
21	---	295	202	148	1500	1690	1340	525	276	59.7	24.3	36.7
22	---	288	213	158	1390	1800	1330	371	391	70.8	32.8	40.3
23	---	311	220	164	1220	1700	1240	315	304	59.0	43.1	49.2
24	---	322	220	161	1080	1200	1200	313	261	54.5	43.0	45.0
25	---	363	180	153	1000	962	1300	198	266	51.8	37.0	40.6
26	---	405	132	163	888	919	1260	252	260	51.0	30.1	46.0
27	---	446	125	87.9	732	676	1090	241	238	54.5	25.2	51.4
28	---	427	134	74.3	829	380	1450	165	192	55.9	19.2	47.2
29	---	419	128	78.3	---	351	1240	147	171	55.1	17.6	48.7
30	---	397	130	79.8	---	206	1190	134	172	56.3	16.1	49.7
31	---	---	136	84.8	---	240	---	202	---	53.8	16.3	---
TOTAL	---	9373	6132	3871.1	14050.8	32025	28979	19636	12994	2373.7	923.2	1623.3

ROCK RIVER BASIN

05424057 ROCK RIVER AT HORICON, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEED (MG/L) (00530)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
NOV 2001							
08...	0945	180	--	10	56	.046	.232
27...	1220	290	--	10	63	.014	.288
DEC							
11...	1325	149	--	10	18	.017	.195
13...	1200	--	287	10	19	.014	.165
14...	1000	--	298	10	17	.013	.168
17...	1140	--	387	10	42	.013	.190
JAN 2002							
24...	1110	--	141	10	5	.102	.178
FEB							
20...	1315	--	1150	10	21	.117	.162
21...	1100	--	975	10	15	.188	.294
22...	1140	--	772	10	15	.235	.318
26...	0930	--	734	10	8	.128	.205
MAR							
11...	1115	--	862	10	20	.198	.297
12...	1000	--	1010	10	19	--	.289
13...	1115	--	1040	10	16	.142	.230
27...	1020	--	1280	10	24	.052	.191
APR							
09...	1455	--	544	10	36	.034	.171
11...	0930	--	776	10	82	.022	.266
22...	1110	--	877	10	54	.063	.294
26...	1530	--	680	10	81	.032	.341
MAY							
09...	0945	--	426	10	47	.143	.354
13...	1115	--	481	10	48	.022	.346
16...	1015	--	505	10	83	.016	.351
21...	0955	--	301	10	63	.015	.327
JUN							
04...	1040	--	376	10	86	.011	.316
05...	1130	--	493	10	64	.033	.284
06...	1030	--	429	10	80	.039	.401
07...	1015	--	225	10	69	.021	.330
10...	1400	--	140	10	84	.021	.381
12...	1015	--	277	10	90	.019	.408
18...	0915	--	243	10	69	.020	.345
JUL							
02...	0910	70	--	10	68	.033	.370
15...	1200	35	--	10	51	.020	.296
30...	1200	24	--	10	56	.031	.436
AUG							
12...	1100	13	--	10	41	.046	.399
22...	1545	16	--	10	35	.047	.373
23...	1120	18	--	10	34	.096	.463
26...	1035	16	--	10	35	.027	.347
28...	1015	11	--	10	43	.025	.321
SEP							
12...	1210	10	--	10	39	.716	1.21
24...	1015	23	--	10	49	.056	.361

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, SAM- PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEED (MG/L) (00530)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 2002						
04...	1220	E31	10	49	.146	.327
10...	1150	E47	10	36	.146	.405
22...	1140	E51	10	30	.015	.233
NOV						
01...	1115	E110	10	51	.013	.201
06...	1045	E92	10	37	.014	.170
19...	1155	E76	10	30	.013	.175
DEC						
05...	1155	--	10	10	.017	.154

E Estimated

ROCK RIVER BASIN

05424075 DEAD CREEK NEAR HUSTISFORD, WI

LOCATION.--Lat 43°21'21", long 88°38'14", in NE ¼ NE ¼ sec.7, T.10 N., R.16 E., Dodge County, Hydrologic Unit 07090001, at bridge on Arrowhead Trail town road, 2.0 mi west of Hustisford.

DRAINAGE AREA.--26.1 mi².

PERIOD OF RECORD.--November 2001 to December 2002 (discontinued).

GAGE.--Water-stage recorder. Side-looking velocity meter system.

REMARKS.--Records are good (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	16	4.4	4.9	21	17	28	6.0	7.0	2.7	0.41
2	---	---	18	3.2	9.2	9.3	16	32	5.4	6.0	0.85	3.7
3	---	---	14	3.7	9.9	16	21	28	46	5.3	1.1	2.9
4	---	---	16	5.6	8.1	22	20	25	83	4.6	0.11	1.8
5	---	---	17	2.9	6.7	16	18	22	98	1.9	-0.66	2.8
6	---	---	17	2.4	8.8	13	19	22	104	2.5	2.0	1.4
7	---	---	15	5.3	8.6	13	21	23	95	-0.14	0.87	1.3
8	---	---	14	4.9	7.4	18	40	21	73	5.9	2.1	1.3
9	---	---	14	4.3	8.8	72	77	27	48	2.6	1.5	-0.74
10	---	---	12	4.3	13	70	94	25	31	4.2	0.69	-2.2
11	---	---	13	5.3	10	83	94	25	48	2.5	-0.33	2.3
12	---	---	12	3.9	12	80	82	30	55	0.90	-0.28	2.5
13	---	---	21	5.0	10	78	67	40	60	3.0	-2.3	1.8
14	---	---	15	5.3	9.7	65	59	41	63	1.3	1.00	1.7
15	---	---	19	6.6	13	52	50	35	58	0.16	0.85	2.8
16	---	---	21	6.7	13	46	45	26	42	1.4	0.01	1.4
17	---	---	20	5.0	15	37	37	24	29	2.9	0.30	1.8
18	---	---	18	5.4	14	35	33	21	19	3.0	0.86	2.2
19	---	---	19	6.9	41	33	41	21	17	1.3	0.90	3.5
20	---	---	17	7.3	75	36	37	16	12	0.70	2.5	5.5
21	---	---	15	8.8	79	34	32	15	14	1.6	1.8	3.9
22	---	---	16	7.6	69	29	30	14	18	4.9	6.2	1.7
23	---	---	14	7.8	71	27	27	11	14	0.34	3.3	-0.72
24	---	---	13	e7.4	60	28	29	9.1	9.9	0.65	1.6	-0.31
25	---	---	8.9	e7.3	52	20	27	14	8.0	1.6	2.7	-0.56
26	---	---	5.2	e7.6	42	22	24	18	7.6	0.30	1.2	0.56
27	---	---	4.3	e9.3	33	18	22	14	4.3	2.2	1.2	-0.62
28	---	---	4.9	e11	26	18	28	12	8.6	-0.86	1.7	-0.50
29	---	---	7.3	10	---	16	31	12	5.2	2.8	1.1	2.4
30	---	---	6.5	8.0	---	20	29	9.8	2.2	0.85	1.4	4.4
31	---	---	5.7	5.4	---	19	---	7.3	---	2.3	0.85	---
TOTAL	---	---	428.8	188.6	730.1	1066.3	1167	668.2	1084.2	73.70	37.82	48.42
MEAN	---	---	13.83	6.084	26.07	34.40	38.90	21.55	36.14	2.377	1.220	1.614
MAX	---	---	21	11	79	83	94	41	104	7.0	6.2	5.5
MIN	---	---	4.3	2.4	4.9	9.3	16	7.3	2.2	-0.86	-2.3	-2.2
CFSM	---	---	0.53	0.23	1.00	1.32	1.49	0.83	1.38	0.09	0.05	0.06
IN.	---	---	0.61	0.27	1.04	1.52	1.66	0.95	1.55	0.11	0.05	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

MEAN	---	---	13.83	6.084	26.08	34.40	38.90	21.55	36.14	2.377	1.220	1.614
MAX	---	---	13.8	6.08	26.1	34.4	38.9	21.6	36.1	2.38	1.22	1.61
(WY)	---	---	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	---	---	13.8	6.08	26.1	34.4	38.9	21.6	36.1	2.38	1.22	1.61
(WY)	---	---	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR
(DECEMBER-SEPTEMBER)

ANNUAL TOTAL	5493.14
ANNUAL MEAN	18.07
HIGHEST DAILY MEAN	104 Jun 6
LOWEST DAILY MEAN	-2.3 Aug 13
ANNUAL SEVEN-DAY MINIMUM	-0.11 Aug 11
ANNUAL RUNOFF (CFSM)	0.69
ANNUAL RUNOFF (INCHES)	7.83
10 PERCENT EXCEEDS	48
50 PERCENT EXCEEDS	10
90 PERCENT EXCEEDS	0.88

e Estimated

05424075 DEAD CREEK NEAR HUSTISFORD, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.8	---	---	---	---	---	---	---	---	---	---
2	4.6	-0.20	---	---	---	---	---	---	---	---	---	---
3	0.42	0.56	---	---	---	---	---	---	---	---	---	---
4	3.6	1.0	---	---	---	---	---	---	---	---	---	---
5	1.3	2.1	---	---	---	---	---	---	---	---	---	---
6	1.2	1.8	---	---	---	---	---	---	---	---	---	---
7	2.2	2.1	---	---	---	---	---	---	---	---	---	---
8	1.4	1.3	---	---	---	---	---	---	---	---	---	---
9	-0.52	2.1	---	---	---	---	---	---	---	---	---	---
10	-0.71	1.9	---	---	---	---	---	---	---	---	---	---
11	0.27	3.0	---	---	---	---	---	---	---	---	---	---
12	-2.1	-0.09	---	---	---	---	---	---	---	---	---	---
13	3.7	0.40	---	---	---	---	---	---	---	---	---	---
14	3.2	-2.2	---	---	---	---	---	---	---	---	---	---
15	2.8	1.6	---	---	---	---	---	---	---	---	---	---
16	2.1	0.64	---	---	---	---	---	---	---	---	---	---
17	0.56	0.91	---	---	---	---	---	---	---	---	---	---
18	0.45	1.4	---	---	---	---	---	---	---	---	---	---
19	0.08	2.4	---	---	---	---	---	---	---	---	---	---
20	-1.1	1.6	---	---	---	-1.1	---	---	---	---	---	---
21	1.9	2.3	---	---	---	---	---	---	---	---	---	---
22	0.17	1.3	---	---	---	---	---	---	---	---	---	---
23	-1.6	0.98	---	---	---	---	---	---	---	---	---	---
24	-1.4	2.1	---	---	---	---	---	---	---	---	---	---
25	-2.0	1.4	---	---	---	---	---	---	---	---	---	---
26	-0.07	0.07	---	---	---	---	---	---	---	---	---	---
27	1.9	0.31	---	---	---	---	---	---	---	---	---	---
28	2.0	0.20	---	---	---	---	---	---	---	---	---	---
29	2.6	0.34	---	---	---	---	---	---	---	---	---	---
30	0.88	-0.68	---	---	---	---	---	---	---	---	---	---
31	-0.40	---	---	---	---	---	---	---	---	---	---	---
TOTAL	29.83	32.44	---	---	---	---	---	---	---	---	---	---
MEAN	0.962	1.081	---	---	---	---	---	---	---	---	---	---
MAX	4.6	3.0	---	---	---	---	---	---	---	---	---	---
MIN	-2.1	-2.2	---	---	---	---	---	---	---	---	---	---
CFSM	0.04	0.04	---	---	---	---	---	---	---	---	---	---
IN.	0.04	0.05	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003
MEAN	0.962	1.081	13.83	6.084	26.08	34.40	38.90	21.55	36.14	2.377	1.220	1.614
MAX	0.96	1.08	13.8	6.08	26.1	34.4	38.9	21.6	36.1	2.38	1.22	1.61
(WY)	2003	2003	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	0.96	1.08	13.8	6.08	26.1	34.4	38.9	21.6	36.1	2.38	1.22	1.61
(WY)	2003	2003	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR
(JANUARY-NOVEMBER)

FOR 2003 WATER YEAR
(OCTOBER-NOVEMBER)

WATER YEARS 2002 - 2003
(DECEMBER-NOVEMBER)

ANNUAL TOTAL	5126.61	62.27		
ANNUAL MEAN	15.35	1.021		
HIGHEST ANNUAL MEAN			18.1	2002
LOWEST ANNUAL MEAN			1.02	2003
HIGHEST DAILY MEAN	104	Jun 6	4.6	Oct 2
LOWEST DAILY MEAN	-2.3	Aug 13	-2.2	Nov 14
ANNUAL SEVEN-DAY MINIMUM	-0.59	Oct 20	-0.59	Oct 20
ANNUAL RUNOFF (CFSM)	0.59		0.039	
ANNUAL RUNOFF (INCHES)	7.31		0.09	
10 PERCENT EXCEEDS	46		2.8	41
50 PERCENT EXCEEDS	5.4		1.2	6.7
90 PERCENT EXCEEDS	0.24		-1.0	0.31

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 2001 to November 2002 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SOLIDS DISCHARGE: December 2001 to November 2002 (discontinued).

TOTAL-PHOSPHORUS DISCHARGE: December 2001 to November 2002 (discontinued).

INSTRUMENTATION.--Water-quality sampler December 2001 to November 2002 (discontinued).

REMARKS.--Chemical analyses by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated.

EXTREMES FOR CURRENT PERIOD.--

2002 WATER YEAR.--

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 16 tons, Apr. 10; minimum daily, -0.37 ton, Aug. 13, result of reverse flow.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 156 lb, Feb. 21; minimum daily, -11.5 lb, Aug. 13, result of reverse flow.

OCTOBER-NOVEMBER 2002.--

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 0.34 tons, Oct. 4; minimum daily, -0.09 ton, Oct. 12, result of reverse flow.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 12.5 lb, Oct. 2; minimum daily, -6.19 lb, Oct. 12, result of reverse flow.

SOLIDS, RESIDUE AT 105 DEG C, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	0.47	0.040	0.060	1.09	0.77	1.34	0.24	1.14	0.28	0.050
2	---	---	0.50	0.030	0.11	0.45	0.72	1.91	0.22	0.97	0.090	0.43
3	---	---	0.40	0.030	0.12	0.69	0.98	2.12	3.59	0.82	0.13	0.34
4	---	---	0.45	0.050	0.10	0.88	0.94	2.31	10.6	0.67	0.010	0.22
5	---	---	0.46	0.030	0.080	0.56	0.84	2.63	11.3	0.26	-0.080	0.35
6	---	---	0.46	0.020	0.11	0.42	0.89	3.16	9.40	0.32	0.27	0.17
7	---	---	0.41	0.050	0.10	0.39	1.19	4.16	10.5	-0.020	0.12	0.16
8	---	---	0.40	0.050	0.090	0.65	3.56	4.75	8.55	0.68	0.29	0.17
9	---	---	0.37	0.040	0.11	5.46	9.30	6.53	5.82	0.28	0.22	-0.10
10	---	---	0.34	0.040	0.16	4.50	16.0	3.85	3.84	0.43	0.10	-0.29
11	---	---	0.32	0.050	0.13	3.54	7.92	2.26	5.88	0.24	-0.050	0.32
12	---	---	0.20	0.040	0.15	1.91	6.00	1.66	6.62	0.080	-0.050	0.35
13	---	---	0.26	0.050	0.13	1.34	4.65	1.98	7.39	0.25	-0.37	0.22
14	---	---	0.18	0.050	0.13	1.19	3.81	2.52	8.03	0.10	0.16	0.19
15	---	---	0.19	0.070	0.17	1.09	3.06	2.91	7.61	0.010	0.13	0.28
16	---	---	0.19	0.070	0.18	1.07	2.59	2.68	5.65	0.11	0.003	0.12
17	---	---	0.16	0.050	0.20	0.98	2.03	2.04	4.09	0.22	0.050	0.14
18	---	---	0.15	0.060	0.21	1.06	1.69	1.40	2.68	0.23	0.13	0.15
19	---	---	0.15	0.070	1.31	1.24	1.96	1.12	2.49	0.10	0.14	0.21
20	---	---	0.14	0.080	7.73	1.73	1.67	0.71	1.80	0.060	0.37	0.30
21	---	---	0.13	0.090	5.85	2.04	1.35	0.54	2.01	0.14	0.26	0.19
22	---	---	0.14	0.080	3.12	2.33	1.17	0.49	2.62	0.41	0.87	0.080
23	---	---	0.12	0.080	2.66	2.45	0.88	0.40	2.13	0.030	0.38	-0.030
24	---	---	0.11	0.080	2.68	2.05	0.75	0.33	1.50	0.060	0.18	-0.010
25	---	---	0.080	0.080	3.03	1.49	0.56	0.51	1.24	0.14	0.34	-0.020
26	---	---	0.040	0.080	2.94	1.28	0.41	0.68	1.19	0.030	0.16	0.020
27	---	---	0.040	0.10	2.12	0.83	0.44	0.53	0.68	0.20	0.15	-0.030
28	---	---	0.040	0.12	1.54	0.81	0.69	0.45	1.36	-0.080	0.19	-0.020
29	---	---	0.060	0.12	---	0.76	0.96	0.48	0.84	0.27	0.12	0.12
30	---	---	0.060	0.090	---	0.93	1.11	0.38	0.36	0.080	0.16	0.23
31	---	---	0.050	0.060	---	0.86	---	0.29	---	0.23	0.10	---
TOTAL	---	---	7.070	1.950	35.320	46.07	78.89	57.12	130.23	8.460	4.853	4.310

05424075 DEAD CREEK NEAR HUSTISFORD, WI--Continued

PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	13.1	2.86	3.02	18.1	11.6	31.4	7.53	19.2	15.7	1.82
2	---	---	14.3	2.08	5.66	8.31	10.9	39.0	6.87	16.6	4.90	14.6
3	---	---	11.5	2.40	6.10	14.5	15.0	37.6	72.8	14.7	6.19	10.8
4	---	---	13.3	3.60	4.99	20.4	14.4	35.9	167	12.9	0.61	6.37
5	---	---	13.8	1.89	4.14	14.6	13.0	35.4	175	5.38	-3.63	9.45
6	---	---	14.0	1.53	5.52	12.1	13.7	37.0	155	7.14	11.1	4.44
7	---	---	12.7	3.43	5.37	12.8	15.1	42.3	141	-0.39	4.69	4.04
8	---	---	12.4	3.10	4.68	19.5	38.1	42.2	124	16.8	11.0	3.89
9	---	---	11.8	2.74	5.58	117	120	55.7	95.3	7.34	7.87	-2.08
10	---	---	10.9	2.69	8.15	103	149	44.7	71.0	12.1	3.56	-5.91
11	---	---	10.7	3.35	6.44	99.3	104	38.2	120	7.09	-1.70	5.81
12	---	---	7.94	2.45	7.36	75.7	84.7	38.0	142	2.57	-1.44	6.09
13	---	---	18.0	3.12	6.65	61.2	67.3	42.4	152	8.52	-11.5	4.44
14	---	---	12.8	3.28	6.27	49.6	56.4	47.4	156	3.76	4.98	4.29
15	---	---	14.3	4.10	8.13	40.0	46.5	47.4	140	0.47	4.21	7.34
16	---	---	15.2	4.09	8.78	34.9	40.2	40.2	98.8	4.36	0.12	3.69
17	---	---	14.1	3.05	9.96	28.1	32.4	35.2	67.7	9.15	1.53	4.91
18	---	---	12.8	3.28	10.1	26.3	27.6	28.8	42.4	9.89	4.43	6.09
19	---	---	12.9	4.21	50.2	24.6	32.9	27.1	39.5	4.44	4.65	10.0
20	---	---	11.7	4.45	146	26.8	28.6	20.3	28.6	2.70	13.0	16.4
21	---	---	10.5	5.32	156	25.4	23.8	17.7	32.3	6.31	9.16	11.8
22	---	---	11.2	4.52	111	27.8	21.9	16.2	42.1	19.8	33.0	5.26
23	---	---	9.66	4.62	97.6	31.7	20.2	13.1	34.5	1.52	19.5	-2.34
24	---	---	8.56	4.38	74.2	22.1	21.6	10.9	24.5	2.99	9.58	-1.02
25	---	---	6.00	4.34	59.0	14.8	20.0	16.8	20.2	7.50	16.6	-1.85
26	---	---	3.48	4.53	49.8	15.3	18.1	22.1	19.5	1.42	7.32	1.83
27	---	---	2.90	5.59	38.9	11.9	18.0	17.3	11.2	11.2	6.97	-2.05
28	---	---	3.27	6.73	23.4	12.0	24.4	14.6	22.6	-4.65	9.10	-1.63
29	---	---	4.86	6.26	---	11.2	29.6	15.5	14.0	16.2	5.35	8.00
30	---	---	4.30	4.84	---	13.8	29.8	12.2	5.96	5.10	6.68	14.1
31	---	---	3.80	3.34	---	13.0	---	9.12	---	13.6	3.88	---
TOTAL	---	---	326.77	116.17	923.00	1005.81	1148.8	931.72	2229.36	245.71	207.41	148.58

ROCK RIVER BASIN

05424075 DEAD CREEK NEAR HUSTISFORD, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEE (MG/L) (00530)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
NOV 2001							
08...	1400	--	--	10	--	--	.151
27...	1405	--	21	10	11	.133	.156
DEC							
11...	0930	--	17	10	10	.105	.164
13...	1035	--	18	10	4	.139	.180
13...	1045	--	25	50	<5	.137	.176
14...	0926	--	13	10	--	.140	.162
17...	1100	--	21	10	3	.108	.130
JAN 2002							
24...	0900	7.4	--	10	4	.071	.110
FEB							
20...	1215	--	77	10	22	.246	.353
20...	1830	--	83	10	83	.229	.432
21...	1015	--	82	10	22	.264	.376
21...	1815	--	89	50	22	--	.333
22...	1005	--	62	10	13	.219	.295
22...	1415	--	89	50	20	--	.310
23...	0215	--	57	50	15	--	.271
23...	1430	--	79	50	13	--	.251
26...	0810	--	22	10	27	.107	.193
MAR							
11...	1000	--	72	10	17	.164	.227
12...	0915	--	71	10	9	.127	.180
13...	1025	--	70	10	6	.102	.142
27...	0925	--	24	10	17	.054	.125
APR							
09...	0215	--	67	50	41	--	.211
09...	1330	--	77	10	24	.180	.301
09...	1645	--	92	50	61	--	.344
10...	0600	--	84	50	74	--	.322
10...	2130	--	101	50	52	--	.254
11...	0825	--	100	10	29	.098	.199
22...	1030	--	26	10	15	.097	.135
26...	1420	--	26	10	6	.088	.139
MAY							
09...	0850	--	32	10	102	.017	.402
12...	1345	--	34	50	19	--	.236
13...	0145	--	33	50	19	--	.210
13...	1035	--	44	10	17	.123	.185
16...	0930	--	31	10	40	.120	.288
21...	0910	--	16	10	13	.107	.218
JUN							
04...	0945	--	86	10	51	.229	.398
05...	0930	--	96	10	45	.203	.338
06...	0930	--	109	10	31	.178	.272
07...	1125	--	86	10	42	.169	.269
10...	1320	--	27	10	47	.217	.442
12...	0940	--	53	10	44	.286	.480
18...	0835	--	16	10	53	.197	.418
JUL							
02...	0817	--	3.8	10	61	.184	.515
15...	1100	--	1.3	10	28	.285	.537
30...	1030	--	5.3	10	36	.581	1.11
AUG							
12...	1005	--	-3.1	10	61	.471	.923
22...	1340	--	6.7	10	53	.506	.971
23...	0910	--	3.9	10	40	.662	1.09
26...	0945	--	7.1	10	49	.690	1.14
28...	0815	--	3.0	10	40	.550	.951
SEP							
12...	1115	--	2.1	10	52	.097	.440
24...	0920	--	-2.4	10	13	.472	.611

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEE (MG/L) (00530)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 2002						
04...	1120	1.0	10	36	.327	.521
10...	1110	-1.0	10	20	.420	.601
22...	1040	-2.8	10	5	.231	.297
27...	1015	-4.6	50	22	--	.263
NOV						
01...	1000	2.1	10	4	.191	.241
06...	1005	3.8	10	7	.314	.397
19...	1015	2.7	10	5	.321	.409
DEC						
05...	1115	--	10	11	.237	.384

05424082 ROCK RIVER AT HUSTISFORD, WI

LOCATION.--Lat 43°20'44", long 88°35'52", in SE ¼ SE ¼ (revised) sec.9, T.10 N., R.16 E., Dodge County, Hydrologic Unit 07090001, on left bank 600 ft downstream from bridge on State Highway 109 and 150 ft downstream of the Hustisford dam, at Hustisford.

DRAINAGE AREA.--511 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1978 to September 1985, December 1998 to December 2000, and November 2001 to November 2002 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 845.67 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor; records fair from Aug. 21 to Nov. 30 (see page 11). Flow partly regulated by dam at Hustisford. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e240	354	205	138	802	72	629	155	e120	e30	6.1
2	---	e240	340	166	139	753	132	598	148	e100	e30	11
3	---	e230	299	137	139	740	201	584	437	e90	e28	28
4	---	e220	206	111	139	731	212	579	654	74	e30	21
5	---	e210	172	120	138	650	212	577	706	63	e32	16
6	---	e200	201	142	139	604	198	397	680	63	e30	13
7	---	182	214	141	139	572	187	325	549	63	e26	11
8	---	200	202	139	138	531	287	343	506	58	e24	11
9	---	184	193	136	157	579	566	455	387	86	e20	11
10	---	193	136	134	203	616	898	490	225	71	e18	17
11	---	189	e120	134	206	655	1000	494	228	69	e16	11
12	---	188	127	134	201	761	1210	509	328	74	e22	9.1
13	---	194	165	134	204	830	1260	591	436	74	e16	7.3
14	---	207	222	135	201	934	1070	643	557	75	e10	7.7
15	---	218	233	135	243	1030	959	599	565	70	e5.8	11
16	---	253	234	136	266	1070	834	580	542	63	e13	6.6
17	---	284	243	135	406	1060	798	584	436	60	e15	5.6
18	---	278	241	134	414	1050	788	572	242	58	e6.0	6.1
19	---	301	251	132	314	1000	832	554	108	54	e12	8.5
20	---	269	237	133	297	989	851	437	79	44	e10	22
21	---	262	232	134	445	1000	859	334	157	35	e17	37
22	---	249	229	135	630	967	957	185	190	53	24	34
23	---	246	229	137	658	959	974	150	192	53	27	26
24	---	246	228	137	665	954	792	159	245	37	28	25
25	---	262	224	136	885	848	720	170	258	30	23	18
26	---	261	218	137	968	756	759	162	194	38	19	22
27	---	300	214	137	911	646	735	170	168	37	16	26
28	---	317	215	137	891	276	760	170	e180	38	12	19
29	---	346	216	138	---	56	753	164	e160	40	11	24
30	---	365	213	138	---	56	746	152	e140	37	9.3	24
31	---	---	209	138	---	62	---	158	---	35	7.2	---
TOTAL	---	7334	6817	4277	10274	22537	20622	12514	9852	1862	587.3	495.0
MEAN	---	244.5	219.9	138.0	366.9	727.0	687.4	403.7	328.4	60.06	18.95	16.50
MAX	---	365	354	205	968	1070	1260	643	706	120	32	37
MIN	---	182	120	111	138	56	72	150	79	30	5.8	5.6
CFSM	---	0.48	0.43	0.27	0.72	1.42	1.35	0.79	0.64	0.12	0.04	0.03
IN.	---	0.53	0.50	0.31	0.75	1.64	1.50	0.91	0.72	0.14	0.04	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	291.3	331.4	254.4	161.7	297.7	647.9	938.6	479.6	353.0	233.0	152.2	236.2													
MAX	752	824	642	375	500	1439	2377	1100	1101	716	446	667													
(WY)	1981	1985	1983	1985	1984	1985	1979	1979	1984	1984	1979	1978													
MIN	14.5	127	83.8	53.6	93.2	110	312	123	20.5	14.8	18.9	4.17													
(WY)	1983	2000	2001	2000	2000	1980	2000	1981	1985	1985	2002	1982													

SUMMARY STATISTICS

WATER YEARS 1978 - 2002

ANNUAL MEAN	370.2
HIGHEST ANNUAL MEAN	590
LOWEST ANNUAL MEAN	218
HIGHEST DAILY MEAN	3340
LOWEST DAILY MEAN	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00
MAXIMUM PEAK FLOW	3550
MAXIMUM PEAK STAGE	6.80
INSTANTANEOUS LOW FLOW	0.00
ANNUAL RUNOFF (CFSM)	0.72
ANNUAL RUNOFF (INCHES)	9.84
10 PERCENT EXCEEDS	985
50 PERCENT EXCEEDS	210
90 PERCENT EXCEEDS	16

(a) Also occurred June 21 to July 11, 1985

(e) Estimated due to missing record

05424082 ROCK RIVER AT HUSTISFORD, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND, OCTOBER 2002 TO NOVEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	146	---	---	---	---	---	---	---	---	---	---
2	35	138	---	---	---	---	---	---	---	---	---	---
3	35	131	---	---	---	---	---	---	---	---	---	---
4	62	130	---	---	---	---	---	---	---	---	---	---
5	69	128	---	---	---	---	---	---	---	---	---	---
6	67	128	---	---	---	---	---	---	---	---	---	---
7	64	126	---	---	---	---	---	---	---	---	---	---
8	48	101	---	---	---	---	---	---	---	---	---	---
9	54	114	---	---	---	---	---	---	---	---	---	---
10	52	123	---	---	---	---	---	---	---	---	---	---
11	52	123	---	---	---	---	---	---	---	---	---	---
12	59	125	---	---	---	---	---	---	---	---	---	---
13	65	124	---	---	---	---	---	---	---	---	---	---
14	43	123	---	---	---	---	---	---	---	---	---	---
15	57	123	---	---	---	---	---	---	---	---	---	---
16	54	123	---	---	---	---	---	---	---	---	---	---
17	51	122	---	---	---	---	---	---	---	---	---	---
18	49	107	---	---	---	---	---	---	---	---	---	---
19	75	94	---	---	---	---	---	---	---	---	---	---
20	67	113	---	---	---	---	---	---	---	---	---	---
21	62	121	---	---	---	---	---	---	---	---	---	---
22	81	130	---	---	---	---	---	---	---	---	---	---
23	70	137	---	---	---	---	---	---	---	---	---	---
24	66	137	---	---	---	---	---	---	---	---	---	---
25	73	136	---	---	---	---	---	---	---	---	---	---
26	87	135	---	---	---	---	---	---	---	---	---	---
27	93	115	---	---	---	---	---	---	---	---	---	---
28	155	104	---	---	---	---	---	---	---	---	---	---
29	173	101	---	---	---	---	---	---	---	---	---	---
30	163	94	---	---	---	---	---	---	---	---	---	---
31	154	---	---	---	---	---	---	---	---	---	---	---
TOTAL	2262	3652	---	---	---	---	---	---	---	---	---	---
MEAN	72.97	121.7	---	---	---	---	---	---	---	---	---	---
MAX	173	146	---	---	---	---	---	---	---	---	---	---
MIN	27	94	---	---	---	---	---	---	---	---	---	---
CFSM	0.14	0.24	---	---	---	---	---	---	---	---	---	---
IN.	0.16	0.27	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	269.4	312.4	254.4	161.7	297.7	647.9	938.6	479.6	353.0	233.0	152.2	236.2														
MAX	752	824	642	375	500	1439	2377	1100	1101	716	446	667														
(WY)	1981	1985	1983	1985	1984	1985	1979	1984	1984	1984	1979	1978														
MIN	14.5	122	83.8	53.6	93.2	110	312	123	20.5	14.8	18.9	4.17														
(WY)	1983	2003	2001	2000	2000	1980	2000	1981	1985	1985	2002	1982														

SUMMARY STATISTICS

WATER YEARS 1978 - 2003

ANNUAL MEAN	370.2
HIGHEST ANNUAL MEAN	590 1979
LOWEST ANNUAL MEAN	218 2000
HIGHEST DAILY MEAN	3340 Apr 4 1979
LOWEST DAILY MEAN	0.00 (a) Aug 24 1984
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 21 1985
MAXIMUM PEAK FLOW	3550 Apr 4 1979
MAXIMUM PEAK STAGE	6.80 Apr 4 1979
INSTANTANEOUS LOW FLOW	0.00 Aug 21 2002
ANNUAL RUNOFF (CFSM)	0.72
ANNUAL RUNOFF (INCHES)	9.84
10 PERCENT EXCEEDS	985
50 PERCENT EXCEEDS	210
90 PERCENT EXCEEDS	16

(a) Also occurred June 21 to July 11, 1985

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1998 to December 2000, November 2001 to November 2002 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SOLIDS DISCHARGE: December 1998 to December 2000, November 2001 to November 2002 (discontinued).
TOTAL-PHOSPHORUS DISCHARGE: December 1998 to December 2000, November 2001 to November 2002 (discontinued).

REMARKS.--Chemical analyses by the Wisconsin State Laboratory of Hygiene. Samples are equal-width increment samples collected by U.S. Geological Survey personnel.

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 447 tons, Apr. 28, 1999; minimum daily, 0.047 ton, Feb. 8, 2000.
TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 6,430 lb, Apr. 6, 1999; minimum daily, 1.55 lb, Feb. 8, 2000.

EXTREMES FOR CURRENT PERIOD.--

2002 WATER YEAR.--

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 327 tons, Apr. 13; minimum daily, 0.38 ton, Jan. 24.
TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 2,290 lb, Apr. 13; minimum daily, 11.7 lb, Sept. 17.

OCTOBER-NOVEMBER 2002.--

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 12.4 tons, Oct. 29; minimum daily, 1.74 ton, Oct. 1.
TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 368 lb, Oct. 29; minimum daily, 50.9 lb, Oct. 1.

SOLIDS, RESIDUE AT 105 DEG C, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	38.5	73.1	4.99	0.94	40.9	7.43	79.8	37.6	25.7	4.03	0.67
2	---	38.9	59.2	3.69	1.06	35.9	13.7	75.9	36.0	20.8	4.01	1.38
3	---	37.3	44.4	2.75	1.19	33.1	21.0	74.2	112	17.6	3.73	3.72
4	---	35.6	26.5	2.04	1.33	30.7	22.3	73.5	181	13.6	3.98	2.63
5	---	34.0	21.5	1.98	1.49	25.7	22.5	73.2	188	10.9	4.24	1.96
6	---	32.4	25.7	2.13	1.68	22.4	21.1	51.6	120	10.1	3.96	1.49
7	---	35.6	27.4	1.93	1.87	19.9	20.1	55.9	110	9.51	3.43	1.35
8	---	53.8	24.3	1.74	2.08	17.3	35.0	78.5	101	8.61	3.15	1.32
9	---	33.5	21.3	1.54	2.68	17.7	103	128	75.1	17.8	2.62	1.32
10	---	33.8	13.9	1.38	3.85	17.7	199	118	42.6	14.1	2.35	2.01
11	---	33.1	11.3	1.25	4.39	18.6	253	98.7	47.0	12.5	2.08	1.33
12	---	32.7	11.6	1.14	4.80	28.2	323	83.9	75.1	12.4	2.85	1.06
13	---	33.7	14.7	1.03	5.46	42.1	327	88.2	109	11.5	2.07	0.83
14	---	35.5	19.6	0.94	6.02	55.9	262	131	150	10.8	1.29	0.86
15	---	38.9	19.8	0.86	8.17	71.1	220	144	157	9.41	0.75	1.15
16	---	59.7	19.0	0.78	9.98	84.4	180	153	154	8.50	1.67	0.70
17	---	67.7	19.2	0.71	17.1	87.6	164	153	127	8.13	1.92	0.58
18	---	63.5	19.3	0.64	19.5	88.6	163	147	71.1	8.01	0.77	0.62
19	---	69.8	24.3	0.57	16.5	86.1	177	140	30.7	7.61	1.53	0.84
20	---	48.0	18.2	0.52	17.3	86.4	186	108	21.2	6.26	1.28	2.35
21	---	44.0	16.2	0.48	26.6	89.2	192	81.2	40.3	5.03	2.16	4.44
22	---	41.3	14.5	0.44	44.1	87.8	214	45.1	46.7	7.88	3.05	3.84
23	---	40.7	13.2	0.40	42.7	88.8	193	36.5	45.8	7.88	3.04	2.59
24	---	40.7	12.0	0.38	38.6	90.1	137	38.7	59.2	5.37	3.44	2.31
25	---	43.0	10.6	0.42	65.0	81.7	107	41.3	62.2	4.31	3.12	1.56
26	---	42.8	9.42	0.47	61.0	74.2	99.0	39.3	45.9	5.35	2.79	1.81
27	---	50.3	8.43	0.53	52.7	64.5	93.2	41.4	39.0	5.18	2.18	2.09
28	---	61.6	7.67	0.59	48.3	27.7	96.5	41.3	40.9	5.26	1.48	1.44
29	---	70.1	7.00	0.66	---	5.74	95.5	39.9	35.7	5.39	1.27	1.76
30	---	77.4	6.27	0.75	---	5.75	94.7	37.0	30.6	5.08	1.07	1.65
31	---	---	5.59	0.84	---	6.35	---	38.5	---	5.49	0.80	---
TOTAL	---	1367.9	625.18	38.57	506.39	1532.14	4042.03	2535.6	2391.7	306.06	76.11	51.66

ROCK RIVER BASIN

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05424082 ROCK RIVER AT HUSTISFORD, WI--Continued

PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	212	433	160	75.2	1030	67.6	1220	285	264	71.4	14.6
2	---	216	325	127	75.8	938	125	1200	267	223	72.0	27.7
3	---	209	226	103	76.3	897	202	1220	840	196	67.8	71.7
4	---	201	127	82.2	76.3	863	221	1250	1370	157	73.3	51.5
5	---	194	119	87.4	76.6	747	222	1280	1420	131	78.9	39.2
6	---	186	171	101	77.5	675	208	911	1180	127	74.7	30.2
7	---	214	221	98.9	77.6	623	196	774	1010	124	65.4	26.2
8	---	43.0	227	96.4	77.2	562	315	844	951	112	60.9	24.7
9	---	66.0	221	92.2	90.2	597	661	1150	730	184	51.2	23.7
10	---	172	160	89.5	123	618	1120	1200	429	152	46.5	36.5
11	---	170	143	88.1	133	648	1380	1180	460	143	41.7	24.2
12	---	171	147	86.6	139	796	2000	1180	703	149	57.6	19.2
13	---	179	185	85.0	150	956	2290	1350	960	146	41.7	15.3
14	---	191	243	83.9	157	1110	1940	1520	1250	144	25.8	16.2
15	---	202	248	82.9	202	1250	1730	1390	1290	131	14.8	22.1
16	---	252	242	81.5	235	1320	1500	1310	1230	117	32.6	13.8
17	---	339	246	79.9	395	1320	1430	1320	985	110	37.3	11.7
18	---	393	239	77.9	443	1280	1400	1290	536	106	14.9	12.7
19	---	408	245	75.4	367	1180	1480	1250	224	99.2	29.1	17.7
20	---	280	228	74.4	364	1130	1500	985	155	81.8	24.1	46.8
21	---	224	219	74.1	416	1110	1510	750	312	68.9	40.6	79.7
22	---	215	212	73.4	605	1040	1670	410	380	113	59.6	73.6
23	---	218	209	72.9	644	1000	1680	325	388	117	67.7	55.0
24	---	224	204	71.9	659	969	1350	339	502	81.6	72.8	53.3
25	---	244	197	71.9	994	839	1210	355	528	67.1	58.2	37.6
26	---	251	188	72.5	1320	725	1260	332	391	85.2	47.3	45.0
27	---	405	182	72.7	1230	606	1250	343	337	84.3	39.5	53.6
28	---	522	179	73.1	1170	258	1340	336	369	87.5	29.0	38.2
29	---	630	177	73.8	---	53.1	1370	319	336	91.9	25.8	48.4
30	---	566	171	74.4	---	52.8	1410	290	301	89.4	22.3	46.7
31	---	---	165	74.8	---	58.0	---	296	---	100	17.1	---
TOTAL	---	7797.0	6499	2658.7	10448.7	25250.9	34037.6	27919	20119	3882.9	1461.6	1076.8

ROCK RIVER BASIN

05424082 ROCK RIVER AT HUSTISFORD, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEED (MG/L) (00530)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
NOV 2001							
08...	1030	--	250	10	108	.038	.375
27...	1315	--	326	10	59	.014	.261
DEC							
11...	0800	120	--	10	35	.015	.223
13...	1140	--	195	10	33	.013	.208
14...	0945	--	247	10	33	.021	.203
17...	1120	--	247	10	29	.013	.187
JAN 2002							
24...	1000	--	137	10	1	.015	.097
FEB							
20...	1245	--	322	10	22	.014	.241
21...	1035	--	357	10	21	.013	.165
22...	1105	--	656	10	27	.036	.179
26...	0850	--	962	10	23	.107	.258
MAR							
11...	1040	--	618	10	10	.075	.181
12...	0930	--	755	10	13	--	.190
13...	1050	--	830	10	19	.096	.215
27...	0940	--	628	10	37	.014	.173
APR							
09...	1405	--	682	10	70	.014	.216
11...	0910	--	1000	10	94	.009	.247
22...	1045	--	1000	10	85	.019	.324
26...	1445	--	769	10	47	.017	.306
MAY							
09...	0920	--	481	10	110	.021	.470
13...	1055	--	631	10	51	.020	.419
16...	0955	--	594	10	99	.019	.418
21...	0930	--	371	10	90	.018	.417
JUN							
04...	1015	--	721	10	102	.028	.392
05...	1100	--	708	10	108	.034	.384
06...	0950	--	676	10	59	.031	.309
07...	1045	--	497	10	77	.021	.346
10...	1340	--	190	10	69	.023	.351
12...	0955	--	366	10	84	.012	.397
18...	0850	--	203	10	110	.015	.416
JUL							
02...	0845	100	--	10	78	.110	.415
15...	1120	--	73	10	49	.023	.345
30...	1115	--	34	10	50	.065	.435
AUG							
12...	1030	22	--	10	48	.104	.487
22...	1505	--	26	10	47	.077	.453
23...	1015	--	25	10	40	.095	.459
26...	1015	--	21	10	55	.070	.454
28...	0835	--	12	10	45	.070	.442
SEP							
12...	1135	--	10	10	43	.061	.387
24...	0945	--	24	10	34	.116	.394

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEED (MG/L) (00530)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 2002							
04...	1145	77	10	10	26	.172	.368
10...	1130	49	10	10	22	.179	.356
22...	1110	82	10	10	23	.229	.395
NOV							
01...	1025	148	10	10	26	.236	.363
06...	1025	129	10	10	15	.151	.348
19...	1105	100	10	10	16	.084	.280
DEC							
05...	1130	--	10	10	41	.028	.238

ROCK RIVER BASIN

05425500 ROCK RIVER AT WATERTOWN, WI

LOCATION.--Lat 43°11'17", long 88°43'34", in NE ¼ SW ¼ sec.4, T.8 N., R.15 E., Jefferson County, Hydrologic Unit 07090001, on left bank, 700 ft downstream from Milwaukee Street bridge, 1.1 mi downstream from Silver Creek, at Watertown.

DRAINAGE AREA.--969 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1931 to September 1970, October 1976 to current year; June to September 1914, daily gage heights available only in District files. Several 1914 water year discharges published in WSP 385.

REVISED RECORDS.--WSP 1438: 1933,1935(M), 1937(M), 1938-39, 1945(M); WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 792.58 ft above NGVD of 1929. Prior to Sept. 26, 1933, nonrecording gage at site 700 ft upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Flow partly regulated by powerplant at Watertown. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	428	1080	690	e350	e380	1160	1220	1430	389	265	113	101
2	357	1060	697	e350	e340	1180	1110	1450	371	234	101	113
3	305	1030	700	e330	e320	e840	990	1440	457	218	95	128
4	274	966	715	e300	e310	e820	806	1390	941	200	103	137
5	251	852	731	e290	e310	e860	714	1360	1280	175	96	176
6	260	754	685	e260	e310	e960	647	1340	1320	165	92	174
7	255	666	623	e240	e310	e1100	631	1310	1270	145	96	146
8	252	574	612	e270	e320	e1200	811	1280	1250	151	89	133
9	241	521	602	e290	e320	1770	1420	1290	1270	175	73	111
10	228	480	579	306	e390	1490	1420	1220	1250	164	65	112
11	241	484	542	318	495	1630	1300	1150	1350	175	66	120
12	264	462	491	322	518	1590	1270	1160	1390	175	67	106
13	317	453	500	299	522	1550	1290	1150	1290	165	96	95
14	443	448	543	335	504	1560	1340	1110	1220	149	112	84
15	547	460	587	330	482	1530	1390	1090	1180	147	143	67
16	592	467	633	331	483	1510	1440	1070	1110	146	167	55
17	609	475	674	327	513	1490	1470	1080	1080	132	123	51
18	612	453	687	e320	543	1480	1510	1080	1060	129	85	47
19	609	558	674	e310	704	1470	1570	1060	1030	122	82	84
20	586	493	658	312	1030	1480	1550	1040	984	119	80	97
21	548	528	624	336	1120	1480	1570	1020	894	112	98	117
22	541	519	603	319	1060	1470	1590	975	1166	106	134	173
23	848	502	579	351	1040	1470	1580	882	580	105	194	189
24	1080	529	499	358	1060	1470	1550	837	463	107	206	188
25	1130	589	426	363	1100	1440	1520	761	438	112	246	185
26	1070	609	415	380	1120	1420	1480	670	437	158	221	169
27	1010	629	e400	394	1120	1390	1450	560	457	163	157	134
28	1070	641	e380	411	1130	1380	1490	513	431	162	150	125
29	1050	654	e370	419	---	1360	1500	482	374	144	122	123
30	1060	672	e370	423	---	1320	1450	443	277	131	117	104
31	1090	---	e370	396	---	1290	---	407	---	127	111	---
TOTAL	18168	18608	17659	10340	17854	42160	39079	32050	26510	4788	3700	3644
MEAN	586.1	620.3	569.6	333.5	637.6	1360	1303	1034	883.7	154.5	119.4	121.5
MAX	1130	1080	731	423	1130	1770	1590	1450	1390	265	246	189
MIN	228	448	370	240	310	820	631	407	277	105	65	47
CFSM	0.60	0.64	0.59	0.34	0.66	1.40	1.34	1.07	0.91	0.16	0.12	0.13
IN.	0.70	0.71	0.68	0.40	0.69	1.62	1.50	1.23	1.02	0.18	0.14	0.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2002, BY WATER YEAR (WY)

MEAN	342.2	416.0	338.0	284.9	368.9	963.4	1300	737.4	472.6	351.5	256.4	261.5
MAX	2981	2034	1148	1055	1627	2448	3875	2634	1785	1625	1540	1552
(WY)	1987	1986	1986	1946	1938	1985	1979	1993	1996	1993	1960	1986
MIN	11.6	27.2	22.3	20.4	29.8	114	192	58.2	23.6	19.4	8.42	3.60
(WY)	1964	1964	1938	1940	1936	1964	1964	1958	1931	1936	1934	1932

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1931 - 2002	
ANNUAL TOTAL	288345		234560			
ANNUAL MEAN	790.0		642.6		509.5	
HIGHEST ANNUAL MEAN					1186	
LOWEST ANNUAL MEAN					64.5	
HIGHEST DAILY MEAN	2130	Jun 19	1770	Mar 9	4970	Apr 4 1959
LOWEST DAILY MEAN	100	Aug 15	47	Sep 18	0.90	(a)Oct 15 1939
ANNUAL SEVEN-DAY MINIMUM	120	Aug 10	69	Sep 13	1.1	Sep 15 1932
MAXIMUM PEAK FLOW			2160	Mar 9	(b)5080	Mar 31 1979
MAXIMUM PEAK STAGE			4.29	Mar 9	(c)6.96	Jan 17 1997
ANNUAL RUNOFF (CFSM)	0.82		0.66		0.53	
ANNUAL RUNOFF (INCHES)	11.07		9.00		7.14	
10 PERCENT EXCEEDS	1620		1420		1350	
50 PERCENT EXCEEDS	674		500		271	
90 PERCENT EXCEEDS	180		113		41	

(a) Also occurred Sept. 9, 1944

(b) Gage height, 6.19 ft

(c) Backwater from ice

(e) Estimated due to ice effect or missing record

05425912 BEAVERDAM RIVER AT BEAVER DAM, WI

LOCATION.--Lat 43°26'57", long 88°50'21", in NE ¼ SW ¼ sec.4, T.11 N., R.14 E., Dodge County, Hydrologic Unit 07090002, on left bank 5 ft upstream from bridge on Davis Street, 0.8 mi downstream from outlet of Beaverdam Lake, at Beaver Dam.

DRAINAGE AREA.--157 mi².

PERIOD OF RECORD.--March 1985 to current year. Instantaneous stages from November 1984 to February 1985 in District data files.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 839.42 ft above NGVD of 1929.

REMARKS.--Records good (see page 11). Flow regulated by dam 0.8 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	34	86	73	32	236	63	161	45	73	18	8.1
2	88	43	76	71	31	267	68	219	41	63	18	15
3	90	38	78	69	32	253	73	228	152	56	14	7.2
4	83	40	77	62	31	241	70	219	260	52	19	5.8
5	84	37	104	55	31	229	53	215	297	45	17	6.1
6	82	37	121	55	31	248	22	215	241	41	15	6.0
7	69	38	118	55	31	273	24	212	231	40	14	6.2
8	42	53	117	54	31	271	37	181	282	39	14	6.4
9	35	38	104	53	31	269	32	232	275	40	13	7.7
10	36	45	101	53	49	264	23	204	263	33	13	7.8
11	42	41	99	36	45	255	25	165	312	30	13	6.7
12	44	38	99	29	45	251	32	193	320	30	12	6.1
13	40	38	110	29	45	249	19	143	307	28	14	6.9
14	49	40	104	30	44	247	21	72	309	27	12	8.0
15	45	41	97	31	44	180	21	38	299	26	10	7.7
16	56	40	103	32	44	142	21	42	282	25	9.7	7.1
17	40	39	113	32	44	221	24	42	138	23	11	6.9
18	37	39	105	31	44	287	26	43	38	21	8.4	6.5
19	41	62	122	31	62	275	36	41	34	20	7.9	8.2
20	40	41	101	32	127	269	41	42	39	17	6.9	8.7
21	41	40	94	32	157	301	41	41	50	16	9.3	5.8
22	44	36	92	31	184	252	47	36	53	23	10	5.1
23	37	36	95	30	196	241	42	39	56	18	7.4	5.3
24	34	38	94	29	198	234	50	40	58	14	8.6	5.0
25	54	49	88	29	204	228	64	43	60	13	7.9	6.3
26	55	43	86	29	204	195	68	41	66	16	7.1	7.4
27	34	47	84	29	198	122	84	41	82	18	7.4	7.1
28	25	50	82	30	191	65	150	39	86	18	7.5	6.8
29	32	54	80	30	---	62	161	47	78	20	7.7	8.9
30	31	78	78	29	---	67	161	46	75	19	8.2	7.1
31	30	---	76	30	---	67	---	47	---	17	8.0	---
TOTAL	1553	1293	2984	1241	2406	6761	1599	3367	4829	921	349.0	213.9
MEAN	50.10	43.10	96.26	40.03	85.93	218.1	53.30	108.6	161.0	29.71	11.26	7.130
MAX	93	78	122	73	204	301	161	232	320	73	19	15
MIN	25	34	76	29	31	62	19	36	34	13	6.9	5.0
CFSM	0.32	0.27	0.61	0.25	0.55	1.39	0.34	0.69	1.03	0.19	0.07	0.05
IN.	0.37	0.31	0.71	0.29	0.57	1.60	0.38	0.80	1.14	0.22	0.08	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	72.90	97.75	83.63	78.46	79.56	159.2	180.6	107.7	120.4	98.46	68.89	58.54						
MAX	446	350	289	281	182	312	527	449	369	561	287	282						
(WY)	1987	1986	1986	1986	1986	1994	1993	1993	1993	1993	1999	1986						
MIN	2.89	6.66	14.2	21.3	20.8	10.9	3.97	4.55	4.86	2.86	3.05	5.13						
(WY)	1989	1989	1995	1995	1988	1988	2000	1989	1985	1988	1988	1988						

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1985 - 2002

ANNUAL TOTAL	40948	27516.9		
ANNUAL MEAN	112.2	75.39	101.0	
HIGHEST ANNUAL MEAN			244	1993
LOWEST ANNUAL MEAN			39.0	1988
HIGHEST DAILY MEAN	439	Jun 19	657	Jul 12,14 1993
LOWEST DAILY MEAN	11	Jan 31	5.0	Sep 24 1988
ANNUAL SEVEN-DAY MINIMUM	18	Jan 31	6.0	Sep 21 1987
MAXIMUM PEAK FLOW			360	Jun 11 (a)758 Jul 9 1993
MAXIMUM PEAK STAGE			7.85	Jun 11 9.35 Sep 26 1986
ANNUAL RUNOFF (CFSM)	0.71		0.48	0.64
ANNUAL RUNOFF (INCHES)	9.70		6.52	8.74
10 PERCENT EXCEEDS	243		228	266
50 PERCENT EXCEEDS	90		42	52
90 PERCENT EXCEEDS	32		8.2	7.7

(a) Gage height, 9.32 ft

ROCK RIVER BASIN

05426000 CRAWFISH RIVER AT MILFORD, WI

LOCATION.--Lat 43°06'00", long 88°50'58", in NW ¼ SW ¼ sec.4, T.7 N., R.14 E., Jefferson County, Hydrologic Unit 07090002, on left bank near upstream side of highway bridge in Milford, 1.4 mi downstream from Rock Creek and 9.8 mi upstream from mouth.

DRAINAGE AREA.--762 mi².

PERIOD OF RECORD.--June 1931 to current year.

REVISED RECORDS.--WSP 975: 1937-38. WSP 1438: 1932-33(M), 1935(M), 1937, 1938-41(M), 1943-44(M), 1947-48(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 779.40 ft above NGVD of 1929. Prior to July 28, 1966, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Some diurnal fluctuation at lower flows, due to manipulation of gates on small dams upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	481	463	391	e310	e200	e720	540	652	359	320	104	59
2	427	477	383	e300	e190	e660	538	693	341	292	120	50
3	386	436	401	297	e190	e560	523	683	372	270	99	86
4	365	415	396	280	e180	e640	508	669	568	262	102	94
5	347	371	343	271	e180	e600	499	679	830	231	107	90
6	327	335	397	265	e170	e580	467	662	1000	212	105	80
7	301	338	437	253	e160	e570	434	687	1100	197	99	79
8	260	341	441	243	e170	e570	549	646	1170	172	96	76
9	245	285	424	241	e190	e700	782	640	1200	212	86	72
10	236	304	410	245	e220	e900	860	621	1160	210	77	75
11	281	285	414	250	e280	e1000	940	627	1170	200	78	70
12	285	262	407	259	e280	e1100	1030	700	1140	188	72	61
13	259	255	432	257	e280	1200	1040	748	1080	176	88	58
14	263	278	449	253	e290	1220	1010	769	1040	161	96	61
15	264	280	455	239	e290	1210	978	732	985	146	73	69
16	293	288	484	228	e290	1170	909	765	940	129	92	56
17	265	282	528	e220	e320	1130	904	759	883	127	81	56
18	233	270	520	e220	e340	1080	851	700	833	125	95	58
19	252	303	544	e210	e340	1010	868	618	781	118	95	57
20	249	264	499	208	e430	978	825	563	750	108	77	73
21	248	268	462	201	e660	980	768	489	697	92	66	94
22	244	268	419	199	e720	890	729	403	635	119	98	93
23	362	275	423	205	e780	874	659	388	573	129	108	75
24	487	283	355	210	e800	874	621	409	520	115	112	83
25	560	321	e350	214	e820	858	625	393	472	105	106	69
26	684	372	e340	223	e820	807	606	351	439	138	99	76
27	689	388	e330	e220	e800	729	572	377	440	137	96	82
28	610	416	e320	e220	e760	662	631	384	416	138	87	63
29	643	422	e310	e230	---	659	607	386	382	136	82	64
30	605	413	e310	e230	---	615	635	369	355	129	76	60
31	514	---	e310	e210	---	567	---	375	---	122	66	---
TOTAL	11665	9958	12684	7411	11150	26113	21508	17937	22631	5216	2838	2139
MEAN	376.3	331.9	409.2	239.1	398.2	842.4	716.9	578.6	754.4	168.3	91.55	71.30
MAX	689	477	544	310	820	1220	1040	769	1200	320	120	94
MIN	233	255	310	199	160	560	434	351	341	92	66	50
CFSM	0.49	0.44	0.54	0.31	0.52	1.11	0.94	0.76	0.99	0.22	0.12	0.09
IN.	0.57	0.49	0.62	0.36	0.54	1.27	1.05	0.88	1.10	0.25	0.14	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2002, BY WATER YEAR (WY)

	MEAN	269.8	300.7	251.9	239.0	315.8	1022	983.9	514.4	388.4	296.6	201.7	240.9
MAX	2565	1958	1065	1278	1576	2473	3206	2337	2263	2189	899	1881	
(WY)	1987	1986	1983	1946	1938	1948	1959	1973	2000	1993	1993	1986	
MIN	16.8	25.9	18.0	15.2	16.2	56.2	193	73.8	34.4	17.9	18.0	8.11	
(WY)	1964	1950	1959	1940	1959	1940	1964	1958	1934	1965	1964	1958	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1931 - 2002

ANNUAL TOTAL	197334	151250	
ANNUAL MEAN	540.6	414.4	420.0
HIGHEST ANNUAL MEAN			1117 1993
LOWEST ANNUAL MEAN			61.8 1964
HIGHEST DAILY MEAN	1880 Jun 22	1220 Mar 14	6130 Apr 6 1959
LOWEST DAILY MEAN	107 Aug 21	50 Sep 2	0.30 Sep 15 1958
ANNUAL SEVEN-DAY MINIMUM	124 Aug 16	59 Sep 13	1.5 Sep 11 1958
MAXIMUM PEAK FLOW		1230 Mar 13	6140 Apr 6 1959
MAXIMUM PEAK STAGE		4.39 Mar 13	11.15 Apr 6 1959
ANNUAL RUNOFF (CFSM)	0.71	0.54	0.55
ANNUAL RUNOFF (INCHES)	9.63	7.38	7.49
10 PERCENT EXCEEDS	1160	859	1090
50 PERCENT EXCEEDS	441	340	200
90 PERCENT EXCEEDS	180	86	40

(e) Estimated due to ice effect or missing record

05426250 BARK RIVER NEAR ROME, WI

LOCATION.--Lat 42°57'37" long 88°40'14", in SE ¼ SW ¼ sec.24, T.6 N., R.15 E., Jefferson County, Hydrologic Unit 07090001, on left bank just upstream from bridge on Cushman Road, 2.8 mi southwest of Rome.

DRAINAGE AREA.--122 mi².

PERIOD OF RECORD.--October 1979 to September 1982. October 1982 to September 1983 (fragmentary). October 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 810 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	132	110	e56	e60	e90	92	109	84	58	37	62
2	100	120	111	e57	e58	e85	87	108	82	62	41	39
3	92	114	106	e57	e57	e84	92	110	99	57	47	42
4	78	108	103	e57	e57	e83	103	109	139	48	45	43
5	78	104	102	e58	e56	e86	111	105	157	40	34	44
6	77	99	98	61	e56	89	109	109	153	41	32	45
7	77	97	98	61	e57	87	113	104	140	44	32	43
8	77	89	97	59	e57	92	147	111	111	34	31	43
9	74	90	95	59	e58	127	228	104	100	27	27	43
10	74	86	95	62	e63	e140	262	101	162	35	25	43
11	76	86	93	64	e66	e140	266	111	168	51	23	37
12	74	83	92	64	e67	147	247	132	157	51	25	27
13	73	85	102	62	e67	158	230	132	146	48	39	26
14	72	90	106	64	e67	160	211	139	140	34	47	28
15	86	91	97	65	e66	153	181	138	137	28	53	29
16	107	92	114	e63	67	159	156	135	132	25	54	34
17	110	92	120	e60	69	155	169	132	135	24	49	37
18	128	91	123	e58	70	142	158	119	138	25	44	37
19	110	89	117	e56	83	134	157	114	116	34	39	41
20	98	94	116	e57	107	130	151	102	99	30	26	51
21	92	96	113	e59	121	120	145	71	95	26	31	65
22	96	97	111	e60	121	123	128	84	93	26	59	63
23	153	97	101	63	116	116	114	104	85	24	96	37
24	167	105	e90	63	109	111	136	104	74	28	110	29
25	161	106	e82	62	105	105	129	107	60	29	53	31
26	156	111	e75	62	101	95	130	110	63	30	70	34
27	168	115	e71	63	e99	94	127	103	64	29	83	33
28	166	110	e69	63	e96	95	126	98	66	30	80	53
29	156	111	e64	62	---	93	121	104	56	33	60	65
30	148	114	e61	62	---	88	114	105	56	31	54	53
31	139	---	e56	e62	---	94	---	94	---	33	67	---
TOTAL	3374	2994	2988	1881	2176	3575	4540	3408	3307	1115	1513	1257
MEAN	108.8	99.80	96.39	60.68	77.71	115.3	151.3	109.9	110.2	35.97	48.81	41.90
MAX	168	132	123	65	121	160	266	139	168	62	110	65
MIN	72	83	56	56	56	83	87	71	56	24	23	26
CFSM	0.89	0.82	0.79	0.50	0.64	0.95	1.24	0.90	0.90	0.29	0.40	0.34
IN.	1.03	0.91	0.91	0.57	0.66	1.09	1.38	1.04	1.01	0.34	0.46	0.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	71.91	91.60	81.10	67.43	83.97	127.2	149.6	111.0	82.98	65.91	66.28	70.85												
MAX	214	214	138	105	137	248	327	180	200	176	127	212												
(WY)	1987	1986	1986	1985	1999	1986	1993	1993	1996	1993	1995	1986												
MIN	23.6	47.6	34.2	38.2	34.5	59.8	79.5	48.1	13.3	7.66	6.04	15.4												
(WY)	1989	2000	1990	2000	1989	1980	2000	1989	1988	1988	1988	1988												

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1980 - 2002

ANNUAL TOTAL	40982	32128	
ANNUAL MEAN	112.3	88.02	89.74
HIGHEST ANNUAL MEAN			139
LOWEST ANNUAL MEAN			52.9
HIGHEST DAILY MEAN	265	Apr 11	459
LOWEST DAILY MEAN	26	Sep 5	3.6
ANNUAL SEVEN-DAY MINIMUM	40	Aug 12	27
MAXIMUM PEAK FLOW			282
MAXIMUM PEAK STAGE			1.93
ANNUAL RUNOFF (CFSM)	0.92		0.72
ANNUAL RUNOFF (INCHES)	12.50		9.80
10 PERCENT EXCEEDS	175		140
50 PERCENT EXCEEDS	104		89
90 PERCENT EXCEEDS	54		34

(e) Estimated due to ice effect or missing record

ROCK RIVER BASIN

05427085 ROCK RIVER AT ROBERT STREET AT FORT ATKINSON, WI

LOCATION.--Lat 42°55'39", long 88°50'34", in SW ¼ NE ¼ sec.4, T.5 N., R.14 E., Jefferson County, Hydrologic Unit 07090001, on upstream center of Robert Street bridge at Fort Atkinson.

DRAINAGE AREA.--2,240 mi².

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Acoustical Velocity Meter (AVM) system. Single-path transducer installation. Datum of gage is 775.09 ft above NGVD of 1929 (levels by the City of Fort Atkinson).

REMARKS.--Records good (see page 11). Gage-height telemeter at station.

DISCHARGE , from primary, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1600	2270	1500	1020	941	2520	2250	2510	1030	831	331	289
2	1340	2230	1530	1010	864	2470	2170	2500	997	748	313	284
3	1080	2090	1550	962	900	1570	2100	2560	1100	696	283	372
4	975	1960	1530	920	830	2080	1990	2370	1740	666	283	368
5	939	1730	1420	906	842	2100	1840	2390	2630	583	311	363
6	892	1510	1530	899	840	2100	1710	2490	3050	509	282	371
7	849	1480	1560	846	819	2130	1590	2450	3150	489	252	372
8	725	1430	1500	807	827	2240	1940	2320	3160	427	250	334
9	654	1240	1470	834	859	2860	2850	2120	3120	528	240	316
10	733	1170	1430	875	998	2890	3440	2260	2960	502	235	312
11	842	1160	1410	880	1150	3700	3650	2240	2990	482	237	293
12	865	1080	1370	885	1340	3770	3690	2330	3090	473	191	280
13	893	1030	1430	889	1240	3700	3570	2410	3040	466	374	253
14	930	1100	1480	887	1250	3690	3390	2420	2940	442	466	234
15	1180	1150	1510	904	1240	3480	3270	2320	2840	396	423	229
16	1380	1200	1550	949	1210	3450	3100	2330	2690	365	419	233
17	1310	1180	1670	944	1170	3340	3050	2310	2530	353	375	215
18	1230	1150	1700	879	1170	3230	2930	2210	2410	350	377	200
19	1210	1180	1710	844	1370	3130	3020	2110	2310	319	317	274
20	1210	1160	1710	828	1920	3050	2960	2000	2230	319	284	295
21	1170	1160	1640	827	2630	2990	2850	1870	2150	300	233	408
22	1170	1180	1490	841	2780	2830	2790	1640	1950	338	473	382
23	1580	1170	1450	857	2810	2830	2700	1420	1580	348	473	375
24	1980	1220	1260	888	2830	2880	2600	1610	1330	301	500	404
25	2140	1320	1190	884	2900	2800	2530	1570	1280	287	539	384
26	2690	1520	1170	899	2870	2690	2610	1480	1210	379	574	378
27	2680	1480	1170	926	2750	2570	2510	1430	1200	395	488	352
28	2510	1570	1150	971	2610	2460	2590	1320	1170	390	374	312
29	2520	1580	1100	957	---	2440	2530	1230	1090	389	364	366
30	2430	1540	1040	938	---	2340	2560	1100	984	366	335	371
31	2250	---	1020	904	---	2280	---	1090	---	349	313	---
TOTAL	43957	42240	44240	27860	43960	86610	80780	62410	63951	13786	10909	9619
MEAN	1418	1408	1427	898.7	1570	2794	2693	2013	2132	444.7	351.9	320.6
MAX	2690	2270	1710	1020	2900	3770	3690	2560	3160	831	574	408
MIN	654	1030	1020	807	819	1570	1590	1090	984	287	191	200
CFSM	0.63	0.63	0.64	0.40	0.70	1.25	1.20	0.90	0.95	0.20	0.16	0.14
IN.	0.73	0.70	0.73	0.46	0.73	1.44	1.34	1.04	1.06	0.23	0.18	0.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	1999	2000	2001	2002	1999	2000	2001	2002	1999	2000	2001	2002
MEAN	869.4	990.4	951.6	798.2	1730	2224	2712	2763	3134	1121	920.9	811.4
MAX	1418	1408	1427	1032	2469	3048	3590	3428	4887	1547	1960	1548
(WY)	2002	2002	2002	1999	1999	2001	2001	1999	2000	1999	1999	2001
MIN	600	565	728	570	922	1238	1349	2013	2132	445	352	321
(WY)	2000	2000	2001	2000	2000	1999	2000	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1999 - 2002
ANNUAL TOTAL	675108	530322	
ANNUAL MEAN	1850	1453	1581
HIGHEST ANNUAL MEAN			1704
LOWEST ANNUAL MEAN			1453
HIGHEST DAILY MEAN	4720	Apr 13	7740
LOWEST DAILY MEAN	311	Aug 15	191
ANNUAL SEVEN-DAY MINIMUM	356	Aug 12	234
ANNUAL RUNOFF (CFSM)	0.83		0.65
ANNUAL RUNOFF (INCHES)	11.21		8.81
10 PERCENT EXCEEDS	3540		3180
50 PERCENT EXCEEDS	1660		1100
90 PERCENT EXCEEDS	585		465

ROCK RIVER BASIN

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05427235 LAKE KOSHKONONG NEAR NEWVILLE, WI

LOCATION.--Lat 42°51'27", long 88°56'27", in NW ¼ NE ¼ sec.34, T.5 N., R.13 E., Jefferson County, Hydrologic Unit 07090001, 80 ft east of Pottawatomie Trail Bridge at Bingham Point Estates, and 4.5 mi northeast of Newville.

DRAINAGE AREA.--2,560 mi², at lake outlet. Area of Lake Koshkonong, 16.3 mi².

PERIOD OF RECORD.--July 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 770.00 ft above NGVD of 1929 (Wisconsin Department of Transportation bench mark).

REMARKS.--Lake level regulated by dam at Indianford. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded gage height, 12.23 ft, Apr. 25, 1993; minimum recorded, 5.10 ft, Dec. 28, 29, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 8.28 ft, Apr. 18; minimum recorded, 5.46 ft, Feb. 9, 10.

GAGE HEIGHT, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.20	7.58	6.60	6.11	5.76	7.37	7.65	7.62	6.53	6.42	6.31	6.22
2	7.12	7.60	6.60	6.04	5.72	7.34	7.63	7.64	6.43	6.36	6.30	6.24
3	7.04	7.57	6.62	5.97	5.68	7.29	7.58	7.59	6.38	6.29	6.27	6.30
4	6.93	7.52	6.62	5.90	5.62	7.24	7.52	7.55	6.52	6.25	6.28	6.29
5	6.84	7.45	6.63	5.82	5.56	7.21	7.45	7.52	6.74	6.20	6.28	6.29
6	6.75	7.36	6.66	5.74	5.53	7.16	7.36	7.50	6.93	6.17	6.24	6.29
7	6.63	7.28	6.67	5.67	5.50	7.12	7.30	7.49	7.13	6.15	6.22	6.30
8	6.53	7.23	6.68	5.62	5.48	7.11	7.36	7.43	7.32	6.12	6.21	6.30
9	6.45	7.10	6.65	5.58	5.46	7.29	7.53	7.48	7.46	6.14	6.20	6.30
10	6.42	7.03	6.64	5.59	5.51	7.47	7.69	7.41	7.55	6.12	6.19	6.31
11	6.43	6.93	6.63	5.61	5.56	7.63	7.89	7.36	7.65	6.11	6.19	6.28
12	6.40	6.85	6.61	5.63	5.64	7.82	8.06	7.42	7.72	6.13	6.20	6.26
13	6.39	6.80	6.65	5.66	5.70	7.96	8.16	7.42	7.76	6.16	6.34	6.25
14	6.43	6.79	6.65	5.69	5.76	8.05	8.21	7.42	7.82	6.18	6.37	6.25
15	6.43	6.76	6.64	5.71	5.79	8.12	8.24	7.40	7.82	6.20	6.29	6.24
16	6.50	6.68	6.68	5.72	5.80	8.14	8.22	7.42	7.80	6.21	6.25	6.21
17	6.50	6.61	6.73	5.73	5.80	8.15	8.23	7.40	7.75	6.21	6.27	6.20
18	6.51	6.54	6.75	5.71	5.80	8.14	8.18	7.37	7.70	6.21	6.28	6.19
19	6.53	6.54	6.82	5.70	5.85	8.12	8.18	7.33	7.62	6.20	6.29	6.28
20	6.54	6.45	6.81	5.68	5.99	8.12	8.11	7.28	7.57	6.20	6.26	6.34
21	6.55	6.41	6.77	5.67	6.23	8.15	8.03	7.21	7.51	6.22	6.25	6.39
22	6.56	6.36	6.70	5.66	6.48	8.08	8.00	7.13	7.44	6.26	6.39	6.40
23	6.69	6.34	6.71	5.64	6.70	8.04	7.93	7.06	7.34	6.24	6.36	6.38
24	6.85	6.35	6.65	5.64	6.90	8.02	7.90	7.00	7.21	6.20	6.31	6.37
25	7.12	6.44	6.57	5.65	7.07	7.95	7.88	6.97	7.07	6.19	6.25	6.36
26	7.28	6.45	6.50	5.66	7.21	7.90	7.80	6.92	6.95	6.22	6.22	6.37
27	7.38	6.50	6.45	5.67	7.30	7.85	7.72	6.87	6.84	6.24	6.22	6.37
28	7.46	6.54	6.39	5.70	7.35	7.80	7.74	6.81	6.71	6.28	6.20	6.35
29	7.55	6.56	6.33	5.73	---	7.78	7.68	6.76	6.61	6.31	6.21	6.42
30	7.58	6.58	6.26	5.74	---	7.75	7.66	6.69	6.51	6.31	6.21	6.45
31	7.57	---	6.18	5.75	---	7.70	---	6.61	---	6.31	6.22	---
MEAN	6.81	6.84	6.61	5.72	6.03	7.74	7.83	7.26	7.21	6.22	6.26	6.31
MAX	7.58	7.60	6.82	6.11	7.35	8.15	8.24	7.64	7.82	6.42	6.39	6.45
MIN	6.39	6.34	6.18	5.58	5.46	7.11	7.30	6.61	6.38	6.11	6.19	6.19

ROCK RIVER BASIN

05427570 ROCK RIVER AT INDIANFORD, WI

LOCATION.--Lat 42°48'15", long 89°05'24", in SW ¼ SW ¼ sec.16, T.4 N., R.12 E., Rock County, Hydrologic Unit 07090001, on right bank 50 ft upstream from bridge on County Trunk Highways F and M, 250 ft upstream from dam in Indianford, and 1.8 mi upstream from Yahara River.

DRAINAGE AREA.--2,630 mi².

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

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 763.84 ft (revised Oct. 1, 1990) above NGVD of 1929 (Rock County Surveyor bench mark).

REMARKS.--Records poor (see page 11). Natural flow of stream affected by dam in Indianford. Discharge is adjusted for flow through wicket gates. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2340	2530	1650	1780	1410	2900	2820	3020	1690	1330	361	333
2	2240	2590	1720	1720	1320	2940	2800	2920	1700	1050	440	300
3	2070	2590	1750	1640	1270	2720	2720	2940	1720	1020	401	381
4	2030	2560	1740	1520	1220	2480	2660	2790	1770	1070	398	405
5	1950	2460	1550	1410	1110	2510	2590	2800	1970	852	456	418
6	1810	2310	1710	1300	1150	2500	2460	2730	2180	592	460	398
7	1740	2260	1850	1190	1150	2440	2330	2860	2370	571	388	399
8	1580	2170	1790	1090	1130	2380	2500	2760	2640	431	375	405
9	1450	1980	1760	1020	1170	2320	2710	2400	2910	511	351	400
10	1370	1950	1710	959	1290	2540	2850	2550	3000	526	301	412
11	1470	1890	1760	962	1170	2990	3240	2700	3170	499	315	408
12	1490	1780	1740	1010	1250	3230	3710	2750	3360	395	282	368
13	1430	1680	1730	1090	1450	3370	3880	2700	3390	349	441	369
14	1340	1700	1780	1160	1460	3720	3940	2650	3420	364	376	360
15	1360	1800	1750	1200	1640	3610	4020	2570	3450	372	249	400
16	1500	1920	1790	1260	1540	3800	3960	2710	3450	355	335	332
17	1510	1810	1860	1240	1550	3770	4010	2810	3440	367	293	333
18	1430	1710	1860	1240	1440	3670	3920	2710	3260	395	383	327
19	1500	1690	1900	1190	1570	3610	4100	2690	3010	388	427	376
20	1570	1560	2380	1170	1750	3560	4100	2650	2940	351	404	392
21	1570	1520	2760	1140	1950	3500	4060	2510	2970	305	344	459
22	1600	1500	2570	1130	2050	3270	3820	2340	2870	382	440	426
23	1700	1510	2400	1160	2140	3310	3560	2190	2770	459	348	394
24	1750	1520	2370	1120	2370	3520	3300	2340	2670	396	309	459
25	1430	1430	2270	1050	2680	3460	3100	2290	2400	344	284	451
26	2220	1740	2220	1130	2770	3170	3250	2100	2140	363	321	475
27	2480	1630	2160	1130	2810	3000	3250	2180	2100	324	375	500
28	2450	1740	2110	1280	2810	2910	3170	2120	1950	377	355	452
29	2690	1790	2010	1330	---	2910	2990	2010	1820	379	353	498
30	2730	1750	1900	1360	---	2770	3030	1860	1720	393	363	453
31	2550	---	1800	1470	---	2780	---	1760	---	396	359	---
TOTAL	56350	57070	60350	38451	46620	95660	98850	78410	78250	15906	11287	12083
MEAN	1818	1902	1947	1240	1665	3086	3295	2529	2608	513.1	364.1	402.8
MAX	2730	2590	2760	1780	2810	3800	4100	3020	3450	1330	460	500
MIN	1340	1430	1550	959	1110	2320	2330	1760	1690	305	249	300
CFSM	0.69	0.72	0.74	0.47	0.63	1.17	1.25	0.96	0.99	0.20	0.14	0.15
IN.	0.80	0.81	0.85	0.54	0.66	1.35	1.40	1.11	1.11	0.22	0.16	0.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2002, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1402	1617	1564	1117	1357	2921	3729	2535	1845	1417	1064	1105																
MAX	7729	5047	3745	2622	2751	6113	9466	6028	6220	4549	3377	3911																
(WY)	1987	1986	1986	1985	1999	1985	1979	1993	2000	1993	1993	1986																
MIN	216	297	262	254	283	795	1369	317	185	158	130	182																
(WY)	1977	1977	1977	1977	1977	1977	2000	1977	1988	1988	1988	1988																

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1975 - 2002
ANNUAL TOTAL	789196	649287	
ANNUAL MEAN	2162	1779	1809
HIGHEST ANNUAL MEAN			3252
LOWEST ANNUAL MEAN			509
HIGHEST DAILY MEAN	4770	4100	11700
LOWEST DAILY MEAN	308	249	39
ANNUAL SEVEN-DAY MINIMUM	466	327	85
MAXIMUM PEAK FLOW		(a)4240	11900
MAXIMUM PEAK STAGE		(b)13.36	(c)16.23
ANNUAL RUNOFF (CFSM)	0.82	0.68	0.69
ANNUAL RUNOFF (INCHES)	11.16	9.18	9.34
10 PERCENT EXCEEDS	3830	3230	3790
50 PERCENT EXCEEDS	2030	1740	1330
90 PERCENT EXCEEDS	872	375	380

- (a) Gage height, 13.29 ft
 (b) Discharge, 3,790 ft³/s, due to shifting control
 (c) Datum then in use

05427718 YAHARA RIVER AT WINDSOR, WI

LOCATION.--Lat 43°12'32", long 89°21'09", in NW ¼ NE ¼ sec.31, T.9 N., R.10 E., Dane County, Hydrologic Unit 07090001, at bridge on road to Lake Windsor Country Club.

DRAINAGE AREA.--73.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1976 to December 1981, October 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 870 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	22	24	e17	20	24	24	24	22	18	13	13
2	24	22	22	e17	e19	e23	24	29	23	17	12	16
3	24	21	21	e18	e19	e22	25	25	86	17	12	15
4	23	21	21	e18	e19	e22	25	24	123	17	14	13
5	23	21	23	19	e19	e23	24	23	66	17	14	13
6	23	21	25	19	e19	24	23	23	38	e17	14	13
7	22	21	22	19	20	24	26	24	30	e17	13	12
8	22	21	21	19	20	27	45	23	26	17	13	12
9	23	21	20	19	21	58	55	40	25	16	13	12
10	23	21	20	19	24	40	34	26	24	16	13	12
11	23	20	20	19	22	28	30	26	30	16	14	12
12	23	20	21	19	22	27	29	72	27	16	15	12
13	24	20	29	19	21	27	26	34	24	15	15	12
14	24	20	24	19	22	27	25	28	24	15	14	12
15	23	20	23	19	23	26	24	25	23	14	14	12
16	22	20	22	19	22	25	24	25	22	14	14	13
17	22	20	22	e18	22	25	24	24	22	14	15	13
18	22	20	21	e18	22	25	23	23	25	14	14	13
19	22	22	21	e18	55	25	26	23	22	14	14	14
20	22	20	20	19	77	27	23	22	21	14	13	15
21	22	20	20	19	58	26	23	22	21	15	13	14
22	27	20	21	19	33	25	24	22	21	18	18	13
23	58	20	22	20	30	24	23	22	20	15	18	13
24	32	26	e19	20	30	24	25	22	20	13	15	13
25	29	27	e19	20	29	24	25	26	19	13	14	13
26	25	23	e19	20	26	24	23	25	21	22	14	13
27	23	22	e18	20	25	24	23	23	19	15	14	13
28	22	21	e18	20	25	24	30	23	19	14	14	13
29	22	21	e17	20	---	24	26	26	19	14	13	14
30	22	24	e17	20	---	24	24	23	18	13	13	14
31	22	---	e17	20	---	24	---	22	---	13	13	---
TOTAL	762	638	649	589	764	816	805	819	900	480	432	392
MEAN	24.58	21.27	20.94	19.00	27.29	26.32	26.83	26.42	30.00	15.48	13.94	13.07
MAX	58	27	29	20	77	58	55	72	123	22	18	16
MIN	22	20	17	17	19	22	23	22	18	13	12	12
CFSM	0.33	0.29	0.28	0.26	0.37	0.36	0.36	0.36	0.41	0.21	0.19	0.18
IN.	0.39	0.32	0.33	0.30	0.39	0.41	0.41	0.41	0.45	0.24	0.22	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2002, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
MEAN	16.85	17.78	15.72	16.89	26.40	39.00	25.12	21.02	26.83	21.98	19.09	18.91									
MAX	29.2	30.4	27.0	32.5	74.2	135	47.8	37.0	75.4	95.3	40.3	50.1									
(WY)	1994	1994	1994	1996	1994	1976	1993	2000	2000	1993	1993	1980									
MIN	7.75	8.78	8.54	6.50	4.76	11.8	14.1	7.71	7.48	7.12	7.29	7.12									
(WY)	1978	1978	1978	1978	1978	1978	1978	1977	1977	1977	1991	1977									

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1976 - 2002

ANNUAL TOTAL	9583	8046	
ANNUAL MEAN	26.25	22.04	21.82
HIGHEST ANNUAL MEAN			39.1
LOWEST ANNUAL MEAN			10.9
HIGHEST DAILY MEAN	363	Aug 2	519
LOWEST DAILY MEAN	16	Jul 13-16	12
ANNUAL SEVEN-DAY MINIMUM	16	Jul 10	12
MAXIMUM PEAK FLOW			152
MAXIMUM PEAK STAGE			3.72
INSTANTANEOUS LOW FLOW			11
ANNUAL RUNOFF (CFSM)	0.36	0.30	0.30
ANNUAL RUNOFF (INCHES)	4.84	4.07	4.03
10 PERCENT EXCEEDS	34	27	31
50 PERCENT EXCEEDS	22	21	17
90 PERCENT EXCEEDS	18	13	9.0

- (a) Also occurred Sept. 7-15
- (b) Ice affected
- (c) Result of freezeup
- (e) Estimated due to ice effect or missing record

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to September 1980, October 1989 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: March 1990 to current year.

TOTAL-PHOSPHORUS DISCHARGE: March 1990 to current year.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: October 1990 to September 1992.

INSTRUMENTATION.--Water-quality sampler since March 1990.

REMARKS.--Records good. Samples are point samples unless otherwise indicated.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 7,070 mg/L, June 29, 1990; minimum observed, 3.0 mg/L, Sept. 10, 2002.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,280 tons, July 5, 1993; minimum daily, 0.10 ton, Sept. 10, 2002.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 5.10 mg/L, June 7, 1993; minimum observed, 0.01 mg/L, Jan. 31, 1991, and Oct. 29, 1997.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 3,240 lb, Feb. 20, 1994; minimum daily, 0.70 lb, Nov. 13-15, 1997.

TOTAL ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.10 mg/L, Mar. 2, 3, 1991; minimum observed, <0.01 mg/L, Nov. 13, 1990 and June 26, 1994.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 1,260 lb, Mar. 2, 1991; minimum daily, 0.49 lb, Nov. 26, 1990.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 834 mg/L, May 12; minimum observed, 3.0 mg/L, Sept. 10.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 53 tons, May 12; minimum daily, 0.10 ton, Sept. 10.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.19 mg/L, May 12; minimum observed, 0.044 mg/L, Sept. 13.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 275 lb, June 4; minimum daily, 2.74 lb, Sept. 14.

TOTAL ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.268 mg/L, Feb. 19; minimum observed, 0.039 mg/L, Aug. 21.

SEDIMENT DISCHARGE, SUSPENDED, (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	0.98	0.92	1.0	1.1	1.2	0.61	0.83	1.5	0.93	0.53	0.35
2	1.0	0.98	0.68	1.1	0.98	1.1	0.63	1.0	1.4	0.93	0.46	1.1
3	1.0	0.97	0.62	1.1	0.97	1.0	0.64	0.89	35.0	0.93	0.42	0.56
4	1.0	0.98	0.58	1.2	0.95	1.0	0.65	0.84	30.0	0.94	0.80	0.31
5	1.0	1.0	1.2	1.3	0.94	1.0	0.64	0.81	9.2	0.95	0.65	0.25
6	0.97	1.0	1.5	1.3	0.93	1.0	0.63	0.82	3.3	0.98	0.57	0.21
7	0.95	1.0	0.72	1.3	0.97	0.99	0.82	0.84	2.3	1.0	0.51	0.17
8	0.96	1.1	0.62	1.3	0.96	1.3	6.3	0.83	1.5	1.0	0.46	0.14
9	0.97	1.1	0.59	1.4	0.97	8.1	9.0	13.0	1.3	1.0	0.42	0.11
10	1.0	1.1	0.57	1.4	1.1	1.6	3.7	3.4	1.3	1.0	0.39	0.10
11	1.0	1.1	0.56	1.4	1.0	0.69	3.3	3.5	6.0	1.1	0.66	0.11
12	1.0	1.1	0.78	1.3	0.97	0.59	3.3	53.0	4.8	1.1	0.85	0.13
13	1.3	1.1	1.9	1.3	0.92	0.60	3.0	3.2	3.6	1.0	0.55	0.15
14	1.5	1.2	1.1	1.3	0.94	0.61	2.9	1.7	3.2	1.0	0.45	0.17
15	1.1	1.2	1.0	1.3	0.97	0.58	2.8	1.5	2.8	1.0	0.40	0.21
16	1.1	1.2	0.99	1.3	0.92	0.57	2.8	1.4	2.4	1.0	0.38	0.25
17	1.1	1.2	1.0	1.2	0.90	0.57	2.8	1.3	2.2	1.0	0.99	0.29
18	1.0	1.2	0.99	1.2	0.88	0.58	2.7	1.2	4.2	1.1	1.0	0.33
19	1.0	1.7	1.0	1.1	13.0	0.58	3.0	1.1	2.9	1.1	0.94	0.42
20	1.0	1.3	0.99	1.2	19.0	0.64	2.6	1.1	2.5	1.1	0.85	0.41
21	1.0	1.4	1.0	1.2	8.6	0.62	2.4	1.0	2.3	0.91	0.82	0.38
22	2.2	1.3	1.0	1.2	2.2	0.58	2.3	1.0	2.1	1.3	1.8	0.34
23	6.9	1.2	1.1	1.2	1.8	0.58	2.0	0.95	1.8	1.0	1.3	0.31
24	1.2	1.9	1.0	1.2	1.8	0.58	3.4	0.92	1.6	0.84	0.60	0.30
25	1.1	1.0	1.0	1.1	1.7	0.57	2.1	1.9	1.4	0.77	0.55	0.29
26	0.97	0.67	1.0	1.1	1.5	0.58	1.3	1.3	2.4	3.7	0.51	0.27
27	0.93	0.64	1.0	1.1	1.4	0.58	0.97	1.1	1.7	1.0	0.48	0.25
28	0.92	0.60	1.0	1.1	1.3	0.60	1.3	0.99	0.97	0.86	0.45	0.24
29	0.91	0.57	0.98	1.1	---	0.60	0.91	3.1	0.92	0.75	0.42	0.24
30	0.92	1.2	1.0	1.1	---	0.60	0.85	2.0	0.92	0.67	0.40	0.23
31	0.96	---	1.0	1.1	---	0.60	---	1.7	---	0.59	0.37	---
TOTAL	38.96	32.99	29.39	37.5	69.67	30.79	70.35	108.22	137.51	32.55	19.98	8.62
WTR YR 2002	TOTAL 616.53											

ROCK RIVER BASIN

05427718 YAHARA RIVER AT WINDSOR, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)
OCT 2001						
01...	1805	24	10	--	.066	16
13...	2030	26	50	--	.104	30
22...	2030	27	50	--	.123	20
22...	2145	48	50	--	.256	46
23...	0015	82	50	--	.509	106
23...	0115	94	50	--	.533	104
23...	0415	77	50	--	.397	54
23...	1445	49	50	--	.311	20
24...	0645	31	50	--	.177	14
NOV						
16...	0850	20	10	--	.055	22
19...	0745	23	50	--	.092	32
21...	0945	30	50	--	.225	131
24...	1800	31	50	--	.142	37
25...	0200	31	50	--	.117	18
25...	1800	25	50	--	.110	11
30...	1815	25	50	--	.087	26
DEC						
05...	2200	25	50	--	.090	39
06...	0600	26	50	--	.134	25
12...	2145	22	50	--	.126	47
13...	0245	30	50	--	.157	31
13...	0800	29	50	--	.134	31
13...	1600	29	50	--	.164	18
14...	0800	24	50	--	.127	16
JAN 2002						
10...	0945	19	10	--	.048	27
FEB						
19...	0100	24	50	--	.073	15
19...	0530	41	50	--	.430	106
19...	0815	61	50	.268	.628	165
19...	1615	64	50	--	.518	68
20...	0815	49	50	--	.361	47
20...	1245	81	50	--	.469	86
20...	1500	102	50	.267	.541	127
20...	2300	97	50	--	.530	95
21...	0645	68	50	--	.477	58
22...	0400	36	50	--	.216	24
MAR						
08...	1045	26	50	--	.062	15
09...	0300	40	50	--	.131	26
09...	0715	57	50	--	--	91
09...	0915	65	50	--	.254	64
09...	1715	67	50	--	.277	46
09...	2200	55	50	--	--	50
10...	0230	32	50	--	.216	18
11...	1525	28	10	--	.063	7.9
APR						
07...	1945	27	50	--	.048	10
08...	0245	43	50	--	.157	67
08...	1045	39	50	--	--	24
08...	1845	46	50	--	.181	44
08...	2200	66	50	--	.244	99
09...	0600	65	50	--	.238	72
09...	1630	45	50	--	.191	41
24...	2045	32	50	--	.187	--
28...	0100	26	50	--	--	13
28...	0900	33	50	--	.083	19
29...	0100	28	50	--	--	13
MAY						
09...	0115	29	50	--	--	83
09...	0500	47	50	--	--	406
09...	0545	58	50	.083	.479	238
09...	1245	44	50	--	--	57
12...	0130	41	50	--	--	80
12...	0315	71	50	.082	.453	205
12...	0415	99	50	--	--	834
12...	0500	112	50	.105	1.19	730
12...	0915	95	50	--	.569	230
12...	1515	65	50	--	.495	155
13...	1131	33	50	--	--	24
25...	1915	28	50	--	--	21
29...	0300	27	50	--	--	34
29...	1100	25	50	--	--	53

05427718 YAHARA RIVER AT WINDSOR, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDEED (MG/L) (80154)
JUN 2002						
03...	0700	36	50	--	--	79
03...	0845	73	50	.122	.352	137
03...	0930	106	50	--	1.02	830
03...	1045	141	50	.136	.634	314
03...	1150	151	10	--	--	53
03...	1500	120	50	--	.436	146
03...	2345	87	50	--	.442	102
04...	0615	101	50	--	.388	106
04...	1012	150	10	--	.399	115
04...	1014	150	50	--	--	92
04...	1400	151	10	--	--	64
04...	1700	145	50	--	.452	98
05...	0330	90	50	--	.349	65
05...	1230	60	50	--	--	46
05...	1235	60	10	--	--	36
06...	0430	41	50	--	--	36
06...	1230	37	10	--	--	29
07...	0430	31	50	--	--	33
08...	1245	26	50	--	--	20
11...	0630	25	50	--	--	64
11...	1145	35	50	--	--	98
12...	1145	27	50	--	--	62
18...	0130	24	50	--	--	71
18...	1000	26	50	--	--	53
22...	2300	21	50	--	--	36
26...	1130	25	50	--	--	57
JUL						
17...	0854	13	10	--	.087	28
20...	2215	18	50	--	.129	41
22...	1230	20	50	--	.150	28
26...	0400	29	50	--	.243	125
26...	2000	19	50	--	.142	26
AUG						
11...	2245	19	50	--	.181	47
14...	1610	15	10	--	.078	11
17...	1315	21	50	--	.130	38
22...	1845	29	50	--	.192	63
SEP						
13...	0930	12	10	--	.044	--
30...	1450	14	10	--	.072	6.4

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	TURBIDITY LAB HACH 2100AN (NTU) (99872)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARDS) (US/CM) (00400)	SPE-CIFIC CON-DUCT-ANCE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
APR 2002												
16...	0700	24	10	16	740	8.3	8.0	751	15.0	--	--	--
JUN 28...	1020	19	10	6.8	739	11.5	8.2	757	18.0	--	--	--
JUL 19...	0715	14	10	5.9	755	7.2	7.8	778	19.0	80.4	45.5	1.66
AUG 21...	0700	13	10	9.5	754	7.9	7.9	767	16.5	--	--	--
SEP 10...	1030	12	10	2.4	755	11.6	8.1	768	19.0	--	--	--

Date	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
APR 2002													
16...	300	39.6	.2	--	27.4	--	.06	.34	7.71	.054	E.04	.04	.09
JUN 28...	297	41.2	E.07	--	26.3	--	<.04	.23	8.17	.041	E.05	.06	.09
JUL 19...	--	41.0	.13	13.8	26.4	445	<.04	.28	7.84	.034	E.05	.05	.07
AUG 21...	314	39.1	E.09	--	25.3	--	<.04	.28	8.72	.024	E.04	.04	E.06
SEP 10...	287	39.7	.13	--	25.9	--	<.04	.18	8.52	.029	E.04	.04	E.06

ROCK RIVER BASIN

05427718 YAHARA RIVER AT WINDSOR, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/100 ML) (31673)	ARSENIC TOTAL (UG/L AS AS) (01002)	BORON, TOTAL RECOVERABLE (UG/L AS B) (01022)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOVERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)
APR 2002													
16...	<10	120	--	--	--	--	--	--	--	--	--	--	--
JUN 28...	<10	410	--	--	--	--	--	--	--	--	--	--	--
JUL 19...	10	670	840	E1	20	<.1	E.8	<2.0	2.5	10	380	M	40.3
AUG 21...	<10	400	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	<10	330	--	--	--	--	--	--	--	--	--	--	--

Date	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	SEDIMENT, SUSPENDED (MG/L) (80154)
APR 2002					
16...	--	--	--	--	74
JUN 28...	--	--	--	--	18
JUL 19...	65.5	<.01	<2.0	<20	30
AUG 21...	--	--	--	--	23
SEP 10...	--	--	--	--	3.4

Date	Time	TEMPERATURE (DEG C) (00010)	AGENCY ANA-LYZING SAMPLE NUMBER (00028)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD ABOVE NGVD) (00400)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DRAINAGE AREA (SQ. MI.) (81024)
JUL 2002								
19...	0515	19.5	1028	779	6.7	7.5	870	73.60
19...	0545	19.5	1028	779	6.7	7.7	870	73.60
19...	0615	19.0	1028	778	6.8	7.7	870	73.60
19...	0645	19.0	1028	778	6.9	7.7	870	73.60
19...	0716	19.0	1028	778	7.2	7.8	870	73.60
19...	0745	19.0	1028	777	7.3	7.8	870	73.60
19...	0815	19.0	1028	776	7.6	7.8	870	73.60
19...	0845	19.0	1028	776	8.0	7.8	870	73.60
19...	0915	19.0	1028	774	8.6	7.9	870	73.60
19...	0945	19.0	1028	774	9.2	7.9	870	73.60
19...	1015	19.5	1028	771	10.2	8.0	870	73.60

05427718 YAHARA RIVER AT WINDSOR, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-WATER (DEG C) (00010)	ANC TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT 2002 02...	1030	12	10	4.6	755	9.1	7.9	756	15.5	E274	37.5	<.17	26.5
Date		NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	SEDI-MENT, SUS-PENDED (MG/L) (80154)		
OCT 2002 02...		<.04	.32	8.19	.033	.06	.05	.08	20	580	36		

E Estimated

ROCK RIVER BASIN

05427850 YAHARA RIVER AT STATE HWY 113 AT MADISON, WI

LOCATION.--Lat 43°09'03", long 89°24'07", in SW ¼ SW ¼ sec.23, T.8 N., R.9 E., Dane County, Hydrologic Unit 07090001, at northbound bridge on Hwy 113, 5.3 mi north of the state capitol in Madison.

DRAINAGE AREA.--114 mi², of which 36.6 mi² is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January to September 2002.

GAGE.--Water-stage recorder. Side-looking velocity meter system. Datum of gage is 840.00 ft above NGVD of 1929 (Wisconsin Department of Transportation benchmark).

REMARKS.--Records good (see page 11). Gage-height telemeter at station.

DISCHARGE, FROM PRIMARY, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	e56	39	61	75	83	60	e38	59	27
2	---	---	---	e55	38	67	63	72	72	e38	40	32
3	---	---	---	e54	44	48	61	84	127	e38	38	75
4	---	---	---	53	e44	54	64	63	226	e35	50	39
5	---	---	---	55	e46	53	66	61	257	e40	53	32
6	---	---	---	54	40	54	31	68	146	e35	38	44
7	---	---	---	49	45	56	83	88	90	e33	37	43
8	---	---	---	54	48	77	170	45	96	e32	39	35
9	---	---	---	62	56	148	183	73	70	62	36	35
10	---	---	---	60	71	157	122	145	43	55	35	49
11	---	---	---	58	39	97	97	87	104	34	38	37
12	---	---	---	55	83	78	119	178	98	38	36	35
13	---	---	---	50	37	87	85	136	66	43	56	37
14	---	---	---	51	42	101	75	94	69	43	29	49
15	---	---	---	48	77	65	61	41	74	39	37	36
16	---	---	---	44	66	73	59	104	68	35	57	37
17	---	---	---	39	48	69	96	69	71	45	51	39
18	---	---	---	39	50	68	41	67	62	48	52	38
19	---	---	---	40	116	71	107	70	50	34	40	43
20	---	---	---	42	176	58	66	52	73	37	35	34
21	---	---	---	46	206	80	65	58	57	27	32	65
22	---	---	---	42	116	63	65	37	45	79	76	46
23	---	---	---	50	74	82	64	88	61	49	55	20
24	---	---	---	47	97	119	64	67	49	43	40	49
25	---	---	---	47	100	23	79	60	34	42	44	43
26	---	---	---	61	69	46	81	65	58	70	38	51
27	---	---	---	54	70	38	83	75	49	38	39	20
28	---	---	---	61	66	80	85	50	50	50	33	35
29	---	---	---	44	---	67	67	99	38	58	40	20
30	---	---	---	43	---	56	85	46	e36	38	38	13
31	---	---	---	48	---	74	---	87	---	37	38	---
TOTAL	---	---	---	1561	2003	2270	2462	2412	2399	1333	1329	1158
MEAN	---	---	---	50.35	71.54	73.23	82.07	77.81	79.97	43.00	42.87	38.60
MAX	---	---	---	62	206	157	183	178	257	79	76	75
MIN	---	---	---	39	37	23	31	37	34	27	29	13
CFSM	---	---	---	0.44	0.63	0.64	0.72	0.68	0.70	0.38	0.38	0.34
IN.	---	---	---	0.51	0.65	0.74	0.80	0.79	0.78	0.43	0.43	0.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	---	---	---	50.35	71.54	73.23	82.07	77.81	79.97	43.00	42.87	38.60
MAX	---	---	---	50.4	71.5	73.2	82.1	77.8	80.0	43.0	42.9	38.6
(WY)	---	---	---	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	---	---	---	50.4	71.5	73.2	82.1	77.8	80.0	43.0	42.9	38.6
(WY)	---	---	---	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR
(JANUARY-SEPTEMBER)

ANNUAL TOTAL	16927
ANNUAL MEAN	62.00
HIGHEST DAILY MEAN	257 Jun 5
LOWEST DAILY MEAN	13 Sep 30
ANNUAL SEVEN-DAY MINIMUM	33 Sep 24
ANNUAL RUNOFF (CFSM)	0.54
ANNUAL RUNOFF (INCHES)	5.52
10 PERCENT EXCEEDS	97
50 PERCENT EXCEEDS	54
90 PERCENT EXCEEDS	35

05427850 YAHARA RIVER AT STATE HWY 113 AT MADISON, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January to September 2002.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: January to September 2002.
 SUSPENDED-SEDIMENT DISCHARGE: January to September 2002.
 TOTAL-PHOSPHORUS DISCHARGE: January to September 2002.

INSTRUMENTATION.--Automatic pumping sampler since December 1977.

REMARKS.--Records good. Samples are equal-width increment samples.

EXTREMES FOR CURRENT PERIODS (JANUARY TO SEPTEMBER).--

WATER TEMPERATURE: Maximum, 31.5°C, July 18 18; minimum, 0.0°C, on many days during winter.
 SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 64 mg/L, June 4; minimum observed, 6.0 mg/L, Feb. 11.
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 39.0 tons, June 4; minimum daily, 0.54 ton, Sept. 30.
 TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.224 mg/L, July 15; minimum observed, 0.03 mg/L, Feb. 11.
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 172 lb, June 4; minimum daily, 6.31 lb, Feb. 11.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	---	---	---	1.5	1.5	1.5
2	---	---	---	---	---	---	---	---	---	1.5	1.5	1.5
3	---	---	---	---	---	---	---	---	---	1.5	1.0	1.5
4	---	---	---	---	---	---	---	---	---	1.0	0.5	1.0
5	---	---	---	---	---	---	---	---	---	1.0	0.5	0.5
6	---	---	---	---	---	---	---	---	---	1.0	0.5	0.5
7	---	---	---	---	---	---	---	---	---	1.0	0.5	0.5
8	---	---	---	---	---	---	---	---	---	1.0	0.5	0.5
9	---	---	---	---	---	---	---	---	---	1.5	0.5	1.0
10	---	---	---	---	---	---	---	---	---	1.5	0.5	1.0
11	---	---	---	---	---	---	---	---	---	2.0	0.5	1.5
12	---	---	---	---	---	---	---	---	---	1.5	1.0	1.5
13	---	---	---	---	---	---	---	---	---	1.5	1.0	1.0
14	---	---	---	---	---	---	---	---	---	1.5	0.5	1.0
15	---	---	---	---	---	---	---	---	---	1.0	0.5	0.5
16	---	---	---	---	---	---	---	---	---	0.5	0.0	0.5
17	---	---	---	---	---	---	---	---	---	0.5	0.0	0.5
18	---	---	---	---	---	---	---	---	---	1.0	0.0	0.5
19	---	---	---	---	---	---	---	---	---	0.5	0.0	0.5
20	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
21	---	---	---	---	---	---	---	---	---	0.5	0.0	0.0
22	---	---	---	---	---	---	---	---	---	0.5	0.0	0.5
23	---	---	---	---	---	---	---	---	---	1.0	0.0	0.5
24	---	---	---	---	---	---	---	---	---	1.5	0.5	1.0
25	---	---	---	---	---	---	---	---	---	2.0	0.5	1.0
26	---	---	---	---	---	---	---	---	---	2.5	0.5	1.5
27	---	---	---	---	---	---	---	---	---	3.0	2.0	2.5
28	---	---	---	---	---	---	---	---	---	2.0	1.5	2.0
29	---	---	---	---	---	---	---	---	---	1.5	0.5	1.0
30	---	---	---	---	---	---	---	---	---	1.0	0.0	0.5
31	---	---	---	---	---	---	---	---	---	1.0	0.0	0.5
MONTH	---	---	---	---	---	---	---	---	---	3.0	0.0	0.9

ROCK RIVER BASIN

05427850 YAHARA RIVER AT STATE HWY 113 AT MADISON, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1.0	0.0	0.5	3.0	2.0	2.5	6.5	3.5	5.5	12.5	11.5	12.0
2	1.0	0.5	0.5	2.0	1.0	2.0	4.0	3.0	3.5	13.0	10.5	11.5
3	1.0	0.5	1.0	1.5	0.5	1.0	4.0	2.0	3.0	15.0	10.0	12.0
4	e1.0	e0.5	e1.0	1.5	0.5	1.0	5.0	1.5	3.0	15.5	11.5	13.5
5	e1.0	e0.5	e1.0	1.0	0.5	0.5	6.5	2.0	4.0	18.0	14.0	15.5
6	1.0	0.5	0.5	0.5	0.5	0.5	8.0	3.0	5.0	20.5	16.0	18.0
7	1.0	0.5	1.0	0.5	0.5	0.5	7.0	5.0	6.0	20.0	16.5	18.5
8	1.5	0.5	1.0	0.5	0.5	0.5	7.0	5.5	6.0	17.0	14.5	15.5
9	1.5	0.5	1.0	1.0	0.5	0.5	9.5	6.0	7.5	17.0	14.0	16.0
10	1.5	1.0	1.5	2.0	0.0	0.5	12.0	8.5	10.0	15.5	12.0	13.5
11	1.5	1.0	1.5	2.0	0.5	1.5	13.0	10.5	11.5	15.0	11.0	13.0
12	1.5	0.0	1.0	4.0	2.0	2.5	14.0	12.5	13.0	11.0	10.0	10.0
13	2.5	0.5	1.5	4.5	3.0	3.5	17.5	11.5	14.0	12.0	9.5	11.0
14	2.5	1.5	2.0	3.0	1.0	2.0	17.5	14.5	16.0	14.0	11.0	12.5
15	1.5	0.5	1.0	2.0	1.0	1.5	19.5	15.5	17.0	17.0	13.0	14.5
16	2.0	1.0	1.5	5.0	0.5	2.5	22.0	18.0	19.5	17.0	16.0	16.5
17	3.5	1.0	2.0	3.5	2.0	3.0	22.5	20.0	21.0	16.0	14.0	14.5
18	3.5	2.0	2.5	6.0	2.0	4.0	21.0	19.5	20.5	15.0	12.5	13.5
19	3.0	2.5	2.5	5.0	4.0	4.5	20.5	16.5	18.5	15.5	12.5	14.0
20	2.5	1.5	2.0	6.5	3.0	4.5	16.5	13.0	14.5	14.0	12.0	13.0
21	1.5	0.0	1.0	6.0	0.5	3.0	13.0	7.0	9.5	16.0	11.5	13.5
22	2.5	0.0	1.0	3.5	0.0	1.5	7.5	6.5	7.0	17.0	13.5	15.0
23	3.5	2.0	2.5	3.5	0.5	2.0	11.5	6.0	8.5	16.5	15.0	15.5
24	5.5	2.0	4.0	4.0	1.0	2.5	12.5	10.0	11.5	17.0	14.5	15.5
25	4.5	1.5	3.0	2.0	0.0	1.0	11.5	9.0	10.5	15.5	13.0	13.5
26	1.5	0.0	0.5	3.5	0.0	1.5	12.5	8.5	10.0	17.0	12.0	14.0
27	2.5	0.0	1.0	6.5	1.5	4.0	12.0	8.0	10.0	21.5	16.0	18.0
28	3.0	2.0	2.5	6.5	4.5	5.5	8.0	7.0	7.5	24.0	19.0	21.0
29	---	---	---	8.0	5.0	6.0	11.0	7.0	9.0	24.5	21.5	23.0
30	---	---	---	8.5	5.5	6.5	13.0	10.0	11.5	26.0	22.5	24.0
31	---	---	---	8.5	6.0	7.0	---	---	---	25.5	23.5	24.5
MONTH	5.5	0.0	1.5	8.5	0.0	2.6	22.5	1.5	10.5	26.0	9.5	15.4
	JUNE			JULY			AUGUST			SEPTEMBER		
1	26.0	22.5	24.0	---	---	---	29.0	26.5	28.0	26.5	24.5	25.5
2	24.0	20.0	22.5	---	---	---	28.5	25.0	26.5	26.0	24.0	24.5
3	20.0	16.5	17.5	---	---	---	29.0	24.5	26.5	25.0	22.5	23.5
4	16.5	15.5	16.0	---	---	---	28.0	26.0	26.5	24.5	22.0	23.0
5	17.0	16.0	16.5	---	---	---	27.0	24.5	26.0	26.5	23.0	24.5
6	21.5	16.0	18.0	---	---	---	25.0	21.5	23.0	25.5	23.0	24.5
7	22.5	18.5	20.5	---	---	---	26.5	21.0	23.5	26.5	23.5	25.0
8	24.0	20.5	22.0	---	---	---	29.0	23.0	25.0	27.5	24.0	25.5
9	27.0	22.5	24.0	30.0	28.0	29.0	27.5	24.5	25.5	28.0	25.5	26.5
10	26.0	24.0	25.0	29.0	23.0	25.0	27.5	25.0	26.0	27.5	24.5	26.0
11	25.5	24.0	25.0	23.0	21.0	22.0	27.0	25.0	26.0	24.5	21.5	23.0
12	26.0	24.0	25.0	26.5	20.0	23.0	28.0	26.0	26.5	24.0	21.0	22.5
13	24.5	22.5	23.5	29.0	22.5	25.5	27.0	25.0	25.5	23.0	21.0	22.0
14	23.5	21.0	22.0	27.5	25.0	26.0	25.0	23.0	24.0	22.5	21.0	21.5
15	22.0	20.0	21.0	28.0	25.0	26.5	25.5	22.5	24.0	21.0	19.0	20.0
16	23.0	20.0	21.0	29.5	26.5	27.5	25.5	23.5	24.0	21.5	18.5	19.5
17	23.0	20.5	21.5	29.0	27.0	28.0	26.0	24.0	24.5	22.5	19.5	21.0
18	25.0	21.0	22.5	31.5	27.0	28.5	25.0	22.0	23.0	22.0	20.5	21.0
19	24.0	21.5	22.5	29.5	26.0	28.0	25.5	22.5	24.0	23.0	21.5	22.0
20	25.5	21.0	23.0	28.5	25.5	27.0	26.0	22.0	24.0	22.5	21.0	22.0
21	27.5	24.0	25.5	29.5	26.0	27.5	25.0	22.5	23.5	21.0	19.0	20.0
22	28.0	25.0	26.5	29.0	26.5	27.5	24.5	23.0	24.0	19.5	17.0	18.5
23	29.5	26.0	27.5	27.0	24.0	25.5	23.5	22.5	23.0	17.0	14.5	16.0
24	29.0	27.0	28.0	27.5	23.0	25.0	25.5	22.5	23.5	15.5	13.0	14.0
25	31.0	27.5	29.0	26.0	24.0	24.5	27.0	23.5	25.0	17.0	14.5	15.5
26	30.0	27.5	28.5	28.0	24.0	25.0	28.0	24.0	25.5	19.5	15.5	17.0
27	28.0	25.5	27.0	28.0	26.5	27.0	28.0	24.0	26.0	18.0	16.0	16.5
28	28.0	25.0	26.0	27.5	25.0	26.0	26.5	24.0	25.0	17.0	14.5	15.5
29	29.0	26.0	27.0	27.0	26.0	26.5	26.5	23.0	24.5	19.5	16.5	17.5
30	e29.0	e26.0	e27.0	28.5	24.5	26.0	27.5	23.5	25.0	21.0	19.0	19.5
31	---	---	---	29.0	26.5	27.5	27.0	24.0	25.5	---	---	---
MONTH	31.0	15.5	23.5	---	---	---	29.0	21.0	24.9	28.0	13.0	21.1

e Estimated

05427850 YAHARA RIVER AT STATE HWY 113 AT MADISON, WI--Continued

DISCHARGE,SUSP.SED., in T/DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	1.00	0.77	1.74	3.53	6.31	6.34	4.39	6.27	1.89
2	---	---	---	0.98	0.76	1.95	2.97	5.49	7.79	4.39	4.08	2.24
3	---	---	---	0.96	0.92	1.38	2.92	6.57	18.1	3.38	3.82	4.65
4	---	---	---	0.94	0.91	1.59	3.12	4.88	39.0	4.01	5.11	2.70
5	---	---	---	0.98	0.96	1.58	3.28	4.78	25.0	4.64	5.40	2.14
6	---	---	---	0.96	0.83	1.64	1.47	5.45	11.4	4.00	3.72	2.99
7	---	---	---	0.87	0.95	1.73	4.35	7.30	6.80	3.75	3.58	2.87
8	---	---	---	0.97	1.03	2.48	15.6	3.57	11.1	3.62	3.76	2.26
9	---	---	---	1.13	1.24	5.11	6.91	10.0	7.94	7.43	4.27	2.23
10	---	---	---	1.09	1.62	5.52	6.93	13.0	4.70	6.51	3.27	2.12
11	---	---	---	1.05	0.63	2.41	5.50	7.60	12.3	3.85	3.54	2.29
12	---	---	---	1.00	1.96	2.67	6.97	16.7	11.6	4.33	3.31	2.13
13	---	---	---	0.90	0.82	3.06	4.92	12.6	7.62	4.94	5.30	2.22
14	---	---	---	0.93	0.95	3.65	4.36	8.57	8.04	4.92	2.97	2.97
15	---	---	---	0.87	1.87	2.30	3.54	3.52	8.71	4.63	3.30	2.09
16	---	---	---	0.79	1.60	2.65	3.47	9.80	7.98	3.91	5.22	2.12
17	---	---	---	0.70	1.14	2.53	5.98	9.12	8.40	5.12	4.58	2.21
18	---	---	---	0.70	1.21	2.53	2.41	6.22	7.28	5.47	4.62	2.12
19	---	---	---	0.73	3.05	2.69	6.94	6.60	4.18	3.74	3.43	1.62
20	---	---	---	0.77	4.85	2.20	4.17	4.83	8.76	4.08	2.93	1.82
21	---	---	---	0.85	5.82	3.17	4.17	5.50	6.71	2.88	2.62	3.62
22	---	---	---	0.78	3.17	2.48	3.86	3.41	5.21	9.21	6.15	2.44
23	---	---	---	0.95	1.98	3.36	4.23	8.83	7.27	5.45	4.90	1.24
24	---	---	---	0.89	2.69	5.11	4.29	6.64	5.74	4.70	3.24	2.54
25	---	---	---	0.90	4.05	0.87	5.48	5.95	3.86	4.55	3.53	2.16
26	---	---	---	1.20	1.91	1.88	5.71	6.55	6.92	6.99	2.97	2.56
27	---	---	---	1.06	1.96	1.55	5.95	7.73	5.77	4.03	3.02	0.91
28	---	---	---	1.22	1.87	3.55	6.20	5.02	5.91	5.40	2.49	1.65
29	---	---	---	0.86	---	2.98	3.07	10.6	4.39	6.30	3.02	0.88
30	---	---	---	0.84	---	2.49	6.38	4.67	4.14	3.79	2.81	0.54
31	---	---	---	0.96	---	3.42	---	9.40	---	3.80	2.78	---
TOTAL				28.83	51.52	82.27	148.68	227.21	278.96	148.21	120.01	66.22

PHOSPHORUS T #/DAY, in POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	12.5	9.76	19.4	34.4	54.5	52.3	37.0	51.7	18.5
2	---	---	---	12.3	9.58	21.5	29.4	48.0	62.8	37.0	35.2	21.6
3	---	---	---	12.0	11.4	15.7	28.9	56.3	98.0	32.6	33.3	42.9
4	---	---	---	11.8	11.2	17.8	30.6	43.1	172	34.2	43.2	25.6
5	---	---	---	12.3	11.8	17.7	32.0	42.2	164	38.9	45.4	20.9
6	---	---	---	12.1	10.4	18.2	15.5	47.4	130	34.1	32.6	28.1
7	---	---	---	11.0	11.7	19.1	40.9	61.4	70.9	32.2	31.6	27.2
8	---	---	---	12.1	12.6	26.3	55.0	32.4	85.7	31.2	33.0	22.0
9	---	---	---	13.9	14.7	50.0	51.3	78.4	63.4	59.3	33.8	21.8
10	---	---	---	13.5	18.7	53.5	61.7	102	39.7	52.7	29.2	20.4
11	---	---	---	13.1	6.31	45.5	50.0	63.2	93.9	32.9	31.4	22.4
12	---	---	---	12.4	22.1	27.9	61.7	127	89.0	36.6	29.6	21.0
13	---	---	---	11.4	10.2	31.4	45.1	99.2	61.0	41.2	45.1	21.9
14	---	---	---	11.6	11.6	36.7	40.5	70.1	63.9	41.1	29.1	28.5
15	---	---	---	11.0	21.1	24.2	33.5	31.6	68.6	47.1	29.6	20.8
16	---	---	---	10.1	18.3	27.5	32.9	78.7	63.5	33.5	44.8	21.1
17	---	---	---	9.04	13.6	26.3	53.3	59.9	66.4	42.6	39.8	22.0
18	---	---	---	9.07	14.3	26.3	23.6	52.4	58.4	45.2	40.2	21.2
19	---	---	---	9.33	32.6	27.7	60.7	55.1	34.8	32.2	30.9	16.7
20	---	---	---	9.83	49.1	23.1	38.5	41.6	68.8	34.9	26.9	18.5
21	---	---	---	10.8	57.7	31.9	38.4	46.7	54.2	25.5	24.4	34.4
22	---	---	---	9.92	33.5	25.6	48.4	30.4	43.2	72.3	56.2	24.3
23	---	---	---	11.8	21.9	33.5	38.7	71.1	58.2	45.3	41.0	7.12
24	---	---	---	11.2	28.8	48.6	39.1	55.0	47.1	39.7	19.4	25.2
25	---	---	---	11.2	78.2	9.96	48.5	49.8	33.0	38.6	32.0	21.9
26	---	---	---	14.5	21.2	19.9	50.3	54.2	55.7	82.0	27.5	25.5
27	---	---	---	13.0	21.7	16.7	52.1	62.7	47.3	34.7	27.9	10.1
28	---	---	---	14.7	20.7	34.8	53.9	42.6	48.3	45.1	21.5	17.3
29	---	---	---	10.8	---	29.7	44.1	83.2	37.0	51.8	28.0	9.86
30	---	---	---	10.6	---	25.3	55.1	39.8	35.1	37.5	26.3	6.37
31	---	---	---	11.9	---	33.5	---	74.4	---	33.1	26.1	---
TOTAL				360.79	604.75	865.26	1288.1	1854.4	2066.2	1282.1	1046.7	645.15

ROCK RIVER BASIN

05427850 YAHARA RIVER AT STATE HWY 113 AT MADISON, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
FEB 2002					
11...	1430	39	10	.030	6.0
25...	1140	100	10	.145	15
MAR					
11...	1345	97	10	.087	9.2
APR					
08...	1030	170	10	.060	34
09...	1640	183	10	.052	14
22...	1430	65	10	.138	22
29...	1120	67	10	.122	17
MAY					
09...	1120	73	10	.199	51
17...	1325	69	10	.161	49
JUN					
03...	1150	126	10	.143	53
04...	1400	226	10	.141	64
05...	1235	257	10	.118	36
06...	1230	146	10	.165	29
07...	1300	90	10	.146	28
19...	1135	50	10	.129	31
JUL					
03...	1228	38	10	.159	33
15...	1330	39	10	.224	44
26...	1310	70	10	.217	37
30...	1315	38	10	.183	37
AUG					
09...	1235	36	10	.174	44
14...	1215	29	10	.186	38
22...	1655	76	10	.137	30
23...	1600	55	10	.138	33
24...	1415	40	10	.090	30
28...	1145	33	10	.121	28
SEP					
03...	1045	75	10	.106	23
10...	1445	49	10	.077	16
19...	1135	43	10	.072	14
23...	1115	20	10	.066	23

05427948 PHEASANT BRANCH AT MIDDLETON, WI

LOCATION.--Lat 43°06'12", long 89°30'42", in NE ¼ NW ¼ sec.11, T.7 N., R.8 E., Dane County, Hydrologic Unit 07090001, on left bank at bridge on U.S. Highway 12, 2.5 mi upstream from Lake Mendota, at Middleton.

DRAINAGE AREA.--18.3 mi², of which 1.22 mi² is noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder, crest-stage gage, parshall flume, and concrete control. Datum of gage is 901.5 ft above NGVD of 1929.

REMARKS.--Records good (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	3.2	5.7	2.4	2.5	3.3	3.1	4.5	2.8	2.4	1.8	1.9
2	3.2	3.0	4.6	2.3	2.4	3.3	3.5	9.6	2.9	2.3	1.7	12
3	2.9	2.9	3.9	2.3	2.4	3.1	3.4	6.1	32	2.2	1.6	7.5
4	3.0	2.9	3.7	2.3	2.3	2.9	3.2	4.3	61	2.0	3.4	3.7
5	2.9	2.8	4.7	2.4	2.2	2.9	3.1	3.8	25	2.0	2.7	2.8
6	2.9	2.8	4.7	2.4	2.2	2.9	3.0	3.8	10	2.0	2.2	2.4
7	2.7	2.8	3.8	2.4	2.4	2.9	6.5	3.6	6.4	2.0	1.9	2.2
8	2.7	2.8	3.5	2.3	2.6	6.8	22	3.4	5.0	2.3	1.9	2.2
9	2.7	2.8	3.2	2.5	2.7	26	24	7.7	4.2	2.5	2.0	2.2
10	3.1	2.8	3.1	2.5	5.3	11	9.8	5.6	4.0	2.2	1.8	2.2
11	2.9	2.7	3.0	2.5	4.2	6.4	6.2	6.5	4.7	2.1	13	2.2
12	2.8	2.8	4.1	2.5	3.4	5.0	5.8	18	3.9	2.1	19	2.1
13	3.4	3.2	9.9	2.5	3.0	4.7	4.5	9.3	4.9	2.0	15	2.0
14	3.1	3.1	6.1	2.5	2.9	4.4	4.4	5.8	5.2	1.9	6.7	1.9
15	2.9	2.9	4.2	2.6	3.0	4.0	4.7	4.6	4.0	1.9	3.4	1.8
16	2.7	2.9	3.7	2.5	2.9	3.7	4.0	4.1	3.5	1.9	2.5	1.9
17	2.6	2.8	3.6	2.5	2.9	3.5	3.7	3.7	3.4	1.8	3.1	1.9
18	2.7	3.0	3.4	2.4	2.9	3.5	4.4	3.4	3.3	1.8	3.3	2.0
19	2.6	3.2	3.3	2.3	15	3.5	10	3.3	3.3	1.9	2.5	4.9
20	2.5	1.8	3.0	2.3	36	3.9	5.7	3.3	3.3	2.5	2.1	4.1
21	2.6	2.3	2.9	2.4	22	3.6	5.0	3.2	3.1	2.3	7.5	3.5
22	12	2.7	3.7	2.4	9.2	3.2	5.7	3.0	3.0	5.3	21	2.6
23	39	3.0	3.7	2.5	6.5	3.2	4.6	3.0	2.9	3.7	8.7	2.2
24	12	14	3.5	2.5	5.7	3.1	4.8	2.9	2.8	2.5	4.2	2.3
25	8.1	13	3.0	2.5	5.2	3.0	4.8	7.4	2.7	2.1	3.1	2.2
26	5.2	5.7	2.8	2.4	4.4	3.0	3.8	6.2	3.6	2.1	2.6	2.5
27	4.0	6.1	2.8	2.5	3.8	2.9	4.5	3.9	2.9	2.2	2.3	2.6
28	3.6	4.8	2.7	2.5	3.6	3.2	12	3.6	2.7	2.8	2.1	2.6
29	3.5	4.1	2.6	2.5	---	3.0	7.7	5.0	2.6	2.3	2.0	7.9
30	3.3	6.2	2.5	2.4	---	2.9	5.0	3.5	2.5	2.0	2.0	4.7
31	3.2	---	2.4	2.4	---	2.9	---	3.0	---	1.9	1.9	---
TOTAL	154.1	119.1	117.8	75.4	163.6	141.7	192.9	159.1	221.6	71.0	149.0	97.0
MEAN	4.971	3.970	3.800	2.432	5.843	4.571	6.430	5.132	7.387	2.290	4.806	3.233
MAX	39	14	9.9	2.6	36	26	24	18	61	5.3	21	12
MIN	2.5	1.8	2.4	2.3	2.2	2.9	3.0	2.9	2.5	1.8	1.6	1.8
CFSM	0.29	0.23	0.22	0.14	0.34	0.27	0.38	0.30	0.43	0.13	0.28	0.19
IN.	0.34	0.26	0.26	0.16	0.36	0.31	0.42	0.35	0.48	0.15	0.32	0.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, BY WATER YEAR (WY)

MEAN	2.618	3.159	2.348	2.587	6.463	10.27	5.661	4.114	7.181	5.385	4.160	3.795
MAX	6.42	12.3	6.11	7.75	20.4	34.6	16.8	18.7	41.7	32.5	26.5	13.0
(WY)	1987	1986	1985	1997	1994	1993	1999	2000	2000	1993	2001	1980
MIN	0.86	0.67	0.34	0.36	0.46	1.63	0.95	0.96	0.92	0.94	1.07	0.74
(WY)	1977	1991	1990	1991	1978	1981	1990	1977	1989	1976	1976	1976

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1974 - 2002

ANNUAL TOTAL	2762.9	1662.3	
ANNUAL MEAN	7.570	4.554	4.826
HIGHEST ANNUAL MEAN			11.0
LOWEST ANNUAL MEAN			2.78
HIGHEST DAILY MEAN	566 Aug 2	61 Jun 4	566 Aug 2 2001
LOWEST DAILY MEAN	1.5 Jan 26,28	1.6 Aug 3	0.17 Dec 25-27 1989
ANNUAL SEVEN-DAY MINIMUM	1.6 Jan 22	1.9 Jul 13	0.18 Dec 21 1989
MAXIMUM PEAK FLOW		80 Jun 4	964 Aug 2 2001
MAXIMUM PEAK STAGE		5.63 Jun 4	9.88 Aug 2 2001
INSTANTANEOUS LOW FLOW		1.6 (a) Aug 2-4	0.15 Dec 21 1989
ANNUAL RUNOFF (CFSM)	0.44	0.27	0.28
ANNUAL RUNOFF (INCHES)	6.02	3.62	3.84
10 PERCENT EXCEEDS	12	7.4	6.8
50 PERCENT EXCEEDS	3.2	3.0	2.0
90 PERCENT EXCEEDS	1.9	2.1	0.84

(a) Also occurred Nov. 19,20, result of construction upstream

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1977 to current year.

TOTAL-PHOSPHORUS DISCHARGE: January 1992 to December 1993, and October 1994 to current year.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: January to September 1992.

INSTRUMENTATION.--Automatic pumping sampler since December 1977.

REMARKS.--Records good. Samples are point samples unless otherwise indicated.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 15,400 mg/L, Apr. 30, 1984; minimum observed, 4 mg/L, Mar. 12, 1979, May 11, 1995, Mar. 17, 2001, July 3 and Aug. 7, 2002.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,870 tons, June 10, 1984; minimum daily, 0.01 ton, on many days in 1990 and 1991 water years.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 15.1 mg/L, July 4, 1994; minimum observed, 0.03 mg/L, Jan. 28, 1998.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 4,310 lb, May 18, 2000; minimum daily, 0.19 lb, Jan. 14, 31, 1998.

TOTAL ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 2.40 mg/L, Feb. 29, 1992; minimum observed, 0.02 mg/L, Nov. 13, 2001.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 966 lb, Feb. 28, 1992; minimum daily, 0.13 lb, Sept. 13, 1992.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 825 mg/L, Aug. 11; minimum observed, 4 mg/L, July 3 and Aug. 7.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 36 tons, June 4; minimum daily, 0.02 ton, July 3-7, Aug. 3, 7, 8, and 10.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.53 mg/L, Aug. 11; minimum observed, 0.06 mg/L, Sept. 27.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 213 lb, June 4; minimum daily, 0.65 lb, July 17-19.

TOTAL ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.14 mg/L, Feb. 20; minimum observed, 0.02 mg/L, Nov. 13.

SEDIMENT DISCHARGE, SUSPENDED, (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.39	0.24	0.55	0.20	0.13	0.07	0.12	0.16	0.09	0.03	0.03	0.05
2	0.37	0.22	0.36	0.19	0.12	0.07	0.14	0.67	0.09	0.03	0.03	3.7
3	0.34	0.19	0.28	0.18	0.12	0.07	0.13	0.22	33.0	0.02	0.02	0.47
4	0.34	0.18	0.25	0.18	0.12	0.06	0.12	0.15	36.0	0.02	0.22	0.09
5	0.33	0.17	0.76	0.18	0.11	0.06	0.12	0.14	3.4	0.02	0.07	0.07
6	0.33	0.16	0.69	0.17	0.11	0.06	0.11	0.14	0.65	0.02	0.03	0.06
7	0.31	0.15	0.28	0.16	0.12	0.06	1.1	0.13	0.22	0.02	0.02	0.07
8	0.31	0.14	0.22	0.16	0.13	0.86	8.5	0.13	0.13	0.04	0.02	0.08
9	0.31	0.15	0.20	0.16	0.14	11.0	16.0	0.38	0.10	0.06	0.03	0.08
10	0.35	0.15	0.18	0.16	1.2	2.4	1.6	0.13	0.08	0.05	0.02	0.09
11	0.32	0.15	0.17	0.15	0.42	0.56	0.33	0.54	0.22	0.05	18.0	0.11
12	0.32	0.17	0.59	0.15	0.22	0.37	0.46	4.1	0.12	0.04	7.7	0.11
13	0.41	0.27	2.3	0.14	0.18	0.33	0.25	1.7	0.88	0.04	3.4	0.12
14	0.36	0.20	0.54	0.15	0.15	0.29	0.25	0.66	1.0	0.03	0.53	0.13
15	0.32	0.17	0.31	0.15	0.15	0.26	0.25	0.34	0.24	0.03	0.20	0.14
16	0.30	0.16	0.26	0.14	0.14	0.22	0.18	0.20	0.13	0.03	0.10	0.16
17	0.29	0.16	0.25	0.14	0.13	0.20	0.14	0.12	0.08	0.03	0.21	0.16
18	0.29	0.19	0.23	0.13	0.13	0.19	0.83	0.10	0.06	0.03	0.11	0.17
19	0.29	0.35	0.22	0.12	3.2	0.18	1.3	0.09	0.05	0.03	0.06	0.86
20	0.28	0.11	0.20	0.12	33.0	0.19	0.39	0.09	0.05	0.08	0.04	0.57
21	0.28	0.14	0.19	0.12	7.2	0.17	0.36	0.09	0.05	0.09	4.3	0.40
22	7.3	0.17	0.43	0.12	0.66	0.14	0.47	0.08	0.04	0.45	6.4	0.25
23	22.0	0.21	0.44	0.13	0.17	0.13	0.26	0.08	0.04	0.13	0.56	0.20
24	1.3	2.5	0.37	0.13	0.12	0.12	0.32	0.07	0.04	0.07	0.15	0.21
25	0.48	1.3	0.31	0.13	0.11	0.12	0.24	0.79	0.04	0.04	0.08	0.20
26	0.28	0.25	0.29	0.12	0.09	0.12	0.14	0.23	0.13	0.03	0.07	0.23
27	0.26	0.50	0.27	0.13	0.08	0.12	0.20	0.11	0.04	0.03	0.06	0.24
28	0.28	0.25	0.26	0.13	0.08	0.13	1.3	0.11	0.04	0.09	0.05	0.24
29	0.32	0.17	0.24	0.13	---	0.12	0.39	0.50	0.03	0.04	0.05	1.1
30	0.29	0.81	0.22	0.12	---	0.11	0.16	0.15	0.03	0.04	0.05	0.23
31	0.27	---	0.21	0.12	---	0.11	---	0.11	---	0.03	0.05	---
TOTAL	39.62	9.98	12.07	4.51	48.53	18.89	36.16	12.51	77.07	1.74	42.66	10.59
WATER YEAR 2002 TOTAL 314.33												

05427948 PHEASANT BRANCH AT MIDDLETON, WI--Continued

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.71	1.52	5.64	1.41	1.31	1.40	1.77	2.97	1.45	1.59	0.80	1.27
2	2.55	1.37	4.06	1.35	1.25	1.39	1.98	10.4	1.49	1.49	0.77	17.8
3	2.36	1.31	3.13	1.31	1.23	1.30	1.92	5.32	89.3	1.36	0.74	8.29
4	2.36	1.30	2.63	1.29	1.19	1.23	1.80	3.03	213	1.21	1.99	3.29
5	2.26	1.28	4.62	1.31	1.16	1.21	1.71	2.43	97.2	1.12	1.41	2.20
6	2.24	1.28	5.35	1.31	1.15	1.20	1.67	2.37	29.3	1.11	1.14	1.68
7	2.11	1.27	3.54	1.30	1.22	1.18	8.78	2.23	13.8	1.07	1.02	1.45
8	2.10	1.26	2.66	1.28	1.31	5.82	35.7	2.07	6.04	1.23	1.00	1.46
9	2.10	1.25	2.25	1.36	1.40	67.9	64.2	6.39	2.77	1.29	1.12	1.44
10	2.35	1.26	2.04	1.37	3.78	32.9	20.7	4.31	2.29	1.02	1.03	1.42
11	2.14	1.21	1.90	1.34	2.78	15.9	10.5	8.12	2.60	0.87	76.9	1.44
12	2.09	1.27	3.84	1.33	2.05	9.42	6.96	65.5	2.08	0.82	58.1	1.36
13	2.76	1.53	13.3	1.33	1.70	6.69	3.63	47.6	4.87	0.76	32.2	1.29
14	2.42	1.49	6.05	1.37	1.63	5.27	2.79	25.2	8.33	0.71	7.98	1.25
15	2.07	1.36	3.45	1.38	1.69	4.55	2.69	14.5	5.07	0.70	2.78	1.21
16	1.78	1.26	2.50	1.35	1.67	3.90	2.17	9.09	3.72	0.70	1.57	1.22
17	1.61	1.23	2.19	1.34	1.62	3.49	1.84	5.96	3.24	0.65	1.90	1.19
18	1.53	1.37	2.10	1.28	1.64	3.24	3.54	4.36	2.99	0.65	1.97	1.26
19	1.49	1.62	1.98	1.23	17.5	3.08	12.3	3.44	2.76	0.65	1.50	3.81
20	1.42	0.74	1.83	1.25	125	3.22	3.64	2.83	2.60	1.13	1.20	2.25
21	1.42	0.96	1.77	1.26	93.9	2.80	3.10	2.29	2.40	1.03	20.5	1.70
22	37.1	1.12	2.50	1.29	30.5	2.35	4.00	2.08	2.28	4.64	45.3	1.10
23	155	1.23	2.87	1.34	13.2	2.20	2.83	2.10	2.06	2.23	9.72	0.85
24	28.6	17.0	2.50	1.31	6.57	1.98	3.53	2.07	1.93	1.15	3.20	0.85
25	15.8	17.7	2.08	1.30	4.56	1.80	3.67	11.3	1.83	0.95	2.08	0.80
26	8.06	6.27	1.96	1.28	3.10	1.71	2.24	8.78	2.76	0.92	1.78	0.88
27	4.82	6.99	1.90	1.30	2.21	1.68	2.54	3.85	2.15	0.97	1.56	0.87
28	3.36	4.64	1.83	1.33	1.67	1.84	11.9	2.68	1.97	1.45	1.43	0.86
29	2.50	3.27	1.70	1.30	---	1.73	7.24	4.61	1.80	1.08	1.35	6.73
30	2.03	6.63	1.57	1.26	---	1.66	3.49	2.22	1.68	0.94	1.33	2.01
31	1.78	---	1.47	1.27	---	1.64	---	1.66	---	0.89	1.28	---
TOTAL	302.92	91.99	97.21	40.73	327.99	195.68	234.83	271.76	515.76	36.38	286.65	73.23
WATER YEAR 2002 TOTAL	2475.13											

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	
OCT 2001							
	02...	0945	3.3	10	--	.150	43
	22...	0945	2.6	10	--	.101	40
	22...	1740	14	50	--	.196	121
	22...	2055	38	50	--	.415	262
	22...	2120	56	50	--	.483	304
	23...	0330	54	50	--	.807	337
	23...	0930	48	50	--	.761	155
	24...	1000	9.9	50	--	.435	31
	24...	1600	15	50	--	.424	54
	25...	2230	6.3	50	--	.328	18
	29...	1315	3.4	10	.05	.13	35
NOV							
	13...	1345	4.4	10	.03	.09	51
	24...	0645	6.3	50	--	.117	29
	24...	1430	20	50	--	.249	72
	24...	2045	20	50	--	.279	62
	26...	0300	6.6	50	--	.223	17
	30...	0600	6.3	50	--	.207	24
DEC							
	05...	1945	6.3	50	--	.238	106
	12...	2230	13	50	--	.250	101
	14...	0500	6.9	50	--	.192	33
	22...	1945	7.2	50	--	.132	75
	27...	0930	2.8	10	--	.128	37
FEB 2002							
	10...	0215	6.9	50	--	--	154
	15...	1110	3.0	10	--	.105	18
	19...	0115	6.3	50	--	--	68
	19...	1800	18	50	--	.247	90
	20...	0600	15	50	--	--	59
	20...	1105	37	50	--	--	284
	20...	1400	52	50	.136	.837	652
	20...	2015	54	50	.144	.547	313
	21...	0815	24	50	--	.900	106
	22...	1445	8.7	50	--	.590	20
	23...	1500	6.3	50	--	--	8.1

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
MAR 2002						
08...	0655	6.3	50	--	.094	28
09...	0445	22	50	--	--	103
09...	0915	33	50	--	.309	199
09...	2115	22	50	--	--	135
11...	0945	6.3	50	--	.470	29
APR						
07...	0710	6.6	50	--	.554	16
08...	0230	18	50	--	.174	103
08...	1440	17	50	--	--	81
09...	0100	38	50	--	.402	376
11...	0745	6.9	50	--	.335	18
18...	2140	6.9	50	--	.097	15
18...	2235	14	50	--	.345	312
19...	0445	12	50	--	--	41
20...	0500	6.6	50	--	.121	28
27...	2359	8.1	50	--	--	23
28...	0600	13	50	--	.151	38
29...	1830	6.3	50	--	--	12
MAY						
01...	2300	6.3	50	--	--	26
02...	0100	13	50	--	.195	39
03...	0730	6.6	50	--	--	13
09...	0200	6.9	50	--	--	14
09...	0800	8.4	50	--	--	15
10...	0215	6.6	50	--	--	9.1
11...	1515	11	50	--	--	40
12...	0130	17	50	--	.421	165
12...	0730	20	50	--	.344	46
13...	1240	9.0	50	--	--	66
13...	1241	9.0	10	--	--	63
14...	0215	6.6	50	--	.908	49
25...	0815	6.6	50	--	--	19
25...	0915	13	50	--	.189	70
26...	0945	6.6	50	--	--	11
JUN						
03...	0630	7.8	50	--	.136	19
03...	0715	30	50	--	.584	511
03...	0730	55	50	.027	.753	666
03...	1345	50	50	--	--	456
04...	0145	32	50	--	.311	119
04...	0615	66	50	--	--	270
04...	1220	75	50	--	.540	163
05...	0738	28	50	--	.732	46
05...	0739	28	10	--	.731	51
07...	1330	6.3	50	--	.398	11
13...	2000	6.3	50	--	.192	19
13...	2100	18	50	--	.302	189
JUL						
03...	0925	2.3	10	--	.115	3.8
17...	0835	1.9	10	--	.066	6.5
22...	0725	6.3	50	--	--	14
22...	1630	6.6	50	--	--	16
AUG						
07...	0819	2.0	50	--	.097	4.7
07...	0820	2.0	10	--	.097	3.7
11...	1810	9.9	50	--	.210	49
11...	1845	37	50	--	.636	315
11...	1900	57	50	--	1.53	825
12...	0115	40	50	--	--	307
12...	1115	16	50	--	.376	57
12...	1116	16	10	--	.369	89
13...	0130	9.9	50	--	--	29
13...	1230	19	50	--	.447	45
14...	0645	7.8	50	--	.222	30
21...	1845	10	50	--	.151	16
21...	1930	39	50	--	.386	268
22...	1345	21	50	--	.318	76
23...	1400	7.5	50	--	.185	16
SEP						
02...	0715	6.9	50	--	.210	37
02...	0745	16	50	--	.218	62
03...	1415	6.3	50	--	.179	8.8
16...	1340	1.9	10	--	.121	32
19...	0515	6.6	50	--	.138	31
27...	1015	2.6	10	--	.062	34
29...	0415	6.9	50	--	.175	80
29...	0550	13	50	--	.153	46
29...	1800	7.5	50	--	.106	11
30...	0740	5.2	10	--	.075	19

STREAMS TRIBUTARY TO LAKE MICHIGAN

054279509 PHEASANT BRANCH TRIBUTARY AT MIDDLETON, WI

LOCATION.--Lat 43°07'10", long 89°29'02", in SE ¼ NW ¼ sec.36, T.8 N., r.8 E., Dane County, Hydrologic Unit 07090001, on left bank about 1.0 mi from County Highway M and Q bridge in Middleton, and approximately 1.1 mi from mouth.

PERIOD OF RECORD.--October 2000 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 840.2 ft above NGVD of 1929.

REMARKS.--Records good except those for Oct. 1-14, which are fair, and June 3, which is poor (see page 11) when flume was submerged or affected by backwater. Discharge is primarily from springs. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.7	4.7	4.7	4.2	4.6	4.7	4.8	4.8	4.6	5.1	4.9	4.5
2	e4.7	4.7	4.7	4.2	4.5	4.7	4.8	5.0	4.7	4.9	4.8	4.6
3	e4.7	4.7	4.8	4.2	4.6	4.7	4.8	4.8	e10	4.6	4.8	4.6
4	e4.7	4.7	4.8	4.2	4.6	4.7	4.8	4.8	8.2	4.6	4.9	4.5
5	e4.7	4.7	4.9	4.2	4.6	4.7	4.7	4.8	5.5	4.6	4.9	4.5
6	e4.7	4.7	4.9	4.2	4.6	4.7	4.7	4.8	4.9	4.6	4.9	4.4
7	e4.7	4.7	4.9	4.2	4.7	4.7	5.0	4.8	4.9	4.7	4.8	4.2
8	e4.7	4.7	4.8	4.3	4.7	4.8	5.3	4.8	4.8	4.7	4.7	4.3
9	e4.6	4.7	4.8	4.3	4.8	5.2	5.0	4.9	4.8	4.7	4.6	4.3
10	e4.6	4.7	4.8	4.3	4.9	4.6	4.7	4.8	4.8	4.8	4.7	4.3
11	e4.6	4.7	4.8	4.3	4.8	4.6	4.5	4.8	4.9	4.8	4.8	4.3
12	e4.6	4.6	4.9	4.3	4.8	4.6	4.6	5.0	4.9	4.8	4.8	4.3
13	e4.6	4.6	5.1	4.3	4.8	4.6	4.5	4.7	5.0	4.8	4.8	4.3
14	e4.6	4.6	4.9	4.3	4.8	4.6	4.6	4.7	5.0	4.7	4.7	4.4
15	4.6	4.6	4.8	4.3	4.8	4.6	4.6	4.7	5.0	4.7	4.5	4.4
16	4.6	4.6	4.7	4.3	4.7	4.6	4.6	4.8	5.0	4.7	4.4	4.3
17	4.6	4.6	4.7	4.3	4.7	4.6	4.6	4.7	5.0	4.7	4.5	4.4
18	4.6	4.6	4.6	4.3	4.7	4.6	4.6	4.8	5.0	4.8	4.4	4.3
19	4.6	4.7	4.5	4.3	5.3	4.6	4.6	4.8	5.0	4.9	4.4	4.4
20	4.6	4.7	4.5	4.3	5.8	4.7	4.6	4.8	5.0	4.9	4.4	4.4
21	4.7	4.7	4.5	4.3	4.7	4.6	4.6	4.6	5.0	4.9	4.6	4.3
22	5.3	4.7	4.6	4.4	4.5	4.6	4.6	4.4	5.1	5.0	4.5	4.3
23	6.1	4.7	4.5	4.4	4.5	4.7	4.6	4.4	5.1	5.0	4.4	4.4
24	4.9	5.1	4.4	4.4	4.6	4.7	4.7	4.4	5.1	5.0	4.4	4.4
25	4.8	4.9	4.4	4.4	4.6	4.7	4.7	4.6	5.1	5.0	4.4	4.2
26	4.7	4.8	4.4	4.5	4.6	4.7	4.7	4.5	5.2	5.0	4.5	4.2
27	4.6	4.8	4.4	4.5	4.6	4.8	4.8	4.5	5.1	4.9	4.5	4.2
28	4.6	4.7	4.4	4.5	4.7	4.8	4.9	4.5	5.1	4.9	4.5	4.2
29	4.6	4.7	4.3	4.5	---	4.9	4.8	4.6	5.1	4.8	4.5	4.3
30	4.7	4.8	4.3	4.6	---	4.8	4.8	4.6	5.1	4.8	4.5	4.2
31	4.7	---	4.3	4.6	---	4.8	---	4.6	---	4.8	4.5	---
TOTAL	146.5	141.2	144.1	134.4	132.6	145.7	141.6	145.8	158.0	149.2	143.0	130.4
MEAN	4.726	4.707	4.648	4.335	4.736	4.700	4.720	4.703	5.267	4.813	4.613	4.347
MAX	6.1	5.1	5.1	4.6	5.8	5.2	5.3	5.0	10	5.1	4.9	4.6
MIN	4.6	4.6	4.3	4.2	4.5	4.6	4.5	4.4	4.6	4.6	4.4	4.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	2001	2002	2001	2001	2001	2001	2001	2001	2002	2001	2002	2002
MEAN	4.542	4.463	4.319	4.137	4.438	4.590	4.540	4.469	5.267	4.645	4.613	4.347
MAX	4.73	4.71	4.65	4.34	4.74	4.70	4.72	4.70	5.27	4.81	4.61	4.35
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	4.36	4.22	3.99	3.94	4.14	4.48	4.36	4.24	5.27	4.48	4.61	4.35
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2002	2001	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 2001 - 2002

ANNUAL TOTAL	1712.5	
ANNUAL MEAN	4.692	
HIGHEST ANNUAL MEAN		4.69 2002
LOWEST ANNUAL MEAN		4.69 2002
HIGHEST DAILY MEAN	(e)10 Jun 3	(e)10 Jun 3 2002
LOWEST DAILY MEAN	4.2 (a)Jan 1-7	(b)3.9 Dec 21-31 2000
ANNUAL SEVEN-DAY MINIMUM	4.2 Jan 1	3.9 Dec 21 2000
MAXIMUM PEAK STAGE	(c)11.35 Jun 3	(c)14.71 Aug 2 2001
INSTANTANEOUS LOW FLOW	4.1 Sep 25	3.7 (d)Jan 10 2001
10 PERCENT EXCEEDS	5.0	4.8
50 PERCENT EXCEEDS	4.7	4.5
90 PERCENT EXCEEDS	4.3	4.1

- (a) Also occurred Sept. 7, 25-28, 30
- (b) Also occurred Jan. 1-13, 19-22, 24-28, and Feb. 2
- (c) Discharge unknown
- (d) Also occurred many times during 2001 water year
- (e) Estimated

ROCK RIVER BASIN

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI

LOCATION.--Lat 43°04'45", long 89°28'15", in NW ¼ SE ¼ sec.18, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in city park near the junction of Spring Harbor Drive and University Avenue in Madison.

DRAINAGE AREA.--3.29 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1976 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 855.3 ft above NGVD of 1929.

REMARKS.--Records good except those for periods of flow between 0.00 ft³/s and 0.3 ft³/s and flow greater than 100 ft³/s, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.78	0.0	0.09	0.11	0.53	1.6	0.0	0.0	0.26	0.10
2	0.0	0.0	0.33	0.0	0.0	0.10	0.84	5.7	0.52	0.0	0.16	15
3	0.0	0.0	0.21	0.0	0.02	0.11	0.70	0.47	22	0.0	0.17	1.3
4	0.0	0.0	0.17	0.0	0.0	0.10	0.46	0.17	32	0.0	3.3	0.42
5	0.0	0.0	1.9	0.0	0.0	0.11	0.24	0.0	4.0	0.0	1.1	0.23
6	0.0	0.0	1.2	0.0	0.06	0.10	0.18	0.25	0.62	0.0	0.44	0.14
7	0.0	0.0	0.32	0.0	0.29	0.10	8.5	0.11	0.21	0.0	0.26	0.10
8	0.0	0.0	0.18	0.0	0.29	8.5	18	0.21	0.08	0.05	0.13	0.10
9	0.0	0.0	0.11	0.0	0.46	12	7.8	4.4	0.0	0.12	0.10	0.10
10	0.57	0.0	0.0	0.0	5.0	1.1	0.80	0.49	9.2	0.07	0.10	0.33
11	0.22	0.0	0.0	0.0	1.4	0.46	0.29	4.7	7.2	0.0	3.0	0.13
12	0.19	0.0	3.8	0.0	0.58	0.31	0.94	6.4	0.88	0.0	2.1	0.10
13	0.85	0.35	5.0	0.0	0.35	0.22	0.44	0.54	2.0	0.06	8.1	0.10
14	0.56	2.4	0.52	0.0	0.37	0.15	1.6	0.23	1.3	0.0	0.76	0.10
15	0.31	0.55	0.30	0.0	0.23	0.12	0.98	0.12	0.49	0.0	0.32	0.11
16	0.17	0.22	0.24	0.0	0.17	0.10	0.17	0.0	0.27	0.02	0.18	0.10
17	0.11	0.12	0.20	0.0	0.12	0.09	0.16	0.0	0.15	0.0	5.8	0.11
18	0.11	0.30	0.24	0.0	0.20	0.10	6.0	0.0	0.08	0.0	0.62	0.10
19	0.02	2.9	0.18	0.0	12	0.63	7.1	0.0	0.14	0.0	0.25	4.1
20	0.0	0.38	0.12	0.0	21	0.83	0.95	0.0	0.13	3.3	0.15	6.8
21	0.0	0.13	0.0	0.0	5.0	0.38	2.2	0.0	0.02	0.46	7.5	1.3
22	23	0.13	3.4	0.05	0.74	0.24	2.0	0.0	0.0	11	14	0.30
23	18	0.31	2.0	0.02	0.34	0.18	0.49	0.0	0.0	0.76	1.1	0.30
24	3.1	16	0.50	0.01	0.20	0.14	2.0	0.0	0.0	0.25	0.39	0.22
25	0.97	3.8	0.17	0.0	0.26	0.10	0.97	9.1	0.0	0.17	0.28	0.15
26	0.37	0.47	0.0	0.0	0.17	0.09	0.28	1.2	3.6	0.09	0.20	0.16
27	0.23	1.7	0.0	0.0	0.18	0.10	3.6	0.25	0.74	0.39	0.13	0.21
28	0.14	0.41	0.0	0.0	0.12	0.40	9.4	4.3	0.31	1.3	0.10	0.13
29	0.0	0.23	0.0	0.0	---	0.12	0.76	3.2	0.14	0.44	0.10	5.6
30	0.0	3.1	0.0	0.0	---	0.10	0.35	0.38	0.05	0.52	0.10	0.51
31	0.0	---	0.0	0.03	---	0.13	---	0.15	---	0.51	0.10	---
TOTAL	48.92	33.50	21.87	0.11	49.64	27.32	78.73	43.97	86.13	19.51	51.30	38.45
MEAN	1.578	1.117	0.705	0.004	1.773	0.881	2.624	1.418	2.871	0.629	1.655	1.282
MAX	23	16	5.0	0.05	21	12	18	9.1	32	11	14	15
MIN	0.00	0.00	0.00	0.00	0.00	0.09	0.16	0.00	0.00	0.00	0.10	0.10
CFSM	0.48	0.34	0.21	0.00	0.54	0.27	0.80	0.43	0.87	0.19	0.50	0.39
IN.	0.55	0.38	0.25	0.00	0.56	0.31	0.89	0.50	0.97	0.22	0.58	0.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2002, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	1.081	1.193	0.515	0.536	1.407	2.026	1.959	1.636	2.652	2.070	2.016	1.734																
MAX	3.19	3.64	1.99	1.73	3.60	6.97	6.26	6.57	7.20	6.51	5.01	4.97																
(WY)	1985	1993	1985	1990	1994	1993	1999	2000	2000	1993	2001	1980																
MIN	0.11	0.027	0.000	0.000	0.050	0.19	0.54	0.25	0.33	0.24	0.36	0.11																
(WY)	2001	1977	1990	1977	1978	1999	1985	1994	1987	2001	1988	1976																

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1976 - 2002

ANNUAL TOTAL	752.33	499.45	
ANNUAL MEAN	2.061	1.368	1.578
HIGHEST ANNUAL MEAN			3.09 1993
LOWEST ANNUAL MEAN			0.97 1988
HIGHEST DAILY MEAN	79 Aug 2	32 Jun 4	79 Aug 2 2001
LOWEST DAILY MEAN	0.00 Many days	0.00 Many days	0.00 Many days
ANNUAL SEVEN-DAY MINIMUM	0.00 (a)Jun 24	0.00 (b)Oct 1	0.00 (c)
MAXIMUM PEAK FLOW		290 Oct 22	754 Jul 5 1993
MAXIMUM PEAK STAGE		2.80 Oct 22	4.16 Jul 5 1993
ANNUAL RUNOFF (CFSM)	0.63	0.42	0.48
ANNUAL RUNOFF (INCHES)	8.51	5.65	6.52
10 PERCENT EXCEEDS	5.0	3.9	3.5
50 PERCENT EXCEEDS	0.23	0.17	0.14
90 PERCENT EXCEEDS	0.00	0.00	0.00

(a) Also occurred Oct. 1, 29, and Dec. 26
 (b) Also occurred Oct. 29, Dec. 26, May 16, and July 1
 (c) Annual seven-day minimum flows are 0.00 for most years

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1976 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1991 to current year.

INSTRUMENTATION.--Automatic pumping sampler.

REMARKS.--Records good. Samples are point samples unless otherwise indicated.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 3,870 mg/L, July 4, 1994; minimum observed, 1 mg/L, Aug. 6, 1993, Sept. 15, 1998, and July 26, 1999.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 137 tons, June 17, 1996; minimum daily, 0.00 ton, on many days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 2,850 mg/L, May 28; minimum observed, 8 mg/L, Sept. 29.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 15 tons, June 3; minimum daily, 0.00 ton, on many days.

SEDIMENT DISCHARGE, SUSPENDED, (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.29	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.03	1.2	0.23	0.00	0.00	3.7
3	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	15.0	0.00	0.00	0.04
4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	7.2	0.00	0.38	0.01
5	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.07	0.00
6	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.02	0.00
7	0.00	0.00	0.02	0.00	0.00	0.00	1.4	0.00	0.00	0.00	0.01	0.00
8	0.00	0.00	0.00	0.00	0.00	2.4	2.9	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	3.3	0.72	1.6	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.89	0.07	0.04	0.02	7.3	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.06	0.03	0.00	1.3	0.90	0.00	1.8	0.00
12	0.00	0.00	0.85	0.00	0.02	0.02	0.05	1.1	0.07	0.00	0.18	0.00
13	0.03	0.01	0.27	0.00	0.01	0.01	0.01	0.02	0.93	0.00	1.4	0.00
14	0.02	0.49	0.02	0.00	0.01	0.00	0.75	0.00	0.16	0.00	0.03	0.00
15	0.00	0.02	0.00	0.00	0.00	0.00	0.06	0.00	0.02	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.8	0.00
18	0.00	0.02	0.00	0.00	0.00	0.00	13.0	0.00	0.00	0.00	0.02	0.00
19	0.00	0.15	0.00	0.00	2.3	0.04	5.3	0.00	0.00	0.00	0.00	1.1
20	0.00	0.01	0.00	0.00	6.4	0.04	0.11	0.00	0.00	2.8	0.00	1.5
21	0.00	0.00	0.00	0.00	0.43	0.02	0.46	0.00	0.00	0.02	8.9	0.09
22	14.0	0.00	1.3	0.00	0.04	0.00	0.18	0.00	0.00	3.5	2.6	0.01
23	4.9	0.02	0.06	0.00	0.02	0.00	0.03	0.00	0.00	0.03	0.04	0.00
24	0.37	1.7	0.01	0.00	0.01	0.00	0.36	0.00	0.00	0.00	0.00	0.00
25	0.06	0.22	0.00	0.00	0.01	0.00	0.08	1.5	0.00	0.00	0.00	0.00
26	0.01	0.02	0.00	0.00	0.00	0.00	0.02	0.04	3.2	0.00	0.00	0.00
27	0.00	0.11	0.00	0.00	0.00	0.00	3.8	0.00	0.03	0.02	0.00	0.00
28	0.00	0.02	0.00	0.00	0.00	0.02	2.7	12.0	0.01	0.15	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.06	0.89	0.00	0.02	0.00	0.69
30	0.00	0.12	0.00	0.00	---	0.00	0.02	0.02	0.00	0.02	0.00	0.01
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.02	0.00	---
TOTAL	19.39	2.91	2.83	0.00	10.20	5.95	32.13	20.03	35.32	6.58	20.25	7.15
WATER YEAR 2002	TOTAL 162.74											

ROCK RIVER BASIN

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 2001				
22...	1530	4.1	50	110
22...	1720	62	50	459
22...	1855	28	50	118
22...	2030	122	50	293
22...	2055	290	50	306
22...	2115	208	50	306
22...	2150	106	50	130
23...	0655	20	50	118
23...	1305	12	50	52
23...	2220	4.1	50	35
24...	1625	5.5	50	46
NOV				
14...	0935	5.3	50	105
19...	0320	5.8	50	25
19...	0630	3.8	50	11
24...	0620	20	50	129
24...	0820	43	50	72
24...	1125	23	50	20
24...	2040	14	50	20
25...	0555	5.3	50	22
27...	0345	5.5	50	36
30...	0640	6.7	50	22
30...	0945	5.0	50	13
DEC				
05...	1910	8.7	50	101
12...	2125	24	50	151
13...	0030	16	50	27
13...	0945	4.4	50	15
22...	1755	24	50	260
23...	0005	5.0	50	16
FEB 2002				
10...	0110	11	50	136
10...	0415	5.5	50	50
10...	1625	4.7	50	45
19...	0225	21	50	121
19...	0530	22	50	94
19...	1016	12	50	41
19...	1020	13	10	37
19...	1445	16	50	98
19...	1750	14	50	47
20...	0305	4.4	50	26
20...	0755	20	50	138
20...	0900	47	50	238
20...	1815	19	50	51
21...	0330	9.6	50	32
21...	0940	4.4	50	32
MAR				
08...	0645	11	50	124
08...	0950	6.7	50	45
08...	1600	10	50	95
08...	1905	19	50	182
09...	0115	12	50	58
09...	0420	23	50	138
09...	1030	14	50	54
09...	1640	6.4	50	343
APR				
07...	0620	7.2	50	117
07...	1230	5.0	50	19
07...	1805	6.4	50	31
07...	2110	22	50	73
08...	0320	14	50	26
08...	1235	5.8	50	51
08...	1845	35	50	85
08...	2150	30	50	70
09...	0400	16	50	33
09...	1315	4.4	50	25
14...	2000	9.1	50	468
18...	1900	4.7	50	476
18...	2135	58	50	1330
19...	0035	23	50	372
19...	0950	6.4	50	246
21...	1425	6.4	50	255
21...	1730	3.8	50	37
24...	1700	5.0	50	93
27...	2045	30	50	850
28...	0255	11	50	50
28...	0435	33	50	237
28...	1045	9.6	50	39
28...	1655	4.1	50	48
MAY 2002				
01...	2340	19	50	115
02...	0245	9.6	50	77
02...	0855	5.5	50	49

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
MAY 2002				
09...	0050	28	50	684
09...	0220	8.7	50	117
09...	0830	4.1	50	15
11...	1240	19	50	337
11...	2155	6.1	50	24
12...	0100	19	50	122
12...	1015	5.5	50	12
25...	0715	6.1	50	43
25...	0810	25	50	168
25...	1420	12	50	20
25...	2030	6.1	50	13
28...	2130	62	50	2850
28...	2230	69	50	1380
28...	2320	31	50	477
29...	0410	5.3	50	54
JUN				
02...	1925	6.1	50	250
03...	0640	110	50	346
03...	0735	153	50	329
03...	0825	65	50	511
03...	1340	20	50	67
03...	2255	7.7	50	33
04...	0245	59	50	112
04...	0515	55	50	78
04...	0931	34	10	114
04...	0932	33	50	94
04...	1735	18	50	44
05...	0555	5.5	50	19
10...	1905	130	50	520
10...	1910	146	50	476
10...	2000	47	50	330
10...	2200	26	50	93
11...	0410	14	50	44
11...	1325	4.1	50	39
13...	1955	60	50	373
13...	2205	4.1	50	34
14...	1835	19	50	158
26...	0425	63	50	386
26...	0450	50	50	1250
26...	0605	5.8	50	124
JUL				
20...	1550	52	50	594
20...	1555	96	50	430
20...	1800	3.6	50	116
22...	0150	23	50	247
22...	0305	5.0	50	78
22...	0655	96	50	263
22...	1105	13	50	36
22...	1715	6.1	50	21
28...	0055	5.0	50	155
AUG				
04...	2025	8.2	50	80
11...	1820	39	50	204
11...	1940	14	50	276
13...	0545	23	50	94
13...	1500	5.8	50	14
17...	0710	45	50	429
17...	0735	82	50	939
17...	0825	21	50	285
17...	1435	4.7	50	14
21...	1850	93	50	195
21...	1910	133	50	1620
21...	1935	39	50	576
21...	2110	19	50	109
21...	2155	40	50	128
22...	0210	14	50	32
22...	0620	48	50	101
22...	1115	16	50	32
22...	2030	5.5	50	17
SEP				
02...	0555	14	50	50
02...	0620	95	50	235
02...	1010	23	50	60
02...	1315	16	50	20
02...	2230	4.4	50	12
19...	0450	19	50	272
20...	0650	30	50	211
20...	1115	6.1	50	16
20...	1935	11	50	86
29...	0325	23	50	189
29...	0630	14	50	40
29...	1240	4.7	50	7.8

ROCK RIVER BASIN

05428000 LAKE MENDOTA AT MADISON, WI

LOCATION.--Lat 43°05'42", long 89°22'12", in SE ¼ sec.12, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in county boat house at dam at outlet, in Madison.

DRAINAGE AREA.--233 mi². Area of Lake Mendota, 15.2 mi².

PERIOD OF RECORD.--January 1916 to current year (incomplete).

REVISED RECORDS.--WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above NGVD of 1929, or 5.60 ft below City of Madison datum. Prior to Oct. 1, 1979, at datum 7.82 ft higher; prior to Nov. 15, 1971, nonrecording gage at same site at the higher datum.

REMARKS.--Lake level regulated by concrete dam with two 12-foot gates and 20-foot lock at outlet. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.75 ft, June 5, 2000; minimum observed, 8.02 ft, Feb. 24 to Mar. 10, 1920, current datum.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 11.24 ft, Oct. 1; minimum recorded, 8.79 ft, Feb. 7.

GAGE HEIGHT, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.22	10.47	9.70	9.17	8.88	9.24	9.40	9.95	10.03	10.09	9.81	9.93
2	11.19	10.43	9.70	9.14	8.86	9.29	9.42	10.00	10.00	10.08	9.80	9.98
3	11.14	10.36	9.73	9.11	8.86	9.30	9.42	9.98	10.09	10.06	9.78	10.02
4	11.10	10.31	9.74	9.08	8.85	9.28	9.42	9.97	10.28	10.04	9.81	10.00
5	11.05	10.23	9.77	9.07	8.84	9.28	9.42	9.97	10.38	10.00	9.82	10.00
6	10.99	10.16	9.78	9.05	8.83	9.28	9.41	9.97	10.40	9.98	9.80	9.99
7	10.92	10.10	9.79	9.03	8.83	9.28	9.44	9.98	10.39	9.98	9.79	9.99
8	10.85	10.04	9.79	9.01	8.83	9.30	9.55	9.95	10.38	9.97	9.78	9.99
9	10.81	9.95	9.78	8.99	8.83	9.35	9.65	10.04	10.36	9.96	9.77	9.99
10	10.79	9.88	9.77	8.98	8.88	9.38	9.68	10.01	10.35	9.92	9.77	10.00
11	10.77	9.82	9.77	8.97	8.89	9.40	9.70	10.02	10.39	9.88	9.77	9.97
12	10.71	9.74	9.77	8.95	8.89	9.41	9.74	10.09	10.36	9.86	9.79	9.96
13	10.66	9.68	9.83	8.94	8.88	9.42	9.75	10.12	10.33	9.85	9.85	9.94
14	10.64	9.65	9.81	8.93	8.87	9.44	9.77	10.12	10.34	9.84	9.86	9.93
15	10.57	9.61	9.80	8.92	8.87	9.43	9.78	10.11	10.30	9.83	9.84	9.91
16	10.51	9.55	9.81	8.91	8.87	9.43	9.80	10.12	10.26	9.81	9.84	9.89
17	10.42	9.50	9.81	8.90	8.87	9.43	9.82	10.10	10.22	9.79	9.87	9.88
18	10.33	9.44	9.78	8.89	8.86	9.43	9.82	10.08	10.20	9.78	9.86	9.87
19	10.29	9.43	9.77	8.88	8.92	9.44	9.87	10.06	10.17	9.75	9.86	9.91
20	10.28	9.40	9.70	8.88	9.05	9.46	9.88	10.04	10.16	9.75	9.84	9.96
21	10.29	9.40	9.65	8.87	9.16	9.48	9.87	10.02	10.15	9.79	9.84	9.96
22	10.32	9.41	9.60	8.87	9.19	9.46	9.89	9.98	10.14	9.84	9.94	9.94
23	10.52	9.42	9.60	8.87	9.20	9.44	9.88	9.96	10.13	9.83	9.96	9.90
24	10.59	9.50	9.57	8.86	9.21	9.44	9.90	9.96	10.11	9.80	9.98	9.87
25	10.63	9.57	9.51	8.85	9.24	9.43	9.91	9.98	10.09	9.78	9.98	9.85
26	10.59	9.58	9.44	8.85	9.26	9.42	9.89	9.98	10.12	9.79	9.98	9.85
27	10.55	9.61	9.42	8.85	9.26	9.41	9.87	9.98	10.12	e9.80	9.97	9.84
28	10.52	9.63	9.38	8.86	9.25	9.40	9.95	9.98	10.11	e9.81	9.96	9.83
29	10.54	9.64	e9.24	8.85	---	9.41	9.94	10.04	10.09	9.82	9.96	9.87
30	10.53	9.68	e9.18	8.85	---	9.41	9.95	10.05	10.09	9.82	9.95	9.89
31	10.51	---	9.19	8.86	---	9.40	---	10.04	---	9.81	9.94	---
MEAN	10.67	9.77	9.65	8.94	8.97	9.39	9.73	10.02	10.22	9.87	9.86	9.93
MAX	11.22	10.47	9.83	9.17	9.26	9.48	9.95	10.12	10.40	10.09	9.98	10.02
MIN	10.28	9.40	9.18	8.85	8.83	9.24	9.40	9.95	10.00	9.75	9.77	9.83

e Estimated

05429000 LAKE MONONA AT MADISON, WI

LOCATION.--Lat 43°03'48", long 89°23'49', in SW ¼ sec.23, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in Brittingham Park, in Madison.

DRAINAGE AREA.--279 mi². Area of Lake Monona, 5.3 mi².

PERIOD OF RECORD.--September 1915 to current year (fragmentary) in reports of the Geological Survey. For 1856 to March 1917 in reports of Wisconsin Railroad Commission, volume 19.

REVISED RECORDS.--WSP 1338: Lake area. WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above NGVD of 1929, or 5.60 ft below City of Madison datum. Prior to Oct. 1, 1979, datum 3.61 ft higher; prior to Nov. 15, 1971, nonrecording gage at same site at the higher datum.

REMARKS.--Lake level regulated by concrete dam with four 12-foot stop-log sections and 12-foot lock at outlet of Lake Waubesa. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 7.48 ft, June 14, 15, 2000; minimum observed, 3.22 ft, Jan. 20, 1965, current datum.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 6.15 ft, Oct. 2; minimum recorded, 4.19 ft, Feb. 17 and 18.

GAGE HEIGHT, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.14	5.16	4.63	4.89	4.29	4.35	4.70	5.14	5.17	5.22	5.06	4.94
2	6.14	5.19	4.58	4.90	4.28	4.38	4.74	5.15	5.19	5.18	5.03	5.01
3	6.13	5.25	4.53	4.91	4.27	4.38	4.75	5.15	5.33	5.15	5.01	5.01
4	6.12	5.30	4.51	4.88	4.25	4.39	4.76	5.15	5.54	5.13	5.03	4.99
5	6.10	5.34	4.50	4.84	4.24	4.40	4.78	5.14	5.63	5.11	5.04	4.98
6	6.05	5.39	4.52	4.81	4.23	4.40	4.80	5.14	5.63	5.08	5.02	4.97
7	6.03	5.44	4.49	4.78	4.22	4.39	4.88	5.14	5.62	5.06	4.98	4.96
8	6.01	5.46	4.45	4.76	4.21	4.42	5.00	5.13	5.61	5.04	4.96	4.95
9	5.98	5.48	4.41	4.73	4.21	4.49	5.16	5.08	5.60	5.06	4.94	4.93
10	5.99	5.49	4.39	4.71	4.26	4.52	5.21	5.03	5.59	5.04	4.92	4.93
11	6.00	5.51	4.37	4.69	4.27	4.53	5.22	5.06	5.63	5.02	4.91	4.92
12	6.01	5.53	4.38	4.67	4.25	4.53	5.22	5.11	5.63	4.99	4.91	4.91
13	6.03	5.55	4.43	4.65	4.24	4.52	5.20	5.10	5.63	4.98	5.00	4.90
14	6.04	5.59	4.43	4.65	4.24	4.51	5.19	5.09	5.64	4.97	4.99	4.90
15	6.02	5.61	4.44	4.63	4.23	4.49	5.18	5.09	5.62	4.96	4.97	4.89
16	6.00	5.62	4.44	4.63	4.21	4.47	5.17	5.09	5.61	4.95	4.96	4.87
17	6.00	5.63	4.44	4.62	4.19	4.46	5.16	5.08	5.61	4.95	4.96	4.87
18	6.00	5.63	4.50	4.57	4.20	4.44	5.17	5.04	5.59	4.96	4.95	4.88
19	5.96	5.60	4.51	4.54	4.27	4.45	5.23	5.01	5.56	4.96	4.92	4.96
20	5.81	5.44	4.55	4.51	4.36	4.49	5.22	4.99	5.54	4.98	4.91	5.01
21	5.67	5.30	4.61	4.47	4.45	4.47	5.21	4.96	5.52	5.04	4.91	5.01
22	5.60	5.19	4.67	4.45	4.46	4.47	5.19	4.99	5.50	5.11	5.00	4.98
23	5.72	5.09	4.72	4.42	4.46	4.51	5.18	5.00	5.48	5.13	5.03	4.97
24	5.66	5.07	4.74	4.40	4.46	4.55	5.17	5.00	5.46	5.10	5.03	4.95
25	5.52	5.02	4.77	4.37	4.44	4.56	5.12	5.04	5.44	5.09	5.02	4.95
26	5.42	4.96	4.77	4.35	4.41	4.56	5.11	5.07	5.40	5.08	5.02	4.95
27	5.34	4.88	4.81	4.34	4.38	4.58	5.15	5.09	5.36	5.08	5.01	4.94
28	5.27	4.81	4.83	4.32	4.36	4.62	5.17	5.11	5.32	5.10	4.99	4.93
29	5.21	4.74	4.84	4.30	---	4.64	5.15	5.16	5.29	5.11	4.97	5.00
30	5.14	4.69	4.85	4.28	---	4.64	5.14	5.16	5.25	5.09	4.96	5.02
31	5.10	---	4.87	4.28	---	4.66	---	5.17	---	5.08	4.95	---
MEAN	5.81	5.30	4.58	4.59	4.30	4.49	5.08	5.09	5.50	5.06	4.98	4.95
MAX	6.14	5.63	4.87	4.91	4.46	4.66	5.23	5.17	5.64	5.22	5.06	5.02
MIN	5.10	4.69	4.37	4.28	4.19	4.35	4.70	4.96	5.17	4.95	4.91	4.87

ROCK RIVER BASIN

430140089281000 KRONCKE DRIVE STORM SEWER AT MADISON, WI

LOCATION.--Lat 43°01'40", long 89°28'10", in NW ¼ NE ¼ sec.6, T.6 N., R.9 E., Dane County, Hydrologic Unit 07090001, 100 ft east of Teal Drive and 50 ft west of Tawhee Drive at Madison.

DRAINAGE AREA.--0.08 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2001 to September 2002.

GAGE.--Water-stage recorder and area-velocity flow meter in a 42-inch circular, concrete pipe. Elevation of gage is 1,030 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.01	0.0	0.05	0.06	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.01	0.0	0.03	0.02	0.02	0.0	0.0	0.23
3	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.40	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.07	0.0
5	0.0	0.0	0.11	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.01	0.02	0.0	0.02	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.02	0.01	0.20	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.02	0.27	0.24	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.05	0.22	0.01	0.03	0.0	0.0	0.0	0.0
10	0.05	0.0	0.0	0.0	0.13	0.01	0.0	0.0	e0.06	0.0	0.0	0.01
11	0.0	0.0	0.0	0.0	0.01	0.01	0.0	0.07	0.0	0.0	0.0	0.0
12	0.0	0.0	0.17	0.0	0.01	0.01	0.02	0.15	0.0	0.0	0.05	0.0
13	0.02	0.04	0.01	0.0	0.01	0.01	0.0	0.0	0.03	0.0	0.10	0.0
14	0.0	0.04	0.0	0.01	0.02	0.01	0.06	0.0	0.01	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.01	0.0	0.18	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.04	0.0	0.01	0.0	0.06	0.0	0.0	0.0	0.0	0.13
17	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.06	0.0
18	0.01	0.01	0.0	0.0	0.03	0.0	0.29	0.0	0.0	0.0	0.0	0.0
19	0.0	0.04	0.0	0.0	0.25	0.04	0.0	0.0	0.0	0.0	0.0	0.15
20	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.0	0.01	0.0	0.06
21	0.0	0.0	0.0	0.01	0.02	0.01	0.04	0.0	0.0	0.0	0.23	0.0
22	0.62	0.0	0.11	0.02	0.02	0.0	0.0	0.0	0.0	0.13	0.11	0.0
23	0.0	0.03	0.0	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.05	0.28	0.0	0.0	0.0	0.0	0.04	0.0	0.0	e0.0	0.0	0.0
25	0.0	0.02	0.0	0.01	0.01	0.0	0.0	0.32	0.0	0.0	0.0	0.0
26	0.0	0.01	0.0	0.0	0.01	0.0	0.0	0.01	0.16	0.0	0.0	0.0
27	0.0	0.03	0.0	0.0	0.01	0.0	0.06	0.0	0.0	0.02	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.04	0.04	0.27	0.0	0.0	0.0	0.0
29	0.0	0.01	0.0	0.0	---	0.01	0.0	0.01	0.0	0.02	0.0	0.14
30	0.0	0.08	0.0	0.0	---	0.0	0.0	0.0	0.0	0.01	0.0	0.0
31	0.0	---	0.0	0.0	---	0.03	---	0.0	---	0.0	0.0	---
TOTAL	0.75	0.59	0.44	0.07	1.01	0.71	1.33	0.96	1.08	0.19	0.62	0.72
MEAN	0.024	0.020	0.014	0.002	0.036	0.023	0.044	0.031	0.036	0.006	0.020	0.024
MAX	0.62	0.28	0.17	0.02	0.32	0.27	0.29	0.32	0.40	0.13	0.23	0.23
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFSM	0.30	0.25	0.18	0.03	0.45	0.29	0.55	0.39	0.45	0.08	0.25	0.30
IN.	0.35	0.27	0.20	0.03	0.47	0.33	0.62	0.45	0.50	0.09	0.29	0.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS - 2002, BY WATER YEAR (WY)

	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MEAN	0.024	0.020	0.014	0.002	0.036	0.023	0.044	0.031	0.036	0.006	0.020	0.024
MAX	0.024	0.020	0.014	0.002	0.036	0.023	0.044	0.031	0.036	0.006	0.020	0.024
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	0.024	0.020	0.014	0.002	0.036	0.023	0.044	0.031	0.036	0.006	0.020	0.024
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

ANNUAL TOTAL	8.47
ANNUAL MEAN	0.023
HIGHEST DAILY MEAN	0.62 Oct 22
LOWEST DAILY MEAN	0.00 Many days
ANNUAL SEVEN-DAY MINIMUM	0.00 Many days
ANNUAL RUNOFF (CFSM)	0.29
ANNUAL RUNOFF (INCHES)	3.94
10 PERCENT EXCEEDS	0.06
50 PERCENT EXCEEDS	0.00
90 PERCENT EXCEEDS	0.00

e Estimated

430140089281000 KRONCKE DRIVE STORM SEWER AT MADISON, WI--Continued

PRECIPITATION QUANTITY

PERIOD OF RECORD.--October 2001 to September 2002.

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established October 2001.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.63 in., Oct. 22.

PRECIPITATION, in INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.34	e0.0	e0.0	e0.0	e0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.05	e0.17	e0.0	e0.0	e1.04
3	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	1.04	e0.0	e0.0	e0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	1.43	e0.0	e0.53	e0.0
5	0.0	0.0	0.39	0.0	0.0	0.0	0.04	0.0	e0.0	e0.0	e0.09	e0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	e0.0	e0.05	e0.0	e0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.0	e0.0	e0.0	e0.0	e0.0
8	0.0	0.0	0.0	0.0	0.0	0.01	0.87	0.05	e0.0	e0.06	e0.0	e0.0
9	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.14	e0.0	e0.0	e0.0	e0.0
10	0.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	e0.23	e0.0	e0.0	e0.13
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	e0.09	e0.0	e0.0	0.0
12	0.0	0.0	0.54	0.0	0.0	0.0	0.08	0.0	e0.0	e0.0	0.40	0.0
13	0.25	0.19	0.01	0.0	0.0	0.0	0.0	0.0	e0.37	e0.0	0.39	0.0
14	0.02	0.15	0.0	0.03	0.0	0.0	0.17	0.0	e0.17	e0.0	0.0	0.02
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	e0.0	e0.0	0.0	0.0
16	0.06	0.0	0.10	0.0	0.0	0.0	0.0	0.0	e0.03	e0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	e0.0	e0.0	0.26	0.0
18	0.0	0.13	0.0	0.0	0.0	0.0	0.80	0.0	e0.0	e0.0	0.0	0.03
19	0.0	0.06	0.0	0.0	0.01	0.20	0.0	0.0	e0.08	e0.0	0.0	0.81
20	0.0	0.0	0.0	0.05	0.01	0.0	0.02	0.0	e0.0	e0.40	0.0	0.30
21	0.0	0.0	0.0	0.07	0.0	0.0	0.22	0.0	e0.07	e0.0	0.73	0.0
22	1.63	0.0	0.35	0.05	0.0	0.0	0.03	0.0	e0.0	e1.03	0.46	0.0
23	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0	e0.0	e0.0	e0.0	0.0
24	0.27	0.89	0.0	0.0	0.0	0.0	0.17	0.0	e0.0	e0.0	e0.0	e0.0
25	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.62	0.0	e0.0	e0.0	e0.0
26	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.55	e0.0	e0.0	e0.0
27	0.0	0.13	0.0	0.0	0.0	0.0	0.37	0.0	e0.0	e0.28	e0.0	e0.0
28	0.0	0.01	0.0	0.0	0.0	0.07	0.16	0.66	e0.0	e0.0	e0.0	e0.08
29	0.0	0.05	0.0	0.0	---	0.0	0.0	0.03	e0.0	e0.06	e0.0	e0.68
30	0.0	0.21	0.0	0.0	---	0.0	0.0	e0.0	e0.0	e0.08	e0.0	e0.0
31	0.08	---	0.0	0.0	---	0.05	---	e0.0	---	e0.0	e0.0	---
TOTAL	2.74	2.21	1.39	0.20	0.02	0.33	3.93	2.13	4.23	1.96	2.86	3.09

e Estimated

ROCK RIVER BASIN

430209089274900 KNOX LANE STORM SEWER AT MADISON, WI

LOCATION.--Lat 43°02'09", long 89°27'49", in NE ¼ SE ¼ sec.31, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, 0.1 mi west of Reetz Road and 50 ft east of Wicklow Way at Madison.

DRAINAGE AREA.--0.14 mi².

PERIOD OF RECORD.--October 2001 to September 2002.

GAGE.--Water-stage recorder and area-velocity flow meter in a 42-inch circular, concrete pipe. Elevation of gage is 1,025 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.12	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.05	0.02	0.0	0.0	0.23
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.04
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.47	0.0	0.04	0.03
5	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
6	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.06	0.0	0.0	0.0	0.03
7	0.0	0.0	0.0	0.0	0.02	0.0	0.42	0.0	0.0	0.0	0.0	0.03
8	0.0	0.0	0.0	0.0	0.02	0.47	0.63	0.0	0.0	0.0	0.0	0.02
9	0.0	0.0	0.0	0.0	0.05	0.31	e0.0	0.09	0.0	0.0	0.0	0.0
10	0.08	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.09	0.0	0.0	0.02
11	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.20	0.0	0.0	0.0	0.0
12	0.0	0.0	0.21	0.0	0.01	0.01	0.09	0.13	0.0	0.0	0.0	0.0
13	0.05	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	e0.12	0.0
14	0.0	0.07	0.0	0.0	0.02	0.0	0.09	0.0	0.03	0.0	e0.0	0.01
15	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.01	0.0	0.11	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.01	0.0	e0.0	0.0	0.0	0.0	0.08	0.10
18	0.0	0.02	0.0	0.0	0.07	0.0	e0.35	0.0	0.0	0.0	0.0	0.01
19	0.0	0.05	0.0	0.0	0.49	0.08	0.0	0.0	0.0	0.0	0.0	0.21
20	0.0	0.0	0.0	0.0	0.57	0.0	0.0	0.0	0.0	0.03	0.0	0.09
21	0.0	0.0	0.0	0.0	0.01	0.01	0.07	0.02	0.0	0.0	e0.28	0.0
22	0.71	0.0	0.13	0.02	0.04	0.0	0.01	0.21	0.0	0.15	e0.14	0.01
23	0.0	0.03	0.0	0.01	0.03	0.0	0.01	0.04	0.0	0.0	e0.0	0.01
24	0.10	0.36	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.0	e0.0	0.01
25	0.0	0.02	0.0	0.0	0.01	0.0	e0.0	0.28	0.0	0.0	e0.0	0.01
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0
27	0.0	0.05	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.01	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.02	0.05	e0.33	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	---	0.0	0.0	0.02	0.0	0.03	0.0	0.14
30	0.0	0.08	0.0	0.0	---	0.0	e0.0	0.0	0.0	0.0	0.0	0.01
31	0.0	---	0.0	0.0	---	0.01	---	0.0	---	0.0	0.0	---
TOTAL	0.94	0.72	0.49	0.03	1.53	0.91	2.14	1.55	1.11	0.22	0.66	1.04
MEAN	0.030	0.024	0.016	0.001	0.055	0.029	0.071	0.050	0.037	0.007	0.021	0.035
MAX	0.71	0.36	0.21	0.02	0.57	0.47	0.63	0.33	0.47	0.15	0.28	0.23
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFSM	0.22	0.17	0.11	0.01	0.39	0.21	0.51	0.36	0.26	0.05	0.15	0.25
IN.	0.25	0.19	0.13	0.01	0.41	0.24	0.57	0.41	0.29	0.06	0.18	0.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS - 2002, BY WATER YEAR (WY)

	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MEAN	0.030	0.024	0.016	0.001	0.055	0.029	0.071	0.050	0.037	0.007	0.021	0.035
MAX	0.030	0.024	0.016	0.001	0.055	0.029	0.071	0.050	0.037	0.007	0.021	0.035
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	0.030	0.024	0.024	0.001	0.055	0.029	0.071	0.050	0.037	0.007	0.021	0.035
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

ANNUAL TOTAL	11.34
ANNUAL MEAN	0.031
HIGHEST DAILY MEAN	0.71 Oct 22
LOWEST DAILY MEAN	0.00 Many days
ANNUAL SEVEN-DAY MINIMUM	0.00 Many days
ANNUAL RUNOFF (CFSM)	0.22
ANNUAL RUNOFF (INCHES)	3.01
10 PERCENT EXCEEDS	0.09
50 PERCENT EXCEEDS	0.00
90 PERCENT EXCEEDS	0.00

e Estimated

05429500 YAHARA RIVER AT MCFARLAND, WI

LOCATION.--Lat 43°00'32", long 89°18'18", in SW ¼ sec.3, T.6 N., R.10 E., Dane County, Hydrologic Unit 07090001, on left bank just upstream from bridge on U.S. Highway 51, downstream of dam at outlet of Lake Waubesa and 1.0 mi southwest of McFarland.

DRAINAGE AREA.--327 mi².

PERIOD OF RECORD.--September 1930 to current year. Prior to October 2000, published as "near McFarland".

REVISED RECORDS.--WSP 805, WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above NGVD of 1929 (levels by Wisconsin Department of Natural Resources). September 1930 to Dec. 22, 1934, nonrecording gage at same site at datum 0.40 ft higher. Dec. 23, 1934 to Sept. 30, 1982, recording gage at same site at datum 0.40 ft higher.

REMARKS.--Records fair (see page 11). Flow regulated by dams at outlets of Lake Mendota and Lake Waubesa. The Madison Metropolitan Sewerage District diverted an average of 61 ft³/s of effluent into the Badfish Creek basin during 2002 water year. The data were provided by the Madison Metropolitan Sewerage District. Prior to 1958 the effluent was discharged into the Yahara River above McFarland. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	362	282	266	299	208	177	131	195	176	168	67	65
2	366	288	251	301	201	168	135	204	174	160	64	68
3	368	294	240	304	199	179	133	201	241	158	62	69
4	371	304	233	305	197	172	125	194	347	153	63	69
5	372	314	230	305	194	170	127	191	376	145	63	69
6	372	325	229	300	192	184	130	193	368	140	62	67
7	368	337	227	295	190	202	139	236	354	138	59	65
8	364	352	223	289	188	203	170	269	340	135	58	64
9	362	360	218	287	187	217	222	278	330	98	56	62
10	372	369	210	283	195	230	243	237	327	71	55	58
11	384	375	206	279	194	224	236	181	337	86	53	56
12	389	381	203	276	193	222	232	193	330	84	52	56
13	398	390	217	271	191	218	231	197	321	81	57	57
14	411	406	219	268	187	217	231	197	319	81	59	56
15	416	415	215	266	185	213	223	193	311	81	58	54
16	422	420	215	263	185	213	217	224	301	74	58	48
17	424	425	218	262	184	209	209	271	290	68	59	43
18	426	427	222	258	180	156	207	262	277	68	57	44
19	427	439	230	252	188	112	215	253	261	66	54	51
20	419	423	232	246	209	120	215	197	251	68	52	54
21	401	400	234	240	228	126	213	162	244	74	51	54
22	386	375	241	234	230	132	211	164	235	77	62	54
23	412	350	255	230	227	124	207	149	223	74	62	53
24	410	341	266	225	224	126	203	144	213	70	74	50
25	403	339	264	219	225	128	201	150	210	67	97	50
26	380	324	275	214	227	129	198	159	208	68	97	52
27	355	311	277	211	225	125	195	162	203	67	95	53
28	329	295	282	209	213	114	199	165	192	70	85	54
29	312	284	289	206	---	116	201	172	182	70	67	66
30	300	277	294	204	---	121	197	175	176	71	66	70
31	288	---	298	204	---	125	---	174	---	70	65	---
TOTAL	11769	10622	7479	8005	5646	5172	5796	6142	8117	2901	1989	1731
MEAN	379.6	354.1	241.3	258.2	201.6	166.8	193.2	198.1	270.6	93.58	64.16	57.70
MAX	427	439	298	305	230	230	243	278	376	168	97	70
MIN	288	277	203	204	180	112	125	144	174	66	51	43
CFSM	1.16	1.08	0.74	0.79	0.62	0.51	0.59	0.61	0.83	0.29	0.20	0.18
IN.	1.34	1.21	0.85	0.91	0.64	0.59	0.66	0.70	0.92	0.33	0.23	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2002, BY WATER YEAR (WY)

	MEAN	129.6	161.4	149.7	142.9	160.0	244.8	258.4	185.7	155.2	148.4	121.4	118.5
MAX	401	355	375	376	363	599	719	520	585	511	478	422	
(WY)	1981	1986	1986	1986	1938	1937	1959	1933	2000	1993	1993	1993	
MIN	4.09	27.4	36.5	34.0	31.6	67.4	25.5	42.1	15.6	16.0	15.9	13.8	
(WY)	1965	1940	1940	1977	1991	1934	1966	1958	1936	1965	1988	1964	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1930 - 2002

ANNUAL TOTAL	88911	75369	
ANNUAL MEAN	243.6	206.5	164.6
HIGHEST ANNUAL MEAN			336
LOWEST ANNUAL MEAN			63.8
HIGHEST DAILY MEAN	439	Nov 19	853
LOWEST DAILY MEAN	83	Aug 1	1.2
ANNUAL SEVEN-DAY MINIMUM	91	Jul 26	50
MAXIMUM PEAK FLOW			(a)442
MAXIMUM PEAK STAGE			(c)5.60
ANNUAL RUNOFF (CFSM)	0.74		0.63
ANNUAL RUNOFF (INCHES)	10.11		8.57
10 PERCENT EXCEEDS	368		324
50 PERCENT EXCEEDS	233		140
90 PERCENT EXCEEDS	145		62

- (a) Gage height, 5.09 ft
- (b) Gage height, 5.82 ft, datum then in use
- (c) Backwater from vegetation

ROCK RIVER BASIN

05430150 BADFISH CREEK NEAR COOKSVILLE, WI

LOCATION.--Lat 42°50'00", long 89°11'48", in SW ¼ SE ¼ sec.4, T.4 N., R.11 E., Rock County, Hydrologic Unit 07090001, on right bank, 20 ft upstream from bridge on State Highway 59, 2.2 mi east of Cooksville, and 2.2 mi above the mouth.

DRAINAGE AREA.--82.6 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 807.06 ft above NGVD of 1929.

REMARKS.--Records good (see page 11). Approximately 52 percent of flow is effluent from Nine Springs treatment plant (data provided by Madison Metropolitan Sewerage District). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	110	115	97	99	111	104	112	101	105	89	78
2	120	110	112	94	95	109	113	124	98	109	83	85
3	118	107	114	97	96	107	113	115	127	110	82	89
4	115	107	113	96	97	107	111	107	242	106	85	84
5	113	108	115	94	96	106	110	104	211	100	87	84
6	110	107	121	95	95	105	106	108	148	101	86	84
7	107	108	114	96	96	105	126	108	126	101	82	83
8	107	107	110	96	98	138	187	104	113	100	81	81
9	108	104	108	96	96	276	307	109	105	109	81	83
10	116	102	110	97	130	164	179	105	105	104	80	86
11	121	101	108	97	113	141	150	106	119	98	78	86
12	112	104	107	95	104	133	144	161	113	95	80	85
13	110	110	140	95	102	133	133	132	109	90	108	86
14	117	114	122	98	99	132	127	120	113	84	95	85
15	110	110	113	97	99	128	127	113	107	82	89	84
16	110	109	119	99	97	121	123	110	100	90	88	85
17	107	105	124	98	96	119	123	109	99	87	87	87
18	105	105	119	97	98	119	120	103	101	88	84	88
19	104	112	117	93	136	118	130	100	100	91	83	124
20	102	107	113	93	190	126	117	102	103	92	86	102
21	100	106	110	95	177	122	115	102	105	97	91	96
22	115	102	109	99	136	116	125	100	105	103	141	89
23	217	97	115	98	125	112	119	99	101	104	104	88
24	155	125	106	98	124	110	117	100	101	94	94	89
25	149	137	99	98	127	108	118	108	106	93	88	88
26	127	123	96	96	120	108	113	105	111	94	86	89
27	119	124	103	98	115	107	111	98	111	94	87	88
28	114	119	102	102	113	108	130	102	108	95	87	86
29	114	116	98	100	---	109	123	114	106	97	85	114
30	112	119	96	98	---	106	115	110	104	96	83	100
31	112	---	94	100	---	102	---	107	---	93	82	---
TOTAL	3667	3315	3442	3002	3169	3806	3936	3397	3498	3002	2742	2676
MEAN	118.3	110.5	111.0	96.84	113.2	122.8	131.2	109.6	116.6	96.84	88.45	89.20
MAX	217	137	140	102	190	276	307	161	242	110	141	124
MIN	100	97	94	93	95	102	104	98	98	82	78	78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	96.89	101.7	95.92	91.35	108.0	125.2	124.7	110.9	121.7	104.8	97.39	98.42															
MAX	139	162	129	122	163	190	193	205	252	171	133	146															
(WY)	1987	1986	1983	1988	1994	1993	1993	1999	1996	1993	1996	2001															
MIN	66.9	69.5	69.7	65.3	73.1	80.4	88.7	78.3	76.4	70.4	59.2	67.6															
(WY)	1978	1978	1979	1991	1979	1981	1990	1981	1991	1977	1977	1991															

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1977 - 2002	
ANNUAL TOTAL	45060		39652			
ANNUAL MEAN	123.5		108.6		106.7	
HIGHEST ANNUAL MEAN					136	
LOWEST ANNUAL MEAN					80.4	
HIGHEST DAILY MEAN	357		307		1450	
LOWEST DAILY MEAN	85		78		35	
ANNUAL SEVEN-DAY MINIMUM	(a)89		81		48	
MAXIMUM PEAK FLOW			389		2210	
MAXIMUM PEAK STAGE			6.22		10.18	
10 PERCENT EXCEEDS	151		127		138	
50 PERCENT EXCEEDS	116		106		97	
90 PERCENT EXCEEDS	99		87		75	

(a) Ice affected

05430175 YAHARA RIVER NEAR FULTON, WI

LOCATION.--Lat 42°49'35", long 89°10'19", in SE ¼ NE ¼ sec.10, T.4 N., R.11 E., Rock County, Hydrologic Unit 07090001, on left bank, 20 ft upstream from bridge on State Highway 59, 0.5 mi downstream from Badfish Creek, and 2.6 mi northwest of Fulton.

DRAINAGE AREA.--518 mi².

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

REVISED RECORDS.--WDR WI-96-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 789.85 ft above NGVD of 1929. July 1977 to April 1996, recording gage at site about 2,000 ft upstream at datum 2.85 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Regulation from dams and powerplants upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	567	626	586	e320	431	339	297	456	322	305	192	177
2	568	585	541	e330	e410	282	311	470	316	250	185	189
3	589	574	531	e330	e400	e280	314	458	408	229	183	192
4	590	551	508	e370	e390	e270	316	448	677	228	187	187
5	597	550	504	e390	e390	e260	316	439	707	195	188	185
6	589	512	505	e430	e400	e270	312	439	629	206	185	183
7	581	436	502	e440	e400	e320	371	438	597	219	181	180
8	578	502	496	e460	409	426	474	450	577	226	179	174
9	574	563	488	494	404	692	771	503	560	239	178	176
10	586	554	482	487	450	552	612	527	552	200	174	181
11	595	550	467	485	436	500	571	517	576	210	166	181
12	588	550	427	482	418	501	587	584	572	170	171	180
13	589	559	466	480	417	501	571	502	559	165	160	179
14	602	567	458	478	421	500	562	445	549	161	152	179
15	594	568	448	477	409	495	549	444	543	162	150	177
16	593	571	451	476	406	485	532	454	519	173	155	176
17	592	570	453	e420	405	488	523	496	513	171	167	175
18	590	573	449	e410	405	480	514	505	508	174	163	177
19	589	589	445	e400	447	365	519	503	487	180	159	260
20	587	600	440	e410	534	328	489	493	445	182	162	217
21	584	599	430	435	534	391	489	413	447	196	175	209
22	607	612	400	440	477	379	501	405	445	202	272	195
23	802	601	373	437	462	355	453	387	436	316	234	189
24	751	647	351	438	458	321	449	329	420	314	205	179
25	752	662	348	437	462	302	460	349	371	292	202	181
26	736	636	e340	432	460	257	457	345	347	243	194	182
27	708	631	e340	432	454	269	457	330	320	194	180	181
28	678	617	e330	434	444	282	484	333	328	201	185	177
29	660	606	e330	433	---	290	473	358	328	205	188	242
30	657	602	e320	430	---	291	462	353	319	195	187	203
31	646	---	e320	432	---	292	---	332	---	192	183	---
TOTAL	19319	17363	13529	13349	12133	11763	14196	13505	14377	6595	5642	5663
MEAN	623.2	578.8	436.4	430.6	433.3	379.5	473.2	435.6	479.2	212.7	182.0	188.8
MAX	802	662	586	494	534	692	771	584	707	316	272	260
MIN	567	436	320	320	390	257	297	329	316	161	150	174
CFSM	1.20	1.12	0.84	0.83	0.84	0.73	0.91	0.84	0.93	0.41	0.35	0.36
IN.	1.39	1.25	0.97	0.96	0.87	0.84	1.02	0.97	1.03	0.47	0.41	0.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	362.9	415.5	385.9	341.2	376.5	457.3	467.0	411.9	389.0	338.1	308.4	327.8														
MAX	623	711	558	542	585	760	1043	858	1002	862	760	696														
(WY)	2002	1986	1983	1986	1986	1994	1993	1993	2000	1993	1993	1993														
MIN	171	181	167	192	168	229	204	155	136	121	117	109														
(WY)	1991	1990	1990	1978	1991	1978	1978	1981	1988	1988	1988	1988														

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1977 - 2002
ANNUAL TOTAL	171314	147434	
ANNUAL MEAN	469.4	403.9	383.1
HIGHEST ANNUAL MEAN			629
LOWEST ANNUAL MEAN			262
HIGHEST DAILY MEAN	802	802	2880
LOWEST DAILY MEAN	231	150	60
ANNUAL SEVEN-DAY MINIMUM	247	158	104
MAXIMUM PEAK FLOW		855	3230
MAXIMUM PEAK STAGE		5.82	11.16
ANNUAL RUNOFF (CFSM)	0.91	0.78	0.74
ANNUAL RUNOFF (INCHES)	12.30	10.59	10.05
10 PERCENT EXCEEDS	598	590	608
50 PERCENT EXCEEDS	473	432	357
90 PERCENT EXCEEDS	326	181	167

(e) Estimated due to ice effect or missing record

ROCK RIVER BASIN

05430500 ROCK RIVER AT AFTON, WI

LOCATION.--Lat 42°36'33", long 89°04'14", in NE ¼ sec.28, T.2 N., R.12 E., Rock County, Hydrologic Unit 07090001, on right bank in Afton, 0.3 mi downstream from highway bridge and 1.1 mi upstream from Bass Creek.

DRAINAGE AREA.--3,340 mi².

PERIOD OF RECORD.--January 1914 to current year. Monthly discharge for January 1914 published in WSP 1308. Unpublished daily discharges for January and February 1914 in District files.

REVISED RECORDS.--WSP 1238: 1916(M), 1919(M), 1933, 1937-38, 1943. WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 742.36 ft above NGVD of 1929. Prior to Aug. 23, 1932, a nonrecording gage 20 ft upstream, and Aug. 23, 1932, to Sept. 30, 1933, water-stage recorder, at same site at datum 1 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair, and periods of discharge below 800 ft³/s, which are poor (see page 11). Diurnal fluctuation caused by powerplants above station. Data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3000	3330	2440	e2100	e1700	e3000	3160	3580	2120	1930	764	725
2	2910	3390	2450	e2000	e1700	e2900	3240	3540	2020	1640	766	747
3	2720	3350	2440	e2000	e1700	e2800	3120	3420	2140	1580	792	678
4	2640	3320	2450	e1900	e1700	e2800	3040	3430	2700	1310	806	813
5	2540	3230	2390	e1900	e1700	e2800	2960	3350	2870	1240	832	821
6	2420	3090	2290	e1800	e1700	e2800	2870	3320	3050	1190	884	816
7	2310	2900	2440	e1700	1720	e2800	2790	3340	3090	1150	793	784
8	2220	2810	2470	e1700	1680	e2900	3080	3360	3210	1060	742	769
9	2050	2750	2410	e1700	1710	3310	3570	3210	3360	754	647	772
10	2110	2640	2320	1630	1830	2870	3640	3060	3400	1070	603	800
11	2100	2600	2350	1520	1740	3500	3720	3280	3480	969	662	812
12	2130	2500	2310	1650	1740	3780	4100	3380	3610	914	741	779
13	2140	2440	2380	1520	1740	4020	4250	3350	3690	681	878	715
14	2080	2430	2360	1650	1830	4220	4240	3200	3700	720	916	694
15	1980	2430	2350	1670	1940	4140	4200	3110	3690	769	1210	748
16	2140	2600	2380	1700	1960	4190	4150	3050	3650	794	1110	749
17	2110	2620	2420	1670	1950	4140	4130	3220	3580	707	633	676
18	2120	2530	2420	e1600	1940	4270	4110	3180	3570	731	622	682
19	2160	2460	2440	e1600	2040	4100	4120	3110	3550	849	786	802
20	2090	2400	2420	e1600	2230	3930	4160	3090	3400	752	754	989
21	2140	2280	2600	e1600	2330	3930	4130	2950	3360	737	783	837
22	2260	2340	2600	e1600	2430	3740	3960	2770	3270	809	1040	854
23	2610	2300	2500	e1600	2560	3660	3830	2620	3070	888	1430	814
24	3180	2470	2410	e1600	2740	3750	3780	2580	2910	937	1380	805
25	2660	2400	2310	1620	2940	3900	3600	2640	2740	923	1320	884
26	2790	2420	e2300	1630	3090	3630	3650	2440	2630	833	1200	879
27	3250	2500	e2200	1630	e3100	3440	3740	2380	2450	784	930	907
28	3300	2460	e2200	1650	e3000	3350	3770	2450	2380	715	969	889
29	3380	2520	e2100	1650	---	3340	3580	2360	2260	862	731	1040
30	3550	2540	e2100	1640	---	3230	3430	2270	2120	821	784	1040
31	3470	---	e2100	e1700	---	3150	---	2200	---	794	757	---
TOTAL	78560	80050	73350	52530	58440	108390	110120	93240	91070	29913	27265	24320
MEAN	2534	2668	2366	1695	2087	3496	3671	3008	3036	964.9	879.5	810.7
MAX	3550	3390	2600	2100	3100	4270	4250	3580	3700	1930	1430	1040
MIN	1980	2280	2100	1520	1680	2800	2790	2200	2020	681	603	676
CFSM	0.76	0.80	0.71	0.51	0.62	1.05	1.10	0.90	0.91	0.29	0.26	0.24
IN.	0.87	0.89	0.82	0.59	0.65	1.21	1.23	1.04	1.01	0.33	0.30	0.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

MEAN	1399	1582	1478	1315	1570	3341	4107	2602	1854	1439	1142	1201
MAX	8219	5884	4395	3558	5647	8958	10010	7911	7452	5443	5376	5088
(WY)	1987	1986	1986	1960	1938	1918	1979	1973	2000	1993	1924	1938
MIN	254	397	383	275	327	610	1002	389	314	247	183	212
(WY)	1940	1964	1940	1959	1959	1940	1931	1958	1934	1934	1934	1939

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1914 - 2002

ANNUAL TOTAL	1003818	827248	
ANNUAL MEAN	2750	2266	1923
HIGHEST ANNUAL MEAN			3925
LOWEST ANNUAL MEAN			557
HIGHEST DAILY MEAN	5370	Apr 18	4270
LOWEST DAILY MEAN	555	Jul 31	603
ANNUAL SEVEN-DAY MINIMUM	975	Aug 14	720
MAXIMUM PEAK FLOW			4440
MAXIMUM PEAK STAGE			7.19
ANNUAL RUNOFF (CFSM)	0.82		0.68
ANNUAL RUNOFF (INCHES)	11.18		9.21
10 PERCENT EXCEEDS	4330		3630
50 PERCENT EXCEEDS	2600		2360
90 PERCENT EXCEEDS	1400		784

- (a) Gage height, 11.81 ft, present datum
 (b) Present datum, backwater from ice
 (e) Estimated due to ice effect or missing record

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI

LOCATION.--Lat 42°39'03", long 88°33'03", in NW ¼ NE ¼ sec.12, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on left bank 20 ft downstream from Interstate Highway 43, 1.1 mi upstream from Delavan Lake inlet at Mound Road, and 1.5 mi south of Elkhorn.

DRAINAGE AREA.--4.34 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR WI-89-1: 1988.

GAGE.--Water-stage recorder. Datum of gage is 924.70 ft above NGVD of 1929 (Wisconsin Department of Transportation bench mark). Prior to Dec. 4, 1992, at site 180 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	3.7	3.3	e0.82	3.2	2.1	2.6	2.7	1.1	1.5	0.92	0.32
2	1.9	3.2	2.5	e0.80	e2.6	e2.0	3.7	4.0	1.1	0.95	0.36	7.2
3	1.8	2.7	2.4	e0.80	e2.2	e1.9	2.4	2.2	7.8	0.80	0.26	0.81
4	2.0	2.4	2.4	e0.80	e2.0	e1.9	2.1	1.9	64	0.60	1.8	0.51
5	1.5	2.3	2.6	e0.82	e1.8	e2.0	2.1	1.8	19	0.49	0.35	0.45
6	1.2	2.2	2.4	e0.90	e1.7	2.1	1.9	2.2	6.4	0.45	0.35	0.47
7	1.1	2.2	2.0	e0.86	2.1	2.1	8.5	2.0	4.0	0.42	0.34	0.34
8	1.1	2.0	1.9	e0.80	2.4	23	32	1.9	3.1	0.47	0.35	0.32
9	0.99	2.0	1.6	e0.94	3.0	32	35	3.1	2.5	0.93	0.36	0.51
10	5.8	1.8	1.7	1.1	13	11	9.1	2.0	3.2	0.45	0.32	0.49
11	2.9	1.8	1.6	1.2	4.2	4.3	5.7	4.4	3.5	0.40	0.33	0.59
12	5.9	1.9	2.4	1.2	3.2	4.0	4.6	3.5	2.1	0.52	0.90	0.44
13	14	11	8.5	1.1	2.5	4.0	3.8	2.5	2.2	0.40	5.6	0.43
14	14	10	2.7	2.2	e2.2	3.6	3.5	2.3	3.2	0.40	1.0	0.29
15	5.5	5.2	2.1	1.4	e2.1	3.2	3.3	2.1	1.8	0.43	0.45	0.32
16	3.4	3.3	2.5	1.2	e2.0	2.7	3.0	3.2	1.4	0.40	0.48	0.57
17	2.6	2.5	2.3	e1.1	1.9	2.5	2.7	2.4	1.5	0.40	0.45	0.46
18	2.2	2.3	1.9	e1.0	2.1	2.5	2.7	1.8	1.3	0.40	0.32	0.53
19	2.0	2.2	2.3	e0.98	6.4	2.5	2.7	1.6	1.2	0.40	0.47	8.2
20	1.8	1.9	1.5	e0.96	7.4	2.7	2.2	1.6	1.2	0.35	0.48	1.7
21	1.5	1.9	1.4	1.2	5.8	2.4	3.4	1.8	1.9	0.35	5.9	0.69
22	8.5	1.7	2.0	1.5	3.6	2.2	2.8	1.9	1.3	0.35	12	0.50
23	47	1.8	1.9	1.9	3.3	2.1	2.4	2.2	1.2	0.35	1.1	0.56
24	65	12	1.5	1.6	3.2	2.0	2.8	1.9	1.6	0.35	0.65	0.71
25	23	9.6	1.3	1.6	2.9	1.9	2.3	8.0	1.5	0.35	0.50	0.59
26	12	4.3	e1.2	1.5	2.9	e1.8	2.0	2.5	6.5	0.35	0.59	0.55
27	8.5	4.2	e1.1	1.6	2.6	e1.9	3.0	2.0	2.3	0.35	0.62	0.56
28	6.6	3.0	e1.0	1.8	2.4	2.1	3.1	1.8	1.9	0.35	0.59	0.50
29	5.2	3.2	e0.96	1.6	---	2.4	2.4	1.6	1.4	0.36	0.53	16
30	4.4	4.6	e0.90	1.4	---	1.9	2.1	1.5	1.2	0.35	0.48	1.2
31	4.4	---	e0.86	1.7	---	2.0	---	1.5	---	0.35	0.31	---
TOTAL	259.79	112.9	64.72	38.38	94.7	134.8	159.9	75.9	152.4	15.02	39.16	46.81
MEAN	8.380	3.763	2.088	1.238	3.382	4.348	5.330	2.448	5.080	0.485	1.263	1.560
MAX	65	12	8.5	2.2	13	32	35	8.0	64	1.5	12	16
MIN	0.99	1.7	0.86	0.80	1.7	1.8	1.9	1.5	1.1	0.35	0.26	0.29
CFSM	1.93	0.87	0.48	0.29	0.78	1.00	1.23	0.56	1.17	0.11	0.29	0.36
IN.	2.23	0.97	0.55	0.33	0.81	1.16	1.37	0.65	1.31	0.13	0.34	0.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

MEAN	2.416	3.607	2.417	1.939	3.902	4.694	5.052	3.582	3.785	2.085	1.607	2.751
MAX	8.38	13.3	6.55	4.62	9.42	10.7	14.4	8.00	9.42	5.39	5.59	10.8
(WY)	2002	1986	1985	1999	2001	1986	1993	2000	1996	1992	1995	1986
MIN	0.30	0.58	0.49	0.45	0.33	1.13	1.28	0.79	0.54	0.44	0.30	0.27
(WY)	1995	1990	1990	1994	1989	1996	1989	1989	1988	1988	1988	1987

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1984 - 2002

ANNUAL TOTAL	1803.39	1194.48	
ANNUAL MEAN	4.941	3.273	3.140
HIGHEST ANNUAL MEAN			5.74
LOWEST ANNUAL MEAN			1.70
HIGHEST DAILY MEAN	81	65	113
LOWEST DAILY MEAN	0.57 (a)	0.26	0.03
ANNUAL SEVEN-DAY MINIMUM	0.77	0.34	0.07
MAXIMUM PEAK FLOW		119	210
MAXIMUM PEAK STAGE		8.93	10.00
ANNUAL RUNOFF (CFSM)	1.14	0.75	0.72
ANNUAL RUNOFF (INCHES)	15.46	10.24	9.83
10 PERCENT EXCEEDS	10	5.8	6.6
50 PERCENT EXCEEDS	2.6	1.9	1.4
90 PERCENT EXCEEDS	1.00	0.43	0.41

(a) Also occurred Sept. 2
(e) Estimated due to ice effect or missing record

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1983 to current year.

DISSOLVED AMMONIA NITROGEN DISCHARGE: February 1993 to September 1995.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Water years 1984-85 and February 1993 to September 1995.

DISSOLVED NITRITE PLUS NITRATE DISCHARGE: February 1993 to September 1995.

TOTAL NITRITE PLUS NITRATE DISCHARGE: Water years 1984-85.

TOTAL-PHOSPHORUS DISCHARGE: October 1983 to current year.

DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: February 1993 to September 1995.

INSTRUMENTATION.--Automatic pumping sampler since October 1983.

REMARKS.--Records good.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 5,520 mg/L, Aug. 7, 1984; minimum observed, 1 mg/L, on several days during 1984, May 12, 1990, and May 11, 1995.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 136 tons, June 17, 1996; minimum daily, 0.00 ton, on several days in 1994, 1995, 1997 and 2000 water years, and Aug. 3, 2002.

DISSOLVED AMMONIA NITROGEN CONCENTRATIONS: Maximum observed, 1.00 mg/L, Jan. 24, 1994; minimum observed, <0.015 mg/L, on many days in 1995 water year.

DISSOLVED AMMONIA NITROGEN DISCHARGE: Maximum daily, 298 lb, Mar. 23, 1993; minimum daily, 0.02 lb, Jan. 8-11 and July 1-2, 1995.

TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 16 mg/L, Nov. 19, 1983; minimum observed, 0.10 mg/L, Oct. 12, 1984.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 1,710 lb, Feb. 19, 1994; minimum daily, 0.09 lb, Jan. 9-11, 1995.

DISSOLVED NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 7.6 mg/L, Apr. 28, 1995; minimum observed, 0.30 mg/L, Aug. 7, 1995.

DISSOLVED NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 1,080 lb, June 8, 1993; minimum daily, 0.43 lb, Aug. 6, 1995.

TOTAL NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 6.10 mg/L, Oct. 19, 1984; minimum observed, <0.10 mg/L, Oct. 12 and July 23, 1985.

TOTAL NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 1,489 lb, May 28, 1984; minimum daily, 0.17 lb, July 23, 1985.

TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 8.20 mg/L, Aug. 7, 1984; minimum observed, 0.01 mg/L, Jan. 16, Mar. 14, 1990, and Dec. 27, 1994.

TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 584 lb, Feb. 19, 1994; minimum daily, 0.01 lb, Aug. 2, 1994.

DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.81 mg/L, Mar. 4, 1993; minimum observed, <0.01 mg/L, on many days during 1995.

DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 126 lb, Mar. 23, 1993; minimum daily, 0.00 lb, Aug. 2, 1994, and Jan. 8-11, Aug. 6, 1995.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 2,760 mg/L, Sept. 19; minimum observed, 5 mg/L, Nov. 25.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 41 tons, Oct. 24; minimum daily, 0.00 ton, Aug. 3.

TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 3.88 mg/L, Sept. 19; minimum observed, 0.05 mg/L, Feb. 11, 21, Apr. 11, and July 15.

TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 119 lb, June 4; minimum daily, 0.07 lb, Aug. 3.

SEDIMENT DISCHARGE, SUSPENDED, TONS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.27	0.16	0.37	e0.16	0.30	0.10	e0.69	0.19	0.03	e0.49	e0.30	0.02
2	0.25	0.16	0.43	e0.17	e0.24	e0.09	e0.98	0.81	0.03	0.05	0.01	2.0
3	0.22	0.15	0.52	e0.16	e0.20	e0.09	e0.21	0.32	4.2	0.04	0.00	0.10
4	0.23	0.15	0.46	e0.16	e0.18	e0.09	0.16	0.25	19.0	0.03	4.4	0.06
5	0.17	0.16	0.46	e0.15	e0.16	e0.10	0.14	0.21	0.54	0.03	0.15	0.05
6	0.13	0.15	0.37	e0.16	e0.15	0.10	0.11	e0.58	0.13	0.03	0.13	0.05
7	0.10	0.14	0.29	e0.15	0.18	0.09	1.4	e0.53	0.09	0.03	0.10	0.04
8	0.10	0.13	0.24	e0.14	0.20	5.8	15.0	e0.50	0.08	0.03	0.09	0.03
9	0.09	0.12	0.19	e0.15	0.41	2.9	6.5	0.53	0.06	0.07	0.07	0.05
10	1.1	0.11	0.17	0.18	2.1	0.81	0.27	0.20	0.29	0.04	0.05	0.05
11	0.21	0.10	0.15	0.19	0.45	0.42	0.41	0.79	e0.93	0.03	0.05	e0.19
12	0.39	0.11	0.40	0.17	0.38	0.40	0.35	e0.93	e0.56	0.05	0.27	0.04
13	1.8	2.3	0.87	0.16	0.29	0.40	0.28	0.24	e0.58	0.04	5.1	0.04
14	0.53	0.97	0.17	e0.31	e0.23	0.36	0.25	0.21	e0.85	0.04	0.14	0.03
15	0.57	0.47	0.14	0.19	e0.21	0.32	0.23	0.19	e0.48	0.05	0.06	0.03
16	0.36	0.32	0.18	0.16	e0.19	0.27	0.20	e0.85	0.07	0.04	0.06	e0.18
17	0.25	0.24	0.18	e0.14	0.17	0.26	0.18	e0.64	0.07	0.03	0.05	0.04
18	0.19	0.21	0.15	e0.12	0.17	0.26	0.17	0.16	0.06	0.03	0.03	e0.17
19	0.15	0.20	0.21	e0.11	0.60	0.26	0.16	0.14	0.05	0.03	0.04	7.8
20	0.12	0.17	0.15	e0.11	0.31	0.28	0.13	0.14	0.05	0.02	0.04	e0.55
21	0.10	0.16	0.14	0.13	0.21	0.26	e0.90	0.16	0.07	0.02	5.2	0.09
22	7.8	0.14	e0.28	0.17	0.16	0.24	0.15	0.16	0.05	0.02	0.99	0.06
23	8.7	0.18	e0.27	0.20	0.15	0.23	0.13	e0.58	0.04	0.02	0.07	0.07
24	41.0	1.6	0.18	0.17	0.14	0.21	e0.74	0.15	0.05	0.02	0.04	0.09
25	1.8	0.28	0.18	0.16	0.13	0.21	0.12	3.7	0.04	0.02	0.03	0.07
26	0.31	0.08	e0.16	0.16	0.13	e0.19	0.10	0.07	0.53	0.02	0.04	0.06
27	0.20	0.11	e0.16	0.16	0.12	e0.21	e0.80	0.03	0.05	0.01	0.04	0.06
28	0.18	0.12	e0.16	0.17	0.11	0.23	e0.82	0.03	0.05	0.01	0.04	0.05
29	0.16	0.18	e0.16	0.15	---	e0.64	0.10	0.03	0.05	0.01	0.03	7.6
30	0.15	0.37	e0.16	0.14	---	e0.50	0.09	0.03	0.05	0.01	0.03	0.12
31	0.17	---	e0.16	0.16	---	0.22	---	0.03	---	0.01	0.02	---
TOTAL	67.80	9.74	8.11	5.01	8.27	16.54	31.77	13.38	29.13	1.37	17.67	19.79

WATER YEAR 2002 TOTAL 228.58

e Estimated

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--Continued

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.74	1.21	1.17	e0.27	1.05	0.65	e1.10	1.79	0.33	0.78	e0.39	0.09
2	0.70	1.05	0.87	e0.26	e0.84	e0.65	e1.60	2.98	0.31	0.49	0.11	15.4
3	0.62	0.87	0.79	e0.26	e0.71	e0.62	0.73	1.10	21.8	0.39	0.07	0.78
4	0.68	0.78	0.74	e0.26	e0.65	e0.62	0.62	0.90	119	0.28	15.4	0.43
5	0.50	0.73	0.82	e0.27	e0.58	e0.65	0.61	0.82	13.2	0.21	0.30	0.35
6	0.38	0.70	0.72	e0.29	e0.55	0.68	0.52	0.93	2.74	0.19	0.25	0.34
7	0.32	0.67	0.61	e0.28	0.61	0.60	7.41	0.69	1.54	0.17	0.21	0.23
8	0.33	0.62	0.54	e0.26	0.68	32.1	56.1	0.57	1.08	0.18	0.18	0.20
9	0.28	0.57	0.48	e0.30	1.74	28.6	47.0	3.81	0.79	0.34	0.16	0.29
10	7.87	0.52	0.48	0.37	12.5	6.25	4.13	0.77	2.35	0.16	0.13	0.26
11	1.55	0.50	0.45	0.41	1.19	1.49	1.61	4.89	e1.50	0.13	0.11	0.29
12	4.25	0.52	1.42	0.38	0.87	1.28	1.24	1.51	e0.89	0.16	1.65	0.20
13	15.1	15.5	6.84	0.36	0.69	1.29	1.04	0.81	e0.93	0.12	20.9	0.18
14	9.77	7.18	1.15	e0.93	e0.59	1.15	0.94	0.72	e1.40	0.11	0.61	0.12
15	1.94	2.07	0.85	e0.59	e0.57	1.02	0.89	0.66	e0.76	0.12	0.22	0.12
16	1.07	1.19	0.93	0.39	e0.54	0.87	0.81	e1.40	0.38	0.12	0.21	0.19
17	0.81	0.89	0.81	e0.36	0.51	0.83	0.75	e1.00	0.40	0.14	0.18	0.14
18	0.67	0.77	0.60	e0.32	0.56	0.82	0.73	0.54	0.36	0.16	0.11	0.16
19	0.59	0.71	0.76	e0.32	3.58	0.81	0.74	0.49	0.34	0.18	0.16	27.4
20	0.51	0.60	0.50	e0.31	3.12	0.88	0.61	0.48	0.33	0.18	0.15	e0.72
21	0.44	0.58	0.45	0.39	1.75	0.79	e1.40	0.52	e0.80	0.20	20.3	0.59
22	28.5	0.50	0.66	0.50	0.99	0.72	e1.20	0.53	0.37	0.22	15.2	0.40
23	86.5	0.52	0.63	0.62	0.92	0.70	0.66	e0.90	0.32	0.21	0.54	0.42
24	114	11.8	0.49	0.52	0.90	0.65	e1.20	0.51	0.43	0.19	0.30	0.51
25	14.8	5.04	0.44	0.52	0.84	0.63	0.64	20.2	0.43	0.18	0.21	0.40
26	4.83	1.98	e0.39	0.51	0.83	e0.58	0.57	1.10	6.12	0.17	0.22	0.35
27	2.83	1.87	e0.36	0.52	0.78	e0.62	e1.20	0.62	1.16	0.16	0.22	0.34
28	2.12	1.25	e0.32	0.56	0.70	0.69	e1.30	0.55	0.95	0.15	0.20	0.28
29	1.68	1.28	e0.31	0.51	---	e1.00	0.64	0.50	0.74	0.14	0.17	40.8
30	1.43	1.72	e0.29	0.48	---	e0.81	0.59	0.46	0.62	0.13	0.15	0.85
31	1.43	---	e0.28	0.56	---	e0.85	---	0.43	---	0.12	0.09	---
TOTAL	307.24	64.19	26.15	12.88	39.84	89.90	138.58	53.18	182.37	6.48	79.10	92.83

WATER YEAR 2002 TOTAL 1092.74

e Estimated

ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT 2001						
01...	0730	--	1.9	10	.07	52
10...	1145	--	6.8	50	.39	137
10...	1230	--	13	50	.55	222
10...	1630	--	7.0	50	.17	24
10...	1745	--	12	50	.27	79
10...	2145	--	9.1	50	.17	28
11...	0815	--	2.8	10	.09	29
12...	0745	--	8.1	50	.21	58
12...	0945	--	12	50	.20	39
12...	1345	--	8.5	50	.12	15
13...	1515	--	12	50	.28	78
13...	1630	--	27	50	.28	111
13...	1745	--	35	50	.25	82
13...	1945	--	40	50	.23	48
13...	2145	--	32	50	.19	24
14...	0345	--	19	50	.17	18
14...	1145	--	13	50	.10	7.3
14...	2345	--	8.1	50	.09	22
15...	0735	--	5.9	10	.06	44
22...	1915	--	11	50	.67	379
22...	2215	--	24	50	.42	71
22...	2300	--	56	50	.92	567
22...	2330	--	97	50	.95	660
23...	0015	--	109	50	.61	342
23...	0215	--	100	50	.40	72
23...	0815	--	50	50	.32	25
23...	2215	--	20	50	.13	14
24...	0015	--	35	50	.28	129
24...	0045	--	82	50	.65	359
24...	0130	--	107	50	.57	306
24...	0330	--	112	50	.39	894
24...	1020	--	62	50	.28	45
24...	1021	--	62	10	.29	45
24...	1330	--	48	50	.25	56
24...	1530	--	55	50	.25	52
24...	1930	--	46	50	.21	33
25...	0735	--	25	10	.12	36
26...	0930	--	13	50	.07	8.3
27...	1530	--	7.9	50	E.06	8.8
NOV						
05...	0735	--	2.1	10	.06	26
13...	1030	--	14	50	.89	466
13...	1115	--	21	50	.47	180
13...	1315	--	20	50	.28	79
13...	1515	--	15	50	.21	31
13...	1715	--	23	50	.28	104
13...	2115	--	14	50	.17	18
14...	0750	--	6.6	10	.09	42
14...	0900	--	14	50	.23	87
14...	1100	--	17	50	.17	42
14...	1500	--	12	50	.10	12
14...	2100	--	8.5	50	.10	17
15...	0740	--	5.6	10	.07	37
24...	0900	--	11	50	.41	310
24...	0945	--	18	50	.34	151
24...	1045	--	26	50	.27	84
24...	1245	--	28	50	.20	44
24...	1645	--	16	50	.14	19
24...	2245	--	11	50	.10	13
25...	0245	--	15	50	.12	20
25...	0645	--	12	50	.09	12
25...	1445	--	8.1	50	.09	4.7
DEC						
03...	0745	--	2.4	10	E.06	82
12...	2330	--	12	50	.34	148
13...	0015	--	19	50	.32	129
13...	0215	--	18	50	.18	42
13...	0615	--	11	50	.12	21
18...	1140	--	1.9	10	.06	31
JAN 2002						
02...	0730	.80	--	10	<.06	78
21...	1105	--	1.2	10	<.06	40

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
FEB 2002						
04...	0740	2.0	--	10	<.06	33
10...	0230	--	11	50	.73	434
10...	0345	--	17	50	.53	246
10...	0545	--	20	50	.25	72
10...	0945	--	15	50	.12	17
10...	1545	--	13	50	.08	9.7
11...	0840	--	4.1	10	E.05	47
19...	0615	--	8.3	50	.31	54
19...	0815	--	8.3	50	.10	31
19...	2230	--	8.1	50	.08	18
20...	1730	--	8.7	50	.10	29
20...	1930	--	8.5	50	.08	9.2
20...	2130	--	9.1	50	.08	14
20...	2330	--	10	50	.09	16
21...	0130	--	9.3	50	.07	8.2
21...	0805	--	6.0	10	E.05	16
MAR						
06...	0730	--	2.0	10	<.06	18
08...	0645	--	9.9	50	.30	177
08...	0730	--	16	50	.56	358
08...	1130	--	27	50	.30	126
08...	1530	--	37	50	.23	71
08...	1930	--	37	50	.22	52
09...	0330	--	28	50	.14	24
09...	0930	--	46	50	.21	51
09...	1330	--	36	50	.19	38
09...	1930	--	22	50	.13	19
10...	1330	--	11	50	.13	30
11...	0805	--	4.2	10	.06	37
APR						
01...	0730	--	1.8	10	E.06	41
07...	1130	--	12	50	.28	134
07...	1530	--	9.7	50	.12	35
07...	2130	--	17	50	.18	75
07...	2330	--	20	50	.18	73
08...	0530	--	13	50	.10	18
08...	1130	--	8.5	50	.07	9.3
08...	1345	--	20	50	.37	315
08...	1515	--	40	50	.48	346
08...	1745	--	61	50	.43	266
08...	2145	--	66	50	.32	128
08...	2345	--	74	50	.33	173
09...	0345	--	63	50	.30	92
09...	0735	--	40	10	.24	42
09...	0745	--	39	50	.25	46
09...	1745	--	19	50	.16	20
10...	0735	--	9.7	10	.08	10
10...	0745	--	9.7	50	.09	5.9
11...	0810	--	5.9	10	E.05	29
MAY						
02...	0015	--	9.5	50	.27	101
06...	0800	--	2.3	10	.08	68
09...	0345	--	9.1	50	.77	299
11...	1345	--	12	50	.64	204
11...	1545	--	11	50	.25	46
13...	0730	--	2.4	10	E.06	35
25...	0745	--	12	50	.57	222
25...	0845	--	21	50	1.15	598
25...	0945	--	29	50	.52	201
25...	1145	--	18	50	.24	53
25...	1345	--	11	50	.71	251
26...	0850	--	2.5	10	.06	6.3

ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
JUN 2002					
03...	0805	8.2	10	.16	86
03...	0815	17	50	1.66	837
03...	0915	27	50	1.25	602
03...	1245	14	50	.23	35
04...	0230	12	50	.23	58
04...	0330	26	50	.34	109
04...	0430	48	50	.36	140
04...	0800	61	50	.29	80
04...	1015	89	50	.35	122
04...	1016	89	10	.34	104
04...	1200	117	50	.54	298
04...	1400	112	50	.42	138
04...	1745	77	50	.28	39
04...	2145	47	50	.22	20
05...	0740	23	10	.12	9.5
05...	0745	22	50	.17	9.7
05...	1545	14	50	.09	5.6
06...	0830	6.8	10	.08	8.2
10...	2115	12	50	.53	183
26...	0600	16	50	.15	28
26...	0615	23	50	.29	66
26...	0715	32	50	.36	86
26...	0830	18	50	.09	10
26...	1030	8.9	50	.15	16
27...	0740	2.3	10	.09	8.5
JUL					
01...	0745	1.1	10	.10	17
15...	0810	.40	10	E.05	40
22...	0830	.35	10	.12	20
AUG					
04...	0515	12	50	3.26	1730
04...	0715	9.1	50	1.55	842
05...	0725	.35	10	.16	169
12...	2300	8.9	50	.76	231
13...	0100	6.8	50	.34	60
13...	1900	21	50	1.18	711
13...	1915	29	50	2.64	1710
13...	2115	20	50	.30	73
13...	2245	8.9	50	.28	54
21...	2030	15	50	3.51	2310
21...	2045	38	50	1.41	1040
21...	2130	49	50	.66	346
21...	2300	32	50	.30	49
22...	0300	24	50	.26	33
22...	0730	19	10	.20	26
22...	1100	11	10	.29	25
26...	0735	.50	10	.07	25
SEP					
02...	0745	10	50	1.30	712
02...	0830	17	50	.68	303
02...	0915	26	50	.51	165
02...	1115	27	50	.31	49
02...	1245	14	50	.30	32
02...	1445	8.1	50	.31	40
03...	0745	.77	10	.17	45
19...	1400	10	50	3.88	2760
19...	1415	34	50	1.93	1610
19...	1445	47	50	.85	626
19...	1515	58	50	.74	533
19...	1615	41	50	.36	93
19...	1815	13	50	.34	52
20...	0745	1.1	10	.17	49
29...	0500	22	50	1.68	1250
29...	0530	30	50	.69	413
29...	0630	70	50	.79	430
29...	0830	55	50	.33	47
29...	1030	22	50	.30	40
29...	1430	8.5	50	.27	29
30...	0800	1.3	10	.13	39

05431016 JACKSON CREEK AT MOUND ROAD NEAR ELKHORN, WI

LOCATION.--Lat 42°38'27", long 88°33'39", in SE ¼ SE ¼ sec.11, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on left bank at bridge on Mound Road, 2.3 mi south of Elkhorn.

DRAINAGE AREA.--16.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 920.00 ft above NGVD of 1929 (Wisconsin Department of Transportation benchmark).

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	13	16	e3.8	7.8	e8.6	8.4	8.4	5.1	2.9	0.51	0.77
2	5.8	12	13	e3.4	7.5	e7.8	9.7	12	4.3	2.6	0.51	7.2
3	5.4	10	13	e3.4	7.0	e7.4	11	9.4	13	2.3	0.51	4.8
4	5.3	9.8	12	e3.5	6.2	e7.6	10	7.9	149	2.0	0.58	2.0
5	6.2	9.5	11	e3.6	5.6	e7.8	8.7	7.5	144	1.8	0.73	1.2
6	6.0	9.3	11	e3.7	5.6	e8.2	8.1	7.7	52	1.6	0.70	1.0
7	5.9	9.6	11	e3.6	5.9	e8.6	11	7.5	30	1.6	0.62	0.93
8	6.1	9.4	9.9	e3.5	6.3	32	52	6.6	21	1.5	0.60	0.70
9	4.4	8.4	9.2	e4.0	7.9	116	169	8.0	17	1.8	0.67	0.65
10	6.2	8.4	8.9	4.8	33	e70	73	6.8	13	1.8	0.62	0.61
11	9.0	8.0	8.6	4.8	25	33	41	8.4	13	1.5	0.55	0.60
12	9.8	7.9	8.6	4.9	18	26	30	12	12	1.4	0.49	0.65
13	15	15	18	4.8	13	25	23	9.6	10	1.2	2.8	0.64
14	39	27	15	6.0	11	23	20	8.5	10	1.2	5.0	0.62
15	23	23	12	6.3	11	20	17	7.2	9.9	1.1	1.8	0.59
16	16	18	11	5.1	10	16	15	7.6	8.1	0.97	1.3	0.53
17	12	14	12	e4.7	9.1	14	13	9.2	7.2	0.96	1.1	0.51
18	9.8	13	11	e4.4	8.6	13	11	7.3	7.0	0.96	1.0	0.51
19	9.4	12	11	e4.3	16	12	12	6.6	6.5	0.93	0.96	5.0
20	8.7	11	10	e4.1	29	12	10	6.4	5.9	0.89	0.95	6.1
21	8.2	10	8.6	e4.0	33	e11	11	6.0	5.5	0.84	1.1	2.7
22	8.9	9.8	8.7	e4.1	22	e10	13	5.5	5.0	0.83	20	1.3
23	102	9.4	11	6.6	19	e9.2	10	5.4	4.2	0.79	6.6	0.95
24	135	18	8.7	6.9	18	e9.0	10	5.7	4.0	0.65	3.1	0.95
25	88	29	e7.4	6.2	18	e8.8	10	14	3.7	0.65	1.8	0.92
26	43	21	e7.0	6.1	14	e8.6	9.0	11	4.6	0.64	1.5	0.87
27	29	18	e6.4	6.1	11	e8.5	8.7	8.6	5.5	0.62	1.3	0.89
28	22	15	e5.8	6.8	e9.6	8.5	12	7.1	4.0	0.61	1.3	0.94
29	19	14	e5.2	6.8	---	8.5	10	6.6	3.5	0.58	1.1	18
30	16	15	e4.8	6.1	---	8.9	9.0	6.1	3.2	0.55	0.97	6.4
31	14	---	e4.2	6.2	---	8.4	---	5.8	---	0.51	0.93	---
TOTAL	694.2	407.5	310.0	152.6	388.1	567.4	655.6	246.4	581.2	38.28	61.70	69.53
MEAN	22.39	13.58	10.00	4.923	13.86	18.30	21.85	7.948	19.37	1.235	1.990	2.318
MAX	135	29	18	6.9	33	116	169	14	149	2.9	20	18
MIN	4.4	7.9	4.2	3.4	5.6	7.4	8.1	5.4	3.2	0.51	0.49	0.51
CFSM	1.33	0.81	0.60	0.29	0.83	1.09	1.30	0.47	1.15	0.07	0.12	0.14
IN.	1.54	0.90	0.69	0.34	0.86	1.26	1.45	0.55	1.29	0.08	0.14	0.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2002, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
MEAN	6.769	8.292	5.348	7.776	19.50	16.91	25.00	15.13	28.36	6.447	4.996	5.621
MAX	22.4	22.4	10.5	21.6	53.5	48.2	77.4	28.5	66.2	22.6	23.8	14.7
(WY)	2002	1996	1996	1999	2001	1993	1993	2000	1996	1993	1995	2001
MIN	1.45	1.50	2.07	1.18	3.83	4.16	8.32	4.18	3.78	1.23	0.82	1.05
(WY)	1998	2000	2000	1994	1995	1996	1994	1994	1994	2002	1999	1996

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1993 - 2002

ANNUAL TOTAL	6543.9	4172.51		
ANNUAL MEAN	17.93	11.43	11.53	
HIGHEST ANNUAL MEAN			15.8	1996
LOWEST ANNUAL MEAN			7.87	1994
HIGHEST DAILY MEAN	316	Jun 12	169	Apr 9
LOWEST DAILY MEAN	1.0	Sep 2	0.49	Aug 12
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 28	0.54	Jul 29
MAXIMUM PEAK FLOW			(a)303	Jun 4
MAXIMUM PEAK STAGE			(b)10.22	Mar 10
ANNUAL RUNOFF (CFSM)	1.07		0.68	
ANNUAL RUNOFF (INCHES)	14.49		9.24	
10 PERCENT EXCEEDS	33		20	23
50 PERCENT EXCEEDS	9.7		7.8	4.8
90 PERCENT EXCEEDS	1.9		0.88	1.0

(a) Gage height, 10.06 ft

(b) Ice affected

(c) Estimated due to ice effect or missing record

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to September 1985, February 1993 to current year.

PERIOD OF DAILY RECORD.--

- WATER TEMPERATURE: October 1999 to current year.
- SUSPENDED-SEDIMENT DISCHARGE: February 1993 to current year.
- DISSOLVED AMMONIA NITROGEN DISCHARGE: February 1993 to September 1995.
- TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: February 1993 to September 1995.
- DISSOLVED NITRITE PLUS NITRATE DISCHARGE: February 1993 to September 1995.
- TOTAL PHOSPHORUS DISCHARGE: February 1993 to current year.
- DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: February 1993 to current year.

INSTRUMENTATION.--Automatic pumping sampler since February 1993. Continuous water temperature recorder since October 1999.

REMARKS.--Records good. Records represent water temperature at sensor within 0.5°C.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--

- TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 2.1 mg/L, July 10, 1985; minimum observed, 0.30 mg/L, Jan. 24, 1985.
- TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.55 mg/L, July 10, 1985; minimum observed, 0.03 mg/L, Apr. 2, 1985.
- DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.20 mg/L, Nov. 20, 1984 and May 22, 1985; minimum observed, <0.01 mg/L, July 10, 23, 1985.

EXTREMES FOR PERIOD OF DAILY RECORD.--

- WATER TEMPERATURE: Maximum, 35.0°C, July 24, 2001 and July 4, 2002; minimum, 0.0°C on many days.
- SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 1,420 mg/L, June 17, 1996; minimum observed, 2 mg/L, Sept. 16, 1993, July 25, 1995, July 18, 1996, and June 4, 2000.
- SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,030 tons, June 17, 1996; minimum daily, 0.01 ton, Aug. 25-28 and Sept. 11, 1993, July 19, 22, 1995, and many days in 1994, 1996, 1997, 1998, and 1999 water years.
- DISSOLVED AMMONIA NITROGEN CONCENTRATIONS: Maximum observed, 1.70 mg/L, Mar. 5, 1993; minimum observed, 0.01 mg/L, Aug. 1, 29, and Sept. 25, 1994.
- DISSOLVED AMMONIA NITROGEN DISCHARGE: Maximum daily, 1,410 lb, Feb. 20, 1994; minimum daily, 0.07 lb, July 31, 1995.
- TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 4.6 mg/L, Mar. 5, 1993; minimum observed, 0.40 mg/L, Oct. 6 and Dec. 15, 1993, and Jan. 14, Mar. 28-29, 1995.
- TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 4,900 lb, Apr. 20, 1993; minimum daily, 1.5 lb, June 19, 1994.
- DISSOLVED NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 13.0 mg/L, Apr. 30, 1995; minimum observed, <0.05 mg/L, Sept. 2, 1993, and many days in 1994 and 1995 water years.
- DISSOLVED NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 5,310 lb, Apr. 20, 1993; minimum daily, 0.16 lb, July 19, 1995.
- TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.6 mg/L, June 17, 1996; minimum observed, <0.01 mg/L, Mar. 19, 1997.
- TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 2,630 lb, Apr. 20, 1993; minimum daily, 0.13 lb, Feb. 6-7, 2000.
- DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.63 mg/L, Feb. 19, 1997; minimum observed, 0.009 mg/L, June 2, 2001.
- DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 700 lb, Feb. 9, 2001; minimum daily, 0.03 lb, Sept. 15-19, 23, 26, 1999 and Sept. 15-18, 2002.

EXTREMES FOR CURRENT YEAR.--

- WATER TEMPERATURE: Maximum, 35.0°C, July 4; minimum, 0.0°C on several days.
- SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 384 mg/L, Feb. 20; minimum observed, 5 mg/L, June 5.
- SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 85 tons, Apr. 19; minimum daily, 0.02 ton, Aug. 3, 4, 7-12.
- TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.815 mg/L, Oct. 23; minimum observed, 0.033 mg/L, May 13.
- TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 398 lb, Apr. 9; minimum daily, 0.51 lb, Sept. 18.
- DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.240 mg/L, June 5; minimum observed, <0.020 mg/L, many days.
- DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 144 lb, June 5; minimum daily, 0.03 lb, Sept. 15-18.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 2001							
	01...	--	6.6	50	<.02	.07	--
	14...	--	43	50	.06	.53	--
	14...	--	44	50	.11	.28	71
	14...	--	37	50	.11	.23	53
	15...	--	23	10	.06	.10	--
	23...	--	71	50	.11	.81	--
	23...	--	119	50	.13	.39	144
	23...	--	142	50	.16	.33	68
	23...	--	121	50	.20	.67	--
	23...	--	73	50	.18	.30	50
	24...	--	123	50	.16	.30	72
	24...	--	173	50	.19	.29	27
	24...	--	173	10	.24	.35	34
	24...	--	140	50	.19	.27	18
	25...	--	98	10	.17	.25	23
	25...	--	66	50	.14	.22	33
	26...	--	44	10	.12	.17	12
NOV							
	05...	--	9.9	10	<.02	.10	--
	14...	--	25	10	.10	.26	--
	15...	--	24	10	--	.40	67
DEC							
	03...	--	13	10	<.02	.12	--
	18...	--	11	70	E.01	.12	--
JAN 2002							
	21...	4.0	--	70	E.01	E.04	74

E Estimated

05431016 JACKSON CREEK AT MOUND ROAD NEAR ELKHORN, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
FEB 2002							
11...	0905	--	26	10	.03	.13	--
20...	1730	--	28	50	--	--	384
20...	2030	--	35	50	--	.27	177
21...	0230	--	37	50	--	.20	55
21...	0830	--	36	50	--	.22	65
21...	0835	--	36	10	.05	.12	315
21...	1430	--	31	50	--	.16	30
26...	0755	--	14	10	<.02	--	--
MAR							
06...	0745	8.2	--	10	<.02	.18	56
08...	1645	--	44	50	.05	.35	158
08...	2245	--	89	50	.16	.39	103
09...	0745	--	107	50	.12	.32	67
09...	0915	--	109	50	--	--	241
09...	1945	--	129	50	.14	.42	128
10...	0915	70	--	50	--	--	29
10...	1515	70	--	50	.10	.50	177
11...	0015	--	41	50	.07	.25	79
11...	0825	--	33	10	.04	.21	216
APR							
01...	0750	--	8.4	10	<.02	--	--
08...	0645	--	39	50	.03	.48	344
08...	1545	--	44	50	.04	.22	86
08...	2130	--	104	50	.16	.44	--
09...	0330	--	165	50	.18	.73	346
09...	0800	--	220	10	.17	.43	192
09...	1230	--	190	50	.23	.40	55
09...	2130	--	127	50	.03	--	104
10...	0919	--	75	50	--	.31	63
10...	0920	--	75	70	--	.25	16
11...	0825	--	43	10	.04	.12	51
12...	0810	--	31	10	--	.16	55
MAY							
06...	0825	--	7.9	10	<.02	E.04	18
07...	1430	--	7.5	70	<.02	.07	24
13...	0755	--	9.9	10	<.02	E.03	19
JUN							
03...	0820	--	4.2	10	<.02	.09	23
04...	0745	--	61	50	--	--	8.8
04...	1107	--	111	50	--	.22	11
04...	1108	--	111	10	--	.27	58
04...	1530	--	204	50	.13	.28	31
04...	2015	--	300	50	.20	.39	33
04...	2315	--	283	50	.22	.41	22
05...	0215	--	229	50	.24	.39	24
05...	0800	--	161	10	.18	.32	15
05...	1715	--	104	50	.15	.26	4.9
06...	0855	--	55	10	.09	.17	6.7
07...	0800	--	33	10	.03	.12	6.5
10...	0755	--	14	10	E.01	.07	37
17...	0740	--	7.2	10	<.02	.07	21
24...	0745	--	4.2	10	<.02	.08	26
JUL							
01...	0755	--	3.1	10	<.02	.10	26
08...	1025	--	1.6	10	<.02	.17	15
15...	0830	--	1.1	10	.06	.17	26
22...	0850	--	.83	10	.09	.29	18
29...	0755	--	.58	10	--	--	29
AUG							
05...	0750	--	.72	10	--	--	14
12...	0815	--	.51	10	<.02	.37	--
19...	0745	--	.96	10	<.02	.26	21
22...	0345	--	22	50	.12	.31	20
22...	0645	--	24	50	.06	.30	42
22...	0755	--	25	10	.05	.38	25
22...	1245	--	25	50	.09	.26	23
22...	1545	--	21	50	.10	.25	19
22...	2145	--	13	50	.12	.30	23
23...	0805	--	7.5	10	.12	.31	18
26...	0755	--	1.5	10	<.02	.22	26
SEP							
02...	1415	--	14	50	.04	.25	31
02...	1715	--	15	50	.07	.23	29
02...	2015	--	13	50	.07	.25	30
03...	0805	--	5.5	10	E.01	.24	52
09...	0750	--	.65	10	<.02	.41	31
16...	0745	--	.51	10	E.01	.31	40
19...	1900	--	16	50	.03	.33	63
19...	2200	--	16	50	.08	.30	49
20...	0100	--	12	50	.06	.29	50
20...	0810	--	6.2	10	.06	.32	51
23...	0750	--	.96	10	<.02	.25	66
29...	0830	--	20	50	.04	.32	85
29...	1130	--	35	50	.10	.27	44
29...	1730	--	25	50	.14	.31	46
29...	2330	--	13	50	.13	.30	43
30...	0825	--	7.0	10	.06	.27	67

05431016 JACKSON CREEK AT MOUND ROAD NEAR ELKHORN, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	28.0	18.5	22.5	34.0	26.5	30.0	30.5	26.0	28.0	25.5	22.0	24.0
2	22.0	16.0	19.5	32.0	25.5	29.0	30.5	24.0	27.5	25.0	20.0	22.5
3	17.5	13.0	15.5	33.5	26.0	29.5	29.0	24.0	26.5	26.5	19.5	23.0
4	16.5	15.0	15.0	35.5	27.0	30.0	29.0	26.0	27.5	25.5	18.5	22.0
5	16.0	14.0	15.5	29.5	22.0	26.5	30.0	25.5	27.5	26.0	20.0	23.0
6	19.0	12.5	15.0	30.5	23.5	26.5	26.5	22.0	24.5	25.0	20.0	22.5
7	20.5	13.5	16.5	33.0	26.0	29.5	28.0	21.5	24.5	26.0	21.5	23.5
8	22.5	15.0	19.0	34.0	27.5	31.0	27.5	22.0	24.5	27.0	22.5	24.5
9	25.0	17.0	20.5	31.0	26.5	28.5	28.0	22.0	25.0	28.5	24.0	26.0
10	25.5	18.5	21.5	27.5	23.0	25.5	27.0	23.0	25.0	27.0	23.0	25.5
11	24.0	20.0	22.0	26.0	21.0	23.0	28.5	24.0	26.0	24.0	19.0	21.5
12	24.5	20.0	21.5	30.0	21.0	25.0	28.5	25.0	26.5	23.0	18.0	20.5
13	21.5	17.5	19.0	28.5	21.5	25.0	28.0	23.0	25.5	22.0	18.5	20.5
14	21.0	17.0	18.5	29.5	22.5	26.0	28.0	22.0	24.5	21.5	18.5	20.0
15	23.5	16.0	19.5	30.5	24.0	27.0	26.5	20.5	23.5	22.0	19.0	20.5
16	24.5	16.5	20.0	31.5	25.5	28.5	28.0	23.0	25.5	21.0	16.5	19.0
17	21.0	17.0	19.5	31.5	24.5	28.0	27.0	23.5	25.0	22.0	17.0	19.5
18	26.5	17.5	21.5	33.5	25.5	28.5	25.5	19.5	22.5	23.0	19.5	21.0
19	23.0	18.5	21.0	30.5	26.0	28.0	26.5	22.0	24.0	24.0	21.5	22.5
20	29.0	19.5	24.0	28.5	24.5	26.5	26.0	20.5	23.0	22.5	19.5	21.5
21	30.5	22.5	26.0	31.0	26.0	28.5	26.0	21.0	23.0	24.5	17.0	20.0
22	31.5	23.5	27.0	29.5	26.5	28.0	23.5	21.0	22.0	21.0	17.0	18.5
23	31.5	23.0	27.5	28.0	22.5	25.5	24.0	20.5	22.0	17.0	13.0	15.5
24	33.0	23.5	28.0	27.5	22.0	24.5	28.5	21.5	24.0	17.5	11.0	14.0
25	32.0	24.5	28.0	25.0	22.5	23.5	28.0	21.5	24.5	19.5	13.5	16.0
26	28.5	23.0	26.0	28.5	23.0	25.0	28.5	22.0	25.0	21.5	15.5	18.0
27	29.5	22.5	26.0	28.0	25.0	26.5	28.0	21.5	24.5	20.0	17.0	18.0
28	31.5	22.0	26.5	30.0	25.5	27.5	27.5	21.5	24.5	19.0	14.0	16.5
29	31.0	23.5	27.0	29.0	25.5	27.0	26.5	20.0	23.0	21.0	17.0	19.0
30	33.5	24.5	29.0	29.5	23.5	26.5	26.0	20.5	23.0	24.5	18.5	21.0
31	---	---	---	30.5	26.0	28.0	26.0	21.0	23.5	---	---	---
MONTH	33.5	12.5	21.9	35.5	21.0	27.2	30.5	19.5	24.7	28.5	11.0	20.6

SEDIMENT DISCHARGE, SUSPENDED, TONS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.33	0.41	2.3	e0.58	1.3	e1.0	0.40	e0.57	0.31	0.20	0.03	0.04
2	0.31	0.35	2.0	e0.53	1.2	e0.97	0.45	e0.82	0.27	0.16	0.03	0.58
3	0.29	0.31	1.8	e0.54	1.1	e0.98	0.52	e0.64	0.62	0.13	0.02	0.61
4	0.29	0.29	1.6	e0.57	0.93	e1.0	0.44	0.42	10.0	0.11	0.02	0.25
5	0.34	0.28	1.5	e0.58	0.82	e1.1	0.37	0.38	5.5	0.09	0.03	0.14
6	0.33	0.27	1.5	e0.61	0.81	e1.2	0.34	0.39	0.91	0.08	0.03	0.11
7	0.32	0.27	1.3	e0.60	0.84	e1.2	1.3	0.47	0.56	0.07	0.02	0.09
8	0.33	0.27	1.2	e0.59	0.88	9.6	25.0	0.41	0.70	0.06	0.02	0.06
9	0.24	0.24	1.1	e0.69	e3.6	42.0	85.0	0.48	1.0	0.08	0.02	0.05
10	e2.8	0.23	1.0	0.83	e15.0	e31.8	13.0	0.39	1.3	0.08	0.02	0.05
11	e4.1	0.22	0.96	0.85	e4.0	13.0	5.8	0.46	1.2	0.08	0.02	0.05
12	e4.4	0.22	0.94	0.87	e2.9	5.6	4.4	0.65	1.0	0.08	0.02	0.06
13	e6.8	e6.8	e8.2	0.87	2.3	2.3	3.3	0.50	0.81	0.08	e0.19	0.06
14	e18.0	e12.0	e2.4	1.1	1.5	1.8	2.6	0.44	0.74	0.08	e0.34	0.06
15	e3.7	e3.7	e1.9	1.2	1.2	1.5	2.2	0.38	0.65	0.08	e0.12	0.06
16	e2.6	e2.9	e1.8	0.96	0.91	1.2	1.8	e0.52	0.49	0.06	0.04	0.06
17	1.2	2.3	e5.5	e0.89	0.69	0.99	1.5	e0.63	0.41	0.06	0.03	0.05
18	0.88	2.0	e1.8	e0.84	0.53	0.90	1.3	e0.50	0.41	0.06	0.03	0.05
19	0.75	1.7	2.7	e0.84	2.2	0.81	1.2	0.36	0.39	0.05	0.03	0.69
20	0.61	1.5	1.8	e0.81	16.0	0.79	1.0	0.35	0.37	0.05	0.03	0.84
21	0.51	1.3	1.2	e0.80	4.2	e0.71	e5.0	0.33	0.35	0.04	0.03	0.40
22	0.71	1.2	1.2	e0.80	1.9	e0.62	e5.9	0.30	0.33	0.04	1.3	0.21
23	20.0	1.1	1.5	1.3	1.7	e0.57	0.90	0.31	0.29	0.04	0.34	0.17
24	12.0	e8.2	1.2	1.3	1.7	e0.53	0.86	0.32	0.28	0.04	0.17	0.15
25	6.0	e13.0	e1.1	1.1	1.7	e0.50	0.82	e0.95	0.26	0.04	0.12	0.14
26	1.7	e3.4	e1.0	1.1	1.5	e0.49	0.69	e0.75	0.32	0.04	0.10	0.12
27	0.93	e2.9	e0.93	1.1	1.1	e0.46	0.64	0.50	0.39	0.04	0.09	0.11
28	0.68	2.4	e0.86	1.2	e1.1	0.45	e5.5	0.42	0.28	0.05	0.08	0.11
29	0.59	2.3	e0.77	1.2	---	0.44	e1.6	0.39	0.25	0.04	0.07	2.4
30	0.50	2.4	e0.73	1.0	---	0.45	0.57	0.36	0.22	0.04	0.06	0.92
31	0.44	---	e0.65	1.0	---	0.41	---	0.35	---	0.03	0.05	---
TOTAL	92.68	74.46	54.44	27.25	73.61	125.37	174.40	14.74	30.61	2.18	3.50	8.69
WATER YEAR 2002 TOTAL		681.93										

e Estimated

ROCK RIVER BASIN

05431016 JACKSON CREEK AT MOUND ROAD NEAR ELKHORN, WI--Continued

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.26	8.84	e12.3	e1.50	1.36	e7.80	5.13	2.41	2.24	1.58	0.90	0.62
2	2.18	7.36	e10.0	e1.30	1.29	e7.20	5.73	e21.7	2.01	1.50	0.91	8.68
3	2.01	6.16	8.20	e1.20	1.18	e6.90	6.62	e17.0	8.36	1.43	0.92	6.36
4	1.97	5.51	7.16	e1.20	1.02	e7.20	5.58	1.91	254	1.36	1.07	2.80
5	2.29	5.16	6.20	e1.20	0.91	e7.50	4.75	1.69	241	1.31	1.34	1.90
6	2.21	5.01	6.08	e1.20	0.90	e7.70	4.29	1.65	47.4	1.29	1.30	1.76
7	2.13	5.09	5.32	e1.20	0.94	e7.30	9.21	1.55	19.4	1.36	1.16	1.75
8	2.20	4.98	4.67	e1.10	0.99	54.0	101	1.31	11.3	1.40	1.16	1.44
9	1.57	4.42	4.07	e1.20	e6.00	224	398	1.52	7.38	1.67	1.29	1.41
10	e9.00	4.36	3.69	1.40	e25.3	e126	93.7	1.23	5.07	1.62	1.21	1.29
11	e13.1	4.13	3.35	1.36	e19.2	37.9	29.5	e15.2	5.09	1.40	1.08	1.22
12	e14.3	4.09	3.14	1.34	e13.8	28.8	25.1	e21.7	4.59	1.28	0.97	1.28
13	14.7	15.9	e13.8	1.28	e10.0	26.7	18.7	e17.3	3.95	1.14	e4.20	1.21
14	59.1	43.6	e11.5	1.53	6.98	23.9	15.0	e15.0	3.95	1.13	e7.40	1.12
15	13.3	43.4	e9.20	1.57	6.49	19.7	12.5	e13.0	3.74	1.03	3.09	1.03
16	7.97	19.9	5.56	1.23	5.70	15.7	9.90	e13.7	3.06	0.97	2.04	0.85
17	5.78	13.6	7.02	e1.10	5.02	13.0	8.26	e16.6	2.72	1.04	1.64	0.65
18	4.46	11.3	6.93	e1.00	4.52	11.8	6.92	e13.0	2.69	1.12	1.48	0.51
19	4.07	9.54	6.76	e0.90	e12.3	10.5	6.69	1.48	2.55	1.17	1.31	7.32
20	3.54	7.77	5.92	e0.90	e22.2	10.3	5.39	1.51	2.39	1.21	1.16	9.90
21	3.20	6.88	4.83	e0.80	27.4	e9.30	e19.9	1.49	2.23	1.23	1.25	4.21
22	3.83	5.87	4.68	e0.80	18.5	e8.20	e23.5	1.43	2.07	1.30	30.3	1.85
23	240	5.18	e8.40	1.31	16.1	e7.30	e18.1	1.50	1.78	1.25	10.7	1.28
24	211	e13.8	4.42	1.36	15.7	e6.90	4.36	1.66	1.76	1.04	4.61	1.22
25	113	e22.2	e3.60	1.20	15.4	e6.60	4.10	e25.3	1.68	1.05	2.39	1.12
26	40.5	e16.1	e3.30	1.16	12.7	e6.30	3.42	e19.9	2.14	1.05	1.73	1.01
27	25.0	e13.8	e2.90	1.15	9.39	e6.00	3.13	2.93	2.62	1.03	1.47	0.99
28	17.7	e11.5	e2.60	1.26	e8.60	5.82	e21.7	2.55	1.98	1.03	1.30	0.99
29	14.6	e10.7	e2.20	1.23	---	5.70	e18.1	2.47	1.80	0.98	1.11	27.3
30	11.8	e11.5	e2.00	1.10	---	5.75	e16.3	2.42	1.67	0.95	0.89	8.73
31	9.94	---	e1.70	1.10	---	5.31	---	2.44	---	0.89	0.80	---
TOTAL	858.71	347.65	181.50	37.18	269.89	727.08	904.58	244.55	652.62	37.81	92.18	101.80
WATER YEAR 2002 TOTAL		4455.55										

PHOSPHORUS, ORTHO, WATER, FILTERED, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.65	2.88	e3.50	e0.20	0.42	e0.93	0.91	1.04	0.55	0.31	0.12	0.08
2	0.63	2.11	1.72	e0.18	0.41	e0.84	1.04	e6.00	0.47	0.28	0.11	2.01
3	0.58	1.56	1.40	e0.18	0.38	e0.80	e1.80	e4.70	2.24	0.24	0.10	0.43
4	0.57	1.23	1.28	e0.19	0.33	e0.82	1.08	0.90	127	0.21	0.11	0.12
5	0.67	1.05	1.18	e0.19	0.30	e0.84	0.94	0.82	144	0.19	0.13	0.08
6	0.65	1.07	1.23	e0.20	0.30	e0.89	0.88	0.83	23.4	0.17	0.11	0.08
7	0.63	1.15	1.15	e0.19	0.32	e0.93	1.33	0.81	4.99	0.17	0.09	0.08
8	0.65	1.19	1.07	e0.19	0.34	15.0	23.4	0.71	2.28	0.17	0.09	0.07
9	0.47	1.12	1.00	e0.22	e6.70	83.4	133	e4.00	1.24	0.23	0.09	0.07
10	0.82	1.17	0.96	0.26	e28.0	e36.5	13.1	e3.40	0.75	0.26	0.08	0.06
11	1.55	1.18	0.93	0.26	e13.0	8.05	8.62	e4.20	0.82	0.27	0.06	0.05
12	1.98	1.23	0.92	0.26	e9.40	5.46	6.25	e6.00	0.81	0.29	0.05	0.05
13	3.08	e12.7	e15.3	0.26	e6.80	5.05	4.71	1.04	0.77	0.30	e1.40	0.05
14	18.8	e22.9	e7.80	e0.65	1.55	4.49	3.88	0.92	0.85	0.35	e2.50	0.04
15	7.72	e12.0	e6.30	e1.00	1.43	3.69	3.34	0.77	0.89	0.36	e0.90	0.03
16	4.32	e9.40	0.75	0.28	1.24	2.93	2.72	e3.80	0.80	0.33	0.14	0.03
17	2.85	4.90	0.76	e0.25	1.08	2.41	2.34	e4.60	0.77	0.35	0.12	0.03
18	2.01	4.00	0.63	e0.24	0.96	2.18	2.02	e3.30	0.75	0.37	0.11	0.03
19	1.67	3.32	0.61	e0.23	e13.6	1.94	2.02	0.72	0.70	0.38	0.10	1.23
20	1.33	2.65	0.55	e0.22	e24.6	1.90	1.68	0.69	0.64	0.39	0.10	1.87
21	1.09	2.30	0.47	e0.22	e28.0	e1.72	e2.40	0.65	0.59	0.39	0.14	0.58
22	1.12	1.92	0.47	e0.22	e11.5	e1.51	e3.50	0.59	0.54	0.40	9.31	0.19
23	91.7	1.66	0.60	0.36	e9.90	e1.34	1.57	0.59	0.45	0.35	3.92	0.11
24	132	e15.3	0.47	0.37	2.79	e1.26	1.53	0.62	0.44	0.27	1.06	0.10
25	77.1	e24.6	e0.40	0.34	2.25	e1.19	1.48	e7.00	0.40	0.25	0.33	0.10
26	27.8	e11.0	e0.38	0.33	1.58	e1.11	1.27	e5.00	0.50	0.23	0.16	0.09
27	15.4	6.03	e0.35	0.33	1.14	e1.06	1.20	0.93	0.59	0.21	0.14	0.10
28	9.57	4.27	e0.31	0.37	e1.04	1.04	e3.20	0.77	0.43	0.19	0.14	0.10
29	6.96	3.27	e0.28	0.37	---	1.01	e1.60	0.71	0.38	0.17	0.12	10.4
30	4.93	e4.00	e0.26	0.33	---	1.02	1.14	0.66	0.34	0.15	0.11	2.26
31	3.67	---	e0.23	0.34	---	0.94	---	0.63	---	0.13	0.10	---
TOTAL	422.97	163.16	53.26	9.23	169.36	192.25	233.95	67.40	319.38	8.36	22.04	20.52
WATER YEAR 2002 TOTAL		1681.88										

e Estimated

05431016 JACKSON CREEK AT MOUND ROAD NEAR ELKHORN, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--June 1999 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Rain gage covered Nov. 15, 2001 to Apr. 3, 2002. Rainfall estimated to be 0.00 for Apr. 6, 10, 13-15, 17, 19, 20, 22-26, 29, 30, and May 1-7 because of datalogger problem.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.65 in., June 13, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.06 in., June 4.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	---	---	---	---	---	e0.30	0.00	0.00	0.15	0.00
2	0.00	0.00	---	---	---	---	---	e0.02	0.00	0.00	0.00	1.26
3	0.00	0.00	---	---	---	---	---	e0.0	0.95	0.00	0.00	0.00
4	0.13	0.00	---	---	---	---	0.00	e0.0	2.06	0.00	0.32	0.00
5	0.00	0.00	---	---	---	---	0.00	e0.0	0.01	0.00	0.00	0.00
6	0.00	0.00	---	---	---	---	e0.0	e0.04	0.00	0.00	0.00	0.01
7	0.00	0.00	---	---	---	---	0.79	e0.0	0.00	0.00	0.00	0.00
8	0.03	0.00	---	---	---	---	1.28	0.00	0.00	0.48	0.00	0.00
9	0.01	0.00	---	---	---	---	0.10	0.21	0.00	0.01	0.00	0.00
10	0.42	0.00	---	---	---	---	e0.0	0.00	0.28	0.00	0.00	0.01
11	0.00	0.00	---	---	---	---	0.00	0.45	0.12	0.00	0.00	0.01
12	0.29	0.00	---	---	---	---	0.04	0.03	0.00	0.00	0.34	0.00
13	0.62	0.78	---	---	---	---	e0.0	0.00	0.28	0.00	0.40	0.00
14	0.02	0.22	---	---	---	---	e0.0	0.00	0.03	0.00	0.03	0.00
15	0.01	---	---	---	---	---	e0.0	0.00	0.01	0.00	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.44	0.01	0.00	0.00	0.00
17	0.00	---	---	---	---	---	e0.02	0.00	0.04	0.00	0.06	0.00
18	0.00	---	---	---	---	---	0.14	0.00	0.00	0.00	0.02	0.09
19	0.00	---	---	---	---	---	e0.0	0.00	0.00	0.00	0.02	1.25
20	0.00	---	---	---	---	---	e0.0	0.00	0.00	0.00	0.00	0.15
21	0.00	---	---	---	---	---	0.31	0.00	0.00	0.00	1.45	0.00
22	1.21	---	---	---	---	---	e0.0	0.00	0.00	0.00	0.72	0.01
23	0.55	---	---	---	---	---	e0.0	0.07	0.00	0.00	0.00	0.00
24	0.36	---	---	---	---	---	e0.14	0.00	0.00	0.00	0.00	0.00
25	0.00	---	---	---	---	---	e0.0	0.61	0.00	0.00	0.00	0.00
26	0.00	---	---	---	---	---	e0.0	0.00	0.67	0.04	0.00	0.00
27	0.00	---	---	---	---	---	0.31	0.00	0.00	0.11	0.00	0.00
28	0.00	---	---	---	---	---	0.11	0.00	0.00	0.00	0.00	0.06
29	0.00	---	---	---	---	---	e0.0	0.00	0.00	0.10	0.00	1.40
30	0.00	---	---	---	---	---	e0.0	0.00	0.00	0.00	0.01	0.00
31	0.01	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	3.66	---	---	---	---	---	---	2.17	4.46	0.74	3.52	4.25

e Estimated

ROCK RIVER BASIN

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI

LOCATION.--Lat 42°37'16", long 88°34'57", in SE ¼ NE ¼ sec.22, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on downstream headwall of State Highway 50 bridge, and 1.0 mi east of Lake Lawn.

DRAINAGE AREA.--21.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1984 and 1985 water years (unpublished) to current year. Published as "at U.S. Highway 50" prior to October 1988.

GAGE.--Nonrecording gage. Datum of gage is 922.94 ft above NGVD of 1929 (Wisconsin Department of Transportation bench mark). Previously published datum of 914.48 ft in 1989-91 annual data reports was in error.

REMARKS.--Daily mean discharges were estimated based on discharges upstream at Jackson Creek near Elkhorn (05431014) and Jackson Creek Tributary near Elkhorn (054310157) for Oct. 1, 1983 to Jan. 31, 1993. Also during this period, an acoustical velocity meter was used to measure discharges equal to or greater than 20 ft³/s from Oct. 1, 1985 to May 7, 1987. Daily mean discharges were estimated based on discharges upstream at Jackson Creek at Mound Road near Elkhorn (05431016) from Feb. 1, 1993 to present. Records poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	17	21	4.9	10	11	11	11	6.6	3.8	0.66	1.0
2	7.5	16	17	4.4	9.8	10	13	16	5.6	3.4	0.66	9.4
3	7.0	13	17	4.4	9.1	9.6	14	12	17	3.0	0.66	6.2
4	6.9	13	16	4.5	8.1	9.9	13	10	194	2.6	0.75	2.6
5	8.1	12	14	4.7	7.3	10	11	9.8	187	2.3	0.95	1.6
6	7.8	12	14	4.8	7.3	11	11	10	68	2.1	0.91	1.3
7	7.7	12	14	4.7	7.7	11	14	9.8	39	2.1	0.81	1.2
8	7.9	12	13	4.5	8.2	42	68	8.6	27	1.9	0.78	0.91
9	5.7	11	12	5.2	10	151	220	10	22	2.3	0.87	0.84
10	8.1	11	12	6.2	43	91	95	8.8	17	2.3	0.81	0.79
11	12	10	11	6.2	32	43	53	11	17	1.9	0.71	0.78
12	13	10	11	6.4	23	34	39	16	16	1.8	0.64	0.84
13	20	20	23	6.2	17	32	30	12	13	1.6	3.6	0.83
14	51	35	20	7.8	14	30	26	11	13	1.6	6.5	0.81
15	30	30	16	8.2	14	26	22	9.4	13	1.4	2.3	0.77
16	21	23	14	6.6	13	21	20	9.9	11	1.3	1.7	0.69
17	16	18	16	6.1	12	18	17	12	9.4	1.2	1.4	0.66
18	13	17	14	5.7	11	17	14	9.5	9.1	1.2	1.3	0.66
19	12	16	14	5.6	21	16	16	8.6	8.4	1.2	1.2	6.5
20	11	14	13	5.3	38	16	13	8.3	7.7	1.2	1.2	7.9
21	11	13	11	5.2	43	14	14	7.8	7.1	1.1	1.4	3.5
22	12	13	11	5.3	29	13	17	7.1	6.5	1.1	26	1.7
23	133	12	14	8.6	25	12	13	7.0	5.5	1.0	8.6	1.2
24	176	23	11	9.0	23	12	13	7.4	5.2	0.84	4.0	1.2
25	114	38	9.6	8.1	23	11	13	18	4.8	0.84	2.3	1.2
26	56	27	9.1	7.9	18	11	12	14	6.0	0.83	1.9	1.1
27	38	23	8.3	7.9	14	11	11	11	7.1	0.81	1.7	1.2
28	29	20	7.5	8.8	12	11	16	9.2	5.2	0.79	1.7	1.2
29	25	18	6.8	8.8	---	11	13	8.6	4.5	0.75	1.4	23
30	21	20	6.2	7.9	---	12	12	7.9	4.2	0.71	1.3	8.3
31	18	---	5.5	8.1	---	11	---	7.5	---	0.66	1.2	---
TOTAL	906.6	529	402.0	198.0	502.5	738.5	854	319.2	756.9	49.63	79.91	89.88
MEAN	29.25	17.63	12.97	6.387	17.95	23.82	28.47	10.30	25.23	1.601	2.578	2.996
MAX	176	38	23	9.0	43	151	220	18	194	3.8	26	23
MIN	5.7	10	5.5	4.4	7.3	9.6	11	7.0	4.2	0.66	0.64	0.66
CFSM	1.34	0.81	0.59	0.29	0.82	1.09	1.31	0.47	1.16	0.07	0.12	0.14
IN.	1.55	0.90	0.69	0.34	0.86	1.26	1.46	0.54	1.29	0.08	0.14	0.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	8.291	13.87	10.53	8.551	20.57	24.07	25.29	15.98	22.19	7.718	4.893	8.059								
MAX	29.2	54.5	30.3	28.0	69.9	68.3	100	37.0	86.0	29.3	30.5	37.4								
(WY)	2002	1986	1992	1999	2001	1986	1993	2000	1996	1993	1995	1986								
MIN	0.67	1.14	1.12	1.11	1.31	5.41	3.28	1.44	0.76	0.61	0.50	0.61								
(WY)	1989	1990	1990	1991	1989	1996	1989	1989	1988	1988	1988	1988								

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1984 - 2002

ANNUAL TOTAL	8546.6	5426.12	
ANNUAL MEAN	23.42	14.87	14.09
HIGHEST ANNUAL MEAN			30.3
LOWEST ANNUAL MEAN			5.38
HIGHEST DAILY MEAN	411	Jun 12	220
LOWEST DAILY MEAN	1.3	Sep 2	0.64
ANNUAL SEVEN-DAY MINIMUM	1.7	Aug 28	0.69
ANNUAL RUNOFF (CFSM)	1.07		0.68
ANNUAL RUNOFF (INCHES)	14.58		9.26
10 PERCENT EXCEEDS	44		26
50 PERCENT EXCEEDS	13		10
90 PERCENT EXCEEDS	2.5		1.2

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: 1984 and 1985 water years (unpublished), October 1989 to September 1995.
 TOTAL-PHOSPHORUS DISCHARGE: 1984 and 1985 water years (unpublished) to current year.
 DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: April 1994 to current year.

REMARKS.--Records poor. Daily mean discharges are estimated based on discharges from upstream stations 05431014 and 054310157 from Oct. 1, 1992 to Jan. 31, 1993, and from station 05431016 from Feb. 1, 1993 to present.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 345 mg/L, Apr. 16, 1984; minimum observed, 0 mg/L, Sept. 23, 1991, July 17, Sept. 26, 1992, and Nov. 16, 1994.
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 468 tons, Apr. 20, 1993; minimum daily, 0.00 ton, Sept. 26, 1990, many days during 1992 to 1994 water years, and July 14, 15, 18, 19, 1995.
 TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 3.8 mg/L, May 27, 1985; minimum observed, 0.01 mg/L, Mar. 7, 1990, Dec. 15, 1994, Apr. 17, 1995, Oct. 6, 1995, Feb. 5, 1997, and Mar. 19, 1998.
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,910 lb, Apr. 20, 1993; minimum daily, 0.10 lb, Dec. 28, 1989.
 DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.851 mg/L, Aug. 3, 2000; minimum observed, <0.01 mg/L, Apr. 14, 1994, many days during 1995 water year, Nov. 22, 1995, several days in 1997-1999 water years, and many days in 2000 water year.
 DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 503 lb, June 26, 1998; minimum daily, 0.02 lb, Sept. 26, 1999.
 DISSOLVED CHLORIDE CONCENTRATIONS: Maximum observed, 130 mg/L, Aug. 8, 1995; minimum observed, 18 mg/L, June 1, 1995.

EXTREMES FOR CURRENT YEAR.--

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.504 mg/L, Sept. 4; minimum observed, 0.033 mg/L, Apr. 1.
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 257 lb, Apr. 9 and June 4; minimum daily, 0.91 lb, Aug. 12.
 DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.324 mg/L, July 22; minimum observed, 0.011 mg/L, Oct. 23.
 DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 119 lb, June 4; minimum daily, 0.37 lb, Sept. 18.

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.70	6.13	6.80	1.59	2.92	3.01	1.79	5.63	4.00	7.55	1.36	1.64
2	1.62	5.05	5.51	1.43	2.84	2.83	2.11	8.26	3.20	6.76	1.35	e15.5
3	1.51	3.60	5.51	1.43	2.61	2.81	2.27	6.25	11.1	5.94	1.34	13.3
4	1.49	3.15	5.18	1.46	2.30	2.99	2.11	5.26	257	5.13	1.51	6.46
5	1.75	2.60	4.54	1.52	2.06	3.13	1.78	5.20	189	4.52	1.88	3.10
6	1.68	2.49	4.54	1.56	2.04	3.54	1.78	5.35	64.3	4.11	1.72	2.28
7	1.66	2.40	4.54	1.52	2.13	3.56	2.27	5.27	25.9	4.09	1.45	2.14
8	1.71	2.32	4.21	1.46	2.25	e13.6	16.5	4.48	15.3	3.69	1.33	1.65
9	1.23	2.05	3.89	1.68	2.71	e48.9	257	5.01	10.8	4.45	1.41	1.54
10	2.16	1.98	3.89	2.01	e13.9	e29.5	124	4.25	7.39	4.43	1.25	1.44
11	4.36	1.74	3.56	2.01	e10.4	e13.9	37.9	5.10	7.19	3.65	1.04	1.41
12	4.60	1.68	3.56	2.07	e7.40	25.0	17.5	7.14	6.64	3.44	0.91	1.50
13	6.67	3.57	7.45	2.01	e5.50	22.1	13.1	5.16	5.29	3.05	e5.90	1.47
14	15.5	10.5	6.48	2.53	3.49	19.2	11.4	4.54	5.19	3.03	e10.7	1.42
15	8.50	9.72	5.19	2.66	3.43	15.4	9.77	3.73	5.09	2.66	e3.80	1.34
16	6.47	7.38	4.54	2.14	3.13	11.5	8.96	3.77	4.23	2.52	2.70	1.19
17	4.28	5.51	5.18	1.98	2.83	9.16	7.69	4.38	3.68	2.38	2.29	1.11
18	3.16	4.95	4.54	1.85	2.55	8.01	6.39	3.34	4.12	2.43	2.19	1.08
19	2.67	4.43	4.54	1.81	e6.80	6.98	7.36	2.90	4.45	2.49	2.06	e10.7
20	2.23	3.69	4.21	1.72	e12.3	6.46	6.04	2.69	4.78	2.55	2.02	13.8
21	2.04	3.26	3.57	1.68	e13.9	5.23	6.56	2.43	5.15	2.39	2.31	7.41
22	2.03	3.10	3.56	1.70	e9.40	4.50	8.03	2.12	5.52	2.43	41.2	3.19
23	28.7	2.73	4.53	2.73	e8.10	3.85	6.20	2.01	5.46	2.20	12.9	1.95
24	52.3	5.29	3.57	2.84	e7.40	3.56	6.25	2.04	5.94	1.83	6.57	1.94
25	57.4	11.9	3.11	2.53	e7.00	3.02	6.31	e20.1	5.98	1.82	4.01	1.94
26	42.6	8.75	2.95	2.44	e5.80	2.80	5.88	13.2	8.09	1.78	3.64	1.78
27	26.6	7.45	2.69	2.42	3.58	2.59	5.43	8.92	10.4	1.73	3.20	1.94
28	17.8	6.48	2.43	2.67	3.17	2.40	7.97	7.00	8.25	1.67	3.12	1.94
29	13.4	5.83	2.20	2.65	---	2.22	6.54	6.18	7.74	1.58	2.50	e37.9
30	9.88	6.48	2.01	2.35	---	2.24	6.09	5.36	7.83	1.48	2.26	17.0
31	7.41	---	1.78	2.39	---	1.90	---	4.81	---	1.37	2.03	---
TOTAL	335.11	146.21	130.26	62.84	151.94	285.89	602.98	171.88	709.01	99.15	131.95	161.06
WTR YR 2002	TOTAL 2988.28											

e Estimated

ROCK RIVER BASIN

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--Continued

PHOSPHORUS, ORTHO, WATER, FILTERED, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.85	2.81	2.27	0.53	1.08	1.19	0.60	1.19	0.71	5.29	1.06	0.82
2	0.81	2.37	1.84	0.48	1.06	1.08	0.70	1.73	0.60	4.79	1.05	e8.70
3	0.75	1.73	1.84	0.48	0.98	1.04	0.76	1.30	2.73	4.24	1.05	6.04
4	0.74	1.54	1.73	0.49	0.87	1.07	0.70	1.08	119	3.68	1.18	2.69
5	0.87	1.31	1.51	0.51	0.79	1.08	0.59	1.06	69.6	3.27	1.46	1.74
6	0.83	1.30	1.51	0.52	0.79	1.21	0.59	1.08	23.0	2.99	1.29	1.44
7	0.82	1.30	1.51	0.51	0.83	1.38	0.76	1.06	4.78	3.00	1.06	1.19
8	0.84	1.30	1.40	0.49	0.89	e4.80	7.15	0.93	2.92	2.72	0.94	0.72
9	0.60	1.19	1.30	0.56	1.08	e17.2	78.1	1.08	2.38	3.30	0.96	0.55
10	1.00	1.19	1.30	0.67	e4.90	e10.4	38.4	0.95	1.84	3.31	0.82	0.51
11	1.86	1.08	1.19	0.67	e3.60	e4.90	6.67	1.19	1.84	2.74	0.66	0.51
12	1.88	1.08	1.19	0.69	e2.60	8.94	4.21	1.73	1.73	2.60	0.56	0.54
13	e2.30	e2.30	2.48	0.67	e1.90	7.88	3.24	1.30	1.40	2.32	e3.30	0.54
14	e5.80	e4.00	2.16	0.84	1.51	6.81	2.81	1.19	1.40	2.33	e6.00	0.52
15	3.27	e3.40	1.73	0.89	1.51	5.45	2.38	1.02	1.40	2.05	e2.10	0.50
16	2.27	2.49	1.51	0.71	1.40	4.06	2.16	1.07	1.19	1.95	1.73	0.44
17	1.69	1.94	1.73	0.66	1.30	3.21	1.84	1.30	1.06	1.84	1.48	0.40
18	1.23	1.84	1.51	0.62	1.19	2.80	1.51	1.03	1.26	1.89	1.43	0.37
19	1.01	1.73	1.51	0.60	e2.40	2.43	1.73	0.93	1.44	1.93	1.33	e6.00
20	0.83	1.51	1.40	0.57	e4.30	2.24	1.40	0.90	1.64	1.98	1.20	7.12
21	0.74	1.40	1.19	0.56	e4.90	1.81	1.51	0.84	1.87	1.86	1.25	5.07
22	0.72	1.40	1.19	0.57	3.13	1.55	1.84	0.77	2.13	1.89	22.0	2.17
23	8.38	1.30	1.51	0.93	e2.80	1.32	1.40	0.76	2.23	1.71	8.55	1.29
24	20.3	e2.60	1.19	0.97	2.48	1.22	1.40	0.80	2.58	1.43	4.57	1.35
25	e13.0	4.10	1.04	0.87	2.48	1.03	1.40	e7.40	2.78	1.42	2.71	1.42
26	17.1	2.92	0.98	0.85	1.94	0.95	1.30	5.38	4.04	1.39	1.78	1.37
27	10.9	2.48	0.90	0.85	1.51	0.88	1.19	1.35	5.56	1.35	1.53	1.57
28	7.46	2.16	0.81	0.95	1.30	0.81	1.73	0.99	4.74	1.31	1.50	1.65
29	5.76	1.94	0.73	0.95	---	0.75	1.40	0.93	4.77	1.23	1.21	e21.4
30	4.33	2.16	0.67	0.85	---	0.75	1.30	0.85	5.18	1.16	1.10	12.6
31	3.32	---	0.59	0.87	---	0.64	---	0.81	---	1.07	1.00	---
TOTAL	122.26	59.87	43.42	21.38	55.52	100.88	170.77	44.00	277.80	74.04	77.86	91.23

WTR YR 2002 TOTAL 1139.03

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	SAM-PLING METHOD, CODES (82398)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
OCT 2001					
01...	0825	7.9	10	<.02	E.04
11...	0910	12	10	.03	.07
15...	0900	30	10	.02	E.05
16...	0810	21	10	.02	E.06
17...	0755	16	10	.02	E.05
23...	0840	133	10	E.01	E.04
24...	0915	176	10	.02	E.05
26...	0925	56	10	.06	.15
NOV					
05...	0840	12	10	<.02	E.04
15...	0900	30	10	--	<.06
16...	0845	23	10	<.02	<.06
25...	1005	38	10	E.02	<.06
26...	0845	27	10	<.02	<.06
DEC					
03...	0845	17	10	<.02	<.06
13...	0825	23	10	<.02	<.06
18...	1450	14	10	<.02	<.06
JAN 2002					
21...	1330	5.2	30	<.02	<.06
FEB					
22...	1200	29	10	<.02	E.04
MAR					
06...	1330	11	10	<.02	<.06
12...	0815	34	10	--	.14

E Estimated

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SAM- PLING METHOD, CODES (82398)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
APR 2002					
01...	0840	11	10	--	E.03
08...	0915	68	10	<.02	E.04
08...	1425	68	10	<.02	E.04
09...	0845	220	10	.04	.15
09...	1415	220	10	.10	.33
10...	0900	95	10	.08	.24
10...	1335	95	10	.09	.26
11...	0850	53	10	.02	.14
11...	1340	53	10	.02	.12
12...	0845	39	10	<.02	.08
MAY					
07...	1345	9.8	10	<.02	.10
13...	0835	12	10	E.02	.08
26...	0930	14	10	.11	.22
26...	1315	14	10	.07	.17
27...	0920	11	10	.02	.15
JUN					
04...	0920	194	10	.18	.31
04...	1405	194	10	.11	.25
05...	0910	187	10	--	.18
05...	1350	187	10	.06	.18
06...	0930	68	10	.08	.19
07...	0930	39	10	<.02	.12
07...	1340	39	10	<.02	.12
10...	0835	17	10	.02	.08
17...	0830	9.4	10	<.02	.07
24...	0825	5.2	10	.09	.21
JUL					
01...	0840	3.8	10	.26	.37
15...	0920	1.4	10	.27	.35
22...	0940	1.1	10	.32	.41
29...	0850	.75	10	<.02	.13
AUG					
05...	0840	.95	10	.29	.37
12...	0910	.64	10	.16	.26
19...	0830	1.2	10	.21	.32
22...	0835	26	10	.15	.30
23...	0850	8.6	10	.18	.27
24...	0925	4.0	10	.21	.30
24...	1515	4.0	10	E.02	.31
25...	0920	2.3	10	.23	.32
25...	1500	2.3	10	.22	.32
26...	0835	1.9	10	.17	.36
SEP					
03...	0855	6.2	10	.18	.38
04...	0835	2.6	10	--	.50
05...	0805	1.6	10	.20	.36
06...	0850	1.3	10	.21	.32
07...	0915	1.2	10	.19	.33
09...	0820	.84	10	.12	.34
16...	0830	.69	10	.12	.32
20...	0845	7.9	10	.15	.31
21...	0920	3.5	10	.27	.38
21...	1530	3.5	10	.29	.42
22...	0915	1.7	10	.28	.39
22...	1430	1.7	10	.19	.30
30...	0905	8.3	10	.28	.38

E Estimated

LOCATION.--Lat 42°35'56", long 88°36'50", in SE 1/4 SW 1/4 sec.28, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 2.6 mi southeast of Delavan.

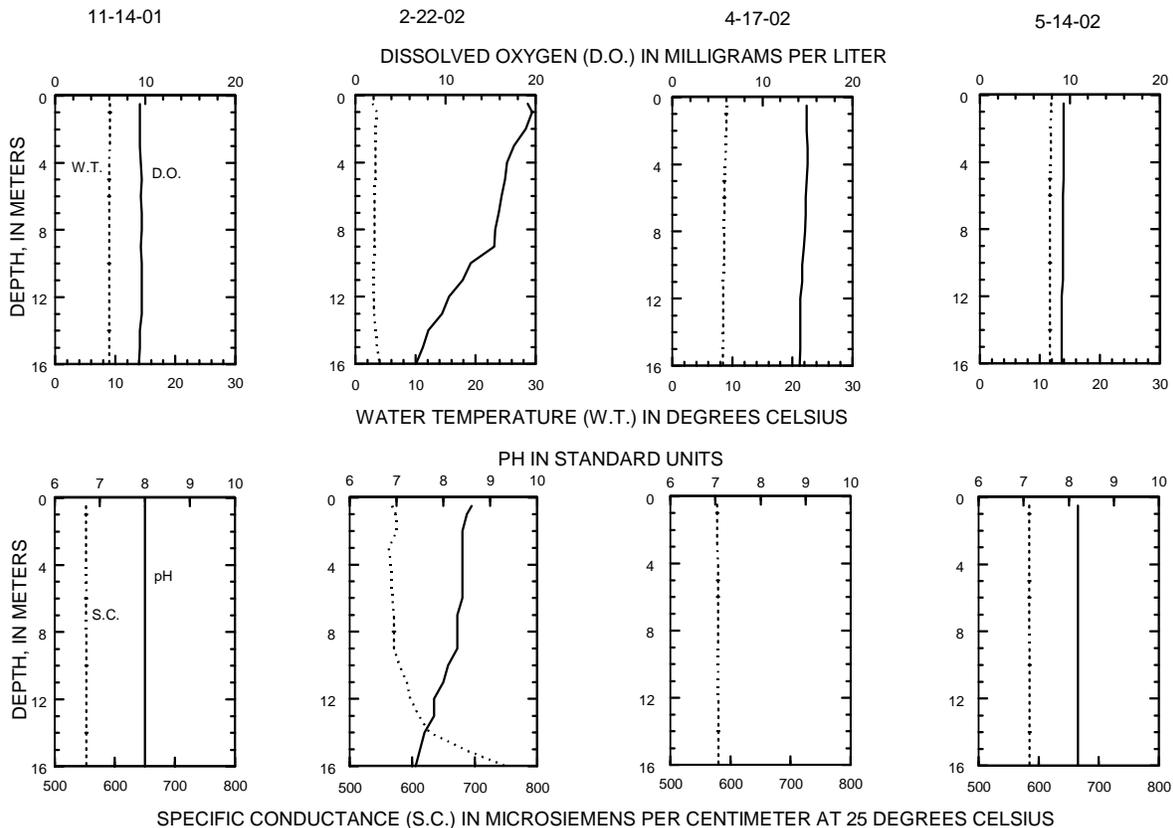
DRAINAGE AREA.--41.4 mi², of which 2.3 mi² is non-contributing. Area of Delavan Lake, 2,072 acres.

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

REMARKS.--Lake ice-covered during February measurements. Water-quality analyses done by the U.S. Geological Survey National Water Quality Laboratory. Samples for determination of chlorophyll-a concentration are collected from the top 1.5 ft of the lake.

WATER-QUALITY DATA, NOVEMBER 14, 2001 TO MAY 14, 2002
(Milligrams per liter unless otherwise indicated)

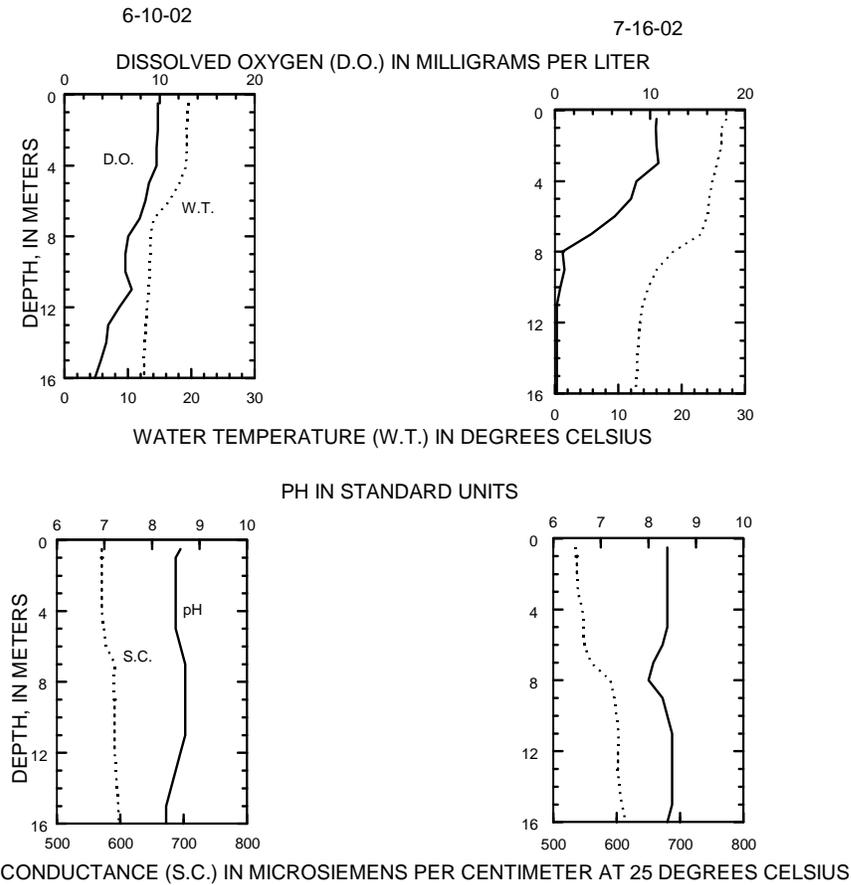
	Nov 14		Feb 22		Apr 17		May 14	
Lake stage (ft)	5.13		5.10		5.04		5.02	
Secchi-depth (m)	6.4		2.4		2.0		6.5	
Chlorophyll a, phytoplankton (µg/L)	0.6		3.4		E7.6		0.3	
Depth of sample (m)	0.5	16.0	0.5	16.0	0.5	16.0	0.5	16.0
Water temperature (°C)	9.1	9.0	2.8	4.0	9.1	8.4	11.9	11.7
Specific conductance (µS/cm)	552	553	568	749	578	580	584	585
pH (units)	8.0	8.0	8.6	7.4	---	---	8.2	8.2
Dissolved oxygen (mg/L)	9.4	9.3	19.1	6.7	14.9	14.1	9.3	9.1
Phosphorus, total (as P)	0.105	0.102	0.049	0.147	0.039	0.037	0.043	0.044
Phosphorus, ortho, dissolved (as P)	0.076	0.065	0.018	0.107	<0.007	<0.007	0.018	0.021
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	0.229	---	0.186	---	0.21	0.214	0.192	---
Nitrogen, ammonia, dissolved (as N)	0.102	---	<0.015	---	0.018	0.019	0.098	---
Nitrogen, amm. + org., total (as N)	0.76	---	0.5	---	0.73	0.70	0.61	---
Nitrogen, total (as N)	0.99	---	0.69	---	0.94	0.92	0.81	---
Color (Pt-Co. scale)	---	---	---	---	18	15	---	---
Turbidity (NTU)	---	---	---	---	3.1	2.2	---	---
Hardness, as CaCO ₃	---	---	---	---	240	240	---	---
Calcium, dissolved (Ca)	---	---	---	---	43.3	43.5	---	---
Magnesium, dissolved (Mg)	---	---	---	---	32.1	32.1	---	---
Sodium, dissolved (Na)	---	---	---	---	25.8	25.4	---	---
Potassium, dissolved (K)	---	---	---	---	2.56	2.54	---	---
Alkalinity as CaCO ₃	---	---	---	---	193	193	---	---
Sulfate, dissolved (SO ₄)	---	---	---	---	25.9	25.7	---	---
Chloride, dissolved (Cl)	---	---	---	---	55.1	54.8	---	---
Silica, dissolved (SiO ₂)	---	---	---	---	<0.2	<0.2	---	---
Solids, dissolved, at 180°C	---	---	---	---	334	325	---	---
Iron, dissolved (Fe) µg/L	---	---	---	---	<10	<10	---	---
Manganese, dissolved (Mn) µg/L	---	---	---	---	E1.0	<2.0	---	---



423556088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI--Continued

WATER-QUALITY DATA, JUNE 10 TO JULY 16, 2002
(Milligrams per liter unless otherwise indicated)

	Jun 10				Jul 16			
Lake stage (ft)	5.03				4.81			
Secchi-depth (m)	4.3				2.0			
Chlorophyll a, phytoplankton (µg/L)	2.2				9.7			
Depth of sample (m)	0.5	4.0	12.0	16.0	0.5	2.0	12.0	16.0
Water temperature (°C)	19.5	19.2	13.0	12.6	27.0	26.3	13.4	12.7
Specific conductance (µS/cm)	571	571	591	598	536	537	602	614
pH (units)	8.6	8.5	8.6	8.3	8.4	8.4	8.5	8.4
Dissolved oxygen (mg/L)	9.8	9.7	5.8	3.2	10.7	10.7	0.2	0.2
Phosphorus, total (as P)	0.037	0.041	0.071	0.124	0.026	0.031	0.248	0.552
Phosphorus, ortho, dissolved (as P)	<0.007	E0.004	0.040	0.084	<0.007	<0.007	0.202	0.474
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	0.085	---	---	---	E0.011	---	---	---
Nitrogen, ammonia, dissolved (as N)	0.032	---	---	---	0.053	---	---	---
Nitrogen, amm. + org., total (as N)	0.89	---	---	---	0.75	---	---	---
Nitrogen, total (as N)	0.97	---	---	---	---	---	---	---

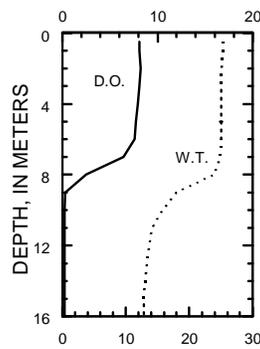


WATER-QUALITY DATA, AUGUST 14, 2002
(Milligrams per liter unless otherwise indicated)

	<u>Aug 14</u>							
Lake stage (ft)	4.60							
Secchi-depth (m)	2.3							
Chlorophyll a, phytoplankton (µg/L)	E9.3							
Depth of sample (m)	0.5	4.0	7.0	9.0	11.0	13.0	14.0	16.0
Water temperature (°C)	25.4	25.0	24.9	17.9	14.1	13.3	13	12.8
Specific conductance (µS/cm)	538	538	539	590	598	606	610	620
pH (units)	8.2	8.2	8.1	8.0	8.3	8.3	8.3	8.1
Dissolved oxygen (mg/L)	8.1	7.9	6.4	0.3	0.2	0.2	0.2	0.2
Phosphorus, total (as P)	0.029	0.038	0.029	0.11	0.273	0.397	0.504	0.605
Phosphorus, ortho, dissolved (as P)	<0.007	---	<0.007	---	---	---	0.417	0.517
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	<0.013	---	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	0.039	---	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	0.65	---	---	---	---	---	---	---

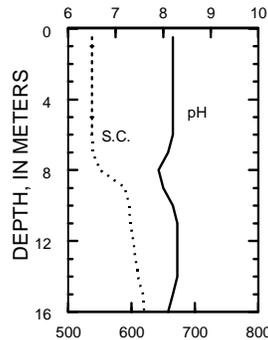
8-14-02

DISSOLVED OXYGEN (D.O.) IN MILLIGRAMS PER LITER



WATER TEMPERATURE (W.T.) IN DEGREES CELSIUS

PH IN STANDARD UNITS



SPECIFIC CONDUCTANCE (S.C.) IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

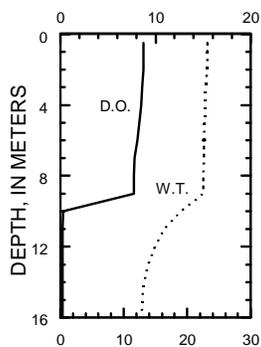
423556088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI--Continued

WATER-QUALITY DATA, SEPTEMBER 16, 2002
(Milligrams per liter unless otherwise indicated)

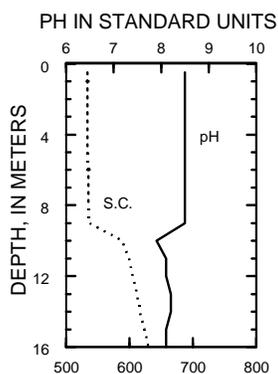
	Sep 16				
Lake stage (ft)	4.63				
Secchi-depth (m)	2.9				
Chlorophyll a, phytoplankton (µg/L)	5.1				
Depth of sample (m)	0.5	9.0	10.0	14.0	16.0
Water temperature (°C)	23.2	22.5	19.0	13.2	12.8
Specific conductance (µS/cm)	534	536	588	616	630
pH (units)	8.5	8.5	7.9	8.2	8.1
Dissolved oxygen (mg/L)	8.7	7.7	0.3	0.2	0.2
Phosphorus, total (as P)"	0.021	0.03	0.191	0.632	0.729
Phosphorus, ortho, dissolved (as P)	<0.007	<0.007	0.140	0.530	0.604
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	E.010	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	0.03	---	---	---	---
Nitrogen, amm. + org., total (as N)	1.9	---	---	---	---

9-16-02

DISSOLVED OXYGEN (D.O.) IN MILLIGRAMS PER LITER



WATER TEMPERATURE (W.T.) IN DEGREES CELSIUS



SPECIFIC CONDUCTANCE (S.C.) IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

ROCK RIVER BASIN

423556088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI--Continued1

ADDITIONAL WATER-QUALITY DATA, OCTOBER 2, 2001 TO SEPTEMBER 26, 2002*
 (Milligrams per liter unless otherwise indicated)

	<u>Oct. 2</u>	<u>Oct. 11</u>	<u>Oct. 23</u>	<u>Apr. 26</u>	<u>May 31</u>
Lake stage (ft)	5.00	5.03	5.15	5.00	5.07
Secchi-depth (meters)	0.6	3.6	4.9	7.6	7.0
Depth of sample (meters)	0.5	0.5	0.5	0.5	0.5
Water temperature (°C)	15.0	13.0	11.0	10.5	17.2
Phosphorus, total (as P)	0.159	0.114	0.106	0.031	0.030
	<u>June 6</u>	<u>June 24</u>	<u>July 2</u>	<u>July 12</u>	<u>July 24</u>
Lake stage (ft)	5.21	4.99	4.95	4.85	4.71
Secchi-depth (meters)	6.4	4.0	2.7	2.6	1.8
Depth of sample (meters)	0.5	0.5	0.5	0.5	0.5
Water temperature (°C)	---	23.9	25.0	24.0	25.0
Phosphorus, total (as P)	0.031	0.027	0.023	0.036	0.034
	<u>July 31</u>	<u>Aug. 8</u>	<u>Aug. 29</u>	<u>Sept. 5</u>	<u>Sept. 11</u>
Lake stage (ft)	4.69	4.61	4.68	4.74	4.69
Secchi-depth (meters)	2.1	2.4	2.3	3.0	4.1
Depth of sample (meters)	0.5	0.5	0.5	0.5	0.5
Water temperature (°C)	26.0	26.1	24.4	23.5	24.5
Phosphorus, total (as P)	0.024	0.033	0.034	0.028	0.016
	<u>Sept. 26</u>				
Lake stage (ft)	4.69				
Secchi-depth (meters)	2.4				
Depth of sample (meters)	0.5				
Water temperature (°C)	21.0				
Phosphorus, total (as P)	0.029				

* Measurements and samples collected by the Delavan Lake Sanitary District.

423659088354401 DELAVAN LAKE, AT NORTH END, NEAR LAKE LAWN, WI

LOCATION.--Lat 42°36'59", long 88°35'44", in NW 1/4 SW 1/4, sec.22, T.2 N., R.16 E., Walworth County, Hydro-logic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.4 mi², of which 2.3 mi² is non-contributing.

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

WATER-QUALITY DATA, APRIL 17 TO AUGUST 14, 2002

	Apr. 17 -----	May 14 -----	June 10 -----	July 16 -----	Aug.14 -----
Secchi-depth (meters)	2.9	5.8	2.7	1.7	1.5

423526088380101 DELAVAN LAKE, AT SW END, NEAR DELAVAN LAKE, WI

LOCATION.--Lat 42°35'26", long 88°38'01", in SE 1/4 NW 1/4, sec.32, T.2 N., R.16 E., Walworth County, Hydro-logic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.4 mi², of which 2.3 mi² is non-contributing.

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

WATER-QUALITY DATA, APRIL 17 TO AUGUST 14, 2002

	Apr. 17 -----	May 14 -----	June 10 -----	July 16 -----	Aug.14 -----
Secchi-depth (meters)	2.0	7.3	4.9	2.3	2.2

ROCK RIVER BASIN

423706088363400 DELAVAN LAKE NEAR DELAVAN, WI

LOCATION.--Lat 42°36'27", long 88°36'19", in SW ¼ NE ¼ sec.28, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, at Delavan Lake Sanitary District Lift Station No. 2 at Delavan Lake Yacht Club, 1.0 mi southeast of outlet, and 2.7 mi southeast of Delavan.

DRAINAGE AREA.--41.4 mi², of which 2.3 mi² is non-contributing. Area of Delavan Lake, 2,072 acres.

PERIOD OF RECORD.--October 1983 to current year. October 1983 to September 1985 data published in Water Resources Investigation series report "Water Quality and Hydrology of Delavan Lake in Southeastern Wisconsin" by Stephen J. Field and Marvin D. Duerk.

GAGE.--Water-stage recorder. Datum of gage is 922.92 ft above NGVD of 1929. Prior to Sept. 5, 1989, staff gage at bridge on North Shore Drive at same datum.

REMARKS.--Lake was ice covered from Jan. 2 to Mar. 17. Lake levels controlled by Delavan Lake Sanitary District.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 6.19 ft, Feb. 21, 1994; minimum daily, -4.44 ft Nov. 6, 1989 (lake drawn down for lake rehabilitation program).

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 5.43 ft, Apr. 9; minimum, 4.51 ft, Aug. 21.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.00	4.98	5.01	5.00	5.05	4.99	5.00	4.99	5.07	4.97	4.68	4.66
2	5.00	4.99	5.01	5.00	5.04	5.03	5.03	5.02	5.05	4.95	4.67	4.72
3	4.99	5.00	5.00	5.01	5.03	5.06	5.04	5.01	5.07	4.94	4.65	4.75
4	4.99	5.01	5.00	5.01	5.02	5.04	5.04	4.99	5.23	4.93	4.66	4.74
5	5.00	5.01	5.00	5.02	5.01	5.02	5.04	4.99	5.32	4.91	4.66	4.74
6	4.99	5.01	5.01	5.02	4.99	5.00	5.03	4.99	5.21	4.89	4.64	4.73
7	4.98	5.01	5.01	5.03	4.98	4.98	5.06	5.00	5.10	4.89	4.62	4.72
8	4.98	5.02	5.01	5.02	4.97	5.01	5.18	4.98	5.07	4.88	4.61	4.71
9	4.97	5.01	5.00	5.02	4.96	5.16	5.40	4.99	5.05	4.90	4.60	4.71
10	5.00	5.01	4.99	5.01	5.00	5.24	5.37	4.97	5.03	4.89	4.59	4.71
11	5.03	5.01	5.00	5.01	5.03	5.22	5.26	4.98	5.03	4.86	4.57	4.69
12	5.05	5.01	5.00	5.00	5.01	5.16	5.14	5.02	5.01	4.85	4.56	4.68
13	5.07	5.05	5.05	4.99	5.01	5.09	5.03	5.02	5.01	4.83	4.59	4.66
14	5.12	5.13	5.06	5.00	5.01	5.04	4.99	5.02	5.05	4.83	4.60	4.65
15	5.13	5.14	5.05	5.01	5.01	5.02	5.01	5.01	5.04	4.82	4.59	4.64
16	5.12	5.12	5.06	5.02	5.01	5.00	5.02	5.02	5.02	4.81	4.58	4.63
17	5.09	5.09	5.06	5.03	5.01	4.98	5.04	5.03	5.00	4.80	4.57	4.61
18	5.05	5.06	5.04	5.03	5.01	4.97	5.03	5.01	5.00	4.79	4.56	4.61
19	5.03	5.03	5.03	5.02	5.04	4.96	5.06	5.00	4.99	4.78	4.56	4.68
20	5.01	5.00	5.01	5.02	5.10	4.96	5.04	4.99	4.99	4.77	4.54	4.76
21	5.00	5.00	4.99	5.01	5.13	4.96	5.03	4.97	4.99	4.76	4.54	4.76
22	5.00	5.00	5.00	5.01	5.10	4.94	5.04	4.96	4.99	4.75	4.69	4.75
23	5.15	5.01	5.00	5.00	5.06	4.93	5.03	4.96	4.99	4.73	4.71	4.73
24	5.25	5.06	5.00	5.00	5.05	4.93	5.02	4.98	4.99	4.71	4.72	4.71
25	5.25	5.11	4.99	5.01	5.04	4.92	5.02	5.02	4.98	4.69	4.72	4.69
26	5.16	5.12	4.99	5.00	5.03	4.92	5.00	5.05	5.01	4.68	4.72	4.69
27	5.04	5.10	5.00	5.01	5.01	4.93	5.00	5.07	5.01	4.69	4.71	4.68
28	4.93	5.07	5.00	5.01	4.99	4.93	5.01	5.07	5.00	4.69	4.70	4.67
29	4.94	5.04	5.00	5.01	---	4.95	5.01	5.07	4.99	4.70	4.68	4.73
30	4.96	5.02	5.00	5.01	---	4.97	5.00	5.07	4.98	4.70	4.67	4.76
31	4.97	---	5.00	5.04	---	4.98	---	5.07	---	4.69	4.66	---
MEAN	5.04	5.04	5.01	5.01	5.03	5.01	5.07	5.01	5.04	4.81	4.63	4.70
MAX	5.25	5.14	5.06	5.04	5.13	5.24	5.40	5.07	5.32	4.97	4.72	4.76
MIN	4.93	4.98	4.99	4.99	4.96	4.92	4.99	4.96	4.98	4.68	4.54	4.61

05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI

LOCATION.--Lat 42°36'53", long 88°37'29", in SW ¼ SE ¼ sec.20, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on right bank 50 ft upstream from bridge on Borg Road, 1.4 mi southeast of Delavan, and 0.2 mi downstream from Delavan Lake dam outlet.

DRAINAGE AREA.--42.1 mi², of which 2.3 mi² is non-contributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 914.50 ft above NGVD of 1929 (Public Service Commission bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	3.3	22	1.9	21	15	7.4	11	4.6	11	0.74	1.5
2	12	3.3	22	1.9	23	15	11	17	9.9	6.1	0.42	1.8
3	12	3.2	21	1.9	23	23	14	20	27	3.7	0.39	1.8
4	6.1	3.4	21	1.9	22	32	16	16	131	3.0	0.47	1.6
5	2.7	4.3	16	1.8	22	32	17	14	198	3.0	0.40	1.6
6	2.1	5.7	14	1.8	22	32	17	15	186	3.0	0.50	1.9
7	2.2	6.1	14	7.3	22	31	17	18	92	2.9	0.44	2.2
8	2.1	7.6	14	12	22	32	40	19	51	1.9	0.30	2.4
9	2.2	7.0	14	14	23	51	131	19	52	1.1	0.40	2.4
10	1.7	6.4	7.4	14	23	66	169	19	49	0.95	0.52	2.3
11	9.8	6.2	5.6	14	37	92	162	16	52	1.2	0.45	2.2
12	22	6.1	6.8	15	32	96	154	16	36	0.90	0.64	1.6
13	23	5.9	11	15	24	96	102	15	17	0.92	0.59	2.5
14	28	25	19	12	20	61	32	14	17	0.61	0.54	3.1
15	29	47	22	13	18	39	12	13	27	0.30	0.70	2.3
16	42	53	22	15	18	44	16	7.6	27	0.35	0.63	2.2
17	45	53	30	15	18	35	25	14	16	0.31	0.71	2.2
18	33	52	37	15	18	29	21	12	11	0.15	0.69	2.1
19	26	51	34	15	24	29	19	9.5	10	0.15	0.83	1.9
20	25	20	33	16	40	24	22	9.1	11	0.17	0.89	1.4
21	25	4.2	16	16	59	22	20	8.3	11	0.26	1.0	1.1
22	8.9	4.3	12	16	70	23	20	3.0	11	0.34	0.45	1.1
23	59	4.6	15	14	55	17	19	0.26	10	0.33	0.36	0.88
24	127	5.6	e15	13	45	14	18	0.19	12	0.32	0.34	1.2
25	160	14	7.7	13	45	9.3	18	0.13	17	0.43	0.56	1.4
26	168	42	2.7	13	44	6.2	18	0.14	16	0.72	0.63	1.4
27	162	53	2.3	13	44	6.0	18	0.07	15	1.1	0.94	1.6
28	56	53	2.3	13	25	5.7	17	3.7	14	0.74	1.1	1.7
29	1.6	52	2.3	12	---	5.4	18	4.8	13	0.66	1.7	1.6
30	1.7	33	2.2	16	---	5.3	13	4.5	12	0.83	1.3	1.4
31	3.0	---	1.9	18	---	5.4	---	4.5	---	0.74	1.5	---
TOTAL	1104.9	635.2	465.2	360.5	859	993.3	1183.4	323.79	1155.5	48.18	21.13	54.38
MEAN	35.64	21.17	15.01	11.63	30.68	32.04	39.45	10.44	38.52	1.554	0.682	1.813
MAX	168	53	37	18	70	96	169	20	198	11	1.7	3.1
MIN	1.6	3.2	1.9	1.8	18	5.3	7.4	0.07	4.6	0.15	0.30	0.88
AC-FT	2190	1260	923	715	1700	1970	2350	642	2290	96	42	108
CFSM	0.90	0.53	0.38	0.29	0.77	0.81	0.99	0.26	0.97	0.04	0.02	0.05
IN.	1.03	0.59	0.43	0.34	0.80	0.93	1.11	0.30	1.08	0.05	0.02	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

	2001	2002	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	22.01	19.36	18.93	18.61	32.20	30.01	38.04	21.30	30.49	10.78	5.222	15.92
MAX	127	93.1	51.1	44.7	97.8	71.2	145	56.0	105	53.7	32.6	110
(WY)	1990	1986	1986	1993	1994	1986	1993	1996	1996	1993	1995	1989
MIN	0.000	0.003	0.000	0.31	0.71	0.41	0.000	0.006	0.014	0.025	0.011	0.020
(WY)	1991	1991	1990	1990	1990	1990	1990	1990	1990	1990	1991	1990

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1984 - 2002	
ANNUAL TOTAL	10936.87		7204.48			
ANNUAL MEAN	29.96		19.74		21.79	
HIGHEST ANNUAL MEAN					42.6	
LOWEST ANNUAL MEAN					11.0	
HIGHEST DAILY MEAN	211 Jun 13		198 Jun 5		406 Feb 22 1994	
LOWEST DAILY MEAN	0.28 Aug 4		0.07 May 27		0.00 (a)Jun 21-22 1989	
ANNUAL SEVEN-DAY MINIMUM	0.65 Aug 1		0.24 Jul 15		0.00 (b)Nov 14 1989	
MAXIMUM PEAK FLOW			219 Jun 5		473 Feb 22 1994	
MAXIMUM PEAK STAGE			7.79 Jun 5		8.35 Aug 5 1988	
ANNUAL RUNOFF (AC-FT)	21690		14290		15780	
ANNUAL RUNOFF (CFSM)	0.75		0.50		0.55	
ANNUAL RUNOFF (INCHES)	10.22		6.73		7.44	
10 PERCENT EXCEEDS	93		46		59	
50 PERCENT EXCEEDS	17		13		8.2	
90 PERCENT EXCEEDS	1.7		0.65		0.12	

(a) Also occurred many days during 1990 and 1991 water years (lake drawn down for lake rehabilitation program)
 (b) Also occurred in 1991 water year
 (c) Estimated due to ice effect or missing record

05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water years 1984-85, 1990-91.

TOTAL-PHOSPHORUS DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Automatic pumping sampler from October to December 1983. Manual samples collected from January 1984 to present.

REMARKS.--Records good.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 238 mg/L, Feb. 22, 1985; minimum observed, 1 mg/L, on many days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 29 tons, Feb. 25, 1985; minimum daily, 0.00 ton, on many days during 1990 and 1991 water years.

DISSOLVED CHLORIDE CONCENTRATIONS: Maximum observed, 71 mg/L, June 5, 1995; minimum observed, 40 mg/L, July 5, 1995.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 6.00 mg/L, Jan. 5, 1990; minimum observed, <0.01 mg/L, Mar. 9-10, 1990, several days during 1992, 1994, and 1995 water years, and Oct. 2, 1995.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 585 lb, Feb. 22, 1994; minimum daily, 0.00 lb, Aug. 9, 13, 1987, and many days during 1990, 1991, and 1994 water years, Dec. 4, 1994, July 10-11, 1995, Oct. 1-5, 1995, and Sept. 27, 1996.

EXTREMES FOR CURRENT YEAR.--

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.10 mg/L, Oct. 24; minimum observed, 0.03 mg/L, June 6.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 81.6 lb, Oct. 26; minimum daily, 0.02 lb, May 27.

PHOSPHORUS, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.20	1.38	8.42	0.88	7.10	4.12	1.98	2.92	1.68	2.35	0.21	0.43
2	3.95	1.31	8.42	0.90	7.61	4.23	2.95	4.34	3.68	1.32	0.13	0.50
3	4.00	1.27	8.14	0.91	7.43	6.44	3.42	5.21	9.64	0.80	0.12	0.48
4	1.97	1.29	7.95	0.87	7.21	8.91	3.90	4.18	38.2	0.64	0.15	0.43
5	0.87	1.64	5.93	0.84	7.21	8.76	4.02	3.72	41.5	0.65	0.13	0.43
6	0.69	2.18	5.14	0.82	7.20	8.54	3.92	4.07	35.3	0.64	0.16	0.52
7	0.72	2.31	5.17	3.32	7.15	8.42	3.87	4.99	28.0	0.62	0.13	0.60
8	0.66	2.86	5.10	5.56	7.12	8.52	9.20	5.42	18.6	0.42	0.09	0.67
9	0.69	2.66	5.07	6.16	7.40	13.9	33.1	5.46	20.6	0.24	0.12	0.68
10	0.55	2.42	2.63	6.03	7.45	17.8	44.7	5.52	21.0	0.20	0.15	0.66
11	3.19	2.36	1.93	6.13	11.9	24.8	37.5	4.91	21.6	0.25	0.13	0.63
12	7.06	2.31	2.34	6.15	10.4	26.0	33.5	4.94	14.6	0.19	0.17	0.47
13	7.45	2.21	3.62	6.09	7.84	25.8	22.3	4.83	6.54	0.20	0.16	0.76
14	9.19	9.34	6.19	4.96	6.51	16.4	7.11	4.44	6.52	0.13	0.14	0.95
15	9.43	18.0	7.23	5.34	5.77	10.6	2.66	4.14	9.92	0.07	0.18	0.71
16	13.5	20.3	7.15	5.93	5.71	12.0	3.54	2.48	9.38	0.08	0.16	0.67
17	14.5	20.0	9.92	5.86	5.60	9.55	5.83	4.67	5.55	0.07	0.17	0.70
18	10.5	19.8	11.8	5.94	5.53	7.90	4.84	3.96	3.59	0.03	0.16	0.67
19	8.50	19.5	11.2	5.87	7.20	7.92	4.32	3.08	3.20	0.03	0.19	0.62
20	8.31	7.49	11.2	6.01	12.1	6.51	5.04	2.96	3.33	0.04	0.20	0.45
21	8.11	1.61	5.57	6.01	17.8	5.90	4.82	2.68	3.16	0.06	0.23	0.40
22	2.92	1.66	4.32	5.92	20.9	6.28	4.65	0.96	3.06	0.08	0.10	0.41
23	22.6	1.76	5.47	5.03	16.1	4.70	4.61	0.08	2.92	0.07	0.10	0.33
24	66.0	2.13	e5.75	4.58	13.2	3.70	4.39	0.06	3.35	0.07	0.11	0.47
25	81.2	5.15	3.00	4.51	13.0	2.52	4.38	0.04	4.42	0.10	0.18	0.53
26	81.6	15.8	1.08	4.44	12.8	1.68	4.39	0.04	4.11	0.18	0.20	0.55
27	76.8	20.1	0.96	4.42	12.6	1.62	4.47	0.02	3.67	0.27	0.30	0.60
28	26.1	19.9	0.97	4.34	6.93	1.54	4.40	1.26	3.33	0.19	0.35	0.65
29	0.71	19.7	1.00	4.24	---	1.45	4.41	1.64	2.88	0.17	0.50	0.60
30	0.74	12.3	0.97	5.43	---	1.42	3.27	1.59	2.58	0.23	0.37	0.54
31	1.28	---	0.87	6.09	---	1.44	---	1.62	---	0.21	0.43	---
TOTAL	475.99	240.74	164.51	139.58	264.77	269.37	281.49	96.23	335.91	10.60	5.92	17.11

WATER YEAR 2002 TOTAL 2302.22

e Estimated

ROCK RIVER BASIN

05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 2001				
01...	0815	6.4	10	<.06
15...	0845	30	10	E.06
24...	0855	93	10	.10
26...	0910	170	10	.09
NOV				
05...	0825	3.4	10	.07
DEC				
03...	0830	21	10	.07
18...	1030	37	10	.06
JAN 2002				
02...	0825	1.9	10	.09
21...	1005	16	70	.07
FEB				
04...	0900	23	10	.06
11...	0925	23	10	E.06
MAR				
06...	0825	32	10	E.05
11...	0855	82	10	E.05
APR				
01...	0825	5.2	10	E.05
08...	0855	22	10	E.04
09...	0840	113	10	E.05
10...	0825	169	10	E.04
10...	1315	167	10	<.06
11...	1330	161	10	E.04
MAY				
07...	1020	19	70	E.05
13...	0825	15	10	<.06
26...	1300	.17	10	E.06
JUN				
03...	0850	16	10	.07
04...	0905	84	10	.06
05...	0845	192	10	E.04
06...	0910	191	10	E.03
07...	0825	164	10	E.06
10...	0825	50	10	.08
JUL				
01...	0825	11	10	E.04
15...	0850	.27	10	E.04
22...	0905	.35	10	E.04
AUG				
05...	0825	.35	10	.06
22...	0820	.48	10	E.04
24...	0900	.27	10	.06
26...	0820	.51	10	E.06
SEP				
03...	0840	1.7	10	E.05
20...	0830	1.3	10	E.06
22...	1445	1.2	10	.07
30...	0855	1.3	10	.07

E Estimated

ROCK RIVER BASIN

05431032 TURTLE CREEK AT DELAVAN, WI

LOCATION.--Lat 42°38'13", long 88°39'27", in NW ¼ NW ¼ sec.18, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on left bank 0.1 mi downstream from bridge on County Highway P, 0.7 mi northwest of Post Office at Delavan.

DRAINAGE AREA.--83.3 mi², of which 2.33 mi² is noncontributing.

PERIOD OF RECORD.--June 1996 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 873.00 ft above NGVD of 1929 (levels by U.S. Geological Survey).

REMARKS.--Records good (see page 11). Some seasonal regulation caused by dams used to maintain levels of Comus and Delavan Lakes and Delavan Millpond. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	61	65	27	46	40	36	50	32	25	14	18
2	21	33	62	26	48	42	42	55	35	24	14	33
3	24	18	61	25	48	44	45	84	59	21	13	22
4	25	22	58	25	48	61	48	69	162	20	16	21
5	31	34	53	25	47	63	51	41	255	19	17	20
6	32	41	47	25	47	63	50	41	282	19	16	19
7	42	40	47	27	47	63	60	43	205	19	15	18
8	45	40	47	35	46	87	115	44	108	20	14	18
9	35	39	46	38	48	145	201	44	82	20	13	18
10	20	37	41	38	60	128	252	49	81	17	13	17
11	15	36	34	37	68	157	259	56	91	17	13	16
12	35	35	37	38	72	135	224	53	81	16	14	15
13	56	48	46	38	58	128	198	52	62	17	19	15
14	62	60	52	38	53	124	137	38	57	17	17	18
15	71	82	57	35	48	89	65	32	62	16	17	14
16	76	89	58	38	47	85	54	36	63	16	18	15
17	80	88	63	37	47	81	60	40	53	16	19	14
18	64	87	72	37	46	66	62	47	41	16	18	15
19	53	86	72	38	60	67	56	40	37	16	18	28
20	53	69	68	38	94	64	62	39	27	16	17	21
21	62	40	56	38	113	59	63	38	23	16	24	19
22	62	37	43	38	116	56	61	32	23	16	43	18
23	115	37	47	36	108	52	60	25	23	15	25	17
24	205	48	46	35	91	45	59	25	23	11	23	18
25	234	55	41	34	91	40	58	35	25	9.1	21	19
26	198	75	31	34	88	33	58	28	34	13	20	19
27	185	90	30	35	77	33	61	28	28	11	18	17
28	174	90	30	35	59	34	62	31	27	12	19	17
29	89	89	29	35	---	34	61	35	26	15	19	31
30	54	82	28	38	---	33	56	34	25	13	18	23
31	50	---	27	43	---	33	---	33	---	13	19	---
TOTAL	2297	1688	1494	1066	1821	2184	2676	1297	2132	511.1	564	573
MEAN	74.10	56.27	48.19	34.39	65.04	70.45	89.20	41.84	71.07	16.49	18.19	19.10
MAX	234	90	72	43	116	157	259	84	282	25	43	33
MIN	15	18	27	25	46	33	36	25	23	9.1	13	14
CFSM	0.89	0.68	0.58	0.41	0.78	0.85	1.07	0.50	0.85	0.20	0.22	0.23
IN.	1.03	0.75	0.67	0.48	0.81	0.98	1.20	0.58	0.95	0.23	0.25	0.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002
MEAN	37.78	35.00	35.21	43.98	83.45	65.33	82.15
MAX	74.1	56.3	48.2	72.4	122	103	106
(WY)	2002	2002	2002	1999	2001	2001	1999
MIN	16.2	17.2	21.9	29.0	57.0	39.5	51.1
(WY)	1998	1998	1998	2000	2000	2000	1997

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1996 - 2002
ANNUAL TOTAL	24403	18303.1	
ANNUAL MEAN	66.86	50.15	52.62
HIGHEST ANNUAL MEAN			61.2
LOWEST ANNUAL MEAN			41.8
HIGHEST DAILY MEAN	305	282	404
LOWEST DAILY MEAN	11	9.1	7.7
ANNUAL SEVEN-DAY MINIMUM	16	12	12
MAXIMUM PEAK FLOW		311	493
MAXIMUM PEAK STAGE		3.21	3.78
INSTANTANEOUS LOW FLOW		8.5	6.6
ANNUAL RUNOFF (CFSM)	0.80	0.60	0.63
ANNUAL RUNOFF (INCHES)	10.90	8.17	8.58
10 PERCENT EXCEEDS	133	89	115
50 PERCENT EXCEEDS	54	38	35
90 PERCENT EXCEEDS	21	16	17

05431486 TURTLE CREEK AT CARVERS ROCK ROAD NEAR CLINTON, WI

LOCATION.--Lat 42°35'50", long 88°49'45", in SE ¼ SW ¼ sec.27, T.2 N., R.14 E., Rock County, Hydrologic Unit 07090001, on left bank 25 ft downstream from bridge on Carvers Rock Road, 3.3 mi northeast of Clinton, 13 mi northeast of Beloit, and 17.8 mi upstream from mouth.

DRAINAGE AREA.--199 mi², of which 2.33 mi² is noncontributing.

PERIOD OF RECORD.--September 1939 to current year. Prior to January 1980, all records published as "Turtle Creek near Clinton" (05431500).

REVISED RECORDS.--WSP 955: 1940. WSP 1308: 1950(M). WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 823 ft above NGVD of 1929, from topographic map. Prior to January 17, 1940, non-recording gage, and January 17, 1940 to December 31, 1979, water-stage recorder at site 1.8 mi downstream at a different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Some seasonal regulation caused by dams used to maintain levels of Comus and Delavan Lakes and Delavan Millpond. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	160	183	e130	e110	e140	130	154	110	98	62	67
2	107	165	168	e130	e110	e130	142	166	108	94	62	84
3	104	118	164	e130	e110	e130	152	160	161	90	61	100
4	106	115	160	e120	e110	e130	145	187	594	86	65	76
5	107	118	157	e120	e110	e130	144	146	818	83	70	72
6	112	132	150	e120	e110	e140	142	150	508	82	67	69
7	110	132	144	e110	118	148	160	141	441	82	64	67
8	122	130	142	e120	119	217	297	138	304	81	63	66
9	121	126	138	e130	123	467	690	141	217	86	62	65
10	119	125	137	e120	224	358	498	133	194	84	60	64
11	133	122	127	114	205	295	438	149	235	79	59	63
12	124	120	126	116	191	286	407	176	228	76	59	62
13	153	152	166	116	167	263	351	160	190	74	71	61
14	225	247	159	121	153	261	313	149	227	73	76	61
15	190	240	155	119	143	234	231	128	179	72	67	66
16	177	217	160	117	139	202	186	131	169	71	65	62
17	172	204	169	e110	134	199	174	138	158	70	66	64
18	168	196	172	e110	133	186	179	141	146	69	65	64
19	146	191	173	e110	163	175	172	131	136	69	64	72
20	140	184	164	e110	257	181	166	125	127	70	63	113
21	136	153	157	e110	321	171	170	125	115	71	64	83
22	153	135	141	113	265	160	177	121	114	69	137	72
23	355	132	146	117	246	159	170	113	109	67	105	69
24	470	186	137	115	227	149	164	110	106	65	86	67
25	482	235	e140	112	215	141	164	129	105	63	78	68
26	405	199	e140	113	204	132	156	141	120	62	73	70
27	326	210	e140	114	e180	128	158	121	115	67	70	70
28	306	205	e140	117	e160	129	178	116	109	65	68	67
29	260	200	e130	116	---	133	169	120	106	67	67	88
30	183	201	e130	113	---	131	163	118	101	68	67	93
31	166	---	e130	e110	---	128	---	115	---	63	66	---
TOTAL	6009	5050	4645	3623	4747	5833	6786	4273	6350	2316	2172	2165
MEAN	193.8	168.3	149.8	116.9	169.5	188.2	226.2	137.8	211.7	74.71	70.06	72.17
MAX	482	247	183	130	321	467	690	187	818	98	137	113
MIN	104	115	126	110	110	128	130	110	101	62	59	61
CFSM	0.99	0.86	0.76	0.59	0.86	0.96	1.15	0.70	1.08	0.38	0.36	0.37
IN.	1.14	0.96	0.88	0.69	0.90	1.10	1.28	0.81	1.20	0.44	0.41	0.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

MEAN	102.7	110.0	104.8	107.5	145.2	225.3	178.2	130.8	128.3	98.12	87.44	97.21
MAX	312	388	343	315	518	664	758	486	407	458	278	482
(WY)	1974	1986	1983	1946	1949	1959	1973	1973	1993	1978	1972	1972
MIN	30.1	37.9	34.5	24.5	30.4	55.4	52.7	31.6	35.2	24.8	21.5	19.6
(WY)	1958	1950	1965	1959	1959	1954	1958	1958	1965	1958	1958	1958

ROCK RIVER BASIN

05431486 TURTLE CREEK AT CARVERS ROCK ROAD NEAR CLINTON, WI--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL TOTAL	62487		53969			
ANNUAL MEAN	171.2		147.9		126.1	
HIGHEST ANNUAL MEAN					289 1973	
LOWEST ANNUAL MEAN					43.0 1958	
HIGHEST DAILY MEAN	688	Jun 12	818	Jun 5	6400	Apr 21 1973
LOWEST DAILY MEAN	70	Sep 1	59	Aug 11,12	16	Sep 13 1958
ANNUAL SEVEN-DAY MINIMUM	72	Aug 28	62	Aug 6	17	Sep 9 1958
MAXIMUM PEAK FLOW			1020	Jun 5	(a)16500	Apr 21 1973
MAXIMUM PEAK STAGE			6.74	Jun 5	(b)12.85	Apr 21 1973
INSTANTANEOUS LOW FLOW			54	Aug 11,12	(c)8.0	Dec 29 1956
ANNUAL RUNOFF (CFSM)	0.87		0.75		0.64	
ANNUAL RUNOFF (INCHES)	11.82		10.21		8.71	
10 PERCENT EXCEEDS	292		227		232	
50 PERCENT EXCEEDS	145		130		86	
90 PERCENT EXCEEDS	80		67		44	

- (a) From rating curve extended above 6,500 ft³/s on basis of slope-area measurement of peak flow
 (b) Site and datum then in use
 (c) Result of freezeup
 (e) Estimated due to ice effect or missing record

05432500 PECAATONICA RIVER AT DARLINGTON, WI

LOCATION.--Lat 42°40'40", long 90°07'07", in NE ¼ sec.3, T.2 N., R.3 E., Lafayette County, Hydrologic Unit 07090003, on right bank in Darlington, 0.3 mi downstream from Vinegar Branch, and 3.6 mi upstream from Otter Creek.

DRAINAGE AREA.--273 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 802.42 ft above NGVD of 1929. Prior to Dec. 19, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	211	202	e140	e140	e150	181	216	169	197	158	132
2	212	207	193	e140	e120	e140	186	229	164	191	155	219
3	207	196	188	e140	e130	e130	186	224	238	186	150	241
4	205	190	187	e150	e130	e150	178	206	1110	183	165	160
5	205	187	194	e150	e140	e150	173	199	1290	178	175	141
6	197	185	236	e140	e140	e150	171	200	837	201	163	136
7	192	185	222	e150	e140	e160	184	200	529	269	152	134
8	191	183	207	e150	e140	e190	250	190	439	208	148	131
9	192	178	199	e160	160	437	364	194	386	194	146	129
10	199	177	195	176	276	409	311	206	357	187	144	128
11	217	176	191	169	260	337	272	192	408	185	143	133
12	201	173	191	167	181	296	268	262	441	180	142	130
13	192	182	250	163	164	264	256	266	345	176	153	126
14	201	193	245	e160	168	254	240	223	343	174	163	126
15	196	184	218	e150	167	241	232	210	352	171	147	129
16	185	178	213	e140	163	225	223	204	307	169	142	127
17	179	172	215	e130	159	215	213	199	283	165	139	123
18	177	171	210	e130	155	215	206	191	270	164	138	123
19	177	181	205	e130	208	212	275	187	259	163	137	147
20	176	180	197	e130	319	229	236	183	259	162	134	162
21	173	172	187	e140	286	224	217	180	244	161	149	150
22	199	171	192	e150	221	189	241	178	238	178	308	135
23	653	170	203	160	206	214	227	177	231	290	216	126
24	395	202	e150	158	204	204	217	179	223	182	164	124
25	319	261	e160	148	205	193	223	192	217	167	153	123
26	267	219	e180	160	197	188	206	217	223	166	145	124
27	241	210	e170	157	172	187	201	187	228	171	141	123
28	229	206	e160	155	e160	189	245	178	215	182	138	123
29	222	196	e160	153	---	198	257	193	207	212	137	245
30	214	200	e150	150	---	188	225	184	202	176	135	267
31	211	---	e140	149	---	181	---	174	---	165	133	---
TOTAL	7041	5696	6010	4645	5111	6709	6864	6220	11014	5753	4813	4417
MEAN	227.1	189.9	193.9	149.8	182.5	216.4	228.8	200.6	367.1	185.6	155.3	147.2
MAX	653	261	250	176	319	437	364	266	1290	290	308	267
MIN	173	170	140	130	120	130	171	174	164	161	133	123
CFSM	0.83	0.70	0.71	0.55	0.67	0.79	0.84	0.73	1.34	0.68	0.57	0.54
IN.	0.96	0.78	0.82	0.63	0.70	0.91	0.94	0.85	1.50	0.78	0.66	0.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

MEAN	131.7	141.6	123.6	155.6	216.4	367.5	247.0	203.9	249.1	204.4	153.2	143.5
MAX	302	674	338	546	738	951	731	780	810	1796	610	487
(WY)	1985	1962	1983	1960	1953	1959	1959	1960	2000	1993	1993	1942
MIN	39.9	43.8	34.6	31.6	38.3	60.9	69.8	51.1	42.2	32.7	42.1	38.3
(WY)	1965	1965	1959	1959	1959	1957	1957	1958	1965	1965	1958	1958

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1939 - 2002

ANNUAL TOTAL	85924	74293	
ANNUAL MEAN	235.4	203.5	194.6
HIGHEST ANNUAL MEAN			534
LOWEST ANNUAL MEAN			66.5
HIGHEST DAILY MEAN	793	Aug 2	1290
LOWEST DAILY MEAN	(a)96	Jan 23-26	(a)120
ANNUAL SEVEN-DAY MINIMUM	(a)97	Jan 20	125
MAXIMUM PEAK FLOW			1340
MAXIMUM PEAK STAGE			10.41
INSTANTANEOUS LOW FLOW			(a)
ANNUAL RUNOFF (CFSM)	0.86		0.75
ANNUAL RUNOFF (INCHES)	11.71		10.12
10 PERCENT EXCEEDS	373		265
50 PERCENT EXCEEDS	202		187
90 PERCENT EXCEEDS	120		139

- (a) Ice affected
 (b) Also occurred July 26, 27, 30, 1965
 (c) From rating curve extended above 11,000 ft³/s on basis of slope-area determination of peak flow
 (d) Result of freezepup
 (e) Estimated due to ice effect or missing record

ROCK RIVER BASIN

05433000 EAST BRANCH PECATONICA RIVER NEAR BLANCHARDVILLE, WI

LOCATION.--Lat 42°47'08" long 89°51'40", in SE 1/4 SE 1/4 sec. 26, T.4 N., R.5 E., Lafayette County, Hydrologic Unit 07090003, on left bank at downstream side of bridge on State Highway 78, 1.8 mi south of Blanchardville and 4.5 mi upstream from Sawmill Creek.

DRAINAGE AREA.--221 mi².

PERIOD OF RECORD.--September 1939 to September 1986, October 1987 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 796.8 ft above NGVD of 1929. Prior to Dec. 20, 1939, nonrecording gage at bridge 50 ft upstream at same datum.

REMARKS.--Records good except those for periods of discharge over 500 ft³/s, which are fair, and estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

Table with columns for DAY, OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP and rows of daily mean discharge values from 1 to 31, plus summary statistics like TOTAL, MEAN, MAX, MIN, CFSM, and IN.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

Table with columns for MEAN, MAX, (WY), MIN, (WY) and rows of monthly mean data for water years 1939, 1965, 1962, 1963, 1948, 1949, 1958, 1959, 1973, 1974, 1975, 1976, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002.

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1939 - 2002

Summary statistics table with rows for ANNUAL TOTAL, ANNUAL MEAN, HIGHEST ANNUAL MEAN, LOWEST ANNUAL MEAN, HIGHEST DAILY MEAN, LOWEST DAILY MEAN, ANNUAL SEVEN-DAY MINIMUM, MAXIMUM PEAK FLOW, MAXIMUM PEAK STAGE, INSTANTANEOUS LOW FLOW, ANNUAL RUNOFF (CFSM), ANNUAL RUNOFF (INCHES), 10 PERCENT EXCEEDS, 50 PERCENT EXCEEDS, and 90 PERCENT EXCEEDS.

- (a) Ice affected
(b) Also occurred Jan. 10-27
(c) Also occurred Feb. 2
(d) Also occurred Sept. 1, 22, 23, 29, Oct. 2, 6, 1958, and Dec. 19, 20, 1964
(e) Estimated due to ice effect or missing record
(f) Gage height, 15.74 ft
(g) Result of freezeup

05434500 PECATONICA RIVER AT MARTINTOWN, WI

LOCATION.--Lat 42°30'34", long 89°47'58", in NE ¼ SE ¼ sec.32, T.1 N., R.6 E., Green County, Hydrologic Unit 07090003, on right bank about 400 ft downstream from highway bridge in Martintown, 0.3 mi upstream from Wisconsin-Illinois State line and 8.8 mi downstream from Skinner Creek.

DRAINAGE AREA.--1,034 mi².

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

REVISED RECORDS.--WSP 1308: 1949-50(M). WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 757.83 ft above NGVD of 1929. Prior to Jan. 6, 1940, nonrecording gage at same site and datum. Auxiliary wire-weight gage 1.2 mi downstream, at same datum.

REMARKS.--Records good except those for periods of discharge above 2,000 ft³/s, which are fair, and estimated daily discharges, which are poor (see page 11). Diurnal fluctuation at low flow caused by powerplant in Argyle, 28.2 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	806	816	846	e630	e580	e660	728	925	708	814	647	562
2	787	805	844	e600	e550	e620	731	900	687	793	623	611
3	767	788	819	e590	e540	e560	741	902	710	776	610	773
4	749	766	796	e580	e540	e540	737	891	1880	756	600	849
5	746	747	788	e620	e540	e570	719	848	2620	740	619	700
6	745	737	802	e630	e560	e580	707	822	2860	733	666	608
7	729	732	840	e580	e570	e590	726	813	3020	768	646	579
8	714	726	853	e600	e570	e650	919	811	2980	831	612	566
9	707	717	815	e630	e570	e1000	1440	800	2590	813	595	557
10	731	707	792	e680	e700	1330	1550	783	2020	773	586	556
11	767	698	780	e720	893	1350	1400	793	1730	749	579	555
12	772	692	766	e710	888	1160	1230	836	1580	733	577	555
13	765	698	819	e700	743	1070	1150	953	1450	724	610	551
14	745	728	911	e670	680	1000	1100	981	1370	712	635	543
15	742	743	926	e680	657	965	1040	897	1310	700	643	539
16	738	739	870	e650	657	924	1000	845	1250	689	612	540
17	717	718	846	e620	649	883	959	818	1170	679	585	538
18	703	699	841	e570	636	854	918	795	1100	671	572	526
19	695	696	817	e530	656	839	902	774	1050	664	571	597
20	690	703	807	e530	889	841	961	758	1020	651	569	658
21	684	706	781	e550	1200	863	967	745	997	652	559	650
22	688	693	766	e570	1150	851	929	736	968	652	1120	619
23	933	684	790	e600	967	810	928	728	939	661	1500	580
24	1560	762	800	e610	874	798	917	725	914	734	1080	554
25	1530	988	e650	e620	852	792	905	738	890	711	758	542
26	1260	1040	e690	e620	839	767	906	772	879	652	652	540
27	1070	957	e770	e620	808	751	877	801	887	649	614	539
28	947	882	e720	621	e700	750	883	764	890	665	593	536
29	887	852	e700	615	---	752	932	730	866	680	580	583
30	854	837	e670	607	---	751	973	741	834	707	573	774
31	830	---	e650	604	---	741	---	736	---	686	571	---
TOTAL	26058	23056	24565	19157	20458	25612	28875	25161	42169	22218	20757	17880
MEAN	840.6	768.5	792.4	618.0	730.6	826.2	962.5	811.6	1406	716.7	669.6	596.0
MAX	1560	1040	926	720	1200	1350	1550	981	3020	831	1500	849
MIN	684	684	650	530	540	540	707	725	687	649	559	526
CFSM	0.81	0.74	0.77	0.60	0.71	0.80	0.93	0.78	1.36	0.69	0.65	0.58
IN.	0.94	0.83	0.88	0.69	0.74	0.92	1.04	0.91	1.52	0.80	0.75	0.64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

	MEAN	539.4	589.4	518.8	584.7	809.6	1367	976.7	820.6	869.0	796.2	589.1	578.8
MAX	1226	2429	1492	2049	2512	3155	2943	3200	2804	5190	1752	1920	
(WY)	1987	1962	1983	1960	1953	1950	1960	1973	2000	1993	1993	1965	
MIN	187	211	162	147	182	259	328	234	233	181	167	166	
(WY)	1957	1965	1959	1959	1959	1957	1957	1958	1965	1965	1958	1958	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1940 - 2002

ANNUAL TOTAL	318119	295966	
ANNUAL MEAN	871.6	810.9	752.8
HIGHEST ANNUAL MEAN			1720
LOWEST ANNUAL MEAN			292
HIGHEST DAILY MEAN	1730	Apr 12	14600
LOWEST DAILY MEAN	(a)400	Jan 23,24	132
ANNUAL SEVEN-DAY MINIMUM	(a)409	Jan 21	542
MAXIMUM PEAK FLOW			3060
MAXIMUM PEAK STAGE			13.57
INSTANTANEOUS LOW FLOW			21.46
ANNUAL RUNOFF (CFSM)	0.84	0.78	(b)0.00
ANNUAL RUNOFF (INCHES)	11.44	10.65	0.73
10 PERCENT EXCEEDS	1300	1040	9.89
50 PERCENT EXCEEDS	806	741	540
90 PERCENT EXCEEDS	542	571	260

- (a) Ice affected
- (b) Result of regulation
- (e) Estimated due to ice effect or missing record

ROCK RIVER BASIN

05435943 BADGER MILL CREEK AT VERONA, WI

LOCATION.--Lat 42°58'37", long 89°32'22", in NW ¼ SW ¼ sec.22, T.6 N., R.8 E., Dane County, Hydrologic Unit 07090004, on left bank 60 ft downstream of Bruce Street, 0.8 mi southwest of intersection of State Highway 69 and County Trunk Highway M, at Verona.

DRAINAGE AREA.--20.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 930 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good (see page 11). Gage-height and water-quality telemeter at station. Effluent discharged into creek continuously at an average rate of 4.6 ft³/s (data provided by Madison Metropolitan Sewerage District).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	11	8.6	9.4	11	10	10	9.9	10	11	8.5
2	11	11	10	8.4	9.4	11	10	12	9.9	9.9	11	14
3	11	11	10	8.4	9.3	11	10	10	23	9.9	10	10
4	11	11	10	8.5	9.3	11	10	10	60	9.7	12	12
5	11	10	11	8.5	9.5	10	10	10	25	9.5	11	11
6	10	11	12	8.4	9.6	10	10	10	12	9.6	9.4	8.9
7	10	11	10	8.6	9.7	10	14	10	11	9.6	9.0	8.9
8	11	10	10	8.7	9.7	16	22	10	11	9.8	9.0	8.7
9	11	10	10	8.7	9.8	25	23	10	10	10	8.3	8.8
10	11	10	10	8.5	13	13	12	9.6	12	9.7	8.2	8.9
11	11	10	9.9	8.4	11	12	11	11	14	9.6	8.2	8.9
12	11	10	11	8.4	10	11	11	15	12	9.6	11	8.6
13	11	11	14	8.4	9.9	11	10	9.9	11	9.4	17	8.6
14	11	11	11	8.5	9.9	11	10	9.4	12	9.0	10	8.6
15	11	11	10	8.5	10	11	11	9.4	11	9.0	8.7	8.6
16	11	10	10	8.8	10	11	10	9.5	10	8.8	8.6	8.4
17	11	10	10	8.7	10	11	10	9.4	10	8.6	9.1	8.4
18	11	10	9.9	8.6	10	11	11	9.4	10	8.9	8.3	8.5
19	11	11	9.8	8.4	16	11	15	9.4	10	9.1	8.4	10
20	11	10	9.8	8.5	28	11	10	9.4	10	10	8.3	9.3
21	11	10	9.7	8.5	19	11	10	9.5	9.9	10	13	8.7
22	19	10	10	8.6	12	11	11	9.5	9.7	16	17	8.5
23	44	10	11	8.6	11	11	10	9.6	9.6	12	11	8.4
24	15	16	9.6	8.6	11	11	10	9.6	9.6	11	11	8.5
25	13	13	9.5	8.7	11	10	10	12	9.6	11	11	8.5
26	11	11	9.4	8.9	11	10	10	10	11	11	11	8.6
27	11	11	9.3	9.0	11	10	11	10	10	11	11	8.7
28	11	11	9.1	9.0	11	10	13	11	9.9	12	9.5	8.7
29	11	10	8.9	9.1	---	10	11	13	10	11	8.6	11
30	11	11	8.9	9.1	---	10	10	10	10	11	8.5	9.0
31	11	---	8.8	9.4	---	10	---	10	---	11	8.5	---
TOTAL	386	323	313.6	268.0	320.5	353	346	317.6	393.1	316.7	316.6	276.2
MEAN	12.45	10.77	10.12	8.645	11.45	11.39	11.53	10.25	13.10	10.22	10.21	9.207
MAX	44	16	14	9.4	28	25	23	15	60	16	17	14
MIN	10	10	8.8	8.4	9.3	10	10	9.4	9.6	8.6	8.2	8.4
CFSM	0.61	0.53	0.50	0.43	0.56	0.56	0.57	0.50	0.65	0.50	0.50	0.45
IN.	0.71	0.59	0.57	0.49	0.59	0.65	0.63	0.58	0.72	0.58	0.58	0.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	8.597	8.076	7.125	7.604	10.93	10.26
MAX	12.5	12.0	10.1	9.24	17.7	13.6
(WY)	2002	1999	2002	2001	1997	1997
MIN	3.55	3.28	3.25	3.67	4.74	7.30
(WY)	1998	1998	1998	1998	1998	2000

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1997 - 2002

ANNUAL TOTAL	4441.6	3930.3		
ANNUAL MEAN	12.17	10.77		
HIGHEST ANNUAL MEAN			10.05	
LOWEST ANNUAL MEAN			11.7	2001
HIGHEST DAILY MEAN	234	Aug 2	7.66	1997
LOWEST DAILY MEAN	8.0	Jun 24	2.9	Nov 23 1997
ANNUAL SEVEN-DAY MINIMUM	8.2	Jul 7	3.1	Nov 21 1997
MAXIMUM PEAK FLOW			466	Jun 2 2000
MAXIMUM PEAK STAGE			5.90	Jun 4
ANNUAL RUNOFF (CFSM)	0.60		0.49	
ANNUAL RUNOFF (INCHES)	8.14		6.72	
10 PERCENT EXCEEDS	13		12	
50 PERCENT EXCEEDS	10		10	
90 PERCENT EXCEEDS	8.9		8.6	

05435943 BADGER MILL CREEK AT VERONA, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1996 to current year.
DISSOLVED OXYGEN: May 1998 to current year.

INSTRUMENTATION.--Continuous water temperature recorder since November 1996. Dissolved-oxygen recorder since May 1998.

REMARKS.--Records represent water temperature at sensor within 0.5°C. Effluent discharged continuously into creek after Aug. 28, 1998.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 25.5°C, June 28, 1998 and July 23, 1999; minimum 0.0°C on many days during winter periods of 1996-98 water years.
DISSOLVED OXYGEN: Maximum, 24.9 mg/L, Mar. 29, 1999; minimum, 1.3 mg/L, Oct. 5, 1998.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.0°C, Aug. 21; minimum 1.5°C, Mar. 10.
DISSOLVED OXYGEN: Maximum, 22.7 mg/L, Apr. 5; minimum, 2.0 mg/L, July 21.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.5	13.5	15.5	---	---	---	10.0	9.0	9.5	6.0	4.5	5.5
2	18.0	13.0	15.0	---	---	---	11.0	9.5	10.0	6.5	4.0	5.5
3	17.0	14.0	15.0	---	---	---	11.5	9.5	10.5	6.5	4.5	5.5
4	14.5	13.5	14.0	---	---	---	13.0	11.5	12.5	7.5	5.0	6.0
5	14.0	12.0	13.0	---	---	---	13.5	11.0	13.0	9.0	7.5	8.0
6	13.5	10.5	12.0	13.5	10.0	12.0	11.0	9.0	10.0	8.0	6.0	7.0
7	13.5	9.5	11.5	15.0	12.5	13.5	10.5	8.5	9.5	6.5	5.0	5.5
8	14.5	11.0	12.5	13.0	10.0	12.0	11.0	8.5	10.0	8.5	5.5	7.0
9	15.5	13.0	14.0	11.5	9.0	10.0	9.0	7.5	8.0	10.5	8.0	9.0
10	15.5	13.5	14.5	12.5	9.5	11.0	9.5	7.5	8.5	9.0	7.5	8.5
11	16.0	12.0	14.0	12.0	9.0	10.5	10.0	7.5	8.5	9.0	7.5	8.0
12	16.0	13.0	14.0	12.0	9.0	10.5	10.5	7.5	9.5	9.0	7.0	8.0
13	14.5	13.0	14.0	12.0	10.5	11.5	10.0	7.0	8.0	8.5	6.5	7.5
14	15.0	12.0	13.5	14.0	12.0	13.0	9.0	8.0	8.5	9.0	8.0	8.5
15	14.0	11.5	12.5	15.0	12.5	13.5	10.0	8.5	9.0	8.0	7.0	7.5
16	13.0	11.0	12.0	14.0	11.5	12.5	10.5	9.5	10.0	7.0	6.5	7.0
17	13.5	10.0	11.5	13.5	10.5	12.0	10.5	8.5	10.0	7.0	4.5	6.0
18	14.0	11.0	12.0	14.0	12.0	13.0	10.0	8.0	9.0	6.0	4.0	5.0
19	14.5	11.0	12.5	13.5	9.0	11.0	9.5	7.5	8.5	7.5	4.0	5.5
20	14.5	11.0	12.5	10.5	7.5	9.5	8.5	7.0	7.5	8.0	5.5	6.5
21	15.0	12.0	13.5	11.5	9.0	10.0	8.5	6.5	7.5	8.5	6.5	7.5
22	13.5	11.0	12.0	11.5	9.5	10.5	9.0	7.0	8.0	9.0	6.0	7.5
23	12.5	11.0	12.0	12.0	10.0	11.0	8.0	5.0	6.0	9.5	7.0	8.0
24	13.0	11.0	12.5	13.0	11.0	12.0	7.0	5.5	6.0	9.0	7.0	8.0
25	11.0	8.5	9.0	11.0	9.5	10.5	6.5	5.0	5.5	9.0	6.5	7.5
26	10.0	8.5	9.5	10.5	9.5	10.0	6.5	5.0	5.5	10.0	7.0	8.5
27	12.0	9.5	10.5	10.5	9.5	10.0	7.0	5.5	6.0	10.5	7.5	9.0
28	12.0	9.0	10.5	10.5	9.5	10.0	7.0	5.5	6.0	8.5	7.5	8.0
29	14.0	10.5	11.5	10.0	9.5	10.0	5.5	4.5	5.0	7.5	6.5	7.0
30	12.5	10.5	11.5	11.0	9.5	10.0	6.0	4.0	5.0	8.0	6.5	7.0
31	13.5	11.5	12.5	---	---	---	5.5	4.0	5.0	7.5	6.0	6.5
MONTH	18.0	8.5	12.6	---	---	---	13.5	4.0	8.2	10.5	4.0	7.1

ROCK RIVER BASIN

05435943 BADGER MILL CREEK AT VERONA, WI--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8.5	5.5	6.5	8.5	5.0	6.5	8.5	7.0	7.5	12.5	10.5	11.5
2	8.0	4.5	6.0	6.5	4.0	5.0	8.5	7.0	8.0	15.0	10.0	11.5
3	9.0	5.0	7.0	8.0	3.0	5.0	10.0	7.0	8.0	17.5	8.5	12.0
4	7.5	4.0	5.5	7.0	2.0	4.0	9.5	6.5	8.0	17.0	9.0	13.0
5	8.0	4.0	6.0	8.5	3.5	6.0	13.0	6.5	9.0	18.0	11.0	14.0
6	9.5	5.0	7.0	8.5	6.0	7.0	14.0	6.0	9.5	19.5	13.0	15.5
7	10.5	6.0	8.0	9.0	6.5	7.5	9.0	6.0	7.5	16.0	13.0	14.0
8	10.5	6.5	8.0	8.5	4.0	6.5	9.0	7.0	8.0	16.0	11.5	13.5
9	10.5	7.5	9.0	4.5	2.0	3.5	11.5	7.0	8.5	16.0	11.5	14.0
10	9.0	4.0	5.5	8.0	1.5	4.5	14.0	8.0	10.5	16.5	9.5	13.0
11	8.0	4.5	6.0	9.0	5.0	6.5	14.5	9.5	12.0	13.5	11.0	11.5
12	9.0	5.5	7.0	12.0	5.5	8.5	13.5	11.0	12.0	11.0	9.5	10.5
13	8.5	4.5	6.5	11.5	7.0	9.0	17.0	9.0	12.5	13.5	10.0	11.5
14	9.5	6.0	7.5	8.5	7.5	8.0	16.5	10.0	13.0	16.0	10.0	13.0
15	9.0	7.0	8.0	9.0	7.5	8.0	19.5	11.5	15.0	17.5	10.5	14.0
16	9.5	7.0	8.0	12.5	6.5	9.0	20.0	12.5	16.0	15.0	13.0	14.0
17	10.0	6.0	7.5	8.5	7.0	7.5	20.0	14.0	16.0	13.5	11.0	12.0
18	10.0	6.0	8.0	13.0	8.0	9.5	16.5	12.5	14.5	14.5	9.5	12.0
19	9.0	5.0	6.0	9.5	7.5	8.5	16.5	12.5	15.0	14.0	10.0	12.0
20	7.0	3.5	5.0	12.0	7.5	9.0	16.0	10.0	12.5	13.5	10.5	12.0
21	5.0	3.5	4.0	9.5	4.5	7.0	11.5	8.5	9.0	16.0	9.5	12.5
22	9.0	4.0	6.5	10.5	4.0	6.5	11.0	8.5	9.5	16.0	10.5	13.5
23	9.5	6.5	7.5	12.0	5.5	8.0	16.0	8.5	11.5	15.0	12.5	14.0
24	12.0	7.5	9.5	10.0	5.5	8.0	14.5	9.5	12.0	15.0	12.5	13.5
25	9.0	6.5	8.0	10.5	4.5	7.0	15.0	8.0	11.0	13.0	10.5	11.5
26	8.0	5.0	6.5	11.5	5.5	8.0	16.0	8.0	11.5	17.5	10.5	14.0
27	9.0	4.5	6.0	13.5	6.0	9.0	11.5	9.0	9.5	17.0	13.0	15.0
28	8.0	5.0	6.5	11.5	7.0	9.0	10.0	9.0	9.5	18.0	13.5	16.0
29	---	---	---	13.0	7.5	9.5	15.5	9.0	11.5	19.5	14.5	18.0
30	---	---	---	13.5	7.0	9.5	15.0	10.0	12.5	19.5	15.0	17.5
31	---	---	---	12.0	7.0	9.0	---	---	---	18.0	15.5	17.0
MONTH	12.0	3.5	6.9	13.5	1.5	7.4	20.0	6.0	11.0	19.5	8.5	13.5
JUNE			JULY			AUGUST			SEPTEMBER			
1	19.0	14.0	17.0	21.0	19.0	20.0	21.5	20.0	21.0	21.0	16.5	19.0
2	17.5	14.5	15.5	21.0	19.0	20.0	21.5	18.5	20.0	21.0	18.0	19.5
3	14.5	12.5	13.5	21.0	19.0	20.0	20.5	17.5	19.0	21.0	16.5	18.5
4	15.5	14.0	14.5	21.0	19.5	20.0	20.5	19.0	20.0	21.5	16.5	18.5
5	16.0	14.5	15.5	19.5	18.0	18.5	20.5	18.5	19.5	21.5	17.0	19.0
6	18.0	13.0	15.5	19.0	17.5	18.0	20.0	17.0	18.5	21.0	16.0	18.5
7	18.5	13.5	16.0	20.0	18.0	19.0	19.5	16.5	18.0	21.5	16.5	19.0
8	19.0	14.5	17.0	21.0	19.5	20.0	20.0	17.0	18.5	22.0	16.5	19.0
9	19.0	15.0	17.0	20.5	19.5	20.0	20.0	17.0	19.0	22.0	17.5	19.5
10	21.0	16.0	18.0	19.5	17.5	18.5	20.5	17.5	19.0	19.5	17.0	18.5
11	20.0	16.5	19.0	18.5	17.0	17.5	21.0	18.0	19.5	20.0	15.0	17.5
12	19.0	17.0	18.0	19.0	16.5	17.5	22.5	18.5	20.0	20.0	14.5	17.0
13	18.0	15.5	16.5	19.0	17.0	18.0	22.0	19.0	20.0	19.0	15.0	17.0
14	17.0	14.5	16.0	19.0	18.0	18.5	20.5	18.0	19.5	18.0	16.0	17.0
15	17.5	14.5	16.0	20.0	18.0	19.0	21.0	17.0	19.0	19.0	15.5	17.0
16	17.5	14.5	16.0	20.0	19.0	19.5	21.0	17.5	19.5	19.5	13.5	16.5
17	17.0	14.5	15.5	19.5	18.5	19.0	21.5	18.0	20.0	19.5	14.5	17.0
18	18.5	14.5	16.5	20.5	19.0	19.5	20.0	16.0	18.0	19.5	16.0	17.5
19	18.0	15.5	16.5	20.5	18.5	19.5	20.0	17.0	18.5	21.0	17.5	19.0
20	19.0	15.5	17.5	20.5	18.0	19.0	20.0	15.5	18.0	19.0	16.5	18.0
21	21.5	17.0	18.0	21.5	19.0	20.5	23.0	17.5	19.5	18.5	15.5	16.5
22	19.5	17.0	18.5	22.0	20.0	21.0	22.5	19.5	20.5	17.5	14.0	15.5
23	20.0	17.5	19.0	20.0	19.0	19.5	20.0	18.5	19.0	16.5	12.5	14.5
24	19.5	17.5	18.5	19.0	18.0	18.5	21.5	18.5	20.0	17.0	12.0	14.5
25	20.0	17.5	19.0	19.5	18.0	18.5	22.0	18.0	19.5	18.0	13.5	15.5
26	20.0	17.5	18.5	20.5	18.5	19.5	21.5	18.0	19.5	19.0	14.0	16.5
27	19.5	18.0	18.5	20.0	18.5	19.5	22.0	18.0	20.0	16.0	14.5	15.5
28	19.0	17.0	18.0	20.5	19.0	20.0	21.0	18.0	19.5	18.0	13.0	15.0
29	19.0	17.0	18.5	20.5	19.0	19.5	21.0	16.0	18.5	19.5	16.0	17.5
30	20.5	18.5	19.5	21.0	18.0	19.5	21.0	16.0	18.5	20.5	16.5	18.0
31	---	---	---	21.0	19.5	20.5	20.5	17.0	19.0	---	---	---
MONTH	21.5	12.5	17.1	22.0	16.5	19.3	23.0	15.5	19.3	22.0	12.0	17.4

ROCK RIVER BASIN

05435943 BADGER MILL CREEK AT VERONA, WI--Continued

OXYGEN DISSOLVED, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN			
													OCTOBER	NOVEMBER	DECEMBER
1	14.2	7.1	9.5	---	---	---	13.2	8.4	9.9	12.8	9.5	10.5			
2	14.6	6.7	9.4	---	---	---	13.4	8.4	10	12.4	9.6	10.4			
3	14.6	6.7	9.0	---	---	---	13.4	8.1	9.8	12.2	9.4	10.4			
4	12.2	6.8	8.8	---	---	---	12.3	7.9	9.4	12.4	8.8	10.3			
5	14.9	7.2	9.8	---	---	---	11.9	7.9	8.9	12.5	8.7	9.9			
6	14.5	7.5	9.8	16.1	7.6	10.4	13.1	8.3	9.9	11.7	8.7	9.8			
7	14.3	7.3	9.8	16.4	7.4	10.3	14.1	7.7	10.4	12.3	9.3	10.3			
8	15.6	6.9	9.8	14.7	7.0	9.7	13.7	8.4	10.2	12.8	8.6	10.2			
9	14.3	6.7	9.1	16.0	8.2	10.7	13.9	9.2	10.7	12.7	8.5	9.9			
10	8.0	6.3	6.9	16.0	8.1	10.5	13.9	9.3	10.7	12.8	8.8	10.1			
11	15.9	6.5	9.7	16.2	8.2	10.7	12.9	8.5	10.3	12.7	8.8	10.1			
12	15.4	6.8	9.5	16.4	8.2	10.8	11.1	8.3	9.2	12.9	8.9	10.2			
13	9.7	6.7	7.7	11.4	7.9	9.0	9.9	8.3	9.3	13.1	8.9	10.3			
14	15.1	6.7	9.8	14.4	7.5	9.5	11.6	8.8	9.6	11.6	8.8	9.6			
15	15.5	7.0	9.6	15.6	7.5	9.9	12.2	8.6	9.7	12.8	8.9	10.2			
16	15.0	7.0	9.8	15.5	7.8	10.2	9.8	8.3	8.8	13.6	9.2	10.6			
17	15.6	7.4	10.1	16.0	8.0	10.4	12.0	8.2	9.4	14.8	9.4	11.1			
18	16.9	7.0	10.3	15.4	7.7	10.1	12.5	8.5	9.8	13.7	9.6	11.0			
19	16.4	7.0	10.2	15.2	7.5	10.2	12.5	8.2	9.9	14.1	9.3	11.0			
20	17.3	7.1	10.3	15.5	8.6	10.9	12.5	9.0	10.1	14.3	9.2	10.8			
21	17.2	7.0	10.2	14.8	8.3	10.3	12.9	8.8	10.2	14.1	8.9	10.7			
22	16.3	7.2	9.6	15.8	8.3	10.6	10.1	8.7	9.2	14.6	8.9	10.8			
23	8.5	7.7	8.0	15.4	8.0	10.3	12.1	8.7	10.2	14.7	8.5	10.5			
24	9.1	7.8	8.2	9.6	7.6	8.4	13.3	9.3	10.6	15.0	8.7	10.8			
25	11.4	8.4	9.5	10.2	8.1	8.9	13.0	9.5	10.5	14.8	8.8	10.7			
26	13.7	8.8	10.4	11.7	8.8	9.7	12.7	9.5	10.5	15.3	8.7	10.7			
27	14.9	8.8	10.7	11.1	8.2	9.1	12.6	9.3	10.3	16.3	8.5	10.9			
28	14.9	8.5	10.7	11.2	8.2	9.0	12.4	9.0	10.1	12.8	8.5	9.9			
29	14.7	7.8	10.3	11.6	8.2	9.2	12.5	9.3	10.4	11.9	8.7	10.0			
30	14.8	7.6	9.8	10.7	8.2	8.9	13.2	9.6	10.7	15.8	9.6	11.6			
31	15.3	7.4	9.8	---	---	---	12.4	9.6	10.5	15.6	9.6	11.4			
MONTH	17.3	6.3	9.6	---	---	---	14.1	7.7	10.0	16.3	8.5	10.5			
				FEBRUARY			MARCH			APRIL			MAY		
1	16.5	9.6	11.8	17.8	8.8	11.7	16.6	7.3	10.8	14.3	5.5	9.0			
2	16.8	9.4	12.0	16.7	9.0	11.7	15.7	7.4	10.6	17.4	5.8	10.1			
3	16.1	9.3	11.4	19.4	9.5	12.7	19.8	7.5	12.2	19.9	6.0	11.2			
4	15.7	9.7	11.6	19.3	9.8	12.9	19.8	7.4	12.4	19.9	6.0	11.3			
5	15.9	9.3	11.6	18.7	9.3	12.6	22.7	4.1	12.9	20.7	5.4	11.0			
6	15.5	8.9	11.1	18.5	9.1	12.1	21.9	7.2	12.5	19.3	5.0	10.0			
7	16.1	8.6	10.8	20.0	9.1	12.6	11.9	6.8	8.7	18.2	4.5	9.5			
8	15.6	8.6	10.7	14.3	8.9	11.3	11.0	8.3	9.4	16.6	5.9	9.6			
9	16.0	8.1	10.8	12.8	11.8	12.2	12.3	8.1	9.8	17.3	4.9	9.8			
10	11.4	8.1	10.0	17.9	11.2	13.6	16.6	7.5	11.0	17.6	6.4	10.7			
11	15.4	8.8	11.1	18.7	10.2	13.3	17.4	7.0	10.9	10.0	5.9	7.6			
12	14.7	8.5	10.5	19.6	8.6	12.6	17.3	6.0	10.4	9.3	6.4	7.8			
13	14.9	8.6	10.6	17.6	8.3	11.6	19.7	6.7	11.6	15.2	7.0	10.4			
14	15.4	8.2	10.6	16.1	8.1	10.6	20.0	6.1	11.2	15.7	6.7	10.2			
15	14.1	7.9	9.9	18.1	8.3	11.6	20.8	5.8	11.1	15.7	6.1	10			
16	14.6	7.9	9.9	19.4	8.4	12.3	20.8	5.4	11.2	13.7	5.6	9.0			
17	15.6	8.1	10.4	16.8	8.3	10.9	21.2	5.0	11.2	15.5	6.2	10.2			
18	15.6	7.8	10.3	20.8	8.2	12.6	17.8	5.4	9.4	15.1	6.8	10.4			
19	9.8	7.8	8.9	15.4	8.2	10.6	15.7	5.2	9.0	15.1	6.6	10.3			
20	10.1	8.5	9.4	20.3	8.0	12.0	20.9	6.2	11.9	15.7	6.7	10.5			
21	11.1	9.0	10.1	20.3	8.1	12.8	12.5	6.3	9.0	16.1	7.1	10.7			
22	13.5	8.5	10.3	20.0	8.7	12.8	18.6	6.9	11.5	15.8	6.2	10.5			
23	13.4	8.1	9.9	20.8	8.1	12.6	21.4	6.6	12.3	13.3	6.1	9.2			
24	14.0	7.8	9.8	20.7	7.8	12.7	19.0	5.7	9.3	15.8	6.0	10.1			
25	12.6	7.8	9.4	20.9	8.6	12.9	21.2	6.4	12.1	12.4	6.6	8.7			
26	16.0	8.4	11.1	20.6	8.3	12.7	21.1	6.2	11.8	15.9	6.1	10.1			
27	15.8	8.9	11.1	20.1	7.6	12.2	12.0	5.7	8.0	15.8	5.7	10.1			
28	16.8	8.9	11.4	18.8	7.2	10.9	6.1	8.9	15.6	5.5	10.0				
29	---	---	---	19.2	7.1	11.2	18.8	6.4	11.1	13.0	3.9	7.5			
30	---	---	---	20.8	7.2	12.1	19.2	5.8	11.0	15.6	4.7	9.4			
31	---	---	---	19.6	7.3	11.5	---	---	---	15.3	4.2	9.2			
MONTH	16.8	7.8	10.6	20.9	7.1	12.1	22.7	4.1	10.8	20.7	3.9	9.8			

ROCK RIVER BASIN

05435943 BADGER MILL CREEK AT VERONA, WI--Continued

OXYGEN DISSOLVED, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	16.6	5.4	10.1	13.5	4.7	8.8	10.2	3.5	6.3	---	---	---
2	15.0	5.1	9.0	13.4	4.6	8.7	10.8	3.6	6.8	---	---	---
3	8.3	5.6	6.4	13.2	4.6	8.7	10.8	4.3	7.2	---	---	---
4	6.9	5.5	6.1	13.5	4.5	8.7	8.2	4.0	5.8	---	---	---
5	9.7	5.4	7.1	13.5	4.9	9.0	8.9	3.9	6.2	9.9	5.7	7.2
6	14.0	6.1	9.3	12.9	5.4	8.7	10.6	3.9	7.1	10.1	5.9	7.6
7	14.5	5.8	9.5	13.4	5.2	9.0	10.5	4.8	7.2	10.1	5.7	7.3
8	14.4	5.6	9.3	13.7	4.8	9.0	10.3	4.5	7.1	10.6	5.7	7.6
9	14.3	5.5	9.3	12.4	4.2	7.9	9.9	4.3	6.8	10.8	5.7	7.6
10	13.6	3.7	8.5	10.7	4.8	7.7	10.3	4.0	6.8	8.8	5.7	7.0
11	11.4	3.2	6.7	13.5	5.6	9.0	9.7	3.9	6.3	10.7	6.1	7.9
12	12.8	4.5	7.9	13.2	5.8	9.1	9.1	3.2	5.6	10.8	6.1	7.9
13	13.6	5.3	8.3	13.1	5.2	8.8	6.6	2.5	4.3	11.2	6.1	7.9
14	12.8	4.7	8.6	12.9	5.0	8.6	8.2	3.3	5.3	9.1	6.0	7.0
15	13.9	5.6	9.4	13.1	3.3	8.7	9.4	4.0	6.2	10.8	5.9	7.8
16	13.6	5.8	9.4	12.9	4.8	8.6	8.8	4.1	5.9	11.3	6.5	8.3
17	12.4	5.7	8.7	12.6	4.6	8.4	8.0	3.8	5.5	11.4	6.4	8.2
18	14.0	6.2	9.8	13.1	4.5	8.3	8.8	4.1	6.1	11.0	6.1	7.7
19	12.2	5.5	8.0	10.2	3.7	6.8	8.4	4.2	5.9	9.4	5.3	6.8
20	14.1	5.6	9.6	12.6	3.4	7.3	8.7	4.5	6.1	8.6	5.6	6.7
21	14.2	5.3	9.3	11.9	2.0	6.9	7.7	3.9	5.5	10.9	6.3	8.0
22	13.8	5.4	9.3	9.0	2.7	5.9	---	---	---	11.0	6.8	8.4
23	14.1	5.2	9.3	11.5	2.6	6.8	---	---	---	11.4	7.4	8.7
24	14.2	5.3	9.4	12.1	4.2	7.7	---	---	---	11.7	7.4	8.9
25	13.8	5.3	9.4	11.4	4.1	7.2	---	---	---	11.9	7.0	8.7
26	12.7	4.8	8.2	11.8	4.0	7.4	---	---	---	11.4	6.8	8.3
27	13.3	4.0	8.6	9.9	3.7	6.1	---	---	---	10.1	6.5	7.7
28	13.7	5.1	9.3	10.5	3.1	6.8	---	---	---	10.9	6.5	8.2
29	14.1	5.3	9.4	8.5	3.7	5.9	---	---	---	10.5	6.1	7.6
30	13.6	5.1	9.1	11.2	4.3	7.2	---	---	---	10.5	6.0	7.6
31	---	---	---	11.1	3.7	6.9	---	---	---	---	---	---
MONTH	16.6	3.2	8.7	13.7	2.0	7.9	---	---	---	---	---	---

05436500 SUGAR RIVER NEAR BRODHEAD, WI

LOCATION.--Lat 42°36'42", long 89°23'53", in SW ¼ sec.26, T.2 N., R.9 E., Green County, Hydrologic Unit 07090004, on left bank at downstream side of highway bridge, 1.2 mi southwest of Brodhead, and 1.9 mi upstream from Sylvester Creek.

DRAINAGE AREA.--523 mi².

PERIOD OF RECORD.--January 1914 to current year. Monthly discharge only for January and February 1914 published in WSP 1308.

REVISED RECORDS.--WSP 1238: 1914-16, 1918, 1922, 1927, 1933. WSP 1508: 1916-17(M), 1919(M), 1920, 1921(M), 1927-28(M), 1930(M), 1931, 1936(M), 1943(M). WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 768.14 ft above NGVD of 1929. Prior to Oct. 17, 1938, nonrecording gage 20 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Some regulation from dam and non-operational powerplant upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	402	433	420	e300	e310	407	383	441	344	330	248	238
2	383	413	424	e290	e290	e370	389	436	334	323	239	256
3	381	401	417	e290	e280	e340	396	431	359	315	233	272
4	371	389	405	e310	e280	e330	396	424	802	308	235	283
5	372	382	401	e310	e280	e330	386	404	1290	300	250	262
6	370	375	406	e310	e280	e340	377	394	1270	299	259	247
7	362	371	425	e310	e280	e350	392	390	1270	304	248	241
8	355	371	427	e320	e280	e380	533	387	953	304	239	236
9	356	365	409	334	319	624	1020	389	616	303	233	235
10	371	363	395	345	384	784	1090	379	521	299	228	233
11	398	357	383	353	476	824	1090	378	511	294	221	232
12	416	353	381	354	482	747	866	412	528	290	222	234
13	402	364	415	e350	399	583	641	490	528	284	275	235
14	401	386	475	e350	373	527	567	528	491	280	283	235
15	406	396	488	e330	364	516	510	461	478	275	273	235
16	399	384	457	e310	359	487	493	425	465	270	251	233
17	379	371	447	e290	353	464	478	403	438	263	238	234
18	396	360	441	e280	347	448	455	390	421	261	232	236
19	378	361	428	e280	365	438	449	379	407	258	228	263
20	364	363	412	e280	515	439	453	372	396	251	225	327
21	360	362	395	e290	755	455	468	366	394	274	225	337
22	368	356	388	e310	817	444	460	358	385	281	316	304
23	598	352	405	345	752	421	453	357	376	282	405	278
24	798	381	e390	342	576	414	448	353	365	277	380	265
25	882	470	e360	330	515	403	425	364	355	247	321	260
26	833	536	e350	328	495	395	401	382	351	274	278	260
27	669	516	e340	328	464	387	412	395	353	260	252	259
28	518	465	e340	331	431	387	435	375	352	259	252	257
29	473	442	e320	330	---	393	458	363	344	265	249	310
30	445	414	e310	326	---	394	467	360	337	268	244	400
31	453	---	e300	327	---	387	---	362	---	261	239	---
TOTAL	14059	11852	12354	9883	11821	14208	15791	12348	16034	8759	8021	7897
MEAN	453.5	395.1	398.5	318.8	422.2	458.3	526.4	398.3	534.5	282.5	258.7	263.2
MAX	882	536	488	354	817	824	1090	528	1290	330	405	400
MIN	355	352	300	280	280	330	377	353	334	247	221	232
CFSM	0.87	0.76	0.76	0.61	0.81	0.88	1.01	0.76	1.02	0.54	0.49	0.50
IN.	1.00	0.84	0.88	0.70	0.84	1.01	1.12	0.88	1.14	0.62	0.57	0.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

	MEAN	286.5	308.2	272.5	294.5	432.3	657.0	464.9	374.6	377.0	303.9	261.4	298.5
MAX	788	836	597	1168	1690	1698	1159	1368	1320	1248	694	1579	
(WY)	1928	1962	1929	1916	1938	1929	1993	1973	2000	1993	1924	1938	
MIN	126	127	120	89.4	127	181	198	140	113	117	105	106	
(WY)	1965	1965	1956	1956	1959	1934	1938	1934	1934	1958	1934	1958	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1914 - 2002

ANNUAL TOTAL	165356	143027	
ANNUAL MEAN	453.0	391.9	360.6
HIGHEST ANNUAL MEAN			694
LOWEST ANNUAL MEAN			172
HIGHEST DAILY MEAN	1150	Jun 13	1290
LOWEST DAILY MEAN	(a)250	Jan 12-29	221
ANNUAL SEVEN-DAY MINIMUM	(a)250	Jan 12	234
MAXIMUM PEAK FLOW			1410
MAXIMUM PEAK STAGE		4.41	Jun 5
INSTANTANEOUS LOW FLOW			(b)14800
ANNUAL RUNOFF (CFSM)	0.87	0.75	(c)11.40
ANNUAL RUNOFF (INCHES)	11.76	10.17	35
10 PERCENT EXCEEDS	704	515	0.69
50 PERCENT EXCEEDS	413	370	9.37
90 PERCENT EXCEEDS	273	252	264
			150

- (a) Ice affected
- (b) From rating curve extended above 7,500 ft³/s
- (c) From floodmarks
- (e) Estimated due to ice effect or missing record

ILLINOIS RIVER BASIN

05437500 ROCK RIVER AT ROCKTON, IL

LOCATION.--Lat 42°26'55", long 89°04'11", in SW ¼ NE ¼ sec.24, T.46 N., R.1 E., Winnebago County, Hydrologic Unit 07090005, on right bank 750 ft downstream from State Highway 75 in Rockton, 1.0 mi downstream from Pecatonica River, and at mile 156.1.

DRAINAGE AREA.--6,363 mi².

PERIOD OF RECORD.--June 1903 to July 1906, October 1906 to March 1909, July 1914 to September 1919, October 1939 to current year. Published as "below mouth of Pecatonica River at Rockton" 1903-9; as "at Rockford" 1914-19. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORD.--WSP 325: 1903-9. WSP 895: 1904(M). WSP 1508: 1915, 1916-17(M). WDR IL-75-1: Drainage area. WDR IL-97-1: 1996 (Dec. 10-23).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 707.94 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1906, nonrecording gage at site 800 ft upstream at datum about 1 ft higher. Oct. 1, 1906, to Mar. 31, 1909, nonrecording gage at site 800 ft upstream at datum about 2 ft higher. July 30, 1914, to Apr. 30, 1919, nonrecording gage at site at Rockford about 21 mi downstream, at different datum. Oct. 1, 1939, to Aug. 10, 1973, at site 800 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Low flow regulated by powerplant upstream from station. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1937 reached a stage of 14.6 ft (backwater from ice), from floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6030	6540	5620	e4100	4170	5890	5980	6940	4750	4700	2540	2900
2	5740	6460	5450	e4050	3990	5870	6050	6950	4630	4200	2520	3050
3	5410	6300	5430	e4000	3950	5550	5970	6740	4800	4040	2430	2820
4	5240	6160	5410	e4000	3800	4970	5860	6680	7150	3690	2550	2960
5	5070	6030	5310	e4000	3400	5000	5710	6550	9730	3500	2520	3160
6	4900	5830	5150	e4000	3520	5350	5560	6470	9980	3400	2540	3050
7	4720	5600	5270	e4000	3770	5640	5530	6410	10400	3420	2470	2850
8	4600	5440	5300	e3950	3800	5720	6190	6360	11000	3280	2430	2670
9	4380	5350	5240	e3900	3840	6930	8220	6210	11800	3050	2360	2510
10	4500	5200	5150	e3800	4470	7700	9090	5890	11800	3310	2190	2490
11	4700	5100	5110	3690	4390	7820	9340	6170	11500	3110	2140	2460
12	4780	5010	5060	e3750	4490	8630	9880	6420	11000	3110	2280	2410
13	4940	5070	5290	3840	4540	8650	9970	6490	10600	2780	2440	2370
14	4960	5300	5340	3900	4380	8770	9700	6350	10300	2620	2490	2280
15	4750	5340	5370	4100	4300	8510	9100	6330	9850	2800	2900	2270
16	4750	5560	5500	4050	4280	8060	8560	6240	9370	2770	2860	2290
17	4670	5490	5580	3930	4140	7920	8190	6270	8730	2660	2480	2270
18	4570	5310	5550	3690	4040	7830	7920	6170	8170	2630	2160	2210
19	4600	5160	5520	3610	4150	7630	7820	6120	7810	2750	2210	2230
20	4500	5010	5400	3750	4710	7340	7770	5960	7320	2650	2290	2680
21	4450	4880	5610	3790	5530	7080	7710	5800	7040	2550	2230	2680
22	4570	4830	5550	3900	6080	6830	7600	5580	6880	2720	4010	2640
23	5840	4770	5400	4000	6460	6740	7390	5430	6450	2650	5940	2560
24	7340	5090	5240	4020	6590	6820	7360	5320	6140	2750	6090	2440
25	7880	5500	4770	3940	6660	6900	7080	5400	5830	2640	6250	2420
26	7770	5590	4340	3890	6380	6620	6950	5300	5700	2650	6410	2430
27	8240	6030	4510	3920	6290	6370	7000	4940	5480	2630	6540	2420
28	8040	5980	4670	3960	5980	6270	7200	5370	5280	2480	6670	2420
29	7620	5930	4590	3980	---	6180	7150	5160	5060	2630	6270	2580
30	7260	5820	e4250	3860	---	6160	6880	5030	4910	2620	4670	2730
31	6860	---	e4150	3970	---	6010	---	4820	---	2550	3420	---
TOTAL	173680	165680	160130	121340	132100	211760	224730	185870	239460	93340	107300	77250
MEAN	5603	5523	5165	3914	4718	6831	7491	5996	7982	3011	3461	2575
MAX	8240	6540	5620	4100	6660	8770	9970	6950	11800	4700	6670	3160
MIN	4380	4770	4150	3610	3400	4970	5530	4820	4630	2480	2140	2210
CFSM	0.88	0.87	0.81	0.62	0.74	1.07	1.18	0.94	1.25	0.47	0.54	0.40
IN.	1.02	0.97	0.94	0.71	0.77	1.24	1.31	1.09	1.40	0.55	0.63	0.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

MEAN	3127	3530	3290	3222	3900	7266	7367	5378	4578	3705	2908	2907
MAX	13340	11320	9049	9432	8365	13920	18530	17770	16960	17000	9039	7753
(WY)	1987	1986	1983	1960	1997	1974	1993	1973	2000	1993	1993	1972
MIN	857	1100	1004	800	1000	1692	2476	1103	1248	1056	793	780
(WY)	1965	1940	1959	1940	1940	1954	1958	1958	1977	1965	1958	1958

05437500 ROCK RIVER AT ROCKTON, IL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

MEAN	3127	3530	3290	3222	3900	7266	7367	5378	4578	3705	2908	2907
MAX	13340	11320	9049	9432	8365	13920	18530	17770	16960	17000	9039	7753
(WY)	1987	1986	1983	1960	1997	1974	1993	1973	2000	1993	1993	1972
MIN	857	1100	1004	800	1000	1692	2476	1103	1248	1056	793	780
(WY)	1965	1940	1959	1940	1940	1954	1958	1958	1977	1965	1958	1958

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1940 - 2002	
ANNUAL TOTAL	2198990		1892640			
ANNUAL MEAN	6025		5185		4264	
HIGHEST ANNUAL MEAN					9484	
LOWEST ANNUAL MEAN					1568	
HIGHEST DAILY MEAN	10500	Apr 14,15	11800	Jun 9,10	29700	Mar 25 1975
LOWEST DAILY MEAN	2590	Aug 15	2140	Aug 11	501	Sep 14 1958
ANNUAL SEVEN-DAY MINIMUM	2990	Jan 1	2270	Sep 13	622	Oct 2 1958
MAXIMUM PEAK FLOW			12700	Jun 9	30000	Mar 25 1975
MAXIMUM PEAK STAGE			8.52	Jun 9	15.54	Mar 25 1975
INSTANTANEOUS LOW FLOW			1980	Aug 18		
ANNUAL RUNOFF (CFSM)	0.95		0.81		0.67	
ANNUAL RUNOFF (INCHES)	12.86		11.06		9.11	
10 PERCENT EXCEEDS	8800		7810		8400	
50 PERCENT EXCEEDS	5820		5150		3240	
90 PERCENT EXCEEDS	3350		2550		1310	

(e) Estimated due to ice effect or missing record

05438283 PISCASAW CREEK NEAR WALWORTH, WI

LOCATION.--Lat 42°31'18", long 88°39'39", in NE ¼ NE ¼ sec.25, T.1 N., R.15 E., Walworth County, Hydrologic Unit 07090006, on right bank 0.9 mi upstream from County Trunk Highway B bridge, 3.2 mi southwest of Walworth.

DRAINAGE AREA.--9.58 mi².

PERIOD OF RECORD.--September 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 935 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.8	2.9	2.3	2.4	2.6	2.9	3.2	3.0	2.7	1.7	1.6
2	2.3	2.7	2.9	2.3	2.3	2.7	2.9	3.2	2.9	2.7	1.6	2.6
3	2.3	2.7	2.7	2.3	2.4	2.6	2.9	3.0	3.4	2.7	1.6	2.1
4	2.3	2.7	2.7	2.3	2.3	2.5	3.1	2.9	28	2.7	1.7	1.8
5	2.3	2.7	2.7	2.3	2.3	2.5	3.2	2.9	12	2.7	1.8	1.8
6	2.3	2.8	2.7	2.3	2.3	2.5	3.1	3.0	6.9	2.6	1.8	1.7
7	2.6	2.7	2.6	2.3	2.0	2.5	3.7	2.9	5.6	2.6	1.8	1.6
8	2.7	2.6	2.5	2.3	2.0	5.1	9.2	2.9	5.0	2.6	1.7	1.6
9	2.7	2.5	2.5	2.3	2.1	18	28	2.9	4.6	2.7	1.6	1.6
10	2.9	2.5	2.5	2.3	5.4	7.3	11	2.9	4.4	2.6	1.6	1.6
11	2.9	2.5	2.5	2.3	3.9	5.2	7.1	3.0	4.6	2.6	1.4	1.6
12	2.9	2.5	2.5	2.3	3.0	4.5	5.8	2.9	4.4	2.4	1.4	1.6
13	3.4	3.1	3.1	2.3	2.7	4.2	5.2	2.9	4.4	2.2	1.5	1.6
14	4.5	5.8	2.9	2.3	2.7	4.0	4.9	2.9	4.5	2.1	1.6	1.6
15	3.5	5.0	2.7	2.3	2.7	3.8	4.6	2.9	4.4	2.1	1.6	1.6
16	3.1	3.9	2.7	2.2	2.6	3.5	4.3	3.1	4.2	2.0	1.5	1.6
17	2.9	3.5	2.7	2.3	2.5	3.5	4.2	2.9	4.2	2.0	1.5	1.6
18	2.9	3.3	2.7	2.3	2.5	3.3	4.0	2.9	4.0	2.0	1.6	1.6
19	3.0	3.1	2.8	2.3	3.1	3.2	3.8	2.9	3.9	2.0	1.6	5.2
20	3.0	2.9	2.7	2.3	4.5	3.0	3.6	2.9	3.8	1.9	1.6	2.8
21	2.7	2.9	2.7	2.3	4.9	2.9	3.7	2.7	3.5	1.9	1.6	2.3
22	2.5	2.8	2.7	2.3	4.0	2.9	3.7	2.7	3.4	1.8	2.2	2.1
23	7.6	2.7	2.7	2.2	3.5	2.9	3.6	2.8	3.4	1.8	2.0	2.1
24	9.7	3.5	2.7	2.2	3.4	2.9	3.7	2.8	3.3	1.6	1.9	2.2
25	8.1	3.6	2.5	2.0	3.2	2.9	3.6	3.3	3.1	1.6	1.8	1.8
26	5.0	3.3	2.5	2.0	3.1	2.9	3.5	3.2	3.3	1.6	1.8	1.7
27	4.1	3.0	2.5	2.0	2.9	2.9	3.6	3.1	3.2	1.6	1.6	1.6
28	3.5	2.9	2.5	2.1	2.9	2.9	3.8	2.8	3.1	1.6	1.6	1.6
29	3.8	2.9	2.5	2.1	---	2.9	3.6	2.9	3.0	1.8	1.6	1.7
30	3.7	2.9	2.5	2.2	---	2.9	3.3	2.8	3.0	1.8	1.6	1.5
31	2.9	---	2.5	2.4	---	2.9	---	3.0	---	1.7	1.6	---
TOTAL	110.4	92.8	82.3	69.7	83.6	118.4	153.6	91.2	150.5	66.7	51.5	57.4
MEAN	3.561	3.093	2.655	2.248	2.986	3.819	5.120	2.942	5.017	2.152	1.661	1.913
MAX	9.7	5.8	3.1	2.4	5.4	18	28	3.3	28	2.7	2.2	5.2
MIN	2.3	2.5	2.5	2.0	2.0	2.5	2.9	2.7	2.9	1.6	1.4	1.5
CFSM	0.37	0.32	0.28	0.23	0.31	0.40	0.53	0.31	0.52	0.22	0.17	0.20
IN.	0.43	0.36	0.32	0.27	0.32	0.46	0.60	0.35	0.58	0.26	0.20	0.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2002, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	2.178	2.077	2.013	2.422	4.882	4.204	4.145	3.430	9.124	2.993	2.135	2.234
MAX	3.68	3.29	4.54	5.85	13.1	12.0	12.4	6.92	17.2	6.22	4.27	4.48
(WY)	1994	1993	1993	1993	1997	1993	1993	2000	1999	1993	1993	1993
MIN	1.24	1.08	0.99	1.16	1.23	0.69	1.00	1.95	1.38	1.07	1.02	0.89
(WY)	1996	1997	1998	1996	1995	1996	1996	1995	1995	1995	1995	1995

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1992 - 2002

ANNUAL TOTAL	1551.8	1128.1	
ANNUAL MEAN	4.252	3.091	3.464
HIGHEST ANNUAL MEAN			6.41 1993
LOWEST ANNUAL MEAN			1.32 1995
HIGHEST DAILY MEAN	89 Jun 12	28 Apr 9	251 Feb 21 1997
LOWEST DAILY MEAN	1.8 Jan 23-28	1.4 Aug 11,12	0.58 Mar 10 1996
ANNUAL SEVEN-DAY MINIMUM	1.8 Jan 22	1.5 Aug 11	0.62 Mar 9 1996
MAXIMUM PEAK FLOW		90 Jun 4	(a)571 Jun 13 1999
MAXIMUM PEAK STAGE		6.42 Jun 4	(b)10.05 Jun 30 1993
INSTANTANEOUS LOW FLOW		1.2 (c)Jul 23-28	0.58 (d)Mar 9 1996
ANNUAL RUNOFF (CFSM)	0.44	0.32	0.36
ANNUAL RUNOFF (INCHES)	6.03	4.38	4.91
10 PERCENT EXCEEDS	6.4	4.3	4.9
50 PERCENT EXCEEDS	3.1	2.7	2.2
90 PERCENT EXCEEDS	2.3	1.6	1.1

- (a) Gage height, 9.69 ft
- (b) Discharge, 322 ft³/s
- (c) Also occurred Aug, 11,12
- (d) Also occurred Mar. 10-12, 1996

05527800 DES PLAINES RIVER AT RUSSELL, IL

LOCATION.--Lat 42°29'21", long 87°55'35", in SE ¼ sec.3, T.46 N., R.11 E., Lake County, Hydrologic Unit 07120004, on right bank at upstream side of Russell Road bridge, 0.3 mi west of Russell, 7.2 mi upstream from Mill Creek, and at mile 109.3.

DRAINAGE AREA.--123 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1961-63, and annual maximum, water years 1962-66. June 1967 to current year.

REVISED RECORDS.--WDR IL-75-1: Drainage area. WDR IL-76-1: 1960-68(M), 1973(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 662.00 ft above NGVD of 1929. Oct. 17, 1961, to June 29, 1967, crest-stage gage at left downstream side of bridge at datum 4.29 ft higher.

REMARKS.--Records good except those estimated daily discharges, which are poor (see page 11). Recording rain gage and gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	290	92	e21	53	75	60	101	32	13	3.3	2.6
2	17	244	100	e18	50	70	60	92	26	11	2.3	21
3	13	196	101	e17	53	81	66	87	32	9.8	2.2	84
4	9.1	139	93	e16	52	75	69	e76	137	7.8	2.4	85
5	6.3	97	86	e16	45	70	70	e70	303	6.7	2.4	51
6	5.3	77	79	e15	31	61	64	66	383	6.0	2.4	21
7	5.7	68	71	e15	37	54	64	61	447	5.0	3.1	11
8	6.9	63	65	e15	36	77	114	57	481	5.2	3.1	7.0
9	7.9	59	61	e16	38	190	288	60	473	12	2.9	4.4
10	8.5	55	61	e16	63	245	383	58	427	25	2.0	2.7
11	11	51	55	e17	98	281	458	57	371	17	0.74	2.1
12	20	47	50	e17	111	309	513	98	322	12	0.57	1.6
13	66	45	63	e17	104	315	508	134	271	9.2	1.5	1.5
14	239	60	77	e17	86	309	451	140	221	6.7	10	1.5
15	291	100	77	e17	72	289	388	125	171	5.4	22	1.4
16	290	113	70	e18	65	256	329	103	130	4.7	15	1.5
17	281	115	67	e18	60	217	272	107	96	3.7	10	1.7
18	263	107	65	e17	55	172	221	106	79	3.1	6.5	2.6
19	241	95	63	e16	55	130	219	95	85	2.7	4.7	5.2
20	212	84	63	e15	79	105	209	81	85	2.3	4.2	43
21	171	74	59	e15	126	93	188	70	74	1.9	4.5	38
22	116	67	57	16	153	81	172	62	62	1.7	17	21
23	135	62	61	17	164	73	156	56	51	1.4	41	13
24	228	59	59	21	163	68	140	52	42	1.1	34	8.9
25	348	65	e50	25	154	61	125	52	33	1.1	38	6.4
26	408	66	e43	25	134	56	108	58	30	1.1	18	4.6
27	438	67	e35	24	112	54	94	56	26	1.1	9.0	3.0
28	438	65	e30	27	91	53	101	52	25	1.1	5.5	2.4
29	412	64	e27	29	---	54	111	46	23	1.2	4.0	3.4
30	370	71	e25	30	---	62	110	41	16	4.8	2.5	7.2
31	331	---	e24	35	---	63	---	36	---	4.5	2.4	---
TOTAL	5413.7	2765	1929	598	2340	4099	6111	2355	4954	189.3	277.21	459.7
MEAN	174.6	92.17	62.23	19.29	83.57	132.2	203.7	75.97	165.1	6.106	8.942	15.32
MAX	438	290	101	35	164	315	513	140	481	25	41	85
MIN	5.3	45	24	15	31	53	60	36	16	1.1	0.57	1.4
CFSM	1.42	0.75	0.51	0.16	0.68	1.08	1.66	0.62	1.34	0.05	0.07	0.12
IN.	1.64	0.84	0.58	0.18	0.71	1.24	1.85	0.71	1.50	0.06	0.08	0.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002, BY WATER YEAR (WY)

	MEAN	43.60	69.77	87.40	69.09	109.7	210.3	226.7	126.6	105.6	52.99	39.89	53.59
MAX	364	390	382	279	327	673	718	410	642	363	417	410	
(WY)	1987	1986	1983	1993	1974	1979	1993	1996	2000	1978	1978	1972	
MIN	0.056	1.60	3.06	1.46	2.35	14.9	33.4	6.15	1.90	0.78	0.23	0.060	
(WY)	1995	2000	1977	1977	1977	1968	1977	1977	1988	1988	1999	1994	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1967 - 2002

ANNUAL TOTAL	38742.55	31490.91	
ANNUAL MEAN	106.1	86.28	99.59
HIGHEST ANNUAL MEAN			206
LOWEST ANNUAL MEAN			9.24
HIGHEST DAILY MEAN	483	Jun 17	513
LOWEST DAILY MEAN	0.50	Aug 8	0.57
ANNUAL SEVEN-DAY MINIMUM	0.59	Aug 7	1.2
MAXIMUM PEAK FLOW			(b)527
MAXIMUM PEAK STAGE			(d)6.97
INSTANTANEOUS LOW FLOW			0.51
ANNUAL RUNOFF (CFSM)	0.86		0.70
ANNUAL RUNOFF (INCHES)	11.72		9.52
10 PERCENT EXCEEDS	253		249
50 PERCENT EXCEEDS	73		57
90 PERCENT EXCEEDS	3.6		3.1
			(c)2130
			10.75
			2100
			0.00
			0.00
			274
			35
			2.8
			Mar 21
			(a)
			Jul 27
			Jun 14
			2000
			(f)

- (a) At times in most years
- (b) Gage height, 6.87 ft
- (c) Gage height, 9.95 ft
- (d) Discharge, 490 ft³/s
- (e) Estimated due to ice effce or missing record
- (f) Mar. 6, 1976 and Sept. 27, 1986

ILLINOIS RIVER BASIN

05543830 FOX RIVER AT WAUKESHA, WI

LOCATION.--Lat 43°00'17", long 88°14'37", in SW ¼ SW ¼ (revised) sec.3, T.6 N., R.19 E., Waukesha County, Hydrologic Unit 07120006, on left bank 20 ft downstream from Prairie Street bridge in Waukesha, 1.0 mi downstream from dam and 3.2 mi downstream from Pewaukee River.

DRAINAGE AREA.--126 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 793.04 ft above NGVD of 1929 (levels by City of Waukesha).

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). There is occasional regulation from mill dam 1.0 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	86	100	e46	e62	e90	99	130	74	49	37	40
2	67	83	92	e45	e60	e85	116	147	65	47	36	133
3	77	83	93	e44	e59	e70	127	142	136	43	31	209
4	76	78	90	e44	e58	e67	117	127	327	37	37	142
5	76	74	90	e44	e60	e65	106	113	377	34	37	92
6	68	73	91	46	e62	e67	95	113	351	31	31	70
7	61	72	84	49	64	e73	116	117	324	27	29	58
8	61	70	86	55	65	107	268	110	298	39	28	50
9	60	65	88	58	67	312	499	112	259	97	27	47
10	78	63	83	56	135	325	517	107	230	58	26	45
11	92	57	79	52	148	329	427	113	190	48	25	42
12	84	62	82	51	131	276	351	255	157	43	207	39
13	100	79	123	54	106	258	298	275	143	35	477	39
14	133	95	117	66	96	239	263	236	150	31	573	42
15	114	91	105	71	93	207	237	197	175	32	496	42
16	101	83	101	69	85	176	196	176	159	30	296	43
17	87	86	106	e55	79	145	159	158	140	28	141	45
18	79	85	104	e52	77	131	138	141	123	30	86	61
19	71	88	103	e49	116	125	159	121	110	31	67	111
20	61	85	98	49	177	130	141	109	108	29	54	134
21	62	82	84	50	197	132	126	89	98	29	68	95
22	119	74	79	53	168	118	132	86	100	33	237	70
23	266	72	e76	61	143	116	130	85	95	28	265	64
24	284	91	e72	65	125	104	130	80	77	25	176	91
25	260	110	e69	64	127	93	132	125	73	24	112	75
26	212	103	e67	63	124	93	120	137	73	162	85	63
27	167	96	e64	65	108	92	130	109	73	72	67	52
28	130	94	e60	73	e97	90	174	95	65	45	58	49
29	111	94	e55	74	---	95	180	109	56	60	56	117
30	101	99	e50	67	---	94	150	105	50	51	52	96
31	94	---	e47	63	---	92	---	88	---	39	46	---
TOTAL	3422	2473	2638	1753	2889	4396	5833	4107	4656	1367	3963	2256
MEAN	110.4	82.43	85.10	56.55	103.2	141.8	194.4	132.5	155.2	44.10	127.8	75.20
MAX	284	110	123	74	197	329	517	275	377	162	573	209
MIN	60	57	47	44	58	65	95	80	50	24	25	39
CFSM	0.88	0.65	0.68	0.45	0.82	1.13	1.54	1.05	1.23	0.35	1.01	0.60
IN.	1.01	0.73	0.78	0.52	0.85	1.30	1.72	1.21	1.37	0.40	1.17	0.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

MEAN	75.73	82.15	81.53	66.21	98.15	188.6	210.9	134.4	105.6	81.22	67.11	78.09
MAX	346	303	207	188	247	451	598	384	370	271	217	385
(WY)	1987	1986	1992	1973	2001	1974	1993	2000	1996	1993	1998	1986
MIN	6.44	8.14	4.80	6.35	6.26	22.5	53.4	26.6	19.0	9.33	8.23	6.44
(WY)	1964	1964	1964	1964	1964	1968	1963	1977	1964	1963	1963	1963

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1963 - 2002
ANNUAL TOTAL	53129	39753	
ANNUAL MEAN	145.6	108.9	107.4
HIGHEST ANNUAL MEAN			193
LOWEST ANNUAL MEAN			31.6
HIGHEST DAILY MEAN	665	Jun 13	2160
LOWEST DAILY MEAN	26	Aug 14	(a)3.2 (b)Dec 29-31 1963
ANNUAL SEVEN-DAY MINIMUM	33	Aug 9	(a)3.3 (b)Dec 26 1963
MAXIMUM PEAK FLOW			2260
MAXIMUM PEAK STAGE		6.05	7.42
ANNUAL RUNOFF (CFSM)	1.16	0.86	0.85
ANNUAL RUNOFF (INCHES)	15.69	11.74	11.58
10 PERCENT EXCEEDS	286	207	235
50 PERCENT EXCEEDS	101	87	66
90 PERCENT EXCEEDS	49	43	20

(a) Ice affected
(b) Also occurred Jan. 1, 1964
(e) Estimated due to ice effect or missing record

05544200 MUKWONAGO RIVER AT MUKWONAGO, WI

LOCATION.--Lat 42°51'24", long 88°19'40", in NE ¼ NE ¼ sec.35, T.5 N., R.18 E., Waukesha County, Hydrologic Unit 07120006, on left bank 100 ft upstream from bridge on State Highway 83 in Mukwonago, 100 ft downstream from railroad bridge, and 800 ft downstream from dam.

DRAINAGE AREA.--74.1 mi².

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

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 779.23 ft above NGVD of 1929 (Southeastern Wisconsin Regional Planning Commission bench mark). Prior to Oct. 19, 1981, at datum 0.85 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Discharge affected by manipulation of gates at dams 800 ft and 11.4 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	51	62	43	44	e53	61	36	55	39	32	33
2	63	55	62	42	45	e53	61	74	31	39	24	37
3	70	56	63	41	48	e54	62	75	66	39	21	52
4	67	54	61	40	49	e54	63	60	108	32	26	55
5	66	55	59	40	49	54	63	60	120	35	27	53
6	64	56	58	40	47	56	62	59	118	33	27	51
7	44	54	60	22	45	70	64	57	113	28	25	35
8	39	54	60	14	43	74	80	56	104	27	24	29
9	50	53	58	18	34	79	144	61	83	26	21	30
10	56	52	56	21	37	94	168	59	63	24	20	29
11	58	51	54	29	42	93	163	46	47	23	20	28
12	85	58	54	39	60	98	140	57	49	23	30	28
13	98	62	57	39	66	86	105	62	77	22	101	27
14	97	64	57	41	63	78	70	62	85	22	120	27
15	93	84	60	45	59	61	58	64	81	20	129	27
16	92	89	61	47	57	41	60	77	79	17	128	23
17	60	87	61	49	39	42	60	78	55	9.2	109	21
18	47	73	59	47	33	45	61	50	43	9.5	98	21
19	50	65	59	46	41	49	81	38	42	10	78	22
20	51	61	59	44	69	53	86	40	65	10	40	46
21	51	59	57	47	100	69	61	40	81	10	30	46
22	53	57	53	53	94	71	27	40	81	11	76	41
23	113	57	53	51	66	65	23	44	75	12	86	42
24	137	61	e50	47	62	35	53	54	46	13	70	39
25	144	63	48	48	52	25	64	64	27	13	64	25
26	141	61	49	50	50	29	80	68	27	18	62	19
27	134	64	e49	49	e52	33	82	67	33	17	50	20
28	73	65	e48	46	e53	40	75	65	37	19	45	20
29	51	65	e48	45	---	44	58	62	37	27	36	27
30	51	64	47	43	---	63	45	60	41	29	33	48
31	51	---	45	43	---	66	---	57	---	33	33	---
TOTAL	2295	1850	1727	1269	1499	1827	2280	1792	1969	689.7	1685	1001
MEAN	74.03	61.67	55.71	40.94	53.54	58.94	76.00	57.81	65.63	22.25	54.35	33.37
MAX	144	89	63	53	100	98	168	78	120	39	129	55
MIN	39	51	45	14	33	25	23	36	27	9.2	20	19
CFSM	1.00	0.83	0.75	0.55	0.72	0.80	1.03	0.78	0.89	0.30	0.73	0.45
IN.	1.15	0.93	0.87	0.64	0.75	0.92	1.14	0.90	0.99	0.35	0.85	0.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2002, BY WATER YEAR (WY)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	48.56	55.86	53.49	46.20	54.91	74.02	77.42	63.40	54.39	42.21	45.35	46.70																		
MAX	98.7	110	83.7	77.8	83.8	151	150	155	138	80.8	83.5	88.7																		
(WY)	1987	1986	1983	1974	1974	1974	1993	1975	1975	1993	1979	1986																		
MIN	19.0	29.2	26.2	22.8	31.1	42.5	43.3	16.9	14.4	13.3	18.5	23.4																		
(WY)	1998	1977	1990	1977	1978	2000	1977	1977	1988	1988	1991	1995																		

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1973 - 2002
ANNUAL TOTAL	23409	19883.7	
ANNUAL MEAN	64.13	54.48	55.04
HIGHEST ANNUAL MEAN			90.3
LOWEST ANNUAL MEAN			30.8
HIGHEST DAILY MEAN	203	168	275
LOWEST DAILY MEAN	16	9.2	1.8
ANNUAL SEVEN-DAY MINIMUM	18	10	6.8
MAXIMUM PEAK FLOW		(b)172	(c)300
MAXIMUM PEAK STAGE		(d)3.25	3.55
ANNUAL RUNOFF (CFSM)	0.87	0.74	0.74
ANNUAL RUNOFF (INCHES)	11.75	9.98	10.09
10 PERCENT EXCEEDS	102	85	100
50 PERCENT EXCEEDS	58	53	47
90 PERCENT EXCEEDS	28	24	22

- (a) Also occurred July 13 and Sept. 29
(b) Gage height, 3.12 ft
(c) Gage height, 2.50 ft, datum then in use
(d) Backwater from vegetation
(e) Estimated due to ice effect or missing record

ILLINOIS RIVER BASIN

05544371 JEWEL CREEK AT MUSKEGO, WI

LOCATION.--Lat 42°55'37", long 88°08'45", in NW 1/4 NW 1/4 sec.4, T.5 N ., R.20 E., Waukesha County, Hydrologic Unit 07120006, on right bank 0.4 mi downstream from County Trunk Highway HH, and 0.3 mi upstream from Little Muskego Lake.

DRAINAGE AREA.--8.16 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1999 to current year.

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

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	5.5	5.9	2.0	5.0	5.3	6.1	6.1	2.7	1.8	1.5	1.9
2	3.5	4.8	5.4	1.9	5.0	5.9	8.7	14	2.5	1.8	e1.3	11
3	3.4	4.3	4.5	1.9	4.8	5.7	8.4	7.7	16	1.7	e1.2	8.6
4	3.7	4.1	4.7	1.9	3.9	5.3	6.9	6.4	51	1.7	1.5	3.8
5	3.5	4.0	3.9	2.1	3.3	4.8	6.3	5.8	22	1.6	1.4	2.4
6	3.1	4.2	5.8	2.1	3.4	4.8	5.9	5.8	11	1.6	e1.2	2.1
7	3.3	4.0	4.7	2.0	3.7	4.8	11	5.4	8.3	1.6	e1.2	2.1
8	3.5	4.2	5.3	2.0	4.5	16	52	5.2	5.8	1.6	e1.1	2.0
9	3.7	3.4	5.3	2.4	6.1	67	90	5.9	4.9	1.7	e1.1	2.0
10	5.2	3.9	4.8	2.6	22	18	21	5.0	4.1	1.7	e1.1	2.0
11	7.0	4.1	4.0	2.6	10	11	12	6.2	4.3	1.6	e1.0	2.0
12	6.8	3.8	4.1	2.7	7.3	9.0	9.9	14	3.2	1.6	e9.0	1.9
13	12	5.3	8.3	2.6	6.4	8.9	8.4	8.2	2.6	1.5	75	2.0
14	19	6.6	6.6	3.3	6.1	8.0	7.6	6.5	3.0	1.5	74	2.0
15	9.5	6.0	5.8	3.4	6.1	7.5	7.1	5.7	5.7	1.5	10	1.9
16	6.8	5.5	5.7	3.5	5.9	7.0	6.6	5.6	8.1	1.5	5.0	1.9
17	5.2	4.4	6.1	3.1	5.6	6.8	6.2	5.2	3.2	1.5	3.8	2.0
18	4.6	3.7	5.5	2.7	5.4	6.7	6.1	5.0	2.6	1.5	2.7	2.4
19	3.1	3.6	5.6	2.5	12	6.6	7.9	4.4	2.4	1.5	2.2	4.1
20	3.1	3.9	5.4	2.5	21	6.8	6.3	3.7	2.2	1.4	2.1	6.1
21	5.1	4.5	4.3	2.6	16	6.7	6.1	3.1	2.2	1.4	2.8	3.6
22	5.7	3.3	4.5	2.8	8.6	6.2	6.8	3.8	2.1	e1.2	26	2.5
23	48	3.3	5.3	4.2	7.5	6.3	6.3	3.2	2.0	e1.2	12	2.4
24	26	5.9	4.0	4.0	7.4	6.1	6.1	3.3	2.0	e1.1	6.3	2.2
25	16	7.0	3.1	3.8	7.1	5.7	6.7	12	1.9	e1.1	3.7	2.2
26	7.8	5.8	2.6	4.2	6.7	5.7	5.8	8.0	2.4	9.3	2.4	2.1
27	6.8	5.7	2.6	4.7	6.3	5.6	6.2	5.6	2.2	2.2	2.2	2.1
28	6.5	4.8	2.6	5.0	5.8	5.8	12	4.4	2.0	1.7	2.1	2.1
29	6.0	5.8	2.3	4.4	---	6.0	7.9	8.5	2.0	1.7	2.0	8.2
30	5.9	6.3	2.1	3.7	---	6.3	6.5	5.2	1.9	1.6	2.0	6.1
31	5.8	---	2.0	4.3	---	5.8	---	3.7	---	1.5	2.0	---
TOTAL	253.6	141.7	142.8	93.5	212.9	282.1	364.8	192.6	186.3	55.9	260.9	97.7
MEAN	8.181	4.723	4.606	3.016	7.604	9.100	12.16	6.213	6.210	1.803	8.416	3.257
MAX	48	7.0	8.3	5.0	22	67	90	14	51	9.3	75	11
MIN	3.1	3.3	2.0	1.9	3.3	4.8	5.8	3.1	1.9	1.1	1.0	1.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	1999	2000	2001	2002	1999	2000	2001	2002	1999	2000	2001	2002
MEAN	4.972	4.429	4.056	4.270	10.55	8.497	12.74	11.07	12.84	6.394	6.141	6.875
MAX	8.18	6.19	4.87	6.89	18.4	12.5	16.4	16.1	19.7	14.6	9.15	12.6
(WY)	2002	2001	2001	2001	2001	2001	2001	2000	1999	2000	2000	2000
MIN	2.62	2.38	2.69	2.91	5.82	3.91	9.70	6.21	6.21	1.80	3.34	3.26
(WY)	2000	2000	2000	2000	2000	2000	2000	2002	2002	2002	1999	2002

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1999 - 2002

ANNUAL TOTAL	3362.3	2284.8		
ANNUAL MEAN	9.212	6.260	7.682	
HIGHEST ANNUAL MEAN			9.01	2001
LOWEST ANNUAL MEAN			6.26	2002
HIGHEST DAILY MEAN	139	Feb 9	187	Jul 3 2000
LOWEST DAILY MEAN	1.4	Aug 14	(e)1.0	Aug 11 1999
ANNUAL SEVEN-DAY MINIMUM	1.7	Aug 9	(e)1.2	Aug 5 1999
MAXIMUM PEAK FLOW			153	Aug 14 2000
MAXIMUM PEAK STAGE			4.49	Aug 14 2000
INSTANTANEOUS LOW FLOW			0.00	(a)Jan 18 2000
10 PERCENT EXCEEDS	16	9.1	13	
50 PERCENT EXCEEDS	6.2	4.5	4.9	
90 PERCENT EXCEEDS	2.6	1.7	1.7	

(a) Also occurred Apr. 7,8, result of dam construction upstream
(e) Estimated

05544371 JEWEL CREEK AT MUSKEGO, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1999 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: June 1999 to current year.

TOTAL-PHOSPHORUS DISCHARGE: June 1999 to current year.

INSTRUMENTATION.--Stage-activated water-quality sampler.

REMARKS.--Chemical analyses are done by the Wisconsin State Laboratory of Hygiene.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 171 tons, June 13, 1999; minimum daily, 0.03 ton, Apr. 30, May 1, 2, 3, 2000, and Sept. 6, 2001.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 428 lb, July 3, 2000; minimum daily, 0.14 lb, Oct. 23, 1999.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 23 tons, Aug. 13; minimum daily, 0.04 ton, July 5.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 104 lb, Aug. 13; minimum daily, 0.25 lb, Aug. 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE D (MG/L) (80154)
OCT 2001					
13...	2130	24	50	.079	62
14...	0400	29	50	.096	36
14...	1030	19	50	.095	26
23...	0005	37	50	.150	--
23...	0130	66	50	.115	139
23...	0445	58	50	.157	60
23...	1115	64	50	.206	68
23...	1745	29	50	.161	35
24...	0330	23	50	.136	33
24...	0645	23	50	.123	28
24...	1315	27	50	.128	36
25...	0215	24	50	.126	--
25...	0845	16	50	.111	--
NOV					
28...	1255	4.6	50	.046	--
FEB 2002					
10...	0430	18	50	.096	187
10...	0745	24	50	.057	117
10...	1415	28	50	.063	65
11...	0000	17	50	.069	--
19...	1945	19	50	.063	45
19...	2300	19	50	.075	48
20...	0530	19	50	.065	66
MAR					
07...	1220	4.9	70	.016	9.5
APR					
03...	1205	7.8	50	.023	21
08...	0030	28	50	.046	40
08...	0700	31	50	.058	25
08...	1545	51	50	.105	64
08...	2130	101	50	.178	112
09...	0345	144	50	.220	113
09...	1015	107	50	.179	81
09...	2000	37	50	.224	69
10...	0900	22	50	.095	33
10...	2200	16	50	.075	24
16...	1055	6.6	50	.058	70
MAY					
02...	0830	21	50	.054	103
02...	1200	16	50	.044	57
12...	1145	19	50	.067	103
24...	1105	2.8	50	.041	63
25...	1645	18	50	.102	95
JUN					
03...	1200	22	50	.157	105
03...	1515	34	50	.135	82
03...	2145	18	50	.102	47
04...	0545	33	50	.126	60
04...	0845	61	50	.141	76
04...	1515	75	50	.172	66
05...	0100	36	50	.141	38
05...	1730	16	50	.103	32
14...	1200	2.7	50	.056	34
16...	0215	16	50	.077	80
JUL					
05...	1130	1.6	70	.054	10

ILLINOIS RIVER BASIN

05544371 JEWEL CREEK AT MUSKEGO, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
AUG 2002					
12...	2115	20	50	.286	151
12...	2145	53	50	.246	170
12...	2215	82	50	.239	129
13...	0445	57	50	.261	147
13...	1115	54	50	.263	68
13...	1430	35	50	.273	138
13...	1500	75	50	.237	132
13...	2130	115	50	.266	102
14...	0400	150	50	.223	72
14...	1030	70	50	.191	67
14...	1700	30	50	.167	35
14...	2330	16	50	.108	49
22...	0600	16	50	.131	48
22...	0845	34	50	.136	37
22...	1515	36	50	.143	32
22...	2145	25	50	.146	35
23...	0415	16	50	.141	35
23...	1100	12	50	.147	26
SEP					
02...	1145	13	50	.085	40
02...	1715	16	50	.096	40
02...	2345	13	50	.089	32
26...	1100	2.1	70	.031	16

DISCHARGE,SUSP.SED., in T/DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.24	0.29	0.31	0.10	0.26	0.21	0.35	1.4	0.33	0.07	0.06	0.12
2	0.24	0.26	0.29	0.10	0.26	0.22	0.49	2.9	0.34	0.06	0.05	1.1
3	0.24	0.23	0.24	0.10	0.25	0.20	0.49	0.98	3.3	0.05	0.05	0.67
4	0.27	0.22	0.25	0.10	0.20	0.17	0.45	0.65	8.5	0.05	0.06	0.24
5	0.26	0.21	0.21	0.11	0.18	0.14	0.47	0.50	2.1	0.04	0.05	0.11
6	0.23	0.22	0.31	0.11	0.18	0.13	0.52	0.49	0.98	0.05	0.05	0.08
7	0.25	0.21	0.25	0.11	0.19	0.15	1.2	0.46	0.72	0.05	0.05	0.08
8	0.28	0.22	0.28	0.11	0.23	2.5	10.0	0.45	0.52	0.05	0.05	0.07
9	0.29	0.18	0.28	0.13	0.54	17.0	22.0	0.51	0.43	0.05	0.05	0.07
10	0.42	0.21	0.25	0.14	5.1	2.6	2.0	0.46	0.37	0.06	0.05	0.07
11	0.58	0.22	0.21	0.14	1.2	1.1	0.90	0.99	0.39	0.06	0.05	0.07
12	0.64	0.20	0.22	0.14	0.52	0.64	0.88	3.7	0.29	0.06	3.9	0.07
13	1.7	0.28	0.44	0.14	0.46	0.52	0.90	1.8	0.24	0.06	23.0	0.07
14	1.7	0.35	0.35	0.17	0.48	0.46	0.99	1.1	0.30	0.06	14.0	0.07
15	0.63	0.32	0.31	0.18	0.52	0.44	1.1	0.77	0.88	0.06	1.1	0.07
16	0.44	0.29	0.30	0.18	0.55	0.41	1.2	0.60	1.6	0.06	0.38	0.07
17	0.32	0.23	0.32	0.17	0.56	0.39	1.1	0.45	0.55	0.06	0.24	0.07
18	0.27	0.20	0.29	0.14	0.59	0.39	0.98	0.41	0.36	0.07	0.16	0.13
19	0.18	0.19	0.30	0.13	1.5	0.38	1.2	0.35	0.27	0.07	0.12	0.30
20	0.16	0.20	0.28	0.13	3.3	0.39	0.85	0.28	0.22	0.06	0.10	0.38
21	0.27	0.24	0.22	0.13	2.0	0.38	0.76	0.22	0.19	0.07	0.23	0.19
22	0.99	0.18	0.23	0.15	0.82	0.36	0.79	0.28	0.17	0.06	2.5	0.11
23	8.6	0.17	0.28	0.22	0.54	0.36	0.67	0.36	0.15	0.06	0.98	0.10
24	2.3	0.31	0.21	0.21	0.43	0.35	0.60	0.58	0.14	0.06	0.42	0.10
25	1.2	0.37	0.16	0.20	0.38	0.33	0.61	2.8	0.12	0.13	0.24	0.09
26	0.45	0.31	0.14	0.22	0.33	0.33	0.50	1.7	0.14	0.81	0.15	0.09
27	0.36	0.30	0.13	0.24	0.29	0.32	0.64	0.87	0.12	0.11	0.13	0.09
28	0.35	0.25	0.14	0.26	0.25	0.33	1.5	0.56	0.10	0.06	0.12	0.09
29	0.32	0.31	0.12	0.23	---	0.34	1.2	1.8	0.09	0.06	0.11	0.60
30	0.31	0.33	0.11	0.19	---	0.36	1.2	0.87	0.08	0.06	0.10	0.34
31	0.31	---	0.10	0.22	---	0.33	---	0.43	---	0.06	0.10	---
TOTAL	24.80	7.50	7.53	4.90	22.11	32.23	56.54	29.72	23.99	2.69	48.65	5.71

WTR YR 2002 TOTAL 266.37

ILLINOIS RIVER BASIN

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05544371 JEWEL CREEK AT MUSKEGO, WI--Continued

PHOSPHORUS T #/DAY, in POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.77	1.44	1.51	0.48	1.03	0.68	0.79	1.79	0.51	0.55	0.33	0.62
2	0.70	1.27	1.38	0.46	1.04	0.71	1.09	3.75	0.65	0.53	0.29	5.04
3	0.69	1.13	1.14	0.46	0.98	0.65	1.08	1.83	11.2	0.50	0.27	3.57
4	0.78	1.07	1.21	0.44	0.80	0.56	1.00	1.50	42.0	0.49	0.34	1.13
5	0.76	1.04	1.01	0.49	0.68	0.47	1.06	1.38	14.4	0.48	0.31	0.61
6	0.68	1.08	1.51	0.50	0.69	0.44	1.18	1.37	5.93	0.48	0.28	0.55
7	0.75	1.03	1.23	0.48	0.75	0.52	2.66	1.26	4.08	0.47	0.28	0.53
8	0.82	1.08	1.39	0.48	1.21	9.57	34.5	1.21	2.69	0.46	0.26	0.51
9	0.86	0.89	1.41	0.56	2.44	55.1	97.7	1.37	2.10	0.48	0.27	0.49
10	1.26	1.01	1.26	0.60	7.84	9.00	11.7	1.22	1.64	0.47	0.27	0.50
11	1.73	1.05	1.06	0.60	2.76	3.51	4.94	1.85	1.61	0.45	0.25	0.48
12	1.71	0.97	1.11	0.63	1.22	2.23	3.76	5.00	1.11	0.43	14.1	0.47
13	4.51	1.36	2.24	0.60	1.09	1.79	3.04	2.45	0.86	0.41	104	0.48
14	9.46	1.69	1.76	0.76	1.06	1.55	2.63	1.59	0.94	0.40	82.8	0.47
15	3.53	1.53	1.54	0.77	1.09	1.43	2.34	1.23	2.07	0.39	4.75	0.46
16	2.15	1.40	1.51	0.79	1.07	1.30	2.07	1.22	3.24	0.39	1.47	0.45
17	1.49	1.12	1.61	0.71	1.16	1.23	1.93	1.13	1.16	0.38	0.84	0.46
18	1.22	0.95	1.44	0.61	1.38	1.19	1.90	1.08	0.83	0.38	0.61	0.62
19	0.78	0.92	1.47	0.55	4.12	1.15	2.43	0.96	0.74	0.39	0.50	1.11
20	0.69	0.98	1.40	0.54	7.18	1.16	1.93	0.81	0.70	0.34	0.48	1.43
21	1.20	1.13	1.10	0.56	4.71	1.11	1.86	0.69	0.67	0.34	1.07	0.69
22	2.68	0.84	1.14	0.60	2.22	1.01	2.09	0.83	0.65	0.29	19.2	0.44
23	43.1	0.83	1.34	0.90	1.68	1.00	1.92	0.70	0.63	0.29	8.90	0.41
24	18.3	1.48	1.00	0.85	1.44	0.96	1.85	0.86	0.60	0.28	2.49	0.38
25	9.54	1.75	0.78	0.82	1.21	0.86	2.03	5.53	0.59	0.43	0.93	0.37
26	3.74	1.46	0.66	0.91	1.05	0.85	1.75	3.25	0.73	2.95	0.60	0.36
27	2.66	1.43	0.63	0.99	0.92	0.82	1.86	1.75	0.68	0.49	0.54	0.36
28	2.08	1.18	0.64	1.05	0.80	0.83	3.63	1.69	0.61	0.35	0.52	0.41
29	1.62	1.45	0.56	0.91	---	0.84	2.33	3.66	0.59	0.35	0.51	2.03
30	1.55	1.59	0.53	0.77	---	0.86	1.92	1.38	0.58	0.34	0.50	0.88
31	1.53	---	0.48	0.88	---	0.78	---	0.65	---	0.33	0.51	---
TOTAL	123.34	36.15	37.05	20.75	53.62	104.16	200.97	54.99	104.79	15.31	248.47	26.31
WTR YR 2002	TOTAL 1025.91											

ILLINOIS RIVER BASIN

05544385 MUSKEGO (BIG MUSKEGO) LAKE OUTLET NEAR WIND LAKE, WI

LOCATION.--Lat 42°51'09", long 88°07'50", in SE ¼ NE ¼ sec.33, T.5 N ., R.20 E., Waukesha County, Hydrologic Unit 07120006, on right bank at dam outlet of Muskego Lake, 700 ft north of Muskego Dam Drive, 2 mi northeast of Wind Lake.

DRAINAGE AREA.--33.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1987 to September 1989, October 1995 to current year. Prior to October 1996, published under station number 425109088075000. Prior to October 2000 published as "Muskego Lake Outlet near Wind Lake".

GAGE.--Water-stage recorder. Datum of gage is 760.00 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 18, 1987, nonrecording gage at same site and datum, October 1989 to September 1995, nonrecording gage at same datum.

REMARKS.--Flows for the water year were based on upstream-stage/downstream-stage-discharge ratings for flow through the variably-opened gate or upstream-stage-discharge rating for the dam crest or combination of gate and crest overflow. Records good (see page 11).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.1	43.4	3.3	10.0	11.0	23.0	7.9	10.4	6.2	4.9	0.00	0.00
2	0.1	46.1	5.2	9.1	10.0	27.0	13.0	10.2	7.8	4.9	0.00	0.00
3	0.00	44.0	6.5	8.4	9.8	28.0	9.8	10.5	12.3	4.9	0.00	0.00
4	0.00	42.9	6.2	8.4	9.1	26.0	9.8	8.8	40.8	5.0	0.00	0.00
5	0.1	31.0	2.2	8.1	8.9	24.0	8.8	11.7	65.7	4.9	0.00	0.00
6	0.00	21.1	6.2	8.0	8.6	23.0	7.1	7.6	68.9	4.9	0.00	0.00
7	0.00	21.3	11.0	7.3	8.2	20.0	7.1	19.7	60.2	4.9	0.00	0.00
8	0.00	21.3	9.9	7.4	8.1	22.0	30.0	9.3	55.0	4.8	0.00	0.00
9	0.00	20.6	7.7	7.2	8.4	28.0	83.3	5.9	53.0	4.9	0.00	0.00
10	0.00	20.8	6.6	7.0	14.0	41.0	91.1	6.6	38.1	4.9	0.00	0.00
11	0.1	20.6	9.1	7.0	14.0	44.0	85.9	10.9	42.7	4.9	0.00	0.00
12	2.0	9.0	9.3	6.2	15.0	45.0	88.3	15.8	45.0	4.8	0.00	0.00
13	1.4	0.00	12.0	6.1	15.0	45.0	84.5	14.5	41.2	4.8	0.00	0.00
14	2.5	0.00	14.0	6.8	12.0	55.0	70.8	11.8	39.1	4.8	0.00	0.00
15	17.9	0.00	11.0	7.1	14.0	38.0	63.9	7.6	37.6	4.8	0.00	0.00
16	30.6	0.4	12.0	8.1	15.0	44.0	50.6	14.7	37.0	4.7	0.00	0.00
17	28.2	0.2	15.0	9.2	14.0	38.0	51.9	17.7	23.4	4.7	0.00	0.00
18	26.4	0.2	13.0	9.2	12.0	32.0	47.9	10.5	2.4	4.8	0.00	0.00
19	28.4	0.7	16.0	9.1	19.0	30.0	57.8	9.6	5.0	4.8	0.00	0.00
20	30.3	0.1	14.0	9.2	25.0	29.0	62.5	10.4	5.0	4.8	0.00	0.00
21	32.1	0.1	14.0	8.8	33.0	29.0	50.0	6.0	5.1	4.7	0.00	0.00
22	34.7	0.2	14.0	7.1	30.0	18.0	41.4	4.9	5.0	4.7	0.00	0.00
23	56.7	0.3	6.4	7.0	28.0	15.0	31.9	4.7	5.0	4.9	0.00	0.00
24	69.2	0.5	13.0	7.0	26.0	34.0	23.4	11.3	5.0	4.8	0.00	0.00
25	44.2	0.3	13.0	7.0	35.0	26.0	11.8	7.6	5.0	4.7	0.00	0.00
26	74.0	3.2	13.0	6.5	32.0	9.8	5.2	5.2	4.9	2.1	0.00	0.00
27	74.0	1.7	13.0	6.6	27.0	6.5	6.1	6.4	5.0	0.00	0.00	0.00
28	58.1	3.5	12.0	6.8	24.0	4.7	9.2	7.2	5.0	0.00	0.00	0.00
29	69.8	7.0	12.0	6.4	---	6.9	6.0	6.5	4.9	0.00	0.00	0.00
30	62.3	7.2	11.0	6.2	---	5.1	7.3	5.7	4.9	0.00	0.00	0.00
31	48.1	---	11.0	9.6	---	5.6	---	5.8	---	0.00	0.00	---
TOTAL	791.30	367.70	322.6	237.9	486.1	822.6	1124.3	295.5	736.2	122.80	0.00	0.00
MEAN	25.53	12.26	10.41	7.674	17.36	26.54	37.48	9.532	24.54	3.961	0.000	0.000
MAX	74	46	16	10	35	55	91	20	69	5.0	0.00	0.00
MIN	0.00	0.00	2.2	6.1	8.1	4.7	5.2	4.7	2.4	0.00	0.00	0.00
CFSM	0.75	0.36	0.31	0.23	0.51	0.78	1.11	0.28	0.72	0.12	0.00	0.00
IN.	0.87	0.40	0.35	0.26	0.53	0.90	1.23	0.32	0.81	0.13	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	16.56	13.63	13.74	18.91	40.56	27.36	31.56	23.67	29.86	8.650	4.114	7.549			
MAX	44.2	45.6	44.2	43.9	88.6	51.8	55.6	69.7	69.7	39.6	14.8	32.0			
(WY)	1996	1996	1988	1988	2001	2001	1999	2000	1999	2000	1998	2000			
MIN	0.000	0.001	0.46	3.08	8.29	9.83	0.000	0.008	0.003	0.000	0.000	0.000			
(WY)	1989	2000	2001	2000	2000	1997	1997	1997	1989	1988	1988	1988			

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1988 - 2002

ANNUAL TOTAL	9240.46	5307.00		
ANNUAL MEAN	25.32	14.54		
HIGHEST ANNUAL MEAN			28.3	1999
LOWEST ANNUAL MEAN			9.42	1989
HIGHEST DAILY MEAN	179	Feb 11	91	Apr 10
LOWEST DAILY MEAN	0.00	Many days	0.00	(a)Oct 3
ANNUAL SEVEN-DAY MINIMUM	0.00	Many periods	0.00	Jul 27
ANNUAL RUNOFF (CFSM)	0.75		0.43	
ANNUAL RUNOFF (INCHES)	10.14		5.82	7.87
10 PERCENT EXCEEDS	60		43	55
50 PERCENT EXCEEDS	14		7.2	9.0
90 PERCENT EXCEEDS	0.00		0.00	0.00

(a) Also occurred Oct. 4, 6-10, Nov. 13-15, and July 27 to Sept. 30

05544385 MUSKEGO (BIG MUSKEGO) LAKE OUTLET NEAR WIND LAKE, WI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1987 to September 1989, October 1995 to September 2002 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1995 to September 2002 (discontinued).

TOTAL-PHOSPHORUS DISCHARGE: October 1987 to September 1989, October 1995 to September 2002 (discontinued).

REMARKS.--Suspended-sediment and total-phosphorus discharge records are fair. Samples to define the temporal fluctuation in total-phosphorus and suspended-sediment concentrations were collected by automatic refrigerated pumping sampler. Phosphorus analyses by the Wisconsin State Laboratory of Hygiene.

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 44 tons, June 14, 1996; minimum daily, 0 ton, many days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 359 lb, Sept. 10, 1989; minimum daily, 0.00 lb, many days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 3.59 tons, Oct. 26; minimum daily, 0 ton, many days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 16.19 lb, Apr. 12; minimum daily, 0.00 lb, many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, IN		PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE D (MG/L) (80154)
		CUBIC FEET PER SECOND (00060)	SAM- PLING METHOD, CODES (82398)		
OCT 2001					
26...	1100	74	50	--	18
NOV					
03...	1100	44	50	.033	--
05...	1100	31	50	.029	--
09...	1100	21	50	--	5.2
28...	1035	3.5	70	.032	3.0
30...	1100	7.2	50	--	--
DEC					
02...	1100	5.2	50	.017	--
04...	1100	6.2	50	--	--
14...	1100	14	50	.024	--
18...	1100	13	50	--	--
20...	1100	14	50	.020	--
22...	1100	14	50	--	--
24...	1100	13	50	.019	--
26...	1100	13	50	--	--
MAR 2002					
06...	0945	23	10	.023	4.1
07...	1125	20	70	.022	2.7
07...	1145	20	50	.048	14
09...	1200	28	50	.030	3.9
13...	1200	45	50	.037	6.5
17...	1200	38	50	.026	.6
19...	1200	30	50	.025	1.3
23...	1200	15	50	.029	3.8
27...	1200	6.5	50	.034	3.8
APR					
02...	1200	13	50	.030	1.3
03...	1040	9.8	70	.030	1.9
04...	1200	9.8	50	.025	6.9
06...	1200	7.1	50	.021	2.4
08...	1200	30	50	.024	2.4
10...	1200	91	50	.030	2.0
12...	1200	88	50	.034	1.7
14...	1200	71	50	.036	3.0
16...	1000	51	70	.040	2.1
20...	1200	62	50	.036	1.7
28...	1200	9.2	50	.026	1.0
MAY					
02...	1200	10	50	.035	2.4
12...	1200	16	50	.030	.9
16...	1200	15	50	.033	.7
18...	1200	10	50	.023	2.2
24...	1030	11	70	.024	2.2
JUN					
03...	1200	12	50	.040	3.5
05...	1200	66	50	.028	3.2
07...	1200	60	50	.025	2.6
09...	1200	53	50	.030	1.9
10...	1055	38	70	--	1.5
11...	1200	43	50	.044	1.8
13...	1200	41	50	.069	2.7
14...	1055	39	70	.037	--
JUL					
05...	1010	4.9	70	.049	2.4

ILLINOIS RIVER BASIN

05544385 MUSKEGO (BIG MUSKEGO) LAKE OUTLET NEAR WIND LAKE, WI--Continued

DISCHARGE,SUSP.SED., in T/DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.82	0.03	0.09	0.11	0.25	0.04	0.04	0.05	0.03	0.00	0.00
2	0.00	0.85	0.04	0.08	0.10	0.30	0.05	0.07	0.07	0.03	0.00	0.00
3	0.00	0.78	0.05	0.08	0.10	0.31	0.05	0.06	0.12	0.03	0.00	0.00
4	0.00	0.74	0.05	0.08	0.09	0.29	0.18	0.05	0.37	0.03	0.00	0.00
5	0.00	0.52	0.02	0.07	0.09	0.26	0.11	0.06	0.57	0.03	0.00	0.00
6	0.00	0.33	0.05	0.07	0.09	0.25	0.05	0.04	0.54	0.03	0.00	0.00
7	0.00	0.32	0.09	0.07	0.08	0.43	0.05	0.09	0.42	0.03	0.00	0.00
8	0.00	0.31	0.08	0.07	0.08	0.35	0.19	0.04	0.33	0.03	0.00	0.00
9	0.00	0.29	0.06	0.07	0.09	0.29	0.51	0.02	0.27	0.03	0.00	0.00
10	0.00	0.29	0.06	0.07	0.14	0.50	0.49	0.02	0.15	0.03	0.00	0.00
11	0.00	0.28	0.08	0.07	0.15	0.62	0.43	0.03	0.21	0.03	0.00	0.00
12	0.02	0.12	0.08	0.06	0.16	0.71	0.41	0.04	0.27	0.03	0.00	0.00
13	0.02	0.00	0.10	0.06	0.16	0.79	0.54	0.03	0.30	0.03	0.00	0.00
14	0.03	0.00	0.12	0.06	0.13	0.75	0.57	0.03	0.28	0.03	0.00	0.00
15	0.19	0.00	0.09	0.07	0.15	0.36	0.44	0.02	0.27	0.03	0.00	0.00
16	0.33	0.00	0.10	0.08	0.16	0.25	0.29	0.03	0.27	0.03	0.00	0.00
17	0.32	0.00	0.13	0.09	0.15	0.06	0.28	0.07	0.17	0.03	0.00	0.00
18	0.31	0.00	0.11	0.09	0.13	0.08	0.25	0.06	0.02	0.03	0.00	0.00
19	0.34	0.01	0.14	0.09	0.20	0.11	0.28	0.06	0.04	0.03	0.00	0.00
20	0.38	0.00	0.12	0.09	0.27	0.15	0.29	0.06	0.03	0.03	0.00	0.00
21	0.42	0.00	0.12	0.07	0.35	0.20	0.22	0.04	0.04	0.03	0.00	0.00
22	0.47	0.00	0.12	0.07	0.32	0.15	0.17	0.03	0.03	0.03	0.00	0.00
23	0.92	0.00	0.06	0.07	0.30	0.15	0.13	0.03	0.03	0.03	0.00	0.00
24	1.50	0.00	0.12	0.07	0.28	0.35	0.09	0.07	0.03	0.03	0.00	0.00
25	1.19	0.00	0.12	0.07	0.38	0.27	0.04	0.05	0.03	0.03	0.00	0.00
26	3.59	0.03	0.12	0.06	0.35	0.10	0.02	0.03	0.03	0.01	0.00	0.00
27	3.23	0.01	0.12	0.07	0.29	0.07	0.02	0.04	0.03	0.00	0.00	0.00
28	2.25	0.03	0.11	0.07	0.26	0.04	0.02	0.05	0.03	0.00	0.00	0.00
29	2.35	0.06	0.11	0.06	---	0.06	0.02	0.05	0.03	0.00	0.00	0.00
30	1.79	0.06	0.10	0.06	---	0.04	0.03	0.05	0.03	0.00	0.00	0.00
31	1.15	---	0.10	0.10	---	0.03	---	0.05	---	0.00	0.00	---
TOTAL	20.80	5.85	2.80	2.28	5.16	8.57	6.26	1.41	5.06	0.76	0.00	0.00

WTR YR 2002 TOTAL 58.95

PHOSPHORUS T #/DAY, in POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	7.88	0.37	1.05	1.26	2.82	1.31	1.83	1.23	1.24	0.00	0.00
2	0.02	8.28	0.48	0.96	1.14	3.32	2.10	1.93	1.61	1.25	0.00	0.00
3	0.00	7.83	0.62	0.89	1.12	3.45	1.59	1.96	2.64	1.26	0.00	0.00
4	0.00	7.17	0.61	0.89	1.05	3.21	1.32	1.62	7.91	1.30	0.00	0.00
5	0.02	4.85	0.22	0.86	1.03	2.97	1.09	2.11	9.92	1.31	0.00	0.00
6	0.00	3.33	0.65	0.85	0.99	2.85	0.80	1.35	9.85	1.27	0.00	0.00
7	0.00	3.38	1.18	0.78	0.95	3.78	0.86	3.45	8.12	1.26	0.00	0.00
8	0.00	3.39	1.09	0.79	0.94	3.92	3.88	1.60	8.16	1.25	0.00	0.00
9	0.00	3.28	0.88	0.77	0.98	4.53	11.69	1.01	8.58	1.27	0.00	0.00
10	0.00	3.33	0.77	0.75	1.64	7.02	14.74	1.10	6.89	1.27	0.00	0.00
11	0.04	3.32	1.09	0.76	1.64	7.95	14.83	1.79	10.13	1.26	0.00	0.00
12	0.76	1.45	1.15	0.67	1.76	8.56	16.19	2.55	13.73	1.25	0.00	0.00
13	0.45	0.00	1.52	0.66	1.77	8.98	15.94	2.40	15.33	1.24	0.00	0.00
14	0.67	0.00	1.81	0.74	1.42	10.16	13.75	2.00	7.80	1.24	0.00	0.00
15	3.86	0.01	1.38	0.77	1.66	6.46	13.11	1.33	7.62	1.23	0.00	0.00
16	6.49	0.07	1.47	0.89	1.78	6.82	10.91	2.62	7.60	1.23	0.00	0.00
17	5.94	0.03	1.78	1.01	1.67	5.33	10.91	2.68	4.87	1.22	0.00	0.00
18	5.51	0.03	1.50	1.01	1.43	4.40	9.81	1.31	0.51	1.24	0.00	0.00
19	5.88	0.11	1.78	1.00	2.27	4.05	11.53	1.20	1.10	1.24	0.00	0.00
20	6.23	0.02	1.51	1.02	3.00	4.07	12.14	1.31	1.11	1.23	0.00	0.00
21	6.55	0.02	1.49	0.98	3.97	4.22	9.44	0.76	1.15	1.21	0.00	0.00
22	7.01	0.03	1.47	0.79	3.61	2.72	7.59	0.62	1.14	1.22	0.00	0.00
23	11.35	0.04	0.66	0.78	3.38	2.35	5.68	0.60	1.15	1.26	0.00	0.00
24	13.51	0.08	1.33	0.78	3.15	5.55	3.92	1.46	1.16	1.23	0.00	0.00
25	8.56	0.05	1.34	0.78	4.25	4.42	1.92	1.04	1.17	1.22	0.00	0.00
26	14.18	0.55	1.34	0.73	3.89	1.73	0.79	0.76	1.18	0.55	0.00	0.00
27	14.07	0.29	1.34	0.74	3.29	1.19	0.88	0.99	1.21	0.00	0.00	0.00
28	10.93	0.60	1.24	0.77	2.93	0.85	1.29	1.18	1.21	0.00	0.00	0.00
29	13.01	1.07	1.25	0.72	---	1.22	0.91	1.12	1.22	0.00	0.00	0.00
30	11.51	0.95	1.15	0.70	---	0.88	1.20	1.03	1.23	0.00	0.00	0.00
31	8.80	---	1.15	1.09	---	0.95	---	1.10	---	0.00	0.00	---
TOTAL	155.37	61.44	35.62	25.98	57.97	130.73	202.12	47.81	146.53	31.75	0.00	0.00

WTR YR 2002 TOTAL 895.32

423525088260400 GENEVA LAKE AT LAKE GENEVA, WI

LOCATION.--Lat 42°35'25", long 88°26'04" in SE ¼ NW ¼ sec.36, T.2 N., R.17 E., Walworth County, Hydrologic Unit 07120006, at Geneva Lake dam at Center Street at Lake Geneva.

DRAINAGE AREA.--28.7 mi². Area of Lake Geneva, 5,262 acres.

GAGE-HEIGHT RECORD

PERIOD OF RECORD.--October 1997 to August 2002 (temporarily discontinued for repairs to dam).

GAGE.--Water-stage recorder. Datum of gage is 862.08 ft above NGVD of 1929. Intermittent staff-gage readings in August and September.

REMARKS.--Recording rain gage and gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 3.29 ft, June 13, 2000; minimum gage height, 1.66 ft, Apr. 9, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 2.97 ft, June 4; minimum gage height, 1.84 ft, Jan. 29.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.53	2.51	2.57	2.18	2.11	2.36	2.48	2.61	2.58	2.57	2.25	---
2	2.53	2.51	2.55	2.17	2.12	2.40	2.50	2.62	2.55	2.55	2.22	---
3	2.53	2.49	2.55	2.16	2.11	2.44	2.51	2.60	2.56	2.53	2.21	---
4	2.51	2.49	2.55	2.15	2.11	e2.43	2.50	2.59	2.78	2.50	2.22	---
5	2.50	2.49	2.58	2.14	2.12	e2.42	2.50	2.58	2.85	2.46	2.23	---
6	2.48	2.49	2.56	2.12	2.12	e2.41	2.50	2.59	2.83	2.45	2.19	---
7	2.46	2.48	2.54	2.11	2.12	e2.43	2.53	2.58	2.81	2.45	2.18	---
8	2.45	2.48	2.53	2.10	2.12	2.46	2.61	2.56	2.79	2.46	2.17	---
9	2.45	2.48	2.53	2.10	2.11	2.58	2.72	2.61	2.76	2.45	2.17	2.30
10	2.48	2.46	2.52	2.08	2.15	2.54	2.72	2.57	2.76	2.41	2.16	2.33
11	2.48	2.45	2.50	2.08	2.18	2.53	2.71	2.56	2.78	2.39	2.15	---
12	2.49	2.45	2.48	2.07	2.18	2.52	2.70	2.59	2.75	2.38	e2.16	---
13	2.52	2.48	2.50	2.05	2.17	2.53	2.68	2.59	2.73	2.37	---	---
14	2.57	2.54	2.47	2.05	2.19	2.51	2.68	2.58	2.76	2.37	---	---
15	2.56	2.56	2.46	2.06	2.19	2.54	2.67	2.60	2.74	2.37	---	---
16	2.53	2.55	2.44	2.06	2.18	2.52	2.68	2.60	2.71	2.36	---	2.21
17	2.51	2.55	2.44	2.06	2.18	2.51	2.68	2.59	2.69	2.35	---	---
18	2.51	2.55	2.43	2.04	2.19	2.52	2.68	2.58	2.66	2.34	---	---
19	2.49	2.55	2.42	2.03	2.22	2.51	2.69	2.57	2.65	2.32	---	---
20	2.48	2.54	2.40	2.02	2.27	2.52	2.66	2.56	2.65	2.32	---	---
21	2.47	2.53	2.38	2.01	2.31	2.52	2.65	2.55	2.63	2.33	---	---
22	2.48	2.51	2.37	2.00	2.32	2.52	2.67	2.55	2.62	2.32	2.30	---
23	2.57	2.50	2.39	2.00	2.33	2.50	2.66	2.55	2.61	2.28	---	---
24	2.63	2.54	2.35	2.01	2.33	2.47	2.66	2.53	2.60	2.25	---	2.28
25	2.68	2.60	2.32	2.03	2.34	2.45	2.67	2.56	2.59	2.24	---	---
26	2.57	2.55	2.31	2.02	2.36	2.46	2.63	2.58	2.63	2.24	2.28	---
27	2.54	2.57	2.29	2.03	2.36	2.46	2.62	2.57	2.61	2.26	---	---
28	2.54	2.55	2.27	2.02	2.37	2.47	2.65	2.56	2.59	2.26	2.23	---
29	2.51	2.55	2.25	2.02	---	2.48	2.64	2.57	2.58	2.27	---	---
30	2.50	2.57	2.23	2.03	---	2.49	2.62	2.59	2.57	2.26	---	---
31	2.52	---	2.21	2.06	---	2.49	---	2.59	---	2.26	---	---
MEAN	2.52	2.52	2.43	2.07	2.21	2.48	2.63	2.58	2.68	2.37	---	---
MAX	2.68	2.60	2.58	2.18	2.37	2.58	2.72	2.62	2.85	2.57	---	---
MIN	2.45	2.45	2.21	2.00	2.11	2.36	2.48	2.53	2.55	2.24	---	---

e Estimated

ILLINOIS RIVER BASIN

423525088260400 GENEVA LAKE AT LAKE GENEVA, WI--Continued

PRECIPITATION QUANTITY

PERIOD OF RECORD.--October 1997 to August 2002 (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Rain gage covered from Nov. 20 to Apr. 3.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.78 in., June 13, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall during periods Oct. 1 to Nov. 20 and Apr. 4 to Aug. 11, 1.98 in., June 4.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	---	---	---	---	---	0.19	0.00	0.00	0.03	---
2	0.00	0.00	---	---	---	---	---	0.02	0.00	0.00	0.00	---
3	0.00	0.00	---	---	---	---	---	0.00	1.48	0.00	0.00	---
4	0.13	0.00	---	---	---	---	0.00	0.00	1.98	0.00	0.25	---
5	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	---
6	0.00	0.00	---	---	---	---	0.00	0.06	0.00	0.00	0.00	---
7	0.00	0.00	---	---	---	---	0.76	0.00	0.00	0.00	0.00	---
8	0.05	0.00	---	---	---	---	1.31	0.00	0.00	0.25	0.00	---
9	0.00	0.00	---	---	---	---	0.07	0.10	0.00	0.08	0.00	---
10	0.32	0.00	---	---	---	---	0.00	0.00	0.20	0.00	0.00	---
11	0.00	0.00	---	---	---	---	0.00	0.60	0.05	0.00	0.00	---
12	0.36	0.00	---	---	---	---	0.04	0.04	0.00	0.00	---	---
13	0.64	0.69	---	---	---	---	0.00	0.00	0.24	0.00	---	---
14	0.02	0.32	---	---	---	---	0.00	0.00	0.14	0.00	---	---
15	0.00	0.00	---	---	---	---	0.00	0.00	0.02	0.00	---	---
16	0.00	0.00	---	---	---	---	0.00	0.31	0.00	0.00	---	---
17	0.00	0.00	---	---	---	---	0.01	0.00	0.03	0.00	---	---
18	0.00	0.00	---	---	---	---	0.34	0.00	0.00	0.00	---	---
19	0.00	0.02	---	---	---	---	0.02	0.02	0.00	0.00	---	---
20	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	---	---
21	0.00	---	---	---	---	---	0.37	0.00	0.02	0.00	---	---
22	0.53	---	---	---	---	---	0.01	0.00	0.00	0.00	---	---
23	0.43	---	---	---	---	---	0.00	0.03	0.00	0.00	---	---
24	0.68	---	---	---	---	---	0.16	0.00	0.00	0.00	---	---
25	0.00	---	---	---	---	---	0.00	0.63	0.00	0.00	---	---
26	0.00	---	---	---	---	---	0.00	0.00	0.92	0.00	---	---
27	0.00	---	---	---	---	---	0.36	0.00	0.00	0.14	---	---
28	0.00	---	---	---	---	---	0.03	0.23	0.00	0.00	---	---
29	0.00	---	---	---	---	---	0.00	0.02	0.00	0.21	---	---
30	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	---	---
31	0.00	---	---	---	---	---	---	0.00	---	0.00	---	---
TOTAL	3.16	---	---	---	---	---	---	2.25	5.08	0.68	---	---

055451345 WHITE RIVER AT CENTER STREET AT LAKE GENEVA, WI

LOCATION.--Lat 42°35'26", long 88°26'01", in SE ¼ NW ¼ sec.36, T.2 N., R.17 E., Walworth County, Hydrologic Unit 07120006, on left bank at Lake Geneva dam at Center Street at Lake Geneva.

DRAINAGE AREA.--28.7 mi².

Water-Discharge Records

PERIOD OF RECORD.--October 1997 to August 12, 2002 (gage temporarily removed because of repairs to dam).

GAGE.--Water-stage recorder. Elevation of gage is 848.22 ft above NGVD of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	18	30	37	1.1	2.7	18	41	36	33	0.07	---
2	19	17	27	37	1.0	7.0	23	45	32	29	0.06	---
3	19	16	26	37	0.98	11	23	40	37	22	0.05	---
4	15	15	26	36	0.92	9.2	22	36	106	18	0.05	---
5	15	15	32	35	0.91	9.3	22	35	123	11	e0.03	---
6	12	16	28	34	0.63	9.4	21	37	105	9.9	0.06	---
7	8.6	14	25	34	0.40	9.5	29	35	96	9.6	0.07	---
8	7.6	14	24	34	0.46	12	46	31	92	12	0.08	---
9	8.9	16	23	33	0.44	33	67	41	84	9.7	0.09	---
10	12	12	22	33	0.50	e28	66	32	85	4.7	0.10	---
11	12	10	32	32	0.48	24	64	30	93	2.3	0.12	---
12	14	9.6	50	32	0.46	25	63	38	80	1.5	e0.14	---
13	19	16	50	32	0.46	26	60	36	74	1.3	---	---
14	28	25	48	32	0.47	22	59	35	83	1.1	---	---
15	25	29	47	32	0.46	26	58	36	76	0.94	---	---
16	21	27	46	32	0.39	23	59	35	68	0.80	---	---
17	17	26	46	32	0.38	23	56	33	62	0.45	---	---
18	18	26	44	31	0.37	24	57	31	56	0.24	---	---
19	16	26	44	32	0.45	23	59	27	55	0.12	---	---
20	15	23	42	33	0.59	24	53	24	51	0.11	---	---
21	13	22	41	35	0.83	25	52	23	45	0.12	---	---
22	14	20	41	23	0.92	25	57	25	45	0.10	---	---
23	28	19	41	1.8	1.3	21	53	28	44	0.08	---	---
24	38	26	39	1.7	1.8	16	55	24	40	0.09	---	---
25	49	37	38	1.5	2.0	14	54	33	38	0.09	---	---
26	28	28	38	1.4	2.9	14	45	36	48	0.09	---	---
27	23	32	38	1.3	3.6	14	42	33	43	0.08	---	---
28	22	27	37	1.3	4.1	15	51	32	39	0.08	---	---
29	18	27	37	1.1	---	17	49	33	34	0.12	---	---
30	15	29	37	1.1	---	19	45	37	31	0.06	---	---
31	18	---	37	1.1	---	18	---	38	---	0.08	---	---
TOTAL	587.1	637.6	1136	740.3	29.30	569.1	1428	1040	1901	168.75	---	---
MEAN	18.94	21.25	36.65	23.88	1.046	18.36	47.60	33.55	63.37	5.444	---	---
MAX	49	37	50	37	4.1	33	67	45	123	33	---	---
MIN	7.6	9.6	22	1.1	0.37	2.7	18	23	31	0.06	---	---
CFSM	0.66	0.74	1.28	0.83	0.04	0.64	1.66	1.17	2.21	0.19	---	---
IN.	0.76	0.83	1.47	0.96	0.04	0.74	1.85	1.35	2.46	0.22	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
MEAN	6.001	7.900	19.72	32.01	42.91	25.24	34.19	55.39	86.95	23.24	4.766	8.805			
MAX	18.9	21.3	36.6	50.7	64.2	61.8	47.6	79.8	127	51.0	10.8	26.4			
(WY)	2002	2002	2002	2001	1999	2001	2002	1999	1999	2000	2001	2001			
MIN	0.81	0.17	0.46	10.9	1.05	2.23	11.3	32.7	44.3	5.44	0.077	0.23			
(WY)	2000	1998	2000	2000	2002	1998	2001	2001	1998	2002	2002	1999			

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR
(OCTOBER-AUGUST 12)

WATER YEARS 1998 - 2002

ANNUAL TOTAL	12682.43	8238.07		
ANNUAL MEAN	34.75	26.07		
HIGHEST ANNUAL MEAN			29.35	
LOWEST ANNUAL MEAN			34.5	1999
HIGHEST DAILY MEAN	168	Jun 13	23.9	1998
LOWEST DAILY MEAN	0.21	Apr 13	342	Jun 14 1999
ANNUAL SEVEN-DAY MINIMUM	0.40	Apr 13	0.03	Aug 5
MAXIMUM PEAK FLOW			0.06	Aug 1
MAXIMUM PEAK STAGE			0.06	Aug 1 2002
ANNUAL RUNOFF (CFSM)	1.21		165	Jun 4
ANNUAL RUNOFF (INCHES)	16.44		11.60	Mar 10
10 PERCENT EXCEEDS	64		11.60	Mar 10 2002
50 PERCENT EXCEEDS	28		0.91	
90 PERCENT EXCEEDS	6.9		1.02	
			10.68	
			53	
			68	
			25	
			0.45	
			0.23	

e Estimated

ILLINOIS RIVER BASIN

055451345 WHITE RIVER AT CENTER STREET AT LAKE GENEVA, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1997 to September 1999, October 2000 to August 2002.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1997 to September 1999.

TOTAL-PHOSPHORUS DISCHARGE: October 1997 to September 1999, October 2000 to August 2002.

REMARKS.--Records fair. Samples collected by Geneva Lake Environmental Agency using equal-width increment (EWI) method unless otherwise noted. Monitoring suspended on Aug. 12 because of repairs to Geneva Lake dam.

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 16 mg/L, Apr. 26, 1999; minimum observed, 1 mg/L, on several days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 3.0 ton, Apr. 26, 1999; minimum daily, 0.0 ton, on many days in 1998 and 1999 water years.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.40 mg/L, Sept. 8; minimum observed, <0.005 mg/L, Jan. 6 and Feb. 12.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 8.86 lb, June 13, 2001; minimum daily, 0.00 lb, on several days in 1998 and 1999 water years, and many days in 2002 water year.

EXTREMES FOR CURRENT YEAR.--

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.121 mg/L, May 10; minimum observed, 0.006 mg/L, Dec. 28 and Apr. 12.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 6.96 lb, June 5; minimum daily, 0.00 lb, on many days.

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.83	1.30	1.51	1.25	0.05	0.13	1.14	1.80	1.97	2.08	0.00	---
2	0.81	1.21	1.32	1.26	0.05	0.36	1.37	2.00	1.74	1.91	0.00	---
3	0.83	1.07	1.30	1.28	0.04	0.57	1.28	1.76	2.07	1.51	0.00	---
4	0.68	1.01	1.28	1.28	0.04	0.51	1.18	1.62	5.95	1.25	0.00	---
5	0.66	0.98	1.54	1.27	0.04	0.54	1.09	1.59	6.96	0.81	0.00	---
6	0.54	1.05	1.39	1.27	0.03	0.57	0.99	1.66	5.98	0.76	0.00	---
7	0.40	0.91	1.20	1.27	0.02	0.60	1.27	1.58	5.52	0.77	0.00	---
8	0.36	0.92	1.17	1.27	0.02	0.81	1.92	1.44	5.29	0.96	0.00	---
9	0.42	1.00	1.10	1.28	0.02	2.25	2.62	1.88	4.92	0.83	0.00	---
10	0.59	0.78	1.07	1.30	0.02	e2.00	2.44	1.51	5.01	0.42	0.00	---
11	0.56	0.62	1.55	1.28	0.02	1.82	2.23	1.42	5.51	0.21	0.00	---
12	0.69	0.59	2.41	1.29	0.02	1.93	2.06	1.81	4.72	0.15	---	---
13	0.93	0.99	2.35	1.30	0.02	2.07	1.98	1.74	4.34	0.12	---	---
14	1.37	1.52	2.17	1.32	0.02	1.83	1.98	1.69	4.84	0.10	---	---
15	1.24	1.72	2.08	1.33	0.02	2.32	1.99	1.73	4.42	0.09	---	---
16	1.02	1.57	2.00	1.34	0.02	2.09	2.04	1.72	3.95	0.07	---	---
17	0.84	1.49	1.93	1.36	0.02	2.16	1.97	1.63	3.56	0.04	---	---
18	0.87	1.46	1.84	1.36	0.02	2.38	2.04	1.55	3.23	0.02	---	---
19	0.78	1.47	1.76	1.41	0.02	2.37	2.15	1.33	3.11	0.01	---	---
20	0.71	1.32	1.66	1.46	0.03	2.58	1.96	1.21	2.88	0.00	---	---
21	0.65	1.22	1.58	1.53	0.04	2.85	1.95	1.18	2.52	0.00	---	---
22	0.71	1.11	1.54	1.01	0.04	2.90	2.19	1.28	2.52	0.00	---	---
23	1.74	1.02	1.51	0.08	0.06	2.38	2.08	1.42	2.43	0.00	---	---
24	2.93	1.41	1.38	0.07	0.09	1.64	2.17	1.21	2.18	0.00	---	---
25	3.92	1.96	1.33	0.07	0.10	1.34	2.18	1.70	2.08	0.00	---	---
26	2.23	1.47	1.29	0.06	0.14	1.34	1.86	1.88	2.60	0.00	---	---
27	1.74	1.66	1.24	0.06	0.17	1.26	1.76	1.77	2.31	0.00	---	---
28	1.70	1.39	1.19	0.06	0.20	1.22	2.16	1.71	2.15	0.00	---	---
29	1.32	1.36	1.20	0.05	---	1.29	2.09	1.78	1.99	0.00	---	---
30	1.11	1.49	1.21	0.05	---	1.37	1.97	1.99	1.91	0.00	---	---
31	1.27	---	1.23	0.05	---	1.24	---	2.06	---	0.00	---	---
TOTAL	34.45	37.07	47.33	29.27	1.38	48.72	56.11	50.65	108.66	12.11	---	---

WTR YR 2002 TOTAL 425.75

e Estimated

055451345 WHITE RIVER AT CENTER STREET AT LAKE GENEVA, WI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 2001				
12...	1523	17	10	.009
24...	1424	43	10	.015
NOV				
06...	1330	18	10	.012
DEC				
04...	1510	27	10	.009
11...	1445	17	10	.009
28...	1400	37	10	.006
JAN 2002				
18...	1525	31	10	.008
MAR				
01...	1001	2.2	10	.009
22...	1415	40	10	.022
APR				
12...	1455	58	10	.006
29...	1349	57	10	.008
MAY				
10...	1445	35	10	.121
31...	0941	37	10	.010
JUN				
11...	1630	93	10	.011
27...	1445	40	10	.010
JUL				
12...	1504	1.5	10	.018

ILLINOIS RIVER BASIN

05545750 FOX RIVER NEAR NEW MUNSTER, WI

LOCATION.--Lat 42°36'39", long 88°13'33", in NW ¼ NW ¼ sec.26, T.2 N., R.19 E., Kenosha County, Hydrologic Unit 07120006, on right bank 40 ft downstream from bridge on County Trunk Highway JB, 2.2 mi north of New Munster, and 17.0 mi upstream from Fox Chain of Lakes.

DRAINAGE AREA.--811 mi².

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1993, published as "at Wilmot" under station number 05546500.

REVISED RECORDS.--WSP 1308: 1943(M), 1945(M). WDR WI-67-1: Drainage area. WDR WI-92-1: 1991.

GAGE.--Water-stage recorder. Datum of gage is 735.72 ft above NGVD of 1929 (Racine County Surveyor bench mark). Prior to Sept. 2 1965, nonrecording gage at bridge 400 ft above dam in Wilmot 11 mi downstream at datum 0.50 ft lower, and Sept. 2 1965 to Sept. 30, 1993, recording gage 100 ft downstream from bridge at the lower datum. Removal of dam due to damage was completed by Sept. 15, 1992.

REMARKS.--Records good except those for estimated daily discharges and periods of discharge below 500 ft³/s, which are fair (see page 11). Gage-height telemeter and data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	398	694	631	e480	e390	e540	512	694	395	306	204	237
2	391	729	612	e480	e390	e540	528	693	414	297	187	340
3	392	690	608	e480	e380	e540	653	733	455	284	205	375
4	361	609	579	e480	e380	e540	635	701	1220	269	172	428
5	405	574	533	e480	e380	e600	605	663	2250	244	194	414
6	386	535	576	e480	e380	e660	578	611	2420	245	171	396
7	361	537	603	e480	e380	645	584	549	2130	232	190	312
8	380	542	552	e480	e390	620	926	551	1790	225	154	247
9	365	486	e500	e500	e410	1220	1780	552	1510	249	165	256
10	364	437	e500	e520	e490	1460	2270	579	1270	243	177	262
11	416	474	e500	e540	e640	1450	2180	599	1140	245	139	189
12	499	442	501	e560	648	1390	2020	645	1060	250	130	213
13	626	480	597	e560	663	1250	1860	752	852	221	214	180
14	919	700	688	e500	593	1200	1610	725	826	234	439	204
15	946	788	654	e440	521	1100	1480	708	811	200	461	173
16	813	750	622	e430	563	1050	1410	679	727	196	535	190
17	735	691	e620	e420	512	954	1250	758	665	189	603	185
18	608	627	e600	e410	447	840	1090	685	693	160	677	178
19	487	598	e580	e390	451	737	1040	658	649	190	695	262
20	490	598	e620	e390	721	693	977	599	473	164	640	336
21	493	549	547	e410	1010	679	859	550	554	162	537	345
22	464	536	482	e430	1010	616	856	305	570	157	578	372
23	808	504	e480	e430	855	575	835	370	436	154	631	325
24	1470	518	e480	411	825	572	687	389	377	154	492	246
25	1930	590	e480	409	809	568	684	474	437	155	498	269
26	1900	655	e480	e410	795	515	732	571	381	171	503	251
27	1780	737	e480	410	678	479	710	566	349	229	496	245
28	1570	633	e480	405	556	423	794	549	357	229	413	241
29	1250	629	e480	400	---	463	782	520	344	285	286	264
30	1120	626	e480	394	---	503	719	471	332	223	256	303
31	886	---	e480	e390	---	517	---	391	---	212	263	---
TOTAL	24013	17958	17025	13999	16267	23939	31646	18290	25887	6774	11305	8238
MEAN	774.6	598.6	549.2	451.6	581.0	772.2	1055	590.0	862.9	218.5	364.7	274.6
MAX	1930	788	688	560	1010	1460	2270	758	2420	306	695	428
MIN	361	437	480	390	380	423	512	305	332	154	130	173
CFSM	0.96	0.74	0.68	0.56	0.72	0.95	1.30	0.73	1.06	0.27	0.45	0.34
IN.	1.10	0.82	0.78	0.64	0.75	1.10	1.45	0.84	1.19	0.31	0.52	0.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

	MEAN	391.3	480.6	452.5	427.1	548.5	1106	1076	715.5	569.9	391.8	334.1	347.3
MAX	1931	1536	1755	1818	1386	2434	3591	2078	1748	1382	902	1763	
(WY)	1987	1986	1983	1960	2001	1979	1993	1973	2000	1969	1952	1972	
MIN	79.5	113	91.4	87.7	105	252	256	108	124	69.2	57.2	62.7	
(WY)	1957	1950	1964	1940	1940	1968	1958	1958	1988	1958	1958	1946	

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1940 - 2002
ANNUAL TOTAL	298944	215341	
ANNUAL MEAN	819.0	590.0	569.7
HIGHEST ANNUAL MEAN			1240
LOWEST ANNUAL MEAN			174
HIGHEST DAILY MEAN	2840	Jun 14	2420 Jun 6
LOWEST DAILY MEAN	202	Aug 15	130 Aug 12
ANNUAL SEVEN-DAY MINIMUM	255	Aug 9	160 Jul 20
MAXIMUM PEAK FLOW			2480 Jun 5
MAXIMUM PEAK STAGE			11.50 Jun 5
INSTANTANEOUS LOW FLOW			119 Aug 11,12
ANNUAL RUNOFF (CFSM)	1.01	0.73	0.70
ANNUAL RUNOFF (INCHES)	13.71	9.88	9.54
10 PERCENT EXCEEDS	1550	1010	1280
50 PERCENT EXCEEDS	660	512	373
90 PERCENT EXCEEDS	308	224	127

- (a) Gage height, 9.25 ft, from graph based on gage readings, site and datum then in use
- (b) Ice affected
- (c) Also occurred Aug. 10, 1990
- (e) Estimated due to ice effect or missing record

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 crest-stage partial-record stations are presented in the following table. Discharge measurements made at miscellaneous sites for both low flows and high flows are given in separate tables.

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.

Maximum discharge at crest-stage partial-record stations

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis-charge (ft ³ /s)	Date	Gage height (feet)	Dis-charge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE SUPERIOR								
04024400 Stony Brook near Superior	Lat 46°35'01", long 92°07'10" in SE 1/4 sec. 4, T.47 N., R.14 W., Douglas County, Hydrologic Unit 04010301, at box culvert on State Highway 35, 12.5 mi south of toll bridge on U.S. Highways 2 and 35 at St. Louis River at Superior; drainage area, 1.86 mi ² .	1959-02	04-11-02	16.28	220	09-02-85	35.23	595
04025200 Pearson Creek near Maple	Lat 46°38'51", long 91°42'55" on common boundary of secs. 11 and 14, T.48 N., R.11 W., Douglas County, Hydrologic Unit 04010301, at box culvert on State Highway 13, 4.0 mi north of Maple; drainage area, 4.07 mi ² .	1957-02	04-11-02	10.04	E765	09-02-85	31.83	1,440
04026200 Sand River Tributary near Red Cliff	Lat 46°53'53", long 90°56'47" in NE 1/4 section 14, T.51 N., R.5 W., Bayfield County, Hydrologic Unit 04010301, at box culvert on State Highway 13, 8.0 mi northwest of Red Cliff; drainage area, 1.09 mi ² .	1959-02	04-11-02	11.01	52	05-23-64	16.86	624
04026300 Sioux River near Washburn	Lat 46°41'20", long 90°57'02" in NE 1/4 sec. 35, T.49 N., R.5 W., Bayfield County, Hydrologic Unit 04010301, on County Trunk Highway C, 2.5 mi west of Washburn; drainage area, 33.9 mi ² .	1959-65 1966# 1967-02	04-11-02	11.42	351	09-02-85 04-23-01	29.45 21.70	2,200 2,670

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis-charge (ft ³ /s)	Date	Gage height (feet)	Dis-charge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE SUPERIOR--CONTINUED								
04026450 Bad River near Mellen	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, Hydrologic Unit 04010302, on left bank 150 ft downstream from bridge on U.S. Forest Service Road, 4.4 mi southwest of Mellen; drainage area, 82.0 mi ² .	1971-75# 1976-02	04-16-02	9.14	2,630	04-16-02	9.14	2,630
04027200 Pearl Creek at Grandview	Lat 46°22'05", long 91°05'27" in NE 1/4 sec.22, T.45 N., R.6 W., Bayfield County, Hydrologic Unit 04010302, at bbox culvert on U.S. Highway 63, 0.8 mi east of Grandview; drainage area, 16.9 mi ² .	1960-02	04-11-02	14.96	417	07-02-92	28.47	1,920
STREAMS TRIBUTARY TO LAKE MICHIGAN								
04059900 Allen Creek Tributary near Alvin	Lat 45°58'05", long 88°47'24" on north boundary sec. 7, T.40 N., R.14 E., Forest County, Hydrologic Unit 04030106, at culvert on State Highway 70, 2.2 mi southeast of Alvin; drainage area, 1.22 mi ² .	1960-02	04-13-02	9.72	9.4	05-22-83	11.38	40
04063640 North Branch Pine River at Windsor Dam near Alvin	Lat 45°55'43", long 88°51'38" in SE 1/4 sec.21, T.40 N., R.13 E., Forest County, Hydrologic Unit 04030108, at bridge on country road, at Windsor Dam, 3.8 mi upstream from confluence of North and South Forks, 4.0 mi southwest of Alvin; drainage area, 27.8 mi ² .	1967-68# 1970-02	04-13-02	D4.43	E121	04-09-80	3.89	165
04067760 Peshtigo River near Cavour	Lat 45°39'20", long 88°38'52" in SW 1/4 sec.29, T.37 N., R.15 E., Forest County, Hydrologic Unit 04040105, at bridge on U.S. Highway 8, 0.7 mi northwest of Cavour; drainage area, 150 mi ² .	1970-02	04-19-02	14.71	1,320	04-21-96	15.78	1,600
04069700 North Branch Oconto River near Wabeno	Lat 45°26'19", long 88°37'40" in SW 1/4 sec.9, T.34 N., R.15 E., Forest County, Hydrologic Unit 04030104, at pipe arch culvert on County Trunk Highway C, 0.6 mi east of intersection with State Highway 32 at Wabeno; drainage area, 34.1 mi ² .	1970-02	04-14-02	12.22	157	04-20-96	14.21	621

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis-charge (ft ³ /s)	Date	Gage height (feet)	Dis-charge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED								
04071700 North Branch Little River near Coleman	Lat 45°00'37", long 88°02'43" on common boundary of secs. 2 and 3, T.29 N., R.20 E., Oconto County, Hydrologic Unit 04030104, at bridge on U.S. Highway 141, 3.8 mi south of Coleman; drainage area, 21.4 mi ² .	1958-02	04-15-02	11.82	118	03-30-67	14.50	640
04071800 Pensaukee River near Pulaski	Lat 44°45'48" long 88°15'07" in NE 1/4 sec.1, T.26 N., R.18 E., Shawano County, Hydrologic Unit 04030103, at bridge on State Highway 32, 6.1 mi north of Pulaski; drainage area, 48.80 mi ² .	1961-02	04-12-02	12.30	542	06-18-96	16.96	1,810
04072792 Tagatz Creek near Westfield	Lat 43°57'22" long 89°29'38" in SE 1/4 sec.12, T.17 N., R.8 E., Marquette County, Hydrologic Unit 04030201, at culvert on County Trunk Highway H, 5.2 mi north of Westfield.	1996-02	2002	C	<25	06-11-01	16.35	59
04073400 Bird Creek at Wautoma	Lat 44°04'06", long 89°18'08" in S 1/2 section 34, T.19 N., R.10 E., Waushara County, Hydrologic Unit 04030201, at concrete culvert on State Highway 21, 0.2 mi west of Wautoma; drainage area, 4.14 mi ² .	1959-02	06-20-02	15.97	B	03-07-73 06-20-02	13.07 15.97	190 B
04074850 Lily River near Lily	Lat 45°20'59", long 88°49'52" in SE 1/4 sec.11, T.33 N., R.13 E., Langlade County, Hydrologic Unit 04030202, at culvert on County Trunk Highway A, 3.2 mi north from junction of State Highways 55 and 52 at Lily; drainage area, 45.6 mi ² .	1970-02	08-21-02	9.68	125	04-20-96	10.25	167
*04075200 Evergreen Creek near Langlade	Lat 45°10'11", long 88°48'12" in NW 1/4 sec.18, T.31 N., R.14 E., Langlade County, Hydrologic Unit 04030202, on culvert on State Highway 64, 3.5 mi southeast of Langlade; drainage area, 8.09 mi ² .	1959-65 1966-72# 1973-02	08-21-02	10.65	37.5	07-11-82	11.66	80
04078891 Maple Creek near Sugar Bush	Lat 44°27'54", long 88°43'20" in NW 1/4 SE 1/4 sec.18, T.23 N., R.15 E., Outagamie County, Hydrologic Unit 04030202, at bridge on County Trunk Highway D, 1.3 mi southeast of Sugar Bush; drainage area, 22.1 mi ² .	1996-02	03-10-02	12.38	116	1996	13.65	360

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis- charge (ft ³ /s)	Date	Gage height (feet)	Dis- charge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED								
04079700 Spaulding Creek near Big Falls	Lat 44°38'13", long 89°01'20" on common boundary of secs. 14 and 15, T.25 N., R.12 E., Waupaca County, Hydrologic Unit 04030202, at culvert on County Trunk Highway E, 1.5 mi north of Big Falls; drainage area, 5.57 mi ² .	1959-65 1966# 1967-02	2002	C	<34	05-07-60	11.64	101
04081900 Sawyer Creek at Oshkosh	Lat 44°02'00", long 88°35'00" in SW 1/4 sec.15, T.18 N., R.16 E., Win- nebago County, Hydrologic Unit 04030201, at bridge on U.S. High- way 41, 1.0 mi southwest of bridge on Algoma Street at Fox River, at Oshkosh; drainage area, 12.10 mi ² .	1961-02	2002	C	B	09-11-86	17.47	2,350
04085145 Red River near Dykesville	Lat 44°38'59", long 87°42'47" in SW 1/4 SE 1/4 sec.9, T.25 N., R.23 E., Kewaunee County, Hydrologic Unit 04030102, at upstream crossing of County Highway A, 2.5 mi east of Dykesville; drainage area, 11.8 mi ² .	1996-02	04-29-02	11.20	70	04-01-98	12.49	215
04085400 Killsnake River near Chilton	Lat 44°03'33", long 88°08'36" in E 1/2 sec.6, T.18 N., R.20 E., Calu- met County, Hydrologic Unit 04030101, at bridge on country road, 2.4 mi northeast of Chilton; drainage area, 29.4 mi ² .	1961-02	03-10-02	10.69	370	03-30-79	14.37	1,840
040854105 Mud Creek near Valders	Lat 44°02'20", long 87°54'07" in SW 1/4 SW 1/4 sec.8, T.18 N., R.22 E., Manitowoc County, Hydrologic Unit 04030101, at culvert on Marken Road, 0.8 mi south of inter- section with State Highway 151, and 1.7 mi southeast of Valders.	1996-02	04-29-02	13.04	103	06-17-96	13.94	145
04086310 Mink Creek near Beech- wood	Lat 43°36'15", long 88°06'01" in SE 1/4 SE 1/4 sec.9, T.13 N., R.20 E., Sheboygan County, Hydrologic Unit 04040003, at bridge on County Trunk Highway S, 1.2 mi northeast of Beechwood; drainage area, 9.84 mi ² .	1996-02	03-09-02	16.70	33	06-17-96	18.33	61
04087100 Honey Creek at Milwaukee	Lat 42°58'44", long 87°59'56" in NE 1/4 SW 1/4, sec.15, T.6 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, 400 ft upstream from bridge on S. 68th Street, 6.0 mi southwest of mouth of Milwau- kee River, at Milwaukee; drainage area, 3.26 mi ² .	1959-02	08-13-02	25.12	2,290	08-13-02	25.12	2,290

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis- charge (ft ³ /s)	Date	Gage height (feet)	Dis- charge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED								
04087200 Oak Creek near South Milwau- kee	Lat 42°52'58", long 87°53'31" on common boundary of sec. 21 and 22, T.5 N., R.22 E., Milwaukee County, Hydrologic Unit 04040002, at bridge on West Nicholson Road, 3.0 mi southeast of South Milwaukee; drainage area, 13.8 mi ² .	1958-02	04-08-02	14.85	247	07-02-00	17.74	1,360
04087250 Pike Creek near Kenosha	Lat 42°36'12", long 87°53'41" in W 1/2 sec.27, T.2 N., R.22 E., Kenosha County, Hydrologic Unit 04040002, at box culvert on State Highway 43, 3.0 mi northeast of Kenosha; drainage area, 7.25 mi ² .	1960-02	06-04-02	14.74	111	06-12-00	18.07	235
ST. CROIX RIVER BASIN								
05340300 Trade River near Frederic	Lat 45°37'41", long 92°29'19" in SW 1/4 sec.4, T.36 N., R.17 W., Polk County, Hydrologic Unit 07030005, at box culvert on State Highways 35 and 48, 2.5 mi south- west of Frederic; drainage area, 6.34 mi ² .	1958-02	04-12-02	11.09	129	06-12-84	18.89	1,050
05341313 Bull Brook near Amery	Lat 45°17'03", long 92°19'00" in SW 1/4 SE 1/4, sec.2, T.32 N., R.16 W., Polk County, Hydrologic Unit 07030005, on right bank just upstream from 32-ft concrete box culvert on County Trunk Highway F, 1.8 mi south of junction of County Trunk Highway J, and about 2.5 mi southeast of Amery; drainage area, 9.62 mi ² .	1995-02	09-06-02	12.14	289	04-23-01	12.83	433
05341900 Kinnickin- nic River Tributary at River Falls	Lat 44°49'57", long 92°38'23" in NE 1/4 sec.14, T.27 N., R.19 W., Pierce County, Hydrologic Unit 07030005, at bridge on County Trunk Highway FF, 1.6 mi south- west of River Falls; drainage area, 7.26 mi ² .	1959-02	03-27-02	12.24	102	08-09-88	15.99	5,200
05346294 Goose Creek at Beldenville	Lat 44°46'27", long 92°31'29" in NW 1/4 NE 1/4 sec.2, T.26 N., R.18 W., Pierce County, Hydrologic Unit 07040001, at bridge on 790th Street, 1.0 mi west of Beldenville; drainage area, 10.8 mi ² .	2000-02	08-21-02	11.27	496	04-12-01	12.50	138

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis-charge (ft ³ /s)	Date	Gage height (feet)	Dis-charge (ft ³ /s)
ST. CROIX RIVER BASIN--CONTINUED								
05355315 Lost Creek near Waverly	Lat 44°42'10", long 92°20'16" in SE 1/4 SE 1/4 sec.29, T.26 N., R.16 W., Pierce County, Hydrologic Unit 07040001, at bridge on 465th Ave., 4.4 mi southwest of Waverly; drainage area, 25.2 mi ² .	2000-02	09-06-02	11.20	406	04-12-01	12.97	1,200
CHIPPEWA RIVER BASIN								
05357360 Bear River near Powell	Lat 46°04'40", long 90°00'52" in NE 1/4 sec.32, T.42 N., R.4 E., Iron County, Hydrologic Unit 07050002, at bridge on State Highway 182, 3.0 mi west of Powell; drainage area, 120 mi ² .	1970-02	05-11-02	13.08	799	05-11-02 04-21-96	13.08 G13.18	799
05359600 Price Creek near Phillips	Lat 45°43'33", long 90°40'12" in SW 1/4 sec.31, T.38 N., R.2 W., Price County, Hydrologic Unit 07050002, at culvert on County Trunk Highway W, 13.0 mi west of Phillips; drainage area, 16.9 mi ² .	1958-65 1966# 1967-02	04-11-02	13.93	257	09-15-94	17.43	552
05361400 Hay Creek near Prentice	Lat 45°32'32", long 90°21'37" in SE 1/4 sec.4, T.35 N., R.1 E., Price County, Hydrologic Unit 07050004, at culvert on U.S. Highway 8, 3.5 mi west of Prentice; drainage area, 22.6 mi ² .	1961-02	04-11-02	13.38	743	09-16-94	15.39	1,650
05361420 Douglas Creek near Prentice	Lat 45°31'06", long 90°15'28" in NE 1/4 sec.17, T.35 N., R.2 E., Price County, Hydrologic Unit 07050004, at culvert on County Trunk Highway C, 2.3 mi southeast of intersection with State Highway 13 at Prentice; drainage area, 25.2 mi ² .	1970-02	04-11-02	15.81	1,120	09-15-94	17.66	1,620
05361989 Jump River Tributary near Jump River	Lat 45°21'08", long 90°49'23" in SW 1/4 SW 1/4 sec.12, T.33 N., R.4 W., Taylor County, Hydrologic Unit 07050004, on left bank just upstream from a 23-ft concrete box culvert at a cut-off road at Junction of Hwys 73 and I-94, 1 mi west of Jump River and 7.5 mi northeast of Sheldon; drainage area, 6.77 mi ² .	1995-02	04-11-02	11.66	205	04-11-02	11.66	205

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis- charge (ft ³ /s)	Date	Gage height (feet)	Dis- charge (ft ³ /s)
CHIPPEWA RIVER BASIN--CONTINUED								
05363775 Babit Creek at Gilman	Lat 45°10'00", long 90°47'49" in NW 1/4 SW 1/4 sec.18, T.31 N., R.3 W., Taylor County, Hydrologic Unit 07050005, on right bank just upstream from a 30 ft concrete cul- vert on State Highway 64 at east side of Gilman; drainage area, 8.49 mi ² .	1995-02	06-22-02	12.33	270	03-28-98	12.87	367
05364000 Yellow River at Cadott	Lat 44°57'21", long 91°08'48" in NE 1/4 sec.31, T.29 N., R.6 W., Chippewa County, Hydrologic Unit 07050005, at bridge on State High- way 27, at Cadott; drainage area, 364 mi ² .	1943-61# 1962-02	04-12-02	10.95	4,700	09-22-86	15.82	16,600
05364100 Seth Creek near Cadott	Lat 44°59'24", long 91°08'48" in SW 1/4 sec.17, T.29 N., R.6 W., Chippewa County, Hydrologic Unit 07050005, at culvert on State High- way 27, 3.1 mi north of Cadott; drainage area, 3.25 mi ² .	1962-02	08-21-02	13.11	182	08-01-01	19.13	1,540
05364500 Duncan Creek at Bloomer	Lat 45°07'00", long 91°30'00" in sec.8, T.30 N., R.9 W., Chippewa County, Hydrologic Unit 07070005, 0.2 mi below Bloomer dam, at Bloomer; drainage area, 50.3 mi ² .	1945-51# 1958-02	09-07-02	6.72	760	06-29-79	11.81	5,400
05366500 Eau Claire River near Fall Creek	Lat 44°48'35", long 91°16'50" in NW 1/4 sec.19, T.27 N., R.7 W., Eau Claire County, Hydrologic Unit 07050006, 500 ft east of County Trunk Highway K, 3.2 mi north of Fall Creek; drainage area, 760 mi ² .	1943-55# 1958-02	04-13-02	11.01	7,610	06-20-93	19.38	24,500
05367030 Willow Creek near Eau Claire	Lat 44°44'11", long 91°26'48" on common boundary of secs. 14 and 15, T.26 N., R.9 W., Eau Claire County, Hydrologic Unit 07050005, at box culvert on State Highway 93, 4.0 mi south of Eau Claire; drainage area, 3.83 mi ² .	1958-02	08-21-02	12.33	E200	07-08-59	14.12	400
053674588 Rock Creek Tributary near Canton	Lat 45°27'06", long 90°36'08" in SW 1/4 SW 1/4 sec.3, T.34 N., R.10 W., Barron County, Hydrologic Unit 07050007, 3 mi north of U.S. Hwy 8 on 27th Street, about 40 ft north of intersection of 27th Street and 17th Avenue, and 2.5 mi east and 1.7 mi north of Canton; drainage area, 6.34 mi ² .	1995-02	04-11-02	12.02	220	08-01-01	12.87	340

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis-charge (ft ³ /s)	Date	Gage height (feet)	Dis-charge (ft ³ /s)
CHIPPEWA RIVER BASIN--CONTINUED								
05367700 Lightning Creek at Almena	Lat 45°25'17", long 92°01'57" in NW 1/4 sec.19, T.34 N., R.13 W., Barron County, Hydrologic Unit 07050007, at bridge on County Trunk Highway P, at Almena; drainage area, 19.0 mi ² .	1958-02	04-12-02	12.13	475	03-30-67	12.39	1,550
05369945 Eau Galle River at Low-Water Bridge at Spring Valley	Lat 44°52'02", long 92°15'07" in SE 1/4 NW 1/4 sec.31, T.28 N., R.15 W., St. Croix County, Hydrologic Unit 07050005, on right bank 50 ft downstream from Low-Water Bridge on Boston Road, approximately 550 ft upstream from French Creek, and at Spring Valley. Drainage area, 47.9 mi ² .	1981-83# 1986-96# 2002	09-06-02	6.79	917	09-21-86	8.80	6,000
05370900 Spring Creek near Durand	Lat 44°34'13", long 91°57'48" in S 1/2 sec.9, T.24 N., R.13 W., Buffalo County, Hydrologic Unit 07050005, at bridge on country road, 4.0 mi south of bridge on Chippewa River at Durand; drainage area, 6.45 mi ² .	1962-02	09-02-02	14.97	580	08-23-75	15.71	860
BUFFALO RIVER BASIN								
05371800 Buffalo River Tributary near Osseo	Lat 44°35'01" long 91°05'40" in S 1/2 sec.3, T.24 N., R.6 W., Jackson County, Hydrologic Unit 07040003, at culvert on U.S. Highway 10, 6.5 mi east of Osseo; drainage area, 1.44 mi ² .	1960-02	06-03-02	11.50	80	09-12-78	12.85	188
05371920 Buffalo River near Mondovi	Lat 44°31'36" long 91°41'46" in SW 1/4 SE 1/4 sec.27, T.24 N., R.11 W., Buffalo County, Hydrologic Unit 07040003, at bridge on State Highway 88, 4.0 mi south of Mondovi; drainage area, 279 mi ² .	1974-02	09-02-02	13.73	1,790	09-10-75	15.39	5,180
WAUMANDEE CREEK BASIN								
05378185 Eagle Creek near Fountain City	Lat 44°12'34" long 91°40'42" in SW 1/4 NE 1/4 sec.15, T.20 N., R 11 W., Buffalo County, Hydrologic Unit 07040003, on right bank, at CTH "G" and 5.7 mi north of Fountain City; drainage area, 14.3 mi ² .	1997-02	06-03-02	5.05	163	06-27-98	9.78	623

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis-charge (ft ³ /s)	Date	Gage height (feet)	Dis-charge (ft ³ /s)
TREMPEALEAU RIVER BASIN								
05379187 Pine Creek near Taylor	Lat 44°20'07", long 91°05'17" in NE 1/4 NE 1/4 sec.3, T.21 N., R.6 W., Jackson County, Hydrologic Unit 07040005, at bridge on Taylor Road, about 2 mi northeast of Taylor; drainage area, 10.9 mi ² .	1996-02	06-03-02	10.81	142	06-27-98	13.69	405
05379288 Bruce Valley Creek near Pleasantville	Lat 44°26'45", long 91°21'40" in SE 1/4 NW 1/4 sec.28, T.23 N., R.8 W., Trempealeau County, Hydrologic Unit 07040005, on left bank, 100 ft upstream from bridge on CTH D, 0.9 mi upstream from Elk Creek, and 2.9 mi west of Pleasantville; drainage area, 10.1 mi ² .	1996-02	06-03-02	6.57	109	06-27-98	8.18	225
BLACK RIVER BASIN								
05380900 Poplar River near Owen	Lat 44°53'10", long 90°34'17" in NW 1/4 sec.25, T.28 N., R.2 W., Clark County, Hydrologic Unit 07040007, at bridge on County Trunk Highway N, 4.2 mi south of Owen; drainage area, 157 mi ² .	1958-65 1966# 1967-02	06-22-02	20.14	5,900	06-06-80 06-22-02	20.12 J20.14	12,500 5,900
05380970 Cawley Creek near Neillsville	Lat 44°35'42", long 90°34'31" in SW 1/4 sec.25, T.25 N., R.2 W., Clark County, Hydrologic Unit 07040007, at bridge on State Highway 73, 3.7 mi north of Neillsville; drainage area, 38.6 mi ² .	1961-02	06-03-02	16.99	2,540	09-22-86	20.62	7,880
05382200 French Creek near Ettrick	Lat 44°11'04", long 91°18'45"(revised) in NW 1/4 NW 1/4 sec.26 (revised), T.20 N., R.8 W., Trempealeau County, Hydrologic Unit 07040007, at bridge on County Trunk Highways D and T, 2.5 mi west of Ettrick; drainage area, 14.7 mi ² .	1960-02	10-10-01	10.19	957	06-12-01	12.58	2,950
BAD AXE RIVER BASIN								
05387100 North Fork Bad Axe River near Genoa	Lat 43°33'10", long 91°08'58" in SW 1/4 sec.36, T.13 N., R.7 W., Vernon County, Hydrologic Unit 07060001, at bridge on State Highway 56, 4.1 mi southeast of Genoa; drainage area, 80.8 mi ² .	1959-65 1966# 1967-02	C	<9.07	<75	08-27-59	19.59	10,000

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis- charge (ft ³ /s)	Date	Gage height (feet)	Dis- charge (ft ³ /s)
WISCONSIN RIVER BASIN								
05391260 Gudegast Creek near Starks	Lat 45°41'41", long 89°15'42" in NW 1/4 sec.16, T.37 N., R.10 E., Oneida County, Hydrologic Unit 07070001, at corrugated culvert on country road, 3.0 mi northwest of Starks; drainage area, 14.0 mi ² .	1970-02	04-19-02	13.36	126	05-09-90 04-19-02	13.33 13.36	130 126
05391950 Squaw Creek near Harrison	Lat 45°32'47" long 89°29'16" in SW 1/4 sec.3, T.35 N., R.8 E., Lincoln County, Hydrologic Unit 07070001, at culvert on County Trunk Highway A, 5.0 mi northeast of Harrison.; drainage area, 3.23 mi ² .	1970-02	04-19-02	10.59	20.2	03-03-87	11.35	F51
05392150 Mishon- agon Creek near Woodruff	Lat 45°54'41", long 89°45'30" in NE 1/4 sec.32, T.40 N., R.6 E., Vilas County, Hydrologic Unit 07070001, at Twin culverts on Stte Highway 47, 3.0 mi northwest of Woodruff; drainage area, 17.6 mi ² .	1958-02	04-14-02	10.22	70.8	08-17-72	11.33	117
05392350 Bearskin Creek near Harshaw	Lat 45°38'43", long 89°41'12" in SW 1/4 sec.36, T.37 N., R.6 E., Oneida County, Hydrologic Unit 07070001, at culvert on County Trunk Highway K, 2.1 mi south- west of Harshaw; drainage area, 31.1 mi ² .	1958-65 1966# 1967-02	04-12-02	10.14	113	06-14-81	10.97	180
05393640 Little Pine Creek near Irma	Lat 45°23'37", long 89°40'20" in NW 1/4 sec.31, T.34 N., R.7 E., Lincoln County, Hydrologic Unit 07070002, at box culvert on U.S. Highway 51, 3.0 mi north of Irma; drainage area, 22.0 mi ² .	1970-02	04-12-02	13.49	B	06-14-81	14.38	310
05394200 Devil Creek near Merrill	Lat 45°08'56", long 89°47'13" in N 1/2 sec.30, T.31 N., R.6 E., Lincoln County, Hydrologic Unit 07070002, at culvert on County Trunk Highway F, 5.8 mi southwest of Merrill; drainage area, 9.58 mi ² .	1961-02	04-12-02	12.95	290	06-13-90	17.98	1,600
05395020 Lloyd Creek near Doering	Lat 45°13'57", long 89°22'04" in SE 1/4, T.32 N., R.9 E., Langlade County, Hydrologic Unit 07070002, at bridge on County Trunk Highway C, 4.5 mi east of Doering; drainage area, 7.80 mi ² .	1970-02	04-11-02	113.68	B	06-13-90	>16.00	>1,000

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis- charge (ft ³ /s)	Date	Gage height (feet)	Dis- charge (ft ³ /s)
WISCONSIN RIVER BASIN--CONTINUED								
05395100 Trappe River Tributary near Merrill	Lat 45°08'07" long 89°30'08" in SW 1/4 sec.28, T.31 N., R.8 E., Lincoln County, Hydrologic Unit 07070002, at culvert on County Trunk Highway P, 9.5 mi southeast of Merrill; drainage area, 1.58 mi ² .	1959-02	04-12-02	E12.24	89	08-15-95	17.79	396
05396300 Wisconsin River Tributary at Wausau	Lat 44°57'28", long 89°39'52" in NE 1/4 NW 1/4 sec.34, T.29 N., R.7 E., Marathon County, Hydrologic Unit 07070002, on road right-of-way of 24th Avenue opposite the Ace Motel, 300 ft east of U.S. Highway 51, at Wausau; drainage area, 1.10 mi ² .	1982-02	08-21-02	H2.72	B	06-12 or 13-90	9.11	740
05397600 Big Sandy Creek near Wausau	Lat 45°01'55", long 89°27'00" in SE 1/4 sec.31, T.30 N., R.9 E., Mara- thon County, Hydrologic Unit 07070002, at bridge on State High- way 52, 10.0 mi northeast of Wau- sau; drainage area, 11.5 mi ² .	1959-02	06-22-02	12.28	431	09-27-59	15.18	2,120
05400025 Johnson Creek near Knowl- ton	Lat 44°44'19", long 89°36'39" in SE 1/4 NE 1/4 sec.13, T.26 N., R.7 E., Marathon County, Hydrologic Unit 07070002, at bridge on County Trunk Highway X, 2.7 mi east of Knowlton; drainage area, 25.1 mi ² .	1973-02	2002	C	<302	06-06-80	21.78	3,700
05401800 Yellow River Tributary near Pittsville	Lat 44°28'58", long 90°07'05" on common boundary of secs.11 and 14, T.23 N., R.3 E., Wood County, Hydrologic Unit 07070003, at bridge on County Trunk Highway C, 2.0 mi north of Pittsville; drain- age area, 7.23 mi ² .	1959-02	06-22-02	11.70	156	05-02-73	13.82	810
05403700 Dell Creek near Lake Delton	Lat 43°33'05" long 89°51'55" in NW 1/4 sec.2, T.12 N., R.5 E., Sauk County, Hydrologic Unit 07070003, on right bank 50 ft upstream from highway bridge, 6.0 mi southwest of Lake Delton, and 7.0 mi upstream from mouth; drain- age area, 44.9 mi ² .	1957-65# 1966-70 1971-80# 1983-02	06-04-02	6.02	217	09-14-92	9.80	1,200
05405600 Rowan Creek at Poynette	Lat 43°23'13", long 89°23'25" in S 1/2 sec.35, T.11 N., R.9 E., Columbia County, Hydrologic Unit 07070005, at bridge on U.S. High- way 51, at Poynette; drainage area, 10.4 mi ² .	1961-02	C	<10.36	<30	09-09-65	17.90	2,260

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis- charge (ft ³ /s)	Date	Gage height (feet)	Dis- charge (ft ³ /s)
WISCONSIN RIVER BASIN--CONTINUED								
054062391 Otter Creek near Prairie du Sac	Lat 43°22'22", long 89°47'47" in SW 1/4 NW 1/4 sec.4, T.10 N., R.6 E., Sauk County, Hydrologic Unit 07070005, at bridge on Kings Cor- ner Road, 6.0 mi north, northwest of Prairie du Sac; drainage area, 4.75 mi ² .	1996-02	06-04-02	14.86	166	06-01-00	19.90	3,680
05406605 Lowery Creek near Spring Green	Lat 43°08'00", long 90°03'52" in SE 1/4 SE 1/4 SW 1/4 sec.30, T.8 N., R.4 E., Iowa County, Hydrologic Unit 07070005, on CTH T, 3.0 mi south of Spring Green; drainage area, 8.76 mi ² .	1996-02	2002	C	B	06-01-00	16.42	780
05407039 Fennimore Fork near Fenni- more	Lat 43°01'40", long 90°33'47" in NE 1/4 SW 1/4 NW 1/4 sec.1, T.6 N., R.2 W., Grant County, Hydrologic Unit 07070005, on Blue School Road, 5.6 mi northeast of Fenni- more; drainage area, 15.3 mi ² .	1996-02	07-06-02	11.93	E150	06-01-00	16.70	1,160
05407200 Crooked Creek near Boscobel	Lat 43°06'27", long 90°42'18" in SW 1/4 SW 1/4 sec.2, T.7 N., R.3 W., Grant County, Hydrologic Unit 07070005, at bridge on U.S. High- way 61, 1.6 mi south of Boscobel; drainage area, 12.9 mi ² .	1959-02	06-04-02	11.31	324	07-27-64	18.21	2,460
GRANT RIVER BASIN								
05413400 Pigeon Creek near Lan- caster	Lat 42°49'00", long 90°43'20" in SW 1/4 sec.15, T.4 N., R.3 W., Grant County, Hydrologic Unit 07060003, at culvert on country road, 2.0 mi south of Lancaster; drainage area, 6.93 mi ² .	1960-65 1966# 1967-02	06-04-02	12.76	E800	01-24-67	20.85	2,800
PLATTE RIVER BASIN								
05414213 Little Platte River near Platteville	Lat 42°43'23", long 90°31'41" in NE 1/4 NE 1/4 sec.19, T.3 N., R.1 W., Grant County, Hydrologic Unit 07060003, on left bank 150 ft upstream from Stumptown Road, 2.6 mi southwest of Post Office in Platteville; drainage area, 79.7 mi ² .	1987-90# 1991-02	06-04-02	12.56	2,190	06-01-00	17.60	9,200

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis-charge (ft ³ /s)	Date	Gage height (feet)	Dis-charge (ft ³ /s)
GALENA RIVER BASIN								
05414900 Pats Creek near Elk Grove	Lat 42°40'03", long 90°22'40" in SW 1/4 sec.4, T.2 N., R.1 E., Lafayette County, Hydrologic Unit 07060005, at bridge on State Highway 81, 7.0 mi southeast of Platteville; drainage area, 8.50 mi ² .	1960-02	10-23-01	13.14	542	06-29-69	17.32	7,040
ROCK RIVER BASIN								
05425806 Mud Creek near Danville	Lat 43°17'06", long 88°56'54" in NW 1/4 NW 1/4 NW 1/4 sec.3, T.9 N., R.13 E., Dodge County, Hydrologic Unit 07090002, at bridge on Burr Oak Road, 2.5 mi south of Danville; drainage area, 12.3 mi ² .	1995-02	06-04-02	13.86	67	06-02-00	16.33	396
05430403 Fisher Creek Tributary at Janesville	Lat 42°40'18", long 89°03'31" in SW 1/4 SE 1/4 sec.34, T.3 N., R.12 E., Rock County, Hydrologic Unit 07090001, at culvert on Rockport Road, 0.4 mi west of South Crosby Avenue and 0.6 mi upstream from County Trunk Highway D, at Janesville; drainage area, 1.42 mi ² .	1982-02	06-04-02	7.01	280	06-25-98	8.23	419
05431400 Little Turtle Creek at Allens Grove	Lat 42°34'46", long 88°45'33" in NE 1/4 sec.6, T.1 N., R.15 E., Walworth County, Hydrologic Unit 07090001, at bridge on country road, 0.2 mi south of Allens Grove; drainage area, 42.4 mi ² .	1962-02	06-04-02	11.51	841	04-21-73	18.28	8,400
05432055 Livingston Branch Pecatonica River near Livingston	Lat 42°54'01", long 90°22'23", in SW 1/4 SE 1/4 sec.16, T.5 N., R.1 E., Iowa County, Hydrologic Unit 07090003, on the left bank 75 ft upstream from Enloe Road and 2.7 mi east of Livingston; drainage area, 16.4 mi ² .	1987-91# 1996-02	06-04-02	5.42	172	06-29-90	13.49	6,260
05432300 Rock Branch near Mineral Point	Lat 42°50'02", long 90°09'15" in SE 1/4 sec.8, T.4 N., R.3 E., Iowa County, Hydrologic Unit 07090003, at box culvert on State Highway 23, 2.5 mi south of Mineral Point; drainage area, 4.83 mi ² .	1959-02	2002	C	B	07-05-93	22.63	3,100
05433500 Yellowstone River near Blanchardville	Lat 42°46'55", long 89°59'50" in NE 1/4 sec.34, T.4 N., R.4 E., Lafayette County, Hydrologic Unit 07090003, 0.6 mi upstream from bridge on County Trunk Highway F, 7.0 mi west-southwest of Blanchardville; drainage area, 28.5 mi ² .	1954-65# 1966-77 1978-79# 1980-02	06-04-02	3.14	127	06-29-90	11.40	8,500

Station Number and Name	Location and Drainage Area	Period of Record	Water Year 2002 Maximum			Period of Record Maximum		
			Date	Gage height (feet)	Dis- charge (ft ³ /s)	Date	Gage height (feet)	Dis- charge (ft ³ /s)
ROCK RIVER BASIN--CONTINUED								
05436200 Gill Creek near Brooklyn	Lat 42°49'38", long 89°26'43" in NW 1/4 sec.16, T.4 N., R.9 E., Green County, Hydrologic Unit 07090004, at culvert on State High- way 92, 4.3 mi west of Brooklyn; drainage area, 3.33 mi ² .	1961-02	10-23-01	11.71	47	05-17-99	17.85	960
ILLINOIS RIVER BASIN								
05545100 Sugar Creek at Elkhorn	Lat 42°41'05", long 88°30'50" in SW 1/4 sec.29, T.3 N., R.17 E., Wal- worth County, Hydrologic Unit 07120006, at culvert on State High- way 11, 2.0 mi northeast of Elkhorn; drainage area, 6.63 mi ² .	1962-02	10-23-01	11.95	110	04-21-73	17.47	900
05545200 White River Tributary near Burlington	Lat 42°41'01", long 88°21'41"(revised) in SW 1/4 SW 1/4, sec. 27 (revised), T.3 N., R.18 E., Walworth County, Hydrologic Unit 07120006, at box culvert on State Highway 11, 4.5 mi west of Burlington; drainage area, 2.42 mi ² .	1958-02	10-23-01	11.10	24	06-13-99	14.77	354
05548150 North Branch Nippersink Creek near Genoa City	Lat 42°30'15", long 88°23'01" in SW 1/4 NW 1/4 sec.33, T.1 N., R.18 E., Walworth County, Hydrologic Unit 07120006, at bridge on County Trunk Highway B, 3.0 mi west of Genoa City; drainage area, 13.6 mi ² .	1962-02	06-04-02	11.96	237	06-12-00	14.18	563
# Operated as a continuous-record station B Discharge not determined C Peak not recorded D Backwater E Estimated F Revised G Backwater from ice H Downstream gage I Ice jam J At different datum								

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE MICHIGAN						
04072185 Trout Creek	Duck Creek	Lat 44°32'10", long 88°07'48", in NE 1/4 SE 1/4 sec.24, T.24 N., R.19 E., Brown County, Hydrologic Unit 04030103, at culvert on County Highway FF, 2.2 mi southwest of Howard.	15.4	1969 1976 1997-2001	11/06/01	1.85
					12/12/01	2.75
					01/16/02	1.81
					02/25/02	8.38
					03/27/02	9.31
					04/22/02	6.16
					05/15/02	5.38
					06/11/02	46.8
					06/27/02	2.58
					07/17/02	0.47
08/22/02	5.39					
09/11/02	0.34					
04072233 Lancaster Brook	Duck Creek	Lat 44°33'29", long 88°06'10", in NE 1/4 NW 1/4 sec.17, T.24 N., R.20 E., Brown County, Hydrologic Unit 04030103, at Shawano Avenue at Howard.	--	1997-2001	11/06/01	1.92
					12/12/01	2.23
					01/16/02	3.78
					02/27/02	3.84
					03/27/02	9.11
					04/22/02	5.31
					05/15/02	5.71
					06/10/02	4.17
					07/17/02	0.53
					08/22/02	7.68
09/11/02	0.44					
CHIPPEWA RIVER BASIN						
05357213 Little John Lake Tributary	Allequash Creek	Lat 46°01'29", long 89°39'00", in NE 1/4 NW 1/4 sec.20, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07050002, at confluence with Allequash Creek, near Boulder Junction.	--	1992-2001	11/01/01	0.40
					04/23/02	0.60
					06/04/02	13.4
05357230 North Creek	Trout River	Lat 46°04'43", long 89°40'02", in SW 1/4 NE 1/4 sec.31, T.42 N., R.7 E., Vilas County, Hydrologic Unit 07050002, at inlet to Trout Lake, 2.6 mi southwest of Boulder Junction.	3.58	1992-96 1998-2001	10/24/01	2.97
					04/23/02	5.44
					06/03/02	2.39
					08/13/02	3.51
					09/17/02	3.23
05357239 Mann Creek	Trout River	Lat 46°00'41", long 89°40'33", in NW 1/4 NW 1/4 sec.30, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07050002, at County Trunk Highway N, near Boulder Junction.	--	1991-96 1998-2001	11/01/01	13.3
					04/23/02	2.11
					06/04/02	2.54
					08/12/02	2.10

DISCHARGE AT MISCELLANEOUS SITES

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
CHIPPEWA RIVER BASIN--CONTINUED						
05369945 Eau Galle River	Chippewa River	Lat 44°52'02", long 92°15'07", in SE 1/4 NW 1/4 sec. 31, T.28 N., R.15 W., St. Croix County, Hydrologic Unit 07050005, approximately 550 ft upstream from French Creek and at Spring Valley.	47.9	(a) 2001	10/01/01	12.0
					11/26/01	23.7
					12/05/01	53.1
					03/14/02	104
					03/28/02	162
					04/11/02	323
					05/23/02	20.2
					05/30/02	15.7
					06/20/02	50.6
					07/16/02	15.0
08/22/02	135					
09/18/02	17.0					
LA CROSSE RIVER BASIN						
05386410 Coon Creek	Mississippi River	Lat 43°46'01", long 90°55'17", in NE 1/4 NW 1/4 sec. 24, T.15 N., R.5 W., LaCrosse County, Hydrologic Unit 07060001, 550 ft south of Korn Coulee Road, 100 ft upstream of confluence with Korn Coulee Creek.	4.56	2001	10/11/01	2.26
					11/30/01	2.40
					02/08/02	1.76
					04/18/02	2.27
					06/15/02	2.04
					08/18/02	1.93
Coon Creek	Mississippi River	Lat 43°42'00", long 91°00'00", in SE 1/4 SW 1/4, sec. 5, T.14 N., R.5 W., Vernon County, Hydrologic Unit 07060001, 500 ft upstream of confluence with Spring Coulee Creek, 0.5 mi west of Hwy P, and 1 mi northeast of Coon Valley.	58.84	--	10/05/01	36.32
Coon Creek	Mississippi River	Lat 43°43'00", long 90°59'00", in NE 1/4 NE 1/4 sec. 4, T.14 N., R.5 W., Vernon County, Hydrologic Unit 07060001, 300 ft upstream of Hwy P bridge over Coon Creek, 500 ft upstream of confluence with Timber Coulee Creek, and 3 mi east of Coon Valley.	19.04	--	10/06/01	11.31
Coon Creek Tributary	Coon Creek	Lat 43°42'00", long 91°01'00", in SW 1/4 NE 1/4, sec. 7, T.14 N., R.5 W., Vernon County, Hydrologic Unit 07060001, at Hwy 162, 0.25 mi north of Coon Valley.	2.15	--	10/05/01	0.91
05386419 Fisbach Coulee Creek	Coon Creek	Lat 43°45'53", long 90°56'38", in SE 1/4 NW 1/4 sec. 23, T.15 N., R.5 W., LaCrosse County, Hydrologic Unit 07060001, 75 ft downstream of County Highway G bridge.	2.17	2001	10/11/01	1.45
					11/30/01	1.38
					02/08/02	1.13
					04/18/02	1.64
					06/14/02	1.46
08/18/02	1.38					

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
LA CROSSE RIVER BASIN--CONTINUED						
05386429 Pinkish Coulee Creek	Coon Creek	Lat 43°45'05", long 90°57'51", in NE 1/4 NW 1/4 sec. 27, T.15 N., R.5 W., Vernon County, Hydrologic Unit 07060001, 500 ft upstream of County Highway G bridge.	1.54	2001	10/11/01	1.12
					11/30/01	1.25
					01/16/02	0.95
					02/07/02	0.95
					04/18/02	1.06
					06/14/02	0.87
08/18/02	0.82					
Eureka Spring Complex	Rullands Coulee Creek	Lat 43°44'00", long 90°52'00", in SW 1/4 SW 1/4 SW 1/4 sec. 28, T.15 N., R.4 W., Monroe County, Hydrologic Unit 07060001, at culvert on Oboe Ave., 4 mi west of Cashton.	--	--	10/06/01	0.99
Rullands Coulee Creek	Timber Coulee Creek	Lat 43°43'00", long 90°54'00", in SE 1/4 SW 1/4 sec. 31, T.15 N., R.4 W., Monroe County, Hydrologic Unit 07060001, 400 ft upstream of Hwy P bridge over Rullands Coulee Creek, 6.5 mi east of Coon Valley.	--	--	10/06/01	7.63
05386479 Timber Coulee Creek	Coon Creek	Lat 43°43'24", long 90°54'14", in NE 1/4 NW 1/4 sec. 6, T.14 N., R.4 W., Vernon County, Hydrologic Unit 07060001, at County Trunk P, 5 mi north of Westby.	12.02	--	10/06/01	7.00
Timber Coulee Creek	Coon Creek	Lat 43°43'00", long 90°59'00", in NE 1/4 NE 1/4 sec. 4, T.14 N., R.5 W., Vernon County, Hydrologic Unit 07060001, 500 ft upstream of confluence with Coon Creek and 3 mi east of Coon Valley.	35.39	--	10/06/01	21.62
05386488 Poplar Coulee Creek	Coon Creek	Lat 43°43'10", long 90°59'01", in SE 1/4 NW 1/4 sec. 4, T.14 N., R.5 W., Vernon County, Hydrologic Unit 07060001, 400 ft south of County Highway P.	2.87	2001	10/11/01	1.49
					11/30/01	1.70
					01/16/02	1.56
					02/07/02	1.51
					04/17/02	1.52
					06/14/02	1.54
08/18/02	1.21					
Spring Coulee Creek	Coon Creek	Lat 43°42'00", long 91°00'00", in SW 1/4 SE 1/4 sec. 5, T.14 N., R.5 W., Vernon County, Hydrologic Unit 07060001, 200 ft upstream of confluence with Coon Creek, 0.5 mi downstream of Hwy P, and 1 mi northeast of Coon Valley.	12.26	--	10/05/01	9.31

DISCHARGE AT MISCELLANEOUS SITES

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
LA CROSSE RIVER BASIN--CONTINUED						
05386490 Spring Coulee Creek	Coon Creek	Lat 43°42'00", long 90°56'40", in SE 1/4 SW 1/4 sec. 11, T.14 N., R.5 W., Vernon County, Hydrologic Unit 07060001, 75 ft upstream from town road bridge over Spring Coulee Creek, 3.5 mi upstream from mouth, and 3.3 mi east of Coon Valley.	8.93	1979-81	10/06/01	5.49
05386498 Coon Creek	Mississippi River	Lat 43°42'19", long 90°01'00", in SW 1/4 NE 1/4 sec. 7, T.14 N., R.5 W., Vernon County, Hydrologic Unit 07060001, 125 ft upstream of east edge of Veterans Memorial Park in Coon Valley.	75.38	2001	10/05/01 11/30/01 02/07/02 04/17/02 04/18/02 06/14/02 08/18/02	50.58 54.92 44.20 58.43 56.35 58.13 46.87
ILLINOIS RIVER BASIN						
05545334 Fox River	Illinois River	Lat 42°40'46", long 88°16'18", in NE 1/4 NE 1/4 sec. 32, T.19 E., R.19 E., Racine County, Hydrologic Unit 07120006, at Jefferson Street bridge in Burlington.	767	1966-67 1973	10/18/01 04/11/02	578 1,970

(a) Continuous-record station 1981-83, 1986-96

(b) Continuous-record station 1964-66

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

Water-quality data in this section are for samples collected at gaging stations and other sites on streams for reconnaissance or other purposes on a non-continuous basis.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT DIS FIELD CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD CO3 (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
04072050 DUCK CREEK AT SEMINARY ROAD NEAR ONEIDA, WI (LAT 44 27 57N LONG 088 13 08W)													
OCT 2001													
18...	1040	--	1.5	40	738	8.3	7.6	1100	7.2	562	681	2	145
NOV													
15...	0805	--	2.0	40	742	12.1	8.1	1230	7.7	292	349	3	187
15...	0820	--	2.0	40	--	--	--	--	--	--	--	--	--
JAN 2002													
09...	0820	--	2.0	40	--	--	--	--	--	--	--	--	--
09...	0840	--	2.0	40	730	13.4	7.9	1650	-1	412	496	3	231
FEB													
14...	0940	--	1.6	40	740	13.9	7.7	1300	-2	319	388	<1	183
MAR													
14...	0915	600	--	30	744	14.6	7.6	319	-2	84	103	<1	23.4
14...	0920	600	--	30	--	--	--	--	--	--	--	--	--
21...	0840	--	203	10	751	14.9	7.7	628	1	195	235	1	--
APR													
04...	0810	--	88	10	754	14.1	8.3	717	2.0	202	244	1	59.5
04...	0820	--	88	10	754	14.1	8.3	717	2.0	--	--	--	--
09...	0910	--	189	10	747	12.3	7.9	673	4.2	194	235	<1	--
16...	0815	--	62	10	738	10.6	8.0	820	15.4	224	268	2	--
16...	0820	--	62	10	--	--	--	--	--	--	--	--	--
25...	0900	--	268	10	741	10.5	7.9	548	7.0	158	191	1	--
MAY													
09...	0720	--	189	10	730	10.0	7.8	662	10.3	229	275	2	39.6
09...	0725	--	189	10	--	--	--	--	--	--	--	--	--
15...	0920	--	96	10	--	--	--	--	--	--	--	--	--
15...	0930	--	96	10	742	10.0	8.2	800	11.0	259	306	5	--
23...	0820	--	28	10	--	--	--	--	--	--	--	--	--
23...	0835	--	28	10	737	9.0	8.3	830	14.2	267	315	5	--
29...	1055	--	73	10	740	10.1	8.1	778	17.2	245	292	3	--
JUN													
03...	1420	--	248	10	--	--	--	--	--	--	--	--	--
06...	1000	--	398	10	742	9.6	7.7	609	14.1	218	262	2	33.3
06...	1020	--	398	10	--	--	--	--	--	--	--	--	--
11...	0710	--	185	10	737	7.9	7.5	519	20.0	190	231	<1	30.8
11...	0720	--	185	10	--	--	--	--	--	--	--	--	--
20...	0720	--	76	10	--	--	--	--	--	--	--	--	--
20...	0745	--	76	10	746	9.2	7.9	834	18.3	288	345	3	--
25...	1120	--	117	10	--	--	--	--	--	--	--	--	--
25...	1125	--	117	10	734	7.3	7.7	795	22.6	282	339	3	--
JUL													
02...	0720	--	14	10	--	--	--	--	--	--	--	--	--
02...	0725	--	14	10	741	5.8	7.8	916	24.8	338	400	6	61.6
10...	1215	4.6	--	40	750	8.0	7.9	1020	21.4	300	360	3	--
10...	1220	4.6	--	40	--	--	--	--	--	--	--	--	--
18...	0720	--	1.3	40	--	--	--	--	--	--	--	--	--
18...	0725	--	1.3	40	743	6.9	7.8	1040	23.5	286	341	4	--
AUG													
08...	1020	--	.26	40	--	--	--	--	--	--	--	--	--
08...	1045	--	.26	40	752	7.6	8.0	1160	20.4	243	290	3	189
20...	1145	--	1.6	40	748	7.7	7.7	766	19.7	193	231	2	--
SEP													
11...	1300	--	1.0	40	747	7.7	8.0	1120	20.6	242	291	2	139

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,PAR TICULATE WAT FLT SUSP (MG/L AS N) (49570)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, INORG + ORGANIC TOTAL (MG/L AS C) (00694)	CARBON, INOR- GANIC, PARTIC. TOTAL (MG/L AS C) (00688)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)
04072050 DUCK CREEK AT SEMINARY ROAD NEAR ONEIDA, WI (LAT 44 27 57N LONG 088 13 08W)													
OCT 2001													
18...	--	93.9	<.04	.74	.08	<.008	--	.23	.28	--	--	--	--
NOV													
15...	--	91.2	<.04	.65	.65	.010	.10	.04	.090	.5	--	7.7	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	161	.10	1.2	4.74	.035	.04	.17	.200	.3	--	12.9	--
FEB													
14...	--	99.4	.45	1.3	2.94	.040	<.02	.28	.30	.3	--	8.7	--
MAR													
14...	--	28.3	.18	1.2	4.02	.028	.12	.18	.23	1.0	--	9.9	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	.05	1.1	7.31	.036	--	.08	.129	--	--	--	--
APR													
04...	--	88.7	.16	1.2	4.74	.018	.05	.04	.072	.4	<.1	12.1	.4
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	<.04	1.3	4.99	.033	--	.04	.141	--	--	--	--
16...	--	--	<.04	1.1	4.06	.036	--	.05	.090	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	.13	1.6	2.06	.024	--	.11	.34	--	--	--	--
MAY													
09...	--	65.5	<.04	1.6	6.27	.038	.12	.08	.164	1.5	<.1	16.2	1.5
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	<.04	1.4	5.03	.020	--	.05	.090	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	<.04	1.3	3.71	.023	--	.05	.104	--	--	--	--
29...	--	--	<.04	1.3	2.43	.027	--	.07	.131	--	--	--	--
JUN													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	45.6	<.04	1.9	8.43	.104	.23	.10	.195	1.3	<.1	18.1	1.3
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	4.93	32.8	.05	2.9	4.97	.072	--	.11	.62	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	<.04	1.8	6.08	.040	--	.13	.21	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	<.04	1.6	6.33	.056	--	.16	.23	--	--	--	--
JUL													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	62.5	<.04	1.7	4.00	.023	.08	.18	.27	.9	<.1	20.8	.9
10...	--	--	<.04	1.3	1.34	.008	--	.17	.24	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	<.04	1.5	.62	.008	--	.20	.33	--	--	--	--
AUG													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	58.2	E.03	.94	.41	.009	.10	.20	.29	.7	<.1	9.0	.7
20...	--	--	E.03	.86	1.41	.008	--	.23	.25	--	--	--	--
SEP													
11...	--	--	<.04	.85	.53	.010	--	.16	.24	--	--	--	--

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	IRON, DIS- SOLVED (UG/L AS FE) (01046)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR ESA FLTRD 0.7 UM GF REC (UG/L) (61029)	ACETO- CHLOR OA FLTRD 0.7 UM GF REC (UG/L) (61030)	ACETO- CHLOR, WATER FLTRD 0.7 UM REC (UG/L) (49260)	ALA- CHLOR OA FLTRD 0.7 UM GF REC (UG/L) (61031)	ALA- CHLOR ESA WAT FLT 0.7U REC (UG/L) (50009)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)
04072050 DUCK CREEK AT SEMINARY ROAD NEAR ONEIDA, WI (LAT 44 27 57N LONG 088 13 08W)													
OCT 2001													
18...	--	<.002	--	--	<.004	--	--	<.002	<.005	.058	<.010	<.002	<.041
NOV													
15...	--	<.002	.06	<.05	<.004	<.05	<.05	<.002	<.005	.056	<.010	<.002	<.041
15...	--	--	.06	<.05	--	<.05	<.05	--	--	--	--	--	--
JAN 2002													
09...	--	--	<.05	<.05	--	<.05	.09	--	--	--	--	--	--
09...	--	<.006	<.05	<.05	<.006	<.05	.09	<.004	<.005	.042	<.010	<.002	<.041
FEB													
14...	--	<.006	--	--	<.006	--	--	<.004	<.005	.066	<.010	<.002	<.041
MAR													
14...	--	<.006	--	--	<.006	--	--	<.004	<.005	.038	<.010	<.002	<.041
14...	--	--	<.05	<.05	--	<.05	<.05	--	--	--	--	--	--
21...	--	<.006	--	--	<.006	--	--	<.004	<.005	.046	<.010	<.002	<.041
APR													
04...	--	<.006	--	--	<.006	--	--	<.004	<.005	.033	<.010	<.002	<.041
04...	--	--	.05	<.05	--	<.05	.09	--	--	--	--	--	--
09...	--	<.006	--	--	<.006	--	--	<.004	<.005	.057	<.010	<.002	<.041
16...	--	<.006	--	--	<.006	--	--	<.004	<.005	.033	<.010	<.002	<.041
16...	--	--	.07	<.05	--	<.05	.08	--	--	--	--	--	--
25...	--	<.006	--	--	.009	--	--	<.004	<.005	.082	<.010	<.002	<.041
MAY													
09...	--	<.006	--	--	.014	--	--	<.004	<.005	.147	<.010	<.002	<.041
09...	--	--	.07	<.05	--	<.05	.05	--	--	--	--	--	--
15...	--	--	<.05	<.05	--	<.05	<.05	--	--	--	--	--	--
15...	--	<.006	--	--	.007	--	--	<.004	<.005	.059	<.010	<.002	<.041
23...	--	--	<.05	<.05	--	.28	.21	--	--	--	--	--	--
23...	--	<.006	--	--	.008	--	--	<.004	<.005	.057	<.010	<.002	<.041
29...	--	<.006	--	--	.023	--	--	.034	<.005	.695	<.010	<.002	<.041
JUN													
03...	--	--	.06	<.05	--	<.05	.06	--	--	--	--	--	--
06...	--	<.006	--	--	1.84	--	--	.254	<.005	4.21	<.010	<.002	<.041
06...	--	--	.51	.61	--	.15	.18	--	--	--	--	--	--
11...	36	<.006	--	--	2.90	--	--	.024	<.005	6.32	<.010	<.002	<.041
11...	--	--	.85	1.53	--	<.05	<.05	--	--	--	--	--	--
20...	--	--	.44	.36	--	.09	.23	--	--	--	--	--	--
20...	--	<.006	--	--	.087	--	--	.012	<.005	1.43	<.010	<.002	<.041
25...	--	--	.67	.42	--	.06	.20	--	--	--	--	--	--
25...	--	<.006	--	--	.080	--	--	.011	<.005	2.59	<.010	<.002	<.041
JUL													
02...	--	--	.48	.23	--	.06	.17	--	--	--	--	--	--
02...	--	<.006	--	--	.024	--	--	<.007	<.005	.955	<.010	<.002	<.041
10...	--	<.006	--	--	.007	--	--	<.004	<.005	.586	<.010	<.002	<.041
10...	--	--	.21	.10	--	<.05	.17	--	--	--	--	--	--
18...	--	--	.15	.06	--	<.05	.07	--	--	--	--	--	--
18...	--	<.006	--	--	<.006	--	--	<.004	<.005	.436	<.010	<.002	<.041
AUG													
08...	--	--	<.05	<.05	--	<.05	.06	--	--	--	--	--	--
08...	--	<.006	--	--	<.006	--	--	<.004	<.005	.094	<.010	<.002	<.041
20...	--	<.006	--	--	<.006	--	--	<.004	<.005	.524	<.010	<.002	<.041
SEP													
11...	--	<.006	--	--	<.006	--	--	<.004	<.005	.065	<.010	<.002	<.041

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DIMETH- ENAMID OA, WATER FLT, REC (UG/L) (62482)	DIMETH- ENAMID, ESA, WAT FLT (UG/L) (61951)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)
	04072050 DUCK CREEK AT SEMINARY ROAD NEAR ONEIDA, WI (LAT 44 27 57N LONG 088 13 08W)												
OCT 2001													
18...	<.020	<.005	<.018	<.003	E.026	101	<.005	<.005	--	--	<.02	<.002	<.009
NOV													
15...	<.020	<.005	.018	<.003	E.021	118	<.005	<.005	<.05	<.05	<.02	<.002	<.009
15...	--	--	--	--	--	--	--	--	<.05	<.05	--	--	--
JAN 2002													
09...	--	--	--	--	--	--	--	--	<.05	<.05	--	--	--
09...	<.020	<.005	<.018	<.003	E.020	88.8	<.005	<.005	<.05	<.05	<.02	<.005	<.009
FEB													
14...	<.020	<.005	.019	<.003	E.018	116	<.005	<.005	--	--	<.02	.004	<.009
MAR													
14...	<.020	<.005	<.018	<.003	E.013	107	<.005	<.005	--	--	<.02	.006	<.009
14...	--	--	--	--	--	--	--	--	<.05	<.05	--	--	--
21...	<.020	<.005	<.018	<.003	E.016	96.3	<.005	<.005	--	--	<.02	.003	<.009
APR													
04...	<.020	<.005	<.018	<.003	E.017	85.9	<.005	<.005	--	--	<.02	<.002	<.009
04...	--	--	--	--	--	--	--	--	<.05	.05	--	--	--
09...	<.020	<.005	<.018	<.003	E.019	102	<.005	<.005	--	--	<.02	<.002	<.009
16...	<.020	<.005	<.018	<.003	E.016	125	<.005	<.005	--	--	<.02	<.002	<.009
16...	--	--	--	--	--	--	--	--	<.05	<.05	--	--	--
25...	<.020	<.005	<.018	<.003	E.023	114	<.005	<.005	--	--	<.02	<.002	<.009
MAY													
09...	<.020	<.005	E.012	<.003	E.044	102	<.005	<.005	--	--	<.02	<.002	<.009
09...	--	--	--	--	--	--	--	--	<.05	.10	--	--	--
15...	--	--	--	--	--	--	--	--	<.05	<.05	--	--	--
15...	<.020	<.005	E.006	<.003	E.035	99.0	.116	<.005	--	--	<.02	E.001	<.009
23...	--	--	--	--	--	--	--	--	<.05	.08	--	--	--
23...	<.020	<.005	<.018	<.003	E.032	119	.013	<.005	--	--	<.02	E.002	<.009
29...	<.020	<.005	<.018	<.003	E.040	107	<.005	<.005	--	--	<.02	<.002	<.009
JUN													
03...	--	--	--	--	--	--	--	--	<.05	<.05	--	--	--
06...	<.020	<.005	<.018	<.003	E.178	108	<.005	<.005	--	--	<.02	.008	<.009
06...	--	--	--	--	--	--	--	--	.18	.16	--	--	--
11...	<.020	<.005	<.035	<.003	E.261	119	<.005	<.005	--	--	<.02	.004	<.009
11...	--	--	--	--	--	--	--	--	.32	.27	--	--	--
20...	--	--	--	--	--	--	--	--	<.05	.20	--	--	--
20...	<.020	<.005	<.018	<.003	E.129	110	<.005	<.005	--	--	<.02	E.001	<.009
25...	--	--	--	--	--	--	--	--	.13	.20	--	--	--
25...	E.062	<.005	<.018	<.003	E.210	109	<.005	<.005	--	--	<.02	<.002	<.009
JUL													
02...	--	--	--	--	--	--	--	--	.09	.18	--	--	--
02...	<.020	<.005	<.018	<.003	E.130	113	<.005	<.005	--	--	<.02	<.002	<.009
10...	<.020	<.005	E.007	<.003	E.077	119	E.002	<.005	--	--	<.02	<.002	<.009
10...	--	--	--	--	--	--	--	--	.06	.10	--	--	--
18...	--	--	--	--	--	--	--	--	<.05	.08	--	--	--
18...	<.020	<.005	<.018	<.003	E.066	131	<.005	<.005	--	--	<.02	<.002	<.009
AUG													
08...	--	--	--	--	--	--	--	--	<.05	<.05	--	--	--
08...	<.020	<.005	E.009	<.003	E.026	95.3	<.005	<.005	--	--	<.02	<.002	<.009
20...	<.020	<.005	<.018	<.003	E.147	88.3	<.005	<.005	--	--	<.02	<.002	<.009
SEP													
11...	<.020	<.005	E.014	<.003	E.035	97.2	<.005	<.005	--	--	<.02	<.002	<.009

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FLUFEN-ACET, ESA, WAT FLT (UG/L) (61952)	FLUFE-NACET OA, WATER FLT, REC (UG/L) (62483)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METOLA-CHLOR ESA FLTRD 0.7 UM GF REC (UG/L) (61043)	METOLA-CHLOR OA FLTRD 0.7 UM GF REC (UG/L) (61044)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)
04072050 DUCK CREEK AT SEMINARY ROAD NEAR ONEIDA, WI (LAT 44 27 57N LONG 088 13 08W)													
OCT 2001													
18...	<.005	--	--	<.003	78.9	<.004	<.035	<.027	<.050	<.006	--	--	.022
NOV													
15...	<.005	<.05	<.05	<.003	89.2	<.004	<.035	<.027	<.050	<.006	1.13	.41	.058
15...	--	<.05	<.05	--	--	--	--	--	--	--	1.13	.41	--
JAN 2002													
09...	--	<.05	--	--	--	--	--	--	--	--	1.43	.36	--
09...	<.005	<.05	<.05	<.003	81.9	<.004	<.035	<.027	<.050	<.006	1.43	.36	.057
FEB													
14...	<.005	--	--	<.003	101	<.004	<.035	<.027	<.050	<.006	--	--	.062
MAR													
14...	<.005	--	--	<.003	85.2	<.004	<.035	<.027	<.050	<.006	--	--	.033
14...	--	<.05	<.05	--	--	--	--	--	--	--	.66	.29	--
21...	<.005	--	--	<.003	100	<.004	<.035	<.027	<.050	<.006	--	--	.029
APR													
04...	<.005	--	--	<.003	91.7	<.004	<.035	<.027	<.050	<.006	--	--	.014
04...	--	<.05	<.05	--	--	--	--	--	--	--	1.52	.37	--
09...	<.005	--	--	<.003	89.8	<.004	<.035	<.027	<.050	<.006	--	--	.030
16...	<.005	--	--	<.003	94.3	<.004	<.035	<.027	<.050	<.006	--	--	.015
16...	--	<.05	<.05	--	--	--	--	--	--	--	1.46	.34	--
25...	<.005	--	--	<.003	110	<.004	<.035	<.027	<.050	<.006	--	--	.027
MAY													
09...	<.005	--	--	<.003	119	<.004	<.035	<.027	<.050	<.006	--	--	.032
09...	--	<.05	<.05	--	--	--	--	--	--	--	1.27	.39	--
15...	--	<.05	<.05	--	--	--	--	--	--	--	1.28	.33	--
15...	<.005	--	--	<.003	115	<.004	<.035	<.027	<.050	<.006	--	--	.019
23...	--	<.05	<.05	--	--	--	--	--	--	--	1.60	.37	--
23...	<.005	--	--	<.003	117	<.004	<.035	<.027	<.050	<.006	--	--	.031
29...	<.005	--	--	<.003	97.1	<.004	<.035	<.027	<.050	<.006	--	--	.623
JUN													
03...	--	<.05	<.05	--	--	--	--	--	--	--	.72	.38	--
06...	<.005	--	--	<.003	99.1	<.004	<.035	<.027	<.050	<.006	--	--	3.49
06...	--	<.05	<.05	--	--	--	--	--	--	--	2.13	.95	--
11...	<.005	--	--	<.003	110	<.004	<.035	<.027	<.050	<.006	--	--	1.41
11...	--	<.05	<.05	--	--	--	--	--	--	--	1.24	.62	--
20...	--	<.05	<.05	--	--	--	--	--	--	--	2.13	.88	--
20...	<.005	--	--	<.003	114	<.004	<.035	<.027	<.050	<.006	--	--	.767
25...	--	<.05	<.05	--	--	--	--	--	--	--	2.25	1.10	--
25...	<.005	--	--	<.003	99.1	<.004	<.035	<.027	<.050	<.006	--	--	.929
JUL													
02...	--	<.05	<.05	--	--	--	--	--	--	--	2.55	.79	--
02...	<.005	--	--	<.003	103	<.004	<.035	<.027	<.050	<.006	--	--	.275
10...	<.005	--	--	<.003	87.1	<.004	<.035	<.027	<.050	<.006	--	--	.155
10...	--	<.05	<.05	--	--	--	--	--	--	--	1.75	.49	--
18...	--	<.05	<.05	--	--	--	--	--	--	--	1.01	.44	--
18...	<.005	--	--	<.003	100	<.004	<.035	<.027	<.050	<.006	--	--	.097
AUG													
08...	--	<.05	<.05	--	--	--	--	--	--	--	.72	.31	--
08...	<.005	--	--	<.003	75.6	<.004	<.035	<.027	<.050	<.006	--	--	.033
20...	<.005	--	--	<.003	102	<.004	<.035	<.027	<.050	<.006	--	--	.946
SEP													
11...	<.005	--	--	<.003	102	<.004	<.035	<.027	<.050	<.006	--	--	.067

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	METRI- BUZLN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U (UG/L) (82676)	PROPA- CHLOR ESA, WAT FLT GF 0.7U REC (UG/L) (62766)	PROPA- CHLOR OA, WAT FLT GF 0.7U REC (UG/L) (62767)
	04072050 DUCK CREEK AT SEMINARY ROAD NEAR ONEIDA, WI (LAT 44 27 57N LONG 088 13 08W)												
OCT 2001													
18...	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.01	<.004	--	--
NOV													
15...	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M	<.005	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002													
09...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
09...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.05	<.05
FEB													
14...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	--	--
MAR													
14...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
21...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	--	--
APR													
04...	<.006	<.002	<.007	<.010	<.010	<.004	<.022	<.006	<.011	<.01	<.004	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
09...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	--	--
16...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
25...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	--	--
MAY													
09...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
15...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
15...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
23...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	--	--
29...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	--	--
JUN													
03...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
06...	.023	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
11...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
20...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
20...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
25...	<.006	<.002	<.007	<.003	<.010	<.004	E.013	<.006	<.011	M	<.004	--	--
JUL													
02...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
02...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	--	--
10...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
18...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
18...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	--	--
AUG													
08...	--	--	--	--	--	--	--	--	--	--	--	<.05	<.05
08...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	--	--
20...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	--	--
SEP													
11...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	--	--

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER- BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE D (MG/L) (80154)
04072050 DUCK CREEK AT SEMINARY ROAD NEAR ONEIDA, WI (LAT 44 27 57N LONG 088 13 08W)													
OCT 2001													
18...	<.010	<.011	<.02	<.011	<.02	<.034	<.02	U	<.005	<.002	<.009	89	165
NOV													
15...	<.010	<.011	<.02	<.011	<.02	<.034	<.02	U	<.005	<.002	<.009	92	188
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	82	327
FEB													
14...	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	99	139
MAR													
14...	<.010	<.011	<.02	.022	<.02	<.034	<.02	U	<.005	<.002	<.009	94	54
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	<.010	<.011	<.02	.010	<.02	<.034	<.02	U	<.005	<.002	<.009	99	96
APR													
04...	<.010	<.011	<.02	.011	<.02	<.034	<.02	--	<.005	<.002	<.009	98	97
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.010	<.011	<.02	.009	<.02	<.034	<.02	--	<.005	<.002	<.009	97	128
16...	<.010	<.011	<.02	.013	<.02	<.034	<.02	--	<.005	<.002	<.009	98	116
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	<.010	<.011	<.02	.010	<.02	<.034	<.02	--	<.005	<.002	<.009	--	--
MAY													
09...	<.010	<.011	<.02	.018	<.02	<.034	<.02	--	<.005	<.002	<.009	91	129
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	<.010	<.011	<.02	.009	<.02	<.034	<.02	--	<.005	<.002	<.009	42	34
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	<.010	<.011	<.02	.010	<.02	<.034	<.02	--	<.005	<.002	<.009	64	65
29...	<.010	<.011	<.02	.015	<.02	<.034	<.02	--	<.005	<.002	<.009	45	60
JUN													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	<.010	<.011	<.02	.030	<.02	<.034	<.02	--	<.005	<.002	<.009	72	26
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	<.010	<.011	<.02	.050	<.02	<.034	<.02	--	<.005	<.002	<.009	98	378
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	<.010	<.011	<.02	.010	<.02	<.034	<.02	--	<.005	<.002	<.009	67	97
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	<.010	<.011	<.02	.014	<.02	<.034	<.02	--	<.005	<.002	<.009	67	24
JUL													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	<.010	<.011	<.02	.007	<.02	<.034	<.02	--	<.005	<.002	<.009	58	50
10...	<.010	<.011	<.02	.007	<.02	<.034	<.02	--	<.005	<.002	<.009	72	12
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--	<.005	<.002	<.009	81	31
AUG													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	<.010	<.011	<.02	E.004	<.02	<.034	<.02	--	<.005	<.002	<.009	--	--
20...	<.010	<.011	<.02	.008	<.02	<.034	<.02	--	<.005	<.002	<.009	--	--
SEP													
11...	<.010	<.011	<.02	.012	<.02	<.034	<.02	--	<.005	<.002	<.009	--	--

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT DIS TOT IT FIELD CAC03 (39086)	BICAR-BONATE WATER DIS IT FIELD HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD CO3 (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	
04072050 DUCK CREEK AT SEMINARY ROAD NEAR ONEIDA, WI (LAT 44 27 57N LONG 088 13 08W)														
DEC 2001 12...	0905	4.9	10	744	16.1	8.4	1080	.7	299	364	<1	115	125	
Date		NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2-NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRIITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, PAR-TICULATE WAT FLT SUSP (MG/L AS N) (49570)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, INORG + ORGANIC PARTIC. DIS-SOLVED (MG/L AS C) (00694)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	2,4,5-T SURROG WATER FLTRD REC (99958)	2,4-D METHYL ESTER, WATER REC (50470)	2,4-D, DIS-SOLVED (MG/L AS CL) (39732)	2,4-DB WATER, FLTRD, REC (38746)
DEC 2001 12...	E.03	1.1	3.59	.019	.04	.15	.197	.4	11.1	97.8	<.009	E.02	<.02	
Date		2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO-FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	3-KETO CARBO-FURAN WAT, FLTRD REC (UG/L) (50295)	ACETO-CHLOR, WATER, FLTRD REC (UG/L) (49260)	ACIFL-UORFEN, WATER, FLTRD, DISS, GF 0.7U REC (UG/L) (49315)	ALA-CHLOR, WATER, DISS, GF 0.7U REC (UG/L) (46342)	ALDI-CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA-RB SUL-FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALDI-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BARBAN SURROG-ATE WTR FLT SCD 2060, PERCENT (90640)	BENDIO-CARB, WATER, FLTRD REC (50299)
DEC 2001 12...	<.002	<.006	<2	<.004	<.007	<.002	<.02	<.008	<.04	<.005	<.009	E16.5	<.03	
Date		BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENOMYL WATER FLTRD REC (UG/L) (50300)	BEN-SUL-FURON METHYL WAT,FLT GF 0.7U REC (UG/L) (61693)	BENTA-ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)	BRO-MOXYNIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAF-FEINE, WATER, FLTRD, REC (UG/L) (50305)	CAF-FEINE-C13 SURROG, WAT FLT GF 0.7U REC (PERCENT) (99959)	CAR-BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR-BARYL, WATER, FLTRD, GF 0.7 U REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN, WATER, FLTRD, GF 0.7 U REC (UG/L) (82674)
DEC 2001 12...	<.010	<.004	<.02	M	<.03	<.02	<.002	<.010	E18.0	<.03	<.041	<.006	<.020	
Date		CHLOR-AM BEN, METHYL ESTER WATER FLTRD (UG/L) (61188)	CHLORI-MURON, WATER, FLTRD REC (UG/L) (50306)	CHLORO-THALO-NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS, DIS-SOLVED (UG/L) (38933)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	CY-CLOATE, WATER, DISS, REC (UG/L) (04031)	DACTHAL MONO-ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER, FLTRD, GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DEETHYL DEISO-PROPYL ATRAZIN, WATER, DISS, REC (UG/L) (04039)	DEISO-PROPYL ATRAZIN, WATER, DISS, REC (UG/L) (04038)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)
DEC 2001 12...	<.02	<.010	E.60	<.005	<.01	<.018	<.01	<.01	<.003	<.03	E.02	<.04	99.1	
Date		DI-AZINON, DIS-SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DINOSEB, WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DIPHEN-AMID, WATER, DISS, REC (UG/L) (04033)	DISUL-FOTON, WATER, FLTRD, GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, REC (UG/L) (49300)	EPTC WATER, FLTRD, GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER, FLTRD, GF, REC (UG/L) (82672)	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUMET-SULAM WATER, FLTRD REC (61694)
DEC 2001 12...	<.005	<.01	<.01	<.005	<.01	<.03	<.02	<.01	<.002	<.009	<.005	<.03	M	

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (UG/L) (91065)	HYDROXY ATRA-ZINE WATER FLTRD REC (UG/L) (50355)	IMAZ-AQUIN WATER FLTRD REC (UG/L) (50356)	IMAZE-THAPYR WATER FLTRD REC (UG/L) (50407)	IMID-ACLOP-RID WATER FLTRD REC (UG/L) (61695)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	
	04072050 DUCK CREEK AT SEMINARY ROAD NEAR ONEIDA, WI (LAT 44 27 57N LONG 088 13 08W)													
DEC 2001 12...	<.03	<.003	84.6	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027	<.02	<.01	
Date	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (50359)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METHYL PHOS WAT FLT 0.7 U GF, REC (UG/L) (49296)	METHYL THION WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN WATER DISSOLV (UG/L) (82630)	MET-SUL-FURON METHYL WAT FLT REC (UG/L) (61697)	MOL-INATE WATER FLTRD 0.7 U GF, REC (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (82684)	NEB-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NICOSUL FURON WATER FLTRD REC (UG/L) (50364)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	
DEC 2001 12...	<.02	<.008	<.004	<.050	<.006	.032	<.006	<.03	<.002	<.007	<.01	M	<.02	
Date	ORY-ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (82664)	PIC-LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO-METON, WATER, DISS, REC (82676)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (82676)	PROPA-CHLOR, WATER, DISS, REC (82676)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (82679)	
DEC 2001 12...	<.02	<.01	<.003	<.007	<.002	<.010	<.006	<.011	<.02	<.01	<.004	<.010	<.011	
Date	PRO-PARGITE WATER, FLTRD, GF 0.7 U REC (UG/L) (82685)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PROP-ICONA-ZOLE, WATER, FLTRD REC (UG/L) (50471)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	SIDURON WATER FLTRD REC (UG/L) (38548)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	SULFO-MET-RURON METHYL WTR FLT REC (UG/L) (50337)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (82670)	TER-BACIL, WATER, DISS, REC (82670)	TER-BACIL, WATER, FLTRD 0.7 U GF, REC (82665)	TER-UFOS WATER FLTRD 0.7 U GF, REC (82675)	TER-BUTHYL-AZINE, WATER, DISS, REC (82675)	THIO-BENCARB, WATER, FLTRD 0.7 U GF, REC (82681)	
DEC 2001 12...	<.02	<.010	<.02	<.008	<.02	<.011	<.009	<.006	<.010	<.034	<.02	U	<.005	
Date			TRIAL-LATE WATER, FLTRD, GF 0.7 U REC (UG/L) (82678)	TRI-BENURON WATER, FLTRD REC (UG/L) (61159)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	UREA 3(4-CHLOR OPHENYL METHYL WAT FLT REC (UG/L) (61692)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (80154)					
DEC 2001 12...			<.002	<.009	.06	<.009	<.02	84	187					

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAMPLING METHOD, CODES (82398)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPECIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3 CO3) (00453)	CAR-BONATE WATER DIS IT (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	
040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)														
OCT 2001	18...	1435	28	10	735	10.9	8.3	726	8.5	742	871	17	40.7	29.7
040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)														
OCT 2001	19...	0915	2.2	10	742	6.6	7.8	1070	11.1	237	285	2	182	76.2
NOV	14...	1115	4.4	10	747	7.2	7.4	826	11.0	157	190	1	124	E.1
	27...	1335	3.5	30	738	8.7	7.8	634	10.2	--	--	--	--	--
DEC	11...	1215	1.8	10	750	12.6	8.2	1160	5.4	228	275	1	211	76.7
	27...	1355	1.8	30	732	15.7	8.2	1160	.4	--	--	--	--	--
JAN 2002	08...	1445	10	40	740	18.7	8.4	970	1.1	201	241	2	163	70.5
	23...	1100	4.4	30	737	13.3	8.0	2500	5.1	--	--	--	--	--
FEB	13...	1350	3.4	40	750	19.1	8.4	--	3.4	223	263	2	485	71.6
	25...	1255	3.9	30	745	15.8	8.0	1910	5.2	--	--	--	--	--
MAR	13...	1225	4.5	10	737	16.0	8.0	2100	6.5	255	304	3	517	82.4
	20...	1215	5.6	10	747	13.9	8.0	1520	6.0	164	198	1	--	--
APR	03...	0955	4.4	40	749	13.8	8.0	1800	5.3	182	220	<1	455	63.6
	08...	1115	13	10	740	11.9	7.9	1350	6.1	171	E208	1	--	--
	15...	1125	8.1	40	738	13.4	8.0	1380	13.6	264	E314	4	--	--
	24...	0955	3.5	40	741	13.0	8.0	1610	10.6	249	298	3	--	--
MAY	08...	0855	2.9	10	742	7.0	7.6	1600	11.3	263	317	2	336	85.2
	14...	0930	5.2	40	743	9.5	7.9	1550	10.3	270	321	4	--	--
	22...	1000	3.2	10	750	10.5	7.8	1410	11.8	254	306	2	--	--
	28...	0940	3.2	40	746	7.8	7.6	1510	14.7	274	331	2	--	--
JUN	05...	0940	17	10	743	8.4	7.6	907	13.2	239	286	2	131	49.0
	10...	1045	2.5	40	739	10.4	7.8	1600	18.7	322	389	2	--	--
	19...	1040	5.3	40	750	12.6	8.0	1260	20.3	258	307	4	--	--
	24...	1030	5.6	40	738	12.8	8.1	1170	25.4	216	253	5	--	--
JUL	01...	1220	3.3	40	747	10.9	8.2	1220	28.8	226	261	7	229	60.3
	09...	1045	18	10	745	5.9	7.5	619	23.2	134	162	1	--	--
	17...	1130	2.7	40	747	13.1	8.4	1100	26.0	175	191	10	--	--
AUG	05...	1235	3.1	40	749	12.2	8.4	770	26.3	150	174	4	--	--
	19...	1040	11	40	744	10.9	8.2	638	22.0	115	134	3	--	--
SEP	10...	1000	2.0	40	742	8.6	7.9	1340	24.5	19	22	<1	265	71.7

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,PAR TICULTE WAT FLT SUSP (MG/L AS N) (49570)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L AS C) (00694)	CARBON, INOR- GANIC, PARTIC. TOTAL (MG/L AS C) (00688)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	2,4,5-T SURROG WATER FLTRD REC PERCENT (99958)	2,4-D METHYL ESTER, WATER FLTRD REC (UG/L) (50470)
040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)													
OCT 2001 18...	<.04	.72	1.78	.017	--	.10	.127	--	--	--	--	--	--
040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)													
OCT 2001 19...	<.04	.26	.45	.008	--	.14	.179	--	--	--	--	90.5	<.009
NOV 14...	<.04	.95	.65	.071	.96	.22	.31	8.5	--	105	--	64.7	<.009
NOV 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	E.02	.24	.80	E.007	.03	.10	.144	.6	--	2.8	--	91.9	<.009
DEC 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 08...	E.03	.24	.84	.009	<.02	.25	.31	1.1	--	2.3	--	94.2	<.009
JAN 2002 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	<.04	.37	1.34	.016	.04	.08	.125	.5	--	4.8	--	87.4	<.009
FEB 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 13...	<.04	.33	1.58	.009	.03	.05	.079	.4	--	5.3	--	70.8	<.009
MAR 20...	E.03	.38	1.11	.014	--	.04	.080	--	--	--	--	64.0	<.009
APR 03...	E.03	.41	.95	.009	.12	.04	.101	.9	<.1	4.2	.9	76.6	<.009
APR 08...	<.04	.61	.66	.010	--	<.02	.105	--	--	--	--	69.8	<.009
APR 15...	E.02	.41	1.52	.036	--	.05	.088	--	--	--	--	62.3	<.009
APR 24...	E.03	.31	.82	.010	--	.11	.154	--	--	--	--	73.9	<.009
MAY 08...	<.04	.46	.55	.018	.04	.07	.145	.6	<.1	3.6	.6	60.4	<.009
MAY 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 22...	<.04	.35	.50	.011	--	.12	.177	--	--	--	--	79.3	<.009
MAY 28...	.06	.46	.69	.025	--	.15	.20	--	--	--	--	73.5	<.009
JUN 05...	<.04	.54	1.55	.021	.07	.05	.106	.5	<.1	5.4	.5	77.5	<.009
JUN 10...	E.03	.48	1.22	.025	--	.10	.169	--	--	--	--	67.7	<.009
JUN 19...	.05	.53	.27	.019	--	.07	.131	--	--	--	--	64.4	<.009
JUN 24...	E.03	.49	.12	.014	--	.08	.129	--	--	--	--	63.5	<.009
JUL 01...	<.04	.53	.07	.010	.04	.08	.146	.4	<.1	4.6	.4	E28.7	<.009
JUL 09...	<.04	.81	.25	.022	--	.05	.143	--	--	--	--	54.4	<.009
JUL 17...	<.04	.36	E.03	<.008	--	.04	.067	--	--	--	--	37.2	<.009
AUG 05...	--	--	--	--	.06	--	--	.4	<.1	9.3	.4	E.0	<.009
AUG 19...	<.04	.65	.24	.026	--	.03	.066	--	--	--	--	--	--
SEP 10...	<.04	.42	<.05	<.008	.15	.02	.065	.8	<.1	3.9	.7	65.9	<.009

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI- ETHYL ANILINE WAT FLT GF 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	3-KETO CARBO- FURAN WATER FLTRD REC (UG/L) (50295)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)
040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)													
OCT 2001 18...	--	--	<.002	--	--	<.004	--	<.002	--	--	--	<.005	.012
040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)													
OCT 2001 19...	.17	<.02	<.002	<.006	<2	<.004	<.007	<.002	<.02	<.008	<.04	<.005	E.006
NOV 14...	.36	<.02	<.002	<.006	<2	<.004	<.007	<.002	<.02	<.008	<.04	<.005	<.009
NOV 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	<.02	<.02	<.002	<.006	<2	<.004	<.007	<.002	<.02	<.008	<.04	<.005	E.005
DEC 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 08...	<.02	<.02	<.006	<.006	<2	<.006	<.007	<.004	<.02	<.008	<.04	<.005	.027
JAN 2002 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	.05	<.02	<.006	<.006	<2	<.006	<.007	<.004	<.02	<.008	<.04	<.005	<.010
FEB 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 13...	<.02	<.02	<.006	<.006	<2	<.006	<.007	<.004	<.02	<.008	<.04	<.005	.010
MAR 20...	<.02	<.02	<.006	<.006	<2	<.006	<.100	<.004	<.02	<.008	<.04	<.005	<.007
APR 03...	<.02	<.02	<.006	<.006	<2	<.006	<.118	<.004	<.02	<.008	<.04	<.005	.021
APR 08...	.06	<.02	<.006	<.006	<2	<.006	<.007	<.004	<.02	<.008	<.04	<.005	.015
APR 15...	.33	<.02	<.006	<.006	<2	.011	<.007	<.004	<.02	<.008	<.04	<.005	.194
APR 24...	<.02	<.02	<.006	<.006	<2	.008	<.007	<.004	<.02	<.008	<.04	<.005	.091
MAY 08...	.09	<.02	<.006	<.006	<2	.024	<.007	<.004	<.02	<.008	<.04	<.005	.098
MAY 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 22...	<.02	<.02	<.006	<.006	<2	.010	<.007	<.004	<.02	<.008	<.04	<.005	.032
MAY 28...	.07	<.02	<.006	<.006	<2	.022	<.007	<.004	<.02	<.008	<.04	<.005	.055
JUN 05...	.48	<.02	<.006	<.006	<2	.037	<.007	<.015	<.02	<.008	<.04	<.005	.110
JUN 10...	.08	<.02	<.006	<.006	<2	<.009	<.007	<.004	<.02	<.008	<.04	<.005	.046
JUN 19...	.12	<.02	<.006	<.006	<2	<.006	<.007	<.004	<.02	<.008	<.04	<.005	.089
JUN 24...	.11	<.02	<.006	<.006	<2	<.007	<.007	<.004	<.02	<.008	<.04	<.005	.111
JUL 01...	<.02	<.02	<.006	<.006	<2	<.006	<.007	<.004	<.02	<.008	<.04	<.005	.054
JUL 09...	.36	<.02	<.006	<.006	<2	.007	<.007	<.004	<.02	<.008	<.04	<.005	.080
JUL 17...	.04	<.02	<.006	<.006	<2	<.006	<.007	<.004	<.02	<.008	<.04	<.005	.024
AUG 05...	<.02	<.02	<.006	<.006	<2	<.006	<.007	<.004	<.02	<.008	<.04	<.005	.023
AUG 19...	--	--	<.006	--	--	<.006	--	<.004	--	--	--	<.005	.014
SEP 10...	.03	<.02	<.006	<.006	<2	<.006	<.007	<.004	<.02	<.008	<.04	<.005	.014

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BARBAN SURROG- ATE WTR FLT SCD 2060, 9060 RE PERCENT (90640)	BENDIO- CARB, WATER FLTRD 0.7 U REC (UG/L) (50299)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BEN- SUL- FURON METHYL WATER FLTRD WAT FLT REC (UG/L) (50300)	BEN- SUL- FURON METHYL WATER FLTRD WAT FLT REC (UG/L) (61693)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAF- FEINE, WATER SURROG, FLTRD WAT FLT REC (UG/L) (50305)	CAF- FEINE- C13 SURROG, FLTRD WAT FLT REC (UG/L) (99959)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)
	040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)												
OCT 2001 18...	--	--	<.010	--	--	--	--	--	<.002	--	--	--	<.041
	040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)												
OCT 2001 19...	60.8	<.03	<.010	.008	<.02	<.01	<.03	<.02	<.002	.108	95.1	<.03	<.041
NOV 14...	E22.5	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	E.653	E80.8	<.03	<.041
NOV 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	E12.6	<.03	<.010	<.004	<.02	<.01	E.01	<.02	<.002	E.082	E110	<.03	<.041
DEC 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 08...	155	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	.144	62.5	<.03	<.041
JAN 2002 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	51.3	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	.277	83.8	<.03	<.041
FEB 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 13...	26.9	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	.291	88.6	<.03	<.041
MAR 20...	44.9	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	.349	104	M	<.041
APR 03...	35.8	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	.127	93.1	E.01	E.015
APR 08...	E31.8	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	E.370	E105	<.03	E.011
APR 15...	9.8	<.03	<.010	<.004	<.02	<.01	E.02	<.02	<.002	.289	100	<.03	<.041
APR 24...	84.1	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	.065	74.3	<.03	<.041
MAY 08...	32.6	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	.063	70.8	<.03	E.005
MAY 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 22...	50.1	<.03	<.010	<.004	<.02	<.01	E.03	<.02	<.002	.059	66.5	<.03	<.041
MAY 28...	66.3	<.03	<.010	<.004	<.02	<.01	E.12	<.02	<.002	.067	83.4	<.03	<.041
JUN 05...	51.9	<.03	<.010	<.004	<.02	<.01	E.12	<.02	<.002	<.010	70.1	<.03	E.009
JUN 10...	106	<.03	<.010	<.004	<.02	<.01	E.06	<.02	<.002	.074	86.4	<.03	<.041
JUN 19...	67.8	<.03	<.010	<.004	<.02	<.01	E.10	<.02	<.002	.141	79.0	<.03	<.041
JUN 24...	E35.6	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	E.097	E132	<.03	<.041
JUL 01...	E.0	<.03	<.010	<.004	<.02	<.01	E.04	<.02	<.002	E.090	E126	<.03	<.041
JUL 09...	E.0	E.09	<.010	<.004	<.02	<.01	E.11	<.02	<.002	E.534	E131	E.02	E.130
JUL 17...	27.2	<.03	<.010	<.004	<.02	<.01	E.03	<.02	<.002	.029	70.3	<.03	<.041
AUG 05...	E.0	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.002	E.222	E126	<.03	E.023
AUG 19...	--	--	<.010	--	--	--	--	--	<.002	--	--	--	E.018
SEP 10...	E28.4	<.03	<.010	<.004	<.02	<.01	E.03	<.02	<.002	<.010	E85.0	<.03	E.004

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO- FURAN- WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- AMBEN, METHYL ESTER WATER FLTRD (UG/L) (61188)	CHLORI- MURON, WATER FLTRD REC (UG/L) (50306)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	CY- CLOATE, WATER, DISS, REC (UG/L) (04031)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DEETHYL DEISO- PROPYL ATRAZIN DISS, REC (UG/L) (04039)
	040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)												
OCT 2001 18...	--	<.020	--	--	--	<.005	--	<.018	--	--	<.003	E.018	--
	040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)												
OCT 2001 19...	<.006	<.020	<.02	<.010	<.04	<.005	.08	<.018	<.01	--	<.003	E.01	<.01
NOV 14...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	<.03	E.01
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	<.006	<.020	<.02	<.010	<.04	<.005	.09	<.018	<.01	<.01	<.003	<.03	<.01
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 08...	<.006	<.020	<.02	<.010	<.04	<.005	.05	<.018	<.01	<.01	<.003	E.014	<.01
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	<.006	<.020	<.02	<.010	<.04	<.005	.04	<.018	<.01	<.01	<.003	E.008	<.01
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 13...	<.006	<.020	<.02	<.010	<.04	<.005	.07	<.018	<.01	<.01	<.003	E.004	<.01
20...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	<.006	<.01
APR 03...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	<.006	M
08...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	<.006	<.01
15...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	E.010	<.01
24...	<.006	<.020	<.02	<.010	<.04	<.005	.03	<.018	<.01	<.01	<.003	E.013	<.01
MAY 08...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	E.028	M
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	E.017	<.01
28...	<.006	<.020	<.02	<.010	<.04	<.005	.04	<.018	<.01	<.01	<.003	E.019	<.01
JUN 05...	<.006	<.020	<.02	<.010	<.04	<.005	.11	<.018	<.01	<.01	<.003	E.071	E.02
10...	<.006	<.020	<.02	<.010	<.04	<.005	.06	<.018	<.01	<.01	<.003	E.030	<.01
19...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	E.028	E.05
24...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	E.061	E.09
JUL 01...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	E.035	<.01
09...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	E.001	E.047	<.01
17...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	E.019	<.01
AUG 05...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	<.020	<.01
19...	--	<.020	--	--	--	<.005	--	<.018	--	--	<.003	E.006	--
SEP 10...	<.006	<.020	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	E.011	<.01

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	DEISO- PROPYL ATRAZIN WATER, DISS, REC (UG/L) (04038)	DIAZ- INON D10 SRG WAT FLT GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DIPHEN- AMID, WATER, DISS, REC (UG/L) (04033)	DISUL- FOTON WATER FLTRD GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD GF, REC (UG/L) (82672)
040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)													
OCT 2001 18...	--	93.8	<.005	--	--	<.005	--	--	<.02	--	<.002	<.009	<.005
040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)													
OCT 2001 19...	E.01	92.9	E.004	.08	<.01	<.005	<.01	<.03	<.02	E.01	<.002	<.009	<.005
NOV 14...	<.04	97.3	<.005	<.01	<.01	<.005	<.01	<.03	<.02	E.06	<.002	<.009	<.005
NOV 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	<.04	105	<.005	<.01	<.01	<.005	<.01	<.03	<.02	E.01	<.002	<.009	<.005
DEC 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 08...	<.04	99.1	<.005	<.01	<.01	<.005	<.01	<.03	<.02	<.01	<.002	<.009	<.005
JAN 2002 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	<.04	112	<.005	<.01	.02	<.005	<.01	<.03	<.02	.02	<.002	<.009	<.005
FEB 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 13...	<.04	129	<.005	<.01	<.01	<.005	<.01	<.03	<.02	.02	<.002	<.009	<.005
MAR 20...	<.04	118	<.005	<.01	<.01	<.005	<.01	<.03	<.02	<.01	<.002	<.009	<.005
APR 03...	<.04	91.6	<.005	<.01	<.01	<.005	<.01	<.03	<.02	<.01	<.002	<.009	<.005
APR 08...	<.04	123	<.005	<.01	<.01	<.005	<.01	<.03	<.02	<.01	<.002	<.009	<.005
APR 15...	E.02	95.4	.007	<.01	<.01	<.005	<.01	<.03	<.02	E.02	<.002	<.009	<.005
APR 24...	E.02	103	<.005	<.01	<.01	<.005	<.01	<.03	<.02	.02	<.002	<.009	<.005
MAY 08...	E.02	117	.012	.03	<.01	<.005	<.01	<.03	<.02	E.01	<.002	<.009	<.005
MAY 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 22...	<.04	114	.011	<.01	<.01	<.005	<.01	<.03	<.02	E.01	<.002	<.009	<.005
MAY 28...	E.02	105	.018	.03	<.01	<.005	<.01	<.03	<.02	E2.89	<.002	<.009	<.005
JUN 05...	E.03	111	.033	E.09	<.01	<.005	<.01	<.03	<.02	E3.96	<.002	<.009	<.005
JUN 10...	E.02	114	.028	.02	<.01	<.005	<.01	<.03	<.02	E1.29	<.002	<.009	<.005
JUN 19...	<.04	101	.021	.05	<.01	<.005	<.01	<.03	<.02	.37	<.002	<.009	<.005
JUN 24...	<.04	99.0	.028	<.01	<.01	<.005	<.01	<.03	<.02	E.40	<.002	<.009	<.005
JUL 01...	E.04	117	.174	<.01	<.01	<.005	<.01	<.03	<.02	E.05	<.002	<.009	<.005
JUL 09...	<.04	128	.052	<.01	<.01	<.005	<.01	<.03	<.02	E.31	<.002	<.009	<.005
JUL 17...	<.04	100	.019	<.01	<.01	<.005	<.01	<.03	<.02	.04	<.002	<.009	<.005
AUG 05...	<.04	120	.027	<.01	<.01	<.005	<.01	<.03	<.02	E.10	<.002	<.009	<.005
AUG 19...	--	117	.030	--	--	<.005	--	--	<.02	--	<.002	<.009	<.005
SEP 10...	<.04	96.2	.006	<.01	<.01	<.005	<.01	<.03	<.02	E.01	<.002	<.009	<.005

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUMET- SULAM WATER FLTRD REC (UG/L) (61694)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	HYDROXY ATRA- ZINE WATER FLTRD REC (UG/L) (50355)	IMAZ- AQUIN WATER FLTRD REC (UG/L) (50356)	IMAZE- THAPYR WATER FLTRD REC (UG/L) (50407)	IMID- ACLOP- RID WATER FLTRD REC (UG/L) (61695)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)
	040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)												
OCT 2001 18...	--	--	--	<.003	98.5	--	--	--	--	<.004	--	<.035	<.027
	040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)												
OCT 2001 19...	<.03	<.01	<.03	<.003	78.8	E.015	E.01	<.02	<.007	<.004	<.01	<.035	<.027
NOV 14...	<.03	<.01	<.03	<.003	104	<.008	E2.46	<.02	<.007	<.004	<.01	<.035	.127
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	<.03	<.01	<.03	<.003	76.8	E.027	E.02	<.02	<.007	<.004	<.01	<.035	<.027
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 08...	<.03	<.01	<.03	<.003	87.1	E.025	E.21	<.02	<.007	<.004	<.01	<.035	<.027
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	<.03	<.01	<.03	<.003	98.2	E.014	E.06	<.02	<.007	<.004	<.01	<.035	<.027
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 13...	<.03	<.01	<.03	<.003	95.2	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027
20...	<.03	<.01	<.03	<.003	88.1	<.008	E1.11	<.02	<.007	<.004	<.01	<.035	<.027
APR 03...	<.03	<.01	<.03	<.003	91.2	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027
08...	<.03	<.01	<.03	<.003	99.1	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027
15...	<.03	<.01	<.03	<.003	88.9	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027
24...	<.03	<.01	<.03	<.003	97.2	E.029	E.08	<.02	<.007	<.004	<.01	<.035	<.027
MAY 08...	<.03	<.01	<.03	<.003	117	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	<.03	<.01	<.03	<.003	106	E.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027
28...	<.03	<.01	<.03	<.003	97.1	E.023	E.16	<.02	<.007	<.004	<.01	<.035	<.027
JUN 05...	<.03	<.01	<.03	<.003	110	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027
10...	<.03	<.01	<.03	<.003	103	E.019	<.02	<.02	<.007	<.004	<.01	<.035	<.027
19...	<.03	<.01	<.03	<.003	94.2	E.028	<.02	<.02	<.007	<.004	<.01	<.035	E.012
24...	<.03	<.01	<.03	<.003	100	E.064	<.02	<.02	<.007	<.004	<.01	<.035	<.027
JUL 01...	<.03	<.01	<.03	<.003	105	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027
09...	<.03	<.01	<.03	<.003	96.3	E.051	E.17	<.02	<.007	<.004	<.01	<.035	<.027
17...	<.03	<.01	<.03	<.003	93.5	E.019	<.02	<.02	<.007	<.004	<.01	<.035	<.027
AUG 05...	<.03	<.01	<.03	<.003	109	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027
19...	--	--	--	<.003	100	--	--	--	--	<.004	--	<.035	<.027
SEP 10...	<.03	<.01	<.03	<.003	100	<.008	<.02	<.02	<.007	<.004	<.01	<.035	<.027

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METAL- AXYL WATER FLTRD REC (UG/L) (50359)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH- OMYL OXIME WATER FLTRD REC (UG/L) (61696)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MET- SUL- FURON METHYL WAT FLT REC (UG/L) (61697)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)
	040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)												
OCT 2001 18...	--	--	--	--	--	--	<.050	<.006	<.013	<.006	--	<.002	<.007
	040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)												
OCT 2001 19...	<.02	<.01	<.02	<.008	<.01	<.004	<.050	<.006	E.003	<.006	<.03	<.002	<.007
NOV 14...	.04	<.01	<.02	<.008	<.01	<.004	<.050	<.006	<.013	<.006	<.03	<.002	<.007
NOV 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	<.013	<.006	<.03	<.002	<.007
DEC 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 08...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	<.013	<.006	E.11	<.002	<.007
JAN 2002 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	E.003	<.006	E.09	<.002	<.007
FEB 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 13...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	<.013	<.006	<.03	<.002	<.007
MAR 20...	<.08	<.01	<.02	<.008	--	<.004	<.050	<.006	<.013	<.006	E.72	<.002	<.007
APR 03...	<.11	<.01	<.02	<.008	--	<.004	<.050	<.006	E.007	<.006	<.03	<.002	<.007
APR 08...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	E.009	<.006	<.03	<.002	<.007
APR 15...	E.12	<.01	<.02	<.008	--	<.004	<.050	<.006	.038	<.006	<.03	<.002	<.007
APR 24...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	<.015	<.006	<.03	<.002	<.007
MAY 08...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	.021	<.006	<.03	<.002	<.007
MAY 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 22...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	.014	<.006	<.03	<.002	<.007
MAY 28...	E.01	<.01	<.02	<.008	--	<.004	<.050	<.006	.023	<.006	E.07	<.002	<.007
JUN 05...	.09	<.01	<.02	<.008	--	<.004	<.050	<.006	.029	<.006	<.03	<.002	<.007
JUN 10...	E.01	<.01	<.02	<.008	--	<.004	<.050	<.006	E.010	<.006	<.03	<.002	<.007
JUN 19...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	E.011	<.006	<.03	<.002	<.007
JUN 24...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	E.008	<.006	E.08	<.002	<.007
JUL 01...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	E.010	<.006	<.03	<.002	<.007
JUL 09...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	E.010	<.006	E.29	<.002	<.007
JUL 17...	<.02	<.01	E.01	<.008	--	<.004	<.050	<.006	E.007	<.006	E.09	<.002	<.007
AUG 05...	<.02	<.01	<.02	<.008	--	<.004	<.050	<.006	E.006	<.006	<.03	<.002	<.007
AUG 19...	--	--	--	--	--	--	<.050	<.006	<.013	<.006	--	<.002	<.007
SEP 10...	.05	<.01	<.02	<.008	--	<.004	<.050	<.006	E.005	<.006	<.03	<.002	<.007

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NICOSUL FURON WATER FLTRD REC (UG/L) (50364)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL OXIME WATER FLTRD REC (UG/L) (50410)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT GF, REC (UG/L) (82687)	PHORATE WATER FLTRD GF, REC (UG/L) (82664)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)
	040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)												
OCT 2001 18...	--	--	--	--	--	--	<.003	<.007	<.002	<.010	<.006	<.011	--
	040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)												
OCT 2001 19...	<.01	E.01	<.02	<.02	<.01	<.01	<.003	<.007	<.002	<.010	<.006	<.011	<.02
NOV 14...	<.01	<.01	<.02	<.02	E.08	<.01	<.003	<.007	<.002	<.010	<.006	<.011	<.02
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.007	<.002	<.010	<.006	<.011	<.02
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 08...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 13...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
20...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
APR 03...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	E.012	<.006	<.011	<.02
08...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
15...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	.058	<.006	<.011	<.02
24...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	.022	<.006	<.011	<.02
MAY 08...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	E.021	<.006	<.011	<.02
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	E.014	<.006	<.011	<.02
28...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
JUN 05...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	E.019	<.006	<.011	<.02
10...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
19...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
24...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	E.007	<.006	<.011	<.02
JUL 01...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
09...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
17...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
AUG 05...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02
19...	--	--	--	--	--	--	<.003	<.010	<.004	<.022	<.006	<.011	--
SEP 10...	<.01	<.01	<.02	<.02	--	<.01	<.003	<.010	<.004	<.022	<.006	<.011	<.02

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO-PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PROP-ICONA-ZOLE, WATER, FLTRD REC (UG/L) (50471)	PRO-POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	PRO-SIDURON WATER, FLTRD REC (UG/L) (38548)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	SULFO-MET-RURON METHYL WTR FLT REC (UG/L) (50337)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL, WATER, DISS, REC (UG/L) (04032)
040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)													
OCT 2001 18...	<.01	<.004	<.010	<.011	<.02	--	--	--	--	<.011	--	<.02	--
040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)													
OCT 2001 19...	E.01	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.011	<.009	.021	<.010
NOV 14...	<.01	<.004	<.010	<.011	<.02	<.010	<.02	<.008	E.07	<.011	<.009	E.019	<.010
NOV 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	.02	<.004	<.010	<.011	<.02	<.010	<.02	<.008	E.02	<.011	<.009	E.036	<.010
DEC 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 08...	M	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	<.009	.03	<.010
JAN 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	.02	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	<.009	.03	<.010
FEB 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 13...	.03	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	<.009	.06	<.010
MAR 20...	.02	<.004	<.010	<.011	<.02	<.010	<.02	E.007	.02	<.006	<.009	.04	<.010
APR 03...	E.01	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	<.009	.04	<.010
APR 08...	E.01	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	<.009	.04	<.010
APR 15...	.02	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	<.009	.05	<.010
APR 24...	.02	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.010	<.009	.05	<.010
MAY 08...	.02	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.005	<.009	.07	<.010
MAY 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 22...	.02	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.007	<.009	E.05	<.010
MAY 28...	.03	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	.425	.03	<.010
JUN 05...	.03	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.009	.242	E.15	<.010
JUN 10...	.02	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.006	E.193	E.11	<.010
JUN 19...	.02	<.004	<.010	<.011	<.02	<.010	<.02	E.004	<.02	E.004	.054	.06	<.010
JUN 24...	.02	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	E.033	.06	<.010
JUL 01...	.02	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	<.009	.08	<.010
JUL 09...	.03	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	.006	<.009	.04	<.010
JUL 17...	.02	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.005	.011	.04	<.010
AUG 05...	.05	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	<.007	<.009	E.06	<.010
AUG 19...	.04	<.004	<.010	<.011	<.02	--	--	--	--	<.005	--	E.08	--
SEP 10...	.02	<.004	<.010	<.011	<.02	<.010	<.02	<.008	<.02	E.004	<.009	.05	<.010

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUPOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER-BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-BENURON METHYL WATER FLTRD (UG/L) (61159)	TRI-CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	UREA 3(4-CHLOR OPHENYL METHYL WAT FLT REC (UG/L) (61692)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)
	040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)												
OCT 2001 18...	<.034	<.02	U	<.005	<.002	--	--	<.009	--	--	--	--	--
	040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)												
OCT 2001 19...	<.034	<.02	U	<.005	<.002	<.009	E.01	<.009	<.02	--	--	--	--
NOV 14...	<.034	<.02	U	<.005	<.002	<.009	<.02	<.009	<.02	<.06	<.12	E.12	<.08
27...	--	--	--	--	--	--	--	--	--	<.03	<.06	.12	<.04
DEC 11...	<.034	<.02	U	<.005	<.002	<.009	<.02	<.009	<.02	<.03	<.06	.15	<.04
27...	--	--	--	--	--	--	--	--	--	<.03	<.06	E.08	<.04
JAN 2002 08...	<.034	<.02	U	<.005	<.002	--	<.02	<.009	<.02	<.03	<.06	E.09	<.04
23...	--	--	--	--	--	--	--	--	--	<.03	<.06	.15	<.04
FEB 13...	<.034	<.02	U	<.005	<.002	--	<.02	<.009	<.02	<.03	<.06	.15	E.01
25...	--	--	--	--	--	--	--	--	--	<.03	<.06	.16	E.01
MAR 13...	<.034	<.02	U	<.005	<.002	--	<.02	<.009	<.02	--	--	--	--
20...	<.034	<.02	U	<.005	<.002	--	<.02	<.009	<.02	<.03	<.06	.11	<.04
APR 03...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	<.03	<.06	.11	<.04
08...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	E.01	<.06	E.06	<.04
15...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	<.03	<.06	E.09	<.04
24...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	--	--	--	--
MAY 08...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	<.034	<.02	--	<.005	<.002	--	<.02	E.001	<.02	--	--	--	--
28...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	--	--	--	--
JUN 05...	<.034	<.02	--	<.005	<.002	--	.17	<.009	<.02	--	--	--	--
10...	<.034	<.02	--	<.005	<.002	--	.06	<.009	<.02	--	--	--	--
19...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	<.03	<.06	E.01	<.04
24...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	--	--	--	--
JUL 01...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	--	--	--	--
09...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	--	--	--	--
17...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	<.03	<.06	<.04	<.04
AUG 05...	<.034	<.02	--	<.005	<.002	--	<.02	<.009	<.02	--	--	--	--
19...	<.034	<.02	--	<.005	<.002	--	--	<.009	--	<.06	<.12	<.07	<.08
SEP 10...	<.034	<.02	--	<.005	<.002	<.009	<.02	<.009	<.02	<.03	<.06	<.04	<.04

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	1,1-DI CHLORO- PRO- PENE, WAT, WH TOTAL (UG/L) (77168)	123-TRI CHLORO- PROPANE WATER WHOLE TOTAL (UG/L) (77443)	1,2- DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	2,2-DI CHLORO- PRO- PANE WAT, WH TOTAL (UG/L) (77170)	2BUTENE TRANS-1 4-DI- CHLORO WATER UNFLTRD TOTAL RECOVER (UG/L) (73547)	2-HEXA- NONE WATER WHOLE TOTAL (UG/L) (77103)	ACETONE WATER WHOLE TOTAL (UG/L) (81552)	ACRYLO- NITRILE TOTAL (UG/L) (34215)	1,2,3- TRI- CHLORO BENZENE WAT, WH REC (UG/L) (77613)	BENZENE 123-TRI METHYL- WATER UNFLTRD RECOVER (UG/L) (77221)
040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)													
OCT 2001 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)													
OCT 2001 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.10	<.32	<.07	<.3	<.06	<.06	<.10	<1.4	<1.4	E8	<2	<.5	<.2
27...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1
DEC 11...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1
27...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1
JAN 2002 08...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1
23...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1
FEB 13...	<.05	<.16	<.04	<.1	<.03	E.01	<.05	<.7	<.7	<7	<1	<.3	<.1
25...	<.05	<.16	<.04	<.1	<.03	E.01	<.05	<.7	<.7	<7	<1	<.3	<.1
MAR 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1
APR 03...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1
08...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	10	<1	<.3	<.1
15...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.10	<.32	<.07	<.3	<.06	<.06	<.10	<1.4	<1.4	<14	<2	<.5	<.2
SEP 10...	<.05	<.16	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (UG/L) (34551)	BENZENE 124-TRI METHYL WATER UNFILT RECOVER (UG/L) (77222)	BENZENE 135-TRI METHYL WATER UNFLTRD REC (UG/L) (77226)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 14BRFL- SURROG VOC UNFLTRD REC PERCENT (99834)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)	ISO- PROPYL- BENZENE WATER WHOLE REC (UG/L) (77223)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L) (77342)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L) (77224)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	BENZENE SEC BUTYL- WATER UNFLTRD REC (UG/L) (77350)	BENZENE TERT- BUTYL- WATER UNFLTRD REC (UG/L) (77353)	BENZENE TOTAL (UG/L) (34030)
	040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)												
OCT 2001 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
	040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)												
OCT 2001 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.1	<.11	<.09	<.06	87.5	<.10	<.12	<.4	<.08	<.06	<.06	<.10	<.07
27...	<.1	<.06	<.04	<.03	99.1	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
DEC 11...	<.1	E.01	<.04	<.03	96.8	<.05	<.06	<.2	<.04	<.03	<.03	<.05	E.02
27...	<.1	<.06	<.04	<.03	85.5	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
JAN 2002 08...	<.1	E.01	<.04	<.03	94.1	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
23...	<.1	E.03	<.04	<.03	91.4	<.05	<.06	<.2	<.04	<.03	<.03	<.05	E.01
FEB 13...	<.1	<.06	<.04	<.03	106	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
25...	<.1	<.06	<.04	<.03	113	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
MAR 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	<.1	<.06	<.04	<.03	104	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
APR 03...	<.1	<.06	<.04	<.03	115	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
08...	<.1	<.06	<.04	<.03	119	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
15...	<.1	<.06	<.04	<.03	93.8	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.1	<.06	<.04	<.03	107	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	<.1	<.06	<.04	<.03	78.0	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.1	<.11	<.09	<.06	85.1	<.10	<.12	<.4	<.08	<.06	<.06	<.10	<.07
SEP 10...	<.1	<.06	<.04	<.03	91.5	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BROMO- BENZENE WATER, WHOLE TOTAL (UG/L) (81555)	BROMO- ETHENE WATER UNFLTRD TOTAL (UG/L) (50002)	BROMO- FORM TOTAL (UG/L) (32104)	CARBON DI- SULFIDE WATER WHOLE TOTAL (UG/L) (77041)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- ETHANE TOTAL (UG/L) (34311)	CHLORO- FORM TOTAL (UG/L) (32106)	CIS-1,2 -DI- CHLORO- ETHENE WATER TOTAL (UG/L) (77093)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	DIBROMO CHLORO- PROPANE WATER TOT.REC (UG/L) (82625)	DI- BROMO- METHANE WATER WHOLE RECOVER (UG/L) (30217)
040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)													
OCT 2001 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)													
OCT 2001 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.07	<.2	<.12	<.14	<.12	<.06	<.4	<.2	E.04	1.03	<.18	<1.0	<.10
27...	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	E.03	.79	<.09	<.5	<.05
DEC 11...	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	E.03	.87	<.09	<.5	<.05
27...	<.04	<.1	<.06	<.07	<.06	<.03	E.1	<.1	E.03	.55	<.09	<.5	<.05
JAN 2002 08...	<.04	<.1	E.06	<.07	<.06	<.03	.2	<.1	.13	.70	<.09	<.5	<.05
23...	<.04	<.1	<.06	<.07	<.06	<.03	E.1	<.1	E.05	1.27	<.09	<.5	<.05
FEB 13...	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	E.02	1.45	<.09	<.5	<.05
25...	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02	1.33	<.09	<.5	<.05
MAR 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	E.03	1.45	<.09	<.5	<.05
APR 03...	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	E.02	1.45	<.09	<.5	<.05
08...	<.04	<.1	<.06	E.03	<.06	<.03	<.2	<.1	<.02	1.04	<.09	<.5	<.05
15...	<.04	<.1	<.06	E.02	<.06	<.03	<.2	<.1	<.02	1.06	<.09	<.5	<.05
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.04	<.1	<.06	E.05	<.06	<.03	<.2	<.1	E.02	E.02	<.09	<.5	<.05
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	E.03	<.04	<.09	<.5	<.05
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.07	<.2	<.12	<.14	<.12	<.06	<.4	<.2	E.02	E.15	<.18	<1.0	<.10
SEP 10...	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	E.02	<.04	<.09	<.5	<.05

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	DI-ISO- PROPYL- ETHER, WATER, UNFLTRD RECOVER (UG/L) (81577)	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC (UG/L) (77562)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	ETHANE 12DICL SURROG VOC UNFLTRD REC PERCENT (99832)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (UG/L) (34396)	ETHER ETHYL WATER UNFLTRD RECOVER (UG/L) (81576)	ETHER TERT- BUTYL METHYL UNFLTRD RECOVER (UG/L) (50004)	ETHER TERT- PENTYL METHYL UNFLTRD RECOVER (UG/L) (50005)	ETHYL- BENZENE TOTAL (UG/L) (34371)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)	FURAN, TETRA- HYDRO- WATER UNFLTRD RECOVER (UG/L) (81607)
	040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)												
OCT 2001 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
	040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)												
OCT 2001 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	E.04	<.36	<.20	<.06	<.18	125	<.4	<.3	<.10	<.16	<.06	<.12	<4
27...	<.05	<.18	<.10	<.03	<.09	117	<.2	<.2	<.05	<.08	<.03	<.06	<2
DEC 11...	E.02	<.18	<.10	<.03	<.09	123	<.2	<.2	<.05	<.08	E.01	<.06	<2
27...	E.05	<.18	<.10	<.03	<.09	112	<.2	<.2	<.05	<.08	<.03	<.06	<2
JAN 2002 08...	.21	<.18	<.10	<.03	<.09	121	<.2	<.2	<.05	<.08	<.03	<.06	<2
23...	E.08	<.18	<.10	<.03	<.09	105	<.2	<.2	<.05	<.08	E.01	<.06	<2
FEB 13...	E.02	<.18	<.10	<.03	<.09	112	<.2	<.2	<.05	<.08	E.01	<.06	<2
25...	<.05	<.18	<.10	<.03	<.09	108	<.2	<.2	<.05	<.08	<.03	<.06	<2
MAR 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	<.05	<.18	<.10	<.03	<.09	108	<.2	<.2	<.05	<.08	<.03	<.06	<2
APR 03...	<.05	<.18	<.10	<.03	<.09	109	<.2	<.2	<.05	<.08	<.03	<.06	<2
08...	<.05	<.18	<.10	<.03	<.09	108	<.2	<.2	<.05	<.08	<.03	<.06	<2
15...	<.05	<.18	<.10	<.03	<.09	98.7	<.2	<.2	<.05	<.08	<.03	<.06	<2
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.05	<.18	<.10	<.03	<.09	104	<.2	<.2	<.05	<.08	<.03	<.06	E1
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	<.05	<.18	<.10	<.03	<.09	118	<.2	<.2	<.05	<.08	<.03	<.06	<2
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.10	<.36	<.20	<.06	<.18	111	<.4	<.3	<.10	<.16	<.06	<.12	<4
SEP 10...	<.05	<.18	<.10	<.03	<.09	97.6	<.2	<.2	<.05	<.08	<.03	<.06	<2

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L) (39702)	ISO- DURENE WATER UNFLTRD RECOVER (UG/L) (50000)	METHAC- RYLATE WATER UNFLTRD RECOVER (UG/L) (73570)	METHAC- RYLATE WATER UNFLTRD RECOVER (UG/L) (81597)	METH- ACRYLO- NITRILE WATER UNFLTRD RECOVER (UG/L) (81593)	METHANE BROMO WAT UNFLTRD REC (UG/L) (77297)	METHYL ACRY- LATE WATER UNFLTRD RECOVER (UG/L) (49991)	METHYL IODIDE WATER UNFLTRD RECOVER (UG/L) (77424)	METHYL TERT- ETHER WAT UNF REC (UG/L) (78032)	METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)	METHYL ENE CHLO- RIDE TOTAL (UG/L) (34423)	METHYL- ETHYL- KETONE WATER WHOLE TOTAL (UG/L) (81595)
040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)													
OCT 2001 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)													
OCT 2001 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.3	<.4	<.4	<.7	<1.2	<.14	<4.0	<.50	<.3	<.5	<.3	<.3	<10.0
27...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
DEC 11...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	M	<5.0
27...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
JAN 2002 08...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
23...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
FEB 13...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
25...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
MAR 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
APR 03...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
08...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
15...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.3	<.4	<.4	<.7	<1.2	<.14	<4.0	<.50	<.3	<.5	<.3	<.3	<10.0
SEP 10...	<.1	<.2	<.2	<.3	<.6	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	METHYL ISO- BUTYL KETONE WAT. WH. TOTAL (UG/L) (78133)	META/ PARA- XYLENE WATER UNFLTRD REC (UG/L) (85795)	NAPHTH- ALENE TOTAL (UG/L) (34696)	O- CHLORO- TOLUENE WATER WHOLE TOTAL (UG/L) (77275)	O- XYLENE WATER WHOLE TOTAL (UG/L) (77135)	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (UG/L) (77356)	1234- TETRA METHYL BENZENE UNFLTRD REC (UG/L) (49999)	1,3-DI- CHLORO- PROPANE WAT. WH TOTAL (UG/L) (77173)	PROPENE 3- CHLORO- WATER UNFLTRD RECOVER (UG/L) (78109)	STYRENE TOTAL (UG/L) (77128)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TOLUENE D8 SURROG VOC UNFLTRD REC PERCENT (99833)	TOLUENE O-ETHYL WATER UNFLTRD RECOVER (UG/L) (77220)
	040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)												
OCT 2001 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
	040869415 LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)												
OCT 2001 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.7	<.12	<1.0	<.05	<.14	E.02	<.5	<.2	<.14	<.08	E.06	107	<.12
27...	<.4	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	E.07	103	<.06
DEC 11...	<.4	E.04	<.5	<.03	E.02	<.07	<.2	<.1	<.07	E.01	E.07	104	<.06
27...	<.4	E.03	<.5	<.03	<.07	<.07	<.2	<.1	<.07	E.01	E.03	97.3	<.06
JAN 2002 08...	<.4	E.03	<.5	<.03	<.07	<.07	<.2	<.1	<.07	E.01	E.06	102	<.06
23...	<.4	E.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	E.01	.10	98.7	<.06
FEB 13...	<.4	E.03	<.5	<.03	<.07	<.07	<.2	<.1	<.07	E.01	E.07	99.9	<.06
25...	<.4	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	E.06	103	<.06
MAR 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	<.4	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	E.07	99.4	<.06
APR 03...	<.4	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	E.05	103	<.06
08...	<.4	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	E.03	E.08	106	<.06
15...	<.4	E.02	<.5	<.03	<.07	<.07	<.2	<.1	<.07	E.01	E.04	98.2	<.06
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.4	<.06	<.5	<.03	<.07	E.01	<.2	<.1	<.07	<.04	E.01	99.0	<.06
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	<.4	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	E.01	96.0	<.06
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.7	<.12	<1.0	<.05	<.14	<.14	<.5	<.2	<.14	<.08	<.05	92.1	<.12
SEP 10...	<.4	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03	97.7	<.06

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	TOLUENE	TRANS-	TRI-	TRI-	VINYL	SED.	SEDI-
	P-CHLOR	1,3-DI-	CHLORO-	CHLORO-		SUSP.	
	WATER	CHLORO-	ETHYL-	FLUORO-	CHLO-	SIEVE	MENT,
	UNFLTRD	PROPENE	ENE	METHANE	RIDE	% FINER	SUS-
	REC	TOTAL	TOTAL	TOTAL	TOTAL	THAN	PENDEd
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	.062 MM	(MG/L)
	(77277)	(34010)	(34699)	(39180)	(34488)	(70331)	(80154)
040863075	NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)						
OCT 2001							
18...	--	--	--	--	--	78	202
040869415	LINCOLN CREEK AT 47TH STREET AT MILWAUKEE, WI (LAT 43 05 49N LONG 087 58 20W)						
OCT 2001							
19...	--	--	--	--	--	99	131
NOV							
14...	<.10	.30	<.18	<.08	<.18	.5	95
27...	<.05	1.15	<.09	<.04	<.09	.3	--
DEC							
11...	<.05	3.52	<.09	E.01	<.09	.3	83
27...	<.05	3.75	<.09	<.04	<.09	.2	--
JAN 2002							
08...	<.05	2.31	<.09	E.01	<.09	.3	99
23...	<.05	2.05	<.09	E.03	<.09	.9	--
FEB							
13...	<.05	1.82	<.09	E.03	<.09	.9	87
25...	<.05	E.01	<.09	E.04	<.09	.8	--
MAR							
13...	--	--	--	--	--	--	84
20...	<.05	E.04	<.09	.14	<.09	.8	97
APR							
03...	<.05	E.01	<.09	E.09	<.09	.8	98
08...	<.05	E.03	<.09	.17	<.09	.5	99
15...	<.05	E.04	<.09	.19	<.09	.6	90
24...	--	--	--	--	--	--	83
MAY							
08...	--	--	--	--	--	--	95
14...	--	--	--	--	--	--	15
22...	--	--	--	--	--	--	20
28...	--	--	--	--	--	--	44
JUN							
05...	--	--	--	--	--	--	51
10...	--	--	--	--	--	--	7
19...	<.05	.81	<.09	<.04	<.09	<.1	38
24...	--	--	--	--	--	--	52
JUL							
01...	--	--	--	--	--	--	44
09...	--	--	--	--	--	--	72
17...	<.05	E.05	<.09	<.04	<.09	<.1	32
AUG							
05...	--	--	--	--	--	--	--
19...	<.10	E.07	<.18	<.08	<.18	<.2	--
SEP							
10...	<.05	E.07	<.09	<.04	<.09	<.1	--

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAMPLING METHOD, CODES (82398)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPECIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
04072185 TROUT CREEK NEAR HOWARD, WI (LAT 44 32 10N LONG 088 07 48W)													
OCT 2001													
22...	1250	1.8	40	745	12.3	8.4	792	8.1	--	--	--	--	--
NOV													
06...	1240	1.9	40	746	16.5	8.7	792	7.8	--	--	--	--	--
DEC													
12...	1505	2.8	10	747	13.3	7.7	868	2.3	--	--	--	--	--
JAN 2002													
16...	1225	1.8	40	735	12.5	6.8	821	-.2	--	--	--	--	--
FEB													
27...	1405	8.4	10	743	17.0	8.1	514	.2	--	--	--	--	--
MAR													
27...	1225	9.3	10	750	22.0	7.8	588	.1	--	--	--	--	--
APR													
22...	1140	6.2	10	755	13.1	7.6	675	5.9	--	--	--	--	--
MAY													
15...	0830	5.4	10	742	11.0	8.2	631	9.2	--	--	--	--	--
JUN													
03...	1340	E63	10	--	--	--	--	--	45.6	17.3	2.45	16.2	30.4
11...	1015	47	10	737	8.4	7.5	545	19.7	--	--	--	--	--
27...	1050	2.6	10	--	--	--	--	--	--	--	--	--	--
JUL													
17...	1120	.47	40	--	7.3	7.8	785	26.8	--	--	--	--	--
AUG													
22...	1245	5.4	10	745	8.8	8.0	616	18.7	--	--	--	--	--
SEP													
11...	1145	.34	40	747	9.3	7.6	763	17.5	--	--	--	--	--
04072233 LANCASTER BROOK AT SHAWANO AVENUE AT HOWARD, WI (LAT 44 33 29N LONG 088 06 10W)													
OCT 2001													
22...	1155	1.5	40	745	11.3	8.2	782	7.4	--	--	--	--	--
NOV													
06...	1140	1.9	40	746	17.3	8.3	806	6.3	--	--	--	--	--
DEC													
12...	1355	2.2	10	747	13.2	7.5	814	2.1	--	--	--	--	--
JAN 2002													
16...	1105	3.8	40	735	13.9	6.5	792	-.2	--	--	--	--	--
FEB													
27...	1240	3.8	40	743	16.4	7.9	797	.0	--	--	--	--	--
MAR													
27...	1125	9.1	40	749	22.8	7.8	715	.5	--	--	--	--	--
APR													
22...	1020	5.3	10	755	13.0	7.1	837	3.2	--	--	--	--	--
MAY													
15...	0735	5.7	10	741	10.9	8.0	774	8.9	--	--	--	--	--
JUN													
03...	1300	E40	10	--	--	--	--	--	38.4	15.7	2.80	15.9	27.6
10...	1445	4.2	40	742	11.1	8.1	830	19.2	--	--	--	--	--
JUL													
17...	1050	.53	40	--	7.1	7.4	882	21.7	--	--	--	--	--
AUG													
22...	1110	7.7	10	745	8.8	7.6	461	18.3	--	--	--	--	--
SEP													
11...	1045	.44	40	748	8.2	7.3	774	17.0	--	--	--	--	--

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
04072185 TROUT CREEK NEAR HOWARD, WI (LAT 44 32 10N LONG 088 07 48W)													
OCT 2001 22...	--	--	--	--	<.04	.44	.48	.38	E.006	.036	.02	.039	--
NOV 06...	--	--	--	--	<.04	.43	.50	.41	<.008	.014	<.02	.020	--
DEC 12...	--	--	--	--	E.02	.67	.69	3.05	.014	.031	.02	.043	--
JAN 2002 16...	--	--	--	--	.07	.39	.47	2.78	.020	.021	E.01	.031	--
FEB 27...	--	--	--	--	.36	1.4	1.6	4.07	.032	.103	.08	.147	--
MAR 27...	--	--	--	--	.06	.76	1.0	3.50	.013	.039	.03	.095	--
APR 22...	--	--	--	--	<.04	.89	.90	.78	.015	.053	.03	.074	--
MAY 15...	--	--	--	--	<.04	1.0	1.0	.93	.008	.055	.03	.077	--
JUN 03...	E.08	6.91	21.6	273	E.03	.68	1.4	.54	.010	.064	.04	.36	143
11...	--	--	--	--	.89	2.6	6.2	13.9	.243	.37	.32	1.46	--
27...	--	--	--	--	E.03	1.0	1.2	1.48	.024	.159	.13	.20	--
JUL 17...	--	--	--	--	<.04	.46	.56	1.14	E.007	.126	.10	.150	--
AUG 22...	--	--	--	--	E.02	.57	.76	2.03	.014	.088	.07	.151	--
SEP 11...	--	--	--	--	<.04	.48	.54	1.30	E.004	.110	.08	.122	--
04072233 LANCASTER BROOK AT SHAWANO AVENUE AT HOWARD, WI (LAT 44 33 29N LONG 088 06 10W)													
OCT 2001 22...	--	--	--	--	<.04	.33	.45	1.38	E.006	.014	<.02	.018	--
NOV 06...	--	--	--	--	<.04	.43	.50	1.65	E.005	.012	<.02	.014	--
DEC 12...	--	--	--	--	E.04	.35	.39	2.04	.010	.014	<.02	.022	--
JAN 2002 16...	--	--	--	--	.09	.38	.48	2.56	.020	.011	<.02	.019	--
FEB 27...	--	--	--	--	.16	.56	.70	1.33	.013	.025	E.02	.043	--
MAR 27...	--	--	--	--	.05	.33	.46	1.77	E.006	.013	E.01	.042	--
APR 22...	--	--	--	--	<.04	.39	.39	1.25	.017	.015	<.02	.028	--
MAY 15...	--	--	--	--	<.04	.44	.49	1.03	.008	.015	<.02	.026	--
JUN 03...	E.10	6.33	20.3	241	.06	.68	1.8	.60	.013	.046	.02	.50	90
10...	--	--	--	--	E.03	.47	.59	1.59	.028	.029	E.01	.047	--
JUL 17...	--	--	--	--	<.04	.34	.45	1.92	.010	.051	.04	.072	--
AUG 22...	--	--	--	--	E.04	.94	1.4	1.12	.015	.130	.05	.25	--
SEP 11...	--	--	--	--	<.04	.34	.40	1.75	E.006	.049	.03	.066	--

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	MANGA- NESE- DIS- SOLVED (UG/L AS MN) (01056)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
04072185 TROUT CREEK NEAR HOWARD, WI (LAT 44 32 10N LONG 088 07 48W)													
OCT 2001 22...	--	<.002	<.004	<.002	<.005	.043	<.010	<.002	<.041	<.020	<.005	<.018	<.003
NOV 06...	--	<.002	<.004	<.002	<.005	.036	<.010	<.002	<.041	<.020	<.005	<.018	<.003
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 16...	--	<.006	<.006	<.004	<.005	.037	<.010	<.002	<.041	<.020	<.005	<.018	<.003
FEB 27...	--	<.006	<.006	<.004	<.005	.029	<.010	<.002	<.041	<.020	<.005	<.018	<.003
MAR 27...	--	<.006	<.006	<.004	<.005	.028	<.010	<.002	<.041	<.020	<.005	<.018	<.003
APR 22...	--	<.006	<.006	<.004	<.005	.035	<.010	<.002	<.041	<.020	<.005	<.018	<.003
MAY 15...	--	<.006	.012	<.004	<.005	.049	<.010	<.002	<.041	<.020	<.005	<.018	<.003
JUN 03...	89.4	<.006	.011	.007	<.005	.084	<.010	<.002	<.041	<.020	<.005	<.018	<.003
JUN 11...	--	<.006	1.60	.568	<.005	15.3	<.010	<.002	<.041	<.020	<.005	<.018	<.003
JUN 27...	--	<.006	.048	<.004	<.005	.416	<.010	<.002	<.041	<.020	<.005	<.018	<.003
JUL 17...	--	<.006	<.006	<.004	<.005	.174	<.010	<.002	<.041	<.020	<.005	<.018	<.003
AUG 22...	--	<.006	<.006	<.004	<.005	.054	<.010	<.002	<.041	<.020	<.005	<.018	<.003
SEP 11...	--	<.006	<.006	<.004	<.005	.069	<.010	<.002	<.041	<.020	<.005	<.018	<.003
04072233 LANCASTER BROOK AT SHAWANO AVENUE AT HOWARD, WI (LAT 44 33 29N LONG 088 06 10W)													
OCT 2001 22...	--	<.002	<.004	<.002	<.005	.015	<.010	<.002	<.041	<.020	<.005	<.018	<.003
NOV 06...	--	<.002	<.004	<.002	<.005	.013	<.010	<.002	<.041	<.020	<.005	<.018	<.003
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 16...	--	<.006	<.006	<.004	<.005	.015	<.010	<.002	<.041	<.020	<.005	<.018	<.003
FEB 27...	--	<.006	<.006	<.004	<.005	.009	<.010	<.002	<.041	<.020	<.005	<.018	<.003
MAR 27...	--	<.006	<.006	<.004	<.005	.011	<.010	<.002	<.041	<.020	<.005	<.018	<.003
APR 22...	--	<.006	<.006	<.004	<.005	.018	<.010	<.002	<.041	<.020	<.005	<.018	<.003
MAY 15...	--	<.006	<.006	<.004	<.005	.031	<.010	<.002	<.041	<.020	<.005	<.018	<.003
JUN 03...	108	<.006	.014	.010	<.005	.221	<.010	<.002	<.041	<.020	<.005	E.013	<.003
JUN 10...	--	<.006	.052	.013	<.005	.380	<.010	<.002	<.041	<.020	<.005	<.018	<.003
JUL 17...	--	<.006	<.006	<.004	<.005	.033	<.010	<.002	<.041	<.020	<.005	<.018	<.003
AUG 22...	--	<.006	.010	.014	<.005	.032	<.010	<.002	<.041	<.020	<.005	<.018	<.003
SEP 11...	--	<.006	<.006	<.004	<.005	.029	<.010	<.002	<.041	<.020	<.005	<.018	<.003

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)
04072185 TROUT CREEK NEAR HOWARD, WI (LAT 44 32 10N LONG 088 07 48W)													
OCT 2001 22...	E.025	95.3	<.009	<.005	<.02	<.002	<.009	<.005	<.003	76.6	<.004	<.035	<.027
NOV 06...	E.019	92.6	<.005	<.005	<.02	<.002	<.009	<.005	<.003	91.5	<.004	<.035	<.027
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 16...	E.025	99.1	<.005	<.005	<.02	<.002	<.009	<.005	<.003	87.6	<.004	<.035	<.027
FEB 27...	E.026	118	<.005	<.005	<.02	<.002	<.009	<.005	<.003	80.3	<.004	E.045	<.027
MAR 27...	E.008	117	<.005	<.005	<.02	<.002	<.009	<.005	<.003	94.3	<.004	<.035	<.027
APR 22...	E.011	97.2	<.005	<.005	<.02	<.002	<.009	<.005	<.003	90.5	<.004	<.035	<.027
MAY 15...	E.020	105	<.005	<.005	<.02	<.002	<.009	<.005	<.003	100	<.004	<.035	<.027
JUN 03...	E.024	121	.017	<.005	<.02	E.002	<.009	<.005	<.003	93.5	<.004	<.035	<.027
11...	E1.03	119	<.010	<.005	<.02	<.002	<.009	<.005	<.003	104	<.004	<.035	<.027
27...	E.061	112	<.005	<.005	<.02	.008	<.009	<.005	<.003	106	<.004	<.035	<.027
JUL 17...	E.044	93.5	<.005	<.005	<.02	E.001	<.009	<.005	<.003	91.4	<.004	<.035	<.027
AUG 22...	E.025	117	<.005	<.005	<.02	<.002	<.009	<.005	<.003	103	<.004	<.035	<.027
SEP 11...	E.036	91.0	<.005	<.005	<.02	<.002	<.009	<.005	<.003	97.2	<.004	<.035	<.027
04072233 LANCASTER BROOK AT SHAWANO AVENUE AT HOWARD, WI (LAT 44 33 29N LONG 088 06 10W)													
OCT 2001 22...	E.017	97.2	<.006	<.005	<.02	<.002	<.009	<.005	<.003	79.7	<.004	<.035	E.007
NOV 06...	E.015	77.8	<.005	<.005	<.02	<.002	<.009	<.005	<.003	79.0	<.004	<.035	<.027
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 16...	E.018	115	<.005	<.005	<.02	<.002	<.009	<.005	<.003	92.7	<.004	<.035	<.027
FEB 27...	E.012	105	<.005	<.005	<.02	<.002	<.009	<.005	<.003	78.1	<.004	<.035	<.027
MAR 27...	E.009	111	<.005	<.005	<.02	<.002	<.009	<.005	<.003	89.9	<.004	<.035	<.027
APR 22...	E.008	102	<.005	<.005	<.02	<.002	<.009	<.005	<.003	93.5	<.004	<.035	<.027
MAY 15...	E.016	95.3	<.005	<.005	<.02	<.002	<.009	<.005	<.003	91.4	<.004	<.035	<.027
JUN 03...	E.030	130	.043	<.005	<.02	E.002	<.009	<.005	<.003	102	<.004	<.035	<.027
10...	E.046	111	.009	<.005	<.02	<.002	<.009	<.005	<.003	107	<.004	<.035	<.027
JUL 17...	E.032	--	E.003	<.005	<.02	<.002	<.009	<.005	<.003	--	<.004	<.035	<.027
AUG 22...	E.014	119	.007	<.005	<.02	<.002	<.009	<.005	<.003	98.2	<.004	<.035	<.027
SEP 11...	E.028	95.3	E.004	<.005	<.02	<.002	<.009	<.005	<.003	99.1	<.004	<.035	<.027

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THON WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THON, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)
04072185 TROUT CREEK NEAR HOWARD, WI (LAT 44 32 10N LONG 088 07 48W)													
OCT 2001 22...	<.050	<.006	E.006	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M
NOV 06...	<.050	<.006	E.006	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 16...	<.050	<.006	E.005	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
FEB 27...	<.050	<.006	.014	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
MAR 27...	<.050	<.006	E.012	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01
APR 22...	<.050	<.006	E.008	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01
MAY 15...	<.050	<.006	.018	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
JUN 03...	<.050	<.006	.091	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	.03
11...	<.050	<.006	E30.8	<.006	<.002	<.007	<.003	<.010	<.004	.095	<.006	<.011	E.01
27...	<.050	<.006	.341	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01
JUL 17...	<.050	<.006	.078	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01
AUG 22...	<.050	<.006	.021	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
SEP 11...	<.050	<.006	.028	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01
04072233 LANCASTER BROOK AT SHAWANO AVENUE AT HOWARD, WI (LAT 44 33 29N LONG 088 06 10W)													
OCT 2001 22...	<.050	<.006	E.005	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M
NOV 06...	<.050	<.006	E.003	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2002 16...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
FEB 27...	<.050	<.006	E.006	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M
MAR 27...	<.050	<.006	E.010	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01
APR 22...	<.050	<.006	E.005	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01
MAY 15...	<.050	<.006	E.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
JUN 03...	<.050	<.006	.469	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	.04
10...	<.050	<.006	.488	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01
JUL 17...	<.050	<.006	E.011	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01
AUG 22...	<.050	<.006	.138	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01
SEP 11...	<.050	<.006	.036	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER-BUTHYL-AZINE, WATER, DISS, REC (UG/L) (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
04072185 TROUT CREEK NEAR HOWARD, WI (LAT 44 32 10N LONG 088 07 48W)													
OCT 2001 22...	<.004	<.010	<.011	<.02	E.008	<.02	<.034	<.02	U	<.005	<.002	<.009	74
NOV 06...	<.004	<.010	<.011	<.02	E.006	<.02	<.034	<.02	U	<.005	<.002	<.009	89
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	82
JAN 2002 16...	<.004	<.010	<.011	<.02	E.005	<.02	<.034	<.02	U	<.005	<.002	<.009	69
FEB 27...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	94
MAR 27...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	81
APR 22...	<.004	<.010	<.011	<.02	E.005	<.02	<.034	<.02	--	<.005	<.002	<.009	99
MAY 15...	<.004	<.010	<.011	<.02	.050	<.02	<.034	<.02	--	<.005	<.002	<.009	15
JUN 03...	<.004	<.010	<.011	<.02	.012	<.02	<.034	<.02	--	<.005	<.002	<.009	74
JUN 11...	<.004	<.010	<.011	<.02	.266	<.02	<.034	<.02	--	<.005	<.002	<.009	95
JUN 27...	<.004	<.010	<.011	<.02	.014	<.02	<.034	<.02	--	<.005	<.002	<.009	80
JUL 17...	<.004	<.010	<.011	<.02	.012	<.02	<.034	<.02	--	<.005	<.002	<.009	59
AUG 22...	<.004	<.010	<.011	<.02	.009	<.02	<.034	<.02	--	<.005	<.002	<.009	--
SEP 11...	<.004	<.010	<.011	<.02	.011	<.02	<.034	<.02	--	<.005	<.002	<.009	--
04072233 LANCASTER BROOK AT SHAWANO AVENUE AT HOWARD, WI (LAT 44 33 29N LONG 088 06 10W)													
OCT 2001 22...	<.004	<.010	<.011	<.02	E.003	<.02	<.034	<.02	U	<.005	<.002	<.009	65
NOV 06...	<.004	<.010	<.011	<.02	E.002	<.02	<.034	<.02	U	<.005	<.002	<.009	89
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	71
JAN 2002 16...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	52
FEB 27...	<.004	<.010	<.011	<.02	.007	<.02	<.034	<.02	U	<.005	<.002	<.009	93
MAR 27...	<.004	<.010	<.011	<.02	.007	<.02	<.034	<.02	U	<.005	<.002	<.009	88
APR 22...	<.004	<.010	<.011	<.02	.313	<.02	<.034	<.02	--	<.005	<.002	<.009	96
MAY 15...	<.004	<.010	<.011	<.02	.953	<.02	<.034	<.02	--	<.005	<.002	<.009	70
JUN 03...	<.004	<.010	<.011	<.02	.108	<.02	<.034	<.02	--	<.005	<.002	<.009	87
JUN 10...	<.004	<.010	<.011	<.02	.048	<.02	<.034	<.02	--	<.005	<.002	<.009	45
JUL 17...	<.004	<.010	<.011	<.02	.008	M	<.034	<.02	--	<.005	<.002	<.009	58
AUG 22...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--	<.005	<.002	<.009	--
SEP 11...	<.004	<.010	<.011	<.02	.021	<.02	<.034	<.02	--	<.005	<.002	<.009	--

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SEDI- MENT, SUS- PENDED (MG/L) (80154)	
04072185		TROUT CREEK NEAR HOWARD, WI (LAT 44 32 10N LONG 088 07 48W)
OCT 2001		
22...	168	
NOV		
06...	133	
DEC		
12...	149	
JAN 2002		
16...	169	
FEB		
27...	89	
MAR		
27...	119	
APR		
22...	72	
MAY		
15...	62	
JUN		
03...	321	
11...	873	
27...	16	
JUL		
17...	23	
AUG		
22...	--	
SEP		
11...	--	
04072233		LANCASTER BROOK AT SHAWANO AVENUE AT HOWARD, WI (LAT 44 33 29N LONG 088 06 10W)
OCT 2001		
22...	168	
NOV		
06...	87	
DEC		
12...	112	
JAN 2002		
16...	159	
FEB		
27...	151	
MAR		
27...	143	
APR		
22...	94	
MAY		
15...	81	
JUN		
03...	400	
10...	13	
JUL		
17...	12	
AUG		
22...	--	
SEP		
11...	--	

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDE (MG/L) (00530)	NITRO-GEN, AMMONIA + DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	
04073140 FOX RIVER ABOVE PUCKAWAY LAKE NEAR MARQUETTE, WI (LAT 43 44 33N LONG 089 14 29W)														
NOV 2001	02...	1150	699	10	7.0	11.6	7.9	412	9.2	12	.041	.86	.773	.011
JAN 2002	24...	0915	794	30	1.5	12.2	7.7	460	.5	--	.089	.51	1.77	.011
MAR	27...	1425	760	10	4.3	--	8.6	405	4.1	5	.022	.83	1.34	.017
MAY	07...	1050	820	10	6.0	10.6	8.7	355	16.8	15	.049	1.1	.532	.015
JUN	27...	1055	705	10	3.4	6.6	7.7	346	25.5	44	<.013	1.3	.110	.029
AUG	13...	1045	330	10	12	6.4	7.9	366	25.1	17	.015	.81	.024	.019
04073345 MECAN RIVER AT COUNTY TRUNK C NEAR PRINCETON WI (LAT 43 48 54N LONG 089 12 20W)														
JUN 2002	25...	0940	260	10	13	3.5	7.0	125	24.1	30	.067	1.4	.090	.048
AUG	08...	1550	123	10	5.9	9.8	8.2	337	23.6	15	.029	.50	1.75	.014
04073365 FOX RIVER AT PRINCETON, WI (LAT 43 51 04N LONG 089 08 00W)														
NOV 2001	02...	1525	788	10	39	10.7	8.0	389	10.4	40	.058	1.3	.650	.009
JAN 2002	24...	1300	773	10	2.7	13.4	8.2	464	1.1	--	.067	.61	1.61	.009
MAR	27...	0945	1170	10	7.7	--	8.4	395	1.9	--	.026	.78	1.26	.010
MAY	07...	1555	1480	10	16	10.8	8.6	357	17.0	31	<.013	1.4	.291	.010
JUN	27...	1405	1130	10	14	6.3	7.2	277	25.8	29	.033	1.3	.088	.033
AUG	13...	1205	383	10	61	7.5	8.5	312	25.3	62	.025	2.3	.388	.018
04073440 WHITE RIVER NEAR PRINCETON WI (LAT 43 55 03N LONG 089 05 01W)														
JUN 2002	25...	1215	363	10	2.6	2.4	6.9	157	25.3	10	.032	1.0	.073	.038
AUG	08...	1420	116	10	2.9	9.9	7.9	334	24.7	9	.027	.40	.091	.011
04073450 SUCKER CREEK NEAR BERLIN WI (LAT 43 56 30N LONG 089 04 47W)														
JUN 2002	25...	1125	26	10	6.4	.2	6.6	154	24.5	143	.070	3.3	.070	.222
AUG	08...	1325	5.8	10	.4	7.8	7.5	395	22.3	<2	.034	.46	.970	.032
040734745 PUCHYAN RIVER AT HIGHWAY J NEAR GREEN LAKE WI (LAT 43 52 22N LONG 088 59 28W)														
JUN 2002	25...	1335	109	10	11	7.6	8.4	482	27.6	19	.053	.76	.400	.048
AUG	08...	1135	38	10	4.9	10.0	8.0	507	23.3	11	.042	.72	.672	.038
04073500 FOX RIVER AT BERLIN, WI (LAT 43 57 14N LONG 088 57 08W)														
NOV 2001	02...	1425	1090	10	27	10.8	7.8	401	10.0	32	.049	.95	.881	.011
JAN 2002	24...	1345	1330	10	2.9	12.3	7.8	467	.1	--	.047	.45	1.73	.010
MAR	27...	1120	1700	10	8.5	--	8.2	408	2.1	--	.024	.77	1.22	.011
MAY	07...	1315	2370	10	6.4	8.8	8.0	362	16.4	15	.089	1.1	.158	.010
JUN	27...	1230	2540	10	9.3	1.6	6.8	261	25.7	14	.053	1.4	.064	.076
AUG	13...	1430	626	10	58	8.3	8.4	342	25.9	66	.023	1.5	.470	.012

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	SEDI- MENT, SUS- PENDEd (MG/L) (80154)
04073140 FOX RIVER ABOVE PUCKAWAY LAKE NEAR MARQUETTE, WI (LAT 43 44 33N LONG 089 14 29W)			
NOV 2001 02...	.048	20	16
JAN 2002 24...	.028	10	7.4
MAR 27...	.037	<10	3.8
MAY 07...	.074	10	6.4
JUN 27...	.112	20	--
AUG 13...	.072	<10	17
04073345 MECAN RIVER AT COUNTY TRUNK C NEAR PRINCETON WI (LAT 43 48 54N LONG 089 12 20W)			
JUN 2002 25...	.111	780	49
AUG 08...	.034	140	19
04073365 FOX RIVER AT PRINCETON, WI (LAT 43 51 04N LONG 089 08 00W)			
NOV 2001 02...	.083	10	40
JAN 2002 24...	.027	<10	18
MAR 27...	.051	<10	9.9
MAY 07...	.078	10	24
JUN 27...	.100	150	--
AUG 13...	.160	20	124
04073440 WHITE RIVER NEAR PRINCETON WI (LAT 43 55 03N LONG 089 05 01W)			
JUN 2002 25...	.064	190	--
AUG 08...	.027	130	9.6
04073450 SUCKER CREEK NEAR BERLIN WI (LAT 43 56 30N LONG 089 04 47W)			
JUN 2002 25...	.489	100	166
AUG 08...	.044	70	4.3
040734745 PUCHYAN RIVER AT HIGHWAY J NEAR GREEN LAKE WI (LAT 43 52 22N LONG 088 59 28W)			
JUN 2002 25...	.088	60	--
AUG 08...	.060	210	12
04073500 FOX RIVER AT BERLIN, WI (LAT 43 57 14N LONG 088 57 08W)			
NOV 2001 02...	.069	200	37
JAN 2002 24...	.026	<10	24
MAR 27...	.040	<10	12
MAY 07...	.055	50	10
JUN 27...	.181	140	23
AUG 13...	.146	300	53

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
04073470 PUCHYAN RIVER AT GREEN LAKE, WI (LAT 43 50 48N LONG 088 57 36W)				
OCT 2001				
01...	1520	42	10	.012
31...	1450	28	10	.017
NOV				
21...	1230	30	10	.013
JAN 2002				
03...	1130	32	10	.023
FEB				
15...	1445	28	10	.024
MAR				
06...	1140	61	10	.034
13...	1400	85	10	.027
APR				
09...	1142	96	10	.022
19...	1125	147	10	.031
MAY				
03...	1540	166	10	.030
24...	1020	69	10	.038
JUN				
17...	1125	83	10	.038
26...	0947	100	10	.040
JUL				
05...	1610	75	10	.041
26...	1545	96	10	.030
AUG				
15...	1345	33	10	.028
30...	1230	19	10	.030
SEP				
19...	1205	37	10	.028
30...	1000	14	10	.020

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, PAR-TICULATE WAT FLT SUSP (MG/L AS N) (49570)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L AS C) (00694)
040780885 MID BR EMBARRASS R @ ELAND RD NR ELAND, WI (LAT 44 52 13N LONG 089 10 08W)													
MAY 2002	1510	--	10	5.13	4.7	<.04	1.0	.40	<.008	.09	<.02	.054	1.3
JUL 29...	1200	24	10	9.20	7.5	<.04	.34	1.33	.014	.05	<.02	.032	.7
040780895 PACKARD CREEK AT BLUEBIRD ROAD NEAR ELAND, WI (LAT 44 52 18N LONG 089 10 25W)													
MAY 2002	1320	31	10	8.82	3.0	<.04	1.1	.18	<.008	.06	E.01	.079	.6
JUL 29...	1100	6.6	10	--	--	<.04	.46	1.19	.014	.06	.04	.072	.7
05381255 VALENTINE CREEK AT MORRISON ROAD NEAR HATFIELD, WI (LAT 44 21 21N LONG 090 44 29W)													
JUN 2002	1030	44	10	6.80	1.6	<.04	1.4	E.03	<.008	.42	<.02	.092	7.5
JUL 30...	1115	.47	10	--	--	<.04	.19	.18	<.008	<.02	<.02	.013	.2
05381260 DICKEY CREEK @ COUNTY TRUNK HGHWY K NR HATFIELD,WI (LAT 44 20 30N LONG 090 44 46W)													
JUN 2002	0815	70	10	5.63	2.0	E.03	1.5	.14	<.008	.22	<.02	.101	3.3
JUL 30...	1230	5.6	10	--	--	<.04	.59	.07	<.008	.07	<.02	.035	1.9
CARBON, INOR-GANIC, PARTIC. TOTAL (MG/L AS C) (00688) CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681) CARBON, ORGANIC PARTIC-ULATE TOTAL (MG/L AS C) (00689) SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331) SEDI-MENT, SUS-PENDED (MG/L) (80154)													
040780885 MID BR EMBARRASS R @ ELAND RD NR ELAND, WI (LAT 44 52 13N LONG 089 10 08W)													
MAY 2002	30...	<.1	20.8	1.3	60	19							
JUL 29...		<.1	4.0	.7	55	5.0							
040780895 PACKARD CREEK AT BLUEBIRD ROAD NEAR ELAND, WI (LAT 44 52 18N LONG 089 10 25W)													
MAY 2002	30...	<.1	20.4	.6	68	9.0							
JUL 29...		<.1	6.0	.7	48	7.0							
05381255 VALENTINE CREEK AT MORRISON ROAD NEAR HATFIELD, WI (LAT 44 21 21N LONG 090 44 29W)													
JUN 2002	03...	<.1	20.6	7.5	12	365							
JUL 30...		<.1	4.4	.2	90	17							
05381260 DICKEY CREEK @ COUNTY TRUNK HGHWY K NR HATFIELD,WI (LAT 44 20 30N LONG 090 44 46W)													
JUN 2002	03...	<.1	17.3	3.3	42	166							
JUL 30...		<.1	11.5	1.9	12	45							

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	ACETO-CHLOR ESA FLTRD 0.7 UM GF REC (UG/L) (61029)	ACETO-CHLOR OA FLTRD 0.7 UM GF REC (UG/L) (61030)	ACETO-CHLOR, OA FLTRD WATER FLTRD 0.7 UM REC (UG/L) (49260)	ALA-CHLOR OA FLTRD 0.7 UM GF REC (UG/L) (61031)	ALA-CHLOR ESA WAT FLT GF 0.7U REC (UG/L) (50009)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	
04087240 ROOT RIVER AT RACINE, WI (LAT 42 45 05N LONG 087 49 25W)														
JUN 2002	03...	1350	89	10	8.7	7.8	825	17.6	<.05	<.05	<.05	<.05	.10	<.05
JUL	26...	1130	23	10	7.6	8.0	850	24.2	.07	.05	<.05	<.05	.08	<.05
SEP	03...	1110	79	10	8.4	8.0	814	23.0	<.05	<.05	<.05	<.05	<.05	<.05
05407000 WISCONSIN RIVER AT MUSCODA, WI (LAT 43 11 53N LONG 090 26 36W)														
MAY 2002	28...	1330	7150	10	--	8.9	211	20.5	<.05	<.05	<.05	<.05	.23	<.05
JUN	27...	1215	30500	10	--	7.4	180	24.5	.05	.05	.06	<.05	.18	<.05
SEP	23...	1130	6460	10	10.1	8.2	259	16.5	.1	.1	<.050	.1	.2	<.05
05430500 ROCK RIVER AT AFTON, WI (LAT 42 36 33N LONG 089 04 14W)														
JUN 2002	04...	1300	2610	10	8.1	7.6	521	17.6	.11	.08	.08	<.05	.43	<.05
JUL	11...	1230	964	10	11.7	8.4	643	24.4	.36	.41	<.05	<.05	.70	<.05
SEP	20...	0945	992	10	6.7	7.6	762	20.4	.1	.1	<.050	<.1	.7	<.05
Date	Time	AMETRYN WATER, DISS, REC, (UG/L) (38401)	AMINO-METHYL-PHOS-ACID, WAT FLT (UG/L) (62649)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	CYANA-ZINE-AMIDE WATER, FLTRD REC (UG/L) (61709)	DEETHYL-ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DEISO-PROPYL-ATRAZIN WATER, DISS, REC (UG/L) (04038)	DIMETH-ENAMID OA, FLT, REC (UG/L) (62482)	DIMETH-ENAMID, ESA, WAT FLT (UG/L) (61951)	DI-METHEN-WATER, FLTRD REC (UG/L) (61588)	FLUFEN-ACET, ESA, WAT FLT (UG/L) (61952)	FLUFE-NACET, WATER, FLT, REC (UG/L) (62483)	FLUFE-NACET, WATER, FLT, REC (UG/L) (62481)
04087240 ROOT RIVER AT RACINE, WI (LAT 42 45 05N LONG 087 49 25W)														
JUN 2002	03...	<.05	<.1	.22	<.05	<.05	.09	<.05	<.05	.06	<.05	<.05	<.05	<.05
JUL	26...	<.05	<.1	.22	<.05	<.05	.09	.06	<.05	.06	<.05	<.05	<.05	<.05
SEP	03...	<.05	.1	<.05	<.05	<.05	<.05	<.05	<.05	.05	<.05	<.05	<.05	<.05
05407000 WISCONSIN RIVER AT MUSCODA, WI (LAT 43 11 53N LONG 090 26 36W)														
MAY 2002	28...	<.05	<.1	.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05
JUN	27...	<.05	<.1	.27	<.05	<.05	.06	<.05	<.05	<.05	<.05	<.05	<.05	<.05
SEP	23...	<.05	<.1	.30	<.05	<.05	.12	<.05	<.05	.06	<.05	<.05	<.05	<.05
05430500 ROCK RIVER AT AFTON, WI (LAT 42 36 33N LONG 089 04 14W)														
JUN 2002	04...	<.05	<.1	.94	<.05	<.05	.11	.05	<.05	<.05	.05	<.05	<.05	<.05
JUL	11...	<.05	<.1	.55	<.05	<.05	.23	.10	<.05	<.05	<.05	<.05	<.05	<.05
SEP	20...	<.05	.4	.08	<.05	<.05	.11	<.05	<.05	.07	<.05	<.05	<.05	<.05

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	GLUFO-SINATE, WATER, FLTRD, GF 0.7U REC (UG/L) (62721)	GLYPHO-SATE, WATER, FLTRD, GF 0.7U REC (UG/L) (62722)	METOLA-CHLOR ESA, FLTRD, GF REC (UG/L) (61043)	METOLA-CHLOR OA, FLTRD, GF REC (UG/L) (61044)	METO-WATER, DISSOLV (UG/L) (39415)	METRI-BUZIN, SENCOR WATER, DISSOLV (UG/L) (82630)	PENDI-METH-ALIN, WAT FLT 0.7 U GF, REC (UG/L) (82683)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRO-METRYN, WATER, DISS, REC (UG/L) (04036)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PROP-AZINE, WATER, DISS, REC (UG/L) (38535)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TER-BUTRYN, WATER, DISS, REC (UG/L) (38888)
04087240 ROOT RIVER AT RACINE, WI (LAT 42 45 05N LONG 087 49 25W)													
JUN 2002 03...	<.1	.1	.64	.13	.06	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05
JUL 26...	<.1	.3	.51	.20	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05
SEP 03...	<.1	.3	.26	.11	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05
05407000 WISCONSIN RIVER AT MUSCODA, WI (LAT 43 11 53N LONG 090 26 36W)													
MAY 2002 28...	<.1	<.1	.17	.07	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05
JUN 27...	<.1	<.1	.16	.07	.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05
SEP 23...	<.1	<.1	.1	.1	<.05	<.05	<.050	<.05	<.05	<.050	<.05	<.05	<.05
05430500 ROCK RIVER AT AFTON, WI (LAT 42 36 33N LONG 089 04 14W)													
JUN 2002 04...	<.1	.2	.48	.23	.80	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05
JUL 11...	<.1	.3	.59	.24	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05
SEP 20...	<.1	<.1	.4	.1	<.05	<.05	<.050	<.05	<.05	<.050	<.05	<.05	<.05

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA SOLVED (MG/L) AS N (00608)	PHOS-PHORUS TOTAL (MG/L) AS P (00665)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)
04085454 MEEHE RIVER AT CT HIGHWAY XX NEAR CLEVELAND, WI (LAT 43 55 20N LONG 087 48 45W)								
OCT 2001								
	03...	0952	2.1	10	6	<.013	.100	200
	11...	1512	2.8	10	5	<.013	.067	70
	16...	1405	E8.0	10	7	.046	.107	--
	24...	1045	E20	10	14	.120	.203	-- 19000
NOV								
	08...	0936	3.6	10	6	.031	.076	<2.0 110
	28...	1116	22	10	11	.159	.211	4.7 900
DEC								
	13...	1416	22	10	17	.111	.149	<2.0 1100
JAN 2002								
	24...	1136	6.8	10	11	.091	.070	<2.0 180
MAR								
	11...	1248	E60	70	19	.186	.222	2.1 110
	20...	1106	26	10	11	.173	.136	2.4 120
APR								
	04...	1554	11	10	6	.027	.061	<2.0 10
	11...	1528	21	10	12	.035	.095	<2.0 40
	25...	1112	10	10	9	.016	.083	3.1 80
JUL								
	02...	1138	3.2	10	25	.084	.213	2.0 180
	12...	1300	3.1	10	11	.018	.165	<2.0 740
	24...	1225	1.8	10	11	.033	.155	<2.0 250
	31...	1332	1.5	10	5	.031	.172	<2.0 270
AUG								
	07...	1454	1.8	10	8	.017	.157	2.3 190
	14...	1406	3.7	10	13	.054	.138	<2.0 270
	28...	1215	2.8	10	9	.035	.160	<2.0 450
SEP								
	05...	1255	1.8	10	7	<.013	.119	<2.0 1800
	12...	1350	1.7	10	5	.046	.124	<2.0 800
	26...	1145	1.7	10	6	.031	.107	<2.0 430

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
05390680 MUSKELLUNGE CK-MUSKELLUNGE L OTL-NR EAGLE RIVER,WI (LAT 45 57 06N LONG 089 23 24W)									
NOV 2001	07...	1350	2.5	70	--	--	--	--	.051
JAN 2002	10...	0900	2.4	70	--	--	--	.011	.030
MAR	13...	1055	3.1	70	--	--	--	--	.033
JUN	19...	1350	3.4	70	--	--	--	.012	.040
JUL	23...	1145	5.0	70	--	--	--	.019	.064
AUG	22...	1010	3.8	70	--	--	--	.012	.051
05390681 MUSKELLUNGE CK AT TRAIL CROSSING NR EAGLE RIVER,WI (LAT 45 56 52N LONG 089 24 10W)									
JAN 2002	09...	1630	3.5	70	--	--	--	.019	.041
JUN	19...	1430	5.1	70	--	--	--	.025	.063
JUL	23...	1200	7.0	70	--	--	--	.024	.062
AUG	22...	1130	5.8	70	--	--	--	.022	.041
05390685 MUSKELLUNGE CREEK NEAR ST. GERMAIN, WI (LAT 45 56 01N LONG 089 25 29W)									
NOV 2001	08...	1200	9.2	70	--	--	--	--	.042
JAN 2002	09...	1530	5.8	70	9.4	6.6	83	.0	.026
MAR	13...	0945	6.8	70	--	--	--	--	.037
JUN	19...	1305	7.7	70	--	--	--	.045	.084
JUL	23...	1410	11	70	--	--	--	.038	.070
AUG	22...	1600	10	70	--	--	--	.022	.040
05390701 LITTLE SAINT GERMAIN CREEK NEAR EAGLE RIVER, WI (LAT 45 53 55N LONG 089 27 10W)									
JAN 2002	10...	1030	14	70	--	--	--	--	.019
MAR	13...	1020	14	70	--	--	--	--	.032
JUN	18...	1255	16	70	--	--	--	--	.044
JUL	23...	1035	6.8	70	--	--	--	--	.043
AUG	22...	1800	9.6	70	--	--	--	--	.056

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
05406500	BLACK EARTH CREEK AT BLACK EARTH, WI (LAT 43 08 03N LONG 089 43 56W)				
APR 2002					
15...	--	--	--	--	8.4
JUN 28...	--	--	--	--	13
JUL 24...	41.8	<.01	<2.0	<20	17
AUG 21...	--	--	--	--	28
SEP 10...	--	--	--	--	21
OCT 02...	--	--	--	--	25
Date	Time	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
JUL 2002					
24...	0525	7.3	7.4	646	15.5
24...	0555	7.3	7.6	645	15.0
24...	0625	7.3	7.6	643	15.0
24...	0655	7.4	7.6	642	15.0
24...	0725	7.6	7.6	642	15.0
24...	0756	7.8	7.7	642	15.0
24...	0825	8.0	7.7	642	15.0
24...	0855	8.3	7.7	642	15.0
24...	0925	8.6	7.7	642	15.0
24...	0955	8.9	7.7	643	15.0
24...	1025	9.4	7.8	643	15.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	
05425830 MAUNESHA RIVER-QW SITE-NEAR SUN PRAIRIE, WI (LAT 43 13 10N LONG 089 08 05W)														
APR 2002	15...	31	10	5.8	738	12.7	8.1	748	12.5	--	--	--	--	
JUL	01...	11	10	34	738	6.9	7.8	812	21.0	--	--	--	--	
	18...	4.9	10	26	752	7.0	7.7	795	19.5	77.7	45.9	1.80	15.7	
AUG	20...	3.2	10	12	759	6.9	7.0	820	14.5	--	--	--	--	
SEP	10...	2.7	10	16	755	6.4	7.3	800	17.0	--	--	--	--	
OCT	01...	3.0	10	7.4	746	8.4	7.6	799	16.0	--	--	--	--	
Date	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS ST02) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L) (70300)	NITRO-GEN, AMMONIA + DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	
APR 2002	15...	295	42.3	.2	--	33.6	--	<.04	.56	6.07	.026	E.04	.03	.07
JUL	01...	322	41.9	.20	--	30.2	--	<.04	.44	9.10	.052	.07	.09	.20
	18...	--	40.8	.18	13.6	28.8	469	<.04	.34	7.96	.040	.07	.07	.13
AUG	20...	334	47.9	E.10	--	27.3	--	E.03	.45	7.67	.048	.10	.08	.09
SEP	10...	320	42.1	.14	--	28.4	--	.07	.38	8.53	.051	.08	.09	.14
OCT	01...	E250	41.9	<.17	--	31.0	--	<.04	.32	8.26	.045	.06	.05	.09
Date	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	ARSENIC TOTAL (UG/L AS AS) (01002)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	
APR 2002	15...	10	510	--	--	--	--	--	--	--	--	--	--	
JUL	01...	10	4900	--	--	--	--	--	--	--	--	--	--	
	18...	<10	2100	1300	E2	20	<.1	.9	E1.0	2.2	<10	740	1	107
AUG	20...	<10	7300	--	--	--	--	--	--	--	--	--	--	
SEP	10...	<10	2300	--	--	--	--	--	--	--	--	--	--	
OCT	01...	20	310	--	--	--	--	--	--	--	--	--	--	
Date	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	SEDI-MENT, SUS-PENDED (MG/L) (80154)									
APR 2002	15...	--	--	--	--	51								
JUL	01...	--	--	--	--	63								
	18...	171	<.01	<2.0	<20	47								
AUG	20...	--	--	--	--	20								
SEP	10...	--	--	--	--	26								
OCT	01...	--	--	--	--	33								

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	
05429280	NINE SPRINGS CREEK AT MOORLAND RD NR MADISON, WI (LAT 43 01 51N LONG 089 20 50W)				
APR 2002					
16...	--	--	--	41	
JUL					
01...	--	--	--	57	
23...	19.7	<.01	<20	3.6	
AUG					
20...	--	--	--	56	
SEP					
11...	--	--	--	11	
OCT					
02...	--	--	--	12	
Date	Time	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
JUL 2002					
23...	0540	1.8	7.1	615	21.0
23...	0610	1.7	7.2	619	21.0
23...	0640	1.7	7.3	624	21.0
23...	0710	2.2	7.3	629	21.0
23...	0740	2.9	7.4	634	21.0
23...	0811	3.7	7.4	638	21.0
23...	0840	4.5	7.5	640	21.0
23...	0910	5.6	7.5	642	21.0
23...	0940	6.8	7.6	643	21.5
23...	1010	8.0	7.6	645	21.5
23...	1040	9.3	7.7	647	22.0
Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
05425042	OCONOMOWOC RIVER NEAR OCONOMOWOC, WI (LAT 43 06 28N LONG 088 27 12W)				
APR 2002					
23...	1200	38	70	.016	.016
MAY					
23...	1150	21	70	.008	.021
JUN					
12...	0915	143	70	.013	.014
JUL					
09...	1350	--	70	<.005	.013
AUG					
08...	1700	--	70	.020	.021
SEP					
24...	1350	38	70	<.005	.018
05425070	OCONOMOWOC R AT OCONOMOWOC L OUTLET-OCONOMOWOC (LAT 43 06 10N LONG 088 28 08W)				
APR 2002					
17...	1700	136	70	--	.011
MAY					
23...	1310	40	70	--	<.005
JUN					
14...	1400	106	70	--	.011
JUL					
09...	1535	22	70	--	.010
AUG					
08...	1200	18	70	--	.017
SEP					
24...	1500	19	70	--	.011

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

Water-quality data were collected at the following sites for the period May to October 2002. Samples are either equal-width increment (EWI) samples (sample code 10) or grab samples (sample code 70).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
STREAMS TRIBUTARY TO LAKE SUPERIOR													
04024570 AMNICON RIVER NEAR PETZAU, WI (LAT 46 27 11N LONG 092 04 14W)													
MAY 2002													
20...	1525	74	10	8.6	6.5	409	13.1	.017	.66	<.010	.012	.020	--
JUN 17...	1250	3.6	10	7.7	6.5	57	20.4	.061	.98	<.010	.014	.029	--
JUL 18...	1305	20	10	1.9	5.8	59	21.9	.114	1.5	<.010	.036	.053	<2.0
AUG 20...	1525	--	10	2.0	5.5	51	18.4	.038	1.6	<.022	.030	.042	<2.0
SEP 17...	1520	4.0	10	2.2	6.3	69	17.4	.038	1.6	<.022	.031	.056	3.0
OCT 15...	1600	--	10	6.6	5.4	45	7.6	.028	.98	<.022	.013	.015	<2.0
04025500 BOIS BRULE RIVER AT BRULE, WI (LAT 46 32 16N LONG 091 35 43W)													
MAY 2002													
20...	1235	222	10	11.3	8.2	996	9.6	.020	.18	.044	.016	.023	--
JUN 17...	1000	158	10	10.4	7.9	108	14.2	.017	.27	.013	.018	.029	--
JUL 18...	1045	127	10	8.8	7.2	124	18.7	<.013	.25	.034	.018	.027	<2.0
AUG 20...	0815	171	10	9.1	7.2	108	14.6	<.013	.48	<.022	.016	.025	3.0
SEP 17...	0750	151	10	9.5	7.1	119	13.9	<.013	.53	<.022	.020	.033	<2.0
OCT 15...	0925	195	10	10.7	6.7	107	7.4	<.013	.41	<.022	.013	.026	4.0
040263491 NORTH FISH CREEK NEAR MOQUAH, WI (LAT 46 32 56N LONG 091 03 43W)													
MAY 2002													
20...	0915	60	10	12.4	8.1	1310	5.4	<.013	<.14	.027	.017	.023	--
JUN 17...	0745	75	10	11.5	7.3	123	9.0	<.013	<.14	.032	.014	.020	--
JUL 18...	0830	250	10	10.0	7.2	161	11.9	.017	<.14	.049	.016	.027	7.0
AUG 19...	1715	51	10	10.7	7.7	130	12.6	<.013	.22	<.022	.020	.027	5.0
SEP 16...	1720	50	10	11.6	7.9	128	11.4	<.013	<.14	.073	.018	.024	3.0
OCT 15...	0750	57	10	11.1	6.9	134	6.5	<.013	.45	.024	.022	.036	4.0
04060993 BRULE RIVER NEAR FLORENCE, WI (LAT 45 57 39N LONG 088 18 57W)													
MAY 2002													
22...	0856	455	10	10.8	7.6	235	10.3	<.013	.25	.084	.005	.018	--
JUN 18...	1203	485	70	11.1	7.7	214	16.8	.019	.50	.103	.008	.027	--
JUL 16...	0945	238	10	9.3	8.0	314	21.6	.017	<.14	.020	<.005	.013	3.0
AUG 20...	0910	238	10	9.7	7.8	308	14.5	<.013	.17	.091	<.005	.013	4.0
SEP 17...	1850	238	10	10.2	8.3	313	17.6	<.013	.17	.062	.006	.010	3.0
OCT 16...	0930	367	10	11.2	7.9	261	4.0	<.013	.31	.096	.009	.019	<2.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
STREAMS TRIBUTARY TO LAKE SUPERIOR--Continued		
04024570 AMNICON RIVER NEAR PETZAU, WI (LAT 46 27 11N LONG 092 04 14W)		
MAY 2002		
20...	.800	--
JUN		
17...	--	82.000
JUL		
18...	1.60	86.000
AUG		
20...	--	103.00
SEP		
17...	3.10	81.000
OCT		
15...	.800	120.00
04025500 BOIS BRULE RIVER AT BRULE, WI (LAT 46 32 16N LONG 091 35 43W)		
MAY 2002		
20...	2.60	120.00
JUN		
17...	--	120.00
JUL		
18...	1.70	120.00
AUG		
20...	--	120.00
SEP		
17...	4.20	120.00
OCT		
15...	3.90	120.00
040263491 NORTH FISH CREEK NEAR MOQUAH, WI (LAT 46 32 56N LONG 091 03 43W)		
MAY 2002		
20...	13.6	181.00
JUN		
17...	--	103.00
JUL		
18...	4.70	84.000
AUG		
19...	--	120.00
SEP		
16...	5.80	--
OCT		
15...	9.90	120.00
04060993 BRULE RIVER NEAR FLORENCE, WI (LAT 45 57 39N LONG 088 18 57W)		
MAY 2002		
22...	3.60	120.00
JUN		
18...	--	120.00
JUL		
16...	--	120.00
AUG		
20...	3.40	120.00
SEP		
17...	2.90	120.00
OCT		
16...	--	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
STREAMS TRIBUTARY TO LAKE MICHIGAN													
04063700 POPPLE RIVER NEAR FENCE, WI (LAT 45 45 49N LONG 088 27 47W)													
MAY 2002													
22...	1235	151	10	10.2	7.1	105	13.3	<.013	.74	.011	.009	.020	--
JUN													
18...	1048	236	70	9.7	7.2	99	16.5	.027	.96	.022	.017	.030	--
JUL													
16...	1230	47	10	7.8	7.8	210	24.4	.016	.49	<.010	.013	.023	3.0
AUG													
20...	1155	45	10	8.6	7.8	232	17.4	.016	.41	<.022	.008	.016	<2.0
SEP													
17...	1545	45	10	12.0	8.0	228	18.2	.039	.42	<.022	.010	.014	<2.0
OCT													
15...	1535	203	10	12.1	7.6	100	7.0	.023	1.1	<.022	.020	.030	<2.0
04063774 WOODS CREEK NEAR MORGAN LAKE, WI (LAT 45 57 39N LONG 088 18 57W)													
MAY 2002													
22...	1043	34	10	11.5	7.7	169	9.0	<.013	.37	.099	.007	.013	--
JUN													
18...	0921	32	10	10.4	7.2	164	12.9	.030	.62	.103	.012	.020	--
JUL													
16...	1055	15	10	9.1	8.0	294	19.1	.015	.25	.215	.017	.022	<2.0
AUG													
20...	1035	11	10	9.9	7.9	286	13.5	<.013	.25	.202	.036	.019	<2.0
SEP													
17...	1740	8.2	10	10.3	8.1	299	14.3	<.013	.49	.195	.021	.015	<2.0
OCT													
15...	1750	22	10	11.4	7.6	176	5.8	.014	.57	.068	.012	.018	3.0
04064500 PINE RIVER BELOW PINE R POWERPLANT NR FLORENCE, WI (LAT 45 50 16N LONG 088 13 31W)													
MAY 2002													
22...	0800	658	10	10.9	7.5	135	10.9	<.013	.52	.025	.006	.016	--
JUN													
18...	1330	774	10	10.2	7.7	128	17.4	.034	.75	.051	.011	.025	--
JUL													
16...	0830	234	10	8.1	7.9	221	23.8	.016	.38	.010	.008	.016	2.0
AUG													
20...	1250	218	10	8.8	8.2	225	22.0	.022	.40	.035	.008	.015	<2.0
SEP													
18...	0815	213	10	9.0	8.0	231	16.3	<.013	.39	<.022	.008	.009	<2.0
OCT													
16...	0815	662	10	11.4	8.1	129	6.2	.032	.92	<.022	.015	.026	5.0
04066350 NORTH BRANCH PIKE RIVER AT LILY LAKE RD NR AMBERG (LAT 45 34 03N LONG 088 06 32W)													
MAY 2002													
22...	1410	103	10	10.8	8.0	210	13.3	<.013	.38	.046	.005	.013	--
JUN													
18...	1515	128	10	10.5	8.1	189	17.1	.017	.55	.053	.006	.017	--
JUL													
16...	1435	64	10	9.7	8.2	262	22.8	<.013	.22	.041	.006	.010	3.0
AUG													
20...	1350	59	10	10.5	8.2	260	17.0	<.013	.19	.037	.005	.009	<2.0
SEP													
17...	1400	59	10	10.9	8.2	264	14.9	<.013	.19	.026	.006	.006	3.0
OCT													
15...	1415	101	10	12.3	7.5	216	7.1	.017	.45	.045	.007	.013	4.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued		
04063700 POPPLE RIVER NEAR FENCE, WI (LAT 45 45 49N LONG 088 27 47W)		
MAY 2002		
22...	1.80	120.00
JUN		
18...	--	120.00
JUL		
16...	--	120.00
AUG		
20...	2.50	120.00
SEP		
17...	2.70	120.00
OCT		
15...	--	105.00
04063774 WOODS CREEK NEAR MORGAN LAKE, WI (LAT 45 57 39N LONG 088 18 57W)		
MAY 2002		
22...	2.00	120.00
JUN		
18...	--	120.00
JUL		
16...	--	120.00
AUG		
20...	.800	120.00
SEP		
17...	.900	120.00
OCT		
15...	--	120.00
04064500 PINE RIVER BELOW PINE R POWERPLANT NR FLORENCE, WI (LAT 45 50 16N LONG 088 13 31W)		
MAY 2002		
22...	2.10	120.00
JUN		
18...	--	110.00
JUL		
16...	--	120.00
AUG		
20...	1.40	120.00
SEP		
18...	2.40	120.00
OCT		
16...	--	120.00
04066350 NORTH BRANCH PIKE RIVER AT LILY LAKE RD NR AMBERG (LAT 45 34 03N LONG 088 06 32W)		
MAY 2002		
22...	2.50	120.00
JUN		
18...	--	120.00
JUL		
16...	--	120.00
AUG		
20...	.800	120.00
SEP		
17...	.800	120.00
OCT		
15...	--	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	SEDI-MENT, SUS-PENDEDED (MG/L) (80154)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued													
04071795 PENSsauKEE RIVER NEAR KRAKOW, WI (LAT 44 45 09N LONG 088 16 35W)													
MAY 2002													
21...	0900	8.6	10	12.4	7.5	520	9.3	.025	1.1	2.00	.032	.056	--
JUN													
18...	0953	15	10	8.0	6.8	739	16.5	.040	1.4	1.05	.152	.175	--
JUL													
16...	0856	.61	10	5.1	7.9	784	23.4	.094	.97	.890	.179	.226	13
AUG													
20...	0750	.51	10	6.3	7.0	723	16.4	.067	.74	.450	.104	.141	9.0
SEP													
16...	1610	.92	10	12.1	7.9	749	19.8	.059	.75	1.06	.101	.122	3.0
OCT													
15...	0755	3.5	10	9.9	6.3	781	6.8	.002	1.1	1.64	.081	.099	5.0
04071858 PENSsauKEE RIVER NEAR PENSsauKEE, WI (LAT 44 49 08N LONG 087 57 12W)													
MAY 2002													
21...	1115	53	10	10.3	7.7	532	10.6	.035	.97	.497	.017	.037	--
JUN													
18...	1031	100	10	8.4	7.2	527	17.1	.046	1.1	1.01	.081	.107	--
JUL													
16...	1009	6.3	10	6.0	8.2	559	25.9	.049	.96	.119	.140	.164	4.9
AUG													
20...	0935	7.6	10	7.3	7.7	520	20.2	.046	.88	.150	.078	.100	5.0
SEP													
16...	1820	7.3	10	9.1	8.0	556	17.0	<.013	.88	.112	.056	.072	3.0
OCT													
15...	1000	25	10	10.8	7.0	622	8.4	<.013	.90	.461	.035	.048	15
04072150 DUCK CREEK NEAR HOWARD, WI (LAT 44 32 09N LONG 088 07 47W)													
MAY 2002													
20...	1844	25	10	14.6	7.9	811	13.0	.018	1.5	3.02	.048	.067	--
JUN													
17...	1940	138	70	10.4	8.0	739	18.7	.034	1.8	5.06	.155	.214	--
JUL													
16...	0749	1.6	10	5.8	8.0	840	23.4	.025	1.7	.095	.159	.245	18
AUG													
19...	1726	1.3	10	13.3	8.5	499	23.2	.033	.89	.620	.141	.173	5.0
SEP													
17...	0730	.17	10	8.3	7.6	712	13.8	.045	.86	.172	.119	.147	3.0
OCT													
15...	1205	1200	10	12.8	7.1	1050	9.2	<.013	.63	<.022	.105	.128	4.0
04074720 HUNTING RIVER NEAR SUMMIT LAKE, WI (LAT 45 22 53N LONG 089 06 51W)													
MAY 2002													
22...	1750	9.6	10	12.0	8.1	152	15.9	<.013	.43	.014	.035	.054	--
JUN													
18...	1800	12	10	10.6	8.2	171	20.3	.027	.41	.035	.051	.069	--
JUL													
16...	1725	6.8	10	8.8	8.2	221	27.3	.029	.36	.011	.069	.093	4.0
AUG													
20...	1625	11	10	9.7	8.1	200	20.6	.014	.30	.011	.050	.067	3.0
SEP													
17...	1025	18	10	10.3	7.7	207	14.7	<.013	.34	<.022	.041	.081	3.0
OCT													
15...	1000	63	10	10.8	7.3	158	5.9	.028	.54	.036	.038	.048	2.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued		
04071795	PENSAUKEE RIVER NEAR KRAKOW, WI (LAT 44 45 09N LONG 088 16 35W)	
MAY 2002		
21...	2.60	120.00
JUN 18...	7.60	89.000
JUL 16...	6.90	74.000
AUG 20...	5.20	90.000
SEP 16...	--	106.00
OCT 15...	3.90	120.00
04071858	PENSAUKEE RIVER NEAR PENSAUKEE, WI (LAT 44 49 08N LONG 087 57 12W)	
MAY 2002		
21...	3.30	120.00
JUN 18...	14.9	78.000
JUL 16...	4.40	66.000
AUG 20...	5.00	84.000
SEP 16...	--	120.00
OCT 15...	2.00	120.00
04072150	DUCK CREEK NEAR HOWARD, WI (LAT 44 32 09N LONG 088 07 47W)	
MAY 2002		
20...	3.60	120.00
JUN 17...	49.8	27.000
JUL 16...	16.8	37.000
AUG 19...	7.40	72.000
SEP 17...	--	72.000
OCT 15...	8.70	120.00
04074720	HUNTING RIVER NEAR SUMMIT LAKE, WI (LAT 45 22 53N LONG 089 06 51W)	
MAY 2002		
22...	3.10	120.00
JUN 18...	--	--
JUL 16...	--	120.00
AUG 20...	4.00	120.00
SEP 17...	3.30	120.00
OCT 15...	--	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) (00666)	PHOS-PHORUS TOTAL (MG/L) (00665)	SEDI-MENT, SUS-PENDEDED (MG/L) (80154)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued													
04074950 WOLF RIVER AT LANGLADE, WI (LAT 45 11 24N LONG 088 44 00W)													
MAY 2002													
23...	0920	708	10	10.0	7.5	137	14.6	<.013	.59	.022	.009	.035	--
JUN													
19...	0930	511	10	9.2	7.6	174	17.6	.015	.65	.061	.016	.042	--
JUL													
17...	0800	290	10	8.1	7.8	213	23.1	.014	.44	.043	.017	.031	5.0
AUG													
21...	0900	270	10	8.5	7.6	209	18.1	.021	.46	.070	.012	.024	3.0
SEP													
17...	0740	258	10	9.7	7.8	229	14.5	.021	.26	.035	.010	.032	5.0
OCT													
15...	0730	636	10	12.0	7.4	157	6.8	.028	.57	.052	.015	.030	6.0
0407809265 MIDDLE BRANCH EMBARRASS RIVER NR WITTENBERG, WI (LAT 44 49 31N LONG 089 07 05W)													
MAY 2002													
22...	1005	49	10	12.0	8.0	363	12.3	.016	.52	1.07	.010	.022	--
JUN													
18...	1050	77	10	9.4	8.0	272	17.3	.065	.93	.662	.033	.048	--
JUL													
16...	1100	21	10	10.0	8.1	451	23.1	.019	.45	.965	.021	.036	2.8
AUG													
20...	1030	32	10	9.7	8.4	434	18.2	.023	.54	1.10	.038	.009	6.0
SEP													
17...	0845	30	10	9.4	8.3	438	14.1	.005	.37	1.34	.018	.027	<2.0
OCT													
17...	1140	39	10	13.4	8.0	744	5.2	.041	.52	1.19	.017	.026	<2.0
04080798 TOMORROW RIVER NEAR NELSONVILLE, WI (LAT 44 31 28N LONG 089 20 16W)													
MAY 2002													
22...	0810	24	10	11.4	7.2	424	9.1	<.013	.42	2.56	.006	.015	--
JUN													
18...	0915	27	10	9.6	8.0	414	12.2	.024	.54	2.57	.012	.024	--
JUL													
16...	0900	19	10	9.3	7.4	472	13.9	<.013	.35	3.11	.012	.022	3.3
AUG													
20...	0845	20	10	9.4	8.0	454	11.2	<.013	.34	2.98	.013	.019	3.0
SEP													
17...	1355	26	10	10.6	7.9	455	12.6	<.013	.33	3.02	.012	.017	16
OCT													
17...	1410	23	10	12.7	8.0	870	6.2	.040	.48	2.15	.012	.018	<2.0
04085109 EAST RIVER AT MIDWAY ROAD NEAR DE PERE, WI (LAT 44 23 12N LONG 088 04 47W)													
MAY 2002													
20...	1715	9.3	10	--	7.5	845	12.0	.517	1.4	<.010	.139	.200	--
JUN													
17...	1355	44	10	9.5	7.8	776	17.6	.107	2.2	4.11	.288	.412	--
JUL													
15...	1849	1.7	10	5.4	7.9	816	23.9	.072	1.2	1.11	.333	.412	26
AUG													
19...	1540	.05	10	5.6	7.3	753	19.3	.087	1.1	.250	.383	.518	15
SEP													
17...	0910	.0	10	1.2	7.5	832	14.6	.101	1.0	<.022	.668	.789	6.0
OCT													
14...	1700	.0	10	6.5	7.6	879	8.4	.020	1.7	4.26	.186	.211	6.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
STEAMS TRIBUTARY TO LAKE MICHIGAN--Continued		
04074950 WOLF RIVER AT LANGLADE, WI (LAT 45 11 24N LONG 088 44 00W)		
MAY 2002		
23...	4.10	120.00
JUN		
19...	--	75.000
JUL		
17...	--	120.00
AUG		
21...	8.20	45.000
SEP		
17...	2.80	120.00
OCT		
15...	--	120.00
0407809265 MIDDLE BRANCH EMBARRASS RIVER NR WITTENBERG, WI (LAT 44 49 31N LONG 089 07 05W)		
MAY 2002		
22...	.00	120.00
JUN		
18...	2.90	120.00
JUL		
16...	--	120.00
AUG		
20...	4.70	83.000
SEP		
17...	2.50	120.00
OCT		
17...	1.00	120.00
04080798 TOMORROW RIVER NEAR NELSONVILLE, WI (LAT 44 31 28N LONG 089 20 16W)		
MAY 2002		
22...	.00	120.00
JUN		
18...	5.80	120.00
JUL		
16...	--	120.00
AUG		
20...	3.00	120.00
SEP		
17...	2.90	120.00
OCT		
17...	.900	120.00
04085109 EAST RIVER AT MIDWAY ROAD NEAR DE PERE, WI (LAT 44 23 12N LONG 088 04 47W)		
MAY 2002		
20...	37.4	29.000
JUN		
17...	161	8.000
JUL		
15...	42.9	17.000
AUG		
19...	33.8	32.000
SEP		
17...	--	82.000
OCT		
14...	7.30	87.000

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued													
04085200 KEWAUNEE RIVER NEAR KEWAUNEE, WI (LAT 44 27 30N LONG 087 33 23W)													
MAY 2002													
21...	1605	38	10	16.0	8.1	721	13.8	.571	.85	.559	.018	.036	--
JUN													
18...	1345	123	10	10.0	7.4	723	17.8	.085	1.7	5.00	.207	.273	--
JUL													
16...	1230	16	10	9.1	8.2	705	25.5	.042	.82	3.78	.058	.095	11
AUG													
20...	1410	19	10	10.8	8.0	679	22.1	.062	.69	2.75	.082	.080	8.0
SEP													
17...	1315	18	10	11.2	8.3	628	18.6	.042	.64	3.13	.032	.052	5.0
OCT													
15...	1545	29	10	12.5	7.5	690	9.5	.038	.68	3.44	.044	.072	12
04085281 EAST TWIN RIVER AT MISHICOT, WI (LAT 44 14 16N LONG 087 38 11W)													
MAY 2002													
21...	1746	57	10	12.7	8.0	628	12.3	.442	1.0	.096	.023	.047	--
JUN													
18...	1505	--	10	10.2	7.6	591	17.7	.043	1.3	2.36	.096	.125	--
JUL													
16...	1356	16	10	8.8	8.2	698	27.2	.067	1.1	2.85	.065	.118	15
AUG													
20...	1537	14	10	9.4	8.0	689	21.5	.059	.72	2.24	.066	.103	18
SEP													
17...	1510	9.2	10	10.0	8.1	697	18.6	.055	1.0	2.58	.055	.153	12
OCT													
15...	1705	18	10	11.1	7.6	705	9.2	<.013	.66	2.44	.039	.063	12
04085305 NESHOTA RIVER AT PARK ROAD NR DENMARK WI (LAT 44 23 34N LONG 087 48 51W)													
MAY 2002													
21...	1353	5.5	10	15.3	7.8	678	12.7	.492	.84	.088	.055	.084	--
JUN													
17...	1740	23	10	10.3	8.0	674	17.6	.060	1.4	2.68	.155	.202	--
JUL													
15...	1649	.0	10	7.7	7.9	711	21.5	.064	.74	.520	.155	.204	17
AUG													
20...	1150	.05	10	6.2	7.6	672	16.5	.049	.44	.180	.200	.254	9.0
SEP													
17...	1115	.0	10	6.6	7.7	685	13.2	.046	.50	.126	.209	.264	6.0
OCT													
15...	1335	.32	10	5.5	7.4	751	8.4	<.013	.60	<.022	.160	.188	<2.0
04085395 SOUTH BRANCH MANITOWOC RIVER AT HAYTON, WI (LAT 44 01 29N LONG 088 07 05W)													
MAY 2002													
20...	1541	36	10	11.5	7.5	780	12.5	.091	1.4	3.51	.100	.193	--
JUN													
17...	1425	22	10	10.7	7.9	827	22.4	.095	1.6	3.22	.174	.256	--
JUL													
15...	1512	10	10	14.7	8.8	780	29.0	.040	2.6	2.23	.045	.228	62
AUG													
19...	1305	.99	10	13.6	8.3	959	24.3	.055	1.9	4.05	.052	.265	63
SEP													
18...	0725	1.1	10	8.8	7.8	1150	19.7	.060	1.9	5.12	.062	.273	58
OCT													
14...	1535	9.8	10	14.3	7.7	1070	10.7	.033	1.3	4.86	.122	.223	23

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued		
04085200	KEWAUNEE RIVER NEAR KEWAUNEE, WI (LAT 44 27 30N LONG 087 33 23W)	
MAY 2002		
21...	4.90	120.00
JUN		
18...	50.4	27.000
JUL		
16...	8.90	100.00
AUG		
20...	10.6	88.000
SEP		
17...	--	120.00
OCT		
15...	3.40	120.00
04085281	EAST TWIN RIVER AT MISHICOT, WI (LAT 44 14 16N LONG 087 38 11W)	
MAY 2002		
21...	4.40	120.00
JUN		
18...	18.1	45.000
JUL		
16...	18.2	34.000
AUG		
20...	12.3	45.000
SEP		
17...	--	44.000
OCT		
15...	6.00	84.000
04085305	NESHOTA RIVER AT PARK ROAD NR DENMARK WI (LAT 44 23 34N LONG 087 48 51W)	
MAY 2002		
21...	3.60	120.00
JUN		
17...	34.7	26.000
JUL		
15...	19.6	29.000
AUG		
20...	8.70	19.000
SEP		
17...	--	54.000
OCT		
15...	4.60	120.00
04085395	SOUTH BRANCH MANITOWOC RIVER AT HAYTON, WI (LAT 44 01 29N LONG 088 07 05W)	
MAY 2002		
20...	39.1	37.000
JUN		
17...	13.7	66.000
JUL		
15...	28.7	26.000
AUG		
19...	53.8	12.000
SEP		
18...	--	13.000
OCT		
14...	23.0	28.000

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued													
04085427 MANITOWOC RIVER AT MANITOWOC, WI (LAT 44 06 26N LONG 087 42 55W)													
MAY 2002													
22...	0916	323	10	10.9	7.2	643	12.0	.034	1.8	1.04	.067	.188	--
JUN 18...	1635	372	70	10.4	7.8	647	22.0	.024	2.2	1.34	.132	.360	--
JUL 16...	1529	26	10	13.0	8.9	683	29.8	.022	2.1	.022	.108	.292	46
AUG 20...	1720	37	10	11.1	8.5	659	23.9	.031	1.1	.750	.143	.202	8.0
SEP 17...	1725	22	10	13.8	8.5	677	20.9	.018	.97	.161	.096	.135	5.0
OCT 16...	0740	49	10	11.4	7.7	726	6.0	<.013	2.5	.580	.038	.323	21
04085435 SILVER CR NR SILVER RD NR MANITOWOC, WI (LAT 44 03 17N LONG 087 40 50W)													
MAY 2002													
22...	1034	12	10	12.5	7.8	716	11.1	.038	1.3	2.10	.048	.067	--
JUN 18...	1736	21	10	10.7	7.9	720	19.7	.045	1.7	4.24	.190	.229	--
JUL 16...	1620	1.1	10	11.9	8.4	729	29.0	.050	1.2	1.31	.291	.335	79
AUG 20...	1835	.85	10	10.9	8.0	679	22.9	.045	.73	1.55	.209	.256	11
SEP 17...	1835	.29	10	12.2	8.2	693	20.9	.039	.91	3.08	.116	.173	17
OCT 16...	0905	.82	10	11.2	7.5	720	5.0	<.013	.41	1.08	.045	.063	15
04085454 MEEME RIVER AT CT HIGHWAY XX NEAR CLEVELAND, WI (LAT 43 55 20N LONG 087 48 45W)													
MAY 2002													
22...	1227	6.8	10	16.8	8.2	613	15.4	.016	.97	3.42	.030	.058	--
JUN 18...	1915	6.3	10	9.2	7.9	659	20.6	.108	1.3	2.95	.107	.172	--
JUL 16...	1755	2.9	10	45.1	8.5	550	28.0	.033	.73	1.07	.136	.167	--
AUG 21...	0713	2.9	10	7.1	7.4	474	17.8	.035	.64	.494	.057	.089	9.0
SEP 18...	1205	2.7	10	9.4	8.0	592	17.7	.035	.60	1.16	.079	.105	7.0
OCT 16...	1105	3.9	10	12.6	7.5	653	6.5	<.013	.65	1.20	.076	.100	5.0
04085480 SHEBOYGAN RIVER NEAR FOND DU LAC, WI (LAT 43 48 33N LONG 088 15 04W)													
MAY 2002													
20...	1335	13	10	17.6	7.5	743	11.8	.032	1.1	2.58	.019	.049	--
JUN 17...	1237	8.0	10	14.0	7.8	788	21.1	.045	1.0	2.52	.088	.121	--
JUL 15...	1303	4.6	10	12.1	8.3	732	26.6	.031	1.1	2.55	.129	.162	9.0
AUG 19...	1215	1.2	10	12.7	8.0	729	22.9	.031	.78	1.08	.110	.161	12
SEP 18...	0900	.95	10	8.4	8.0	763	17.7	.037	.76	1.84	.084	.117	11
OCT 14...	1255	3.5	10	16.7	7.6	828	9.3	<.013	.67	2.34	.082	.100	<2.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued		
04085427 MANITOWOC RIVER AT MANITOWOC, WI (LAT 44 06 26N LONG 087 42 55W)		
MAY 2002		
22...	83.4	16.000
JUN		
18...	205	10.000
JUL		
16...	37.7	17.000
AUG		
20...	11.9	61.000
SEP		
17...	--	101.00
OCT		
16...	14.1	54.000
04085435 SILVER CR NR SILVER RD NR MANITOWOC, WI (LAT 44 03 17N LONG 087 40 50W)		
MAY 2002		
22...	4.20	120.00
JUN		
18...	17.8	50.000
JUL		
16...	7.90	75.000
AUG		
20...	19.2	67.000
SEP		
17...	--	103.00
OCT		
16...	4.40	120.00
04085454 MEEHE RIVER AT CT HIGHWAY XX NEAR CLEVELAND, WI (LAT 43 55 20N LONG 087 48 45W)		
MAY 2002		
22...	6.90	120.00
JUN		
18...	46.7	24.000
JUL		
16...	12.3	55.000
AUG		
21...	8.50	86.000
SEP		
18...	--	120.00
OCT		
16...	7.70	99.000
04085480 SHEBOYGAN RIVER NEAR FOND DU LAC, WI (LAT 43 48 33N LONG 088 15 04W)		
MAY 2002		
20...	5.00	120.00
JUN		
17...	6.60	89.000
JUL		
15...	7.70	69.000
AUG		
19...	5.70	98.000
SEP		
18...	--	120.00
OCT		
14...	4.20	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD) UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued													
04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI (LAT 43 41 48N LONG 087 49 15W)													
MAY 2002													
22...	1415	40	10	17.9	8.6	677	16.3	.018	1.1	2.16	.054	.116	--
JUN													
19...	0739	41	10	9.4	7.2	725	18.2	.048	1.4	4.02	.113	.213	--
JUL													
17...	0750	18	10	7.2	8.2	706	23.0	.011	1.6	1.30	.178	.301	34
AUG													
21...	0855	8.5	10	7.7	7.8	667	19.4	.068	.85	.277	.194	.275	16
SEP													
18...	1340	9.2	10	9.8	8.1	650	18.9	.039	.67	.335	.127	.179	12
OCT													
16...	1400	13	10	15.3	7.8	708	8.7	<.013	.53	.490	.086	.108	4.0
04086017 SAUK CR AT CHT A NR FREDONIA WI (LAT 43 28 13N LONG 087 52 09W)													
MAY 2002													
23...	0755	6.3	10	8.7	7.3	797	12.3	.098	1.1	4.12	.138	.184	--
JUN													
19...	1230	3.3	10	10.9	7.7	866	18.9	.079	1.1	5.02	.238	.306	--
JUL													
17...	1332	1.9	10	15.4	8.5	688	26.5	.026	1.3	3.04	.279	.357	31
AUG													
21...	1340	.10	70	19.5	8.9	852	24.1	.027	2.6	<.022	.662	1.03	29
SEP													
19...	0710	.53	10	5.2	7.6	1060	19.1	.104	2.1	.456	.616	.855	46
OCT													
17...	0725	.23	10	9.8	7.2	1040	4.8	.140	2.2	.050	.530	.852	106
040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)													
MAY 2002													
22...	1615	40	10	12.1	8.4	660	17.6	.088	.97	2.50	.052	.115	--
JUN													
19...	0923	36	10	7.8	7.3	705	18.7	.202	1.5	2.66	.107	.218	--
JUL													
17...	0932	22	10	7.7	8.2	751	23.2	.049	1.1	2.57	.095	.173	36
AUG													
21...	1038	17	10	7.3	8.1	703	20.6	.072	.74	2.19	.130	.173	29
SEP													
18...	1610	18	10	6.7	8.3	668	20.2	.065	1.1	2.73	.081	.167	30
OCT													
16...	1550	22	10	12.3	7.9	764	9.3	.040	.70	3.33	.100	.123	5.0
040863313 STONEY CR AT CTH X NR BOLTONVILLE WI (LAT 43 31 39N LONG 088 05 20W)													
MAY 2002													
22...	1746	6.2	10	12.2	8.6	636	16.8	.025	.81	1.34	.017	.036	--
JUN													
19...	1033	6.2	10	9.7	7.6	612	19.3	.056	1.0	1.48	.062	.087	--
JUL													
17...	1215	3.1	10	8.7	8.3	574	24.6	.032	.76	.768	.054	.075	4.0
AUG													
21...	1158	2.2	10	9.1	8.1	672	20.8	.021	.53	1.41	.053	.067	4.0
SEP													
18...	1750	3.3	10	8.2	8.0	699	20.1	.039	.79	1.92	.046	.071	5.0
OCT													
16...	1745	3.7	10	12.0	7.9	691	10.0	.00	.57	1.78	.025	.038	4.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued		
04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI (LAT 43 41 48N LONG 087 49 15W)		
MAY 2002		
22...	13.4	64.000
JUN		
19...	61.3	19.000
JUL		
17...	28.2	25.000
AUG		
21...	19.0	38.000
SEP		
18...	--	74.000
OCT		
16...	4.90	120.00
04086017 SAUK CR AT CHT A NR FREDONIA WI (LAT 43 28 13N LONG 087 52 09W)		
MAY 2002		
23...	22.1	45.000
JUN		
19...	32.9	27.000
JUL		
17...	26.0	24.000
AUG		
21...	73.8	50.000
SEP		
19...	--	17.000
OCT		
17...	162	13.000
040863075 NORTH BRANCH MILWAUKEE RIVER NR RANDOM LAKE, WI (LAT 43 33 25N LONG 088 03 10W)		
MAY 2002		
22...	20.1	45.000
JUN		
19...	36.8	27.000
JUL		
17...	19.9	34.000
AUG		
21...	18.8	61.000
SEP		
18...	--	38.000
OCT		
16...	2.60	120.00
040863313 STONEY CR AT CTH X NR BOLTONVILLE WI (LAT 43 31 39N LONG 088 05 20W)		
MAY 2002		
22...	2.10	120.00
JUN		
19...	14.9	120.00
JUL		
17...	16.3	120.00
AUG		
21...	2.70	120.00
SEP		
18...	--	120.00
OCT		
16...	1.10	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD) (UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) (00666)	PHOS-PHORUS TOTAL (MG/L) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued													
04086500 CEDAR CREEK NEAR CEDARBURG, WI (LAT 43 19 23N LONG 087 58 43W)													
MAY 2002													
23...	0945	61	10	9.0	7.6	724	14.4	.119	1.1	1.52	.039	.109	--
JUN													
19...	1358	55	10	11.8	7.9	712	20.4	<.013	.94	1.66	.019	.131	--
JUL													
17...	1509	19	10	12.5	8.6	772	28.3	.015	.91	.703	.032	.177	9.0
AUG													
21...	1500	14	10	11.7	8.3	743	22.7	.019	.64	.714	.075	.099	7.0
SEP													
19...	0915	24	10	6.3	8.0	806	19.9	.036	.57	.850	.043	.094	3.0
OCT													
17...	1005	19	10	12.1	7.5	812	6.1	.010	.38	1.36	.042	.058	6.0
04086600 MILWAUKEE RIVER NEAR CEDARBURG, WI (LAT 43 16 49N LONG 087 56 34W)													
MAY 2002													
23...	1130	249	10	13.1	8.0	755	15.3	.104	.87	1.37	.036	.076	--
JUN													
19...	1455	312	10	10.7	8.0	763	21.4	.025	.93	1.70	.081	.125	--
JUL													
17...	1550	271	10	11.7	8.7	779	30.3	.030	.89	1.06	.102	.127	4.0
AUG													
21...	1610	109	10	12.2	8.6	881	25.3	.035	.76	.803	.077	.123	32
SEP													
19...	1030	122	10	10.4	8.0	836	8.0	<.013	.75	1.12	.051	.107	3.0
OCT													
17...	1105	51	10	16.6	8.0	836	8.0	.010	1.1	1.18	.023	.109	15
ST. CROIX RIVER BASIN													
05331585 UPPER OX CREEK AT GERMANN CREEK NEAR SOLON SPRINGS (LAT 46 18 58N LONG 091 39 45W)													
MAY 2002													
21...	1040	12	10	10.5	7.9	127	11.9	<.013	.24	<.010	.011	.019	--
JUN													
18...	1005	11	10	9.6	7.5	124	16.6	.014	<.14	<.010	.010	.018	--
JUL													
17...	1440	11	10	8.9	7.4	136	25.0	.025	.29	<.010	.013	.027	4.0
AUG													
20...	1010	9.6	10	9.6	7.4	125	13.6	<.013	.16	<.022	.013	.018	4.0
SEP													
17...	0950	9.1	10	9.6	7.2	128	11.8	<.013	<.14	<.022	.012	.018	4.0
OCT													
15...	1110	12	10	10.6	6.7	125	6.5	<.013	.20	<.022	.009	.019	4.0
05331597 EAU CLAIRE RIVER AT MCCUMBER ROAD NEAR GORDON WI (LAT 46 15 02N LONG 091 39 18W)													
MAY 2002													
21...	1240	96	10	10.8	8.3	131	15.1	<.013	<.14	.026	.008	.015	--
JUN													
18...	1205	84	10	9.4	7.7	124	20.7	.041	.27	.021	.007	.015	--
JUL													
17...	1305	30	10	9.1	8.0	127	26.6	.025	.22	.011	.009	.021	<2.0
AUG													
20...	1155	71	10	9.3	7.7	133	19.4	<.013	.16	<.022	.008	.013	<2.0
SEP													
17...	1135	77	10	9.3	7.4	136	18.0	<.013	.24	<.022	.008	.018	<2.0
OCT													
15...	1230	96	10	11.0	7.0	130	9.0	<.013	.25	<.022	.007	.018	<2.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued		
04086500 CEDAR CREEK NEAR CEDARBURG, WI (LAT 43 19 23N LONG 087 58 43W)		
MAY 2002		
23...	13.3	100.00
JUN		
19...	10.5	75.000
JUL		
17...	5.90	57.000
AUG		
21...	2.60	120.00
SEP		
19...	--	120.00
OCT		
17...	2.30	120.00
04086600 MILWAUKEE RIVER NEAR CEDARBURG, WI (LAT 43 16 49N LONG 087 56 34W)		
MAY 2002		
23...	7.50	115.00
JUN		
19...	10.6	82.000
JUL		
17...	3.10	100.00
AUG		
21...	4.90	91.000
SEP		
19...	--	120.00
OCT		
17...	2.10	120.00
ST. CROIX RIVER BASIN--Continued		
05331585 UPPER OX CREEK AT GERMANN CREEK NEAR SOLON SPRINGS (LAT 46 18 58N LONG 091 39 45W)		
MAY 2002		
21...	3.80	120.00
JUN		
18...	--	120.00
JUL		
17...	3.30	120.00
AUG		
20...	--	120.00
SEP		
17...	2.50	120.00
OCT		
15...	2.20	120.00
05331597 EAU CLAIRE RIVER AT MCCUMBER ROAD NEAR GORDON WI (LAT 46 15 02N LONG 091 39 18W)		
MAY 2002		
21...	.500	120.00
JUN		
18...	--	--
JUL		
17...	.700	120.00
AUG		
20...	--	120.00
SEP		
17...	1.20	120.00
OCT		
15...	.100	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAMPLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPECIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
ST. CROIX RIVER BASIN--Continued													
05331833 NAMEKAGON RIVER AT LEONARDS, WI (LAT 46 10 17N LONG 091 19 45W)													
MAY 2002													
21...	0800	253	10	10.4	7.6	106	8.7	<.013	.42	.050	.011	.021	--
JUN													
18...	0750	156	10	9.0	7.0	111	14.7	.013	.35	.064	.009	.020	--
JUL													
17...	1745	63	10	8.1	7.6	132	23.6	.019	.25	.034	.012	.020	3.0
AUG													
19...	1450	95	10	10.8	8.0	132	17.7	<.013	<.14	<.022	.009	.013	<2.0
SEP													
16...	1450	101	10	10.6	7.9	132	16.0	<.013	.28	.032	.012	.013	3.0
OCT													
14...	1610	223	10	10.7	7.3	100	7.8	<.013	.46	.031	.011	.014	3.0
05333067 TOTAGATIC RIVER NEAR CHITTAMO WI (LAT 46 10 02N LONG 091 41 41W)													
MAY 2002													
21...	1505	70	10	9.9	7.3	78	14.4	.021	.58	.036	.022	.033	--
JUN													
18...	1400	79	10	8.6	7.2	72	21.8	.029	.56	.032	.021	.035	--
JUL													
17...	1030	--	10	7.1	6.4	78	23.6	.062	.56	.019	.026	.041	3.0
AUG													
20...	1405	65	10	9.1	7.2	105	17.3	<.013	.40	<.022	.017	.028	<2.0
SEP													
17...	1310	56	10	9.0	7.3	103	16.3	.025	.48	<.022	.023	.034	2.0
OCT													
15...	1400	--	10	10.1	6.6	69	8.0	.022	.65	<.022	.018	.032	<2.0
05335574 UPPER TAMARACK RIVER NEAR CLOVERTON MINN (LAT 46 09 52N LONG 092 17 02W)													
MAY 2002													
20...	1740	118	10	9.8	7.0	385	16.1	.019	.86	<.010	.014	.023	--
JUN													
17...	1510	29	10	8.8	7.1	77	22.8	.023	1.0	<.010	.025	.039	--
JUL													
17...	0745	75	10	7.2	6.2	67	23.1	.103	1.8	.043	.059	.083	3.0
AUG													
21...	0825	129	10	8.3	6.4	55	18.0	.026	1.3	<.022	.028	.042	3.0
SEP													
17...	1725	29	10	8.6	7.0	84	20.0	.025	1.6	<.022	.042	.062	<2.0
OCT													
16...	0855	90	10	12.2	8.3	45	4.0	.021	1.0	<.022	.018	.035	<2.0
05338955 WOOD RIVER @ NORTH WILLIAMS ROAD NR GRANTSBURG, WI (LAT 45 47 07N LONG 092 37 52W)													
MAY 2002													
22...	0700	175	10	8.3	7.4	159	12.7	.029	.66	.045	.021	.041	--
JUN													
18...	1740	47	10	8.4	7.5	204	23.1	.042	.50	.182	.019	.038	--
JUL													
16...	1745	52	10	7.4	7.6	206	28.3	.035	.56	.151	.029	.061	6.0
AUG													
21...	1155	59	10	7.1	6.9	211	19.1	.037	.48	.180	.023	.046	2.0
SEP													
18...	0825	--	70	5.4	6.9	192	18.6	.058	1.0	<.022	.043	.080	6.0
OCT													
16...	1130	--	10	9.1	7.6	176	6.6	.024	.63	.034	.020	.040	7.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
ST. CROIX RIVER BASIN--Continued		
05331833 NAMEKAGON RIVER AT LEONARDS, WI (LAT 46 10 17N LONG 091 19 45W)		
MAY 2002		
21...	7.00	120.00
JUN		
18...	--	120.00
JUL		
17...	1.60	120.00
AUG		
19...	--	120.00
SEP		
16...	1.00	120.00
OCT		
14...	1.60	120.00
05333067 TOTAGATIC RIVER NEAR CHITTAMO WI (LAT 46 10 02N LONG 091 41 41W)		
MAY 2002		
21...	2.00	120.00
JUN		
18...	--	120.00
JUL		
17...	2.50	120.00
AUG		
20...	--	--
SEP		
17...	3.10	120.00
OCT		
15...	2.10	120.00
05335574 UPPER TAMARACK RIVER NEAR CLOVERTON MINN (LAT 46 09 52N LONG 092 17 02W)		
MAY 2002		
20...	1.60	120.00
JUN		
17...	--	120.00
JUL		
17...	3.80	82.000
AUG		
21...	--	100.00
SEP		
17...	3.40	80.000
OCT		
16...	.00	85.000
05338955 WOOD RIVER @ NORTH WILLIAMS ROAD NR GRANTSBURG, WI (LAT 45 47 07N LONG 092 37 52W)		
MAY 2002		
22...	4.60	120.00
JUN		
18...	--	120.00
JUL		
16...	7.00	120.00
AUG		
21...	--	120.00
SEP		
18...	6.60	95.000
OCT		
16...	.500	--

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
ST. CROIX RIVER BASIN--Continued													
05341752 WILLOW RIVER @ WILLOW R STATE PARK NR BURKHARDT,WI (LAT 45 00 42N LONG 092 42 30W)													
MAY 2002													
22...	1540	147	10	11.0	8.9	305	15.3	.018	.71	1.77	.017	.090	--
JUN													
19...	1440	227	10	9.0	8.1	339	20.7	.067	.56	2.42	.041	.069	--
JUL													
16...	1500	170	10	8.9	8.3	354	23.0	.035	.93	.150	.021	.090	6.0
AUG													
22...	0845	--	10	9.2	7.9	362	19.1	.040	.55	2.25	.025	.058	7.0
SEP													
19...	0830	162	10	9.1	7.7	356	17.6	.047	.57	2.86	.072	.116	3.0
OCT													
17...	0840	209	10	11.3	7.7	310	7.9	.050	.66	2.58	.077	.112	8.0
CHIPPEWA RIVER BASIN													
05359698 SKINNER CREEK AT PIONEER ROAD NEAR HAWKINS WI (LAT 45 35 00N LONG 090 41 58W)													
MAY 2002													
23...	1315	20	10	8.9	7.2	58	17.2	.028	.93	.012	.032	.052	--
JUN													
20...	1330	14	10	8.2	6.7	73	22.9	.054	1.1	.042	.051	.086	--
JUL													
15...	1715	13	10	7.7	6.7	92	26.9	.061	1.7	.035	.090	.154	11
AUG													
19...	1045	13	10	7.4	6.5	65	17.1	.035	1.2	<.022	.050	.077	4.0
SEP													
16...	1130	22	10	7.8	7.1	63	14.2	.058	1.6	<.022	.070	.114	5.0
OCT													
14...	1200	54	10	9.5	6.9	42	6.5	.022	.99	<.022	.041	.068	7.0
05365707 NORTH FORK EAU CLAIRE RIVER NEAR THORP, WI (LAT 44 58 25N LONG 090 50 57W)													
MAY 2002													
23...	1105	24	10	9.9	7.8	150	16.3	.016	.69	.038	.039	.070	--
JUN													
20...	1055	42	10	7.8	6.8	137	20.5	.089	1.6	.450	.107	.307	--
JUL													
15...	1440	6.7	10	10.3	7.0	179	26.4	.075	.93	.153	.125	.163	3.0
AUG													
19...	0810	41	10	8.5	6.9	107	16.8	.025	.99	.060	.096	.147	9.0
SEP													
16...	0825	--	10	9.1	7.5	179	13.7	.015	.86	.192	.097	.166	5.0
OCT													
14...	0845	75	10	6.1	7.6	132	--	.024	.67	.136	.061	.083	5.0
053674464 YELLOW RIVER AT BARRON, WI (LAT 45 23 43N LONG 091 49 48W)													
MAY 2002													
22...	1000	141	10	10.7	7.6	157	14.0	<.013	.66	.877	.044	.097	--
JUN													
19...	0830	113	10	8.1	7.0	182	20.0	.080	.62	.833	.054	.129	--
JUL													
16...	0800	87	10	7.4	6.6	209	22.2	.051	.36	.903	.043	.083	2.0
AUG													
21...	1500	310	10	8.1	7.0	181	19.1	.040	.39	.804	.050	.101	9.0
SEP													
18...	1115	123	10	8.5	7.0	185	17.7	.054	.44	1.14	.094	.149	7.0
OCT													
16...	1420	155	10	11.2	7.5	157	7.3	.018	.50	1.09	.050	.089	<2.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
ST. CROIX RIVER BASIN--Continued		
05341752 WILLOW RIVER @ WILLOW R STATE PARK NR BURKHARDT,WI (LAT 45 00 42N LONG 092 42 30W)		
MAY 2002		
22...	7.50	55.000
JUN		
19...	--	120.00
JUL		
16...	5.00	104.00
AUG		
22...	--	78.000
SEP		
19...	4.40	120.00
OCT		
17...	4.60	120.00
CHIPPEWA RIVER BASIN--Continued		
05359698 SKINNER CREEK AT PIONEER ROAD NEAR HAWKINS WI (LAT 45 35 00N LONG 090 41 58W)		
MAY 2002		
23...	2.70	120.00
JUN		
20...	--	101.00
JUL		
15...	6.50	85.000
AUG		
19...	--	120.00
SEP		
16...	2.80	92.000
OCT		
14...	1.50	120.00
05365707 NORTH FORK EAU CLAIRE RIVER NEAR THORP, WI (LAT 44 58 25N LONG 090 50 57W)		
MAY 2002		
23...	5.20	120.00
JUN		
20...	--	8.000
JUL		
15...	5.90	120.00
AUG		
19...	--	83.000
SEP		
16...	7.30	97.000
OCT		
14...	4.40	115.00
053674464 YELLOW RIVER AT BARRON, WI (LAT 45 23 43N LONG 091 49 48W)		
MAY 2002		
22...	6.00	90.000
JUN		
19...	--	42.000
JUL		
16...	2.40	120.00
AUG		
21...	--	87.000
SEP		
18...	2.90	115.00
OCT		
16...	1.90	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAMPLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	NITROGEN, AMMONIA DIS-SOLVED (MG/L) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L) (00625)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L) (00631)	PHOSPHORUS DIS-SOLVED (MG/L) (00666)	PHOSPHORUS TOTAL (MG/L) (00665)	SEDIMENT, SUSPENDED (MG/L) (80154)
CHIPPEWA RIVER BASIN--Continued													
05368000 HAY RIVER AT WHEELER, WI (LAT 45 02 52N LONG 091 54 39W)													
MAY 2002													
22...	1200	470	10	9.7	8.0	318	12.8	.018	.46	1.57	.045	.081	--
JUN													
19...	1050	367	10	8.9	7.5	322	17.4	.040	.47	1.79	.049	.094	--
JUL													
16...	1020	322	10	8.4	7.5	373	18.6	<.013	.48	2.09	.056	.096	12
AUG													
21...	1700	536	10	8.5	7.4	234	16.7	.021	.64	1.27	.078	.149	64
SEP													
18...	1340	362	10	9.1	7.5	358	15.5	.020	.41	2.24	.059	.108	10
OCT													
17...	1405	497	10	10.9	7.8	317	6.6	<.013	.38	1.85	.049	.083	8.0
05369945 EAU GALLE R @ LOW-WTR BRIDGE @ SPRING VALLEY, WI (LAT 44 52 02N LONG 092 15 07W)													
MAY 2002													
23...	0715	20	10	8.5	8.1	391	13.1	<.013	.36	1.21	.009	.023	--
JUN													
20...	0725	51	10	8.8	7.4	369	16.9	.048	.52	1.23	.051	.084	--
JUL													
16...	1140	15	10	10.5	7.9	411	17.5	.029	.15	1.96	.012	.022	<2.0
AUG													
22...	1055	135	10	8.4	7.3	174	17.3	.038	1.3	.553	.284	.353	13
SEP													
18...	1700	17	10	12.1	8.0	402	15.8	.009	.22	1.60	.029	.035	<2.0
OCT													
17...	1110	24	10	11.8	7.8	393	6.5	<.013	.30	1.85	.037	.038	3.0
TREMPELEAU-BLACK RIVER BASIN													
05381000 BLACK RIVER AT NEILLSVILLE, WI (LAT 44 33 35N LONG 090 36 54W)													
MAY 2002													
22...	1445	344	10	11.4	8.3	121	16.6	<.013	.60	.063	.064	.095	--
JUN													
18...	1610	586	10	9.0	7.9	131	21.9	.018	1.3	.428	.130	.187	--
JUL													
16...	1730	145	10	9.6	8.4	163	29.7	.029	.94	.172	.139	.178	3.4
AUG													
20...	1600	578	10	9.2	8.0	127	21.6	.026	1.0	.243	.151	.190	7.0
SEP													
16...	1500	236	10	10.4	7.9	149	19.1	.005	.88	.449	.146	.167	<2.0
OCT													
16...	1735	637	10	12.1	7.5	131	7.2	.019	.76	.266	.095	.122	5.0
LA CROSSE RIVER BASIN													
05382325 LA CROSSE RIVER AT SPARTA, WI (LAT 43 56 15N LONG 090 48 38W)													
MAY 2002													
22...	1445	118	10	11.9	7.6	179	14.8	<.013	.28	.905	.040	.092	--
JUN													
19...	1355	150	10	9.7	7.5	180	18.8	.056	.45	1.04	.056	.145	--
JUL													
17...	1305	164	10	9.7	7.2	191	22.3	.041	.21	1.04	.047	.092	10
AUG													
21...	1017	107	70	8.9	7.5	191	18.1	.037	.25	.987	.041	.085	28
SEP													
18...	1400	144	10	10.2	7.7	192	16.7	<.013	.27	1.09	.047	.083	<2.0
OCT													
15...	1555	148	10	11.9	7.3	177	9.6	.031	.23	1.11	.056	.092	12

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
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CHIPPEWA RIVER BASIN--Continued

05368000 HAY RIVER AT WHEELER, WI (LAT 45 02 52N LONG 091 54 39W)

MAY 2002		
22...	7.10	120.00
JUN		
19...	--	53.000
JUL		
16...	8.60	105.00
AUG		
21...	--	47.000
SEP		
18...	7.20	110.00
OCT		
17...	6.20	120.00

05369945 EAU GALLE R @ LOW-WTR BRIDGE @ SPRING VALLEY, WI (LAT 44 52 02N LONG 092 15 07W)

MAY 2002		
23...	1.40	120.00
JUN		
20...	--	50.000
JUL		
16...	1.20	120.00
AUG		
22...	--	21.000
SEP		
18...	--	120.00
OCT		
17...	.400	120.00

TREMPEALEAU-BLACK RIVER BASIN--Continued

05381000 BLACK RIVER AT NEILLSVILLE, WI (LAT 44 33 35N LONG 090 36 54W)

MAY 2002		
22...	3.70	120.00
JUN		
18...	12.3	54.000
JUL		
16...	--	120.00
AUG		
20...	7.40	89.000
SEP		
16...	6.30	120.00
OCT		
16...	3.20	80.000

LA CROSSE RIVER BASIN--Continued

05382325 LA CROSSE RIVER AT SPARTA, WI (LAT 43 56 15N LONG 090 48 38W)

MAY 2002		
22...	--	120.00
JUN		
19...	--	90.000
JUL		
17...	--	102.00
AUG		
21...	--	120.00
SEP		
18...	3.00	120.00
OCT		
15...	--	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
LA CROSSE RIVER BASIN--Continued													
05382500 LITTLE LA CROSSE RIVER NEAR LEON, WI (LAT 43 53 45N LONG 090 50 25W)													
MAY 2002													
22...	1615	41	10	11.8	8.0	451	14.9	.020	.23	1.62	.046	.079	--
JUN													
19...	1329	43	10	10.4	7.8	461	16.7	.014	.28	1.69	.060	.104	--
JUL													
17...	1150	43	10	10.6	7.7	467	18.1	.020	<.14	1.81	.068	.095	11
AUG													
21...	0909	43	10	8.4	7.2	469	15.1	.022	.20	1.72	.059	.085	9.0
SEP													
18...	1520	41	10	10.3	7.7	472	15.5	<.013	.20	1.78	.056	.081	10
OCT													
15...	1645	51	10	11.4	7.7	468	9.9	<.013	.26	1.79	.051	.083	14
05386500 COON CREEK AT COON VALLEY, WI (LAT 43 42 17N LONG 091 01 06W)													
MAY 2002													
22...	1130	52	10	12.0	7.9	479	12.3	.019	<.14	1.06	.016	.035	--
JUN													
19...	1134	65	10	9.5	7.8	108	16.9	.229	.24	1.12	.025	.038	--
JUL													
17...	0958	56	10	9.1	7.6	106	17.8	.016	.15	1.12	.032	.046	7.0
AUG													
21...	0741	46	10	8.0	7.1	104	16.4	.034	.16	1.19	.028	.040	8.0
SEP													
18...	1050	48	10	9.8	7.7	510	14.4	<.013	.16	1.34	.028	.048	7.0
OCT													
15...	1240	55	10	12.6	7.9	504	8.3	.031	.36	1.46	.027	.051	12
WISCONSIN RIVER BASIN													
05392233 KAUBASHINE CREEK NR HAZELHURST (LAT 45 47 48N LONG 089 48 03W)													
MAY 2002													
21...	1725	12	10	11.7	8.3	108	15.2	<.013	.32	.010	.018	.036	--
JUN													
17...	2107	8.5	10	9.4	7.4	112	19.8	.030	.39	.013	.021	.041	--
JUL													
15...	1855	5.7	10	9.2	7.8	125	25.9	.022	.16	.026	.026	.039	2.0
AUG													
19...	1845	6.9	10	9.8	7.3	114	19.8	<.013	.26	<.022	.017	.028	<2.0
SEP													
18...	1245	11	10	6.4	6.9	113	15.2	<.013	.39	<.022	.021	.043	4.0
OCT													
16...	1300	15	10	8.1	7.6	95	5.4	.029	.45	<.022	.016	.027	<2.0
05393500 SPIRIT RIVER AT SPIRIT FALLS, WI (LAT 45 26 58N LONG 089 58 47W)													
MAY 2002													
21...	1520	83	10	10.9	7.1	64	13.4	<.013	.63	<.010	.021	.035	--
JUN													
17...	1854	138	10	9.5	7.2	61	18.6	.027	.72	.036	.041	.060	--
JUL													
15...	1655	21	10	11.3	8.6	102	27.1	.021	.86	.063	.067	.092	3.0
AUG													
19...	1650	42	70	10.1	7.8	93	19.9	.020	.82	.026	.048	.076	3.0
SEP													
16...	1410	52	10	9.9	7.3	91	15.3	.023	.92	.055	.066	.110	2.0
OCT													
14...	1255	201	10	10.6	7.6	55	6.1	.160	.66	<.022	.035	.049	<2.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
LA CROSSE RIVER BASIN--Continued		
05382500	LITTLE LA CROSSE RIVER NEAR LEON, WI (LAT 43 53 45N LONG 090 50 25W)	
MAY 2002		
22...	--	120.00
JUN		
19...	--	100.00
JUL		
17...	--	64.000
AUG		
21...	--	100.00
SEP		
18...	5.90	120.00
OCT		
15...	--	120.00
05386500	COON CREEK AT COON VALLEY, WI (LAT 43 42 17N LONG 091 01 06W)	
MAY 2002		
22...	--	120.00
JUN		
19...	--	120.00
JUL		
17...	--	35.000
AUG		
21...	--	120.00
SEP		
18...	5.40	98.000
OCT		
15...	--	120.00
WISCONSIN RIVER BASIN--Continued		
05392233	KAUBASHINE CREEK NR HAZELHURST (LAT 45 47 48N LONG 089 48 03W)	
MAY 2002		
21...	--	90.000
JUN		
17...	--	120.00
JUL		
15...	--	120.00
AUG		
19...	1.40	120.00
SEP		
18...	1.50	120.00
OCT		
16...	--	120.00
05393500	SPIRIT RIVER AT SPIRIT FALLS, WI (LAT 45 26 58N LONG 089 58 47W)	
MAY 2002		
21...	--	120.00
JUN		
17...	--	100.00
JUL		
15...	--	120.00
AUG		
19...	3.10	120.00
SEP		
16...	6.00	120.00
OCT		
14...	--	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
WISCONSIN RIVER BASIN--Continued													
05394079 WFK COPPER R AT WENGER RD NR MERRILL WI (LAT 45 12 54N LONG 089 55 29W)													
MAY 2002													
21...	1018	17	10	10.4	6.6	45	9.2	<.013	.58	<.010	.019	.031	--
JUN													
17...	1245	33	10	9.7	6.8	48	16.1	.026	.81	.027	.033	.050	--
JUL													
15...	1340	4.7	10	9.0	7.4	121	22.3	.023	.69	<.010	.057	.076	3.0
AUG													
19...	1320	12	10	9.5	7.1	83	17.7	.029	.88	.033	.053	.075	4.0
SEP													
16...	1110	10	10	9.2	7.1	91	12.2	.015	.82	<.022	.061	.101	5.0
OCT													
14...	1100	49	10	11.0	8.0	47	5.4	.047	.71	.044	.029	.038	<2.0
05394500 PRAIRIE RIVER NEAR MERRILL, WI (LAT 45 14 09N LONG 089 38 59W)													
MAY 2002													
21...	1310	204	10	11.7	7.4	109	11.9	<.013	.48	.063	.022	.037	--
JUN													
17...	1700	159	10	10.7	7.8	127	19.7	.026	.55	.107	.040	.061	--
JUL													
15...	1500	85	10	11.4	8.8	185	24.7	<.013	.43	.032	.032	.043	3.0
AUG													
19...	1530	124	10	11.7	8.1	153	19.6	.023	.61	.087	.039	.060	6.0
SEP													
16...	1540	114	10	11.7	8.5	171	15.5	<.013	.37	.070	.038	.090	6.0
OCT													
14...	1440	245	10	12.5	7.6	103	7.0	.025	.65	.073	.036	.049	<2.0
05397110 EAU CLAIRE RIVER NEAR ANTIGO, WI (LAT 45 07 33N LONG 089 14 03W)													
MAY 2002													
23...	1140	152	10	9.7	7.1	135	14.2	.019	.69	.542	.031	.055	--
JUN													
19...	1110	107	10	8.6	7.4	177	16.4	.038	.72	.811	.048	.089	--
JUL													
17...	1005	98	10	8.1	7.7	234	21.8	.019	.58	1.01	.052	.095	11
AUG													
21...	0745	--	10	7.8	7.5	264	17.2	.037	.57	1.28	.048	.081	8.0
SEP													
16...	1745	62	10	10.8	8.1	240	15.7	<.013	.49	1.17	.052	.093	3.0
OCT													
14...	1630	209	10	12.2	7.4	120	7.3	.022	.76	.516	.043	.060	3.0
05397180 SPRING BROOK AT ANTIGO WI (LAT 45 09 17N LONG 089 07 59W)													
MAY 2002													
23...	0730	3.5	10	9.0	6.8	381	10.5	<.013	.36	4.33	.010	.022	--
JUN													
19...	0730	3.5	10	10.4	6.4	397	11.4	.033	.40	4.65	.033	.082	--
JUL													
17...	0615	2.6	10	8.2	6.6	386	13.5	.034	.41	4.65	.042	.060	7.0
AUG													
21...	1000	5.7	10	8.7	7.2	319	12.4	.054	.70	4.24	.071	.108	14
SEP													
16...	1915	2.2	10	9.0	7.5	386	12.7	<.013	.45	5.20	.040	.049	5.0
OCT													
14...	1805	3.4	10	9.9	7.2	388	7.7	.014	.35	5.28	.035	.046	<2.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
WISCONSIN RIVER BASIN--Continued		
05394079	WFK COPPER R AT WENGER RD NR MERRILL WI (LAT 45 12 54N LONG 089 55 29W)	
MAY 2002		
21...	--	120.00
JUN		
17...	--	105.00
JUL		
15...	--	120.00
AUG		
19...	4.30	120.00
SEP		
16...	4.00	120.00
OCT		
14...	--	120.00
05394500	PRAIRIE RIVER NEAR MERRILL, WI (LAT 45 14 09N LONG 089 38 59W)	
MAY 2002		
21...	--	120.00
JUN		
17...	--	120.00
JUL		
15...	--	120.00
AUG		
19...	2.60	120.00
SEP		
16...	2.40	120.00
OCT		
14...	--	120.00
05397110	EAU CLAIRE RIVER NEAR ANTIGO, WI (LAT 45 07 33N LONG 089 14 03W)	
MAY 2002		
23...	3.00	120.00
JUN		
19...	--	55.000
JUL		
17...	--	120.00
AUG		
21...	5.50	120.00
SEP		
16...	2.20	120.00
OCT		
14...	--	120.00
05397180	SPRING BROOK AT ANTIGO WI (LAT 45 09 17N LONG 089 07 59W)	
MAY 2002		
23...	.500	120.00
JUN		
19...	--	120.00
JUL		
17...	--	120.00
AUG		
21...	11.3	60.000
SEP		
16...	3.30	120.00
OCT		
14...	--	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
WISCONSIN RIVER BASIN--Continued													
05397500 EAU CLAIRE RIVER AT KELLY, WI (LAT 44 55 06N LONG 089 33 00W)													
MAY 2002													
22...	1120	224	10	11.6	7.6	152	12.9	<.013	.63	.702	.023	.041	--
JUN													
18...	1230	208	10	9.4	7.7	169	18.4	.028	.87	.844	.051	.083	--
JUL													
16...	1300	70	10	9.9	8.3	266	25.6	.020	.50	.662	.028	.045	4.0
AUG													
20...	1225	84	10	9.8	8.3	283	19.1	.030	.50	1.27	.036	.058	4.0
SEP													
17...	1140	88	10	10.5	8.3	262	16.2	<.013	.50	1.44	.028	.043	3.0
OCT													
17...	1015	234	10	12.7	7.4	332	4.5	.031	.75	.984	.038	.053	10
05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI (LAT 44 49 19N LONG 090 04 46W)													
MAY 2002													
22...	1255	47	10	14.0	8.6	183	16.0	.016	.79	.159	.108	.161	--
JUN													
18...	1415	95	10	9.2	7.7	199	21.9	.058	1.3	.887	.241	.296	--
JUL													
16...	1500	28	10	11.3	8.5	210	28.2	.039	1.5	.113	.267	.394	8.8
AUG													
20...	1400	95	10	9.0	7.6	179	20.6	.051	1.2	.649	.317	.372	5.0
SEP													
16...	1655	45	10	12.1	8.2	204	19.5	.010	.80	.735	.185	.220	2.0
OCT													
17...	0800	105	10	12.5	7.3	398	5.2	.022	.84	.843	.158	.189	<2.0
05400650 LITTLE PLOVER RIVER AT PLOVER, WI (LAT 44 28 26N LONG 089 31 44W)													
MAY 2002													
21...	1720	9.5	10	11.5	8.3	416	14.7	<.013	.28	7.70	.010	.018	--
JUN													
17...	1855	10	10	9.5	8.1	427	14.2	<.013	.39	7.80	.018	.031	--
JUL													
15...	1810	12	10	9.8	7.7	429	15.2	<.013	.33	7.96	.027	.040	5.4
AUG													
19...	1745	10	10	9.7	8.0	420	13.9	.023	.15	8.01	.027	.031	<2.0
SEP													
17...	1520	11	10	10.3	8.0	421	13.3	<.013	.37	8.46	.028	.030	8.0
OCT													
17...	1610	9.5	10	11.4	8.0	869	7.7	<.013	.30	8.13	.018	.025	<2.0
05401050 TENMILE CREEK NEAR NEKOOSA, WI (LAT 44 15 45N LONG 089 48 37W)													
MAY 2002													
21...	1540	77	10	10.3	7.7	352	14.9	.020	.90	4.25	.014	.063	--
JUN													
17...	1645	91	10	9.6	7.9	363	16.4	.029	1.1	4.31	.020	.082	--
JUL													
15...	1545	94	10	8.6	7.3	334	18.3	.029	1.0	3.37	.021	.086	23
AUG													
19...	1515	57	10	8.8	7.8	305	16.8	.029	.53	2.73	.016	.038	8.0
SEP													
17...	1655	43	10	9.3	7.9	298	14.9	<.013	.48	3.19	.019	.031	7.0
OCT													
17...	1800	36	10	11.2	7.9	585	7.9	.028	2.0	2.13	.018	.031	3.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
WISCONSIN RIVER BASIN--Continued		
05397500	EAU CLAIRE RIVER AT KELLY, WI (LAT 44 55 06N LONG 089 33 00W)	
MAY 2002		
22...	.200	120.00
JUN		
18...	5.00	120.00
JUL		
16...	--	120.00
AUG		
20...	3.30	120.00
SEP		
17...	3.60	120.00
OCT		
17...	2.00	109.00
05399500	BIG EAU PLEINE RIVER NEAR STRATFORD, WI (LAT 44 49 19N LONG 090 04 46W)	
MAY 2002		
22...	1.40	120.00
JUN		
18...	7.60	90.000
JUL		
16...	--	65.000
AUG		
20...	6.90	63.000
SEP		
16...	6.90	120.00
OCT		
17...	3.30	104.00
05400650	LITTLE PLOVER RIVER AT PLOVER, WI (LAT 44 28 26N LONG 089 31 44W)	
MAY 2002		
21...	7.90	120.00
JUN		
17...	--	120.00
JUL		
15...	--	120.00
AUG		
19...	.800	120.00
SEP		
17...	1.20	120.00
OCT		
17...	.300	120.00
05401050	TENMILE CREEK NEAR NEKOOSA, WI (LAT 44 15 45N LONG 089 48 37W)	
MAY 2002		
21...	16.9	63.000
JUN		
17...	8.10	56.000
JUL		
15...	--	69.000
AUG		
19...	7.40	120.00
SEP		
17...	5.80	120.00
OCT		
17...	5.50	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	SEDI-MENT, SUS-PENDEDED (MG/L) (80154)
WISCONSIN RIVER BASIN--Continued													
05402000 YELLOW RIVER AT BABCOCK, WI (LAT 44 18 08N LONG 090 07 19W)													
MAY 2002													
21...	1415	71	10	10.5	6.8	122	14.2	<.013	.97	.195	.084	.183	--
JUN													
17...	1500	208	10	7.7	7.1	127	19.7	.127	1.6	.435	.147	.276	--
JUL													
15...	1415	30	10	8.2	6.8	146	24.3	.027	1.2	.024	.140	.269	11
AUG													
19...	1400	71	10	9.1	7.3	162	20.2	.032	1.3	.118	.075	.176	7.0
SEP													
16...	1315	22	10	8.1	6.9	145	16.2	.099	1.1	.275	.178	.272	3.0
OCT													
16...	1450	152	10	10.4	7.1	153	8.3	.078	1.3	.246	.131	.211	8.0
05403043 LITTLE YELLOW RIVER NEAR NECEDAH, WI (LAT 44 03 27N LONG 090 10 35W)													
MAY 2002													
21...	1105	76	10	11.0	6.7	67	12.9	.036	.97	<.010	.021	.045	--
JUN													
17...	1115	90	10	8.8	7.1	77	19.3	.204	1.5	.013	.035	.067	--
JUL													
15...	1145	3.8	10	3.9	6.0	132	19.5	.428	1.5	.042	.041	.081	9.1
AUG													
19...	1030	1.7	10	5.1	6.6	134	16.3	.278	1.1	<.022	.013	.049	8.0
SEP													
16...	0945	1.5	10	5.2	6.4	148	12.2	.437	1.2	<.022	.008	.051	17
OCT													
16...	1055	1.7	10	6.6	6.6	137	6.0	.520	1.2	<.022	.031	.060	13
05403044 SOUTH BRANCH YELLOW RIVER NEAR NECEDAH, WI (LAT 44 02 49N LONG 090 08 52W)													
MAY 2002													
21...	1230	36	10	10.8	6.6	55	15.3	.036	1.1	.023	.017	.055	--
JUN													
17...	1305	32	10	8.8	7.2	69	20.6	.172	1.2	.038	.020	.053	--
JUL													
15...	1230	4.0	10	7.2	6.5	84	24.4	.193	1.2	.077	.025	.053	.9
AUG													
19...	1250	--	10	6.9	6.9	81	18.0	.345	1.1	.055	.019	.046	3.0
SEP													
16...	1120	1.6	10	7.1	6.5	85	13.6	.546	1.3	.072	.018	.043	5.0
OCT													
16...	1306	--	10	11.7	7.3	53	7.5	.020	1.1	<.022	.017	.061	8.0
05406500 BLACK EARTH CREEK AT BLACK EARTH, WI (LAT 43 08 03N LONG 089 43 56W)													
MAY 2002													
20...	0930	113	10	12.0	7.4	629	9.2	<.013	.21	3.09	.036	.050	--
JUN													
17...	0841	148	10	10.6	7.7	641	13.5	.013	.24	2.94	.050	.061	--
JUL													
15...	0916	125	10	8.1	7.6	641	15.9	.019	.15	3.02	.051	.065	6.0
AUG													
19...	0837	--	10	6.5	7.0	629	15.1	.021	.40	3.00	.062	.084	14
SEP													
16...	0945	57	10	14.6	7.5	648	11.8	<.013	.28	3.26	.039	.048	8.0
OCT													
13...	1120	34	10	12.1	7.6	634	8.7	.020	.24	3.17	.052	.076	14

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
WISCONSIN RIVER BASIN--Continued		
05402000 YELLOW RIVER AT BABCOCK, WI (LAT 44 18 08N LONG 090 07 19W)		
MAY 2002		
21...	15.7	56.000
JUN		
17...	8.30	27.000
JUL		
15...	--	48.000
AUG		
19...	18.5	73.000
SEP		
16...	1.40	105.00
OCT		
16...	9.00	55.000
05403043 LITTLE YELLOW RIVER NEAR NECEDAH, WI (LAT 44 03 27N LONG 090 10 35W)		
MAY 2002		
21...	7.90	86.000
JUN		
17...	--	65.500
JUL		
15...	--	39.000
AUG		
19...	42.9	32.000
SEP		
16...	30.7	28.000
OCT		
16...	41.8	21.000
05403044 SOUTH BRANCH YELLOW RIVER NEAR NECEDAH, WI (LAT 44 02 49N LONG 090 08 52W)		
MAY 2002		
21...	8.10	55.000
JUN		
17...	--	68.000
JUL		
15...	--	94.000
AUG		
19...	9.00	100.00
SEP		
16...	--	100.00
OCT		
16...	13.0	37.000
05406500 BLACK EARTH CREEK AT BLACK EARTH, WI (LAT 43 08 03N LONG 089 43 56W)		
MAY 2002		
20...	--	120.00
JUN		
17...	--	120.00
JUL		
15...	--	120.00
AUG		
19...	--	52.000
SEP		
16...	4.40	120.00
OCT		
13...	--	80.000

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	SEDI-MENT, SUS-PENDEDED (MG/L) (80154)
WISCONSIN RIVER BASIN--Continued													
05407039 FENNIMORE FORK NEAR FENNIMORE, WI (LAT 43 01 40N LONG 090 33 47W)													
MAY 2002													
21...	1905	4.1	10	9.3	8.1	707	16.9	.047	.63	7.36	.096	.149	--
JUN													
18...	1800	5.8	10	9.3	8.2	710	21.9	.016	.41	7.44	.110	.137	--
JUL													
16...	1601	6.8	10	11.4	8.3	738	24.6	.016	.40	7.67	.091	.117	17
AUG													
20...	1418	3.8	10	15.2	8.1	765	20.1	.021	1.5	8.21	.114	.135	17
SEP													
17...	1430	2.4	10	12.9	8.4	787	17.8	<.013	.44	8.87	.124	.143	8.0
OCT													
14...	1720	2.5	10	14.7	8.5	784	9.9	<.013	.44	8.92	.133	.153	<2.0
05407428 MOORE CREEK AT COUNTY TRUNK T NEAR NORWALK (LAT 43 47 36N LONG 090 35 48W)													
MAY 2002													
22...	1805	29	10	11.1	8.4	430	19.4	.056	.59	1.20	.128	.166	--
JUN													
19...	1618	14	10	11.5	8.3	471	19.7	.031	.51	1.61	.145	.177	--
JUL													
17...	1500	11	10	12.7	8.4	486	25.3	.027	.37	2.01	.222	.260	5.0
AUG													
21...	1118	12	10	8.8	7.4	499	17.8	.042	.29	1.84	.193	.243	4.0
SEP													
18...	1250	12	10	12.5	8.2	497	17.2	<.013	.43	1.70	.160	.219	<2.0
OCT													
15...	1440	16	10	14.2	8.1	486	10.4	.026	.40	1.69	.109	.145	8.0
05408000 KICKAPOO RIVER AT LA FARGE, WI (LAT 43 34 27N LONG 090 38 35W)													
MAY 2002													
22...	0910	160	10	10.7	7.9	449	12.0	<.013	.24	.578	.029	.069	--
JUN													
19...	0953	159	10	7.5	7.8	469	19.1	.047	.44	.921	.074	.156	--
JUL													
17...	0749	150	10	8.1	7.6	475	21.2	.020	.24	.823	.076	.138	45
AUG													
20...	1707	--	10	10.8	7.8	469	19.4	.026	.29	.919	.086	.152	38
SEP													
17...	1645	133	10	10.1	8.1	482	16.5	<.013	.33	.974	.064	.096	12
OCT													
15...	0945	169	10	12.5	7.9	478	7.4	.016	.15	1.11	.058	.105	22
05413245 BLAKE FORK AT CEMETERY ROAD NEAR BLOOMINGTON WI (LAT 42 52 09N LONG 090 51 30W)													
MAY 2002													
21...	1720	14	10	14.9	8.3	670	17.5	.018	.44	7.19	.105	.142	--
JUN													
18...	1542	27	10	8.9	8.0	712	21.4	.016	.47	7.50	.120	.166	--
JUL													
16...	1400	18	10	10.4	7.9	752	23.6	.047	.48	7.07	.142	.189	26
AUG													
20...	1209	14	10	15.5	7.8	737	18.6	.022	.39	7.49	.124	.152	9.0
SEP													
17...	1255	14	10	12.3	8.0	748	16.6	<.013	.43	8.33	.124	.147	8.0
OCT													
14...	1505	15	10	15.4	8.2	733	11.0	.019	.41	8.46	.136	.169	12

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
WISCONSIN RIVER BASIN--Continued		
05407039 FENNIMORE FORK NEAR FENNIMORE, WI (LAT 43 01 40N LONG 090 33 47W)		
MAY 2002		
21...	--	34.000
JUN		
18...	--	40.000
JUL		
16...	--	52.000
AUG		
20...	4.80	80.000
SEP		
17...	8.00	88.000
OCT		
14...	--	94.000
05407428 MOORE CREEK AT COUNTY TRUNK T NEAR NORWALK (LAT 43 47 36N LONG 090 35 48W)		
MAY 2002		
22...	--	120.00
JUN		
19...	--	120.00
JUL		
17...	--	120.00
AUG		
21...	--	120.00
SEP		
18...	11.4	120.00
OCT		
15...	--	120.00
05408000 KICKAPOO RIVER AT LA FARGE, WI (LAT 43 34 27N LONG 090 38 35W)		
MAY 2002		
22...	--	120.00
JUN		
19...	--	32.000
JUL		
17...	--	39.000
AUG		
20...	17.3	38.000
SEP		
17...	7.10	102.00
OCT		
15...	--	90.000
05413245 BLAKE FORK AT CEMETERY ROAD NEAR BLOOMINGTON WI (LAT 42 52 09N LONG 090 51 30W)		
MAY 2002		
21...	--	87.000
JUN		
18...	--	35.000
JUL		
16...	--	37.000
AUG		
20...	4.80	74.000
SEP		
17...	7.20	120.00
OCT		
14...	--	94.000

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAMPLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOSPHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	SEDIMENT, SUSPENDED (MG/L) (80154)
PECATONICA-SUGAR RIVER BASIN													
05413415 PIGEON CREEK AT PIGEON RIVER ROAD NR BEETOWN, WI (LAT 42 47 10N LONG 090 48 58W)													
MAY 2002													
21...	1335	11	10	13.1	8.0	769	16.4	.023	.37	6.30	.541	.588	--
JUN 18...	1217	24	10	11.2	8.0	740	18.6	<.013	.42	5.92	.319	.351	--
JUL 16...	1042	13	10	12.5	8.3	787	21.8	<.013	.52	5.43	.412	.453	5.0
AUG 20...	0858	9.0	10	10.3	7.6	820	17.4	.028	.50	5.91	.584	.633	14
SEP 17...	0950	8.9	10	10.0	8.0	838	15.3	<.013	.34	6.78	.615	.666	11
OCT 14...	1155	9.7	10	15.0	8.3	808	8.2	<.013	.43	6.87	.618	.658	11
05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI (LAT 42 46 49N LONG 090 56 32W)													
MAY 2002													
21...	1530	17	10	13.4	8.2	687	15.5	.020	.42	7.30	.088	.105	--
JUN 18...	1355	30	10	13.9	8.2	738	19.6	<.013	.43	9.23	.095	.120	--
JUL 16...	1233	24	10	12.8	8.1	742	21.6	<.013	.34	8.17	.046	.061	8.0
AUG 20...	1027	23	10	11.9	7.7	760	17.4	.021	.31	8.18	.086	.103	7.0
SEP 17...	1125	19	10	11.8	8.0	773	15.4	<.013	.29	9.18	.088	.096	5.0
OCT 14...	1330	21	10	15.3	8.2	754	8.5	<.013	.28	9.47	.096	.109	4.0
05414000 PLATTE RIVER NEAR ROCKVILLE, WI (LAT 42 43 52N LONG 090 38 25W)													
MAY 2002													
21...	1205	90	10	12.7	7.9	642	12.4	.055	.54	4.49	.061	.140	--
JUN 18...	1051	143	10	10.3	7.9	653	17.9	.019	.58	4.99	.077	.157	--
JUL 16...	0922	85	10	9.2	7.9	650	20.3	.014	.29	4.77	.065	.104	30
AUG 20...	0714	70	10	9.6	7.2	648	17.5	.024	.33	4.23	.057	.101	36
SEP 17...	0820	63	10	9.4	7.8	654	14.6	<.013	.33	4.72	.059	.090	24
OCT 14...	1010	81	10	13.8	8.2	655	7.5	<.013	.32	4.75	.083	.137	37
05415000 GALENA RIVER AT BUNCOMBE, WI (LAT 42 30 49N LONG 090 22 40W)													
MAY 2002													
21...	0850	--	10	12.2	8.1	846	10.2	.046	.48	6.97	.050	.092	--
JUN 18...	0910	--	10	9.4	8.0	817	18.7	.020	.55	7.46	.060	.143	--
JUL 16...	0726	--	10	7.8	7.8	845	21.8	.026	.37	6.96	.054	.111	46
AUG 19...	1613	--	10	9.5	8.0	839	24.3	<.013	.23	5.84	.046	.060	10
SEP 16...	1750	--	10	15.9	8.2	845	20.1	<.013	.28	6.09	.041	.061	12
OCT 14...	0845	--	10	12.9	8.0	855	7.5	<.013	.27	6.92	.075	.111	21

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
PECATONICA-SUGAR RIVER BASIN--Continued		
05413415 PIGEON CREEK AT PIGEON RIVER ROAD NR BEETOWN, WI (LAT 42 47 10N LONG 090 48 58W)		
MAY 2002		
21...	--	89.000
JUN		
18...	--	39.000
JUL		
16...	--	120.00
AUG		
20...	6.50	65.000
SEP		
17...	8.40	90.000
OCT		
14...	--	94.000
05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI (LAT 42 46 49N LONG 090 56 32W)		
MAY 2002		
21...	--	120.00
JUN		
18...	--	69.000
JUL		
16...	--	120.00
AUG		
20...	1.80	104.00
SEP		
17...	12.7	120.00
OCT		
14...	--	120.00
05414000 PLATTE RIVER NEAR ROCKVILLE, WI (LAT 42 43 52N LONG 090 38 25W)		
MAY 2002		
21...	--	36.000
JUN		
18...	--	24.000
JUL		
16...	--	50.000
AUG		
20...	24.3	41.000
SEP		
17...	15.4	68.000
OCT		
14...	--	38.000
05415000 GALENA RIVER AT BUNCOMBE, WI (LAT 42 30 49N LONG 090 22 40W)		
MAY 2002		
21...	--	71.000
JUN		
18...	5.70	26.000
JUL		
16...	--	33.000
AUG		
19...	--	102.00
SEP		
16...	8.10	92.000
OCT		
14...	--	57.000

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
ROCK-FOX RIVER BASIN													
05423510 WEST BRANCH ROCK RIVER @ STATE HWY 49 NR WAUPUN, WI (LAT 43 38 04N LONG 088 41 08W)													
MAY 2002													
20...	1009	69	10	11.9	6.6	847	10.3	.013	.92	4.82	.488	.525	--
JUN 17...	1025	43	10	8.2	7.1	918	18.4	.166	1.1	4.84	.516	.577	--
JUL 15...	1045	19	10	6.6	8.0	966	23.5	.113	1.0	6.31	.879	.972	48
AUG 19...	1005	5.6	10	7.8	7.5	1470	20.0	.053	1.4	8.09	2.04	2.31	52
SEP 16...	1010	4.1	10	8.0	7.5	1530	15.7	.096	1.4	9.72	2.72	2.82	32
OCT 14...	1015	5.8	10	10.9	7.3	1500	7.3	<.013	.88	7.68	2.63	3.21	5.0
05424440 OCONOMOWOC R. AT ST. AUGUSTINE RD NR MONCHES, WI (LAT 43 13 09N LONG 088 18 02W)													
MAY 2002													
23...	1325	8.8	10	12.6	8.1	677	16.1	.029	1.0	1.30	.009	.042	--
JUN 19...	1615	8.8	10	10.6	8.0	643	21.7	.060	.91	1.31	.009	.033	--
JUL 17...	1718	4.5	10	11.6	8.3	657	27.6	.039	.81	.070	.016	.037	32
AUG 21...	1730	3.4	10	9.9	8.2	616	23.2	.015	.57	1.41	.009	.022	3.0
SEP 19...	1250	10	10	9.1	7.7	605	20.4	.032	1.0	1.12	.014	.058	7.0
OCT 17...	1300	5.3	10	11.2	7.7	664	8.9	.110	.81	1.43	.010	.028	18
05426900 WHITEWATER CREEK AT MILLIS RD NR WHITEWATER, WI (LAT 42 48 14N LONG 088 42 10W)													
MAY 2002													
23...	1150	16	10	13.0	7.7	659	12.1	<.013	.25	2.97	.007	.015	--
JUN 20...	1210	15	10	11.6	7.7	666	19.3	<.013	.46	2.07	.015	.024	--
JUL 18...	1039	14	10	9.9	7.6	669	19.4	.026	.24	1.90	.018	.031	10
AUG 22...	1157	21	10	6.7	7.1	635	18.0	.051	.48	1.74	.032	.050	15
SEP 19...	1025	12	10	10.2	7.6	669	17.1	<.013	.29	2.27	.012	.022	3.0
OCT 17...	1025	14	10	12.8	7.6	668	7.0	<.013	.21	2.73	.011	.016	4.0
05427718 YAHARA RIVER AT WINDSOR, WI (LAT 43 12 32N LONG 089 21 09W)													
MAY 2002													
23...	1000	22	10	10.4	7.7	759	12.9	.035	.44	8.04	.046	.078	--
JUN 20...	0850	21	10	10.3	7.8	765	16.8	.029	.51	8.37	.065	.096	--
JUL 18...	1354	13	10	13.3	8.0	762	22.5	.004	.27	9.07	.055	.073	6.0
AUG 22...	0903	15	10	7.0	6.7	628	19.1	.066	.68	6.25	.069	.114	21
SEP 19...	0825	16	10	7.7	7.6	746	17.0	<.013	.53	8.19	.060	.089	11
OCT 17...	0840	15	10	12.6	7.6	770	8.5	.035	.37	9.10	.044	.058	5.0

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
ROCK-FOX RIVER BASIN--Continued		
05423510	WEST BRANCH ROCK RIVER @ STATE HWY 49 NR WAUPUN,WI (LAT 43 38 04N LONG 088 41 08W)	
MAY 2002		
20...	3.90	120.00
JUN		
17...	39.5	32.000
JUL		
15...	41.1	21.000
AUG		
19...	52.2	14.000
SEP		
16...	--	13.500
OCT		
14...	7.80	65.000
05424440	OCONOMOWOC R. AT ST. AUGUSTINE RD NR MONCHES, WI (LAT 43 13 09N LONG 088 18 02W)	
MAY 2002		
23...	9.60	104.00
JUN		
19...	5.50	120.00
JUL		
17...	6.60	79.000
AUG		
21...	1.90	120.00
SEP		
19...	--	120.00
OCT		
17...	4.90	120.00
05426900	WHITEWATER CREEK AT MILLIS RD NR WHITEWATER, WI (LAT 42 48 14N LONG 088 42 10W)	
MAY 2002		
23...	--	120.00
JUN		
20...	--	120.00
JUL		
18...	--	120.00
AUG		
22...	1.60	115.00
SEP		
19...	2.80	--
OCT		
17...	--	120.00
05427718	YAHARA RIVER AT WINDSOR, WI (LAT 43 12 32N LONG 089 21 09W)	
MAY 2002		
23...	--	120.00
JUN		
20...	--	61.000
JUL		
18...	--	120.00
AUG		
22...	8.60	71.000
SEP		
19...	6.30	82.000
OCT		
17...	--	120.00

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
ROCK-FOX RIVER BASIN--Continued													
05427800 TOKEN CREEK NEAR MADISON, WI (LAT 43 10 52N LONG 089 19 28W)													
MAY 2002													
23...	0855	27	10	9.8	7.3	740	12.1	.017	.26	7.73	.021	.053	--
JUN													
20...	0943	24	10	9.8	7.6	754	15.9	.037	.39	19.3	.030	.060	--
JUL													
18...	1243	22	10	12.8	7.7	757	20.0	.022	.48	9.00	.029	.080	51
AUG													
22...	0958	--	10	7.4	7.1	719	16.8	.078	.77	7.41	.039	.125	66
SEP													
19...	0730	22	10	8.2	7.4	733	15.4	<.013	.59	8.24	.034	.101	67
OCT													
17...	0745	20	10	12.1	7.4	745	7.2	<.013	.18	9.03	.021	.036	14
05431486 TURTLE CREEK AT CARVERS ROCK ROAD NEAR CLINTON, WI (LAT 42 35 50N LONG 088 49 45W)													
MAY 2002													
23...	1410	103	10	14.4	8.0	727	15.6	<.013	.69	7.61	.013	.067	--
JUN													
20...	1352	121	10	18.9	8.2	756	23.4	<.013	.96	20.3	.025	.106	--
JUL													
18...	0937	66	10	9.1	7.7	806	22.4	.025	.46	9.61	.037	.079	13
AUG													
22...	1322	141	10	7.7	7.3	689	21.3	.056	1.4	6.15	.081	.221	96
SEP													
19...	1200	65	70	10.9	7.9	812	20.6	<.013	.46	9.07	.031	.051	3.0
OCT													
17...	1150	75	10	14.8	7.8	823	7.3	<.013	.37	9.11	.022	.044	4.0
PECATONICA-SUGAR RIVER BASIN													
05433000 EAST BR PECATONICA RIVER NEAR BLANCHARDVILLE, WI (LAT 42 47 08N LONG 089 51 40W)													
MAY 2002													
20...	1555	140	10	11.4	7.9	588	11.7	.188	.59	3.73	.057	.153	--
JUN													
17...	1452	165	10	10.4	7.9	568	17.6	.051	.69	3.79	.075	.196	--
JUL													
15...	1539	118	10	8.5	7.9	614	21.9	.036	.25	4.12	.083	.134	44
AUG													
19...	1247	107	70	7.0	7.2	601	19.9	.038	.27	3.34	.076	.121	37
SEP													
16...	1420	102	10	14.1	7.9	601	16.2	.020	.33	3.76	.072	.113	23
OCT													
13...	1520	116	10	12.1	8.1	606	10.2	.019	.42	3.95	.073	.108	11
05434240 SKINNER CR AT KLONDYKE RD NR MONROE, WI (LAT 42 37 32N LONG 089 44 39W)													
MAY 2002													
20...	1720	23	10	11.6	7.9	635	11.6	.030	.31	4.08	.031	.071	--
JUN													
17...	1614	40	10	11.8	7.9	656	15.8	.044	.47	4.76	.046	.115	--
JUL													
15...	1651	11	10	10.0	7.9	648	20.4	.026	.29	4.32	.048	.090	45
AUG													
19...	1356	20	10	9.6	7.8	6	18.8	<.013	.20	3.94	.047	.059	4.0
SEP													
16...	1550	18	10	16.3	8.0	644	15.9	<.013	.21	4.06	.051	.067	10
OCT													
13...	1715	18	10	12.8	8.0	661	10.1	.022	.34	6.19	.068	.078	13

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	FIELD TUR- BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
ROCK-FOX RIVER BASIN--Continued		
05427800 TOKEN CREEK NEAR MADISON, WI (LAT 43 10 52N LONG 089 19 28W)		
MAY 2002		
23...	--	60.000
JUN		
20...	--	46.000
JUL		
18...	--	42.000
AUG		
22...	42.4	33.000
SEP		
19...	42.2	34.000
OCT		
17...	--	90.000
05431486 TURTLE CREEK AT CARVERS ROCK ROAD NEAR CLINTON, WI (LAT 42 35 50N LONG 088 49 45W)		
MAY 2002		
23...	--	96.000
JUN		
20...	--	53.000
JUL		
18...	--	94.000
AUG		
22...	38.8	35.000
SEP		
19...	3.80	120.00
OCT		
17...	--	120.00
PECATONICA-SUGAR RIVER BASIN--Continued		
05433000 EAST BR PECATONICA RIVER NEAR BLANCHARDVILLE, WI (LAT 42 47 08N LONG 089 51 40W)		
MAY 2002		
20...	--	50.000
JUN		
17...	48.2	33.000
JUL		
15...	--	35.000
AUG		
19...	--	36.000
SEP		
16...	20.4	35.000
OCT		
13...	--	64.000
05434240 SKINNER CR AT KLONDYKE RD NR MONROE, WI (LAT 42 37 32N LONG 089 44 39W)		
MAY 2002		
20...	--	56.000
JUN		
17...	--	28.000
JUL		
15...	--	31.000
AUG		
19...	--	120.00
SEP		
16...	6.00	98.000
OCT		
13...	--	70.000

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO OCTOBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L) AS P) (00666)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
PECATONICA-SUGAR RIVER BASIN--Continued													
05435980 WEST BRANCH SUGAR RIVER NEAR MT. VERNON, WI (LAT 42 54 47N LONG 089 37 19W)													
JUL 2002													
15...	1057	15	10	10.1	7.9	677	17.1	.022	.54	5.84	.072	.157	93
AUG													
19...	0953	13	10	7.7	7.2	683	15.6	.027	.36	5.79	.076	.131	43
SEP													
16...	1130	14	10	15.7	7.8	683	12.4	<.013	.33	6.60	.064	.104	28
OCT													
13...	1310	11	10	14.1	8.0	672	8.6	.054	.42	4.32	.055	.090	21
05436010 WEST BRANCH SUGAR RIVER NEAR BELLEVILLE, WI (LAT 42 54 11N LONG 089 33 54W)													
MAY 2002													
20...	1200	47	10	11.9	7.7	599	9.5	.048	.50	5.57	.048	.105	--
JUN													
17...	1004	51	10	11.2	7.8	610	13.9	.036	.56	5.54	.055	.136	--
05436280 LITTLE SUGAR RIVER AT STATE HWY 69 AT NEW GLARUS (LAT 42 49 02N LONG 089 37 55W)													
MAY 2002													
20...	1415	16	10	12.2	7.8	612	9.9	.025	.71	3.12	.179	.165	--
JUN													
17...	1205	17	10	12.0	7.8	628	13.5	.036	.34	3.57	.043	.074	--
JUL													
15...	1325	11	10	11.4	7.7	626	17.4	.025	.19	3.69	.048	.070	14
AUG													
19...	1113	11	10	7.9	7.2	614	15.9	.022	.20	2.95	.052	.069	6.0
SEP													
16...	1300	8.6	10	15.5	7.7	624	--	<.013	.43	3.39	.045	.061	11
OCT													
13...	1410	10	10	12.5	7.8	628	9.3	<.013	.23	3.46	.053	.070	12

Date	FIELD TUR-BIDITY (NTU) (99905)	SECCHI TUBE (CM) (99910)
05435980 WEST BRANCH SUGAR RIVER NEAR MT. VERNON, WI (LAT 42 54 47N LONG 089 37 19W)		
JUL 2002		
15...	--	23.000
AUG		
19...	10.6	50.000
SEP		
16...	21.2	35.000
OCT		
13...	--	72.000
05436010 WEST BRANCH SUGAR RIVER NEAR BELLEVILLE, WI (LAT 42 54 11N LONG 089 33 54W)		
MAY 2002		
20...	--	49.000
JUN		
17...	2.30	28.000
05436280 LITTLE SUGAR RIVER AT STATE HWY 69 AT NEW GLARUS (LAT 42 49 02N LONG 089 37 55W)		
MAY 2002		
20...	--	55.000
JUN		
17...	--	44.000
JUL		
15...	--	56.000
AUG		
19...	--	120.00
SEP		
16...	6.00	120.00
OCT		
13...	--	92.000

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	MERCURY BIOTA, TISSUE, DRY WGT REC (UG/G) (49258)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)												
04063660 PINE RIVER NEAR TIPLER, WI (LAT 45 53 37N LONG 088 33 31W)															
JUL 2002															
23...	--	--	--												
23...	--	--	--												
23...	--	14	100												
AUG															
07...	.327	--	--												
04063700 POPPLE RIVER NEAR FENCE, WI (LAT 45 45 49N LONG 088 27 47W)															
JUL 2002															
23...	--	--	--												
23...	--	12	100												
AUG															
05...	.522	--	--												
04070720 SOUTH BRANCH OCONTO RIVER NEAR BREED, WI (LAT 45 03 40N LONG 088 31 24W)															
JUL 2002															
24...	--	--	--												
24...	--	14	100												
AUG															
08...	.561	--	--												
04075365 EVERGREEN RIVER BLW EVERGREEN FALLS NR LANGLADE,WI (LAT 45 03 57N LONG 088 40 34W)															
JUL 2002															
24...	--	--	--												
24...	--	33	100												
AUG															
07...	.574	--	--												
04087000 MILWAUKEE RIVER AT MILWAUKEE, WI (LAT 43 06 00N LONG 087 54 32W)															
JUL 2002															
22...	--	--	--												
22...	--	45	100												
AUG															
29...	.616	--	--												
29...	.549	--	--												
04087204 OAK CREEK AT SOUTH MILWAUKEE, WI (LAT 42 55 30N LONG 087 52 12W)															
JUL 2002															
25...	--	--	--												
25...	--	14	100												
AUG															
12...	.544	--	--												
04087220 ROOT RIVER NEAR FRANKLIN, WI (LAT 42 52 25N LONG 087 59 45W)															
JUL 2002															
22...	--	--	--												
22...	--	--	--												
22...	--	20	100												
AUG															
12...	.624	--	--												
				DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	MERCURY WATER, FLTRD (NG/L) (50287)	MERCURY METHYL, WATER, FLTRD (NG/L) (50285)	BED MAT. SIEVE DIAM. THAN (80164)	BED MAT. SIEVE DIAM. THAN (80165)
05543796 POPLAR CREEK NEAR WAUKESHA, WI (LAT 43 02 39N LONG 088 09 59W)															
JUL 2002															
25...	1335	.74	8.3	99	8.0	1160	22.9	69.6	7.7	1.37	.05	--	--		
25...	1335	--	--	--	--	--	--	--	--	--	--	--	52	100	
25...	1336	--	--	--	--	--	--	--	--	--	--	--	53	100	

GROUND-WATER LEVELS

ADAMS COUNTY

435759089490001. Local number, AD-17/06E/08-0076.

LOCATION.--Lat 43°57'59", long 89°49'00", Hydrologic Unit 07070003. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in., depth 21 ft, cased to 19 ft, well point 19-21 ft.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Elevation of land-surface datum is 955 ft above sea level. Measuring point: top of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--September 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.69 ft below land-surface datum. May 29, 1973; lowest water level measured, 18.14 ft below land-surface datum, Mar. 7, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	15.04	DEC 17	15.56	FEB 25	16.50	APR 29	14.59	JUL 08	14.43	SEP 09	15.17
08	15.14	27	15.68	MAR 04	16.50	MAY 13	14.29	15	14.64	16	15.29
15	15.18	JAN 02	15.77	11	15.82	20	14.44	23	14.95	23	15.32
22	15.33	07	15.87	18	15.71	28	14.46	29	14.94	30	15.37
29	15.39	14	15.97	25	15.62	JUN 03	14.64	AUG 05	14.91		
NOV 12	15.53	23	16.11	APR 01	15.54	10	14.13	12	15.05		
26	15.72	28	16.26	08	15.32	17	13.97	19	15.10		
DEC 03	15.70	FEB 04	16.35	15	15.03	25	13.61	26	14.74		
10	15.58	11	16.40	22	14.83	JUL 01	13.89	SEP 03	15.10		
WATER YEAR 2002		HIGHEST	13.61	JUN 25, 2002	LOWEST	16.50	FEB 25, 2002	MAR 04, 2002			

BROWN COUNTY

443228088003101. Local number, BN-24/20E/24-0076.

LOCATION.--Lat 44°32'28", long 88°00'31", Hydrologic Unit 04030204. Owner: Wisconsin Public Service Corp.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 5 in., depth 500 ft, cased to 150 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Elevation of land-surface datum is 590 ft above sea level. Measuring point: top of 3-in. pipe, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured. 41.24 ft below land-surface datum, May 3, 1961; lowest water level measured, 248.97 ft below land-surface datum, Aug. 30, 1955.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	146.78	DEC 31	141.88	FEB 28	141.80	APR 25	142.95	JUN 28	139.97	AUG 30	154.00
NOV 28	144.34	JAN 28	139.05	MAR 28	138.65	MAY 28	148.76	JUL 18	143.50	SEP 20	154.00
WATER YEAR 2002		HIGHEST	138.65	MAR 28, 2002	LOWEST	154.00	AUG 30, 2002	SEP 20, 2002			

GROUND-WATER LEVELS

543

BURNETT COUNTY

455224092215601. Local number, BT-39/16W/17-0002.

LOCATION.--Lat 45°52'24", long 92°21'56", Hydrologic Unit 07030001. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in., depth 46 ft, cased to 46 ft, perforated 44.5-46 ft.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Elevation of land-surface datum is 981 ft above sea level. Measuring point: pointer on float gage, 4.87 ft above land-surface datum.

PERIOD OF RECORD.--May 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.33 ft below land-surface datum, June 28, 1968; lowest water level measured, 37.90 ft below land-surface datum, Aug. 21, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	32.58	NOV 30	32.69	JAN 18	32.80	MAR 08	32.81	APR 26	32.90	AUG 16	32.31
12	32.58	DEC 07	32.74	25	32.84	15	32.92	JUL 05	32.35	23	32.23
19	32.55	14	32.65	FEB 01	32.81	22	32.96	12	32.32	30	32.28
26	32.57	21	32.65	08	32.79	29	32.84	19	32.28	SEP 06	32.26
NOV 02	32.57	28	32.74	15	32.77	APR 05	33.02	26	32.25	13	32.24
09	32.59	JAN 04	32.73	22	32.89	12	32.99	AUG 02	32.24	20	32.16
16	32.59	11	32.75	MAR 01	32.97	19	33.03	09	32.27	27	32.18
23	32.65										
WATER YEAR 2002		HIGHEST	32.16	SEP 20, 2002	LOWEST	33.03	APR 19, 2002				

CHIPPEWA COUNTY

445544091155701. Local number, CH-28/07W/17-0142.

LOCATION.--Lat 44°55'44", long 91°15'57", Hydrologic Unit 07050005. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in., depth 60 ft, cased to 39 ft, open end.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Elevation of land-surface datum is 965 ft above sea level. Measuring point: 0.25-in. hole in top of casing, 2.20 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.97 ft below land-surface datum, Oct. 28, 1986; lowest water level measured, 33.46 ft below land-surface datum, Jan. 10, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	32.07	JAN 18	32.94	APR 04	32.79	JUL 15	31.93				
NOV 16	32.68	MAR 04	33.22	JUN 13	31.51						
WATER YEAR 2002		HIGHEST	31.51	JUN 13, 2002	LOWEST	33.22	MAR 04, 2002				

DANE COUNTY

430456089190601. Local number, DN-07/10E/09-0105.

LOCATION.--Lat 43°04'56", long 89°19'06", Hydrologic Unit 07070005. Owner: City of Madison.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in., depth 380 ft, cased to 85 ft, open end.

INSTRUMENTATION.--Continuous water-level recorder.

DATUM.--Elevation of land-surface datum is 870 ft above sea level. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.91 ft below land-surface datum, July 11, 1993; lowest water level measured, 32.35 ft below land-surface datum, May 27, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.89	26.15	25.64	26.38	26.78	26.60	26.64	24.83	24.12	26.90	28.03	26.08
10	25.86	25.99	25.58	25.82	26.66	26.38	26.27	25.88	24.81	26.96	28.22	26.28
15	26.29	26.12	25.34	25.74	26.82	26.59	25.59	25.65	24.24	28.27	26.51	26.18
20	25.67	26.58	25.55	25.61	26.97	25.64	25.22	25.37	25.26	28.38	26.22	26.35
25	25.70	25.30	25.09	25.86	26.56	26.25	25.37	24.99	25.72	27.45	25.79	25.96
EOM	25.49	25.88	25.40	26.72	26.80	25.57	25.13	25.56	26.15	27.45	26.22	26.14
WATER YEAR 2002		HIGHEST	24.12	JUN 05, 2002	LOWEST	28.68	JUL 18, 2002	JUL 19, 2002				

GROUND-WATER LEVELS

DODGE COUNTY

432407088552701. Local number, DG-11/13E/23-0081.

LOCATION.--Lat 43°24'15", long 88°55'26", Hydrologic Unit 07090002. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 125 ft, cased to 57 ft, open end.

INSTRUMENTATION.--Water level measured bi-monthly by observer.

DATUM.--Elevation of land-surface datum is 880 ft above sea level. Measuring point: 0.25-in. hole in side of casing, 1.30 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.00 ft below land-surface datum, Dec. 4, 1991; lowest water level measured, 26.67 ft below land-surface datum, Feb. 3, 1965.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	20.19	JAN 18	20.63	MAR 11	21.16	JUN 06	17.60	AUG 06	21.51
WATER YEAR 2002		HIGHEST	17.60	JUN 06, 2002		LOWEST	21.51	AUG 06, 2002	

DOOR COUNTY

451518087042601. Local number, DR-32/28E/15-0317.

LOCATION.--Lat 44°15'18", long 87°04'26", Hydrologic Unit 04030102. Owner: Town of Liberty.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 4 in., depth 155 ft, cased to 153 ft.

INSTRUMENTATION.--Water level measured by observer.

DATUM.--Elevation of land-surface datum is 580 ft above sea level. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.70 ft below land-surface datum, Mar. 27, 1986; lowest water level measured, 45.17 ft below land-surface datum, Feb. 1, 2000.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	43.64	JAN 07	41.78	APR 02	37.26	JUL 02	38.53	SEP 30	43.38		
NOV 05	43.45	FEB 04	42.59	MAY 06	35.62	AUG 02	41.53				
30	41.95	MAR 04	40.24	JUN 07	38.10	SEP 06	42.74				
WATER YEAR 2002		HIGHEST	35.62	MAY 06, 2002		LOWEST	43.64	OCT 01, 2001			

DOUGLAS COUNTY

461921091484201. Local number, DS-44/12W/01-0327.

LOCATION.--Lat 46°19'21", long 91°48'42", Hydrologic Unit 04010301. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 148 ft, cased to 145 ft.

INSTRUMENTATION.--Water level measured by observer.

DATUM.--Elevation of land-surface datum is 1,090 ft above sea level. Measuring point: hole in pump base, 4.33 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 72.16 ft above land-surface datum, Dec. 28, 1972; lowest water level measured, 81.05 ft below land-surface datum, July 7, 1971.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	77.90	DEC 03	78.10	FEB 04	78.50	APR 03	78.59	JUN 04	78.45	AUG 01	77.60
NOV 01	78.00	JAN 03	78.28	MAR 01	78.54	MAY 03	78.27	JUL 02	78.27	SEP 03	77.65
WATER YEAR 2002		HIGHEST	77.60	AUG 01, 2002		LOWEST	78.59	APR 03, 2002			

GROUND-WATER LEVELS

GRANT COUNTY

425551090391301. Local number, GR-05/02W/06-0005

LOCATION.--Lat 42°55'51", long 90°39'13", Hydrologic Unit 07060003. Owner: Homer Yelinek.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in., depth 35 ft, cased to 5 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

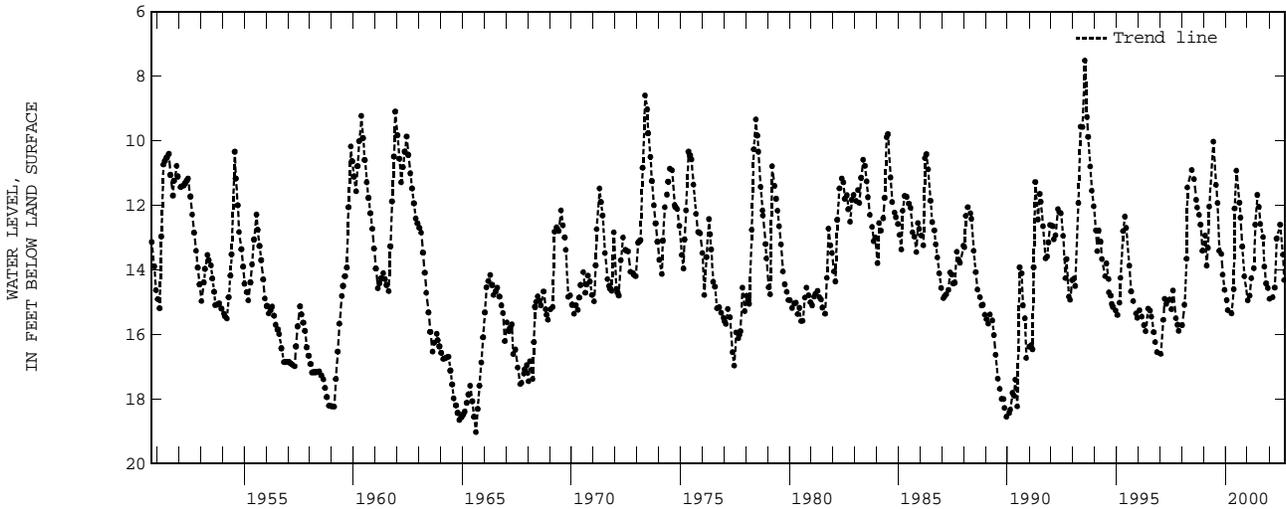
DATUM.--Elevation of land-surface datum is 980 ft above sea level. Measuring point: edge of pump base, 0.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.52 ft below land-surface datum, July 22, 1993; lowest water level measured, 19.03 ft below land-surface datum, Aug. 17, 1965.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	13.90	DEC 14	14.56	MAR 05	14.85	MAY 10	13.03	AUG 23	13.53		
NOV 15	14.42	JAN 11	14.90	APR 09	14.55	JUL 08	12.60	SEP 16	14.32		
WATER YEAR 2002		HIGHEST	12.60	JUL 08, 2002		LOWEST	14.90	JAN 11, 2002			



GREEN COUNTY

424427089494701. Local number, GN-03/06E/18-0002.

LOCATION.--Lat 42°44'27", long 89°49'47", Hydrologic Unit 07090003. Owner: Earl Waddington.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in., depth 150 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Elevation of land-surface datum is 1,020 ft above sea level. Measuring point: hole in pump base, 0.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 118.96 ft below land-surface datum, June 1, 1999; lowest water level measured, 143.94 ft below land-surface datum, Feb. 18, 1960.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	128.01	DEC 13	128.72	FEB 15	129.12	APR 02	129.44	JUN 04	128.16	AUG 12	130.52
WATER YEAR 2002		HIGHEST	128.01	OCT 30, 2001		LOWEST	130.52	AUG 12, 2002			

GROUND-WATER LEVELS

IOWA COUNTY

425644090101901. Local number, IW-06/03E/32-0032.

LOCATION.--Lat 42°56'44", long 90°10'19", Hydrologic Unit 07090003. Owner: Archie Lee.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 92 ft.

INSTRUMENTATION.--Water level measured bi-monthly by observer.

DATUM.--Elevation of land-surface datum is 1,200 ft above sea level. Measuring point: 0.25-in. hole in top of casing, at land-surface datum.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.02 ft below land-surface datum, July 22, 1993; lowest water level measured, 68.81 ft below land-surface datum, Aug. 18, 1965.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	55.39	DEC 13	54.74	FEB 15	55.11	APR 02	54.59	JUN 18	53.91	AUG 12	55.16
WATER YEAR 2002		HIGHEST	53.91	JUN 18, 2002	LOWEST	55.39	OCT 30, 2001				

JACKSON COUNTY

441810090484001. Local number, JA-21/04W/13-0038.

LOCATION.--Lat 44°18'10", long 90°48'40", Hydrologic Unit 07040007. Owner: Brockway Sanitation District.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled municipal well, diameter 18 in., depth 80 ft, cased to 80 ft, open end.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Elevation of land-surface datum is 856 ft above sea level. Measuring point: top of vent pipe, 2.5 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.64 ft below land-surface datum, Sept. 10, 1993; lowest water level measured, 58.50 ft below land-surface datum, June 9, 16, 2000.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	56.90	NOV 30	56.10	MAR 08	56.00	MAY 03	56.00	JUN 28	55.60	AUG 23	56.39
12	56.70	DEC 07	56.10	15	56.00	10	56.20	JUL 05	55.90	30	56.41
19	56.90	JAN 25	56.00	22	56.00	17	56.60	12	56.00	SEP 06	56.40
26	57.00	FEB 01	56.00	29	56.00	24	57.50	19	57.40	13	56.30
NOV 02	57.30	08	56.20	APR 05	56.10	31	57.30	26	56.39	20	56.10
09	57.40	15	56.10	12	56.30	JUN 07	57.30	AUG 02	56.30	27	55.90
16	56.90	22	56.00	19	56.40	14	55.80	09	55.52		
23	57.30	MAR 01	56.00	26	56.20	21	55.70	16	56.42		
WATER YEAR 2002		HIGHEST	55.52	AUG 09, 2002	LOWEST	57.50	MAY 24, 2002				

GROUND-WATER LEVELS

KENOSHA COUNTY

423214087503801. Local number, KE-01 /22E/13-0046.

LOCATION.--Lat 42°32'14", long 87°50'38", Hydrologic Unit 04040002. Owner: St. Joseph Home.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled well, diameter 6 in., depth 135 ft, cased to 82 ft, open end.

INSTRUMENTATION.--Water level measured by observer.

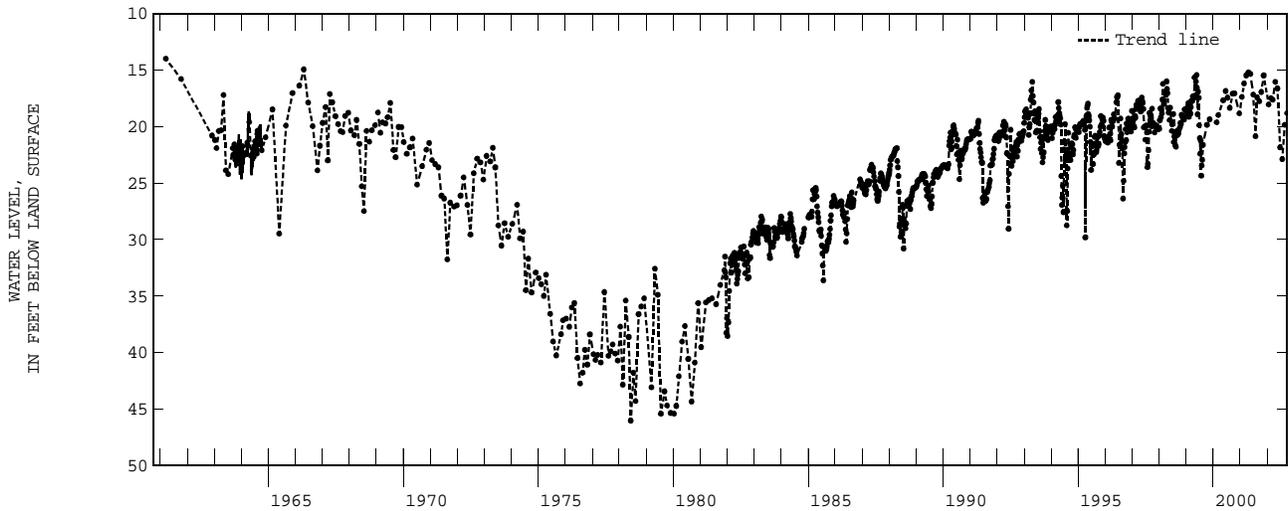
DATUM.--Elevation of land-surface datum is 645 ft above sea level. Measuring point: top of casing, 1.60 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.00 ft below land-surface datum, Mar. 16, 1961; lowest water level measured, 46.02 ft below land-surface datum, June 6, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	16.94	JAN 22	18.06	MAR 18	17.63	MAY 22	16.63	JUL 26	22.88	SEP 30	18.82
NOV 16	15.48	FEB 21	17.50	APR 24	16.05	JUN 27	21.84	AUG 28	19.86		
WATER YEAR 2002		HIGHEST	15.48	NOV 16, 2001	LOWEST	22.88	JUL 26, 2002				



LAFAYETTE COUNTY

423114090161101. Local number, LF-01/02E/33-0057.

LOCATION.--Lat 42°31'13", long 90°16'11", Hydrologic Unit 07060005. Owner: Coulthard Estate.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in., depth 265 ft, cased to 16 ft, open end.

INSTRUMENTATION.--Water level measured by observer.

DATUM.--Elevation of land-surface datum is 1,000 ft above sea level. Measuring point: top of casing, 3.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.00 ft below land-surface datum, June 26, 1996; lowest water level, 130.99 ft below land-surface datum, Oct. 27, 1959.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	25.45	DEC 15	26.27	JAN 15	26.34	FEB 15	27.01	JUN 18	19.74	AUG 13	24.52
NOV 15	25.73										
WATER YEAR 2002		HIGHEST	19.74	JUN 18, 2002	LOWEST	26.27	DEC 15, 2001				

GROUND-WATER LEVELS

LAFAYETTE COUNTY--Continued

424004090220601. Local number, LF-02/01E/04-0011.

LOCATION.--Lat 42°40'04", long 90°22'06", Hydrologic Unit 07060005. Owner: Ed Wiegel.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 64 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Elevation of land-surface datum is 1,010 ft above sea level. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.58 ft below land-surface datum, July 22, 1993; lowest water level measured, 38.81 ft below land-surface datum, Aug. 1, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	25.01	DEC 13	24.82	FEB 15	25.15	APR 02	24.69	JUN 04	23.49	AUG 12	25.81
WATER YEAR 2002		HIGHEST	23.49	JUN 04, 2002		LOWEST	25.81	AUG 12, 2002			

MANITOWOC COUNTY

440430087420401. Local number, MN-19/23E/35-0028.

LOCATION.--Lat 44°04'30", long 87°42'04", Hydrologic Unit 04030101. Owner: Wis. Dept. of Transportation.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in., depth 147 ft, cased to 133 ft, open end.

INSTRUMENTATION.--Water level measured weekly by observer.

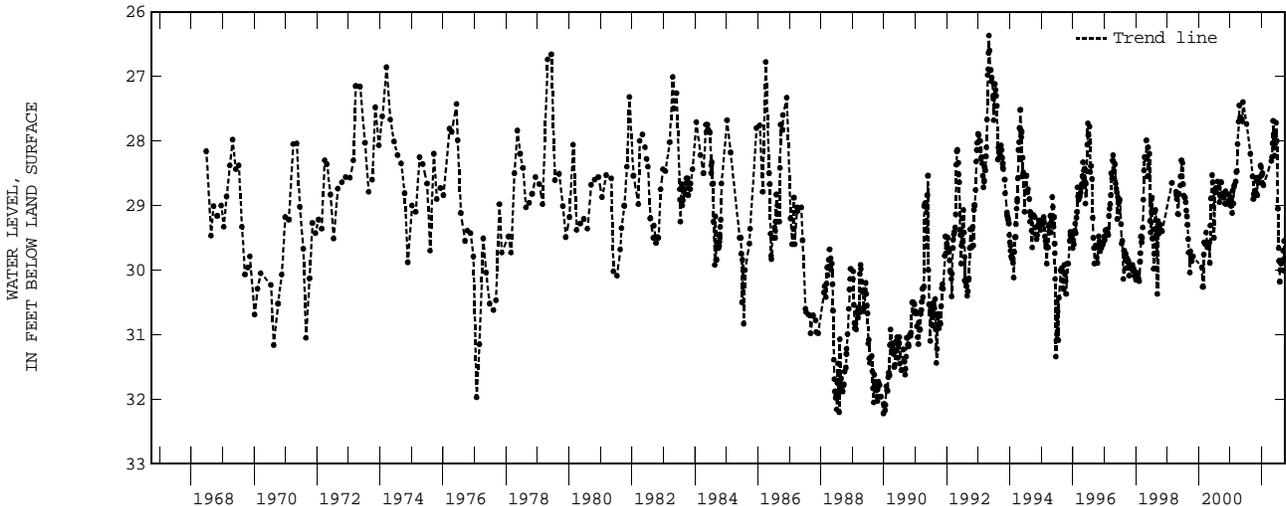
DATUM.--Elevation of land-surface datum is 670 ft above sea level. Measuring point: 0.25-in. hole in pump base, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.37 ft below land-surface datum, May 4, 1993; lowest water level measured, 32.22 ft below land-surface datum, Dec. 28, 1989.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	28.82	NOV 20	28.64	JAN 15	28.66	MAY 30	28.23	JUL 23	29.86	SEP 18	29.55
09	28.85	27	28.65	22	28.69	JUN 04	27.92	30	30.18	24	29.82
16	28.77	DEC 11	28.56	APR 23	28.31	11	28.04	AUG 06	30.00		
23	28.80	19	28.38	MAY 01	28.25	18	27.72	13	29.90		
31	28.61	26	28.41	07	28.04	25	28.00	20	29.86		
NOV 06	28.57	JAN 02	28.53	14	27.69	JUL 08	29.05	SEP 06	29.70		
13	28.84	09	28.50	22	28.11	17	29.66	10	30.01		
WATER YEAR 2002		HIGHEST	27.69	MAY 14, 2002		LOWEST	30.18	JUL 30, 2002			



GROUND-WATER LEVELS

MARATHON COUNTY

444709089265301. Local number, MR-27/09E/31-0028.

LOCATION.--Lat 44°47'09", long 89°26'53", Hydrologic Unit 07070002. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in., depth 27 ft, cased to 25 ft, well point 25-27 ft.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Elevation of land-surface datum is 1,229 ft above sea level. Measuring point: top of pipe, 0.80 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.18 ft below land-surface datum, Aug. 1, 1993; lowest water level measured, 26.09 ft below land-surface datum, Mar. 30, 1959.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	20.50	DEC 29	21.00	FEB 25	21.10	APR 26	20.70	JUN 27	20.70	AUG 22	20.30
NOV 29	20.70	JAN 25	21.00	MAR 25	20.70	MAY 24	20.80	JUL 24	20.50	SEP 24	20.40
WATER YEAR 2002		HIGHEST	20.30	AUG 22, 2002		LOWEST	21.10	FEB 25, 2002			

MARINETTE COUNTY

453816087590101. Local number, MT-37/20E/34-0007.

LOCATION.--Lat 45°38'16", long 87°59'01", Hydrologic Unit 04030108. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in., depth 33 ft, cased to 33 ft, open end.

INSTRUMENTATION.--Water level measured weekly by observer.

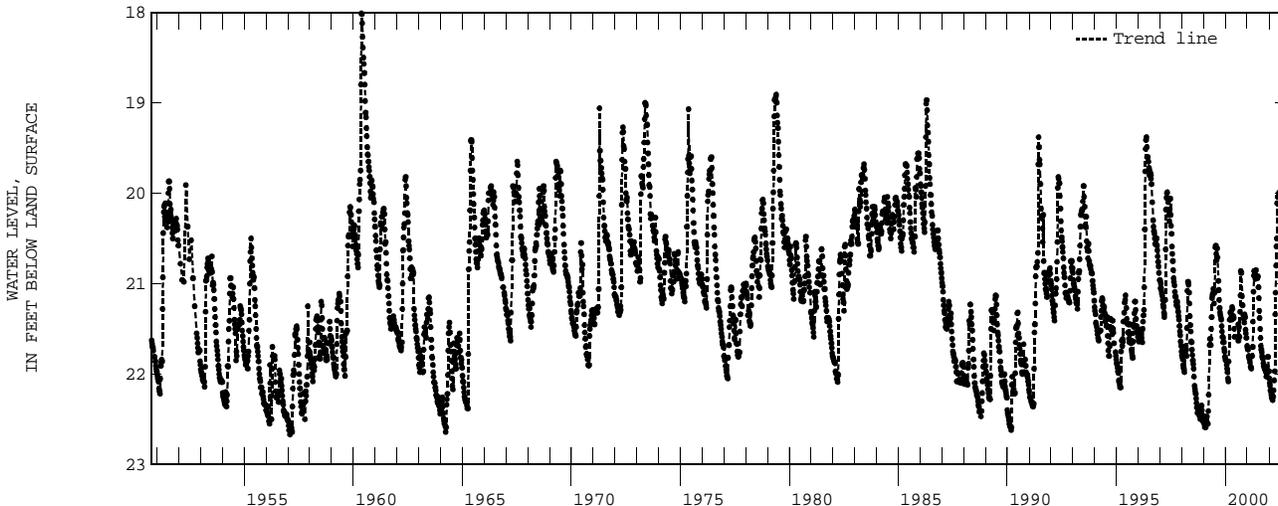
DATUM.--Elevation of land-surface datum is 980 ft above sea level. Measuring point: pointer on float gage, 4.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.01 ft below land-surface datum, May 17, 1960; lowest water level measured, 23.26 ft below land-surface datum, Nov. 2, 1948.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	21.88	NOV 27	22.00	JAN 29	22.18	APR 02	22.07	MAY 28	20.04	JUL 23	20.37
09	21.91	DEC 04	21.92	FEB 06	22.20	09	21.97	JUN 04	20.04	AUG 13	20.45
17	21.93	13	21.81	11	22.23	16	21.34	11	20.12	20	20.56
23	21.94	18	21.81	19	22.26	23	21.10	18	20.00	27	20.59
30	21.95	JAN 02	21.97	26	22.27	MAY 01	20.80	25	19.99	SEP 03	20.67
NOV 06	21.96	08	22.05	MAR 05	22.29	07	20.59	JUL 02	20.12	10	20.81
13	21.98	15	22.10	14	22.25	14	20.50	10	20.24	17	20.88
20	22.03	22	22.13	20	22.18	21	20.11	16	20.35	23	20.92
WATER YEAR 2002		HIGHEST	19.99	JUN 25, 2002		LOWEST	22.29	MAR 05, 2002			



GROUND-WATER LEVELS

MARQUETTE COUNTY

435244089293401. Local number, MQ-16/08E/12-0009.

LOCATION.--Lat 43°52'44", long 89°29'34", Hydrologic Unit 04030201. Owner: Village of Westfield.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 274 ft.

INSTRUMENTATION.--Water level measured bi-monthly by observer.

DATUM.--Elevation of land-surface datum is 880 ft above sea level. Measuring point: top of casing, at land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.15 ft below land-surface datum, July 13, 1993; lowest water level measured, 19.69 ft below land-surface datum, Jan. 25, 1999.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	15.55	MAR 11	16.99	JUN 26	14.44	AUG 24	15.00				
JAN 18	16.14	JUN 07	14.41	JUL 25	14.80						
WATER YEAR 2002		HIGHEST	14.41	JUN 07, 2002	LOWEST	16.99	MAR 11, 2002				

433956089275601. Local number, MQ-14/09E/30-0026.

LOCATION.--Lat 43°39'56", long 89°27'56", Hydrologic Unit 04030201. Owner: Leslie Mountford.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in., depth 170 ft, cased to 145 ft, open end.

INSTRUMENTATION.--Water level measured bi-monthly by observer.

DATUM.--Elevation of land-surface datum is 800 ft above sea level. Measuring point: 0.25-in. hole in cap of casing, 0.75 ft above land-surface datum.

PERIOD OF RECORD.--May 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.80 ft below land-surface datum, Apr. 2, 1973; lowest water level measured, 19.22 ft below land-surface datum, Feb. 22, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	15.73	MAR 11	16.66	JUN 26	15.45	AUG 24	17.40				
JAN 18	16.17	JUN 07	14.99	JUL 25	16.60						
WATER YEAR 2002		HIGHEST	14.99	JUN 07, 2002	LOWEST	17.40	AUG 24, 2002				

GROUND-WATER LEVELS

MILWAUKEE COUNTY

425613088014301. Local number, ML-06/21E/32-0148.

LOCATION.--Lat 42°56'13", long 88°01'43", Hydrologic Unit 04040002. Owner: Milwaukee County.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in., depth 180 ft, cased to 43 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

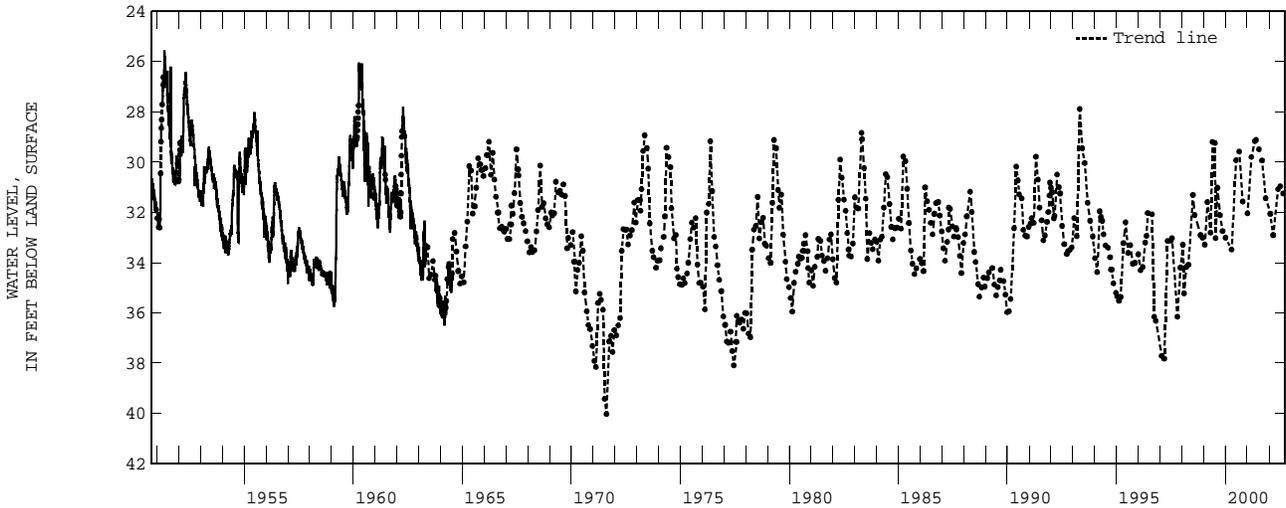
DATUM.--Elevation of land-surface datum is 774 ft above sea level. Measuring point: top of 0.25-in. pipe, at land-surface datum.

PERIOD OF RECORD.--September 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.56 ft below land-surface datum, May 4, 1951; lowest water level measured, 40.03 ft below land-surface datum, Aug. 13, 1971.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 08	31.44	JAN 24	32.06	MAR 13	32.91	JUN 03	31.08	JUL 12	30.96	AUG 26	31.26
WATER YEAR 2002		HIGHEST	30.96	JUL 12, 2002		LOWEST	32.91	MAR 13, 2002			



MONROE COUNTY

434342090495601. Local number, MO-15/04W/34-0002.

LOCATION.--Lat 43°43'42", long 90°49'56", Hydrologic Unit 07060001. Owner: Joseph Anderson.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in., depth 44 ft.

INSTRUMENTATION.--Water level measured by observer.

DATUM.--Elevation of land-surface datum is 1,100 ft above sea level. Measuring point: top of casing, 0.50 ft above land-surface datum.

REMARKS.--No measurements made in 1981-82 water year.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.70 ft below land-surface datum, Apr. 10, 1976; lowest water level measured, 18.68 ft below land-surface datum, Feb. 23, 1935.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	
NOV 14	7.28	JAN 10	7.71	MAR 19	7.39	JUN 18	6.72	AUG 12	7.04	
WATER YEAR 2002		HIGHEST	6.72	JUN 18, 2002		LOWEST	7.71	JAN 10, 2002		

GROUND-WATER LEVELS

MONROE COUNTY--Continued

440026090390101. Local number, MO-18/02W/29-0017.

LOCATION.--Lat 44°00'26", long 90°39'01", Hydrologic Unit 07040006. Owner: U.S. Army.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 9 in., depth 192 ft, cased to 109 ft, open end.

INSTRUMENTATION.--Continuous water-level recorder.

DATUM.--Elevation of land-surface datum is 909 ft above sea level. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.48 ft below land-surface datum, Sept. 29, 1965; lowest water level, 8.62 ft below land-surface datum, Oct. 7, 1987.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.50	5.82	5.32	5.85	6.57	6.89	5.19	4.93	4.65	4.53	5.37	5.11
10	5.60	6.01	5.82	6.00	6.58	6.68	5.17	5.01	4.32	4.74	5.42	5.29
15	5.33	5.99	5.03	6.00	6.59	6.10	5.07	4.99	4.33	4.97	5.58	5.42
20	5.31	6.16	4.76	5.99	6.57	5.40	4.99	5.13	4.49	5.09	5.67	5.52
25	5.55	6.27	5.28	6.00	6.66	5.31	4.95	5.25	4.26	5.20	4.93	5.58
EOM	5.72	5.66	5.78	6.39	6.83	5.11	4.91	5.37	4.36	5.29	4.98	5.65
WATER YEAR 2002		HIGHEST	4.24	JUN 24, 2002			LOWEST	6.92	MAR 04, 2002			

OCONTO COUNTY

450819088263901. Local number, OC-31/16E/25-0179.

LOCATION.--Lat 45°08'19", long 88°26'392", Hydrologic Unit 04030104. Owner: U.S. Forest Service.

AQUIFER.--Prairie du Chien.

WELL CHARACTERISTICS.--Drilled public water-table well, diameter 6 in., depth 46 ft, cased to 38 ft, open end.

INSTRUMENTATION.--Water level measured by observer.

DATUM.--Elevation of land-surface datum is 920 ft above sea level. Measuring point: hole in pump base, 2.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.54 ft below land-surface datum, June 30, 1993; lowest water level measured, 20.52 ft below land-surface datum, May 12, 1999.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	19.36	DEC 03	19.95	FEB 02	20.23	APR 02	19.95	JUN 01	18.65	AUG 02	18.30
NOV 02	20.10	JAN 02	20.10	MAR 04	20.30	MAY 01	19.10	JUL 01	18.30	SEP 02	18.50
WATER YEAR 2002		HIGHEST	18.30	JUL 01, 2002		AUG 02, 2002		LOWEST	20.30	MAR 04, 2002	

ONEIDA COUNTY

455213089323501. Local number, ON-39/08E/18-0022.

LOCATION.--Lat 45°52'13", long 89°32'35", Hydrologic Unit 07070001. Owner: Wisconsin Valley Improvement Co.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Jetted unused water-table well, diameter 6 in., depth 27 ft, cased to 27 ft, open end.

INSTRUMENTATION.--Water level measured by observer.

DATUM.--Elevation of land-surface datum is 1,607 ft above sea level. Measuring point: top of casing, 6.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.31 ft below land-surface datum, May 26, 1973; lowest water level, 19.29 ft below land-surface datum, Mar. 27, 1949.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	16.54	DEC 06	16.80	FEB 10	16.69	APR 01	17.00	MAY 25	15.00	JUL 26	14.90
13	14.60	13	16.55	17	16.76	07	17.07	31	14.80	31	15.00
20	14.60	20	16.68	24	16.81	13	17.05	JUN 08	14.75	AUG 04	14.96
27	16.65	27	16.50	MAR 01	16.90	20	16.60	15	14.70	11	15.10
NOV 02	16.60	JAN 01	16.61	03	16.90	27	16.05	22	14.66	17	15.20
09	16.65	11	16.57	08	16.92	MAY 01	15.80	30	14.70	24	15.24
16	16.70	18	16.56	15	16.80	04	15.60	JUL 07	14.80	31	15.30
23	16.70	FEB 01	16.65	24	16.83	10	15.30	14	14.93	SEP 30	15.30
30	16.70	03	16.65	29	16.95	18	15.20	20	15.00		
WATER YEAR 2002		HIGHEST	14.60	OCT 13, 2001		OCT 20, 2001		LOWEST	17.07	APR 07, 2002	

GROUND-WATER LEVELS

ONEIDA COUNTY--Continued

453720089215401. Local number, ON-36/09E/09-0024.

LOCATION.--Lat 45°37'20", long 89°21'54", Hydrologic Unit 07070001. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in., depth 33 ft, cased to 37 ft, well point 31-33 ft.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Elevation of land-surface datum is 1,560 ft above sea level. Measuring point: top of casing, 0.80 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.67 ft below land-surface datum, Aug. 3, 1968; lowest water level measured, 23.16 ft below land-surface datum, Mar. 12, 1990.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	21.06	DEC 03	21.32	FEB 02	21.30	APR 06	21.58	JUN 03	19.50	AUG 03	19.45
NOV 03	21.42	JAN 05	21.12	MAR 03	21.47	MAY 04	20.08	JUL 05	20.22	SEP 04	19.70
WATER YEAR 2002		HIGHEST	19.45	AUG 03, 2002		LOWEST	21.58	APR 06, 2002			

POLK COUNTY

452352092332001. Local number, PK-34/18W/26-0093.

LOCATION.--Lat 45°23'52", long 92°33'20", Hydrologic Unit 07030005. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in., depth 64 ft, cased to 60 ft, open end.

INSTRUMENTATION.--Water level measured weekly by observer.

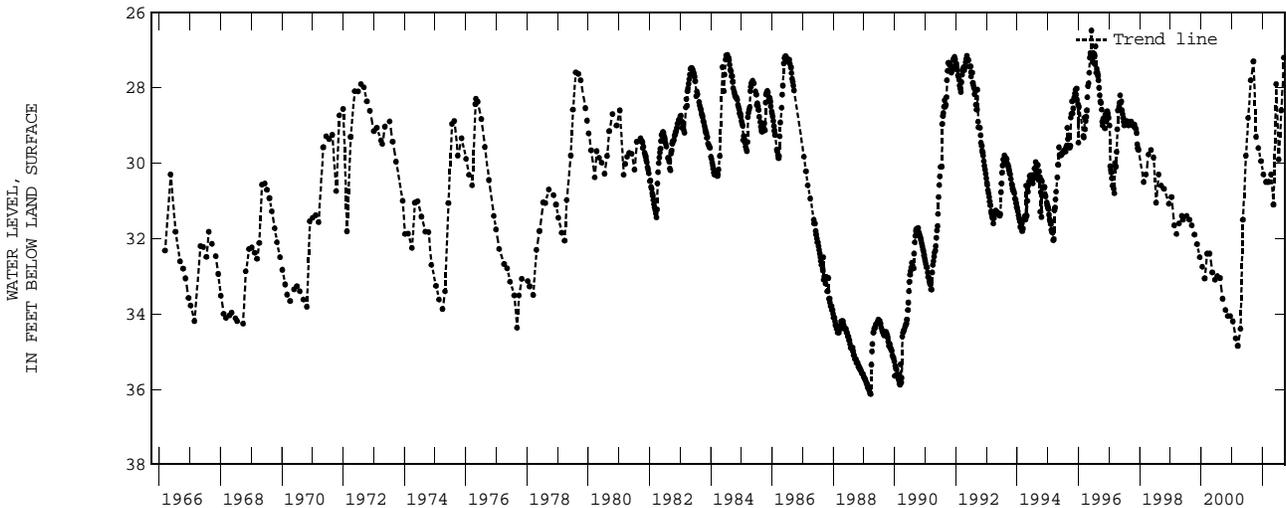
DATUM.--Elevation of land-surface datum is 1,140 ft above sea level. Measuring point: hole in pump base, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--March 10, 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.72 ft below land-surface datum, June 20, 1973; lowest water level measured, 36.13 ft below land-surface datum, Mar. 22, 1989.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	29.30	DEC 17	29.95	FEB 15	30.50	APR 15	30.30	JUN 15	27.90	AUG 15	28.60
NOV 14	29.60	JAN 15	30.30	MAR 15	30.50	MAY 14	31.10	JUL 16	29.90	SEP 16	27.20
WATER YEAR 2002		HIGHEST	27.20	SEP 16, 2002		LOWEST	31.10	MAY 14, 2002			



GROUND-WATER LEVELS

PORTAGE COUNTY

442810089194501. Local number, PT-23/10E/18-0276.

LOCATION.--Lat 44°28'10", long 89°19'45", Hydrologic Unit 04030202. Owner: Portage County.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven unused water-table well, diameter 1.25 in., depth 17 ft, cased to 15 ft.

INSTRUMENTATION.--Water level measured by observer.

DATUM.--Elevation of land-surface datum is 1,090 ft above sea level. Measuring point: rim of casing, 3.50 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.01 ft below land-surface datum, Apr. 22, 1974; lowest water level measured, 11.09 ft below land-surface datum, Mar. 3, 1959.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	5.51	JAN 08	7.67	MAR 15	8.00	MAY 15	7.90	JUL 15	5.70	SEP 15	5.90
DEC 19	7.20	FEB 15	8.21	APR 01	7.20	JUN 15	5.50	AUG 06	5.50		
WATER YEAR 2002		HIGHEST	5.50	JUN 15, 2002		AUG 06, 2002	LOWEST	8.21		FEB 15, 2002	

PRICE COUNTY

453311090065301. Local number, PR-35/03E/04-0065.

LOCATION.--Lat 45°33'11", long 90°06'53", Hydrologic Unit 07070001. Owner: Town of Knox.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in., depth 118 ft, cased to 118 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

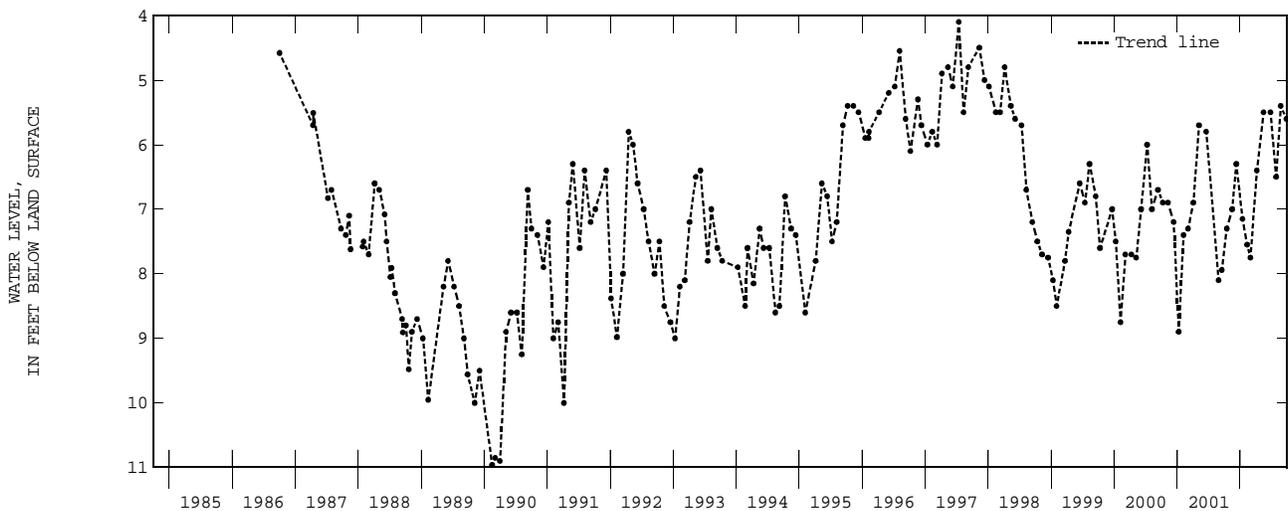
DATUM.--Elevation of land-surface datum is 1,695 ft above sea level. Measuring point: top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.10 ft above land-surface datum, July 14, 1997; lowest water level measured, 10.96 ft below land-surface datum, Feb. 15, 1990.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	7.30	DEC 09	6.30	FEB 10	7.55	APR 07	6.40	JUN 25	5.50	AUG 24	5.40
NOV 15	7.00	JAN 14	7.15	MAR 01	7.75	MAY 16	5.50	JUL 28	6.50	SEP 27	5.60
WATER YEAR 2002		HIGHEST	5.40	AUG 24, 2002		LOWEST	7.75	MAR 01, 2002			



GROUND-WATER LEVELS

RACINE COUNTY

424119088081801. Local number, RA-03/20E/28-0062.

LOCATION.--Lat 42°41'19", long 88°08'18", Hydrologic Unit 07120006. Owner: Wis. Dept .of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 104 ft, cased to 104 ft, open hole.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Elevation of land-surface datum is 800 ft above sea level. Measuring point: hole in pump base, 1.50 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.21 ft below land-surface datum, Apr. 28, 1988; lowest water level measured, 31.15 ft below land-surface datum, Nov. 11, 1993.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	23.23	DEC 19	22.26	FEB 13	22.95	APR 10	21.98	JUN 12	21.52	AUG 21	25.98
NOV 28	23.22	JAN 16	22.75	MAR 20	22.00	MAY 05	20.60	JUL 10	24.10	SEP 25	25.82
WATER YEAR 2002		HIGHEST	20.60	MAY 05, 2002		LOWEST	25.98	AUG 21, 2002			

RICHLAND COUNTY

431840090203201. Local number, RI-10/01E/26-0023.

LOCATION.--Lat 43°18'40", long 90°20'32", Hydrologic Unit 07070005. Owner: Koch Tractor, Inc.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in., depth 160 ft, cased to 135 ft, open end.

INSTRUMENTATION.--Water level measured by observer.

DATUM.--Elevation of land-surface datum is 725 ft above sea level. Measuring point: top of 1-in. breather pipe, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.11 ft below land-surface datum, May 22, 1973; lowest water level measured, 16.45 ft below land-surface datum, Mar. 14, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	12.72	DEC 14	12.46	FEB 15	12.06	APR 01	13.23	JUN 18	12.47	AUG 12	12.90
WATER YEAR 2002		HIGHEST	12.06	FEB 15, 2002		LOWEST	13.23	APR 01, 2002			

SAUK COUNTY

432100089440001. Local number, SK-10/06E/02-0003.

LOCATION.--Lat 43°21'00", long 89°44'00", Hydrologic Unit 07070005. Owner: Badger Army Ammunition Plant.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in., depth 451 ft, cased to 160 ft, open end.

INSTRUMENTATION.--Continuous water-level recorder.

DATUM.--Elevation of land-surface datum is 884 ft above sea level. Measuring point: hole in platform, at land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--May 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 67.23 ft below land-surface datum, Aug. 10, 1993; lowest water level, 83.92 ft below land-surface datum, Aug. 2, 1946.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	75.49	76.10	76.48	76.58	77.03	77.08	76.32	74.60	72.60	72.84	73.61	74.28
10	75.52	76.23	76.56	76.78	77.16	77.18	76.25	74.19	72.55	72.93	73.57	74.34
15	75.67	76.18	76.67	76.94	76.96	76.95	75.86	73.30	72.48	72.96	73.69	74.51
20	75.70	76.22	76.56	76.71	76.87	76.69	75.88	73.01	72.70	73.16	73.94	74.44
25	75.89	76.36	76.63	76.83	77.12	76.65	75.59	72.76	72.72	73.25	73.89	74.75
EOM	75.87	76.37	76.80	76.98	77.18	76.30	75.14	72.55	72.68	73.38	74.18	74.70
WATER YEAR 2002		HIGHEST	72.46	JUN 14, 2002		LOWEST	77.25	MAR 01, 2002				

GROUND-WATER LEVELS

TAYLOR COUNTY

450947090483902. Local number, TA-31/04W/13-0001.

LOCATION.--Lat 45°09'47", long 90°48'39", Hydrologic Unit 07050005. Owner: Village of Gilman.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 18 in., depth 26 ft, cased to 16 ft, screened 16-26 ft.

INSTRUMENTATION.--Continuous water-level recorder.

DATUM.--Elevation of land-surface datum is 1,200 ft above sea level. Measuring point: top of casing, 2.00 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--April 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.69 ft below land-surface datum, June 21, 1993; lowest water level, 13.11 ft below land-surface datum, Oct. 15, 1959.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.93	9.43	8.24	8.93	9.49	9.43	8.69	8.03	---	8.89	8.91	8.31
10	9.88	9.53	8.10	9.06	9.51	9.32	7.65	7.75	9.18	8.70	9.42	8.18
15	9.27	9.55	8.59	9.08	9.58	9.15	5.32	8.20	8.32	9.16	8.78	8.84
20	9.35	9.43	8.73	9.34	9.10	9.12	7.18	8.71	8.61	9.55	9.08	9.10
25	9.46	8.81	8.39	9.44	9.20	9.26	7.90	9.11	6.46	9.69	8.06	9.00
EOM	9.43	8.13	8.75	9.54	9.31	8.22	7.39	9.26	7.89	8.86	9.08	8.74
WATER YEAR 2002		HIGHEST	4.52	APR 13, 2002		LOWEST	10.05	OCT 06, 2001				

TREMPEALEAU COUNTY

440422091182901. Local number, TR-19/08W/35-0001.

LOCATION.--Lat 44°04'22", long 91°18'29", Hydrologic Unit 07040007. Owner: Mrs. William Davidson.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 195 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Elevation of land-surface datum is 820 ft above sea level. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 131.38 ft below land-surface datum, Sept. 7, 1993; lowest water level measured, 146.56 ft below land-surface datum, Sept. 1, 1959.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	139.46	DEC 10	139.75	FEB 17	140.09	APR 13	138.86	JUN 07	137.97	AUG 10	139.46
NOV 13	139.99	JAN 05	139.32	MAR 19	139.01	MAY 11	138.61	JUL 20	140.02	SEP 16	139.46
WATER YEAR 2002		HIGHEST	137.97	JUN 07, 2002		LOWEST	140.09	FEB 17, 2002			

440414091270401. Local number, TR-19/09W/33-0009.

LOCATION.--Lat 44°04'14", long 91°27'04", Hydrologic Unit 07040005. Owner: Village of Centerville.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled public-supply water-table, diameter 6 in., depth 71 ft, cased to 66 ft, screened 66-71 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Elevation of land-surface datum is 740 ft above sea level. Measuring point: top of breather pipe, at land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.80 ft below land-surface datum, Oct. 12, 1993, and Apr. 12, 1994; lowest water level measured, 57.11 ft below land-surface datum, Mar. 16, 1965.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	49.30	JAN 03	49.25	MAR 01	49.50	MAY 02	49.80	AUG 02	49.60		
DEC 05	49.30	FEB 03	49.40	APR 02	49.70	JUN 03	49.90	SEP 03	49.80		
WATER YEAR 2002		HIGHEST	49.25	JAN 03, 2002		LOWEST	49.90	JUN 03, 2002			

GROUND-WATER LEVELS

VILAS COUNTY

455517089144001. Local number, VI-40/10E/28-0033.

LOCATION.--Lat 45°55'17", long 89°14'40", Hydrologic Unit 07070001. Owner: Trees for Tomorrow, Inc.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled observation water table well, diameter 6 in., depth 37 ft, cased to 37 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Elevation of land-surface datum is 1,640 ft above sea level. Measuring point: top of casing, 0.75 ft above land-surface datum.

PERIOD OF RECORD.--December 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.41 ft below land-surface datum, May 14, 1997; lowest water level measured, 16.22 ft below land-surface datum, Apr. 4, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26	15.57	FEB 20	15.53	APR 25	14.54	JUN 17	14.43	AUG 15	14.90		
DEC 18	15.13	MAR 28	15.05	MAY 15	14.17	JUL 15	14.70				
WATER YEAR 2002		HIGHEST	14.17	MAY 15, 2002		LOWEST	15.57	NOV 26, 2001			

WALWORTH COUNTY

423532088254601. Local number, WW-02/17E/36-0037.

LOCATION.--Lat 42°35'32", long 88°25'46", Hydrologic Unit 07120006. Owner: Lake Geneva Water Works.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in., depth 820 ft, cased to 10 in., 0-214 ft; 8 in., 214-227 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Elevation of land-surface datum is 860 ft above sea level. Measuring point: top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 129.48 ft below land-surface datum, Feb. 14, 1962; lowest water level measured, 250.71 ft below land-surface datum, Aug. 21, 2000.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 08	222.96	JAN 24	223.55	MAR 13	224.04	JUN 03	214.79	JUL 12	215.20	AUG 26	221.73
WATER YEAR 2002		HIGHEST	214.79	JUN 03, 2002		LOWEST	224.04	MAR 13, 2002			

WAUKESHA COUNTY

425535088131701. Local number, WK-05/19E/02-0031.

LOCATION.--Lat 42°55'35", long 88°13'17", Hydrologic Unit 07120006. Owner: William Bahl.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 508 ft, cased to 434 ft, open end.

INSTRUMENTATION.--Water level measured monthly.

DATUM.--Elevation of land-surface datum is 962 ft above sea level. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 126.06 ft below land-surface datum, May 10, 1973; lowest water level, 139.27 ft below land-surface datum, Aug. 31, 1998.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	133.95	NOV 08	133.84	MAR 13	134.32	JUN 03	134.56	JUL 12	136.34	AUG 26	134.90
	25 134.01	JAN 24	134.09								
WATER YEAR 2002		HIGHEST	133.84	NOV 08, 2001		LOWEST	136.34	JUL 12, 2002			

GROUND-WATER LEVELS

WAUPACA COUNTY

441545088522901. Local number, WP-21/13E/25-0002.

LOCATION.--Lat 44°15'45", long 88°52'29", Hydrologic Unit 04030202. Owner: Village of Fremont.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 205 ft, cased to 109 ft, open end.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Elevation of land-surface datum is 764 ft above sea level. Measuring point: hole in cap, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.65 ft below land-surface datum, Apr. 7, 1979; lowest water level measured, 17.45 ft below land-surface datum, May 12, 1997.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	14.09	JAN 11	14.29	FEB 08	14.33	MAR 22	13.71	JUN 28	12.72	SEP 27	13.91
WATER YEAR 2002		HIGHEST	12.72	JUN 28, 2002	LOWEST	14.33	FEB 08, 2002				

WAUSHARA COUNTY

440713089320801. Local number, WS-19/08E/15-0008.

LOCATION.--Lat 44°07'13", long 89°32'08", Hydrologic Unit 07070003. Owner: University of Wisconsin Experiment Farm, Hancock.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in., depth 18 ft, cased to 18 ft.

INSTRUMENTATION.--Continuous water-level recorder.

DATUM.--Elevation of land-surface datum is 1,080 ft above sea level. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.88 ft below land-surface datum, July 5, 1973; lowest water level, 15.34 ft below land-surface datum, Apr. 25, 1959.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.76	12.09	12.34	12.60	12.85	13.01	12.85	12.50	12.07	8.42	9.06	9.22
10	11.79	12.13	12.38	12.63	12.89	12.99	12.82	12.42	12.05	8.45	9.17	9.26
15	11.87	12.18	12.43	12.68	12.92	12.84	12.77	12.32	11.80	8.64	9.10	9.32
20	11.93	12.21	12.47	12.71	12.89	12.87	12.73	12.26	11.66	8.80	9.28	9.28
25	11.97	12.26	12.50	12.75	12.95	12.88	12.65	12.20	8.57	8.89	9.17	9.37
EOM	12.03	12.28	12.56	12.80	12.98	12.84	12.56	12.15	8.43	8.89	9.35	9.40
WATER YEAR 2002		HIGHEST	8.37	JUL 04, 2002	JUL 08, 2002	LOWEST	13.04	MAR 08, 2002				

440345089151701. Local number, WS-18/10E/01-0105.

LOCATION.--Lat 44°03'45", long 89°15'17", Hydrologic Unit 04030201. Owner: Ronald Campbell.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in., depth 14 ft, cased to 14 ft, open hole.

INSTRUMENTATION.--Continuous water-level recorder.

DATUM.--Elevation of land-surface datum is 873 ft above sea level. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.08 ft below land-surface datum, June 18, 1993; lowest water level measured, 7.87 ft below land-surface datum, Mar. 19, 1959.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.86	3.07	2.64	---	3.32	3.01	2.68	2.28	1.91	2.01	---	---
10	2.90	3.17	2.72	---	3.28	2.48	2.07	2.28	2.67	2.12	---	---
15	2.89	3.21	2.59	3.37	3.24	2.34	2.33	2.12	2.40	2.41	---	---
20	2.98	3.18	2.85	3.21	2.71	2.30	2.19	2.64	2.68	2.56	---	---
25	2.83	2.73	2.91	---	2.56	2.71	1.99	2.76	1.00	1.33	---	---
EOM	2.81	2.42	3.20	3.40	2.80	2.68	1.84	2.79	1.45	---	---	---
WATER YEAR 2002		HIGHEST	0.63	JUN 22, 2002	LOWEST	3.45	MAR 03, 2002					

GROUND-WATER LEVELS

559

WINNEBAGO COUNTY

440122088324601. Local number, WI-18/16E/23-0006.

LOCATION.--Lat 44°01'22", long 88°2'46", Hydrologic Unit 04030201. Owner: City of Oshkosh.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 200 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Elevation of land-surface datum is 765 ft above sea level. Measuring point: top of 1-in. pipe, at land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.65 ft below land-surface datum, Apr. 28, 1993; lowest water level measured, 45.13 ft below land-surface datum, Jan. 1, 1966.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	21.67	JAN 04	21.60	FEB 28	21.22	APR 29	19.70	JUN 28	19.32	AUG 30	22.09
NOV 29	21.66	FEB 01	22.25	MAR 29	20.11	MAY 30	19.10	JUL 31	21.10	SEP 30	21.66
WATER YEAR 2002		HIGHEST	19.10	MAY 30, 2002	LOWEST	22.25	FEB 01, 2002				

QUALITY OF GROUND WATER

Data for the following sites represent ground-water samples collected as part of a major aquifer study conducted in the Western Lake Michigan Drainages study unit of the National Water-Quality Assessment (NAWQA) Program. Major aquifer study samples were collected from domestic, institutional, or public-supply wells in the Cambrian-Ordovician aquifer in Wisconsin and Michigan. Samples collected in Michigan are identified by County and State.

GEOLOGICAL UNIT.--300SNDS, Cambrian-Ordovician aquifer, consists of rocks of the Cambrian and Ordovician Systems.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Station number	Geo- logic unit	Date	Time	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	FLOW RATE (G/M) (00059)	SAM- PLING METHOD, CODES (82398)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)
BROWN COUNTY										
BN-23/20E/13-0144	442730088014101	300SNDS	07-08-02	0900	300.00	870	--	4045	.18	.9
COLUMBIA COUNTY										
CO-13/10E/19-0737	433542089204601	300SNDS	09-11-02	1000	18.69	123	--	4040	1.8	2.8
FOND DU LAC COUNTY										
FL-16/14E/17-0799	435123088380601	300SNDS	05-22-02	1400	135.00	320	580	4045	.09	2.6
FL-17/18E/27-0798	435515088193101	300SNDS	05-30-02	1300	--	466	--	4040	1.4	.2
GREEN LAKE COUNTY										
GL-14/11E/27-0091	434004089100701	300SNDS	05-20-02	1000	65.35	138	--	4040	1.9	7.9
MARINETTE COUNTY										
MT-30/20E/11-0029	450533088020501	300SNDS	06-25-02	1400	--	346	--	4045	.18	.1
MARQUETTE COUNTY										
MQ-15/10E/09-0108	434745089184801	300SNDS	05-21-02	1020	--	210	--	4040	.12	5.6
MQ-17/09E/19-0107	435602089165401	300SNDS	05-21-02	1450	--	179	--	4040	.08	6.3
OCONTO COUNTY										
OC-28/18E/08-0198	445504088094101	300SNDS	06-26-02	1000	--	85	--	4045	3.7	1.5
OUTAGAMIE COUNTY										
OU-21/15E/01-0629	441948088223301	300SNDS	05-29-02	1030	9.51	140	--	4040	4.1	2.0
OU-23/17E/12-0202	442912088224101	300SNDS	05-29-02	1500	--	114	--	4040	35	.2
DELTA COUNTY, MICHIGAN										
39N 23W 18 CAC 01	454622087114801	300SNDS	06-11-02	1000	25.65	290	--	4040	.23	.1
40N 23W 35 ABB 01	454932087063601	300SNDS	06-12-02	1000	--	300	--	4040	1.1	.1
41N 22W 06 BBA 01	455902087064701	300SNDS	06-13-02	1000	--	305	--	4040	.49	.1
MARQUETTE COUNTY, MICHIGAN										
42N 24W 04 BAA 01	460418087185501	300SNDS	06-13-02	1300	--	92	--	4040	.50	.1
44N 24W 03 BDB 01	461427087171001	300SNDS	06-12-02	1400	--	31	--	4040	.35	7.5
MENOMINEE COUNTY, MICHIGAN										
32N 27W 02 AAC 01	451154087361501	300SNDS	06-25-02	1000	9.90	432	--	4040	.27	.1
36N 28W 13 ADA 01	453101087414901	300SNDS	06-11-02	1400	--	123	--	4040	.66	.1
37N 26W 17 CDC 01	453542087324401	300SNDS	06-10-02	1250	--	483	--	4040	.24	.2
38N 26W 09 ADD 01	454215087304301	300SNDS	07-08-02	1400	46.28	353	--	4040	.24	.1

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	PH WATER FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	7.3	640	12.2	59.2	22.1	6.30	30.1	164	.20	33.0
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	7.1	462	11.1	53.4	27.9	1.27	1.52	229	E.02	5.68
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	7.1	632	10.3	70.3	40.2	1.06	4.80	304	.03	12.6
FL-17/18E/27-0798	05-30-02	6.8	2950	12.4	513	37.0	11.2	148	71	.84	234
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	7.1	935	10.3	93.3	49.6	1.40	21.8	345	.05	46.2
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	7.0	539	10.0	59.0	32.5	2.07	5.61	220	.03	10.9
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	7.8	390	10.7	.16	.068	.40	97.0	189	E.02	2.09
MQ-17/09E/19-0107	05-21-02	7.5	345	10.0	38.0	20.6	.51	2.34	151	<.03	6.74
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	6.9	797	10.1	101	44.1	1.67	6.60	280	.03	29.6
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	7.1	540	9.5	58.0	35.1	1.43	2.71	286	.03	2.41
OU-23/17E/12-0202	05-29-02	6.8	756	10.0	91.0	40.5	3.37	6.08	286	E.02	7.93
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC	01 06-11-02	7.2	463	9.1	49.8	20.1	3.39	9.04	222	.05	7.15
40N 23W 35 ABB	01 06-12-02	7.3	440	9.4	54.1	19.8	3.82	2.61	224	.06	1.35
41N 22W 06 BBA	01 06-13-02	7.1	444	8.6	52.6	22.8	3.05	6.67	184	E.03	3.42
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA	01 06-13-02	7.2	385	8.6	53.7	18.7	.93	1.69	178	<.03	1.64
44N 24W 03 BDB	01 06-12-02	7.5	314	7.5	33.6	17.2	.78	1.54	153	<.03	.85
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC	01 06-25-02	7.2	2870	10.2	550	112	6.22	59.1	87	.42	67.2
36N 28W 13 ADA	01 06-11-02	7.1	492	8.4	58.0	25.7	.77	1.59	248	.10	2.62
37N 26W 17 CDC	01 06-10-02	7.2	477	9.6	62.4	24.6	2.38	3.89	233	E.02	5.04
38N 26W 09 ADD	01 07-08-02	7.3	451	10.8	52.7	21.9	3.01	4.86	186	.05	5.94

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	2.31	6.77	106	397	.05	E.09	<.05	<.008	<.02	E.3
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	.11	13.0	7.1	265	<.04	E.08	2.67	<.008	.03	.9
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	.15	16.4	30.8	381	<.04	<.10	1.41	<.008	<.02	.4
FL-17/18E/27-0798	05-30-02	.87	4.15	1310	2520	.31	.22	<.05	<.008	<.02	E.2
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.10	10.6	25.1	567	<.04	E.10	19.4	<.008	<.02	1.0
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	E.07	8.10	20.6	301	<.04	<.10	<.05	<.008	<.02	.7
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.10	14.1	16.4	260	<.04	<.10	1.41	<.008	<.02	E.3
MQ-17/09E/19-0107	05-21-02	<.10	14.4	8.1	214	<.04	<.10	4.51	<.008	.03	E.3
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.10	15.1	69.1	528	<.04	E.08	.13	.009	<.02	1.4
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	.11	16.9	14.1	303	<.04	<.10	.80	<.008	<.02	.6
OU-23/17E/12-0202	05-29-02	.25	14.3	105	496	E.03	.25	4.83	.086	<.02	2.8
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC	01 06-11-02	.30	8.33	16.7	297	.15	.18	<.05	<.008	<.02	1.5
40N 23W 35 ABB	01 06-12-02	.20	7.39	12.5	252	.04	E.08	<.05	<.008	<.02	.9
41N 22W 06 BBA	01 06-13-02	.36	7.23	17.8	254	.06	<.10	<.05	<.008	<.02	.6
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA	01 06-13-02	.13	12.5	2.5	228	.07	.13	<.05	<.008	<.02	5.5
44N 24W 03 BDB	01 06-12-02	E.08	10.4	9.7	178	<.04	<.10	.24	<.008	<.02	.9
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC	01 06-25-02	1.45	22.3	1700	2860	.29	.20	<.05	<.008	<.02	E.2
36N 28W 13 ADA	01 06-11-02	E.08	10.9	17.1	304	<.04	E.05	<.05	<.008	<.02	1.6
37N 26W 17 CDC	01 06-10-02	.11	11.8	11.9	268	.23	.30	<.05	<.008	<.02	1.7
38N 26W 09 ADD	01 07-08-02	.15	11.2	14.8	247	.15	.20	<.05	<.008	<.02	.8

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	<1	E.03	.6	21	<.06	196	<.04	<.8	.28	.8
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<1	.06	.2	27	<.06	8	<.04	E.4	.10	38.6
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	<1	<.05	.2	17	<.06	10	.05	<.8	.16	4.3
FL-17/18E/27-0798	05-30-02	<2	<.10	.5	7	<.10	232	<.07	<1.6	1.02	6.0
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<1	E.04	<.2	28	<.06	13	E.02	.9	.29	37.0
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	<1	<.05	.6	85	<.06	17	<.04	<.8	.23	.3
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<1	E.03	1.1	<1	<.06	E5	<.04	1.6	.04	5.8
MQ-17/09E/19-0107	05-21-02	<1	E.04	E.2	14	<.06	<7	<.04	1.3	.07	2.6
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<1	.07	.5	67	<.06	11	.04	.9	1.22	1.1
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<1	.06	.2	25	<.06	11	<.04	<.8	.09	1.7
OU-23/17E/12-0202	05-29-02	<1	.11	.4	38	<.06	31	E.02	<.8	30.2	4.0
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC 01	06-11-02	<1	<.05	<.2	122	<.06	151	<.04	<.8	.14	.3
40N 23W 35 ABB 01	06-12-02	<1	<.05	<.2	136	<.06	85	<.04	<.8	.14	E.2
41N 22W 06 BBA 01	06-13-02	<1	<.05	<.2	37	<.06	130	<.04	<.8	.13	.3
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA 01	06-13-02	1	<.05	<.2	134	<.06	12	<.04	<.8	.14	.4
44N 24W 03 BDB 01	06-12-02	<1	<.05	.4	11	<.06	8	<.04	<.8	.09	8.6
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC 01	06-25-02	<2	<.10	E.3	9	<.10	353	<.07	<.8	1.16	9.8
36N 28W 13 ADA 01	06-11-02	<1	<.05	10.0	31	<.06	E5	<.04	<.8	.15	.2
37N 26W 17 CDC 01	06-10-02	<1	E.04	.2	51	<.06	25	<.04	<.8	.09	E.2
38N 26W 09 ADD 01	07-08-02	<1	<.05	<.2	66	<.06	59	<.04	<.8	.11	.3

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S) (71875)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	ND	131	E.07	31.1	16.9	1.6	.14	E.2	<1	10000
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	ND	<10	.18	.5	.2	E.1	2.60	1.2	<1	29.9
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	ND	<10	.28	2.0	.3	.4	.69	.5	<1	143
FL-17/18E/27-0798	05-30-02	M.0	639	E.15	52.9	69.4	1.1	<.10	1.9	<2	12300
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	ND	<10	.77	.3	.9	E.1	3.12	.3	<1	52.1
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	M.0	408	<.08	4.4	31.1	.8	1.28	<.3	<1	222
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	ND	<10	1.27	1.1	E.1	.2	.11	E.2	<1	.15
MQ-17/09E/19-0107	05-21-02	ND	<10	.61	.5	<.1	<.2	<.06	E.2	<1	31.5
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	ND	65	<.08	5.2	27.3	1.5	3.87	.5	<1	95.2
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	ND	<10	.17	2.7	<.1	.2	<.06	E.2	<1	81.4
OU-23/17E/12-0202	05-29-02	ND	118	<.08	4.9	26.4	1.0	20.1	<.3	<1	279
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC	01 06-11-02	M.0	231	<.08	11.0	4.3	E.1	1.39	.5	--	488
40N 23W 35 ABB	01 06-12-02	M.0	393	<.08	4.7	14.3	<.2	1.30	<.3	<1	338
41N 22W 06 BBA	01 06-13-02	M.0	123	.09	10.3	6.9	.2	1.38	<.3	<1	774
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA	01 06-13-02	M.0	340	<.08	1.1	18.9	E.2	1.34	<.3	<1	105
44N 24W 03 BDB	01 06-12-02	ND	<10	E.07	.6	.1	E.1	.85	<.3	<1	28.1
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC	01 06-25-02	M.0	354	<.20	61.5	48.4	4.3	6.08	.8	<2	9060
36N 28W 13 ADA	01 06-11-02	M.0	1010	<.08	1.3	30.9	3.2	1.49	<.3	<1	41.9
37N 26W 17 CDC	01 06-10-02	M.0	170	<.08	3.4	22.6	.3	.71	<.3	<1	178
38N 26W 09 ADD	01 07-08-02	M.0	445	<.08	7.7	18.1	.4	<.06	<.3	<1	400

M Presence verified, not quantified

ND Not detected

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	2,6-DI- ETHYL- ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	<.04	1.7	7	<.006	<.006	<.004	<.005	<.007	<.010	<.002
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.04	1.1	3	<.006	<.006	<.004	<.005	.022	<.010	<.002
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	.10	2.8	24	<.006	<.006	<.004	<.005	E.005	<.010	<.002
FL-17/18E/27-0798	05-30-02	<.08	<.4	192	<.006	<.006	<.004	<.005	<.007	<.010	<.002
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.04	5.3	163	<.006	<.006	<.004	<.005	.018	<.010	<.002
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	<.04	.5	7	<.006	<.006	<.004	<.005	<.007	<.010	<.002
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.04	2.2	23	<.006	<.006	<.004	<.005	<.007	<.010	<.002
MQ-17/09E/19-0107	05-21-02	<.04	1.3	3	<.006	<.006	<.004	<.005	.042	<.010	<.002
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	.04	3.1	75	<.006	<.006	<.004	<.005	<.007	<.010	<.002
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	.05	2.3	30	<.006	<.006	<.004	<.005	<.007	<.010	<.002
OU-23/17E/12-0202	05-29-02	.07	2.0	33	<.006	<.006	<.004	<.005	<.007	<.010	<.002
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC	01 06-11-02	<.04	2.5	2	<.006	<.006	<.004	<.005	<.007	<.010	<.002
40N 23W 35 ABB	01 06-12-02	<.04	2.4	<1	<.006	<.006	<.004	<.005	<.007	<.010	<.002
41N 22W 06 BBA	01 06-13-02	<.04	2.4	6	<.006	<.006	<.004	<.005	<.007	<.010	<.002
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA	01 06-13-02	<.04	2.9	7	<.006	<.006	<.004	<.005	<.007	<.010	<.002
44N 24W 03 BDB	01 06-12-02	<.04	1.4	3	<.006	<.006	<.004	<.005	<.007	<.010	<.002
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC	01 06-25-02	E.07	E.3	8	<.006	<.006	<.004	<.005	<.007	<.010	<.002
36N 28W 13 ADA	01 06-11-02	<.04	3.0	<1	<.006	<.006	<.004	<.005	<.007	<.010	<.002
37N 26W 17 CDC	01 06-10-02	<.04	1.4	<1	<.006	<.006	<.004	<.005	<.007	<.010	<.002
38N 26W 09 ADD	01 07-08-02	E.03	2.3	2	<.006	<.006	<.004	<.005	<.007	<.010	<.002

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	<.041	<.020	<.005	<.018	<.003	<.006	116	<.005	<.005	<.02
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.041	<.020	<.005	<.018	<.003	E.117	110	<.005	<.005	<.02
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	<.041	<.020	<.005	<.018	<.003	E.004	78.7	<.005	<.005	<.02
FL-17/18E/27-0798	05-30-02	<.041	<.020	<.005	<.018	<.003	<.006	129	<.005	<.005	<.02
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.041	<.020	<.005	<.018	<.003	E.051	60.1	<.005	<.005	<.02
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	<.041	<.020	<.005	<.018	<.003	<.006	101	<.005	<.005	<.02
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.041	<.020	<.005	<.018	<.003	E.003	88.3	<.005	<.005	<.02
MQ-17/09E/19-0107	05-21-02	<.041	<.020	<.005	<.018	<.003	E.189	79.8	<.005	<.005	<.02
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.041	<.020	<.005	<.018	<.003	<.006	101	<.005	<.005	<.02
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.041	<.020	<.005	<.018	<.003	<.006	94.3	<.005	<.005	<.02
OU-23/17E/12-0202	05-29-02	<.041	<.020	<.005	<.018	<.003	<.006	103	<.005	<.005	<.02
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC 01	06-11-02	<.041	<.020	<.005	<.018	<.003	<.006	100	<.005	<.005	<.02
40N 23W 35 ABB 01	06-12-02	<.041	<.020	<.005	<.018	<.003	<.006	96.3	<.005	<.005	<.02
41N 22W 06 BBA 01	06-13-02	<.041	<.020	<.005	<.018	<.003	<.006	100	<.005	<.005	<.02
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA 01	06-13-02	<.041	<.020	<.005	<.018	<.003	<.006	89.0	<.005	<.005	<.02
44N 24W 03 BDB 01	06-12-02	<.041	<.020	<.005	<.018	<.003	<.006	98.1	<.005	<.005	<.02
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC 01	06-25-02	<.041	<.020	<.005	<.018	<.003	<.006	95.3	<.005	<.005	<.02
36N 28W 13 ADA 01	06-11-02	<.041	<.020	<.005	<.018	<.003	<.006	95.3	<.005	<.005	<.02
37N 26W 17 CDC 01	06-10-02	<.041	<.020	<.005	<.018	<.003	<.006	107	<.005	<.005	<.02
38N 26W 09 ADD 01	07-08-02	<.041	<.020	<.005	<.018	<.003	<.006	116	<.005	<.005	<.02

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	EPTC	ETHAL-	ETHO-	HCH		LIN-	METHYL	METHYL		
		WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS	D6 SRG	LINDANE	URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	<.002	<.009	<.005	<.003	94.2	<.004	<.035	<.027	<.050	<.006
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.002	<.009	<.005	<.003	101	<.004	<.035	<.027	<.050	<.006
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	<.002	<.009	<.005	<.003	90.2	<.004	<.035	<.027	<.050	<.006
FL-17/18E/27-0798	05-30-02	<.002	<.009	<.005	<.003	98.1	<.004	<.035	<.027	<.050	<.006
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.002	<.009	<.005	<.003	65.0	<.004	<.035	<.027	<.050	<.006
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	<.002	<.009	<.005	<.003	99.0	<.004	<.035	<.027	<.050	<.006
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.002	<.009	<.005	<.003	90.3	<.004	<.035	<.027	<.050	<.006
MQ-17/09E/19-0107	05-21-02	<.002	<.009	<.005	<.003	84.1	<.004	<.035	<.027	<.050	<.006
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.002	<.009	<.005	<.003	87.4	<.004	<.035	<.027	<.050	<.006
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.002	<.009	<.005	<.003	96.2	<.004	<.035	<.027	<.050	<.006
OU-23/17E/12-0202	05-29-02	<.002	<.009	<.005	<.003	91.9	<.004	<.035	<.027	<.050	<.006
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC	01 06-11-02	<.002	<.009	<.005	<.003	96.2	<.004	<.035	<.027	<.050	<.006
40N 23W 35 ABB	01 06-12-02	<.002	<.009	<.005	<.003	87.3	<.004	<.035	<.027	<.050	<.006
41N 22W 06 BBA	01 06-13-02	<.002	<.009	<.005	<.003	86.5	<.004	<.035	<.027	<.050	<.006
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA	01 06-13-02	<.002	<.009	<.005	<.003	87.3	<.004	<.035	<.027	<.050	<.006
44N 24W 03 BDB	01 06-12-02	<.002	<.009	<.005	<.003	97.1	<.004	<.035	<.027	<.050	<.006
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC	01 06-25-02	<.002	<.009	<.005	<.003	98.1	<.004	<.035	<.027	<.050	<.006
36N 28W 13 ADA	01 06-11-02	<.002	<.009	<.005	<.003	94.4	<.004	<.035	<.027	<.050	<.006
37N 26W 17 CDC	01 06-10-02	<.002	<.009	<.005	<.003	104	<.004	<.035	<.027	<.050	<.006
38N 26W 09 ADD	01 07-08-02	<.002	<.009	<.005	<.003	96.3	<.004	<.035	<.027	<.050	<.006

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	E.003	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
FL-17/18E/27-0798	05-30-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
MQ-17/09E/19-0107	05-21-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
OU-23/17E/12-0202	05-29-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC	01 06-11-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
40N 23W 35 ABB	01 06-12-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
41N 22W 06 BBA	01 06-13-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA	01 06-13-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
44N 24W 03 BDB	01 06-12-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC	01 06-25-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
36N 28W 13 ADA	01 06-11-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
37N 26W 17 CDC	01 06-10-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011
38N 26W 09 ADD	01 07-08-02	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.01	<.004	<.011	<.02	.010	<.02	<.034	<.02	<.005	<.002
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
FL-17/18E/27-0798	05-30-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	.04	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
MQ-17/09E/19-0107	05-21-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
OU-23/17E/12-0202	05-29-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC	01 06-11-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
40N 23W 35 ABB	01 06-12-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
41N 22W 06 BBA	01 06-13-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA	01 06-13-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
44N 24W 03 BDB	01 06-12-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC	01 06-25-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
36N 28W 13 ADA	01 06-11-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
37N 26W 17 CDC	01 06-10-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002
38N 26W 09 ADD	01 07-08-02	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1-DI- CHLORO- PRO- PENE, WAT, WH TOTAL (UG/L) (77168)	123-TRI- CHLORO- PROPANE WATER WHOLE TOTAL (UG/L) (77443)	1,2- DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	<.009	--	--	--	--	--	--	--	--	--
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.03
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	<.009	--	--	--	--	--	--	--	--	--
FL-17/18E/27-0798	05-30-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.03
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	E.03
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	<.009	--	--	--	--	--	--	--	--	--
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	<.03
MQ-17/09E/19-0107	05-21-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	<.03
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.009	<.03	<.06	.11	<.04	<.05	<.16	<.04	<.1	V.03
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.03
OU-23/17E/12-0202	05-29-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.04
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC 01	06-11-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.03
40N 23W 35 ABB 01	06-12-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.04
41N 22W 06 BBA 01	06-13-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.02
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA 01	06-13-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.03
44N 24W 03 BDB 01	06-12-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.03
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC 01	06-25-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.04
36N 28W 13 ADA 01	06-11-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.04
37N 26W 17 CDC 01	06-10-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.03
38N 26W 09 ADD 01	07-08-02	<.009	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.03

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	2,2-DI- CHLORO- PRO- PANE WAT, WH TOTAL (UG/L) (77170)	2BUTENE TRANS-1 4-DI- CHLORO UNFLTRD RECOVER (UG/L) (73547)	2-HEXA- NONE WATER WHOLE TOTAL (UG/L) (77103)	ACETONE WATER WHOLE TOTAL (UG/L) (81552)	ACRYLO- NITRILE TOTAL (UG/L) (34215)	1,2,3- TRI- CHLORO BENZENE WAT, WH REC (UG/L) (77613)	BENZENE 123-TRI METHYL- WATER UNFLTRD RECOVER (UG/L) (77221)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (UG/L) (34551)	BENZENE 124-TRI METHYL UNFILT RECOVER (UG/L) (77222)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	--	--	--	--	--	--	--	--	--	--
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	E.04
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	--	--	--	--	--	--	--	--	--	--
FL-17/18E/27-0798	05-30-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	--	--	--	--	--	--	--	--	--	--
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
MQ-17/09E/19-0107	05-21-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
OU-23/17E/12-0202	05-29-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC 01	06-11-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
40N 23W 35 ABB 01	06-12-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
41N 22W 06 BBA 01	06-13-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA 01	06-13-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
44N 24W 03 BDB 01	06-12-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC 01	06-25-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
36N 28W 13 ADA 01	06-11-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
37N 26W 17 CDC 01	06-10-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06
38N 26W 09 ADD 01	07-08-02	<.03	<.05	<.7	<.7	<7	<1	<.3	<.1	<.1	<.06

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	BENZENE 135-TRI METHYL WATER UNFLTRD REC (UG/L) (77226)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 14BRFL- SURROG VOC UNFLTRD REC (99834)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)	ISO- PROPYL- BENZENE WATER WHOLE REC (UG/L) (77223)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L) (77342)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L) (77224)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	BENZENE SEC BUTYL- WATER UNFLTRD REC (UG/L) (77350)	BENZENE TERT- BUTYL- WATER UNFLTRD REC (UG/L) (77353)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	--	--	--	--	--	--	--	--	--	--
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.04	<.03	83.5	<.05	<.06	<.2	<.04	<.03	<.03	<.05
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	--	--	--	--	--	--	--	--	--	--
FL-17/18E/27-0798	05-30-02	<.04	<.03	79.3	<.05	<.06	<.2	<.04	<.03	<.03	<.05
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.04	<.03	95.8	<.05	<.06	<.2	<.04	<.03	<.03	<.05
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	--	--	--	--	--	--	--	--	--	--
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.04	<.03	83.8	<.05	<.06	<.2	<.04	<.03	<.03	<.05
MQ-17/09E/19-0107	05-21-02	<.04	<.03	87.8	<.05	<.06	<.2	<.04	<.03	<.03	<.05
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.04	<.03	83.8	<.05	<.06	<.2	<.04	<.03	<.03	<.05
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.04	<.03	95.5	<.05	<.06	<.2	<.04	<.03	<.03	<.05
OU-23/17E/12-0202	05-29-02	<.04	<.03	96.5	<.05	<.06	<.2	<.04	<.03	<.03	<.05
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC	01 06-11-02	<.04	<.03	118	<.05	<.06	<.2	<.04	<.03	<.03	<.05
40N 23W 35 ABB	01 06-12-02	<.04	<.03	115	<.05	<.06	<.2	<.04	<.03	<.03	<.05
41N 22W 06 BBA	01 06-13-02	<.04	<.03	84.5	<.05	<.06	<.2	<.04	<.03	<.03	<.05
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA	01 06-13-02	<.04	<.03	84.6	<.05	<.06	<.2	<.04	<.03	<.03	<.05
44N 24W 03 BDB	01 06-12-02	<.04	<.03	116	<.05	<.06	<.2	<.04	<.03	<.03	<.05
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC	01 06-25-02	<.04	<.03	87.3	<.05	<.06	<.2	<.04	<.03	<.03	<.05
36N 28W 13 ADA	01 06-11-02	<.04	<.03	113	<.05	<.06	<.2	<.04	<.03	<.03	<.05
37N 26W 17 CDC	01 06-10-02	<.04	<.03	115	<.05	<.06	<.2	<.04	<.03	<.03	<.05
38N 26W 09 ADD	01 07-08-02	<.04	<.03	84.9	<.05	<.06	<.2	<.04	<.03	<.03	<.05

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	BENZENE TOTAL (UG/L) (34030)	BROMO- BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	BROMO- ETHENE WATER UNFLTRD RECOVER (UG/L) (50002)	BROMO- FORM TOTAL (UG/L) (32104)	CARBON DI- SULFIDE WATER WHOLE TOTAL (UG/L) (77041)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- ETHANE TOTAL (UG/L) (34311)	CHLORO- FORM TOTAL (UG/L) (32106)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	--	--	--	--	--	--	--	--	--	--
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.04	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	--	--	--	--	--	--	--	--	--	--
FL-17/18E/27-0798	05-30-02	E.01	<.04	<.1	<.06	E.07	<.06	<.03	<.2	<.1	<.02
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.04	<.04	<.1	<.06	E.09	<.06	<.03	<.2	<.1	<.02
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	--	--	--	--	--	--	--	--	--	--
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.04	<.04	<.1	<.06	E.06	<.06	<.03	<.2	<.1	<.02
MQ-17/09E/19-0107	05-21-02	<.04	<.04	<.1	<.06	E.08	<.06	<.03	<.2	<.1	<.02
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.04	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.04	<.04	<.1	<.06	E.03	<.06	<.03	<.2	<.1	<.02
OU-23/17E/12-0202	05-29-02	<.04	<.04	<.1	<.06	E.05	<.06	<.03	<.2	<.1	<.02
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC 01	06-11-02	<.04	<.04	<.1	<.06	E.02	<.06	<.03	<.2	<.1	<.02
40N 23W 35 ABB 01	06-12-02	<.04	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02
41N 22W 06 BBA 01	06-13-02	<.04	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA 01	06-13-02	<.04	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02
44N 24W 03 BDB 01	06-12-02	<.04	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC 01	06-25-02	<.04	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02
36N 28W 13 ADA 01	06-11-02	<.04	<.04	<.1	<.06	E.01	<.06	<.03	<.2	<.1	<.02
37N 26W 17 CDC 01	06-10-02	<.04	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02
38N 26W 09 ADD 01	07-08-02	<.04	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	CIS-1,2 -DI- CHLORO- ETHENE WATER TOTAL (UG/L) (77093)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	DIBROMO CHLORO- PROPANE WATER WHOLE TOT.REC (UG/L) (82625)	DI- BROMO- METHANE WATER WHOLE RECOVER (UG/L) (30217)	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	DI-ISO- PROPYL- ETHER, WATER, UNFLTRD RECOVER (UG/L) (81577)	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC (UG/L) (77562)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	ETHANE 12DICL SURROG VOC REC PERCENT (99832)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	--	--	--	--	--	--	--	--	--	--
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	120
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	--	--	--	--	--	--	--	--	--	--
FL-17/18E/27-0798	05-30-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	110
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	113
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	--	--	--	--	--	--	--	--	--	--
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	113
MQ-17/09E/19-0107	05-21-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	111
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	113
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	111
OU-23/17E/12-0202	05-29-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	112
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC	01 06-11-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	100
40N 23W 35 ABB	01 06-12-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	95.5
41N 22W 06 BBA	01 06-13-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	107
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA	01 06-13-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	106
44N 24W 03 BDB	01 06-12-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	96.3
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC	01 06-25-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	112
36N 28W 13 ADA	01 06-11-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	105
37N 26W 17 CDC	01 06-10-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	98.3
38N 26W 09 ADD	01 07-08-02	<.04	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	102

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (UG/L) (34396)	ETHER ETHYL WATER UNFLTRD RECOVER (UG/L) (81576)	ETHER TERT- BUTYL ETHYL UNFLTRD RECOVER (UG/L) (50004)	ETHER TERT- PENTYL METHYL UNFLTRD RECOVER (UG/L) (50005)	ETHYL- BENZENE TOTAL (UG/L) (34371)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)	FURAN, TETRA- HYDRO- WATER UNFLTRD RECOVER (UG/L) (81607)	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L) (39702)	ISO- DURENE WATER UNFLTRD RECOVER (UG/L) (50000)	METHAC- RYLATE ETHYL- WATER UNFLTRD RECOVER (UG/L) (73570)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	--	--	--	--	--	--	--	--	--	--
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	--	--	--	--	--	--	--	--	--	--
FL-17/18E/27-0798	05-30-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	--	--	--	--	--	--	--	--	--	--
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
MQ-17/09E/19-0107	05-21-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
OU-23/17E/12-0202	05-29-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC 01	06-11-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
40N 23W 35 ABB 01	06-12-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
41N 22W 06 BBA 01	06-13-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA 01	06-13-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
44N 24W 03 BDB 01	06-12-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC 01	06-25-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
36N 28W 13 ADA 01	06-11-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
37N 26W 17 CDC 01	06-10-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2
38N 26W 09 ADD 01	07-08-02	<.2	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	METHAC- RYLATE METHYL WATER UNFLTRD RECOVER (UG/L) (81597)	METHANE BROMO- CHLORO- WAT UNFLTRD REC (UG/L) (77297)	METHYL ACRY- LATE WATER UNFLTRD RECOVER (UG/L) (49991)	METHYL IODIDE WATER UNFLTRD RECOVER (UG/L) (77424)	METHYL TERT- BUTYL ETHER WAT UNF REC (UG/L) (78032)	METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)	METHYL- ENE CHLO- RIDE TOTAL (UG/L) (34423)	METHYL- ETHYL- KETONE WATER TOTAL (UG/L) (81595)	METHYL ISO- BUTYL KETONE WAT.WH. TOTAL (UG/L) (78133)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	--	--	--	--	--	--	--	--	--	--
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	--	--	--	--	--	--	--	--	--	--
FL-17/18E/27-0798	05-30-02	<.3	.13	<2.0	<.25	<.2	<.3	<.2	5.5	<5.0	<.4
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	--	--	--	--	--	--	--	--	--	--
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
MQ-17/09E/19-0107	05-21-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
OU-23/17E/12-0202	05-29-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC 01	06-11-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
40N 23W 35 ABB 01	06-12-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
41N 22W 06 BBA 01	06-13-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA 01	06-13-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
44N 24W 03 BDB 01	06-12-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	M	<5.0	<.4
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC 01	06-25-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
36N 28W 13 ADA 01	06-11-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
37N 26W 17 CDC 01	06-10-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4
38N 26W 09 ADD 01	07-08-02	<.3	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	META/ PARA- XYLENE WATER UNFLTRD REC (UG/L) (85795)	NAPHTH- ALENE TOTAL (UG/L) (34696)	O- CHLORO- TOLUENE WATER WHOLE TOTAL (UG/L) (77275)	O- XYLENE WATER WHOLE TOTAL (UG/L) (77135)	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (UG/L) (77356)	1234- TETRA METHYL BENZENE UNFLTRD REC (UG/L) (49999)	1,3-DI- CHLORO- PROPANE WAT. WH TOTAL (UG/L) (77173)	PROPENE 3- CHLORO- WATER UNFLTRD RECOVER (UG/L) (78109)	STYRENE TOTAL (UG/L) (77128)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	--	--	--	--	--	--	--	--	--	--
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	--	--	--	--	--	--	--	--	--	--
FL-17/18E/27-0798	05-30-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	E.03	<.03
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	--	--	--	--	--	--	--	--	--	--
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
MQ-17/09E/19-0107	05-21-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
OU-23/17E/12-0202	05-29-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC 01	06-11-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
40N 23W 35 ABB 01	06-12-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
41N 22W 06 BBA 01	06-13-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA 01	06-13-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
44N 24W 03 BDB 01	06-12-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC 01	06-25-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
36N 28W 13 ADA 01	06-11-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
37N 26W 17 CDC 01	06-10-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03
38N 26W 09 ADD 01	07-08-02	<.06	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	TOLUENE D8 SURROG VOC UNFLTRD REC PERCENT (99833)	TOLUENE O-ETHYL WATER UNFLTRD RECOVER (UG/L) (77220)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L) (77277)	TOLUENE TOTAL (UG/L) (34010)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	RADON 222 TOTAL (PCI/L) (82303)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)
BROWN COUNTY											
BN-23/20E/13-0144	07-08-02	--	--	--	--	--	--	--	--	330	22
COLUMBIA COUNTY											
CO-13/10E/19-0737	09-11-02	99.4	<.06	<.05	<.05	<.09	<.04	<.09	<.1	310	22
FOND DU LAC COUNTY											
FL-16/14E/17-0799	05-22-02	--	--	--	--	--	--	--	--	730	28
FL-17/18E/27-0798	05-30-02	92.5	<.06	<.05	.20	<.09	<.04	<.09	<.1	180	19
GREEN LAKE COUNTY											
GL-14/11E/27-0091	05-20-02	99.7	<.06	<.05	E.01	<.09	<.04	<.09	<.1	160	18
MARINETTE COUNTY											
MT-30/20E/11-0029	06-25-02	--	--	--	--	--	--	--	--	620	27
MARQUETTE COUNTY											
MQ-15/10E/09-0108	05-21-02	96.6	<.06	<.05	<.05	<.09	<.04	<.09	<.1	210	20
MQ-17/09E/19-0107	05-21-02	95.4	<.06	<.05	<.05	<.09	<.04	<.09	<.1	140	18
OCONTO COUNTY											
OC-28/18E/08-0198	06-26-02	98.9	<.06	<.05	<.05	<.09	<.04	<.09	<.1	540	25
OUTAGAMIE COUNTY											
OU-21/15E/01-0629	05-29-02	102	<.06	<.05	<.05	<.09	<.04	<.09	<.1	770	28
OU-23/17E/12-0202	05-29-02	101	<.06	<.05	<.05	<.09	<.04	<.09	<.1	1140	32
DELTA COUNTY, MICHIGAN											
39N 23W 18 CAC	01 06-11-02	105	<.06	<.05	<.05	<.09	<.04	<.09	<.1	230	20
40N 23W 35 ABB	01 06-12-02	105	<.06	<.05	<.05	<.09	<.04	<.09	<.1	290	22
41N 22W 06 BBA	01 06-13-02	98.7	<.06	<.05	<.05	<.09	<.04	<.09	<.1	820	30
MARQUETTE COUNTY, MICHIGAN											
42N 24W 04 BAA	01 06-13-02	99.4	<.06	<.05	<.05	<.09	<.04	<.09	<.1	350	23
44N 24W 03 BDB	01 06-12-02	104	<.06	<.05	<.05	<.09	<.04	<.09	<.1	1540	38
MENOMINEE COUNTY, MICHIGAN											
32N 27W 02 AAC	01 06-25-02	97.5	<.06	<.05	<.05	<.09	<.04	<.09	<.1	530	25
36N 28W 13 ADA	01 06-11-02	103	<.06	<.05	<.05	<.09	<.04	<.09	<.1	600	27
37N 26W 17 CDC	01 06-10-02	103	<.06	<.05	<.05	<.09	<.04	<.09	<.1	520	24
38N 26W 09 ADD	01 07-08-02	95.4	<.06	<.05	<.05	<.09	<.04	<.09	<.1	730	28

QUALITY OF GROUND WATER

579

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	TICS FROM VOC BY GCMS NUMBER (99871)
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BROWN COUNTY

BN-23/20E/13-0144	07-08-02	.44	--
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COLUMBIA COUNTY

CO-13/10E/19-0737	09-11-02	.60	0
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FOND DU LAC COUNTY

FL-16/14E/17-0799	05-22-02	.87	--
FL-17/18E/27-0798	05-30-02	.04	1

GREEN LAKE COUNTY

GL-14/11E/27-0091	05-20-02	.11	2
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MARINETTE COUNTY

MT-30/20E/11-0029	06-25-02	.24	--
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MARQUETTE COUNTY

MQ-15/10E/09-0108	05-21-02	.40	0
MQ-17/09E/19-0107	05-21-02	.27	1

OCONTO COUNTY

OC-28/18E/08-0198	06-26-02	3.06	0
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OUTAGAMIE COUNTY

OU-21/15E/01-0629	05-29-02	.73	0
OU-23/17E/12-0202	05-29-02	4.70	0

DELTA COUNTY, MICHIGAN

39N 23W 18 CAC	01 06-11-02	E.01	0
40N 23W 35 ABB	01 06-12-02	E.01	0
41N 22W 06 BBA	01 06-13-02	.20	0

MARQUETTE COUNTY, MICHIGAN

42N 24W 04 BAA	01 06-13-02	E.01	0
44N 24W 03 BDB	01 06-12-02	.08	2

MENOMINEE COUNTY, MICHIGAN

32N 27W 02 AAC	01 06-25-02	.20	1
36N 28W 13 ADA	01 06-11-02	.29	0
37N 26W 17 CDC	01 06-10-02	.10	0
38N 26W 09 ADD	01 07-08-02	E.01	0

Local ident- i- fier	Station number	Geo- logic unit	Date	Time	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL, (FEET) (72008)	SAM- PLING METHOD, CODES (82398)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
SHAWANO COUNTY										
SH-26/17E/28-0223	444158088263601	300SNDS	06-26-02	1400	46.91	125	4040	.82	.1	7.0
SH-27/17E/14-0222	444834088232201	300SNDS	06-27-02	1130	30.83	140	4040	13	.1	7.0
WAUSHARA COUNTY										
WS-18/12E/29-1006	440015089053301	300SNDS	05-22-02	1010	13.92	95	4040	.28	9.3	7.2
WINNEBAGO COUNTY										
WI-17/14E/36-0332	435354088460901	300SNDS	05-20-02	1420	--	111	4040	.26	.1	7.1
WI-18/14E/36-0841	435907088462502	300SNDS	05-23-02	1100	15.83	102	4040	.19	2.2	6.9
WI-18/16E/24-0395	440117088323001	300SNDS	05-28-02	1500	--	195	4040	.61	.2	7.3
WI-20/14E/30-0140	441015088515501	300SNDS	05-28-02	1050	--	95.0	4040	.13	.2	7.6

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L) (AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) (AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L) (AS K) (00935)	SODIUM, DIS- SOLVED (MG/L) (AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L) (AS BR) (71870)	CHLO- RIDE, DIS- SOLVED (MG/L) (AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) (AS F) (00950)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	615	9.3	72.6	40.9	1.15	1.28	288	E.02	1.71	E.07
SH-27/17E/14-0222	06-27-02	653	9.6	72.0	40.3	1.00	4.31	239	E.02	20.0	.20
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	688	10.6	67.9	34.1	1.43	25.9	260	E.03	13.6	E.10
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	537	9.5	58.7	32.6	1.06	4.07	233	.04	5.16	E.11
WI-18/14E/36-0841	05-23-02	986	10.1	108	57.7	2.30	12.6	365	.04	46.9	E.07
WI-18/16E/24-0395	05-28-02	813	13.5	85.6	21.3	3.02	53.3	166	.27	66.2	.70
WI-20/14E/30-0140	05-28-02	469	10.2	42.5	31.9	1.34	5.81	190	E.02	8.96	.12
Local ident- ifier	Date	SILICA, DIS- SOLVED (MG/L) AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) (AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) (AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) (AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) (AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L) AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C) (00681)	ALUM- INUM, DIS- SOLVED (UG/L) AS AL) (01106)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	12.2	8.6	346	<.04	<.10	<.05	<.008	<.02	.5	<1
SH-27/17E/14-0222	06-27-02	19.6	42.4	390	<.04	E.06	<.05	<.008	<.02	.7	<1
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	14.9	23.2	430	<.04	.13	19.3	<.008	<.02	1.0	<1
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	14.5	60.7	341	<.04	<.10	<.05	<.008	<.02	.6	<1
WI-18/14E/36-0841	05-23-02	20.0	56.2	580	<.04	E.08	11.9	<.008	<.02	.8	<1
WI-18/16E/24-0395	05-28-02	11.2	153	528	.11	.14	<.05	<.008	<.02	.8	<1
WI-20/14E/30-0140	05-28-02	14.2	33.6	285	<.04	.10	4.71	.133	<.02	1.1	<1
Local ident- ifier	Date	ANTI- MONY, DIS- SOLVED (UG/L) AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L) AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L) AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L) AS BE) (01010)	BORON, DIS- SOLVED (UG/L) AS B) (01020)	CADMIUM DIS- SOLVED (UG/L) AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR) (01030)	COBALT, DIS- SOLVED (UG/L) AS CO) (01035)	COPPER, DIS- SOLVED (UG/L) AS CU) (01040)	HYDRO- GEN SULFIDE TOTAL (MG/L) AS H2S) (71875)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	<.05	.2	90	<.06	E7	<.04	E.9	.24	.3	ND
SH-27/17E/14-0222	06-27-02	<.05	3.0	23	<.06	7	<.04	<.8	.58	.5	ND
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<.05	.3	24	<.06	208	.12	1.0	.37	12.9	ND
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	<.05	3.9	24	<.06	E4	<.04	<.8	20.7	.5	M.0
WI-18/14E/36-0841	05-23-02	.19	1.3	54	<.06	11	.08	.9	.99	8.8	ND
WI-18/16E/24-0395	05-28-02	<.05	2.4	22	<.06	235	<.04	<.8	.36	1.0	M.0
WI-20/14E/30-0140	05-28-02	E.04	1.0	41	<.06	22	<.04	<.8	.17	1.7	ND

M Presence verified, not quantified
 ND Not detected

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	40	<.08	2.5	60.2	.2	1.10	<.3	<1	100	<.04
SH-27/17E/14-0222	06-27-02	363	<.08	2.9	15.4	.7	1.18	<.3	<1	86.1	E.03
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<10	.27	.8	.1	<.2	1.02	.6	<1	47.2	.07
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	877	E.06	1.1	11.8	1.5	32.9	<.3	<1	52.6	<.04
WI-18/14E/36-0841	05-23-02	<10	.66	3.3	2.2	.6	9.31	1.6	<1	76.2	.10
WI-18/16E/24-0395	05-28-02	382	E.04	15.3	46.5	5.1	1.80	<.3	<1	2000	.64
WI-20/14E/30-0140	05-28-02	<10	<.08	4.2	21.2	.6	1.04	.5	<1	105	.42
Local ident- i- fier	Date	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	2,6-DI- ETHYL- ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER, FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	3.4	7	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041
SH-27/17E/14-0222	06-27-02	2.3	15	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	2.4	25	<.006	<.006	.009	<.005	1.93	<.010	<.002	<.041
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	3.2	3	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041
WI-18/14E/36-0841	05-23-02	7.9	73	E.004	<.006	<.004	<.005	.062	<.010	<.002	<.041
WI-18/16E/24-0395	05-28-02	E.2	43	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041
WI-20/14E/30-0140	05-28-02	4.2	17	<.006	<.006	<.004	<.005	.008	<.010	<.002	<.041
Local ident- i- fier	Date	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC (UG/L) (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	<.020	<.005	<.018	<.003	<.006	101	<.005	<.005	<.02	<.002
SH-27/17E/14-0222	06-27-02	<.020	<.005	<.018	<.003	<.006	108	<.005	<.005	<.02	<.002
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<.020	<.005	<.018	<.003	E.978	87.3	<.005	<.005	<.02	<.002
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	<.020	<.005	<.018	<.003	<.006	90.9	<.005	<.005	<.02	<.002
WI-18/14E/36-0841	05-23-02	<.020	<.005	<.018	<.003	E.276	96.3	<.005	<.005	<.02	<.002
WI-18/16E/24-0395	05-28-02	<.020	<.005	<.018	<.003	<.006	91.9	<.005	<.005	<.02	<.002
WI-20/14E/30-0140	05-28-02	<.020	<.005	<.018	<.003	E.005	89.7	<.005	<.005	<.02	<.002

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	ETHAL- FLUR- ALIN	ETHO- PROP WATER	FONOFOS	HCH ALPHA D6 SRG	LINDANE	LIN- URON WATER	MALA- THION, DIS-	METHYL AZIN- PHOS	METHYL PARA- THION	METO- LACHLOR WATER
		WAT FLT 0.7 U GF, REC (UG/L) (82663)	FLTRD 0.7 U GF, REC (UG/L) (82672)	WATER DISS REC (UG/L) (04095)	WAT FLT 0.7 U GF, REC (UG/L) (91065)	DISS SOLVED (UG/L) (39341)	FLTRD 0.7 U GF, REC (UG/L) (82666)	THION, DIS- SOLVED (UG/L) (39532)	WAT FLT 0.7 U GF, REC (UG/L) (82686)	WAT FLT 0.7 U GF, REC (UG/L) (82667)	DISSOLV (UG/L) (39415)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	<.009	<.005	<.003	83.3	<.004	<.035	<.027	<.050	<.006	<.013
SH-27/17E/14-0222	06-27-02	<.009	<.005	<.003	98.1	<.004	<.035	<.027	<.050	<.006	<.013
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<.009	<.005	<.003	96.3	<.004	<.035	<.027	<.050	<.006	9.54
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	<.009	<.005	<.003	91.4	<.004	<.035	<.027	<.050	<.006	<.013
WI-18/14E/36-0841	05-23-02	<.009	<.005	<.003	100	<.004	<.035	<.027	<.050	<.006	<.013
WI-18/16E/24-0395	05-28-02	<.009	<.005	<.003	91.0	<.004	<.035	<.027	<.050	<.006	<.013
WI-20/14E/30-0140	05-28-02	<.009	<.005	<.003	93.5	<.004	<.035	<.027	<.050	<.006	<.013
Local ident- ifier	Date	METRI- BUZIN SENCOR WATER	MOL- INATE WATER	NAPROP- AMIDE WATER	P,P' DDE	PARA- THION, DIS-	PEB- ULATE WATER	PENDI- METH- ALIN	PER- METHRIN CIS	PHORATE WATER	PRO- METON, WATER, DISS, RECC
		WAT FLT 0.7 U DISSOLV (UG/L) (82630)	FLTRD 0.7 U GF, REC (UG/L) (82671)	FLTRD 0.7 U GF, REC (UG/L) (82684)	FLTRD 0.7 U GF, REC (UG/L) (34653)	DIS- SOLVED (UG/L) (39542)	FILTRD 0.7 U GF, REC (UG/L) (82669)	WAT FLT 0.7 U GF, REC (UG/L) (82683)	WAT FLT 0.7 U GF, REC (UG/L) (82687)	WAT FLT 0.7 U GF, REC (UG/L) (82664)	FLTRD 0.7 U GF, REC (UG/L) (04037)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
SH-27/17E/14-0222	06-27-02	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
WI-18/14E/36-0841	05-23-02	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	.06
WI-18/16E/24-0395	05-28-02	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
WI-20/14E/30-0140	05-28-02	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
Local ident- ifier	Date	PRON- AMIDE WATER	PRO- PANIL WATER	PRO- PARGITE WATER	SI- MAZINE, WATER, DISS, REC	TEBU- THIURON WATER	TER- BACIL WATER	TER- BUFOS WATER	THIO- BENCARB WATER	TRIAL- LATE WATER	TRI- FLUR- ALIN WAT FLT
		FLTRD 0.7 U GF, REC (UG/L) (82676)	FLTRD 0.7 U GF, REC (UG/L) (82679)	FLTRD 0.7 U GF, REC (UG/L) (82685)	FLTRD 0.7 U GF, REC (UG/L) (04035)	FLTRD 0.7 U GF, REC (UG/L) (82670)	FLTRD 0.7 U GF, REC (UG/L) (82665)	FLTRD 0.7 U GF, REC (UG/L) (82675)	FLTRD 0.7 U GF, REC (UG/L) (82681)	FLTRD 0.7 U GF, REC (UG/L) (82678)	WAT FLT 0.7 U GF, REC (UG/L) (82661)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009
SH-27/17E/14-0222	06-27-02	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<.004	<.011	<.02	.011	<.02	<.034	<.02	<.005	<.002	<.009
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009
WI-18/14E/36-0841	05-23-02	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009
WI-18/16E/24-0395	05-28-02	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009
WI-20/14E/30-0140	05-28-02	<.004	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local identifier	Date	1,1,1-TRI-CHLOROETHANE TOTAL (UG/L) (34506)	1,1,2-TRI-CHLOROETHANE TOTAL (UG/L) (34511)	1,1-DI-CHLOROETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLOROETHYLENE TOTAL (UG/L) (34501)	1,1-DI-CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L) (77168)	123-TRI-CHLORO-PROPANE WATER WHOLE TOTAL (UG/L) (77443)	1,2-DIBROMOETHANE WATER WHOLE TOTAL (UG/L) (77651)	1,2-DI-CHLOROETHANE TOTAL (UG/L) (32103)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	TRANS-1,2-DI-CHLOROETHENE TOTAL (UG/L) (34546)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.03	<.03
SH-27/17E/14-0222	06-27-02	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.04	<.03
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	E.03	<.03
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	E.03	<.03
WI-18/14E/36-0841	05-23-02	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	<.03	<.03
WI-18/16E/24-0395	05-28-02	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.03	<.03
WI-20/14E/30-0140	05-28-02	<.03	<.06	<.04	<.04	<.05	<.16	<.04	<.1	V.03	<.03

Local identifier	Date	2,2-DI-CHLORO-PRO-PANE WAT, WH TOTAL (UG/L) (77170)	2BUTENE TRANS-1 4-DI-CHLORO UNFLTRD RECOVER (UG/L) (73547)	2-HEXA-NONE WATER WHOLE TOTAL (UG/L) (77103)	ACETONE WATER WHOLE TOTAL (UG/L) (81552)	ACRYLO-NITRILE TOTAL (UG/L) (34215)	1,2,3-TRI-CHLORO-BENZENE WAT, WH REC (UG/L) (77613)	BENZENE 123-TRI-METHYL-WATER UNFLTRD RECOVER (UG/L) (77221)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L) (34551)	BENZENE 124-TRI-METHYL UNFLTRD RECOVER (UG/L) (77222)	BENZENE 135-TRI-METHYL WATER UNFLTRD REC (UG/L) (77226)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	<.05	<.7	<.7	<.7	<.1	<.3	<.1	<.1	<.06	<.04
SH-27/17E/14-0222	06-27-02	<.05	<.7	<.7	<.7	<.1	<.3	<.1	<.1	<.06	<.04
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<.05	<.7	<.7	<.7	<.1	<.3	<.1	<.1	<.06	<.04
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	<.05	<.7	<.7	<.7	<.1	<.3	<.1	<.1	<.06	<.04
WI-18/14E/36-0841	05-23-02	<.05	<.7	<.7	<.7	<.1	<.3	<.1	<.1	<.06	<.04
WI-18/16E/24-0395	05-28-02	<.05	<.7	<.7	<.7	<.1	<.3	<.1	<.1	<.06	<.04
WI-20/14E/30-0140	05-28-02	<.05	<.7	<.7	<.7	<.1	<.3	<.1	<.1	<.06	<.04

Local identifier	Date	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34566)	BENZENE 14BRFL-SURROG VOC UNFLTRD REC PERCENT (99834)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34571)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L) (77223)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L) (77342)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L) (77224)	BENZENE O-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34536)	BENZENE BUTYL-WATER UNFLTRD REC (UG/L) (77350)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L) (77353)	BENZENE TOTAL (UG/L) (34030)
SHAWANO COUNTY											
SH-26/17E/28-0223	06-26-02	<.03	83.0	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
SH-27/17E/14-0222	06-27-02	<.03	78.0	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<.03	95.3	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	<.03	96.0	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
WI-18/14E/36-0841	05-23-02	<.03	94.3	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
WI-18/16E/24-0395	05-28-02	<.03	99.1	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04
WI-20/14E/30-0140	05-28-02	<.03	98.8	<.05	<.06	<.2	<.04	<.03	<.03	<.05	<.04

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	BROMO- BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	BROMO- ETHENE WATER UNFLTRD RECOVER (UG/L) (50002)	BROMO- FORM TOTAL (UG/L) (32104)	CARBON DI- SULFIDE WATER WHOLE TOTAL (UG/L) (77041)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- DI- METHANE TOTAL (UG/L) (32105)	CHLORO- ETHANE TOTAL (UG/L) (34311)	CHLORO- FORM TOTAL (UG/L) (32106)	CIS-1,2 -DI- CHLORO- ETHENE WATER TOTAL (UG/L) (77093)
		SHAWANO COUNTY									
SH-26/17E/28-0223	06-26-02	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02	<.04
SH-27/17E/14-0222	06-27-02	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02	<.04
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<.04	<.1	<.06	E.06	<.06	<.03	<.2	<.1	<.02	<.04
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	<.04	<.1	<.06	.11	<.06	<.03	<.2	<.1	<.02	<.04
WI-18/14E/36-0841	05-23-02	<.04	<.1	<.06	E.03	<.06	<.03	<.2	<.1	<.02	<.04
WI-18/16E/24-0395	05-28-02	<.04	<.1	<.06	E.09	<.06	<.03	<.2	<.1	<.02	E.06
WI-20/14E/30-0140	05-28-02	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02	<.04
Local ident- i- fier	Date	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	DIBROMO CHLORO- PROPANE WATER WHOLE TOT.REC (UG/L) (82625)	DI- BROMO- METHANE WATER WHOLE RECOVER (UG/L) (30217)	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	DI-ISO- PROPYL- ETHER, WATER, UNFLTRD RECOVER (UG/L) (81577)	ETHANE, 1112- ETHER, CHLORO- WAT UNF REC (UG/L) (77562)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	ETHANE 12DICL SURROG VOC UNFLTRD REC PERCENT (99832)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (UG/L) (34396)
		SHAWANO COUNTY									
SH-26/17E/28-0223	06-26-02	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	116	<.2
SH-27/17E/14-0222	06-27-02	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	118	<.2
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<.09	<.5	<.05	<.05	E.08	<.10	<.03	<.09	101	<.2
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	112	<.2
WI-18/14E/36-0841	05-23-02	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	111	<.2
WI-18/16E/24-0395	05-28-02	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	108	<.2
WI-20/14E/30-0140	05-28-02	<.09	<.5	<.05	<.05	<.18	<.10	<.03	<.09	111	<.2
Local ident- i- fier	Date	ETHER ETHYL WATER UNFLTRD RECOVER (UG/L) (81576)	ETHER TERT- BUTYL ETHYL UNFLTRD RECOVER (UG/L) (50004)	ETHER TERT- PENTYL METHYL UNFLTRD RECOVER (UG/L) (50005)	ETHYL- BENZENE TOTAL (UG/L) (34371)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)	FURAN, TETRA- HYDRO- WATER UNFLTRD RECOVER (UG/L) (81607)	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L) (39702)	ISO- DURENE WATER UNFLTRD RECOVER (UG/L) (50000)	METHAC- RYLATE ETHYL- WATER UNFLTRD RECOVER (UG/L) (73570)	METHAC- RYLATE METHYL WATER UNFLTRD RECOVER (UG/L) (81597)
		SHAWANO COUNTY									
SH-26/17E/28-0223	06-26-02	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2	<.3
SH-27/17E/14-0222	06-27-02	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2	<.3
WAUSHARA COUNTY											
WS-18/12E/29-1006	05-22-02	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2	<.3
WINNEBAGO COUNTY											
WI-17/14E/36-0332	05-20-02	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2	<.3
WI-18/14E/36-0841	05-23-02	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2	<.3
WI-18/16E/24-0395	05-28-02	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2	<.3
WI-20/14E/30-0140	05-28-02	<.2	<.05	<.08	<.03	<.06	<2	<.1	<.2	<.2	<.3

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	METHANE	METHYL	METHYL	METHYL		METHYL-	METHYL-	METHYL-	METHYL	METHYL	METHA/ PARA-
		BROMO- CHLORO- WAT UNFLTRD REC (UG/L) (77297)	ACRY- LATE WATER UNFLTRD RECOVER (UG/L) (49991)	IODIDE WATER UNFLTRD RECOVER (UG/L) (77424)	TERT- BUTYL ETHER WAT UNF REC (UG/L) (78032)	METHYL- BROMIDE TOTAL (UG/L) (34413)		CHLO- RIDE TOTAL (UG/L) (34418)	ENE CHLO- RIDE TOTAL (UG/L) (34423)	ETHYL- KETONE WATER WHOLE TOTAL (UG/L) (81595)	ISO- BUTYL KETONE WAT. WH. TOTAL (UG/L) (78133)	XYLENE WATER UNFLTRD REC (UG/L) (85795)
SHAWANO COUNTY												
SH-26/17E/28-0223	06-26-02	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4	<.06	
SH-27/17E/14-0222	06-27-02	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4	<.06	
WAUSHARA COUNTY												
WS-18/12E/29-1006	05-22-02	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4	<.06	
WINNEBAGO COUNTY												
WI-17/14E/36-0332	05-20-02	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4	<.06	
WI-18/14E/36-0841	05-23-02	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4	<.06	
WI-18/16E/24-0395	05-28-02	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4	<.06	
WI-20/14E/30-0140	05-28-02	<.07	<2.0	<.25	<.2	<.3	<.2	<.2	<5.0	<.4	<.06	
Local ident- i- fier	Date		O- CHLORO- TOLUENE WATER WHOLE TOTAL (UG/L) (34696)	O- XYLENE WATER WHOLE TOTAL (UG/L) (77135)	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (UG/L) (77356)	1234- TETRA METHYL BENZENE UNFLTRD REC (UG/L) (49999)	1,3-DI- CHLORO- PROPANE WAT. WH TOTAL (UG/L) (77173)	PROPENE 3- CHLORO- WATER UNFLTRD RECOVER (UG/L) (78109)	STYRENE TOTAL (UG/L) (77128)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TOLUENE D8 SURROG VOC UNFLTRD REC PERCENT (99833)	
		NAPHTH- ALENE TOTAL (UG/L) (34696)										
SHAWANO COUNTY												
SH-26/17E/28-0223	06-26-02	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03	97.7	
SH-27/17E/14-0222	06-27-02	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03	98.7	
WAUSHARA COUNTY												
WS-18/12E/29-1006	05-22-02	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03	98.7	
WINNEBAGO COUNTY												
WI-17/14E/36-0332	05-20-02	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03	99.6	
WI-18/14E/36-0841	05-23-02	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03	99.6	
WI-18/16E/24-0395	05-28-02	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03	101	
WI-20/14E/30-0140	05-28-02	<.5	<.03	<.07	<.07	<.2	<.1	<.07	<.04	<.03	101	
Local ident- i- fier	Date	TOLUENE	TOLUENE		TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	RADON 222 TOTAL (PCI/L) (82303)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	
		O-ETHYL WATER UNFLTRD RECOVER (UG/L) (77220)	P-CHLOR WATER UNFLTRD REC (UG/L) (77277)	TOLUENE TOTAL (UG/L) (34010)								
SHAWANO COUNTY												
SH-26/17E/28-0223	06-26-02	<.06	<.05	<.05	<.09	<.04	<.09	<.1	650	26	1.79	
SH-27/17E/14-0222	06-27-02	<.06	<.05	<.05	<.09	<.04	<.09	<.1	420	23	.85	
WAUSHARA COUNTY												
WS-18/12E/29-1006	05-22-02	<.06	<.05	E.01	<.09	<.04	<.09	<.1	180	19	.17	
WINNEBAGO COUNTY												
WI-17/14E/36-0332	05-20-02	<.06	<.05	E.01	<.09	<.04	<.09	<.1	220	19	.39	
WI-18/14E/36-0841	05-23-02	<.06	<.05	<.05	<.09	<.04	<.09	<.1	1470	84	1.05	
WI-18/16E/24-0395	05-28-02	<.06	<.05	E.01	<.09	<.04	<.09	<.1	590	26	.58	
WI-20/14E/30-0140	05-28-02	<.06	<.05	<.05	<.09	<.04	<.09	<.1	1960	41	.90	

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	TICS FROM VOC BY GCMS NUMBER (99871)
SHAWANO COUNTY		
SH-26/17E/28-0223	06-26-02	0
SH-27/17E/14-0222	06-27-02	0
WAUSHARA COUNTY		
WS-18/12E/29-1006	05-22-02	0
WINNEBAGO COUNTY		
WI-17/14E/36-0332	05-20-02	0
WI-18/14E/36-0841	05-23-02	0
WI-18/16E/24-0395	05-28-02	0
WI-20/14E/30-0140	05-28-02	0

QUALITY OF GROUND WATER

587

Data for the following sites represent ground-water samples collected as part of an agricultural land-use study conducted in the Western Lake Michigan Drainages study unit of the National Water-Quality Assessment (NAWQA) Program. Land-use study samples were collected from shallow monitor wells in the sand and gravel aquifer. Note: Sites FR-0656 and FR-0863 are reference wells that are minimally impacted by agricultural land use.

GEOLOGICAL UNIT.--100SDGV, sand and gravel aquifer, consists of unconsolidated deposits of the Quaternary System.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Station number	Geo- logic unit	Date	Time	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	FLOW RATE (G/M) (00059)	SAM- PLING METHOD, CODES (82398)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)
ADAMS COUNTY										
AD-15/07E/24-0407	434551089365001	100SDGV	07-29-02	1000	34.80	54	1.0	4040	1.9	8.7
FOREST COUNTY										
FR-34/14E/03-0656	452726088434401	100SDGV	09-09-02	1500	14.55	34	1.0	4040	.21	6.1
FR-38/12E/36-0863	454350088560301	100SDGV	09-10-02	1000	39.02	52	.50	4040	85	8.7
LANGLADE COUNTY										
LA-30/11E/25-1310	450242089065401	100SDGV	08-20-02	1700	16.47	39	.25	4040	15	6.5
MARATHON COUNTY										
MR-27/10E/13-1182	444910089140401	100SDGV	08-12-02	1700	9.90	23.5	1.0	4040	.55	.7
MARQUETTE COUNTY										
MQ-16/08E/32-0102	434944089345001	100SDGV	07-29-02	1400	38.44	73	1.0	4040	.37	9.5
MQ-16/08E/19-0103	435140089351301	100SDGV	07-30-02	1500	7.71	23	1.0	4040	.88	6.0
MQ-16/09E/17-0106	435142089270101	100SDGV	07-30-02	1000	10.59	32	--	4040	52	1.2
MQ-17/08E/35-0104	435339089305001	100SDGV	07-31-02	1400	19.44	44	1.0	4040	.39	7.9
MQ-17/09E/08-0105	435729089265401	100SDGV	08-28-02	1300	29.95	84	1.0	4040	1.2	9.6
PORTAGE COUNTY										
PT-21/10E/03-1319	441900089164501	100SDGV	08-27-02	1000	61.17	62	.40	4040	6.0	11.2
PT-22/10E/32-1320	441958089183601	100SDGV	08-15-02	1000	67.67	81	.67	4040	1.4	8.9
PT-23/09E/26-1321	442631089222901	100SDGV	08-14-02	0900	25.46	59	1.0	4040	.50	7.3
PT-23/10E/13-1322	442819089141301	100SDGV	08-14-02	1300	73.22	94	.67	4040	1.1	3.8
PT-24/10E/16-1324	443342089171601	100SDGV	08-13-02	1100	47.21	68	1.0	4040	.30	9.5
PT-25/10E/11-1323	443921089152001	100SDGV	08-21-02	1000	19.17	33	1.5	4040	.93	.1
SHAWANO COUNTY										
SH-27/13E/04-0221	445052088552801	100SDGV	08-20-02	1300	11.38	28	1.3	4040	1.1	.0
SH-28/12E/05-0218	445556089045701	100SDGV	08-29-02	1000	5.71	10	.10	4040	24	4.5
WAUPACA COUNTY										
WP-21/12E/06-0789	441858089045901	100SDGV	08-22-02	1000	17.78	74.25	.50	4040	72	.4
WP-22/11E/22-0791	442151089091301	100SDGV	08-21-02	1500	23.21	43	1.2	4040	.24	8.2
WP-22/12E/23-0790	442154089005301	100SDGV	08-14-02	1700	23.81	39	.25	4040	43	6.4
WP-22/12E/07-0792	442333089055201	100SDGV	08-13-02	1700	14.14	29	.50	4040	.26	7.5
WP-24/11E/16-0793	443339089095001	100SDGV	08-12-02	1200	1.91	19	1.0	4040	3.7	.3
WP-25/13E/31-0794	443610088582201	100SDGV	08-13-02	1400	18.53	29.5	.50	4040	3.7	6.8
WAUSHARA COUNTY										
WS-18/08E/34-0997	435946089323001	100SDGV	08-28-02	1500	22.35	39	1.0	4040	.91	10.0
WS-18/11E/15-1000	440149089102401	100SDGV	08-27-02	1500	21.21	41	1.0	4040	20	9.2
WS-19/10E/18-0999	440643089214501	100SDGV	07-31-02	1100	105.74	128	.50	4040	18	9.8
WS-19/09E/09-1001	440827089255001	100SDGV	08-28-02	1000	74.85	94	.50	4040	1.2	8.5

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	7.2	497	11.9	55.5	27.2	.43	5.01	187	227	0
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	6.7	155	7.8	14.7	7.66	.49	1.47	58	70	0
FR-38/12E/36-0863	09-10-02	5.7	56	8.9	4.69	1.84	.63	1.73	18	22	0
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	7.2	799	13.2	88.7	47.9	1.62	4.51	338	410	0
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	7.0	780	9.8	85.2	40.1	1.42	16.7	249	303	0
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	7.5	540	11.6	56.5	30.1	.49	2.00	154	187	0
MQ-16/08E/19-0103	07-30-02	7.1	554	10.8	61.9	25.5	2.29	10.7	220	267	0
MQ-16/09E/17-0106	07-30-02	7.2	949	11.1	108	56.7	.75	6.34	367	446	0
MQ-17/08E/35-0104	07-31-02	7.4	553	10.2	60.7	27.7	3.60	3.49	195	237	0
MQ-17/09E/08-0105	08-28-02	6.9	440	11.0	45.8	23.9	1.25	2.89	106	128	0
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	7.8	368	11.8	42.9	18.7	3.19	2.98	157	190	0
PT-22/10E/32-1320	08-15-02	7.5	474	11.9	53.5	27.2	.64	2.29	198	240	0
PT-23/09E/26-1321	08-14-02	7.2	651	10.0	80.4	39.8	2.03	4.06	303	368	0
PT-23/10E/13-1322	08-14-02	7.5	446	12.4	52.8	27.1	1.26	2.92	214	260	0
PT-24/10E/16-1324	08-13-02	7.3	891	10.8	92.1	46.3	1.18	4.69	239	290	0
PT-25/10E/11-1323	08-21-02	6.2	296	8.6	29.0	15.2	2.72	3.12	137	167	0
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	6.8	348	8.6	40.9	17.7	.54	1.43	175	213	0
SH-28/12E/05-0218	08-29-02	6.5	210	17.0	20.6	10.7	.48	1.03	82	99	0
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	8.2	259	12.3	19.2	6.10	1.29	29.0	140	166	2
WP-22/11E/22-0791	08-21-02	7.3	594	10.0	62.2	30.5	1.18	2.57	172	209	0
WP-22/12E/23-0790	08-14-02	7.2	842	16.5	104	53.8	1.19	5.01	384	466	0
WP-22/12E/07-0792	08-13-02	6.9	332	9.8	31.9	13.1	1.03	3.61	36	44	0
WP-24/11E/16-0793	08-12-02	6.8	429	10.4	46.1	22.0	1.36	3.82	123	149	0
WP-25/13E/31-0794	08-13-02	7.4	420	11.6	49.6	23.6	.77	3.58	203	246	0
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	7.4	420	10.0	49.9	24.6	.38	2.48	185	225	0
WS-18/11E/15-1000	08-27-02	7.2	505	11.0	56.0	25.3	2.04	1.94	148	180	0
WS-19/10E/18-0999	07-31-02	7.5	416	13.5	46.8	23.9	.40	1.61	186	226	0
WS-19/09E/09-1001	08-28-02	7.0	917	12.4	106	52.2	.67	3.34	239	290	0

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	E.03	10.7	E.09	16.9	10.9	280	<.04	<.10	2.37	<.008
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<.03	.61	E.08	15.4	14.8	85	<.04	<.10	.11	<.008
FR-38/12E/36-0863	09-10-02	<.03	.40	E.06	16.7	4.8	39	<.04	E.05	.28	<.008
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	E.02	15.8	.11	16.9	3.4	380	<.04	.16	18.2	<.008
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	E.02	57.5	E.07	16.1	14.3	443	<.04	.21	12.9	<.008
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	E.02	13.7	E.07	14.3	5.4	316	<.04	E.08	19.3	<.008
MQ-16/08E/19-0103	07-30-02	E.01	16.2	<.10	12.2	8.4	318	<.04	.12	6.71	<.008
MQ-16/09E/17-0106	07-30-02	.04	26.5	.12	16.9	33.8	565	<.04	E.08	19.0	.008
MQ-17/08E/35-0104	07-31-02	<.03	8.41	<.10	10.6	14.4	316	<.04	.14	13.5	<.008
MQ-17/09E/08-0105	08-28-02	<.03	24.4	<.10	10.5	7.3	281	<.04	.15	20.3	<.008
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<.03	6.24	<.10	6.78	6.7	207	E.02	E.07	5.42	<.008
PT-22/10E/32-1320	08-15-02	<.03	12.4	E.08	12.3	6.4	282	<.04	E.06	9.71	<.008
PT-23/09E/26-1321	08-14-02	E.02	12.3	.49	16.5	13.8	399	<.04	E.05	9.03	<.008
PT-23/10E/13-1322	08-14-02	<.03	6.96	.32	13.5	15.0	258	<.04	E.06	3.71	<.008
PT-24/10E/16-1324	08-13-02	.03	46.4	<.10	13.1	27.3	471	<.04	.21	18.2	<.008
PT-25/10E/11-1323	08-21-02	.06	9.25	E.09	5.58	8.8	182	.50	1.0	.10	<.008
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	<.03	5.93	.12	15.1	1.6	189	1.67	2.0	.07	<.008
SH-28/12E/05-0218	08-29-02	.12	.50	E.07	22.7	2.1	140	.08	.20	E.03	<.008
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	<.15	1.10	.73	21.6	.6	164	.42	.61	<.05	<.008
WP-22/11E/22-0791	08-21-02	E.03	22.8	.12	13.5	17.1	397	<.04	E.09	22.7	<.008
WP-22/12E/23-0790	08-14-02	E.02	22.4	E.09	21.4	15.4	533	<.04	E.09	14.9	<.008
WP-22/12E/07-0792	08-13-02	E.02	15.7	<.10	16.1	13.3	222	<.04	.10	19.0	<.008
WP-24/11E/16-0793	08-12-02	<.03	13.5	<.10	15.2	13.2	258	<.04	.19	13.6	.204
WP-25/13E/31-0794	08-13-02	<.03	3.65	.11	13.9	7.1	228	<.04	.15	1.16	<.008
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	<.03	10.5	<.10	17.7	5.9	221	<.04	E.06	5.78	<.008
WS-18/11E/15-1000	08-27-02	E.03	17.6	<.10	12.7	18.1	293	<.04	E.07	16.1	<.008
WS-19/10E/18-0999	07-31-02	E.02	3.27	<.10	11.5	7.0	232	<.04	<.10	4.74	<.008
WS-19/09E/09-1001	08-28-02	.04	39.8	<.10	14.5	35.4	572	<.04	.14	39.7	<.008

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	<.02	.5	<1	E.04	.6	17	<.06	E5	<.04	3.6
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<.02	.9	<1	<.05	<.2	2	<.06	7	<.04	E.6
FR-38/12E/36-0863	09-10-02	E.01	.8	1	<.05	<.2	2	<.06	7	<.04	E.5
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	E.01	1.7	<1	E.04	.3	30	<.06	10	<.04	3.8
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	<.02	1.9	<1	<.05	.3	30	<.06	29	<.04	E.6
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	<.02	.6	3	E.03	.3	11	<.06	18	<.04	2.0
MQ-16/08E/19-0103	07-30-02	<.02	1.1	<1	<.05	.2	12	<.06	13	<.04	.8
MQ-16/09E/17-0106	07-30-02	<.02	.8	<1	.05	.3	58	<.06	E5	<.04	1.1
MQ-17/08E/35-0104	07-31-02	<.02	1.0	<1	<.05	E.1	23	<.06	33	<.04	1.3
MQ-17/09E/08-0105	08-28-02	<.02	.8	<1	<.05	<.2	11	<.06	E4	<.04	<.8
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<.02	.6	1	.05	E.1	13	<.06	9	<.04	E.5
PT-22/10E/32-1320	08-15-02	<.02	.6	<1	<.05	.5	14	<.06	11	<.04	1.9
PT-23/09E/26-1321	08-14-02	<.02	.9	<1	<.05	.3	37	<.06	8	<.04	1.9
PT-23/10E/13-1322	08-14-02	<.02	.4	2	<.05	.5	24	<.06	E6	<.04	1.6
PT-24/10E/16-1324	08-13-02	<.02	1.2	2	<.05	.2	22	<.06	31	<.04	2.2
PT-25/10E/11-1323	08-21-02	.02	10.0	22	E.03	.4	21	E.04	8	<.04	.9
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	.04	4.4	3	E.03	.3	16	<.06	13	<.04	E.4
SH-28/12E/05-0218	08-29-02	<.02	4.5	3	E.04	.5	24	<.06	12	.06	E.6
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	.10	3.4	<1	<.05	16.5	29	<.06	152	.05	<.8
WP-22/11E/22-0791	08-21-02	<.02	.7	<1	<.05	.4	16	<.06	16	<.04	<.8
WP-22/12E/23-0790	08-14-02	<.02	1.1	1	<.05	.3	37	<.06	E6	<.04	3.3
WP-22/12E/07-0792	08-13-02	<.02	.5	3	<.05	<.2	13	<.06	12	<.04	1.7
WP-24/11E/16-0793	08-12-02	<.02	2.2	1	E.04	E.1	20	<.06	43	.04	E.6
WP-25/13E/31-0794	08-13-02	<.02	1.1	2	<.05	E.2	11	<.06	22	<.04	3.2
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	E.01	.5	<1	E.03	.3	10	<.06	11	<.04	E.8
WS-18/11E/15-1000	08-27-02	<.02	.6	<1	E.04	.4	23	<.06	15	<.04	1.1
WS-19/10E/18-0999	07-31-02	<.02	.5	1	<.05	E.2	9	<.06	12	<.04	1.1
WS-19/09E/09-1001	08-28-02	<.02	1.1	<1	E.02	<.2	31	<.06	67	<.04	.9

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S) (71875)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	.37	1.2	ND	14	<.08	.8	1.2	.8	4.38	E.2
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	.06	.4	ND	<10	<.08	.8	.2	<.2	1.09	<.3
FR-38/12E/36-0863	09-10-02	.06	.6	ND	<10	<.08	1.4	1.2	.2	1.60	<.3
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	.33	1.3	ND	11	E.06	2.9	.6	1.3	4.25	E.3
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	.20	1.4	ND	<10	E.06	2.2	.4	.5	1.90	E.2
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	.14	.5	ND	E6	<.08	E.2	.3	.3	2.06	<.3
MQ-16/08E/19-0103	07-30-02	.25	1.1	ND	<10	<.08	.5	.2	E.2	1.16	.5
MQ-16/09E/17-0106	07-30-02	.24	1.0	ND	<10	<.08	5.1	3.4	.5	1.90	.7
MQ-17/08E/35-0104	07-31-02	.16	1.2	ND	E5	<.08	.3	.2	.2	1.50	<.3
MQ-17/09E/08-0105	08-28-02	.25	.5	M.0	<10	<.08	E.3	.5	<.2	.83	<.3
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	.11	1.1	ND	<10	<.08	.6	.2	<.2	.47	E.2
PT-22/10E/32-1320	08-15-02	.19	.6	ND	E6	<.08	.9	.4	.4	2.26	<.3
PT-23/09E/26-1321	08-14-02	.23	.9	ND	E8	<.08	2.6	.3	1.0	2.67	E.2
PT-23/10E/13-1322	08-14-02	.20	.9	ND	E9	<.08	2.1	1.5	1.7	3.54	E.2
PT-24/10E/16-1324	08-13-02	.30	.9	ND	<10	<.08	1.5	.2	.4	2.69	<.3
PT-25/10E/11-1323	08-21-02	.23	E.2	M.0	3250	E.07	E.2	312	E.1	.97	E.2
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	.15	E.2	M.0	1470	E.05	1.2	80.4	.5	.91	E.2
SH-28/12E/05-0218	08-29-02	.24	1.4	ND	4430	<.08	1.2	485	E.2	1.09	E.2
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	.12	<.2	M.0	39	E.07	1.7	36.7	25.9	.61	<.3
WP-22/11E/22-0791	08-21-02	.15	.6	ND	<10	<.08	1.6	.2	.4	1.61	E.2
WP-22/12E/23-0790	08-14-02	.52	1.1	ND	45	<.08	3.5	2.8	3.2	13.0	E.2
WP-22/12E/07-0792	08-13-02	.09	.3	ND	<10	<.08	.8	.3	<.2	1.11	<.3
WP-24/11E/16-0793	08-12-02	.15	1.4	ND	<10	<.08	1.9	29.5	.4	2.09	<.3
WP-25/13E/31-0794	08-13-02	.20	.7	ND	16	<.08	1.5	.7	1.3	4.08	<.3
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	.10	.4	ND	<10	<.08	.6	.1	E.1	E.06	E.3
WS-18/11E/15-1000	08-27-02	.29	.7	ND	<10	<.08	.6	.2	E.2	.95	.6
WS-19/10E/18-0999	07-31-02	.20	.8	ND	14	<.08	.4	1.0	1.2	4.61	<.3
WS-19/09E/09-1001	08-28-02	.29	1.5	ND	<10	<.08	.9	.3	E.1	1.94	<.3

M Presence verified, not quantified
 ND Not detected

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	<1	31.1	<.04	4.8	12	<.006	<.006	<.004	<.005	.394
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<1	17.1	<.04	.5	<1	<.006	<.006	<.004	<.005	<.007
FR-38/12E/36-0863	09-10-02	<1	12.8	<.04	.5	<1	<.006	<.006	<.004	<.005	<.007
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	<1	62.4	<.04	1.3	2	<.006	<.006	<.004	<.005	<.007
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	<1	91.3	<.04	1.4	<1	<.006	<.006	<.004	<.005	.141
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	<1	30.3	<.04	3.2	<1	<.006	<.006	<.004	<.005	.080
MQ-16/08E/19-0103	07-30-02	<1	42.5	<.04	1.6	<1	<.006	<.006	<.004	<.005	.147
MQ-16/09E/17-0106	07-30-02	<1	78.3	<.04	2.3	1	<.006	<.006	<.004	<.005	.259
MQ-17/08E/35-0104	07-31-02	<1	45.3	<.04	.8	3	<.006	<.006	<.004	<.005	.012
MQ-17/09E/08-0105	08-28-02	<1	49.1	<.04	.4	<1	<.006	<.006	<.004	<.005	.461
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<1	45.8	<.04	1.3	<1	<.006	<.006	<.004	<.005	.062
PT-22/10E/32-1320	08-15-02	<1	36.4	.05	1.9	4	<.006	<.006	<.004	<.005	.137
PT-23/09E/26-1321	08-14-02	<1	50.8	<.04	2.1	2	<.006	<.006	<.004	<.005	.125
PT-23/10E/13-1322	08-14-02	<1	38.3	<.04	1.9	2	<.006	<.006	<.004	<.005	.021
PT-24/10E/16-1324	08-13-02	<1	68.6	<.04	2.1	1	<.006	<.006	<.004	<.005	.022
PT-25/10E/11-1323	08-21-02	<1	39.6	E.03	4.5	<1	E.005	<.006	<.004	<.005	<.007
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	<1	23.9	.12	2.3	<1	<.006	<.006	<.004	<.005	<.007
SH-28/12E/05-0218	08-29-02	<1	24.0	E.02	1.5	90	E.001	<.006	<.004	<.005	<.007
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	<1	109	<.04	E.1	<1	<.006	<.006	<.004	<.005	<.007
WP-22/11E/22-0791	08-21-02	<1	57.9	<.04	1.4	<1	<.006	<.006	<.004	<.005	.095
WP-22/12E/23-0790	08-14-02	<1	66.2	<.04	3.2	1	<.006	<.006	<.004	<.005	.007
WP-22/12E/07-0792	08-13-02	<1	108	.15	.6	<1	<.006	<.006	<.004	<.005	.205
WP-24/11E/16-0793	08-12-02	<1	86.6	<.04	.8	<1	<.006	<.006	<.004	<.005	.067
WP-25/13E/31-0794	08-13-02	<1	34.6	.12	2.3	<1	<.006	<.006	<.004	<.005	.019
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	<1	31.2	E.02	1.8	1	<.006	<.006	<.004	<.005	.028
WS-18/11E/15-1000	08-27-02	<1	59.1	E.02	1.2	1	<.006	<.006	<.004	<.005	.171
WS-19/10E/18-0999	07-31-02	<1	25.9	<.04	1.3	<1	<.006	<.006	<.004	<.005	.030
WS-19/09E/09-1001	08-28-02	<1	55.3	<.04	1.3	2	<.006	<.006	<.004	<.005	.036

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.926	118	<.005
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	104	<.005
FR-38/12E/36-0863	09-10-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.004	110	<.005
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.104	102	<.005
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.113	111	<.005
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.697	110	<.005
MQ-16/08E/19-0103	07-30-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.252	106	<.005
MQ-16/09E/17-0106	07-30-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.562	99.0	<.005
MQ-17/08E/35-0104	07-31-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.055	102	<.005
MQ-17/09E/08-0105	08-28-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.862	76.5	<.005
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.068	121	<.005
PT-22/10E/32-1320	08-15-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.561	97.2	<.005
PT-23/09E/26-1321	08-14-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.284	110	<.005
PT-23/10E/13-1322	08-14-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.048	111	<.005
PT-24/10E/16-1324	08-13-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.064	116	<.005
PT-25/10E/11-1323	08-21-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	111	<.005
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	105	<.005
SH-28/12E/05-0218	08-29-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.003	95.0	<.005
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	105	<.005
WP-22/11E/22-0791	08-21-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.381	99.0	<.005
WP-22/12E/23-0790	08-14-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.041	111	<.005
WP-22/12E/07-0792	08-13-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.352	92.7	<.005
WP-24/11E/16-0793	08-12-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.095	98.1	<.005
WP-25/13E/31-0794	08-13-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.045	102	<.005
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.137	86.2	<.005
WS-18/11E/15-1000	08-27-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.505	122	<.005
WS-19/10E/18-0999	07-31-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.157	100	<.005
WS-19/09E/09-1001	08-28-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.338	78.7	<.005

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U (UG/L) (82677)	EPTC WATER FLTRD 0.7 U (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U DIS- SOLVED (UG/L) (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	<.005	<.02	<.002	<.009	<.005	<.003	98.1	<.004	<.035	<.027
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<.005	<.02	<.002	<.009	<.005	<.003	95.3	<.004	<.035	<.027
FR-38/12E/36-0863	09-10-02	<.005	<.02	<.002	<.009	<.005	<.003	97.2	<.004	<.035	<.027
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	<.005	<.02	<.002	<.009	<.005	<.003	94.2	<.004	<.035	<.027
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	<.005	<.02	<.002	<.009	<.005	<.003	97.2	<.004	<.035	<.027
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	<.005	<.02	<.002	<.009	<.005	<.003	90.5	<.004	<.035	<.027
MQ-16/08E/19-0103	07-30-02	<.005	<.02	<.002	<.009	<.005	<.003	106	<.004	<.035	<.027
MQ-16/09E/17-0106	07-30-02	<.005	<.02	<.002	<.009	<.005	<.003	100	<.004	<.035	<.027
MQ-17/08E/35-0104	07-31-02	<.005	<.02	<.002	<.009	<.005	<.003	102	<.004	<.035	<.027
MQ-17/09E/08-0105	08-28-02	<.005	<.02	<.002	<.009	<.005	<.003	86.5	<.004	<.035	<.027
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<.005	<.02	<.002	<.009	<.005	<.003	95.3	<.004	<.035	<.027
PT-22/10E/32-1320	08-15-02	<.005	<.02	<.002	<.009	<.005	<.003	106	<.004	<.035	<.027
PT-23/09E/26-1321	08-14-02	<.005	<.02	<.002	<.009	<.005	<.003	93.5	<.004	<.035	<.027
PT-23/10E/13-1322	08-14-02	<.005	<.02	<.002	<.009	<.005	<.003	98.1	<.004	<.035	<.027
PT-24/10E/16-1324	08-13-02	<.005	<.02	<.002	<.009	<.005	<.003	103	<.004	<.035	<.027
PT-25/10E/11-1323	08-21-02	<.005	<.02	<.002	<.009	<.005	<.003	96.2	<.004	<.035	<.027
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	<.005	<.02	<.002	<.009	<.005	<.003	101	<.004	<.035	<.027
SH-28/12E/05-0218	08-29-02	<.005	<.02	<.002	<.009	<.005	<.003	96.2	<.004	<.035	<.027
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	<.005	<.02	<.002	<.009	<.005	<.003	91.1	<.004	<.035	<.027
WP-22/11E/22-0791	08-21-02	<.005	<.02	<.002	<.009	<.005	<.003	86.3	<.004	<.035	<.027
WP-22/12E/23-0790	08-14-02	<.005	<.02	<.002	<.009	<.005	<.003	98.2	<.004	<.035	<.027
WP-22/12E/07-0792	08-13-02	<.005	<.02	<.002	<.009	<.005	<.003	92.7	<.004	<.035	<.027
WP-24/11E/16-0793	08-12-02	<.005	<.02	<.002	<.009	<.005	<.003	99.1	<.004	<.035	<.027
WP-25/13E/31-0794	08-13-02	<.005	<.02	<.002	<.009	<.005	<.003	107	<.004	<.035	<.027
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	<.005	<.02	<.002	<.009	<.005	<.003	102	<.004	<.035	<.027
WS-18/11E/15-1000	08-27-02	<.005	<.02	<.002	<.009	<.005	<.003	92.3	<.004	<.035	<.027
WS-19/10E/18-0999	07-31-02	<.005	<.02	<.002	<.009	<.005	<.003	95.4	<.004	<.035	<.027
WS-19/09E/09-1001	08-28-02	<.005	<.02	<.002	<.009	<.005	<.003	91.0	<.004	<.035	<.027

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	METHYL AZIN- PHOS	METHYL PARA- THION	METO- LACHLOR WATER	METRI- BUZIN WATER	MOL- INATE WATER	NAPROP- AMIDE WATER	P,P' DDE	PARA- THION, DIS- SOLVED	PEB- ULATE WATER	PENDI- METH- ALIN
		WAT FLT 0.7 U GF, REC (UG/L) (82686)	WAT FLT 0.7 U GF, REC (UG/L) (82667)	DISSOLV (UG/L) (39415)	DISSOLV (UG/L) (82630)	GF, REC (UG/L) (82671)	GF, REC (UG/L) (82684)		DISSOLV (UG/L) (34653)	DISSOLV (UG/L) (39542)	FILTRD 0.7 U GF, REC (UG/L) (82669)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
FR-38/12E/36-0863	09-10-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MQ-16/08E/19-0103	07-30-02	<.050	<.006	.014	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MQ-16/09E/17-0106	07-30-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MQ-17/08E/35-0104	07-31-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MQ-17/09E/08-0105	08-28-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PT-22/10E/32-1320	08-15-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PT-23/09E/26-1321	08-14-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PT-23/10E/13-1322	08-14-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PT-24/10E/16-1324	08-13-02	<.050	<.006	E.003	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PT-25/10E/11-1323	08-21-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
SH-28/12E/05-0218	08-29-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WP-22/11E/22-0791	08-21-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WP-22/12E/23-0790	08-14-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WP-22/12E/07-0792	08-13-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WP-24/11E/16-0793	08-12-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WP-25/13E/31-0794	08-13-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WS-18/11E/15-1000	08-27-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WS-19/10E/18-0999	07-31-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WS-19/09E/09-1001	08-28-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	PER- METHRIN WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
FR-38/12E/36-0863	09-10-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	<.006	<.011	<.01	<.004	<.011	<.02	E.003	<.02	<.034	<.02
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
MQ-16/08E/19-0103	07-30-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
MQ-16/09E/17-0106	07-30-02	<.006	<.011	<.01	<.004	<.011	<.02	.018	<.02	<.034	<.02
MQ-17/08E/35-0104	07-31-02	<.006	<.011	<.01	<.004	<.011	<.02	.006	<.02	<.034	<.02
MQ-17/09E/08-0105	08-28-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PT-22/10E/32-1320	08-15-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PT-23/09E/26-1321	08-14-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PT-23/10E/13-1322	08-14-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PT-24/10E/16-1324	08-13-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PT-25/10E/11-1323	08-21-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	<.006	<.011	<.01	<.004	<.011	<.02	.009	<.02	<.034	<.02
SH-28/12E/05-0218	08-29-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WP-22/11E/22-0791	08-21-02	<.006	<.011	<.01	<.004	<.011	<.02	.009	<.02	<.034	<.02
WP-22/12E/23-0790	08-14-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WP-22/12E/07-0792	08-13-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WP-24/11E/16-0793	08-12-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WP-25/13E/31-0794	08-13-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WS-18/11E/15-1000	08-27-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WS-19/10E/18-0999	07-31-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WS-19/09E/09-1001	08-28-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02

QUALITY OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
ADAMS COUNTY					
AD-15/07E/24-0407	07-29-02	<.005	<.002	<.009	.18
FOREST COUNTY					
FR-34/14E/03-0656	09-09-02	<.005	<.002	<.009	E.01
FR-38/12E/36-0863	09-10-02	<.005	<.002	<.009	<.02
LANGLADE COUNTY					
LA-30/11E/25-1310	08-20-02	<.005	<.002	<.009	1.56
MARATHON COUNTY					
MR-27/10E/13-1182	08-12-02	<.005	<.002	<.009	1.09
MARQUETTE COUNTY					
MQ-16/08E/32-0102	07-29-02	<.005	<.002	<.009	.05
MQ-16/08E/19-0103	07-30-02	<.005	<.002	<.009	.07
MQ-16/09E/17-0106	07-30-02	<.005	<.002	<.009	3.21
MQ-17/08E/35-0104	07-31-02	<.005	<.002	<.009	.08
MQ-17/09E/08-0105	08-28-02	<.005	<.002	<.009	E.01
PORTAGE COUNTY					
PT-21/10E/03-1319	08-27-02	<.005	<.002	<.009	.09
PT-22/10E/32-1320	08-15-02	<.005	<.002	<.009	.24
PT-23/09E/26-1321	08-14-02	<.005	<.002	<.009	2.17
PT-23/10E/13-1322	08-14-02	<.005	<.002	<.009	3.93
PT-24/10E/16-1324	08-13-02	<.005	<.002	<.009	.76
PT-25/10E/11-1323	08-21-02	<.005	<.002	<.009	.26
SHAWANO COUNTY					
SH-27/13E/04-0221	08-20-02	<.005	<.002	<.009	.50
SH-28/12E/05-0218	08-29-02	<.005	<.002	<.009	.05
WAUPACA COUNTY					
WP-21/12E/06-0789	08-22-02	<.005	<.002	<.009	.04
WP-22/11E/22-0791	08-21-02	<.005	<.002	<.009	.35
WP-22/12E/23-0790	08-14-02	<.005	<.002	<.009	.60
WP-22/12E/07-0792	08-13-02	<.005	<.002	<.009	.02
WP-24/11E/16-0793	08-12-02	<.005	<.002	<.009	11.9
WP-25/13E/31-0794	08-13-02	<.005	<.002	<.009	.48
WAUSHARA COUNTY					
WS-18/08E/34-0997	08-28-02	<.005	<.002	<.009	.07
WS-18/11E/15-1000	08-27-02	<.005	<.002	<.009	.10
WS-19/10E/18-0999	07-31-02	<.005	<.002	<.009	.14
WS-19/09E/09-1001	08-28-02	<.005	<.002	<.009	.30

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	<1	31.1	<.04	4.8	12	<.006	<.006	<.004	<.005	.394
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<1	17.1	<.04	.5	<1	<.006	<.006	<.004	<.005	<.007
FR-38/12E/36-0863	09-10-02	<1	12.8	<.04	.5	<1	<.006	<.006	<.004	<.005	<.007
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	<1	62.4	<.04	1.3	2	<.006	<.006	<.004	<.005	<.007
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	<1	91.3	<.04	1.4	<1	<.006	<.006	<.004	<.005	.141
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	<1	30.3	<.04	3.2	<1	<.006	<.006	<.004	<.005	.080
MQ-16/08E/19-0103	07-30-02	<1	42.5	<.04	1.6	<1	<.006	<.006	<.004	<.005	.147
MQ-16/09E/17-0106	07-30-02	<1	78.3	<.04	2.3	1	<.006	<.006	<.004	<.005	.259
MQ-17/08E/35-0104	07-31-02	<1	45.3	<.04	.8	3	<.006	<.006	<.004	<.005	.012
MQ-17/09E/08-0105	08-28-02	<1	49.1	<.04	.4	<1	<.006	<.006	<.004	<.005	.461
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<1	45.8	<.04	1.3	<1	<.006	<.006	<.004	<.005	.062
PT-22/10E/32-1320	08-15-02	<1	36.4	.05	1.9	4	<.006	<.006	<.004	<.005	.137
PT-23/09E/26-1321	08-14-02	<1	50.8	<.04	2.1	2	<.006	<.006	<.004	<.005	.125
PT-23/10E/13-1322	08-14-02	<1	38.3	<.04	1.9	2	<.006	<.006	<.004	<.005	.021
PT-24/10E/16-1324	08-13-02	<1	68.6	<.04	2.1	1	<.006	<.006	<.004	<.005	.022
PT-25/10E/11-1323	08-21-02	<1	39.6	E.03	4.5	<1	E.005	<.006	<.004	<.005	<.007
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	<1	23.9	.12	2.3	<1	<.006	<.006	<.004	<.005	<.007
SH-28/12E/05-0218	08-29-02	<1	24.0	E.02	1.5	90	E.001	<.006	<.004	<.005	<.007
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	<1	109	<.04	E.1	<1	<.006	<.006	<.004	<.005	<.007
WP-22/11E/22-0791	08-21-02	<1	57.9	<.04	1.4	<1	<.006	<.006	<.004	<.005	.095
WP-22/12E/23-0790	08-14-02	<1	66.2	<.04	3.2	1	<.006	<.006	<.004	<.005	.007
WP-22/12E/07-0792	08-13-02	<1	108	.15	.6	<1	<.006	<.006	<.004	<.005	.205
WP-24/11E/16-0793	08-12-02	<1	86.6	<.04	.8	<1	<.006	<.006	<.004	<.005	.067
WP-25/13E/31-0794	08-13-02	<1	34.6	.12	2.3	<1	<.006	<.006	<.004	<.005	.019
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	<1	31.2	E.02	1.8	1	<.006	<.006	<.004	<.005	.028
WS-18/11E/15-1000	08-27-02	<1	59.1	E.02	1.2	1	<.006	<.006	<.004	<.005	.171
WS-19/10E/18-0999	07-31-02	<1	25.9	<.04	1.3	<1	<.006	<.006	<.004	<.005	.030
WS-19/09E/09-1001	08-28-02	<1	55.3	<.04	1.3	2	<.006	<.006	<.004	<.005	.036

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.926	118	<.005
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	104	<.005
FR-38/12E/36-0863	09-10-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.004	110	<.005
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.104	102	<.005
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.113	111	<.005
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.697	110	<.005
MQ-16/08E/19-0103	07-30-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.252	106	<.005
MQ-16/09E/17-0106	07-30-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.562	99.0	<.005
MQ-17/08E/35-0104	07-31-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.055	102	<.005
MQ-17/09E/08-0105	08-28-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.862	76.5	<.005
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.068	121	<.005
PT-22/10E/32-1320	08-15-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.561	97.2	<.005
PT-23/09E/26-1321	08-14-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.284	110	<.005
PT-23/10E/13-1322	08-14-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.048	111	<.005
PT-24/10E/16-1324	08-13-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.064	116	<.005
PT-25/10E/11-1323	08-21-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	111	<.005
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	105	<.005
SH-28/12E/05-0218	08-29-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.003	95.0	<.005
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	105	<.005
WP-22/11E/22-0791	08-21-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.381	99.0	<.005
WP-22/12E/23-0790	08-14-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.041	111	<.005
WP-22/12E/07-0792	08-13-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.352	92.7	<.005
WP-24/11E/16-0793	08-12-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.095	98.1	<.005
WP-25/13E/31-0794	08-13-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.045	102	<.005
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.137	86.2	<.005
WS-18/11E/15-1000	08-27-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.505	122	<.005
WS-19/10E/18-0999	07-31-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.157	100	<.005
WS-19/09E/09-1001	08-28-02	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.338	78.7	<.005

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- i- fier	Date	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U (UG/L) (82677)	EPTC WATER FLTRD 0.7 U (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	<.005	<.02	<.002	<.009	<.005	<.003	98.1	<.004	<.035	<.027
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<.005	<.02	<.002	<.009	<.005	<.003	95.3	<.004	<.035	<.027
FR-38/12E/36-0863	09-10-02	<.005	<.02	<.002	<.009	<.005	<.003	97.2	<.004	<.035	<.027
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	<.005	<.02	<.002	<.009	<.005	<.003	94.2	<.004	<.035	<.027
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	<.005	<.02	<.002	<.009	<.005	<.003	97.2	<.004	<.035	<.027
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	<.005	<.02	<.002	<.009	<.005	<.003	90.5	<.004	<.035	<.027
MQ-16/08E/19-0103	07-30-02	<.005	<.02	<.002	<.009	<.005	<.003	106	<.004	<.035	<.027
MQ-16/09E/17-0106	07-30-02	<.005	<.02	<.002	<.009	<.005	<.003	100	<.004	<.035	<.027
MQ-17/08E/35-0104	07-31-02	<.005	<.02	<.002	<.009	<.005	<.003	102	<.004	<.035	<.027
MQ-17/09E/08-0105	08-28-02	<.005	<.02	<.002	<.009	<.005	<.003	86.5	<.004	<.035	<.027
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<.005	<.02	<.002	<.009	<.005	<.003	95.3	<.004	<.035	<.027
PT-22/10E/32-1320	08-15-02	<.005	<.02	<.002	<.009	<.005	<.003	106	<.004	<.035	<.027
PT-23/09E/26-1321	08-14-02	<.005	<.02	<.002	<.009	<.005	<.003	93.5	<.004	<.035	<.027
PT-23/10E/13-1322	08-14-02	<.005	<.02	<.002	<.009	<.005	<.003	98.1	<.004	<.035	<.027
PT-24/10E/16-1324	08-13-02	<.005	<.02	<.002	<.009	<.005	<.003	103	<.004	<.035	<.027
PT-25/10E/11-1323	08-21-02	<.005	<.02	<.002	<.009	<.005	<.003	96.2	<.004	<.035	<.027
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	<.005	<.02	<.002	<.009	<.005	<.003	101	<.004	<.035	<.027
SH-28/12E/05-0218	08-29-02	<.005	<.02	<.002	<.009	<.005	<.003	96.2	<.004	<.035	<.027
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	<.005	<.02	<.002	<.009	<.005	<.003	91.1	<.004	<.035	<.027
WP-22/11E/22-0791	08-21-02	<.005	<.02	<.002	<.009	<.005	<.003	86.3	<.004	<.035	<.027
WP-22/12E/23-0790	08-14-02	<.005	<.02	<.002	<.009	<.005	<.003	98.2	<.004	<.035	<.027
WP-22/12E/07-0792	08-13-02	<.005	<.02	<.002	<.009	<.005	<.003	92.7	<.004	<.035	<.027
WP-24/11E/16-0793	08-12-02	<.005	<.02	<.002	<.009	<.005	<.003	99.1	<.004	<.035	<.027
WP-25/13E/31-0794	08-13-02	<.005	<.02	<.002	<.009	<.005	<.003	107	<.004	<.035	<.027
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	<.005	<.02	<.002	<.009	<.005	<.003	102	<.004	<.035	<.027
WS-18/11E/15-1000	08-27-02	<.005	<.02	<.002	<.009	<.005	<.003	92.3	<.004	<.035	<.027
WS-19/10E/18-0999	07-31-02	<.005	<.02	<.002	<.009	<.005	<.003	95.4	<.004	<.035	<.027
WS-19/09E/09-1001	08-28-02	<.005	<.02	<.002	<.009	<.005	<.003	91.0	<.004	<.035	<.027

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	METHYL AZIN- PHOS	METHYL PARA- THION	METO- LACHLOR WATER	METRI- BUZIN WATER	MOL- INATE WATER	NAPROP- AMIDE WATER	P,P' DDE	PARA- THION, DIS-	PEB- ULATE WATER	PENDI- METH- ALIN
		WAT FLT 0.7 U GF, REC (UG/L) (82686)	WAT FLT 0.7 U GF, REC (UG/L) (82667)	DISSOLV (UG/L) (39415)	DISSOLV (UG/L) (82630)	GF, REC (UG/L) (82671)	GF, REC (UG/L) (82684)		DISSOLV (UG/L) (34653)	SOLVED (UG/L) (39542)	FILTRD 0.7 U GF, REC (UG/L) (82669)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
FR-38/12E/36-0863	09-10-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MQ-16/08E/19-0103	07-30-02	<.050	<.006	.014	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MQ-16/09E/17-0106	07-30-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MQ-17/08E/35-0104	07-31-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
MQ-17/09E/08-0105	08-28-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PT-22/10E/32-1320	08-15-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PT-23/09E/26-1321	08-14-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PT-23/10E/13-1322	08-14-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PT-24/10E/16-1324	08-13-02	<.050	<.006	E.003	<.006	<.002	<.007	<.003	<.010	<.004	<.022
PT-25/10E/11-1323	08-21-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
SH-28/12E/05-0218	08-29-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WP-22/11E/22-0791	08-21-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WP-22/12E/23-0790	08-14-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WP-22/12E/07-0792	08-13-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WP-24/11E/16-0793	08-12-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WP-25/13E/31-0794	08-13-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WS-18/11E/15-1000	08-27-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WS-19/10E/18-0999	07-31-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022
WS-19/09E/09-1001	08-28-02	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)
ADAMS COUNTY											
AD-15/07E/24-0407	07-29-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
FOREST COUNTY											
FR-34/14E/03-0656	09-09-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
FR-38/12E/36-0863	09-10-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
LANGLADE COUNTY											
LA-30/11E/25-1310	08-20-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
MARATHON COUNTY											
MR-27/10E/13-1182	08-12-02	<.006	<.011	<.01	<.004	<.011	<.02	E.003	<.02	<.034	<.02
MARQUETTE COUNTY											
MQ-16/08E/32-0102	07-29-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
MQ-16/08E/19-0103	07-30-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
MQ-16/09E/17-0106	07-30-02	<.006	<.011	<.01	<.004	<.011	<.02	.018	<.02	<.034	<.02
MQ-17/08E/35-0104	07-31-02	<.006	<.011	<.01	<.004	<.011	<.02	.006	<.02	<.034	<.02
MQ-17/09E/08-0105	08-28-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PORTAGE COUNTY											
PT-21/10E/03-1319	08-27-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PT-22/10E/32-1320	08-15-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PT-23/09E/26-1321	08-14-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PT-23/10E/13-1322	08-14-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PT-24/10E/16-1324	08-13-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
PT-25/10E/11-1323	08-21-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
SHAWANO COUNTY											
SH-27/13E/04-0221	08-20-02	<.006	<.011	<.01	<.004	<.011	<.02	.009	<.02	<.034	<.02
SH-28/12E/05-0218	08-29-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WAUPACA COUNTY											
WP-21/12E/06-0789	08-22-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WP-22/11E/22-0791	08-21-02	<.006	<.011	<.01	<.004	<.011	<.02	.009	<.02	<.034	<.02
WP-22/12E/23-0790	08-14-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WP-22/12E/07-0792	08-13-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WP-24/11E/16-0793	08-12-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WP-25/13E/31-0794	08-13-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WAUSHARA COUNTY											
WS-18/08E/34-0997	08-28-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WS-18/11E/15-1000	08-27-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WS-19/10E/18-0999	07-31-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02
WS-19/09E/09-1001	08-28-02	<.006	<.011	<.01	<.004	<.011	<.02	<.005	<.02	<.034	<.02

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Local ident- ifier	Date	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
ADAMS COUNTY					
AD-15/07E/24-0407	07-29-02	<.005	<.002	<.009	.18
FOREST COUNTY					
FR-34/14E/03-0656	09-09-02	<.005	<.002	<.009	E.01
FR-38/12E/36-0863	09-10-02	<.005	<.002	<.009	<.02
LANGLADE COUNTY					
LA-30/11E/25-1310	08-20-02	<.005	<.002	<.009	1.56
MARATHON COUNTY					
MR-27/10E/13-1182	08-12-02	<.005	<.002	<.009	1.09
MARQUETTE COUNTY					
MQ-16/08E/32-0102	07-29-02	<.005	<.002	<.009	.05
MQ-16/08E/19-0103	07-30-02	<.005	<.002	<.009	.07
MQ-16/09E/17-0106	07-30-02	<.005	<.002	<.009	3.21
MQ-17/08E/35-0104	07-31-02	<.005	<.002	<.009	.08
MQ-17/09E/08-0105	08-28-02	<.005	<.002	<.009	E.01
PORTAGE COUNTY					
PT-21/10E/03-1319	08-27-02	<.005	<.002	<.009	.09
PT-22/10E/32-1320	08-15-02	<.005	<.002	<.009	.24
PT-23/09E/26-1321	08-14-02	<.005	<.002	<.009	2.17
PT-23/10E/13-1322	08-14-02	<.005	<.002	<.009	3.93
PT-24/10E/16-1324	08-13-02	<.005	<.002	<.009	.76
PT-25/10E/11-1323	08-21-02	<.005	<.002	<.009	.26
SHAWANO COUNTY					
SH-27/13E/04-0221	08-20-02	<.005	<.002	<.009	.50
SH-28/12E/05-0218	08-29-02	<.005	<.002	<.009	.05
WAUPACA COUNTY					
WP-21/12E/06-0789	08-22-02	<.005	<.002	<.009	.04
WP-22/11E/22-0791	08-21-02	<.005	<.002	<.009	.35
WP-22/12E/23-0790	08-14-02	<.005	<.002	<.009	.60
WP-22/12E/07-0792	08-13-02	<.005	<.002	<.009	.02
WP-24/11E/16-0793	08-12-02	<.005	<.002	<.009	11.9
WP-25/13E/31-0794	08-13-02	<.005	<.002	<.009	.48
WAUSHARA COUNTY					
WS-18/08E/34-0997	08-28-02	<.005	<.002	<.009	.07
WS-18/11E/15-1000	08-27-02	<.005	<.002	<.009	.10
WS-19/10E/18-0999	07-31-02	<.005	<.002	<.009	.14
WS-19/09E/09-1001	08-28-02	<.005	<.002	<.009	.30

WISCONSIN DISTRICT PUBLICATIONS

The reports listed below are a partial list of reports prepared by the Wisconsin District in cooperation with other agencies since 1948. The list contains reports that are relevant and contribute significantly to understanding the hydrology of Wisconsin's water resources.

The reports published in a U.S. Geological Survey series are for sale by the U.S. Geological Survey, Box 25286, Federal Center, Denver, CO 80225. Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices can be obtained by writing to the above address or by calling 1-888-ASK-USGS. Copies of reports published by the University of Wisconsin, Geological and Natural History Survey, can be obtained from their office at 3817 Mineral Point Road, Madison, Wisconsin 53705.

WATER-RESOURCES INVESTIGATIONS REPORTS

- Garn, H.S., 2002, Effects of lawn fertilizer on nutrient concentration in runoff from lakeshore lawns, Lauderdale Lakes, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 02-4130, 6 p.
- Robertson, D.M., Goddard, G.L., Mergener, E.A., Rose, W.J., and Garrison, P.J., 2002, Hydrology and water quality of Geneva Lake, Walworth County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 02-4039, 73 p.
- Krohelski, J.T., Rose, W.J., and Hunt, R.J., 2002, Hydrologic Investigation of Powell Marsh and its Relation to Dead Pike Lake, Vilas County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 02-4034, 20 p.
- Krohelski, J.T., Lin, Yu-Feng, Rose, W.J., and Hunt, R.J., 2002, Simulation of Fish, Mud, and Crystal Lakes, and the shallow ground-water system, Dane County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 02-4014, 17 p.
- Lenz, B.N., Robertson, D.M., Fallon, J.D., and Ferrin, R., 2001, Nutrient and suspended-sediment concentrations and loads and benthic-invertebrate data for tributaries to the St. Croix River, Wisconsin and Minnesota, 1997-99: U.S. Geological Survey Water-Resources Investigations Report 01-4162, 57 p.
- Dunning, C.P., and Yeskis, D.J., 2001, Hydrogeology and ground-water quality of the County Road A disposal site on the Bad River Indian Reservation, Ashland County, Wisconsin: 1997-98: U.S. Geological Survey Water-Resources Investigations Report 01-4082, 61 p.
- Steuer, J.J., and Hunt, R.J., 2001, Use of a watershed-modeling approach to assess hydrologic effects of urbanization, Middleton, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 01-4113, 49 p.
- Robertson, D.M., Saad, D.A., and Wieben, A.M., 2001, An alternative regionalization scheme for defining nutrient criteria for rivers and streams: U.S. Geological Survey Water-Resources Investigations Report 01-4073, 57 p.
- Garn, H.S., Scudder, B.C., Richards, K.D., and Sullivan, D.J., 2001, Characteristics of water sediment, and benthic communities of the Wolf River, Menominee Indian Reservation, Wisconsin, water years 1986-98: U.S. Geological Survey Water-Resources Investigations Report 01-4019, 54 p.
- Robertson, D.M., 2000, One-dimensional simulation of stratification and dissolved oxygen in McCook Reservoir, Illinois: U.S. Geological Survey Water-Resources Investigations Report 00-4258, 17 p.
- Steuer, J.J., 2000, A mass-balance approach for assessing PCB movement during remediation of a PCB-contaminated deposit on the Fox River, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 00-4245, 8 p.
- Robertson, D.M., and Rose, W.J., 2000, Hydrology, water quality, and phosphorus loading of Little St. Germain Lake, Vilas County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 00-4209, 8 p.
- Schmidt, M.A., Richards, K.D., and Scudder, B.C., 2000, Surface-water quality, Oneida Reservation and vicinity, Wisconsin, 1997-98, U.S. Geological Survey Water-Resources Investigations Report 00-4179, 30 p.
- Hunt, R.J., and Steuer, J.J., 2000, Simulation of the recharge area for Frederick Springs, Dane County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 00-4172, 33 p.
- Hunt, R.J., Lin, Y., Krohelski, J.T., and Juckem, P.F., 2000, Simulation of the shallow hydrologic system in the vicinity of Middle Genesee Lake, Wisconsin, using analytic elements and parameter estimation: U.S. Geological Survey Water-Resources Investigations Report 00-4136, 16 p.
- Saad, D.A., and Robertson, D.M., 2000, Water-resources-related information for the St. Croix Reservation and vicinity, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 00-4133, 65 p.
- Grannemann, N.G., Hunt, R.J., Nicholas, J.R., Reilly, T.E., and Winter, T.C., 2000, The importance of ground water in the Great Lakes Region: U.S. Geological Survey Water-Resources Investigations Report 00-4008, 14 p.
- Brown, T.A., Dunning, C.P., and Sharpe, J.B., 2000, Altitude, depth, and thickness of the Galena-Platteville bedrock unit in the subcrop area of Illinois and Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 97-4054-C, 4 sheets.
- Lenz, B.N. and Rheame, S.J., 2000, Benthic invertebrates of fixed sites in the Western Lake Michigan Drainages, Wisconsin and Michigan, 1993-95: U.S. Geological Survey Water-Resources Investigations Report 95-4211-D, 30 p.
- Krohelski, J.T., Feinstein, D.T., and Lenz, B.N., 1999, Simulation of stage and hydrologic budget for Shell Lake, Washburn County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 99-4209, 23 p.
- Batten, W.G., Yeskis, D.J., and Dunning, C.P., 1999, Hydrogeologic properties of the Ordovician Sinnipee Group at test well BN-483, Better Brite Superfund Site, De Pere, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 99-4199, 19 p.
- Waschbusch, R.J., 1999, Evaluation of the effectiveness of an urban stormwater treatment unit in Madison, Wisconsin, 1996-97: U.S. Geological Survey Water-Resources Investigations Report 99-4195, 49 p.
- Steuer, J.S., Hall, D.W., and Fitzgerald, S.A., 1999, Distribution and transport of polychlorinated biphenyls and associated particulates in the Hayton Millpond, South Branch Manitowoc River, 1993-95: U.S. Geological Survey Water-Resources Investigations Report 99-4101, 20 p.

- Steuer, J.S., Fitzgerald, S.A., and Hall, D.W., 1999, Distribution and transport of polychlorinated biphenyls and associated particulates in the Milwaukee River system, Wisconsin, 1993–95: U.S. Geological Survey Water-Resources Investigations Report 99–4100, 37 p.
- Fitzpatrick, F.A., Knox, J.C., and Whitman, H.E., 1999, Effects of historical land-cover changes on flooding and sedimentation, North Fish Creek, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 99–4083, 12 p.
- Waschbusch, R.J., Selbig, W.R., and Bannerman, R.T., 1999, Sources of phosphorus from two urban residential basins in Madison, Wisconsin, 1994–95, U.S. Geological Survey Water-Resources Investigations Report 99–4021, 47 p.
- Saad, D.A., and Schmidt, M.A., 1999, Water-resources-related information for the Oneida Reservation and vicinity, Wisconsin, U.S. Geological Survey Water-Resources Investigations Report 98–4266, 57 p.
- Saad, D.A., and Thorstenson, D.C., 1998, Flow and geochemistry along shallow ground-water flowpaths in an agricultural area in southeastern Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 98–4179, 62 p.
- Robertson, D.M., 1998, Evaluation of the surface-water sampling design in the Western Lake Michigan Drainages in relation to environmental factors affecting water quality at base flow, U.S. Geological Survey Water-Resources Investigations Report 98–4072, 53 p.
- Walker, J.F., Saad, D.A., and Krohelski, J.T., 1998, Optimization of ground-water withdrawal in the lower Fox River communities, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 97–4218, 24 p.
- Richards, K.D., Sullivan, D.J., and Stewart, J.S., 1998, Surface-water quality at fixed sites in the Western Lake Michigan Drainages, Wisconsin and Michigan, and the effects of natural and human factors, 1993–95, U.S. Geological Survey Water-Resources Investigations Report 97–4208, 40 p.
- Stewart, J.S., 1998, Combining satellite data with ancillary data to produce a refined land-use/land-cover map: U.S. Geological Survey Water-Resources Investigations Report 97–4203, 11 p., 3 pl.
- Conlon, T.D., 1998, Hydrogeology and simulation of ground-water flow in the sandstone aquifer, northeastern Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 97–4096, 60 p., 1 pl.
- Elder, J.F., Manion, B.J., and Goddard, G.L., 1997, Mesocosm experiments to assess factors affecting phosphorus retention and release in an extended Wisconsin wetland: U.S. Geological Survey Water-Resources Investigations Report 97–4272, 14 p.
- Steuer, J., Selbig, W., Hornewer, N., and Prey, J., 1997, Sources of contamination in an urban basin in Marquette, Michigan and an analysis of concentrations, loads, and data quality: U.S. Geological Survey Water-Resources Investigations Report 97–4242, 25 p.
- Peters, C.A., et al, 1997, Environmental setting and implications for water quality in the Western Lake Michigan drainage: U.S. Geological Survey Water-Resources Investigations Report 97–4196, 79 p.
- Scudder, B.C., Sullivan, D.J., Fitzpatrick, F.A., and Rheaume, S.J., 1997, Trace elements and synthetic organic compounds in biota and streambed sediment of the Western Lake Michigan drainages, 1992–1995: U.S. Geological Survey Water-Resources Investigations Report 97–4192, 34 p.
- Fitzgerald, S.A., 1997, Results of quality-control sampling of water, bed sediment, and tissue in the Western Lake Michigan drainages study unit of the national water-quality assessment program: U.S. Geological Survey Water-Resources Investigations Report 97–4148, 24 p.
- Batten, W.G., Brown, T.A., Mills, P.C., and Sabin, T.J., 1997, Rock-stratigraphic nomenclature, lithology, and subcrop area of the Galena-Platteville bedrock unit in Illinois and Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 97–4054–B, 1 sheet.
- Sullivan, D.J. and Peterson, E.M., 1997, Fish communities of benchmark streams in agricultural areas of eastern Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 96–4038–D, 23 p.
- Sullivan, D.J., 1997, Fish communities of fixed sites in the Western Lake Michigan drainages, Wisconsin and Michigan, 1993–95: U.S. Geological Survey Water-Resources Investigations Report 95–4211–C, 23 p.
- Fitzpatrick, F.A., and Giddings, E.M.P., 1997, Stream habitat characteristics of fixed sites in the Western Lake Michigan drainages, Wisconsin and Michigan, 1993–95: U.S. Geological Survey Water-Resources Investigations Report 95–4211–B, 58 p.
- Garn, H.S., Olson, D.L., Seidel, T.L., and Rose, W.J., 1996, Hydrology and water quality of Lauderdale Lakes, Walworth County, Wisconsin, 1993–94: U.S. Geological Survey Water-Resources Investigations Report 96–4235, 29 p.
- Conlon, T.D., 1996, Hydrogeology of the sand and gravel aquifer in the vicinity of the Wild Rose State Fish Hatchery, north-central Waushara County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 96–4213, 14 p.
- Legg, A.D., Bannerman, R.T., and Panuska, J., 1996, Variation in the relation of rainfall to runoff from residential lawns in Madison, Wisconsin, July and August 1995: U.S. Geological Survey Water-Resources Investigations Report 96–4194, 11 p.
- Robertson, D.M., Field, S.J., Elder, J.F., Goddard, G.L., and James, W.F., 1996, Phosphorus dynamics in Delavan Lake Inlet, Southeastern Wisconsin, 1994: U.S. Geological Survey Water-Resources Investigations Report 96–4160, 18 p.
- Robertson, D.M., 1996, Use of frequency-volume analyses to estimate regionalized yields and load of sediment, phosphorus, and polychlorinated biphenyls to Lakes Michigan and Superior: U.S. Geological Survey Water-Resources Investigations Report 96–4092, 47 p.
- Fitzpatrick, F.A., Peterson, E.M., and Stewart, J.S., 1996, Habitat characteristics of benchmark streams in agricultural areas of Eastern Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 96–4038–B, 35 p.
- Rheaume, S.J., Stewart, J.S., and Lenz, B.N., 1996, Environmental setting of benchmark streams in agricultural areas of Eastern Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 96–4038–A, 50 p.
- Robertson, D.M., and Saad, D.A., 1996, Water-quality assessment of the Western Lake Michigan drainages—analysis of available information on nutrients and suspended sediment, water years 1971–90: U.S. Geological Survey Water-Resources Investigations Report 96–4012, 165 p.
- Rose, W.J. and Graczyk, D.J., 1996, Sediment transport, particle size, and loads in North Fish Creek in Bayfield County, Wisconsin, water years 1990–91: U.S. Geological Survey Water-Resources Investigations Report 95–4222, 18 p.

- Batten, W.G., and Lidwin, R.A., 1996, Water resources of the Lac du Flambeau Indian Reservation, Wisconsin, 1981–86: U.S. Geological Survey Water-Resources Investigations Report 94–4025, 42 p., 3 pls.
- Sullivan, D.J., Peterson, E.M., and Richards, K.D., 1995, Environmental setting of fixed sites in the Western Lake Michigan Drainages, Michigan and Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 95–4211–A, 30 p.
- Batten, W.G., and Lidwin, R.A., 1995, Water resources of the Bad River Indian Reservation, northern Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 95–4207, 45 p., 2 pl.
- Conlon, T.D., 1995, Hydrogeology of southwestern Sheboygan County, Wisconsin, in the vicinity of the Kettle Moraine Springs Fish Hatchery: U.S. Geological Survey Water-Resources Investigations Report 94–4106, 17 p.
- Corsi, S.R., and Schuler, J.G., 1995, Discharge ratings for tainter gates and roller gates at Lock and Dam No. 7 on the Mississippi River, La Crescent, Minnesota: U.S. Geological Survey Water-Resources Investigations Report 95–4089, 17 p.
- DeWild, J.F., and Krohelski, J.T., 1995, Radon-222 concentrations in ground water and soil gas on Indian Reservations in Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 95–4088, 12 p.
- Kammerer, P.A., Jr., 1995, Ground-water flow and quality in Wisconsin's shallow aquifer system: U.S. Geological Survey Water-Resources Investigations Report 90–4171, 42 p., 2 pl.
- Goddard, Gerald L., and Field, Stephen J., 1994, Hydrology and water quality of Whitewater and Rice Lakes in southeastern Wisconsin, 1990–91: U.S. Geological Survey Water-Resources Investigations Report 94–4101, 36 p.
- Krohelski, J.T., Kammerer, Jr., P.A., and Conlon, T.D., 1994, Water resources of the Menominee Indian Reservation of Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 93–4053, 54 p., 4 pl.
- Rose, W.J., 1993, Hydrology of Little Rock Lake in Vilas County, north-central Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 93–4139, 22 p.
- Graczyk, D.J., 1993, Surface-water hydrology and quality, and macroinvertebrate and smallmouth bass populations in four stream basins in southwestern Wisconsin, 1987–90: U.S. Geological Survey Water-Resources Investigations Report 93–4024, 70 p.
- Batten, W.G., and Conlon, T.D., 1993, Hydrogeology of glacial deposits in a preglacial bedrock valley, Waukesha County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 92–4077, 15 p.
- House, L.B., 1993, Simulation of the effects of hypothetical residential development on water levels in Graber Pond, Middleton, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 92–4029, 10 p.
- Krohelski, J.T., and Lidwin, R.A., 1993, Hydrology and water quality of the Forest County Potawatomi Indian Reservation, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 91–4136, 24 p.
- Rose, W.J., 1993, Water and phosphorus budgets and trophic state, Balsam Lake, northwestern Wisconsin, 1987–1989: U.S. Geological Survey Water-Resources Investigations Report 91–4125, 28 p.
- Field, S.J., 1993, Hydrology and water quality of Powers Lake, southeastern Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 90–4126, 36 p.
- Field, S.J., 1993, Hydrology and water quality of Wind Lake in southeastern Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 91–4107, 61 p.
- Hughes, P.E., 1993, Hydrology, water quality, trophic status, and aquatic plants of Fowler Lake, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 91–4076, 44 p.
- Krug, W.R., Conger, D.H., and Gebert, W.A., 1992, Flood-frequency characteristics of Wisconsin streams: U.S. Geological Survey Water-Resources Investigations Report 91–4128, 185 p., 2 pls.
- Rose, W.J., 1992, Sediment transport, particle sizes, and loads in lower reaches of the Chippewa, Black, and Wisconsin Rivers in western Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 90–4124, 38 p.
- Wentz, D.A., and Rose, W.J., 1991, Hydrology of Lakes Clara and Vandercook in north-central Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 89–4204, 24 p.
- Patterson, G.L., 1990, Ground-water levels and quality at Crex Meadows Wildlife Area, Burnett County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 89–4129, 19 p.
- Field, S.J., and Graczyk, D.J., 1990, Hydrology, aquatic macrophytes, and water quality of Black Earth Creek and its tributaries, Dane County, Wisconsin, 1985–86: U.S. Geological Survey Water-Resources Investigations Report 89–4089, 44 p.
- Krug, W.R., Gebert, W.A., Graczyk, D.J., Stevens, D.L., Jr., Rochelle, B.P., Church, M.R., and Campbell, W.G., 1988, Runoff map for the Northeastern, Southeastern, and Mid-Atlantic United States for water years 1951–80: U.S. Geological Survey Water-Resources Investigations Report 88–4094, 44 p.
- Rose, W.J., 1988, Water resources of the Apostle Islands National Lakeshore, Northern Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 87–4220, 44 p.
- Field, S.J., and Duerk, M.D., 1988, Hydrology and water quality of Delavan Lake in southeastern Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 87–4168, 61 p.
- Walker, J.F., Osen, L.L., and Hughes, P.E., 1987, Cost effectiveness of the U.S. Geological Survey's stream-gaging program in Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 86–4125, 44 p.
- Krohelski, J.T., Ellefson, B.R., and Storlie, C.A., 1987, Estimated use of ground water for irrigation in Wisconsin, 1984: U.S. Geological Survey Water-Resources Investigations Report 86–4079, 12 p., 1 pl.
- House, L.B., 1987, Simulation of unsteady flow in the Milwaukee Harbor Estuary at Milwaukee, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 86–4050, 19 p.
- Conger, D.H., 1986, Estimating magnitude and frequency of floods for Wisconsin urban streams: U.S. Geological Survey Water-Resources Investigations Report 86–4005, 18 p.
- Graczyk, D.J., 1986, Water quality in the St. Croix National Scenic Riverway, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 85–4319, 48 p.
- Field, S.J., 1986, Relations between precipitation, streamflow, and water quality in the Galena River basin, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 85–4214, 48 p.

- Emmons, P.J., 1987, An evaluation of the bedrock aquifer system in northeastern Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 85-4199, 48 p.
- Krug, W.R., and Goddard, G.L., 1986, Effects of urbanization on streamflow, sediment loads, and channel morphology in Pheasant Branch basin near Middleton, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 85-4068, 82 p.
- Cotter, R.D., 1986, Hydrogeology and ground-water quality of Lannon-Sussex Area, northeastern Waukesha County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 84-4213, 28 p.
- Field, S.J., 1985, Nonpoint-source discharges and water quality of Elk Creek basin, west-central Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 84-4094, 38 p.
- Field, S.J., and Lidwin, R.A., 1984, An assessment of nonpoint-source discharges, streamflow, and water quality in Onion River, Wisconsin: U.S. Geological Survey Water-Resource Investigations Report 84-4066, 78 p.
- House, L.B., 1984, Effects of urbanization on three ponds in Middleton, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 84-4051, 17 p.
- Kammerer, P.A., Jr., 1984, An overview of ground-water-quality data in Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 83-4239, 58 p.
- Krug, W.R., and House, L.B., 1984, Evaluation of alternative reservoir-management practices in the Rock River basin, Wisconsin: U.S. Geological Survey Water-Resources Investigations Report 83-4186, 21 p.
- Duerk, M.D., 1983, Automatic dilution gaging of rapidly varying flow: U.S. Geological Survey Water-Resources Investigations Report 83-4088, 17 p.
- Kammerer, P.A., Jr., Lidwin, R.A., Mason, J.W., and Narf, R.P., 1983, Aquatic biology in Nederlo Creek, southwestern Wisconsin: U.S. Geological Survey Water Resources Investigations 82-56, 27 p.
- Lawrence, C.L., and Ellefson, B.R., 1982, Water use in Wisconsin, 1979: U.S. Geological Survey Water-Resources Investigations 82-444, 98 p.
- Wentz, D.A., and Graczyk, D.J., 1982, Effects of a floodwater-retarding structure on the hydrology and ecology of Trout Creek in southwestern Wisconsin: U.S. Geological Survey Water-Resources Investigations 82-23, 68 p.
- Holmstrom, B.K., 1982, Low-flow characteristics of streams in the Lake Michigan basin, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Report 81-1193, 102 p.
- House, L.B., 1981, An assessment of streamflow, water quality, and the effects of construction on impoundment on Bridge Creek at Augusta, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Report 81-1192, 25 p.
- Field, S.J., and Lidwin, R.A., 1982, Water-quality assessment of Steiner Branch basin, Lafayette County, Wisconsin: U.S. Geological Survey Water-Resources Investigations 81-52, 58 p.
- Gebert, W.A., 1982, Low-flow characteristics of streams in the Central Wisconsin River basin, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Report 81-495, 99 p.
- Conger, D.H., 1981, Techniques for estimating magnitude and frequency of floods for Wisconsin streams: U.S. Geological Survey Water-Resources Investigations Open-File Report 80-1214, 116 p.
- Krug, W.R., and House, L.B., 1980, Streamflow model of Wisconsin River for estimating flood frequency and volume: U.S. Geological Survey Water-Resources Investigations 80-1103, 44 p.
- Holmstrom, B.K., 1980, Low-flow characteristics of streams in the Menominee-Oconto-Peshtigo River basin, Wisconsin: Water-Resources Investigations Open-File Report 80-749, 82 p.
- _____, 1980, Low-flow characteristics of streams in the St. Croix River basin, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Report 80-696, 62 p.
- Gebert, W.A., 1980, Low-flow characteristics of streams in the upper Wisconsin River basin, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Report 80-691, 60 p.
- Krug, W.R., 1981, Hydrologic effects of proposed changes in management practices, Winnebago Pool, Wisconsin: U.S. Geological Survey Water-Resources Investigations 80-107, 19 p.
- House, L.B., and Skavronek, S., 1981, Comparison of the propane-area tracer method and predictive equations for determination of stream-re-aeration coefficients on two small streams in Wisconsin: U.S. Geological Survey Water-Resources Investigations 80-105, 18 p.
- Kontis, A.L., and Mandle, R.J., 1980, Data-base system for northern Midwest regional aquifer-system analysis: U.S. Geological Survey Water-Resources Investigations 80-104, 27 p.
- Grant, R.S., and Goddard, G., 1980, Channel erosion and sediment transport in Pheasant Branch basin near Middleton, Wisconsin, a preliminary report: U.S. Geological Survey Water-Resources Investigations Open-File Report 80-161, 19 p., 11 figs., 3 tables.
- McLeod, R.S., 1980, The effects of using ground water to maintain water levels of Cedar Lake, Wisconsin: U.S. Geological Survey Water-Resources Investigations 80-23, 35 p.
- Grant, R.S., and Skavronek, S., 1980, Comparison of tracer methods and predictive models for determination of stream-re-aeration coefficients on three small streams in Wisconsin: U.S. Geological Survey Water-Resources Investigations 80-19, 36 p.
- Hindall, S.M., 1979, Ground-water quality in selected areas of Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Report 79-1594, 20 p.
- Stedfast, D.A., 1979, Low-flow characteristics of streams in the Pecatonica-Sugar River basin, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Report 79-1274, 92 p.
- Grant, R.S., and Goddard, Gerald, 1979, Urban storm-runoff modeling—Madison, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Report 79-1273, 20 p.
- Novitzki, R.P., and Holmstrom, B.K., 1979, Monthly and annual water budgets of Lake Wingra, Madison, Wisconsin, 1971-77: U.S. Geological Survey Water-Resources Investigations 79-100, 31 p.
- Kammerer, P.A., and Sherrill, M.G., 1979, Hydrology and water quality in the Nederlo Creek basin before construction of two water-retention structures: U.S. Geological Survey Water-Resources Investigations 79-95, 42 p.
- Gebert, W.A., 1979, Low-flow characteristics of streams in Lake Superior basin, Wisconsin: U.S. Geological Survey Water-Resources Investigations 79-38, 74 p.
- Holmstrom, B.K., 1979, Low-flow characteristics of Wisconsin streams at sewage-treatment plants and industrial plants: U.S. Geological Survey Water-Resources Investigations 79-31, 123 p.

- Gebert, W.A., 1979, Red Cedar River basin, Wisconsin: Low-flow characteristics: U.S. Geological Survey Water-Resources Investigations 79–29, 12 p.
- Holmstrom, B.K., 1979, Low-flow characteristics of streams in the Trempealeau-Black River basin, Wisconsin: U.S. Geological Survey Water-Resources Investigations 79–9, 79 p.
- Sherrill, M.G., 1979, Contamination potential in the Silurian dolomite aquifer, eastern Wisconsin: U.S. Geological Survey Water-Resources Investigations 78–108, 2 pls.
- Holmstrom, B.K., 1978, Low-flow characteristics of streams in the Rock-Fox River basin, Wisconsin: U.S. Geological Survey Water-Resources Investigations 78–85, 98 p.
- Rathbun, R.E., and Grant, R.S., 1978, Comparison of the radioactive and modified techniques for measurement of stream reaeration coefficients: U.S. Geological Survey Water-Resources Investigations 78–68, 65 p.
- Field, S.J., 1978, Ten-year low mean monthly discharge determinations for ungaged streams near waste-stabilization ponds in Wisconsin: U.S. Geological Survey Water-Resources Investigations 78–49, 16 p.
- Novitzki, R.P., 1978, Hydrology of the Nevin wetland near Madison, Wisconsin: U.S. Geological Survey Water-Resources Investigations 78–48, 25 p.
- Grant, R.S., 1978, Reaeration capacity of the Rock River between Lake Koshkonong, Wisconsin, and Rockton, Illinois: U.S. Geological Survey Water-Resources Investigations 77–128, 33 p.
- Gebert, W.A., 1978, Low-flow characteristics of streams in the lower Wisconsin River basin: U.S. Geological Survey Water-Resources Investigations 77–118, 80 p.
- Gebert, W.A., and Holmstrom, B.K., 1977, Low-flow characteristics at gaging stations on the Wisconsin, Fox, and Wolf Rivers, Wisconsin: U.S. Geological Survey Water-Resources Investigations 77–27, 20 p.
- Rose, W.J., 1977, Hydrologic considerations associated with dredging spring ponds in Wisconsin: U.S. Geological Survey Water-Resources Investigations 77–18, 35 p.
- Krug, W.R., 1976, Simulation of streamflow of Flambeau River at Park Falls, Wisconsin, to define low-flow characteristics: U.S. Geological Survey Water-Resources Investigations 76–116, 14 p.
- Grant, R.S., 1976, Reaeration of coefficient measurements of 10 small streams in Wisconsin using radioactive tracers— with a section on the energy-dissipation model: U.S. Geological Survey Water-Resources Investigations 76–96, 50 p.
- Novitzki, R.P., 1976, Recycling ground water in Waushara County, Wisconsin: Resource management for cold-water fish hatcheries: U.S. Geological Survey Water-Resources Investigations 76–20, 60 p.
- Hindall, S.M., 1976, Measurement and prediction of sediment yields in Wisconsin streams: U.S. Geological Survey Water-Resources Investigations 75–75, 27 p.
- Oakes, E.L., Hendrickson, G.E., and Zuehls, E.E., 1975, Hydrology of the Lake Wingra basin, Dane County, Wisconsin: U.S. Geological Survey Water-Resources Investigations 17–75, 31 p.
- Gebert, W.A., and Holmstrom, B.K., 1974, Low-flow characteristics of Wisconsin streams at sewage-treatment plants: U.S. Geological Survey Water-Resources Investigations 45–74, 101 p.
- Hendrickson, G.E., Knutilla, R.L., and Doonan, C.J., 1973, Hydrology and recreation of selected cold-water rivers of the St. Lawrence River basin in Michigan, New York, and Wisconsin: U.S. Geological Survey Water-Resources Investigations 8–73, 73 p.

OPEN-FILE REPORTS

- Hueschen, K.A., Jones, S.Z., and Fuller, J.A., 2002, Water-resources investigations in Wisconsin, 2002: U.S. Geological Survey Open-File Report 02–300, 184 p.
- Wisconsin District Lakes-Studies Team, 2002, Water-quality and lake-stage data for Wisconsin lakes, water year 2000: U.S. Geological Survey Open-File Report 02–135, 149 p.
- Garn, H.S., 2002, Surface-water quality-assurance plan for the Wisconsin District of the U.S. Geological Survey, Water Resources Division: U.S. Geological Survey Open-File Report 02–30, 52 p.
- De Wild, J.F., Olson, M.L., and Olund, S.D., 2002, Determination of methyl mercury by aqueous phase ethylation, followed by gas chromatographic separation with cold vapor atomic fluorescence detection: U.S. Geological Survey Open-File Report 01–445, 14 p.
- Maertz, D.E., and Fuller, J.A., 2001, Water-resources investigations in Wisconsin, 2001: U.S. Geological Survey Open-File Report 01–254, 133 p.
- Walker, J.F., Graczyk, D.J., Corsi, S.R., Wierl, J.A., and Owens, D.W., 2001, Evaluation of nonpoint-source contamination, Wisconsin: water year 1999: U.S. Geological Survey Open-File Report 01–105, 37 p.
- Wisconsin District Lakes-Studies Team, 2001, Water-quality and lake-stage data for Wisconsin lakes, water year 2000: U.S. Geological Survey Open-File Report 01–86, 128 p.
- Scudder, B.C., Selbig, J.W., and Waschbusch, R.J., 2000, Determination of the effects of fine-grained sediment and other limiting variables on trout habitat for selected streams in Wisconsin: U.S. Geological Survey Open-File Report 00–435, 25 p.
- Maertz, D.E., 2000, Water-resources investigations in Wisconsin, 2000: U.S. Geological Survey Open-File Report 00–251, 117 p.
- Corsi, S.R., Greb, S.R., Bannerman, R.T., and Pitt, R.E., 1999, Evaluation of the multi-chambered treatment train, a retrofit water-quality management device: U.S. Geological Survey Open-File Report 99–270, 24 p.
- Maertz, D.E., 1999, Water-resources investigations in Wisconsin, 1999: U.S. Geological Survey Open-File Report 99–229, 112 p.
- Wisconsin District Lake-Studies Team, 1999, Water-quality and lake-stage data for Wisconsin lakes, water year 1998: U.S. Geological Survey Open-File Report 99–98, 143 p.
- Krug, W. R., 1999, Simulation of the effects of operating Lakes Mendota, Monona, and Waubesa, south-central Wisconsin, as multipurpose reservoirs to maintain dry-weather flow: U.S. Geological Survey Open-File Report 99–67, 18 p.
- Hall, D.W., Behrendt, T.E., and Hughes, P.E., 1998, temperature, pH, conductance, and dissolved oxygen in cross sections of 11 Lake Michigan tributaries, 1994–95: U.S. Geological Survey Open-File Report 98–567, 85 p.
- Maertz, D.E., 1998, Water-resources investigations in Wisconsin: U.S. Geological Survey Open-File Report 98–295, 96 p.

- Wisconsin District Lake-Studies Team, 1998, Water-quality and lake-stage data for Wisconsin lakes, water year 1997: U.S. Geological Survey Open-File Report 98-78, 129 p.
- Ellefson, B.R., Fan, C.H., and Ripley, J.L., 1997, Water use in Wisconsin, 1995: U.S. Geological Survey Open-File Report 97-356, 1 sheet.
- Maertz, D.E., 1997, Water-resources investigations in Wisconsin, U.S. Geological Survey Open-File Report 97-351, 91 p.
- Wisconsin District Lake-Studies Team, 1997, Water-quality and lake-stage data for Wisconsin lakes, water year 1996: U.S. Geological Survey Open-File Report 97-123, 134 p.
- Rappold, K.F., Wierl, J.A., and Amerson, F.U., 1997, Watershed characteristics and land management in the nonpoint-source evaluation monitoring watersheds in Wisconsin: U.S. Geological Survey Open-File Report 97-119, 39 p.
- Owens, D.W., Corsi, S.R., and Rappold, K.F., 1997, Evaluation of nonpoint-source contamination, Wisconsin: Selected topics for water year 1995: U.S. Geological Survey Open-File Report 96-661A, 41 p.
- Bannerman, R.T., Legg, A.D., and Greb, S.R., 1996, Quality of Wisconsin stormwater 1989-94: U.S. Geological Survey Open-File Report 96-458, 26 p.
- Maertz, D.E., 1996, Water-resources investigations in Wisconsin, U.S. Geological Survey Open-File Report 96-333, 74 p.
- Wisconsin District Lake-Studies Team, 1996, Water-quality and lake-stage data for Wisconsin lakes, water year 1995: U.S. Geological Survey Open-File Report 96-168, 123 p.
- Wierl, J.A., Rappold, K.F., and Amerson, F.U., 1996, Summary of the land-use inventory for the nonpoint-source evaluation monitoring watersheds in Wisconsin: U.S. Geological Survey Open-File Report 96-123, 23 p.
- Steuer, J.J., Selbig, W.R. and Hornewer, N.J., 1996, Contaminant concentrations in stormwater from eight Lake Superior basin cities, 1993-94: U.S. Geological Survey Open-File Report 96-122, 16 p.
- Waschbusch, R.J., 1996, Stormwater-runoff data, Madison, Wisconsin, 1993-94: U.S. Geological Survey Open-File Report 95-733, 33 p.
- Maertz, D.E., 1995, Water-resources investigations in Wisconsin, 1995: U.S. Geological Survey Open-File Report 95-328, 84 p.
- Walker, J.R., Graczyk, D.J., Corsi, S.R., Owens, D.W., and Wierl, J.A., 1995, Evaluation of nonpoint-source contamination, Wisconsin: Land-use and best-management-practices inventory, selected streamwater-quality data, urban-watershed quality assurance and quality control, constituent loads in rural streams, and snowmelt-runoff analysis, water year 1994: U.S. Geological Survey Open-File Report 95-320, 21 p.
- Wisconsin District Lake-Studies Team, 1995, Water-quality and lake-stage data for Wisconsin lakes, water year 1994: U.S. Geological Survey Open-File Report 95-190, 157 p.
- Peters, C.A., 1995, National Water-Quality Assessment Program, Western Lake Michigan Drainages-Summaries of Liaison Committee Meeting, Green Bay, Wisconsin, March 28-29, 1995: U.S. Geological Survey Open-File Report 95-163, 57 p.
- Corsi, S.R., Walker, J.F., Graczyk, D.J., Greb, S.R., Owens, D.W., and Rappold, K.F., 1995, Evaluation of nonpoint-source contamination, Wisconsin: Selected streamwater-quality data, land-use and best-management practices inventory, and quality assurance and quality control, water year 1993: U.S. Geological Survey Open-File Report 94-707, 57 p.
- Krohelski, J.T., and Batten, W.G., 1995, Simulation of stage and the hydrologic budget of Devils Lake, Sauk County, Wisconsin: U.S. Geological Survey Open-File Report 94-348, 22 p.
- House, L.B., 1995, Distribution and transport of polychlorinated biphenyls in Little Lake Butte des Morts, Fox River, Wisconsin, April 1987-October 1988: U.S. Geological Survey Open-File Report 93-31, 43 p., 1 pl.
- Maertz, D.E., 1994, Water-resources investigations in Wisconsin, 1994: U.S. Geological Survey Open-File Report 94-321.
- Graczyk, D.J., Walker, J.F., Greb, S.R., Corsi, S.R., and Owens, D.W., 1993, Evaluation of nonpoint-source contamination, Wisconsin: Selected data for 1992 water year: U.S. Geological Survey Open-File Report 93-630, 48 p.
- House, L.B., Waschbusch, R.J., and Hughes, P.E., 1993, Water quality of an urban wet detention pond in Madison, Wisconsin, 1987-88: U.S. Geological Survey Open-File Report 93-172, 57 p.
- House, L.B., Hughes, P.E., and Waschbusch, R.J., 1993, Concentrations and loads of polychlorinated biphenyls in major tributaries entering Green Bay, Lake Michigan, 1989-90: U.S. Geological Survey Open-File Report 93-132, 41 p.
- Walker, J.F., 1993, Techniques for detecting effects of urban and rural land-use practices on stream-water chemistry in selected watersheds in Texas, Minnesota, and Illinois: U.S. Geological Survey Open-File Report 93-130, 16 p.
- Maertz, D.E., 1993, Water-resources investigations in Wisconsin, 1993: U.S. Geological Survey Open-File Report 93-129, 91 p.
- Ellefson, B.R., Sabin, T.J., and Krohelski, J.T., 1993, Water use in Wisconsin, 1990: U.S. Geological Survey Open-File Report 93-118, 1 sheet.
- Maertz, D.E., 1992, Water-resources investigations in Wisconsin: Programs and activities of the U.S. Geological Survey, 1991-1992: U.S. Geological Survey Open-File Report 92-125, 93 p.
- Elder, J.F., Krabbenhoft, D.P. and Walker, J.F., 1992, Water, energy, and biogeochemical budgets (WEBB) program: Data availability and research at the northern temperate lakes site, Wisconsin: U.S. Geological Survey Open-File Report 92-48, 15 p.
- Krabbenhoft, D.P., and Krohelski, J.T., 1992, Data on water quality, lake sediment, and lake-level fluctuation, St. Croix Indian Reservation, Wisconsin, 1981-87: U.S. Geological Survey Open-File Report 92-26, 53 p.
- Hughes, P.E., 1993, Hydrologic and water-quality data for the East River Basin of northeastern Wisconsin: U.S. Geological Survey Open-File Report 89-245, 91 p.
- Setmire, J.G., 1991, National Water-Quality Assessment Program - Western Lake Michigan Drainage Basin: U.S. Geological Survey Open-File Report 91-161, Water Fact Sheet, 2 p.
- Melcher, N.B. and Walker, J.F., 1990, Evaluation of selected methods for determining streamflow during periods of ice effect: U.S. Geological Survey Open-File Report 90-554, 51 p.
- U.S. Geological Survey, 1990, The effects of the 1988 drought on the water resources of Wisconsin: U.S. Geological Survey Open-File Report 90-149, Water Fact Sheet, 2 p.
- House, L.B., 1990, Data on polychlorinated biphenyls, dieldrin, lead, and cadmium in Wisconsin and upper Michigan tributaries to Green Bay, July 1987 through April 1988: U.S. Geological Survey Open-File Report 89-52, 11 p.
- Gebert, Warren A., Graczyk, David J., and Krug, William R., 1988, Runoff for selected sites in Shenandoah National Park, Virginia, July 18, 1981 through July 17, 1982: U.S. Geological Survey Open-File Report 88-98, 13 p.

- Ellefson, B.R., Rury, K.S., and Krohelski, J.T., 1988, Water use in Wisconsin, 1985: U.S. Geological Survey Open-File Report 87-699.
- Krug, W.R., Gebert, W.A., and Graczyk, D.J., 1989, Preparation of average annual runoff map of the United States, 1951-80: U.S. Geological Survey Open-File Report 87-535, 414 p.
- Krug, W.R., Ostenso, N.A., and Krohelski, J.T., 1988, Prediction of the effects of mine dewatering on four lakes near Crandon, Wisconsin, by use of a water-budget model: U.S. Geological Survey Open-File Report 87-471, 63 p.
- Graczyk, David J., Gebert, Warren A., Krug, William R., and Allord, G.J., 1987, Maps of runoff in the Northeastern Region and southern Blue Ridge Province of the United States during selected time periods in 1983-85: U.S. Geological Survey Open-File Report 87-106, 8 p., 3 pl.
- Graczyk, David J., Krug, William R., and Gebert, Warren A., 1986, A history of annual streamflows from the 21 water-resource regions in the United States and Puerto Rico, 1951-83: U.S. Geological Survey Open-File Report 86-128, 30 p.
- Henrich, E.W., 1984, Drainage area data for Wisconsin Streams: U.S. Geological Survey Open-File Report 83-933, 322 p.
- Lawrence, C.L., Ellefson, B.R., and Cotter, R.D., 1984, Public-supply pumpage in Wisconsin in 1979: U.S. Geological Survey Open-File Report 83-931, 40 p.
- Lawrence, C.L., and Ellefson, B.R., Water use in Wisconsin, 1979, U.S. Geological Survey Open-File Report 82-444, 98 p.
- Novitzki, R.P., 1979, Streamflow estimates in selected Wisconsin streams: U.S. Geological Survey Open-File Report 79-1282, 11 p.
- Harr, C.A., and Novitzki, R.P., 1979, Availability of supplemental water supplies at salmonid fish-propagation stations in Wisconsin: U.S. Geological Survey Open-File Report 79-1170, 13 p.
- Krug, W.R., 1979, Simulation of streamflow of Rock River at Lake Koshkonong, Wisconsin, to determine effects of withdrawal of powerplant-cooling water: U.S. Geological Survey Open-File Report 79-253, 21 p.
- McLeod, R.S., 1978, Water-level declines in the Madison area, Dane County, Wisconsin: U.S. Geological Survey Open-File Report 78-936, 15 p.
- Field, S.J., 1978, Low-flow characteristics of small streams in proposed Public Law 566 basins: U.S. Geological Survey Open-File Report 78-664, 32 p.
- Hindall, S.M., 1978, Suspended-sediment transport in the Big Eau Pleine River basin, central Wisconsin: U.S. Geological Survey Open-File Report 78-313, 12 p.
- Lawrence, C.L., 1976, Regional flood limits of lower Yahara River, Lake Waubesa and south, in Dane County, Wisconsin: U.S. Geological Survey Open-File Report 76-805, 20 p.
- Krug, W.R., 1976, Probable maximum flood at Lake Chippewa near Winter, Wisconsin: U.S. Geological Survey Open-File Report 76-800, 14 p.
- Grant, R.S., 1976, Waste-assimilation study of Koshkonong Creek below sewage-treatment plant at Sun Prairie, Wisconsin: U.S. Geological Survey Open-File Report 76-655, 44 p.
- Lawrence, C.L., 1976, Regional flood limits of upper Yahara River in Dane County, Wisconsin: U.S. Geological Survey Open-File Report 76-448, 15 p.
- Holmstrom, B.K., 1976, Low-flow characteristics and mean annual discharge of North Branch Manitowoc River at Potter, Wisconsin: U.S. Geological Survey Open-File Report 76-204, 20 p.
- Krug, W.R., 1976, Flood-plain delineation for regional flood in Dane County, Wisconsin: U.S. Geological Survey Open-File Report 76-164, 168 p.
- Field, S.J., 1975, Low-flow study of the Pike River basin, Racine and Kenosha Counties, Wisconsin: U.S. Geological Survey Open-File Report 75-653, 10 p.
- Green, J.H., 1975, Flow characteristics of the lower Wisconsin River: U.S. Geological Survey Open-File Report 75-582, 9 p.
- Holmstrom, B.K., 1975, Streamflow characteristics of Klawitter Creek basin near Westfield, Wisconsin: U.S. Geological Survey Open-File Report 75-527, 14 p.
- Krug, W.R., 1975, Analysis of operational plan for Lake Chippewa near Winter, Wisconsin: U.S. Geological Survey Open-File Report 75-487, 17 p.
- Holmstrom, B.K., 1975, Low-flow characteristics of the Eau Claire River basin near Antigo, Wisconsin: U.S. Geological Survey Open-File Report 75-336, 19 p.
- Gebert, W.A., 1974, Streamflow characteristics of Little Wolf River—Holt Creek basin near Galloway, Wisconsin: U.S. Geological Survey Open-File Report, 10 p.
- Lawrence, C.L., and Holmstrom, B.K., 1973, Floods on Yahara River tributaries, Dane County, Wisconsin: U.S. Geological Survey Open-File Report, 19 p.
- Grant, R.S., Krug, W.R., and Duerk, M.D., 1973, Floodplain and floodway delineation for regional flood in central Marathon County, Wisconsin: U.S. Geological Survey Open-File Report, 33 p.
- Holmstrom, B.K., Gebert, W.A., and Borman, R.G., 1973, Alder Creek hydrology, Wisconsin: U.S. Geological Survey Open-File Report, 28 p.
- Lawrence, C.L., and Holmstrom, B.K., 1972, Flood in Starkweather Creek basin, Madison, Wisconsin: U.S. Geological Survey Open-File Report, 15 p.
- Holmstrom, B.K., 1972, Drainage-area data for Wisconsin streams: U.S. Geological Survey Open-File Report, 74 p. (Updated 1973, 1974, 1978, and 1979.)
- Hindall, S.M., 1972, Sediment yields of Wisconsin streams: U.S. Geological Survey Open-File Report, 2 p.
- Weeks, E.P., and Stangland, H.G., 1971, Effects of irrigation on streamflow in the central sand plains of Wisconsin: U.S. Geological Survey Open-File Report, 113 p.
- Conger, D.H., 1971, Estimating magnitude and frequency of floods in Wisconsin: U.S. Geological Survey Open-File Report, 200 p.
- Holmstrom, B.K., and Lawrence, C.L., 1971, Floods on Yahara River, Lake Mendota to Lake Kegonsa, Dane County, Wisconsin: U.S. Geological Survey Open-File Report, 12 p.
- Lawrence, C.L., and Holmstrom, B.K., 1971, Floods on Yahara River, Lake Kegonsa dam to countyline, Dane County, Wisconsin: U.S. Geological Survey Open-File Report, 10 p.

- Shearman, J.O., and Lawrence, C.L., 1971, Floods on Yahara River upstream from Lake Mendota, Dane County, Wisconsin: U.S. Geological Survey Open-File Report, 7 p.
- Gebert, W.A., 1971, Hydrology of Pine Creek: U.S. Geological Survey Open-File Report, 6 p.
- _____, 1971, Hulbert Creek hydrology, southwestern Wisconsin: U.S. Geological Survey Open-File Report, 11 p.
- Gonthier, J.B., 1970, Water resources of southeastern Wisconsin—Milwaukee River basin: U.S. Geological Survey Open-File Report, 138 p. (Extensively used in preparation of "A comprehensive plan for the Milwaukee River watershed", v. 1 and 2, 1970 and 1971, Southeastern Wisconsin Regional Planning Commission Report No. 13, v. 1, 514 p. and v. 2, 623 p.)
- Hamilton, L.J., 1970, Availability of ground water in the lower Wisconsin River Valley, Wisconsin: U.S. Geological Survey Open-File Report, 45 p.
- Campbell, R.E., and Dreher, F.C., 1970, A proposed stream-flow data program for Wisconsin: U.S. Geological Survey Open-File Report, 55 p.
- Shearman, J.O., 1969, Evaluation of flood potential, part 2 of Flood-plain management—Lake Koshkonong: U.S. Geological Survey Open-File Report, 6 p.
- Young, K.B., 1965, Effect of treated effluent diversion on Yahara River flow: U.S. Geological Survey Open-File Report, 81 p.
- _____, 1965, Supplement to report on flow characteristics of Wisconsin streams: U.S. Geological Survey Open-File Report, 81 p.
- U.S. Geological Survey, 1964, Water-quality records in Michigan and Wisconsin: U.S. Geological Survey Open-File Report, 61 p.
- Young, K.B., 1963, Flow characteristics of Wisconsin streams: U.S. Geological Survey Open-File Report, 151 p.
- Erickson, D.W., 1961, Floods in Wisconsin, magnitude and frequency: U.S. Geological Survey Open-File Report, 109 p.
- _____, 1961, Wisconsin River near Dekorra, Wisconsin, flood-flow characteristics at proposed bridge site on the Wisconsin Freeway in Columbia County: U.S. Geological Survey Open-File Report, 13 p.
- Spicer, H.C., and Edwards, G.J., 1955, Electrical resistivity measurements in the Neillsville area, Wisconsin: U.S. Geological Survey Open-File Report, 34 p.
- _____, 1954, A resistivity survey to locate an aquifer in the glacial deposits near Marshfield, Wisconsin: U.S. Geological Survey Open-File Report, 76 p.
- Owens, D.W., Jopke, P., Hall, D.W., Balousek, J., and Roa, A., 2000, Soil erosion from two small construction sites, Dane County, Wisconsin: U.S. Geological Survey Fact Sheet 109-00, 4 p.
- Hunt, R.J., Graczyk, D.J., and Rose, W.J., 2000, Water flows in the Necedah National Wildlife Refuge: U.S. Geological Survey Fact Sheet 068-00, 4 p.
- Graczyk, D.J., Robertson, D.M., Rose, W.J., and Steuer, J.J., 2000, Comparison of water-quality samples collected by siphon samplers and automatic samplers in Wisconsin: U.S. Geological Survey Fact Sheet 067-00, 4 p.
- Graczyk, D.J., Vanden Brook, J.P., and Rheineck, B.D., 1999, Herbicides in the Pecatonica, Trempealeau, and Yahara Rivers in Wisconsin, May 1997-July 1998: U.S. Geological Survey Fact Sheet 167-99, 9 p.
- Wierl, J.A., Giddings, E.M.P., and Bannerman, R.T., 1998, Evaluation of a method for comparing phosphorus loads from barnyards and croplands in Otter Creek watershed, Wisconsin: U.S. Geological Survey Fact Sheet 168-98, 4 p.
- Rose, W.J., and Robertson, D.M., 1998, Hydrology, water quality, and phosphorus loading of Kirby Lake, Barron County, Wisconsin: U.S. Geological Survey Fact Sheet 066-98, 4 p.
- Stuntebeck, T.D., and Bannerman, R.T., 1998, Effectiveness of barnyard best management practices in Wisconsin: U.S. Geological Survey Fact Sheet 051-98, 4 p.
- Team for evaluating the Wisconsin Water-Monitoring Network, 1998, Plan for an integrated long-term water-monitoring network for Wisconsin: U.S. Geological Survey Fact Sheet 048-98, 4 p.
- Corsi, S.R., Graczyk, D.J., Owens, D.W., and Bannerman, R.T., 1997, Unit-area loads of suspended sediment, suspended solids, and total phosphorus from small watersheds in Wisconsin: U.S. Geological Survey Fact Sheet 195-97, 4 p.
- Graczyk, David J., and Vanden Brook, James P., 1997, Herbicides in the Pecatonica and Yahara Rivers in southwestern Wisconsin, May 1996-July 1996: U.S. Geological Survey Fact Sheet 175-97, 4 p.
- Lenz, B.N., 1997, Feasibility of combining two aquatic benthic macroinvertebrate community databases for water-quality assessment: U.S. Geological Survey Fact Sheet 132-97, 4 p.
- Hunt, R.J., 1996, Do created wetlands replace the wetlands that are destroyed: U.S. Geological Survey Fact Sheet 246-96, 4 p.
- Elder, J.F., and Goddard, G.L., 1996, Sediment and nutrient trapping efficiency of a constructed wetland near Delavan Lake, Wisconsin, 1993-1995: U.S. Geological Survey Fact Sheet 232-96, 4 p.
- Kammerer, P.A., Jr., 1996, Hydrology and water quality of Park Lake, south-central Wisconsin: U.S. Geological Survey Fact Sheet 197-96, 4 p.
- Matzen, A.M., and Saad, D.A., 1996, Pesticides in ground water in the Western Lake Michigan drainages, Wisconsin and Michigan, 1983-1995: U.S. Geological Survey Fact Sheet 192-96, 4 p.
- U.S. Geological Survey, 1996, Real-time streamflow conditions: U.S. Geological Survey Fact Sheet 190-96, 2 p.
- Krabbenhof, D.P., 1996, Mercury studies in the Florida Everglades: U.S. Geological Survey Fact Sheet 166-96, 4 p.
- Fitzgerald, S.A., and Steuer, J.J., 1996, The Fox River PCB transport study—stepping stone to a healthy Great Lakes ecosystem: U.S. Geological Survey Fact Sheet 116-96, 4 p.

FACT SHEETS

- Hunt, R.J., Bradbury, K.R., and Krohelski, J.T., 2001, The effects of large-scale pumping and diversion on the water resources of Dane County, Wisconsin: U.S. Geological Survey Fact Sheet 127-01, 4 p.
- Hunt, R.J. and Steuer, J.J., 2001, Evaluating the effects of urbanization and land-use planning using ground-water and surface-water models: U.S. Geological Survey Fact Sheet 102-01, 4 p.
- Elder, J.F., and Robertson, D.M., 2000, Chemical composition of surficial sediment in Geneva Lake, Wisconsin: U.S. Geological Survey Fact Sheet 121-00, 4 p.

- Sullivan, D.J., and Richards, K.D., 1996, Pesticides in streams in the Western Lake Michigan drainages, Wisconsin and Michigan, 1993–95: U.S. Geological Survey Fact Sheet 107–96, 4 p.
- Stuntebeck, T.D., 1995, Evaluating barnyard best management practices in Wisconsin using upstream-downstream monitoring: U.S. Geological Survey Fact Sheet 221–95, 4 p.
- Robertson, Dale M., and Saad, David A., 1995, Environmental factors used to subdivide the Western Lake Michigan Drainages into relatively homogeneous units for water-quality site selection: U.S. Geological Survey Fact Sheet 220–95, 4 p.
- Krabbenhoft, D.P., and Rickert, D.A., 1995, Mercury contamination of aquatic ecosystems: U.S. Geological Survey Fact Sheet 216–95, 4 p.
- Saad, D.A., 1995, Nitrate in ground water in the Western Lake Michigan Drainage Basin, Wisconsin and Michigan: U.S. Geological Survey Fact Sheet 070–94, 2 p.
- Drescher, W.J., 1948, Results of pumping tests on artesian wells in the Milwaukee-Waukesha area, Wisconsin: U.S. Geological Survey Open-File Report, 22 p.
- WATER-SUPPLY PAPERS**
- Kammerer, P.A., Jr., and Krug, W.R., 1993, Wisconsin stream water quality, in U.S. Geological Survey, National water summary 1990–91—Hydrologic events and stream water quality: U.S. Geological Survey Water-Supply Paper 2400, p. 561–568.
- Melcher, N.B., and Walker, J.F., 1992, Evaluation of selected methods for determining streamflow during periods of ice effect: U.S. Geological Survey Water-Supply Paper 2378, 47 p.
- U.S. Geological Survey, 1991, National water summary 1988–89—Hydrologic Events and Floods and Droughts: U.S. Geological Survey Water-Supply Paper 2375, 591 p.
- U.S. Geological Survey, 1990, National water summary 1987—Hydrologic events and water supply and use: U.S. Geological Survey Water-Supply Paper 2350, 553 p.
- , 1988, National water summary 1986—Hydrologic events, selected water-quality trends, and ground-water quality: U.S. Geological Survey Water-Supply Paper 2325, 569 p.
- , 1986, National water summary 1985—Hydrologic events and surface-water resources: U.S. Geological Survey Water-Supply Paper 2300, 506 p.
- , 1985, National water summary 1984—Hydrologic events, selected water-quality trends, and ground-water resources: U.S. Geological Survey Water-Supply Paper 2275, 467 p.
- , 1984, National water summary 1983—Hydrologic events and issues: U.S. Geological Survey Water-Supply Paper 2250, 243 p.
- Batten, W.G., and Hindall, S.M., 1980, Sediment deposition in the White River Reservoir, northwestern Wisconsin: U.S. Geological Survey Water-Supply Paper 2069, 30 p.
- Sherrill, M.G., 1978, Geology and ground water in Door County, Wisconsin, with emphasis on contamination potential in the Silurian dolomite: U.S. Geological Survey Water-Supply Paper 2047, 38 p.
- Hurtgen, D.C., 1975, Summary of floods, June 29–30 in southwestern Wisconsin, in Summary of floods in the United States during 1969: U.S. Geological Survey Water-Supply Paper 2030, p. 116–119.
- Bell, E.A., and Sherrill, M.G., 1974, Water availability in central Wisconsin—an area of near-surface crystalline rock: U.S. Geological Survey Water-Supply Paper 2022, 32 p.
- Novitzki, R.P., 1973, Improvement of trout streams in Wisconsin by augmenting low flows with ground water: U.S. Geological Survey Water-Supply Paper 2017, 52 p.
- Oakes, Edward, Field, S.J., and Seeger, L.P., 1973, The Pine-Popple River basins—hydrology of a wild river area, northeastern Wisconsin: U.S. Geological Survey Water-Supply Paper 2006, 57 p.
- Hamilton, L.J., 1971, Water for cranberry culture in the Cranmoor area of central Wisconsin: U.S. Geological Survey Water-Supply Paper 1999–I, 20 p.
- Hurtgen, D.C., 1972, Floods of March 27–April 4, 1967, in northwestern and west-central Wisconsin, in summary of floods in the United States during 1967: U.S. Geological Survey Water-Supply Paper 1880–C, p. 7–10.
- Hutchinson, R.D., 1970, Ground-water resources of Racine and Kenosha Counties, Wisconsin: U.S. Geological Survey Water-Supply Paper 1878, 63 p.
- Olcott, P.G., 1966, Geology and water resources of Winnebago County, Wisconsin: U.S. Geological Survey Water-Supply Paper 1814, 61 p.
- Weeks, E.P., Erickson, D.W., and Holt, C.L.R., Jr., 1965, Hydrology of the Little Plover River basin, Portage County, Wisconsin, and the effects of water-resources development: U.S. Geological Survey Water-Supply Paper 1811, 78 p.
- Green, J.H., and Hutchinson, R.D., 1965, Ground-water pumpage and water-level changes in the Milwaukee-Waukesha area, Wisconsin, 1950–61: U.S. Geological Survey Water-Supply Paper 1809–I, 19 p.
- Summers, W.K., 1965, Geology and ground-water resources of Waushara County, Wisconsin: U.S. Geological Survey Water-Supply Paper 1809–B, 32 p.
- Holt, C.L.R., Jr., and Knowles, D.B., 1963, The water situation in Wisconsin in the role of ground water in the national water situation: U.S. Geological Survey Water-Supply Paper 1800, p. 943–960.
- Cline, D.R., 1965, Geology and ground-water resources of Dane County, Wisconsin: U.S. Geological Survey Water-Supply Paper 1779–U, 64 p.
- Holt, C.L.R., Jr., 1965, Geology and water resources of Portage County, Wisconsin: U.S. Geological Survey Water-Supply Paper 1796, 77 p.
- Berkstresser, C.F., Jr., 1964, Ground-water resources of Waupaca County, Wisconsin: U.S. Geological Survey Water-Supply Paper 1669–U, 38 p.
- Knowles, D.B., 1964, Ground-water conditions in the Green Bay area, Wisconsin, 1950–60: U.S. Geological Survey Water-Supply Paper 1669–J, 37 p.
- Cline, D.R., 1963, Hydrology of upper Black Earth Creek basin, Wisconsin, with a section on surface water by M.W. Busby: U.S. Geological Survey Water-Supply Paper 1669–C, 27 p.
- Collier, C.R., 1963, Sediment characteristics of small streams in southern Wisconsin, 1954–59: U.S. Geological Survey Water-Supply Paper 1669–B, 34 p.

- LeRoux, E.F., 1963, Geology and ground-water resources of Rock County, Wisconsin: U.S. Geological Survey Water-Supply Paper 1619-X, 50 p.
- Newport, T.G., 1962, Geology and ground-water resources of Fond du Lac County, Wisconsin: U.S. Geological Survey Water-Supply Paper 1604, 52 p.
- Knowles, D.B., Dreher, F.C., and Whetstone, G.W., 1964, Water resources of the Green Bay area, Wisconsin: U.S. Geological Survey Water-Supply Paper 1499-G, 66 p.
- LeRoux, E.F., 1957, Geology and ground-water resources of Outagamie County, Wisconsin: U.S. Geological Survey Water-Supply Paper 1421, 57 p.
- Harger, A.H., and Drescher, W.J., 1954, Ground-water conditions in southwestern Langlade County, Wisconsin: U.S. Geological Survey Water-Supply Paper 1294, 39 p.
- Foley, F.C., Walton, W.D., and Drescher, W.J., 1953, Ground-water conditions in the Milwaukee-Waukesha area, Wisconsin: U.S. Geological Survey Water-Supply Paper 1229, 96 p.

HYDROLOGIC INVESTIGATIONS ATLASES

- Kammerer, Phil A., Jr., Trotta, Lee C., Krabbenhoft, David P., and Lidwin, R.A., 1998, Geology, ground-water flow, and dissolved solids concentrations in ground water along hydrogeologic sections through Wisconsin aquifers, U.S. Geological Survey Hydrologic Investigations Atlas, HA-731, 4 sheets.
- Gebert, W.A., Graczyk, D.J., and Krug, W.R., 1987, Average annual runoff in the United States, 1951-80: U. S. Geological Survey Hydrologic Investigations Atlas HA-710, 1 sheet.
- Hughes, P.E., Hannuksela, J. S., and Danchuk, W.J., 1981, Flood of July 1-5, 1978, on the Kickapoo River, Southwestern Wisconsin: U.S. Geological Survey Hydrologic Investigations Atlas HA-653, 7 sheets.
- Oakes, E.L., and Cotter, R.D., 1975, Water resources of Wisconsin—upper Wisconsin River basin: U.S. Geological Survey Hydrologic Investigations Atlas HA-536, 3 sheets.
- Young, H.L., and Skinner, E.L., 1974, Water resources of Wisconsin—Lake Superior basin: U.S. Geological Survey Hydrologic Investigations Atlas HA-524, 3 sheets.
- Hindall, S.M., and Borman, R.G., 1974, Water resources of Wisconsin—lower Wisconsin River basin: U.S. Geological Survey Hydrologic Investigations Atlas HA-479, 3 sheets.
- Young, H.L., and Borman, R.D., 1973, Water resources of Wisconsin—Trempealeau-Black River basin: U.S. Geological Survey Hydrologic Investigations Atlas HA-474, 4 sheets.
- Oakes, E.L., and Hamilton, L.J., 1973, Water resources of Wisconsin—Menominee-Oconto-Peshigo River basin, U.S. Geological Survey Hydrologic Investigations Atlas HA-470, 4 sheets.
- Hindall, S.M., and Skinner, E.L., 1973, Water resources of Wisconsin—Pecatonica-Sugar River basin: U.S. Geological Survey Hydrologic Investigations Atlas HA-453, 3 sheets.
- Young, H.L., and Hindall, S.M., 1973, Water resources of Wisconsin—St. Croix River basin: U.S. Geological Survey Hydrologic Investigations Atlas HA-451, 4 sheets.

- Skinner, E.L., and Borman, R.G., 1973, Water resources of Wisconsin—Lake Michigan basin: U.S. Geological Survey Hydrologic Investigations Atlas HA-432, 4 sheets.
- Shearman, J.O., and Holmstrom, B.K., 1971, Floods on Rock River in southwestern Jefferson County, Wisconsin: U.S. Geological Survey Hydrologic Investigations Atlas HA-413, 1 sheet.
- _____, 1971, Floods on Rock River in northeastern Jefferson County, Wisconsin: U.S. Geological Survey Hydrologic Investigations Atlas HA-394, 1 sheet.
- Sherman, J.O., 1970, Floods on Rock River in northern Rock County, Wisconsin: U.S. Geological Survey Hydrologic Investigations Atlas HA-393, 1 sheet.
- Gebert, W.A., 1971, Low-flow frequency of Wisconsin streams: U.S. Geological Survey Hydrologic Investigations Atlas HA-390, 1 sheet.
- Young, H.L., and Hindall, S.M., 1972, Water resources of Wisconsin—Chippewa River basin: U.S. Geological Survey Hydrologic Investigations Atlas HA-386, 4 sheets.
- Hindall, S.M., and Flint, R.F., 1970, Sediment yields of Wisconsin streams: U.S. Geological Survey Hydrologic Investigations Atlas HA-376, 1 sheet.
- Devaul, R.W., and Green, J.H., 1971, Water resources of Wisconsin—central Wisconsin River basin: U.S. Geological Survey Hydrologic Investigations Atlas HA-367, 4 sheets.
- Cotter, R.D., Hutchinson, R.D., Skinner, E.L., and Wentz, D.A., 1969, Water resources of Wisconsin—Rock-Fox River basin: U.S. Geological Survey Hydrologic Investigations Atlas HA-360, 4 sheets.
- Olcott, P.G., 1968, Water resources of Wisconsin—Fox-Wolf River basin: U.S. Geological Survey Hydrologic Investigations Atlas HA-321, 4 sheets.
- U.S. Geological Survey, 1965, Preliminary map of the conterminous United States showing depth to and quality of shallowest ground water containing more than 1,000 parts per million dissolved solids: U.S. Geological Survey Hydrologic Investigations Atlas HA-199, 31 p., 2 sheets.

PROFESSIONAL PAPERS

- Young, H.L., 1992, Summary of ground-water hydrology of the Cambrian-Ordovician aquifer system in the northern midwest, United States: U.S. Geological Survey Professional Paper 1405-A, 55 p.
- _____, 1992, Hydrogeology of the Cambrian-Ordovician aquifer system in the northern midwest, United States: U.S. Geological Survey Professional Paper 1405-B, 99 p., 1 pl.
- Mandle, R.J., and Kontis, A.L., 1992, Simulation of regional ground-water flow in the Cambrian-Ordovician aquifer system in the northern midwest, United States: U.S. Geological Survey Professional Paper 1405-C, 97 p.
- Siegel, D.I., 1989, Geochemistry of the Cambrian-Ordovician aquifer system in the northern midwest, United States: U.S. Geological Survey Professional Paper 1405-D, 76 p.
- Green, J.H., 1968, The Troy Valley of southeastern Wisconsin: U.S. Geological Survey Professional Paper 600-C, p. 135-139.

Carey, K.L., 1967, The underside of river ice, St. Croix River, Wisconsin: U.S. Geological Survey Professional Paper 575-C, p. 195-199.

_____, 1966, Observed configuration and computed roughness of the underside of river ice, St. Croix River, Wisconsin: U.S. Geological Survey Professional Paper 550-B, p. 192-198.

Weeks, E.P., 1964, Field methods for determining vertical permeability and aquifer anisotropy: U.S. Geological Survey Professional Paper 501-D, p. 193-198.

_____, 1964, Use of water-level recession curves to determine the hydraulic properties of glacial outwash in Portage County, Wisconsin: U.S. Geological Survey Professional Paper 501-B, p. 181-184.

OPEN-FILE MAPS

Gonthier, J.B., 1979, Water-table map of Waukesha County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Map 79-43, 1 pl.

Sherrill, M.G., and Erickson, J.R., 1979, Water-table map of Walworth County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Map 79-42, 1 pl.

Sherrill, M.G., and Schiller, J.J., 1979, Water-table map of Racine County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Map 79-41, 1 pl.

Sherrill, M.G., Schiller, J.J., and Erickson, J.R., 1979, Water-table map of Milwaukee County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Map 79-40, 1 pl.

Sherrill, M.G., and Schiller, J.J., 1979, Water-table map of Kenosha County, Wisconsin: U.S. Geological Survey Water-Resources Investigations Open-File Map 79-39, 1 pl.

Borman, R.G., 1976, Thickness of unconsolidated materials of Walworth County, Wisconsin: U.S. Geological Survey Open-File Report 76-465, scale 1:62,500.

_____, 1976, Water-table map of Walworth County, Wisconsin: U.S. Geological Survey Open-File Report 76-464, scale 1:62,500.

_____, 1976, Bedrock topography of Walworth County, Wisconsin: U.S. Geological Survey Open-File Report 76-463, scale 1:62,500.

_____, 1976, Bedrock geology of Walworth County, Wisconsin: U.S. Geological Survey Open-File Report 75-462, scale 1:62,500.

Gonthier, J.B., 1975, Bedrock topography of Waukesha County, Wisconsin: U.S. Geological Survey Open-File Report 75-572, scale 1:62,500.

_____, 1975, Water-table map of Waukesha County, Wisconsin: U.S. Geological Survey Open-File Report 75-571, scale 1:62,500.

_____, 1975, Bedrock geology of Waukesha County, Wisconsin: U.S. Geological Survey Open-File Report 75-570, scale 1:62,500.

Borman, R.G., 1971, Preliminary map showing thickness of glacial deposits in Wisconsin: U.S. Geological Survey Open-File Report, scale 1:2,500,000.

_____, 1971, Preliminary map of probable well yields from bedrock in Wisconsin: U.S. Geological Survey Open-File Report, scale 1:2,500,000.

_____, 1971, Preliminary map of probable well yields from glacial deposits in Wisconsin: U.S. Geological Survey Open-File Report, scale 1:2,500,000.

WISCONSIN GEOLOGICAL AND NATURAL HISTORY SURVEY INFORMATION CIRCULARS

Batten, W.G., 1989, Hydrogeology of Wood County, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 60, 27 p., 2 pls.

Patterson, G.L., and Zaporozec, Alexander, 1988, Analysis of water-level fluctuations in Wisconsin wells: Wisconsin Geological and Natural History Survey Information Circular 63, 38 p.

Batten, W.G., 1987, Water resources of Langlade County, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 58, 28 p., 1 pl.

Krohelski, J.T., 1986, Hydrogeology and ground-water use and quality, Brown County, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 57, 42 p.

House, L.B., 1986, Stage fluctuations of Wisconsin Lakes: Wisconsin Geological and Natural History Survey Information Circular No. 49, 84 p.

Devaul, R.W., Harr, C.A., and Schiller, J.J., 1983, Ground-water resources and geology of Dodge County, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 44, 34 p.

Erickson, R.M., and Cotter, R.D., 1983, Trends in ground-water levels in Wisconsin through 1981: Wisconsin Geological and Natural History Survey Information Circular 43, 139 p.

Novitzki, R.P., 1982, Hydrology of Wisconsin Wetlands: Wisconsin Geological and Natural History Survey Information Circular 40, 22 p.

Kammerer, Phil A., Jr., Ground-water quality atlas of Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 39, 39 p.

Young, H.L., and Batten, W.G., 1980, Ground-water resources and geology of Washington and Ozaukee Counties, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 38, 37 p.

Harr, C.A., Trotta, L.C., and Borman, R.G., 1978, Ground-water resources and geology of Columbia County, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 37, 30 p.

Hindall, S.M., 1978, Effects of irrigation on water quality in the sand plain of central Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 36, 50 p.

Borman, R.G., 1976, Ground-water resources and geology of Walworth County, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 34, 45 p.

Borman, R.G., and Trotta, L.C., 1976, Ground-water resources and geology of Jefferson County, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 33, 31 p.

Borman, R.G., 1976, Ground-water resources and geology of St. Croix County, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 32, 30 p.

- Bell, E.A., and Hindall, S.M., 1975, The availability of ground water for irrigation in the Rice Lake-Eau Claire area, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 31, 65 p.
- McLeod, R.S., 1975, A digital-computer model for estimating hydrologic changes in the aquifer system in Dane County, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 30, 40 p.
- Gonthier, J.B., 1975, Ground-water resources of Waukesha County, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 29, 47 p.
- McLeod, R.S., 1975, A digital-computer model for estimating drawdown in the sandstone aquifer in Dane County, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 28, 91 p.
- Holt, C.L.R., Jr., and Skinner, E.L., 1973, Ground-water quality in Wisconsin through 1972: Wisconsin Geological and Natural History Survey Information Circular 22, 148 p.
- Erickson, R.M., 1972, Trends in ground-water levels in Wisconsin, 1967–71: Wisconsin Geological and Natural History Survey Information Circular 21, 40 p. (Supplement to Information Circular 9).
- Holt, C.L.R., Jr., Cotter, R.D., Green, J.H., and Olcott, P.G., 1970, Hydrogeology of the Rock-Fox River basin of southeastern Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 17, 47 p. (Prepared for the Annual Meeting of the Geological Society of America-Field Trip Guidebook).
- Devaul, R.W., 1967, Trends in ground-water levels in Wisconsin through 1966: Wisconsin Geological and Natural History Survey Information Circular 9, 109 p.
- Ryling, R.W., 1961, A preliminary study of the distribution of saline water in the bedrock aquifers of eastern Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 5, 23 p.
- Drescher, W.J., 1956, Ground water in Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 3, 37 p.
- _____, 1955, Some effects of precipitation on ground water in Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 1, 17 p.

WISCONSIN GEOLOGICAL AND NATURAL HISTORY SURVEY MISCELLANEOUS PAPERS

- Patterson, G.L., 1989, Water resources of Vilas County, Wisconsin: Wisconsin Geological and Natural History Survey Miscellaneous Paper 89–1, 46 p.

OTHER PUBLICATIONS

- Krabbenhoft, D.P., Olson, M.L., Dewild, J.F., Clow, D.W., Striegl, R.G., Dornblaser, M.M., and Vanmetre, P., 2002, Mercury loading and methylmercury production and cycling in high-altitude lakes from the Western United States: *Water, Air, and Soil Pollution—Focus*, v. 2, p. 233–249.
- Bravo, H.R., Jiang, F., and Hunt, R.J., 2002, Using groundwater temperature data to constrain parameter estimation in a groundwater flow model of a wetland system: *Water Resources Research*, v. 38, no. 8, p. 28/1–28/14.
- Anderson, M.P., Hunt, R.J., Krohelski, J.T., and Chung, K., March–April 2002, Using high hydraulic conductivity nodes to simulate seepage lakes: *Ground Water*, v. 40, no. 2, p. 117–122.
- Kelson, V.A., Hunt, R.J., Haitjema, March–April 2002, Improving a regional model using reduced complexity and parameter estimation: *Ground Water*, v. 40, no. 2, p. 132–143.
- Fitzpatrick, F.A., Scudder, B.C., Lenz, B.N., and Sullivan, D.J., December 2001, Effects of multi-scale environmental characteristics on agricultural stream biota in eastern Wisconsin: *Journal of the American Water Resources Association*, v. 37, no. 6, p. 1,489–1,507.
- Lott, R.B., and Hunt, R.J., December 2001, Estimating evapotranspiration in natural and constructed wetlands: *Wetlands*, v. 21, no. 4, p. 614–628.
- Fitzpatrick, F.A., 2001, A comparison of multi-disciplinary methods for measuring physical conditions of streams: Chapter in the American Geophysical Union, *Geomorphic Processes and Riverine Habitat*, v. 4, p. 7–18.
- Corsi, S.R., Booth, N.L., and Hall, D.W., 2001, Aircraft and runway deicers at General Mitchell International Airport, Milwaukee, Wisconsin, USA. 1. Biochemical oxygen demand and dissolved oxygen in receiving streams: *Environmental Toxicology and Chemistry*, v. 20, no. 7, p. 1,474–1,482.
- Corsi, S.R., Booth, Hall, D.W., and Geis, S.W., 2001, Aircraft and runway deicers at General Mitchell International Airport, Milwaukee, Wisconsin, USA. 2. Toxicity of aircraft and runway deicers: Published in *Environmental Toxicology and Chemistry*, v. 20, no. 7, p. 1,483–1,490.
- Hunt, R.J., Steuer, J.J., Mansor, M.T.C., and Bullen, T.D., September–October 2001, Delineating a recharge area for a spring using numerical modeling, Monte Carlo Techniques, and Geochemical Investigation: *Ground Water*, v. 39, no. 5, p. 702–712.
- Robertson, D.M., Goddard, G.L., Helsel, D.R., and MacKinnon, K.L., 2000, Rehabilitation of Delavan Lake, Wisconsin: *Lake and Reservoir Management*, v. 16, no. 3, p. 155–176.
- Fitzpatrick, F.A., and Knox, J.C., 2000, Spatial and temporal sensitivity of hydrogeomorphic response and recovery to deforestation, agriculture, and floods: *Physical Geography*, v. 21, no. 2, p. 89–108.
- Robertson, D.M., Wynne, R.H., and Chang, W.Y.B., December 2000, Influence of El Nino on lake and river ice cover in the northern hemisphere from 1900 to 1995: *Verh. Internat. Verein. Limnology*, v. 27, p. 2,784–2,788.
- Elder, J.F., Rybicki, N.B., Carter, V., and Weintraub, V., March 2000, Sources and yields of dissolved carbon in northern Wisconsin stream catchments with differing amounts of peatland: *Wetlands*, v. 20, no. 1, p. 113–125.
- Robertson, D.M. and Richards, K.D., 2000, Influence of Different Temporal sampling strategies on estimating loads and maximum concentrations in small streams in the National Water Quality Monitoring Council Conference—proceedings, April 25–27, 2000, p. 209–223.
- Hunt, R. and Zheng, C., 1999, Newsletter: Debating complexity in modeling; *Eos, Transactions, American Geophysical Union*, v. 80, no. 3, p. 29.
- Hunt, R.J., Walker, J.F., and Krabbenhoft, D.P., 1999, Characterizing hydrology and the importance of ground-water discharge in natural and constructed wetlands: *Wetlands*, v. 2, no. 19, p. 458–472.

- Lathrop, R.C., Carpenter, S.R., and Robertson, D.M., 1999, Summer water clarity responses to phosphorus, Daphnia grazing, and internal mixing in Lake Mendota: *Limnology and Oceanography*, v. 44, no. 1, p. 137–146.
- Panuska, J.C., and Robertson, D.M., 1999, Estimating phosphorus concentrations following alum treatment using apparent settling velocities: *Lakes and Reservoir Management*, v. 15, no. 1, p. 28–38.
- Cleckner, L.B., Garrison, P.J., Hurley, J.P., Olson, M.L., and Krabbenhoft, D.P., 1998, Trophic transfer of methyl mercury in the northern Florida Everglades: *Biogeochemistry*, v. 40, p. 347–361.
- Hunt, R.J., Anderson, M.P., and Kelson, V.A., 1998, Improving a complex finite difference groundwater-flow model through the use of an analytic element screening model: *Ground Water*, v. 36, no. 6, p. 1,011–1,017.
- Hunt, R.J., Bullen, T.D., Krabbenhoft, D.P., and Kendall, C., 1998, Using stable isotopes of water and strontium to investigate the hydrology of a natural and constructed wetland: *Ground Water*, v. 36, no. 3, p. 434–443.
- Hurley, J.P., Krabbenhoft, D.P., Cleckner, L.B., Olson, M.L., Aiken, G.R., and Rawlik Jr., P.S., 1998, System controls on the aqueous distribution of mercury in the northern Florida Everglades: *Biogeochemistry*, v. 40, p. 293–311.
- Krabbenhoft, David P., Gilmour, Cynthia C., Benoit, Janina M., Babiarz, Christopher L., Andren, Anders W., and Hurley, James P., 1998, Methyl mercury dynamics in littoral sediments of a temperate seepage lake: *Canadian Journal of Fisheries and Aquatic Sciences*, v. 55, no. 4, p. 835–844.
- Krabbenhoft, David P., Hurley, James P., Olson, Mark L., and Cleckner, Lisa B., 1998, Diel variability of mercury phase and species distributions in the Florida Everglades: *Biogeochemistry*, v. 40, p. 311–325.
- Peters, C.A., and others, 1998, Water-quality in the western Lake Michigan drainages, Wisconsin and Michigan, 1992–95: U.S. Geological Survey Circular 1156, 40 p.
- Robertson, D.M., Elder, J.F., Goddard, G.L., and James, W.F., 1998, Dynamics in phosphorus retention in wetlands upstream of Delavan Lake, Wisconsin: *Lakes and Reservoir Management*, v. 14, no. 4, p. 466–477.
- Schindler, John E., and Krabbenhoft, David P., 1998, The hyporheic zone as a source of dissolved organic carbon and carbon gases to a temperate forested stream: *Biogeochemistry*, v. 43, p. 157–174.
- Team for Evaluating the Wisconsin Water-Monitoring Network, 1998, An integrated water-monitoring network for Wisconsin: University of Wisconsin Water Resources Center Special Report WRC SR 98–01, 62 p.
- Thorstenson, Donald C., Weeks, Edwin P., Haas, Herbert, Busenberg, Eurybiades, Plummer, L. Niel., and Peters, Charles A., 1998, Chemistry of unsaturated zone gases sampled in open boreholes at the crest of Yucca Mountain, Nevada: Data and basic concepts of chemical and physical processes in the mountain: *Water Resources Research*, v. 34, no. 6, p. 1,507–1,529.
- Walker, J.F., and Krabbenhoft, D.P., 1998, Groundwater and surface-water interactions in riparian and lake-dominated systems in McDonnell, J.J., and Kendall, C., eds., *Isotopic tracers in catchment hydrology*: Elsevier, Amsterdam, The Netherlands, p. 467–486.
- Fitzgerald, S.A., and Steuer, J.J., 1997, Polychlorinated biphenyls (PCBs) as probes of biogeochemical processes in rivers, in *Molecular Markers in Environmental Geochemistry*, Eganhouse, R.P., ed.: American Chemical Society Symposium Series, p. 382–397.
- Fitzgerald, S.A., and Steuer, J.J., 1997, Polychlorinated biphenyls (PCBs) as probes of biogeochemical processes in rivers, American Chemical Society Annual Meeting, Orlando, Florida, August 1996.
- Hornewer, N.J., Johnson, G.P., Robertson, D.M., and Hondzo, M., 1997, Field-scale tests for determining mixing patterns associated with coarse-bubble air diffuser configurations, Egan Quarry, Illinois, in *Environmental and Coastal Hydraulics: Protecting the Aquatic Habitat*, proceedings of the International Association of Hydraulic Research, San Francisco, CA, USA, p. 57–63.
- Hunt, R.J., Krabbenhoft, D.P., and Anderson, M.P., 1997, Assessing hydrogeochemical heterogeneity in natural and constructed wetlands: *Biogeochemistry*, v. 39, p. 271–293.
- Olson, M.L., Cleckner, L.B., Hurley, J.P., Krabbenhoft, D.P., and Heelan, T.W., 1997, Resolution of matrix effects on analysis of total and methyl mercury in aqueous samples from the Florida Everglades: *Fresenius Journal of Analytical Chemistry*, v. 358, p. 392–396.
- Robertson, D.M., 1997, Regionalized loads of sediment and phosphorus to Lakes Michigan and Superior—High flow and long-term average: *Journal of Great Lakes Research*, v. 23, p. 416–439.
- Walker, J.F., and Wang, D., 1997, Measurement of flow under ice covers in North America: *Journal of Hydraulic Engineering*, v. 123, no. 11, p. 1,037–1,040.
- Anderson, W.L., Robertson, D.M., and Magnuson, J.J., 1996, Evidence of recent warming and El Niño-related variation in ice breakup of Wisconsin lakes: *Limnology and Oceanography*, v. 41, p. 815–821.
- Bullen, T.D., Krabbenhoft, D.P., and Kendall, C., 1996, Kinetic and mineralogic controls on the evolution of groundwater chemistry and $^{87}\text{Sr}/^{86}\text{Sr}$ in a sandy silicate aquifer, northern Wisconsin: *Geochimica Cosmochimica Acta*, v. 60, p. 1,807–1,821.
- Elder, J.F., James, R.V., and Steuer, J.J., 1996, Mobility of 2,2',5,5'-tetrachlorobiphenyl in model systems containing bottom sediments and water from an industrialized river basin in northeastern Wisconsin: *Journal of Great Lakes Research*, v. 22, no. 3, p. 697–706.
- Gebert, Warren A. and Krug, William R., 1996, Streamflow trends in Wisconsin's driftless area: *Journal of the American Water Resources Association*, v. 32, no. 4, p. 733–744.
- Hunt, R.J., Krabbenhoft, D.P., and Anderson, M.P., 1996, Groundwater inflow measurements in wetland systems: *Water Resources Research*, v. 32, no. 3, p. 495–507.
- Hunt, R.J., and Krohelski, J.T., 1996, The application of an analytic element model to investigate ground-water lake interactions at Pretty Lake, Wisconsin: *Journal of Lakes and Reservoir Management*, v. 12, no. 4, p. 487–495.
- Imberger, J., Robertson, D.M., and Boland, K., 1996, Lake Number—A quantitative indicator of mixing to be used in water quality management: *Scientific Impeller*, Solna, Sweden, no. 4, p. 9–15.

- Klump, J.V., Edgington, D.N., Sager, P.E., and Robertson, D.M., 1996, The biogeochemistry of Green Bay—1. Sedimentary phosphorus cycling in a phosphorus mass balance for the Green Bay ecosystem: *Canadian Journal of Fisheries and Aquatic Sciences*, v. 54, no. 1, p. 10–26.
- Krug, W.R., 1996, Simulation of temporal changes in rainfall-runoff characteristics, Coon Creek Basin, Wisconsin: *Journal of the American Water Resources Association*, v. 32, no. 4, p. 745–752.
- Assel, R.A., and Robertson, D.M., 1995, Changes in winter air temperatures near Lake Michigan, 1851–1993, as determined from regional lake-ice records: *Limnology and Oceanography*, v. 40, no. 1, January 1995, p. 165–176.
- Assel, R.A., Robertson, D.M., Hoff, M.H., and Selgeby, J.H., 1995, Climatic-change implications from long-term (1823–1994) ice records near the Laurentian Great Lakes: *Annals of Glaciology*, v. 21, p. 383–386.
- Greb, S.R., and Graczyk, D.J., 1995, Frequency duration analysis of dissolved-oxygen concentrations in two southwestern Wisconsin streams: *Water Resources Bulletin, American Water Resources Association*, v. 31, no. 3, June 1995, p. 431–438.
- Kendall, C., and Krabbenhoft, D.P., 1995, Applications of isotopes to tracing sources of solutes and water *in* shallow systems in Charbeneau, R.J., ed., *Groundwater Management, proceedings of the international symposium, August 1995, San Antonio, Tx, American Association of Civil Engineers*, p. 390–395.
- Krabbenhoft, D.P., Benoit, J.M., Babiarz, C.L., Hurley, J.P., and Andren, A.W., 1995, Mercury cycling in the Allequash Creek watershed, northern Wisconsin: *Water, Air, and Soil Pollution*, v. 80, nos. 1/4, February 1995, p. 425–433.
- Krabbenhoft, D.P., and Webster, K.E., 1995, Transient hydrogeological controls on the chemistry of a seepage lake: *Water Resources Research*, v. 31, no. 9, September 1995, p. 2,295–2,305.
- Velleux, M., Endicott, D., Steuer, J., Jaeger, S., and Patterson, D., 1995, Long-term simulation of PCB export from the Fox River to Green Bay: *Journal of Great Lakes Research, International Association for Great Lakes Research*, v. 21, no. 3, 1995, p. 359–372.
- Wentz, D.A., Rose, W.J., and Webster, K.E., 1995, Long-term hydrologic and biogeochemical responses of a soft water seepage lake in north central Wisconsin: *Water Resources Research*, v. 31, no. 1, January 1995, p. 199–212.
- Elder, J.F., 1994, Distribution and grain-size partitioning of metals in bottom sediments of an experimentally acidified Wisconsin lake: *Water Resources Bulletin*, v. 30, no. 2, p. 251–259.
- Hurley, J.P., Krabbenhoft, D.P., Babiarz, C.L., and Andren, A.W., 1994, Cycling processes of mercury across sediment/water interfaces in seepage lakes *in* Baker, L.A., ed., *Environmental Chemistry of Lakes and Reservoirs: Advances in Chemistry Series, American Chemical Society, Washington, D.C.*, p. 426–449.
- Krabbenhoft, D.P., Bowser, C.J., Kendall, C., and Gat, J.R., 1994, Use of oxygen-18 and deuterium to assess the hydrology of groundwater/lake systems *in* Baker, L.A., ed., *Environmental Chemistry of Lakes and Reservoirs: Advances in Chemistry Series, American Chemical Society, Washington, D.C.*, p. 67–90.
- Robertson, D.M., Anderson, W., and Magnuson, J.J., 1994, Relations between El Niño/Southern Oscillation events and the climate and ice cover of lakes in Wisconsin, p. 48–57. *in* Greenland, D. ed., *El Niño and Long-Term Ecological Research (LTER) Sites, Publication no. 18, LTER Network Office: University of Washington, Seattle, WA*, 57 p.
- Robertson, D.M. and Imberger, J., 1994, Lake Number, a quantitative indicator of mixing used to estimate changes in dissolved oxygen. *Internationale Revue der gesamen: Hydrobiologie*, v. 79, p. 159–176.
- Teal, M.J., Ettema, R., and Walker, J.F., 1994, Estimation of mean flow velocity in ice-covered channels: *Journal of Hydraulic Engineering*, v. 120, no. 12, p. 1,385–1,400.
- Walker, J.F., 1994, Methods for measuring discharge under ice cover: *Journal of Hydraulic Engineering*, v. 120, no. 11, p. 1,327–1,336.
- Walker, J.F., 1994, Statistical techniques for assessing water-quality effects of BMPs: *Journal of Irrigation and Drainage Engineering*, v. 120, no. 2, p. 334–347.
- Bannerman, R.T., Owens, D.W., Dodds, R.B., and Hornewer, N.J., 1993, Sources of pollutants in Wisconsin stormwater: *Water Science Technology*, v. 28, no. 3–5, p. 241–259.
- Fitzgerald, S.A., and Gardner, W.S., 1993, An algal carbon budget for pelagic/benthic coupling in Lake Michigan: *Limnology and Oceanography*, v. 28, no. 3, p. 547–560.
- Walker, J.F., and Graczyk, D.J., 1993, Preliminary evaluation of effects of best management practices in the Black Earth Creek, Wisconsin, priority watershed: *Water Science Technology*, v. 28, no. 3–5, p. 539–548.
- Assel, R.A. and Robertson, D.M., 1992, Climatic changes near the Great Lakes inferred from 141-year ice records *in* proceedings of the 5th International Meeting on Statistical Climatology, Toronto, Canada, June, p. 81–85.
- Krabbenhoft, D.P., Anderson, M.P., and Bowser, C.J., 1992, Reply to comment by Stauffer on “Estimating groundwater exchange with lakes using stable isotopes:” *Water Resources Research*, v. 28, no. 6, p. 1,751–1,753.
- Krabbenhoft, D.P., and Babiarz, C.L., 1992, Role of groundwater transport in aquatic mercury cycling: *Water Resources Research*, v. 28, no. 12, p. 3,119–3,128.
- Luecke, C., Lunte, C.C., Wright, R.A., Robertson, D.M., and McLain, A.S., 1992, Impacts of variation in planktivorous fish on abundance of Daphnids: A simulation model of the Lake Mendota Food Web, *in* Kitchell, J.F. ed., *Food Web Management—A Case Study of Lake Mendota: Springer-Verlag, New York, NY*, 553 p.
- Robertson, D.M., Ragotzkie, R.A., and Magnuson, J.J., 1992, Lake ice records used to detect historical and future climatic changes: *Climatic Change*, v. 21, p. 407–427.
- Elder, J.F., and Collins, J.J., 1991, Freshwater molluscs as indicators of bioavailability and toxicity of metals in surface-water systems: *Reviews of Environmental Contamination and Toxicology*, v. 122, no. 4, p. 37–79.
- Walker, J.F., 1991, Accuracy of selected techniques for estimating ice-affected streamflow: *Journal of Hydraulic Engineering*, v. 117, no. 6, p. 697–712.
- Krabbenhoft, D.P., Anderson, M.P., and Boswer, C.J., 1990, Estimating groundwater exchange with lakes, 2—Calibration of a three-dimensional, solute transport model to a stable isotope plume: *Water Resources Research*, v. 26, no. 10, p. 2,445–2,462.
- Krabbenhoft, D.P., Bowser, C.J., Anderson, M.P., and Valley, J.W., 1990, Estimating groundwater exchange with lakes, 1—Use of the stable isotope method: *Water Resources Research*, v. 26, no. 10, p. 2,445–2,453.
- Lodge, D.M., Krabbenhoft, D.P., and Striegl, R.G., 1989, Groundwater velocity and abundance of grazing of crayfish as predictors of submersed macrophyte biomass in Sparkling Lake, Wisconsin: *Limnology and Oceanography*, v. 34, no. 1, p. 235–239.

- Walker, J.F., Pickard, S.A., and Sonzogni, W.C., 1989, Spreadsheet watershed modeling for nonpoint-source pollution management in a Wisconsin basin: *Water Resources Bulletin*, v. 25, no. 1, p. 139–147.
- Wentz, D.A., Garrison, P.J., and Bockheim, J.G., 1989, Section 7—Chemical input-output budgets, in Knauer, D., and Brouwer, S.A., eds., *The Wisconsin Regional Integrated Lake-Watershed Acidification Study (RILWAS): 1981–1983*: Palo Alto, California, Electric Power Research Institute Report EA-6214, p. 7-1 to 7-30.
- Wentz, D.A., and Rose, W.J., 1989, Interrelationships among hydrologic-budget components of a northern Wisconsin seepage lake and implications for acid-deposition modeling: *Archives of Environmental Contamination and Toxicology*, v. 18, p. 147–155.
- Wentz, D.A., Rose, W.J., and Krohelski, J.T., 1989, Section 5—Hydrologic component, in Knauer, D., and Brouwer, S.A., eds., *The Wisconsin Regional Integrated Lake-Watershed Acidification Study (RILWAS): 1981–1983*: Palo Alto, California, Electric Power Research Institute Report EA-6214, p. 5-1 to 5-77.
- Rochelle, B.P., Church, M.R., Gebert, W.A., Graczyk, D.J., and Krug, W.R., 1988, Relationship between annual runoff and watershed area for the eastern United States: *Water Resources Bulletin*, v. 24, no. 1, February 1988, p. 35–41.
- Walker, J.F., 1988, General two-point method for determining velocity in open channel: *ASCE Journal of Hydraulic Engineering*, v. 114, no. 7, p. 801–805.
- Graczyk, D.J., 1980, Flood insurance study of Verona, Dane County, Wisconsin, 3 fig., 3 pls.
- Grant, R.S., and Graczyk, D.J., 1979, Flood insurance study of Hayward, Sawyer County, Wisconsin, 42 p.
- Graczyk, D.J., 1978, Flood insurance study of Marathon City, Marathon County, Wisconsin, 1 fig., 3 pls.
- Graczyk, D.J., 1978, Flood insurance study of Athens, Marathon County, Wisconsin, 3 figs., 3 pls.

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CONVERSION FACTORS

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$