



Water Resources Data Wisconsin Water Year 1992



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WI-92-1

Prepared in cooperation with the State of Wisconsin

and with other agencies

CALENDAR FOR WATER YEAR 1992

1991

OCTOBER

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Water Resources Data Wisconsin Water Year 1992

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



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

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BRUCE BABBITT, Secretary

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Green Bay Metropolitan Sewerage District
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City of Peshtigo
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Menominee Indian Tribe of Wisconsin
Oneida Indian Tribe of Wisconsin
Town of Delavan
Green Lake Sanitary District
City of Fond du Lac
City of Barron
Brown County Planning Commission
Lac du Flambeau Band of Lake Superior Chippewa
Stockbridge/Munsee Indian Tribe
Dane County Lakes and Watershed Commission

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Madison, Wisconsin 53719

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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The following continuous-record surface-water discharge stations in Wisconsin have been discontinued. Daily stream-flow 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.

Discontinued surface-water discharge stations

Station name	Station number	Drainage area (sq mi)	Period of record
STREAMS TRIBUTARY TO LAKE SUPERIOR			
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	3.27	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
North Fish Creek near Moquah, WI	040263491	65.4	1990-91
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
Pine River below Pine River Powerplant near Florence, WI	04064500	533	1924-76
Pike River at Amberg, WI	04066500	255	1914-70
Menominee River near McAllister, WI	04067500	3,930	1945-61, 1979-86, 1988-90
Peshtigo River at High Falls near Crivitz, WI	04068000	537	1912-57
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
White Creek at Forest Glen Beach near Green Lake, WI	04073462	3.05	1982-88
Swamp Creek above Rice Lake at Mole Lake, WI	04074538	46.3	1977-83, 1985-87
Swamp Creek below Rice Lake at Mole Lake, WI	04074548	56.8	1977-79, 1982-85
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
Embarrass River near Embarrass, WI	04078500	384	1919-85
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
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
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
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 Fillmore, WI	04086340	148	1968-81
Milwaukee River at Waubesa, WI	04086360	432	1968-81
Mud Lake Outlet near Decker Corner, WI	04086488	7.36	1983-84
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

Station name	Station number	Drainage area (sq mi)	Period of record
ST. CROIX RIVER BASIN			
Nomekagon 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
Kinnickinnic River near River Falls, WI	05342000	165	1917-21
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
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 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	1914-80, 1989-90
Eau Galle River near Woodville, WI	05369900	39.4	1978-83
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
TREMPEALEAU RIVER BASIN			
Bruce Valley Creek near Pleasantville, WI	05379288	10.1	1980
Elk Creek near Independence, WI	05379305	108	1980
Trempealeau River at Arcadia, WI	05379400	553	1960-77
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, near 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

Station name	Station number	Drainage area (sq mi)	Period of record
WISCONSIN RIVER BASIN--CONTINUED			
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
Eau Claire River near Antigo, WI	05397110	185	1975-81
Bull Junior Creek (Bull Creek Junior) near 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	05400840	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
Hulbert Creek near Wisconsin Dells, WI	05403630*	11.2	1971-77
Dell Creek near Lake Delton, WI	05403700*	44.9	1957-1965, 1971-80
Narrows Creek at Loganville, WI	05404200*	40.1	1964-66
Wisconsin River at Prairie du Sac, WI	05406000	9,180	1946-54
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
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
Fats 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
APPLE RIVER BASIN			
Apple River near Shullsburg, WI	05418731	9.34	1981-82
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
East Branch Rock River near Mayville, WI	05424000	179	1949-70
Rock River at Hustisford, WI	05424082	511	1978-85
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
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
Pheasant Branch at Airport Road near Middleton, WI	05427943	9.61	1977-81
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
Door Creek near Cottage Grove, WI	05429580	15.3	1976-79

Station name	Station number	Drainage area (sq mi)	Period of record
ROCK RIVER BASIN--CONTINUED			
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	41.9	1956-66, 1986-88
Badfish Creek near Stoughton, WI	05430100	41.3	1956-66
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			
White River near Burlington, WI	05545300	110	1964-66, 1973-82

The following daily- or continuous-record surface-water-quality stations were discontinued prior to the 1992 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 (sq mi)	Type of record	Period of record (water year)
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 nr 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
Menominee River at mouth at Marinette, WI	04067651	4,070	SED	1988-90
Peshtigo River at Peshtigo, WI	04069500	1,080	T	1989-90
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
White Creek at Forest Glen Beach nr Green Lake, WI	04073462	3.05	SED, C	1982-88
Middle Branch Embarrass River near Wittenberg, WI	0407809265	76.3	T	1990-91
Fox River at Appleton, WI	04084445	5,950	T	1987-90
Fox River at State Highway 55 at Kaukauna, WI	04084475	5,980	SED	1986-90
Fox River at Wrightstown, WI	04085000	6,050	T, SC	1989-90
Fox River at Little Rapids, WI	04085054	6,100	SED	1975-81
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	1989-90
Bower Creek at County MM near De Pere, WI	04085119	14.8	C	1985-86
East River at Monroe Street in Green Bay, WI	040851378	144.9	SED, C	1991
Fox River at mouth at Green Bay, WI	04085139	6,330	T, SC, DO, PH	1985-86
Manitowoc River at Manitowoc, WI	04085427	526	T, SC	1989-90
Cedar Lake near Kiel, WI	04085500	1.43	T	1979-80
Onion River at Hingham, WI	04085813	37.2	T, SC, SED	1974-77
Onion River near Sheboygan Falls, WI	04085845	94.1	C	1979-80
Milwaukee River near Cedarburg, WI	04086600	607	SED	1980
Milwaukee River at Milwaukee, WI	04087000	696	T, SC	1982-84
Milwaukee River above North Avenue Dam at Milwaukee, WI	04087010	702	SED	1973-80 ²
Menominee River at Germantown, WI	04087018	19	SED	1982-84
Jefferson Park Drain at Germantown, WI	04087019	1.82	SED	1975-77
Menominee River at Menominee Falls, WI	04087030	34.7	SED	1975-77
Menominee River at Butler, WI	04087040	60.64	SED	1975-77
Little Menominee River near Freistadt, WI	04087050	8.0	SED	1975-77
Noyes Creek at Milwaukee, WI	04087060	1.94	SED	1975-77
Little Menominee 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
Menominee River at Wauwatosa, WI	04087120	123	SED	1975-77
Schoonmaker Creek at Wauwatosa, WI	04087125	1.94	SED	1982-84
Hawley Road Storm Sewer at Wauwatosa, WI	04087130	1.83	SED	1975-77
Menominee River at Milwaukee, WI	04087138	134	SED	1975-77
Menominee River at Falk Corp at Milwaukee, WI	04087140	133.82	SED	1983-84
Kinnickinnic River at South 11th Street at Milwaukee, WI	04087159	20.2	SED	1975-77, 1982

Station name	Station number	Drainage area (sq mi)	Type of record	Period of record (water year)
ST. CROIX RIVER BASIN				
Round Lake near Gordon, WI	461342091561002	---	T	1981-85
St. Croix River at St. Croix Falls, WI	05340500	6,240	T,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
CHIPPEWA RIVER BASIN				
Duncan Creek Tributary near Tilden, WI	05364850	4.17	TC,SED	1987-89
			DO	1987-88 ¹
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 Spring Valley, WI	05370000	64.1	T,SC	1978-90
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
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 ³	1985-86
Brewery Creek at Cross Plains, WI	05406470	10.5	SED ³	1985-86
Garfoot Creek near Cross Plains, WI	05406491	5.39	SED ³	1985-86
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,SED	1976-79
Trout Creek at Twin Parks Dam 8 nr 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 Muscoda, WI	05407000	10,400	T,SC	1975-80 ¹ , 1981
			SED	1975-79
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 Fk Nederlo Creek at mouth nr Gays Mills, WI	05409842	2.31	T	1970 ¹ , 1974-78
South Fk Nederlo Creek near Gays Mills, WI	05409860	4.11	T	1970 ¹ , 1974-78
Nederlo Creek at Utica Town Hall nr Gays Mills, WI	05409870	6.70	T	1968-78
GRANT RIVER BASIN				
Rattlesnake Creek near Beetown, WI	05413451	45.2	T	1990-91
			DO	1990-91 ¹
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

Station name	Station number	Drainage area (sq mi)	Type of record	Period of record (water year)
ROCK RIVER BASIN				
Crawfish River at Milford, WI	05426000	762	SED	1980-82
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 Century Ave. 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	SED, C	1984-85
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				
Muskego Lake Outlet near Wind Lake, WI	425109088075000	28.3	C	1988-89
Powers Lake Tributary at Powers Lake, WI	05548163	1.83	C	1987

¹ Seasonal record, non-freezing periods.

² Numerous periods of missing record.

³ Station currently in operation for constituent(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."

Water-resources data for Wisconsin for the 1992 water year include 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 122 gaging stations and peak stage and discharge from 104 crest-stage stations; stage for 40 lakes and contents for 24 reservoirs; water-quality data from 47 streams and from 57 lakes; precipitation from 20 sites; and water-level records from 64 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-92-1." 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. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

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)274-3535. A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

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, George E. Meyer, secretary.
 Southeastern Wisconsin Regional Planning Commission, K. W. Bauer, executive director.
 U.S. Army Corps of Engineers.
 Wisconsin Department of Transportation, S. W. Woods, chief bridge engineer.
 The University of Wisconsin-Extension, Geological and Natural History Survey, Jamie Robertson, state geologist and director.
 Dane County Department of Public Works, Kenneth J. Kosciuk, director.
 Dane County Regional Planning Commission, Thomas Favour, executive director.
 City of Madison, Paul Soglin, mayor.
 City of Middleton, Dan Ramsey, mayor.
 City of Beaver Dam, Robert Kachelski, mayor.
 City of Galena, IL, Terry W. Cole, mayor.
 City of Thorp, Bernell Lange, mayor.
 Madison Metropolitan Sewerage District, James L. Nemke, chief engineer and director.
 Milwaukee Metropolitan Sewerage District, Ralph Hollman, acting executive director.
 Green Bay Metropolitan Sewerage District, Paul E. Thorndsgard, general manager.
 City of Hillsboro, Janice G. Boekme, 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, Harry Krumrie, President.
 Menominee Indian Tribe of Wisconsin, Glen Miller, Chairman.
 Oneida Indian Tribe of Wisconsin, Richard G. Hill, Chairman.
 Town of Delavan, Pat Kohler, Town Clerk.
 Green Lake Sanitary District, Ron Edwards, Administrator.
 City of Fond du Lac, Jack Howley, City Manager.
 City of Barron, Bard Kittleson, Mayor.
 Brown County Planning Commission, Ken Jaworski, Senior Planner.
 Lac du Flambeau Band of Lake Superior Chippewa, Michael Allen, Sr., Chairman.
 Stockbridge/Munsee Indian Tribe, Reginald C. Miller, Chairman.
 Dane County Lakes and Watershed Division, Karin VanVlack, Watershed Management Coordinator.

The following organizations aided in collecting streamflow records: Wisconsin Valley Improvement Co., Wisconsin-Michigan Power Co., Wisconsin Public Service Corp., Northern States Power Co., Dairyland Power Cooperative, Wisconsin Power and Light Co., Georgia-Pacific Corp., Wisconsin Electric Power Co., Wisconsin River Power Co., Scott Paper Co., and Milwaukee County Park Commission. Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

The statewide average precipitation of 33.65 inches for the 1992 water year was 107 percent of the normal annual precipitation of 31.32 inches for water years 1951-80. Average precipitation values ranged from 99 percent of normal in northwestern Wisconsin to 118 percent of normal in southwestern Wisconsin. Although annual precipitation totals were slightly above normal for the 1992 water year, precipitation values were below normal for a number of precipitation stations throughout the State in May through August. Precipitation totals for Wisconsin for May and June were only 58 and 54 percent of the 1951-80 normal precipitation with a June total of only 29 percent of normal for south-central Wisconsin (Pamela Naber Knox, UW-Extension, Geological and Natural History Survey, written commun., 1992). These low precipitation totals along with late frosts resulted in an estimated \$506 million dollar loss in farm forage by July 7 (Wisconsin State Journal, August 1, 1992).

Runoff was variable for rivers throughout the State ranging from 83 percent in east-central Wisconsin to 167 percent in the southwestern portion of east-central Wisconsin. Departure of runoff in the 1992 water year from long-term average runoff is shown in Figure 1. Runoff was lowest (83 percent of the average annual runoff from 1973-92) for the East Twin River at Mishicot and was highest (167 percent of the average annual runoff from 1949-69, 1988-92) for the South Branch Rock River at Waupun.

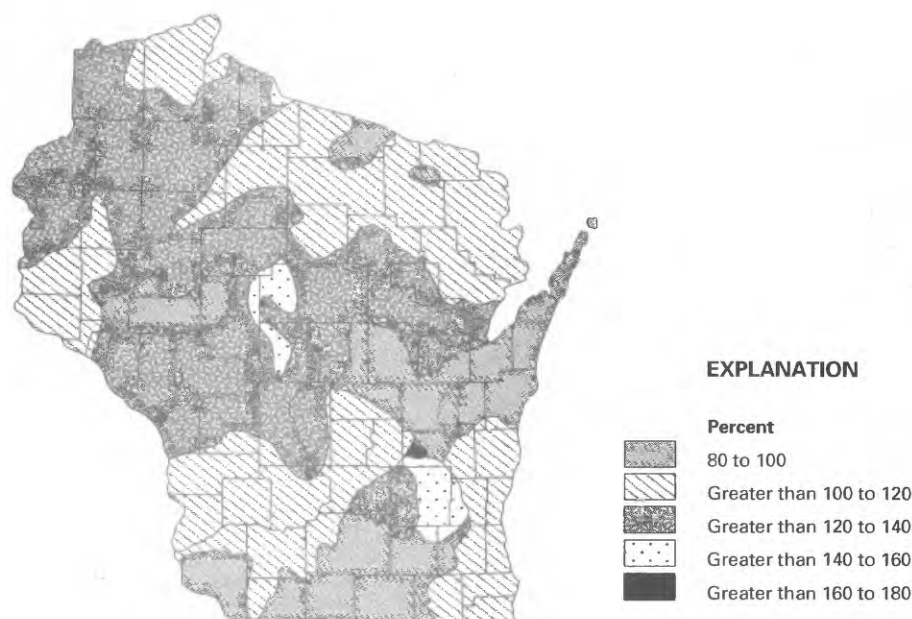


Figure 1. 1992 runoff as percent of long-term average runoff.

A comparison of the annual discharge for the individual water years (1916-92) at the Oconto River near Gillett, Jump River at Sheldon, and Sugar River near Brodhead is shown in figure 2. The comparisons of monthly and annual discharges for the 1992 water year to discharge for a 77-year base period at the same three gaging stations are shown in figure 3.

Although annual precipitation values were above normal for a large portion of the State, low precipitation totals in May through August resulted in the annual minimum 7-consecutive day average flows (Q7) with recurrence intervals of 2 or more years occurring at 13 gaging stations. The Q7 values were typically reached in the June through August period. The Q7 values and recurrence intervals for gaging stations where the recurrence interval equalled or exceeded 2 years are listed in the following table:

Station number	Station name	Date	Q7 (ft ³ /s)	Recurrence interval (years)
04027500	White River near Ashland	June 11-17	153	2
04063700	Popple River near Fence	July 27-Aug. 2	28	2
04069500	Peshtigo River at Peshtigo	July 28-Aug. 3	304	2
04071858	Pensaukee River near Pensaukee	July 28-Aug. 3	2.3	4
04084500	Fox River at Rapide Croche Dam near Wrightstown	Aug. 26-Sept. 1	1,480	2
04087030	Menomonee River at Menomonee Falls	Aug. 18-24	2.2	5
04087159	Kinnickinnic River at South 11th St at Milwaukee	Feb. 8-14	5.0	5
05395000	Wisconsin River at Merrill	Aug. 22-28	1,350	2
05400760	Wisconsin River at Wisconsin Rapids	Aug. 11-17	1,860	2
05404000	Wisconsin River near Wisconsin Dells	Aug. 16-22	2,550	2
05407000	Wisconsin River near Muscoda	Aug. 19-25	3,350	3
05427948	Pheasant Branch at Middleton	Aug. 17-23	0.55	3
05430500	Rock River at Afton	Aug. 18-24	395	2

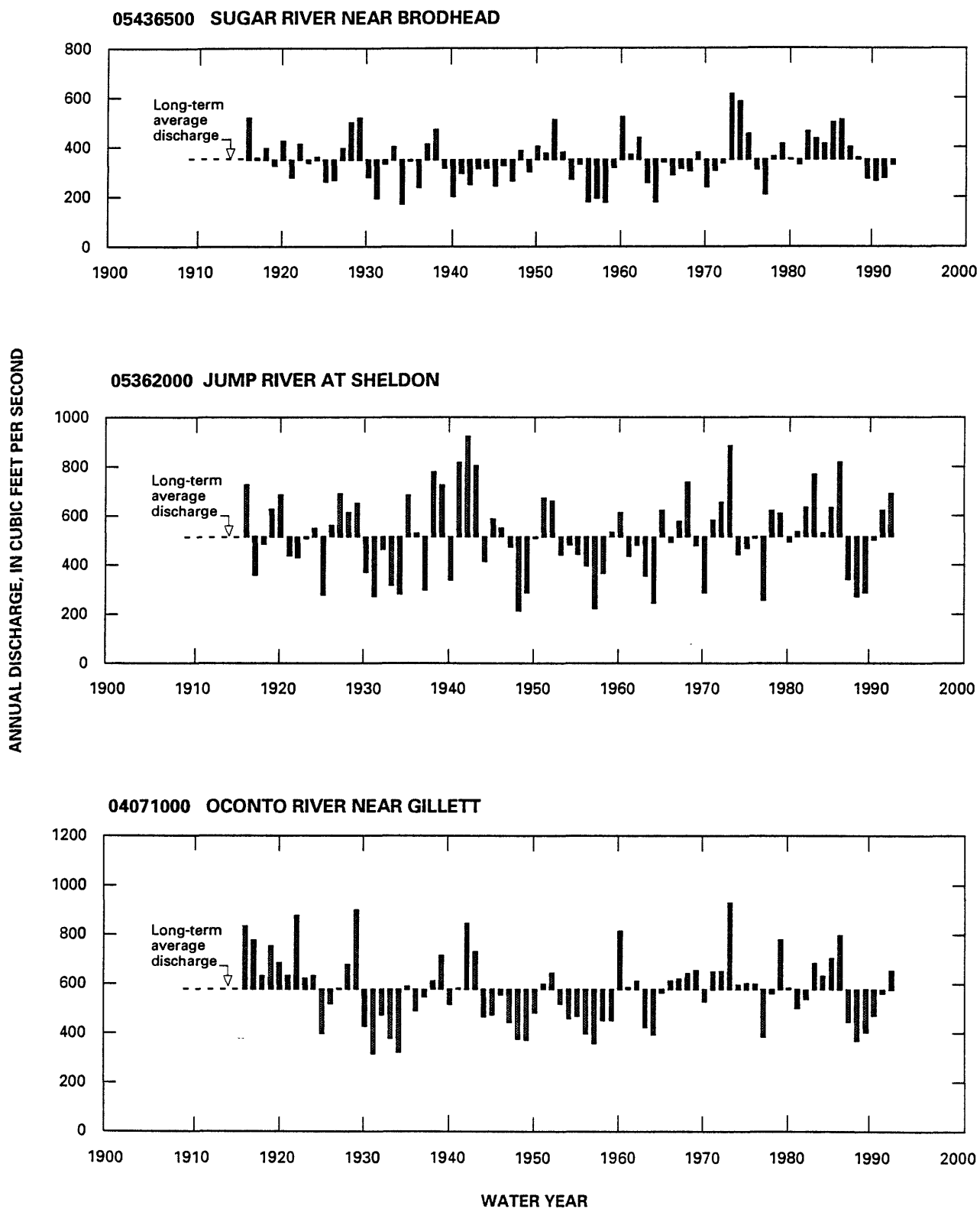


Figure 2. Comparison of annual discharge at representative gaging stations to their long-term average discharge for water years 1916-1992.

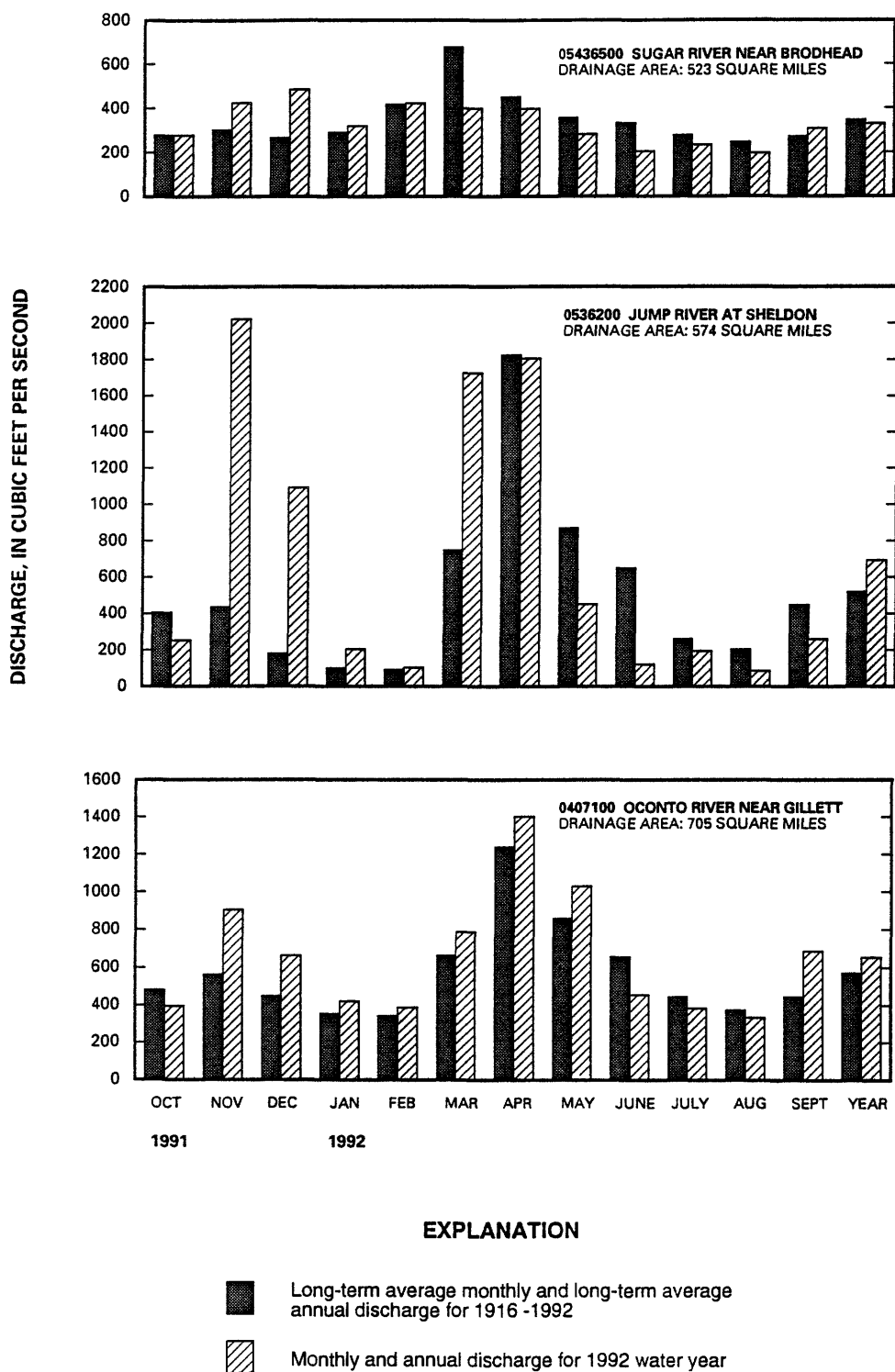


Figure 3. Comparison of discharge at representative gaging stations during 1992 water year with discharge for 1916-1992.

Spring runoff from snowmelt and major storms in the period March through September 1992, caused floods with discharges that equalled or exceeded those with a recurrence interval of 5 years at a number of crest-stage gage and gaging stations.

Precipitation amounts in north-central and northwestern Wisconsin for the three-day period from July 1-3, 1992, were 6.0 inches at Mellen, 6.01 inches at Ashland, 7.12 inches at Drummond, and 7.58 inches at Gurney (National Oceanic and Atmospheric Administration, July 1992, p.7). There were reports of as much as 10 inches in the Saxon area of Iron County. Major flooding on the Bad River caused estimated damages of \$65,000 in the city of Mellen (Mellen Weekly Record, July 9, 1992) and damage to homes, road, and bridges in Iron County was estimated at \$250,000 (Hurley-Iron County Miner, July 9, 1992).

A major storm system moved through southern and western Wisconsin during the five-day period from Sept. 14-18, 1992. Precipitation stations in west-central, central, and southwestern Wisconsin had precipitation totals of 8.47 inches at Fairchild Ranger Station, 8.48 inches at Montello, 8.85 inches at Wisconsin Dells, 8.90 inches at Readstown, 9.25 inches at Hillsboro, and 9.51 inches at LaFarge for this storm (National Oceanic and Atmospheric Administration, September 1992, pp. 8, 9). There were reports that the storm produced precipitation totals of up to 17 inches in Sauk County (Brian Hahn, National Oceanic and Atmospheric Administration, written commun., 1992). Flood damage in ten southern and western Wisconsin counties was \$18 million from the September floods (Wisconsin State Journal, October 1, 1992) caused this storm. Peak discharges with recurrence intervals that equalled or exceeded 5 years are summarized in the following table:

Station number	Station name	Date	Peak discharge (ft ³ /s)	Recurrence interval (years)
04026450	Bad River near Mellen	July 2	2,750	>100
04027000	Bad River near Odanah	July 3	20,100	52
04027200	Pearl Creek at Grandview	July 2	1,920	>100
04027500	White River near Ashland	July 2	6,270	17
04067800	Armstrong Creek near Armstrong	Sept. 16	287	100
04077400	Wolf River near Shawano	May 17	3,130	6
04079700	Spaulding Creek near Big Falls	Apr. 16	90	25
05332500	Namekagon River near Trego	Mar. 13	2,910	48
05357390	Weber Creek near Mercer	July 2	152	5
05364500	Duncan Creek at Bloomer	Apr. 22	2,650	14
05370600	Arkansas Creek Tributary near Arkansasaw	Sept. 16	525	>100
05370900	Spring Creek near Durand	Sept. 16	360	7
05371920	Buffalo River near Mondovi	Sept. 16	3,300	12
05379500	Trempealeau River at Dodge	Sept. 18	8,230	9
05380900	Poplar River near Owen	Mar. 6	9,100	8
05380970	Cawley Creek near Neillsville	Apr. 16	5,400	12
05390140	Muskrat Creek near Conover	Apr. 16	90	5
05393500	Spirit River at Spirit Falls	Nov. 2	2,470	6
05403550	One Mile Creek near Mauston	Sept. 14	2,250	30
05403630	Hulbert Creek near Wisconsin Dells	Sept. 14	380	85
05403700	Dell Creek near Lake Delton	Sept. 14	1,800	>100
05404200	Narrows Creek at Loganville	Sept. 16	5,650	>100
05405000	Baraboo River near Baraboo	Sept. 20	4,470	5
05410490	Kickapoo River at Steuben	Sept. 18	5,320	5
05430403	Fisher Creek Tributary at Janesville	Sept. 16	770	35

References cited:

- Hurley-Iron County Miner, Up to 10" of rain last week taxed area manpower and resources: Hurley, Wis., July 9, 1992.
- Mellen Weekly Record, Heavy rains cause flooding: Mellen, Wis., July 9, 1992.
- National Oceanic and Atmospheric Administration, 1992, Climatological data, Wisconsin, July 1992, Vol. 97, No. 7, 36 p.
- _____, 1992, Climatological data, Wisconsin, September 1992, Vol. 97, No. 9, 32 p.
- Wisconsin State Journal, Disaster aid request rejected: Madison, Wis., August 1, 1992.
- _____, Counties get disaster relief: Madison, Wis., October 1, 1992.

Water Quality

Suspended-sediment and total phosphorus yields for the 1992 water year at two monitoring stations in southern Wisconsin were well below average yields while runoff was near normal. At the Grant River near Burton in southwestern Wisconsin, the suspended-sediment yield was 90 tons/mi² (tons per square mile), which was 39 percent of the average annual yield for 1978-92. This yield was the second lowest for the period. Total runoff from the Grant River watershed during water year 1992 was 93 percent of the 1978-92 average. At Jackson Creek Tributary near Elkhorn in southeastern Wisconsin, the suspended sediment yield was 41 tons/mi², which was 60 percent of the average annual yield for 1984-92; the total phosphorus yield was 282 lbs/mi², which was 57 percent of the average annual yield for 1984-92. Total runoff was 8 percent greater than average for 1984-92.

Data collection began in the Western Lake Michigan Drainages study unit as part of the National Water-Quality Assessment (NAWQA) Program. A nested design was used to select areas within physiographic provinces having similar surficial deposits, upper bedrock geology, and land use. These areas have been designated as relatively homogeneous units (RHU's). A geographic information system was used to overlay these RHU's and river drainages to select about 100 sites for evaluation. From this evaluation, 34 sites were selected for a more intensive reconnaissance investigation which involved field identification of fish and invertebrates along with measurements of aquatic habitat. From this reconnaissance, 12 sites having organisms from a prioritized list of National Target Taxa were selected for an occurrence survey. The occurrence survey involved collection of fish for determination of synthetic organic compounds, benthic invertebrates for trace element analysis, and bed sediment for determination of both trace elements and synthetic organic compounds. A national list was used to insure consistency and comparability among the 20 NAWQA study units.

Loading of polychlorinated biphenyls (PCB) to Green Bay from major tributaries was calculated from data collected from April 1989 to May 1990 as part of the Green Bay Mass Balance Study. More than half of the PCB loading to Green Bay from tributary for this period came from the Fox River.

Ground-Water Levels

Maps showing the seasonal ground-water trends for the year (fig. 4) are based on water-level data from 27 shallow-aquifer wells, each having at least 15 years of record. Water-level measurements from each well are grouped so that FALL consists of measurements from October through December 1991; WINTER consists of measurements from January through March 1992; SPRING consists of measurements from April through June 1992; and SUMMER consists of measurements from July through September 1992. Mean seasonal water levels were compared to the long-term mean seasonal water levels. The 1992 water level was considered normal if it was within one-half of the standard deviation on the long-term mean.

In general, shallow ground-water levels during the 1992 water year were normal to above normal for most of the wells in the State. Water levels in the central part of the State were below normal during FALL and SUMMER and levels in the Forest County well were below normal for the entire year. Water levels at three of the wells were above normal and four wells had normal levels for the entire year. Ground-water levels in Ashland and Iowa Counties varied more than those in other parts of the State. In Ashland County, water levels were normal in the FALL and above normal for the remainder of the year. In Iowa County, water levels were normal in the SPRING and above normal for the other three quarters.

SPECIAL NETWORKS AND PROGRAMS

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

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

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

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are from the 1992 water year that began October 1, 1991, and ended September 30, 1992. 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; water-quality data for precipitation; surface and ground water; and ground-water-level data. Figure 5 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 6.

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.

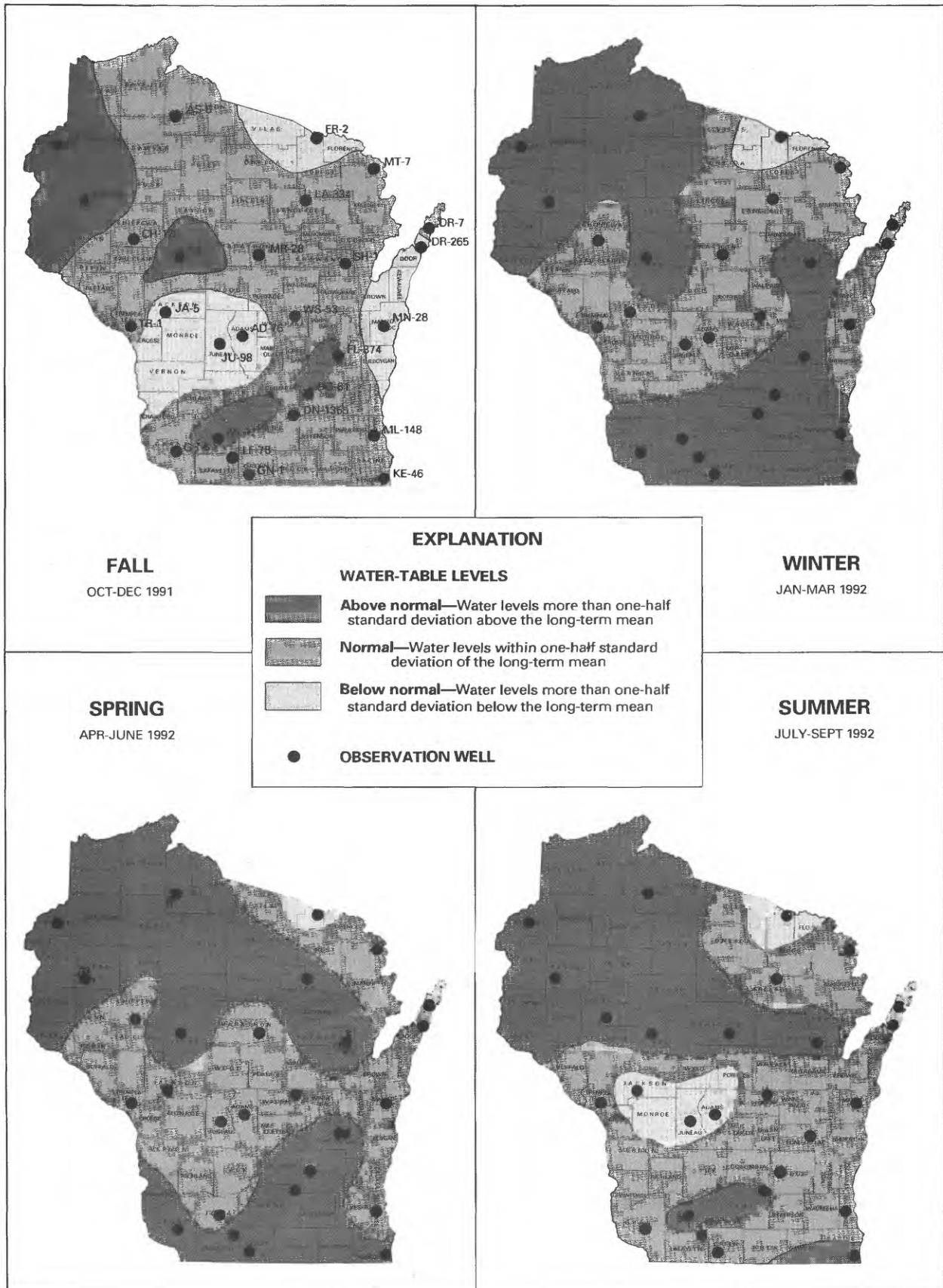


Figure 4. Relation of seasonal water-table levels to long-term means.

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 new 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 National Geodetic Vertical Datum of 1929 (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.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office (see address on back of title page of this report).

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the date of occurrence for the instantaneous peak flow and instantaneous peak stage differ, 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 by 10 percent of the flow for the designated period.

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

90 PERCENT EXCEEDS.--The discharge that is exceeded by 90 percent of the flow 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. Water-quality partial-record stations are sites where more limited water-quality data are collected. These data include water temperature and specific conductance measurements made at gaging station visits and other reconnaissance data collected for special purposes. Water-quality data for water-quality partial-record stations appear together 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 given in "U.S. Geological Survey Techniques of Water-Resources Investigations," listed in "Publications on techniques of water-resources investigations."

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 continuous monitors, daily maximum, minimum, and mean values for each constituent or property are computed and reported herein. Continuous records (usually hourly values) 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 method (time-discharge weighted average) given in "U.S. Geological Survey Techniques of Water-Resources Investigations" listed in "Publications on techniques of water-resources investigations." 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.

Concentration values used in discharge computations are given in separate tables.

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 are given in "U.S. Geological Survey Techniques of Water-Resources Investigations" listed in "Publications on techniques of water-resources investigations."

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.

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). Present data above the $\mu\text{g/L}$ level should be viewed 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 will begin using new trace-element protocols in water year 1994.

A problem has been identified with total phosphorus analyses done by the USGS National Water Quality Laboratory prior to Oct. 1, 1991, relating to concentrations and loads that may be higher than reported. Some time after 1975, an error was introduced during a rewrite of the laboratory method for digestion of samples of 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.

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). These codes may be included in some of the water-quality tables herein. 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; 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)

Records of Ground-Water Levels

Water-level data for 64 wells are given in this report. The locations of these wells are shown in figure 6. 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 64 wells are presented in this report, water-level data are currently being collected for a total of 203 wells in Wisconsin through a cooperative program with the Wisconsin Geological and Natural History Survey (WG&NHS). 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. 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 nine 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 the graph or punched tape of a water-stage 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 the National Geodetic Vertical Datum of 1929 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) National Geodetic Vertical Datum of 1929 (NGVD of 1929); 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 OF WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval system (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

- * Station Header File - Contains descriptive information on more than 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
- * Daily Values File - Contains more than 220 million daily values of stream flows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.
- * Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.
- * Water Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both surface and ground water.
- * Ground-Water Site Inventory Data Base - Contains inventory data for more than 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requester will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, Virginia 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disk; and, as noted in the introduction, on CD-ROM discs. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc-Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. 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.) A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, CO 80225.

DEFINITION OF TERMS

Terms used in this report with reference to streamflow, water-quality, and other hydrologic data are defined below. For conversion of inch-pound units and International System (SI) units see the table on the inside of the back cover.

Acre-foot (acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot. It is the equivalent of 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Bacteria are microscopic, unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, and often clumped into colonies. Some bacteria cause disease; others perform essential roles in the natural recycling of materials such as decomposing organic matter into forms available for reuse by plants.

Fecal coliform bacteria are present in the intestines of warmblooded animals and are used to determine the sanitary quality of water. They are defined as those organisms that produce blue colonies within 24 hours when incubated at $44.5^{\circ}\text{C} \pm 0.2^{\circ}$ on M-FC culture medium. Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal streptococci bacteria are also found in the intestines of warmblooded animals. Their presence in water is used to verify fecal pollution. They are characterized as gram-positive, spherical bacteria capable of growth in brain-heart infusion broth. They are defined as those organisms that produce red or pink colonies within 48 hours at $35^{\circ} \pm 1.0^{\circ}$ on KF-streptococcus culture medium. Their concentrations are expressed as number of colonies per 100 ml of sample.

Bed material is the unconsolidated material at the bottom of a streambed, lake, pond, reservoir, or estuary.

Biochemical oxygen demand (BOD) measures the quantity of dissolved oxygen, in milligrams per liter, used by microorganisms for the decomposition of organic matter.

Cfs-day is the volume of water produced by a flow of 1 cubic foot per second for 24 hours. It is the equivalent of 86,400 cubic feet, 1.9835 acre-feet, 646,000 gallons, or 2,447 cubic meters.

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

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

Cubic foot per second (ft^3/s) represents a volume of 1 cubic foot of water passing a given point during 1 second and is the equivalent of 7.48 gallons per second, 448.8 gallons per minute, or 0.02832 cubic meters per second.

Discharge is the volume of fluid or mass of suspended sediment passing a given point in a given period of time.

Mean discharge (MEAN) is the arithmetic average of all daily mean discharges for a specific period of time.

Instantaneous discharge is the discharge at a particular time.

Dissolved is an operational definition used by Federal and State agencies collecting water data as that material in a water sample which passes through a $0.45 \mu\text{m}$ membrane filter. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Drainage area of a stream at a specified location is measured in a horizontal plane and constitutes an area enclosed by a topographic divide from which surface runoff above the specified point drains by gravity into the stream. Values of the drainage areas given herein include closed basins and noncontributing areas within the basin, as noted.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage", although gage height is more appropriate when referring to a reading on a gage. See also Lake stage.

Gaging station is a particular site on a stream or lake where systematic hydrologic data are collected.

Geologic unit is a geologic formation or group of formations; in this report, the term is used in the same sense as "aquifer" and refers to the geologic formation(s) open to the uncased or screened portion of a well.

Hardness is a physical-chemical characteristic of water that is attributable principally to the presence of calcium and magnesium and is expressed as calcium carbonate (CaCO_3). Hardness is commonly recognized by the increased quantity of soap required to produce lather.

Hydrologic unit designates part or all of a surface-drainage basin delineated by the Office of Water Data Coordination; each hydrologic unit is identified by an 8-digit number.

Lake stage is the elevation of the lake's water surface referred to some arbitrary gage datum.

Micrograms per gram ($\mu\text{g/g}$) indicates the concentration of a chemical constituent as the mass (micrograms) of that constituent per unit mass (gram) of sediment.

Micrograms per kilogram ($\mu\text{g/kg}$) indicates the concentration of a chemical constituent as mass (micrograms) of that constituent per unit mass (kilogram) of sediment.

Micrograms per liter ($\mu\text{g/L}$) indicates the concentration of a chemical constituent as the mass (micrograms) of that constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

Milligrams per liter (mg/L) indicates the concentration of a chemical constituent or suspended sediment as the mass (milligrams) per unit volume (liter) of water.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent mean sea level at any particular place.

Partial-record station is a site for the systematic collection of limited streamflow or water-quality data over a period of years.

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

Particle-size classification for this report is based on recommendations of the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

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

Pesticides are chemical compounds used to control undesirable plants and animals. They include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides control insects and plants respectively and are the two categories reported.

Picocurie (PCi) is one trillionth (1×10^{-12}) of a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} disintegrations per second. A picocurie yields 2.22 disintegrations per minute.

Polychlorinated biphenyls (PCB's) are industrial chemicals composed of biphenyl compounds containing various amounts of chlorine. Their chemical structure is similar to the organochlorine insecticides.

Polychlorinated naphthalenes (PCN's) are industrial chemicals composed of naphthalene compounds containing various amounts of chlorine. Their chemical structure is similar to the organochlorine insecticides.

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

Runoff in inches (IN, in) indicates the depth of water that would cover a drainage area if all runoff for a given time period were uniformly distributed.

Secchi disk is a black and white plate, 20-25 cm in diameter, which is lowered into a lake on a calibrated line until it is no longer visible. The depth, in meters, at which the disk just disappears is reported as a measure of transparency.

Sediment originates mostly from disintegrated rocks and is transported by, suspended in, and deposited by water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. Topography, geology, soil type, land cover, land use, quantity and intensity of precipitation, and other environmental factors influence the quantity, characteristics, and cause of sediment in streams.

Suspended sediment is sediment maintained in suspension by turbulent currents or as a colloid.

Suspended-sediment discharge is the quantity of suspended sediment passing through a stream cross section in a unit of time. It is computed by multiplying water discharge times suspended-sediment concentration times 0.0027.

Suspended-sediment concentration is the discharge-weighted concentration of suspended sediment in a sample zone (from the water surface to approximately 0.3 ft above the streambed) and is expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing through a stream cross section during a 24-hour period.

Sodium-adsorption ratio (SAR) expresses the relative activity of sodium ions in exchange reactions with soil.

Solute is any substance dissolved in water.

Specific conductance is a measure of the ability of water to conduct electrical current and is expressed in microsiemens per centimeter at 25°C. It is related to the number and specific types of ions in solution, and is useful for approximating the concentration of dissolved solids in the water. Commonly, the concentration of dissolved solids mg/L is about 65 percent of the specific conductance.

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

Streamflow uniquely describes discharge in the natural channel of a surface stream course as opposed to the term "discharge", which can be applied to the flow of a canal. Unlike the term "runoff", streamflow may be applied to discharge whether it is affected by diversion or regulation or not.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a water-sediment sample retained on a 0.45 μ m membrane filter has been digested by dilute acid that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter usually is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of dissolved and total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45 μ m membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of dissolved and total recoverable concentrations of the constituent.

Tons per acre-foot indicates the dry weight of a constituent in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the measure of a substance that passes a stream section in solution or suspension during a 24-hour period. It is computed by multiplying the concentration of the substance (mg/L) by 0.0027 times the discharge of the stream (cfs).

Total is the total amount of a given constituent in a water-sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." The term indicates the sample consists of a water-sediment mixture and that the analytical method determines all of the constituent in the sample.

Total, recoverable is the amount of a given constituent that is in solution after a water-sediment sample has been digested by dilute acid resulting in dissolution of only readily soluble substances. Complete dissolution of all particulate matter usually is not achieved, thus the determination represents something less than the "total" amount of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

WDR is the abbreviation for "Water-Data Report" used in the summary REVISIONS paragraph to indicate previously published State annual basic data report (WRD was used an abbreviation for "Water-Resources Data" in reports published prior to 1982).

WSP is the abbreviation for "Water-Supply Paper" used in references to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficken, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. McCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 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, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
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ST. LAWRENCE RIVER BASIN RECORDS

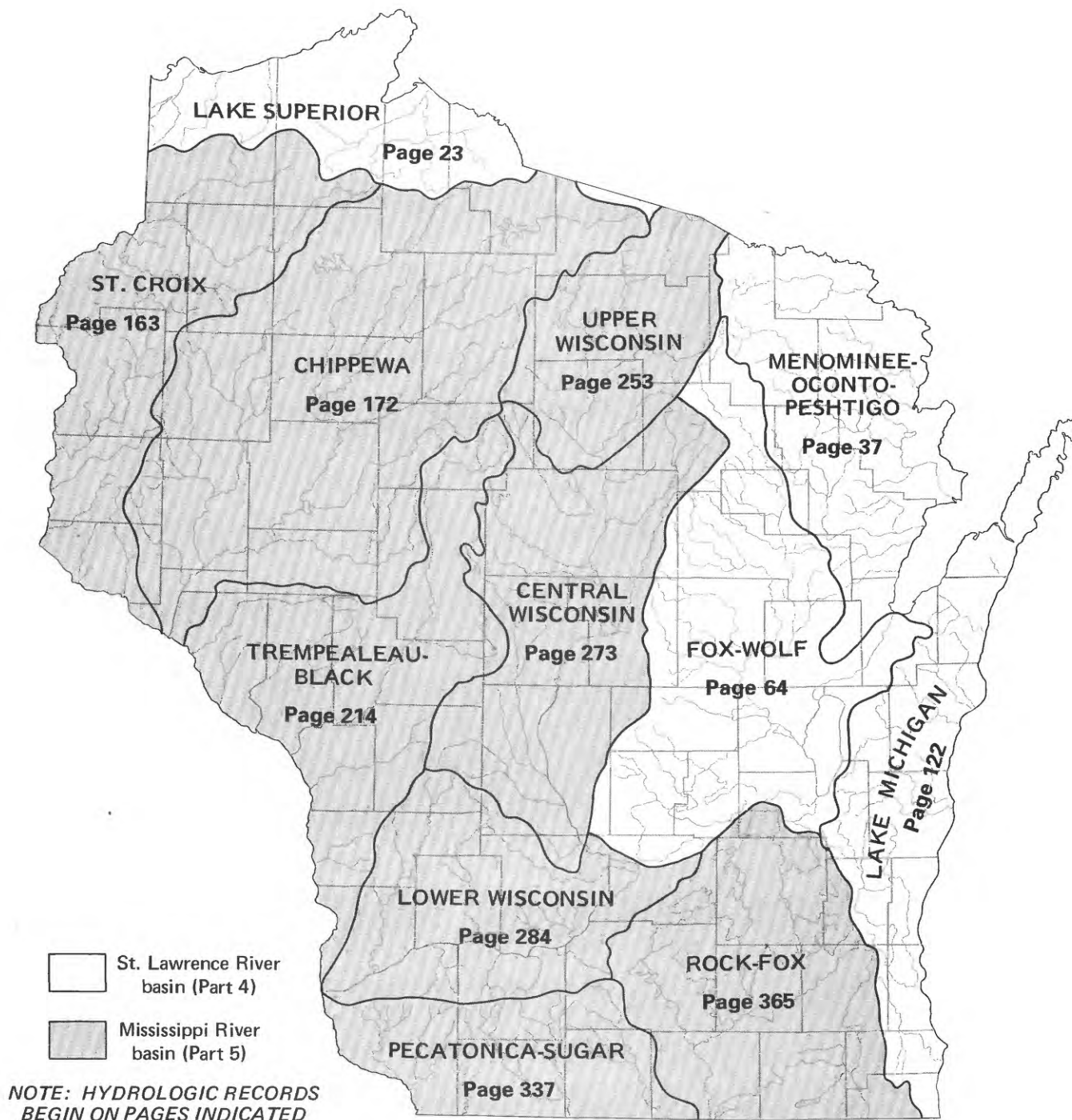
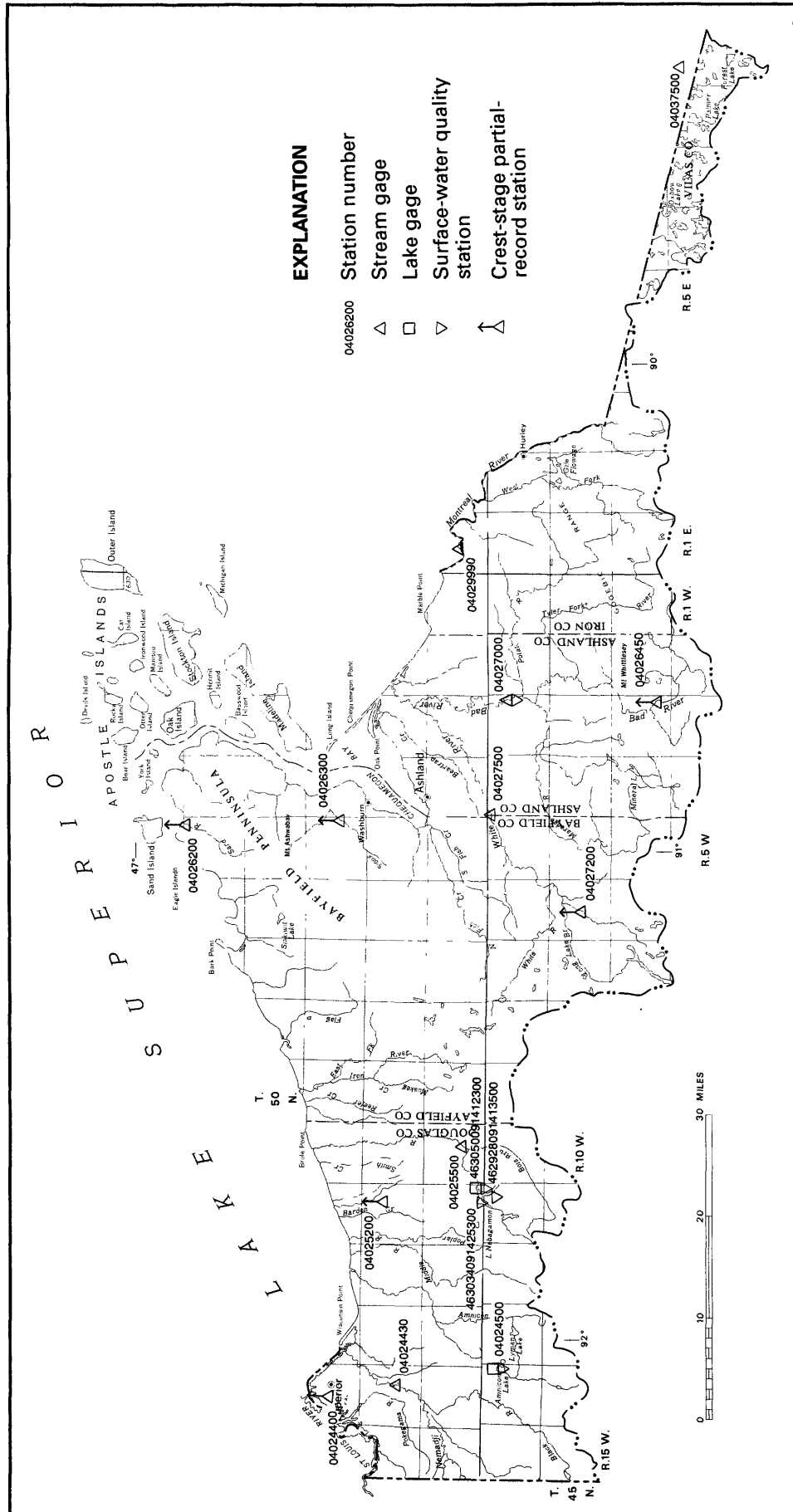


Figure 5. Major surface-water drainage basins and index of hydrologic records.



LAKE SUPERIOR BASIN

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

STREAMS TRIBUTARY TO LAKE SUPERIOR

04024430 NEMADJI RIVER NEAR SOUTH SUPERIOR, WI

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

DRAINAGE AREA.--420 mi².

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

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

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 1-2 and Nov. 7 to Apr. 3. Records good except those for ice-affected periods, which are fair.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	520	800	240	130	170	1000	539	123	643	96	117
2	178	640	740	230	130	170	940	496	120	3400	93	147
3	177	1090	660	230	130	180	1000	439	114	5020	92	269
4	173	1190	620	230	130	190	1550	392	110	2590	87	217
5	165	1180	580	220	130	230	1550	368	105	1220	85	217
6	185	1120	560	220	130	450	2020	341	106	802	86	324
7	236	960	560	220	130	760	2210	314	111	592	89	336
8	225	920	540	230	120	1400	1610	294	112	475	121	260
9	204	880	520	230	120	1800	1440	276	106	415	127	246
10	188	840	500	220	120	1500	1320	258	101	389	113	214
11	177	800	480	200	130	1300	1040	279	97	507	100	190
12	167	800	460	230	120	1100	862	1250	94	445	95	164
13	159	780	430	220	110	1000	789	866	90	395	92	143
14	155	780	410	200	110	880	706	581	88	321	87	135
15	159	800	390	150	110	800	833	456	87	274	84	127
16	163	780	390	130	110	760	921	392	92	244	81	120
17	168	760	390	130	120	710	872	366	134	237	76	273
18	164	1500	390	130	120	680	839	336	540	219	76	352
19	147	3100	340	120	120	640	1070	295	683	202	75	340
20	142	2900	300	120	120	610	1870	274	802	212	73	244
21	140	2600	300	120	120	580	4050	230	575	194	79	230
22	139	2100	290	130	130	560	4440	210	420	175	89	204
23	135	1500	280	130	130	540	3710	199	358	174	87	165
24	210	1400	270	130	130	700	2470	191	329	166	82	139
25	274	1200	260	130	140	1200	1700	176	327	148	97	121
26	244	1100	260	120	140	2100	1290	165	381	136	136	113
27	212	1000	250	120	150	1600	1040	156	364	127	142	108
28	196	980	250	120	160	1500	854	149	278	120	126	103
29	601	920	250	130	160	1400	729	142	227	111	114	96
30	813	860	240	130	---	1300	623	135	202	104	110	93
31	532	---	240	130	---	1400	---	129	---	100	119	---
TOTAL	7009	36000	12950	5290	3700	28210	45348	10694	7276	20157	3009	5807
MEAN	226	1200	418	171	128	910	1512	345	243	650	97.1	194
MAX	813	3100	800	240	160	2100	4440	1250	802	5020	142	352
MIN	135	520	240	120	110	170	623	129	87	100	73	93
CFSM	.54	2.86	.99	.41	.30	2.17	3.60	.82	.58	1.55	.23	.46
IN.	.62	3.19	1.15	.47	.33	2.50	4.02	.95	.64	1.79	.27	.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1992, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1974	365	1082	1983	41.0	1977
1975	330	1200	1992	33.9	1977
1976	146	418	1992	28.2	1977
1977	82.7	177	1984	27.3	1977
1978	92.9	336	1984	29.8	1977
1979	455	910	1992	102	1980
1980	1388	2426	1986	244	1987
1981	634	1355	1979	120	1980
1982	489	1259	1984	82.9	1988
1983	344	790	1986	46.6	1988
1984	206	978	1986	40.6	1976
1985	406	1485	1986	34.4	1976

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1974 - 1992

ANNUAL TOTAL	218398	185450	
ANNUAL MEAN	598	507	411
HIGHEST ANNUAL MEAN			786
LOWEST ANNUAL MEAN			200
HIGHEST DAILY MEAN	4200	5020	7630
LOWEST DAILY MEAN	54	73	19
ANNUAL SEVEN-DAY MINIMUM	54	78	26
INSTANTANEOUS PEAK FLOW		5350	(a)13700
INSTANTANEOUS PEAK STAGE		20.28	25.97
ANNUAL RUNOFF (CFSM)	1.42	1.21	.98
ANNUAL RUNOFF (INCHES)	19.34	16.43	13.30
10 PERCENT EXCEEDS	1460	1210	1010
50 PERCENT EXCEEDS	356	230	150
90 PERCENT EXCEEDS	60	106	54

(a) From rating curve extended above 9,000 ft³/s

STREAMS TRIBUTARY TO LAKE SUPERIOR

25

463034091425300 LAKE NEBAGAMON, WEST BAY, AT LAKE NEBAGAMON, WI

LOCATION.--Lat 46°30'34", long 91°42'53", in NE 1/4 SW 1/4 sec.35, T.46 N., R.11 W., Douglas County, Hydrologic Unit 04010301, at Lake Nebagamon.

PERIOD OF RECORD.--May to August 1992.

REMARKS.--Lake sampled in west bay at a depth of about 20 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MAY 12 TO AUGUST 18, 1992
(Milligrams per liter unless otherwise indicated)

	May 12	June 10	July 22	Aug. 18
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	88.47	87.59	88.13	87.47
Specific conductance (μS/cm)	80	86	84	88
pH (units)	7.8	7.5	7.9	7.0
Water temperature (°C)	13.0	20.5	20.5	21.0
Secchi-depth (meters)	1.7	2.1	2.0	1.5
Dissolved oxygen	10.1	8.8	8.7	8.5
Phosphorus, total (as P)	<0.020	0.012	0.019	0.021
Chlorophyll a, phytoplankton (μg/L)	8.0	4.0	12	13

463050091412300 LAKE NEBAGAMON, NORTHEAST BAY, AT LAKE NEBAGAMON, WI

LOCATION.--Lat 46°30'50", long 91°41'23", in NE 1/4 NW 1/4 sec.36, T.47 N., R.11 W., Douglas County, Hydrologic Unit 04010301, at Lake Nebagamon.

PERIOD OF RECORD.--May to August 1992.

REMARKS.--Lake sampled in northeast bay. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MAY 12 TO AUGUST 18, 1992
(Milligrams per liter unless otherwise indicated)

	May 12	June 10	July 22	Aug. 18
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	88.47	87.59	88.13	87.47
Specific conductance (μS/cm)	81	83	84	88
pH (units)	7.8	7.6	7.9	7.4
Water temperature (°C)	13.5	23.0	21.0	21.5
Secchi-depth (meters)	1.7	2.1	2.1	1.5
Dissolved oxygen	10.1	8.4	8.8	8.8
Phosphorus, total (as P)	0.020	0.015	0.019	0.016
Chlorophyll a, phytoplankton (μg/L)	8.0	6.0	13	12

462928091413500 LAKE NEBAGAMON. SOUTHEAST BAY AT DEEP HOLE, AT LAKE NEBAGAMON, WI

LOCATION.--Lat 46°29'28", long 91°41'35", in SW 1/4 SW 1/4 sec.1, T.46 N., R.11 W., Douglas County, Hydrologic Unit 04010301, at Lake Nebagamon.

DRAINAGE AREA.--40.9 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--March to September 1992.

GAGE.--Non-recording staff gage. Staff gage read by Edward Girzi; gage is located near observer's residence.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 89.88 ft, Apr. 23; minimum observed, 86.77 ft, Mar. 3.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

462928091413500 LAKE NEBAGAMON, SOUTHEAST BAY AT DEEP HOLE, AT LAKE NEBAGAMON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March to August 1992.

REMARKS.--Lake sampled in southeast bay at a depth of about 52 ft. Lake ice-covered during March sampling.
Water-quality analyses by Wisconsin State Laboratory of Hygiene.WATER-QUALITY DATA, MARCH 03 TO AUGUST 18, 1992
(Milligrams per liter unless otherwise indicated)

	Mar. 03		May 12		June 10		July 22		Aug. 18	
Depth of sample (ft)	1.5	44	1.5	51	1.5	49	1.5	50	1.5	50
Lake stage (ft)	86.77		88.47		87.59		88.13		87.47	
Specific conductance ($\mu\text{S}/\text{cm}$)	116	144	80	84	84	95	83	99	87	121
pH (units)	6.9	6.8	7.9	7.6	7.5	7.4	7.9	7.4	7.0	7.1
Water temperature ($^{\circ}\text{C}$)	1.0	5.0	13.0	7.0	21.0	7.5	20.5	8.5	20.5	8.5
Color (Pt-Co. scale)	---	---	60	60	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.3	5.6	---	---	---	---	---	---
Secchi-depth (meters)	---		1.7		2.1		2.1		1.8	
Dissolved oxygen	10.7	0.3	10.0	6.1	8.6	0.4	9.0	0.1	8.1	0.0
Hardness, as CaCO_3	---	---	38	39	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	9.8	10	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	3.4	3.5	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.3	2.3	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.8	0.8	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	35	37	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	<5.0	<5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	2.0	2.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	<0.0	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	8.2	9.3	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	74	72	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.09	0.08	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.12	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.50	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.020	0.044	0.017	0.119	0.022	0.060	0.014	0.060
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	0.014	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	220	420	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	140	700	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	8.0	---	4.0	---	14	---	10	---

3-3-92

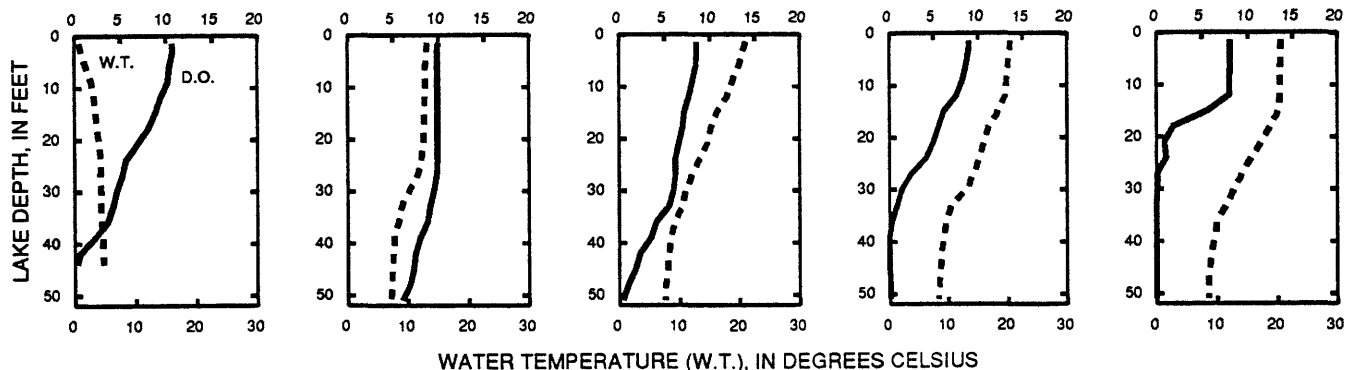
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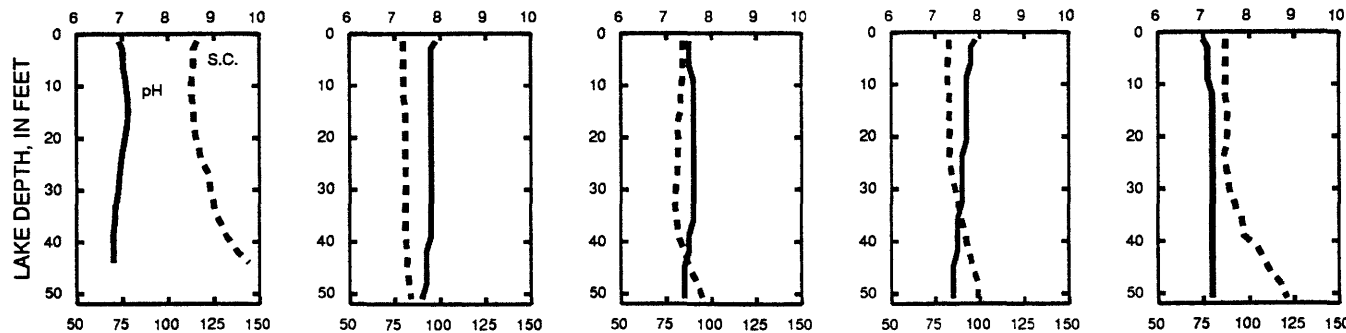
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DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



WATER TEMPERATURE (W.T.), IN DEGREES CELSIUS

pH, IN STANDARD UNITS



SPECIFIC CONDUCTANCE (S.C.), IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

04025500 BOIS BRULE RIVER NEAR BRULE. WI

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

DRAINAGE AREA.--118 mi², revised.

PERIOD OF RECORD.--October 1942 to September 1981, January 1984 to current year. Prior to January 1943, monthly discharge published in WSP 1307.

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

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 1-11, Nov. 22 to Dec. 11, Dec. 14-25, Jan. 14-31, Feb. 8-14, and Mar. 11-16. Records good except those for ice-affected periods, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	170	210	164	150	151	232	320	142	195	133	137
2	155	180	200	165	151	153	226	301	141	541	131	144
3	153	190	200	165	150	153	236	278	138	559	128	142
4	151	210	200	164	149	154	263	261	136	455	127	139
5	155	200	190	164	147	168	286	247	134	397	124	141
6	173	200	190	164	149	212	356	235	140	334	123	144
7	167	200	190	162	147	249	388	225	140	287	135	141
8	161	200	190	163	150	266	367	214	135	250	140	150
9	157	200	190	162	150	257	380	208	130	227	133	145
10	153	190	190	161	150	247	369	201	129	234	130	143
11	151	190	190	161	150	240	338	213	127	227	125	139
12	148	191	198	160	150	230	315	227	126	222	124	137
13	148	190	197	155	150	220	294	215	124	210	123	138
14	154	192	180	160	150	210	278	205	122	199	121	140
15	154	192	170	160	146	210	281	199	121	190	120	136
16	151	191	170	160	146	200	292	195	122	188	119	142
17	149	193	170	160	147	200	307	190	146	181	120	161
18	145	278	170	160	148	195	335	187	157	173	120	172
19	143	312	170	160	149	190	388	180	163	177	119	161
20	143	319	170	160	151	187	569	173	163	169	117	155
21	145	323	170	160	150	183	778	169	153	162	128	149
22	144	310	170	160	149	180	689	169	145	157	126	143
23	144	300	180	160	148	179	622	170	140	152	122	138
24	166	260	180	150	151	188	546	167	142	149	123	134
25	167	240	170	150	152	210	489	162	148	146	142	130
26	165	220	173	150	151	219	447	157	150	144	141	131
27	161	210	170	150	151	216	412	154	143	140	135	131
28	161	200	169	150	150	215	384	152	137	138	132	134
29	169	200	169	150	151	216	363	150	131	135	130	132
30	168	210	169	150	---	223	342	146	128	133	136	130
31	168	---	167	150	---	238	---	143	---	131	136	---
TOTAL	4823	6661	5622	4910	4333	6359	11572	6213	4153	7002	3963	4259
MEAN	156	222	181	158	149	205	386	200	138	226	128	142
MAX	173	323	210	165	152	266	778	320	163	559	142	172
MIN	143	170	167	150	146	151	226	143	121	131	117	130
CFSM	1.32	1.88	1.54	1.34	1.27	1.74	3.27	1.70	1.17	1.91	1.08	1.20
IN.	1.52	2.10	1.77	1.55	1.37	2.00	3.65	1.96	1.31	2.21	1.25	1.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1992, BY WATER YEAR (WY)

MEAN	159	161	142	133	132	153	278	236	195	166	148	158
MAX	259	295	205	164	187	265	399	495	416	345	252	297
(WY)	1978	1972	1972	1984	1966	1945	1976	1950	1944	1952	1986	1951
MIN	110	119	113	104	104	105	157	140	122	108	114	108
(WY)	1949	1949	1948	1948	1948	1943	1959	1958	1948	1964	1948	1948

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1943 - 1992
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ANNUAL TOTAL	67207		69870			
ANNUAL MEAN	184		191		171	
HIGHEST ANNUAL MEAN					223	1972
LOWEST ANNUAL MEAN					133	1948
HIGHEST DAILY MEAN	479	May 7	778	Apr 21	1270	Jun 5 1944
LOWEST DAILY MEAN	110	Feb 10	117	Aug 20	74	Mar 23 1943
ANNUAL SEVEN-DAY MINIMUM	110	Feb 10	119	Aug 14	89	Mar 23 1943
INSTANTANEOUS PEAK FLOW			857	Apr 21	(a)1520	Jun 5 1944
INSTANTANEOUS PEAK STAGE			4.30	Apr 21	(b)5.20	Jun 5 1944
INSTANTANEOUS LOW FLOW			117	Aug 19-21	67	Mar 13 1943
ANNUAL RUNOFF (CFSM)	1.56		1.62		1.45	
ANNUAL RUNOFF (INCHES)	21.19		22.03		19.74	
10 PERCENT EXCEEDS	268		286		257	
50 PERCENT EXCEEDS	172		162		146	
90 PERCENT EXCEEDS	115		132		119	

(a) From rating curve extended above 750 ft³/s
(b) From graph based on gage readings

STREAMS TRIBUTARY TO LAKE SUPERIOR

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04027000 BAD RIVER NEAR ODANAH, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

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

DRAINAGE AREA.--597 mi².

WATER-DISCHARGE RECORDS

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

REMARKS.--Estimated daily discharges: Sept. 21-30 and ice-affected periods, Nov. 7-13 and Nov. 25 to Apr. 1. Records good except those for estimated daily discharges, which are poor.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252	2640	840	490	370	310	1000	872	287	288	179	222
2	263	10100	800	490	380	320	1000	797	277	6860	179	205
3	307	6560	780	490	360	330	1050	723	271	17800	176	208
4	302	3640	760	520	340	350	1230	661	264	10300	176	214
5	438	2670	720	500	330	420	1410	604	261	5790	176	200
6	1960	1860	660	480	320	600	2200	540	256	2710	176	350
7	1930	1500	700	480	310	900	3140	493	278	1650	180	457
8	1420	1400	680	480	290	1300	2580	447	288	1170	187	416
9	1050	1300	640	460	300	1100	2640	417	264	964	190	392
10	806	1100	680	450	310	940	2750	384	252	813	191	347
11	664	980	720	460	290	840	2370	364	244	731	177	316
12	569	940	760	470	280	760	1800	389	241	656	172	283
13	498	940	760	480	270	660	1620	384	220	611	162	248
14	476	1030	680	400	270	580	1330	346	207	551	153	231
15	515	1080	620	350	270	520	1350	341	198	479	147	218
16	521	1030	560	370	290	500	1790	410	200	428	141	203
17	488	883	600	380	300	490	1880	633	221	389	137	231
18	446	3100	620	340	280	480	2130	727	309	349	144	546
19	400	4750	600	360	280	470	2840	632	309	316	149	663
20	367	3260	580	370	270	460	3990	531	296	311	144	508
21	358	2380	580	370	270	450	5820	439	275	290	144	400
22	362	2040	600	370	270	470	5460	409	255	276	144	350
23	353	1830	620	360	270	520	4180	1010	233	267	141	310
24	702	1380	600	330	270	700	2910	838	231	253	133	290
25	1110	1200	580	340	280	1000	2130	658	262	241	152	270
26	975	1100	540	340	290	1000	1710	531	347	234	210	260
27	821	1000	520	350	290	960	1420	451	343	220	211	250
28	704	1000	500	360	310	920	1210	409	294	209	189	240
29	645	940	500	360	310	1000	1060	366	255	195	168	230
30	617	900	490	360	---	1200	956	333	233	188	195	220
31	561	---	490	360	---	1100	---	308	---	181	229	---
TOTAL	20880	64533	19780	12720	8670	21650	66956	16447	7871	55720	5252	9278
MEAN	674	2151	638	410	299	698	2232	531	262	1797	169	309
MAX	1960	10100	840	520	380	1300	5820	1010	347	17800	229	663
MIN	252	883	490	330	270	310	956	308	198	181	133	200
CFSM	1.13	3.60	1.07	.69	.50	1.17	3.74	.89	.44	3.01	.28	.52
IN.	1.30	4.02	1.23	.79	.54	1.35	4.17	1.02	.49	3.47	.33	.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

MEAN	467	532	295	188	188	662	2203	1073	662	483	303	367
MAX	1861	2151	638	410	713	2494	4187	2752	2054	2311	1565	1775
(WY)	1986	1992	1992	1992	1984	1973	1960	1950	1951	1949	1972	1977
MIN	67.1	95.2	107	95.0	69.3	113	513	261	121	77.9	68.2	74.3
(WY)	1949	1949	1977	1917	1964	1917	1987	1980	1948	1964	1948	1976

STREAMS TRIBUTARY TO LAKE SUPERIOR
04027000 BAD RIVER NEAR ODANAH, WI--CONTINUED

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1914 - 1992	
ANNUAL TOTAL	323503		309757		621	
ANNUAL MEAN	886		846		942	1983
HIGHEST ANNUAL MEAN					346	1990
LOWEST ANNUAL MEAN					22000	Apr 24 1960
HIGHEST DAILY MEAN	10100	Nov 2	17800	Jul 3	52	(a)Oct 1 1948
LOWEST DAILY MEAN	100	Jan 9	133	Aug 24	54	Feb 19 1964
ANNUAL SEVEN-DAY MINIMUM	107	Jan 4	143	Aug 18	(b)27700	Apr 24 1960
INSTANTANEOUS PEAK FLOW			20100	Jul 3	(c)21.70	Apr 24 1960
INSTANTANEOUS PEAK STAGE			18.41	Jul 3	(d)34	Nov 8 1976
INSTANTANEOUS LOW FLOW			132	Aug 24-25	1.04	
ANNUAL RUNOFF (CFSM)	1.48		1.42		14.14	
ANNUAL RUNOFF (INCHES)	20.16		19.30		1450	
10 PERCENT EXCEEDS	2180		1730		270	
50 PERCENT EXCEEDS	580		450		115	
90 PERCENT EXCEEDS	130		206			

(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

STREAMS TRIBUTARY TO LAKE SUPERIOR

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04027000 BAD RIVER NEAR ODANAH, WI--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1974 to January 1978 and October 1987 to current year. Water-quality data collected downstream at bridge on U.S. Highway 2 at Odanah (04027595 Bad River at Odanah) from February 1978 to September 1987.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	
OCT 1991												
08...	1130	--	1420	81	8.0	8.0	14	11.8	760	100	150	
JAN 1992												
08...	1030	--	487	117	7.4	1.0	71	13.0	741	94	37	
MAR												
11...	1000	840	--	85	6.6	0.5	13	14.6	744	104	160	
APR												
08...	1015	--	2570	65	8.0	2.0	37	--	745	--	K15	
AUG												
27...	0900	--	196	170	8.0	16.0	2.5	8.4	740	88	140	
DATE		STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
OCT 1991												
08...	280	35	9.7	2.7	2.1	1.3	29	24	3.0	3.1	0.10	
JAN 1992												
08...	59	52	14	4.1	2.7	0.80	53	44	5.0	3.7	0.10	
MAR												
11...	44	28	7.7	2.2	2.1	1.0	27	22	4.3	3.0	<0.10	
APR												
08...	33	26	7.0	2.0	1.8	0.60	26	21	3.5	2.1	0.20	
AUG												
27...	510	79	22	5.8	3.4	1.1	96	78	4.0	4.2	<0.10	
DATE		SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 1991												
08...	9.3	76	46	<0.010	0.050	0.050	0.060	0.60	0.040	0.020	0.010	
JAN 1992												
08...	13	87	70	0.010	0.200	0.060	0.050	0.90	0.210	0.020	0.010	
MAR												
11...	9.3	70	44	<0.010	0.240	0.060	0.060	0.50	0.050	0.020	0.010	
APR												
08...	8.3	65	39	<0.010	0.150	0.070	0.060	0.50	0.040	<0.010	<0.010	
AUG												
27...	9.4	103	98	<0.010	0.089	0.010	0.020	0.30	0.020	<0.010	<0.010	

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

STREAMS TRIBUTARY TO LAKE SUPERIOR
04027000 BAD RIVER NEAR ODANAH, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 1991 08...	1130	--	1420	130	13	<3	420
MAR 1992 11...	1000	840	--	140	10	<3	260
APR 08...	1015	--	2570	140	7	<3	270
AUG 27...	0900	--	196	40	21	<3	150

DATE	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)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
OCT 1991 08...	<4	11	<10	<1	<1	23	<6
MAR 1992 11...	12	10	<10	<1	<1	18	<6
APR 08...	<4	12	<10	<1	<1	16	<6
AUG 27...	<4	13	<10	1	<1	51	<6

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1991 01...	1540	--	231	137	11.0	--	--	--
08...	1130	--	1420	81	8.0	39	150	88
JAN 1992 08...	1030	--	487	117	1.0	223	293	97
FEB 19...	1130	--	276	155	0.0	--	--	--
MAR 11...	1000	840	--	85	0.5	31	70	85
APR 07...	1610	--	3120	62	2.0	--	--	--
08...	1015	--	2570	65	2.0	199	1380	69
MAY 20...	1540	--	490	122	22.0	--	--	--
JUL 15...	1330	--	466	118	19.0	--	--	--
AUG 27...	0900	--	196	170	16.0	12	6.4	86
SEP 09...	1000	--	395	180	15.5	--	--	--

STREAMS TRIBUTARY TO LAKE SUPERIOR

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04027500 WHITE RIVER NEAR ASHLAND, WI

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

DRAINAGE AREA.--301 mi².

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

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

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

REMARKS.--Estimated daily discharges: Apr. 24-30 and ice-affected periods, Dec. 2-15 and Jan. 17 to Feb. 16. Records good except for estimated daily discharges, which are fair. Diurnal fluctuation caused by hydro-electric plant at gage.

REVISIONS.--The maximum discharges for some water years have been revised, as shown in the following table. They supersede figures published in WSP 1237, WSP 1277, WSP 1707, and the Water Resources Data-Wisconsin reports for 1967, 1972, and 1978.

Water year	Date	Discharge (ft ³ /s)	Gage height (ft)
1952	June 24, 1952	6,580	7.10
1953	July 1, 1953	8,100	7.90
1960	Apr. 24, 1960	5,670	6.40
1967	Mar. 30, 1967	4,770	6.00
1972	Aug. 20, 1972	6,030	6.80
1978	Aug. 23, 1978	6,970	7.32

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	704	267	269	230	234	468	290	195	251	204	220
2	201	837	230	255	230	234	402	275	187	3640	213	215
3	201	460	260	271	230	221	394	264	181	1790	216	215
4	225	489	250	258	230	234	484	225	171	2190	226	219
5	214	588	260	269	220	242	529	222	166	2040	195	219
6	271	551	290	249	200	487	681	214	166	1760	210	244
7	312	514	300	259	210	824	623	200	168	1310	207	255
8	255	518	290	263	170	891	622	188	172	974	210	269
9	271	400	280	251	160	771	592	183	165	609	216	256
10	226	347	300	213	190	615	526	170	163	401	214	248
11	235	332	290	189	200	539	446	182	160	292	189	238
12	200	325	290	280	200	504	421	214	156	277	201	230
13	226	324	290	291	180	406	373	216	153	264	194	221
14	196	354	290	166	200	350	337	217	150	269	188	213
15	197	391	240	141	220	321	343	209	146	227	183	207
16	204	378	228	154	220	283	423	212	146	236	182	207
17	210	358	208	200	228	287	430	241	160	226	179	216
18	195	1010	218	240	228	252	432	246	183	224	182	238
19	211	1010	274	260	227	242	444	283	200	228	187	254
20	195	796	309	250	221	238	618	261	194	225	185	258
21	195	801	282	240	218	228	1230	234	193	226	191	244
22	195	813	279	240	222	221	1090	258	182	220	182	244
23	195	673	274	240	221	221	1040	380	170	212	194	193
24	244	482	263	230	217	298	1080	398	166	210	188	203
25	311	423	276	220	223	579	941	373	177	207	199	205
26	299	312	251	230	220	549	736	296	187	204	215	196
27	291	300	268	240	221	436	493	256	191	205	234	200
28	274	260	249	240	228	426	359	234	180	204	228	172
29	243	241	272	240	224	455	318	221	166	201	210	157
30	233	272	258	240	---	461	291	213	155	210	211	148
31	250	---	266	240	---	518	---	206	---	192	218	---
TOTAL	7175	15263	8302	7328	6188	12567	17166	7581	5149	19724	6251	6604
MEAN	231	509	268	236	213	405	572	245	172	636	202	220
MAX	312	1010	309	291	230	891	1230	398	200	3640	234	269
MIN	195	241	208	141	160	221	291	170	146	192	179	148
CFSM	.77	1.69	.89	.79	.71	1.35	1.90	.81	.57	2.11	.67	.73
IN.	.89	1.89	1.03	.91	.76	1.55	2.12	.94	.64	2.44	.77	.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1992, BY WATER YEAR (WY)

	MEAN	239	252	204	188	193	308	573	371	290	264	231	246
MAX	445	509	285	248	318	666	1017	867	707	697	744	635	
(WY)	1983	1992	1961	1952	1984	1973	1960	1950	1952	1953	1972	1960	
MIN	152	160	150	146	136	178	238	197	139	142	147	146	
(WY)	1949	1977	1964	1991	1968	1965	1987	1980	1948	1988	1948	1948	

STREAMS TRIBUTARY TO LAKE SUPERIOR

04027500 WHITE RIVER NEAR ASHLAND, WI--CONTINUED

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1948 - 1992	
ANNUAL TOTAL	112282		119298		281	
ANNUAL MEAN	308		326		426	1953
HIGHEST ANNUAL MEAN					217	1980
LOWEST ANNUAL MEAN					4100	Aug 20 1972
HIGHEST DAILY MEAN	1490	Mar 23	3640	Jul 2	61	Sep 7, 8 1979
LOWEST DAILY MEAN	102	Feb 24	141	Jan 15	68	Sep 4 1979
ANNUAL SEVEN-DAY MINIMUM	133	Jan 21	153	Jun 11	(a)8100	Jul 1 1953
INSTANTANEOUS PEAK FLOW			(a)6270	Jul 2	7.90	Jul 1 1953
INSTANTANEOUS PEAK STAGE			6.93	Jul 2	.93	
ANNUAL RUNOFF (CFSM)	1.02		1.08		12.67	
ANNUAL RUNOFF (INCHES)	13.88		14.74		472	
10 PERCENT EXCEEDS	537		532		210	
50 PERCENT EXCEEDS	260		235		159	
90 PERCENT EXCEEDS	160		182			

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

STREAMS TRIBUTARY TO LAKE SUPERIOR

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04029990 MONTREAL RIVER AT SAXON FALLS NEAR SAXON, WI

LOCATION.--Lat 46°32'13", long 90°22'47", in SW 1/4 NW 1/4 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 (from Power Company data).

REMARKS.--No estimated daily discharges. 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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	205	345	260	325	285	435	340	185	225	210	105
2	170	2880	385	255	325	285	325	315	185	1400	210	100
3	170	2880	470	285	305	285	345	315	208	9880	210	100
4	170	1400	415	305	305	285	420	260	215	7080	210	100
5	175	945	320	305	265	370	420	235	200	3100	210	100
6	175	700	320	305	300	585	785	209	210	1860	210	100
7	715	440	415	280	285	718	1580	197	210	1030	210	155
8	585	400	415	260	250	869	1180	214	220	1010	210	155
9	420	420	375	250	250	985	1180	214	210	735	210	120
10	335	420	375	245	285	825	1320	214	205	650	210	100
11	250	420	375	245	285	650	915	180	200	585	210	100
12	210	385	375	245	225	650	915	210	200	585	210	85
13	210	385	375	250	285	435	720	275	205	490	210	85
14	180	415	405	255	280	325	525	220	205	310	205	60
15	200	420	405	200	285	325	650	220	200	265	205	55
16	235	415	325	220	285	370	795	250	200	285	205	60
17	215	415	375	370	285	325	950	250	200	265	200	80
18	205	585	250	200	305	235	1400	420	220	250	160	160
19	185	1300	265	200	300	220	1400	350	220	250	120	270
20	175	1380	335	210	285	235	2990	275	200	265	115	280
21	120	1210	325	185	285	185	3680	235	200	255	110	160
22	135	865	325	150	285	185	3710	200	190	275	110	130
23	135	865	280	160	285	167	3400	345	190	275	110	115
24	200	865	280	150	285	200	2580	345	230	275	110	95
25	300	715	280	167	285	280	1560	345	251	230	115	85
26	310	585	260	178	285	350	1560	280	250	230	120	80
27	323	585	260	170	285	270	701	235	250	210	110	80
28	255	585	260	180	285	251	510	200	250	210	80	70
29	220	585	260	320	285	251	415	200	190	210	105	75
30	200	345	260	325	---	385	370	200	190	210	105	80
31	200	---	260	325	---	485	---	200	---	210	150	---
TOTAL	7548	24015	10370	7455	8280	12271	37736	7948	6289	33110	5165	3340
MEAN	243	800	335	240	286	396	1258	256	210	1068	167	111
MAX	715	2880	470	370	325	985	3710	420	251	9880	210	280
MIN	120	205	250	150	225	167	325	180	185	210	80	55
CFSM	.93	3.06	1.28	.92	1.09	1.51	4.80	.98	.80	4.08	.64	.42
IN.	1.07	3.41	1.47	1.06	1.18	1.74	5.36	1.13	.89	4.70	.73	.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1992, BY WATER YEAR (WY)

	MEAN	201	259	181	164	155	304	961	518	380	287	196	203
MAX	495	800	391	295	321	888	1795	1180	1172	1068	432	894	
(WY)	1942	1992	1952	1969	1969	1945	1939	1954	1939	1992	1953	1941	
MIN	38.2	34.2	38.1	27.8	21.0	55.4	213	127	101	74.1	36.1	33.6	
(WY)	1949	1949	1949	1949	1949	1940	1987	1941	1987	1987	1987	1939	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1938 - 1992

ANNUAL TOTAL	135371		163527										
ANNUAL MEAN	371		447							317			
HIGHEST ANNUAL MEAN										487		1952	
LOWEST ANNUAL MEAN										162		1987	
HIGHEST DAILY MEAN	2880	Nov 2				9880	Jul 3			9880	Jul 3	1992	
LOWEST DAILY MEAN	90	Feb 15				55	Sep 15			7.2	Oct 24	1948	
ANNUAL SEVEN-DAY MINIMUM	95	Feb 28				75	Sep 11			7.7	Oct 29	1948	
ANNUAL RUNOFF (CFSM)	1.42					1.71				1.21			
ANNUAL RUNOFF (INCHES)	19.22					23.22				16.46			
10 PERCENT EXCEEDS	860					804				649			
50 PERCENT EXCEEDS	220					260				191			
90 PERCENT EXCEEDS	109					127				83			

STREAMS TRIBUTARY TO LAKE SUPERIOR

04037500 CISCO BRANCH ONTONAGON RIVER AT CISCO LAKE OUTLET, MI

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

DRAINAGE AREA.--50.7 mi².

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

REVISED RECORDS.--WSP 1911: Drainage area.

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

REMARKS.--Records good except those below 3.0 ft³/s, which are poor. Flow regulated by Cisco Lake (station 04037400). Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	83	85	37	22	38	40	41	.81	51	1.8	77
2	1.5	112	83	37	22	37	40	3.9	.82	148	1.6	96
3	1.7	109	82	37	22	37	40	3.9	.70	190	1.6	120
4	2.1	107	81	37	22	37	40	3.4	.71	183	1.3	117
5	45	106	80	37	23	39	40	3.2	.50	177	1.3	113
6	81	104	80	37	23	67	41	2.7	.60	143	1.3	110
7	110	102	79	37	23	86	42	1.8	.48	121	.90	108
8	128	99	77	37	23	86	69	1.3	.57	117	1.0	56
9	122	96	51	37	24	103	84	1.2	.48	73	.95	1.3
10	119	95	35	37	24	119	86	1.2	.47	4.8	.75	1.0
11	89	93	35	37	24	117	97	.90	.45	4.6	.74	1.0
12	64	91	37	37	32	97	87	.90	.61	3.9	.80	.80
13	65	89	39	37	38	61	90	.90	.55	14	.80	.68
14	63	87	39	37	38	40	95	.90	.60	33	.80	.70
15	62	85	39	37	38	40	96	.90	.48	56	.80	.60
16	63	83	39	30	37	40	96	24	.68	78	.80	.73
17	61	82	40	22	37	40	91	58	12	75	.69	.91
18	58	84	40	22	36	40	82	77	27	73	.80	14
19	57	84	40	23	36	40	92	105	26	72	.81	28
20	56	82	40	23	36	40	105	101	25	58	.82	28
21	55	81	40	23	36	40	108	99	24	38	.80	28
22	55	80	40	23	36	40	111	97	12	40	.84	25
23	53	80	40	24	36	39	113	54	.46	39	.84	27
24	57	83	39	24	36	39	113	28	.52	39	.88	27
25	58	83	40	41	37	39	118	27	.51	38	.90	27
26	58	82	39	58	37	40	122	14	.51	36	.90	26
27	57	81	39	58	37	40	118	1.7	.51	19	.90	28
28	59	80	38	58	38	40	108	1.3	.54	2.4	.90	15
29	59	79	38	57	38	40	106	1.0	12	2.3	1.0	17
30	56	85	38	56	---	40	82	1.0	28	2.1	2.1	28
31	56	---	38	38	---	40	---	.92	---	2.1	39	---
TOTAL	1872.5	2687	1550	1135	911	1641	2552	758.02	178.56	1933.2	69.42	1122.72
MEAN	60.4	89.6	50.0	36.6	31.4	52.9	85.1	24.5	5.95	62.4	2.24	37.4
MAX	128	112	85	58	38	119	122	105	28	190	39	120
MIN	1.2	79	35	22	22	37	40	.90	.45	2.1	.69	.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1992, BY WATER YEAR (WY)

	MEAN	69.8	67.8	49.8	39.0	35.7	43.9	59.7	45.3	46.6	31.9	26.4	38.8
MAX	151	116	84.1	62.6	81.0	92.1	111	137	123	113	99.7	104	104
(WY)	1986	1968	1961	1983	1945	1973	1985	1960	1953	1953	1978	1977	1977
MIN	13.1	14.5	23.5	23.1	20.6	24.1	2.02	.17	.11	.25	.15	.23	.23
(WY)	1958	1945	1990	1959	1950	1956	1948	1977	1977	1977	1970	1976	1976

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

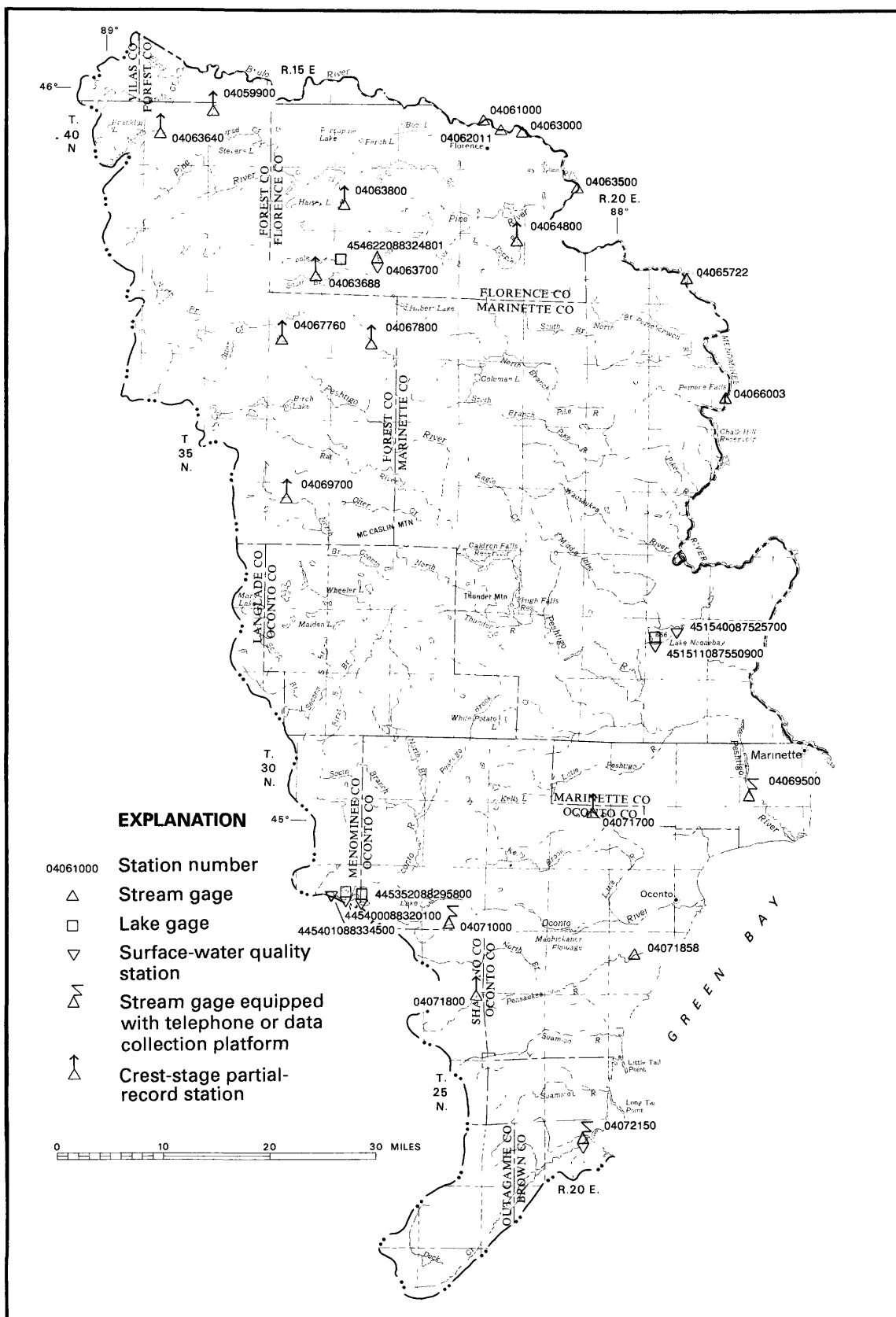
FOR 1992 WATER YEAR

WATER YEARS 1945 - 1992

ANNUAL TOTAL	16443.77	16410.42	
ANNUAL MEAN	45.1	44.8	46.2
HIGHEST ANNUAL MEAN			65.9
LOWEST ANNUAL MEAN			25.2
HIGHEST DAILY MEAN	188	May 29	288
LOWEST DAILY MEAN	.52	Apr 26	.08 (a)
ANNUAL SEVEN-DAY MINIMUM	.71	Aug 27	.09
INSTANTANEOUS PEAK FLOW			288
INSTANTANEOUS PEAK STAGE			(b)6.10
ANNUAL RUNOFF (CFSM)	.89		.91
ANNUAL RUNOFF (INCHES)	12.07		12.39
10 PERCENT EXCEEDS	105		102
50 PERCENT EXCEEDS	37		38
90 PERCENT EXCEEDS	1.1	.81	1.0

(a) Also occurred Aug. 2, 3, 1988

(B) Present datum



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

MENOMINEE-OCONTO-PESHTIGO RIVER BASIN

STREAMS TRIBUTARY TO LAKE MICHIGAN

04061000 BRULE RIVER NEAR FLORENCE, WI

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

DRAINAGE AREA.--373 mi², revised.

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

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

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

REMARKS.--Estimated daily discharges: Nov. 4-19 and Nov. 24 to Mar. 29. Records excellent except for estimated daily discharges, which are fair. Discharge includes some mine pumpage prior to August 1977. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221	421	400	265	235	245	324	472	252	242	222	242
2	229	590	360	275	235	250	305	463	265	343	229	239
3	236	499	340	275	235	255	300	453	275	406	224	297
4	227	385	330	275	235	260	298	449	254	343	220	251
5	241	320	310	275	235	320	306	427	242	296	212	230
6	267	300	310	265	230	400	372	399	236	273	203	234
7	259	285	320	260	230	460	633	377	235	254	196	237
8	247	280	330	260	230	470	783	364	233	246	221	241
9	239	280	320	260	230	450	768	347	223	255	211	244
10	238	290	320	260	230	400	823	331	220	279	258	239
11	229	295	310	255	230	330	750	321	217	280	242	226
12	224	300	300	255	230	310	646	341	215	288	221	219
13	223	300	320	255	230	300	571	338	203	323	217	213
14	231	300	330	240	230	305	533	324	206	299	202	230
15	245	300	320	235	230	315	545	326	203	271	196	255
16	242	300	300	210	230	330	673	358	204	247	192	297
17	233	300	290	225	230	350	751	574	221	238	188	368
18	222	310	290	230	230	330	847	660	246	228	207	433
19	219	320	280	230	230	290	980	550	245	226	210	512
20	217	336	280	230	230	290	1180	457	233	260	199	390
21	217	304	280	230	230	305	1380	410	216	242	194	319
22	221	299	290	240	230	280	1370	372	206	227	210	284
23	238	316	280	245	230	285	1200	357	222	227	204	262
24	250	300	270	240	230	295	951	347	284	233	194	245
25	322	280	260	235	230	310	791	329	280	216	197	236
26	367	255	260	235	230	380	693	310	281	239	238	236
27	290	280	260	240	232	335	612	296	261	235	220	351
28	267	300	255	250	236	305	550	282	244	227	226	389
29	358	350	255	250	240	315	510	274	236	207	242	337
30	395	420	260	250	---	346	489	268	244	199	257	284
31	350	---	260	240	---	333	---	262	---	194	247	---
TOTAL	7964	9815	9290	7690	6713	10149	20934	11838	7102	8043	6699	8540
MEAN	257	327	300	248	231	327	698	382	237	259	216	285
MAX	395	590	400	275	240	470	1380	660	284	406	258	512
MIN	217	255	255	210	230	245	298	262	203	194	188	213
CFSM	.66	.84	.77	.64	.60	.84	1.79	.98	.61	.67	.56	.73
IN.	.76	.94	.89	.74	.64	.97	2.00	1.13	.68	.77	.64	.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	MEAN	328	338	279	253	246	324	653	502	400	337	292	316
MAX	612	600	424	369	406	833	1235	1104	712	983	604	582	
(WY)	1986	1916	1986	1986	1984	1973	1967	1965	1981	1953	1972	1959	
MIN	179	202	175	176	174	178	235	251	194	185	186	182	
(WY)	1949	1990	1990	1959	1959	1965	1990	1988	1988	1989	1948	1948	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1914 - 1992

ANNUAL TOTAL	116881						114777						
ANNUAL MEAN	320						314			354			
HIGHEST ANNUAL MEAN										512		1973	
LOWEST ANNUAL MEAN										221		1990	
HIGHEST DAILY MEAN	1410				Apr 9		1380		Apr 21	4420		Jul 2	1953
LOWEST DAILY MEAN	156				Jan 2		188		Aug 17	130		Dec 2	1963
ANNUAL SEVEN-DAY MINIMUM	158				Jan 1		198		Aug 15	151		Mar 26	1965
INSTANTANEOUS PEAK FLOW							1410		Apr 21	4700		Jul 2	1953
INSTANTANEOUS PEAK STAGE							(a) 6.67		Dec 6	(a) 8.60		Dec 20	1983
INSTANTANEOUS LOW FLOW							184		Aug 17	(b) 118		Dec 2	1963
ANNUAL RUNOFF (CFSM)	.82						.81			.91			
ANNUAL RUNOFF (INCHES)	11.18						10.98			12.37			
10 PERCENT EXCEEDS	543						451			560			
50 PERCENT EXCEEDS	261						262			291			
90 PERCENT EXCEEDS	182						220			205			

(a) Backwater from ice

(b) Discharge measurement

STREAMS TRIBUTARY TO LAKE MICHIGAN

39

04062011 BRULE RIVER NEAR COMMONWEALTH, WI

LOCATION.--Lat 45°56'51", long 88°12'55", in NW 1/4 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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. 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. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	352	520	573	369	256	334	460	595	303	333	368	382
2	328	313	507	351	318	338	373	590	320	481	335	279
3	305	202	481	377	313	340	384	535	406	1010	379	409
4	362	200	512	375	312	341	452	486	382	1510	275	392
5	344	213	381	373	381	429	432	498	334	1740	329	339
6	343	340	401	340	315	525	448	502	331	1340	359	289
7	370	293	425	392	315	593	787	522	335	362	275	271
8	346	325	502	328	319	591	951	449	292	263	379	405
9	323	346	469	314	294	600	927	479	280	369	373	341
10	306	473	453	414	309	446	919	436	310	410	497	318
11	309	334	448	343	301	434	901	406	332	391	320	304
12	306	406	426	304	361	483	709	463	325	404	329	354
13	303	407	468	319	294	373	745	424	324	477	336	341
14	322	370	525	356	295	420	602	423	257	436	322	288
15	364	459	384	325	318	430	576	424	248	413	293	330
16	269	473	335	243	315	388	819	466	330	374	295	426
17	328	360	390	269	302	497	881	713	304	317	296	490
18	329	474	393	258	304	420	1100	740	367	323	300	490
19	283	481	284	329	315	348	1950	611	341	342	306	518
20	293	500	376	312	348	364	1960	710	320	432	339	592
21	356	383	463	274	253	399	2720	404	322	448	308	399
22	294	476	377	360	293	358	2870	459	321	450	311	383
23	312	456	381	352	372	368	2700	463	279	351	329	375
24	382	425	387	294	384	434	2130	431	376	253	325	293
25	414	340	359	297	257	402	1510	446	383	239	271	369
26	435	287	344	308	275	488	1280	372	430	241	345	306
27	346	325	378	325	344	445	1040	389	356	353	360	453
28	425	386	415	364	339	388	660	410	362	331	343	482
29	583	432	376	325	346	407	547	395	417	348	296	445
30	390	637	376	317	---	427	536	367	330	304	394	376
31	395	---	315	344	---	452	---	290	---	303	395	---
TOTAL	10817	11636	12904	10251	9148	13262	32369	14898	10017	15348	10382	11439
MEAN	349	388	416	331	315	428	1079	481	334	495	335	381
MAX	583	637	573	414	384	600	2870	740	430	1740	497	592
MIN	269	200	284	243	253	334	373	290	248	239	271	271

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	446	340	323	293	310	434	783	540	407	383	310	345
MEAN	446	340	323	293	310	434	783	540	407	383	310	345
MAX	712	388	416	331	344	506	1079	708	505	495	335	381
(WY)	1991	1992	1992	1992	1990	1991	1992	1991	1991	1992	1992	1992
MIN	276	307	270	259	270	370	322	430	334	272	296	314
(WY)	1990	1990	1990	1991	1991	1990	1990	1990	1992	1990	1990	1991

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1990 - 1992

ANNUAL TOTAL	162614		162471									
ANNUAL MEAN	446		444							409		
HIGHEST ANNUAL MEAN										460		1991
LOWEST ANNUAL MEAN										325		1990
HIGHEST DAILY MEAN	3060	Apr 10	2870	Apr 22	3060	Apr 10	1991					
LOWEST DAILY MEAN	200	Nov 4	200	Nov 4	190	Oct 9	1989					
ANNUAL SEVEN-DAY MINIMUM	235	Jan 4	269	Nov 2	202	Mar 26	1990					
INSTANTANEOUS PEAK FLOW			3000	Apr 22	3430	Apr 9	1991					
INSTANTANEOUS PEAK STAGE			9.75	Apr 22	10.22	Apr 9	1991					
10 PERCENT EXCEEDS	696		585		582							
50 PERCENT EXCEEDS	348		370		329							
90 PERCENT EXCEEDS	256		293		248							

STREAMS TRIBUTARY TO LAKE MICHIGAN

04063000 MENOMINEE RIVER NEAR FLORENCE, WI

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

DRAINAGE AREA.--1,760 mi², revised.

PERIOD OF RECORD.--January 1914 to current year. Published as "at Twin Falls near Iron Mountain, MI" January 1914 to June 1950.

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

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

REMARKS.--Records excellent. Prior to July 1950, discharge determined from powerplant records computed on basis of load-discharge rating of hydroelectric units and rating for tailwater gage during periods of spill; ratings developed by U. S. Geological Survey. 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 many smaller reservoirs upstream from station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	1630	1660	1600	1530	1410	2120	1930	1390	1070	937	979
2	1150	1820	1880	1500	1390	1770	1890	1450	1350	1660	905	837
3	912	2100	1560	1810	1700	1620	1790	1430	1190	2670	1190	823
4	831	1800	1790	1700	1650	1630	1810	1210	1360	4410	1250	1230
5	1080	1710	1820	1600	1640	1930	1730	1250	1210	5070	1140	1430
6	1110	1390	1810	1560	1570	1970	1810	1460	1110	4260	1190	1450
7	1400	1150	1920	1640	1540	2210	2470	1850	1190	2840	1160	595
8	1320	840	1810	1610	1340	2430	3060	1840	1030	2170	901	745
9	1420	881	1490	1570	1030	2510	3080	2040	1070	1990	890	632
10	1330	803	1840	1690	1340	2550	3210	1750	1150	2140	1120	959
11	1270	1240	1780	1440	1350	2320	3200	1720	1090	2090	1040	1120
12	1260	1150	1740	1400	1480	1990	3000	1760	984	1850	1230	1250
13	1240	1090	1860	1680	1270	1680	3030	1880	703	2050	1110	1220
14	1200	1120	1810	1550	1490	1530	2860	1810	992	2000	1130	1260
15	1400	1380	1860	1600	1420	1550	2850	1820	1160	1950	875	1230
16	1160	1000	1820	1560	1390	1620	3100	1600	1000	2200	913	1310
17	1280	684	1720	1740	1530	2140	3160	1710	1050	2160	977	1500
18	1280	1460	1730	1500	1440	1760	3390	1870	896	2160	821	1610
19	969	1870	1810	1520	1400	1920	4430	2190	1060	1890	899	1950
20	1020	1920	1750	1560	1440	1700	4550	2840	849	1920	979	1820
21	1250	1390	1790	1560	1350	1650	5340	2620	921	1810	962	1760
22	1170	1160	1860	1680	1340	1480	5530	1960	951	1640	977	1960
23	1170	922	1850	1860	1410	1760	5330	1490	1260	1660	1010	2050
24	858	1300	1840	1760	1620	1780	4750	1470	1400	1660	903	2270
25	1530	1110	1460	1770	1430	1660	4080	1630	1150	1430	1030	2080
26	953	1110	1970	1380	1480	1860	3700	1650	1160	1280	868	2060
27	704	949	1700	1660	1350	1780	3580	1780	782	1720	1050	2060
28	1540	1030	1500	1640	1360	2020	3180	1400	830	1560	972	2030
29	1320	862	1630	1640	1440	2160	2680	1360	1110	1530	1000	2110
30	1960	1330	1660	1640	---	2030	2300	1190	1120	1500	919	2120
31	1660	---	1600	1620	---	2080	---	984	---	1330	1050	---
TOTAL	37837	38201	54320	50040	41720	58500	97010	52944	32518	65670	31398	44450
MEAN	1221	1273	1752	1614	1439	1887	3234	1708	1084	2118	1013	1482
MAX	1960	2100	1970	1860	1700	2550	5530	2840	1400	5070	1250	2270
MIN	704	684	1460	1380	1030	1410	1730	984	703	1070	821	595

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	1486	1615	1450	1384	1352	1586	3226	3060	2145	1593	1298	1409
MEAN	1486	1615	1450	1384	1352	1586	3226	3060	2145	1593	1298	1409
MAX	3537	3465	2640	2253	2514	3544	8159	6319	5035	4253	2359	3149
(WY)	1986	1986	1984	1983	1984	1973	1916	1960	1916	1953	1972	1968
MIN	726	725	765	691	647	692	735	595	799	721	545	718
(WY)	1949	1964	1925	1924	1926	1914	1990	1987	1988	1925	1925	1925

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1914 - 1992
ANNUAL TOTAL	608984	604608	
ANNUAL MEAN	1668	1652	1800
HIGHEST ANNUAL MEAN			3069
LOWEST ANNUAL MEAN			922
HIGHEST DAILY MEAN	5320	5530	18800
LOWEST DAILY MEAN	557	595	57
ANNUAL SEVEN-DAY MINIMUM	723	918	277
INSTANTANEOUS PEAK FLOW		5650	19500
INSTANTANEOUS PEAK STAGE		7.34	(a)14.15
INSTANTANEOUS LOW FLOW		258	(a)38
10 PERCENT EXCEEDS	2370	2230	3070
50 PERCENT EXCEEDS	1550	1540	1460
90 PERCENT EXCEEDS	1070	961	839

(a) Since July 1950

(b) Also occurred Sept. 26, 1975

STREAMS TRIBUTARY TO LAKE MICHIGAN

41

04063500 MENOMINEE RIVER AT TWIN FALLS NEAR IRON MOUNTAIN, MI

LOCATION.--Lat 45°52'17", long 88°04'12", in NE 1/4 SE 1/4 sec.12, T.40 N., R.31 W., Michigan Meridian, Dickinson County, Hydrologic Unit 04030108, on left bank in powerhouse of Wisconsin Electric Power Company at Twin Falls Dam, 3.6 mi north of Iron Mountain, and at mile 106.6.

DRAINAGE AREA.--1,800 mi².

PERIOD OF RECORD.--January 1914 to current year. Published as "near Florence, WI" October 1957 to September 1989.

REVISED RECORDS.--WDR MI-91-1: 1990(M). WDR MI-90-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,062 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Electric Power Co.). Prior to September 1957, headwater and tailwater gages and generation data entered hourly in daily log sheets by company employees. October 1957 to September 1989, water-stage recorder at site 10.4 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 5, 6, 16, 18, 19, Jan. 15-20, 25-28, and Feb. 1. Records good. Prior to September 1957, discharge determined from powerplant records computed on basis of load-discharge rating of hydroelectric units and rating for tailwater gage during periods of spill; ratings developed by U.S. Geological Survey. 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 many smaller reservoirs upstream from station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	1750	1740	1600	1500	1450	2090	2100	1200	1120	1000	1010
2	1140	1990	1800	1680	1380	1560	1960	1460	1250	1760	964	905
3	840	2080	1720	1700	1600	1620	1730	1480	1240	2750	1270	842
4	872	1890	1760	1740	1580	1740	1770	1150	1350	4260	1250	1170
5	1080	1630	1830	1640	1650	1860	1790	1250	1290	5250	1230	1470
6	1220	1530	1840	1590	1560	2050	1840	1540	1200	4400	1220	1480
7	1270	1110	1830	1630	1560	2240	2420	1730	1240	2970	1150	728
8	1330	1000	1840	1630	1310	2470	3250	1800	1080	2330	985	705
9	1420	824	1710	1660	1250	2640	3210	2020	1170	2080	919	643
10	1360	787	1800	1690	1070	2570	3190	1760	1110	2190	1210	934
11	1280	1200	1760	1480	1250	2400	3420	1700	1100	2250	1050	1140
12	1280	1130	1820	1410	1500	1990	2920	1870	1040	2110	1240	1260
13	1280	1120	1840	1700	1320	1740	3100	1840	735	2100	1200	1250
14	1290	1060	1860	1570	1470	1560	3000	1820	927	2170	1110	1220
15	1250	1300	1850	1520	1350	1640	2840	1920	1210	2080	891	1170
16	1310	1200	1840	1550	1380	1660	3140	1680	1090	2290	889	1400
17	1280	727	1700	1550	1490	1980	3300	1780	1070	2280	920	1570
18	1200	1390	1750	1350	1410	1840	3250	1960	929	2350	839	1660
19	1070	1850	1800	1500	1420	1870	4470	2160	1050	2010	850	1880
20	1020	1850	1770	1580	1430	1650	4620	2930	923	2010	967	1930
21	1270	1590	1830	1580	1440	1640	5290	2650	929	1940	1010	1800
22	1160	1120	1820	1610	1360	1550	5370	2110	1010	1750	970	1930
23	1260	1040	1850	1800	1360	1660	5400	1550	1260	1810	951	2140
24	925	1280	1820	1730	1440	1760	4790	1520	1490	1760	996	2220
25	1450	1130	1670	1720	1500	1700	4240	1710	1220	1600	894	2190
26	983	994	1750	1410	1450	1670	3660	1740	1200	1360	1050	2120
27	786	1010	1750	1600	1360	1930	3620	1770	831	1700	954	2050
28	1480	980	1560	1580	1430	2090	3280	1470	822	1750	1010	2120
29	1460	850	1590	1620	1470	2130	2670	1430	1230	1620	992	2200
30	2000	1400	1640	1600	---	2060	2320	1200	1180	1620	951	2180
31	1700	---	1600	1610	---	2040	---	1070	---	1410	960	---
TOTAL	38376	38812	54740	49630	41290	58760	97950	54170	33376	69080	31892	45317
MEAN	1238	1294	1766	1601	1424	1895	3265	1747	1113	2228	1029	1511
MAX	2000	2080	1860	1800	1650	2640	5400	2930	1490	5250	1270	2220
MIN	786	727	1560	1350	1070	1450	1730	1070	735	1120	839	643

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	1490	1624	1457	1392	1358	1597	3239	3067	2156	1602	1308	1418
MEAN	1490	1624	1457	1392	1358	1597	3239	3067	2156	1602	1308	1418
MAX	3537	3465	2640	2253	2514	3544	8159	6319	5035	4309	2359	3149
(WY)	1986	1986	1984	1983	1984	1973	1916	1960	1916	1953	1972	1968
MIN	726	725	765	691	647	692	707	595	799	721	545	718
(WY)	1949	1964	1925	1924	1926	1914	1990	1987	1988	1925	1925	1925

SUMMARY STATISTICS

	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1914 - 1992
ANNUAL TOTAL	612105	613393	
ANNUAL MEAN	1677	1676	1809
HIGHEST ANNUAL MEAN			3069
LOWEST ANNUAL MEAN			922
HIGHEST DAILY MEAN	5340	5400	18100
LOWEST DAILY MEAN	660	643	57
ANNUAL SEVEN-DAY MINIMUM	703	909	277
INSTANTANEOUS PEAK FLOW		5680	19500
INSTANTANEOUS PEAK STAGE		9.80	(a)9.80
INSTANTANEOUS LOW FLOW		526	(a)399
10 PERCENT EXCEEDS	2410	2320	3090
50 PERCENT EXCEEDS	1580	1570	1470
90 PERCENT EXCEEDS	1070	982	847

(a) Since October 1989

STREAMS TRIBUTARY TO LAKE MICHIGAN

454622088324801 MORGAN LAKE NEAR FENCE, WI

LOCATION.--Lat 45°46'22", long 88°32'48", in NE 1/4 NW 1/4 SW 1/4 sec.18, T.38 N., R.16 E., Florence County, Hydrologic Unit 04030108, at southwest end of lake on dirt road off Forest Service Road 2161, 6 mi west northwest of Fence.

DRAINAGE AREA.--Not determined. Area of lake, 44 acres.

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

GAGE.--Water-stage recorder. Datum of gage is approximately 1,400.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lake does not have surface inlet or outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 65.67 ft, May 18, 1992; minimum observed gage height, 63.61 ft, Oct. 19, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 65.67 ft, May 18; minimum observed gage height, 64.75 ft, Oct. 23.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64.79	64.98	65.28	65.34	65.33	65.32	65.41	65.63	65.50	65.35	---	---
2	64.80	65.01	65.29	65.33	65.33	65.32	65.41	65.62	65.49	65.34	---	---
3	64.80	65.00	65.29	65.33	65.33	65.31	65.40	65.61	65.48	65.33	---	---
4	64.79	64.99	65.29	65.34	65.32	65.31	65.40	65.61	65.47	65.32	---	---
5	64.81	64.99	65.30	65.34	65.32	65.31	65.40	65.60	65.45	65.32	---	---
6	64.82	65.00	65.32	65.34	65.32	65.35	65.41	65.59	65.43	65.32	---	---
7	64.81	64.99	65.33	65.34	65.31	65.35	65.42	65.59	65.42	65.32	---	---
8	64.81	64.99	65.33	65.34	65.31	65.38	65.42	65.58	65.41	65.31	---	---
9	64.81	64.99	65.33	65.34	65.31	65.43	65.42	65.57	65.40	65.32	---	---
10	64.80	65.01	65.33	65.34	65.31	65.45	65.44	65.56	65.38	65.32	---	---
11	64.80	65.01	65.32	65.34	65.30	65.45	65.49	65.55	65.38	65.31	---	---
12	64.79	65.01	65.34	65.34	65.31	65.45	65.48	65.56	65.36	65.32	---	---
13	64.79	65.01	65.37	65.33	65.31	65.45	65.47	65.55	65.35	65.33	---	---
14	64.79	65.00	65.37	65.33	65.31	65.44	65.48	65.53	65.32	---	---	---
15	64.79	65.02	65.36	65.32	65.30	65.44	65.48	65.56	65.29	---	---	---
16	64.79	65.02	65.35	65.32	65.30	65.44	65.51	65.60	65.29	---	---	---
17	64.79	65.02	65.36	65.32	65.29	65.44	65.52	65.66	65.31	---	---	---
18	64.78	65.05	65.35	65.32	65.29	65.43	65.52	65.67	65.29	---	65.11	65.25
19	64.76	65.06	65.36	65.33	65.29	65.43	65.55	65.66	65.26	---	---	65.23
20	64.76	65.05	65.36	65.33	65.29	65.43	65.59	65.66	65.25	---	---	65.22
21	64.76	65.05	65.36	65.33	65.30	65.42	65.61	65.65	65.23	---	---	65.22
22	64.76	65.06	65.36	65.33	65.30	65.42	65.62	65.64	65.24	---	---	65.20
23	64.75	65.11	65.36	65.34	65.30	65.42	65.62	65.63	65.25	---	---	65.19
24	64.80	65.16	65.36	65.33	65.30	65.41	65.62	65.60	65.29	---	---	65.18
25	64.83	65.15	65.36	65.33	65.31	65.43	65.62	65.58	65.36	---	---	65.17
26	64.83	65.17	65.36	65.33	65.31	65.42	65.63	65.57	65.35	---	---	65.18
27	64.83	65.20	65.36	65.33	65.31	65.42	65.63	65.56	65.35	---	---	65.23
28	64.83	65.20	65.35	65.33	65.32	65.41	65.63	65.54	65.35	---	---	65.22
29	64.91	65.21	65.34	65.33	65.32	65.41	65.63	65.53	65.34	---	---	65.20
30	64.90	65.29	65.34	65.34	---	65.41	65.62	65.52	65.32	---	---	65.19
31	64.90	---	65.34	65.33	---	65.41	---	65.51	---	---	---	---
MEAN	64.81	65.06	65.34	65.33	65.31	65.40	65.51	65.59	65.35	---	---	---
MAX	64.91	65.29	65.37	65.34	65.33	65.45	65.63	65.67	65.50	---	---	---
MIN	64.75	64.98	65.28	65.32	65.29	65.31	65.40	65.51	65.23	---	---	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04063700 POPPLE RIVER NEAR FENCE, WI
(HYDROLOGIC BENCHMARK STATION)
(NATIONAL RADIOCHEMICAL SURVEILLANCE NETWORK STATION)

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

DRAINAGE AREA.--139 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Estimated daily discharges: Ice periods, Nov. 5-8, 15-18, 24-27, Dec. 3-7, 15-19, 26, Jan. 18-20, Feb. 9-15, Mar. 10-17, Mar. 25 to Apr. 10, and Apr. 12, 13. Records good except those for ice-affected periods, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	232	181	68	56	55	170	266	81	61	30	55
2	61	285	190	68	56	57	140	242	73	63	36	55
3	62	300	180	69	56	58	150	228	67	68	34	99
4	61	261	160	70	56	57	120	219	62	66	31	111
5	69	230	150	70	54	61	150	205	58	64	29	102
6	79	180	140	70	54	93	180	187	55	60	25	123
7	88	200	130	68	55	118	270	167	52	55	23	139
8	86	170	130	68	54	156	340	148	50	51	35	133
9	82	127	125	68	58	173	370	136	50	49	40	123
10	76	114	122	67	58	160	390	129	47	48	62	116
11	73	106	118	67	58	140	306	126	44	48	69	101
12	69	102	123	67	58	130	380	136	42	51	61	90
13	66	100	144	66	56	120	410	136	39	61	54	81
14	66	100	156	65	56	110	362	127	37	64	47	80
15	69	110	150	64	56	110	328	128	36	59	41	88
16	70	120	130	62	55	100	316	179	35	53	38	138
17	70	120	110	60	55	100	324	287	39	48	35	188
18	68	140	100	62	56	93	354	351	46	43	47	213
19	65	164	90	66	56	88	423	370	48	40	42	217
20	62	169	89	64	55	84	516	354	45	38	35	206
21	62	160	86	63	53	80	616	320	44	38	31	192
22	61	157	85	61	53	78	674	276	45	35	31	172
23	61	151	85	63	53	75	679	238	42	33	31	148
24	78	100	84	60	52	74	649	201	49	31	30	122
25	108	140	82	57	52	80	604	163	58	29	30	104
26	125	150	82	58	53	88	542	137	83	38	42	95
27	132	140	75	59	54	94	475	121	80	29	51	145
28	115	130	74	57	55	98	403	108	75	28	46	167
29	166	119	72	58	55	100	344	99	76	26	41	164
30	190	161	70	57	---	110	299	94	69	25	44	146
31	191	---	70	57	---	130	---	87	---	24	48	---
TOTAL	2692	4738	3583	1979	1598	3070	11284	5965	1627	1426	1239	3913
MEAN	86.8	158	116	63.8	55.1	99.0	376	192	54.2	46.0	40.0	130
MAX	191	300	190	70	58	173	679	370	83	68	69	217
MIN	61	100	70	57	52	55	120	87	35	24	23	55
CFSM	.62	1.14	.83	.46	.40	.71	2.71	1.38	.39	.33	.29	.94
IN.	.72	1.27	.96	.53	.43	.82	3.02	1.60	.44	.38	.33	1.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992, BY WATER YEAR (WY)

	MEAN	122	118	67.1	48.2	47.3	87.9	316	222	139	75.0	67.1	113
MAX	265	220	116	86.6	107	356	613	617	320	235	147	356	
(WY)	1972	1986	1992	1969	1984	1973	1979	1965	1981	1968	1978	1980	
MIN	25.0	30.9	23.9	24.6	26.0	30.5	54.6	70.7	21.2	17.5	23.1	16.4	
(WY)	1990	1977	1990	1977	1982	1964	1990	1977	1988	1988	1989	1989	

SUMMARY STATISTICS

	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1964 - 1992
ANNUAL TOTAL	49276	43114	
ANNUAL MEAN	135	118	118
HIGHEST ANNUAL MEAN			175
LOWEST ANNUAL MEAN			64.3
HIGHEST DAILY MEAN	974	Jun 1	1610
LOWEST DAILY MEAN	25	Jan 24	10
ANNUAL SEVEN-DAY MINIMUM	25	Jan 24	12
INSTANTANEOUS PEAK FLOW		690	1640
INSTANTANEOUS PEAK STAGE		3.21	4.52
INSTANTANEOUS LOW FLOW		21	(b)5.9
ANNUAL RUNOFF (CFSM)	.97	.85	.85
ANNUAL RUNOFF (INCHES)	13.19	11.54	11.58
10 PERCENT EXCEEDS	289	234	262
50 PERCENT EXCEEDS	88	78	71
90 PERCENT EXCEEDS	30	41	32

(a) Also occurred Sept. 20, 1989

(b) Result of temporary storage from beaver dam

STREAMS TRIBUTARY TO LAKE MICHIGAN

04063700 POPPLE RIVER NEAR FENCE, WI--CONTINUED
(HYDROLOGIC BENCH-MARK STATION)
(NATIONAL RADIOCHEMICAL SURVEILLANCE NETWORK STATION)

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	
NOV 1991 01...	0915	--	210	108	7.6	4.5	1.8	13.5	728	109	62	
MAR 1992 12...	0950	130	--	122	7.2	0.0	1.7	9.7	724	70	K15	
JUN 18...	0930	--	45	203	7.9	17.5	1.5	7.0	712	78	53	
AUG 25...	1135	--	28	222	7.9	21.0	1.8	6.1	726	72	51	
DATE		STREP- TOCOCCHI FECAL KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 1991 01...	210	63	14	6.9	1.3	0.80	60	49	4.9	1.8	<0.10	
MAR 1992 12...	K17	68	15	7.4	1.5	0.80	65	54	6.7	2.6	0.10	
JUN 18...	62	110	25	12	1.6	0.70	129	106	5.6	2.0	<0.10	
AUG 25...	270	120	27	13	1.6	0.70	129	106	4.8	1.0	<0.10	
DATE		SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 1991 01...	8.9	100	69	<0.010	0.085	0.040	0.050	0.50	0.070	0.020	<0.010	
MAR 1992 12...	12	101	80	0.020	0.320	0.090	0.110	0.50	<0.010	<0.010	<0.010	
JUN 18...	5.7	133	116	<0.010	<0.050	0.020	0.020	0.40	0.020	0.010	<0.010	
AUG 25...	8.4	132	120	<0.010	<0.050	0.020	0.010	0.30	<0.010	<0.010	<0.010	

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

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

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
NOV 1991 01...	0915	--	210	10	8	<3	290
MAR 1992 12...	0950	130	--	60	9	<3	330
JUN 18...	0930	--	45	10	9	<3	160
AUG 25...	1135	--	28	10	11	<3	67

DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)
NOV 1991 01...	<4	36	<10	<1	<1	17	<6
MAR 1992 12...	<4	69	<10	<1	<1	17	<6
JUN 18...	<4	91	<10	<1	<1	28	<6
AUG 25...	6	110	<10	<1	<1	31	<6

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1991 03...	1610	--	58	174	11.0	--	--	--
NOV 01...	0915	--	210	108	4.5	4	2.3	81
NOV 14...	1650	--	106	135	1.0	--	--	--
DEC 23...	1700	--	86	220	0.5	--	--	--
FEB 1992 25...	1030	--	53	215	0.5	--	--	--
MAR 12...	0950	130	--	122	0.0	7	2.5	71
APR 07...	1720	--	294	102	3.0	--	--	--
MAY 27...	1400	--	113	118	14.5	--	--	--
JUN 18...	0930	--	45	203	17.5	6	0.73	77
AUG 25...	1135	--	28	222	21.0	2	0.15	100

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90) (80060)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
MAR 1992 12...	0950	130	--	<0.6	<0.6	1.7	<0.6	1.3	<0.6	<0.02	0.17
AUG 25...	1135	--	28	1.2	<0.6	1.5	<0.6	1.2	<0.6	0.02	0.73

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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records excellent. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1550	3400	3220	2270	2090	1890	3430	3840	1850	1680	1360	1420
2	1730	4180	2770	2260	1970	1970	2940	3340	1910	2070	1290	1440
3	1490	4230	3220	2360	1970	2110	3020	3050	1830	3380	1470	1510
4	1240	3850	3110	2420	2050	2340	2940	2990	1710	4870	1590	2000
5	1380	3340	3000	2360	2070	2300	2990	2580	1840	5840	1550	2150
6	1700	2980	2900	2250	2090	2740	3040	2500	1690	5640	1490	2230
7	1860	2320	2690	2200	2040	3170	3970	2760	1700	3790	1470	1530
8	1770	2160	2810	2220	1860	3490	5930	2900	1670	2910	1420	1310
9	1960	1800	2880	2320	1640	3870	5990	3080	1680	2700	1560	1420
10	1800	1850	2880	2310	1580	3850	6070	2760	1560	2630	1830	1560
11	1810	2140	2830	2330	1700	3650	6010	2730	1570	2920	1900	1680
12	1760	1900	2820	2020	1730	3070	5100	2800	1520	2860	1820	1740
13	1690	1820	2870	2170	1840	3050	5040	3070	1150	2610	1680	1750
14	1790	1990	2980	2210	1840	2560	5170	2820	1140	2940	1750	1840
15	1810	2160	3190	2080	1870	2550	4810	2840	1560	2730	1300	1740
16	1650	2290	3150	2300	1770	2770	5130	2920	1400	2770	1290	2210
17	1810	1920	2750	2050	1770	2780	5950	3680	1340	2690	1270	2620
18	1860	2240	2580	2160	1860	2640	5790	4350	1440	2690	1290	2790
19	1410	2910	2700	2320	1920	2660	7050	4440	1460	2680	1410	2790
20	1430	3160	2560	2600	1850	2670	7980	4480	1370	2310	1270	3330
21	1680	3170	2530	2240	1880	2200	9360	4410	1380	2390	1270	2450
22	1750	2340	2610	2270	1830	2310	9810	3830	1340	2350	1360	2960
23	1750	2320	2580	2240	1810	2380	9860	2800	1660	1950	1330	2830
24	1430	2450	2610	2310	1840	2340	9130	2580	1760	2130	1350	2860
25	2020	2140	2580	2290	1900	2480	8110	2560	1810	2060	1350	2840
26	1930	2020	2290	2110	1890	2640	6660	2640	1830	1830	1370	2640
27	1850	1980	2430	1930	1880	2540	6390	2730	1450	1810	1480	2840
28	2010	1900	2320	2080	1880	3000	5830	2520	1310	2140	1520	3350
29	2580	1870	2150	2130	1900	3140	4950	2230	1770	1900	1410	3220
30	3700	2450	2330	2040	---	3130	4240	1970	1770	1880	1490	3100
31	3520	---	2320	2120	---	3280	---	1720	---	1650	1390	---
TOTAL	57720	75280	84660	68970	54320	85570	172690	93920	47470	84800	45330	68150
MEAN	1862	2509	2731	2225	1873	2760	5756	3030	1582	2735	1462	2272
MAX	3700	4230	3220	2600	2090	3870	9860	4480	1910	5840	1900	3350
MIN	1240	1800	2150	1930	1580	1890	2940	1720	1140	1650	1270	1310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1992, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992
MEAN	1744	2478	2322	1983	1841
MAX	2510	4412	3008	2225	1964
(WY)	1991	1989	1989	1992	1988
MIN	1081	1382	1555	1689	1773
(WY)	1990	1990	1990	1991	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1988 - 1992

ANNUAL TOTAL	970010	938880	2367
ANNUAL MEAN	2658	2565	2565
HIGHEST ANNUAL MEAN			1864
LOWEST ANNUAL MEAN			1990
HIGHEST DAILY MEAN	10300	May 31	10300
LOWEST DAILY MEAN	1060	Aug 11	846
ANNUAL SEVEN-DAY MINIMUM	1100	Aug 13	932
INSTANTANEOUS PEAK FLOW			10700
INSTANTANEOUS PEAK STAGE		12.57	12.82
INSTANTANEOUS LOW FLOW		603	603
10 PERCENT EXCEEDS	4280	3840	3910
50 PERCENT EXCEEDS	2160	2240	1890
90 PERCENT EXCEEDS	1630	1460	1170

REMARKS.--Estimated daily discharges: Ice-affected period, Nov. 25 to Mar. 17. Records good except those for ice-affected period, which is fair. Flow regulated by powerplants and by Michigamme Reservoir, capacity, 119,950 acre-ft, and Peavy Pond, capacity, 33,860 acre-ft, on the Michigamme River, and by many smaller reservoirs above station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1700	3910	3200	2400	2300	2100	3750	4360	1990	1890	1600	1520
2	1740	4750	3100	2400	2200	2100	3470	3910	2110	1990	1510	1620
3	1780	4630	3400	2500	2100	2200	3330	3390	2020	3190	1530	1590
4	1360	4400	3300	2500	2200	2400	3240	3400	1900	4770	1700	1890
5	1410	3660	3200	2500	2200	2600	3350	2910	1970	6040	1690	2350
6	1760	3310	3200	2400	2200	2900	3460	2780	1910	5920	1600	2430
7	2000	2630	3000	2400	2200	3200	4240	3080	1820	4280	1640	1940
8	1950	2600	3000	2400	2000	3800	6510	3240	1740	3110	1680	1480
9	1950	2100	3100	2400	1800	4000	6680	3330	1780	2870	1750	1500
10	2060	2010	3100	2500	1700	4300	6670	3150	1660	2800	1880	1570
11	1960	2200	3000	2400	1800	4000	6600	2920	1660	3190	2090	1820
12	1860	2120	3000	2300	1800	3600	5940	2990	1610	3100	2010	1920
13	1820	1890	3100	2300	2000	3300	5210	3360	1360	2850	1870	1850
14	1840	2210	3200	2300	2000	3000	5590	3100	1190	3150	1890	1990
15	2000	2210	3400	2300	2000	2800	5350	3110	1430	2980	1590	1760
16	1760	2700	3300	2400	1900	2900	5520	3250	1590	2990	1420	2170
17	1840	2230	3000	2200	1900	3000	6570	4090	1400	2860	1420	2850
18	2030	2290	2800	2300	2000	2950	6510	4910	1590	2810	1440	2980
19	1600	3110	2900	2500	2000	2910	7600	5040	1570	2890	1500	2940
20	1530	3450	2800	2700	2000	2930	9020	4840	1570	2370	1490	3400
21	1770	3440	2700	2500	2000	2500	10300	5010	1470	2480	1370	2690
22	1780	2600	2800	2400	2000	2330	11500	4220	1460	2480	1500	3010
23	1820	2770	2800	2400	2000	2530	11300	3230	1620	2140	1470	2940
24	1730	2700	2800	2400	2000	2560	10400	2840	1920	2280	1440	2940
25	1970	2400	2700	2500	2000	2670	9250	2780	1890	2230	1500	2880
26	2130	2200	2500	2300	2000	2860	7350	2810	2010	1990	1530	2700
27	2030	2300	2500	2100	2000	2780	7010	2900	1730	1830	1590	3110
28	2050	2100	2500	2300	2000	3180	6390	2700	1540	2280	1660	3430
29	2770	2000	2300	2300	2000	3380	5450	2460	1710	2100	1560	3570
30	4260	2500	2500	2200	---	3410	4670	2250	1990	2020	1660	3230
31	4000	---	2500	2200	---	3620	---	1860	---	1870	1520	---
TOTAL	62260	83420	90700	73700	58300	92810	192230	104220	51210	89750	50100	72070
MEAN	2008	2781	2926	2377	2010	2994	6408	3362	1707	2895	1616	2402
MAX	4260	4750	3400	2700	2300	4300	11500	5040	2110	6040	2090	3570
MIN	1360	1890	2300	2100	1700	2100	3240	1860	1190	1830	1370	1480

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1992, BY WATER YEAR (WY)

MEAN	2524	2669	2321	2116	2062	2620	5685	4829	3407	2538	2115	2356
MAX	5659	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1950 - 1992

ANNUAL TOTAL	1055010		1020770						
ANNUAL MEAN	2890		2789			2937			
HIGHEST ANNUAL MEAN						4318			1960
LOWEST ANNUAL MEAN						1778			1977
HIGHEST DAILY MEAN	12200	May 31	11500	Apr 22		26700	May 8		1960
LOWEST DAILY MEAN	1140	Aug 16	1190	Jun 14		840	Aug 14		1977
ANNUAL SEVEN-DAY MINIMUM	1180	Aug 13	1450	(a)Jun 13		914	Aug 8		1977
INSTANTANEOUS PEAK FLOW			(b)11900	Apr 22		26900	May 8		1960
INSTANTANEOUS PEAK STAGE			(c)15.75	Dec 7		(d)13.90	May 8		1960
10 PERCENT EXCEEDS	4670		4270			5000			
50 PERCENT EXCEEDS	2300		2400			2300			
90 PERCENT EXCEEDS	1700		1600			1440			

(a) Also occurred Aug. 16

(b) Gage height, 12.64 ft

(c) Ice jam

(d) Site and datum then in use

451511087550900 LAKE NOQUEBAY NEAR CRIVITZ. WI

LOCATION.--Lat 45°15'11", long 87°55'09", in SE 1/4 SE 1/4 sec.7, T.32 N., R.21 E., Marinette County, Hydrologic Unit 04030105, near Crivitz.

DRAINAGE AREA.--132 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--February to September 1987, April 1991 to current year.

GAGE.--Staff gage read by Rev. Donald Burkart.

REMARKS.--Lake levels controlled at outlet. Lake levels are drawn down about 1.5 ft from October through April.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 2.50 ft, June 1, 1991; minimum observed, 0.72 ft, Apr. 8, 1987 and Mar. 21, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height observed, 2.44 ft, June 27; minimum observed, 0.72 ft, Mar. 21.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

451511087550900 LAKE NOQUEBAY NEAR CRIVITZ, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1987 to August 1988, April 1991 to current year.

REMARKS.--Lake sampled at a lake depth of approximately 31 ft approximately 4,000 ft northeast of dam outlet. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 03 TO AUGUST 25, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 03		Apr. 27		June 09		July 28		Aug. 25	
Depth of sample (ft)	1.5	33	1.5	22	1.5	32	1.5	30	1.5	30
Lake stage (ft)	0.78		2.13		2.35		2.28		2.22	
Specific conductance ($\mu\text{S}/\text{cm}$)	330	372	229	232	267	272	279	283	272	285
pH (units)	8.2	7.7	7.9	7.9	8.4	7.4	8.5	7.5	8.3	7.4
Water temperature ($^{\circ}\text{C}$)	0.5	3.5	7.0	7.0	21.5	15.0	22.5	17.5	23.5	18.5
Color (Pt-Co. scale)	---	---	50	50	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.70	0.80	---	---	---	---	---	---
Secchi-depth (meters)	---	---	3.2		2.9		4.2		2.8	
Dissolved oxygen	11.2	8.1	11.6	11.6	9.3	4.3	8.7	1.0	9.1	0.2
Hardness, as CaCO_3	---	---	120	130	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	29	30	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	12	13	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.0	2.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.9	0.9	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	110	120	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	6.0	6.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	3.0	4.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	<0.0	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	5.4	5.4	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	152	154	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.04	0.04	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	<0.00	<0.00	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.50	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.011	0.011	0.013	0.011	0.008	0.020	0.013	<0.020
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	3.0	---	4.0	---	3.2	---	4.7	---

2-3-92

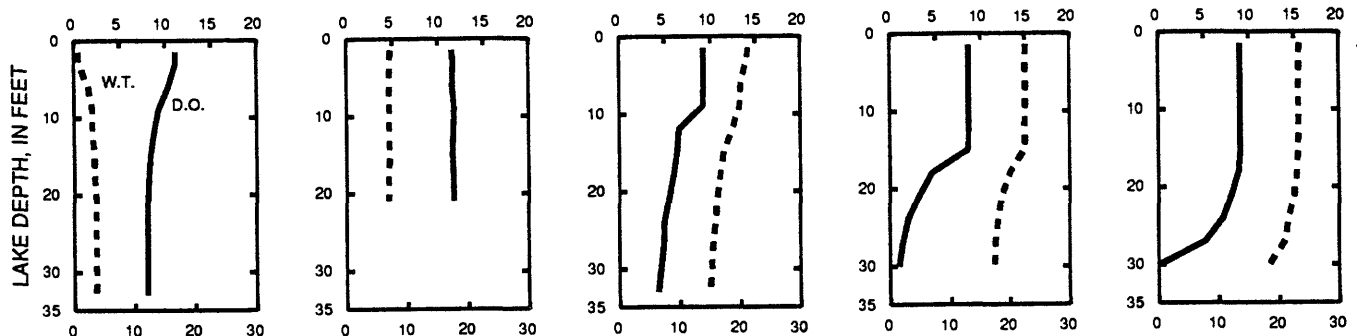
4-27-92

6-9-92

7-28-92

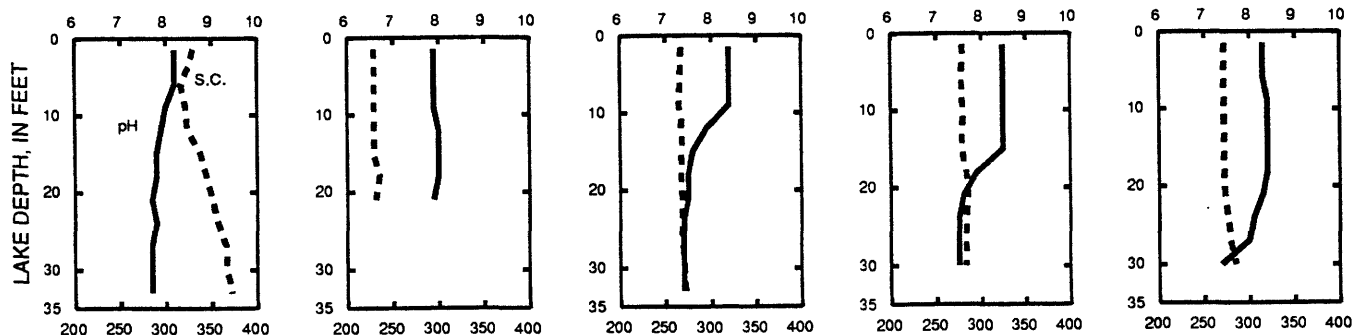
8-25-92

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

STREAMS TRIBUTARY TO LAKE MICHIGAN

451540087525700 LAKE NOQUEBAY, EAST END, NEAR CRIVITZ, WI

LOCATION.--Lat 45°15'40", long 87°52'57", in SE 1/4 NE 1/4 sec.9, T.32 N., R.21 E., Marinette County, Hydrologic Unit 04030105, 5.9 mi northeast of Crivitz.

PERIOD OF RECORD.--April 1991 to current year.

REMARKS.--Lake sampled in east bay. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 27 TO AUGUST 25, 1992
(Milligrams per liter unless otherwise indicated)

	Apr. 27	June 09	July 28	Aug. 25
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	2.13	2.35	2.28	2.22
Specific conductance (μS/cm)	236	247	261	253
pH (units)	7.8	8.2	8.6	8.4
Water temperature (°C)	8.0	21.5	23.5	24.0
Color (Pt-Co. scale)	40	---	---	---
Turbidity (NTU)	1.2	---	---	---
Secchi-depth (meters)	3.1	3.8	4.1	3.2
Dissolved oxygen	11.0	9.2	9.0	9.1
Hardness, as CaCO ₃	120	---	---	---
Calcium, dissolved (Ca)	29	---	---	---
Magnesium, dissolved (Mg)	12	---	---	---
Sodium, dissolved (Na)	2.0	---	---	---
Potassium, dissolved (K)	0.8	---	---	---
Alkalinity, as CaCO ₃	120	---	---	---
Sulfate, dissolved (SO ₄)	<5.0	---	---	---
Chloride, dissolved (Cl)	3.0	---	---	---
Fluoride, dissolved (F)	<0.0	---	---	---
Silica, dissolved (SiO ₂)	6.7	---	---	---
Solids, dissolved, at 180°C	154	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	0.38	---	---	---
Nitrogen, ammonia, dissolved (as N)	0.01	---	---	---
Nitrogen, amm. + org., total (as N)	0.50	---	---	---
Phosphorus, total (as P)	0.113	0.011	0.007	0.013
Phosphorus, ortho, dissolved (as P)	0.051	---	---	---
Iron, dissolved (Fe) μg/L	60	---	---	---
Manganese, dissolved (Mn) μg/L	<40	---	---	---
Chlorophyll a, phytoplankton (μg/L)	4.0	4.0	2.8	4.7

STREAMS TRIBUTARY TO LAKE MICHIGAN

51

04069500 PESHTIGO RIVER AT PESHTIGO, WI

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

DRAINAGE AREA.--1,080 mi².

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

REVISED RECORDS.--WDR WI-80-1: Drainage area. WDR WI-84-1: 1983 average discharge.

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 6-10, Nov. 24 to Dec. 22, and Jan. 9 to Mar. 21. Records good except those for ice-affected periods, which are poor. Diurnal fluctuation caused by two powerplants upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	641	2190	1300	636	640	450	1390	1810	700	616	352	486
2	542	2070	1100	704	600	540	1390	1550	595	555	295	511
3	613	2480	1200	710	540	490	1290	1340	860	517	360	514
4	434	2340	1400	732	500	540	1560	1290	637	595	401	695
5	609	2190	1400	767	470	600	1310	1230	525	528	432	588
6	631	1700	1400	740	520	900	1460	1180	568	374	267	643
7	570	1300	1300	743	540	1700	1720	1110	552	375	283	796
8	708	1000	1200	729	450	1900	2040	1140	479	543	375	707
9	601	1000	1300	740	350	2000	2440	981	563	525	311	988
10	667	1100	1200	700	390	1700	2510	951	549	583	397	854
11	636	1240	1200	600	450	1600	2610	1040	478	580	476	619
12	648	1100	1200	520	500	1300	2440	1020	486	720	415	615
13	311	860	1300	560	450	1200	2240	1070	417	910	444	547
14	434	1030	1500	600	400	1100	2040	1060	419	1020	407	642
15	679	1170	1200	580	340	1200	2080	1010	298	1020	402	969
16	680	1270	1100	640	380	940	2460	1090	348	827	293	892
17	635	1120	1000	560	420	1000	2830	1790	428	633	212	1190
18	608	1280	1200	640	500	1100	2850	2620	422	572	413	1680
19	554	1620	1100	520	580	900	3060	2820	365	474	378	1900
20	514	1570	1000	560	450	800	3270	2530	369	471	367	1790
21	574	1550	940	660	400	840	3830	2200	342	582	327	1440
22	502	1540	900	680	450	734	4090	1840	304	441	363	1190
23	430	1450	817	600	500	767	4170	1680	319	428	393	883
24	594	1600	901	520	500	810	3890	1710	384	456	274	859
25	634	1300	867	540	430	968	3550	1460	462	421	350	726
26	794	1100	686	500	430	1340	2920	1170	400	385	309	731
27	1010	940	821	560	400	1100	2660	1160	686	366	583	1030
28	1210	1000	749	470	490	1230	2510	1090	611	333	420	1510
29	1300	1100	721	580	500	1190	1930	1020	637	242	495	1420
30	2010	1500	748	520	---	1220	1930	776	624	252	404	1310
31	2270	---	644	600	---	1500	---	686	---	292	551	---
TOTAL	23043	42710	33394	19211	13570	33659	74470	43424	14827	16636	11749	28725
MEAN	743	1424	1077	620	468	1086	2482	1401	494	537	379	957
MAX	2270	2480	1500	767	640	2000	4170	2820	860	1020	583	1900
MIN	311	860	644	470	340	450	1290	686	298	242	212	486
CFSM	.69	1.32	1.00	.57	.43	1.01	2.30	1.30	.46	.50	.35	.89
IN.	.79	1.47	1.15	.66	.47	1.16	2.57	1.50	.51	.57	.40	.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1992, BY WATER YEAR (WY)

	790	895	633	535	539	1100	2088	1495	1028	637	598	754
MEAN	790	895	633	535	539	1100	2088	1495	1028	637	598	754
MAX	1728	2197	1128	1219	1449	3272	3813	4639	1971	1239	1242	1706
(WY)	1986	1986	1966	1960	1984	1973	1979	1960	1990	1968	1974	1959
MIN	310	328	250	268	282	424	485	538	228	300	285	264
(WY)	1990	1977	1990	1990	1990	1964	1990	1977	1988	1989	1957	1989

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1953 - 1992

ANNUAL TOTAL	384855		355418									
ANNUAL MEAN	1054		971									
HIGHEST ANNUAL MEAN										925		
LOWEST ANNUAL MEAN										1559		1973
HIGHEST DAILY MEAN	3890	Jun 2								591		1957
LOWEST DAILY MEAN	128	Sep 2								9600	May 9	1960
ANNUAL SEVEN-DAY MINIMUM	362	Aug 27								84	Aug 5	1957
INSTANTANEOUS PEAK FLOW										172	Aug 4	1957
INSTANTANEOUS PEAK STAGE										4430	Apr 22	May 9
INSTANTANEOUS LOW FLOW										8.14	Apr 22	May 9
ANNUAL RUNOFF (CFSM)	.98									103	(a) Oct 13	Nov 29
ANNUAL RUNOFF (INCHES)	13.26									11.59		1966
10 PERCENT EXCEEDS	2080									17		
50 PERCENT EXCEEDS	852									.86		
90 PERCENT EXCEEDS	420									11.63		
										1820		
										668		
										349		

(a) Also occurred June 22 and July 29

(b) From rating curve extended above 5,000 ft³/s on basis of computation of peak flow through dam gates

445401088334500 LEGEND LAKE SITE #2 (CENTER) NEAR SHAWANO, WI

LOCATION.--Lat 44°54'01", long 88°33'45", in SE 1/4 SW 1/4 sec. 16, T.28 N., R.16 E., Menominee County, Hydrologic Unit 04030104, 8.6 mi northeast of Shawano.

PERIOD OF RECORD.--February 1990 to current year.

REMARKS.--Lake sampled near center and approximately 2 mi west of the dam at the east end at a lake depth of about 70 ft. Lake ice-covered during February sampling. Legend Lake Site #2 is also known as Big Blacksmith Lake.

WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 27, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 29		June 11		July 30		Aug. 27	
Depth of sample (ft)	1.5	66.0	1.5	59.5	1.5	68.0	1.5	58.5	1.5	62.5
Lake stage (ft)	---		---		---		---		---	
Specific conductance (μ S/cm)	277	294	245	311	239	332	219	317	223	329
pH (units)	7.6	7.4	7.0	7.4	8.2	7.6	8.5	7.4	8.4	7.5
Water temperature ($^{\circ}$ C)	1.7	4.1	10.6	4.6	23.8	4.7	23.2	4.7	22.1	4.7
Color (Pt-Co. scale)	---		10.0		---		---		---	
Turbidity (NTU)	---		0.7		---		---		---	
Secchi-depth (meters)	---		2.9		5.5		3.7		3.7	
Dissolved oxygen	11.9	2.5	7.0	2.9	8.9	2.9	8.8	0.0	8.9	0.0
Hardness, as CaCO ₃	---		120	150	---		---		---	
Calcium, dissolved (Ca)	---		27	35	---		---		---	
Magnesium, dissolved (Mg)	---		12	16	---		---		---	
Sodium, dissolved (Na)	---		1.6	2.0	---		---		---	
Potassium, dissolved (K)	---		1.0	1.3	---		---		---	
Alkalinity, as CaCO ₃	---		124	163	---		---		---	
Sulfate, dissolved (SO ₄)	---		6.2	6.8	---		---		---	
Fluoride, dissolved (F)	---		0.2	0.3	---		---		---	
Chloride, dissolved (Cl)	---		1.3	1.4	---		---		---	
Silica, dissolved (SiO ₂)	---		7.5	11.0	---		---		---	
Solids, dissolved, at 180 $^{\circ}$ C	---		142	186	---		---		---	
Nitrogen, nitrite, total (as N)	---		<0.01	0.01	---		---		---	
Nitrogen, NO ₂ + NO ₃ , total (as N)	---		<0.05	<0.05	---		---		---	
Nitrogen, ammonia, total (as N)	---		<0.01	0.11	---		---		---	
Nitrogen, organic, total (as N)	---		---	0.19	---		---		---	
Nitrogen, amm. + org., total (as N)	---		<0.20	0.30	---		---		---	
Phosphorus, total (as P)	---		0.011	0.004	0.002	0.030	0.007	0.100	0.008	0.142
Phosphorus, ortho, dissolved (as P)	---		0.002	<0.001	---		---		---	
Iron, dissolved (Fe) μ g/L	---		29.0	7.0	---		---		---	
Manganese, dissolved (Mn) μ g/L	---		50	1000	---		---		---	
Chlorophyll a, phytoplankton (μ g/L)	---		1.3	---	0.3	---	0.6	---	0.3	---

2-5-92

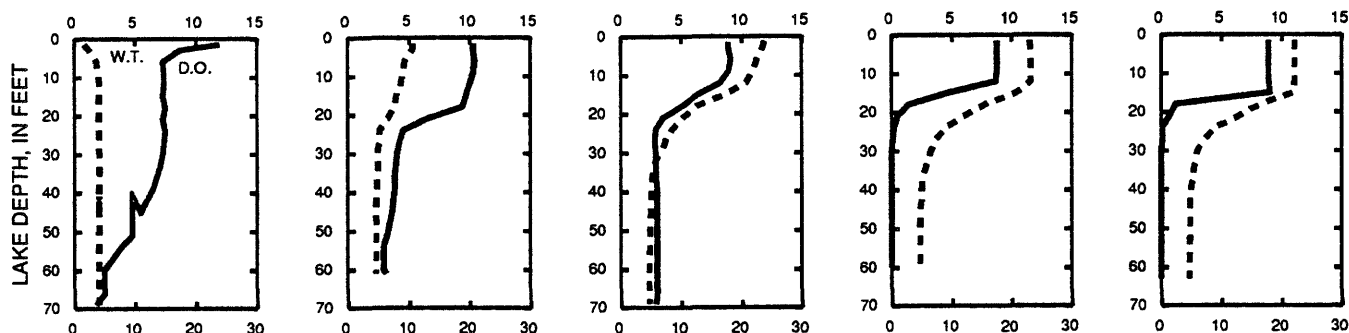
4-29-92

6-11-92

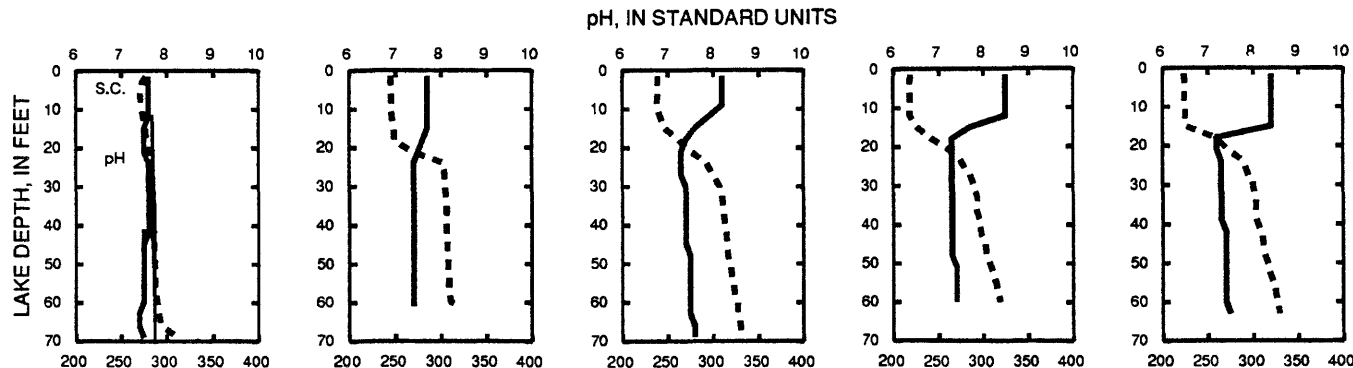
7-30-92

8-27-92

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

LOCATION.--Lat 44°54'00", long 88°32'01", in SE 1/4 SE 1/4 sec. 15, T.28 N., R.16 E., Menominee County, Hydrologic Unit 04030104, 5 mi east of Keshena.

PERIOD OF RECORD.--June to September 1992.

GAGE.--Staff gage. Elevation of gage is 854 ft, from topographic map.

REMARKS.--Legend Lake Site #4 is also known as Spirit Lake.

PERIOD OF RECORD.--Maximum gage-height observed, 1.99 ft, June 11; minimum gage-height observed, -0.08 ft, Sept. 28.

[illegible]

STREAMS TRIBUTARY TO LAKE MICHIGAN

445400088320100 LEGEND LAKE SITE #4 NEAR KESHENA, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1992.

REMARKS.--Lake sampled 1 mi west of dam at a maximum depth of about 70 ft.

WATER-QUALITY DATA, APRIL 29 TO AUGUST 27, 1992
(Milligrams per liter unless otherwise indicated)

	Apr. 29		June 11		July 30		Aug. 27	
Depth of sample (ft)	1.5	59.5	1.5	69.5	1.5	67.5	1.5	66.5
Lake stage (ft)	---		1.990		1.75		0.69	
Specific conductance ($\mu\text{S}/\text{cm}$)	223	270	233	285	214	284	214	291
pH (units)	7.6	7.3	8.2	7.4	8.3	7.4	8.4	7.4
Water temperature ($^{\circ}\text{C}$)	9.9	4.7	23.3	5.1	23.1	5.0	22.3	5.0
Color (Pt-Co. scale)	10	15	---	---	---	---	---	---
Turbidity (NTU)	0.9	2.5	---	---	---	---	---	---
Secchi-depth (meters)	3.4		4.6		4.4		3.5	
Dissolved oxygen	10.5	2.9	9.4	2.8	8.2	0.0	8.9	0.0
Hardness, as CaCO_3	110	140	---	---	---	---	---	---
Calcium, dissolved (Ca)	26	32	---	---	---	---	---	---
Magnesium, dissolved (Mg)	12	15	---	---	---	---	---	---
Sodium, dissolved (Na)	1.7	2.0	---	---	---	---	---	---
Potassium, dissolved (K)	0.9	1.0	---	---	---	---	---	---
Alkalinity, as CaCO_3	113	139	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	5.0	5.0	---	---	---	---	---	---
Fluoride, dissolved (F)	0.3	0.3	---	---	---	---	---	---
Chloride, dissolved (Cl)	1.4	1.6	---	---	---	---	---	---
Silica, dissolved (SiO_2)	4.6	7.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	127	157	---	---	---	---	---	---
Nitrogen, nitrite, total (as N)	<0.010	<0.010	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, total (as N)	<0.050	0.066	---	---	---	---	---	---
Nitrogen, ammonia, total (as N)	0.04	0.20	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	0.20	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	<0.20	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	0.47	---	---	---	---	---	---
Phosphorus, total (as P)	0.017	0.010	0.005	0.010	0.005	0.054	0.006	0.095
Phosphorus, ortho, dissolved (as P)	0.006	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	32	11	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	33	880	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	0.7	---	0.2	---	0.4	---	0.4	---

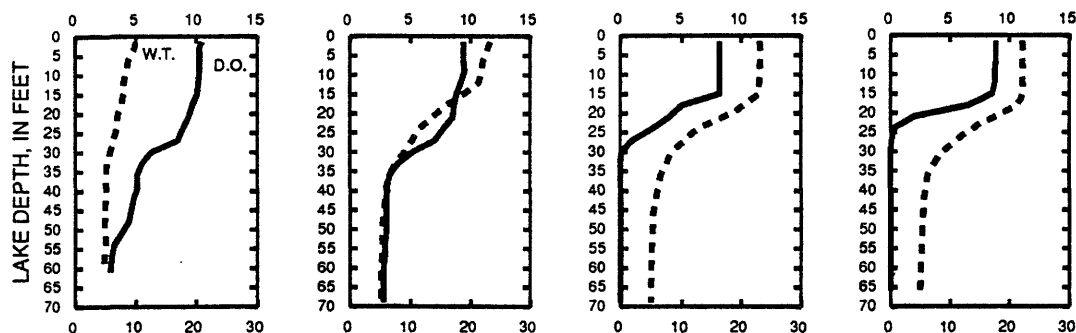
4-29-92

6-11-92

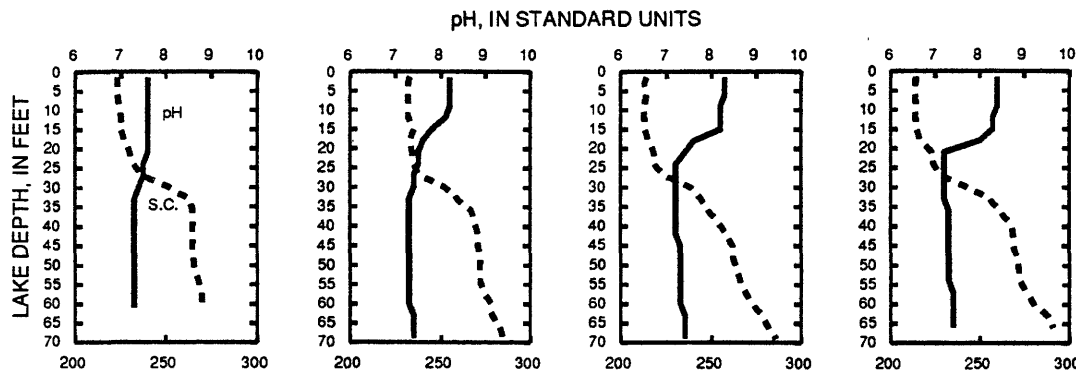
7-30-92

8-27-92

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

55

LOCATION.--Lat 44°53'52", long 88°29'58", in NW 1/4 NE 1/4 sec. 24, T.28 N., R.16 E., Menominee County, Hydrologic Unit 04030104, 9.7 mi northeast of Shawano.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height observed, 2.34 ft, Aug. 26, 1992; minimum gage-height observed, 1.26 ft, May 4, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height observed, 2.34 ft, Aug. 26; minimum gage-height observed, 1.36 ft, Aug. 4.

[illegible]

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1990 to current year.

REMARKS.--Lake sampled near east end at a lake depth of about 25 ft. Lake ice-covered during February sampling.

WATER-QUALITY DATA, FEBRUARY 04 TO AUGUST 27, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 30		June 11		July 29		Aug. 27	
Depth of sample (ft)	1.5	27.0	1.5	28.5	1.5	29.5	1.5	27.5	1.5	28.5
Lake stage (ft)	---	---	---	1.98	---	1.66	---	1.38	---	2.08
Specific conductance (μ S/cm)	247	252	212	209	221	241	213	233	214	245
pH (units)	7.2	7.4	8.2	8.0	8.3	7.2	8.3	7.3	8.2	7.3
Water temperature ($^{\circ}$ C)	1.2	4.5	10.1	8.7	23.2	14.8	23.8	17.9	21.9	19.0
Color (Pt-Co. scale)	---	---	5.0	5.0	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.5	0.6	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	4.7	---	4.6	---	3.2	---	2.8
Dissolved oxygen	9.7	6.0	12.0	11.2	9.0	2.1	8.5	0.0	8.1	0.2
Hardness, as CaCO_3	---	---	100	100	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	22	22	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	11	11	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	1.9	1.8	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.8	0.8	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	104	103	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	5.3	5.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	3.2	3.0	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	2.9	3.1	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	114	128	---	---	---	---	---	---
Nitrogen, nitrite, total (as N)	---	---	<0.01	<0.01	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, total (as N)	---	---	<0.05	<0.05	---	---	---	---	---	---
Nitrogen, ammonia, total (as N)	---	---	<0.01	<0.01	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	<0.20	<0.20	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.006	0.010	0.006	0.005	0.005	0.006	0.005	0.009
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.003	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g/L}$	---	---	8.0	5.0	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g/L}$	---	---	3.0	3.0	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g/L}$)	---	---	0.6	---	0.2	---	0.4	---	0.3	---

2-4-92

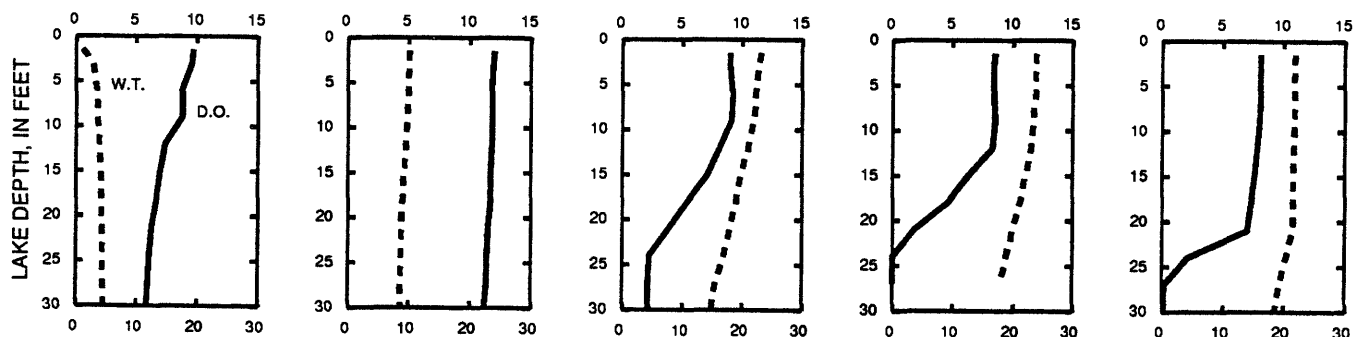
4-30-92

6-11-92

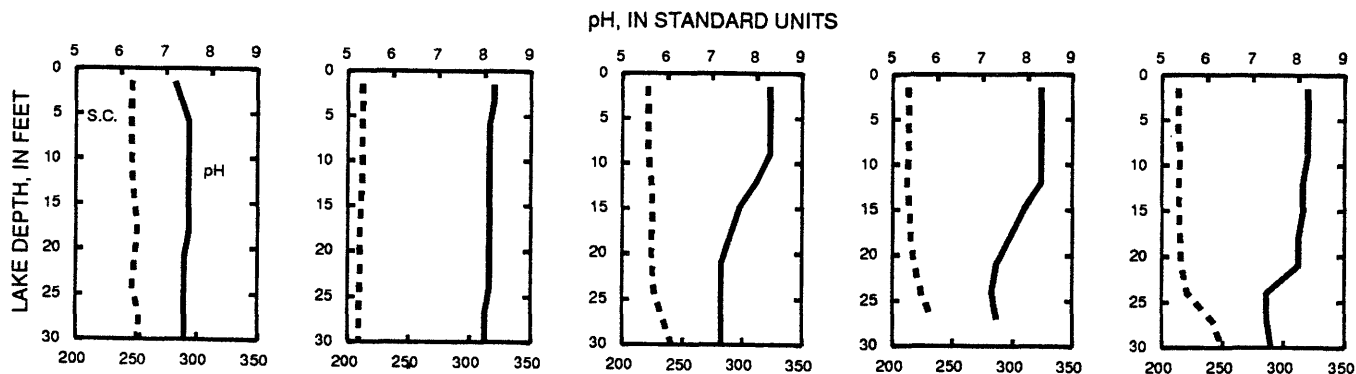
7-29-92

8-27-92

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

STREAMS TRIBUTARY TO LAKE MICHIGAN

57

04071000 OCONTO RIVER NEAR GILLETT, WI

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

DRAINAGE AREA.--705 mi².

PERIOD OF RECORD.--June 1906 to March 1909, October 1913 to current year. Monthly discharge 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 National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Transportation). See WSP 1727 for history of changes prior to Aug. 25, 1938.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 4-13 and Nov. 25 to Mar. 27. Records good except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	325	1150	900	500	380	450	881	1120	647	411	290	469
2	320	1300	900	480	390	440	872	1050	608	392	305	433
3	312	1360	800	480	380	470	834	988	573	384	316	432
4	306	1300	740	500	380	520	815	930	545	381	319	577
5	306	1200	700	500	380	640	812	855	520	373	313	640
6	322	1100	720	480	380	900	850	782	506	362	303	582
7	342	1000	760	480	370	1000	953	750	500	352	295	544
8	343	900	720	480	370	1100	1050	724	489	352	301	561
9	337	820	720	490	370	1300	1140	692	489	359	322	517
10	333	780	760	500	370	1300	1240	657	475	356	346	496
11	332	740	820	500	370	1100	1280	622	462	352	339	482
12	331	720	860	480	360	1000	1270	614	449	392	334	459
13	333	680	800	460	370	900	1200	660	440	519	336	431
14	341	716	720	430	380	840	1140	687	428	600	325	449
15	347	716	660	400	380	780	1160	655	418	554	315	563
16	349	728	620	350	370	740	1600	723	399	493	307	735
17	346	727	640	320	390	700	1660	1550	386	446	304	816
18	348	806	580	330	400	680	1780	1860	384	419	308	891
19	340	862	540	350	390	680	1910	2110	399	401	314	1020
20	330	911	560	360	390	680	2010	1890	413	384	323	1180
21	327	940	560	380	400	680	2210	1610	411	368	321	1260
22	326	933	560	400	390	680	2270	1380	393	362	316	1160
23	324	959	560	380	400	740	2200	1260	379	362	310	971
24	327	972	540	370	420	800	2030	1170	375	358	305	757
25	381	900	560	380	420	780	1840	1160	400	348	304	649
26	439	860	560	380	420	760	1660	1170	431	341	343	619
27	479	780	540	380	420	740	1510	1090	439	328	431	639
28	482	740	560	380	420	730	1390	944	455	314	464	719
29	661	740	540	380	410	725	1290	819	435	291	426	784
30	850	820	520	390	---	751	1210	733	419	288	423	812
31	960	---	500	380	---	822	---	687	---	289	471	---
TOTAL	12199	27160	20520	13070	11270	24428	42067	31942	13667	11931	10429	20647
MEAN	394	905	662	422	389	788	1402	1030	456	385	336	688
MAX	960	1360	900	500	420	1300	2270	2110	647	600	471	1260
MIN	306	680	500	320	360	440	812	614	375	288	290	431
CFSM	.56	1.28	.94	.60	.55	1.12	1.99	1.46	.65	.55	.48	.98
IN.	.64	1.43	1.08	.69	.59	1.29	2.22	1.69	.72	.63	.55	1.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1992, BY WATER YEAR (WY)

	MEAN	486	565	451	359	349	659	1231	878	666	459	381	454
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	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1906 - 1992
ANNUAL TOTAL	222508	239330	
ANNUAL MEAN	610	654	579
HIGHEST ANNUAL MEAN			930
LOWEST ANNUAL MEAN			315
HIGHEST DAILY MEAN	2100	2270	6790
LOWEST DAILY MEAN	269	288	95
ANNUAL SEVEN-DAY MINIMUM	285	299	137
INSTANTANEOUS PEAK FLOW		(a)2280	8400
INSTANTANEOUS PEAK STAGE		(b)7.42	(c)11.20
INSTANTANEOUS LOW FLOW		288	(d)93
ANNUAL RUNOFF (CFSM)	.86	.93	
ANNUAL RUNOFF (INCHES)	11.74	12.63	11.16
10 PERCENT EXCEEDS	1160	1160	1060
50 PERCENT EXCEEDS	479	503	440
90 PERCENT EXCEEDS	305	328	257

(a) Gage height, 4.24 ft

(b) Ice affected

(c) From flood-marks, caused by a failure of dam at Pulcifer 4 mi above station

(d) Flow retarded by anchor ice above station

STREAMS TRIBUTARY TO LAKE MICHIGAN

04071858 PENSANKEE RIVER NEAR PENSANKEE, WI

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

DRAINAGE AREA.--134 mi².

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

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

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 3-16 and Nov. 25 to Mar. 27. Records fair except those for ice-affected periods and periods of discharge below 10 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	172	450	38	20	30	249	111	27	7.3	2.0	19
2	18	247	360	37	22	52	202	108	24	6.2	2.1	19
3	19	210	310	37	20	120	184	97	21	7.0	2.5	23
4	18	150	250	38	19	200	171	86	19	6.5	3.4	20
5	30	100	210	41	18	330	160	78	18	4.8	2.5	18
6	35	78	180	43	19	500	168	68	16	4.4	2.4	18
7	35	64	160	45	17	1100	208	57	15	3.4	2.3	22
8	37	54	140	47	15	960	233	49	13	3.5	2.6	26
9	42	50	130	50	16	800	211	44	12	4.1	4.2	30
10	38	46	140	45	14	680	187	40	11	4.6	5.3	38
11	33	43	170	42	13	600	184	38	9.9	4.6	2.9	37
12	31	41	210	25	12	400	273	36	8.7	8.2	4.4	30
13	29	43	140	37	13	300	355	42	7.9	21	6.6	36
14	38	48	100	30	14	250	310	46	7.9	44	5.8	36
15	40	56	80	26	15	200	320	42	6.9	42	1.5	53
16	42	74	66	23	14	170	1280	42	6.8	32	1.5	60
17	43	84	60	21	14	180	1570	449	7.9	27	2.8	76
18	47	110	52	19	14	240	794	734	11	22	4.6	74
19	46	197	48	18	15	290	536	430	13	16	6.1	59
20	54	174	46	17	13	280	756	270	10	12	4.4	50
21	39	131	45	18	14	220	785	181	7.9	8.5	3.1	44
22	36	105	43	19	14	200	478	133	5.9	7.4	3.2	34
23	35	149	41	21	15	180	338	125	5.8	7.2	3.3	24
24	37	426	40	20	16	200	257	124	6.4	6.2	3.2	14
25	70	390	39	19	16	260	208	100	7.6	5.1	3.5	19
26	84	220	38	20	18	270	185	81	9.3	4.4	9.4	17
27	81	350	38	19	20	220	161	67	12	3.2	11	39
28	71	400	39	20	22	201	139	55	11	3.0	14	86
29	99	580	39	21	25	192	130	45	8.7	2.4	20	76
30	232	660	39	23	---	229	122	37	7.8	2.0	20	71
31	232	---	38	21	---	269	---	31	---	2.0	16	---
TOTAL	1705	5452	3741	900	477	10123	11154	3846	348.4	332.0	176.6	1168
MEAN	55.0	182	121	29.0	16.4	327	372	124	11.6	10.7	5.70	38.9
MAX	232	660	450	50	25	1100	1570	734	27	44	20	86
MIN	14	41	38	17	12	30	122	31	5.8	2.0	1.5	14
CFSM	.41	1.36	.90	.22	.12	2.44	2.77	.93	.09	.08	.04	.29
IN.	.47	1.51	1.04	.25	.13	2.81	3.10	1.07	.10	.09	.05	.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1992, BY WATER YEAR (WY)

MEAN	58.8	81.2	46.8	25.7	43.5	261	259	121	57.0	38.7	25.8	54.4
MAX	176	327	206	97.6	231	618	657	577	163	262	141	178
(WY)	1987	1986	1983	1973	1984	1986	1975	1973	1984	1986	1984	1984
MIN	8.61	7.75	3.30	3.26	3.19	63.8	38.4	19.0	2.77	3.04	2.14	1.06
(WY)	1977	1977	1990	1977	1977	1975	1990	1977	1988	1988	1989	1989

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1973 - 1992

ANNUAL TOTAL	36535.0	39423.0	89.5
ANNUAL MEAN	100	108	162
HIGHEST ANNUAL MEAN			25.2
LOWEST ANNUAL MEAN			1977
HIGHEST DAILY MEAN	1400	1570	3700
LOWEST DAILY MEAN	1.2	1.5	.52
ANNUAL SEVEN-DAY MINIMUM	1.4	2.3	.64
INSTANTANEOUS PEAK FLOW		(a)1810	4310
INSTANTANEOUS PEAK STAGE		(b)10.92	13.58
ANNUAL RUNOFF (CFSM)	.75	.80	.67
ANNUAL RUNOFF (INCHES)	10.14	10.94	9.08
10 PERCENT EXCEEDS	248	270	201
50 PERCENT EXCEEDS	39	38	29
90 PERCENT EXCEEDS	4.0	5.6	5.6

(a) Gage height, 9.39 ft

(b) Ice jam

STREAMS TRIBUTARY TO LAKE MICHIGAN

59

04072150 DUCK CREEK NEAR HOWARD, WI

LOCATION.--Lat 44°32'01", long 88°07'46", in SW 1/4 sec.19, T.24 N., R.20 E., Brown County, Hydrologic Unit 04030103, at County Highway FF near Howard and about 1 mi upstream from mouth.

DRAINAGE AREA.--108 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Continuous water-stage recorder since April 1988. Elevation of gage is 615 ft from topographic map.

REMARKS.--Estimated daily discharges: May 15-20 and ice-affected periods, Nov. 3-10 and Dec. 2 to Mar. 17. Records fair except for estimated daily discharges, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	54	300	12	6.2	15	384	62	9.0	3.0	.57	.00
2	1.2	44	200	12	6.4	25	270	56	8.3	3.2	.52	.00
3	1.3	37	120	12	6.2	50	175	48	7.2	3.5	.95	.00
4	1.2	28	86	12	6.0	90	136	40	6.7	2.7	.87	.00
5	1.9	23	70	13	5.6	150	112	36	5.6	2.1	.49	.00
6	2.3	19	60	14	5.4	250	96	33	5.7	1.5	.05	.00
7	1.9	15	56	14	5.2	330	102	30	5.6	1.1	.00	.00
8	1.8	12	52	15	4.7	400	131	27	4.5	1.7	.00	.00
9	1.6	10	48	15	4.6	320	112	25	3.8	2.5	.00	.00
10	1.7	9.4	45	16	4.3	270	92	22	3.2	2.1	.00	.00
11	1.9	9.1	46	15	4.1	220	285	21	2.6	1.6	.00	.00
12	2.2	9.1	60	13	3.8	180	859	21	2.1	6.9	.00	.00
13	2.2	9.1	110	10	4.1	140	543	22	1.7	8.7	.00	.00
14	2.8	11	60	9.0	4.4	110	316	25	1.4	22	.00	13
15	3.0	16	30	8.0	4.7	100	236	27	1.4	32	.00	14
16	2.8	25	23	7.4	4.5	96	722	29	1.1	21	.00	38
17	2.9	35	20	6.6	4.4	100	1340	60	2.3	12	.00	126
18	2.9	35	17	6.2	4.5	241	589	250	2.5	9.4	.00	169
19	2.9	74	16	6.0	4.8	261	425	120	1.5	6.9	.00	198
20	3.3	81	15	5.8	4.3	157	744	56	1.7	6.1	.00	114
21	3.3	53	14	5.8	4.5	135	528	40	2.1	5.6	.00	54
22	3.1	40	13	5.8	4.7	78	307	28	3.3	4.3	.00	33
23	3.3	47	13	6.0	4.8	80	202	27	3.1	4.1	.00	22
24	4.0	156	13	6.0	5.2	76	134	28	3.2	3.7	.00	14
25	11	198	12	6.0	5.6	102	109	24	3.4	3.7	.00	10
26	7.7	89	12	6.0	7.2	137	93	20	3.6	3.4	.00	8.3
27	12	67	12	6.0	8.0	108	85	17	4.4	2.9	.00	9.2
28	14	45	12	6.0	9.0	111	73	14	6.5	2.6	.00	12
29	26	40	12	6.0	10	126	66	14	4.1	1.5	.00	20
30	62	103	12	6.0	---	228	65	11	3.5	1.2	.00	18
31	88	---	12	6.0	---	275	---	11	---	.99	.00	---
TOTAL	277.4	1393.7	1571	287.6	157.2	4961	9331	1244	115.1	183.99	3.45	872.50
MEAN	8.95	46.5	50.7	9.28	5.42	160	311	40.1	3.84	5.94	.11	29.1
MAX	88	198	300	16	10	400	1340	250	9.0	32	.95	198
MIN	1.2	9.1	12	5.8	3.8	15	65	11	1.1	.99	.00	.00
CFSM	.08	.43	.47	.09	.05	1.48	2.88	.37	.04	.05	.00	.27
IN.	.10	.48	.54	.10	.05	1.71	3.21	.43	.04	.06	.00	.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1992, BY WATER YEAR (WY)

	7.65	22.8	21.3	4.25	4.20	195	134	43.0	81.2	3.48	2.89	13.3
MEAN	7.65	22.8	21.3	4.25	4.20	195	134	43.0	81.2	3.48	2.89	13.3
MAX	20.9	46.5	50.7	9.28	10.1	250	311	109	370	8.09	11.0	36.8
(WY)	1991	1992	1992	1992	1991	1991	1992	1990	1990	1990	1990	1990
MIN	.26	1.81	.59	.11	.51	160	9.40	2.79	.000	.000	.000	.000
(WY)	1989	1990	1990	1990	1989	1992	1990	1988	1988	1988	1988	1989

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1988 - 1992

ANNUAL TOTAL	18480.26	20397.94	
ANNUAL MEAN	50.6	55.7	47.5
HIGHEST ANNUAL MEAN			62.9
LOWEST ANNUAL MEAN			22.3
HIGHEST DAILY MEAN	1410	1340	3690
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		(a)1600	(b)4520
INSTANTANEOUS PEAK STAGE		(c)16.75	(d)21.00
ANNUAL RUNOFF (CFSM)	.47	.52	.44
ANNUAL RUNOFF (INCHES)	6.37	7.03	5.97
10 PERCENT EXCEEDS	90	143	79
50 PERCENT EXCEEDS	8.4	11	4.6
90 PERCENT EXCEEDS	.59	.00	.00

(a) Gage height, 16.43 ft

(b) Based on rating curve extended above 1,500 ft³/s on basis of contracted-opening measurement of peak flow

(c) Backwater from ice

(d) Estimated from flood marks

STREAMS TRIBUTARY TO LAKE MICHIGAN

04072150 DUCK CREEK NEAR HOWARD, WI--CONTINUED

WATER-QUALITY RECORDS

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

INSTRUMENTATION.--Water-quality sampler since April 1988.

REMARKS.--Samples are point samples unless otherwise noted.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 1991												
25...	0400	--	9.5	--	--	--	--	--	--	<0.010	<0.010	<0.050
26...	0400	--	7.1	--	--	--	--	--	--	<0.010	<0.010	0.075
27...	0300	--	9.5	--	--	--	--	0.055	0.053	0.010	0.010	0.065
28...	0300	--	14	--	--	--	--	0.200	0.220	0.020	0.020	0.220
29...	0300	--	13	--	--	--	--	0.100	0.110	0.010	0.020	0.110
29...	1030	--	19	--	--	--	--	0.140	--	0.010	<0.010	0.150
30...	0315	--	33	--	--	--	--	0.220	--	0.020	<0.010	0.240
30...	1315	--	61	--	--	--	--	0.690	0.750	0.030	0.020	0.720
30...	1915	--	88	--	--	--	--	1.05	1.16	0.050	0.040	1.10
*31...	1357	--	85	--	--	--	--	--	2.90	0.100	0.100	<0.050
31...	1358	--	85	--	--	--	--	2.79	2.80	0.110	0.100	2.90
31...	1430	--	85	--	--	--	--	--	--	--	--	--
NOV												
23...	1230	--	42	--	--	--	--	6.43	6.53	0.070	0.070	6.50
24...	0215	--	66	--	--	--	--	5.75	5.75	0.050	0.050	5.80
24...	0545	--	94	--	--	--	--	6.04	6.14	0.060	0.060	6.10
24...	0830	--	133	--	--	--	--	6.55	6.44	0.050	0.060	6.60
24...	1200	--	172	--	--	--	--	6.25	6.35	0.050	0.050	6.30
24...	1815	--	215	--	--	--	--	5.54	5.55	0.060	0.050	5.60
26...	1815	--	79	--	--	--	--	7.35	7.45	0.050	0.050	7.40
29...	1815	--	38	--	--	--	--	7.65	7.55	0.050	0.050	7.70
30...	0315	--	60	--	--	--	--	5.96	6.26	0.040	0.040	6.00
30...	1500	--	85	--	--	--	--	5.36	5.46	0.040	0.040	5.40
30...	1715	--	118	--	--	--	--	5.66	5.66	0.040	0.040	5.70
30...	1900	--	158	--	--	--	--	6.06	6.15	0.040	0.050	6.10
30...	2115	--	199	--	--	--	--	5.86	5.96	0.040	0.040	5.90
DEC												
*04...	1228	--	84	701	6.9	0.0	13.5	7.85	7.75	0.050	0.050	7.90
04...	1229	--	84	701	6.9	0.0	13.5	7.45	7.25	0.050	0.050	7.50
04...	1338	86	--	--	--	--	--	--	--	--	--	--
04...	1339	86	--	--	--	--	--	--	--	--	--	--
04...	2030	86	--	--	--	--	--	8.05	8.06	0.050	0.040	8.10
05...	1930	70	--	--	--	--	--	7.55	7.66	0.050	0.040	7.60
06...	0415	60	--	--	--	--	--	7.56	7.66	0.040	0.040	7.60
06...	1530	60	--	--	--	--	--	7.76	7.66	0.040	0.040	7.80
07...	1530	56	--	--	--	--	--	7.36	7.47	0.040	0.030	7.40
12...	2215	60	--	--	--	--	--	3.47	3.57	0.030	0.030	3.50
13...	0215	110	--	--	--	--	--	3.37	3.47	0.030	0.030	3.40
13...	0915	110	--	--	--	--	--	3.66	3.67	0.040	0.030	3.70
13...	1415	110	--	--	--	--	--	3.16	3.17	0.040	0.030	3.20
13...	2230	110	--	--	--	--	--	2.96	2.96	0.040	0.040	3.00
14...	0445	60	--	--	--	--	--	2.46	2.47	0.040	0.030	2.50
JAN 1992												
*22...	1133	--	5.6	943	7.6	0.5	13.7	--	--	--	--	--
22...	1134	--	5.6	943	7.6	0.5	13.7	--	--	--	--	--
FEB												
*26...	1020	--	6.7	860	8.3	0.5	12.5	--	--	--	--	--
26...	1021	--	6.7	860	8.3	0.5	12.5	--	--	--	--	--
26...	1025	--	6.7	--	--	--	--	--	--	--	--	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
1991											
5...	<0.050	0.020	0.030	0.68	0.70	--	0.220	0.170	0.130	0.140	27
6...	0.069	0.020	0.020	0.88	0.90	0.97	0.170	0.130	0.100	0.090	10
7...	0.063	0.020	0.030	0.98	1.0	1.1	0.200	0.180	0.150	0.130	6
8...	0.240	0.090	0.100	1.2	1.3	1.5	0.480	0.410	0.350	0.290	7
9...	0.130	0.040	0.040	0.96	1.0	1.1	0.390	0.350	0.290	0.250	4
9...	0.160	0.020	0.020	0.88	0.90	1.0	0.330	0.270	0.200	0.210	24
0...	0.250	0.030	0.030	0.67	0.70	0.94	0.200	0.150	0.110	0.110	23
0...	0.770	0.050	0.040	0.95	1.0	1.7	0.310	0.210	0.180	0.150	42
0...	1.20	0.040	0.030	1.2	1.2	2.3	0.310	0.210	0.170	0.140	28
1...	3.00	0.570	0.590	2.0	2.6	--	0.590	0.450	0.380	0.370	--
1...	2.90	0.640	0.620	2.3	2.9	5.8	0.600	0.500	0.430	0.350	--
1...	--	--	--	--	--	--	--	--	--	--	19
3...	6.60	<0.010	0.020	--	1.2	7.7	0.170	0.140	0.130	0.120	4
4...	5.80	0.010	0.010	1.1	1.1	6.9	0.190	0.150	0.140	0.130	10
4...	6.20	0.020	0.020	1.4	1.4	7.5	0.230	0.190	0.170	0.160	15
4...	6.50	0.010	0.020	1.6	1.6	8.2	0.260	0.160	0.160	0.150	--
4...	6.40	0.030	0.020	1.5	1.5	7.8	0.300	0.170	0.170	0.160	--
4...	5.60	0.070	0.060	1.3	1.4	7.0	0.310	0.180	0.190	0.180	--
6...	7.50	0.010	0.020	1.4	1.4	8.8	0.250	0.190	0.200	0.190	9
9...	7.60	0.020	0.010	1.4	1.4	9.1	0.150	0.140	0.130	0.120	4
0...	6.30	0.030	0.020	1.2	1.2	7.2	0.150	0.110	0.110	0.110	10
0...	5.50	0.040	0.040	1.3	1.3	6.7	0.200	0.170	0.150	0.130	17
0...	5.70	0.070	0.070	1.3	1.4	7.1	0.240	0.170	0.170	0.160	24
0...	6.20	0.030	0.030	1.3	1.3	7.4	0.260	0.180	0.180	0.170	--
0...	6.00	0.030	0.030	1.3	1.3	7.2	0.240	0.180	0.170	0.150	30
4...	7.80	0.100	0.110	1.3	1.4	9.3	0.200	0.190	0.170	0.160	--
4...	7.30	0.100	0.110	1.9	2.0	9.5	0.350	0.160	0.140	0.150	--
4...	--	--	--	--	--	--	--	--	--	--	11
4...	--	--	--	--	--	--	--	--	--	--	15
4...	8.10	0.020	0.020	1.4	1.4	9.5	0.200	0.160	0.160	0.140	9
5...	7.70	0.020	0.020	1.2	1.2	8.8	0.150	0.130	0.120	0.110	4
6...	7.70	0.020	0.020	1.3	1.3	8.9	0.150	0.130	0.120	0.120	3
6...	7.70	0.020	0.020	1.4	1.4	9.2	0.150	0.120	0.120	0.110	5
7...	7.50	0.010	0.020	1.4	1.4	8.8	0.130	0.100			

STREAMS TRIBUTARY TO LAKE MICHIGAN

04072150 DUCK CREEK NEAR HOWARD, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
MAR 1992							
17...	1830	100	--	--	--	--	--
17...	2045	100	--	--	--	--	--
18...	0215	--	215	--	--	--	--
18...	0645	--	267	--	--	--	--
*18...	1335	--	210	487	7.8	0.5	14.1
18...	1336	--	210	487	7.8	0.5	14.1
18...	1340	--	210	--	--	--	--
18...	1341	--	210	--	--	--	--
19...	0115	--	354	--	--	--	--
APR							
*08...	1320	--	133	687	6.9	10.5	14.1
08...	1321	--	133	687	6.9	10.5	14.1
08...	1325	--	133	--	--	--	--
11...	0100	--	127	--	--	--	--
11...	1045	--	215	--	--	--	--
11...	1630	--	360	--	--	--	--
11...	2115	--	508	--	--	--	--
12...	0200	--	656	--	--	--	--
12...	0830	--	949	--	--	--	--
13...	0430	--	662	--	--	--	--
24...	1130	--	127	--	--	--	--
30...	1130	--	64	--	--	--	--
MAY							
10...	1130	--	21	--	--	--	--
*20...	1220	--	44	698	8.2	19.5	11.4
20...	1221	--	44	698	8.2	19.5	11.4
20...	1300	--	44	--	--	--	--
JUN							
*30...	1135	--	3.4	880	8.2	20.0	10.9
30...	1136	--	3.4	880	8.2	20.0	10.9
JUL							
19...	1730	--	6.4	--	--	--	--
AUG							
*05...	1400	--	0.51	--	--	--	--
05...	1401	--	0.51	--	--	--	--
05...	1430	--	0.51	--	--	--	--

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
MAR 1992						
17...	2.10	0.440	1.9	0.250	0.100	27
17...	2.10	0.520	1.8	0.220	0.110	24
18...	2.10	0.590	2.1	0.290	0.130	55
18...	2.30	0.570	2.1	0.280	0.120	39
18...	1.80	0.710	2.1	0.300	0.170	--
18...	1.70	0.690	2.2	0.320	0.170	--
18...	--	--	--	--	--	40
18...	--	--	--	--	--	43
19...	--	--	--	--	--	55
APR						
08...	2.40	0.040	1.1	0.100	0.050	--
08...	2.40	0.040	1.2	0.130	0.050	--
08...	--	--	--	--	--	13
11...	2.00	0.060	0.90	0.090	0.070	--
11...	2.00	0.070	0.90	0.080	0.070	--
11...	2.10	0.150	0.90	0.090	0.080	--
11...	2.20	0.260	1.2	0.160	0.120	--
12...	2.30	0.220	1.1	0.170	0.130	--
12...	2.20	0.320	1.3	0.160	0.110	--
13...	2.90	0.340	1.4	0.170	0.140	--
24...	2.60	0.090	1.1	0.110	0.090	15
30...	--	--	--	--	--	24
MAY						
10...	--	--	--	--	--	7
20...	1.60	0.040	1.8	0.220	0.150	--
20...	1.70	0.040	1.8	0.210	0.160	--
20...	--	--	--	--	--	8
JUN						
30...	<0.050	0.030	1.2	0.140	0.080	--
30...	<0.050	0.030	1.0	0.120	0.080	--
JUL						
19...	--	--	--	--	--	12
AUG						
05...	0.110	0.040	1.4	0.200	0.110	--
05...	0.110	0.040	1.7	0.360	0.110	--
05...	--	--	--	--	--	7

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

STREAMS TRIBUTARY TO LAKE MICHIGAN
04072150 DUCK CREEK NEAR HOWARD, WI--CONTINUED

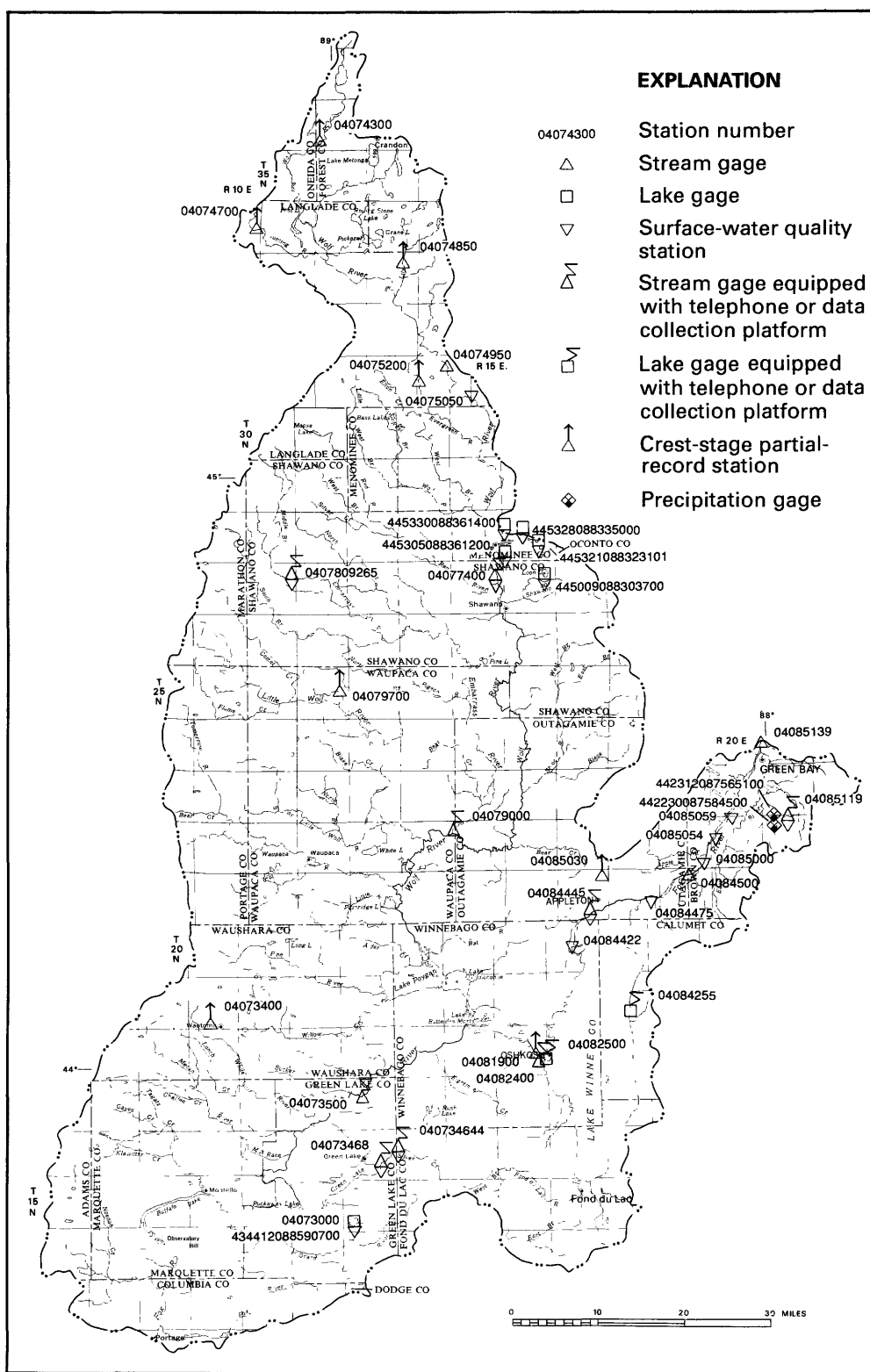
63

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
SEP 1992												
14...	1200	6.7	--	--	--	--	0.180	0.030	1.2	0.360	0.070	--
14...	1230	14	--	--	--	--	0.150	0.040	0.80	0.260	0.040	--
14...	1430	24	--	--	--	--	0.110	0.030	1.0	0.210	0.050	--
16...	1100	45	--	--	--	--	0.520	0.020	1.1	0.420	0.150	--
16...	1215	66	--	--	--	--	0.450	0.030	1.1	0.320	0.140	--
17...	1515	153	--	--	--	--	1.30	0.060	1.6	0.480	0.220	--
21...	0945	56	--	--	--	--	--	--	--	--	--	19
22...	0945	34	--	--	--	--	--	--	--	--	--	15
*22...	1400	32	693	8.2	14.5	10.2	2.50	0.060	1.4	0.340	0.270	--
22...	1401	32	693	8.2	14.5	10.2	2.50	0.060	1.4	0.340	0.270	--
22...	1410	32	--	--	--	--	--	--	--	--	--	11
24...	0945	15	--	--	--	--	--	--	--	--	--	9
25...	0945	10	--	--	--	--	--	--	--	--	--	6
26...	0945	7.4	--	--	--	--	--	--	--	--	--	7
27...	0945	9.5	--	--	--	--	--	--	--	--	--	8
28...	0945	8.3	--	--	--	--	--	--	--	--	--	4
28...	1915	17	--	--	--	--	--	--	--	--	--	6
29...	1915	21	--	--	--	--	--	--	--	--	--	6
30...	1915	16	--	--	--	--	--	--	--	--	--	5

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
OCT 1991										
*31...	1357	85	80	31	24	25	120	77	0.20	9.0
DEC										
*04...	1228	84	85	28	15	9.9	110	59	0.10	7.1

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE



FOX-WOLF RIVER BASIN

STREAMS TRIBUTARY TO LAKE MICHIGAN

65

434412088590700 LITTLE GREEN LAKE, AT CENTER, NEAR MARKESAN, WI

LOCATION--Lat 43°44'12", long 88°59'07", in SW 1/4 SW 1/4 sec.29, T.15 N., R.13 E., Green Lake County, Hydrologic Unit 04030201, 2 mi north of Markesan.

PERIOD OF RECORD--February 1991 to current year.

REMARKS--Lake sampled near center at a lake depth of about 28 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 07 TO AUGUST 27, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 07		Apr. 22		June 15		July 30		Aug. 27	
Depth of sample (ft)	1.5	24	1.5	24	1.5	23	1.5	22	1.5	23
Lake stage (ft)	---		---		5.80		5.57		5.32	
Specific conductance (µS/cm)	327	361	328	328	278	325	315	354	287	345
pH (units)	8.8	7.6	8.0	8.5	9.1	7.7	8.7	7.5	8.6	7.5
Water temperature (°C)	4.5	4.5	9.0	9.0	21.5	15.5	22.5	19.5	21.5	20.0
Color (Pt-Co. scale)	---		10	15	---		---		---	
Turbidity (NTU)	---		5.0	5.6	---		---		---	
Secchi-depth (meters)	---		0.9		1.6		0.5		0.4	
Dissolved oxygen	17.5	1.0	13.0	12.9	7.5	1.0	9.2	0.1	6.5	0.8
Hardness, as CaCO ₃	---		150	150	---		---		---	
Calcium, dissolved (Ca)	---		28	28	---		---		---	
Magnesium, dissolved (Mg)	---		20	20	---		---		---	
Sodium, dissolved (Na)	---		6.6	6.6	---		---		---	
Potassium, dissolved (K)	---		4	4	---		---		---	
Alkalinity, as CaCO ₃	---		140	140	---		---		---	
Sulfate, dissolved (SO ₄)	---		5.0	5.0	---		---		---	
Chloride, dissolved (Cl)	---		14	14	---		---		---	
Fluoride, dissolved (F)	---		0.1	0.1	---		---		---	
Silica, dissolved (SiO ₂)	---		<0.2	<0.2	---		---		---	
Solids, dissolved, at 180°C	---		186	186	---		---		---	
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---		0.09	0.10	---		---		---	
Nitrogen, ammonia, dissolved (as N)	---		0.03	0.04	---		---		---	
Nitrogen, amm. + org., total (as N)	---		0.90	0.50	---		---		---	
Phosphorus, total (as P)	---		0.077	0.070	0.065	0.330	0.148	0.400	0.154	0.440
Phosphorus, ortho, dissolved (as P)	---		0.006	0.006	---		---		---	
Iron, dissolved (Fe) µg/L	---		<50	<50	---		---		---	
Manganese, dissolved (Mn) µg/L	---		<40	<40	---		---		---	
Chlorophyll a, phytoplankton (µg/L)	---		37	---	15	---	96	---	140	---

2-7-92

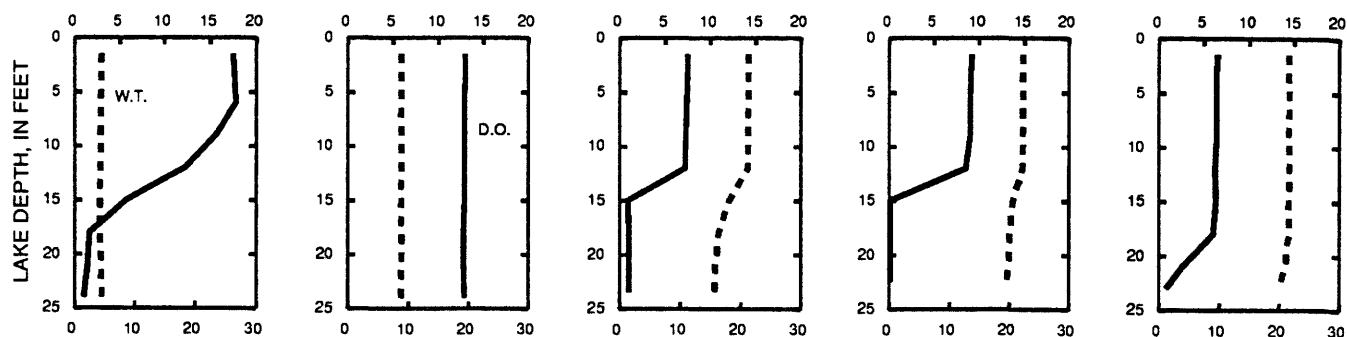
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6-15-92

7-30-92

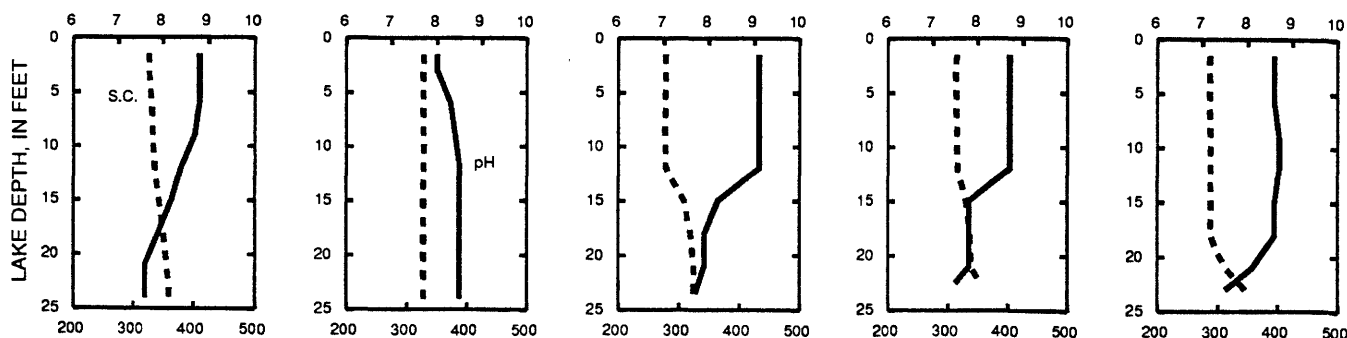
8-27-92

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

04073000 LITTLE GREEN LAKE NEAR MARKESAN, WI

LOCATION--Lat 43°44'12", long 88°59'07", in SW 1/4 SW 1/4 sec.29, T.15 N., R.13 E., Green Lake County, Hydrologic Unit 04030201, 2 mi north of Markesan.

DRAINAGE AREA.--3.33 mi²

PERIOD OF RECORD.--August 1936 to September 1964 (fragmentary); April 1991 to current year.

GAGE.--Nonrecording gage. Datum of gage is 90.00 ft above datum determined by Wisconsin Department of Natural Resources. Gage readings have been reduced to elevation above this datum. Staff mounted on wall of Otis Wendt's property. Staff read by Otis Wendt.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 97.36 ft, July 23 and 24, 1960; minimum observed, 94.02 ft, Dec. 25-31, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 6.19 ft, May 22; minimum observed, 5.22 ft, Sept. 10.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

STREAMS TRIBUTARY TO LAKE MICHIGAN

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040734644 SILVER CREEK AT SOUTH KORO ROAD NEAR RIPON, WI

LOCATION.--Lat 43°51'30", long 88°52'17" in NW 1/4 SE 1/4 sec.18, T.16 N., R.14 E., Fond du Lac County, Hydrologic Unit 04030201, on left bank at upstream side of culvert on South Koro Road, 1.8 mi west of Ripon.

DRAINAGE AREA.--36.2 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR WI-88-1: (M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 810 ft, from topographic map.

REMARKS.--Estimated daily discharges: Aug. 4-11 and ice-affected periods, Dec. 15-18, Jan. 15-20, 24, 25, and Feb. 9-11. Records good, except for estimated daily discharges, which are fair. Approximately 2.1 ft³/s of daily flow is effluent from Ripon Wastewater Treatment Plant. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	54	47	24	16	68	43	42	15	8.1	6.0	6.0
2	7.9	25	49	25	16	83	40	39	14	8.9	6.1	5.8
3	7.9	25	46	26	18	77	38	35	13	8.2	7.4	5.4
4	10	31	39	26	20	71	37	33	12	7.3	8.8	5.4
5	13	32	34	26	19	69	35	31	12	6.7	7.6	5.1
6	13	29	30	27	18	72	35	29	11	7.4	6.8	9.0
7	12	24	31	27	17	74	37	27	10	7.4	8.4	7.4
8	12	21	35	28	14	70	37	26	11	7.9	7.0	6.7
9	12	18	40	31	14	86	38	25	11	7.3	6.6	12
10	10	18	41	31	14	64	46	24	10	7.6	6.0	9.1
11	9.6	18	43	30	14	70	56	23	10	7.0	8.0	7.7
12	8.7	17	57	34	14	60	54	23	9.9	13	8.6	6.7
13	8.5	19	64	36	14	46	53	22	9.2	20	8.1	5.8
14	9.7	22	61	26	14	42	47	21	8.7	21	7.4	30
15	9.1	27	40	23	14	35	44	21	9.3	18	6.6	25
16	8.8	28	36	20	14	39	62	20	9.1	16	5.8	94
17	8.6	28	32	17	15	37	72	36	15	15	6.2	85
18	8.5	41	29	15	16	37	84	27	14	14	5.7	108
19	7.9	41	28	13	16	36	106	25	12	13	5.6	93
20	7.8	40	26	13	16	35	111	23	10	13	5.0	82
21	8.4	38	25	15	16	34	120	21	9.5	11	5.1	68
22	8.5	37	24	16	16	29	111	20	9.6	11	4.7	51
23	8.4	49	25	18	17	34	95	29	9.5	11	4.9	38
24	17	46	24	14	18	35	80	22	9.6	9.5	5.4	30
25	50	37	23	13	18	43	68	21	9.2	8.9	9.1	24
26	42	37	22	14	18	46	61	20	9.2	8.3	8.2	24
27	47	34	23	15	22	44	56	19	8.4	8.6	7.8	25
28	48	30	23	15	39	45	51	18	8.1	8.0	7.1	22
29	58	31	24	15	46	43	49	17	9.7	7.1	6.0	20
30	47	56	24	16	---	43	45	16	8.6	6.3	6.0	19
31	43	---	24	17	---	44	---	15	---	6.6	6.3	---
TOTAL	570.2	953	1069	666	523	1611	1811	770	317.6	323.1	208.3	930.1
MEAN	18.4	31.8	34.5	21.5	18.0	52.0	60.4	24.8	10.6	10.4	6.72	31.0
MAX	58	56	64	36	46	86	120	42	15	21	9.1	108
MIN	7.8	17	22	13	14	29	35	15	8.1	6.3	4.7	5.1
CFSM	.51	.88	.95	.59	.50	1.44	1.67	.69	.29	.29	.19	.86
IN.	.59	.98	1.10	.68	.54	1.66	1.86	.79	.33	.33	.21	.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	MEAN	12.3	16.9	14.7	8.92	11.4	53.3	39.4	25.4	25.0	12.9	15.8	15.0
MAX	20.3	31.8	34.5	21.5	18.0	73.1	60.4	37.0	57.6	24.0	50.3	31.0	31.0
(WY)	1991	1992	1992	1992	1992	1991	1992	1989	1989	1990	1990	1992	1992
MIN	5.49	9.37	3.88	4.66	5.28	34.1	21.0	11.6	3.84	3.29	4.14	6.82	6.82
(WY)	1989	1990	1990	1990	1989	1987	1990	1988	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1987 - 1992	
ANNUAL TOTAL	9444.8		9752.3			
ANNUAL MEAN	25.9		26.6		21.6	
HIGHEST ANNUAL MEAN					26.6	
LOWEST ANNUAL MEAN					13.4	
HIGHEST DAILY MEAN	110		120		478	
LOWEST DAILY MEAN	6.2		4.7		1.8	
ANNUAL SEVEN-DAY MINIMUM	6.9		5.2		2.2	
INSTANTANEOUS PEAK FLOW			193		545	
INSTANTANEOUS PEAK STAGE			7.96		10.83	
INSTANTANEOUS LOW FLOW			3.7		1.8	
ANNUAL RUNOFF (CFSM)	.71		.74		.60	
ANNUAL RUNOFF (INCHES)	9.71		10.02		8.13	
10 PERCENT EXCEEDS	56		55		45	
50 PERCENT EXCEEDS	16		20		13	
90 PERCENT EXCEEDS	8.0		7.4		4.6	

STREAMS TRIBUTARY TO LAKE MICHIGAN

040734644 SILVER CREEK AT SOUTH KORO ROAD NEAR RIPON, 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 since April 1987.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 3,330 mg/L, May 31, 1987; minimum observed, 1 mg/L, Aug. 29, 1988 and Oct. 10, 1989.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 378 tons, May 30, 1989; minimum daily, 0.00 ton, Aug. 12, 1988.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 5.28 mg/L, Sept. 3, 1988; minimum observed, 0.04 mg/L, Apr. 30, 1992.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,620 lb, May 30, 1989; minimum daily, 2.3 lb, Aug. 7, 1988.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 1,300 mg/L, Aug. 25; minimum observed, 3 mg/L, Jan. 3.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 37 tons, Oct. 25; minimum daily, 0.13 ton, Aug. 20, 22, 23.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 2.04 mg/L, Aug. 25; minimum observed, 0.04 mg/L, Apr. 30.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 203 lb, Sept. 16; minimum daily, 3.4 lb, Sept. 5.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 1991					MAR 1992				
*01...	1205	8.3	0.230	67	02...	1720	80	--	32
04...	1900	22	1.12	162	03...	0520	79	0.300	27
24...	1005	21	0.560	204	04...	0520	71	0.230	--
24...	1355	21	--	85	04...	1120	71	--	18
24...	2225	21	0.300	78	05...	1720	69	--	12
24...	2250	28	--	122	05...	2320	71	0.170	--
24...	2300	38	0.630	--	06...	1720	73	--	14
24...	2310	49	--	463	08...	0520	67	0.120	12
24...	2320	61	1.20	--	08...	2320	71	0.110	18
24...	2345	71	1.15	677	09...	0520	84	0.230	82
28...	1042	49	0.230	13	09...	0900	97	0.180	51
29...	0145	56	0.220	30	09...	1500	97	0.160	37
29...	0705	71	--	56	09...	2050	79	--	22
29...	0715	82	0.350	122	09...	2255	63	0.130	--
31...	0920	41	--	52	10...	1220	59	--	23
31...	2120	49	0.140	--	10...	2000	82	0.130	15
NOV					11...	2000	72	--	13
01...	0920	49	--	102	16...	1340	38	--	38
01...	1210	60	0.150	--	17...	0140	38	0.070	--
03...	1505	28	--	25	25...	1240	45	0.070	60
04...	0920	31	0.180	--	*25...	1242	45	0.060	57
05...	1245	35	--	82	APR				
*19...	1125	42	0.160	8	*07...	1040	38	0.100	5
23...	1005	53	0.090	61	10...	1940	56	0.260	66
23...	1130	65	0.150	81	10...	1955	68	--	126
23...	1700	50	0.080	60	10...	2010	85	0.560	--
30...	1435	56	0.120	45	10...	2025	97	--	421
DEC					10...	2100	110	0.960	537
01...	2230	49	0.080	70	10...	2155	91	--	231
02...	1030	49	0.100	64	10...	2240	75	0.260	--
12...	1050	64	--	134	11...	0135	58	--	29
12...	1650	64	0.070	--	12...	0135	55	0.090	--
12...	2250	67	--	120	12...	1335	55	--	12
13...	1650	64	0.110	--	14...	0135	50	0.150	9
14...	1650	61	--	91	16...	0615	54	0.080	23
JAN 1992					16...	0755	79	0.180	65
*03...	1305	26	0.060	3	17...	0355	66	0.060	32
FEB					18...	2155	86	0.060	24
*27...	1100	19	0.140	23	18...	2156	86	0.060	--
28...	0745	30	0.260	28	19...	0215	100	0.130	71
28...	1235	40	--	28	19...	0235	112	--	241
28...	1540	49	0.350	48	19...	0345	125	0.390	286
29...	0340	42	0.210	21	19...	0640	108	0.120	54
29...	1445	52	0.210	36	20...	0600	108	--	29
MAR					20...	1200	111	0.100	--
01...	0245	54	--	23	21...	1200	121	--	32
01...	1300	63	0.290	66	21...	1800	121	0.090	--
01...	1750	76	--	61	24...	1200	81	--	14
01...	1825	88	0.490	135	24...	1800	77	0.060	--
02...	0025	96	0.320	56	26...	0600	63	0.050	14
02...	0520	82	0.270	33	*30...	1440	45	0.040	24

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

STREAMS TRIBUTARY TO LAKE MICHIGAN

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040734644 SILVER CREEK AT SOUTH KORO ROAD NEAR RIPON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
MAY 1992					SEP 1992				
19...	1030	27	0.270	20	06...	0340	15	0.540	136
23...	0030	47	0.580	216	06...	0355	19	0.950	327
23...	0040	62	0.710	318	06...	0640	13	0.410	85
23...	0055	75	1.16	--	09...	0710	16	0.650	128
JUN					09...	0720	25	1.25	500
17...	1010	22	0.450	141	09...	0735	34	1.26	678
17...	1015	28	--	279	09...	0915	24	0.440	133
17...	1025	45	1.35	795	09...	1055	17	0.310	55
17...	1035	56	1.63	942	14...	0735	15	0.490	84
17...	1130	39	--	371	14...	0955	27	0.570	137
17...	1205	27	0.520	--	14...	1145	56	0.790	309
17...	1420	19	0.220	57	14...	1245	103	--	774
18...	1525	21	--	63	14...	1315	117	1.02	673
18...	1815	21	0.340	--	14...	1355	97	0.620	288
JUL					14...	1700	34	0.430	51
12...	1340	21	0.570	153	15...	0740	21	0.320	32
12...	1435	27	1.10	170	15...	0850	29	--	45
12...	1720	19	0.310	72	15...	0910	52	0.640	181
13...	1740	22	--	122	16...	0700	31	0.310	75
13...	1800	30	0.830	--	16...	0940	135	0.610	391
13...	1835	40	--	312	16...	1045	165	0.660	371
13...	1945	50	0.590	--	*16...	1115	183	0.500	193
13...	2350	37	--	80	16...	1120	187	0.530	226
14...	0135	25	0.320	--	16...	1435	161	0.360	86
14...	1335	22	--	23	16...	1800	99	0.300	50
15...	0135	19	0.290	--	*16...	1801	99	0.300	47
AUG					17...	0525	87	0.280	35
*11...	1535	8.6	0.230	10	17...	2325	82	0.270	24
25...	1835	16	0.710	104	18...	0435	113	0.480	272
25...	1840	22	--	462	18...	0615	142	0.410	113
25...	1845	32	2.03	--	18...	1320	107	0.280	36
25...	1850	39	--	1300	19...	1320	93	0.290	22
25...	1905	49	2.04	1060	22...	1320	51	0.220	13
25...	1940	35	--	436	*25...	0925	25	0.150	10
25...	2105	17	0.530	131	26...	1320	21	0.150	11
26...	1315	8.4	--	13	26...	1610	28	0.130	9
26...	1515	9.1	0.210	--	26...	2045	37	0.170	26
					27...	0500	26	0.190	44
					28...	0500	22	0.140	16

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					MAR 1992				
01...	1205	8.3	1240	13.0	25...	1325	44	780	6.0
NOV					APR				
19...	1135	42	750	5.5	07...	1045	38	790	7.0
JAN 1992					30...	1440	45	730	16.5
03...	1310	26	910	4.5	AUG				
FEB					11...	1535	8.6	2060	21.5
27...	1100	19	1060	4.5	SEP				
					25...	0925	25	835	13.0

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

040734644 SILVER CREEK AT SOUTH KORO ROAD NEAR RIPON, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	61	23	8.4	7.9	126	18	9.1	13	7.1	8.2	5.0
2	9.4	28	25	8.3	8.2	127	18	8.4	12	7.8	8.1	4.5
3	9.0	23	23	8.3	9.2	116	18	7.5	10	7.1	9.8	4.0
4	22	33	19	8.4	11	84	18	7.1	9.7	6.3	12	3.8
5	19	26	15	8.7	10	69	18	6.7	9.0	5.7	9.9	3.4
6	17	24	13	9.1	10	61	18	6.2	8.2	6.2	8.8	17
7	16	20	13	9.3	9.7	53	20	5.8	7.4	6.2	11	9.0
8	16	17	14	9.9	7.7	44	19	5.6	7.5	6.6	8.9	7.2
9	15	15	15	11	8.0	75	19	5.4	7.2	6.0	8.3	26
10	13	14	14	11	8.1	45	58	5.1	6.9	6.3	7.5	9.5
11	12	14	14	11	8.3	46	42	5.1	6.6	5.7	9.9	7.5
12	11	14	29	13	8.2	36	30	5.0	6.2	27	10	6.2
13	10	15	34	14	8.3	25	37	4.8	5.5	46	9.5	5.0
14	12	19	36	10	8.6	20	33	4.6	5.1	35	8.4	95
15	11	20	23	9.0	8.9	15	21	4.5	5.3	27	7.2	54
16	10	19	20	7.9	9.1	16	35	4.5	5.0	24	6.2	203
17	10	16	17	6.8	9.9	14	23	91	33	22	6.4	127
18	9.8	44	15	6.1	11	14	27	48	16	21	5.7	187
19	9.1	35	14	5.4	11	14	82	37	12	20	5.5	141
20	8.8	27	13	5.5	11	13	64	31	10	19	4.8	101
21	9.4	20	12	6.2	11	13	59	26	9.0	17	4.7	75
22	9.4	16	11	6.9	11	11	49	22	9.1	16	4.2	52
23	9.2	25	11	7.9	12	13	36	64	8.9	15	4.2	36
24	40	19	10	6.3	13	13	27	25	8.9	14	4.5	26
25	151	15	9.7	5.9	13	15	20	22	8.5	13	32	20
26	62	15	9.1	6.6	13	16	16	21	8.4	12	11	20
27	64	14	8.9	6.9	25	16	14	19	7.7	12	8.4	24
28	59	11	8.9	7.0	61	16	12	17	7.3	11	7.3	17
29	72	21	8.9	7.1	53	16	11	16	8.7	9.8	5.9	14
30	44	53	8.8	7.8	---	17	9.9	15	7.7	8.6	5.6	12
31	35	---	8.6	8.4	---	18	---	13	---	9.0	5.5	---
TOTAL	804.8	693	495.9	258.1	396.1	1177	871.9	562.4	279.8	449.4	259.4	1312.1

WTR YR 1992 TOTAL 7559.9

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

LOCATION.--Lat 43°49'18", long 88°55'36" in NE 1/4 SE 1/4 SE 1/4 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.--Acoustical Velocity Meter (AVM) system. Single-path, mid-depth transducer installation. Cross-path, dual-depth transducers installed on June 6, 1990. Elevation of gage is 785 ft from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-11, Nov. 25, Dec. 24 to Jan. 3, and Mar. 10-12. Estimated discharges are based on discharges from upstream station, Silver Creek near Ripon (040734644), adjusted for drainage area. Approximately 2.1 ft³/s of daily flow is effluent from Ripon Wastewater Treatment Plant. Flows fluctuate due to seiche from Green Lake. Records are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	46	63	29	18	90	45	54	20	12	4.6	3.6
2	9.6	81	53	30	19	94	41	45	20	5.0	6.9	.00
3	9.6	69	51	33	22	78	41	43	20	7.2	7.9	6.3
4	12	52	52	34	26	76	40	41	16	11	8.0	-1.0
5	16	42	44	33	22	72	40	39	14	7.3	6.3	5.8
6	16	37	45	35	21	75	39	37	11	4.1	6.1	4.0
7	14	27	45	33	18	77	43	39	13	7.7	4.8	2.8
8	14	30	48	35	15	75	41	35	12	3.7	8.9	5.0
9	14	28	59	43	16	96	41	36	12	8.2	5.0	6.7
10	12	21	57	39	16	77	46	35	11	5.8	6.2	8.5
11	7.8	17	59	38	16	85	74	31	10	8.5	4.4	6.3
12	6.4	25	78	43	14	73	57	31	11	12	3.7	5.8
13	7.6	30	94	48	16	53	57	31	6.7	20	9.0	4.7
14	8.4	29	64	32	15	48	52	28	15	29	6.8	23
15	13	37	63	30	15	42	49	29	15	20	6.0	27
16	5.7	38	57	29	17	42	79	22	10	16	4.8	104
17	11	39	53	23	16	43	76	52	- .40	15	3.0	129
18	5.7	58	41	20	17	41	85	39	26	17	4.2	123
19	8.9	53	40	17	19	38	121	35	15	9.2	4.7	108
20	8.9	49	41	17	19	38	139	33	8.5	19	3.5	95
21	12	46	37	16	19	38	128	29	7.0	8.9	2.4	74
22	1.1	48	37	18	19	31	129	25	10	14	4.4	61
23	9.7	75	33	23	20	41	109	47	13	7.7	2.0	46
24	20	64	32	20	22	47	87	28	10	9.4	2.0	37
25	104	49	28	17	21	59	75	28	8.8	8.4	8.4	32
26	53	50	27	16	22	54	67	26	9.0	8.2	11	26
27	57	40	28	18	33	45	64	26	7.3	7.4	6.0	32
28	56	40	28	17	71	50	61	21	8.0	4.3	4.5	33
29	77	36	29	17	61	48	68	25	7.6	7.0	-1.8	25
30	64	98	29	19	---	46	55	19	12	6.2	9.0	24
31	49	---	29	19	---	46	---	23	---	6.1	3.4	---
TOTAL	713.0	1354	1444	841	645	1818	2049	1032	358.50	325.3	166.1	1058.40
MEAN	23.0	45.1	46.6	27.1	22.2	58.6	68.3	33.3	11.9	10.5	5.36	35.3
MAX	104	98	94	48	71	96	139	54	26	29	11	129
MIN	1.1	17	27	16	14	31	39	19	- .40	3.7	-1.8	-1.0
CFSM	.43	.84	.87	.51	.42	1.10	1.28	.62	.22	.20	.10	.66
IN.	.50	.94	1.00	.58	.45	1.26	1.42	.72	.25	.23	.12	.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1987	1988	1989	1990	1991	1992
MEAN	16.3	23.8	20.2	11.3	15.1	71.9	52.3	35.2	34.8	16.8	19.7	18.1
MAX	27.4	45.1	46.6	27.1	22.2	97.1	68.3	53.6	84.0	35.6	67.5	35.3
(WY)	1991	1992	1992	1992	1992	1989	1992	1989	1989	1990	1990	1992
MIN	7.00	13.8	5.73	6.66	6.71	49.4	31.2	16.1	4.57	3.78	5.03	9.01
(WY)	1989	1990	1990	1989	1989	1987	1990	1988	1988	1988	1988	1988

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1987 - 1992

ANNUAL TOTAL	11613.08	11804.30	
ANNUAL MEAN	31.8	32.3	28.7
HIGHEST ANNUAL MEAN			33.9
LOWEST ANNUAL MEAN			18.7
HIGHEST DAILY MEAN	177	Mar 2	705
LOWEST DAILY MEAN	- .72	Jun 14	-1.8
ANNUAL SEVEN-DAY MINIMUM	3.3	Aug 24	2.1
ANNUAL RUNOFF (CFSM)	.59		.54
ANNUAL RUNOFF (INCHES)	8.07		7.30
10 PERCENT EXCEEDS	76		59
50 PERCENT EXCEEDS	19		17
90 PERCENT EXCEEDS	7.5		5.3

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.--Observer takes samples during periods of low flow and more frequently during runoff periods.

REMARKS.--Records poor. Phosphorus analyses by the Wisconsin State Laboratory of Hygiene. All samples are equal-width increment (EWI).

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, -0.11 ton, Aug. 29, 1992.

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, -1.4 lb, Aug. 30, 1992.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 77 mg/L, Aug. 26; minimum observed, 2 mg/L, Apr. 15.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 18 tons, Sept. 18; minimum daily, -0.11 ton, Aug. 29.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.34 mg/L, June 17; minimum observed, 0.03 mg/L, Feb. 3, 13, Apr. 15, and Sept. 16.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 183 lb, Sept. 18; minimum daily, -1.4 lb, Aug. 30.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT 1991					MAY 1992				
01...	1255	9.6	0.040	4	12...	0850	31	0.280	52
07...	0915	14	0.120	11	18...	0920	39	0.260	67
22...	0850	1.1	0.100	13	19...	1055	35	0.280	43
25...	0900	104	0.150	16	27...	1210	26	0.210	71
28...	1110	56	0.170	23	JUN				
29...	0900	77	0.190	21	03...	1235	20	0.190	62
NOV					09...	1400	12	0.180	31
19...	0845	53	0.090	5	17...	1330	-0.39	0.340	49
19...	1000	53	0.090	10	18...	1245	26	0.300	57
DEC					19...	1415	15	0.140	19
23...	0930	33	0.050	3	JUL				
JAN 1992					02...	1630	5.0	0.200	28
03...	1000	33	0.070	47	14...	0915	29	0.270	39
21...	1020	16	0.040	28	15...	0915	20	0.310	--
FEB					15...	1400	20	--	39
03...	1320	22	0.030	46	23...	1340	7.7	0.200	32
13...	0850	16	0.030	24	AUG				
25...	0845	21	0.070	26	10...	1400	6.2	0.180	43
27...	1145	33	0.060	28	11...	1628	4.4	0.260	--
28...	1100	71	0.170	19	11...	1630	4.4	--	40
MAR					26...	0915	11	0.290	77
04...	0840	76	0.260	22	26...	1745	11	0.260	30
09...	1615	96	0.140	13	SEP				
12...	0830	73	0.140	8	02...	0830	0.0	0.270	42
17...	0855	43	0.090	10	08...	0850	5.0	0.280	55
25...	1010	59	0.060	64	09...	0850	6.7	0.240	48
30...	0930	46	0.050	9	09...	1500	6.7	0.210	39
APR					14...	1120	23	0.040	12
07...	0945	43	0.070	29	14...	1700	23	0.210	63
15...	1215	49	0.030	2	15...	0850	27	0.230	22
16...	0900	79	0.080	22	16...	1100	104	0.030	21
20...	1330	139	0.130	28	16...	1745	104	0.280	29
22...	1440	129	0.070	19	16...	1905	104	0.240	27
29...	1240	68	0.140	46	17...	0900	129	0.250	33
30...	1535	55	0.130	63	18...	0915	123	0.280	58
					25...	0900	32	0.220	32

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SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073500 FOX RIVER AT BERLIN, WI

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

DRAINAGE AREA.--1,340 mi².

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

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

GAGE.--Water-stage recorder 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.--Estimated daily discharges: Ice-affected periods, Nov. 6-14, Dec. 3 to Jan. 4, and Jan. 15 to Feb. 24. Records good except for ice-affected periods, which are fair. Usually less than about 20 ft³/s was diverted into the basin from the Wisconsin River at Portage Canal throughout the year. Data-collection platform and gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	645	1330	1950	1400	1300	1310	1790	1990	931	595	598	488
2	655	1410	1960	1400	1400	1410	1760	1970	885	576	596	504
3	681	1470	1900	1500	1400	1470	1740	1930	852	586	563	525
4	691	1520	1900	1500	1400	1530	1720	1890	836	590	560	498
5	666	1620	1900	1480	1500	1620	1690	1840	818	568	560	497
6	718	1700	1800	1440	1500	1700	1670	1800	784	524	570	554
7	721	1800	1800	1400	1400	1770	1650	1750	779	550	551	537
8	721	1800	1800	1380	1300	1830	1620	1700	746	567	543	540
9	725	1800	1900	1400	1100	1950	1590	1630	711	556	555	564
10	717	1800	1900	1390	1200	2000	1570	1560	692	544	560	598
11	718	1800	2000	1380	1200	2010	1590	1480	696	531	513	614
12	700	1800	2000	1370	1200	2030	1600	1440	680	605	520	606
13	698	1800	2000	1390	1200	2060	1590	1380	665	644	525	617
14	723	1800	2000	1350	1200	2080	1590	1310	653	710	552	738
15	750	1780	1900	1300	1200	2070	1570	1260	589	764	542	884
16	723	1740	1900	1300	1300	2060	1550	1230	566	802	543	1100
17	739	1700	1900	1300	1400	2050	1580	1260	615	810	539	1410
18	737	1720	1800	1300	1400	2030	1630	1260	689	812	545	1640
19	690	1720	1800	1300	1500	2000	1710	1220	695	791	509	1760
20	699	1700	1800	1300	1500	1970	1790	1210	669	787	500	1850
21	706	1690	1700	1300	1500	1940	1870	1190	650	760	500	1930
22	694	1690	1700	1300	1500	1900	1930	1180	642	745	496	2000
23	685	1740	1600	1300	1300	1860	1970	1180	631	706	489	2040
24	713	1780	1600	1300	1100	1840	2000	1130	612	693	481	2050
25	865	1800	1600	1200	1100	1860	2020	1090	621	723	482	2060
26	969	1800	1500	1200	1080	1860	2030	1090	623	717	488	2040
27	1020	1790	1500	1200	1130	1840	2040	1070	584	682	470	2040
28	1060	1790	1500	1200	1230	1830	2030	1060	608	663	459	2020
29	1130	1820	1500	1200	1270	1810	2030	1030	608	641	494	1990
30	1210	1900	1400	1300	---	1810	2010	1010	573	612	537	1970
31	1260	---	1400	1300	---	1810	---	964	---	601	492	---
TOTAL	24429	51610	54910	41380	37810	57310	52930	43104	20703	20455	16332	36664
MEAN	788	1720	1771	1335	1304	1849	1764	1390	690	660	527	1222
MAX	1260	1900	2000	1500	1500	2080	2040	1990	931	812	598	2060
MIN	645	1330	1400	1200	1080	1310	1550	964	566	524	459	488
CFSM	.59	1.28	1.32	1.00	.97	1.38	1.32	1.04	.51	.49	.39	.91
IN.	.68	1.43	1.52	1.15	1.05	1.59	1.47	1.20	.57	.57	.45	1.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 1992, BY WATER YEAR (WY)

	MEAN	974	1067	884	689	750	1770	2213	1431	1155	862	764	884
MAX	3819	2463	1871	1631	1803	4272	4225	3801	4230	2221	2456	3491	
(WY)	1987	1986	1986	1939	1966	1973	1979	1973	1905	1938	1924	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1898 - 1992

ANNUAL TOTAL	431188	457637											
ANNUAL MEAN	1181	1250								1123			
HIGHEST ANNUAL MEAN										2078		1973	
LOWEST ANNUAL MEAN										559		1964	
HIGHEST DAILY MEAN	2480	Mar 28	2080	Mar 14	6900	Mar 17,18	1946						
LOWEST DAILY MEAN	418	Sep 2	459	Aug 28	217	Jun 27	1988						
ANNUAL SEVEN-DAY MINIMUM	471	Aug 31	480	Aug 23	266	Jan 30	1900						
INSTANTANEOUS PEAK FLOW			(a)2080	Mar 14	6900	Mar 17,18	1946						
INSTANTANEOUS PEAK STAGE			(b)12.25	Dec 15	15.50	Mar 17,18	1946						
INSTANTANEOUS LOW FLOW			450	Aug 28	210	Jun 27	1988						
ANNUAL RUNOFF (CFSM)	.88	.93								.84			
ANNUAL RUNOFF (INCHES)	11.97	12.70								11.39			
10 PERCENT EXCEEDS	2090	1950			2150								
50 PERCENT EXCEEDS	848	1300			845								
90 PERCENT EXCEEDS	592	556			500								

(a) Gage height, 11.12 ft

(b) Ice affected

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04074950 WOLF RIVER AT LANGLADE, WI

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

DRAINAGE AREA.--463 mi².

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

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

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 4-6, 8-9, Nov. 24 to Dec. 26, Jan. 5, and Jan. 14 to Mar. 3. Records good except those for ice-affected periods, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292	708	620	420	430	520	510	856	384	295	242	358
2	299	946	560	413	420	540	507	808	362	334	269	364
3	311	836	520	413	440	564	502	763	354	354	283	422
4	311	740	490	424	450	585	498	724	342	294	268	472
5	323	700	470	420	430	589	500	666	344	260	261	484
6	354	620	500	410	410	642	555	578	306	253	251	505
7	353	563	560	404	410	647	773	520	291	249	245	478
8	344	600	600	400	400	618	953	504	287	251	278	444
9	342	580	680	394	370	606	1000	500	284	255	290	460
10	356	530	720	420	400	437	1060	476	274	276	274	493
11	346	481	740	392	410	574	988	463	271	312	268	468
12	339	464	760	432	390	625	959	497	271	357	256	402
13	334	463	800	408	370	580	929	521	264	415	234	332
14	341	469	800	400	400	562	852	463	249	431	243	340
15	355	514	740	380	430	581	832	441	235	416	252	395
16	380	495	560	350	440	572	953	439	231	399	253	510
17	396	468	520	350	450	569	1040	668	246	375	247	887
18	390	576	470	320	480	534	1140	762	288	360	263	939
19	374	647	500	330	480	522	1250	711	288	336	296	823
20	340	607	520	350	490	513	1440	679	279	322	330	763
21	336	591	490	400	500	480	1520	643	270	301	293	715
22	342	642	460	420	500	478	1480	604	259	286	251	675
23	351	697	450	430	520	474	1400	583	260	285	237	629
24	359	638	460	410	520	453	1320	516	290	270	233	532
25	501	580	450	390	540	441	1250	483	312	266	229	418
26	506	540	470	390	520	460	1180	465	321	265	259	390
27	454	520	492	390	500	435	1100	446	328	256	281	512
28	431	560	486	400	500	449	1020	431	303	251	277	598
29	555	600	503	410	520	442	961	421	316	229	275	575
30	647	680	484	430	---	455	905	411	323	238	305	575
31	626	---	453	450	---	493	---	400	---	239	337	---
TOTAL	11988	18055	17328	12350	13120	16440	29377	17442	8832	9430	8280	15958
MEAN	387	602	559	398	452	530	979	563	294	304	267	532
MAX	647	946	800	450	540	647	1520	856	384	431	337	939
MIN	292	463	450	320	370	435	498	400	231	229	229	332
CFSM	.84	1.30	1.21	.86	.98	1.15	2.11	1.22	.64	.66	.58	1.15
IN.	.96	1.45	1.39	.99	1.05	1.32	2.36	1.40	.71	.76	.67	1.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1992, BY WATER YEAR (WY)

	441	447	373	317	318	487	833	611	484	358	318	402
MEAN	441	447	373	317	318	487	833	611	484	358	318	402
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	203	226	193	213	278	263	319	173	183	188	171
(WY)	1977	1977	1977	1977	1982	1982	1990	1987	1988	1989	1989	1989

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1966 - 1992

ANNUAL TOTAL	208121		178600									
ANNUAL MEAN	570		488									
HIGHEST ANNUAL MEAN									451			
LOWEST ANNUAL MEAN									666			1973
HIGHEST DAILY MEAN	1750	Jun 3	1520	Apr 21					326			1988
LOWEST DAILY MEAN	262	Sep 2	229	Jul 29					2200		Mar 15	1973
ANNUAL SEVEN-DAY MINIMUM	277	Aug 28	246	Jul 26					137		Jul 7	1988
INSTANTANEOUS PEAK FLOW			1550	Apr 21					142		Sep 28	1989
INSTANTANEOUS PEAK STAGE			9.53	Apr 21					(a)2200		Mar 15	1973
INSTANTANEOUS LOW FLOW			207	Jul 29					(b)10.18		Mar 16	1990
ANNUAL RUNOFF (CFSM)	1.23		1.05						119		Nov 8	1976
ANNUAL RUNOFF (INCHES)	16.72		14.35						.97			
10 PERCENT EXCEEDS	1020		761						13.23			
50 PERCENT EXCEEDS	468		447						780			
90 PERCENT EXCEEDS	300		268						370			
									238			

(a) Gage height, 9.48 ft

(b) Backwater from ice

STREAMS TRIBUTARY TO LAKE MICHIGAN

04075050 WOLF RIVER AT HIGHWAY M NEAR LANGLADE, WI

LOCATION.--Lat 45°07'38", long 88°39'45", in SE 1/4 NE 1/4 sec.31, T.31 N., R.14 E., Langland County, Hydrologic Unit 04030202, at County Highway M bridge near State Highway 55, 5.7 mi southeast of Langlade.

DRAINAGE AREA.--489 mi².

PERIOD OF RECORD.--April 1986 to current year.

REMARKS.--Discharge values are estimated from record at station 04074950 Wolf River at Langlade.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	OXYGEN, DIS- SOLVED (MG/L) (00300)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
OCT 1991										
30...	1635	664	182	7.0	7.0	--	12.5	19	9.2	2.1
DEC										
03...	1530	509	182	7.9	0.0	--	14.7	20	9.4	2.2
JAN 1992										
13...	1540	400	209	8.1	0.0	--	12.0	24	11	2.6
APR										
09...	1230	1000	133	8.4	5.0	--	13.1	15	6.8	1.8
MAY										
20...	0845	671	155	7.6	16.0	55	10.1	17	7.5	2.0
JUN										
29...	1620	329	218	8.1	19.5	25	9.1	25	11	2.4
AUG										
05...	0910	255	--	--	--	13	--	25	13	2.6
SEP										
25...	1125	415	209	7.9	11.5	56	10.9	21	9.8	2.2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT 1991									
30...	1.1	83	2.8	6.1	<0.10	8.8	121	<0.010	0.140
DEC									
03...	0.90	87	3.1	7.1	0.20	10	116	<0.010	0.260
JAN 1992									
13...	0.90	104	2.5	6.1	0.20	11	138	<0.010	0.330
APR									
09...	0.90	--	3.1	4.9	<0.10	8.2	86	<0.010	0.200
MAY									
20...	0.70	67	2.6	4.7	<0.10	5.4	94	<0.010	0.079
JUN									
29...	0.70	105	2.1	6.1	<0.10	4.1	130	<0.010	<0.050
AUG									
05...	0.60	112	2.4	5.2	0.20	6.2	146	<0.010	0.062
SEP									
25...	0.60	89	2.1	5.1	0.10	8.6	111	<0.010	0.092

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
OCT 1991									
30...	0.030	0.40	0.030	<0.010	1	<100	<1	1	9
DEC									
03...	0.030	0.30	0.020	<0.010	<1	<100	<1	4	7
JAN 1992									
13...	0.050	0.30	0.040	0.010	<1	<100	<1	<1	<1
APR									
09...	0.050	0.20	0.040	<0.010	<1	<100	<1	<1	3
MAY									
20...	0.040	0.40	0.040	0.010	--	--	--	--	--
JUN									
29...	0.020	0.30	0.010	<0.010	--	--	--	--	--
AUG									
05...	0.020	0.30	0.020	<0.010	--	--	--	--	--
SEP									
25...	0.050	0.40	0.020	0.020	--	--	--	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

77

04075050 WOLF RIVER AT HIGHWAY M NEAR LANGLADE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
OCT 1991									
30...	390	--	3	120	--	<0.10	2	<1	10
DEC									
03...	300	--	<1	50	--	<0.10	2	<1	10
JAN 1992									
13...	380	--	<1	60	--	<0.10	<1	<1	20
APR									
09...	600	--	3	90	--	0.20	<1	<1	10
MAY									
20...	450	130	--	120	12	--	--	--	--
JUN									
29...	210	45	--	50	10	--	--	--	--
AUG									
05...	170	32	--	70	10	--	--	--	--
SEP									
25...	380	200	--	80	11	--	--	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

445330088361400 LEGEND LAKE SITE #3 (NEAR LODGE) NEAR SHAWANO, WI

LOCATION.--Lat 44°53'30", long 88°36'14", in NE 1/4 SW 1/4 sec. 19, T.28 N., R.16 E, Menominee County, Hydrologic Unit 04030202, 7.4 mi north of Shawano.

PERIOD OF RECORD.--February 1990 to current year.

REMARKS.--Lake sampled approximately 1 mi east of lodge located on west shore at a depth of about 40 ft. Lake ice-covered during February sampling. Legend Lake Site #3 is also known as Watosah-Skice Lake.

WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 28, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 29		June 12		July 30		Aug. 28	
Depth of sample (ft)	1.5	36.0	1.5	30.5	1.5	33.5	1.5	35.5	1.5	34.5
Lake stage (ft)	---	---	5.80	---	5.60	---	5.38	---	4.30	---
Specific conductance (μS/cm)	295	379	278	379	276	373	254	384	244	379
pH (units)	8.2	7.3	8.3	7.3	8.3	7.3	8.6	7.1	8.6	7.0
Water temperature (°C)	1.3	5.5	9.1	6.1	23.0	7.6	22.8	7.5	21.6	7.7
Color (Pt-Co. scale)	---	---	10.0	10.0	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.7	2.5	---	---	---	---	---	---
Secchi-depth (meters)	---	---	4.7	---	5.2	---	2.8	---	2.9	---
Dissolved oxygen	8.7	1.8	12.0	3.0	9.6	2.6	9.2	0.0	9.0	0.0
Hardness, as CaCO ₃	---	---	140	190	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	30	41	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	17	21	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.1	2.7	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.8	1.1	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	139	185	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	9.9	15.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.3	0.3	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	4.0	6.3	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	1.5	7.8	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	150	205	---	---	---	---	---	---
Nitrogen, nitrite, total (as N)	---	---	<0.01	<0.01	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , total (as N)	---	---	<0.05	<0.05	---	---	---	---	---	---
Nitrogen, ammonia, total (as N)	---	---	<0.01	0.32	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	---	0.48	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	<0.20	0.80	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.011	0.028	0.005	0.031	0.007	0.041	0.002	0.032
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.001	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	3.0	11.0	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	2.0	340	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	0.7	---	0.4	---	0.5	---	1.0	---

2-5-92

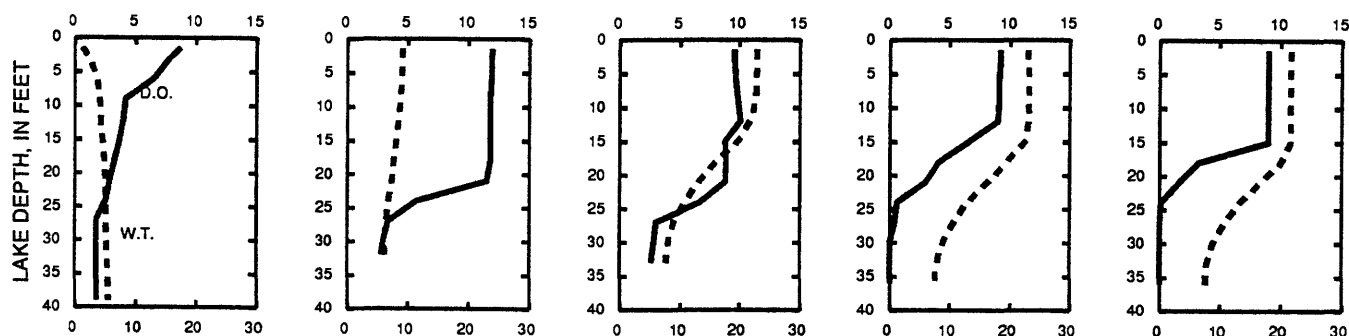
4-29-92

6-12-92

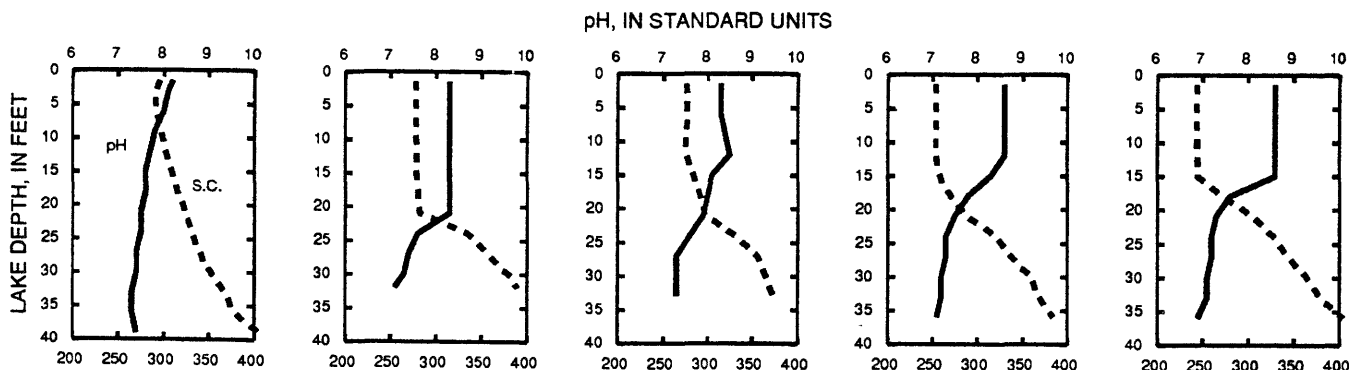
7-30-92

8-28-92

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

STREAMS TRIBUTARY TO LAKE MICHIGAN

79

445321088323101 SAND LAKE (DEEP HOLE) NEAR KESHENA, WI

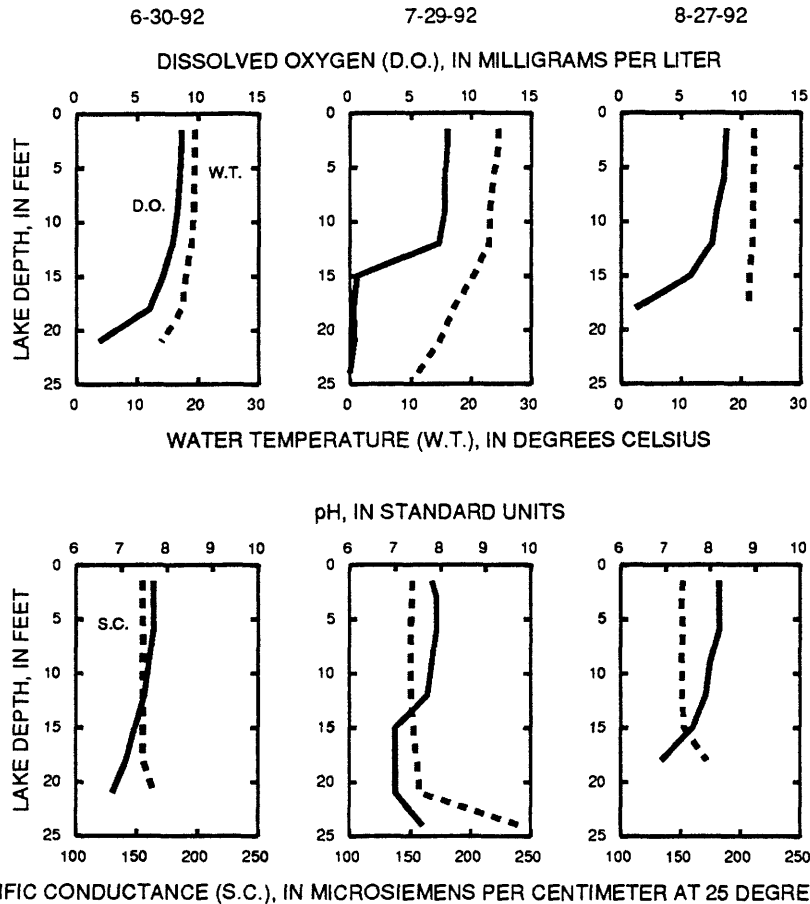
LOCATION.--Lat 44°53'21", long 88°32'31", in NE 1/4 SW 1/4, sec.22, T.28 N., R.16 E, Menominee County, Hydrologic Unit 04030202, 4.5 mi east of Keshena.

PERIOD OF RECORD.--June to September 1992.

REMARKS.--Lake sampled 300 yards south of landing at a maximum depth of about 26 ft.

WATER-QUALITY DATA, JUNE 30 TO AUGUST 27, 1992
(Milligrams per liter unless otherwise indicated)

	June 30		July 29		Aug. 27	
Depth of sample (ft)	1.5	21.5	1.5	24.5	1.5	18.5
Lake stage (ft)	1.22		1.04		---	
Specific conductance (μS/cm)	155	164	151	242	152	172
pH (units)	7.7	6.8	7.8	7.6	8.2	6.9
Water temperature (°C)	19.5	14.0	24.6	11.0	22.1	21.2
Secchi-depth (meters)	3.0		3.0		2.4	
Dissolved oxygen	8.6	1.9	8.0	0.0	8.8	1.2
Phosphorus, total (as P)	0.006	0.010	0.005	0.018	0.004	0.008
Chlorophyll a, phytoplankton (μg/L)	0.6	---	0.2	---	0.2	---



LOCATION.--Lat 44°53'28", long 88°33'50", in NE 1/4 SW 1/4 sec. 21, T.28 N., R.16 E., Menominee County, Hydrologic Unit 04030202, 7.8 mi northeast of Shawano.

PERIOD OF RECORD.--May 1990 to current year.

GAGE.--Staff gage read by A. Fowler. Elevation of gage 841 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height observed, 2.98 ft, Nov. 1, 1990; minimum gage-height observed, 1.49 ft, May 4, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height observed, 1.83 ft, Sept. 17; minimum gage-height observed, 1.57 ft, Aug. 24.

[illegible]

445328088335000 ROUND LAKE NEAR SHAWANO, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1990 to current year.

REMARKS.--Lake sampled near southeast end at a lake depth of about 35 ft. Lake ice-covered during February sampling.

WATER-QUALITY DATA, FEBRUARY 04 TO AUGUST 28, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 30		June 12		July 30		Aug. 28	
Depth of sample (ft)	1.5	27.0	1.5	25.5	1.5	25.5	1.5	25.5	1.5	23.5
Lake stage (ft)	---	---	1.68	---	---	---	1.59	---	1.70	---
Specific conductance ($\mu\text{S}/\text{cm}$)	181	187	164	174	165	177	154	200	153	185
pH (units)	7.2	7.1	7.8	7.0	8.4	7.1	8.8	6.9	8.8	6.8
Water temperature ($^{\circ}\text{C}$)	1.5	4.4	9.9	6.1	24.9	8.4	22.8	8.6	20.8	10.7
Color (Pt-Co. scale)	---	---	5.0	10.0	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.5	0.6	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.9	---	4.1	---	3.9	---	3.3	---
Dissolved oxygen	8.3	4.0	11.6	3.3	8.9	2.7	9.1	0.1	9.0	0.0
Hardness, as CaCO_3	---	---	77	77	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	18	18	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	7.9	7.9	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.1	2.1	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.5	0.5	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	70	71	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	8.0	8.3	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.1	0.1	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	3.4	3.5	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	3.6	4.0	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	100	98	---	---	---	---	---	---
Nitrogen, nitrite, total (as N)	---	---	<0.01	<0.01	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, total (as N)	---	---	0.19	0.19	---	---	---	---	---	---
Nitrogen, ammonia, total (as N)	---	---	<0.01	0.05	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	---	0.15	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	<0.20	0.20	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	---	0.39	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.020	0.014	0.005	0.037	0.006	0.034	0.003	0.018
Phosphorus, ortho, dissolved (as P)	---	---	0.001	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	14	22	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	25	56	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	0.7	---	0.4	---	0.5	---	0.7	---

2-4-92

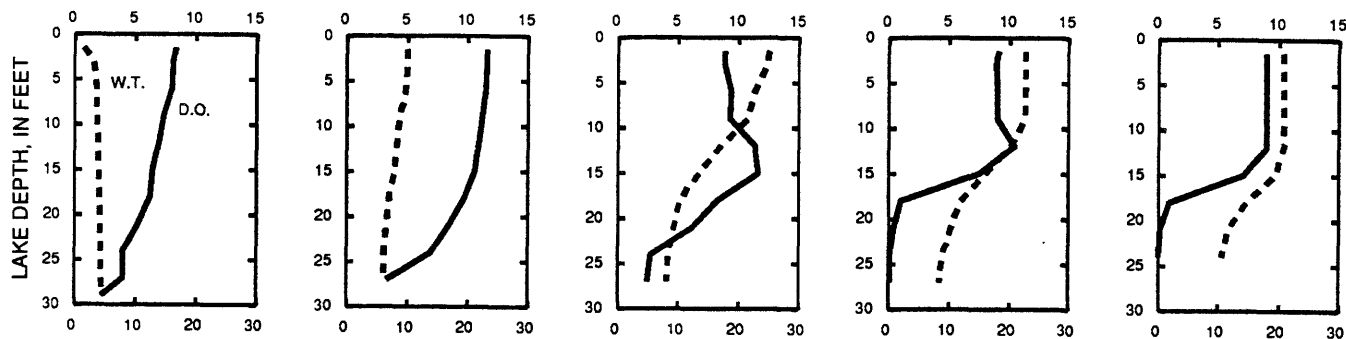
4-30-92

6-12-92

7-30-92

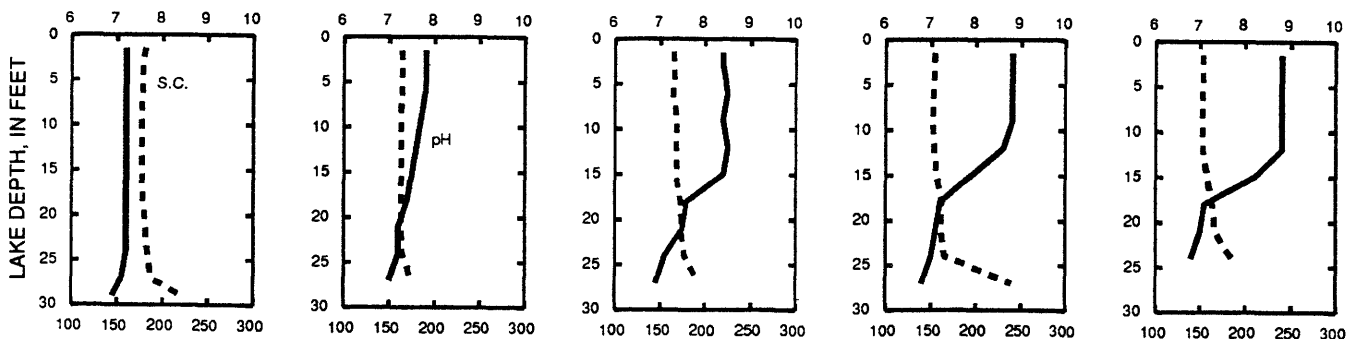
8-28-92

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

LOCATION.--Lat 44°53'05", long 88°36'12", in NE 1/4 NW 1/4 sec. 30, T.28 N., R.16 E., Menominee County, Hydrologic Unit 04030202, 6.9 mi north of Shawano.

PERIOD OF RECORD.--May 1990 to current year.

GAGE.--Staff gage read by A. Fowler. Elevation of gage, 838 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height observed, 2.10 ft, May 1, 1991; minimum gage-height observed, 1.24 ft, Aug. 17, 21-23, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum gage-height observed, 1.65 ft, Sept. 4; minimum gage-height observed, 1.24 ft, Aug. 17, 21-23.

[illegible]

445305088361200 LAMOTTE LAKE NEAR SHAWANO, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1990 to current year.

REMARKS.--Lake sampled near center at a lake depth of about 70 ft. Lake ice-covered during February sampling.

WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 28, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 30		June 12		July 30		Aug. 28	
Depth of sample (ft)	1.5	66.0	1.5	68.5	1.5	68.5	1.5	68.5	1.5	69.0
Lake stage (ft)	---		---		1.41		1.27		1.51	
Specific conductance ($\mu\text{S}/\text{cm}$)	326	334	282	349	268	353	257	341	256	344
pH (units)	8.5	7.5	8.2	7.4	8.3	7.4	8.4	7.3	8.3	7.2
Water temperature ($^{\circ}\text{C}$)	1.1	4.2	9.2	4.6	24.0	5.2	22.4	5.2	21.0	5.4
Color (Pt-Co. scale)	---		15		---		---		---	
Turbidity (NTU)	---		0.7		---		---		---	
Secchi-depth (meters)	---		2.8		3.5		4.4		4.3	
Dissolved oxygen	8.2	1.7	12.0	2.6	9.6	2.5	8.6	0.0	8.7	0.0
Hardness, as CaCO_3	---		140		---		---		---	
Calcium, dissolved (Ca)	---		33		---		---		---	
Magnesium, dissolved (Mg)	---		15		---		---		---	
Sodium, dissolved (Na)	---		3.3		---		---		---	
Potassium, dissolved (K)	---		0.9		---		---		---	
Alkalinity, as CaCO_3	---		144		---		---		---	
Sulfate, dissolved (SO_4)	---		4.4		---		---		---	
Fluoride, dissolved (F)	---		0.2		---		---		---	
Chloride, dissolved (Cl)	---		2.8		---		---		---	
Silica, dissolved (SiO_2)	---		8.5		---		---		---	
Solids, dissolved, at 180°C	---		178		---		---		---	
Nitrogen, nitrite, total (as N)	---		<0.01		---		---		---	
Nitrogen, $\text{NO}_2 + \text{NO}_3$, total (as N)	---		0.084		<0.050		---		---	
Nitrogen, ammonia, total (as N)	---		<0.01		1.00		---		---	
Nitrogen, organic, total (as N)	---		---		0.30		---		---	
Nitrogen, amm. + org., total (as N)	---		<0.20		1.30		---		---	
Phosphorus, total (as P)	---		0.014		0.145		0.003		0.112	
Phosphorus, ortho, dissolved (as P)	---		0.003		0.133		0.005		0.131	
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---		11		1100		---		---	
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---		34		1200		---		---	
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---		2.0		---		0.2		0.3	

2-5-92

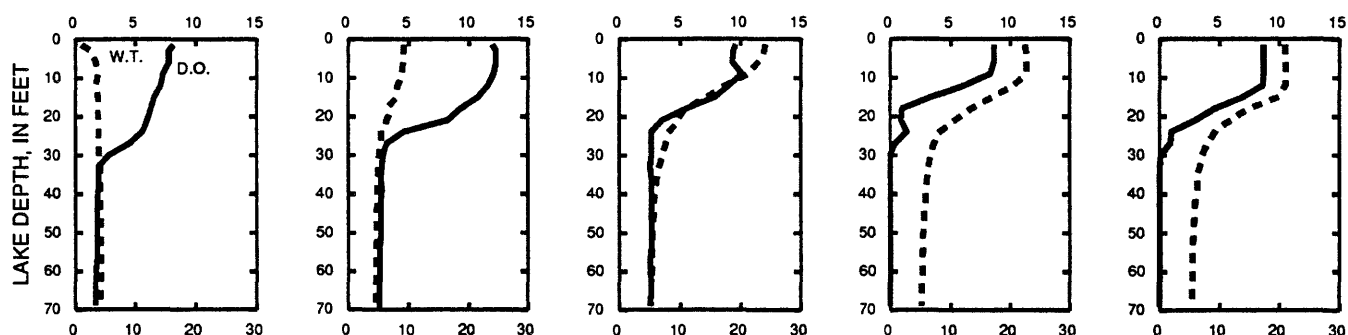
4-30-92

6-12-92

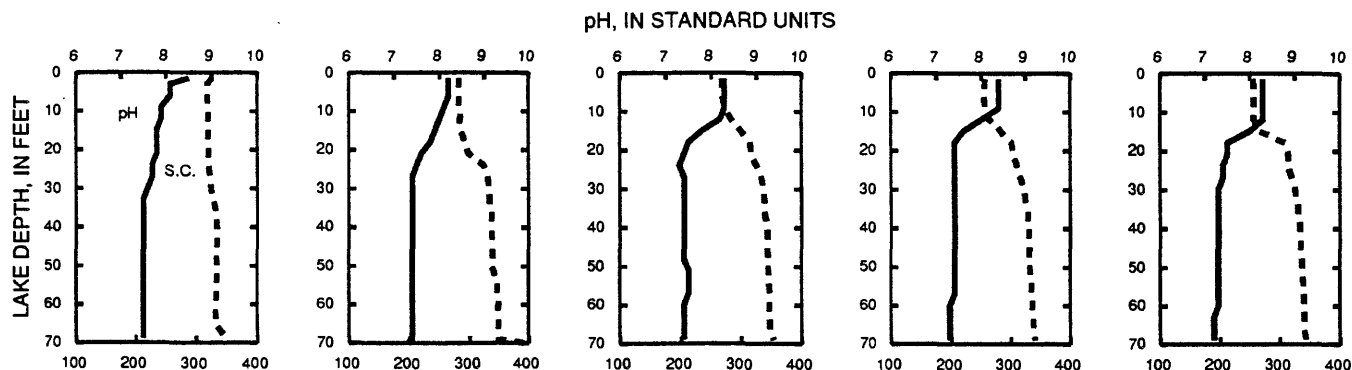
7-30-92

8-28-92

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

STREAMS TRIBUTARY TO LAKE MICHIGAN

04077400 WOLF RIVER NEAR SHAWANO, WI

LOCATION.--Lat 44°50'09", long 88°37'30", in SE 1/4 NW 1/4 sec.12, T.27 N., R.15 E., Shawano County, Hydrologic Unit 04030202, on left bank 350 ft downstream from dam, 3.7 mi north of Shawano, 1.5 mi upstream from Red River, and at mile 130.6.

DRAINAGE AREA.--816 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1907 to March 1909, October 1910 to current year. Monthly discharge only for some periods, published in WSP 1307. Published as "at Keshena" prior to April 1928. Published as "at Keshena Falls" April 1928 to September 1981. Published as "at Keshena Falls near Keshena" October 1981 to September 1985. Prior to October 1985, all records published under station number 04077000.

REVISED RECORDS.--WSP 1337: 1914-15(M), 1918-19(M), 1921, 1923(M), 1926(M), 1928(M), 1933. WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 810 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 23, 1928, nonrecording gage at bridge in Keshena 4.1 mi upstream at different datum, and from Mar. 23, 1928 to Sept. 30, 1985, water-stage recorder at site 5.8 mi upstream at different datum. Gage-height telemeter at station.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 3-10 and Nov. 27 to Mar. 27. Records fair except those for ice-affected periods, which are poor. Minor regulation by power dam upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	498	1240	1100	760	560	600	1090	1420	779	666	562	814
2	499	1700	1200	700	540	700	1070	1280	761	609	591	787
3	485	1600	1400	740	560	700	1110	1300	765	627	636	1230
4	539	1300	1100	720	580	740	1010	1250	550	640	669	1090
5	514	1000	940	700	560	860	967	1160	691	630	647	985
6	536	1100	920	700	540	1000	992	1060	727	525	620	996
7	534	940	1000	760	520	1300	1260	974	704	556	611	992
8	520	740	1100	700	520	1500	1590	878	629	590	627	917
9	522	1000	1100	720	520	1600	1720	841	606	604	662	881
10	520	1100	900	700	500	1400	1700	853	610	580	675	722
11	524	964	840	660	540	1300	1710	859	606	545	637	881
12	535	924	900	620	540	1200	1520	897	577	642	627	921
13	493	878	980	640	520	1300	1400	1030	573	854	651	792
14	491	822	920	680	540	1100	1470	929	584	860	611	847
15	487	917	760	500	560	940	1460	898	584	801	627	1060
16	518	942	600	420	580	900	1940	953	612	700	633	1220
17	556	824	660	480	600	1100	2180	2710	654	676	659	1640
18	548	1000	600	540	600	1100	2170	2770	612	662	691	2000
19	548	1240	700	580	580	1000	2250	2280	598	623	702	1850
20	522	1270	740	540	580	960	2590	1560	530	613	686	1510
21	440	1030	740	580	560	940	2740	1410	661	619	740	1360
22	521	963	860	620	560	860	2630	1240	610	628	729	1130
23	508	1110	960	620	600	800	2410	1400	404	561	633	1040
24	518	1130	900	600	560	920	2190	1400	362	608	542	968
25	551	822	820	540	580	1000	2000	1150	733	604	727	898
26	741	774	800	520	580	1000	1900	1020	850	601	693	775
27	714	1000	780	540	620	980	1730	1030	809	587	775	956
28	630	820	800	560	600	960	1650	913	730	581	644	1140
29	924	1000	800	580	580	936	1540	873	680	588	691	1110
30	1300	1100	800	560	---	922	1500	872	626	556	848	985
31	1180	---	800	560	---	1000	---	821	---	544	885	---
TOTAL	18416	31250	27520	19140	16280	31618	51489	38031	19217	19480	20731	32497
MEAN	594	1042	888	617	561	1020	1716	1227	641	628	669	1083
MAX	1300	1700	1400	760	620	1600	2740	2770	850	860	885	2000
MIN	440	740	600	420	500	600	967	821	362	525	542	722
CFSM	.73	1.28	1.09	.76	.69	1.25	2.10	1.50	.79	.77	.82	1.33
IN.	.84	1.42	1.25	.87	.74	1.44	2.35	1.73	.88	.89	.95	1.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 1992, BY WATER YEAR (WY)

MEAN	713	743	603	518	497	730	1340	1102	896	676	604	696
MAX	1573	1517	1115	937	888	1972	2526	2265	1898	1186	1277	1699
(WY)	1942	1912	1986	1986	1984	1973	1922	1960	1943	1968	1912	1941
MIN	376	383	335	323	315	385	574	510	328	366	294	330
(WY)	1949	1977	1928	1926	1936	1956	1990	1931	1988	1933	1934	1933

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04077400 WOLF RIVER NEAR SHAWANO, WI--CONTINUED

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1907 - 1992	
ANNUAL TOTAL	319958		325669		761	
ANNUAL MEAN	877		890		1119	1973
HIGHEST ANNUAL MEAN					510	1934
LOWEST ANNUAL MEAN					5200	Mar 15 1973
HIGHEST DAILY MEAN	2320	Mar 28	2770	May 18	194	Feb 7 1936
LOWEST DAILY MEAN	440	Oct 21	362	Jun 24	260	Feb 3 1936
ANNUAL SEVEN-DAY MINIMUM	470	Feb 14	510	Oct 10		
INSTANTANEOUS PEAK FLOW			3130	May 17	(a)15.59	Dec 2 1983
INSTANTANEOUS PEAK STAGE			11.03	May 17	(b)77	Nov 19 1989
INSTANTANEOUS LOW FLOW			81	Jan 16		
ANNUAL RUNOFF (CFSM)	1.07		1.09		.93	
ANNUAL RUNOFF (INCHES)	14.59		14.85		12.66	
10 PERCENT EXCEEDS	1550		1400		1280	
50 PERCENT EXCEEDS	744		763		635	
90 PERCENT EXCEEDS	490		540		410	

(a) From high-water mark in well, at site and datum then in use (backwater from ice)
(b) Regulated

STREAMS TRIBUTARY TO LAKE MICHIGAN

04077400 WOLF RIVER NEAR SHAWANO, WI--CONTINUED

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	OXYGEN, DIS- SOLVED (MG/L) (00300)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
DEC 1991 04...	0850	1550	225	6.4	0.0	--	13.8	25	12	2.3
JAN 1992 13...	1700	882	261	7.1	0.0	--	14.4	28	14	2.8
APR 09...	1505	1630	173	7.4	6.5	--	12.5	20	9.4	1.8
MAY 20...	0730	1630	179	7.6	16.5	60	9.5	20	9.1	1.8
JUN 29...	1800	753	270	7.9	19.0	15	8.0	30	15	2.7
SEP 25...	1015	908	241	7.8	12.0	50	9.8	24	11	2.4

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
DEC 1991 04...	1.0	107	4.6	10	0.20	10	138	0.010	0.480
JAN 1992 13...	1.1	129	4.9	10	0.20	12	169	0.010	0.570
APR 09...	1.0	71	3.2	5.9	0.10	7.8	111	<0.010	0.300
MAY 20...	0.90	82	2.8	6.2	0.10	6.3	118	<0.010	0.110
JUN 29...	0.80	129	3.2	7.1	0.30	5.8	148	<0.010	0.190
SEP 25...	0.80	103	4.2	6.2	0.10	9.2	132	<0.010	0.140

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
DEC 1991 04...	0.040	0.30	0.020	<0.010	<1	<100	<1	2	8
JAN 1992 13...	0.050	0.30	0.100	0.010	<1	<100	<1	3	4
APR 09...	0.040	0.20	0.040	<0.010	<1	<100	<1	<1	<1
MAY 20...	0.060	0.50	0.050	<0.010	--	--	--	--	--
JUN 29...	0.040	<0.20	0.040	<0.010	--	--	--	--	--
SEP 25...	0.060	0.40	0.020	0.020	--	--	--	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN
04077400 WOLF RIVER NEAR SHAWANO, WI--CONTINUED

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
DEC 1991 04...	270	--	<1	30	--	<0.10	<1	<1	20
JAN 1992 13...	1200	--	<1	80	--	<0.10	3	<1	<10
APR 09...	450	--	2	60	--	<0.10	<1	<1	<10
MAY 20...	480	150	--	100	34	--	--	--	--
JUN 29...	80	240	--	50	66	--	--	--	--
SEP 25...	420	170	--	60	23	--	--	--	--

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1992 04...	1406	588	220	14.2	FEB 1992 24...	1207	448	293	1.5
NOV 14...	0920	786	242	3.3	MAR 26...	0745	--	197	1.2
DEC 19...	1133	--	262	2.5	APR 24...	1004	2270	137	7.8
JAN 1992 02...	1418	701	249	2.0	JUL 15...	1500	802	246	20.0

STREAMS TRIBUTARY TO LAKE MICHIGAN

0407809265 MIDDLE BRANCH EMBARRASS RIVER NEAR WITTENBERG, WI

LOCATION.--Lat 44°49'31", long 89°07'05", in NW 1/4 NW 1/4 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. Datum of gage is 1,118.24 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Transportation.)

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 3-9, 25-28, and Dec. 1 to Mar. 28. Records good except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	133	130	48	39	31	130	101	54	47	21	47
2	32	206	120	50	40	33	111	92	51	44	31	43
3	32	210	100	50	41	33	111	84	49	43	40	60
4	31	160	90	52	40	32	110	79	48	42	40	80
5	33	100	80	50	37	34	115	76	46	40	36	65
6	34	78	74	48	36	45	136	75	44	42	16	71
7	35	66	70	46	38	64	183	72	43	32	32	73
8	35	58	68	44	35	80	228	69	42	18	36	68
9	34	54	66	46	33	92	247	63	40	39	35	64
10	33	49	64	44	35	84	222	61	43	44	35	64
11	33	49	62	42	33	74	183	60	42	41	34	61
12	32	49	68	44	34	68	152	66	33	45	34	54
13	33	50	98	45	36	64	136	67	35	73	34	48
14	34	53	100	39	36	60	130	60	37	99	31	74
15	35	64	84	38	34	58	132	57	38	71	16	126
16	36	77	70	39	34	56	232	83	44	53	19	239
17	35	71	60	38	34	56	321	373	44	45	26	242
18	33	111	56	36	34	52	363	434	45	42	29	230
19	32	148	52	38	34	56	348	388	48	39	33	221
20	32	165	52	38	33	54	365	240	45	39	35	181
21	32	133	52	38	32	52	371	138	42	38	33	133
22	33	93	52	40	31	52	330	92	33	38	32	87
23	33	92	52	42	32	50	266	131	42	39	30	67
24	35	82	50	38	33	60	213	177	44	38	28	59
25	47	78	48	41	35	74	172	176	47	31	14	54
26	68	82	50	40	34	90	146	114	58	20	26	55
27	59	110	50	41	33	82	130	82	57	38	53	87
28	50	94	50	41	32	90	120	72	49	39	45	104
29	66	81	50	40	31	92	114	65	46	39	41	103
30	103	90	50	41	---	92	111	61	48	33	46	78
31	110	---	49	40	---	115	---	57	---	15	57	---
TOTAL	1302	2886	2117	1317	1009	1975	5928	3765	1337	1306	1018	2938
MEAN	42.0	96.2	68.3	42.5	34.8	63.7	198	121	44.6	42.1	32.8	97.9
MAX	110	210	130	52	41	115	371	434	58	99	57	242
MIN	31	49	48	36	31	31	110	57	33	15	14	43
CFSM	.55	1.26	.90	.56	.46	.83	2.59	1.59	.58	.55	.43	1.28
IN.	.63	1.41	1.03	.64	.49	.96	2.89	1.84	.65	.64	.50	1.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	1990	1991	1992	1990	1991	1992	1990	1991	1992	1990	1991	1992
MEAN	39.4	55.2	37.6	27.1	29.8	97.7	128	103	81.1	42.4	37.2	67.1
MAX	53.1	96.2	68.3	42.5	34.8	116	198	121	107	43.4	41.5	97.9
(WY)	1991	1992	1992	1992	1992	1990	1992	1992	1990	1990	1990	1992
MIN	23.2	27.2	13.5	18.5	24.9	63.7	40.4	74.2	44.6	41.6	32.8	41.0
(WY)	1990	1990	1990	1991	1991	1992	1990	1990	1992	1991	1992	1991

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1990 - 1992

ANNUAL TOTAL	25353	26898	62.1
ANNUAL MEAN	69.5	73.5	73.5
HIGHEST ANNUAL MEAN			50.0
LOWEST ANNUAL MEAN			601
HIGHEST DAILY MEAN	398	Mar 28	434
LOWEST DAILY MEAN	16	Jan 2	14
ANNUAL SEVEN-DAY MINIMUM	17	Jan 1	27
INSTANTANEOUS PEAK FLOW			468
INSTANTANEOUS PEAK STAGE			3.54
INSTANTANEOUS LOW FLOW			13
ANNUAL RUNOFF (CFSM)	.91	.96	.81
ANNUAL RUNOFF (INCHES)	12.36	13.11	11.06
10 PERCENT EXCEEDS	151	134	123
50 PERCENT EXCEEDS	47	50	41
90 PERCENT EXCEEDS	23	33	21

(a) Result of freezeup

(b) Backwater from ice

STREAMS TRIBUTARY TO LAKE MICHIGAN

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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, 28.5°C, Aug. 30, 1991; minimum, 0.0°C, on many days during winter.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 27.5°C, June 12, 13; minimum, 0.0°C, on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					APR 1992				
01...	1230	32	415	10.0	13...	1435	137	235	3.5
NOV					MAY				
12...	1240	47	--	0.5	19...	1710	367	210	17.0
JAN 1992					JUL				
06...	1345	48	374	0.0	15...	1140	73	310	19.0
FEB					SEP				
20...	1245	33	415	0.0	16...	1525	271	216	17.0

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	12.0	9.0	10.0	5.5	4.5	5.0	.0	.0	.0	.0	.0	.0
2	14.5	9.5	11.5	4.5	1.0	3.0	.0	.0	.0	.0	.0	.0
3	12.5	9.5	11.0	1.0	.0	.0	.0	.0	.0	.0	.0	.0
4	11.0	9.0	10.0	.5	.0	.0	.0	.0	.0	.0	.0	.0
5	10.0	8.0	9.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	9.5	7.0	8.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	10.0	5.5	7.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	11.5	6.0	8.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	11.5	7.5	9.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	10.0	6.5	8.5	.5	.0	.0	.0	.0	.0	.0	.0	.0
11	11.5	7.0	9.5	.5	.0	.0	.0	.0	.0	.0	.0	.0
12	10.5	8.0	9.5	.5	.0	.0	.0	.0	.0	.0	.0	.0
13	10.5	6.5	8.5	2.0	.0	.5	.0	.0	.0	.0	.0	.0
14	9.0	7.0	8.5	1.5	.0	.5	.0	.0	.0	.0	.0	.0
15	8.5	5.5	6.5	2.0	.5	1.0	.0	.0	.0	.0	.0	.0
16	10.5	5.0	7.5	2.5	.5	1.0	.0	.0	.0	.0	.0	.0
17	12.0	7.0	9.0	2.5	.5	1.5	.0	.0	.0	.0	.0	.0
18	8.5	6.0	7.5	3.0	1.5	2.0	.0	.0	.0	.0	.0	.0
19	8.0	4.0	6.0	3.0	2.0	2.5	.0	.0	.0	.0	.0	.0
20	8.5	5.0	6.5	2.5	1.5	2.0	.0	.0	.0	.0	.0	.0
21	10.0	6.0	7.5	2.0	1.5	1.5	.0	.0	.0	.0	.0	.0
22	10.5	6.5	8.0	2.5	1.5	2.0	.0	.0	.0	.0	.0	.0
23	12.0	7.5	9.5	2.0	.5	1.5	.0	.0	.0	.0	.0	.0
24	12.5	10.0	11.0	1.0	.0	.5	.0	.0	.0	.0	.0	.0
25	11.0	10.0	10.5	.5	.0	.0	.0	.0	.0	.0	.0	.0
26	10.0	8.5	9.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
27	8.5	7.5	8.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28	7.5	7.5	7.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	9.0	7.5	8.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
30	7.5	6.0	7.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
31	6.0	4.5	5.5	---	---	---	.0	.0	.0	.0	.0	.0
MONTH	14.5	4.0	8.5	5.5	.0	.8	.0	.0	.0	.0	.0	.0

STREAMS TRIBUTARY TO LAKE MICHIGAN

0407809265 MIDDLE BRANCH EMBARRASS RIVER NEAR WITTENBERG, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	.0	.0	.0	.5	.0	.0	3.5	1.0	2.5	18.5	12.0	15.0
2	.0	.0	.0	.0	.0	.0	4.0	1.0	2.0	17.5	15.0	16.0
3	.0	.0	.0	.0	.0	.0	4.0	1.5	2.5	15.5	12.5	14.0
4	.0	.0	.0	.5	.0	.0	5.0	2.0	3.0	13.5	10.5	12.0
5	.0	.0	.0	.0	.0	.0	6.5	2.5	4.0	14.5	9.0	11.5
6	.0	.0	.0	.5	.0	.5	6.5	3.5	4.5	15.5	8.5	11.5
7	.0	.0	.0	.5	.5	.5	6.5	4.5	5.0	17.0	10.5	13.5
8	.0	.0	.0	1.5	.5	1.0	5.0	4.0	4.5	19.5	12.0	15.0
9	.0	.0	.0	1.0	.0	.5	5.5	3.5	4.5	20.5	13.5	16.5
10	.0	.0	.0	1.0	.0	.0	5.0	2.0	4.0	21.5	15.0	18.0
11	.0	.0	.0	.5	.0	.0	2.0	.5	1.5	21.0	16.5	18.0
12	.0	.0	.0	1.0	.0	.0	4.0	.5	2.0	20.5	17.5	18.5
13	.0	.0	.0	.5	.0	.0	3.5	2.0	2.5	20.5	15.5	17.5
14	.0	.0	.0	1.5	.0	.0	4.0	2.0	2.5	15.5	13.5	15.0
15	.0	.0	.0	1.5	.0	.5	3.5	2.5	3.0	16.5	12.5	14.5
16	.0	.0	.0	2.0	.0	.5	3.0	2.5	3.0	17.0	13.0	14.5
17	.0	.0	.0	3.0	.0	1.0	5.5	3.0	4.0	17.0	15.0	16.0
18	.0	.0	.0	4.0	.0	1.0	6.0	5.5	5.5	17.0	16.0	16.5
19	.0	.0	.0	4.0	.0	1.0	7.5	5.5	6.5	17.5	16.0	16.5
20	.0	.0	.0	4.0	.0	1.5	10.5	7.5	9.0	19.0	17.0	18.0
21	.0	.0	.0	2.5	.0	1.0	11.5	10.5	11.0	21.0	18.5	19.5
22	.0	.0	.0	4.5	.0	1.5	10.5	7.5	9.0	22.5	19.0	20.5
23	.0	.0	.0	5.5	.0	1.5	7.5	7.0	7.0	20.5	16.5	19.0
24	.0	.0	.0	6.0	.0	2.5	7.5	6.5	7.0	16.5	13.0	15.0
25	.0	.0	.0	6.0	1.5	3.5	6.5	5.5	6.0	13.5	12.0	13.0
26	.0	.0	.0	3.0	1.0	2.5	6.5	5.0	5.5	14.5	12.0	13.0
27	.5	.0	.0	4.5	.5	1.5	9.5	5.0	7.0	16.0	11.5	13.5
28	.0	.0	.0	3.5	.5	2.0	11.0	6.5	8.5	17.0	12.0	14.5
29	.5	.0	.0	2.5	1.5	2.0	13.0	8.5	10.5	17.5	13.0	15.0
30	---	---	---	5.5	1.5	3.0	15.0	10.0	12.0	17.5	14.0	15.5
31	---	---	---	6.0	2.5	4.0	---	---	---	20.5	14.0	17.0
MONTH	.5	.0	.0	6.0	.0	1.1	15.0	.5	5.3	22.5	8.5	15.6
JUNE			JULY			AUGUST			SEPTEMBER			
1	21.0	15.0	18.0	22.0	16.5	18.5	24.5	16.5	20.5	19.0	13.5	15.5
2	23.0	16.5	19.5	19.5	17.0	18.0	25.5	19.0	21.5	16.5	15.0	15.5
3	24.0	17.5	20.0	19.5	17.0	18.0	23.5	18.5	20.5	19.0	15.0	17.0
4	23.5	17.5	20.0	21.0	15.5	18.0	24.0	18.0	20.0	16.5	14.5	15.5
5	25.0	19.0	21.5	21.0	15.5	18.0	24.0	17.0	20.0	18.5	14.0	16.0
6	22.0	18.5	20.0	23.0	15.5	19.0	24.0	15.5	19.5	20.0	16.5	18.0
7	22.0	17.0	19.0	22.5	17.0	19.5	20.0	17.5	19.0	18.0	16.5	17.0
8	19.5	16.5	17.5	23.0	17.5	20.0	24.0	18.5	20.5	18.0	15.0	16.5
9	22.0	15.0	18.0	24.5	17.0	20.5	25.5	18.5	21.5	15.5	14.5	15.0
10	23.0	16.5	19.0	24.5	19.5	21.5	26.0	21.0	23.0	14.5	13.0	13.5
11	25.0	17.0	20.5	22.0	19.0	20.0	24.5	19.5	21.5	16.0	11.5	13.5
12	27.5	18.5	22.5	19.5	17.5	18.5	21.0	18.0	19.5	17.5	12.5	14.5
13	27.5	19.5	23.0	18.5	16.0	17.0	20.5	17.0	18.0	16.5	14.5	15.5
14	23.0	19.5	21.5	18.5	16.0	17.0	21.0	15.0	17.5	16.5	15.5	16.0
15	21.0	17.5	19.0	21.0	16.0	18.0	22.5	13.0	17.5	16.5	15.5	16.0
16	18.5	16.5	18.0	23.0	17.5	20.0	23.5	13.5	18.5	17.0	16.5	16.5
17	21.5	17.0	18.5	23.0	18.0	20.5	23.5	15.5	19.0	18.0	17.0	17.5
18	20.0	17.0	18.5	24.0	18.5	20.5	24.0	18.0	20.5	17.5	16.0	17.0
19	18.0	15.0	16.5	21.5	18.0	19.5	24.0	16.0	19.5	16.0	13.0	14.5
20	20.0	13.5	16.0	22.5	17.5	19.5	23.5	16.5	19.5	13.0	12.5	13.0
21	20.5	12.5	16.0	22.5	16.0	19.0	23.5	17.0	20.0	13.5	12.5	13.0
22	19.0	13.5	15.5	18.0	16.5	17.0	24.5	18.0	21.0	14.0	11.5	12.5
23	15.0	14.0	14.5	19.0	16.0	17.0	25.0	18.0	21.0	14.0	10.5	12.0
24	15.0	13.5	14.0	22.5	14.5	18.0	26.0	20.0	22.5	14.5	10.5	12.0
25	17.0	12.5	14.5	22.0	16.0	19.0	26.0	19.5	22.5	14.5	11.0	12.5
26	16.0	14.0	15.0	25.5	17.5	21.0	23.5	17.5	20.0	13.5	12.5	13.0
27	19.5	12.5	15.5	25.0	17.5	21.0	20.0	17.5	19.0	14.0	12.0	13.0
28	21.5	14.0	17.5	25.5	19.5	22.0	20.0	16.5	18.0	12.5	10.5	12.0
29	18.5	16.5	17.5	24.5	18.5	21.0	19.5	15.5	17.0	11.5	9.5	10.5
30	22.0	15.5	18.0	22.0	18.0	19.5	17.0	15.5	16.0	11.5	9.0	10.0
31	---	---	---	25.0	15.0	19.5	17.5	14.5	15.5	---	---	---
MONTH	27.5	12.5	18.1	25.5	14.5	19.2	26.0	13.0	19.7	20.0	9.0	14.5

STREAMS TRIBUTARY TO LAKE MICHIGAN

91

445009088303700 LOON LAKE NEAR SHAWANO, WI

LOCATION.--Lat 44°50'09", long 88°30'37", in NE 1/4 NE 1/4 sec. 11, T.27 N., R.16 E., Shawano County, Hydrologic Unit 04030202, 6.1 mi northeast of Shawano.

DRAINAGE AREA.--15.6 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--May 1991 to current year.

GAGE.--Nonrecording gage. Staff read by Harvey Stubenvoll. Elevation of lake is 803 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 2.92 ft, Apr. 22, 23, 1992; minimum observed, 1.35 ft, July 12, 27, 31, and Aug. 1, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 2.92 ft, Apr. 22, 23; minimum observed, 1.47 ft, Oct. 23.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.64	2.20	2.48	1.86	1.71	1.72	2.06	2.46	2.31	1.74	1.58	---
2	1.63	---	2.44	---	1.72	---	---	---	---	1.72	1.62	---
3	1.60	---	2.42	1.86	---	---	2.10	---	2.21	---	1.56	1.60
4	1.58	---	2.40	---	1.74	1.72	2.12	2.32	---	---	---	1.62
5	---	---	2.38	1.82	1.76	---	2.13	2.24	---	---	---	1.60
6	---	---	2.36	---	1.76	---	---	---	---	1.66	---	1.64
7	---	---	---	---	1.76	---	---	2.22	---	1.64	1.50	---
8	---	---	2.34	1.78	1.76	---	2.28	2.08	---	---	---	1.70
9	---	---	---	---	1.76	---	2.30	2.02	---	---	1.54	1.72
10	1.86	2.52	2.30	---	1.76	---	---	1.98	---	---	---	1.72
11	---	2.48	2.26	1.74	1.76	---	2.40	1.92	---	1.62	1.50	1.71
12	1.74	2.42	2.30	---	1.76	---	2.40	1.96	---	1.72	1.48	---
13	1.71	2.40	---	---	---	---	2.34	---	1.80	1.78	---	1.68
14	---	2.36	2.32	---	---	2.06	---	1.96	1.77	1.89	1.46	1.78
15	1.68	2.40	2.32	---	1.76	2.00	2.36	1.94	1.74	1.91	1.46	1.80
16	1.60	2.40	---	---	1.76	---	2.54	1.94	1.70	1.90	---	1.97
17	1.58	2.34	---	---	1.76	1.98	---	2.52	1.71	1.92	1.44	2.03
18	1.56	2.42	---	---	1.76	---	---	2.75	1.70	1.90	---	---
19	---	2.42	2.18	---	1.76	---	---	2.89	1.68	1.88	---	2.05
20	1.52	2.41	2.16	---	1.76	---	2.84	2.90	1.64	1.86	1.44	2.04
21	1.50	2.40	2.12	---	1.76	---	2.90	2.86	1.62	---	---	---
22	1.48	2.37	2.10	---	1.76	1.89	2.92	2.79	---	1.80	1.44	---
23	1.47	2.44	---	---	1.76	---	2.92	2.84	---	1.78	1.44	1.94
24	---	2.45	2.04	---	1.76	---	2.86	2.80	---	1.76	---	---
25	---	2.44	2.02	1.66	---	1.89	2.80	2.72	---	1.74	1.47	1.88
26	1.58	2.42	2.00	1.66	---	---	2.74	2.64	1.74	---	---	---
27	1.60	---	---	---	1.76	---	---	---	1.74	1.71	1.54	2.00
28	1.60	---	1.94	---	---	1.94	2.58	2.52	1.74	---	---	---
29	1.84	---	1.92	1.68	---	1.96	2.54	2.46	1.76	---	---	1.94
30	1.98	---	1.90	---	---	1.99	2.49	2.42	1.74	1.62	---	---
31	2.14	---	---	---	---	2.02	---	2.32	---	---	---	---

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1991 to current year.

REMARKS.--Lake sampled near center of lake at lake depth of about 22 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 04 TO AUGUST 27, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 29		June 11		July 29		Aug. 27	
Depth of sample (ft)	1.5	18	1.5	21	1.5	18	1.5	18	1.5	18
Lake stage (ft)	1.72		2.54		1.88		1.62		1.54	
Specific conductance ($\mu\text{S}/\text{cm}$)	159	157	106	108	115	138	118	158	125	125
pH (units)	6.1	6.7	7.1	6.9	7.4	6.8	7.6	7.3	7.5	7.3
Water temperature ($^{\circ}\text{C}$)	2.0	4.5	9.0	7.5	23.0	13.0	22.5	15.5	21.5	16.5
Color (Pt-Co. scale)	---	---	70	70	---	---	---	---	---	---
Turbidity (NTU)	---	---	2.4	2.9	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.6		3.8		1.6		1.8	
Dissolved oxygen	9.2	3.0	10.6	9.4	8.6	2.1	7.9	0.0	7.4	0.1
Hardness, as CaCO_3	---	---	48	51	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	11	12	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	5.0	5.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	1.0	1.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.5	0.5	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	44	44	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	<5.0	<5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	1.0	2.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	<0.0	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	5.6	5.7	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	80	78	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.08	0.08	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.03	0.03	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.50	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.021	0.018	0.032	0.033	0.018	0.020	0.019	0.030
Phosphorus, ortho, dissolved (as P)	---	---	0.004	0.004	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	530	540	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	82	95	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	6.0	---	13	---	11	---	6.1	---

2-4-92

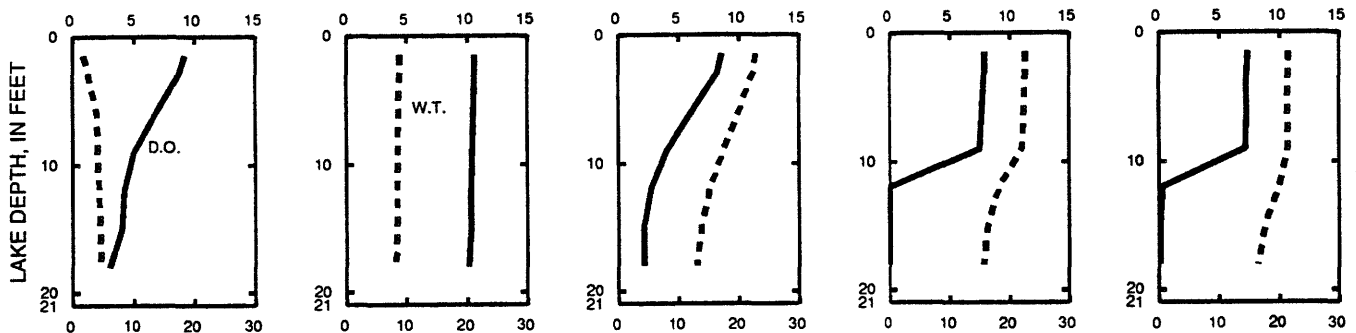
4-29-92

6-11-92

7-29-92

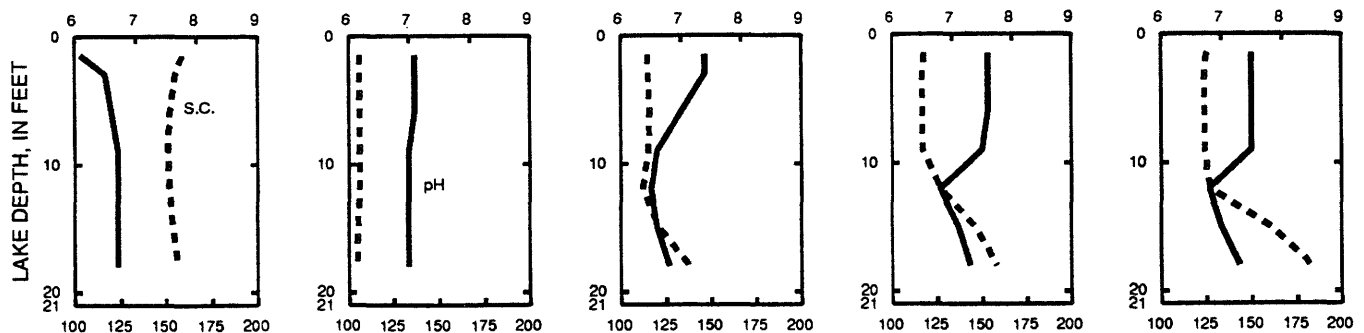
8-27-92

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

STREAMS TRIBUTARY TO LAKE MICHIGAN

93

04079000 WOLF RIVER AT NEW LONDON, WI

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

DRAINAGE AREA.--2,260 mi².

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

REVISED RECORDS.--WSP 1114: 1943(M). WSP 1337: 1931. WDR WI-80-1: Drainage area.

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 7-10 and Dec. 4 to Mar. 24. Records good except those for ice-affected periods, which are fair. Gage-height telemeter and data-collection platform at station.

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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1060	2150	3040	1600	1000	1200	3340	4800	2860	1400	927	1040
2	1030	2380	2880	1600	1100	1300	3350	4480	2650	1350	987	1050
3	1010	2500	2850	1600	1100	1400	3340	4190	2440	1320	1000	1090
4	999	2660	2900	1600	1100	1500	3310	3950	2230	1280	1020	1130
5	1020	2760	2800	1600	1100	1700	3280	3730	2050	1210	999	1310
6	1010	2820	2800	1600	1100	1800	3260	3510	1880	1130	974	1450
7	1050	2900	2800	1600	1100	1900	3270	3320	1730	1100	943	1510
8	1100	2900	2800	1600	1100	2000	3280	3160	1610	1070	944	1560
9	1110	2900	2900	1600	1000	2300	3310	3000	1540	1010	931	1630
10	1100	2900	3000	1600	1000	3100	3340	2840	1480	976	923	1650
11	1060	2900	3000	1600	1000	4000	3470	2670	1420	972	912	1620
12	1010	2820	3100	1600	1000	4700	3620	2540	1370	1070	900	1580
13	998	2710	3100	1600	1000	4900	3780	2430	1320	1270	902	1500
14	1060	2570	3200	1500	1000	4900	3990	2320	1270	1480	881	1480
15	1020	2520	3200	1500	1000	4800	4140	2250	1220	1720	833	1500
16	994	2470	3200	1400	1000	4600	4470	2190	1210	1890	801	1620
17	1020	2480	3100	1300	1000	4400	4810	2300	1220	1980	783	1930
18	1050	2530	2900	1200	1000	4100	4990	2450	1210	1950	774	2210
19	1040	2640	2800	1200	1000	3900	5210	2650	1210	1860	784	2380
20	1030	2710	2600	1100	1000	3700	5580	2880	1240	1760	790	2460
21	1050	2760	2400	1100	1000	3500	6110	3200	1220	1620	785	2500
22	1050	2790	2300	1000	1000	3400	6630	3720	1190	1480	800	2510
23	1040	2860	2100	1000	1000	3300	6950	4150	1170	1360	794	2510
24	1020	2970	2000	1000	1000	3300	7090	4300	1130	1300	793	2530
25	1140	3050	2000	1000	1000	3230	7070	4260	1120	1270	784	2520
26	1200	3070	1900	1000	1100	3240	6840	4080	1210	1220	808	2470
27	1320	2990	1800	1000	1100	3240	6470	3830	1290	1160	893	2410
28	1410	2870	1800	1000	1100	3290	6000	3610	1350	1080	1040	2340
29	1570	2800	1700	1000	1100	3330	5550	3430	1410	1010	1060	2310
30	1750	2860	1700	1000	---	3310	5140	3270	1430	960	1070	2240
31	1900	---	1600	1000	---	3310	---	3070	---	938	1030	---
TOTAL	35221	82240	80270	41100	30100	98650	140990	102580	45680	41196	27865	56040
MEAN	1136	2741	2589	1326	1038	3182	4700	3309	1523	1329	899	1868
MAX	1900	3070	3200	1600	1100	4900	7090	4800	2860	1980	1070	2530
MIN	994	2150	1600	1000	1000	1200	3260	2190	1120	938	774	1040
CFSM	.50	1.21	1.15	.59	.46	1.41	2.08	1.46	.67	.59	.40	.83
IN.	.58	1.35	1.32	.68	.50	1.62	2.32	1.69	.75	.68	.46	.92

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 1992, BY WATER YEAR (WY)

MEAN	1476	1612	1213	952	915	2145	3950	2770	2114	1434	1113	1330
MAX	4761	4738	3258	2149	2003	7566	9169	7452	5489	4306	4485	4544
(WY)	1987	1986	1912	1960	1984	1973	1922	1960	1916	1969	1912	1938
MIN	533	617	429	323	388	486	1157	901	595	427	443	429
(WY)	1949	1934	1899	1899	1900	1896	1931	1931	1988	1910	1933	1933

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1897 - 1992
ANNUAL TOTAL	753120	781932	
ANNUAL MEAN	2063	2136	1791
HIGHEST ANNUAL MEAN			3200
LOWEST ANNUAL MEAN			866
HIGHEST DAILY MEAN	6880	Mar 29	15500
LOWEST DAILY MEAN	811	Sep 3	150
ANNUAL SEVEN-DAY MINIMUM	831	Jan 26	337
INSTANTANEOUS PEAK FLOW		7120	Apr 24
INSTANTANEOUS PEAK STAGE		8.86	Apr 24
INSTANTANEOUS LOW FLOW		773	Aug 17
ANNUAL RUNOFF (CFSM)	.91	.95	.79
ANNUAL RUNOFF (INCHES)	12.40	12.87	10.77
10 PERCENT EXCEEDS	3920	3740	3510
50 PERCENT EXCEEDS	1520	1600	1260
90 PERCENT EXCEEDS	870	1000	700

(a) Backwater from ice

STREAMS TRIBUTARY TO LAKE MICHIGAN

04082400 FOX RIVER AT OSHKOSH, WI

LOCATION.--Lat 44°00'49", long 88°32'27" in SW 1/4 SW 1/4 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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1991 to September 1992.

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

REMARKS.--Estimated daily discharges: Oct. 1-3, Jan. 1, 2, and Feb. 10, 11. Records fair, except for days with negative mean daily flow, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2190	1540	5040	3860	2620	3490	6600	9730	4650	1950	3830	-998
2	2160	13400	4880	3860	2890	4020	6280	11800	5330	3010	2040	2250
3	2170	6330	4940	3990	3020	3720	5520	7990	3020	5570	1500	4280
4	290	2660	4750	4730	3450	4450	5900	6410	4700	3320	1090	225
5	8220	5050	4350	4470	2420	4470	5160	6980	6010	617	2010	1500
6	2960	5910	4480	4840	3950	4770	5850	7200	4200	800	2640	3830
7	-1550	4700	4790	3940	3690	5850	7700	7010	4460	2080	-1210	1800
8	2630	4320	5410	4110	2880	6070	5640	5900	2350	4050	6060	4840
9	3550	4500	5440	5310	2700	7210	5890	5370	3080	2220	1980	1970
10	2320	5320	5600	4560	2830	6290	664	2710	3320	2380	4860	4380
11	2410	5460	6010	3890	2830	6050	10700	6420	2940	394	-76	1240
12	1720	5410	6460	4390	2830	7360	7640	6930	3650	3570	1680	2360
13	-1.0	5360	6670	5040	2940	7360	4150	5230	3610	881	2680	2820
14	6760	5520	8070	4070	2540	7550	6200	1970	-697	4590	2080	3370
15	2200	5770	4640	3690	3010	7760	5270	6150	2690	3520	2310	3360
16	-118	5500	5050	2860	2690	7380	8360	2530	951	4100	2860	4420
17	3330	3690	5270	3660	1740	7850	7980	7920	6100	3790	2060	5740
18	4540	5610	4920	3130	3120	7260	6620	3700	6080	3020	2560	9670
19	736	7100	4780	2990	3670	8100	8130	4940	313	3870	1680	4570
20	1910	6030	5120	3080	3060	7330	8850	4800	3110	2440	2360	5330
21	2730	5210	5180	3060	2620	5830	9570	4380	2680	3330	1850	7170
22	1510	5910	5250	3120	3030	7790	10500	6420	2720	1120	1250	7730
23	2950	4720	5390	3620	2860	6520	9430	3990	2510	4080	1980	4050
24	2230	10600	5120	2990	3040	6280	9630	5400	2760	3550	2850	4950
25	3010	3910	4790	2870	3950	7070	10000	5280	2020	3420	2830	5760
26	2650	4420	4930	2780	3300	7960	10000	6060	4820	4640	1460	7150
27	2220	5920	4830	3040	3080	5760	9480	5780	647	1140	3160	6850
28	-3040	5090	4760	2810	3600	5180	9380	5910	3680	3840	2410	7710
29	8070	4980	4810	2900	3100	6160	9270	4910	1780	735	965	3680
30	7470	7680	4540	3090	---	7320	7930	5970	1840	1210	6770	5190
31	4070	---	4570	3100	---	6590	---	4850	---	4130	595	---
TOTAL	82297.0	167620	160840	113850	87460	196800	224294	180640	95324	87367	71114	127197
MEAN	2655	5587	5188	3673	3016	6348	7476	5827	3177	2818	2294	4240
MAX	8220	13400	8070	5310	3950	8100	10700	11800	6100	5570	6770	9670
MIN	-3040	1540	4350	2780	1740	3490	664	1970	-697	394	-1210	-998
CFSM	.50	1.05	.98	.69	.57	1.20	1.41	1.10	.60	.53	.43	.80
IN.	.58	1.17	1.13	.80	.61	1.38	1.57	1.27	.67	.61	.50	.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1992, BY WATER YEAR (WY)

	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992
MEAN	2655	5587	5188	3673	3016	6348	7476	5827	3177	2818	2294	4240
MAX	2655	5587	5188	3673	3016	6348	7476	5827	3177	2818	2294	4240
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992
MIN	2655	5587	5188	3673	3016	6348	7476	5827	3177	2818	2294	4240
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1992 WATER YEAR

ANNUAL TOTAL	1594803.0
ANNUAL MEAN	4357
HIGHEST DAILY MEAN	13400
LOWEST DAILY MEAN	-3040
ANNUAL SEVEN-DAY MINIMUM	1580
ANNUAL RUNOFF (CFSM)	.82
ANNUAL RUNOFF (INCHES)	11.17
10 PERCENT EXCEEDS	7490
50 PERCENT EXCEEDS	4140
90 PERCENT EXCEEDS	1730

STREAMS TRIBUTARY TO LAKE MICHIGAN
04082400 FOX RIVER AT OSEKOSH, WI--CONTINUED

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WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April to September 1992.

INSTRUMENTATION.--Continuous water temperature recorder since April 1992.

REMARKS.--Records represent water temperature at sensor. Interruptions in record were due to malfunction of the instrument.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum temperature during period April to September, 25.9°C, June 13; minimum, 2.9°C, Apr. 4.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1							---	---	4.4	15.1	12.5	13.7
2							4.5	3.4	3.9	16.2	14.9	15.5
3							4.7	3.7	4.0	15.2	13.6	14.2
4							4.7	2.9	4.0	14.1	12.8	13.6
5							6.1	4.1	5.0	13.1	11.9	12.5
6							6.6	5.1	5.7	13.6	11.9	12.8
7							9.0	6.6	7.6	13.8	12.6	13.2
8							9.6	8.4	9.0	15.3	13.2	14.3
9							10.5	8.5	9.5	16.9	14.6	15.8
10							10.4	6.4	8.2	18.0	16.1	16.8
11							7.5	6.5	7.0	19.2	16.6	17.9
12							6.6	4.8	5.7	19.3	18.6	19.0
13							6.1	4.9	5.5	19.5	18.2	18.8
14							5.4	4.5	4.9	18.8	15.3	17.0
15							5.8	4.9	5.3	16.8	16.0	16.3
16							5.8	5.4	5.6	17.7	16.2	16.6
17							6.5	5.3	5.9	18.8	17.4	18.1
18							6.8	6.1	6.4	19.6	18.3	18.8
19							9.2	6.8	7.9	19.2	18.3	18.8
20							10.6	9.2	9.9	20.0	18.7	19.3
21							11.2	10.5	10.8	21.2	19.6	20.1
22							10.5	9.5	9.9	22.5	20.7	21.4
23							9.7	8.8	9.3	22.4	20.0	21.6
24							9.6	8.8	9.1	20.4	17.1	18.5
25							8.9	8.3	8.6	17.1	15.5	16.1
26							8.3	7.8	8.0	15.8	15.1	15.4
27							9.1	7.1	8.1	16.4	14.9	15.6
28							10.2	7.9	9.0	17.7	15.9	16.6
29							11.9	9.9	10.7	18.4	17.5	17.9
30							13.1	11.0	12.1	18.9	17.6	18.3
31							---	---	---	20.2	18.6	19.4
MONTH							---	---	7.4	22.5	11.9	16.9

STREAMS TRIBUTARY TO LAKE MICHIGAN

04082400 FOX RIVER AT OSHKOSH, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	20.2	19.2	19.6	21.8	19.4	20.6	22.5	22.1	22.3	20.0	18.4	19.0
2	21.7	19.7	20.7	21.1	20.0	20.4	23.4	22.0	22.6	19.8	18.8	19.5
3	23.2	20.9	21.6	20.6	20.0	20.3	23.8	22.0	22.9	19.6	18.6	19.1
4	21.8	20.8	21.4	20.3	19.9	20.1	24.0	22.6	23.1	20.0	19.2	19.5
5	22.8	21.3	22.1	20.6	19.8	20.1	23.3	22.2	22.7	20.5	19.3	19.8
6	22.8	22.4	22.6	21.7	20.0	20.8	23.2	21.8	22.2	20.7	19.9	20.3
7	22.5	21.5	21.8	21.7	20.7	21.2	22.4	21.5	21.9	20.4	20.0	20.2
8	22.1	20.9	21.5	22.4	21.2	21.8	22.5	21.1	21.7	20.0	18.8	19.2
9	22.5	21.2	21.7	23.0	22.0	22.5	24.5	21.8	22.8	19.2	18.0	18.6
10	22.9	21.7	22.2	24.3	21.8	22.9	25.3	24.3	24.7	18.1	16.6	17.2
11	24.2	22.8	23.3	22.7	21.0	21.8	24.8	22.3	23.2	17.5	16.7	17.0
12	24.7	22.8	23.5	23.2	21.6	22.1	22.7	21.6	22.0	17.3	16.6	16.9
13	25.9	24.5	25.1	22.2	20.6	21.4	22.0	20.7	21.2	17.8	16.7	17.1
14	25.6	22.8	24.0	21.5	20.0	20.8	21.1	20.2	20.5	18.0	17.6	17.8
15	23.2	21.6	22.6	24.0	20.5	21.4	21.0	19.7	20.2	19.1	17.9	18.2
16	22.5	20.5	21.4	21.5	20.7	21.2	20.7	19.8	20.2	19.3	18.7	19.2
17	21.2	20.3	20.8	23.0	21.4	22.1	21.0	20.3	20.7	19.6	19.1	19.4
18	20.6	20.0	20.3	23.4	22.4	22.9	21.9	20.5	21.0	19.6	18.3	19.2
19	20.5	19.6	20.1	23.4	23.1	23.2	22.1	20.8	21.4	18.3	17.2	17.6
20	19.6	18.2	18.9	23.1	21.8	22.3	22.6	21.3	21.9	17.2	16.6	16.8
21	18.5	17.7	18.0	22.3	21.5	21.8	22.7	21.9	22.3	16.9	16.7	16.8
22	18.2	17.5	17.8	21.9	20.9	21.5	22.9	21.7	22.3	16.7	15.5	15.9
23	17.8	16.9	17.3	21.1	19.5	20.1	22.7	21.7	22.2	15.5	15.0	15.2
24	17.3	16.9	17.1	21.5	20.1	20.5	23.5	22.1	22.8	15.2	14.4	14.7
25	18.0	16.7	17.3	21.5	20.6	20.8	24.2	22.8	23.7	15.3	14.4	14.9
26	18.6	17.2	17.9	22.8	21.3	22.1	24.0	22.3	23.3	15.3	15.0	15.1
27	---	---	18.5	23.8	21.7	22.7	22.3	20.4	21.6	15.2	14.6	15.0
28	19.9	18.3	19.1	24.1	22.4	23.4	20.4	19.4	19.8	15.1	13.5	14.1
29	19.9	19.4	19.7	24.4	23.4	23.8	20.3	19.1	19.6	13.7	13.1	13.4
30	---	---	19.8	23.7	22.4	23.0	19.6	18.5	19.0	13.9	12.8	13.3
31	---	---	---	22.9	21.6	22.2	19.3	18.3	18.7	---	---	---
MONTH	---	---	20.6	24.4	19.4	21.7	25.3	18.3	21.8	20.7	12.8	17.3

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04082500 LAKE WINNEBAGO AT OSHKOSH, WI

LOCATION.--Lat 44°00'35", long 88°31'38", in NE 1/4 NE 1/4 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 1882 to 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.--Records good. Lake elevations controlled by dams at Menasha and Neenah, which are operated in the interest of navigation. Crests of both dams are at elevation 746.73 ft. Present limits of regulation are from 21 1/4 in. above the crest of Menasha dam to crest during navigation season, plus additional 18 in. below crest during winter. 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 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 gage height, 3.34 ft, May 23, 24, local condition due to seiche; minimum, 1.28 ft, Feb. 24, 28, and Mar. 5.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.71	2.80	2.60	2.13	1.48	1.31	2.09	3.13	3.16	2.82	2.85	2.66
2	2.71	2.46	2.61	2.11	1.47	1.31	2.12	3.09	3.13	2.82	2.88	2.62
3	2.73	2.65	2.58	2.09	1.47	1.32	2.16	3.14	3.11	2.80	2.89	2.65
4	2.80	2.63	2.53	2.06	1.48	1.33	2.20	3.14	3.08	2.80	2.88	2.67
5	2.68	2.55	2.50	2.03	1.48	1.36	2.22	3.09	3.06	2.82	2.85	2.65
6	2.75	2.45	2.45	2.00	1.47	1.40	2.22	3.04	3.07	2.80	2.83	2.70
7	2.76	2.47	2.40	1.97	1.46	1.44	2.24	3.01	3.05	2.76	2.84	2.73
8	2.73	2.45	2.35	1.95	1.45	1.48	2.28	3.05	3.05	2.77	2.80	2.68
9	2.72	2.42	2.32	1.94	1.43	1.58	2.31	3.09	3.02	2.78	2.85	2.75
10	2.72	2.39	2.28	1.92	1.41	1.64	2.41	3.11	3.00	2.78	2.83	2.75
11	2.72	2.37	2.24	1.89	1.39	1.65	2.33	3.09	2.98	2.79	2.84	2.79
12	2.74	2.34	2.25	1.87	1.37	1.66	2.43	3.12	2.96	2.86	2.86	2.77
13	2.73	2.34	2.28	1.86	1.36	1.68	2.49	3.15	2.96	2.95	2.83	2.76
14	2.68	2.35	2.28	1.84	1.36	1.70	2.50	3.13	2.98	2.99	2.82	2.88
15	2.75	2.36	2.28	1.80	1.37	1.73	2.55	3.07	2.93	2.97	2.80	2.95
16	2.72	2.36	2.24	1.76	1.38	1.76	2.66	3.08	2.90	2.97	2.78	3.00
17	2.70	2.36	2.24	1.72	1.38	1.78	2.74	3.09	2.82	2.99	2.77	3.03
18	2.72	2.33	2.25	1.71	1.37	1.81	2.81	3.15	2.86	3.01	2.78	2.94
19	2.75	2.34	2.25	1.69	1.37	1.82	2.89	3.11	2.92	2.98	2.77	2.99
20	2.72	2.37	2.26	1.67	1.36	1.87	2.98	3.09	2.90	3.01	2.75	2.89
21	2.71	2.38	2.28	1.65	1.35	1.90	3.03	3.10	2.86	2.99	2.73	2.84
22	2.72	2.38	2.27	1.62	1.33	1.89	3.04	3.09	2.82	3.01	2.72	2.80
23	2.71	2.43	2.26	1.61	1.32	1.90	3.11	3.20	2.82	3.00	2.70	2.81
24	2.76	2.36	2.25	1.60	1.31	1.91	3.13	3.18	2.82	2.98	2.69	2.73
25	2.94	2.48	2.24	1.58	1.32	1.89	3.13	3.15	2.83	2.96	2.69	2.70
26	2.96	2.49	2.23	1.56	1.32	1.90	3.15	3.15	2.82	2.96	2.75	2.67
27	2.96	2.44	2.21	1.54	1.31	1.96	3.17	3.17	2.84	2.97	2.73	2.69
28	2.94	2.50	2.20	1.53	1.31	1.98	3.14	3.18	2.79	2.92	2.68	2.63
29	2.85	2.52	2.18	1.51	1.31	1.99	3.16	3.17	2.83	2.94	2.65	2.67
30	2.91	2.47	2.16	1.49	---	1.99	3.18	3.17	2.82	2.93	2.59	2.63
31	2.92	---	2.14	1.48	---	2.04	---	3.17	---	2.89	2.66	---
MEAN	2.77	2.44	2.31	1.78	1.39	1.71	2.66	3.12	2.94	2.90	2.78	2.77
MAX	2.96	2.80	2.61	2.13	1.48	2.04	3.18	3.20	3.16	3.01	2.89	3.03
MIN	2.68	2.33	2.14	1.48	1.31	1.31	2.09	3.01	2.79	2.76	2.59	2.62

CAL YR 1991 MEAN 2.46 MAX 3.25 MIN 1.13
WTR YR 1992 MEAN 2.47 MAX 3.20 MIN 1.31

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.

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.--Records good. Lake elevations controlled by dams at Menasha and Neenah, which are operated in the interest of navigation. Crests of both dams are at elevation 746.73 ft. Present limits of regulation are from 21 1/4 in. above the crest of Menasha dam to crest during navigation season, plus additional 18 in. below crest during winter. Data-collection platform at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 3.82 ft, May 30, 1989, local condition due to seiche; minimum observed, 0.30 ft, Mar. 1, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.49 ft, May 3, local condition due to seiche; minimum, 1.23 ft, Mar. 5.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.70	2.80	2.58	2.09	1.43	1.26	2.04	3.13	3.11	2.75	2.94	2.62
2	2.69	3.06	2.57	2.07	1.43	1.27	2.11	3.16	3.10	2.76	2.87	2.62
3	2.69	2.87	2.55	2.05	1.43	1.28	2.13	3.15	3.07	2.86	2.85	2.67
4	2.61	2.68	2.51	2.02	1.44	1.29	2.12	3.08	3.02	2.87	2.83	2.63
5	2.82	2.61	2.46	1.99	1.43	1.32	2.17	3.00	3.03	2.81	2.82	2.62
6	2.87	2.56	2.41	1.96	1.44	1.36	2.19	3.01	3.04	2.76	2.81	2.66
7	2.79	2.50	2.36	1.93	1.43	1.40	2.22	3.02	3.05	2.74	2.77	2.66
8	2.73	2.44	2.31	1.90	1.42	1.45	2.25	3.02	3.00	2.75	2.81	2.75
9	2.71	2.41	2.28	1.91	1.38	1.54	2.27	3.05	2.99	2.77	2.81	2.73
10	2.70	2.35	2.24	1.89	1.36	1.62	2.17	3.06	2.96	2.77	2.85	2.82
11	2.69	2.33	2.21	1.85	1.35	1.61	2.34	3.07	2.95	2.73	2.81	2.77
12	2.68	2.33	2.22	1.82	1.33	1.63	2.42	3.11	2.94	2.80	2.75	2.77
13	2.68	2.31	2.25	1.83	1.32	1.65	2.43	3.11	2.94	2.85	2.77	2.76
14	2.76	2.31	2.28	1.81	1.31	1.67	2.43	3.05	2.86	2.89	2.76	2.85
15	2.79	2.33	2.24	1.77	1.33	1.70	2.46	3.06	2.81	2.94	2.76	2.91
16	2.76	2.32	2.20	1.71	1.34	1.72	2.54	3.04	2.80	2.95	2.76	3.00
17	2.73	2.30	2.22	1.69	1.33	1.75	2.69	3.09	2.84	2.97	2.77	3.02
18	2.73	2.29	2.22	1.67	1.32	1.76	2.75	3.06	2.92	2.96	2.76	3.08
19	2.75	2.32	2.21	1.64	1.33	1.80	2.84	3.07	2.84	2.99	2.74	2.98
20	2.75	2.35	2.22	1.63	1.32	1.83	2.94	3.05	2.79	2.99	2.73	2.89
21	2.74	2.35	2.23	1.60	1.31	1.82	3.05	3.06	2.79	2.95	2.73	2.81
22	2.66	2.35	2.22	1.57	1.29	1.86	3.10	3.08	2.80	2.91	2.70	2.80
23	2.68	2.38	2.22	1.58	1.28	1.87	3.10	3.07	2.76	2.90	2.68	2.76
24	2.73	2.48	2.21	1.57	1.27	1.87	3.09	3.04	2.77	2.94	2.69	2.70
25	2.92	2.51	2.20	1.54	1.28	1.89	3.10	3.08	2.78	2.94	2.70	2.66
26	2.86	2.47	2.19	1.52	1.28	1.87	3.10	3.10	2.81	2.97	2.67	2.67
27	2.86	2.52	2.17	1.50	1.27	1.93	3.10	3.13	2.80	2.94	2.61	2.75
28	2.79	2.47	2.16	1.48	1.26	1.94	3.14	3.15	2.80	2.96	2.64	2.74
29	2.83	2.48	2.14	1.46	1.26	1.93	3.14	3.14	2.76	2.90	2.66	2.64
30	2.86	2.61	2.12	1.45	---	1.98	3.12	3.13	2.78	2.85	2.74	2.60
31	2.80	---	2.10	1.44	---	2.01	---	3.13	---	2.86	2.67	---
MEAN	2.75	2.47	2.27	1.74	1.34	1.67	2.62	3.08	2.90	2.87	2.76	2.76
MAX	2.92	3.06	2.58	2.09	1.44	2.01	3.14	3.16	3.11	2.99	2.94	3.08
MIN	2.61	2.29	2.10	1.44	1.26	1.26	2.04	3.00	2.76	2.73	2.61	2.60

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04084422 LITTLE LAKE BUTTE DES MORTS AT MENASHA, WI

LOCATION.--Lat 44°12'17", long 88°28'07", in NE 1/4 SE 1/4 sec.16, T.20 N., R.17 E., Winnebago County, Hydrologic Unit 04030204, at railroad bridge.

DRAINAGE AREA.--5,910 mi².

PERIOD OF RECORD.--October 1989 to September 1990, June to November 1992 (discontinued).

REMARKS.--Daily mean discharges estimated by using daily mean discharges from Fox River at Appleton, 04084445, multiplied times the drainage area ratio between the two sites of 0.993. Samples for chemical analysis were composite samples of water pumped from multiple fixed points in the stream cross section. Chemical analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, JUNE TO NOVEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	ALKA- LILITY WAT WH TOT FET LAB MG/L AS CACO3 (00417)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
JUN 1992												
08...	1005	3860	382	7.7	19.5	2.10	7.1	39	21	154	15	1.2
08...	1225	3860	382	8.0	20.0	2.30	8.0	40	22	153	15	1.2
AUG												
04...	0945	1690	306	8.8	20.5	0.80	7.9	33	21	144	15	0.30
31...	0950	1430	334	8.8	18.5	0.40	9.2	32	22	141	16	<0.20
NOV												
17...	1020	7980	358	8.4	2.5	0.60	13.6	32	20	143	14	<0.20
DATE	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	RESIDUE VOLATILE, TILE, SUS- PENDED (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CHLORO- PHYLL A TRICHR. UNCORR. WHOLE TOTAL (UG/L) (32210)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1992												
08...	5	4	0.293	0.285	1.3	0.080	0.002	8.8	7.9	12.0	2	80
08...	3	3	0.309	0.261	1.3	0.080	<0.002	9.1	8.2	13.0	--	--
AUG												
04...	22	10	0.047	0.103	1.3	0.100	0.017	11	8.5	55.7	8	98
31...	32	20	0.115	0.084	2.0	0.160	0.004	11	9.5	156	16	95
NOV												
17...	21	12	0.311	0.164	1.3	0.080	0.003	--	--	52.7	16	99

STREAMS TRIBUTARY TO LAKE MICHIGAN

04084445 FOX RIVER AT APPLETON, WI

LOCATION.--Lat 44°14'53", long 88°25'23" in NW 1/4 SE 1/4 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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1986 to current year.

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

REMARKS.--Estimated daily discharges: Nov. 3-8, Dec. 15 to Jan. 29, and June 18-23. Records good, except for estimated daily discharges, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1650	10400	5940	5480	2940	3730	4820	10800	5860	2050	1960	1300
2	1700	11000	6800	5520	2840	3820	4870	10600	6260	1940	2030	1760
3	1500	10000	9080	6130	2690	3810	5020	10400	6240	2010	1810	1460
4	1570	9910	9140	6050	3170	3790	5020	10500	5660	2090	1700	1360
5	1520	10100	8990	5970	3090	4350	5120	9620	4560	1890	1770	1660
6	1730	8180	8890	5550	3470	4970	5380	8780	4080	1960	1840	1610
7	2170	7270	8800	5560	3950	5070	5280	7450	3960	2080	1840	1530
8	2980	7050	8750	5530	3970	5080	5300	3980	3890	1960	1760	1520
9	2950	7380	8670	5600	3950	5800	5320	4000	3740	1910	1720	1730
10	2550	7310	8740	5570	3920	6700	5200	4160	3720	1930	1770	1750
11	1690	7330	9230	5670	3890	6990	5460	4380	3470	1940	1710	1680
12	1410	6900	9160	5510	3880	6980	5540	4850	2990	2250	1690	1770
13	1620	6450	8780	5320	3470	7020	5830	5210	2520	2350	1590	1820
14	1680	6380	8500	5240	2950	7050	5250	5440	2360	2390	1590	3250
15	1600	6780	6550	4830	2870	7100	4560	5430	2070	2390	1690	4860
16	1850	7230	5740	4240	2900	7280	5260	5400	2300	2490	1730	7080
17	1940	7270	5310	4090	2910	7270	5120	5440	2550	2410	1710	9540
18	1460	6990	4790	3420	3340	7310	5220	5120	2620	2510	1710	11300
19	1550	5920	4630	3540	3660	6490	5630	5780	2320	2570	1620	11000
20	1750	5940	4770	3530	3760	7330	6230	5210	2350	2490	1660	11000
21	2460	5950	4980	3610	3740	7400	7610	4230	2150	2480	1680	9510
22	2840	6010	5100	3930	3740	7490	9420	4200	1950	2470	1650	7770
23	2880	6140	5050	3760	3710	7590	10000	4040	2120	2370	1650	7970
24	3010	6100	5200	3460	3700	7630	10500	3870	1970	2380	1630	8050
25	4410	6090	5270	3530	3710	7780	10500	4080	2040	2460	1610	7770
26	5260	6190	5280	3580	3700	7060	10500	4160	2030	2450	1560	7720
27	5260	6390	5250	3580	3690	6590	10400	4270	1980	2400	1320	7720
28	5300	5980	5310	3450	3730	6670	10800	5090	2100	2340	1380	7590
29	6160	6160	5260	3880	3810	6670	10900	5510	1970	1840	1520	7540
30	7090	6660	5440	3820	---	5870	10700	5430	2180	1880	1650	7520
31	9230	---	5380	3430	---	4890	---	5440	---	1870	1450	---
TOTAL	90770	217460	208780	142380	101150	193580	206760	182870	94010	68550	52000	158140
MEAN	2928	7249	6735	4593	3488	6245	6892	5899	3134	2211	1677	5271
MAX	9230	11000	9230	6130	3970	7780	10900	10800	6260	2570	2030	11300
MIN	1410	5920	4630	3420	2690	3730	4560	3870	1950	1840	1320	1300
CFSM	.49	1.22	1.13	.77	.59	1.05	1.16	.99	.53	.37	.28	.89
IN.	.57	1.36	1.31	.89	.63	1.21	1.29	1.14	.59	.43	.33	.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1986	4431	13510	1987	1845	1990
1987	4656	7249	1992	2923	1990
1988	4184	6735	1992	2541	1990
1989	3911	5575	1987	2535	1990
1990	3750	5422	1987	2485	1990
1991	4876	6245	1992	3598	1987
1992	5144	8156	1991	2688	1990
1993	4577	5921	1991	2682	1988
1994	4448	7969	1990	1243	1988
1995	2417	4671	1986	944	1988
1996	2402	4581	1990	971	1988
1997	3712	8899	1986	1226	1988

SUMMARY STATISTICS

	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1986 - 1992
ANNUAL TOTAL	1630180	1716450	
ANNUAL MEAN	4466	4690	3916
HIGHEST ANNUAL MEAN			4690
LOWEST ANNUAL MEAN			2995
HIGHEST DAILY MEAN	11900	11300	16300
LOWEST DAILY MEAN	1410	1300	840
ANNUAL SEVEN-DAY MINIMUM	1610	1450	899
ANNUAL RUNOFF (CFSM)	.75	.79	.66
ANNUAL RUNOFF (INCHES)	10.19	10.73	8.94
10 PERCENT EXCEEDS	7810	8690	7370
50 PERCENT EXCEEDS	3630	4250	3370
90 PERCENT EXCEEDS	1940	1700	1500

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04084445 FOX RIVER AT APPLETON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1986 to September 1990, June to November 1992 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: July 1986 to September 1990, (discontinued).

WATER TEMPERATURE: October 1986 to September 1990 (discontinued).

REMARKS.--Samples for chemical analysis were composite samples of water pumped from multiple fixed points in the stream cross section. Chemical analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, JUNE TO NOVEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	ALKA- LILITY WAT WH TOT FET LAB MG/L AS CACO3 (00417)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
JUN 1992												
08...	1610	3890	395	8.2	20.5	1.00	8.4	44	23	156	17	1.3
AUG												
04...	1345	1700	330	8.8	22.0	0.60	8.5	34	21	147	19	0.90
04...	1615	1700	325	8.8	22.5	0.60	8.8	33	21	147	19	0.80
SEP												
01...	1445	1300	360	9.1	20.0	0.40	12.6	34	22	144	22	<0.20
NOV												
17...	1500	8040(a)	371	8.4	2.5	0.60	13.7	33	20	145	16	<0.20
DATE	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CHLORO- PHYLL A TRICHR. UNCORR. WHOLE TOTAL (UG/L) (32210)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1992												
08...	12	5	0.301	0.205	1.3	0.100	<0.002	9.1	8.4	22.0	8	94
AUG												
04...	24	12	0.040	0.081	1.6	0.120	0.016	11	8.8	69.8	15	99
04...	26	12	0.041	0.092	1.6	0.130	0.016	11	9.4	72.3	--	--
SEP												
01...	42	24	0.007	0.018	1.9	0.160	0.003	11	9.5	146	19	98
NOV												
17...	24	15	0.176	0.204	1.4	0.090	0.005	10	8.9	60.3	12	96

(a) PROVISIONAL

STREAMS TRIBUTARY TO LAKE MICHIGAN

04084475 FOX RIVER AT STATE HIGHWAY 55 AT KAUKAUNA, WI

LOCATION.--Lat 44°16'50", long 88°16'07", in N 1/2 sec.22, T.21 N., R.18 E., Outagamie County, Hydrologic Unit 04030204, at State Highway 55.

DRAINAGE AREA.--5,980 mi².

PERIOD OF RECORD.--April 1989 to September 1990, June to November 1992 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: May 1989 to September 1990 (discontinued).

REMARKS.--Daily mean discharges estimated by using daily mean discharges from Fox River at Appleton, 04084445, multiplied times the drainage area ratio between the two sites of 1.005. Samples for chemical analysis were composite samples of water pumped from multiple fixed points in the stream cross section. Chemical analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, JUNE TO NOVEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	ALKA- LITY WAT WH TOT FET LAB MG/L AS CAC03 (00417)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
JUN 1992												
09...	1410	3760	406	8.0	21.0	1.00	8.6	40	21	157	19	1.3
AUG												
05...	1415	1780	368	8.8	23.5	0.60	10.0	35	21	148	25	<0.20
31...	1400	1460	386	8.9	19.5	0.40	10.9	35	22	146	26	<0.20
31...	1600	1460	380	8.9	20.0	0.40	12.0	35	22	146	27	<0.20
NOV												
17...	1800	8080	374	8.5	2.5	--	14.0	34	21	146	16	<0.20
DATE		RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	RESIDUE VOLATILE, TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CHLORO- PHYLL A TRICHR. UNCORR. WHOLE TOTAL (UG/L) (32210)	SED. SUSE. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1992												
09...	12	6	0.404	0.168	1.2	0.100	0.026	9.4	8.1	28.0	7	93
AUG												
05...	31	13	0.107	0.026	1.7	0.160	0.016	11	9.1	79.0	20	100
31...	43	25	<0.007	0.016	2.2	0.200	0.003	12	9.7	164	24	90
31...	44	25	0.008	0.015	2.1	0.190	0.004	12	10	164--	--	--
NOV												
17...	23	13	0.146	0.220	1.3	0.080	0.007	10	8.8	50.4	10	99

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

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

DRAINAGE AREA.--6,010 mi².

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

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

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

REMARKS.--Flow regulated by storage in Lake Winnebago (see sta. 04082500 and 04084255). Daily 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 U.S. Army Corps of Engineers. Records reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1540	10900	5600	5700	2940	4000	5020	10600	5480	2140	2040	1230
2	1660	11000	7460	5720	2820	4020	5230	10500	6240	1940	2250	1890
3	1450	10500	9580	6450	2260	4020	5040	10100	5960	2130	1910	1530
4	1460	10100	9620	6340	2630	3980	5250	10300	6070	2200	1760	1380
5	1420	10300	8900	6240	3120	4360	5030	8940	5030	2060	1770	1630
6	1630	8160	8930	5640	3450	5100	5170	8070	4420	2080	1910	1620
7	1930	7180	8480	5670	3880	5360	5200	7360	4380	2070	1840	1640
8	2720	6910	8200	5650	3870	5440	5150	4360	4260	2140	1930	1590
9	2890	6670	8180	5820	3580	5850	5240	4420	3980	1920	1660	1940
10	2350	6960	8640	5780	3690	6150	5210	4510	3970	2010	1820	1610
11	1570	7020	8870	5890	3420	6070	5380	4680	3730	2000	1770	1560
12	1280	5970	8930	5680	3610	6270	5410	4780	3280	2570	1750	1800
13	1410	5810	8900	5470	3480	6380	5500	5150	2800	2550	1540	1840
14	1530	5350	7000	5350	2900	6380	5390	5510	2540	2570	1580	3640
15	1520	6340	6490	4910	2850	6390	4850	5640	2200	2500	1710	4640
16	1700	6220	5590	4250	2830	6550	5830	5480	2500	2560	1750	7670
17	1870	6520	5300	4100	2820	6470	5180	5840	3010	2430	1770	10200
18	1420	6050	4770	3380	3340	6430	5050	5310	2810	2530	1730	12600
19	1440	5000	4690	3600	3820	5980	5150	5570	2410	2660	1610	11600
20	1650	5790	4890	3600	3870	6650	5280	5450	2370	2590	1620	11700
21	2300	5890	5220	3800	3650	6770	7280	4440	2170	2540	1750	10400
22	2430	5780	5370	4150	3680	6770	8040	4460	1990	2460	1670	8350
23	2660	5790	5280	3950	3740	6730	9590	4430	2190	2490	1700	9770
24	2770	5750	5410	3560	3680	6640	9840	4150	2050	2440	1710	8920
25	4240	6000	5470	3600	3880	7000	9970	4370	2240	2450	1700	8290
26	4990	6090	5490	3680	3870	6550	10100	4550	2170	2540	1690	8140
27	5030	6620	5440	3740	3920	6170	9960	4570	2000	2400	1410	8030
28	5050	6020	5500	3580	3830	6210	10600	4830	2240	2450	1340	7880
29	6250	6450	5440	4080	3940	6220	10100	5310	2050	1920	1540	7770
30	7160	6560	5650	4170	---	5950	10300	5380	2300	1910	1730	7850
31	9040	---	5580	3830	---	5240	---	5400	---	1960	1430	---
TOTAL	86360	209700	208870	147380	99370	182100	200340	184460	98840	71210	53390	168710
MEAN	2786	6990	6738	4754	3427	5874	6678	5950	3295	2297	1722	5624
MAX	9040	11000	9620	6450	3940	7000	10600	10600	6240	2660	2250	12600
MIN	1280	5000	4690	3380	2260	3980	4850	4150	1990	1910	1340	1230

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1897 - 1992, BY WATER YEAR (WY)

	MEAN	3272	3898	3969	4018	4064	4910	7125	6026	4959	3288	2603	2807
MAX	14230	12740	9879	7831	7831	12440	19360	20160	13150	11150	9623	11020	
(WY)	1987	1985	1983	1960	1939	1973	1929	1960	1942	1969	1924	1938	
MIN	728	1242	1562	1432	1767	1596	1590	1260	1097	983	761	709	
(WY)	1933	1931	1959	1977	1977	1964	1954	1931	1931	1931	1936	1933	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1897 - 1992	
ANNUAL TOTAL	1602890		1710730			
ANNUAL MEAN	4391		4674		4253	
HIGHEST ANNUAL MEAN					7544	
LOWEST ANNUAL MEAN					1626	
HIGHEST DAILY MEAN	11000	Nov 2	12600	Sep 18	24000	Apr 18 1952
LOWEST DAILY MEAN	1280	Oct 12	1230	Sep 1	138	Aug 2 1936
ANNUAL SEVEN-DAY MINIMUM	1530	Oct 12	1480	Aug 26	499	Sep 20 1933
10 PERCENT EXCEEDS	7980		8310		7580	
50 PERCENT EXCEEDS	3580		4480		3530	
90 PERCENT EXCEEDS	1880		1700		1660	

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

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

DRAINAGE AREA.--6,050 mi², approximately.

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

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCHI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	
OCT 1991												
30...	1030	7160	283	8.3	7.0	27	10.6	766	87	>200	K1000	
MAR 1992												
18...	1330	6430	392	8.4	3.5	3.0	14.0	746	108	100	K20	
JUN												
16...	1320	2500	305	8.2	22.5	6.5	7.6	747	90	66	1200	
AUG												
13...	0917	1540	389	8.5	20.5	10	7.1	751	80	K30	140	
DATE		HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
OCT 1991												
30...	170	34	21	13	3.1	171	1	141	31	24	0.20	
MAR 1992												
18...	200	43	22	9.8	2.8	190	3	160	27	19	0.30	
JUN												
16...	190	43	21	14	3.2	199	--	163	27	25	0.20	
AUG												
13...	160	33	19	--	3.4	166	5	146	33	26	0.20	
DATE		SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 1991												
30...	3.1	227	216	0.030	0.210	0.170	0.160	1.1	0.170	0.050	0.020	
MAR 1992												
18...	6.4	245	230	0.020	0.710	0.160	0.160	1.0	0.070	<0.010	<0.010	
JUN												
16...	1.8	254	236	0.070	0.540	0.220	0.230	1.5	0.110	0.050	0.060	
AUG												
13...	0.32	230	--	0.010	0.095	0.110	0.070	1.6	0.160	0.020	0.030	

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

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04085000 FOX RIVER AT WRIGHTSTOWN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 1991 30...	1030	7160	10	21	<3	11	<4
MAR 1992 18...	1330	6430	<10	19	<3	27	<4
JUN 16...	1320	2500	20	12	<3	12	<4
AUG 13...	0917	1540	30	23	<3	20	<4

DATE	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)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
OCT 1991 30...	2	<10	<1	<1	210	<6
MAR 1992 18...	34	<10	1	<1	130	<6
JUN 16...	4	<10	<1	<1	260	<6
AUG 13...	1	<10	4	<1	290	<6

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1991 30...	1030	7160	283	7.0	63	1220	94
MAR 1992 18...	1330	6430	392	3.5	10	174	76
JUN 16...	1320	2500	305	22.5	16	108	88
AUG 13...	0917	1540	389	20.5	25	104	90

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085054 FOX RIVER AT LITTLE RAPIDS, WI

LOCATION.--Lat 44°22'37", long 88°07'00", in NE 1/4 SW 1/4 sec.18, T.22 N., R.20 E., Brown County, Hydrologic Unit 04030204, at dam at Little Rapids.

DRAINAGE AREA.--6,100 mi².

PERIOD OF RECORD.--March 1989 to September 1990, June to November 1992 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: April 1989 to September 1990 (discontinued).

REMARKS.--Daily mean discharges estimated by using daily mean discharges from Fox River at Appleton, 04084445, multiplied times the drainage area ratio between the two sites of 1.025. Samples for chemical analysis were composite samples of water pumped from multiple fixed points in the stream cross section. Chemical analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, JUNE TO NOVEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	ALKA- LITY WAT WE TOT FET LAB MG/L AS CACO3 (00417)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
JUN 1992												
09...	1110	3830	408	7.9	20.5	1.30	8.0	40	21	157	19	1.1
AUG 05...	1130	1810	401	8.6	23.0	0.50	8.8	38	23	154	--	<0.20
SEP 01...	1120	1330	402	8.9	19.5	0.50	11.0	35	22	147	--	<0.20
NOV 18...	1520	8210	389	8.3	2.5	--	14.1	34	20	147	--	<0.20
DATE	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	RESIDUE VOLATILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CHLORO- PHYLL A TRICHR. UNCORR. WHOLE TOTAL (UG/L) (32210)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1992												
09...	13	6	0.490	0.122	1.2	0.100	0.028	9.4	8.3	21.0	9	82
AUG 05...	36	15	0.192	0.054	1.9	0.180	0.018	11	8.8	109	27	100
SEP 01...	41	20	0.022	0.015	1.8	0.160	0.009	11	9.1	102	25	96
NOV 18...	23	12	0.205	0.217	1.1	0.070	0.010	10	8.6	52.5	13	95

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04085059 FOX RIVER AT DE PERE, WI

LOCATION.--Lat 44°26'58", long 88°03'52", in N 1/2 of land grant 33, T.23 N., R.20 E., Brown County, Hydrologic Unit 04030204, 8.3 mi upstream of mouth, at dam at DePere.

DRAINAGE AREA.--6,110 mi².

PERIOD OF RECORD.--June 1988 to September 1990, June to November 1992 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1988 to July 1989 and May to September 1990 (discontinued).

TOTAL SUSPENDED-SOLIDS DISCHARGE: July 1989 to April 1990 (discontinued).

REMARKS.--Daily mean discharges estimated by using daily mean discharges from Fox River at Appleton, 04084445, multiplied times the drainage area ratio between the two sites of 1.025. Samples were composite samples of water pumped from multiple fixed points in the stream cross section. Chemical analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, JUNE TO NOVEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	ALKA- LITY WAT WH TOT FET LAB MG/L AS CACO3 (00417)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
JUN 1992												
09...	0820	3840	405	8.1	21.0	1.00	8.6	40	--	--	19	--
AUG												
05...	0815	1820	397	8.5	23.0	0.50	8.4	37	21	155	24	<0.20
SEP												
01...	0830	1340	401	8.2	19.5	0.30	9.9	35	22	147	25	<0.20
NOV												
18...	0945	8230	388	8.3	2.5	--	13.7	34	21	147	17	<0.20
18...	1210	8230	390	8.3	2.5	--	13.8	35	21	147	17	<0.20
DATE		RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CHLORO- PHYLL A TRICHR. UNCORR. WHOLE TOTAL (UG/L) (32210)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1992												
09...	--	--	0.468	--	1.2	0.110	0.013	9.6	8.5	36.0	13	96
AUG												
05...	25	11	0.200	0.151	1.7	0.150	0.027	10	8.3	58.3	17	99
SEP												
01...	32	15	0.067	0.022	1.5	0.140	0.020	11	9.6	78.4	20	98
NOV												
18...	21	12	0.219	0.236	1.6	0.100	0.013	10	8.5	46.2	13	99
18...	22	14	0.231	0.246	1.6	0.100	0.012	9.9	8.1	46.0	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

442312087565100 BOWER CREEK RAIN GAGE #2 NEAR DE PERE, WI

LOCATION.--Lat 44°23'12", long 87°56'51", in NE 1/4 SW 1/4 sec.17, T.22 N., R.21 E., Brown County, Hydrologic Unit 04030204, on CTH X, 0.3 mi south of junction with Zion Road, near De Pere.

PERIOD OF RECORD.--January 1991 to current year (non-frozen precipitation).

REMARKS.--Gage established on Jan. 29, 1991. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 12, 27, Dec. 6, 21, 22, Jan. 22, 23, Feb. 18-20, 26, 28, and Mar. 22, 26. Recorded precipitation interpreted as a combination of rainfall and snowmelt; rainfall estimated to be 0.00 for Nov. 29, 30, and Mar. 9, 29, 31.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.58 in., Sept. 14, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.58 in., Sept. 14.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.09	.00	.00	.00	.00	.00	.12	.44	.10
3	.00	.00	.00	.03	.00	.00	.00	.00	.00	.04	.19	.00
4	.35	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00
5	.16	.00	.00	.00	.00	.24	.00	.00	.13	.00	.00	.00
6	.02	.00	.00	.00	.00	.25	.00	.00	.00	.00	.00	.19
7	.00	.00	.00	.00	.00	.04	.05	.00	.00	.00	.10	.03
8	.00	.00	.00	.30	.00	.01	.00	.00	.00	.60	.06	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.24
10	.00	.00	.00	.00	.00	.00	.16	.00	.00	.17	.00	.00
11	.00	.00	.00	.00	.00	.00	.26	.00	.00	.02	.01	.00
12	.00	.00	.60	.16	.00	.00	.00	.00	.00	1.26	.09	.00
13	.32	.00	.00	.01	.00	.00	.00	.00	.00	.64	.00	.00
14	.08	.32	.00	.00	.00	.00	.00	.00	.03	.03	.00	2.58
15	.00	.02	.00	.00	.00	.00	.57	.00	.04	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.74	.54	.00	.01	.00	1.35
17	.00	.03	.00	.00	.00	.00	.00	.44	.70	.04	.00	.00
18	.07	.22	.00	.00	.00	.00	.00	.00	.00	.00	.67	1.52
19	.00	.00	.00	.00	.00	.00	.26	.00	.01	.37	.00	.00
20	.00	.00	.00	.00	.00	.00	.29	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
22	.00	.22	.00	.00	.00	.00	.02	.08	.00	.16	.00	.00
23	.00	.47	.00	.00	.00	.00	.00	.17	.21	.01	.00	.00
24	.83	.00	.00	.00	.00	.00	.00	.00	.09	.00	.00	.00
25	.35	.00	.00	.00	.00	.03	.00	.00	.26	.00	.21	.00
26	.18	.00	.00	.00	.00	.00	.00	.00	.03	.00	.18	.94
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.19
28	.16	.00	.00	.00	.00	.00	.10	.00	.00	.00	.02	.01
29	.78	.00	.00	.00	.01	.00	.06	.00	.13	.00	.01	.00
30	.01	.00	.00	.00	---	.02	.01	.00	.00	.00	.00	.00
31	.04	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	3.37	1.59	0.60	0.59	0.01	0.59	2.53	1.23	1.77	3.47	1.98	7.15

STREAMS TRIBUTARY TO LAKE MICHIGAN

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442230087584500 BOWER CREEK RAIN GAGE #1 NEAR DE PERE, WI

LOCATION.--Lat 44°22'30", long 87°58'45", in SE 1/4 SE 1/4 sec.9, T.22 N., R.21 E., Brown County, Hydrologic Unit 04030204, on CTH G, just west of the junction with Langers Corner Road, near De Pere.

PERIOD OF RECORD.--January 1991 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Jan. 29, 1991. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 12, Dec. 6, 20, 21, Jan. 22, 23, Feb. 14, 15, 18-20, 25, 28, and Mar. 22. Recorded precipitation interpreted as a combination of rainfall and snowmelt; rainfall estimated to be 0.00 for Nov. 29, 30, and Mar. 9, 29, 31.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.76 in., Sept. 14, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.76 in., Sept. 14.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.38	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.11	.00	.00	.00	.01	.00	.08	.42	.14
3	.00	.00	.00	.02	.00	.00	.00	.00	.00	.04	.12	.00
4	.34	.00	.00	.00	.00	.00	.00	.01	.21	.00	.00	.00
5	.16	.00	.00	.00	.00	.32	.00	.00	.02	.00	.00	.00
6	.02	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00	.25
7	.00	.00	.00	.00	.00	.02	.10	.00	.00	.00	.12	.01
8	.00	.00	.00	.33	.00	.01	.00	.00	.00	.76	.05	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.27
10	.00	.00	.00	.00	.00	.00	.27	.00	.00	.19	.00	.00
11	.00	.00	.00	.00	.00	.00	.20	.00	.00	.02	.11	.00
12	.01	.00	.64	.19	.00	.00	.00	.00	.00	---	.07	.00
13	.35	.00	.00	.01	.00	.00	.00	.00	.00	---	.00	.00
14	.10	.34	.00	.00	.00	.00	.00	.00	.00	---	.00	2.76
15	.00	.02	.00	.00	.00	.00	.63	.00	.06	---	.00	.00
16	.00	.00	.00	.00	.00	.00	.87	.48	.00	---	.00	1.48
17	.00	.04	.00	.00	.00	.00	.00	.44	.87	---	.00	.00
18	.06	.23	.00	.00	.00	.00	.00	.00	.02	---	.41	1.60
19	.00	.00	.00	.00	.00	.00	.21	.00	.01	---	.00	.00
20	.00	.00	.00	.00	.00	.00	.36	.00	.00	---	.00	.00
21	.00	.00	.00	.00	.00	.00	.03	.00	.00	---	.00	.00
22	.00	.23	.00	.00	.00	.00	.03	.03	.00	---	.00	.00
23	.02	.48	.00	.00	.00	.00	.00	.11	.22	---	.00	.00
24	.89	.00	.00	.00	.00	.00	.01	.00	.04	.00	.00	.00
25	.39	.00	.00	.00	.00	.05	.00	.00	.28	.00	.15	.00
26	.24	.00	.00	.00	.00	.00	.01	.00	.02	.00	.16	.94
27	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.20
28	.17	.00	.00	.00	.00	.00	.12	.00	.00	.00	.02	.01
29	1.03	.00	.00	.00	.00	.00	.15	.00	.15	.00	.01	.00
30	.01	.00	.00	.00	---	.00	.00	.00	.00	.01	.00	.00
31	.07	---	.00	.00	---	.00	---	.00	---	.00	.01	---
TOTAL	3.89	1.72	0.64	0.66	0.00	0.70	2.99	1.08	1.90	---	1.66	7.66

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085119 BOWER CREEK, AT COUNTY MM, NEAR DE PERE, WI

LOCATION.--Lat 44°25'21", long 87°56'24", in NE 1/4 SW 1/4 sec.34 (revised), T.23 N., R.21 E., Brown County, Hydrologic Unit 04030204, on right bank upstream from bridge on Highway MM, 1.1 mi east from intersection of Highways G and MM, and 6.2 mi southeast of post office in De Pere.

DRAINAGE AREA.--14.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 790 ft from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 5, 15-28, Jan. 14-28, Feb. 4-16, and Feb. 24 to Mar. 21. Records are good except those for ice-affected periods, which are poor. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 23, 1990, maximum discharge, 4,020 ft³/s, gage height, 14.11 ft, estimated from floodmarks, based on step-backwater model.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2.1	21	.32	.31	34	21	1.8	.00	.00	.00	.00
2	.00	5.8	6.4	.33	.56	25	5.5	1.2	.00	.00	.00	.00
3	.00	3.0	2.7	1.3	.83	20	3.8	1.0	.00	.00	.00	.00
4	.00	1.9	1.9	6.0	1.1	27	3.8	1.0	.00	.00	.00	.00
5	.00	1.2	1.7	4.1	1.5	36	3.5	.86	.00	.00	.00	.00
6	.00	1.0	1.5	2.7	.70	140	3.1	.74	.00	.00	.00	.00
7	.00	.74	1.3	1.6	.50	37	4.6	.59	.00	.00	.00	.00
8	.00	.55	1.5	5.3	.40	20	5.7	.54	.00	.00	.00	.00
9	.00	.33	3.4	41	.30	100	4.3	.57	.00	.00	.00	.00
10	.00	.27	4.3	19	.25	18	3.6	.48	.00	.00	.00	.00
11	.00	.27	4.4	6.4	.21	8.8	61	.42	.00	.00	.00	.00
12	.00	.27	81	5.7	.20	5.4	61	.32	.00	.06	.00	.00
13	.00	.27	77	23	.18	3.3	17	.40	.00	.23	.00	.00
14	.00	.41	22	7.0	.17	2.2	11	.30	.00	3.1	.00	.11
15	.00	1.8	4.5	2.3	.17	1.8	13	.21	.00	2.1	.00	.02
16	.00	3.4	2.6	1.7	.17	5.7	329	.17	.00	.65	.00	6.8
17	.00	3.0	1.6	1.2	.16	16	45	1.1	.00	.23	.00	15
18	.00	3.7	1.2	.75	.19	9.4	16	1.2	.00	.20	.00	107
19	.00	5.8	1.0	.60	.20	5.1	20	.90	.00	.10	.00	37
20	.00	4.0	.80	.47	.25	3.6	39	.54	.00	.10	.00	8.0
21	.00	2.3	.70	.40	.27	2.2	66	.30	.00	.11	.00	2.9
22	.00	1.7	.60	.35	.25	1.5	14	.18	.00	.04	.00	1.4
23	.00	5.5	.52	.30	1.0	1.3	7.5	.18	.00	.06	.00	.98
24	.00	17	.47	.27	1.9	1.6	5.3	.27	.00	.10	.00	.64
25	.00	5.7	.43	.24	2.3	4.3	4.3	.25	.00	.01	.00	.41
26	.00	2.3	.38	.22	2.2	4.3	3.3	.23	.00	.00	.00	.89
27	.00	1.6	.35	.19	10	4.0	2.8	.13	.00	.00	.00	20
28	.00	1.1	.32	.18	55	6.2	2.0	.09	.00	.00	.00	13
29	2.5	1.2	.30	.17	21	13	1.8	.07	.00	.00	.00	4.1
30	7.4	95	.30	.17	---	29	2.0	.04	.00	.00	.00	1.8
31	2.5	---	.31	.21	---	33	---	.02	---	.00	.00	---
TOTAL	12.40	173.21	246.48	133.47	102.27	618.7	779.9	16.10	0.00	7.09	0.00	220.05
MEAN	.40	5.77	7.95	4.31	3.53	20.0	26.0	.52	.000	.23	.000	7.33
MAX	7.4	95	81	41	55	140	329	1.8	.00	3.1	.00	107
MIN	.00	.27	.30	.17	.16	1.3	1.8	.02	.00	.00	.00	.00
CFSM	.03	.39	.54	.29	.24	1.35	1.76	.04	.00	.02	.00	.50
IN.	.03	.44	.62	.34	.26	1.56	1.96	.04	.00	.02	.00	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1992	1992	1991	1991	1992	1991	1991	1992	1991	1992
MEAN	1.78	4.54	5.67	2.38	7.43	30.5	21.5	1.20	.59	.11	.000	3.67
MAX	3.16	5.77	7.95	4.31	11.5	41.1	26.0	1.88	1.17	.23	.000	7.33
(WY)	1991	1992	1992	1992	1991	1991	1992	1991	1991	1992	1991	1992
MIN	.40	3.32	3.39	.45	3.53	20.0	16.9	.52	.000	.000	.000	.000
(WY)	1992	1991	1991	1991	1992	1992	1991	1992	1992	1991	1991	1991

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	2640.66	2309.67	
ANNUAL MEAN	7.23	6.31	6.59
HIGHEST ANNUAL MEAN			6.88
LOWEST ANNUAL MEAN			6.31
HIGHEST DAILY MEAN	263	Mar 2	329
LOWEST DAILY MEAN	.00	Many days	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Many periods	.00
INSTANTANEOUS PEAK FLOW		542	Apr 16
INSTANTANEOUS PEAK STAGE		9.36	Apr 16
INSTANTANEOUS LOW FLOW		.00	Many days
ANNUAL RUNOFF (CFSM)	.49	.43	.45
ANNUAL RUNOFF (INCHES)	6.64	5.81	6.05
10 PERCENT EXCEEDS	20	16	17
50 PERCENT EXCEEDS	.52	.35	.74
90 PERCENT EXCEEDS	.00	.00	.00

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04085119 BOWER CREEK, AT HIGHWAY MM, NEAR DE PERE, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1990 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1990 to current year.

DISSOLVED OXYGEN: April to June 1991.

SUSPENDED-SOLIDS DISCHARGE: October 1990 to current year.

TOTAL-PHOSPHORUS DISCHARGE: October 1990 to current year.

INSTRUMENTATION.--Stage-activated water-quality sampler since October 1990. Continuous water-temperature recorder since October 1990. Dissolved-oxygen recorder during open-water periods from April to June 1991.

REMARKS.--Chemical analyses by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated. Dissolved-oxygen concentrations greater than 20.0 mg/L are out of calibration range of meter.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 30.0°C, June 19, 1991; minimum observed, 0.0°C, many days.

DISSOLVED OXYGEN: Maximum observed, 17.4 mg/L, Apr. 22, 1991; minimum observed, 0.0 mg/L, May 18, 1991.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 706 tons, Apr. 16, 1992; minimum daily, 0.0 ton, many days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 2,760 lb, Apr. 16, 1992; minimum daily, 0.0 lb., many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 27.3°C, June 13; minimum observed, 0.0°C, many days during winter period.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 706 tons, Apr. 16; minimum daily, 0.0 ton, many days during summer period.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 2,760 lb, Apr. 16; minimum daily, 0.0 lb., many days during summer period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, IN CUBIC FEET PER SECOND (00061)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
OCT 1991								
29...	1845	--	6.4	--	--	--	144	606
30...	0645	--	9.9	--	--	--	54	572
30...	1845	--	4.8	--	--	--	25	594
NOV								
02...	0055	--	3.8	--	--	--	21	658
02...	0600	--	6.0	--	--	--	28	644
16...	0240	--	3.6	--	--	--	9	572
18...	1015	--	3.6	--	--	--	8	596
18...	2220	--	4.8	--	--	--	12	588
19...	1020	--	6.0	--	--	--	8	586
19...	2220	--	5.4	--	--	--	8	570
20...	1020	--	3.8	2.6	--	--	6	570
30...	0020	--	6.0	--	--	--	13	566
30...	0140	--	15	--	--	--	27	546
30...	0220	--	27	--	--	--	14	552
30...	0250	--	40	--	--	--	60	522
30...	0315	--	57	--	--	--	166	552
30...	0350	--	78	--	--	--	342	702
DEC								
01...	0055	--	38	--	--	--	130	466
01...	1255	--	24	3.6	--	--	64	406
02...	0055	--	10	3.1	--	--	28	408
02...	1255	--	6.7	2.6	--	--	14	406
03...	0055	--	3.3	--	--	--	18	480
12...	0715	--	4.6	--	--	--	6	510
12...	1035	--	13	--	--	--	25	496
12...	1125	--	23	--	--	--	48	490
12...	1215	--	34	--	--	--	58	460
12...	1255	--	50	--	--	--	86	414
12...	1325	--	71	--	--	--	118	430
12...	1355	--	95	--	--	--	192	490
12...	1440	--	124	--	--	--	246	522
12...	1555	--	148	--	--	--	258	506
12...	1755	--	182	--	--	--	296	538
13...	0445	--	114	--	--	--	86	368
13...	1405	--	56	--	--	--	48	342
14...	0205	--	33	--	--	--	29	358
14...	1405	--	21	--	--	--	14	382
15...	0205	4.5	--	--	--	--	10	420
15...	1405	4.5	--	--	--	--	8	454
16...	1405	2.6	--	--	--	--	12	488
JAN 1992								
*20...	1415	0.47	--	7.3	20	30	13	630
FEB								
*11...	1320	0.21	--	1.7	10	80	7	536
*23...	1415	--	0.84	2.0	20	20	4	532
27...	1855	10	--	12	--	--	20	308

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085119 BOWER CREEK, AT HIGHWAY MM, NEAR DE PERE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE FIXED NON FILTER- ABLE (MG/L) (00540)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS NH4) (71846)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)
OCT 1991							
29...	194	64	80	0.428	0.254	0.33	0.580
30...	162	40	14	1.02	0.345	0.44	1.15
30...	170	18	7	1.74	0.225	0.29	1.05
NOV							
02...	190	12	9	2.51	0.502	0.65	1.69
02...	198	19	9	2.92	0.652	0.84	1.81
16...	144	4	5	1.26	0.557	0.72	0.750
18...	148	5	3	1.28	0.375	0.48	0.560
18...	160	8	4	3.08	0.633	0.82	0.600
19...	144	3	5	2.74	0.505	0.65	0.610
19...	152	5	3	3.32	0.193	0.25	0.540
20...	154	4	2	3.41	0.144	0.19	0.510
30...	176	10	3	3.96	0.377	0.49	0.580
30...	172	19	8	3.57	0.743	0.96	0.680
30...	166	11	3	3.46	0.174	0.22	0.370
30...	154	50	10	3.00	0.272	0.35	0.590
30...	154	138	28	2.69	0.301	0.39	0.820
30...	172	294	48	2.68	0.395	0.51	1.16
DEC							
01...	118	113	17	6.47	0.297	0.38	0.780
01...	118	54	10	6.59	0.225	0.29	0.660
02...	124	24	4	7.31	0.230	0.30	0.590
02...	122	12	2	7.53	0.178	0.23	0.540
03...	136	14	4	7.52	0.158	0.20	0.490
12...	142	0	6	2.91	0.898	1.2	0.460
12...	138	17	8	2.73	0.861	1.1	0.570
12...	146	35	13	2.36	0.872	1.1	0.760
12...	142	39	19	2.09	1.04	1.3	0.890
12...	124	62	24	1.87	0.808	1.0	0.780
12...	124	92	26	1.76	0.606	0.78	0.740
12...	124	158	34	1.57	0.482	0.62	0.800
12...	130	204	42	1.56	0.752	0.97	0.870
12...	116	214	44	1.45	0.749	0.96	0.890
12...	110	248	48	1.70	0.580	0.75	0.980
13...	102	68	18	3.42	0.416	0.54	0.740
13...	110	34	14	4.12	0.372	0.48	0.630
14...	124	20	9	5.32	0.308	0.40	0.550
14...	142	9	5	5.82	0.254	0.33	0.510
15...	162	7	3	6.36	0.231	0.30	0.470
15...	176	5	3	6.94	0.192	0.25	0.440
16...	164	8	4	6.95	0.168	0.22	0.400
JAN 1992							
20...	188	7	6	0.528	3.02	3.9	0.480
FEB							
11...	148	4	3	0.797	1.81	2.3	0.390
23...	128	--	<2	0.654	1.51	1.9	0.290
27...	104	11	9	0.951	3.22	4.1	0.510

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04085119 BOWER CREEK, AT HIGHWAY MM, NEAR DE PERE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
FEB 1992								
27...	1925	10	--	14	--	--	33	308
27...	2115	10	--	14	--	--	36	250
28...	0915	55	--	16	--	--	31	248
28...	1325	55	--	18	--	--	62	272
28...	1600	55	--	19	--	--	76	286
29...	0250	21	--	17	--	--	40	244
29...	0900	21	--	16	--	--	38	244
29...	1800	21	--	16	--	--	38	238
MAR								
01...	0300	34	--	14	--	--	30	254
01...	1200	34	--	12	--	--	22	264
01...	1201	34	--	13	--	--	50	302
01...	1315	34	--	10	--	--	49	272
01...	1405	34	--	11	--	--	91	298
01...	1440	34	--	12	--	--	142	344
01...	1530	34	--	13	--	--	226	406
01...	1610	34	--	13	--	--	312	472
01...	1705	34	--	13	--	--	242	402
01...	1905	34	--	14	--	--	230	392
01...	2025	34	--	13	--	--	126	284
02...	0015	25	--	13	--	--	102	258
02...	0145	25	--	15	--	--	90	244
02...	0400	25	--	16	--	--	80	252
02...	0900	25	--	13	--	--	62	248
*02...	1635	25	--	13	--	--	51	248
02...	1637	25	--	12	--	--	54	246
06...	1310	140	--	14	--	--	516	776
06...	1350	140	--	12	--	--	364	630
06...	1710	140	--	--	--	--	272	538
06...	2015	140	--	--	--	--	180	448
06...	2350	140	--	--	--	--	148	398
07...	0655	37	--	--	--	--	76	348
09...	0505	100	--	4.9	--	--	92	396
09...	0545	100	--	4.5	--	--	75	382
09...	0635	100	--	4.4	--	--	90	382
09...	0730	100	--	5.5	--	--	118	538
09...	0825	100	--	6.6	--	--	432	714
09...	0905	100	--	7.4	--	--	480	766
09...	0940	100	--	7.4	--	--	445	732
09...	1015	100	--	7.6	--	--	505	796
09...	1215	100	--	8.9	--	--	660	974
09...	1725	100	--	7.4	--	--	345	662
09...	1830	100	--	6.9	--	--	292	554
09...	2010	100	--	6.7	--	--	280	526
09...	2205	100	--	5.6	--	--	136	410
15...	1540	1.8	--	1.4	<10	20	6	430
*26...	1155	--	3.9	1.4	20	50	8	372
30...	0510	--	28	4.7	--	--	46	364
30...	1340	--	25	5.3	--	--	33	356
30...	1825	--	37	5.8	--	--	112	466
31...	0325	--	25	5.6	--	--	60	416
31...	1435	--	26	4.7	--	--	25	364
31...	1700	--	38	5.0	--	--	57	392
31...	1855	--	53	5.4	--	--	136	492

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085119 BOWER CREEK, AT HIGHWAY MM, NEAR DE PERE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE FIXED NON FILTER- ABLE (MG/L) (00540)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
FEB 1992							
27...	108	23	10	0.778	3.32	4.3	0.560
27...	94	24	12	0.674	3.02	3.9	0.580
28...	100	20	11	0.998	3.01	3.9	0.650
28...	98	46	16	1.27	3.23	4.2	0.710
28...	104	58	18	1.42	3.60	4.6	0.790
29...	96	16	24	1.65	3.83	4.9	0.730
29...	100	16	22	1.68	3.88	5.0	0.770
29...	94	16	22	1.62	3.73	4.8	0.760
MAR							
01...	106	12	18	1.62	3.90	5.0	0.820
01...	106	10	12	1.59	3.73	4.8	0.750
01...	116	36	14	1.42	3.99	5.1	1.07
01...	104	38	11	1.35	3.46	4.5	0.820
01...	106	73	18	1.20	3.11	4.0	0.850
01...	104	118	24	1.21	2.68	3.5	1.00
01...	112	192	34	1.19	2.38	3.1	1.17
01...	104	272	40	1.10	2.30	3.0	1.27
01...	98	210	32	0.971	2.03	2.6	1.24
01...	98	194	36	1.01	2.23	2.9	1.18
01...	86	102	24	0.954	2.14	2.8	1.10
02...	80	84	18	0.944	2.28	2.9	1.13
02...	80	66	24	0.933	2.58	3.3	1.24
02...	82	62	18	0.928	2.90	3.7	1.27
02...	90	42	20	0.897	2.76	3.6	1.16
02...	90	37	14	0.901	2.80	3.6	1.13
02...	92	40	14	0.871	2.78	3.6	1.12
06...	166	456	60	2.68	1.27	1.6	1.11
06...	148	316	48	2.70	1.29	1.7	1.00
06...	114	232	40	2.83	1.29	1.7	0.960
06...	114	152	28	2.88	1.26	1.6	0.860
06...	122	120	28	2.93	1.22	1.6	0.740
07...	116	64	12	3.13	1.11	1.4	0.630
09...	116	76	16	3.11	0.984	1.3	0.600
09...	120	63	12	3.01	0.994	1.3	0.590
09...	114	76	14	2.89	0.925	1.2	0.550
09...	140	104	14	2.82	0.935	1.2	0.740
09...	164	382	50	3.00	0.933	1.2	0.980
09...	162	420	60	2.92	0.928	1.2	1.05
09...	158	390	55	2.76	0.931	1.2	1.05
09...	160	450	55	2.69	0.896	1.2	1.13
09...	176	570	90	2.87	0.949	1.2	1.38
09...	142	295	50	2.77	0.887	1.1	1.07
09...	122	248	44	2.81	0.889	1.1	0.950
09...	118	240	40	2.74	0.889	1.1	0.910
09...	112	104	32	2.70	0.862	1.1	0.760
15...	146	4	2	1.68	0.830	1.1	0.280
26...	128	4	4	0.953	0.561	0.72	0.550
30...	114	37	9	1.37	0.577	0.74	0.440
30...	116	23	10	1.68	0.775	1.0	0.560
30...	132	94	18	2.77	0.909	1.2	0.700
31...	130	44	16	3.08	0.845	1.1	0.600
31...	128	18	7	2.59	0.703	0.91	0.530
31...	136	49	8	2.62	0.713	0.92	0.560
31...	148	119	17	3.07	0.777	1.0	0.690

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04085119 BOWER CREEK, AT HIGHWAY MM, NEAR DE PERE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI KF AGAR (COLS. PER 100 ML) (31673)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
APR 1992							
01...	0355	35	5.8	--	--	121	450
11...	1015	16	--	--	--	18	442
11...	1410	26	--	--	--	22	450
11...	1525	39	--	--	--	74	480
11...	1610	55	--	--	--	88	480
11...	1655	75	--	--	--	108	472
11...	1740	103	--	--	--	180	534
11...	1825	132	--	--	--	296	664
11...	1910	158	--	--	--	420	778
11...	2025	187	--	--	--	524	836
12...	0235	146	--	--	--	196	514
12...	0440	104	--	--	--	156	444
12...	0655	67	--	--	--	90	386
12...	0920	42	--	--	--	69	360
12...	1820	30	--	--	--	23	344
13...	0320	25	2.8	--	--	19	382
13...	1220	15	2.5	--	--	11	386
13...	1339	14	2.4	--	--	11	384
15...	1550	14	1.6	--	--	7	420
15...	2325	25	2.1	--	--	28	470
16...	0040	37	3.2	--	--	108	526
16...	0120	53	2.9	--	--	108	546
16...	0150	74	3.3	--	--	116	558
16...	0215	104	4.2	--	--	226	622
16...	0235	135	5.2	--	--	356	752
16...	0255	166	5.7	--	--	534	916
16...	0315	201	7.6	--	--	692	1060
16...	0335	236	8.3	--	--	916	1300
16...	0400	270	10	--	--	1300	1660
16...	0430	309	12	--	--	1940	2320
16...	0510	350	12	--	--	2100	2500
16...	0540	396	17	--	--	2010	2480
16...	0605	453	11	--	--	1770	2240
16...	0705	508	8.0	--	--	1470	1940
*16...	1030	542	5.8	3200	16000	740	1130
16...	1100	539	6.2	--	--	896	1200
16...	1305	511	5.0	--	--	420	940
16...	1510	418	4.6	--	--	504	828
16...	1625	352	4.3	--	--	360	778
16...	1735	297	3.8	--	--	284	736
16...	1850	245	--	--	--	224	696
16...	2010	196	3.5	--	--	168	642
16...	2200	153	3.5	--	--	132	588
16...	2400	112	3.1	--	--	90	542
17...	0250	75	2.6	--	--	94	502
17...	0655	53	--	--	--	50	442
17...	1520	33	2.6	--	--	42	400
18...	0035	22	2.3	--	--	26	384
18...	0935	17	2.4	--	--	25	380
18...	1835	13	2.6	--	--	18	384
19...	0335	11	2.7	--	--	18	386
19...	1235	11	2.4	--	--	10	390
19...	1650	21	1.9	--	--	14	396
19...	1820	32	2.2	--	--	20	406
19...	2135	46	3.7	--	--	286	682
20...	0635	37	3.4	--	--	68	472
20...	1535	24	3.2	--	--	32	442
20...	2040	35	4.8	--	--	212	614
20...	2130	51	4.2	--	--	96	554
20...	2220	72	5.5	--	--	282	642
20...	2325	96	5.1	--	--	484	860
21...	0050	124	6.0	--	--	750	1290
21...	0805	84	4.4	--	--	260	766
21...	1135	53	4.5	--	--	96	604
21...	1700	31	3.3	--	--	98	492
22...	0200	19	2.6	--	--	30	438
22...	1100	14	2.0	--	--	23	418
22...	2000	11	3.4	--	--	23	264

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085119 BOWER CREEK, AT HIGHWAY MM, NEAR DE PERE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE FIXED NON FILTER- ABLE (MG/L) (00540)	RESIDUE VOLA- TILE, SUS- PENDED (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
APR 1992							
01...	148	105	16	3.18	0.778	1.0	0.690
11...	108	15	3	0.781	0.119	0.15	0.260
11...	108	18	4	0.783	0.099	0.13	0.300
11...	130	66	8	0.919	0.135	0.17	0.380
11...	130	78	10	1.09	0.152	0.20	0.380
11...	128	96	12	1.25	0.144	0.19	0.400
11...	134	158	22	1.41	0.185	0.24	0.490
11...	146	264	32	1.55	0.219	0.28	0.680
11...	160	368	52	1.74	0.259	0.33	0.880
11...	166	464	60	1.83	0.328	0.42	0.980
12...	124	164	32	2.46	0.403	0.52	0.620
12...	18	138	18	2.55	0.347	0.45	0.580
12...	110	74	16	2.62	0.360	0.46	0.460
12...	116	58	11	2.77	0.329	0.42	0.420
12...	116	17	6	2.93	0.234	0.30	0.350
13...	122	14	5	3.06	0.154	0.20	0.340
13...	124	6	5	3.11	0.086	0.11	0.320
13...	124	6	5	3.08	0.080	0.10	0.320
15...	<10	5	2	2.24	0.030	0.04	0.230
15...	<10	23	5	2.36	0.070	0.09	0.310
16...	13	95	13	2.16	0.132	0.17	0.450
16...	14	94	14	2.07	0.195	0.25	0.560
16...	14	102	14	2.03	0.192	0.25	0.540
16...	24	202	24	1.93	0.237	0.31	0.630
16...	38	318	38	2.04	0.253	0.33	0.770
16...	56	478	56	2.21	0.287	0.37	0.990
16...	74	618	74	2.35	0.344	0.44	1.19
16...	96	820	96	2.33	0.352	0.45	2.02
16...	136	1160	136	2.32	0.369	0.48	1.85
16...	220	1720	220	2.46	0.443	0.57	2.79
16...	210	1890	210	2.58	0.487	0.63	2.82
16...	210	1800	210	2.72	0.489	0.63	2.92
16...	200	1570	200	2.81	0.494	0.64	2.83
16...	170	1300	170	3.12	0.495	0.64	2.46
16...	80	.660	80	3.71	0.410	0.53	1.45
16...	90	806	90	3.74	0.398	0.51	1.43
16...	70	350	70	3.95	0.388	0.50	1.26
16...	54	450	54	4.13	0.397	0.51	1.10
16...	36	324	36	4.17	0.357	0.46	1.05
16...	32	252	32	4.20	0.344	0.44	1.00
16...	16	208	16	4.25	0.340	0.44	0.950
16...	24	144	24	4.28	0.332	0.43	0.880
16...	20	112	20	4.32	0.324	0.42	0.810
16...	12	78	12	4.37	0.330	0.42	0.730
17...	16	78	16	4.42	0.334	0.43	0.670
17...	20	30	20	4.50	0.308	0.40	0.590
17...	<10	37	5	4.46	0.281	0.36	0.480
18...	108	20	6	4.33	0.224	0.29	0.400
18...	114	21	4	4.10	0.181	0.23	0.360
18...	122	15	3	3.77	0.112	0.14	0.320
19...	116	14	4	3.47	0.086	0.11	0.300
19...	116	8	2	3.06	0.097	0.12	0.280
19...	116	12	2	2.88	0.074	0.09	0.290
19...	122	16	4	2.75	0.086	0.11	0.300
19...	168	252	34	2.27	0.105	0.14	0.710
20...	150	52	16	2.02	0.150	0.19	0.470
20...	152	30	2	1.80	0.107	0.14	0.450
20...	174	192	20	1.50	0.338	0.44	0.700
20...	168	90	6	1.57	0.230	0.30	0.710
20...	170	254	28	1.33	0.264	0.34	0.740
20...	188	440	44	1.22	0.193	0.25	0.930
21...	232	690	60	1.43	0.164	0.21	1.39
21...	182	240	20	1.39	0.201	0.26	0.980
21...	148	88	8	1.36	0.173	0.22	0.790
21...	148	85	13	1.35	0.153	0.20	0.560
22...	146	26	4	1.40	0.149	0.19	0.590
22...	144	18	5	1.40	0.124	0.16	0.480
22...	94	15	8	1.34	0.084	0.11	0.360

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04085119 BOWER CREEK, AT HIGHWAY MM, NEAR DE PERE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, TOTAL RECOVER- ABLE (MG/L) (00921)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
MAY 1992									
*06...	1430	0.80	1.6	<10	30	--	--	4	480
*28...	1350	0.06	2.5	20	<10	--	--	6	536
JUL									
14...	1515	3.6	3.3	--	--	--	--	11	416
15...	0015	2.9	5.8	--	--	--	--	17	648
*16...	1105	0.60	4.2	1300	--	--	--	23	648
*23...	1500	0.05	--	140	--	--	--	22	512
SEP									
16...	1135	2.6	6.6	--	--	--	--	45	482
16...	1630	8.6	9.8	160000	--	--	--	38	496
16...	1745	20	5.5	17000	--	--	--	27	402
17...	0245	20	7.0	31000	--	--	--	62	506
18...	0545	17	--	--	--	--	--	48	430
18...	0650	26	--	--	--	--	--	42	436
18...	0725	41	--	--	--	--	--	44	432
18...	0850	111	--	--	--	--	--	260	618
18...	1115	166	--	--	--	--	--	832	1070
18...	1715	182	--	--	--	--	--	196	532
18...	2000	142	--	--	--	--	--	132	462
18...	2220	100	--	--	--	--	--	102	418
19...	0825	39	--	--	--	--	--	42	360
20...	0210	13	--	--	--	--	--	31	362
*20...	1015	8.2	--	2500	830	--	--	19	356
20...	2010	5.1	--	--	--	--	--	19	382
21...	2310	1.9	--	--	--	--	--	12	408
23...	2010	0.80	--	--	--	--	--	12	446
26...	2130	2.2	2.2	--	--	--	--	12	446
27...	0435	7.8	13	--	--	--	--	32	482
27...	0730	17	--	--	--	61	32	27	476
27...	1045	28	--	--	--	52	28	43	452
27...	1945	25	--	--	--	24	13	16	220
28...	0445	18	--	--	--	--	--	48	452
28...	1345	11	--	--	--	--	--	32	458
29...	0745	4.6	--	--	--	--	--	37	448
30...	0145	2.4	--	--	--	--	--	36	472

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE FIXED NON FILTER- ABLE (MG/L) (00540)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	COPPER, TOTAL RECOVER- ABLE (UG/L) (01119)	ZINC, TOTAL RECOVER- ABLE (UG/L) (01094)
MAY 1992									
06...	124	2	2	0.045	0.031	0.04	0.170	--	--
28...	172	4	2	<0.007	0.069	0.09	0.160	--	--
JUL									
14...	208	7	4	10.5	0.147	0.19	0.570	--	--
15...	326	13	4	19.5	0.155	0.20	0.370	--	--
16...	298	15	8	18.6	0.109	0.14	0.300	--	--
23...	180	8	14	5.69	0.083	0.11	0.180	--	--
SEP									
16...	142	32	13	0.665	0.219	0.28	0.740	--	--
16...	164	24	14	0.535	0.412	0.53	1.45	--	--
16...	130	20	7	0.306	0.067	0.09	0.540	--	--
17...	148	52	10	2.29	0.275	0.35	1.06	--	--
18...	134	36	12	1.09	0.325	0.42	1.19	--	--
18...	142	28	14	1.10	0.421	0.54	1.46	--	--
18...	128	32	12	1.11	0.390	0.50	1.40	--	--
18...	146	216	44	1.92	0.473	0.61	1.65	--	--
18...	162	736	96	2.47	0.431	0.56	1.64	--	--
18...	122	160	36	1.80	0.089	0.11	1.15	--	--
18...	114	108	24	2.04	0.074	0.09	1.10	--	--
18...	110	82	20	1.95	0.092	0.12	1.06	--	--
19...	108	34	8	1.67	0.093	0.12	0.810	--	--
20...	120	25	6	1.89	0.114	0.15	0.830	--	--
20...	112	15	4	1.80	0.148	0.19	0.800	--	--
20...	130	14	5	1.78	0.110	0.14	0.780	--	--
21...	134	9	3	1.39	0.113	0.15	0.670	--	--
23...	140	10	2	0.959	0.063	0.08	0.530	--	--
26...	142	9	3	0.508	0.049	0.06	0.390	--	--
27...	150	18	14	0.421	0.558	0.72	0.780	--	--
27...	152	20	7	0.494	0.157	0.20	0.610	4	<10
27...	144	35	8	0.901	0.008	0.01	0.570	6	10
27...	84	11	5	0.872	0.162	0.21	0.410	5	20
28...	160	37	11	1.55	0.351	0.45	0.970	--	--
28...	158	24	8	1.55	0.256	0.33	0.980	--	--
29...	158	26	11	0.927	0.648	0.83	0.880	--	--
30...	152	20	16	<0.007	0.592	0.76	0.830	--	--

* EQUAL-WIDTH INCREMENT SAMPLE

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085119 BOWER CREEK, AT HIGHWAY MM, NEAR DE PERE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR TOTAL RECOVER (77825)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)	CARBO- FURAN WATER WHOLE TOT.REC (UG/L) (82615)	CHLOR- DYRIFOS TOTAL RECOVER (UG/L) (38932)	CIS- PERME- THRIN WATER WHOLE REC (UG/L) (82418)	CYAN- AZINE TOTAL (UG/L) (81757)	DICAMBA (MED- IBEN) (BAN- VEL D) TOTAL (UG/L) (82052)	DIMETH- OATE WATER WHOLE TOTAL (UG/L) (39009)	EPTC WATER WHOLE REC (UG/L) (81894)
MAY 1992 *28...	1355	0.06	<0.10	0.4	<0.3	<1.0	<1.0	<0.30	<0.20	<1.0	<1.0

DATE	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	METHO- MYL TOTAL (UG/L) (39051)	METOLA- CHLOR IN WHOLE WATER (UG/L) (39356)	PARA- THION, TOTAL (UG/L) (39540)	PENDI- METH- ALIN TOTAL (UG/L) (79190)	PHORATE TOTAL (UG/L) (39023)	TERBU- FOS WAT, WH REC (UG/L) (82088)	TRANS PERME THRIN WATER WHOLE REC (UG/L) (82420)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	2,4-D, TOTAL (UG/L) (39730)
MAY 1992 28...	<0.20	<1.0	<0.20	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	13.1	6.6	9.9	7.8	6.3	7.0	.0	.0	.0	.0	.0	.0
2	21.6	9.6	14.6	6.4	.0	3.0	.0	.0	.0	.0	.0	.0
3	15.9	6.2	11.1	1.0	.0	.4	.0	.0	.0	.0	.0	.0
4	12.1	4.3	7.6	1.6	.0	.4	.1	.0	.0	.0	.0	.0
5	9.2	3.1	6.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	10.4	1.8	5.2	.0	.0	.0	.1	.0	.0	.0	.0	.0
7	14.0	.0	5.8	.0	.0	.0	.3	.0	.1	.0	.0	.0
8	19.9	4.4	11.9	.0	.0	.0	.2	.0	.1	.0	.0	.0
9	22.1	4.4	12.5	.0	.0	.0	.2	.0	.0	.0	.0	.0
10	14.0	.1	7.6	.0	.0	.0	.3	.0	.1	.0	.0	.0
11	19.2	4.5	10.0	.0	.0	.0	.3	.0	.1	.1	.0	.0
12	11.8	2.4	7.9	.0	.0	.0	.1	.0	.0	.1	.0	.0
13	17.4	.0	7.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	13.8	2.0	7.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
15	9.6	.0	2.8	.8	.0	.1	.0	.0	.0	.0	.0	.0
16	17.7	.0	8.8	1.9	.5	.9	.0	.0	.0	.0	.0	.0
17	25.0	10.6	16.0	1.6	.1	.6	.0	.0	.0	.0	.0	.0
18	11.1	.0	4.4	4.5	.4	2.7	.0	.0	.0	.0	.0	.0
19	11.6	.0	3.6	5.9	4.5	5.1	.0	.0	.0	.0	.0	.0
20	14.9	3.1	7.4	5.6	3.7	4.7	.0	.0	.0	.0	.0	.0
21	19.3	4.2	10.0	4.3	2.8	3.7	.0	.0	.0	.0	.0	.0
22	21.2	3.2	11.6	6.1	3.9	4.9	.0	.0	.0	.0	.0	.0
23	24.9	14.0	17.8	5.3	3.4	4.8	.0	.0	.0	.0	.0	.0
24	19.1	13.8	15.5	3.4	.7	2.1	.0	.0	.0	.0	.0	.0
25	15.1	6.3	9.4	.7	.0	.3	.0	.0	.0	.0	.0	.0
26	6.8	4.3	5.7	.7	.0	.2	.0	.0	.0	.0	.0	.0
27	8.5	6.2	7.1	.2	.0	.1	.0	.0	.0	.0	.0	.0
28	13.8	7.4	8.9	.2	.0	.1	.0	.0	.0	.0	.0	.0
29	11.0	8.4	9.8	.3	.0	.1	.0	.0	.0	.0	.0	.0
30	10.3	6.6	8.2	.9	.0	.4	.0	.0	.0	.0	.0	.0
31	6.6	5.6	6.0	---	---	---	.0	.0	.0	.0	.0	.0
MONTH	25.0	.0	9.0	7.8	.0	1.4	.3	.0	.0	.1	.0	.0

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04085119 BOWER CREEK, AT HIGHWAY MM, NEAR DE PERE, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	.0	.0	.0	.0	.0	.0	3.6	1.3	2.3	20.5	10.9	15.2
2	.0	.0	.0	.0	.0	.0	4.5	.3	2.2	18.3	15.4	16.9
3	.0	.0	.0	.0	.0	.0	5.3	1.5	3.5	15.3	11.4	12.6
4	.0	.0	.0	.0	.0	.0	7.1	2.6	4.8	14.2	9.8	11.9
5	.0	.0	.0	.0	.0	.0	9.2	3.3	6.1	14.3	9.2	11.8
6	.0	.0	.0	.0	.0	.0	9.9	4.8	7.5	15.6	10.7	13.0
7	.0	.0	.0	.4	.0	.1	12.3	7.8	9.9	15.7	10.5	13.1
8	.0	.0	.0	2.2	.2	1.2	10.6	7.5	9.1	19.1	12.5	15.8
9	.0	.0	.0	1.8	.0	.7	12.3	6.6	9.4	21.4	14.9	17.9
10	.0	.0	.0	.0	.0	.0	10.4	1.8	5.7	20.7	16.5	18.5
11	.0	.0	.0	.0	.0	.0	4.1	1.6	2.5	21.7	17.0	19.3
12	.0	.0	.0	.4	.0	.1	5.5	.3	2.8	21.1	19.0	20.1
13	.0	.0	.0	.6	.0	.2	4.6	2.9	3.7	20.3	16.6	18.3
14	.0	.0	.0	.8	.0	.2	5.9	2.7	4.0	16.7	13.9	15.2
15	.0	.0	.0	.9	.0	.3	5.7	4.2	4.9	16.2	12.5	14.5
16	.0	.0	.0	1.6	.0	.3	5.0	3.2	3.8	18.6	14.0	16.3
17	.0	.0	.0	.9	.0	.2	8.2	3.2	5.4	21.6	17.3	19.1
18	.0	.0	.0	1.1	.0	.3	8.2	5.9	6.9	20.6	15.4	17.8
19	.0	.0	.0	2.0	.0	.7	12.4	7.4	9.3	20.8	15.4	18.0
20	.0	.0	.0	3.6	.0	1.4	16.0	11.8	13.5	22.5	16.4	19.4
21	.0	.0	.0	.9	.0	.5	14.0	11.0	12.7	23.2	18.4	20.8
22	.0	.0	.0	2.8	.0	1.1	11.0	8.0	9.0	23.9	20.0	22.0
23	.0	.0	.0	3.9	.2	1.9	8.9	7.1	8.0	22.2	16.0	19.4
24	.0	.0	.0	5.5	1.1	3.2	8.2	6.7	7.4	15.5	12.8	13.9
25	.0	.0	.0	6.5	2.7	4.4	7.7	5.9	6.8	14.7	12.1	13.1
26	.0	.0	.0	4.2	.8	2.6	8.0	6.0	7.0	16.4	12.1	14.0
27	.0	.0	.0	4.9	.0	2.3	11.5	4.8	8.0	19.6	12.9	15.6
28	.0	.0	.0	5.1	.7	2.9	12.5	6.9	9.8	19.3	14.1	16.6
29	.0	.0	.0	3.4	1.4	2.5	14.2	9.8	11.6	20.7	14.9	17.8
30	---	---	---	7.2	1.0	3.7	15.3	10.5	12.7	20.0	16.9	18.2
31	---	---	---	6.2	3.6	5.0	---	---	---	22.8	16.1	19.1
MONTH	.0	.0	.0	7.2	.0	1.2	16.0	.3	7.0	23.9	9.2	16.6
	JUNE			JULY			AUGUST			SEPTEMBER		
1	21.9	17.6	19.7	23.9	17.7	20.1	21.7	19.0	20.3	19.1	15.0	16.7
2	24.4	17.8	20.8	22.0	18.2	20.0	22.1	20.2	21.2	19.0	16.9	18.0
3	24.6	18.8	21.5	20.5	18.9	19.7	21.6	20.0	20.8	20.9	17.5	19.0
4	23.0	19.5	21.3	21.6	17.2	19.3	22.3	18.9	20.6	18.9	16.5	17.9
5	23.7	19.8	21.3	21.0	17.5	19.3	21.1	18.9	20.2	21.5	16.8	18.9
6	22.5	19.5	20.9	25.0	18.0	20.9	21.4	18.8	20.2	20.3	19.3	19.7
7	21.2	18.7	19.9	21.8	18.6	20.3	21.1	20.1	20.7	19.1	18.0	18.4
8	21.0	17.9	19.1	23.9	20.0	21.6	21.3	19.6	20.4	19.3	16.6	17.9
9	23.1	17.3	19.9	26.3	20.3	22.9	23.1	20.6	21.9	17.0	15.9	16.4
10	22.9	18.2	20.3	24.7	21.1	22.7	26.0	22.6	23.7	15.6	14.1	15.0
11	26.1	18.9	22.1	22.3	20.2	21.2	22.9	20.8	21.9	17.2	13.3	15.0
12	25.7	20.3	23.2	20.2	18.3	19.2	21.0	18.1	19.5	18.1	13.9	15.9
13	27.3	22.1	24.4	19.2	17.3	18.2	18.1	16.6	17.4	19.1	15.9	17.3
14	23.9	20.7	22.6	19.7	16.0	17.8	17.0	15.6	16.4	18.3	17.4	17.7
15	20.4	18.7	19.5	20.6	16.1	18.3	17.4	14.5	16.1	17.8	17.0	17.4
16	19.8	17.5	18.7	21.6	17.9	19.6	17.9	15.5	16.8	18.7	17.2	18.0
17	19.6	17.2	18.4	24.0	18.9	21.2	20.5	16.6	18.4	18.3	17.8	18.1
18	22.0	17.8	19.5	24.3	19.3	21.5	21.1	18.5	19.8	17.9	15.9	17.5
19	18.6	16.1	17.3	22.8	19.5	21.1	20.3	17.6	19.1	15.8	13.7	14.6
20	18.1	14.1	15.9	22.3	19.3	20.4	20.0	17.2	18.6	15.5	12.6	14.0
21	19.0	14.1	16.3	24.8	18.0	20.9	21.2	18.0	19.6	15.4	14.4	14.8
22	20.3	15.0	17.1	20.1	17.9	18.8	22.8	18.9	20.7	15.3	12.4	13.9
23	17.6	15.3	16.3	21.3	17.2	18.9	23.5	19.6	21.4	13.1	10.8	11.8
24	15.3	14.6	15.0	24.7	18.1	21.2	25.1	21.2	23.0	14.3	10.9	12.3
25	19.6	14.1	16.4	24.7	19.4	21.9	25.8	22.0	23.8	14.3	11.7	13.0
26	17.7	15.8	16.6	25.7	21.4	23.3	24.1	18.8	20.7	14.8	13.5	13.9
27	21.8	15.1	18.1	25.0	20.7	22.5	18.6	17.2	17.8	14.3	12.8	13.7
28	21.6	16.0	18.8	25.1	19.9	22.3	17.1	16.0	16.6	13.1	11.0	12.2
29	19.9	17.3	18.7	23.8	19.9	21.6	18.5	15.0	16.6	11.4	9.1	10.2
30	24.1	16.2	19.5	20.9	19.3	19.9	17.8	15.9	16.8	11.7	9.5	10.5
31	---	---	---	20.3	18.3	19.2	17.7	15.4	16.4	---	---	---
MONTH	27.3	14.1	19.3	26.3	16.0	20.5	26.0	14.5	19.6	21.5	9.1	15.7

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085119 BOWER CREEK, AT HIGHWAY MM, NEAR DE PERE, WI--CONTINUED

SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED(TONS PER DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.07	4.4	.01	.01	8.5	4.8	.04	.00	.00	.00	.00
2	.00	.42	.34	.01	.01	4.5	.13	.02	.00	.00	.00	.00
3	.00	.20	.13	e.03	.02	4.9	.06	.02	.00	.00	.00	.00
4	.00	.12	.08	e.17	.03	12	.06	.01	.00	.00	.00	.00
5	.00	.07	.06	.14	.03	28	.06	.01	.00	.00	.00	.00
6	.00	.05	.05	.09	.02	134	.05	.01	.00	.00	.00	.00
7	.00	.04	.04	.05	.01	8.8	.07	.01	.00	.00	.00	.00
8	.00	.02	.04	e.15	.01	4.6	.09	.01	.00	.00	.00	.00
9	.00	.01	.08	e8.4	.01	79	.07	.01	.00	.00	.00	.00
10	.00	.01	.09	e1.8	.00	5.0	.07	.01	.00	.00	.00	.00
11	.00	.01	.08	e.18	.00	1.4	52	.00	.00	.00	.00	.00
12	.00	.01	47	e.16	.00	.50	23	.00	.00	.00	.00	.00
13	.00	.01	17	e2.6	.00	.18	.68	.00	.00	.01	.00	.00
14	.00	.01	1.2	e.20	.00	.07	.31	.00	.00	.11	.00	.00
15	.00	.04	.11	e.06	.00	.03	.49	.00	.00	.11	.00	.00
16	.00	.08	.08	.06	.00	.09	706	.00	.00	.04	.00	.64
17	.00	.07	.05	.04	.00	.27	7.4	.01	.00	.01	.00	2.2
18	.00	.09	.04	.03	.00	.16	1.0	.02	.00	.01	.00	91
19	.00	.13	.03	.02	.00	.09	5.0	.01	.00	.01	.00	5.2
20	.00	.07	.03	.02	.00	.07	15	.01	.00	.01	.00	.50
21	.00	.04	.02	.01	.00	.04	62	.00	.00	.01	.00	.12
22	.00	.03	.02	.01	.00	.03	.99	.00	.00	.00	.00	.05
23	.00	e.15	.02	.01	.01	.03	.43	.00	.00	.00	.00	.03
24	.00	e1.4	.02	.01	.03	.03	.27	.00	.00	.01	.00	.02
25	.00	e.16	.01	.01	.05	.09	.19	.00	.00	.00	.00	.01
26	.00	e.06	.01	.01	.07	.09	.13	.00	.00	.00	.00	.03
27	.00	.03	.01	.01	.57	.08	.10	.00	.00	.00	.00	1.5
28	.00	.02	.01	.01	7.2	.11	.06	.00	.00	.00	.00	.78
29	.72	.02	.01	.00	2.2	.36	.05	.00	.00	.00	.00	.39
30	.99	59	.01	.00	---	4.6	.05	.00	.00	.00	.00	.12
31	.12	---	.01	.01	---	6.9	---	.00	---	.00	.00	---
TOTAL	1.83	62.44	71.08	14.31	10.28	304.52	880.61	0.20	0.00	0.33	0.00	102.59
CAL YR 1991	TOTAL 825.55											
WTR YR 1992	TOTAL 1448.19											

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	12	77	.76	.71	174	68	2.2	.00	.00	.00	.00
2	.00	56	19	.77	1.3	157	9.1	1.4	.00	.00	.00	.00
3	.00	27	7.2	e3.4	1.9	121	5.8	1.1	.00	.00	.00	.00
4	.00	16	5.0	e19	2.5	163	5.7	1.1	.00	.00	.00	.00
5	.00	9.7	4.4	9.7	3.3	216	5.3	.83	.00	.00	.00	.00
6	.00	7.6	3.8	6.4	1.5	768	4.7	.69	.00	.00	.00	.00
7	.00	5.2	3.2	3.9	1.1	128	6.9	.54	.00	.00	.00	.00
8	.00	3.6	3.7	e16	.87	66	8.6	.50	.00	.00	.00	.00
9	.00	2.0	8.7	e160	.64	490	6.5	.52	.00	.00	.00	.00
10	.00	1.5	11	e68	.53	67	5.5	.43	.00	.00	.00	.00
11	.00	1.4	11	e20	.44	28	238	.38	.00	.00	.00	.00
12	.00	1.4	386	e18	.41	14	174	.29	.00	.09	.00	.00
13	.00	1.3	294	e84	.36	7.3	31	.36	.00	.39	.00	.00
14	.00	1.8	63	e22	.33	4.1	18	.27	.00	8.1	.00	.31
15	.00	7.4	11	e6.5	.32	2.8	19	.19	.00	4.0	.00	.04
16	.00	13	5.7	4.3	.32	9.1	2760	.15	.00	1.1	.00	28
17	.00	10	3.5	3.1	.28	27	142	1.0	.00	.35	.00	85
18	.00	12	2.6	1.9	.33	17	32	1.1	.00	.28	.00	764
19	.00	18	2.2	1.5	.35	9.8	47	.79	.00	.13	.00	173
20	.00	11	1.8	1.2	.43	7.4	123	.48	.00	.13	.00	35
21	.00	6.5	1.6	1.0	.44	4.8	360	.26	.00	.12	.00	11
22	.00	4.6	1.3	.89	.41	3.4	37	.16	.00	.04	.00	4.8
23	.00	e17	1.2	.76	1.6	3.2	14	.16	.00	.06	.00	2.9
24	.00	e60	1.1	.67	3.4	4.3	9.5	.23	.00	.10	.00	1.7
25	.00	e18	.97	.59	4.7	12	7.3	.22	.00	.01	.00	.99
26	.00	e6.5	.86	.54	5.1	12	5.3	.20	.00	.00	.00	2.0
27	.00	4.5	.80	.46	.27	9.7	4.2	.11	.00	.00	.00	56
28	.00	3.0	.74	.43	206	12	2.9	.08	.00	.00	.00	39
29	8.8	3.5	.70	.40	86	22	2.4	.06	.00	.00	.00	18
30	41	501	.70	.41	---	85	2.5	.03	.00	.00	.00	6.9
31	13	---	.73	.48	---	101	---	.02	---	.00	.00	---
TOTAL	62.80	842.5	934.50	457.06	352.57	2745.9	4155.2	15.85	0.00	14.90	0.00	1228.64
CAL YR 1991	TOTAL 10341.77											
WTR YR 1992	TOTAL 10809.92											

e Estimated

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04085119 BOWER CREEK, AT HIGHWAY MM, NEAR DE PERE, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

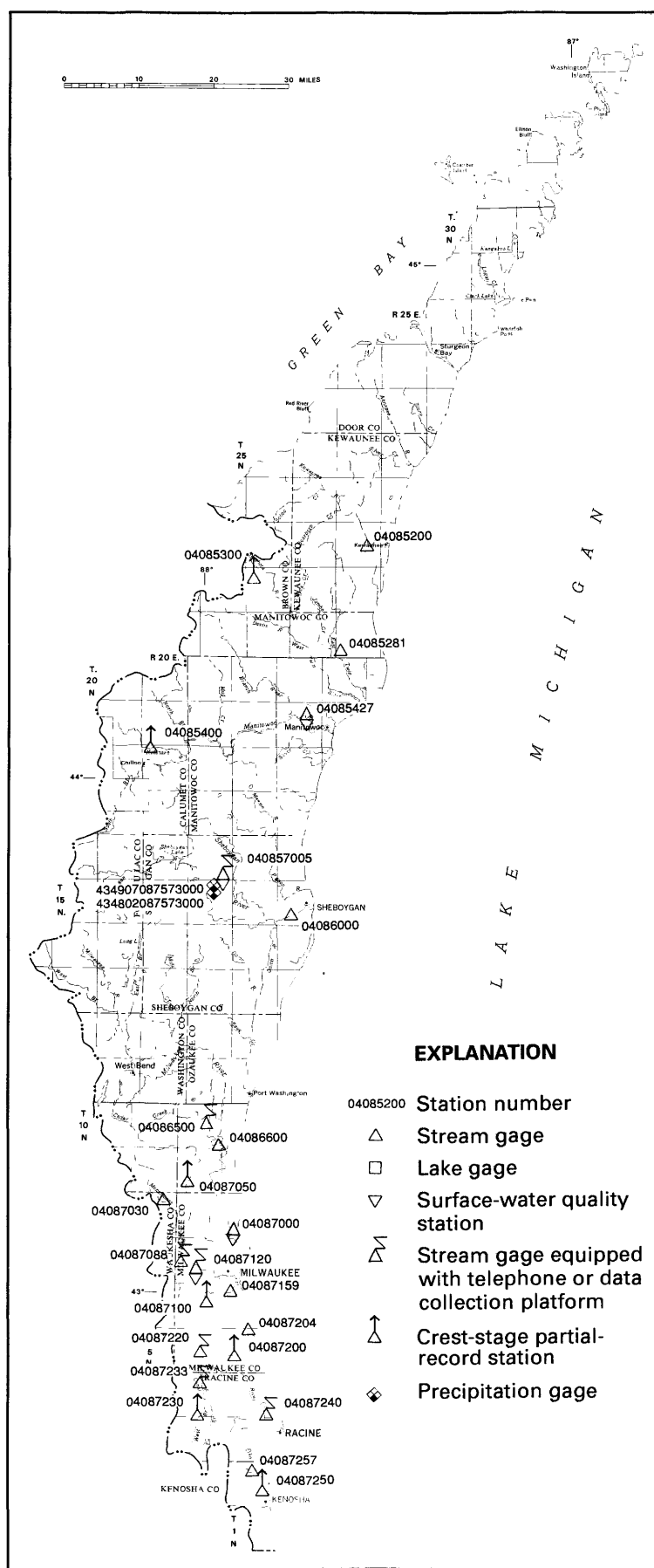
REMARKS.--Gage established on Oct. 1, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 12, Dec. 6, 7, 20-22, Jan. 22, 23, Feb. 15, 16, 18, 19, 23, 26, 28, and Mar. 15, 22. Recorded precipitation interpreted as a combination of rainfall and snowmelt; rainfall estimated to be 0.00 for Nov. 29, 30, and Mar. 9, 29, 31.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.54 in., Sept. 14, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.54 in., Sept. 14.

 RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
 DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.36	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
2	.02	.00	.00	.11	.00	.00	.00	.00	.00	.00	.39	.15
3	.00	.01	.00	.03	.00	.00	.00	.00	.00	.03	.13	.01
4	.28	.00	.00	.00	.00	.00	.00	.00	.15	.00	.01	.00
5	.08	.00	.00	.00	.00	.26	.00	.00	.03	.00	.00	.00
6	.01	.00	.00	.00	.00	.25	.00	.01	.00	.00	.00	.15
7	.00	.00	.00	.00	.00	.01	.03	.00	.00	.00	.09	.01
8	.00	.00	.00	.31	.00	.01	.00	.00	.01	.62	.08	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.25
10	.00	.00	.00	.00	.00	.00	.20	.00	.00	.23	.00	.02
11	.00	.00	.00	.00	.00	.00	.36	.00	.00	.03	.07	.01
12	.01	.00	.57	.12	.00	.00	.00	.04	.00	1.23	.06	.00
13	.35	.00	.01	.00	.00	.00	.00	.00	.10	.72	.00	.00
14	.08	.34	.00	.00	.00	.00	.00	.00	.04	.02	.00	2.54
15	.00	.02	.00	.00	.00	.00	.41	.00	.04	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.88	.55	.00	.01	.00	1.33
17	.00	.02	.00	.00	.00	.00	.00	.48	.58	.15	.00	.01
18	.04	.18	.00	.00	.00	.00	.00	.00	.02	.00	.19	1.32
19	.01	.00	.00	.00	.00	.00	.18	.00	.00	.37	.00	.00
20	.00	.00	.00	.00	.00	.00	.42	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
22	.00	.21	.00	.00	.00	.00	.01	.17	.01	.16	.00	.00
23	.04	.36	.00	.00	.00	.00	.00	.11	.20	.00	.00	.00
24	.76	.00	.00	.00	.00	.00	.00	.00	.07	.00	.00	.00
25	.35	.00	.00	.00	.00	.03	.00	.00	.21	.00	.25	.00
26	.22	.00	.00	.00	.00	.19	.00	.00	.01	.00	.21	.94
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.13
28	.12	.00	.00	.00	.00	.00	.09	.00	.00	.00	.02	.00
29	.84	.00	.00	.00	.00	.00	.08	.00	.06	.00	.01	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.05	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	3.28	1.50	0.58	0.57	0.00	0.75	2.68	1.36	1.53	3.57	1.53	6.87



LAKE MICHIGAN BASIN

STREAMS TRIBUTARY TO LAKE MICHIGAN

123

04085200 KEWAUNEE RIVER NEAR KEWAUNEE, WI

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

DRAINAGE AREA.--127 mi².

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

REVISED RECORDS.--WDR WI-79-1: Drainage area. WDR WI-85-1: 1962(M), 1965(M), 1967-69(M), 1971(M), 1973-74(M), 1976(M), 1978(M), 1980-82(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 579.64 ft above National Geodetic Vertical Datum of 1929 (Wisconsin State Highway Commission benchmark). Apr. 3, 1957, to Sept. 2, 1964, crest-stage gage only at same site and datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 4-9, 27-29, Dec. 1-20, 24, 25, and Jan. 8 to Mar. 23. Records good except those for ice-affected periods, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	56	300	37	27	140	245	89	27	19	15	12
2	14	72	120	38	28	270	151	83	26	18	16	12
3	13	66	80	48	28	290	114	74	25	18	17	13
4	13	41	50	65	29	250	105	68	24	18	21	12
5	16	32	40	73	27	320	101	64	32	17	17	12
6	16	24	45	64	27	540	96	60	32	16	16	13
7	15	20	52	57	24	560	104	57	29	16	15	13
8	15	20	58	62	21	340	110	54	27	17	17	13
9	14	21	62	100	19	380	102	52	26	18	16	13
10	13	23	66	160	19	440	98	50	24	18	16	14
11	13	24	70	110	18	370	211	48	23	19	14	13
12	13	25	90	90	16	190	695	49	22	31	14	13
13	13	26	260	84	17	130	449	53	20	71	14	12
14	14	30	240	74	18	88	239	50	21	87	14	35
15	15	52	140	54	19	72	189	47	23	84	14	60
16	15	62	110	45	20	66	683	45	21	59	14	55
17	14	52	82	38	21	86	1230	63	22	44	13	79
18	14	51	72	34	22	100	388	69	39	41	14	240
19	13	60	66	32	23	100	239	57	33	37	15	409
20	13	56	56	30	23	96	240	50	26	30	14	233
21	13	48	52	29	22	86	405	44	22	26	13	117
22	12	42	48	28	24	74	325	42	21	26	13	75
23	12	54	45	28	25	70	203	45	21	25	12	53
24	14	86	39	27	27	73	155	46	23	24	12	42
25	40	78	37	28	31	87	132	40	24	22	12	36
26	48	54	37	28	35	105	119	38	24	20	14	34
27	39	44	37	28	35	91	107	35	22	18	14	52
28	32	41	38	28	45	90	97	33	21	17	14	73
29	38	38	38	28	60	114	98	31	20	16	14	69
30	76	229	37	28	---	206	96	30	20	16	13	52
31	68	---	36	29	---	314	---	28	---	15	13	---
TOTAL	671	1527	2503	1604	750	6138	7526	1594	740	903	450	1879
MEAN	21.6	50.9	80.7	51.7	25.9	198	251	51.4	24.7	29.1	14.5	62.6
MAX	76	229	300	160	60	560	1230	89	39	87	21	409
MIN	12	20	36	27	16	66	96	28	20	15	12	12
CFSM	.17	.40	.64	.41	.20	1.56	1.98	.40	.19	.23	.11	.49
IN.	.20	.45	.73	.47	.22	1.80	2.20	.47	.22	.26	.13	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992, BY WATER YEAR (WY)

	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
MEAN	46.8	64.1	51.6	36.9	57.5	284	204	84.8	71.4	29.8	31.6	58.0																	
MAX	221	458	154	265	314	567	407	354	483	95.2	113	454																	
(WY)	1985	1986	1983	1973	1984	1986	1971	1973	1990	1969	1975	1986																	
MIN	10.1	10.9	9.10	9.83	11.9	77.5	56.4	21.2	12.3	8.29	7.90	8.98																	
(WY)	1967	1977	1977	1977	1977	1970	1990	1977	1988	1965	1970	1966																	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1964 - 1992
ANNUAL TOTAL	31356	26285	
ANNUAL MEAN	85.9	71.8	85.7
HIGHEST ANNUAL MEAN			176
LOWEST ANNUAL MEAN			35.7
HIGHEST DAILY MEAN	1400	Apr 15	5950
LOWEST DAILY MEAN	12	Oct 22	5.9
ANNUAL SEVEN-DAY MINIMUM	13	Oct 17	6.3
INSTANTANEOUS PEAK FLOW			(a)8570
INSTANTANEOUS PEAK STAGE			(b)16.03
INSTANTANEOUS LOW FLOW			(c)4.0
ANNUAL RUNOFF (CFSM)	.68	.57	.68
ANNUAL RUNOFF (INCHES)	9.18	7.70	9.17
10 PERCENT EXCEEDS	200	152	168
50 PERCENT EXCEEDS	39	37	30
90 PERCENT EXCEEDS	15	14	12

(a) Gage height, 16.00 ft, from crest-stage gage

(b) Backwater from ice

(c) Also occurred on Aug. 25, Sept. 1, 4, 5

(d) Result of freezeup

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085281 EAST TWIN RIVER AT MISHICOT, WI

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

DRAINAGE AREA.--110 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 584.72 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Sept. 16-30 and ice-affected periods, Nov. 5-11, 27-29, Dec. 5-21, Jan. 13-21, 24-26, Feb. 7-14, and Feb. 29 to Mar. 19. Records good except those for estimated daily discharges, which are fair. Occasional regulation caused by recreation dam 0.3 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	82	290	37	26	68	154	102	23	16	11	9.7
2	11	105	223	40	26	110	136	95	23	15	11	9.6
3	11	87	163	56	28	180	117	88	22	15	11	10
4	12	61	110	74	28	180	106	78	21	14	12	9.8
5	17	43	96	65	27	200	100	71	23	13	12	9.6
6	18	36	80	63	27	280	95	65	27	13	11	10
7	17	31	72	60	25	390	105	61	25	12	11	11
8	14	28	66	65	25	350	114	56	23	14	14	11
9	13	27	64	132	22	240	113	53	23	18	13	16
10	13	28	66	150	19	170	110	50	21	18	12	11
11	13	30	84	118	21	120	172	47	20	17	12	11
12	13	32	120	91	19	100	317	48	19	28	12	11
13	13	34	240	82	18	84	287	55	17	43	12	9.8
14	15	39	180	70	19	72	224	54	19	56	12	41
15	17	73	130	64	20	66	174	48	20	44	11	60
16	16	89	110	50	21	60	422	44	19	28	11	70
17	16	74	82	44	21	62	797	58	18	22	10	120
18	17	73	70	36	23	68	563	69	18	20	11	190
19	16	79	54	32	25	70	339	60	18	20	11	290
20	15	73	46	29	25	78	260	51	17	20	11	170
21	14	63	44	27	25	71	320	44	16	21	10	110
22	14	56	45	27	25	66	313	39	16	19	9.3	66
23	14	72	45	29	27	65	248	38	16	18	9.2	45
24	27	117	41	28	30	66	188	38	17	18	9.2	34
25	186	101	39	25	32	74	152	37	20	16	9.9	30
26	134	68	35	25	32	85	134	34	20	15	11	33
27	125	58	35	25	34	86	118	33	19	14	12	48
28	87	54	36	25	63	85	106	30	16	13	12	64
29	76	56	37	25	47	87	105	28	15	12	11	58
30	98	268	37	25	---	102	108	27	16	12	11	50
31	89	---	37	26	---	128	---	25	---	12	10	---
TOTAL	1152	2037	2777	1645	780	3863	6497	1626	587	616	345.6	1618.5
MEAN	37.2	67.9	89.6	53.1	26.9	125	217	52.5	19.6	19.9	11.1	53.9
MAX	186	268	290	150	63	390	797	102	27	56	14	290
MIN	11	27	35	25	18	60	95	25	15	12	9.2	9.6
CFSM	.34	.62	.81	.48	.24	1.13	1.97	.48	.18	.18	.10	4.9
IN.	.39	.69	.94	.56	.26	1.31	2.20	.55	.20	.21	.12	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1992, BY WATER YEAR (WY)

	MEAN	53.9	71.3	54.8	35.8	56.7	219	192	84.8	62.7	24.0	30.3	53.5
MAX	228	365	144	156	307	435	413	331	440	56.8	108	345	
(WY)	1985	1986	1974	1973	1984	1986	1979	1973	1990	1990	1980	1986	
MIN	9.80	11.9	7.72	7.70	9.39	34.5	53.3	20.2	9.19	8.42	6.75	5.63	
(WY)	1977	1977	1977	1977	1977	1980	1990	1977	1988	1988	1988	1976	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1972 - 1992

ANNUAL TOTAL	26760.0	23544.1	77.9	
ANNUAL MEAN	73.3	64.3	151	1986
HIGHEST ANNUAL MEAN			34.5	1977
LOWEST ANNUAL MEAN			2930	Jun 24 1990
HIGHEST DAILY MEAN	558	Apr 15	9.2	Aug 23 1988
LOWEST DAILY MEAN	8.9	Sep 1	9.8	Aug 31 1988
ANNUAL SEVEN-DAY MINIMUM	9.6	Sep 6	872	Apr 17 1990
INSTANTANEOUS PEAK FLOW			9.04	Apr 17 1979
INSTANTANEOUS PEAK STAGE			9.2	Aug 22 1979
INSTANTANEOUS LOW FLOW			.58	.71
ANNUAL RUNOFF (CFSM)	.67		7.96	9.62
ANNUAL RUNOFF (INCHES)	9.05			
10 PERCENT EXCEEDS	180		135	182
50 PERCENT EXCEEDS	36		35	31
90 PERCENT EXCEEDS	12		12	11

(a) Gage height, 13.35 ft

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

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

DRAINAGE AREA.--526 mi².

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 610.12 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: May 25 to July 1, Aug. 12-20, 27-30, and ice-affected periods, Nov. 5-16,
and Nov. 25 to Mar. 21. Records good except those for May 25 to July 1, Aug. 12-20 and 27-30, which are fair,
and the periods of ice affect, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	576	520	290	170	350	682	617	92	50	30	36
2	21	653	450	300	180	700	697	578	88	43	31	38
3	23	618	420	320	170	740	697	544	86	37	35	33
4	23	531	400	350	150	800	697	481	90	37	40	29
5	30	490	380	310	150	880	697	415	96	43	32	24
6	30	460	380	290	140	1000	689	369	88	40	30	30
7	45	430	420	270	130	1100	685	323	80	34	30	33
8	45	400	520	270	120	1100	685	277	72	29	38	29
9	36	350	700	310	110	1000	685	235	64	25	31	36
10	30	340	640	320	110	900	685	205	56	32	36	41
11	29	320	700	310	110	880	820	179	62	35	35	38
12	28	300	960	330	100	820	923	158	58	78	35	39
13	28	280	760	330	100	780	886	163	52	88	38	35
14	27	270	640	310	100	740	883	159	48	138	37	64
15	27	300	560	290	110	700	873	158	47	171	35	82
16	28	330	500	280	100	720	1050	155	48	198	33	116
17	31	342	440	270	100	720	1290	162	49	185	34	176
18	30	361	390	260	110	680	1390	189	52	168	35	283
19	30	388	370	250	110	640	1150	187	56	142	35	334
20	29	397	360	250	110	620	1090	177	54	118	33	292
21	29	390	350	240	110	580	1140	150	50	99	31	268
22	28	377	340	240	120	556	1140	134	49	77	30	261
23	28	410	340	240	110	532	1100	141	49	67	29	249
24	32	475	330	230	120	510	1010	135	52	57	29	209
25	259	420	330	210	120	504	944	140	56	56	29	176
26	361	380	330	200	120	540	881	130	60	54	30	158
27	375	360	330	190	130	531	819	120	58	50	34	158
28	394	340	320	190	150	582	759	110	56	47	35	166
29	447	370	310	180	170	582	719	120	52	41	34	162
30	544	580	310	190	---	592	677	100	52	40	33	136
31	551	---	300	180	---	637	---	96	---	34	31	---
TOTAL	3608	12238	14100	8200	3630	22016	26443	7107	1872	2313	1028	3731
MEAN	116	408	455	265	125	710	881	229	62.4	74.6	33.2	124
MAX	551	653	960	350	180	1100	1390	617	96	198	40	334
MIN	20	270	300	180	100	350	677	96	47	25	29	24
CFSM	.22	.78	.86	.50	.24	1.35	1.68	.44	.12	.14	.06	.24
IN.	.26	.87	1.00	.58	.26	1.56	1.87	.50	.13	.16	.07	.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1992, 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
MEAN	237	282	205	119	202	952	1013	380	222	98.0	74.1	170									
MAX	1465	1367	575	503	1104	1951	2672	991	618	354	343	1711									
(WY)	1987	1986	1983	1973	1984	1985	1979	1978	1990	1990	1986	1986									
MIN	18.8	23.1	16.3	20.4	20.7	226	222	53.8	18.1	13.6	13.7	14.9									
(WY)	1977	1977	1977	1977	1977	1980	1990	1977	1988	1988	1988	1976									

SUMMARY STATISTICS

	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1972 - 1992
ANNUAL TOTAL	116819	106286	
ANNUAL MEAN	320	290	329
HIGHEST ANNUAL MEAN			728
LOWEST ANNUAL MEAN			82.7
HIGHEST DAILY MEAN	1950	1390	8000
LOWEST DAILY MEAN	16	20	7.0
ANNUAL SEVEN-DAY MINIMUM	19	27	8.1
INSTANTANEOUS PEAK FLOW		(a)1480	(b)8280
INSTANTANEOUS PEAK STAGE		(c)11.09	(d)13.30
INSTANTANEOUS LOW FLOW		18	6.8
ANNUAL RUNOFF (CFSM)	.61	.55	.63
ANNUAL RUNOFF (INCHES)	8.26	7.52	8.51
10 PERCENT EXCEEDS	958	700	900
50 PERCENT EXCEEDS	110	178	120
90 PERCENT EXCEEDS	28	31	29

(a) Gage height, 7.87 ft

(b) Gage height, 13.24 ft

(c) Ice jam

(d) From floodmarks

(e) Also occurred Oct. 3-5, 1989

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	BAROMETRIC PRESSURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 1991												
31...	0955	--	551	520	8.2	5.0	21	15.4	763	121	K770	K2500
MAR 1992												
19...	1020	640	--	507	8.2	1.0	2.6	14.4	745	104	610	260
JUN												
17...	0828	49	--	735	8.5	18.0	3.3	5.9	736	65	100	100
AUG												
12...	1445	35	--	660	8.4	19.0	15	8.6	749	95	160	510

DATE	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)
OCT 1991											
31...	250	55	27	11	8.8	210	--	172	62	33	0.20
MAR 1992											
19...	260	56	28	12	6.1	235	--	192	39	31	0.20
JUN											
17...	380	78	46	22	3.4	362	4	304	44	50	0.20
AUG											
12...	340	63	43	21	3.9	340	3	284	37	46	0.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 1991											
31...	12	340	320	0.040	1.50	0.240	0.250	1.7	0.340	0.270	0.220
MAR 1992											
19...	6.7	327	301	0.010	1.40	0.060	0.030	1.1	0.080	0.050	0.020
JUN											
17...	3.1	463	431	<0.010	0.320	0.050	0.030	1.6	0.110	0.080	0.080
AUG											
12...	9.0	408	396	0.010	0.340	0.040	0.020	1.4	0.210	0.070	0.060

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

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04085427 MANITOWOC RIVER AT MANITOWOC, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 1991							
31...	0955	--	551	10	28	<3	140
MAR 1992							
19...	1020	640	--	<10	22	<3	90
JUN							
17...	0828	49	--	<10	25	<3	13
AUG							
12...	1445	35	--	<10	37	<3	12

DATE	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)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
OCT 1991							
31...	<4	12	<10	2	<1	110	<6
MAR 1992							
19...	4	17	<10	2	<1	97	<6
JUN							
17...	7	9	<10	3	<1	410	<6
AUG							
12...	4	32	<10	1	<1	660	<6

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1991								
02...	1604	--	24	692	16.5	--	--	--
31...	0955	--	551	520	5.0	45	67	95
NOV								
20...	0903	--	395	706	6.5	--	--	--
DEC								
24...	1015	--	333	722	1.5	--	--	--
FEB 1992								
26...	1250	--	116	810	1.0	--	--	--
MAR								
19...	1020	640	--	507	1.0	9	16	92
25...	1529	--	513	613	7.0	--	--	--
MAY								
14...	1420	--	155	487	16.0	--	--	--
JUN								
17...	0828	49	--	735	18.0	36	4.8	50
JUL								
29...	1450	--	39	720	23.0	--	--	--
AUG								
12...	1445	35	--	660	19.0	26	2.5	95

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 1/4 NW 1/4 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 current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Jan. 9, 1991. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 27, Dec. 3, 6, 8, 12, 21, 22, Jan. 13, 23, Feb. 15-17, 26, and Mar. 20, 22, 26, 31. Recorded precipitation interpreted as a combination of rainfall and snowmelt; rainfall estimated to be 0.00 for Feb. 18, 19, and Mar. 5, 6, 29.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.03 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.76 in., Oct. 24.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.53	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
2	.03	.00	.00	.27	.00	.00	.00	.00	.00	---	.04	.18
3	.07	.00	.00	.02	.00	.00	.00	.00	.00	---	.04	.00
4	.69	.00	.00	.00	.00	.00	.00	.00	.31	---	.00	.00
5	.24	.00	.00	.00	.00	.00	.00	.00	.15	---	.00	.00
6	.03	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.33
7	.00	.00	.00	.00	.00	.04	.01	.00	.00	---	.98	.00
8	.00	.00	.00	.27	.00	.04	.01	.00	.00	---	.01	.00
9	.00	.00	.00	.00	.00	.53	.01	.00	.00	---	.00	.73
10	.00	.00	.00	.00	.00	.00	.82	.00	.00	---	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.37	.00	---	.00	.00
12	.00	.00	.00	.14	.00	.00	.00	.00	.00	---	.67	.00
13	.33	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
14	.07	.45	.00	.00	.00	.00	.00	.00	.02	---	.00	1.15
15	.01	.04	.00	.00	.00	.00	.16	.00	.31	---	.00	.00
16	.00	.00	.00	.00	.00	.30	.64	.04	.01	---	.00	1.06
17	.00	.06	.00	.00	.00	.00	.00	.05	.34	---	.00	.05
18	.00	.38	.00	.00	.00	.00	.00	.00	.21	---	.13	1.01
19	.13	.02	.00	.00	.00	.00	.11	.00	.01	---	.00	.00
20	.00	.00	.00	.00	.00	.00	.03	.00	.00	---	.00	.15
21	.00	.00	.00	.00	.00	.00	.06	.00	.00	---	.00	.06
22	.00	.25	.00	.06	.00	.00	.00	.00	.00	---	.00	.00
23	.00	.26	.00	.00	.00	.02	.09	.04	.00	.00	.00	.00
24	1.76	.00	.00	.00	.00	.00	.03	.00	---	.00	.00	.00
25	.24	.00	.00	.00	.00	.08	.00	.00	---	.00	.04	.00
26	.48	.00	.00	.00	.00	.00	.03	.00	---	.00	.00	1.17
27	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.04	.07
28	.16	.00	.00	.00	.00	.00	.07	.00	---	.00	.00	.00
29	.93	.79	.00	.00	.00	.00	.03	.00	---	.00	.00	.00
30	.05	.10	.00	.00	---	.00	.00	.00	---	.00	.00	.00
31	.01	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	5.23	2.88	0.00	0.76	0.00	1.01	2.10	0.50	---	---	1.95	5.96

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 1/4 NW 1/4 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 current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Jan. 9, 1991. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 27, Dec. 3, 6, 8, 12, 20, 21, Jan. 13, 23, Feb. 15, 16, 25, 26, and Mar. 14, 20-22, 26, 30. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Feb. 18, 19, and Mar. 5, 6, 29.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.61 in., Oct. 24, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.61 in., Oct. 24.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.57	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.02	.00	.00	.26	.00	.00	.00	.00	.00	.00	.09	.18
3	.07	.00	.00	.02	.00	.00	.00	.00	.00	.02	.07	.00
4	.73	.00	.00	.00	.00	.00	.00	.00	.28	.00	.01	.00
5	.28	.00	.00	.00	.00	.00	.00	.00	.16	.00	.00	.00
6	.03	.00	.00	.00	.00	.00	.00	.00	---	.00	.00	.30
7	.00	.00	.00	.00	.00	.03	.01	.00	---	.00	.88	.00
8	.00	.00	.00	.22	.00	.02	.02	.00	---	.13	.01	.00
9	.00	.00	.00	.01	.00	.54	.00	.00	---	.00	.00	.68
10	.00	.00	.00	.00	.00	.00	.89	.00	---	.29	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.34	---	.00	.00	.00
12	.00	.00	.00	.14	.00	.00	.00	.00	---	.46	.84	.00
13	.30	.00	.00	.00	.00	.00	.00	.00	---	.87	.01	.00
14	.06	.42	.00	.00	.00	.00	.00	.00	---	.01	.00	.92
15	.00	.03	.00	.00	.00	.00	.19	.00	---	.00	.00	.00
16	.00	.01	.00	.00	.00	.33	.68	.02	---	.00	.00	.95
17	.00	.07	.00	.00	.00	.00	.00	.03	---	.17	.00	.09
18	.00	.35	.00	.00	.00	.00	.00	.00	---	.00	.08	1.00
19	.15	.02	.00	.00	.00	.00	.11	.00	---	.01	.00	.00
20	.00	.00	.00	.00	.01	.00	.01	.00	---	.00	.00	.14
21	.00	.00	.00	.00	.00	.00	.06	.00	---	.00	.00	.05
22	.00	.24	.00	.05	.00	.00	.00	.00	---	.00	.00	.00
23	.00	.27	.00	.00	.00	.00	.09	.07	---	.01	.00	.00
24	1.61	.00	.00	.00	.00	.00	.05	.00	.10	.00	.00	.00
25	.27	.00	.00	.00	.00	.10	.00	.00	.36	.00	.05	.00
26	.47	.00	.00	.00	.00	.00	.03	.00	.01	.00	.00	.75
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.07
28	.14	.00	.00	.00	.00	.00	.06	.00	.00	.00	.01	.00
29	.84	.58	.00	.00	.00	.00	.04	.00	.06	.00	.00	.00
30	.05	.09	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.01	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	5.03	2.65	0.00	0.70	0.01	1.02	2.24	0.46	---	1.97	2.07	5.13

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 1/4 NW 1/4 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 current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 760 ft from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 4, 6-10, 24-26, 28, Dec. 2-9, 15-18, Jan. 16 to Feb. 2, Feb 5, and 7-15. Records are good except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	15	22	4.8	4.5	24	9.5	5.7	2.5	2.5	2.0	1.7
2	1.7	14	12	5.6	4.5	21	8.3	5.4	2.4	2.4	2.1	1.8
3	1.7	9.1	8.0	7.5	4.4	15	7.7	4.8	2.4	2.3	2.1	1.8
4	2.3	5.8	7.6	7.5	4.4	13	7.4	4.5	2.4	2.2	2.1	1.7
5	3.4	5.7	7.4	6.6	4.3	14	6.7	4.3	3.1	2.2	2.1	1.7
6	2.9	4.7	7.2	6.3	4.3	32	6.4	4.1	2.8	2.1	2.1	2.0
7	2.6	4.6	9.8	6.1	4.2	25	6.6	4.1	2.7	2.1	2.2	2.0
8	2.6	4.4	11	8.3	4.1	19	6.3	4.1	2.5	2.3	3.3	1.8
9	2.5	4.2	9.8	13	4.0	36	6.0	4.1	2.5	2.3	2.7	2.5
10	2.4	4.1	16	9.7	3.9	26	8.6	3.9	2.4	2.6	2.6	2.3
11	2.4	4.6	15	7.9	3.8	26	27	3.7	2.4	2.4	2.3	2.0
12	2.2	4.6	36	7.3	3.8	14	15	4.5	2.3	2.8	3.0	2.0
13	2.3	4.8	36	8.3	3.8	11	10	4.1	2.2	3.6	2.8	1.9
14	2.8	5.6	25	13	3.7	7.7	7.4	3.8	2.1	5.3	2.4	2.9
15	2.7	11	18	9.9	3.7	7.4	5.5	3.7	2.2	4.3	2.3	3.0
16	2.6	9.3	14	8.0	3.5	9.0	28	3.5	2.3	3.7	2.2	4.5
17	2.7	7.7	11	7.2	3.5	13	22	3.5	2.3	3.4	2.2	4.4
18	2.7	14	9.7	6.5	3.5	10	16	3.3	2.4	3.1	2.1	8.5
19	2.6	11	8.6	6.1	3.5	8.5	14	3.2	2.5	2.8	2.1	4.7
20	2.7	8.7	7.5	5.9	3.5	7.8	14	3.2	2.4	2.7	2.0	3.5
21	2.9	7.4	8.0	5.6	3.7	7.1	13	3.1	2.2	2.5	2.0	3.3
22	2.9	6.6	8.3	5.4	3.9	8.7	10	2.9	2.1	2.4	1.9	2.9
23	2.8	12	8.4	5.2	5.1	7.1	9.1	2.9	2.2	2.4	1.9	2.5
24	4.7	8.0	7.1	5.1	5.5	13	8.7	2.8	2.2	2.3	1.9	2.3
25	14	7.0	5.3	4.9	4.7	20	7.9	2.7	2.4	2.3	2.0	2.2
26	11	6.0	4.7	4.8	4.6	19	7.2	2.6	2.8	2.4	1.9	2.4
27	10	6.4	4.6	4.7	9.6	16	6.7	2.6	2.8	2.2	1.9	4.4
28	7.5	5.6	4.7	4.7	18	13	6.1	2.6	2.7	2.2	1.8	3.4
29	17	6.8	4.8	4.6	18	13	6.2	2.6	2.6	2.1	1.7	2.8
30	16	36	4.8	4.6	---	12	6.2	2.6	2.6	2.0	1.7	2.6
31	11	---	4.8	4.5	---	11	---	2.6	---	2.1	1.6	---
TOTAL	149.3	254.7	357.1	209.6	152.0	479.3	313.5	111.5	73.4	82.0	67.0	85.5
MEAN	4.82	8.49	11.5	6.76	5.24	15.5	10.4	3.60	2.45	2.65	2.16	2.85
MAX	17	36	36	13	18	36	28	5.7	3.1	5.3	3.3	8.5
MIN	1.7	4.1	4.6	4.5	3.5	7.1	5.5	2.6	2.1	2.0	1.6	1.7
CFSM	.51	.89	1.21	.71	.55	1.63	1.10	.38	.26	.28	.23	.30
IN.	.58	1.00	1.40	.82	.60	1.88	1.23	.44	.29	.32	.26	.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	4.40	6.98	8.49	5.13	6.52	14.4	11.2	4.05	3.90	2.76	2.32	2.50
MEAN	4.40	6.98	8.49	5.13	6.52	14.4	11.2	4.05	3.90	2.76	2.32	2.50
MAX	4.82	8.49	11.5	6.76	7.84	15.5	12.0	4.51	5.36	2.88	2.48	2.85
(WY)	1992	1992	1992	1992	1991	1992	1991	1991	1991	1991	1991	1992
MIN	3.98	5.48	5.45	3.49	5.24	13.4	10.4	3.60	2.45	2.65	2.16	2.15
(WY)	1991	1991	1991	1991	1992	1991	1992	1992	1992	1992	1992	1991

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	2394.6	2334.9	
ANNUAL MEAN	6.56	6.38	6.05
HIGHEST ANNUAL MEAN			6.38
LOWEST ANNUAL MEAN			5.73
HIGHEST DAILY MEAN	40	36	40
LOWEST DAILY MEAN	1.7	1.6	1.6
ANNUAL SEVEN-DAY MINIMUM	1.8	1.7	1.7
INSTANTANEOUS PEAK FLOW		69	69
INSTANTANEOUS PEAK STAGE		5.92	(b)6.99
INSTANTANEOUS LOW FLOW		1.6	1.6
ANNUAL RUNOFF (CFSM)	.69	.67	.64
ANNUAL RUNOFF (INCHES)	9.38	9.14	8.66
10 PERCENT EXCEEDS	14	14	13
50 PERCENT EXCEEDS	4.3	4.3	4.1
90 PERCENT EXCEEDS	2.1	2.1	2.1

(a) Also occurred Mar. 9, 1992

(b) Backwater from ice

(c) Also occurred Aug. 31, Sept. 1-3, 12, 30, 1991, Aug. 30 and Sept. 1, 1992

(d) Also occurred Sept. 1

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1990 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1990 to current year.

DISSOLVED OXYGEN: October 1990 to current year, open-water periods.

SUSPENDED-SOLIDS DISCHARGE: October 1990 to current year.

TOTAL-PHOSPHORUS DISCHARGE: October 1990 to current year.

INSTRUMENTATION.--Stage-activated water-quality sampler since October 1990. Continuous water-temperature recorder since October 1990. Dissolved-oxygen recorder during open-water periods since October 1990.

REMARKS.--Chemical analyses by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated. Dissolved-oxygen concentrations greater than 20.0 mg/L are out of calibration range of meter.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 29.5°C, June 27, 29, 1991; minimum observed, 0.0°C, many days during winter period.

DISSOLVED OXYGEN: Maximum observed, 19.1 mg/L, Nov. 2, 1990; minimum observed, 0.2 mg/L, Sept. 18, 1992.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 27.7 tons, Apr. 10, 1991; minimum daily, 0.01 ton, many days during 1992 water year.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 161 lb, Apr. 10, 1991; minimum daily, 0.35 lb, July 7, 1992.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 27.5°C, June 12; minimum observed, 0.0°C, many days during winter period.

DISSOLVED OXYGEN: Maximum observed, 17.6 mg/L, May 16; minimum observed, 0.2 mg/L, Sept. 18.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 23 tons, Mar. 9; minimum daily, 0.01 ton, many days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 120 lb, Nov. 30; minimum daily, 0.35 lb, July 7.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCOCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE TOTAL (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
OCT 1991								
*13...	1430	--	2.2	2.5	320	100	2	424
24...	1735	--	6.4	11	--	--	66	500
25...	0030	--	12	15	--	--	172	608
25...	0300	--	20	19	--	--	376	806
25...	1500	--	12	6.4	--	--	84	512
26...	0300	--	10	4.3	--	--	54	480
26...	1500	--	12	11	--	--	70	516
27...	0300	--	12	4.3	--	--	40	486
27...	1500	--	9.6	--	--	--	13	430
28...	0300	--	8.2	--	--	--	19	440
28...	1500	--	7.1	--	--	--	8	430
29...	0300	--	7.1	--	--	--	23	448
29...	0920	--	13	--	--	--	76	534
29...	1220	--	20	--	--	--	144	576
29...	1540	--	28	--	--	--	324	714
30...	0340	--	18	--	--	--	94	512
30...	1540	--	15	--	--	--	46	468
31...	0340	--	11	--	--	--	51	474
31...	1540	--	10	--	--	--	50	464
NOV								
01...	0340	--	9.0	--	--	--	37	464
01...	1310	--	16	--	--	--	390	880
01...	1520	--	23	--	--	--	192	592
02...	0320	--	17	--	--	--	110	550
02...	1520	--	13	3.1	--	--	39	474
03...	0320	--	9.6	2.1	--	--	29	476
05...	2100	--	5.6	--	--	--	44	510
06...	0855	4.7	--	--	--	--	30	498
06...	2055	4.7	--	--	--	--	21	458
07...	2055	4.6	--	--	--	--	58	478
08...	1055	4.4	--	--	--	--	40	464
08...	2255	4.4	--	--	--	--	49	466
09...	1055	4.2	--	--	--	--	35	462
09...	2255	4.2	--	2.0	--	--	35	446
10...	1055	4.1	--	1.6	--	--	31	438
*10...	1330	4.1	--	1.7	520	690	9	458
14...	2130	--	7.1	--	--	--	82	508
15...	0930	--	11	--	--	--	58	500
15...	2130	--	11	--	--	--	50	478
16...	0930	--	9.3	--	--	--	39	470
16...	2130	--	8.5	--	--	--	25	454
17...	0930	--	7.7	--	--	--	35	466
17...	2130	--	7.7	--	--	--	28	460

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE FIXED NON FILTER- ABLE (MG/L) (00540)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS NH4) (71846)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)
OCT 1991							
13...	116	--	<2	0.377	<0.005	--	0.080
24...	148	42	24	0.744	0.300	0.39	0.510
25...	176	118	54	0.679	0.453	0.58	0.880
25...	208	276	100	0.770	0.335	0.43	1.03
25...	144	60	24	1.55	0.066	0.08	0.290
26...	138	39	15	1.10	0.059	0.08	0.160
26...	158	42	28	1.12	0.448	0.58	0.600
27...	152	27	13	1.88	0.108	0.14	0.220
27...	124	8	5	1.53	0.065	0.08	0.140
28...	126	11	8	1.33	0.073	0.09	0.110
28...	128	4	4	1.23	0.051	0.07	0.080
29...	134	15	8	1.05	0.285	0.37	0.200
29...	174	44	32	1.27	0.652	0.84	0.840
29...	166	110	34	1.71	0.241	0.31	0.580
29...	204	244	80	2.30	0.296	0.38	0.950
30...	160	68	26	2.86	0.100	0.13	0.350
30...	142	30	16	2.13	0.092	0.12	0.230
31...	142	35	16	1.83	0.102	0.13	0.160
31...	140	34	16	1.67	0.123	0.16	0.180
NOV							
01...	138	24	13	1.56	0.122	0.16	0.140
01...	354	160	230	1.30	2.17	2.8	3.17
01...	176	124	68	1.78	0.355	0.46	0.840
02...	154	78	32	3.12	0.131	0.17	0.350
02...	134	26	13	2.25	0.116	0.15	0.160
03...	136	16	13	1.84	0.118	0.15	0.130
05...	154	33	11	1.52	0.168	0.22	0.120
06...	150	22	8	1.42	0.166	0.21	0.090
06...	132	15	6	1.36	0.160	0.21	0.080
07...	134	44	14	1.34	0.189	0.24	0.120
08...	128	31	9	1.28	0.162	0.21	0.100
08...	126	36	13	1.29	0.172	0.22	0.120
09...	134	26	9	1.31	0.175	0.23	0.120
09...	132	25	10	1.26	0.157	0.20	0.100
10...	132	22	9	1.20	0.153	0.20	0.080
10...	136	5	4	1.19	0.172	0.22	0.080
14...	140	62	20	1.04	0.249	0.32	0.280
15...	140	44	14	2.09	0.187	0.24	0.270
15...	140	32	18	2.66	0.120	0.15	0.190
16...	130	27	12	2.07	0.141	0.18	0.160
16...	124	18	7	1.85	0.111	0.14	0.110
17...	124	25	10	1.66	0.116	0.15	0.110
17...	126	18	10	1.61	0.096	0.12	0.110

STREAMS TRIBUTARY TO LAKE MICHIGAN

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040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER PENDE) (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
NOV 1991							
18...	0530	--	14	--	--	--	552
18...	1730	--	15	--	--	--	550
19...	0530	--	12	--	--	--	528
19...	1730	--	10	--	--	--	488
20...	0530	--	9.6	2.8	--	--	462
20...	1730	--	8.5	3.8	--	--	468
21...	0530	--	7.7	3.2	--	--	484
29...	0850	--	6.2	--	--	--	434
29...	2050	--	6.6	--	--	--	446
29...	2320	--	13	--	--	--	478
30...	0055	--	21	--	--	--	532
30...	0220	--	31	--	--	--	734
30...	0425	--	41	--	--	--	584
30...	1625	--	35	--	--	--	398
DEC							
01...	0425	--	25	--	--	--	386
01...	1625	--	19	--	--	--	400
02...	0425	12	--	--	--	--	438
02...	1625	12	--	--	--	--	442
*29...	1030	--	4.8	1.8	100	--	436
JAN 1992							
*20...	1300	5.9	--	1.9	1000	30	452
FEB							
*11...	1045	3.8	--	3.8	190	<10	424
*23...	1245	--	4.3	7.3	350	340	420
27...	1500	--	16	17	--	--	532
28...	1105	--	16	9.6	--	--	354
28...	1255	--	24	12	--	--	454
29...	0055	--	20	6.2	--	--	342
29...	0925	--	28	8.0	--	--	444
29...	1230	--	16	6.2	--	--	362
29...	1830	--	13	5.6	--	--	414
MAR							
01...	1110	--	16	15	--	--	438
01...	1215	--	24	18	--	--	476
01...	1300	--	33	14	--	--	508
01...	1345	--	42	16	--	--	690
01...	1945	--	35	7.0	--	--	378
02...	0145	--	25	5.0	--	--	334
02...	0745	--	21	4.4	--	--	330
02...	1345	--	20	4.3	--	--	332
*02...	1415	--	20	4.8	--	--	332
02...	1417	--	20	4.5	--	--	334
02...	1945	--	19	4.4	--	--	338
03...	0145	--	19	3.4	--	--	334
03...	0745	--	14	4.4	--	--	328
03...	1345	--	14	3.8	--	--	346
03...	1945	--	14	3.6	--	--	340
04...	0145	--	13	3.0	--	--	342
04...	0745	--	12	3.0	--	--	344
06...	0135	--	20	4.8	--	--	406
06...	0520	--	28	5.7	--	--	386
06...	0725	--	38	7.5	--	--	458
06...	1325	--	35	7.6	--	--	526
06...	1925	--	31	--	--	--	360
07...	0125	--	28	--	--	--	358
07...	0725	--	27	--	--	--	362
07...	1325	--	24	--	--	--	346
07...	1925	--	23	--	--	--	360
08...	0125	--	21	--	--	--	348
08...	0725	--	20	--	--	--	382
08...	1325	--	19	--	--	--	358
08...	1925	--	19	--	--	--	356
09...	0125	--	19	2.9	--	--	358
09...	0725	--	25	4.6	--	--	444
09...	1010	--	33	9.5	--	--	844
09...	1105	--	45	15	--	--	1700
09...	1200	--	56	10	--	--	928
09...	1340	--	69	8.6	--	--	1050
09...	1655	--	51	4.6	--	--	426
09...	1855	--	36	3.4	--	--	360
10...	0055	--	34	3.0	--	--	364
10...	0655	--	29	2.4	--	--	344
*15...	1350	--	6.0	1.9	820	10	400
24...	1530	--	19	5.1	--	--	384
24...	2130	--	20	13	--	--	486
25...	0330	--	16	3.2	--	--	380
25...	0930	--	16	3.2	--	--	384

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE FIXED NON FILTER- ABLE (MG/L) (00540)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS NH4) (71846)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)
NOV 1991							
18...	142	98	40	1.89	0.154	0.20	0.410
18...	158	88	32	3.47	0.119	0.15	0.380
19...	144	76	28	2.70	0.113	0.15	0.240
19...	136	46	16	2.08	0.060	0.08	0.180
20...	132	27	12	1.90	0.088	0.11	0.130
20...	134	27	12	1.68	0.059	0.08	0.140
21...	142	33	15	1.65	0.116	0.15	0.140
29...	124	12	6	1.25	0.066	0.08	0.070
29...	122	15	9	1.26	0.102	0.13	0.100
29...	150	50	30	1.27	0.564	0.73	0.620
30...	154	128	56	1.51	0.559	0.72	1.05
30...	190	308	96	1.70	0.242	0.31	0.800
30...	152	256	72	2.40	0.226	0.29	0.820
30...	116	58	20	3.87	0.074	0.09	0.530
DEC							
01...	110	23	9	2.82	0.083	0.11	0.200
01...	118	17	7	2.68	0.040	0.05	0.160
02...	140	13	7	2.50	0.033	0.04	0.130
02...	144	12	8	2.36	0.022	0.03	0.130
29...	142	--	<2	1.35	0.066	0.08	0.050
JAN 1992							
20...	126	4	6	1.64	0.054	0.07	0.050
FEB							
11...	122	2	4	1.37	0.037	0.05	0.050
23...	110	4	4	1.30	0.459	0.59	0.160
27...	144	144	64	1.20	0.502	0.65	0.690
28...	100	46	16	1.10	0.797	1.0	0.420
28...	128	158	50	1.04	0.986	1.3	0.690
29...	118	32	15	1.32	0.776	1.0	0.410
29...	144	80	38	1.46	0.570	0.73	0.400
29...	106	24	20	1.50	0.568	0.73	0.270
29...	122	36	26	1.58	0.484	0.62	0.280
MAR							
01...	132	42	30	1.39	1.65	2.1	1.05
01...	146	108	52	1.18	1.80	2.3	1.37
01...	136	192	56	1.20	1.29	1.7	1.22
01...	168	388	124	1.31	1.14	1.5	1.27
01...	112	92	40	1.69	0.519	0.67	0.540
02...	94	42	14	1.44	0.416	0.54	0.290
02...	94	20	7	1.42	0.408	0.53	0.260
02...	96	19	12	1.60	0.411	0.53	0.260
02...	102	10	11	1.63	0.422	0.54	0.260
02...	108	22	9	1.62	0.428	0.55	0.270
02...	110	26	12	1.85	0.442	0.57	0.270
03...	110	16	14	1.84	0.385	0.50	0.230
03...	100	14	8	1.83	0.363	0.47	0.250
03...	118	10	6	1.83	0.445	0.57	0.290
03...	110	18	8	1.98	0.321	0.41	0.250
04...	106	16	7	1.92	0.290	0.37	0.220
04...	106	11	5	1.91	0.267	0.34	0.200
06...	128	84	24	3.57	0.294	0.38	0.320
06...	122	46	16	2.38	0.346	0.45	0.350
06...	144	96	52	3.03	0.426	0.55	0.560
06...	158	196	60	3.23	0.439	0.57	0.530
06...	108	30	20	3.17	0.237	0.31	0.220
07...	104	28	16	3.04	0.211	0.27	0.190
07...	112	38	20	3.19	0.190	0.24	0.190
07...	108	21	14	3.17	0.160	0.21	0.180
07...	110	24	16	3.10	0.124	0.16	0.160
08...	104	18	18	3.08	0.116	0.15	0.150
08...	136	20	12	3.03	0.095	0.12	0.160
08...	110	10	10	2.99	0.078	0.10	0.140
08...	104	18	14	2.90	0.070	0.09	0.150
09...	114	8	14	2.79	0.113	0.15	0.160
09...	136	48	30	3.16	0.150	0.19	0.190
09...	234	140	60	3.21	0.372	0.48	0.610
09...	364	444	156	3.16	0.537	0.69	0.810
09...	246	348	100	3.12	0.462	0.59	0.750
09...	204	584	124	3.16	0.247	0.32	0.720
09...	124	98	38	3.40	0.215	0.28	0.420
09...	122	42	14	3.45	0.171	0.22	0.290
10...	120	30	12	2.88	0.099	0.13	0.160
10...	128	5	7	2.58	0.100	0.13	0.130
15...	124	6	4	1.64	0.043	0.05	0.080
24...	106	60	24	1.41	0.262	0.34	0.310
24...	140	80	32	1.34	1.20	1.5	0.590
25...	110	24	13	1.73	0.128	0.16	0.160
25...	116	6	14	1.83	0.127	0.16	0.150

STREAMS TRIBUTARY TO LAKE MICHIGAN

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040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER (31673)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
MAR 1992							
25...	1315	23	6.0	--	--	88	440
25...	1915	25	3.7	--	--	82	412
26...	0115	20	3.7	--	--	30	388
26...	0715	18	4.1	--	--	48	408
26...	1315	18	2.9	--	--	24	394
*26...	1345	19	1.6	1000	220	14	378
26...	1915	21	--	--	--	45	386
27...	0115	16	--	--	--	13	368
27...	1650	17	--	--	--	31	390
27...	2250	16	--	--	--	24	386
APR							
10...	2150	19	--	--	--	244	638
10...	2250	28	--	--	--	344	716
10...	2335	37	--	--	--	664	986
11...	0535	29	--	--	--	156	516
11...	1135	25	--	--	--	64	436
11...	1735	23	--	--	--	70	428
11...	2335	20	--	--	--	236	480
12...	0535	17	--	--	--	60	444
*13...	1212	9.9	2.0	--	--	14	404
16...	0830	14	5.6	--	--	73	480
16...	0915	21	7.9	--	--	150	546
16...	0950	30	22	--	--	263	632
16...	1030	40	9.9	--	--	320	672
16...	1120	50	7.4	--	--	376	712
*16...	1515	50	4.6	--	--	230	564
16...	1555	48	3.2	2100	3400	116	488
16...	1600	48	9.2	--	--	344	736
16...	1815	36	4.4	--	--	574	708
17...	0015	24	7.7	--	--	170	528
17...	0615	23	7.3	--	--	94	482
17...	1215	23	5.1	--	--	60	416
17...	1815	21	2.7	--	--	39	394
18...	0015	19	2.5	--	--	40	408
18...	0615	17	2.4	--	--	22	394
18...	1215	16	2.8	--	--	13	388
18...	1815	15	2.5	--	--	13	390
19...	0015	15	2.3	--	--	18	396
19...	0615	14	2.3	--	--	20	400
19...	1215	14	3.5	--	--	12	394
19...	1815	16	3.2	--	--	25	404
20...	0015	16	1.6	--	--	28	416
20...	0615	15	2.5	--	--	20	410
20...	1215	14	2.4	--	--	11	412
20...	1815	14	3.4	--	--	21	412
21...	0015	15	4.2	--	--	74	470
21...	0615	14	2.6	--	--	30	440
21...	1215	14	2.6	--	--	14	418
21...	1815	12	2.8	--	--	19	418
MAY							
*06...	1055	4.1	1.5	<10	10	2	402
*28...	1050	2.7	2.2	490	60	<2	396
JUN							
*11...	1130	2.6	2.2	1300	370	22	438
*24...	1240	2.2	1.6	900	190	2	402
JUL							
*08...	1200	2.4	2.2	1200	320	54	316
*23...	1215	2.5	--	1900	--	130	520
AUG							
*05...	1216	2.1	2.3	680	--	61	456
*20...	1230	2.1	2.2	550	--	17	412

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE FIXED NON FILTER- ABLE (MG/L) (00540)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS NH4) (71846)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)
MAR 1992							
25...	--	66	22	1.89	0.505	0.65	0.440
25...	--	58	24	2.52	0.160	0.21	0.300
26...	136	14	16	2.06	0.057	0.07	0.140
26...	152	30	18	2.28	0.063	0.08	0.240
26...	134	8	16	2.07	0.144	0.19	0.190
26...	138	7	7	2.03	0.164	0.21	0.160
26...	106	30	15	2.76	0.103	0.13	0.160
27...	104	7	6	2.59	0.058	0.08	0.100
27...	122	22	9	2.24	0.219	0.28	0.200
27...	128	14	10	2.48	0.045	0.06	0.110
APR							
10...	196	176	68	2.38	1.03	1.3	1.27
10...	204	260	84	1.82	0.584	0.75	1.16
10...	244	532	132	1.70	0.345	0.44	1.03
11...	160	108	48	2.78	0.170	0.22	0.350
11...	140	40	24	2.48	0.074	0.09	0.190
11...	130	34	36	2.15	0.036	0.05	0.170
11...	150	132	104	1.94	0.038	0.05	0.220
12...	132	32	28	1.91	0.048	0.06	0.150
13...	112	7	7	1.59	0.034	0.04	0.070
16...	18	55	18	1.79	0.349	0.45	0.420
16...	35	115	35	1.76	0.363	0.47	0.570
16...	49	214	49	1.72	0.418	0.54	0.780
16...	58	262	58	1.82	0.342	0.44	0.780
16...	56	320	56	2.04	0.234	0.30	1.09
16...	34	196	34	3.12	0.129	0.17	0.640
16...	18	98	18	3.33	0.105	0.14	0.450
16...	48	296	48	3.35	0.114	0.15	0.520
16...	90	484	90	3.40	0.080	0.10	0.410
17...	34	136	34	2.79	0.063	0.08	0.270
17...	20	74	20	2.55	0.068	0.09	0.210
17...	13	47	13	2.32	0.046	0.06	0.150
17...	106	30	9	2.22	0.031	0.04	0.110
18...	112	30	10	2.10	0.036	0.05	0.090
18...	108	17	5	2.05	0.031	0.04	0.080
18...	108	9	4	1.97	0.024	0.03	0.070
18...	110	9	4	1.87	0.012	0.02	0.070
19...	114	14	4	1.90	0.030	0.04	0.080
19...	114	13	7	1.87	0.038	0.05	0.070
19...	112	8	4	1.84	0.026	0.03	0.070
19...	114	18	7	1.75	0.114	0.15	0.120
20...	116	19	9	1.84	0.083	0.11	0.110
20...	112	14	6	1.88	0.052	0.07	0.090
20...	118	--	<2	1.85	0.038	0.05	0.080
20...	118	--	4	1.70	0.018	0.02	0.090
21...	132	58	16	1.77	0.099	0.13	0.170
21...	136	25	5	1.90	0.090	0.12	0.120
21...	158	10	4	1.64	0.045	0.06	0.090
21...	158	13	6	1.49	0.030	0.04	0.100
MAY							
06...	114	--	<2	0.774	0.031	0.04	0.030
28...	156	--	<2	0.596	0.037	0.05	0.040
JUN							
11...	153	15	7	0.701	0.089	0.11	0.090
24...	128	0	3	0.585	0.039	0.05	0.040
JUL							
08...	12	42	12	0.433	0.037	0.05	0.030
23...	128	108	22	0.640	0.035	0.05	0.060
AUG							
05...	124	47	14	0.448	0.025	0.03	0.070
20...	122	11	6	0.383	0.022	0.03	0.050

STREAMS TRIBUTARY TO LAKE MICHIGAN

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040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCHI, FECAL, KF AGAR (COLS./100 ML) (31673)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L) (00921)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
SEP 1992									
*07...	1445	1.9	1.8	3100	--	--	--	6	402
14...	1335	4.8	--	--	--	--	--	39	298
14...	1935	4.0	--	--	--	--	--	71	438
16...	1405	5.8	15	200000	--	--	--	134	540
16...	2005	6.4	8.8	150000	--	--	--	120	576
17...	0205	5.0	4.2	52000	--	--	--	56	494
17...	0805	4.4	3.3	8800	--	--	--	48	464
18...	0205	3.7	--	--	--	--	--	27	432
18...	0455	6.0	--	--	--	--	--	45	384
18...	0540	12	--	--	--	--	--	280	634
18...	1140	14	--	--	--	--	--	148	532
18...	1740	6.6	--	--	--	--	--	55	470
19...	1140	4.6	--	--	--	--	--	27	434
19...	2345	3.8	--	--	--	--	--	24	428
*20...	1230	3.5	--	2500	700	--	--	13	406
27...	0115	3.7	5.7	--	--	66	41	59	462
27...	0715	4.8	3.4	--	--	68	41	43	456
27...	1320	4.5	--	--	--	40	23	13	256
27...	1920	4.3	--	--	--	--	--	19	432
28...	0720	3.7	--	--	--	--	--	30	432

DATE	SOLIDS, VOLA-TILE ON IGNITION, TOTAL (MG/L) (00505)	RESIDUE FIXED NON-FILTER-ABLE (MG/L) (00540)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	COPPER, TOTAL RECOVERABLE (MG/L) (01119)	ZINC, TOTAL RECOVERABLE (MG/L) (01094)
SEP 1992									
07...	116	4	2	0.630	0.080	0.10	0.080	--	--
14...	92	28	11	0.482	0.116	0.15	0.170	--	--
14...	132	53	18	0.686	0.153	0.20	0.300	--	--
16...	180	84	50	0.983	0.575	0.74	0.970	--	--
16...	176	84	36	0.575	0.476	0.61	0.570	--	--
17...	142	40	16	0.508	0.147	0.19	0.270	--	--
17...	124	35	13	0.534	0.140	0.18	0.210	--	--
18...	132	19	8	0.578	0.101	0.13	0.130	--	--
18...	122	35	10	0.541	0.125	0.16	0.360	--	--
18...	180	210	70	0.526	0.343	0.44	0.740	--	--
18...	162	110	38	1.19	0.179	0.23	0.600	--	--
18...	148	39	16	0.992	0.095	0.12	0.360	--	--
19...	136	19	8	0.677	0.058	0.08	0.140	--	--
19...	128	15	9	0.648	0.059	0.08	0.150	--	--
20...	120	9	4	0.651	0.075	0.10	0.120	--	--
27...	136	37	22	0.699	0.257	0.33	0.350	<3	10
27...	132	29	14	0.593	0.063	0.08	0.190	<3	<10
27...	80	6	7	0.325	0.024	0.03	0.110	<3	<10
27...	126	11	8	0.521	0.039	0.05	0.110	--	--
28...	124	18	12	0.566	0.026	0.03	0.100	--	--

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA-CHLOR TOTAL RECOVER (UG/L) (77825)	ATRA-ZINE WATER UNFLTRD REC (UG/L) (39630)	CARBO-FURAN WATER WHOLE TOT.REC (UG/L) (82615)	CHLOR-DYRIFOS TOTAL RECOVER (UG/L) (38932)	CIS-PERME-THRIN WATER WHOLE REC (UG/L) (82418)	CYAN-AZINE TOTAL (UG/L) (81757)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (UG/L) (82052)	DIMETH-OATE WATER WHOLE TOTAL (UG/L) (39009)	EPTC WATER WHOLE REC (UG/L) (81894)
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MAY 1992
 *28... 1055 2.7 <0.10 <0.1 <0.3 <1.0 <1.0 <0.30 <0.30 <1.0 <1.0

DATE	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	METHO-MYL TOTAL (UG/L) (39051)	METOLA-CHLOR IN WHOLE WATER (UG/L) (39356)	PARA-THION, TOTAL (UG/L) (39540)	PENDI-METH-ALIN TOTAL (UG/L) (79190)	PHORATE TOTAL (UG/L) (39023)	TERBU-FOS WAT. WH REC (UG/L) (82088)	TRANS PERME-THRIN WATER WHOLE REC (UG/L) (82420)	TRI-FLURA-LIN TOTAL RECOVER (UG/L) (39030)	2,4-D, TOTAL (UG/L) (39730)
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MAY 1992
 28... <0.20 <1.0 <0.20 <1.0 <1.00 <0.20 <0.20 <1.0 <1.0 <0.50

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	12.1	9.2	10.9	9.2	6.1	8.3	1.7	.0	.6	2.3	1.8	2.1
2	16.7	11.4	14.0	6.1	.4	3.3	.2	.0	.0	2.6	2.1	2.3
3	15.5	12.0	13.5	1.9	.0	.7	1.5	.0	.4	3.5	2.4	2.7
4	12.3	9.1	10.6	2.9	.0	1.0	.1	.0	.0	2.5	2.0	2.3
5	12.0	7.2	9.4	1.6	.0	.8	.0	.0	.0	2.9	2.1	2.4
6	11.1	6.5	8.3	1.5	.0	.4	.0	.0	.0	2.7	2.0	2.3
7	12.1	5.4	8.3	.3	.0	.0	.0	.0	.0	3.0	1.7	2.4
8	13.9	6.4	9.9	.3	.0	.1	2.5	.0	1.1	2.4	1.8	2.1
9	15.2	10.0	12.4	.3	.0	.0	2.9	.7	1.6	2.9	1.8	2.2
10	12.8	7.8	10.3	1.8	.0	.8	3.6	1.4	2.3	1.9	.6	1.3
11	14.5	8.6	11.2	3.5	1.8	2.6	3.8	1.0	2.1	3.6	.3	1.6
12	11.8	7.8	10.0	3.6	2.6	3.0	2.6	1.5	2.2	2.8	1.3	2.1
13	12.0	5.6	8.7	5.8	2.5	3.8	2.5	.8	1.6	2.5	.0	1.9
14	10.8	7.7	9.5	5.2	2.2	3.9	1.8	.0	.5	.1	.0	.0
15	8.7	5.1	7.0	6.3	3.8	5.4	.0	.0	.0	.0	.0	.0
16	11.8	4.5	7.7	5.5	2.2	3.5	.0	.0	.0	.0	.0	.0
17	15.3	7.8	11.2	4.9	1.2	3.4	.0	.0	.0	.0	.0	.0
18	11.3	5.7	8.6	8.2	4.9	6.4	.0	.0	.0	.0	.0	.0
19	9.0	3.1	5.8	7.8	5.9	6.8	.0	.0	.0	.0	.0	.0
20	10.1	4.8	7.3	7.4	3.6	5.6	.0	.0	.0	.0	.0	.0
21	11.8	6.6	8.8	6.6	2.3	4.5	.0	.0	.0	.0	.0	.0
22	14.1	7.4	10.4	7.7	4.1	5.8	.0	.0	.0	.0	.0	.0
23	16.7	10.4	13.4	6.2	3.0	5.1	.2	.0	.0	.0	.0	.0
24	15.2	12.6	14.0	3.1	.3	2.3	.3	.0	.1	.0	.0	.0
25	13.8	10.5	12.2	1.0	.0	.2	1.3	.0	.4	.0	.0	.0
26	10.5	9.1	9.5	.9	.0	.2	2.0	.0	1.1	.0	.0	.0
27	10.1	9.1	9.5	2.5	.0	1.2	2.6	1.9	2.2	.0	.0	.0
28	9.9	9.1	9.5	1.1	.0	.3	2.6	2.0	2.3	.0	.0	.0
29	11.1	9.7	10.4	3.1	.7	2.1	2.0	1.4	1.7	.0	.0	.0
30	10.6	6.9	8.1	2.8	.5	2.1	2.3	1.6	2.0	.0	.0	.0
31	8.1	6.1	7.0	---	---	---	2.5	2.0	2.2	1.1	.0	.5
MONTH	16.7	3.1	9.9	9.2	.0	2.8	3.8	.0	.8	3.6	.0	.9
FEBRUARY				MARCH			APRIL			MAY		
1	.5	.0	.1	4.2	.9	1.9	5.0	1.0	3.0	21.6	8.4	14.9
2	2.8	.0	1.2	2.9	.9	1.8	6.3	.2	3.2	18.6	12.5	15.9
3	3.4	1.3	2.2	2.9	1.6	2.1	6.6	1.6	4.2	13.4	8.3	10.9
4	3.0	.7	2.1	6.4	1.8	3.5	7.1	2.3	4.6	12.0	7.3	9.4
5	3.0	.0	1.1	4.7	2.0	3.1	11.2	1.6	5.8	15.4	5.0	9.9
6	2.0	.2	1.1	2.9	1.8	2.3	11.5	3.1	7.0	17.7	5.8	11.3
7	1.5	.0	.5	3.3	2.0	2.5	13.6	6.7	9.6	19.0	7.8	12.9
8	.1	.0	.0	6.1	2.1	3.7	11.8	4.2	8.0	20.8	9.1	14.7
9	.3	.0	.0	3.3	.0	1.7	13.9	5.6	9.5	21.9	10.5	15.8
10	.0	.0	.0	1.0	.0	.1	8.1	2.9	5.0	22.5	11.8	16.7
11	.0	.0	.0	2.5	.0	.5	8.3	2.6	5.0	23.5	12.6	17.6
12	.0	.0	.0	2.2	.0	.5	10.0	2.0	5.7	21.3	16.0	18.4
13	.0	.0	.0	2.8	.0	.9	5.2	3.5	4.2	21.3	12.4	16.3
14	.4	.0	.0	4.8	.0	1.6	8.6	3.6	5.6	13.6	10.6	12.0
15	.8	.0	.2	4.3	.0	1.4	8.8	4.8	6.4	18.5	9.6	13.7
16	3.0	.0	1.4	4.8	.0	1.9	6.0	4.6	5.2	20.6	11.7	16.2
17	3.4	2.1	2.5	5.3	1.0	2.7	9.9	4.3	6.4	22.9	14.7	18.2
18	2.1	1.1	1.6	5.6	.3	2.5	7.9	5.8	6.8	21.2	11.2	15.6
19	3.4	1.3	2.2	7.3	.0	3.2	11.0	7.0	8.7	22.5	10.6	16.0
20	3.7	1.8	2.6	7.0	1.2	3.5	13.8	8.7	10.7	24.6	12.1	17.9
21	2.8	.0	1.5	1.5	.0	.5	13.1	8.3	10.3	25.6	14.1	19.5
22	5.6	1.4	2.9	6.4	.0	2.1	8.6	6.4	7.6	24.8	16.1	20.2
23	4.1	.8	2.0	8.0	.0	3.2	10.5	6.6	8.3	19.4	11.1	16.1
24	3.0	1.3	1.9	7.4	.2	3.1	8.1	6.8	7.4	13.8	8.1	10.3
25	4.2	1.2	2.4	6.5	1.6	3.5	8.4	5.7	7.0	12.5	7.8	10.1
26	4.0	.0	1.8	5.2	.9	2.6	8.3	5.8	7.1	16.9	8.5	12.2
27	4.8	1.0	2.0	7.2	.0	3.0	13.8	4.1	8.5	18.3	8.1	12.9
28	2.0	.0	1.1	6.7	.6	3.6	15.1	4.6	9.6	19.7	10.1	14.3
29	3.5	.0	1.0	3.6	2.6	3.1	14.5	8.3	11.2	21.9	10.0	15.6
30	---	---	---	10.2	2.4	5.5	15.3	8.2	11.1	20.6	13.0	16.2
31	---	---	---	9.4	3.2	5.6	---	---	---	23.5	11.5	17.1
MONTH	5.6	.0	1.2	10.2	.0	2.5	15.3	.2	7.1	25.6	5.0	14.8

040857005 OTTER CREEK. AT WILLOW ROAD. NEAR PLYMOUTH. WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	23.3	13.0	17.6	24.7	15.9	19.9	24.3	15.8	19.9	20.9	12.4	16.5
2	24.6	13.4	18.3	20.7	16.7	18.6	23.6	18.1	20.3	19.1	15.5	17.2
3	24.7	13.6	18.8	21.0	17.2	18.7	20.6	16.6	18.5	21.9	16.1	18.4
4	19.4	14.2	16.9	23.3	14.8	18.7	22.0	14.5	18.0	20.8	13.2	16.8
5	21.8	15.3	17.9	23.2	14.7	18.6	23.2	14.1	18.3	22.8	14.3	18.2
6	20.3	14.8	17.5	23.6	15.0	19.0	22.8	13.5	18.1	19.8	17.6	18.4
7	22.8	14.4	18.1	22.3	15.7	19.0	19.9	15.6	18.0	17.7	16.3	17.1
8	19.2	13.9	16.4	25.0	17.5	20.6	25.1	17.3	20.8	19.5	14.3	16.7
9	23.6	13.4	18.1	24.8	18.0	21.2	27.1	18.5	22.6	15.7	13.3	14.4
10	23.3	14.0	18.4	25.5	18.4	21.5	26.7	20.5	23.2	15.8	12.1	14.0
11	26.3	15.1	20.3	22.2	17.0	19.5	23.6	17.0	19.9	18.8	11.3	14.8
12	27.5	16.7	21.3	19.6	17.0	18.0	17.8	14.2	15.9	19.6	11.9	15.4
13	26.6	17.8	22.0	17.3	15.7	16.5	17.2	12.8	15.0	20.1	14.0	16.8
14	25.3	17.6	21.0	19.2	15.0	16.7	19.9	12.3	15.9	17.6	16.0	16.5
15	17.4	15.0	16.3	24.3	14.4	18.9	21.4	12.2	16.5	18.8	15.4	16.8
16	19.6	13.4	16.6	22.7	16.4	19.3	20.9	12.4	16.6	17.6	16.7	17.1
17	20.3	15.3	17.6	23.4	16.6	19.9	21.6	13.2	17.4	18.3	16.7	17.7
18	21.9	15.8	18.7	22.7	16.9	19.7	23.0	16.1	18.9	18.4	13.6	16.5
19	17.4	13.0	14.9	23.6	16.5	19.8	20.8	14.3	17.5	17.4	11.6	14.2
20	19.3	11.0	14.4	21.6	17.0	19.2	21.8	13.3	17.4	17.0	11.5	14.0
21	20.2	9.9	14.7	23.1	14.5	18.5	23.2	14.6	18.6	17.7	14.3	15.7
22	19.0	10.8	14.7	17.2	14.9	16.0	23.2	15.0	18.9	16.3	11.2	13.9
23	15.6	13.2	14.3	21.7	14.1	17.3	23.5	15.4	19.4	16.1	8.5	11.9
24	16.2	12.1	14.2	23.8	15.9	19.5	25.1	17.6	21.1	16.7	9.2	12.6
25	18.8	11.7	15.1	23.6	16.4	19.7	26.0	18.9	22.1	17.8	9.5	13.3
26	18.1	13.3	15.4	26.2	18.9	21.9	21.3	15.9	18.2	15.5	12.9	14.0
27	22.2	12.5	16.9	24.5	16.8	20.5	17.5	14.2	15.7	16.9	12.0	14.0
28	23.4	13.2	18.0	25.5	17.4	21.2	18.9	13.3	15.7	14.2	9.5	11.9
29	17.6	14.7	16.4	23.5	17.0	20.0	21.4	12.5	16.8	14.3	7.3	10.5
30	23.7	13.5	18.1	18.1	15.5	16.7	20.0	14.5	17.2	15.5	8.3	11.5
31	---	---	---	23.3	14.7	18.6	20.6	14.1	17.0	---	---	---
MONTH	27.5	9.9	17.3	26.2	14.1	19.1	27.1	12.2	18.4	22.8	7.3	15.2

OXYGEN DISSOLVED (MG/L). WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[illegible]

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	13.4	6.7	10.4
2	---	---	---	---	---	---	---	---	---	13.7	7.1	10.1
3	---	---	---	---	---	---	---	---	---	14.6	8.4	11.2
4	---	---	---	---	---	---	---	---	---	15.2	9.5	12.0
5	---	---	---	---	---	---	---	---	---	15.3	8.9	12.1
6	---	---	---	---	---	---	---	---	---	15.2	8.2	11.9
7	---	---	---	---	---	---	---	---	---	15.3	7.7	11.4
8	---	---	---	---	---	---	---	---	---	15.5	6.9	11.2
9	---	---	---	---	---	---	---	---	---	15.5	6.4	10.9
10	---	---	---	---	---	---	---	---	---	16.1	5.8	10.6
11	---	---	---	---	---	---	---	---	---	15.6	4.9	9.9
12	---	---	---	---	---	---	---	---	---	14.1	5.4	8.7
13	---	---	---	---	---	---	---	---	---	15.7	6.9	10.7
14	---	---	---	---	---	---	---	---	---	15.2	7.9	11.0
15	---	---	---	---	---	---	---	---	---	16.8	7.2	11.9
16	---	---	---	---	---	---	---	---	---	17.6	6.1	11.5
17	---	---	---	---	---	---	---	---	---	16.7	6.0	10.4
18	---	---	---	---	---	---	11.5	9.8	10.5	17.0	6.4	10.9
19	---	---	---	---	---	---	11.0	9.0	10.0	16.7	5.7	10.7
20	---	---	---	---	---	---	11.7	8.5	9.8	16.2	5.1	10.0
21	---	---	---	---	---	---	12.0	8.6	10.2	15.6	4.6	9.4
22	---	---	---	---	---	---	11.9	9.7	10.6	14.0	4.7	8.5
23	---	---	---	---	---	---	12.0	9.6	10.6	13.4	5.0	8.6
24	---	---	---	---	---	---	12.0	9.8	10.8	14.0	8.2	10.7
25	---	---	---	---	---	---	12.4	9.9	11.1	13.9	8.3	10.8
26	---	---	---	---	---	---	12.7	10.2	11.3	14.3	7.3	10.5
27	---	---	---	---	---	---	13.0	9.4	11.2	14.1	6.9	10.1
28	---	---	---	---	---	---	12.8	9.0	11.0	13.8	7.1	9.9
29	---	---	---	---	---	---	13.0	8.6	10.7	13.5	6.0	9.8
30	---	---	---	---	---	---	13.8	8.7	11.0	13.5	6.4	9.2
31	---	---	---	---	---	---	---	---	---	12.5	5.7	9.0
MONTH	---	---	---	---	---	---	---	---	---	17.6	4.6	10.5
JUNE				JULY			AUGUST			SEPTEMBER		
1	12.4	5.9	8.8	14.0	4.5	8.0	12.6	5.2	8.5	13.1	7.0	9.5
2	11.8	5.5	8.5	14.2	4.5	8.1	12.5	5.3	7.7	11.6	6.3	8.5
3	11.4	5.1	8.2	14.8	6.2	9.9	11.7	5.6	8.2	13.1	6.6	9.1
4	11.4	5.9	8.0	15.7	6.3	10.4	12.6	6.3	9.0	14.4	7.1	10.0
5	10.7	6.2	8.0	16.1	6.1	10.2	13.0	6.2	9.0	14.3	6.7	9.7
6	10.5	6.2	8.1	15.9	5.8	10.1	12.5	5.8	8.8	12.3	6.7	8.9
7	10.5	6.1	8.2	15.8	5.8	9.4	12.0	6.0	8.3	12.3	7.8	9.8
8	11.0	6.6	8.5	15.5	5.0	8.8	11.6	4.8	7.9	14.8	8.3	11.0
9	10.9	5.9	8.4	15.7	5.1	9.4	11.4	4.6	7.5	10.7	8.8	9.8
10	10.6	5.6	8.1	14.9	5.1	8.9	11.1	4.6	7.0	13.8	9.1	11.2
11	10.1	4.8	7.7	15.5	5.5	9.8	11.9	5.3	8.1	14.0	9.0	11.1
12	10.3	4.5	7.2	11.2	6.2	8.5	10.1	6.1	8.0	13.7	8.2	10.7
13	9.9	4.6	6.9	13.0	7.1	9.2	12.2	7.9	9.8	13.5	7.6	10.1
14	10.2	4.7	7.3	13.8	7.7	10.3	13.1	7.3	9.9	10.0	5.7	8.5
15	10.4	5.8	7.7	14.8	7.0	10.7	13.1	7.0	9.7	11.5	8.1	9.5
16	11.1	5.8	8.2	15.4	6.7	10.2	13.3	6.9	9.5	9.1	6.9	8.1
17	10.4	5.6	7.3	14.8	6.7	9.7	13.2	6.3	9.2	9.4	7.8	8.4
18	10.4	5.9	8.1	14.8	6.4	9.9	13.0	6.0	8.5	9.6	7.2	8.5
19	10.8	6.0	8.4	14.5	6.0	9.2	12.6	6.1	8.9	12.1	9.2	10.4
20	12.2	7.1	9.5	14.6	6.0	9.4	13.0	6.3	8.8	11.8	9.0	10.3
21	12.0	6.7	9.2	15.6	6.0	9.6	12.5	5.9	8.7	11.2	8.7	9.6
22	12.2	6.4	9.0	9.9	6.2	8.2	12.6	5.9	8.6	12.7	9.1	10.9
23	11.3	6.5	8.2	13.2	5.9	9.0	12.5	5.3	8.5	13.0	8.7	10.7
24	11.7	6.7	8.8	12.3	5.7	8.5	12.1	4.8	7.6	11.9	8.0	10.0
25	12.4	6.1	8.5	12.3	5.3	8.2	11.3	4.6	7.2	12.7	7.5	10.3
26	11.7	6.1	8.2	11.5	4.8	7.5	10.3	4.8	7.4	10.8	7.6	9.4
27	12.8	5.8	8.8	11.7	5.0	7.8	13.4	6.8	8.8	11.9	7.6	9.8
28	12.8	5.1	8.5	11.4	4.8	7.6	12.5	6.8	9.0	11.9	9.2	10.3
29	11.1	5.1	7.8	12.3	4.9	8.1	12.4	5.8	8.7	11.9	8.9	10.2
30	13.3	4.9	8.6	10.9	5.7	8.4	11.9	6.1	8.6	11.8	8.0	10.0
31	---	---	---	13.1	5.7	9.1	12.5	6.7	9.0	---	---	---
MONTH	13.3	4.5	8.2	16.1	4.5	9.1	13.4	4.6	8.5	14.8	7.2	9.8

STREAMS TRIBUTARY TO LAKE MICHIGAN

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040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--CONTINUED

SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (TONS PER DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	5.8	1.7	.08	.09	12	.52	.07	.03	.07	.42	.04
2	.01	2.6	.65	.10	.09	2.0	.44	.05	.03	.09	.41	.04
3	.01	.76	.42	.14	.09	.93	.39	.04	.04	.10	.39	.04
4	.01	.56	.38	.14	.08	.66	.36	.03	.04	.13	.37	.03
5	.02	.64	.35	.13	.08	.97	.31	.03	.07	.16	.35	.03
6	.02	.36	.33	.12	.08	11	.29	.02	.07	.19	.32	.03
7	.01	.53	.43	.12	.07	2.9	.28	.02	.08	.25	.30	.03
8	.01	.54	.46	.17	.07	1.5	.26	.02	.09	.33	.42	.03
9	.01	.43	.39	.27	.07	23	.24	.02	.11	.36	.32	.04
10	.01	.23	.61	.21	.06	1.2	3.8	.02	.12	.42	.28	.04
11	.01	.11	.54	.17	.06	.79	13	.02	.14	.42	.23	.03
12	.01	.11	e12	.16	.06	.43	2.6	.02	.11	.52	.27	.03
13	.01	.12	e12	.19	.06	.32	.46	.02	.09	.71	.24	.03
14	.01	.40	e6.3	.31	.06	.22	.28	.02	.07	1.1	.19	.26
15	.01	1.7	.55	.24	.07	.20	.21	.02	.06	.93	.16	.07
16	.01	.90	.41	.20	.06	.24	20	.02	.06	.85	.14	.93
17	.01	.64	.31	.18	.07	.36	4.5	.02	.04	.83	.13	.52
18	.01	4.5	.26	.17	.07	.28	.86	.02	.04	.80	.12	3.0
19	.01	2.5	.22	.16	.07	.23	.77	.02	.03	.77	.11	.38
20	.01	.96	.18	.16	.07	.21	.92	.02	.03	.79	.09	.15
21	.02	.92	.19	.15	.08	.19	.99	.02	.02	.78	.09	.10
22	.02	.74	.18	.14	.08	.23	.47	.02	.02	.80	.08	.08
23	.02	e1.7	.18	.13	.11	.19	.36	.02	.01	.82	.07	.06
24	.71	e.84	.14	.13	.12	2.3	.29	.01	.01	.76	.07	.05
25	6.8	e.67	.10	.12	.10	3.2	.23	.01	.02	.72	.07	.04
26	1.7	.41	.09	.11	.10	1.7	.18	.01	.02	.70	.06	.05
27	.67	.39	.08	.11	3.1	.96	.14	.01	.03	.62	.06	.32
28	.24	.30	.08	.11	5.2	.84	.11	.01	.04	.58	.05	.26
29	8.3	.52	.08	.10	3.4	.80	.10	.02	.05	.51	.05	.13
30	3.0	16	.08	.10	---	.71	.08	.02	.06	.47	.04	.06
31	1.4	---	.08	.09	---	.62	---	.02	---	.45	.04	---
TOTAL	23.10	46.88	39.77	4.71	13.72	71.18	53.44	0.69	1.63	17.03	5.94	6.90
CAL YR 1991	TOTAL 395.12											
WTR YR 1992	TOTAL 284.99											

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.73	53	22	1.3	1.2	91	4.9	1.4	.68	.47	.73	.62
2	.73	18	8.5	1.5	1.2	30	4.1	1.2	.69	.45	.76	.67
3	.75	6.4	5.5	2.0	1.2	20	3.7	.99	.73	.42	.78	.72
4	.98	3.9	5.0	2.0	1.2	15	3.4	.85	.78	.39	.80	.70
5	1.5	3.7	4.7	1.8	1.2	18	3.0	.75	1.1	.37	.81	.71
6	1.3	2.3	4.4	1.7	1.2	67	2.8	.68	1.0	.36	.78	.82
7	1.1	2.6	5.8	1.6	1.1	24	2.8	.68	1.0	.35	.79	.86
8	1.1	2.6	6.3	2.2	1.1	16	2.6	.69	1.0	.38	1.2	.79
9	1.1	2.6	5.4	3.4	1.1	84	2.4	.69	1.1	.40	.94	1.1
10	1.0	1.9	8.6	2.6	1.1	19	22	.67	1.1	.45	.87	.99
11	1.0	2.0	7.6	2.1	1.0	16	49	.65	1.2	.45	.77	.88
12	.97	2.0	e110	2.0	1.1	8.2	11	.79	1.1	.55	.98	.86
13	.98	2.1	e110	2.2	1.3	5.9	4.2	.73	.96	.75	.89	.81
14	1.2	4.0	e54	3.5	1.3	3.7	2.8	.69	.86	1.1	.75	2.7
15	1.2	14	8.0	2.7	1.5	3.3	2.1	.68	.83	.95	.70	1.5
16	1.1	7.4	6.0	2.2	1.6	3.9	86	.64	.83	.86	.66	11
17	1.1	4.6	4.5	1.9	1.7	5.7	20	.66	.75	.83	.63	4.8
18	1.2	27	3.9	1.8	1.9	4.4	6.7	.63	.74	.79	.60	23
19	1.1	13	3.3	1.6	2.1	3.7	6.9	.61	.75	.75	.59	4.3
20	1.2	6.5	2.8	1.6	2.3	3.4	7.6	.61	.67	.76	.55	2.4
21	1.2	5.5	2.9	1.5	2.6	3.1	8.1	.62	.58	.74	.56	2.0
22	1.2	4.5	2.9	1.5	3.1	3.7	5.2	.59	.52	.74	.55	1.7
23	1.2	e14	2.8	1.4	4.3	3.1	4.2	.58	.51	.77	.55	1.3
24	10	e6.5	2.3	1.4	4.7	22	3.8	.57	.49	.75	.57	1.2
25	43	e5.1	1.6	1.3	4.1	29	3.2	.56	.51	.76	.60	1.1
26	18	2.9	1.4	1.3	4.0	18	2.6	.55	.59	.80	.60	1.2
27	9.5	2.8	1.3	1.3	25	12	2.2	.56	.56	.76	.61	3.6
28	3.7	2.3	1.3	1.3	51	7.7	1.9	.57	.53	.75	.58	1.8
29	61	5.4	1.3	1.2	34	7.3	1.8	.61	.50	.72	.59	1.4
30	24	120	1.3	1.2	---	6.6	1.6	.63	.49	.70	.59	1.2
31	9.6	---	1.3	1.2	---	5.8	---	.67	---	.73	.58	---
TOTAL	203.74	348.6	406.7	56.3	160.2	560.5	282.6	21.80	23.15	20.05	21.96	76.73
CAL YR 1991	TOTAL 3151.17											
WTR YR 1992	TOTAL 2182.33											

e Estimated

STREAMS TRIBUTARY TO LAKE MICHIGAN

040857005 OTTER CREEK, AT WILLOW ROAD, NEAR PLYMOUTH, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Oct. 1, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 27, 28, Dec. 2, 3, 5, 6, 12, 20, Jan. 23, 25, Feb. 15, 24, and Mar. 20-22, 26, 29. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Feb. 18, 19, and Mar. 5, 6.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.39 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.39 in., Oct. 24.

 RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
 DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.48	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.03	.00	.00	.19	.00	.00	.00	.00	.00	.01	.12	.35
3	.06	.00	.00	.00	.00	.00	.00	.00	.00	.09	.03	.00
4	.70	.00	.00	.00	.00	.04	.00	.00	.26	.00	.00	.00
5	.24	.00	.00	.00	.00	.00	.00	.00	.26	.00	.00	.00
6	.01	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.31
7	.00	.00	.00	.00	.00	.02	.01	.00	.00	.00	.78	.01
8	.00	.00	.00	.12	.00	.04	.01	.00	.00	.17	.01	.00
9	.00	.00	.00	.00	.00	.50	.00	.00	.00	.00	.00	.74
10	.00	.00	.00	.00	.00	.01	.72	.00	.00	.24	.00	.00
11	.00	.00	.00	.00	.00	.02	.00	.27	.00	.01	.00	.00
12	.00	.00	.00	.07	.00	.00	.00	.01	.00	.45	.68	.00
13	.30	.00	.00	.00	.00	.00	.00	.00	.01	.86	.00	.00
14	.07	.41	.00	.00	.00	.00	.00	.00	.02	.01	.00	.95
15	.00	.04	.00	.00	.00	.00	.22	.00	.67	.00	.00	.01
16	.00	.00	.00	.00	.00	.15	.59	.01	.01	.00	.00	1.00
17	.00	.05	.00	.00	.00	.00	.00	.04	.07	.02	.00	.04
18	.00	.28	.00	.00	.00	.00	.00	.00	.14	.00	.13	1.25
19	.15	.02	.00	.00	.00	.00	.08	.00	.02	.03	.00	.00
20	.00	.00	.00	.00	.00	.00	.19	.00	.00	.00	.00	.16
21	.00	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.05
22	.00	.21	.00	.02	.00	.00	.00	.00	.00	.02	.00	.00
23	.00	.18	.00	.00	.00	.00	.08	.07	.00	.04	.00	.00
24	1.39	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
25	.29	.00	.00	.00	.00	.03	.00	.00	.31	.00	.14	.00
26	.42	.00	.00	.00	.00	.00	.01	.00	.00	.00	.02	.49
27	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.06
28	.13	.00	.00	.00	.00	.00	.07	.00	.00	.00	.01	.00
29	.66	.51	.00	.00	.00	.00	.04	.00	.06	.00	.00	.00
30	.09	.04	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.02	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	4.57	2.22	0.00	0.40	0.00	0.81	2.10	0.40	1.84	1.95	1.94	5.42

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

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

GAGE.--Water-stage recorder. Datum of gage is 584.00 ft above National Geodetic Vertical Datum of 1929. June 1916 to June 1924, nonrecording gage at site 0.7 mi downstream at different datum. November 1950 to June 1951, nonrecording gage at site 0.3 mi downstream at datum 3.15 ft lower.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	690	700	291	196	500	614	384	87	67	43	34
2	52	871	370	303	190	938	571	336	83	65	43	34
3	52	480	250	369	180	810	547	327	80	62	45	37
4	70	300	220	402	178	643	528	293	81	56	45	38
5	103	200	190	414	159	753	493	281	95	51	44	35
6	125	170	210	360	140	1120	467	262	92	48	42	36
7	113	160	300	276	130	1320	456	234	86	47	46	38
8	96	160	600	267	120	1180	409	197	82	53	70	44
9	83	180	880	419	110	1410	368	195	74	53	67	57
10	67	205	620	430	110	1380	449	190	54	59	55	63
11	85	206	717	366	110	900	1510	183	66	56	48	59
12	70	201	899	336	110	760	1120	201	63	67	51	51
13	68	201	1520	350	100	660	866	200	56	84	54	43
14	75	210	1160	309	110	620	742	183	51	156	57	60
15	80	297	700	250	110	560	694	172	59	163	48	83
16	88	383	600	220	110	542	1150	165	65	126	42	92
17	81	320	500	180	110	860	1420	161	79	100	40	124
18	78	357	460	160	110	809	1110	162	82	85	41	178
19	79	447	430	170	110	634	917	140	84	75	41	190
20	75	380	400	200	120	491	890	120	70	75	41	141
21	73	334	370	230	120	394	977	132	61	73	39	125
22	71	309	350	292	110	344	890	124	57	67	36	120
23	58	342	340	234	120	324	810	127	56	67	35	105
24	90	500	330	216	140	352	742	118	56	64	36	93
25	245	350	330	212	160	693	701	112	71	59	37	90
26	443	300	320	215	160	986	630	108	106	56	39	92
27	477	250	320	215	170	922	581	100	100	53	39	104
28	399	220	332	211	270	821	441	89	78	49	40	118
29	474	250	322	205	400	735	402	96	69	42	37	111
30	828	640	313	203	---	731	413	91	69	42	36	95
31	734	---	301	208	---	676	---	89	---	45	35	---
TOTAL	5483	9913	15354	8513	4263	23868	21908	5572	2212	2165	1372	2490
MEAN	177	330	495	275	147	770	730	180	73.7	69.8	44.3	83.0
MAX	828	871	1520	430	400	1410	1510	384	106	163	70	190
MIN	51	160	190	160	100	324	368	89	51	42	35	34
CFSM	.42	.79	1.18	.66	.35	1.84	1.75	.43	.18	.17	.11	.20
IN.	.49	.88	1.37	.76	.38	2.12	1.95	.50	.20	.19	.12	.22

MEAN	163	211	169	113	167	702	724	303	191	101	109	144
MAX	741	1372	505	370	887	2052	1707	1027	789	420	1433	1143
(WY)	1987	1986	1983	1960	1984	1918	1951	1960	1984	1952	1924	1986
MIN	29.6	31.7	19.7	17.1	20.9	110	141	41.5	25.2	19.8	11.1	20.4
(WY)	1958	1951	1959	1959	1958	1968	1970	1958	1958	1958	1958	1958

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1916 - 1992	
ANNUAL TOTAL	107204		103113			
ANNUAL MEAN	294		282		258	
HIGHEST ANNUAL MEAN					526	1986
LOWEST ANNUAL MEAN					47.1	1958
HIGHEST DAILY MEAN	1670	Mar 28	1520	Dec 13	7000	Aug 6 1924
LOWEST DAILY MEAN	30	Sep 2	34	Sep 1, 2	1.0	Aug 27 1922
ANNUAL SEVEN-DAY MINIMUM	37	Aug 28	36	Aug 30	8.9	Aug 14 1958
INSTANTANEOUS PEAK FLOW			(a)1900	Mar 9	7680	Mar 22 1975
INSTANTANEOUS PEAK STAGE			(b)6.62	Dec 16	11.64	Mar 22 1975
INSTANTANEOUS LOW FLOW			33	Sep 2	1.0	Aug 27 1922
ANNUAL RUNOFF (CFSM)	.70		.67		.62	
ANNUAL RUNOFF (INCHES)	9.54		9.18		8.40	
10 PERCENT EXCEEDS	724		732		610	
50 PERCENT EXCEEDS	164		162		111	
90 PERCENT EXCEEDS	57		48		36	

(a) Gage height, 6.14 ft
(b) Ice affected

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086500 CEDAR CREEK NEAR CEDARBURG, WI

LOCATION.--Lat 43°19'23", long 87°58'43", in SE 1/4 SW 1/4 sec.14, T.10 N., R.21 E., Ozaukee County, Hydrologic Unit 04040003, on left bank 40 ft upstream from bridge on State Highway 60, 1.9 mi north of Cedarburg, and 6.6 mi upstream from mouth.

DRAINAGE AREA.--120 mi².

PERIOD OF RECORD.--August 1930 to September 1970, July 1973 to September 1981, August 1983 to September 1987, October 1990 to current year.

REVISED RECORDS.--WSP 1307: 1932-34(M), 1937(M), 1939(M), 1945(M), 1948-49(M). WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 795.33 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Nonrecording gage and crest-stage gage August 1930 to September 1970 at same site and datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 7-11, Dec. 2-9, 15-26, and Jan. 13 to Feb. 29. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	266	446	118	56	231	171	118	30	14	19	19
2	20	292	390	114	56	307	147	99	29	13	17	18
3	19	287	350	103	60	277	135	84	27	14	18	18
4	23	240	310	115	62	202	130	75	26	14	19	17
5	79	170	280	107	60	209	122	71	28	14	19	16
6	102	126	260	100	56	285	110	67	30	12	17	15
7	70	110	260	98	54	366	106	64	28	11	17	25
8	52	90	270	105	48	385	102	63	26	15	22	23
9	43	84	390	193	48	438	113	62	24	20	31	23
10	37	78	385	204	52	469	130	59	21	26	23	31
11	32	74	350	156	56	468	170	58	21	22	20	26
12	30	72	376	133	50	352	191	73	20	21	17	20
13	28	68	464	130	48	225	153	75	18	26	17	17
14	30	77	512	120	46	161	138	62	16	51	18	17
15	32	161	400	100	48	140	123	57	15	60	17	26
16	30	233	340	58	50	133	173	55	15	46	15	30
17	29	204	300	45	54	250	294	52	16	36	15	46
18	30	181	250	40	60	294	296	47	23	30	15	136
19	29	202	220	46	66	251	234	46	26	27	15	181
20	27	181	200	52	74	191	192	44	23	25	14	177
21	27	150	180	62	76	158	168	41	21	24	13	151
22	26	126	160	70	76	126	147	39	19	25	13	117
23	27	119	150	66	76	133	131	45	18	25	13	79
24	29	137	150	62	76	148	150	48	18	25	13	60
25	87	118	140	58	76	248	225	43	19	25	14	50
26	141	101	140	58	80	285	227	40	19	23	37	44
27	163	90	139	56	80	262	185	38	18	21	55	47
28	150	95	129	54	96	228	155	37	17	20	38	48
29	168	98	126	54	120	201	136	35	16	17	31	41
30	252	339	122	54	---	214	134	33	15	16	28	34
31	266	---	121	54	---	204	---	33	---	17	25	---
TOTAL	2099	4569	8310	2785	1860	7841	4888	1763	642	735	645	1552
MEAN	67.7	152	268	89.8	64.1	253	163	56.9	21.4	23.7	20.8	51.7
MAX	266	339	512	204	120	469	296	118	30	60	55	181
MIN	19	68	121	40	46	126	102	33	15	11	13	15
CFSM	.56	1.27	2.23	.75	.53	2.11	1.36	.47	.18	.20	.17	.43
IN.	.65	1.42	2.58	.86	.58	2.43	1.52	.55	.20	.23	.20	.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1992, BY WATER YEAR (WY)												
MEAN	45.5	57.3	49.6	49.4	60.9	196	157	78.9	64.9	40.5	23.7	47.1
MAX	306	376	268	273	253	575	454	291	364	298	106	485
(WY)	1955	1986	1992	1975	1984	1976	1965	1933	1940	1952	1960	1986
MIN	5.65	6.66	4.92	3.74	5.32	19.9	38.9	14.0	3.34	1.40	1.45	2.48
(WY)	1935	1938	1964	1940	1959	1940	1958	1958	1934	1936	1934	1932

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1930 - 1992	
ANNUAL TOTAL	37594.6		37689		72.6	
ANNUAL MEAN	103		103		168	
HIGHEST ANNUAL MEAN					13.5	
LOWEST ANNUAL MEAN					1986	
HIGHEST DAILY MEAN	512		512		3320	
LOWEST DAILY MEAN	9.6		11		.20	
ANNUAL SEVEN-DAY MINIMUM	11		13		.24	
INSTANTANEOUS PEAK FLOW			(a)532		3600	
INSTANTANEOUS PEAK STAGE			(b)8.39		(c)12.25	
INSTANTANEOUS LOW FLOW			11		.20	
ANNUAL RUNOFF (CFSM)	.86		.86		.60	
ANNUAL RUNOFF (INCHES)	11.65		11.68		8.22	
10 PERCENT EXCEEDS	268		254		160	
50 PERCENT EXCEEDS	52		60		30	
90 PERCENT EXCEEDS	21		17		6.7	

(a) Gage height, 7.56 ft

(b) Backwater from ice

(c) From graph based on gage readings, backwater from ice

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04086600 MILWAUKEE RIVER NEAR CEDARBURG, WI

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

DRAINAGE AREA.--607 mi².

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

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 3-10, 24-27, Dec. 2-9, Dec. 15 to Mar. 1, and Mar. 12-16. Records good except those for ice-affected periods, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	1180	1280	330	210	640	898	696	197	106	98	91
2	112	1250	1000	340	210	1100	846	644	188	108	102	94
3	112	1000	700	370	220	1180	814	585	185	113	108	95
4	174	900	500	410	220	1070	791	541	169	102	104	95
5	255	760	380	440	220	1040	746	497	180	99	104	91
6	361	580	350	450	210	1180	690	468	192	96	101	91
7	323	470	330	460	200	1380	661	419	185	95	99	120
8	284	430	660	490	200	1450	633	389	172	129	134	136
9	259	380	1000	540	190	1630	668	377	162	105	159	146
10	231	420	1250	620	180	1720	698	363	167	132	137	160
11	194	407	1110	680	190	1490	829	352	172	138	117	170
12	180	373	1140	620	190	1200	939	411	129	147	112	138
13	162	350	1470	580	180	1000	986	462	131	176	114	122
14	165	373	1460	540	170	840	982	459	115	283	140	129
15	161	570	900	440	170	780	992	407	105	332	133	133
16	163	779	700	270	180	720	995	510	108	262	120	183
17	176	766	540	190	190	973	1270	366	124	215	109	251
18	148	761	480	150	210	1090	1270	363	165	174	101	431
19	149	832	440	160	240	1010	1200	357	179	148	99	465
20	140	806	420	180	270	910	1160	329	157	139	95	434
21	137	736	400	210	280	831	1130	295	136	127	92	396
22	137	670	390	250	290	743	1060	312	116	121	88	344
23	133	638	360	240	300	695	972	325	115	125	84	277
24	154	600	350	220	300	712	961	304	114	129	85	230
25	366	560	340	210	310	927	1030	301	115	121	103	197
26	746	520	330	200	320	1030	1000	308	118	117	182	214
27	841	520	330	200	320	1040	924	311	115	111	210	215
28	848	495	330	200	350	1020	855	292	110	104	144	211
29	915	531	330	200	450	985	781	242	106	96	118	223
30	1160	1040	330	200	---	990	743	213	105	97	104	216
31	1200	---	330	200	---	967	---	204	---	97	99	---
TOTAL	10499	19697	19930	10590	6970	32343	27524	12102	4332	4344	3595	6098
MEAN	339	657	643	342	240	1043	917	390	144	140	116	203
MAX	1200	1250	1470	680	450	1720	1270	696	197	332	210	465
MIN	112	350	330	150	170	640	633	204	105	95	84	91
CFSM	.56	1.08	1.06	.56	.40	1.72	1.51	.64	.24	.23	.19	.33
IN.	.64	1.21	1.22	.65	.43	1.98	1.69	.74	.27	.27	.22	.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1992, BY WATER YEAR (WY)

	396	587	470	277	435	1046	940	455	388	203	196	351
MEAN	396	587	470	277	435	1046	940	455	388	203	196	351
MAX	1157	1565	757	406	997	1793	1661	757	1232	500	349	1593
(WY)	1987	1986	1983	1985	1984	1986	1983	1984	1984	1984	1987	1986
MIN	167	177	120	190	167	494	487	219	89.5	69.7	69.5	135
(WY)	1983	1990	1990	1991	1989	1984	1990	1988	1988	1988	1988	1982

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1982 - 1992

ANNUAL TOTAL	166644	158024	
ANNUAL MEAN	457	432	476
HIGHEST ANNUAL MEAN			720
LOWEST ANNUAL MEAN			356
HIGHEST DAILY MEAN	1690	1720	4430
LOWEST DAILY MEAN	83	84	42
ANNUAL SEVEN-DAY MINIMUM	92	92	49
INSTANTANEOUS PEAK FLOW		(a)1870	(b)4860
INSTANTANEOUS PEAK STAGE		(c)10.89	(c)12.85
INSTANTANEOUS LOW FLOW			42
ANNUAL RUNOFF (CFSM)	.75	.71	.78
ANNUAL RUNOFF (INCHES)	10.21	9.68	10.66
10 PERCENT EXCEEDS	1090	1000	1050
50 PERCENT EXCEEDS	319	300	296
90 PERCENT EXCEEDS	136	108	124

(a) Gage height, 8.52 ft
 (b) Gage height, 12.21 ft
 (c) Ice affected

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 43°06'00", long 87°54'32", in NE 1/4 sec.5, T.7 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, on left bank near northeast limits of Milwaukee in Estabrook Park, 2,000 ft downstream from Port Washington Road bridge and 6.6 mi upstream from mouth.

DRAINAGE AREA.--696 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 564: 1918(M). WSP 924: 1940. WSP 1207: 1936(M). WSP 1337: 1915-17(M), 1918, 1919-21(M), 1922, 1923(M), 1924, 1925-33(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 607.23 ft above National Geodetic Vertical Datum 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.--Estimated daily discharges: Ice-affected periods, Nov. 8-10, Dec. 2-7, 16-27, Jan. 16 to Feb. 19, and Mar. 12-14. Records good except those for ice-affected periods, which are poor. Occasional regulation caused by recreation dam approximately 1,200 ft upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	1600	1480	385	240	858	900	687	176	113	103	98
2	135	1340	1000	395	250	1170	833	646	171	123	120	109
3	137	1270	700	435	260	1240	785	587	165	115	155	118
4	661	1090	500	499	260	1150	769	535	173	104	135	97
5	457	892	450	531	250	1100	719	503	234	102	109	93
6	358	795	380	528	250	1270	676	472	176	97	111	96
7	360	597	520	526	240	1470	648	441	177	92	194	92
8	318	450	1210	559	220	1530	623	415	170	274	213	155
9	289	430	1530	685	210	1750	665	396	161	150	139	329
10	267	450	1480	808	200	1950	692	379	152	141	156	165
11	240	470	1320	780	210	1620	791	367	144	139	131	170
12	212	419	1460	696	200	1300	943	418	137	277	166	146
13	200	399	1690	691	200	1000	993	427	133	577	127	128
14	232	437	1620	637	190	940	1010	402	143	338	125	254
15	198	596	1020	434	200	916	1090	378	121	347	134	157
16	195	767	600	240	210	822	1490	361	115	304	126	224
17	202	809	540	190	230	1010	1480	340	368	255	115	468
18	219	855	500	170	260	1150	1390	325	183	207	111	409
19	186	863	480	190	350	1080	1310	305	193	173	103	454
20	176	850	450	220	371	966	1250	288	178	161	98	459
21	171	780	430	260	378	876	1190	267	159	151	92	437
22	175	701	420	300	375	811	1100	236	148	141	88	364
23	170	697	400	280	375	724	1040	409	140	152	83	309
24	368	670	400	250	408	729	1010	251	135	145	81	260
25	498	662	400	240	409	940	1070	235	133	145	119	222
26	942	573	390	240	389	1090	1060	236	135	139	297	232
27	935	561	390	230	420	1080	968	237	137	134	271	280
28	937	530	398	230	570	1020	855	232	128	118	195	217
29	1040	727	391	230	745	998	788	223	123	113	152	218
30	1180	1360	388	230	---	975	733	72	117	151	113	221
31	1250	---	388	240	---	956	---	70	---	131	104	---
TOTAL	12846	22640	23325	12329	8870	34491	28871	11140	4825	5609	4266	6981
MEAN	414	755	752	398	306	1113	962	359	161	181	138	233
MAX	1250	1600	1690	808	745	1950	1490	687	368	577	297	468
MIN	135	399	380	170	190	724	623	70	115	92	81	92
CFSM	.60	1.08	1.08	.57	.44	1.60	1.38	.52	.23	.26	.20	.33
IN.	.69	1.21	1.25	.66	.47	1.84	1.54	.60	.26	.30	.23	.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	MEAN	284	352	303	252	383	1068	952	494	367	209	202	269
MAX	1316	1956	981	864	2200	3545	2615	1720	1249	1200	2936	2304	
(WY)	1987	1986	1929	1916	1938	1929	1959	1973	1984	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	

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1914 - 1992	
ANNUAL TOTAL	194400		176193		427	
ANNUAL MEAN	533		481		874	1986
HIGHEST ANNUAL MEAN					112	1958
LOWEST ANNUAL MEAN					14800	Mar 20 1918
HIGHEST DAILY MEAN	2370	Apr 15	1950	Mar 10	(a).00	Sep 8 1943
LOWEST DAILY MEAN	84	Sep 2	70	May 31	8.3	Aug 3 1936
ANNUAL SEVEN-DAY MINIMUM	105	Aug 27	94	Aug 18	15100	(b)Mar 20 1918
INSTANTANEOUS PEAK FLOW			3120	Nov 1	(c)9.00	Aug 6 1924
INSTANTANEOUS PEAK STAGE			4.88	Nov 1	(a).00	Sep 8 1943
INSTANTANEOUS LOW FLOW			1.6	May 30	.61	
ANNUAL RUNOFF (CFSM)	.77		.69		8.34	
ANNUAL RUNOFF (INCHES)	10.39		9.42		975	
10 PERCENT EXCEEDS	1260		1080		220	
50 PERCENT EXCEEDS	370		359		69	
90 PERCENT EXCEEDS	152		123			

(a) Result of regulation

(b) Also occurred Aug. 6, 1924

(c) Datum then in use, from floodmark for 1918, from graph based on gage reading for 1924

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967-69, 1971, 1973 to current year. National Stream-Quality Accounting Network data collection begin in January 1973.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	
DEC 1991												
10...	0945	1540	675	8.2	0.5	4.8	14.1	738	101	450	3200	
MAR 1992												
19...	1030	1110	579	8.4	3.0	4.9	13.5	752	102	38	130	
JUN												
10...	1120	152	714	8.7	21.0	5.5	13.0	755	148	26	K15	
AUG												
11...	0950	132	656	8.4	24.5	5.7	8.0	756	97	550	50	
DATE		HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
DEC 1991												
10...	300	68	32	33	3.6	278	--	228	40	63	0.20	
MAR 1992												
19...	270	60	30	25	3.1	256	8	224	30	51	<0.10	
JUN												
10...	310	58	39	36	2.8	283	10	248	40	72	0.20	
AUG												
11...	230	36	35	48	2.8	198	6	172	31	81	0.20	
DATE		SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
DEC 1991												
10...	9.1	486	394	0.020	1.80	0.080	0.070	0.90	0.130	0.070	0.070	
MAR 1992												
19...	5.2	336	346	0.010	1.60	0.060	0.050	0.60	0.060	0.040	0.040	
JUN												
10...	2.3	403	400	<0.010	<0.050	0.020	0.010	0.70	0.080	0.040	<0.010	
AUG												
11...	0.27	355	338	<0.010	<0.050	0.030	<0.010	3.3	0.320	<0.010	<0.010	

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

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
DEC 1991							
10...	0945	1540	<10	31	<3	35	4
MAR 1992							
19...	1030	1110	<10	28	<3	23	<4
JUN							
10...	1120	152	<10	36	<3	7	9
AUG							
11...	0950	132	<10	30	<3	5	<4

DATE	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)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
DEC 1991						
10...	6	<10	1	<1	180	<6
MAR 1992						
19...	9	<10	<1	<1	160	<6
JUN						
10...	4	<10	1	<1	280	<6
AUG						
11...	4	<10	2	<1	260	<6

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1991							
09...	0910	303	560	11.0	--	--	--
DEC							
10...	0945	1540	675	0.5	30	125	84
FEB 1992							
26...	0915	422	620	0.0	--	--	--
MAR							
19...	1030	1110	579	3.0	17	51	84
JUN							
10...	1120	152	714	21.0	16	6.6	79
19...	0935	183	550	20.0	--	--	--
AUG							
11...	0950	132	656	24.5	15	5.3	97
13...	0945	126	670	20.5	--	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087030 MEMOMONEE RIVER AT MEMOMONEE FALLS, WI

LOCATION.--Lat 43°10'22", long 88°06'14", in SE 1/4 NE 1/4 sec.10, T.8 N., R.20 E., Waukesha County, Hydrologic Unit 04040003, on right bank, 150 ft 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. Datum of gage is 753.50 ft above National Geodetic Vertical Datum of 1929 (University of Wisconsin bench mark).

REMARKS.--Estimated discharges: Mar. 22-30, Sept. 8-30, and ice-affected periods, Nov. 2-10, 26, 27, Dec. 1-7, Dec. 15 to Feb. 28, and Mar. 11-15. Records good except those for estimated daily discharges, which are poor. Occasional regulation caused by dam in Menomonee Falls, about 1.0 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	83	100	15	16	68	50	35	6.9	3.5	3.3	5.5
2	4.7	60	70	18	20	94	37	31	6.4	4.8	3.2	6.5
3	4.7	42	50	25	23	73	34	29	6.2	3.8	5.0	6.3
4	28	32	40	35	20	63	36	26	6.0	3.1	3.7	5.2
5	62	25	34	32	14	70	33	23	10	2.7	3.1	4.5
6	50	20	30	31	13	97	29	20	7.2	2.4	2.7	5.9
7	29	20	62	30	12	105	29	19	6.6	2.3	7.6	5.1
8	20	21	89	30	12	113	28	18	5.8	23	11	10
9	16	17	105	56	12	110	34	17	5.0	7.0	6.6	24
10	14	16	91	50	12	107	36	18	4.6	8.0	5.1	18
11	12	18	68	48	13	90	52	18	4.1	5.3	4.3	13
12	13	19	72	43	13	74	50	23	3.8	13	4.8	9.0
13	12	21	64	44	13	54	41	22	6.9	28	4.2	7.0
14	14	30	69	36	14	46	37	19	4.5	33	3.5	22
15	13	69	50	25	19	42	44	16	4.0	18	3.0	19
16	12	67	37	15	17	52	99	15	4.0	11	2.7	25
17	12	48	29	13	15	92	115	14	16	8.4	2.7	50
18	12	58	26	13	13	80	88	13	8.7	6.7	2.7	45
19	9.8	60	22	12	14	64	69	12	6.6	5.7	2.5	38
20	8.8	50	20	11	15	56	62	11	5.5	5.1	2.3	35
21	9.0	41	19	13	18	49	54	10	4.8	4.6	2.2	33
22	11	35	18	19	19	40	45	9.5	4.4	4.2	2.2	28
23	11	38	18	20	20	38	42	15	4.4	4.4	2.1	21
24	31	38	18	18	20	46	53	12	4.4	4.4	1.7	15
25	60	29	17	15	20	60	68	9.6	4.5	4.2	15	12
26	57	23	15	14	19	80	60	9.6	4.9	4.3	33	14
27	60	22	15	14	20	84	53	9.5	4.8	3.7	30	17
28	41	28	16	15	45	78	41	9.1	4.3	3.4	21	13
29	82	54	16	15	64	74	37	8.2	3.8	3.1	12	10
30	97	143	15	16	---	64	36	7.7	3.5	6.2	8.7	8.0
31	81	---	15	16	---	56	---	7.0	---	4.4	6.6	---
TOTAL	891.7	1227	1310	757	545	2219	1492	506.2	172.6	241.7	218.5	525.0
MEAN	28.8	40.9	42.3	24.4	18.8	71.6	49.7	16.3	5.75	7.80	7.05	17.5
MAX	97	143	105	56	64	113	115	35	16	33	33	50
MIN	4.7	16	15	11	12	38	28	7.0	3.5	2.3	1.7	4.5
CFSM	.83	1.18	1.22	.70	.54	2.06	1.43	.47	.17	.22	.20	.50
IN.	.96	1.32	1.40	.81	.58	2.38	1.60	.54	.19	.26	.23	.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1992, BY WATER YEAR (WY)

MEAN	24.5	32.4	28.6	17.1	30.3	63.5	58.5	25.0	16.3	13.1	15.0	23.3
MAX	94.3	137	70.4	72.8	87.4	124	161	71.4	51.2	48.3	34.9	151
(WY)	1982	1986	1985	1988	1984	1976	1983	1990	1984	1984	1986	1986
MIN	3.31	3.38	3.00	2.29	4.21	18.3	24.6	3.80	3.33	1.55	1.47	1.86
(WY)	1977	1977	1977	1977	1977	1980	1977	1977	1988	1988	1988	1976

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1975-92

ANNUAL TOTAL	11046.4	10105.7	
ANNUAL MEAN	30.3	27.6	29.1
HIGHEST ANNUAL MEAN			53.4
LOWEST ANNUAL MEAN			10.9
HIGHEST DAILY MEAN	250	143	674
LOWEST DAILY MEAN	2.9	1.7	.63
ANNUAL SEVEN-DAY MINIMUM	3.5	2.2	.82
INSTANTANEOUS PEAK FLOW		307	(a)1440
INSTANTANEOUS PEAK STAGE		4.62	6.57
INSTANTANEOUS LOW FLOW		1.7	.52
ANNUAL RUNOFF (CFSM)	.87	.80	.84
ANNUAL RUNOFF (INCHES)	11.84	10.83	11.39
10 PERCENT EXCEEDS	65	67	62
50 PERCENT EXCEEDS	19	18	15
90 PERCENT EXCEEDS	5.4	4.3	4.2

(a) Gage height, 6.49 ft

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04087088 UNDERWOOD CREEK AT WAUWATOSA, WI

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

DRAINAGE AREA.--18.2 mi².

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

REVISED RECORDS.--WDR WI-77-1: Drainage area. WRD WI-85-1: 1984.

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 4-9, Jan. 16-26, Feb. 9-13, and Mar. 11-13. Records good, except those for ice-affected periods, which are fair, and discharges greater than 600 ft³/s, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	49	33	7.8	5.6	11	13	12	5.0	4.5	6.1	4.2
2	3.6	24	21	10	6.3	12	12	10	4.9	12	5.0	12
3	3.2	14	18	11	5.9	12	12	9.0	4.9	6.3	18	5.9
4	113	11	14	9.4	6.4	11	14	9.6	4.8	4.5	7.7	4.3
5	47	9.2	11	8.8	5.9	20	11	8.5	6.9	4.2	5.7	3.8
6	15	7.0	12	8.6	5.8	41	9.6	8.7	4.9	4.0	4.9	4.9
7	8.9	6.0	36	8.2	5.6	39	9.8	7.8	4.6	3.7	28	4.1
8	7.3	6.0	51	17	5.0	25	9.6	7.3	4.3	22	16	12
9	6.3	6.2	36	15	4.8	52	17	7.1	4.5	6.6	7.5	35
10	6.2	6.2	24	11	5.4	33	18	7.1	4.7	5.4	7.1	7.3
11	6.4	6.5	19	9.7	5.0	21	20	8.6	5.0	4.1	6.1	5.0
12	5.1	5.9	88	10	4.9	18	12	16	4.6	35	30	4.3
13	5.4	6.0	57	9.9	4.8	15	11	7.8	4.9	59	11	3.9
14	11	15	33	8.8	4.8	14	10	6.6	15	30	6.6	32
15	5.6	26	23	7.1	9.1	12	24	6.6	6.7	12	4.9	11
16	4.9	12	18	7.0	6.2	22	70	6.5	5.1	9.1	4.5	31
17	4.7	9.7	15	6.8	8.0	23	39	6.6	39	7.2	4.0	29
18	9.0	26	13	6.6	32	18	26	5.9	12	6.9	4.9	17
19	5.8	18	12	6.4	33	15	21	6.2	7.2	5.1	4.1	9.3
20	4.8	12	14	6.4	23	14	19	5.6	5.7	5.0	4.1	11
21	4.8	9.5	15	6.4	14	13	15	5.3	5.2	5.2	4.2	9.9
22	4.4	8.7	11	8.6	20	18	13	5.6	4.5	5.2	3.8	6.2
23	4.4	18	11	10	15	17	20	27	5.1	5.9	3.7	5.5
24	45	11	10	5.6	13	23	20	9.3	5.5	5.1	3.7	5.2
25	31	8.2	9.7	6.4	14	28	19	7.3	5.1	6.1	16	4.9
26	57	7.3	9.1	6.0	12	25	16	6.0	5.0	5.8	22	9.5
27	22	12	9.2	6.0	14	20	15	5.6	4.3	4.7	18	10
28	20	8.4	8.4	5.8	16	17	13	5.4	5.0	4.5	8.0	5.7
29	35	68	8.7	6.3	12	19	16	5.0	4.8	4.0	7.3	5.2
30	25	81	8.7	6.3	---	17	12	4.9	4.5	18	5.0	4.9
31	15	---	8.2	6.0	---	16	---	4.8	---	7.4	4.3	---
TOTAL	540.3	507.8	657.0	258.9	317.5	641	537.0	249.7	203.7	318.5	282.2	314.0
MEAN	17.4	16.9	21.2	8.35	10.9	20.7	17.9	8.05	6.79	10.3	9.10	10.5
MAX	113	81	88	17	33	52	70	27	39	59	30	35
MIN	3.2	5.9	8.2	5.6	4.8	11	9.6	4.8	4.3	3.7	3.7	3.8
CFSM	.96	.93	1.16	.46	.60	1.14	.98	.44	.37	.56	.50	.58
IN.	1.10	1.04	1.34	.53	.65	1.31	1.10	.51	.42	.65	.58	.64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1992, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	9.31	11.7	12.2	7.63	11.7	26.7	26.6	14.9	9.64	10.3	12.8	12.8						
MAX	26.9	42.1	27.2	39.1	26.3	73.4	52.0	46.9	21.9	23.5	29.1	56.0						
(WY)	1987	1986	1983	1988	1985	1979	1983	1990	1990	1987	1987	1986						
MIN	2.43	1.81	1.57	.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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1975 - 1992

ANNUAL TOTAL	5647.0	4827.6	
ANNUAL MEAN	15.5	13.2	13.8
HIGHEST ANNUAL MEAN			22.1
LOWEST ANNUAL MEAN			4.21
HIGHEST DAILY MEAN	180	Apr 15	348
LOWEST DAILY MEAN	2.7	Sep 8	.00
ANNUAL SEVEN-DAY MINIMUM	3.2	Aug 23	.00
INSTANTANEOUS PEAK FLOW			371
INSTANTANEOUS PEAK STAGE			4.18
INSTANTANEOUS LOW FLOW			2.5
ANNUAL RUNOFF (CFSM)	.85		.72
ANNUAL RUNOFF (INCHES)	11.54		9.87
10 PERCENT EXCEEDS	35		26
50 PERCENT EXCEEDS	8.3		8.8
90 PERCENT EXCEEDS	3.8		4.7

(a) No flow on all or part of many days during 1977 winter period

(b) Gage height, 5.55 ft

(c) Backwater from ice

(d) Also occurred Aug. 23-25

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087120 MENOMONEE RIVER AT WAUWATOSA, WI

LOCATION.--Lat 43°02'44", long 87°59'59", in NE 1/4 NW 1/4 sec.27, T.7 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, on left bank near upstream side of 70th Street bridge in Wauwatosa, 800 ft downstream from Honey Creek, and at mile 6.2.

DRAINAGE AREA.--123 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 630.86 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1974, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Aug. 7, 8, and ice-affected periods, Nov. 8, Dec. 5-7, Jan. 14-29, and Feb. 9-13. Records good except those for estimated daily discharges, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	343	373	61	45	159	154	112	25	14	25	22
2	19	273	271	78	44	202	139	100	24	42	31	48
3	19	186	203	103	48	180	129	89	23	27	97	54
4	513	137	153	106	54	160	141	84	23	15	58	24
5	382	112	110	99	47	189	120	76	57	13	25	19
6	157	100	110	94	46	342	113	73	27	13	21	26
7	104	84	240	90	43	414	110	67	23	13	110	22
8	74	72	409	132	35	306	105	64	21	175	60	64
9	58	68	381	181	35	477	156	58	20	59	37	225
10	46	64	280	160	38	397	150	56	20	34	28	73
11	43	66	228	133	32	286	183	62	19	25	24	37
12	36	67	483	122	32	218	150	125	19	172	116	26
13	33	69	468	123	31	169	130	73	19	403	49	21
14	76	119	313	100	30	149	121	61	58	271	24	171
15	39	236	195	66	59	134	191	56	32	108	19	84
16	35	171	153	50	49	163	563	50	19	68	17	144
17	32	137	150	43	63	270	413	46	244	47	16	282
18	49	218	107	42	150	215	273	44	92	41	17	246
19	40	182	98	41	205	176	214	42	33	27	16	165
20	26	148	108	41	143	156	190	40	23	24	15	125
21	26	127	111	40	130	144	170	39	19	23	15	126
22	27	116	93	46	129	150	148	38	18	22	14	77
23	27	164	89	70	139	153	164	188	18	28	13	57
24	273	129	79	60	123	192	183	64	18	24	13	44
25	412	110	74	54	118	274	202	43	17	24	45	36
26	390	93	68	47	103	264	177	38	17	32	184	62
27	227	112	68	42	115	231	159	34	15	21	170	82
28	173	99	64	42	182	196	140	32	15	20	91	43
29	312	350	64	45	185	199	141	30	14	19	63	33
30	290	723	64	49	---	187	120	28	14	77	38	29
31	207	---	62	48	---	173	---	26	---	57	25	---
TOTAL	4163	4875	5669	2408	2453	6925	5349	1938	986	1938	1476	2467
MEAN	134	162	183	77.7	84.6	223	178	62.5	32.9	62.5	47.6	82.2
MAX	513	723	483	181	205	477	563	188	244	403	184	282
MIN	18	64	62	40	30	134	105	26	14	13	13	19
CFSM	1.09	1.32	1.49	.63	.69	1.82	1.45	.51	.27	.51	.39	.67
IN.	1.26	1.47	1.71	.73	.74	2.09	1.62	.59	.30	.59	.45	.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1992, BY WATER YEAR (WY)

MEAN	69.2	81.3	83.5	53.8	86.4	217	195	102	75.9	67.1	67.5	87.8
MAX	232	422	222	191	239	582	651	326	223	257	264	562
(WY)	1982	1986	1988	1974	1971	1979	1973	1990	1968	1964	1986	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1962 - 1992

ANNUAL TOTAL	43966	40647	
ANNUAL MEAN	120	111	98.8
HIGHEST ANNUAL MEAN			195
LOWEST ANNUAL MEAN			24.0
HIGHEST DAILY MEAN	1090	723	6380
LOWEST DAILY MEAN	13	13	2.8
ANNUAL SEVEN-DAY MINIMUM	17	15	3.1
INSTANTANEOUS PEAK FLOW		1800	(b)13500
INSTANTANEOUS PEAK STAGE		5.08	13.92
INSTANTANEOUS LOW FLOW		12	
ANNUAL RUNOFF (CFSM)	.98	.90	.80
ANNUAL RUNOFF (INCHES)	13.30	12.29	10.91
10 PERCENT EXCEEDS	273	241	226
50 PERCENT EXCEEDS	70	73	42
90 PERCENT EXCEEDS	23	20	13

(a) Also occurred July 6, 7, and Aug. 23, 24

(b) From rating curve extended above 6,000 ft³/s on basis of slope-area measurement of peak flow

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04087120 MENOMONEE RIVER AT WAUWATOSA, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- January 1975 to September 1977, June 1982 to September 1984, and October 1990 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: January 1975 to September 1977 and June 1982 to September 1984.

REMARKS.--Samples are collected by an automatic sampler and are composite samples. Chemical analyses by Wisconsin State Laboratory of Hygiene and U.S. Geological Survey National Water Quality Laboratory.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					JUN 1992				
28...	1310	136	456	11.0	03...	1410	23	1070	22.0
DEC					JUL				
09...	1310	371	1200	4.0	06...	1200	12	956	21.5
JAN 1992					AUG				
22...	1130	40	1270	1.5	11...	1340	24	897	23.0
MAR					SEP				
02...	1330	206	818	4.5	23...	1305	56	950	14.0
APR									
20...	1145	189	1000	14.0					

DATE	TIME	ENDING TIME	RUNOFF VOLUME, MILLIONS OF CUBIC FEET (99905)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)	CAPTAN WATER WHOLE REC (UG/L) (39640)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DYRIFOS TOTAL RECOVER (UG/L) (38932)	CYAN- AZINE TOTAL (UG/L) (81757)	DCPA WATER UNFLTRD REC (UG/L) (39770)	DI- AZINON, TOTAL (UG/L) (39570)
JUN 1992											
17-18	1350	1230	25.5	<0.10	0.5	<1.0	<0.5	<1.0	<0.90	<0.10	<0.50
JUL											
08-09	0935	1235	18.3	<0.10	<0.1	<1.0	<0.5	<1.0	<0.30	<0.10	<0.50
12-13	1140	2330	46.2	<0.30	<0.1	<1.0	<0.5	<1.0	<0.30	<0.10	<0.50
13-16	2330	0830	37.6	<0.10	0.1	<1.0	<0.5	<1.0	<0.30	<0.10	<0.50

DATE	DICAMBA (MED- IBEN) (BAN- VEL D) TOTAL (UG/L) (82052)	DIMETH- OATE WATER WHOLE TOTAL (UG/L) (39009)	DISUL- FOTON WATER WHOLE TOT.REC (UG/L) (82617)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	PENDI- METH- ALIN TOTAL (UG/L) (79190)	P,P' DDT, TOTAL (UG/L) (39300)	SEVIN, TOTAL (UG/L) (39750)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	2,4-D, TOTAL (UG/L) (39730)
JUN 1992											
17-18	<0.30	<1.0	<1.0	<0.050	<1.0	<0.10	<1.00	<0.10	<1.0	<1.0	2.4
JUL											
08-09	<0.20	<1.0	<1.0	<0.050	<1.0	<0.10	<1.00	<0.10	<1.0	<1.0	<1.5
12-13	<0.20	<1.0	<1.0	<0.050	<1.0	<0.10	<1.00	<0.10	<1.0	<1.0	<1.0
13-16	<0.20	<1.0	<1.0	<0.050	<1.0	<0.10	<1.00	<0.10	<1.0	<1.0	<2.0

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087120 MENOMONEE RIVER AT WAUWATOSA, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	ENDING TIME	RUNOFF VOLUME, MILLIONS OF CUBIC FEET (99905)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	CALCIUM DIS- SOLVED (MG/L) AS CA (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	PHOS- PHORUS TOTAL (MG/L) AS P (00665)
OCT 1991												
04-07	0215	0430	92.6	7.3	6.2	2.0	--	100	350	0.453	--	0.240
14-14	0030	1515	4.50	--	68	31	--	12	552	0.573	--	0.070
OCT 28-												
NOV 06	2010	1145	169	--	68	29	--	39	540	1.16	--	0.130
MAR 1992												
16-20	1910	1400	70.6	--	76	33	--	30	678	1.28	--	0.070
23-25	1330	0955	32.6	--	80	35	--	18	876	0.979	--	0.050
25-27	0955	0900	44.7	--	81	36	--	6	662	1.28	--	0.040
27-29	0900	2105	43.9	--	84	38	--	<2	652	1.15	--	0.020
MAR 30-												
APR 02	0930	0420	40.2	--	87	40	--	3	642	1.20	--	0.020
15-16	0720	1500	41.6	--	55	24	--	192	626	1.12	--	0.250
16-17	1500	1330	43.4	--	58	25	--	88	528	0.942	--	0.140
17-18	1330	1445	28.0	--	77	34	--	20	544	1.51	--	0.060
18-21	1445	0015	43.4	--	87	38	--	8	594	1.26	--	0.040
MAY												
11-13	2115	1000	14.6	--	72	34	--	34	602	0.583	--	0.110
JUN												
14-14	0300	1515	3.80	12	66	33	--	98	678	0.880	--	0.340
17-18	1350	1230	25.5	16	31	12	--	334	578	0.548	--	0.510
JUL												
08-09	0935	1235	18.3	14	32	13	--	252	516	0.390	--	0.470
12-13	1140	2330	46.2	7.0	23	8.0	--	246	424	0.296	--	0.330
13-16	2330	0830	37.6	3.8	44	18	--	73	426	0.757	--	0.160
AUG												
12-13	1000	0745	11.2	9.2	35	16	60	107	396	0.309	<0.005	0.190
25-27	2210	1030	25.6	19	--	--	41	160	402	0.363	0.014	0.330
27-30	1030	0405	21.9	2.6	--	--	70	37	382	0.329	0.027	0.110
SEP												
09-10	0725	0925	22.1	--	27	11	39	205	484	0.367	0.070	0.410
14-16	1320	1355	23.3	6.8	33	14	55	190	422	0.397	0.058	0.320
16-18	1355	1235	44.6	--	33	13	48	148	396	0.383	0.056	0.220

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P (00671)	CADMIUM TOTAL RECOVER- ABLE (UG/L) (01113)	CADMIUM DIS- SOLVED (UG/L) AS CD (01025)	CHRO- MIUM, TOTAL RECOVER- ABLE (UG/L) (01118)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR (01030)	COPPER, TOTAL RECOVER- ABLE (UG/L) (01119)	COPPER, DIS- SOLVED (UG/L) AS CU (01040)	LEAD, TOTAL RECOVER- ABLE (UG/L) (01114)	LEAD, DIS- SOLVED (UG/L) AS PB (01049)	ZINC, TOTAL RECOVER- ABLE (UG/L) (01094)	ZINC, DIS- SOLVED (UG/L) AS ZN (01090)
OCT 1991											
04-07	0.047	0	<0.2	6	<3	14	<3	16	<3	80	43
14-14	0.021	<0	<0.2	4	<3	25	<3	9	<3	30	78
OCT 28-											
NOV 06	--	<0	<0.2	4	4	7	3	8	<3	30	23
MAR 1992											
16-20	0.003	<0	<0.2	<3	<3	7	<3	8	<3	30	30
23-25	<0.002	<0	<0.2	<3	<3	10	<3	5	<3	20	23
25-27	0.002	1	<0.2	9	<3	5	<3	5	<3	120	18
27-29	0.004	<0	<0.2	<3	<3	6	<3	4	<3	10	17
MAR 30-											
APR 02	--	<0	<0.2	<3	<3	<3	<3	3	<3	10	18
APR											
15-16	0.002	1	<0.2	9	<3	<3	4	30	<3	110	33
16-17	0.012	0	<0.2	5	<3	7	3	11	<3	50	38
17-18	0.006	<0	<0.2	<3	<3	<3	<3	5	<3	20	19
18-21	0.005	<0	<0.2	<3	<3	<3	<3	<3	<3	<10	10
MAY											
11-13	0.003	<0	<0.2	4	<3	10	6	10	<3	30	26
JUN											
14-14	0.005	<0	<0.2	4	<3	13	4	12	<3	50	53
17-18	0.009	1	<0.2	12	<3	27	<3	54	<3	160	160
JUL											
08-09	0.002	1	0.2	9	<3	25	<3	39	<3	140	26
12-13	0.018	1	<0.2	9	<3	19	<3	33	<3	110	38
13-16	0.036	<0	<0.2	<3	<3	7	<3	6	<3	40	32
AUG											
12-13	0.008	--	--	--	--	15	<3	15	<3	70	82
25-27	0.004	--	--	--	--	19	--	27	--	100	--
27-30	0.025	--	--	--	--	6	--	6	--	30	--
SEP											
09-10	--	--	--	--	--	24	<3	45	<3	130	23
14-16	0.019	--	--	--	--	15	<3	36	<3	100	67
16-18	0.036	--	--	--	--	12	<3	22	<3	70	15

04087120 MENOMONEE RIVER AT WAUWATOSA, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--April 1991 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger. Prior to June 13, 1991, precipitation measured with a volumetric rain gage and a potentiometer.

REMARKS.--Tipping bucket rain gage established on June 13, 1991. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Oct. 6, Nov. 5, 11, Dec. 3, 6, 7, Jan. 23, 28, 29, and Mar. 11-13, 20, 22, 26, 27. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Dec. 14, 20, Jan. 22, and Feb. 15, 16, 18, 19, 24, 25. Unpublished precipitation data, prior to October 1990, available in District files.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.47 in., Oct. 4, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.47 in., Oct. 4.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.57	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.02	.00	.00	.11	.00	.00	.00	.00	.00	.23	.04	.26
3	.12	.00	.00	.00	.00	.00	.00	.00	.01	.04	.38	.00
4	2.47	.00	.00	.00	.00	.00	.14	.00	.15	.00	.01	.00
5	.16	.00	.00	.00	.00	.36	.00	.00	.06	.00	.00	.00
6	.00	.00	.00	.00	.00	.23	.00	.00	.00	.00	.00	.07
7	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.80	.17
8	.00	.00	.00	.27	.00	.02	.12	.00	.00	.42	.01	.05
9	.00	.00	.00	.04	.00	.40	.15	.00	.00	.00	.00	.88
10	.00	.00	.00	.00	.00	.00	.35	.00	.00	.03	.00	.00
11	.05	.00	.00	.00	.00	.00	.00	.15	.00	.00	.00	.00
12	.00	.00	.73	.05	.00	.00	.00	.16	.00	.74	.89	.00
13	.13	.00	.00	.00	.00	.00	.00	.00	.00	1.13	.00	.00
14	.15	.31	.00	.00	.00	.00	.02	.00	.26	.23	.00	.56
15	.00	.21	.00	.00	.00	.00	.51	.00	.00	.00	.00	.02
16	.00	.00	.00	.00	.00	.26	.47	.00	.00	.05	.00	.37
17	.00	.04	.00	.00	.00	.00	.00	.00	.74	.02	.00	.30
18	.18	.23	.00	.00	.00	.00	.00	.00	.06	.00	.03	.11
19	.01	.18	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.27
21	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00	.02
22	.00	.02	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
23	.00	.25	.00	.00	.00	.00	.26	.66	.01	.11	.00	.00
24	1.20	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00
25	.16	.00	.00	.00	.00	.01	.01	.02	.00	.05	.45	.00
26	.83	.00	.00	.00	.00	.00	.00	.02	.00	.02	.26	.27
27	.00	.08	.00	.00	.00	.00	.00	.00	.00	.00	.34	.03
28	.32	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00
29	.30	1.16	.00	.00	.00	.13	.09	.00	.00	.00	.05	.00
30	.12	.00	.00	.00	---	.00	.00	.00	.00	.61	.00	.00
31	.02	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	6.24	3.05	0.77	0.47	0.00	1.55	2.36	1.01	1.29	3.69	3.26	3.38

STREAMS TRIBUTARY TO LAKE MICHIGAN

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

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

DRAINAGE AREA.--20.2 mi².

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

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

REMARKS.--Estimated daily discharges: Oct. 12, 13, Dec. 6, 7, and ice-affected periods, Nov. 5, 6, Dec. 16-19, Jan. 15-25, Feb. 8-14, and Mar. 12-15. Records good except those for estimated daily discharges, which are poor, and those for discharges greater than 500 ft³/s, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	136	23	6.9	5.8	8.9	11	9.4	7.9	6.8	6.7	6.2
2	5.6	27	17	12	6.0	9.1	10	8.8	8.3	48	15	33
3	5.7	15	16	14	6.9	8.3	9.5	7.6	8.6	9.3	99	20
4	467	13	13	10	8.1	8.6	17	7.8	8.7	6.1	11	7.0
5	88	12	12	8.5	7.8	25	8.4	7.7	54	5.3	6.2	6.2
6	15	11	12	8.9	6.9	55	8.5	7.6	9.2	5.6	6.0	7.1
7	11	9.9	80	8.8	6.0	55	8.5	7.5	8.0	5.9	76	7.5
8	9.6	9.2	113	31	5.2	16	8.6	7.4	8.6	112	44	69
9	8.5	8.5	37	31	4.8	102	16	6.8	8.6	8.7	7.4	147
10	7.6	8.4	23	12	5.6	27	23	6.6	8.5	8.7	6.7	12
11	7.5	8.7	19	9.7	4.8	30	29	7.4	8.9	6.3	6.7	8.4
12	6.4	8.5	154	12	4.6	15	8.5	12	9.4	104	89	7.2
13	6.1	8.6	43	12	4.6	13	8.1	7.0	24	221	15	6.5
14	22	33	23	9.2	5.4	12	12	7.2	12	83	7.8	88
15	8.2	54	14	9.0	36	11	45	6.9	7.4	15	6.5	12
16	7.3	13	13	8.4	11	35	112	6.6	7.8	12	5.6	83
17	7.6	10	12	8.0	20	24	22	6.4	333	37	6.0	50
18	25	38	10	7.6	90	12	14	6.6	16	27	6.8	14
19	11	29	9.6	7.4	77	11	14	6.6	9.4	8.3	6.5	8.1
20	6.4	20	15	7.2	38	12	13	7.2	7.7	8.7	6.1	23
21	6.7	12	20	7.0	15	10	12	7.1	7.0	7.8	6.0	31
22	7.3	11	11	22	17	23	10	7.1	7.4	7.4	5.4	8.2
23	6.9	41	10	12	11	21	41	56	8.4	9.9	6.2	7.0
24	644	13	8.9	8.0	12	36	29	7.2	7.5	7.2	5.8	6.5
25	108	9.9	7.9	7.0	21	33	21	5.9	7.3	13	30	6.5
26	132	9.6	8.3	6.6	12	25	11	6.7	8.4	26	81	25
27	34	16	7.9	6.6	11	22	11	8.3	6.3	7.4	52	22
28	44	9.9	8.0	7.4	11	13	10	8.3	6.0	7.8	12	6.4
29	85	245	7.6	9.0	8.9	25	23	8.3	6.7	6.8	13	6.2
30	51	137	7.6	7.8	---	14	10	7.8	6.7	37	6.6	6.3
31	24	---	7.4	7.4	---	12	---	7.4	---	9.8	6.6	---
TOTAL	1874.1	977.2	763.2	334.4	473.4	723.9	576.1	281.2	637.7	878.8	658.6	740.3
MEAN	60.5	32.6	24.6	10.8	16.3	23.4	19.2	9.07	21.3	28.3	21.2	24.7
MAX	644	245	154	31	90	102	112	56	333	221	99	147
MIN	5.6	8.4	7.4	6.6	4.6	8.3	8.1	5.9	6.0	5.3	5.4	6.2
CFSM	2.99	1.61	1.22	.53	.81	1.16	.95	.45	1.05	1.40	1.05	1.22
IN.	3.45	1.80	1.41	.62	.87	1.33	1.06	.52	1.17	1.62	1.21	1.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1992, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	25.0	30.3	23.7	13.6	18.9	27.9	29.5	25.5	20.4	27.4
MAX	60.5	67.8	48.9	43.7	34.7	40.8	51.2	72.9	36.8	49.9
(WY)	1992	1986	1983	1988	1986	1983	1990	1990	1986	1986
MIN	8.79	9.15	3.96	6.51	5.84	13.5	14.1	9.07	11.4	13.2
(WY)	1988	1987	1990	1987	1989	1988	1989	1992	1985	1985

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1983 - 1992

ANNUAL TOTAL	10577.7	8918.9	
ANNUAL MEAN	29.0	24.4	
HIGHEST ANNUAL MEAN			25.7
LOWEST ANNUAL MEAN			39.8
HIGHEST DAILY MEAN			21.2
LOWEST DAILY MEAN	644	Oct 24	1630
ANNUAL SEVEN-DAY MINIMUM	4.8	Sep 29	2.9
INSTANTANEOUS PEAK FLOW	5.4	Sep 27	3.0
INSTANTANEOUS PEAK STAGE			(a)10600
INSTANTANEOUS LOW FLOW			(b)14.41
ANNUAL RUNOFF (CFSM)	1.43		(c)1.3
ANNUAL RUNOFF (INCHES)	19.48		1.27
10 PERCENT EXCEEDS	65		17.25
50 PERCENT EXCEEDS	9.9		50
90 PERCENT EXCEEDS	6.4		10
			6.4

(a) From rating curve extended above 600 ft³/s on basis of step-backwater analysis at peak gage height

(b) From inside gage, 16.01 ft, from floodmarks

(c) Result of freezeup

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04087204 OAK CREEK AT SOUTH MILWAUKEE, WI

LOCATION.--Lat 42°55'30", long 87°52'12", in NW 1/4 sec.2, T.5 N., R.22 E., Milwaukee County, Hydrologic Unit 04040002, on left bank 25 ft downstream from 15th Avenue bridge in South Milwaukee and 2.8 mi upstream from mouth.

DRAINAGE AREA.--25.0 mi².

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

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

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

REMARKS.--Estimated daily discharges: Ice-affected period, Jan. 15-20. Records good except those for ice-affected period, which is fair. Low flows may occasionally be affected by construction and activity at gravel pit upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	120	90	9.7	5.8	17	23	17	3.2	2.5	4.7	3.4
2	1.8	104	46	11	5.5	19	20	15	3.0	7.7	3.5	5.6
3	2.0	37	33	15	6.2	19	19	14	2.9	13	14	14
4	100	27	27	16	7.1	19	21	13	3.2	4.4	19	6.5
5	212	22	24	15	6.7	20	19	12	32	2.7	6.4	3.2
6	41	19	21	14	6.3	63	16	11	9.5	2.3	3.9	2.8
7	18	16	67	14	5.8	99	15	11	4.7	1.9	17	3.0
8	14	14	204	21	5.1	49	14	10	3.7	23	60	12
9	11	13	145	55	4.4	85	16	9.9	3.5	13	12	36
10	9.1	13	64	30	4.3	84	17	9.4	3.0	4.2	6.5	24
11	7.9	13	45	19	4.3	37	31	8.7	2.8	2.8	4.8	7.7
12	7.1	13	119	18	4.1	30	20	9.2	2.5	26	31	4.5
13	6.5	13	177	19	4.1	22	16	7.6	2.5	146	34	3.5
14	10	16	68	16	4.1	20	15	6.7	5.3	226	10	25
15	9.6	61	34	12	11	19	28	6.5	4.3	76	5.9	24
16	7.0	35	25	10	13	18	114	6.2	2.7	25	4.4	51
17	5.4	22	20	9.0	11	30	97	5.7	48	16	3.6	94
18	8.2	32	16	8.2	46	23	41	5.0	58	14	3.2	30
19	15	38	15	7.6	128	20	30	5.0	11	11	3.2	14
20	8.6	62	14	7.2	58	19	26	4.6	5.2	7.4	2.9	14
21	5.8	30	15	6.7	46	18	23	4.5	3.9	5.9	2.8	37
22	5.0	23	14	7.2	24	18	20	4.4	3.2	4.9	2.9	15
23	4.9	33	13	12	22	22	24	14	3.3	7.8	2.9	10
24	130	32	12	9.9	20	41	46	12	3.4	5.7	2.5	8.6
25	301	20	12	6.8	21	84	39	5.6	3.3	14	3.7	7.4
26	122	17	11	5.9	23	61	28	4.5	3.5	16	31	10
27	121	19	10	5.7	21	48	23	4.1	3.4	7.0	32	18
28	53	19	9.7	5.6	22	37	19	3.7	3.1	4.8	17	9.9
29	111	151	10	5.7	19	39	22	3.5	3.0	3.8	9.7	6.1
30	91	312	10	5.9	---	34	20	3.4	2.8	6.3	7.2	5.0
31	61	---	9.7	6.1	---	27	---	3.4	---	9.8	4.4	---
TOTAL	1501.7	1346	1380.4	404.2	558.8	1141	862	250.6	243.9	710.9	366.1	505.2
MEAN	48.4	44.9	44.5	13.0	19.3	36.8	28.7	8.08	8.13	22.9	11.8	16.8
MAX	301	312	204	55	128	99	114	17	58	226	60	94
MIN	1.8	13	9.7	5.6	4.1	17	14	3.4	2.5	1.9	2.5	2.8
CFSM	1.94	1.79	1.78	.52	.77	1.47	1.15	.32	.33	.92	.47	.67
IN.	2.23	2.00	2.05	.60	.83	1.70	1.28	.37	.36	1.06	.54	.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992, BY WATER YEAR (WY)

	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
MEAN	12.5	17.2	21.2	13.2	22.7	52.4	46.1	23.4	18.9	15.2	13.1	18.5																	
MAX	48.4	85.3	65.3	77.3	84.4	149	140	96.1	85.8	95.8	52.7	110																	
(WY)	1992	1986	1983	1974	1971	1979	1973	1990	1968	1968	1986	1972																	
MIN	1.86	1.83	.79	.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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1964 - 1992

ANNUAL TOTAL	11109.73	9270.8	
ANNUAL MEAN	30.4	25.3	22.8
HIGHEST ANNUAL MEAN			41.7
LOWEST ANNUAL MEAN			6.67
HIGHEST DAILY MEAN	358	312	855
LOWEST DAILY MEAN	.93	1.8	.00
ANNUAL SEVEN-DAY MINIMUM	1.2	2.9	.00
INSTANTANEOUS PEAK FLOW		508	1140
INSTANTANEOUS PEAK STAGE		7.32	9.88
INSTANTANEOUS LOW FLOW		1.7	.00
ANNUAL RUNOFF (CFSM)	1.22	1.01	.91
ANNUAL RUNOFF (INCHES)	16.53	13.79	12.41
10 PERCENT EXCEEDS	67	60	48
50 PERCENT EXCEEDS	13	14	7.7
90 PERCENT EXCEEDS	2.6	3.4	1.8

(a) Several days during 1977

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087220 ROOT RIVER NEAR FRANKLIN, WI

LOCATION.--Lat 42°52'25", long 87°59'45", in SE 1/4 sec.22, T.5 N., R.21 E., Milwaukee County, Hydrologic Unit 04040002, on right bank 400 ft upstream from State Highway 100, 2.1 mi upstream from Root River Canal, 2.4 mi southeast of Franklin, 5.5 mi southeast of Hales Corners, and about 24 mi upstream from mouth.

DRAINAGE AREA.--49.2 mi².

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

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

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 7-9, 26, Dec. 3-7, 15-26, Jan. 14-19, Jan. 23 to Feb. 17, and Mar. 11-14. Records good except those for ice-affected periods, which are poor. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	141	282	15	10	32	42	35	7.8	4.8	6.5	5.3
2	7.3	200	104	15	10	34	37	31	7.4	7.6	4.8	5.7
3	7.5	95	76	25	10	34	33	28	6.9	22	6.9	26
4	80	62	68	29	11	33	35	27	7.0	6.7	35	9.1
5	453	48	64	27	10	35	33	26	8.4	5.1	8.1	6.6
6	200	43	60	26	9.6	89	28	24	8.4	4.5	7.2	5.7
7	69	33	64	25	9.0	171	27	24	7.6	5.6	6.2	5.5
8	43	28	235	30	8.4	113	25	24	6.2	20	60	32
9	31	23	267	75	7.8	111	28	23	5.6	33	16	53
10	25	22	121	56	7.6	192	28	23	6.0	9.3	7.0	63
11	22	21	84	41	8.0	86	45	21	5.7	7.5	5.9	18
12	18	20	129	35	9.0	68	35	24	6.0	18	9.0	10
13	14	21	301	34	7.8	50	27	24	5.4	129	70	7.5
14	19	23	134	29	7.6	44	26	18	6.4	228	18	16
15	26	79	78	25	8.2	42	40	17	7.4	85	9.2	59
16	18	72	64	23	10	37	125	15	6.7	34	6.8	33
17	16	47	54	21	12	64	177	13	38	22	5.5	96
18	13	57	43	20	26	55	86	12	87	29	5.5	51
19	23	68	30	17	112	44	63	12	22	15	4.7	24
20	17	75	26	16	82	39	55	11	13	11	4.9	14
21	12	53	25	15	84	36	49	11	9.3	9.8	4.5	34
22	11	40	24	15	52	34	42	11	7.7	7.3	4.5	20
23	11	48	24	26	71	40	38	17	7.1	7.6	4.1	11
24	107	58	23	24	51	52	68	32	6.7	8.2	4.5	9.3
25	569	38	22	16	43	95	61	12	6.8	7.4	3.9	8.7
26	251	29	20	14	43	88	52	11	6.4	13	35	9.1
27	309	30	19	11	42	75	45	10	6.3	8.7	47	28
28	129	36	18	10	45	60	39	8.8	5.3	6.0	29	13
29	160	128	18	10	39	57	42	8.0	5.2	5.1	11	9.2
30	174	500	18	10	---	57	41	7.8	4.9	5.2	11	9.2
31	120	---	16	10	---	49	---	7.8	---	18	6.0	---
TOTAL	2962.0	2138	2511	745	846.0	2016	1472	568.4	334.6	793.4	457.7	691.9
MEAN	95.5	71.3	81.0	24.0	29.2	65.0	49.1	18.3	11.2	25.6	14.8	23.1
MAX	569	500	301	75	112	192	177	35	87	228	70	96
MIN	7.2	20	16	10	7.6	32	25	7.8	4.9	4.5	3.9	5.3
CFSM	1.94	1.45	1.65	.49	.59	1.32	1.00	.37	.23	.52	.30	.47
IN.	2.24	1.62	1.90	.56	.64	1.52	1.11	.43	.25	.60	.35	.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992, BY WATER YEAR (WY)

	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
MEAN	25.8	31.9	40.3	29.5	44.9	103	88.1	43.0	36.4	26.3	23.0	33.1																	
MAX	95.5	151	118	190	161	315	316	138	137	142	72.3	214																	
(WY)	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975																	
MIN	2.38	4.26	2.02	2.47	2.75	13.6	21.5	5.32	3.55	3.09	3.82	3.04																	
(WY)	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975																	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1964 - 1992

ANNUAL TOTAL	19946.6	15536.0	
ANNUAL MEAN	54.6	42.4	43.7
HIGHEST ANNUAL MEAN			84.0
LOWEST ANNUAL MEAN			12.7
HIGHEST DAILY MEAN	569	569	2390
LOWEST DAILY MEAN	4.0	3.9	.44
ANNUAL SEVEN-DAY MINIMUM	4.4	4.4	1.1
INSTANTANEOUS PEAK FLOW		641	3700
INSTANTANEOUS PEAK STAGE		7.57	9.31
INSTANTANEOUS LOW FLOW		3.6	.38
ANNUAL RUNOFF (CFSM)	1.11	.86	.89
ANNUAL RUNOFF (INCHES)	15.08	11.75	12.08
10 PERCENT EXCEEDS	129	87	90
50 PERCENT EXCEEDS	24	24	17
90 PERCENT EXCEEDS	6.2	6.5	4.4

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04087233 ROOT RIVER CANAL NEAR FRANKLIN, WI

LOCATION.--Lat 42°48'55", long 87°59'40", in SE 1/4 sec.10, T.4 N., R.21 E., Racine County, Hydrologic Unit 04040002, on right bank 10 ft downstream from highway bridge 3.5 mi upstream from mouth, 5.5 mi southeast of intersection U.S. 45 and State Highway 100 in Franklin, and 8.7 mi southeast of Hales Corners.

DRAINAGE AREA.--57.0 mi².

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

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

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 19, Jan. 16-31, and Feb. 6-11. Records are good except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	197	549	24	14	49	58	37	5.9	3.0	10	3.9
2	6.1	272	276	25	14	52	50	33	5.6	3.2	8.1	3.9
3	6.9	154	157	32	15	52	45	29	5.4	3.9	7.0	4.3
4	40	92	115	39	18	54	43	27	5.8	3.8	9.9	5.0
5	237	68	93	40	16	54	40	24	7.6	3.1	7.9	3.9
6	138	55	80	42	15	129	38	22	7.2	2.7	5.7	3.8
7	68	42	107	43	14	164	35	20	6.0	2.6	5.1	3.7
8	46	34	322	55	12	134	32	20	5.6	5.9	20	5.2
9	32	30	412	141	11	163	31	19	4.9	9.4	15	11
10	24	28	239	126	11	230	31	17	4.0	5.1	8.8	23
11	20	28	159	81	9.8	126	55	17	3.4	3.9	6.3	12
12	18	26	202	68	9.8	95	53	17	2.6	5.3	6.5	7.0
13	16	26	388	69	11	72	42	16	2.6	99	16	4.6
14	17	28	234	62	11	62	38	15	3.1	303	12	5.1
15	17	73	136	47	14	55	45	14	3.4	238	8.0	11
16	15	89	98	40	20	49	96	13	2.6	132	5.3	23
17	15	64	77	30	19	58	150	12	8.9	84	3.9	142
18	14	63	62	25	49	54	102	11	34	57	3.7	150
19	19	60	54	24	146	48	81	10	16	39	3.6	84
20	19	116	48	23	108	42	69	10	10	28	3.7	51
21	18	103	44	21	82	38	60	9.2	7.9	21	3.1	78
22	16	70	42	19	56	40	50	8.8	6.3	17	2.6	69
23	14	63	39	25	54	38	43	10	5.8	18	2.6	42
24	61	64	34	18	49	50	56	11	5.3	17	3.1	30
25	281	49	31	16	55	140	61	9.9	4.8	16	3.7	23
26	180	39	29	15	68	176	56	9.4	4.7	20	5.6	21
27	199	38	27	14	58	131	49	9.1	4.5	15	11	31
28	132	38	27	13	61	102	42	7.8	3.6	11	11	27
29	170	182	28	13	56	91	42	6.8	3.3	10	7.5	20
30	217	602	26	14	---	83	41	6.3	3.1	9.6	6.5	17
31	196	---	24	14	---	69	---	6.1	---	15	4.7	---
TOTAL	2257.0	2793	4159	1218	1076.6	2700	1634	477.4	193.9	1201.5	227.9	915.4
MEAN	72.8	93.1	134	39.3	37.1	87.1	54.5	15.4	6.46	38.8	7.35	30.5
MAX	281	602	549	141	146	230	150	37	34	303	20	150
MIN	5.0	26	24	13	9.8	38	31	6.1	2.6	2.6	2.6	3.7
CFSM	1.28	1.63	2.35	.69	.65	1.53	.96	.27	.11	.68	.13	.54
IN.	1.47	1.82	2.71	.79	.70	1.76	1.07	.31	.13	.78	.15	.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992, BY WATER YEAR (WY)

	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964
MEAN	24.6	34.4	47.6	31.0	55.4	118	102	48.1	36.4	26.2	23.5	35.7
MAX	113	152	200	219	189	352	252	211	130	141	138	212
(WY)	1973	1986	1983	1974	1971	1979	1983	1990	1967	1978	1978	1972
MIN	1.05	1.27	.86	.56	.69	6.03	10.8	2.47	2.51	2.18	2.20	1.28
(WY)	1964	1964	1964	1977	1977	1968	1977	1977	1977	1991	1985	1971

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1964 - 1992

ANNUAL TOTAL	22506.1	18853.7	
ANNUAL MEAN	61.7	51.5	48.5
HIGHEST ANNUAL MEAN			98.4
LOWEST ANNUAL MEAN			4.57
HIGHEST DAILY MEAN	1020	602	1410
LOWEST DAILY MEAN	1.3	2.6	(b).40
ANNUAL SEVEN-DAY MINIMUM	1.5	3.1	.45
INSTANTANEOUS PEAK FLOW		635	1440
INSTANTANEOUS PEAK STAGE		9.05	9.88
INSTANTANEOUS LOW FLOW		2.2	
ANNUAL RUNOFF (CFSM)	1.08	.90	.85
ANNUAL RUNOFF (INCHES)	14.69	12.30	11.56
10 PERCENT EXCEEDS	168	135	120
50 PERCENT EXCEEDS	24	26	15
90 PERCENT EXCEEDS	2.5	4.7	2.2

(a) Also occurred June 13, 16, July 7, and Aug. 22-23

(b) Result of freezeup

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087240 ROOT RIVER AT RACINE, WI

LOCATION.--Lat 42°45'05", long 87°49'25", in NE 1/4 sec.6, T.3 N., R.23 E., Racine County, Hydrologic Unit 04040002, on left bank 30 ft downstream from State Highway 38 bridge in Racine, 350 ft downstream from Horlick Dam, and 5.2 mi upstream from mouth.

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

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

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

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 11, Dec. 20, 21, Jan. 17-20, and Feb. 9-11. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	790	1170	70	41	161	199	102	18	11	39	24
2	11	792	1150	70	39	152	171	88	16	12	34	20
3	10	761	817	80	40	156	148	74	16	11	26	16
4	46	605	458	103	45	159	135	64	15	15	28	19
5	443	362	274	112	49	166	126	57	17	17	52	23
6	538	262	237	113	47	294	116	52	17	14	32	20
7	583	216	279	113	45	495	106	52	20	11	28	16
8	305	168	611	122	37	546	97	52	23	12	49	17
9	154	145	902	248	32	553	91	52	20	31	101	36
10	106	132	967	368	31	584	95	51	17	54	57	91
11	82	110	774	289	30	601	139	53	15	28	32	95
12	71	96	595	205	30	443	169	51	14	25	39	46
13	60	91	821	183	30	290	134	49	13	168	74	29
14	55	93	903	174	31	221	113	49	12	719	109	24
15	45	152	725	111	40	195	114	46	11	790	61	36
16	50	293	416	71	49	170	197	44	11	702	42	112
17	41	264	296	64	57	170	419	41	15	379	31	262
18	35	211	180	58	102	208	480	35	83	193	27	398
19	36	221	130	54	315	181	356	32	133	151	22	291
20	40	307	120	52	425	155	245	32	57	111	20	160
21	46	342	120	50	400	134	197	31	36	92	17	165
22	38	271	118	51	292	119	162	29	29	78	12	182
23	33	206	113	57	208	119	136	30	25	72	12	128
24	52	217	98	62	206	142	147	32	23	65	16	87
25	490	198	85	55	178	307	197	45	21	63	16	69
26	772	147	84	46	188	475	185	28	20	67	15	60
27	1030	128	82	44	197	483	154	24	17	66	31	62
28	863	130	76	41	192	387	128	23	15	49	69	79
29	840	349	75	39	183	304	114	21	14	32	54	65
30	753	1130	75	39	---	282	113	19	13	29	34	50
31	777	---	74	41	---	247	---	18	---	29	28	---
TOTAL	8417	9189	12825	3185	3559	8899	5183	1376	756	4096	1207	2682
MEAN	272	306	414	103	123	287	173	44.4	25.2	132	38.9	89.4
MAX	1030	1130	1170	368	425	601	480	102	133	790	109	398
MIN	10	91	74	39	30	119	91	18	11	11	12	16
CFSM	1.44	1.62	2.19	.54	.65	1.52	.92	.24	.13	.70	.21	.47
IN.	1.66	1.81	2.53	.63	.70	1.75	1.02	.27	.15	.81	.24	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1992, BY WATER YEAR (WY)

	75.3	105	141	90.4	156	368	340	170	111	90.0	69.0	99.4
MEAN	75.3	105	141	90.4	156	368	340	170	111	90.0	69.0	99.4
MAX	335	454	568	401	457	1149	805	649	378	485	237	683
(WY)	1987	1986	1983	1974	1971	1979	1983	1990	1967	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1963 - 1992

ANNUAL TOTAL	72071.8	61374	151
ANNUAL MEAN	197	168	257
HIGHEST ANNUAL MEAN			23.3
LOWEST ANNUAL MEAN			4010
HIGHEST DAILY MEAN	1950	Mar 29	1170
LOWEST DAILY MEAN	3.6	Sep 2	10
ANNUAL SEVEN-DAY MINIMUM	4.3	Aug 28	13
INSTANTANEOUS PEAK FLOW			1220
INSTANTANEOUS PEAK STAGE			4.90
ANNUAL RUNOFF (CFSM)	1.05		.89
ANNUAL RUNOFF (INCHES)	14.20		12.10
10 PERCENT EXCEEDS	579		463
50 PERCENT EXCEEDS	80		79
90 PERCENT EXCEEDS	11		17
			8.9

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04087257 PIKE RIVER NEAR RACINE, WI

LOCATION.--Lat 42°38'49", long 87°51'38", in SE 1/4 NE 1/4 sec.11, T.2 N., R.22 E., Kenosha County, Hydrologic Unit 04040002, on right bank just downstream from unnamed tributary, 1.7 mi downstream from Pike Creek, 6.8 mi southwest of Racine Post Office and 9.0 mi upstream from mouth.

DRAINAGE AREA.--38.5 mi².

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

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

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 6, 16, 19, Jan. 15-21, and Feb. 8-13. Records good except those for ice-affected periods, which are fair. Low flows considerably affected by effluent discharge in upper portion of basin, and by occasional regulation of small recreation dam 1.1 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

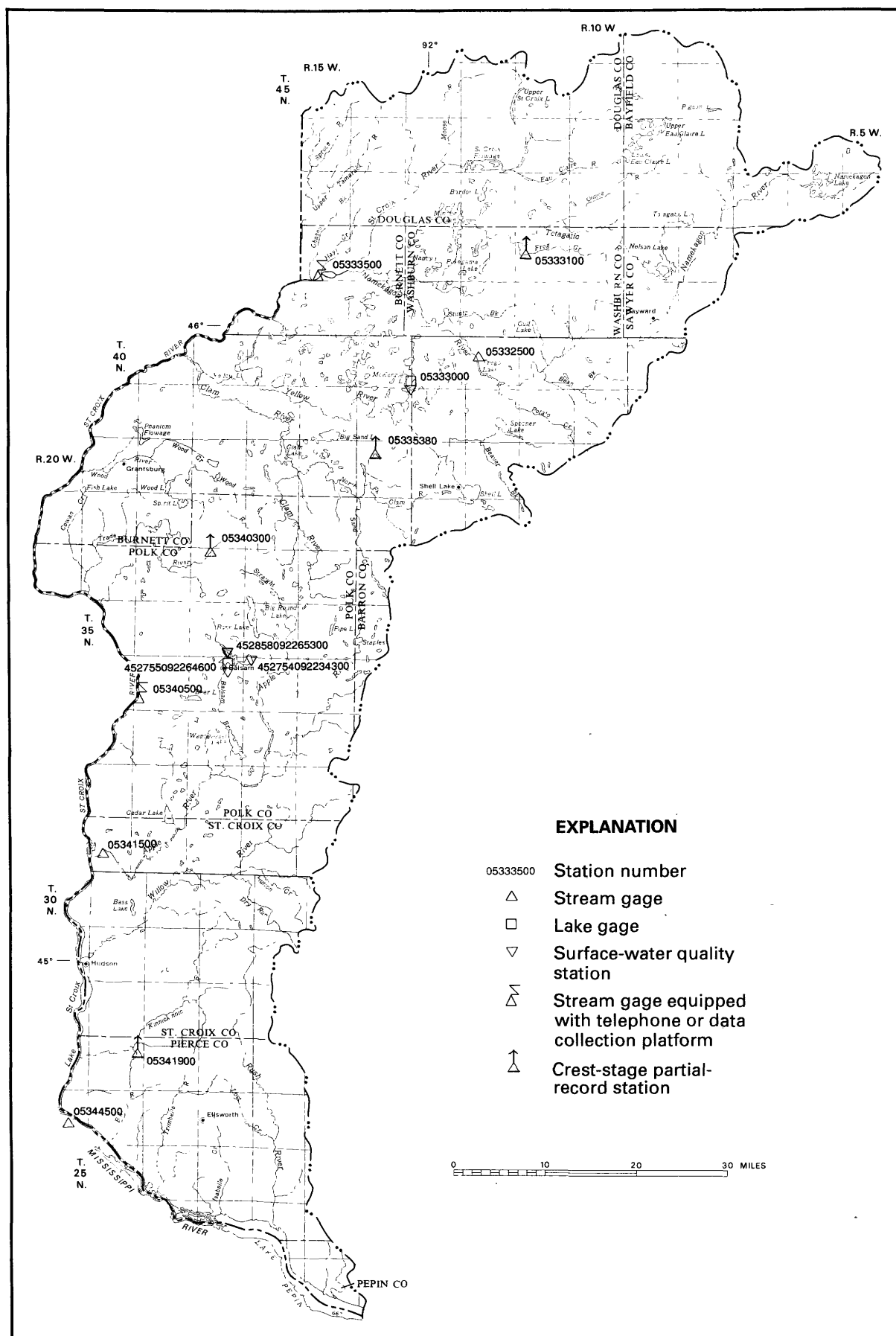
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	143	177	14	13	39	41	22	9.8	7.4	12	10
2	8.7	133	104	16	13	38	37	19	10	8.8	10	11
3	9.2	62	75	22	15	36	34	18	10	10	12	14
4	78	42	57	25	16	35	33	18	11	7.3	13	8.6
5	191	33	48	25	16	34	28	17	12	7.2	11	7.4
6	53	27	38	26	16	74	27	16	11	7.7	9.3	7.3
7	29	21	84	27	15	95	26	16	8.7	8.4	9.5	9.0
8	20	19	269	33	11	74	23	14	8.6	22	37	27
9	17	18	204	62	10	87	22	16	10	13	13	65
10	14	17	116	51	9.6	103	22	14	10	11	12	44
11	12	16	84	38	10	61	48	13	9.2	7.5	11	20
12	9.4	16	124	33	11	49	30	16	8.7	15	13	14
13	8.2	16	196	33	11	39	26	17	8.3	51	20	11
14	13	18	105	30	11	36	25	16	7.8	121	12	16
15	10	39	64	24	43	31	37	15	7.4	63	9.2	17
16	9.3	34	50	23	34	29	60	14	8.1	36	8.1	38
17	9.6	27	40	22	21	33	68	14	30	26	8.6	125
18	10	30	31	21	107	28	48	14	18	18	9.3	78
19	15	30	28	20	149	26	41	14	11	15	10	40
20	9.2	111	26	20	72	24	37	14	7.8	15	10	29
21	8.5	68	24	19	52	23	33	13	6.3	14	9.9	88
22	11	48	22	19	40	29	28	14	7.5	13	8.6	49
23	9.8	45	20	24	42	25	27	15	8.4	16	7.4	30
24	21	39	17	19	41	36	33	14	8.2	14	7.7	22
25	36	30	16	16	55	100	31	12	7.7	13	8.5	18
26	30	26	16	15	61	107	28	12	9.4	13	25	20
27	62	27	15	15	51	84	25	12	8.5	12	25	27
28	36	24	15	14	51	69	23	12	8.0	9.7	18	18
29	125	271	15	14	43	64	27	12	8.3	10	14	13
30	114	527	14	15	---	57	24	12	8.5	20	13	12
31	83	---	14	15	---	49	---	10	---	22	11	---
TOTAL	1069.7	1957	2108	750	1039.6	1614	992	455	298.2	627.0	398.1	888.3
MEAN	34.5	65.2	68.0	24.2	35.8	52.1	33.1	14.7	9.94	20.2	12.8	29.6
MAX	191	527	269	62	149	107	68	22	30	121	37	125
MIN	7.8	16	14	14	9.6	23	22	10	6.3	7.2	7.4	7.3
CFSM	.90	1.69	1.77	.63	.93	1.35	.86	.38	.26	.53	.33	.77
IN.	1.03	1.89	2.04	.72	1.00	1.56	.96	.44	.29	.61	.38	.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1992, 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
MEAN	19.7	29.9	37.9	22.8	32.8	78.7	70.2	40.6	28.4	22.6	22.2	29.6									
MAX	61.2	126	101	97.1	69.6	258	160	146	82.4	129	92.5	131									
(WY)	1987	1986	1983	1974	1981	1979	1979	1990	1972	1978	1978	1986									
MIN	4.40	3.62	2.35	2.05	3.74	20.0	12.1	4.57	8.32	4.93	4.35	3.25									
(WY)	1972	1972	1977	1977	1977	1977	1977	1977	1988	1976	1976	1976									

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1972 - 1992
ANNUAL TOTAL	14852.8	12196.9	
ANNUAL MEAN	40.7	33.3	36.3
HIGHEST ANNUAL MEAN			55.8
LOWEST ANNUAL MEAN			8.10
HIGHEST DAILY MEAN	528	527	1010
LOWEST DAILY MEAN	5.9	6.3	.35
ANNUAL SEVEN-DAY MINIMUM	6.7	7.9	1.7
INSTANTANEOUS PEAK FLOW		791	1480
INSTANTANEOUS PEAK STAGE		6.39	8.15
ANNUAL RUNOFF (CFSM)	1.06	.87	.94
ANNUAL RUNOFF (INCHES)	14.35	11.79	12.80
10 PERCENT EXCEEDS	84	70	81
50 PERCENT EXCEEDS	19	19	15
90 PERCENT EXCEEDS	8.6	8.8	5.1

UPPER MISSISSIPPI RIVER BASIN RECORDS



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

ST. CROIX RIVER BASIN

ST. CROIX RIVER BASIN

05332500 NAMEKAGON RIVER NEAR TREGO, WI

LOCATION.--Lat 45°56'53", long 91°53'17", in SW 1/4 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.--No estimated daily discharges. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	488	561	488	488	488	488	787	378	508	472	449	435
2	488	561	568	594	488	488	787	594	403	594	449	476
3	488	561	594	594	488	488	578	594	508	1270	449	435
4	488	584	594	594	488	488	578	803	508	1510	449	435
5	481	561	594	566	488	488	578	803	508	1510	362	435
6	488	561	594	488	488	787	578	594	508	1650	362	435
7	488	561	594	488	488	781	787	594	508	1190	362	435
8	488	561	594	488	488	781	787	594	403	904	362	476
9	488	561	594	488	488	1090	787	594	403	819	362	599
10	488	871	594	488	403	1090	787	594	403	1020	362	508
11	488	871	978	488	403	578	787	508	385	1020	430	476
12	488	871	978	488	403	787	787	508	485	1020	430	476
13	488	871	594	488	403	2910	787	508	485	920	430	476
14	488	561	594	488	403	578	787	508	485	920	385	440
15	488	770	594	368	403	578	787	508	535	819	385	435
16	488	768	488	488	403	787	787	508	485	610	385	435
17	488	768	488	368	403	578	578	508	476	610	385	440
18	488	972	594	368	403	561	787	508	630	610	385	456
19	488	1160	488	368	488	561	888	508	488	610	385	440
20	488	1240	488	368	488	488	888	508	488	561	385	440
21	488	1320	488	450	403	488	1340	508	488	553	385	456
22	488	972	488	450	403	488	1820	508	488	553	385	440
23	403	972	594	450	403	578	2270	508	403	440	385	435
24	402	972	594	450	488	578	1760	508	503	440	385	435
25	403	972	594	450	488	528	1330	508	473	440	476	435
26	403	972	594	450	488	578	1560	505	473	440	476	435
27	480	488	594	488	488	578	1330	508	473	429	435	435
28	444	488	488	488	488	578	994	508	473	429	435	398
29	444	488	488	444	488	578	888	508	473	429	435	435
30	515	488	488	488	---	578	888	508	472	429	435	385
31	515	---	488	488	---	578	---	508	---	403	476	---
TOTAL	14738	22927	17990	14652	13132	21503	29077	16807	14321	23624	12661	13472
MEAN	475	764	580	473	453	694	969	542	477	762	408	449
MAX	515	1320	978	594	488	2910	2270	803	630	1650	476	599
MIN	402	488	488	368	403	488	578	378	385	403	362	385
CFSM	.97	1.57	1.19	.97	.93	1.42	1.99	1.11	.98	1.56	.84	.92
IN.	1.12	1.75	1.37	1.12	1.00	1.64	2.22	1.28	1.09	1.80	.97	1.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1992, BY WATER YEAR (WY)

MEAN	435	431	377	348	341	437	694	634	560	484	408	474
MAX	893	764	580	531	512	778	1084	1156	1093	1026	687	1834
(WY)	1969	1992	1992	1969	1969	1945	1969	1950	1944	1958	1953	1941
MIN	252	288	251	245	241	282	408	389	275	235	195	214
(WY)	1949	1934	1933	1933	1933	1934	1931	1934	1934	1934	1933	1933

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1928 - 1992		
ANNUAL TOTAL	208543			214904					
ANNUAL MEAN	571			587			469		
HIGHEST ANNUAL MEAN							607		
LOWEST ANNUAL MEAN							300		
HIGHEST DAILY MEAN	1790			2910			5200		
LOWEST DAILY MEAN	243			362			113		
ANNUAL SEVEN-DAY MINIMUM	254			372			159		
ANNUAL RUNOFF (CFSM)	1.17			1.20			.96		
ANNUAL RUNOFF (INCHES)	15.90			16.38			13.05		
10 PERCENT EXCEEDS	904			888			715		
50 PERCENT EXCEEDS	521			488			411		
90 PERCENT EXCEEDS	323			403			283		

(a) Also occurred Sept. 7, 1930

LOCATION.--Lat 46°04'28", long 92°14'50", in SW 1/4 sec.33, T.42 N., R.15 W., Burnett County, Hydrologic Unit 07030001, St. Croix National Scenic Waterway, on left bank at downstream side of bridge on State Highway 35, 3.5 mi downstream from Namekagon River, 10 mi northeast of Danbury, and at mile 129.2.

PERIOD OF RECORD.--March 1914 to September 1981, October 1984 to current year. Prior to October 1933, published as "at Swiss".

GAGE.--Water-stage recorder. Datum of gage is 882.21 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 23, 1937, nonrecording gage 40 ft downstream at same datum. Apr. 23, 1937, to Jan. 5, 1939, nonrecording gage at present site and datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)												
MEAN	1180	1196	1008	895	883	1328	2337	1841	1528	1289	1062	1204
MAX	2489	2151	1910	1439	1486	2930	4614	4023	3797	3230	2223	4759
(WY)	1969	1952	1992	1992	1992	1973	1916	1950	1944	1958	1955	1941
MIN	590	631	551	600	535	703	939	889	625	514	432	564
(WY)	1933	1926	1933	1924	1936	1934	1931	1931	1934	1934	1934	1933

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1914 - 1992		
ANNUAL TOTAL	597801			622585					
ANNUAL MEAN	1638			1701			1311		
HIGHEST ANNUAL MEAN							1982		
LOWEST ANNUAL MEAN							795		
HIGHEST DAILY MEAN	4490	May	7	5530	Apr	23	8740	May	2
LOWEST DAILY MEAN	680	Jan	11	840	Aug	17	(a)405	Aug	6
ANNUAL SEVEN-DAY MINIMUM	709	Jan	7	898	Aug	15	417	Aug	12
INSTANTANEOUS PEAK FLOW				(b)5640	Apr	22	10200	May	6
INSTANTANEOUS PEAK STAGE				(c)6.18	Dec	13	8.22	May	6
INSTANTANEOUS LOW FLOW				808	Aug	20	393	Aug	6,13
ANNUAL RUNOFF (CFSM)	1.04			1.08			.83		
ANNUAL RUNOFF (INCHES)	14.07			14.66			11.28		
10 PERCENT EXCEEDS	2600			2560			2210		
50 PERCENT EXCEEDS	1600			1500			1070		
90 PERCENT EXCEEDS	792			1080			720		

(c) Ice jam

ST. CROIX RIVER BASIN

05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI

LOCATION.--Lat 45°24'25", long 92°38'49", in SW 1/4 NW 1/4 sec.30, T.34 N., R.18 W., Polk County, Hydrologic Unit 07030005, St. Croix National Scenic Riverway, on left bank, 1,500 ft downstream from powerplant of Northern States Power Co., in St. Croix Falls, and at mile 52.2.

DRAINAGE AREA.--6,240 mi².

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 National Geodetic Vertical Datum of 1929. Prior to July 1905, gage heights and discharge measurements were used by Loweth and Wolff, consulting engineers of St. Paul, Minn., to determine the flow. July 1905 to February 1940, records were computed from power generation at the St. Croix Falls Powerplant. February 1940 to Sept. 30, 1979, water-stage recorder at site 300 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Ice-affected period, Jan. 15-21. Records good. Diurnal fluctuation caused by St. Croix Falls Powerplant 1,500 ft upstream. Data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3980	5520	5970	4300	3280	3660	9860	10300	3430	3400	2320	2860
2	3820	4100	5560	4120	3320	3880	9740	9600	2880	4360	2400	2610
3	3390	2520	5740	4300	3450	3990	9160	8240	2970	5890	2060	3140
4	3600	3360	6150	4210	3350	4140	8730	7590	2650	8640	2160	2860
5	3290	4450	6120	4000	3370	5130	8490	7100	2960	10200	2320	3550
6	3990	4990	5070	4160	3150	6850	8880	6540	2170	10300	2140	3720
7	3620	5260	5030	4050	3460	11100	8920	6020	2300	9240	2420	4330
8	3720	5050	4890	4170	3470	13500	9010	5420	3040	8490	2500	3260
9	3590	5500	5580	4140	3200	15500	9160	4540	2510	7560	3050	3710
10	3340	6010	5650	4160	3160	16700	8930	4470	2640	6970	2430	3540
11	3390	6570	6200	3790	2960	17800	8550	4380	2370	6330	2040	3770
12	3220	6590	6130	4000	3490	17600	8280	5140	2380	6750	2530	3590
13	3360	6770	5940	4360	2770	17600	7650	5590	2300	7020	2060	3120
14	3360	6740	6090	4340	3080	16100	7560	5560	2020	6880	2250	3480
15	3140	6690	5660	4200	3060	14300	7430	5710	2190	5860	2190	3840
16	2990	6800	5760	3900	2760	12200	7940	5550	2190	5520	2170	3120
17	3500	6800	5650	3700	2960	11000	8290	5100	3060	5340	2150	2630
18	3210	7980	5170	3400	2920	10900	8410	5050	3760	5060	2280	3060
19	3160	9800	5680	3500	2960	9890	8680	4850	3480	4770	2060	3010
20	3000	13200	5550	3300	3000	9200	9900	4620	4060	4270	2160	3190
21	2970	15700	5150	3300	3350	9180	14100	4250	4620	4100	2160	2930
22	2860	17500	4710	3610	3080	8360	17600	4300	4860	3820	1700	3200
23	3360	16400	4820	3600	3170	8180	20500	3820	4490	3870	2300	3060
24	3080	12700	4510	3750	3090	8320	22300	4040	4670	3310	2480	2800
25	3030	9700	4710	3520	3180	8350	22100	3860	4300	3340	2760	2200
26	3140	8960	4400	3440	3060	9790	20500	3700	4460	3050	2410	2980
27	3170	7880	4550	3450	3440	10900	18600	3680	4210	3190	3200	2350
28	3090	7800	4290	3600	3670	10600	16300	3470	4180	2570	2690	2600
29	3630	7240	4250	3290	3670	10600	14000	3430	3800	2690	3130	2500
30	4190	6800	4080	3440	---	9980	12600	3280	3170	2680	3040	2270
31	5030	---	4100	3300	---	9910	---	2710	---	2670	2520	---
TOTAL	106220	235380	163160	118400	92880	325210	352170	161910	98120	168140	74080	93280
MEAN	3426	7846	5263	3819	3203	10490	11740	5223	3271	5424	2390	3109
MAX	5030	17500	6200	4360	3670	17800	22300	10300	4860	10300	3200	4330
MIN	2860	2520	4080	3290	2760	3660	7430	2710	2020	2570	1700	2200
CFSM	.55	1.26	.84	.61	.51	1.68	1.88	.84	.52	.87	.38	.50
IN.	.63	1.40	.97	.71	.55	1.94	2.10	.97	.58	1.00	.44	.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 1992, BY WATER YEAR (WY)

MEAN	3745	3403	2539	2152	2107	4169	9958	7514	5758	4080	2824	3486
MAX	14270	11910	5821	4279	6021	14420	22320	21840	19510	17260	9777	14590
(WY)	1969	1972	1984	1984	1984	1945	1952	1950	1944	1952	1955	1941
MIN	1380	1342	1287	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 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1902 - 1992
ANNUAL TOTAL	2227430	1988950	
ANNUAL MEAN	6103	5434	4324
HIGHEST ANNUAL MEAN			8569
LOWEST ANNUAL MEAN			1754
HIGHEST DAILY MEAN	24800	May 9	22300
LOWEST DAILY MEAN	1570	Feb 6	1700
ANNUAL SEVEN-DAY MINIMUM	1790	Feb 2	2100
INSTANTANEOUS PEAK FLOW			22600
INSTANTANEOUS PEAK STAGE			10.85
ANNUAL RUNOFF (CFSM)	.98	.87	25.19
ANNUAL RUNOFF (INCHES)	13.28	11.86	.69
10 PERCENT EXCEEDS	11700	8990	9.41
50 PERCENT EXCEEDS	5340	4040	2700
90 PERCENT EXCEEDS	1910	2520	1540

ST. CROIX RIVER BASIN

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452858092265300 BALSAM LAKE, OFF LITTLE NARROWS, NEAR BALSAM LAKE, WI

LOCATION.--Lat 45°28'58", long 92°26'53", in NE 1/4 NE 1/4 sec.34, T.35 N., R.17 W., Polk County, Hydrologic Unit 07030005, 2.1 mi north of Balsam Lake.

PERIOD OF RECORD.--May 1991 to current year.

REMARKS.--Lake sampled about 0.25 mi northwest of Little Narrows. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MAY 07 TO AUGUST 17, 1992
(Milligrams per liter unless otherwise indicated)

	May 07	June 08	July 21	Aug. 17
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	7.93	7.51	7.79	7.51
Specific conductance (μS/cm)	212	208	213	223
pH (units)	8.5	8.8	8.2	8.3
Water temperature (°C)	13.5	20.5	22.5	21.5
Secchi-depth (meters)	2.9	2.1	1.8	1.5
Dissolved oxygen	11.2	10.2	10.5	9.9
Phosphorus, total (as P)	<0.020	0.014	0.023	0.030
Chlorophyll a, phytoplankton (μg/L)	4.0	6.0	15	20

452754092234300 BALSAM LAKE, OFF ROCK ISLAND, NEAR BALSAM LAKE, WI

LOCATION.--Lat 45°27'54", long 92°23'43", in NW 1/4 NE 1/4 sec.6, T.34 N., R.16 W., Polk County, Hydrologic Unit 07030005, 3 mi northeast of Balsam Lake.

PERIOD OF RECORD.--May 1991 to current year.

REMARKS.--Lake sampled in eastern bay about 0.25 mi northeast of Rock Island. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MAY 07 TO AUGUST 17, 1992
(Milligrams per liter unless otherwise indicated)

	May 07	June 08	July 21	Aug. 17
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	7.93	7.51	7.79	7.51
Specific conductance (μS/cm)	162	167	163	168
pH (units)	8.5	8.3	8.0	7.9
Water temperature (°C)	12.5	20.5	22.0	22.0
Secchi-depth (meters)	3.2	3.0	3.4	2.7
Dissolved oxygen	10.6	8.3	8.5	8.1
Phosphorus, total (as P)	<0.020	0.013	0.013	0.018
Chlorophyll a, phytoplankton (μg/L)	6.0	5.0	5.2	8.4

LOCATION.--Lat 45°27'55", long 92°26'46", in NW 1/4 SW 1/4 sec.2, T.34 N., R.17 W., Polk County, Hydrologic Unit 07030005, 1 mi north of Balsam Lake.

LAKE-STAGE RECORDS

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 8.41 ft, Sept. 18, 1991; minimum observed, 6.74 ft, Aug. 3, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 8.15 ft, Dec. 26; minimum observed, 7.48 ft, Feb. 25.

[illegible]

452755092264600 BALSAM LAKE, OFF CEDAR ISLAND, AT BALSAM LAKE, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1991 to current year.

REMARKS.--Lake sampled about 0.25 mi north of Cedar Island at a lake depth of about 34 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 25 TO AUGUST 17, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 25		May 07		June 08		July 21		Aug. 17	
Depth of sample (ft)	1.5	30	1.5	32	1.5	30	1.5	29	1.5	30
Lake stage (ft)	7.48		7.93		7.51		7.79		7.51	
Specific conductance ($\mu\text{S}/\text{cm}$)	184	213	176	178	173	184	174	195	177	218
pH (units)	9.1	8.2	8.5	8.1	8.3	7.8	7.8	7.8	8.2	8.0
Water temperature ($^{\circ}\text{C}$)	1.5	5.0	11.5	9.5	20.0	12.0	21.0	16.5	21.5	16.5
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.70	0.90	---	---	---	---	---	---
Secchi-depth (meters)	---	---	3.4		5.5		3.0		2.4	
Dissolved oxygen	11.0	0.8	11.0	9.0	8.4	0.6	9.0	0.1	8.9	0.1
Hardness, as CaCO_3	---	---	84	84	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	21	21	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	7.7	7.7	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	4.3	4.3	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	76	75	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	<5.0	<5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	9.0	9.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	9.6	10	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	112	114	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.19	0.18	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.03	0.02	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.30	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.009	0.008	0.010	0.035	0.016	0.060	0.020	0.040
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	0.003	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	140	160	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	5.0	---	2.0	---	7.7	---	9.6	---

2-25-92

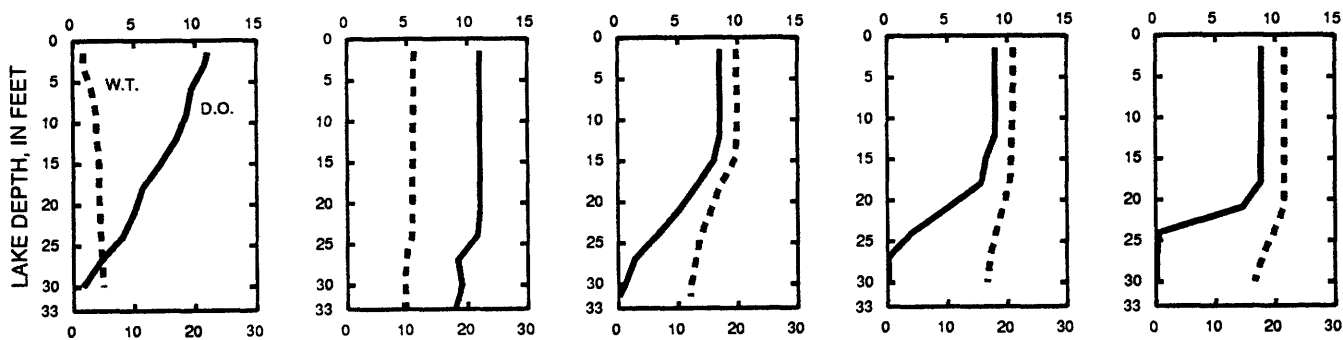
5-7-92

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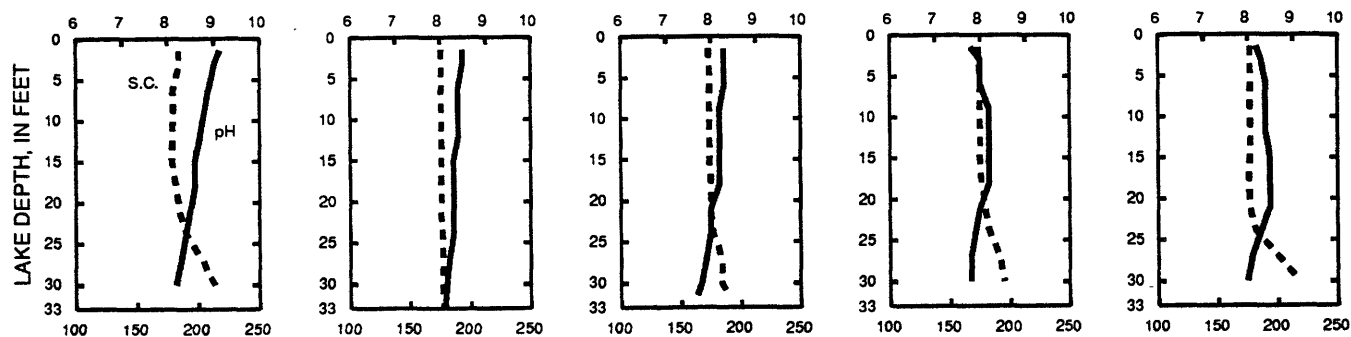
8-17-92

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

ST. CROIX RIVER BASIN

05341500 APPLE RIVER NEAR SOMERSET, WI

LOCATION.--Lat 45°09'27", long 92°42'59", in 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 September 1914 (monthly discharge only), October 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.--No estimated daily discharges. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	390	363	359	448	421	380	641	688	312	245	205	219
2	433	350	524	492	424	394	481	740	283	376	229	207
3	500	368	474	431	404	385	546	555	367	599	210	235
4	506	307	457	431	440	398	654	416	340	750	248	242
5	443	393	411	465	390	411	513	555	337	716	210	244
6	467	464	419	472	362	481	525	496	360	667	231	297
7	479	331	430	457	325	656	366	417	340	658	229	295
8	386	348	606	444	260	820	418	395	335	545	218	311
9	373	404	576	473	261	783	509	394	323	535	265	322
10	378	485	547	556	402	909	457	408	256	461	327	308
11	391	498	501	423	410	902	487	394	262	359	284	319
12	364	523	522	511	369	798	424	393	280	459	235	275
13	325	504	509	490	384	958	443	437	199	524	222	262
14	285	473	513	326	414	865	448	485	240	539	221	250
15	246	605	421	270	443	680	412	449	239	518	221	263
16	247	535	384	318	382	690	483	418	231	522	206	353
17	269	526	546	423	403	661	469	277	338	422	224	343
18	395	451	525	370	407	680	536	346	383	427	252	384
19	310	530	461	381	345	626	524	434	450	424	286	380
20	307	579	518	445	322	632	536	451	384	374	265	392
21	320	674	460	405	340	556	559	422	308	393	232	268
22	238	625	460	406	322	657	717	384	301	383	244	341
23	263	629	516	416	382	662	906	369	330	387	239	292
24	146	504	440	340	381	592	961	379	263	365	202	248
25	153	444	474	316	363	578	1090	351	335	261	234	272
26	274	516	399	342	418	474	1080	432	350	266	237	228
27	401	547	509	361	373	563	984	401	333	247	245	215
28	352	676	469	361	383	571	809	332	352	340	325	285
29	324	600	467	408	384	609	709	379	327	325	289	254
30	399	491	498	425	---	603	621	342	331	291	251	261
31	154	---	457	496	---	561	---	346	---	247	226	---
TOTAL	10518	14743	14852	12902	10914	19535	18308	13285	9489	13625	7512	8565
MEAN	339	491	479	416	376	630	610	429	316	440	242	285
MAX	506	676	606	556	443	958	1090	740	450	750	327	392
MIN	146	307	359	270	260	380	366	277	199	245	202	207
CFSM	.59	.85	.83	.72	.65	1.09	1.05	.74	.55	.76	.42	.49
IN.	.68	.95	.95	.83	.70	1.26	1.18	.85	.61	.88	.48	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 1992, BY WATER YEAR (WY)

	MEAN	274	268	237	223	228	373	533	407	371	269	225	283
MAX	623	536	479	416	411	730	1335	1000	1030	532	506	808	
(WY)	1904	1907	1992	1992	1966	1946	1965	1906	1905	1905	1906	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1901 - 1992	
ANNUAL TOTAL	158077		154248			
ANNUAL MEAN	433		421		307	
HIGHEST ANNUAL MEAN					535	
LOWEST ANNUAL MEAN					144	
HIGHEST DAILY MEAN	1210	Sep 12	1090	Apr 25	2510	Apr 13 1965
LOWEST DAILY MEAN	144	Jan 24	146	Oct 24	7.0	(a) Aug 21 1927
ANNUAL SEVEN-DAY MINIMUM	173	Jan 20	223	Aug 1	49	Aug 2 1933
ANNUAL RUNOFF (CFSM)	.75		.73		.53	
ANNUAL RUNOFF (INCHES)	10.16		9.91		7.20	
10 PERCENT EXCEEDS	734		622		497	
50 PERCENT EXCEEDS	393		396		240	
90 PERCENT EXCEEDS	199		245		141	

(a) Also occurred Sept. 30, 1929, July 19, 1932, and Aug. 2, 3, 1933

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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.

REVISED RECORDS.--WSP 1508: 1941. WRD MN-74: 1973.

GAGE.--Water-stage recorder. Datum of gage is 649.50 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 2, 1932, nonrecording gage at railroad bridge 300 ft upstream at following datums: June 3, 1928, to Sept. 30, 1929, 19.27 ft higher; Oct. 1, 1929, to Sept. 30, 1930, 17.68 ft higher; Oct. 1, 1930, to Aug. 1, 1932, 19.28 ft higher. Aug. 2, 1932, to Oct. 30, 1938, water-stage recorder at present site at datum 19.28 ft higher; Nov. 1, 1938, to Sept. 7, 1971, water-stage recorder at present site at datum 50.00 ft lower.

REMARKS.--Records good. Some regulation by reservoirs, navigation dams, and powerplants at low and medium stages. Flood flow not materially affected by artificial storage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

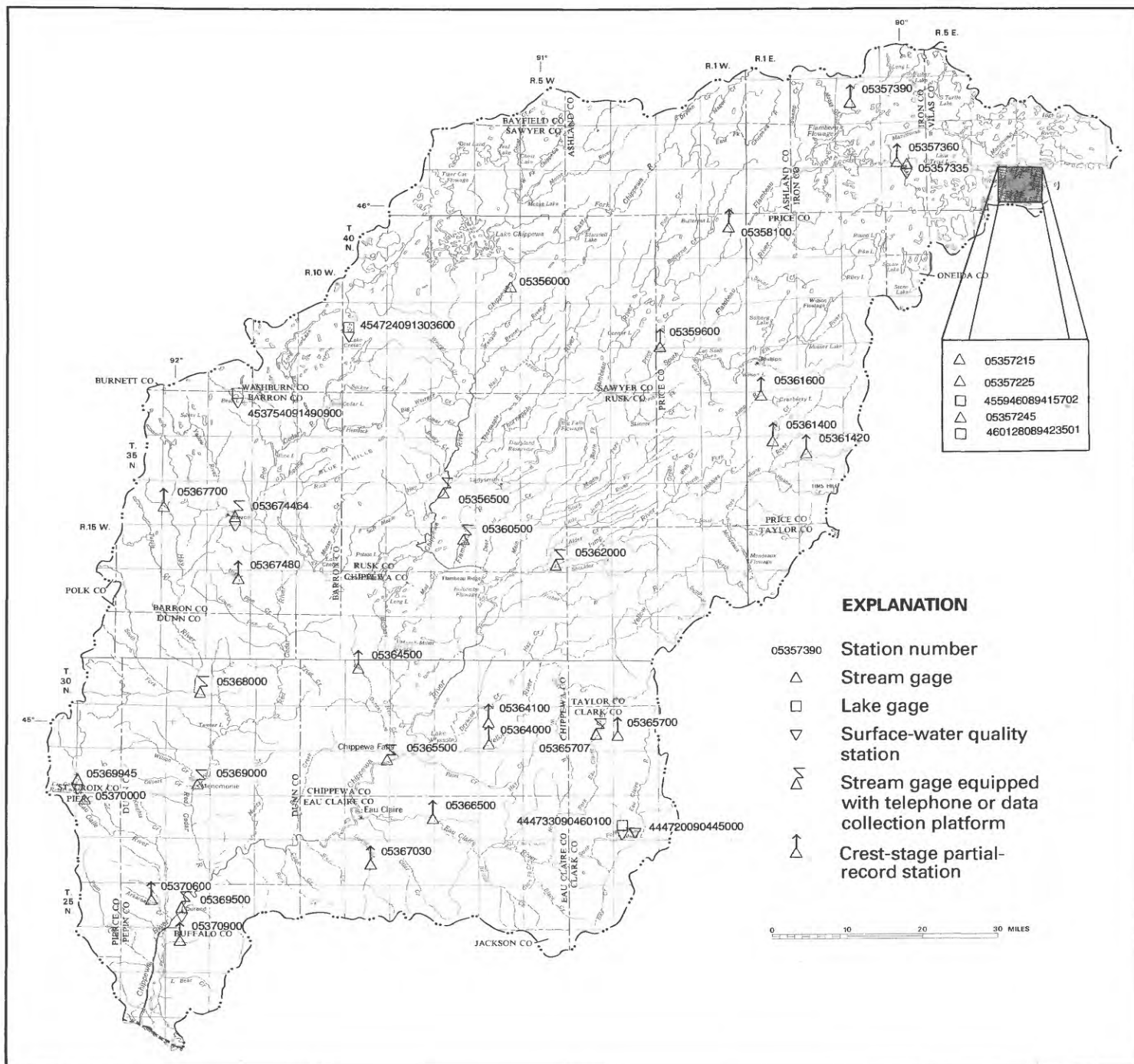
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20800	15100	24900	16700	13600	14100	39100	51800	16200	27100	17900	12600
2	21300	16100	22900	16800	13000	16300	38200	48000	16200	26700	16600	12700
3	21200	15200	22600	16700	12600	21400	37000	44800	15100	27100	15600	12400
4	19400	13600	21500	16900	12800	25600	35900	40300	15000	31200	15300	13000
5	19400	13700	21400	16400	12400	29900	34700	37000	13800	36100	16000	13000
6	18000	13700	20500	15800	11900	35100	33800	34300	13400	40100	15400	13400
7	18300	14100	18900	16000	12000	43100	33000	31400	12500	41700	14400	13700
8	17100	14800	19800	16000	12600	52200	31400	29100	12300	42400	13800	15400
9	17400	13100	20600	15700	12300	58300	30800	27300	12600	42600	13900	16000
10	16500	13900	22300	16400	12800	62700	31000	24700	11500	41400	15700	16000
11	16600	14800	22000	16200	12400	66400	30000	24100	11700	40200	17400	16300
12	15700	17400	22200	15400	13100	67900	29900	22800	10900	38500	19200	15700
13	15100	18000	22100	16200	13300	68800	29600	23100	10700	38300	20400	15500
14	14700	18100	21900	17100	12100	69400	28800	23600	10200	39200	19300	13900
15	14500	18500	21900	17100	12900	68100	28000	23300	9890	38600	18600	14500
16	14500	18600	20500	17500	12300	66100	28200	22800	9780	37000	16900	15500
17	14500	18800	19300	15400	11900	62000	28900	22800	9740	35500	15100	14100
18	14100	19100	18900	13800	11800	58200	29600	22700	10800	34000	14400	15800
19	13400	21100	19200	14800	11900	56000	30100	22200	13300	31900	13500	18900
20	13500	24900	19400	13800	12000	51900	30700	22200	20700	30800	12400	18000
21	13100	32400	18200	13600	12100	48700	32600	20700	24800	29400	12100	17700
22	12600	38400	18200	14600	12600	46800	38300	18800	26600	28000	11300	16400
23	13100	42200	18900	15300	12200	45600	44500	19300	28400	26100	10000	15700
24	13900	43400	18900	15200	13100	44500	51200	18500	29300	24500	10400	15000
25	13000	40800	18500	14400	12700	43400	56300	17900	30500	22800	10300	13900
26	13100	36100	18100	13800	13100	43000	58700	16900	30500	22000	10300	12200
27	13100	33400	17400	12700	12800	43400	58800	16400	30000	21600	11200	12700
28	12800	29100	17800	13400	13200	43400	58400	16400	29500	21600	11800	11700
29	12400	27300	17500	13700	13500	42700	56800	17000	29300	20900	11800	11500
30	12500	26500	17100	13300	---	42000	54600	16400	28400	20200	12500	10700
31	13900	---	16900	13500	---	40400	---	16800	---	19500	12400	---
TOTAL	479500	682200	620300	474200	365000	1477400	1148900	793400	543610	977000	445900	433900
MEAN	15470	22740	20010	15300	12590	47660	38300	25590	18120	31520	14380	14460
MAX	21300	43400	24900	17500	13600	69400	58800	51800	30500	42600	20400	18900
MIN	12400	13100	16900	12700	11800	14100	28000	16400	9740	19500	10000	10700
CFSM	.35	.51	.45	.34	.28	1.06	.85	.57	.40	.70	.32	.32
IN.	.40	.57	.52	.39	.30	1.23	.95	.66	.45	.81	.37	.62

MEAN	13020	12610	9476	7955	7880	16760	39520	30980	24940	18900	12370	12430
MAX	49740	40360	21460	16060	21390	55010	117600	90100	69720	48970	43840	45950
(WY)	1987	1972	1983	1983	1966	1983	1965	1986	1944	1952	1953	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

WATER YEARS 1928 - 1992

ANNUAL TOTAL	9293000		8441310			
ANNUAL MEAN	25460		23060		(a)17270	
HIGHEST ANNUAL MEAN					38540	1986
LOWEST ANNUAL MEAN					4367	1934
HIGHEST DAILY MEAN	74300	May 12	69400	Mar 14	226000	Apr 18 1965
LOWEST DAILY MEAN	5360	Feb 9	9740	Jun 17	1380	Jul 13 1940
ANNUAL SEVEN-DAY MINIMUM	5650	Feb 9	10300	Jun 12	2190	Aug 11 1936
INSTANTANEOUS PEAK FLOW					228000	Apr 18 1965
INSTANTANEOUS PEAK STAGE					43.11	Apr 18 1965
ANNUAL RUNOFF (AC-FT)	18430000		16740000		12510000	
ANNUAL RUNOFF (CFSM)		.57		.51		.39
ANNUAL RUNOFF (INCHES)		7.72		7.01		5.24
10 PERCENT EXCEEDS	47700		42500		37700	
50 PERCENT EXCEEDS	22100		17900		11200	
90 PERCENT EXCEEDS	5890		12400		4920	

(a) Median of annual mean discharges is 16,500 ft³/s



Based on U.S. Geological Survey
State base map, 1968

CHIPPEWA RIVER BASIN

CHIPPEWA RIVER BASIN

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05356000 CHIPPEWA RIVER AT BISHOPS BRIDGE, NEAR WINTER, WI

LOCATION.--Lat 45°50'57", long 91°04'44", in SW 1/4 NE 1/4 sec.23, T.39 N., R.6 W., Sawyer County, Hydrologic Unit 07050001, on right bank 15 ft upstream from highway bridge on County Trunk Highway G, 3.2 mi downstream from Lake Chippewa Dam, and 3.7 mi northwest of Winter.

DRAINAGE AREA.--790 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,256.78 ft above National Geodetic Vertical Datum of 1929 (levels by Wilhelm Engineering Co.). See WSP 1708 or 1728 for history of changes prior to July 23, 1930.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Moose Lake and Lake Chippewa.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	739	898	1890	1250	1150	252	275	1400	518	223	573	443
2	466	1240	1770	1250	1140	246	272	1140	517	390	583	435
3	433	1180	1710	1240	1130	252	275	1170	515	413	470	475
4	431	1150	1710	1230	1130	272	278	1170	512	392	431	480
5	437	1150	1710	1240	1130	280	281	1120	512	383	589	464
6	435	1650	1710	1230	1130	300	286	794	512	858	599	482
7	438	2010	1690	1230	1120	315	287	463	510	2190	609	469
8	437	2100	1690	1220	1120	323	288	864	509	3280	607	456
9	435	1990	1830	1220	1120	322	286	537	507	3560	611	447
10	435	1970	2290	1230	1120	356	287	535	506	3270	575	441
11	435	1970	2500	1220	932	391	284	860	503	2680	592	441
12	435	1970	2450	1220	591	398	285	856	500	2680	590	442
13	435	1960	2450	1210	614	408	286	850	481	2370	589	443
14	435	1950	2450	1210	639	365	285	828	499	2170	589	447
15	396	1950	2440	1210	642	366	296	836	498	1430	589	432
16	767	1950	2430	1220	643	378	313	475	499	1330	589	462
17	792	1950	2410	1210	642	606	324	527	507	1470	591	453
18	724	2170	2400	1210	646	683	317	847	514	1680	590	457
19	415	2050	2410	1200	644	607	336	830	512	1690	589	470
20	415	2000	1980	1200	647	603	366	846	511	1530	589	470
21	739	1990	1610	1190	652	602	412	863	510	1430	583	460
22	839	1970	1600	1180	665	601	616	886	511	951	454	577
23	793	1960	1590	1170	663	601	745	534	349	647	454	615
24	764	1960	1590	1170	666	611	981	531	214	548	463	616
25	782	2220	1590	1170	672	622	1210	530	216	504	455	615
26	410	2470	1580	1170	673	629	1210	811	214	502	453	615
27	410	2480	1580	1160	744	630	1210	840	212	478	448	615
28	773	2470	1580	1170	503	620	1440	807	215	618	445	613
29	786	2190	1570	1160	254	623	1620	827	222	615	450	611
30	768	1540	1570	1150	---	624	1630	521	223	615	432	609
31	765	---	1420	1150	---	432	---	519	---	594	447	---
TOTAL	17764	56508	59200	37290	23422	14318	16981	24617	13028	41491	16628	15055
MEAN	573	1884	1910	1203	808	462	566	794	434	1338	536	502
MAX	839	2480	2500	1250	1150	683	1630	1400	518	3560	611	616
MIN	396	898	1420	1150	254	246	272	463	212	223	431	432

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1992, BY WATER YEAR (WY)

	MEAN	662	846	996	921	763	431	510	748	794	655	627	693
MAX	2896	1884	1910	1770	1550	1097	3453	2823	2950	1713	2235	3769	
(WY)	1986	1992	1992	1983	1928	1920	1922	1954	1939	1951	1972	1941	
MIN	43.6	143	321	201	194	117	20.0	24.2	39.8	40.3	146	140	
(WY)	1925	1925	1990	1922	1918	1923	1925	1923	1925	1925	1970	1970	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1912 - 1992

ANNUAL TOTAL	366287	336302	719	
ANNUAL MEAN	1004	919	1124	1942
HIGHEST ANNUAL MEAN			258	1923
LOWEST ANNUAL MEAN			7520	1941
HIGHEST DAILY MEAN	2500	Dec 11	212	Jun 27
LOWEST DAILY MEAN	234	Sep 6	217	Jun 24
ANNUAL SEVEN-DAY MINIMUM	269	Sep 4	3590	Jul 8
INSTANTANEOUS PEAK FLOW			7.99	Jul 8
INSTANTANEOUS PEAK STAGE			172	Aug 3
INSTANTANEOUS LOW FLOW			1960	
10 PERCENT EXCEEDS	1950	621	1400	
50 PERCENT EXCEEDS	1040	579	168	
90 PERCENT EXCEEDS	434	332		

(a) Also occurred May 1-5, 1925

CHIPPEWA RIVER BASIN

454724091303600 BIG SISSABAGAMA LAKE NEAR STONE LAKE, WI

LOCATION.--Lat 45°47'24", Long 91°30'36", in NW 1/4 SE 1/4 sec.6, T.38 N., R.9 W., Sawyer County, Hydrologic Unit 07050001, near Stone Lake.

DRAINAGE AREA.--9.47 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--April 1986 to current year.

GAGE.--Staff gage read near lake outlet by Richard Roehrich. Elevation of lake is 1,320 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD: Maximum gage height observed, 6.09 ft, May 7 and Sept. 15, 1991; minimum observed, 4.78 ft, Sept. 15, 16, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 6.08 ft, Dec. 1; minimum observed, 5.54 ft, Sept. 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.77	5.97	6.08	5.73	---	5.61	5.70	5.92	5.76	---	5.69	5.69
2	5.78	6.04	6.06	5.73	---	5.61	5.70	5.88	5.76	5.92	5.71	5.69
3	5.81	6.02	6.05	5.73	---	5.60	5.70	5.88	5.75	5.92	5.70	5.69
4	5.82	6.01	6.04	5.72	---	5.60	5.70	5.86	5.74	5.91	5.70	5.71
5	5.86	6.02	6.03	5.72	---	5.63	5.74	5.83	5.73	5.90	5.69	5.72
6	5.84	---	---	5.72	---	5.66	5.77	5.80	5.74	5.89	5.69	5.78
7	5.84	5.99	5.98	---	---	5.71	5.77	5.79	5.72	5.88	5.68	5.76
8	5.82	5.99	5.95	5.71	---	5.74	5.77	5.78	5.72	5.89	5.68	5.76
9	5.82	---	---	---	---	5.77	5.77	5.77	5.72	5.87	5.68	5.74
10	5.81	5.98	5.93	5.71	---	5.77	5.78	5.76	5.73	5.89	5.67	5.76
11	5.80	5.97	---	5.70	---	5.77	5.82	5.75	5.72	5.87	5.66	5.73
12	5.77	---	5.92	5.70	---	5.76	5.81	5.75	5.71	5.97	5.65	5.72
13	---	5.94	5.91	---	---	5.77	5.79	5.74	5.71	5.97	5.64	5.72
14	5.78	5.94	---	5.69	---	5.77	5.79	5.74	5.69	5.96	5.62	5.74
15	5.77	5.93	5.88	---	---	5.77	5.78	5.73	5.69	5.94	5.61	5.73
16	5.77	5.92	5.87	---	---	5.77	5.81	5.82	5.68	5.92	5.59	5.72
17	5.76	---	5.86	---	---	5.75	5.80	5.84	5.77	5.89	5.58	5.78
18	---	6.02	5.84	---	---	5.74	5.80	5.82	5.74	5.88	5.59	5.77
19	5.74	6.04	5.84	---	---	5.73	5.83	5.81	5.78	5.84	5.57	5.76
20	5.70	---	5.82	---	---	5.72	5.92	5.80	5.75	5.84	5.58	---
21	5.72	6.03	5.80	---	---	5.71	6.00	5.79	5.74	5.83	5.59	5.76
22	5.71	6.04	5.80	---	---	5.71	6.02	5.84	5.73	5.83	5.60	5.72
23	5.71	---	5.80	---	---	5.70	6.04	5.84	5.72	5.80	5.61	5.71
24	5.77	6.05	5.77	---	---	5.69	6.04	5.82	5.74	5.80	5.59	5.68
25	5.77	6.04	5.77	---	---	5.69	6.03	5.81	5.74	5.79	5.64	5.67
26	5.77	6.03	5.77	---	---	5.69	6.02	5.79	5.73	5.77	5.64	5.64
27	5.76	6.01	5.76	---	---	5.69	5.99	5.78	5.73	5.77	5.64	5.60
28	5.77	---	5.75	---	---	5.69	5.97	5.77	5.70	5.75	5.63	5.58
29	5.78	6.01	5.75	---	---	5.69	5.94	5.77	5.69	5.73	5.72	---
30	5.75	---	5.74	---	---	5.69	5.93	5.76	5.67	5.73	5.69	5.54
31	5.75	---	5.73	---	---	5.69	---	5.75	---	---	5.69	---
MAX	---	---	---	---	---	5.77	6.04	5.92	5.78	---	5.72	---
MIN	---	---	---	---	---	5.60	5.70	5.73	5.67	5.73	5.57	---

454724091303600 BIG SISSABAGAMA LAKE NEAR STONE LAKE, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1986 to current year.

REMARKS.--Lake sampled near center at a lake depth of about 48 ft. Lake ice-covered during March sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene. Additional water-quality data for Big Sissabagama Lake on page 484.

WATER-QUALITY DATA, MARCH 04 TO AUGUST 19, 1992
(Milligrams per liter unless otherwise indicated)

	Mar. 04		May 11		June 09		July 23		Aug. 19	
Depth of sample (ft)	1.5	47	1.5	48	1.5	46	1.5	46	1.5	50
Lake stage (ft)	5.60		5.75		5.72		5.80		5.57	
Specific conductance ($\mu\text{S}/\text{cm}$)	104	208	66	69	65	92	67	114	69	141
pH (units)	7.2	7.7	8.8	7.7	8.0	7.4	8.1	7.4	7.5	7.5
Water temperature ($^{\circ}\text{C}$)	0.5	6.0	14.5	9.0	20.0	10.0	20.0	11.0	21.0	11.0
Color (Pt-Co, scale)	---	---	30	50	---	---	---	---	---	---
Turbidity (NTU)	---	---	2.0	7.0	---	---	---	---	---	---
Secchi-depth (meters)	---		2.1		4.4		2.3		1.5	
Dissolved oxygen	12.5	0.2	10.6	4.3	9.0	0.1	8.5	0.0	8.6	0.0
Hardness, as CaCO_3	---	---	32	32	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	8.2	8.3	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	2.7	2.7	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	1.5	1.5	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.8	0.8	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	30	32	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	<5.0	<5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	<1.0	<1.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	<0.0	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	6.7	8.4	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	58	50	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.07	0.06	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.03	0.21	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	1.1	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.033	0.076	0.016	0.119	0.023	0.110	0.024	0.140
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.017	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	300	720	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	46	480	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	15	---	5.0	---	11	---	13	---

3-4-92

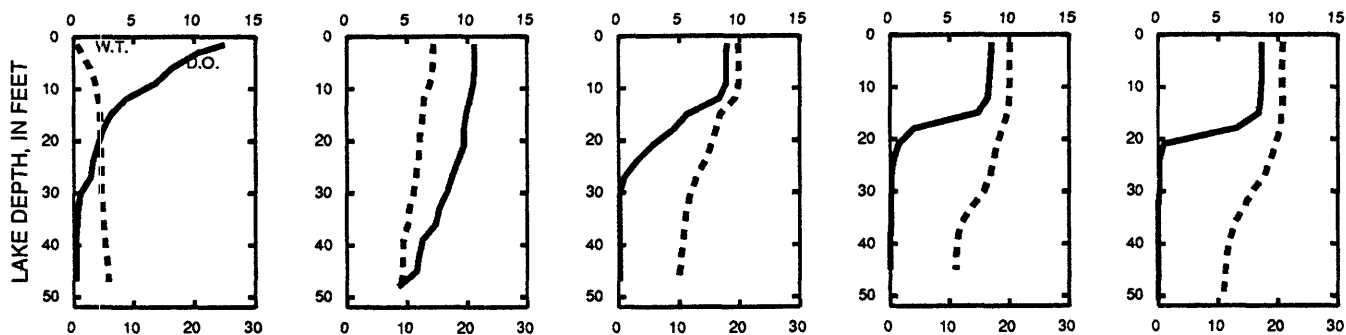
5-11-92

6-9-92

7-23-92

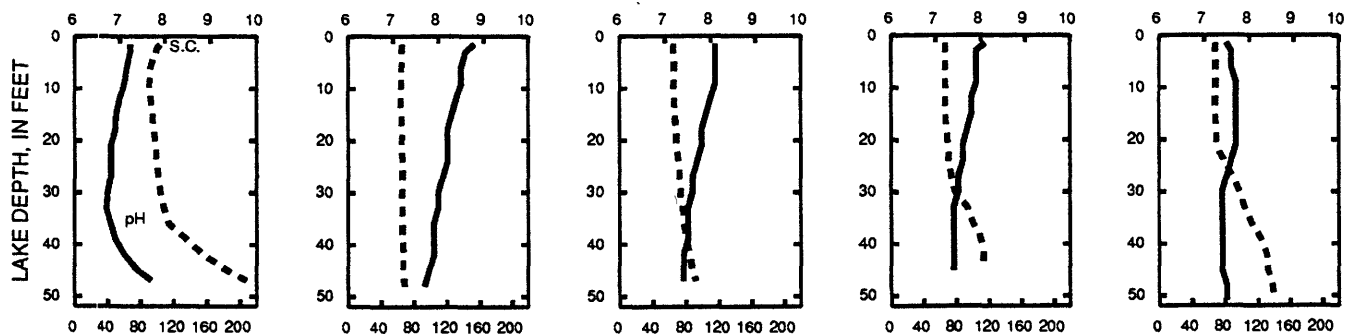
8-19-92

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

CHIPPEWA RIVER BASIN

05356500 CHIPPEWA RIVER NEAR BRUCE, WI

LOCATION.--Lat 45°27'08", long 91°15'39", in SE 1/4 sec.5, T.34 N., R.7 W., Rusk County, Hydrologic Unit 07050001, on right bank 1.0 mi east of Bruce and 1.0 mi downstream from Thornapple River.

DRAINAGE AREA.--1,650 mi².

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

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

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 1-12 and Nov. 22 to Mar. 5. Records good except those for ice-affected periods, which are fair. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1640	1400	2300	2200	1600	1400	1960	2700	877	675	836	812
2	1150	1500	2800	2000	1700	1500	1580	2220	932	1320	923	740
3	1020	1800	2700	1800	1700	1600	1620	2160	909	3490	936	757
4	906	1700	2600	1800	1700	1800	1780	2080	890	3840	766	871
5	959	1600	2600	1900	1700	2000	1640	1970	856	2410	721	885
6	924	1600	2600	1900	1700	3420	1810	1660	869	1920	833	1150
7	978	1900	2600	2000	1700	4890	1970	1450	876	2200	874	1250
8	1010	2800	2600	2000	1700	5020	1910	1060	871	3620	895	1170
9	900	3200	2600	1900	1700	4670	1730	1450	858	4070	890	1000
10	878	3100	2700	1800	1700	4140	1590	1100	853	4160	1250	940
11	858	3100	3000	1800	1600	4300	1560	1100	806	3560	1160	922
12	858	3000	3600	1800	1400	3660	1420	1560	824	3370	1130	877
13	837	2900	3700	1800	1100	2890	1380	1610	837	3630	855	804
14	823	2880	3700	1800	1100	2530	1280	1580	847	3010	898	806
15	851	3040	3700	1800	1200	1780	1360	1530	830	2860	898	829
16	844	3330	3600	1800	1200	1510	1870	1540	801	1760	869	945
17	1170	3300	3600	1800	1200	1520	2490	1390	951	1940	855	1210
18	1180	6700	3500	1800	1200	1830	2630	1740	1120	2160	873	2170
19	1110	10800	3400	1900	1200	1660	2850	1840	1090	2170	869	2370
20	810	9480	3300	1900	1200	1470	4040	1650	1010	2130	849	1700
21	752	6840	3100	1900	1200	1430	7540	1550	934	1880	863	1390
22	1150	5800	2500	1900	1200	1370	8540	1570	905	1750	882	1260
23	1200	4500	2400	1800	1200	1350	6910	1810	927	1230	772	1270
24	1230	3100	2400	1700	1200	1490	5050	1430	770	1020	736	1110
25	1270	3000	2400	1700	1200	1940	4070	1310	558	924	678	1110
26	1280	3200	2400	1700	1300	2270	3530	1260	631	935	708	1100
27	917	3500	2400	1700	1300	2110	3070	1450	657	877	743	1040
28	826	3600	2400	1700	1300	1990	2790	1330	716	846	836	1030
29	1250	3600	2300	1700	1300	1970	2850	1250	564	993	700	1010
30	1290	3600	2300	1700	---	1980	2820	1280	579	848	785	982
31	1260	---	2300	1700	---	2170	---	1040	---	993	885	---
TOTAL	32131	109870	88100	56700	40500	73660	85640	48670	25148	66591	26768	33510
MEAN	1036	3662	2842	1829	1397	2376	2855	1570	838	2148	863	1117
MAX	1640	10800	3700	2200	1700	5020	8540	2700	1120	4160	1250	2370
MIN	752	1400	2300	1700	1100	1350	1280	1040	558	675	678	740

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	MEAN	1244	1420	1395	1200	1033	1440	2673	1929	1736	1234	1044	1347
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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1914 - 1992	
ANNUAL TOTAL	761506		687288			
ANNUAL MEAN	2086		1878		1472	
HIGHEST ANNUAL MEAN					2290	
LOWEST ANNUAL MEAN					666	
HIGHEST DAILY MEAN	10800		10800		24900	
LOWEST DAILY MEAN	474		558		155	
ANNUAL SEVEN-DAY MINIMUM	700		626		218	
INSTANTANEOUS PEAK FLOW			11100		(a)25800	
INSTANTANEOUS PEAK STAGE			11.30		(b)20.46	
10 PERCENT EXCEEDS	3920		3490		2700	
50 PERCENT EXCEEDS	1630		1580		1100	
90 PERCENT EXCEEDS	759		842		497	

(a) From rating curve extended above 20,000 ft³/s

(b) From floodmarks

CHIPPEWA RIVER BASIN

177

05357215 ALLEQUASH CREEK (HEAD OF TROUT RIVER) AT CTH M, NEAR BOULDER JUNCTION, WI

LOCATION.--Lat 46°01'25", long 89°39'10", in NW 1/4 NW 1/4 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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 1-13, 30, Dec. 1 to Jan. 3, Jan. 15 to Feb. 17, Mar. 12-16, and Mar. 18 to Apr. 3. Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	17	23	12	5.5
2								---	16	23	12	5.3
3								---	15	23	12	6.4
4								---	13	23	11	4.6
5								---	12	22	9.7	4.5
6								---	11	20	8.5	4.7
7								---	9.4	19	8.0	5.4
8								---	8.2	18	7.9	6.2
9								---	7.6	16	7.6	12
10								---	6.6	15	7.4	14
11								---	7.4	13	7.2	12
12								---	10	15	7.0	6.2
13								---	9.5	15	6.9	4.3
14								---	11	14	6.7	4.6
15								---	12	12	5.0	4.1
16								---	11	10	4.7	3.1
17								---	10	13	6.2	2.8
18								---	6.1	13	6.3	2.8
19								---	2.8	12	6.2	2.6
20								---	3.6	12	5.9	3.0
21								---	11	13	5.5	2.7
22								---	11	12	5.5	2.6
23								---	9.5	11	5.5	4.8
24								---	7.2	11	5.7	5.5
25								---	8.0	11	5.5	15
26								---	7.5	11	5.5	24
27								---	18	10	5.7	29
28								---	28	13	5.7	32
29								17	28	15	5.4	34
30								17	26	15	4.7	32
31								18	---	13	5.4	---
TOTAL								---	353.4	466	218.3	295.7
MEAN								---	11.8	15.0	7.04	9.86
MAX								---	28	23	12	34
MIN								---	2.8	10	4.7	2.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1991, BY WATER YEAR (WY)

MEAN	---	11.8	15.0	7.04	9.86
MAX	---	11.8	15.0	7.04	9.86
(WY)	---	1991	1991	1991	1991
MIN	---	11.8	15.0	7.04	9.86
(WY)	---	1991	1991	1991	1991

05357215 ALLEQUASH CREEK (HEAD OF TROUT RIVER) AT CTH M, NEAR BOULDER JUNCTION, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	23	17	10	9.0	10	11	18	11	11	1.2	12
2	39	28	16	10	9.1	10	11	18	10	15	1.1	12
3	49	29	16	11	9.2	10	11	20	9.8	15	1.1	12
4	50	29	15	11	9.3	10	10	20	9.4	14	1.3	11
5	56	26	15	11	9.2	12	10	20	9.4	14	1.4	11
6	49	24	15	11	9.0	15	11	18	9.2	13	1.2	12
7	41	23	14	11	9.0	16	11	17	9.0	13	1.0	11
8	35	22	14	13	8.9	12	12	17	8.7	14	.93	12
9	30	21	14	12	8.8	13	12	16	8.4	15	1.1	11
10	26	20	14	11	8.8	13	13	15	8.1	15	1.7	11
11	24	20	14	11	8.8	11	15	13	7.9	14	1.9	10
12	22	19	15	11	8.8	11	14	13	7.8	15	2.2	9.7
13	19	18	16	11	8.8	10	14	13	7.7	15	2.5	9.6
14	17	18	16	10	8.8	10	13	12	7.6	14	3.0	12
15	15	18	15	9.6	8.7	10	14	13	7.1	14	3.4	13
16	12	16	15	9.2	8.6	10	16	14	7.0	13	4.2	14
17	6.7	16	14	9.0	8.6	10	16	17	7.1	13	4.9	15
18	4.9	20	14	8.8	7.9	10	16	17	7.9	12	6.7	17
19	3.0	18	13	8.8	5.7	9.9	17	15	8.5	12	7.2	16
20	4.6	15	13	9.0	6.5	9.8	18	15	8.5	11	7.5	18
21	10	17	13	9.4	6.6	9.8	20	14	8.1	11	11	18
22	9.5	17	12	9.6	7.8	9.9	28	13	7.8	11	20	17
23	5.2	20	12	9.8	8.0	10	44	15	8.7	10	17	16
24	15	21	12	9.6	9.6	10	37	14	9.7	10	16	14
25	15	20	11	9.2	10	10	33	13	11	9.8	16	13
26	16	18	11	9.0	10	11	30	13	11	9.6	15	13
27	15	18	11	8.9	9.7	10	26	13	10	9.1	14	13
28	15	18	11	8.8	11	10	23	12	10	8.5	13	10
29	19	17	11	8.9	11	11	22	12	10	7.0	13	8.7
30	23	17	10	9.0	---	11	21	12	10	3.7	12	6.7
31	23	---	10	8.9	---	11	---	11	---	1.4	12	---
TOTAL	702.9	606	419	309.5	255.2	336.4	549	463	266.4	363.1	214.53	378.7
MEAN	22.7	20.2	13.5	9.98	8.80	10.9	18.3	14.9	8.88	11.7	6.92	12.6
MAX	56	29	17	13	11	16	44	20	11	15	20	18
MIN	3.0	15	10	8.8	5.7	9.8	10	11	7.0	1.4	.93	6.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	22.7	20.2	13.5	9.98	8.80	10.9	18.3	14.9	10.3	13.4	6.98	11.2
MAX	22.7	20.2	13.5	9.98	8.80	10.9	18.3	14.9	11.8	15.0	7.04	12.6
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1991	1991	1991	1992
MIN	22.7	20.2	13.5	9.98	8.80	10.9	18.3	14.9	8.88	11.7	6.92	9.86
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1991

SUMMARY STATISTICS

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	4863.73		
ANNUAL MEAN	13.3	13.3	
HIGHEST ANNUAL MEAN		13.3	1992
LOWEST ANNUAL MEAN		13.3	1992
HIGHEST DAILY MEAN	56	56	Oct 5 1991
LOWEST DAILY MEAN	.93	.93	Aug 8 1992
ANNUAL SEVEN-DAY MINIMUM	1.1	1.1	Aug 2 1992
INSTANTANEOUS PEAK FLOW	79	79	Oct 5 1991
INSTANTANEOUS PEAK STAGE	2.36	2.36	Oct 5 1991
INSTANTANEOUS LOW FLOW	.69	.69	Aug 7 1992
ANNUAL RUNOFF (AC-FT)	9650	9630	
10 PERCENT EXCEEDS	20	20	
50 PERCENT EXCEEDS	12	11	
90 PERCENT EXCEEDS	7.7	5.5	

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EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 27.10 ft, Apr. 21-27; minimum observed gage height, 26.25 ft. Oct. 22-23.

CAL	YR	1991	MEAN	26.20	MAX	26.81	MIN	25.61
WTR	YR	1992	MEAN	26.74	MAX	27.10	MIN	26.25

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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: May 30 to June 3, 1991. Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								64	64	58	47	26
2								63	63	60	46	25
3								61	64	60	46	28
4								62	65	64	44	29
5								62	63	63	42	29
6								64	62	62	41	29
7								64	60	61	40	32
8								63	59	60	39	33
9								62	57	59	38	36
10								62	55	57	37	38
11								60	54	56	36	36
12								59	55	58	35	36
13								58	53	57	34	36
14								58	55	54	34	37
15								57	58	52	34	38
16								63	56	50	35	37
17								62	55	55	39	35
18								60	53	54	38	34
19								57	52	53	36	33
20								55	52	53	34	32
21								54	62	53	33	30
22								53	60	51	32	29
23								52	56	48	32	28
24								53	54	47	31	27
25								53	52	46	31	28
26								60	50	44	30	27
27								61	50	43	30	26
28								61	55	49	30	26
29								66	59	53	29	25
30								65	59	51	29	25
31								65	---	49	27	---
TOTAL								1859	1712	1680	1109	930
MEAN								60.0	57.1	54.2	35.8	31.0
MAX								66	65	64	47	38
MIN								52	50	43	27	25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1991, BY WATER YEAR (WY)

MEAN	60.0	57.1	54.2	35.8	31.0
MAX	60.0	57.1	54.2	35.8	31.0
(WY)	1991	1991	1991	1991	1991
MIN	60.0	57.1	54.2	35.8	31.0
(WY)	1991	1991	1991	1991	1991

CHIPPEWA RIVER BASIN

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05357245 TROUT RIVER AT TROUT LAKE NEAR BOULDER JUNCTION, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	42	62	51	44	42	44	63	46	36	35	25
2	28	44	61	51	43	42	44	62	44	46	34	26
3	27	45	61	51	43	41	44	62	43	49	33	27
4	27	44	61	51	43	41	44	61	42	49	32	26
5	28	44	61	50	42	43	44	60	43	48	31	26
6	31	43	61	50	42	45	44	58	43	48	30	27
7	31	42	60	49	42	46	44	57	42	48	30	27
8	31	42	61	49	42	48	45	56	41	49	29	27
9	31	42	61	49	41	50	45	56	40	51	29	26
10	31	44	60	49	41	51	48	55	39	51	30	25
11	31	44	59	48	40	50	51	55	38	50	29	24
12	32	44	61	48	32	48	51	55	36	51	28	24
13	32	44	62	48	40	38	51	54	36	51	26	24
14	33	44	62	47	40	41	50	53	35	50	25	30
15	32	45	59	39	40	38	51	52	33	50	24	31
16	32	45	54	36	39	49	54	56	32	49	24	35
17	32	45	61	45	39	48	54	62	32	49	23	38
18	31	49	60	30	39	47	54	62	32	48	24	42
19	30	49	51	35	38	48	55	61	32	47	23	41
20	30	49	59	39	38	47	57	60	31	46	22	40
21	30	49	59	45	39	41	60	60	29	45	22	40
22	29	50	58	45	38	44	61	60	29	44	22	40
23	29	53	57	46	38	46	63	61	30	43	22	39
24	33	55	56	46	40	45	63	58	33	42	22	38
25	34	54	56	46	41	45	64	55	35	41	24	36
26	34	54	55	45	41	45	64	53	37	40	24	37
27	34	54	54	45	41	45	64	51	36	39	23	40
28	34	54	53	45	43	45	63	50	35	38	23	38
29	35	54	53	45	42	45	62	49	36	36	23	37
30	34	63	52	44	---	44	63	48	36	36	25	36
31	34	---	51	44	---	44	---	47	---	35	26	---
TOTAL	967	1430	1801	1411	1171	1392	1601	1752	1096	1405	817	972
MEAN	31.2	47.7	58.1	45.5	40.4	44.9	53.4	56.5	36.5	45.3	26.4	32.4
MAX	35	63	62	51	44	51	64	63	46	51	35	42
MIN	27	42	51	30	32	38	44	47	29	35	22	24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992
MEAN	31.2	47.7	58.1	45.5	40.4	44.9	53.4	58.2	46.8	49.8	31.1	31.7
MAX	31.2	47.7	58.1	45.5	40.4	44.9	53.4	60.0	57.1	54.2	35.8	32.4
(WY)	1992	1992	1992	1992	1992	1992	1992	1991	1991	1991	1991	1992
MIN	31.2	47.7	58.1	45.5	40.4	44.9	53.4	56.5	36.5	45.3	26.4	31.0
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1991

SUMMARY STATISTICS

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	15815		
ANNUAL MEAN	43.2	43.2	
HIGHEST ANNUAL MEAN		43.2	1992
LOWEST ANNUAL MEAN		43.2	1992
HIGHEST DAILY MEAN	64	Apr 25	66 May 29 1991
LOWEST DAILY MEAN	22	Aug 20-24	22 Aug 20-24 1992
ANNUAL SEVEN-DAY MINIMUM	22	Aug 18	22 Aug 18 1992
INSTANTANEOUS PEAK FLOW	77	Dec 19	77 Dec 19 1991
INSTANTANEOUS PEAK STAGE	1.90	Dec 19	1.90 Dec 19 1991
INSTANTANEOUS LOW FLOW	13	Mar 13,15	13 Mar 13,15 1992
ANNUAL RUNOFF (AC-FT)	31370		31300
10 PERCENT EXCEEDS	60		61
50 PERCENT EXCEEDS	44		44
90 PERCENT EXCEEDS	28		29

CHIPPEWA RIVER BASIN

460128089423501 MAX LAKE NEAR WOODRUFF, WI

LOCATION.--Lat 46°01'28", long 89°42'35", in NW 1/4 NE 1/4 sec.23, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07070001, 8.5 mi north of Woodruff, 1,500 ft west of U.S. Highway 51.

DRAINAGE AREA.--Unknown. Area of lake, 0.036 mi².

PERIOD OF RECORD.--Unpublished intermittent data from March 1988 to September 1989; intermittent segments of daily data since July 1990.

GAGE.--Staff gage and water-stage recorder. Datum of gages is about 1,613 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lake does not have surface inlet or outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 6.25 ft, May 18, 1992; minimum observed gage height, 3.97 ft, Nov. 16.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 6.25 ft, May 18; minimum observed gage height, 5.50 ft, Sept. 1.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.70	---	---	---	---	---	---	---	---	5.94	---	5.50
2	---	---	---	---	---	---	---	---	6.10	6.11	---	---
3	---	---	---	---	---	5.90	---	---	6.08	6.10	5.81	---
4	---	---	6.10	---	---	---	---	---	6.07	---	---	---
5	---	---	---	---	---	---	---	6.19	6.07	---	---	---
6	---	---	---	---	---	---	---	6.18	6.07	---	---	---
7	---	---	---	---	---	---	---	6.17	6.06	---	---	---
8	---	---	---	6.03	---	---	---	---	6.04	---	---	---
9	---	---	---	---	---	---	---	---	6.02	---	---	---
10	---	---	---	---	---	---	---	---	6.02	---	---	---
11	---	---	---	---	---	---	---	---	6.00	6.10	---	---
12	---	---	---	---	---	---	---	---	5.99	6.12	---	---
13	---	---	---	---	---	---	---	---	5.97	6.12	---	---
14	---	---	---	---	---	---	---	---	5.95	---	---	---
15	---	---	---	---	---	---	---	---	5.91	---	---	---
16	---	---	---	---	---	---	---	---	5.90	---	---	---
17	---	---	---	---	---	---	---	---	5.92	---	---	5.64
18	---	---	---	---	5.89	---	---	6.25	5.92	---	---	---
19	---	---	---	---	---	---	---	---	5.90	---	---	---
20	---	---	---	---	---	---	---	6.21	5.88	---	---	---
21	5.62	---	---	---	---	---	---	---	5.85	---	---	---
22	---	---	---	5.97	---	---	---	---	5.82	5.99	---	---
23	5.61	---	---	---	---	---	---	---	5.87	---	---	---
24	---	---	---	---	---	---	---	---	5.90	---	---	5.57
25	---	---	---	---	---	---	---	---	5.98	---	---	---
26	---	---	---	---	---	---	---	---	6.00	---	---	---
27	---	---	---	---	---	---	---	6.16	5.98	---	---	5.59
28	---	---	---	---	---	---	---	6.16	5.97	---	---	---
29	---	---	---	---	---	---	---	---	5.96	---	---	---
30	5.68	---	---	---	---	---	---	---	5.95	---	---	---
31	---	---	---	---	---	5.94	---	---	---	---	---	---

CHIPPEWA RIVER BASIN

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05357335 BEAR RIVER NEAR MANITOWISH WATERS, WI

LOCATION.--Lat 46°02'56", long 89°59'04", in SE 1/4 NW 1/4 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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: May 1 to June 5, 1991, and Jan. 6 to Feb. 4, 1992. Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								200	280	128	128	66
2								190	270	131	129	65
3								170	230	135	130	68
4								170	190	142	127	68
5								180	160	136	123	70
6								200	148	129	120	73
7								200	137	123	116	86
8								200	128	121	113	97
9								180	122	114	108	118
10								170	118	106	105	130
11								170	115	99	101	129
12								160	120	99	96	128
13								150	116	103	93	126
14								150	122	99	90	130
15								160	139	96	92	136
16								170	139	94	93	135
17								170	140	110	100	133
18								170	139	116	98	130
19								160	136	117	95	125
20								150	132	117	92	118
21								140	148	116	87	112
22								130	152	116	84	105
23								120	146	115	81	98
24								120	140	114	79	95
25								130	133	116	80	94
26								140	127	113	79	92
27								150	121	111	76	87
28								180	122	119	74	83
29								240	130	129	72	77
30								260	128	130	70	72
31								280	---	128	68	---
TOTAL								5360	4428	3622	2999	3046
MEAN								173	148	117	96.7	102
MAX								280	280	142	130	136
MIN								120	115	94	68	65
CFSM								2.13	1.82	1.44	1.19	1.25
IN.								2.45	2.03	1.66	1.37	1.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1991, BY WATER YEAR (WY)

MEAN	173	148	117	96.7	102
MAX	173	148	117	96.7	102
(WY)	1991	1991	1991	1991	1991
MIN	173	148	117	96.7	102
(WY)	1991	1991	1991	1991	1991

CHIPPEWA RIVER BASIN

05357335 BEAR RIVER NEAR MANITOWISH WATERS, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	122	155	81	110	153	176	166	85	55	49	29
2	73	238	153	79	120	158	146	158	78	86	46	34
3	71	267	147	79	120	157	132	154	72	112	42	34
4	70	255	145	81	120	156	126	144	69	111	38	31
5	71	225	140	100	110	169	134	134	64	104	34	29
6	80	203	134	120	107	195	153	128	64	95	32	27
7	80	182	130	120	105	210	174	120	63	86	34	27
8	78	165	125	110	103	231	165	111	59	85	37	25
9	75	154	122	110	102	230	164	105	55	85	38	22
10	74	149	120	110	101	209	174	118	53	80	38	21
11	72	145	114	110	102	215	167	144	51	76	36	20
12	69	139	118	120	102	209	170	156	49	79	34	18
13	68	135	137	120	101	196	161	138	48	82	33	17
14	68	132	135	110	101	187	151	120	46	80	32	17
15	69	132	125	110	103	179	164	108	44	77	31	17
16	68	123	114	100	103	180	200	124	44	75	30	18
17	66	112	114	98.0	101	182	213	194	47	72	30	20
18	62	144	115	96.0	100	176	218	208	47	69	30	27
19	59	151	111	96.0	98	175	244	194	47	67	27	32
20	56	134	111	100	99	176	280	174	46	67	24	34
21	55	116	110	110	99	172	318	160	44	65	21	34
22	53	107	108	120	102	172	327	150	42	65	19	31
23	51	104	105	120	104	174	312	145	45	64	19	27
24	56	137	101	110	108	180	289	138	50	62	18	24
25	60	149	98	100	117	190	261	129	52	61	18	22
26	60	135	97	100	127	192	238	121	54	60	18	21
27	57	123	94	100	135	185	219	111	53	58	17	22
28	54	112	92	110	147	185	201	103	52	56	16	19
29	56	104	90	110	149	199	184	96	56	54	15	17
30	56	132	86	110	---	196	177	95	54	51	18	18
31	53	---	83	110	---	198	---	92	---	49	23	---
TOTAL	2009	4526	3629	3250.0	3196	5786	6038	4238	1633	2288	897	734
MEAN	64.8	151	117	105	110	187	201	137	54.4	73.8	28.9	24.5
MAX	80	267	155	120	149	231	327	208	85	112	49	34
MIN	51	104	83	79	98	153	126	92	42	49	15	17
CFSM	.80	1.86	1.44	1.29	1.36	2.30	2.48	1.68	.67	.91	.36	.30
IN.	.92	2.07	1.66	1.49	1.46	2.65	2.76	1.94	.75	1.05	.41	.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	MEAN	64.8	151	117	105	110	187	201	155	101	95.3	62.8	63.0
MAX	64.8	151	117	105	110	187	201	173	148	117	96.7	102	
(WY)	1992	1992	1992	1992	1992	1992	1992	1991	1991	1991	1991	1991	
MIN	64.8	151	117	105	110	187	201	137	54.4	73.8	28.9	24.5	
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	

SUMMARY STATISTICS

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	38224.0		
ANNUAL MEAN	104		
HIGHEST ANNUAL MEAN		104	1992
LOWEST ANNUAL MEAN		104	1992
HIGHEST DAILY MEAN		327	Apr 22 1992
LOWEST DAILY MEAN	15	15	Aug 29 1992
ANNUAL SEVEN-DAY MINIMUM	17	17	Aug 24 1992
INSTANTANEOUS PEAK FLOW	331	331	Apr 22 1992
INSTANTANEOUS PEAK STAGE	2.82	3.35	Jul 29 1991
INSTANTANEOUS LOW FLOW	15	15	Aug 29 1992
ANNUAL RUNOFF (CFSM)	1.28	1.28	
ANNUAL RUNOFF (INCHES)	17.49	17.45	
10 PERCENT EXCEEDS	185	182	
50 PERCENT EXCEEDS	102	110	
90 PERCENT EXCEEDS	30	34	

CHIPPEWA RIVER BASIN

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05357335 BEAR RIVER NEAR MANITOWISH WATERS, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1991 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: May 1991 to current year.

TOTAL-PHOSPHORUS DISCHARGE: May 1991 to current year.

INSTRUMENTATION.--None. Samples collected using equal-width increment (EWI) method.

REMARKS.--Records fair except for periods May 1 to June 5, 1991 and Jan. 6 to Feb. 4, 1992, which are poor.

COOPERATION.--Observer furnished by Lac du Flambeau Band of Lake Superior Chippewa.

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 12 mg/L, May 30 and June 3, 1991; minimum observed, 0 mg/L, Nov. 25, 1991.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 9.1 tons, May 31 and June 1, 1991; minimum daily, 0.04 ton, Aug. 28-29, 1992.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.05 mg/L, June 3, 1991; minimum observed, <0.01 mg/L, on many days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 57.9 lb, June 3, 1991; minimum daily, 0.43 lb, Aug. 28-29, 1992.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 5 mg/L, Apr. 21; minimum observed, 0 mg/L, Nov. 25.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 4.2 tons, Apr. 22; minimum daily, 0.04 ton, Aug. 28-29.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.03 mg/L, May 19 and June 2; minimum observed, <0.01 mg/L, on several days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 33.7 lb, May 18; minimum daily, 0.43 lb, Aug. 28-29.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED TOTAL (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N) (00631)
OCT 1991									
16...	1225	--	69	89	6.5	<0.010	<0.010	<0.050	<0.050
22...	1345	--	53	--	--	--	--	--	--
NOV									
04...	1334	--	253	57	0.0	<0.010	<0.010	<0.050	0.068
21...	0910	--	119	67	1.0	<0.010	<0.010	<0.050	0.073
25...	1320	--	149	67	1.0	<0.010	<0.010	<0.050	<0.050
JAN 1992									
02...	1450	--	79	93	0.0	<0.010	<0.010	<0.050	0.051
FEB									
03...	0920	120	--	103	0.0	--	--	--	--
09...	0915	--	103	103	0.0	<0.010	<0.010	<0.050	0.050
19...	0900	--	98	96	0.0	<0.010	<0.010	0.050	0.064
MAR									
04...	0956	--	155	98	0.0	<0.010	<0.010	0.059	0.059
24...	1007	--	174	91	0.0	<0.010	<0.010	0.052	0.055
APR									
01...	1325	--	171	85	2.0	<0.010	<0.010	<0.050	0.064
21...	1435	--	319	62	8.0	<0.010	<0.010	<0.050	<0.050
MAY									
19...	0855	--	197	76	14.0	0.020	<0.010	<0.050	<0.050
JUN									
02...	1413	--	77	99	22.5	0.020	<0.010	<0.050	<0.050
17...	1035	--	48	101	18.0	<0.010	<0.010	<0.050	<0.050
26...	1310	--	55	--	15.0	<0.010	<0.010	<0.050	<0.050
JUL									
29...	1430	--	54	99	22.0	<0.010	<0.010	<0.050	<0.050
AUG									
04...	1340	--	37	100	22.0	<0.010	<0.010	<0.050	<0.050
SEP									
08...	1030	--	25	94	14.5	<0.010	<0.010	<0.050	<0.050
09...	1032	--	22	--	--	--	--	--	--
16...	1500	--	19	93	20.0	<0.010	<0.010	<0.050	<0.050
17...	0830	--	20	96	17.0	<0.010	<0.010	<0.050	<0.050

CHIPPEWA RIVER BASIN

05357335 BEAR RIVER NEAR MANITOWISH WATERS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT 1991									
16...	0.020	0.010	0.58	0.60	0.010	0.010	<0.010	<0.010	--
22...	--	--	--	--	--	--	--	--	1
NOV									
04...	0.030	0.040	0.27	0.30	0.020	0.010	0.020	0.010	2
21...	0.040	0.020	0.26	0.30	<0.010	<0.010	<0.010	<0.010	2
25...	0.040	0.040	--	<0.20	0.020	0.010	<0.010	<0.010	0
JAN 1992									
02...	0.040	0.040	0.26	0.30	<0.010	<0.010	0.010	<0.010	1
FEB									
03...	--	--	--	--	--	--	--	--	1
09...	0.030	0.010	0.27	0.30	<0.010	<0.010	<0.010	<0.010	1
19...	0.030	0.040	0.27	0.30	0.020	0.010	<0.010	<0.010	1
MAR									
04...	0.030	0.030	0.17	0.20	<0.010	<0.010	<0.010	<0.010	2
24...	0.020	0.030	--	<0.20	<0.010	<0.010	<0.010	<0.010	2
APR									
01...	0.030	0.030	0.17	0.20	<0.010	<0.010	<0.010	<0.010	1
21...	0.030	0.030	0.27	0.30	<0.010	<0.010	0.020	<0.010	5
MAY									
19...	0.030	0.030	0.37	0.40	0.030	0.030	0.030	<0.010	3
JUN									
02...	0.030	0.030	0.37	0.40	0.030	<0.010	<0.010	<0.010	3
17...	0.040	0.030	0.36	0.40	0.020	<0.010	<0.010	<0.010	3
26...	0.030	0.020	0.27	0.30	<0.010	<0.010	<0.010	<0.010	1
JUL									
29...	0.020	0.010	0.28	0.30	<0.010	<0.010	<0.010	<0.010	2
AUG									
04...	<0.010	0.010	--	0.20	<0.010	<0.010	<0.010	<0.010	1
SEP									
08...	0.030	0.010	0.37	0.40	0.020	0.020	<0.010	<0.010	--
09...	--	--	--	--	--	--	--	--	4
16...	<0.010	0.010	--	0.40	0.020	0.020	<0.010	<0.010	--
17...	0.010	0.010	0.29	0.30	0.010	<0.010	<0.010	<0.010	--

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PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.75	11.1	15.7	2.24	3.81	5.53	4.75	4.48	13.8	1.49	1.31	2.60
2	3.92	25.7	13.6	2.19	4.03	5.16	3.95	4.28	12.7	3.65	1.24	4.55
3	3.86	28.9	10.7	2.62	3.90	4.65	3.56	4.16	11.4	11.7	1.13	5.32
4	3.75	27.3	8.68	3.41	3.78	4.25	3.39	3.89	10.5	15.7	1.02	4.55
5	3.84	22.1	7.45	5.37	3.36	4.56	3.61	3.61	9.60	11.2	.92	3.88
6	4.29	18.0	6.98	8.15	3.17	5.27	4.12	3.44	9.27	7.77	.86	3.40
7	4.35	14.5	6.62	10.3	3.02	5.68	4.71	3.25	8.94	5.38	.93	3.10
8	4.20	11.9	6.23	11.4	2.85	6.25	4.46	2.99	8.15	4.52	1.01	2.70
9	4.03	9.99	5.93	11.1	2.82	6.20	4.43	2.83	7.39	4.36	1.02	2.40
10	4.01	8.72	5.68	10.3	3.19	5.64	4.70	4.70	6.87	3.99	1.01	2.26
11	3.91	7.67	5.26	9.66	3.69	5.80	4.52	11.4	6.47	3.69	.96	2.15
12	3.73	6.62	5.31	9.83	4.24	5.63	4.58	15.8	6.08	3.69	.92	2.00
13	3.66	5.81	6.01	9.17	4.82	5.30	4.35	12.1	5.72	3.71	.88	1.87
14	3.70	5.14	5.77	7.84	5.56	5.06	4.08	9.20	5.34	3.52	.87	1.86
15	3.73	4.60	5.22	7.32	6.48	4.85	4.42	7.17	5.02	3.28	.85	1.81
16	3.68	3.89	4.67	6.21	7.44	4.87	5.41	7.16	4.88	3.08	.82	1.86
17	3.54	3.18	4.55	5.68	8.43	4.92	5.74	19.5	4.98	2.87	.80	1.26
18	3.37	8.67	4.47	5.21	9.59	4.77	5.89	33.7	4.37	2.66	.82	2.21
19	3.19	12.4	4.24	5.02	10.3	4.74	6.58	31.4	3.73	2.52	.74	3.68
20	3.04	6.18	4.11	5.07	9.54	4.76	7.56	28.1	3.12	2.41	.65	5.14
21	2.96	3.29	4.00	5.40	8.67	4.64	8.60	26.0	2.57	2.28	.57	4.95
22	2.87	2.90	3.81	5.71	8.10	4.65	8.84	24.3	2.11	2.21	.52	4.09
23	2.74	2.82	3.63	5.53	7.48	4.71	8.43	23.5	1.92	2.11	.50	3.21
24	3.05	6.08	3.41	4.91	7.06	4.87	7.79	22.4	1.83	1.97	.49	2.57
25	3.24	13.9	3.24	4.33	6.89	5.12	7.06	20.9	1.66	1.88	.49	2.09
26	3.22	12.4	3.10	4.19	6.77	5.20	6.44	19.6	1.51	1.79	.49	1.81
27	3.05	9.45	2.94	4.06	6.55	5.00	5.92	18.1	1.44	1.68	.47	1.69
28	2.89	7.24	2.82	4.33	6.44	5.01	5.44	16.7	1.40	1.56	.43	1.35
29	3.00	6.03	2.68	4.19	5.93	5.36	4.98	15.5	1.50	1.46	.43	1.07
30	3.02	10.2	2.50	4.06	---	5.30	4.79	15.3	1.47	1.39	.75	1.04
31	3.03	---	2.37	3.94	---	5.34	---	14.8	---	1.33	1.39	---
TOTAL	108.62	316.68	171.68	188.74	167.91	159.09	163.10	430.26	165.74	120.85	25.29	82.47
WTR YR 1992	TOTAL 2100.43											

05357335 BEAR RIVER NEAR MANITOWISH WATERS. WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

[illegible]

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

CHIPPEWA RIVER BASIN

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05360500 FLAMBEAU RIVER NEAR BRUCE, WI

LOCATION.--Lat 45°22'21", long 91°12'34", in Lot 7 of NW 1/4 sec.2, T.33 N., R.7 W., Rusk County, Hydrologic Unit 07050002, on right bank 2.5 mi downstream from Thornapple Powerplant, 6.0 mi upstream from mouth, and 7.0 mi southeast of Bruce.

DRAINAGE AREA.--1,860 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,056.34 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 7-9 and Nov. 26 to Mar. 14. Records good except those for ice-affected periods, which are fair. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1390	2890	3700	1900	1500	1200	2600	3610	1390	992	1090	1190
2	1250	9370	2300	1800	1200	1600	2400	3890	1350	1270	1320	1200
3	1430	11500	2600	1800	1200	1600	2580	3070	1190	2800	1100	1080
4	1260	9170	3600	1800	1400	1600	2610	3350	1080	3410	1190	1040
5	1250	6000	2700	1700	1200	1500	2550	3160	976	2580	1080	1070
6	1150	4080	2200	1300	1400	1900	2470	2510	804	2510	1180	1290
7	1420	3300	3700	1700	1300	4500	3380	2320	993	1740	910	1300
8	1590	2700	4100	1700	1300	4400	3770	2090	1010	2050	1140	1210
9	1400	2500	2400	1700	1400	4900	3900	1720	914	2120	1130	1110
10	1500	2830	2600	1600	1000	4800	3410	1400	952	2960	1590	1120
11	1510	2790	2800	1900	1300	4800	3250	1240	957	2560	1160	1090
12	1410	2580	3400	1600	1400	3600	3110	1300	791	3010	1010	1030
13	1450	2450	3600	1600	1300	1400	2870	1350	809	2800	922	765
14	1570	2540	2800	1900	1400	3300	2200	1670	1080	3210	949	889
15	1530	2320	3100	1500	1200	3530	2370	1570	977	2950	980	844
16	1460	2760	2500	1100	1200	2360	2480	1570	973	2570	1030	1160
17	1610	2830	2500	1100	1300	2590	2740	2570	984	2260	915	1540
18	1440	5980	2600	1200	1300	1960	4290	3260	1060	2040	1050	2730
19	1470	7540	2700	1300	1500	2080	4250	3560	1120	1850	1140	3070
20	1200	6370	2600	1500	1400	2330	4800	3160	985	1680	1210	2170
21	1210	5320	1800	1400	1600	2080	7440	2270	1030	1450	927	1910
22	1280	4820	2000	1500	1100	1920	8480	2660	906	1570	999	1590
23	1310	4250	2700	1500	1300	1780	7770	2370	819	1380	1050	1380
24	1300	4470	1800	1700	1500	1810	6200	1940	1070	1450	962	1310
25	1520	4070	1700	1700	1400	2470	5230	2380	1040	1280	880	1220
26	1360	3500	1700	1500	1100	2550	5010	2200	863	1280	953	1070
27	1290	2400	1700	1300	1400	2660	4160	2090	855	1170	1010	1240
28	1580	3800	1700	1300	1200	2780	4090	1650	911	1290	930	1140
29	1350	3200	2100	1100	1200	2710	3850	1610	1050	1280	793	1040
30	1560	3800	1400	1400	---	2920	4680	1380	995	1140	1160	865
31	1590	---	1700	1500	---	2540	---	1320	---	1180	1350	---
TOTAL	43640	132130	78800	47600	38000	82170	118940	70240	29934	61832	33110	39663
MEAN	1408	4404	2542	1535	1310	2651	3965	2266	998	1995	1068	1322
MAX	1610	11500	4100	1900	1600	4900	8480	3890	1390	3410	1590	3070
MIN	1150	2320	1400	1100	1000	1200	2200	1240	791	992	793	765

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1992, BY WATER YEAR (WY)

	MEAN	1743	1656	1289	1141	1130	1719	3590	2597	2035	1620	1460	1826
MAX	5616	4404	2542	2006	2411	5490	6782	6082	6066	4339	3765	4612	
(WY)	1986	1992	1992	1973	1969	1973	1967	1954	1968	1968	1972	1959	
MIN	363	430	382	451	474	971	1013	758	572	596	591	491	
(WY)	1977	1977	1977	1977	1977	1959	1990	1987	1988	1988	1987	1976	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1951 - 1992	
ANNUAL TOTAL	852440		776059		1814	
ANNUAL MEAN	2335		2120		2900	
HIGHEST ANNUAL MEAN					993	
LOWEST ANNUAL MEAN					17300	
HIGHEST DAILY MEAN	11500	Nov 3	11500	Nov 3	205	Apr 2 1986
LOWEST DAILY MEAN	540	Mar 18	765	Sep 13	320	Oct 10 1976
ANNUAL SEVEN-DAY MINIMUM	691	Mar 13	917	Jun 6	17600	Nov 25 1976
INSTANTANEOUS PEAK FLOW			12500	Nov 3	(a)17600	Apr 2 1986
INSTANTANEOUS PEAK STAGE			8.80	Nov 3	10.90	May 1 1954
10 PERCENT EXCEEDS	4430		3780		3410	
50 PERCENT EXCEEDS	1850		1590		1350	
90 PERCENT EXCEEDS	752		1010		760	

(a) Gage height, 10.45 ft

CHIPPEWA RIVER BASIN

05362000 JUMP RIVER AT SHELDON, WI

LOCATION.--Lat 45°18'29", long 90°57'23", in sec.26, T.33 N., R.5 W., Rusk County, Hydrologic Unit 07050004, on right bank just downstream from highway bridge in Sheldon, 1,500 ft upstream from Shoulder Creek and 11 mi upstream from mouth.

DRAINAGE AREA.--576 mi².

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

REVISED RECORDS.--WSP 975: 1938. WSP 1438: 1916-17(M), 1919(M), 1920, 1921(M), 1922, 1923-26(M), 1927, 1928-31(M), 1932, 1933-37(M), 1945-46(M), 1948-50(M). WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,092.75 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1939, and Sept. 1, 1941, to Apr. 1, 1953, Feb. 18, 1954, to Sept. 27, 1964, nonrecording gage at same site and datum. Apr. 2, 1953, to Feb. 18, 1954, nonrecording gage in creamery wellhouse 400 ft upstream at same datum. Feb. 9, 1939, to Aug. 31, 1941, and from Sept. 27, 1964, water-stage recorder at present site and datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 6-10 and Nov. 24 to Apr. 3. Records good except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	2450	1700	310	110	180	1300	651	191	110	67	127
2	165	10100	2900	310	100	190	1200	595	175	158	84	114
3	159	8180	4100	320	110	360	1200	524	159	255	92	104
4	159	4760	2900	320	100	660	1250	458	139	297	122	107
5	163	2880	2000	310	98	1200	1320	393	128	261	120	117
6	183	1700	1200	310	94	2000	1520	313	121	207	107	134
7	255	1000	1400	320	100	3300	1890	280	111	168	97	138
8	277	700	1600	300	90	5000	2120	265	106	144	94	132
9	250	600	1400	300	78	5400	1980	252	106	139	94	124
10	223	580	1300	270	68	3700	1750	234	102	140	110	115
11	205	585	1100	280	66	2800	1400	219	97	148	126	109
12	192	550	1000	290	62	2200	1100	224	94	190	126	99
13	181	523	1300	250	60	1800	1070	236	92	439	109	95
14	188	522	1600	220	64	1500	999	252	87	530	96	90
15	206	784	1200	200	74	1400	1180	238	80	435	86	89
16	229	1180	920	190	86	1300	2850	240	76	337	75	218
17	228	1160	700	200	98	1200	2980	577	89	261	69	755
18	211	3180	560	160	110	1100	2500	1450	146	211	67	1010
19	191	4470	470	120	110	1000	2370	1310	193	186	70	878
20	181	3390	450	100	120	960	3200	924	175	174	86	667
21	174	2390	440	100	120	900	3920	648	152	167	85	499
22	170	1790	420	120	130	840	3510	499	134	155	75	392
23	170	1450	400	130	130	800	2880	486	119	141	70	315
24	186	1000	390	140	130	800	2220	521	116	130	67	264
25	340	820	380	140	130	1500	1700	458	109	123	65	228
26	444	660	360	130	130	2400	1330	386	124	114	60	207
27	408	640	350	120	140	2200	1060	333	119	104	59	187
28	367	620	340	110	160	1900	885	293	119	98	59	178
29	366	600	330	100	170	1800	770	269	115	90	66	171
30	544	1400	320	100	---	1700	699	242	104	80	91	158
31	625	---	320	110	---	1400	---	209	---	73	103	---
TOTAL	7815	60664	33850	6380	3038	53490	54153	13979	3678	6065	2697	7821
MEAN	252	2022	1092	206	105	1725	1805	451	123	196	87.0	261
MAX	625	10100	4100	320	170	5400	3920	1450	193	530	126	1010
MIN	159	522	320	100	60	180	699	209	76	73	59	89
CFSM	.44	3.51	1.90	.36	.18	3.00	3.13	.78	.21	.34	.15	.45
IN.	.50	3.92	2.19	.41	.20	3.45	3.50	.90	.24	.39	.17	.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1992, BY WATER YEAR (WY)

	406	435	181	101	93.4	750	1825	871	652	262	217	452
MEAN	406	435	181	101	93.4	750	1825	871	652	262	217	452
MAX	1881	2022	1092	392	620	3184	4126	2514	3442	1293	1916	4145
(WY)	1986	1992	1992	1946	1984	1973	1982	1973	1943	1968	1941	1941
MIN	27.5	35.3	34.7	25.6	21.4	61.2	360	134	54.6	17.5	21.9	25.4
(WY)	1949	1977	1934	1917	1924	1940	1946	1987	1934	1936	1933	1976

CHIPPEWA RIVER BASIN

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05362000 JUMP RIVER AT SHELDON, WI--CONTINUED

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1915 - 1992	
ANNUAL TOTAL	292938		253630		519	
ANNUAL MEAN	803		693		923	
HIGHEST ANNUAL MEAN					214	
LOWEST ANNUAL MEAN					40800	
HIGHEST DAILY MEAN	10100	Nov 2	10100	Nov 2	11	Aug 31 1941
LOWEST DAILY MEAN	66	Sep 2	59	Aug 27, 28	14	Dec 18 1943
ANNUAL SEVEN-DAY MINIMUM	72	Aug 31	64	Aug 23	(a) 46000	Jan 25 1924
INSTANTANEOUS PEAK FLOW			(b) 10900	Nov 2	(e) 18.80	Aug 31 1941
INSTANTANEOUS PEAK STAGE			(d) 12.38	Dec 3	11	Aug 31 1941
INSTANTANEOUS LOW FLOW			56	Aug 29	.90	Dec 18 1943
ANNUAL RUNOFF (CFSM)	1.39		1.20		12.24	
ANNUAL RUNOFF (INCHES)	18.92		16.38		1300	
10 PERCENT EXCEEDS	2070		1800		150	
50 PERCENT EXCEEDS	352		241		45	
90 PERCENT EXCEEDS	90		92			

(a) Also occurred July 11, 1936

(b) Gage height, 11.53 ft

(c) From rating curve extended above 13,000 ft³/s on basis of contracted-opening measurement of peak flow

(d) Ice jam

(e) From floodmark

05365500 CHIPPEWA RIVER AT CHIPPEWA FALLS. WI

LOCATION.--Lat 44°55'37", long 91°24'33", in Lot 1, sec.12, T.28 N., R.9 W., Chippewa County, Hydrologic Unit 07050005, on right bank at Chippewa Falls, 1.0 mi downstream from Duncan Creek.

DRAINAGE AREA.--5.650 mi².

PERIOD OF RECORD.--June 1888 to September 1883, October 1886 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 National Geodetic Vertical Datum of 1929. Prior to January 1914, nonrecording gage, and January 1914 to June 19, 1932, water-stage recorder at site 1 mi upstream at different datum. June 19, 1932, to current year, water-stage recorder at present site and datum.

REMARKS.--Estimated daily discharges: Mar. 10-12, June 11-13, and July 2. Records good. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3790	9900	14100	5510	1550	1490	7750	9800	4890	2620	497	3930
2	3330	32800	11500	5000	1510	5320	7950	8180	2310	2500	2390	2570
3	2560	43300	9870	5750	4430	4950	7940	7020	3540	5450	2190	2230
4	4250	34000	9830	4790	4900	5580	7880	7720	2780	8430	2880	2260
5	1890	20900	9750	3930	4950	7180	7950	7840	1750	5400	2920	1260
6	845	16000	9070	5400	5030	8140	7860	6030	976	5880	2190	3040
7	3670	10400	7770	4750	2460	8600	7080	4500	536	5760	3230	3570
8	2810	9580	9260	4970	2780	19200	7290	5220	3940	4700	2120	2660
9	4320	9560	7140	6240	1510	23900	8100	2100	1570	8280	1440	2810
10	1890	7960	8110	4870	2780	19000	8120	3020	1720	7400	2980	2970
11	3880	7760	8160	2840	4400	15000	8160	4920	2130	6570	4040	1710
12	2710	8440	8870	4830	4860	14000	8170	3370	1900	8120	2520	1330
13	2620	7640	9790	5950	3640	11600	8150	3410	1700	10000	2010	1980
14	2330	9720	9970	5950	2410	9410	8080	4330	1040	9860	2290	2550
15	3500	9780	9770	5290	1480	9120	8080	4990	2730	7780	480	2370
16	3490	9820	7370	3820	1500	5800	8590	5110	2280	7360	1010	4510
17	3410	10800	8280	2460	3250	6050	14100	5800	3390	5430	3010	3900
18	3280	20600	7660	1950	4110	8000	14400	5540	2700	3070	3720	6630
19	2390	33200	7310	1900	6690	8090	14200	9050	4590	4210	1930	8700
20	2840	32400	7900	5130	5600	8050	15800	8240	1470	4980	1990	4780
21	3130	26700	6040	5490	3570	8010	31400	5990	1620	4160	3100	5100
22	3130	19600	6230	5390	1960	7930	34100	5830	2780	4580	489	3990
23	3580	16000	7630	5320	1480	7880	31300	5160	2110	3550	1270	3820
24	3010	12800	4770	4040	5110	7750	24600	4870	3110	3690	3520	3770
25	3500	11200	5190	1510	5050	7780	14900	4870	2460	888	1810	3650
26	2180	10400	5620	1520	6200	7910	14100	5840	2260	2230	2100	1920
27	3060	9140	6680	4510	6180	7890	14200	4280	488	3970	2330	481
28	4420	9670	4620	4530	3900	7930	10000	4660	1480	738	1660	4200
29	2960	9610	4910	5030	2650	7910	9150	3650	2720	4390	773	3350
30	3860	10100	5200	4970	---	7870	9750	2570	2520	656	1040	2260
31	5780	---	6450	3760	---	7890	---	1480	---	3960	3150	---
TOTAL	98415	479780	244820	137400	105940	285230	379150	165390	69490	156612	67079	98301
MEAN	3175	15990	7897	4432	3653	9201	12640	5335	2316	5052	2164	3277
MAX	5780	43300	14100	6240	6690	23900	34100	9800	4890	10000	4040	8700
MIN	845	7640	4620	1510	1480	1490	7080	1480	488	656	480	481

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1888 - 1992, BY WATER YEAR (WY)

MEAN	4178	4168	2976	2564	2564	5333	11610	8655	6908	4310	3349	4444
MAX	15570	15990	7897	5305	6569	17630	28900	22890	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 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1888 - 1992
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ANNUAL TOTAL	2578640			2287607					
ANNUAL MEAN	7065			6250				5084	
HIGHEST ANNUAL MEAN								8868	1903
LOWEST ANNUAL MEAN								2453	1934
HIGHEST DAILY MEAN	43300	Nov	3	43300	Nov	3		95500	Sep 1 1941
LOWEST DAILY MEAN	269	Mar	3	480	Aug	15		40	Feb 4 1917
ANNUAL SEVEN-DAY MINIMUM	1680	Feb	12	1800	Jun	5		308	Jan 29 1917
INSTANTANEOUS PEAK FLOW				48700	Nov	2		102000	Sep 1 1941
INSTANTANEOUS PEAK STAGE				17.20	Nov	2		24.80	Sep 1 1941
10 PERCENT EXCEEDS	14500			10000				10600	
50 PERCENT EXCEEDS	4770			4870				3300	
90 PERCENT EXCEEDS	1840			1720				1210	

05365707 NORTH FORK EAU CLAIRE RIVER NEAR THORP, WI

LOCATION.--Lat 44°58'25", long 90°50'57", in NW 1/4 NE 1/4 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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 3-14 and Nov. 24 to Mar. 24. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	1290	310	12	4.9	30	123	24	2.9	5.5	3.2	3.0
2	7.0	1420	200	12	4.9	54	93	20	3.6	8.0	3.2	3.0
3	6.9	760	130	13	5.0	98	86	15	3.2	6.4	3.4	3.2
4	6.8	360	82	13	4.9	180	94	14	2.4	5.6	3.6	4.4
5	7.4	170	56	12	4.7	370	103	12	2.2	4.5	3.1	7.3
6	10	92	48	12	4.6	680	119	11	1.9	4.3	2.6	16
7	12	70	49	12	3.4	600	161	11	1.9	3.5	2.6	11
8	12	62	54	11	2.5	410	130	11	1.9	4.7	3.1	7.8
9	10	56	52	10	2.3	250	92	9.2	2.3	4.4	3.1	5.9
10	9.0	52	50	8.0	2.5	160	76	7.9	2.6	5.1	4.6	4.5
11	7.6	50	49	6.8	1.9	98	65	7.3	2.1	4.6	3.7	4.2
12	7.5	47	160	6.0	1.6	62	79	9.2	1.8	240	3.4	3.6
13	7.4	46	380	5.0	2.1	42	98	9.3	1.4	282	3.7	3.3
14	8.4	46	280	4.6	3.0	29	101	7.3	1.3	168	3.9	9.7
15	9.4	288	160	4.2	3.7	25	438	6.8	1.2	66	4.3	38
16	9.9	195	100	4.1	3.5	22	544	9.1	2.3	33	3.5	88
17	9.7	142	62	4.0	3.6	20	284	34	20	19	2.7	95
18	8.8	950	37	3.9	3.7	25	153	31	23	12	2.4	60
19	7.8	560	24	3.8	3.7	21	316	20	14	8.8	2.2	38
20	7.5	260	21	3.9	3.7	20	415	14	12	7.9	1.9	25
21	7.2	132	20	4.0	3.6	23	551	11	8.4	6.7	1.7	20
22	7.2	92	19	4.2	3.6	18	308	12	6.1	6.2	1.6	16
23	7.2	62	18	4.5	3.5	16	183	11	4.8	7.1	1.5	13
24	38	43	16	4.3	5.0	110	117	10	4.5	6.6	1.4	15
25	57	35	14	4.0	5.0	279	83	7.6	4.2	5.4	1.1	13
26	43	33	13	3.7	6.2	242	67	6.6	3.5	4.9	1.1	11
27	31	32	12	3.6	8.0	169	50	6.0	3.0	4.0	1.1	7.3
28	23	31	14	3.6	15	131	39	5.7	2.8	3.7	1.1	5.3
29	39	31	16	3.7	17	107	33	4.5	2.4	3.3	2.1	5.1
30	58	450	14	4.3	---	140	27	3.7	2.3	4.5	6.9	5.1
31	43	---	12	5.2	---	158	---	3.4	---	4.1	3.5	---
TOTAL	525.5	7857	2472	206.4	137.1	4589	5028	364.6	146.0	949.8	87.3	541.7
MEAN	17.0	262	79.7	6.66	4.73	148	168	11.8	4.87	30.6	2.82	18.1
MAX	58	1420	380	13	17	680	551	34	23	282	6.9	95
MIN	6.8	31	12	3.6	1.6	16	27	3.4	1.2	3.3	1.1	3.0
CFSM	.33	5.14	1.56	.13	.09	2.90	3.29	.23	.10	.60	.06	.35
IN.	.38	5.73	1.80	.15	.10	3.35	3.67	.27	.11	.69	.06	.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992
MEAN	30.5	59.7	21.9	3.85	3.40	150	74.2
MAX	123	262	79.7	6.66	6.10	181	168
(WY)	1987	1992	1992	1988	1988	1987	1990
MIN	2.17	3.57	.56	.28	.45	90.4	25.9
(WY)	1990	1990	1990	1990	1990	1987	1987

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1986 - 1992

ANNUAL TOTAL	25006.08	22904.4	
ANNUAL MEAN	68.5	62.6	43.5
HIGHEST ANNUAL MEAN			63.4
LOWEST ANNUAL MEAN			28.5
HIGHEST DAILY MEAN	1420	1420	3670
LOWEST DAILY MEAN	.86	1.1	.03
ANNUAL SEVEN-DAY MINIMUM	1.3	1.3	.07
INSTANTANEOUS PEAK FLOW		(a)2320	(b)9050
INSTANTANEOUS PEAK STAGE		(c)6.94	10.13
INSTANTANEOUS LOW FLOW		1.1	.02
ANNUAL RUNOFF (CFSM)	1.34	1.23	.85
ANNUAL RUNOFF (INCHES)	18.24	16.71	11.60
10 PERCENT EXCEEDS	193	160	108
50 PERCENT EXCEEDS	14	10	8.4
90 PERCENT EXCEEDS	2.0	2.8	1.1

(a) Gage height, 6.84 ft

(b) From rating curve extended above 2,500 ft³/s on basis of step-backwater measurement of peak flow

(c) Ice jam

CHIPPEWA RIVER BASIN

444720090445000 MEAD LAKE, EAST BAY, NEAR WILLARD, WI

LOCATION.--Lat 44°47'20", long 90°44'50", in SW 1/4 SE 1/4 sec.28, T.27 N., R.3 W., Clark County, Hydrologic Unit 07050006, 4.1 mi northwest of Willard.

PERIOD OF RECORD.--April 1991 to current year.

REMARKS.--Lake sampled in east bay. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 27 TO AUGUST 27, 1992
(Milligrams per liter unless otherwise indicated)

	Apr. 27	June 12	July 24	Aug. 27
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	1.96	1.43	1.46	1.30
Specific conductance (μ S/cm)	114	160	125	122
pH (units)	7.3	9.7	7.0	8.6
Water temperature ($^{\circ}$ C)	7.5	27.0	20.0	20.5
Secchi-depth (meters)	---	0.5	0.6	0.5
Dissolved oxygen	11.1	7.7	8.6	9.7
Phosphorus, total (as P)	0.083	0.142	0.136	0.250
Chlorophyll a, phytoplankton (μ g/L)	1.0	170	7.1	200

CHIPPEWA RIVER BASIN

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444733090460100 MEAD LAKE, WEST BAY, NEAR WILLARD, WI

LOCATION.--Lat 44°47'33", long 90°46'01", in NW 1/4 SE 1/4 sec.29, T.27 N., R.3 W., Clark County, Hydrologic Unit 07050006, 4.7 mi northwest of Willard.

DRAINAGE AREA.--99.9 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--February 1991 to current year.

GAGE.--Nonrecording gage. Staff mounted to the wingwall of the dam. Staff read by Margaret Stauner. Elevation of lake is 1,037 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 2.88 ft, Dec. 13, 1991; minimum observed, 1.14 ft, Sept. 2, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 2.88 ft, Dec. 13; minimum observed, 1.25 ft, Aug. 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	1.77	---	1.27	---	1.29
2	1.60	1.68	---	---	---	---	---	---	1.57	---	1.39	---
3	---	---	---	---	---	---	---	---	---	1.29	---	1.35
4	1.55	---	---	---	---	---	---	1.77	---	---	1.35	---
5	---	2.26	---	---	---	---	---	---	1.49	1.33	---	---
6	1.64	---	---	---	---	---	---	---	---	---	1.33	1.67
7	---	---	---	---	---	---	---	1.69	---	---	---	---
8	---	---	---	---	---	---	2.10	---	1.45	---	---	1.73
9	1.66	---	---	---	---	---	---	---	---	1.29	1.35	---
10	---	---	---	---	---	---	---	---	---	---	---	1.65
11	---	---	---	---	---	---	2.04	1.65	1.43	---	---	---
12	---	---	---	---	---	---	---	---	1.43	---	1.37	---
13	---	---	2.88	---	---	---	---	---	---	2.03	---	---
14	---	---	---	---	---	---	---	---	---	---	1.39	1.81
15	1.64	2.34	---	---	---	---	---	1.63	1.37	1.89	---	1.77
16	---	---	---	---	---	---	1.90	---	1.39	---	---	1.95
17	---	---	---	---	1.58	---	---	2.61	1.49	1.73	1.37	---
18	---	2.20	---	---	---	---	---	---	---	---	---	1.97
19	1.66	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	1.85	---	---	1.37	---
21	---	---	---	---	---	---	2.28	---	---	1.67	---	1.79
22	1.64	2.06	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	1.76	---	1.59	---	---	---
24	---	---	---	---	---	---	---	---	---	1.46	---	1.69
25	1.80	---	---	---	---	---	---	1.67	---	1.47	1.35	---
26	---	---	---	---	---	---	2.04	---	---	---	---	---
27	---	---	---	---	---	---	1.97	---	1.29	---	1.30	---
28	---	---	---	---	---	---	---	---	---	1.47	---	1.67
29	---	---	---	---	---	---	1.90	1.59	---	---	---	---
30	---	2.44	---	---	---	---	---	---	---	---	1.25	1.69
31	---	---	---	---	---	---	---	---	---	1.39	---	---

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1991 to current year.

REMARKS.--Lake sampled in west bay at a lake depth of about 17 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 17 TO AUGUST 27, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 17		Apr. 27		June 12		July 24		Aug. 27	
Depth of sample (ft)	3.0	15	1.5	16	1.5	15	1.5	16	1.5	15
Lake stage (ft)		1.58		1.96		1.43		1.46		1.30
Specific conductance ($\mu\text{S}/\text{cm}$)	137	162	113	115	151	147	114	118	112	115
pH (units)	8.6	7.9	7.5	7.6	9.8	7.5	6.8	7.0	8.9	8.7
Water temperature ($^{\circ}\text{C}$)	0.5	4.0	7.5	6.5	28.5	15.5	20.5	19.0	20.5	20.5
Color (Pt-Co. scale)	---	---	65	70	---	---	---	---	---	---
Turbidity (NTU)	---	---	5.1	6.0	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.0	---	0.6	---	1.0	---	0.6	---
Dissolved oxygen	16.8	2.1	11.0	10.6	7.5	0.1	9.5	6.3	9.4	5.7
Hardness, as CaCO_3	---	---	44	44	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	10	9.9	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	4.7	4.7	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	3.5	3.5	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	5	5	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	35	35	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	6.0	6.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	8.0	8.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.0	<0.0	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	6.3	6.4	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	82	86	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.33	0.36	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.08	0.08	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.90	1.0	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.113	0.125	0.096	1.5	0.112	0.103	0.141	0.280
Phosphorus, ortho, dissolved (as P)	---	---	0.061	0.060	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	250	250	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	2.0	---	110	---	49	---	110	---

2-17-92

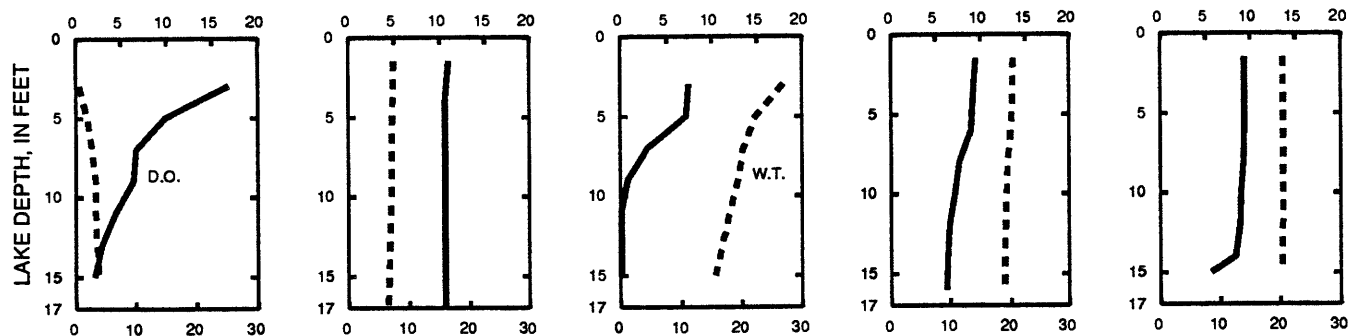
4-27-92

6-12-92

7-24-92

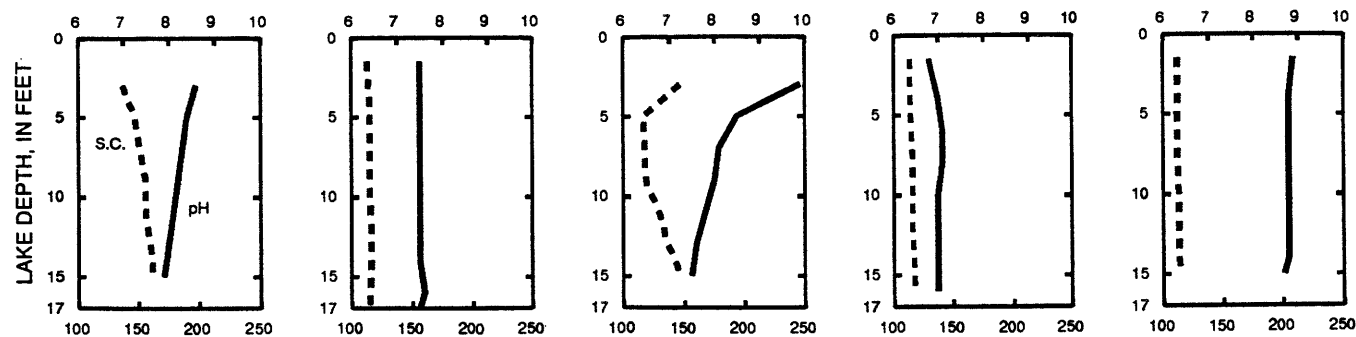
8-27-92

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

CHIPPEWA RIVER BASIN

197

453754091490900 BEAR LAKE, AT DEEP HOLE, NEAR HAUGEN, WI

LOCATION.--Lat 45°37'54", long 91°49'09", in SE 1/4 NW 1/4 sec.2, T.36 N., R.12 W., Barron County, Hydrologic Unit 07050007, 2.7 mi northwest of Haugen.

DRAINAGE AREA.--47.6 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--March to September 1992.

GAGE.--Staff gage read by Quent Tellefson. Staff is located on concrete pier behind C.J.'s Resort, which is about 1.7 mi northwest of dam in Haugen. Elevation of lake is 1,220 ft, from topographic map.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 7.07 ft, July 7; minimum observed, 5.73 ft, Mar. 4.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	6.87	6.53	6.87	6.84	6.97
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	5.73	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	6.56	6.49	7.07	6.87	6.96
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	6.47	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	6.42	6.50	6.95	6.93	6.88
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	6.50	6.76	6.87	6.87	6.92
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	6.83	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	6.55	6.82	6.84	6.99	6.66
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	6.84	---	---

453754091490900 BEAR LAKE, AT DEEP HOLE, NEAR HAUGEN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March to September 1992.

REMARKS.--Lake sampled near center of lake at a depth of about 80 ft. Lake ice-covered during March sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MARCH 04 TO AUGUST 19, 1992
(Milligrams per liter unless otherwise indicated)

	Mar. 04		May 13		June 09		July 23		Aug. 19	
Depth of sample (ft)	1.5	72	1.5	78	1.5	78	1.5	78	1.5	78
Lake stage (ft)	5.73		6.42		6.47		6.83		6.87	
Specific conductance ($\mu\text{S}/\text{cm}$)	143	172	116	117	121	123	125	129	128	130
pH (units)	7.4	7.0	7.7	7.5	8.0	7.5	8.1	7.5	7.9	7.7
Water temperature ($^{\circ}\text{C}$)	0.5	3.0	15.0	7.5	21.0	7.5	21.5	8.0	22.5	8.5
Color (Pt-Co. scale)	---	---	30	30	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.3	4.3	---	---	---	---	---	---
Secchi-depth (meters)	---		1.8		2.7		2.4		2.1	
Dissolved oxygen	9.4	0.2	9.9	6.7	8.6	1.8	8.8	0.0	9.2	0.1
Hardness, as CaCO_3	---	---	59	59	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	15	15	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	5.3	5.3	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	1.9	1.9	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	1	1	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	59	59	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	<5.0	<5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	1.0	1.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	6.6	8.6	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	88	88	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.06	0.14	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.11	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.70	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.027	0.139	0.016	0.063	0.018	0.050	0.016	0.050
Phosphorus, ortho, dissolved (as P)	---	---	0.003	0.011	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	70	200	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	270	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	12	---	5.0	---	9.1	---	12	---

3-4-92

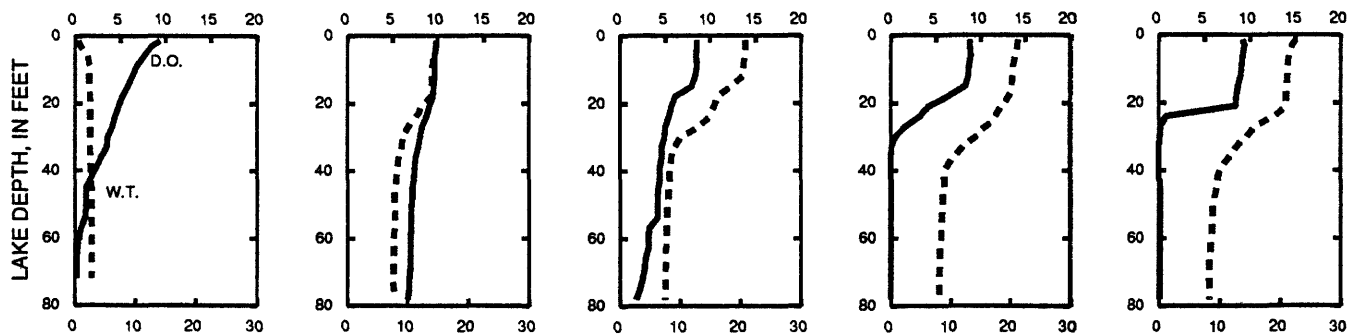
5-13-92

6-9-92

7-23-92

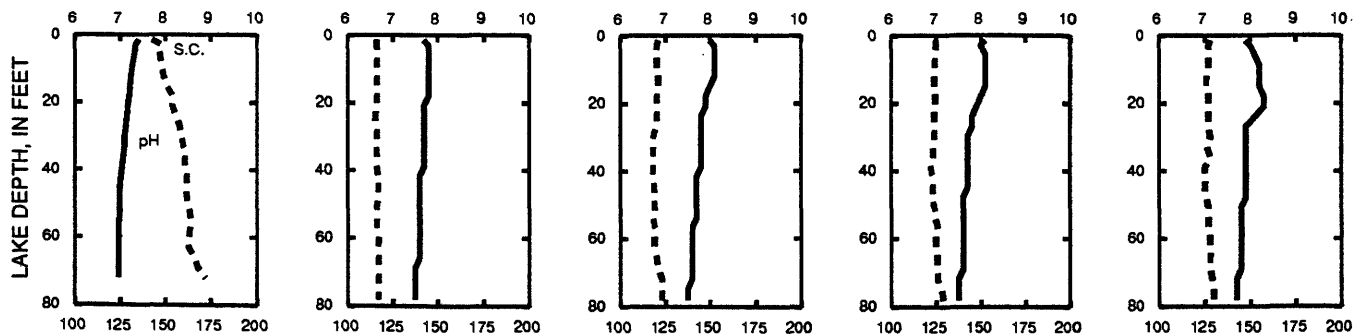
8-19-92

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

199

LOCATION.--Lat 45°23'43", long 91°49'48", in SE 1/4 SE 1/4 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.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Elevation of gage is 1,090 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Jan. 15-18 and Feb. 10-12, 1992. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

[illegible]

CHIPPEWA RIVER BASIN
053674464 YELLOW RIVER AT BARRON, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	132	118	89	81	90	124	140	69	65	61	67
2	80	143	126	90	79	94	118	130	73	141	68	71
3	78	154	122	92	80	95	117	117	78	234	66	79
4	74	135	117	92	81	101	116	111	77	318	66	70
5	78	122	112	91	79	119	113	109	75	236	64	78
6	86	111	107	92	80	226	112	108	76	155	62	117
7	87	99	109	92	79	487	113	106	78	118	63	107
8	85	96	109	93	73	592	109	102	77	105	66	102
9	80	94	110	95	72	483	104	99	76	96	66	83
10	77	93	107	77	72	339	105	98	75	80	68	75
11	75	93	105	93	72	284	108	76	73	86	70	76
12	73	93	106	93	72	229	105	105	71	123	78	73
13	71	93	115	93	71	201	103	97	70	138	82	71
14	67	94	111	74	79	186	102	82	70	115	67	71
15	67	99	99	74	81	157	112	89	68	91	65	72
16	68	105	97	72	81	149	137	99	66	86	64	94
17	69	108	101	72	76	149	134	109	101	85	64	93
18	67	231	91	72	75	140	125	102	105	81	66	108
19	65	572	89	76	79	133	138	96	88	78	64	93
20	64	573	91	76	80	129	292	92	87	76	63	88
21	66	331	93	78	79	124	847	91	82	69	66	56
22	69	265	93	78	78	117	795	110	78	70	75	65
23	70	221	94	82	79	113	477	122	77	71	71	72
24	77	171	92	78	88	118	358	106	77	71	66	68
25	76	175	87	76	85	134	279	97	77	70	81	67
26	74	151	89	76	73	142	233	94	75	70	101	68
27	71	148	90	76	84	136	207	91	75	68	93	66
28	76	141	90	78	95	130	189	90	73	67	61	65
29	81	133	91	79	91	131	169	90	71	63	71	63
30	80	118	91	81	---	131	148	90	69	61	73	64
31	74	---	90	83	---	128	---	91	---	60	70	---
TOTAL	2305	5094	3142	2563	2294	5787	6189	3139	2307	3247	2161	2342
MEAN	74.4	170	101	82.7	79.1	187	206	101	76.9	105	69.7	128
MAX	87	573	126	95	95	592	847	140	105	318	101	177
MIN	64	93	87	72	71	90	102	76	66	60	61	56
CFSM	.49	1.11	.66	.54	.52	1.22	1.35	.66	.50	.68	.46	.51
IN.	.56	1.24	.76	.62	.56	1.41	1.50	.76	.56	.79	.53	.57

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	74.4	170	101	82.7	79.1	187	206	101	76.9	105	69.7	128
MAX	74.4	170	101	82.7	79.1	187	206	101	76.9	105	69.7	177
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1991
MIN	74.4	170	101	82.7	79.1	187	206	101	76.9	105	69.7	78.1
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	40570	
ANNUAL MEAN	111	111
HIGHEST ANNUAL MEAN		111 1992
LOWEST ANNUAL MEAN		111 1992
HIGHEST DAILY MEAN	847	847 Apr 21 1992
LOWEST DAILY MEAN	56	48 Sep 6 1991
ANNUAL SEVEN-DAY MINIMUM	64	63 Sep 1 1991
INSTANTANEOUS PEAK FLOW	1160	1160 Apr 21 1992
INSTANTANEOUS PEAK STAGE	5.89	5.89 Apr 21 1992
INSTANTANEOUS LOW FLOW	36	25 Sep 7 1991
ANNUAL RUNOFF (CFSM)	.72	.72
ANNUAL RUNOFF (INCHES)	9.86	9.84
10 PERCENT EXCEEDS	148	170
50 PERCENT EXCEEDS	89	90
90 PERCENT EXCEEDS	67	67

WATER-QUALITY RECORDS

WATER TEMPERATURE: August 1991 to current year.

REMARKS.--Records represent water temperature at sensor within 0.5°C.

WATER TEMPERATURE:

AUGUST AND SEPTEMBER 1991.--Maximum temperature, 25.5°C, Aug. 30; minimum, 9.5°C, Sept. 27, 28.

WATER YEAR 1992.--Maximum temperature, 24.0°C, June 12, 13; minimum, 0.0°C, many days November through March.

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
AUG 1991					MAR 1992				
15...	0945	59	197	23.5	19...	0910	129	144	2.5
SEP					APR				
13...	1350	176	143	17.0	22...	0825	1020	92	5.0
16...	0930	609	100	19.0	MAY				
OCT					12...	1535	117	195	19.5
02...	1025	80	180	11.5	JUN				
21...	1050	68	204	7.0	12...	1505	70	210	24.0
NOV					JUL				
13...	1305	93	206	1.5	24...	0830	71	196	17.5
18...	1040	167	173	1.5	AUG				
DEC					06...	0840	62	218	19.0
18...	1250	94	200	0.0	SEP				
JAN 1992					22...	0925	60	185	13.0
28...	0935	81	215	0.0					

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1										22.5	20.5	21.5
2										21.5	20.0	20.5
3										21.5	20.0	20.5
4										20.5	19.0	20.0
5										19.5	17.5	18.5
6										19.0	17.0	18.0
7										19.5	17.5	18.5
8										19.0	18.5	19.0
9										20.0	18.5	19.0
10										20.0	19.0	19.5
11										19.0	17.0	18.0
12										17.0	16.5	16.5
13										17.5	16.0	17.0
14										19.0	17.5	18.0
15										20.0	18.5	19.0
16										19.5	17.5	18.5
17										17.5	16.0	16.5
18										16.0	13.0	14.5
19										13.0	11.0	12.0
20										11.5	10.5	11.0
21										12.0	10.5	11.5
22										12.0	11.5	12.0
23										11.5	11.0	11.5
24										12.0	11.0	11.5
25										11.5	11.0	11.5
26										11.0	10.0	10.5
27										11.0	9.5	10.0
28										11.5	9.5	10.5
29										11.5	10.0	11.0
30							25.5	23.5	24.5	12.0	11.0	11.5
31							24.0	22.0	23.0	---	---	---
MONTH							---	---	---	22.5	9.5	15.6

CHIPPEWA RIVER BASIN
053674464 YELLOW RIVER AT BARRON, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	12.0	11.0	11.5	3.0	.5	2.0	.5	.0	.0	.5	.5	.5
2	13.0	11.5	12.0	.5	.0	.5	.0	.0	.0	1.0	.5	.5
3	13.0	12.0	12.5	.5	.0	.0	.5	.0	.0	1.0	.5	.5
4	12.0	11.0	11.5	.5	.0	.5	.0	.0	.0	1.0	.5	.5
5	11.0	9.5	10.5	.5	.0	.5	.0	.0	.0	1.0	.5	.5
6	9.5	8.0	9.0	.5	.0	.0	.5	.0	.0	1.0	.5	.5
7	8.5	7.5	8.0	.5	.0	.0	.5	.0	.5	1.0	.5	.5
8	9.5	8.0	8.5	.5	.0	.5	.5	.0	.5	1.0	.5	.5
9	10.0	9.0	9.5	1.0	.0	.5	.5	.0	.0	1.0	.0	.5
10	9.5	9.0	9.0	1.0	.5	.5	1.0	.0	.5	1.0	.0	.5
11	10.0	8.5	9.5	1.0	.5	.5	.5	.0	.0	1.0	.0	.5
12	10.0	9.0	9.5	1.0	.5	.5	.5	.0	.5	1.0	.0	.5
13	9.0	8.5	9.0	1.5	.5	1.0	.5	.0	.0	.5	.0	.0
14	8.5	7.0	8.0	1.5	.5	1.0	.0	.0	.0	.5	.0	.0
15	7.0	6.0	6.5	1.5	1.0	1.0	.0	.0	.0	.0	.0	.0
16	8.0	6.5	7.0	1.5	1.0	1.0	.5	.0	.0	.5	.0	.0
17	10.0	8.0	9.0	1.5	1.0	1.5	.0	.0	.0	.0	.0	.0
18	9.0	7.5	8.5	1.5	1.0	1.5	.0	.0	.0	.0	.0	.0
19	7.5	6.0	6.5	1.0	.5	.5	.5	.0	.0	.5	.0	.0
20	7.0	5.5	6.5	.5	.0	.5	.5	.0	.0	.5	.0	.0
21	8.0	7.0	7.5	1.0	.5	.5	.5	.0	.5	.5	.0	.0
22	8.5	7.0	7.5	1.5	1.0	1.0	1.0	.0	.5	.5	.0	.5
23	9.5	8.0	8.5	1.0	.0	.5	.5	.0	.0	.5	.0	.0
24	9.5	8.5	9.0	.5	.0	.0	.5	.0	.0	.5	.0	.0
25	9.0	8.0	8.5	.5	.0	.0	.5	.0	.0	.5	.0	.0
26	8.0	7.5	8.0	.5	.0	.0	.5	.5	.5	.5	.0	.0
27	7.5	7.0	7.0	.5	.0	.0	.5	.5	.5	.5	.0	.0
28	7.5	7.0	7.0	.5	.0	.0	.5	.5	.5	.5	.0	.0
29	8.5	7.0	8.0	.5	.0	.0	.5	.0	.5	.5	.0	.5
30	7.0	5.0	6.0	.5	.0	.0	.5	.0	.5	1.0	.0	.5
31	5.0	3.5	4.5	---	---	---	.5	.5	.5	1.0	.0	.5
MONTH	13.0	3.5	8.5	3.0	.0	.5	1.0	.0	.2	1.0	.0	.3
FEBRUARY				MARCH			APRIL			MAY		
1	1.0	.0	.5	3.0	1.5	2.0	4.0	3.0	3.5	15.5	13.0	14.5
2	1.0	.0	.5	2.5	1.5	2.0	5.0	3.0	4.0	15.5	14.0	15.0
3	1.5	.0	.5	3.0	2.0	2.5	6.0	4.5	5.0	14.5	12.5	13.5
4	1.0	.0	.5	3.0	2.0	2.5	7.0	5.0	6.0	14.0	12.5	13.0
5	1.0	.0	.5	3.0	2.5	3.0	7.5	6.0	7.0	13.5	11.0	12.5
6	1.0	.0	.5	3.0	2.0	2.5	9.0	7.0	8.0	13.0	11.5	12.5
7	.5	.0	.0	2.0	.5	1.0	9.0	8.0	8.5	14.0	12.0	13.0
8	.5	.0	.0	.5	.0	.5	8.5	7.5	8.0	16.0	13.5	14.5
9	.5	.0	.0	.5	.0	.0	9.0	7.0	8.0	17.5	15.0	16.5
10	.5	.0	.0	.5	.0	.0	8.0	4.5	6.5	18.5	16.5	17.5
11	.5	.0	.0	.5	.0	.0	5.5	4.0	4.5	19.0	17.5	18.0
12	.5	.0	.0	1.0	.0	.5	4.5	3.0	4.0	19.5	18.0	18.5
13	.5	.0	.5	1.0	.0	.5	4.0	3.5	4.0	18.5	16.5	17.5
14	.5	.0	.5	1.0	.0	.5	4.5	3.5	4.0	17.0	16.0	16.5
15	.5	.0	.5	1.5	.0	.5	4.5	4.5	4.5	17.0	15.5	16.0
16	1.0	.0	.5	2.0	.5	1.5	5.5	4.0	4.5	17.0	16.0	16.5
17	1.0	.5	.5	2.5	1.0	1.5	6.5	4.0	5.5	17.0	16.0	16.5
18	1.0	.5	.5	3.0	1.5	2.5	6.5	6.0	6.5	17.5	15.5	16.5
19	1.0	.5	.5	3.5	2.0	2.5	8.5	6.5	7.5	18.5	16.0	17.0
20	1.0	.5	.5	3.5	2.5	3.0	9.0	8.0	8.5	19.5	17.5	18.5
21	1.5	.5	.5	3.5	2.5	3.0	8.0	5.5	6.5	21.0	19.0	20.0
22	1.5	.5	1.0	4.0	2.5	3.0	5.5	5.0	5.0	22.0	20.0	20.5
23	1.5	.5	1.0	4.5	2.5	3.5	5.5	5.0	5.0	20.5	17.5	19.0
24	1.5	.5	1.0	5.0	3.0	4.0	5.5	5.0	5.0	17.5	16.0	17.0
25	1.5	.5	1.0	5.0	4.0	4.5	5.5	5.0	5.5	16.0	14.5	15.5
26	2.5	.5	1.5	4.5	3.5	4.0	6.5	5.0	6.0	16.0	13.5	14.5
27	2.5	1.0	1.5	5.0	3.5	4.0	8.5	5.5	7.0	15.5	14.0	14.5
28	2.0	1.0	1.5	4.0	3.5	4.0	10.0	7.5	8.5	16.0	14.0	15.0
29	2.5	1.0	1.5	4.0	3.5	3.5	12.5	9.5	11.0	17.0	15.0	15.5
30	---	---	---	5.0	3.0	4.0	14.0	12.0	13.0	18.0	16.0	17.0
31	---	---	---	4.5	3.5	4.0	---	---	---	19.5	16.5	18.0
MONTH	2.5	.0	.6	5.0	.0	2.3	14.0	3.0	6.3	22.0	11.0	16.1

CHIPPEWA RIVER BASIN

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053674464 YELLOW RIVER AT BARRON, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	20.0	18.5	19.0	20.5	18.5	19.5	21.0	19.5	20.0	16.0	14.5	15.5
2	21.0	18.5	19.5	19.5	18.0	19.0	21.5	19.5	20.5	16.0	15.5	15.5
3	21.0	19.0	20.0	18.0	16.5	17.0	21.0	19.5	20.0	17.0	15.0	16.0
4	21.0	19.5	20.0	16.5	15.5	16.0	20.5	18.5	19.5	16.5	16.0	16.0
5	21.5	19.0	20.0	18.5	16.0	17.0	20.5	18.5	19.5	17.5	15.5	16.0
6	20.5	19.0	19.5	18.5	17.0	18.0	19.0	18.5	19.0	18.0	16.5	17.0
7	20.0	18.0	19.0	18.5	18.0	18.5	18.5	17.5	18.0	17.5	16.5	17.0
8	19.5	18.0	18.5	20.5	18.5	19.5	20.0	17.5	18.5	16.5	15.5	16.0
9	20.0	18.0	18.5	21.5	20.0	20.5	21.0	19.0	20.0	16.0	14.5	15.5
10	21.0	18.5	20.0	22.5	20.5	21.5	22.5	20.5	21.5	15.0	13.5	14.5
11	23.0	20.0	21.0	22.0	20.5	21.0	22.5	20.5	21.5	14.5	13.0	14.0
12	24.0	21.0	22.5	21.0	20.0	20.5	21.0	20.0	20.5	15.5	14.0	14.5
13	24.0	22.0	23.0	20.0	19.0	19.5	20.0	18.5	19.5	16.0	15.0	15.5
14	23.5	22.0	22.5	20.0	18.5	19.0	19.5	18.0	18.5	17.0	15.5	16.0
15	22.0	20.5	21.5	19.5	18.5	19.0	19.5	17.5	18.0	17.5	16.0	16.5
16	20.5	19.0	20.0	20.5	18.5	19.5	19.0	17.0	18.0	18.5	17.0	17.5
17	19.5	18.5	19.0	21.5	19.5	20.5	19.0	17.5	18.0	18.5	17.5	18.0
18	19.0	18.0	18.5	21.5	20.0	20.5	20.0	17.5	18.5	18.0	15.5	17.0
19	18.0	16.0	17.0	21.0	20.0	20.5	20.0	17.5	18.5	15.5	14.5	15.0
20	17.5	15.0	16.0	20.5	19.5	20.0	19.5	18.0	18.5	14.5	13.5	14.5
21	18.0	15.0	16.5	20.5	18.5	19.5	19.0	18.5	19.0	15.5	14.0	14.5
22	16.5	15.5	16.0	19.0	18.0	19.0	20.0	18.5	19.0	14.5	13.0	13.5
23	16.0	15.0	15.5	19.0	17.0	18.0	20.5	19.0	20.0	13.5	12.5	13.0
24	17.5	15.5	16.5	19.5	17.5	18.5	21.0	20.0	20.5	13.5	12.5	13.0
25	18.5	16.5	17.5	19.0	18.0	18.5	20.0	18.5	19.5	14.0	12.5	13.0
26	18.5	16.5	17.5	20.5	18.0	19.5	19.0	18.0	18.5	14.0	13.5	14.0
27	19.0	17.0	18.0	21.5	19.0	20.0	18.5	17.5	18.0	14.0	13.0	13.5
28	20.0	18.0	19.0	22.0	19.5	20.5	18.0	16.5	17.0	13.0	11.5	12.5
29	21.0	19.0	20.0	21.5	19.5	20.5	18.5	16.5	17.5	12.0	11.0	11.5
30	20.5	19.0	19.5	21.0	19.5	20.0	17.0	16.0	16.5	12.5	11.0	11.5
31	---	---	---	21.5	19.0	20.0	16.0	15.0	15.5	---	---	---
MONTH	24.0	15.0	19.0	22.5	15.5	19.4	22.5	15.0	18.9	18.5	11.0	14.9

CHIPPEWA RIVER BASIN

05368000 HAY RIVER AT WHEELER, WI

LOCATION.--Lat 45°02'52", long 91°54'39", in SW 1/4 sec.25, T.30 N., R.13 W., Dunn County, Hydrologic Unit 07050007, on right bank 25 ft downstream from highway bridge in Wheeler, 1.8 mi upstream from Otter Creek, and 2.4 mi downstream from South Fork Hay River.

DRAINAGE AREA.--418 mi².

PERIOD OF RECORD.--October 1950 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 889.30 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 25, 1951, nonrecording gage.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 4-9, 16-22, Jan. 15-31, and Feb. 9-14. Records good except those for ice-affected periods, which are fair. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	305	370	525	323	280	316	408	455	267	238	224	213
2	303	645	521	323	279	340	391	437	265	289	236	220
3	296	507	505	324	279	351	384	418	262	410	238	223
4	291	431	480	323	278	393	377	407	258	458	239	221
5	294	397	460	322	272	513	369	398	256	422	235	222
6	302	352	440	320	279	1030	370	388	256	353	230	279
7	297	336	460	314	272	1820	369	380	258	326	231	278
8	290	341	430	315	258	1860	358	377	255	313	238	249
9	284	343	410	317	250	1520	349	372	254	302	235	233
10	278	319	414	296	250	1070	354	364	251	294	323	228
11	275	316	398	313	250	780	359	357	246	282	355	222
12	272	318	407	309	250	640	363	359	242	319	263	218
13	268	323	444	303	260	556	362	353	241	389	258	214
14	272	343	427	276	260	513	365	343	249	358	244	214
15	274	384	386	260	264	468	390	338	241	320	236	214
16	270	435	370	250	263	454	485	343	242	300	230	284
17	269	418	360	250	263	467	466	373	348	286	225	363
18	263	785	350	240	266	460	411	363	411	281	224	320
19	256	1890	330	240	266	443	407	340	313	276	224	333
20	250	1680	310	240	264	421	704	329	299	275	219	243
21	248	1010	320	240	262	412	1720	320	284	264	216	248
22	250	838	330	250	261	396	2820	320	267	261	217	241
23	252	755	357	260	261	398	1780	331	263	263	215	234
24	271	604	336	250	267	422	971	317	264	252	211	230
25	280	536	327	240	266	488	709	314	259	243	221	227
26	264	510	326	240	263	548	625	312	254	242	237	225
27	256	500	323	250	270	457	562	301	249	237	228	225
28	254	462	324	260	305	420	522	293	244	231	225	220
29	267	460	325	250	327	411	494	283	244	227	225	216
30	262	525	325	240	---	434	473	277	240	225	222	215
31	255	---	324	250	---	431	---	272	---	223	217	---
TOTAL	8468	17133	12044	8588	7785	19232	18717	10834	7982	9159	7341	7272
MEAN	273	571	389	277	268	620	624	349	266	295	237	242
MAX	305	1890	525	324	327	1860	2820	455	411	458	355	363
MIN	248	316	310	240	250	316	349	272	240	223	211	213
CFSM	.65	1.37	.93	.66	.64	1.48	1.49	.84	.64	.71	.57	.58
IN.	.75	1.52	1.07	.76	.69	1.71	1.67	.96	.71	.82	.65	.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1992, BY WATER YEAR (WY)

	MEAN	257	250	223	197	217	488	633	356	333	264	253	284
MAX	579	704	470	412	657	1021	2054	767	664	667	513	762	
(WY)	1986	1971	1966	1981	1981	1983	1965	1954	1991	1979	1980	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1951 - 1992

ANNUAL TOTAL	165514		134555									
ANNUAL MEAN	453		368									
HIGHEST ANNUAL MEAN										313		
LOWEST ANNUAL MEAN										424		1986
HIGHEST DAILY MEAN	4590	Mar 24	2820	Apr 22						152		1959
LOWEST DAILY MEAN	150	Jan 3	211	Aug 24						13000	Mar 31	1967
ANNUAL SEVEN-DAY MINIMUM	157	Jan 1	218	Aug 19						80	Feb 20	1959
INSTANTANEOUS PEAK FLOW			3130	Apr 22						82	Feb 16	1959
INSTANTANEOUS PEAK STAGE			10.33	Apr 22						(a)13600	Mar 31	1967
INSTANTANEOUS LOW FLOW			201	Sep 4						15.04	Mar 31	1967
ANNUAL RUNOFF (CFSM)	1.08		.88							(b)55	Mar 13	1954
ANNUAL RUNOFF (INCHES)	14.73		11.97							.75		
10 PERCENT EXCEEDS	800		496							10.17		
50 PERCENT EXCEEDS	326		302							483		
90 PERCENT EXCEEDS	180		230							230		
										150		

(a) From rating curve extended above 9,000 ft³/s

(b) Result of freezeup

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LOCATION.--Lat 44°53'02", long 91°55'57", in NW 1/4 sec.26, T.28 N., R.13 W., Dunn County, Hydrologic Unit 07050007, on right bank at Menomonie, 900 ft downstream from powerplant of Northern States Power Co., and 1,000 ft downstream from Wilson Creek.

PERIOD OF RECORD.--June 1907 to September 1908, May 1913 to current year. Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 780 ft above National Geodetic Vertical Datum of 1929 (Northern States Power Co. bench mark). Prior to Sept. 3, 1908, nonrecording gage at site 1 mi downstream at different datum. May 9, 1913, to Sept. 30, 1923, water-stage recorder at same site at datum 0.42 ft lower than present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 1992, BY WATER YEAR (WY)

MEAN	1119	1133	967	886	942	1934	2289	1474	1452	1102	943	1187
MAX	2806	2521	2316	1317	2047	4142	6819	2947	3702	2926	1708	3091
(WY)	1969	1992	1966	1973	1966	1973	1965	1938	1943	1968	1980	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1907 - 1992	
ANNUAL TOTAL	640223		571230			
ANNUAL MEAN	1754		1561		1285	
HIGHEST ANNUAL MEAN					1842	1983
LOWEST ANNUAL MEAN					711	1931
HIGHEST DAILY MEAN	10500	Mar 24	7800	Apr 23	29000	Apr 4 1934
LOWEST DAILY MEAN	671	Feb 24	466	May 9	100	Nov 8 1907
ANNUAL SEVEN-DAY MINIMUM	793	Aug 27	785	Jul 30	310	Sep 8 1934
INSTANTANEOUS PEAK FLOW			9850	Apr 23	(a)40000	Apr 4 1934
INSTANTANEOUS PEAK STAGE			6.16	Apr 23	(b)16.00	Apr 4 1934
10 PERCENT EXCEEDS	3200		2380		2160	
50 PERCENT EXCEEDS	1390		1280		1030	
90 PERCENT EXCEEDS	850		923		626	

(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

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)
(NATIONAL RADIOCHEMICAL SURVEILLANCE NETWORK STATION)

LOCATION.--Lat 44°37'40", long 91°58'10", in SW 1/4 sec.21, T.25 N., R.13 W., Pepin County, Hydrologic Unit 07050005, on left bank in Durand, 75 ft downstream from bridge on U.S. Highway 10, and 9.5 mi downstream from Red Cedar River.

DRAINAGE AREA.--9,010 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 785: 1930, 1934(M). WSP 875: 1930 (monthly and yearly runoff). WSP 925: 1938. WSP 1508: 1929(M), 1932. WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 694.59 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 9, 1930, nonrecording gage at bridge 400 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Nov. 3, 4, 19, 20, and ice-affected periods, Dec. 5-8 and Dec. 15 to Mar. 10. Records good except those for ice-affected periods, which are fair. Flow regulated by powerplants, Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota on Chippewa and Flambeau Rivers. Gage-height telemeter 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7030	10700	15100	7200	4900	4800	12400	14100	4610	4370	4670	4030
2	6230	19100	17800	6800	3600	5400	12300	13100	6610	4440	2650	4830
3	5720	31000	16100	6800	3200	6800	12100	12300	4550	5870	4640	3780
4	4960	43000	15100	6600	6400	9000	11800	10500	5110	8780	3580	3590
5	6310	41100	14000	6400	6600	10000	11600	12300	5070	10400	4330	3970
6	4910	25400	13000	7200	6600	11000	11600	11500	3250	7110	4390	3280
7	3330	20400	12000	7000	6200	14000	10900	10400	3450	8170	3450	4430
8	5970	13200	12000	6800	4400	17000	10900	8600	3290	7660	4060	4470
9	4910	13400	11900	7800	4100	25000	11400	6870	5080	8400	3390	4210
10	6270	13000	11700	7200	4100	28000	11900	4750	4400	9350	3430	4180
11	4330	12500	11900	6200	5000	23800	11800	6100	4800	9780	4260	4270
12	5690	12300	12600	5400	5800	19900	11600	8100	4080	9380	5140	3110
13	5350	11300	13200	8000	6000	18200	11500	6440	2840	12600	4090	2640
14	5470	12400	13000	7400	5800	15900	11700	6240	4050	12500	3540	3690
15	3810	14000	11000	6400	4000	14400	12100	7350	2820	11800	3600	3850
16	5500	14000	9800	5600	3300	13700	13300	7400	4310	11200	2260	7300
17	5690	15000	9400	4500	3400	9600	16300	7940	4410	8740	2640	8710
18	5540	18500	9400	4100	4900	11200	20400	9630	5440	7420	4240	9350
19	5120	27000	9200	3700	6200	11700	19900	10100	4970	6180	4000	12200
20	4480	36000	9000	4000	8000	12000	19700	11500	6350	6920	3910	11900
21	5000	39200	9400	5400	7200	11900	25300	9640	3670	7210	3140	8420
22	5080	32300	9400	7000	6200	11700	37400	9000	3840	6420	3470	7770
23	5160	24000	9200	7000	5400	11500	43000	8600	4350	6660	2070	6550
24	5760	20000	8600	6400	3300	11600	40700	7940	4350	5750	2860	6040
25	5300	16800	8000	5600	4400	11600	30300	7790	4650	5790	4330	5910
26	5280	15000	8200	4500	6800	12300	21800	7330	4010	3210	3060	4820
27	5050	13800	8600	3500	8000	13300	20400	8310	3790	4400	3440	3720
28	5400	13000	8400	4200	7200	13400	18500	6980	2680	5520	3660	3080
29	6960	13600	7600	6400	6800	13100	14400	6570	3350	3110	2520	5220
30	5540	14800	7200	6600	---	12200	13400	6230	4270	4990	2050	4760
31	6330	---	7600	6400	---	12400	---	5180	---	2720	2830	---
TOTAL	167480	605800	339400	188100	157800	416400	530400	268790	128450	226850	109700	164080
MEAN	5403	20190	10950	6068	5441	13430	17680	8671	4282	7318	3539	5469
MAX	7030	43000	17800	8000	8000	28000	43000	14100	6610	12600	5140	12200
MIN	3330	10700	7200	3500	3200	4800	10900	4750	2680	2720	2050	2640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1992, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1928	6442	20350	1986	2103	1977
1929	6782	20190	1992	2209	1977
1930	5371	11600	1966	2335	1934
1931	4775	8181	1984	2289	1934
1932	4968	11160	1984	2404	1990
1933	9732	25120	1973	3645	1931
1934	15700	34170	1967	4718	1931
1935	10470	28220	1954	3336	1931
1936	9312	37730	1943	2699	1934
1937	6233	19070	1968	2271	1934
1938	4979	10440	1972	2026	1934
1939	7041	27950	1941	1954	1948

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1928 - 1992
ANNUAL TOTAL	3670900	3303250	
ANNUAL MEAN	10060	9025	7642
HIGHEST ANNUAL MEAN			11550
LOWEST ANNUAL MEAN			3992
HIGHEST DAILY MEAN	43000	Nov 4	117000
LOWEST DAILY MEAN	2300	Feb 25	1100
ANNUAL SEVEN-DAY MINIMUM	3210	Jan 21	1580
INSTANTANEOUS PEAK FLOW			123000
INSTANTANEOUS PEAK STAGE			12.00
INSTANTANEOUS LOW FLOW			1590
10 PERCENT EXCEEDS	18900		15100
50 PERCENT EXCEEDS	7510		6800
90 PERCENT EXCEEDS	3700		3570

(a) Also occurred Apr. 23

CHIPPEWA RIVER BASIN

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05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)
(NATIONAL RADIOCHEMICAL SURVEILLANCE NETWORK STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967, 1973 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	
OCT 1991												
17...	1000	--	6530	144	8.1	11.5	3.0	10.6	763	97	K930	
DEC												
31...	1015	7600	--	147	6.7	2.0	2.4	11.3	0	0	620	
MAR 1992												
12...	1000	--	19600	114	7.4	0.0	4.0	14.6	746	102	200	
APR												
28...	1030	--	18800	90	7.2	7.5	3.9	11.4	746	97	450	
AUG												
17...	1145	--	2530	180	7.9	22.0	1.0	9.2	737	109	K16	
DATE		STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 1991												
17...	110	63	16	5.7	3.8	1.5	62	50	5.4	5.8	0.20	
DEC												
31...	170	65	16	6.1	4.6	1.4	73	60	4.5	5.6	0.20	
MAR 1992												
12...	210	47	12	4.2	3.5	2.3	46	38	5.0	4.9	0.20	
APR												
28...	61	35	9.0	3.1	2.9	1.7	32	26	4.5	3.9	0.20	
AUG												
17...	88	78	19	7.5	4.4	1.3	76	62	7.1	11	<0.10	
DATE		SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT 1991												
17...	9.7	101	82	0.020	0.600	<0.010	<0.010	0.50	0.090	0.080	0.050	
DEC												
31...	11	117	89	0.010	0.770	0.070	0.100	0.40	0.050	0.060	0.040	
MAR 1992												
12...	10	83	69	<0.010	0.710	0.190	0.210	0.80	0.100	0.070	0.050	
APR												
28...	6.8	75	50	<0.010	0.420	0.050	0.060	0.60	0.090	0.040	0.020	
AUG												
17...	10	124	101	<0.010	0.600	0.020	0.030	0.70	0.080	0.030	0.020	

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

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 1991 17...	1000	6530	20	12	<3	310	<4
MAR 1992 12...	1000	19600	40	13	<3	430	<4
APR 28...	1030	18800	50	11	<3	210	<4
AUG 17...	1145	2530	40	12	<3	66	<4

DATE	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)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
OCT 1991 17...	7	<10	<1	<1	33	<6
MAR 1992 12...	27	<10	<1	<1	26	<6
APR 28...	11	<10	<1	<1	23	<6
AUG 17...	14	<10	1	<1	40	<6

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1991 11...	1140	--	4030	174	11.0	--	--	--
17...	1000	--	6530	144	11.5	10	176	50
NOV 04...	1330	--	44400	144	2.0	--	--	--
20...	1450	--	37500	115	1.5	--	--	--
25...	1410	--	17200	105	0.0	--	--	--
DEC 31...	1015	7600	--	147	2.0	--	--	--
JAN 1992 30...	0840	--	6600	165	0.0	--	--	--
MAR 10...	1050	--	28000	130	0.0	--	--	--
12...	1000	--	19600	114	0.0	--	--	--
16...	1440	--	13700	135	2.0	--	--	--
APR 23...	1330	--	42300	140	6.5	--	--	--
28...	1030	--	18800	90	7.5	26	1320	38
MAY 11...	1325	--	6220	140	18.5	--	--	--
JUL 20...	1610	--	7060	132	21.5	--	--	--
AUG 17...	1145	--	2530	180	22.0	5	34	86
SEP 17...	1500	--	8130	135	21.0	--	--	--

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
APR 1992 28...	1030	18800	<0.6	<0.6	2.2	<0.6	1.9	<0.6	0.02	0.04
SEP 08...	1045	4730	<0.6	<0.6	1.6	<0.6	1.4	<0.6	0.60	0.06

CHIPPEWA RIVER BASIN

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05369945 EAU GALLE RIVER AT LOW-WATER BRIDGE AT SPRING VALLEY, WI

LOCATION.--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 (revised), approximately 550 ft upstream from French Creek and at Spring Valley.

DRAINAGE AREA.--47.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1981 to September 1983, May 1986 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 960 ft, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 8-30, Feb. 9 to Mar. 3, Mar. 9-17, and periods of ice effect, Nov. 8, and Dec. 5, 10, 16-20. Records good for discharges less than 500 ft³/s, fair for estimated periods, and poor for discharges greater than 500 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	23	68	14	9.6	12	34	23	15	13	12	9.6
2	9.7	63	55	14	9.6	14	28	22	15	16	16	10
3	9.6	34	41	14	9.6	17	26	21	15	14	13	10
4	9.0	22	30	14	11	39	25	21	14	13	12	12
5	9.4	17	27	14	10	147	24	19	14	13	11	11
6	9.3	13	26	14	10	156	24	18	14	13	11	12
7	9.1	11	25	14	10	54	24	18	14	12	12	10
8	9.0	10	22	15	9.6	18	23	18	14	12	12	9.6
9	9.0	10	20	15	9.4	16	23	18	14	13	11	9.7
10	8.6	9.8	19	15	9.4	14	23	18	13	12	11	9.9
11	8.6	9.8	19	14	9.4	13	24	18	13	12	11	9.9
12	8.6	9.8	20	14	9.4	12	33	17	13	188	11	9.9
13	8.6	12	26	14	9.4	12	34	17	13	84	11	9.9
14	8.6	20	37	13	9.4	12	30	17	13	35	11	9.9
15	8.6	70	29	13	9.4	12	83	17	13	22	10	10
16	8.6	79	22	12	9.4	18	100	18	14	18	10	104
17	8.6	43	17	10	9.6	26	50	18	28	15	11	27
18	8.3	285	16	9.6	10	36	35	17	38	14	11	16
19	8.3	124	16	9.2	9.4	33	91	17	19	16	10	13
20	8.1	58	16	9.6	9.4	33	295	17	16	15	10	12
21	8.3	43	17	9.4	9.6	30	288	17	14	14	10	12
22	8.3	44	17	9.6	9.8	26	127	17	14	15	10	11
23	8.3	38	16	9.4	10	26	70	17	14	15	10	11
24	9.4	25	16	9.2	10	72	48	17	14	14	10	11
25	8.6	22	15	9.4	9.8	112	39	17	14	14	11	11
26	8.3	20	15	9.4	10	59	34	17	13	14	11	11
27	8.0	20	14	9.2	10	38	29	16	13	13	9.9	10
28	8.1	18	14	9.2	11	30	27	16	14	13	9.9	10
29	8.2	20	14	9.2	11	31	26	15	16	12	10	9.9
30	7.7	75	14	9.6	---	57	24	15	13	12	10	10
31	7.9	---	14	9.9	---	52	---	15	---	12	9.8	---
TOTAL	268.5	1248.4	717	364.9	284.2	1227	1741	548	461	698	338.6	432.3
MEAN	8.66	41.6	23.1	11.8	9.80	39.6	58.0	17.7	15.4	22.5	10.9	14.4
MAX	9.8	285	68	15	11	156	295	23	38	188	16	104
MIN	7.7	9.8	14	9.2	9.4	12	23	15	13	12	9.8	9.6
CFSM	.18	.87	.48	.25	.20	.83	1.21	.37	.32	.47	.23	.30
IN.	.21	.97	.56	.28	.22	.95	1.35	.43	.36	.54	.26	.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1992, BY WATER YEAR (WY)

MEAN	17.0	22.0	13.8	9.10	9.35	95.6	40.3	33.0	35.6	18.2	14.7	27.8
MAX	47.5	60.9	25.7	13.3	14.2	152	104	67.0	157	30.3	34.4	129
(WY)	1987	1983	1983	1987	1983	1990	1983	1991	1990	1990	1987	1986
MIN	7.73	7.68	6.61	6.45	6.73	20.5	11.6	10.3	8.87	8.54	8.28	9.34
(WY)	1990	1990	1990	1990	1990	1987	1987	1987	1988	1988	1988	1982

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1982 - 1992

ANNUAL TOTAL	11693.8	8328.9	
ANNUAL MEAN	32.0	22.8	27.2
HIGHEST ANNUAL MEAN			40.9
LOWEST ANNUAL MEAN			14.8
HIGHEST DAILY MEAN	949	295	2460
LOWEST DAILY MEAN	7.6	7.7	6.0
ANNUAL SEVEN-DAY MINIMUM	7.6	8.1	6.0
INSTANTANEOUS PEAK FLOW		444	(b)6000
INSTANTANEOUS PEAK STAGE		6.27	(c)13.80
INSTANTANEOUS LOW FLOW		6.3	4.7
ANNUAL RUNOFF (CFSM)	.67	.48	.57
ANNUAL RUNOFF (INCHES)	9.08	6.47	7.72
10 PERCENT EXCEEDS	52	38	33
50 PERCENT EXCEEDS	14	14	11
90 PERCENT EXCEEDS	8.1	9.4	7.6

(a) Also occurred Feb. 1, 1990

(b) From rating curve extended above 140 ft³/s on basis of indirect measurement of peak flow but may have been exceeded on Mar. 27, 1989, gage height, 8.80 ft

(c) Backwater from reservoir

CHIPPEWA RIVER BASIN

05369945 EAU GALLE RIVER AT LOW-WATER BRIDGE AT SPRING VALLEY, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: March 1987 to current year.

INSTRUMENTATION.--Continuous water temperature recorder since March 24, 1987.

REMARKS.--Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum temperature, 27.5°C June 19, 20, 1988; minimum, 0.0°C for many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum temperature, 20.5°C, June 12, 14 and Aug. 9, 10; minimum, 0.0°C for many days November through March.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					MAY 1992				
22...	1200	8.4	446	8.5	05...	1105	19	397	9.5
DEC					JUN				
17...	1325	17	372	0.0	10...	1040	13	458	15.0
JAN 1992					11...	0900	13	460	15.0
29...	1155	9.4	435	0.0	JUL				
FEB					17...	1005	15	405	15.5
06...	1245	10	440	0.0	AUG				
MAR					04...	1340	12	465	15.5
17...	0850	26	386	2.5	18...	0715	11	435	14.5
24...	0935	56	376	3.0	SEP				
APR					22...	1530	11	418	11.5
21...	1500	230	170	5.0					

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.0	10.0	11.0	3.0	.0	2.0	.0	.0	.0	3.0	3.0	3.0
2	13.0	11.0	12.0	.5	.0	.0	.0	.0	.0	3.5	2.5	3.0
3	12.0	10.0	10.5	.5	.0	.0	.0	.0	.0	3.5	3.0	3.5
4	10.0	8.5	9.0	.5	.0	.0	.0	.0	.0	4.0	3.0	3.5
5	9.5	8.5	9.0	1.0	.5	.5	.0	.0	.0	3.0	3.0	3.0
6	8.5	7.5	8.0	.5	.0	.5	.0	.0	.0	3.5	3.0	3.5
7	8.5	6.0	7.5	.5	.0	.0	.0	.0	.0	3.0	2.5	3.0
8	10.0	7.5	9.0	.5	.0	.5	1.0	.0	.5	3.0	2.5	2.5
9	10.0	9.0	9.5	1.0	.0	.5	1.5	.5	1.0	3.0	.5	2.0
10	9.0	7.5	8.0	2.0	1.0	1.5	2.5	1.5	2.0	.5	.0	.5
11	10.0	8.0	9.0	2.5	2.0	2.5	1.5	.5	1.0	1.0	.0	.5
12	9.5	8.0	8.5	3.5	2.5	3.0	2.5	1.0	1.5	1.5	.5	1.0
13	8.5	7.0	8.0	4.5	3.0	3.5	2.0	1.0	1.5	1.5	.0	1.5
14	8.5	7.0	8.0	3.5	2.5	3.0	1.0	.0	.0	.5	.0	.0
15	7.0	6.0	6.5	3.0	.5	2.0	.0	.0	.0	.0	.0	.0
16	9.5	6.0	7.5	1.5	.0	1.0	.0	.0	.0	.0	.0	.0
17	11.0	9.0	10.0	3.0	1.0	1.5	.5	.0	.0	.0	.0	.0
18	9.5	6.0	8.0	3.0	.0	1.0	.0	.0	.0	.0	.0	.0
19	6.0	4.5	5.5	2.0	.5	1.5	.0	.0	.0	.0	.0	.0
20	7.5	5.5	6.5	2.5	1.0	2.0	.5	.0	.0	.0	.0	.0
21	9.0	7.5	8.0	4.0	2.5	3.0	.5	.0	.0	.5	.0	.0
22	10.0	7.5	9.0	4.0	2.5	3.5	.5	.0	.5	.5	.0	.0
23	10.5	9.0	10.0	2.5	.0	.5	1.0	.5	.5	.5	.0	.0
24	10.5	9.0	10.0	.5	.0	.0	1.0	.0	.5	.0	.0	.0
25	8.5	8.0	8.0	.5	.0	.0	.5	.0	.5	.0	.0	.0
26	8.0	7.5	8.0	.0	.0	.0	1.5	.5	1.0	.5	.0	.0
27	7.5	6.5	7.0	.5	.0	.5	2.0	1.5	1.5	.5	.0	.5
28	9.0	7.5	8.0	.5	.0	.5	2.0	2.0	2.0	.5	.0	.0
29	9.5	7.0	9.0	1.0	.5	.5	2.5	2.0	2.0	.5	.0	.5
30	7.0	4.5	5.5	.5	.0	.0	2.5	2.5	2.5	1.5	.5	1.0
31	4.5	2.5	4.0	---	---	---	3.0	2.5	2.5	2.0	1.0	1.5
MONTH	13.0	2.5	8.3	4.5	.0	1.2	3.0	.0	.7	4.0	.0	1.1

CHIPPEWA RIVER BASIN

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05369945 EAU GALLE RIVER AT LOW-WATER BRIDGE AT SPRING VALLEY, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	1.5	.5	1.0	6.0	2.5	4.0	5.0	3.0	4.0	18.0	13.0	15.0
2	2.0	.5	1.5	4.5	2.5	3.5	6.5	2.0	4.0	16.0	13.0	14.5
3	2.5	1.5	2.0	2.5	1.0	2.0	9.0	4.5	6.5	14.5	10.0	12.0
4	2.5	1.5	2.0	2.0	.5	1.0	9.0	5.0	7.0	13.0	10.0	11.5
5	2.5	1.0	1.5	.5	.5	.5	10.5	6.5	8.0	13.5	8.0	10.5
6	2.5	1.5	2.0	1.0	.5	.5	11.0	7.5	9.0	14.0	8.5	11.0
7	2.0	.0	1.0	2.0	.5	1.0	11.5	7.5	9.0	16.0	10.0	12.5
8	.5	.0	.0	3.0	1.0	2.0	8.5	6.0	7.0	17.0	11.5	14.0
9	.5	.0	.0	1.5	.0	.5	9.5	5.5	7.5	17.5	12.0	14.5
10	.5	.0	.5	1.0	.0	.5	8.0	4.5	5.5	18.5	13.0	15.5
11	.5	.0	.5	2.5	.0	1.0	6.5	4.0	5.0	17.0	15.0	16.0
12	.5	.0	.0	2.0	.0	1.0	6.0	2.5	4.0	18.0	14.5	16.0
13	.5	.0	.5	2.5	.0	1.0	5.0	4.5	4.5	16.0	12.5	14.0
14	1.0	.5	.5	4.0	1.5	2.5	7.0	4.5	5.5	15.0	12.0	13.5
15	1.5	1.0	1.0	4.0	.5	2.0	6.5	4.5	5.5	17.0	12.0	14.0
16	3.0	1.5	2.0	5.5	1.5	3.5	5.5	4.0	5.0	16.0	14.0	15.0
17	3.0	2.5	3.0	5.5	3.0	4.0	7.5	4.5	6.0	15.5	14.0	14.5
18	3.5	2.5	3.0	4.5	1.5	3.0	8.0	6.5	7.0	17.0	11.5	14.0
19	3.5	2.5	3.0	4.5	1.5	3.0	11.5	8.0	9.5	18.0	12.5	15.0
20	3.5	2.5	3.0	5.0	3.0	4.0	11.5	9.0	10.5	19.0	14.0	16.5
21	3.0	2.0	2.5	3.5	1.5	2.0	8.5	6.5	7.0	19.0	15.0	17.0
22	3.0	2.5	2.5	4.0	.0	2.0	6.5	6.0	6.0	19.0	16.0	17.5
23	4.0	2.5	3.5	6.0	1.5	3.5	6.5	5.5	6.0	16.5	13.5	14.5
24	4.0	3.0	3.0	6.0	1.5	4.0	7.0	6.0	6.5	14.5	10.5	12.5
25	3.5	2.0	2.5	4.5	.5	2.5	7.0	6.0	6.5	13.0	10.5	11.5
26	4.0	1.5	2.5	4.0	.5	2.5	8.0	6.0	7.0	14.0	9.0	11.5
27	5.0	3.0	4.0	5.5	1.5	3.5	11.0	5.5	8.0	13.5	10.5	12.0
28	5.0	4.0	4.5	4.5	3.5	4.0	11.5	7.5	9.5	14.5	10.5	12.5
29	4.0	2.0	3.5	5.0	3.0	4.0	15.0	9.5	12.0	16.0	11.0	13.5
30	---	---	---	6.5	3.0	4.5	16.0	11.0	13.5	17.0	12.0	14.5
31	---	---	---	6.0	4.0	5.0	---	---	---	18.0	12.5	15.5
MONTH	5.0	.0	1.9	6.5	.0	2.5	16.0	2.0	7.1	19.0	8.0	13.9
JUNE				JULY			AUGUST			SEPTEMBER		
1	17.5	14.0	16.0	18.0	14.5	16.0	18.5	15.5	17.0	14.0	12.0	13.0
2	17.0	14.0	15.5	17.5	15.0	16.5	19.0	16.0	17.5	14.5	14.0	14.0
3	19.0	14.0	16.5	16.5	14.0	15.0	17.5	15.5	16.5	15.0	13.0	14.0
4	17.5	14.5	16.0	18.0	13.5	15.5	17.0	14.0	15.5	14.5	13.0	13.5
5	17.5	13.5	15.5	18.0	13.5	16.0	18.0	14.5	16.0	16.0	13.5	14.5
6	17.5	14.5	16.0	17.0	14.0	15.5	16.5	14.5	15.0	16.5	14.5	15.5
7	17.5	13.0	15.5	16.5	15.0	16.0	15.5	14.5	15.0	15.5	13.5	14.5
8	16.0	14.0	15.0	19.0	15.0	17.0	19.0	14.5	16.5	14.0	12.5	13.5
9	17.5	13.5	15.5	18.5	16.0	17.5	20.5	17.0	18.5	14.0	13.0	13.5
10	18.5	14.5	16.5	19.5	16.0	18.0	20.5	18.5	19.5	13.0	12.0	12.5
11	20.0	15.0	17.5	18.5	16.0	17.5	19.0	16.5	17.5	13.0	10.5	11.5
12	20.5	16.0	18.0	18.5	16.0	17.5	18.0	15.5	16.5	14.5	12.5	13.5
13	19.5	16.5	18.0	17.5	16.0	17.0	16.0	14.0	15.0	15.0	14.0	14.5
14	20.5	16.5	18.5	19.0	15.0	17.0	15.5	13.0	14.5	15.0	14.0	14.5
15	19.5	16.5	18.0	17.5	15.5	16.5	16.0	13.0	14.5	16.0	14.0	15.0
16	18.5	15.5	16.5	19.0	15.0	17.0	16.0	13.5	14.5	18.0	15.5	17.0
17	18.5	15.5	17.0	19.0	15.5	17.5	15.5	13.5	14.5	17.5	15.5	16.5
18	18.5	16.5	17.5	18.0	15.5	16.5	17.0	14.5	15.5	16.0	13.0	14.5
19	17.0	13.5	15.0	18.0	14.5	16.5	16.5	14.0	15.5	13.0	11.0	12.0
20	16.0	11.5	13.5	17.5	14.5	16.0	17.0	14.0	15.5	13.5	11.0	12.0
21	16.0	11.0	13.5	17.5	13.5	15.5	17.5	15.0	16.0	14.5	13.0	13.5
22	15.0	12.5	13.5	16.5	13.5	14.5	18.0	16.0	17.0	13.5	11.0	12.0
23	15.5	12.5	13.5	16.0	13.0	14.5	19.0	16.5	17.5	12.0	9.5	10.5
24	17.0	13.5	15.0	17.0	13.0	15.0	19.0	17.5	18.5	12.5	10.5	11.5
25	16.5	13.5	15.5	16.0	15.0	15.5	18.5	15.5	17.0	13.5	11.0	12.0
26	16.5	13.0	15.0	18.5	14.5	16.5	16.5	14.5	15.5	13.0	12.5	13.0
27	17.0	12.5	15.0	19.0	14.5	17.0	15.5	14.0	15.0	12.5	11.0	11.5
28	18.5	14.0	16.5	19.5	16.0	18.0	15.0	13.0	14.0	12.0	10.0	10.5
29	18.0	15.5	16.5	18.0	15.5	17.0	16.0	13.5	15.0	10.0	8.0	9.0
30	16.5	14.0	15.5	17.5	14.5	16.0	15.5	13.5	14.5	11.0	8.5	9.5
31	---	---	---	18.0	14.0	16.0	14.5	13.0	13.5	---	---	---
MONTH	20.5	11.0	15.9	19.5	13.0	16.4	20.5	13.0	15.9	18.0	8.0	13.1

CHIPPEWA RIVER BASIN

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI

LOCATION.--Lat 44°51'10", long 92°14'17", in SE 1/4 NE 1/4 sec.6, T.27 N., R.15 W., Pierce County, Hydrologic Unit 07050005, on right bank 770 ft downstream from flood control dam, 1,500 ft upstream from Mines Creek, at Spring Valley.

DRAINAGE AREA.--64.1 mi².

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

REVISED RECORDS.--WDR WI-67-1: 1966. WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and v-notch sharp-crested weir. Datum of gage is 900.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to July 31, 1957, nonrecording gage at site 850 ft downstream at datum of 912.45 ft above National Geodetic Vertical Datum of 1929. Aug. 1, 1957, to June 6, 1966, nonrecording gage at downstream site at datum of 910.45 ft above National Geodetic Vertical Datum of 1929. June 7, 1966, to Oct. 31, 1968, nonrecording gage at downstream site at datum of 909.45 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Low flow slightly regulated and high flow completely regulated by flood-control dam 770 ft upstream. Data-collection platform at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Maximum stage since at least 1894, that of Sept. 18, 1942, 19.98 ft, with datum at 909.45 ft above National Geodetic Vertical Datum of 1929, from floodmarks, discharge, 33,000 ft³/s estimated by U.S. Army Corps of Engineers on basis of slope-area measurement by Geological Survey of peak discharge of 39,000 ft³/s at Elmwood, drainage area, 91.9 mi².

REVISIONS.--The maximum discharges for water years 1975 through 1979 along with some daily, monthly, and annual values for water years 1977 and 1978 have been revised, and are shown in the following table. They supersede figures published in U.S.G.S. Water Resources Data-Wisconsin reports for 1975 through 1979.

Water year	Date	Discharge (ft ³ /s)	Gage height (ft)
1975	Aug. 23, 1975	2,370	918.95
1976	Mar. 20, 1976	890	916.47
1977	Aug. 31, 1977	2,570	919.24
1978	July 1, 1978	2,350	918.92
1979	July 4, 1979	925	916.54

Daily, monthly, and annual revisions are as follows:

August 31, 1977.....1,540 ft³/s
 June 25, 1978..... 907 ft³/s
 June 26, 1978..... 423 ft³/s
 July 1, 1978.....1,660 ft³/s

	Total	Mean	Max	Min
August 1977	1,882.6	60.7	1,540	9.4
Wtr Yr 1977	9,363.2	25.7	1,540	5.8
Cal Yr 1977	11,169.8	30.6	1,540	6.0
June 1978	2,771	92.4	907	17
July 1978	2,916	94.1	1,660	11
Wtr Yr 1978	15,458.2	42.4	1,660	6.0
Cal Yr 1978	13,957.9	38.2	1,660	7.5

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	29	78	20	18	23	44	33	20	21	19	18
2	17	55	64	20	18	33	35	19	20	27	26	18
3	17	49	49	20	18	63	32	13	20	24	20	18
4	17	38	38	20	17	157	30	21	20	22	18	20
5	18	31	34	20	18	481	29	26	20	22	17	20
6	18	27	30	20	17	712	28	46	20	21	17	20
7	17	23	29	21	17	331	27	43	20	21	19	18
8	17	21	28	22	17	170	27	31	21	23	19	18
9	16	20	27	22	17	136	27	26	21	23	18	32
10	27	19	26	22	17	75	28	25	21	23	19	23
11	22	19	26	21	17	59	28	24	21	23	18	6.2
12	8.1	19	28	21	17	43	31	24	21	388	17	8.7
13	11	20	29	20	17	36	34	22	21	205	17	13
14	14	24	36	20	17	32	36	22	20	58	17	16
15	15	49	35	19	17	30	78	23	19	32	17	17
16	15	88	32	19	17	28	210	25	34	26	16	189
17	15	61	28	19	17	30	85	26	44	23	16	64
18	15	600	25	19	17	39	51	25	44	22	16	32
19	15	311	23	18	18	39	63	24	34	23	16	24
20	15	92	23	18	17	38	567	23	27	22	16	22
21	16	54	23	18	17	37	744	23	23	21	16	21
22	16	46	22	19	17	34	294	23	29	22	16	19
23	16	45	22	19	17	31	162	24	26	22	16	18
24	17	36	21	18	18	49	78	23	24	20	16	18
25	17	31	22	19	18	160	54	23	22	19	18	17
26	16	28	21	19	17	91	47	23	21	19	18	17
27	16	27	21	18	18	50	43	22	20	18	17	17
28	16	26	20	18	18	38	37	22	22	18	17	16
29	17	28	20	18	19	36	33	22	29	18	17	16
30	16	66	20	18	---	48	33	21	23	19	18	16
31	16	---	20	18	---	54	---	21	---	19	19	---
TOTAL	505.1	1982	920	603	504	3183	3015	768	727	1264	546	771.9
MEAN	16.3	66.1	29.7	19.5	17.4	103	100	24.8	24.2	40.8	17.6	25.7
MAX	27	600	78	22	19	712	744	46	44	388	26	189
MIN	8.1	19	20	18	17	23	27	13	19	18	16	6.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1992, BY WATER YEAR (WY)

	MEAN	26.4	26.6	18.3	14.5	19.7	75.3	64.6	37.5	40.1	26.8	25.7	32.1
MAX	81.3	86.2	39.7	19.5	71.6	164	128	94.9	148	94.1	88.8	153	153
(WY)	1971	1971	1978	1992	1981	1989	1969	1973	1980	1978	1975	1986	1986
MIN	10.4	7.24	4.22	5.21	5.77	10.1	19.5	12.4	11.6	12.5	5.95	9.81	9.81
(WY)	1970	1969	1969	1969	1969	1970	1987	1977	1969	1988	1969	1969	1969

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

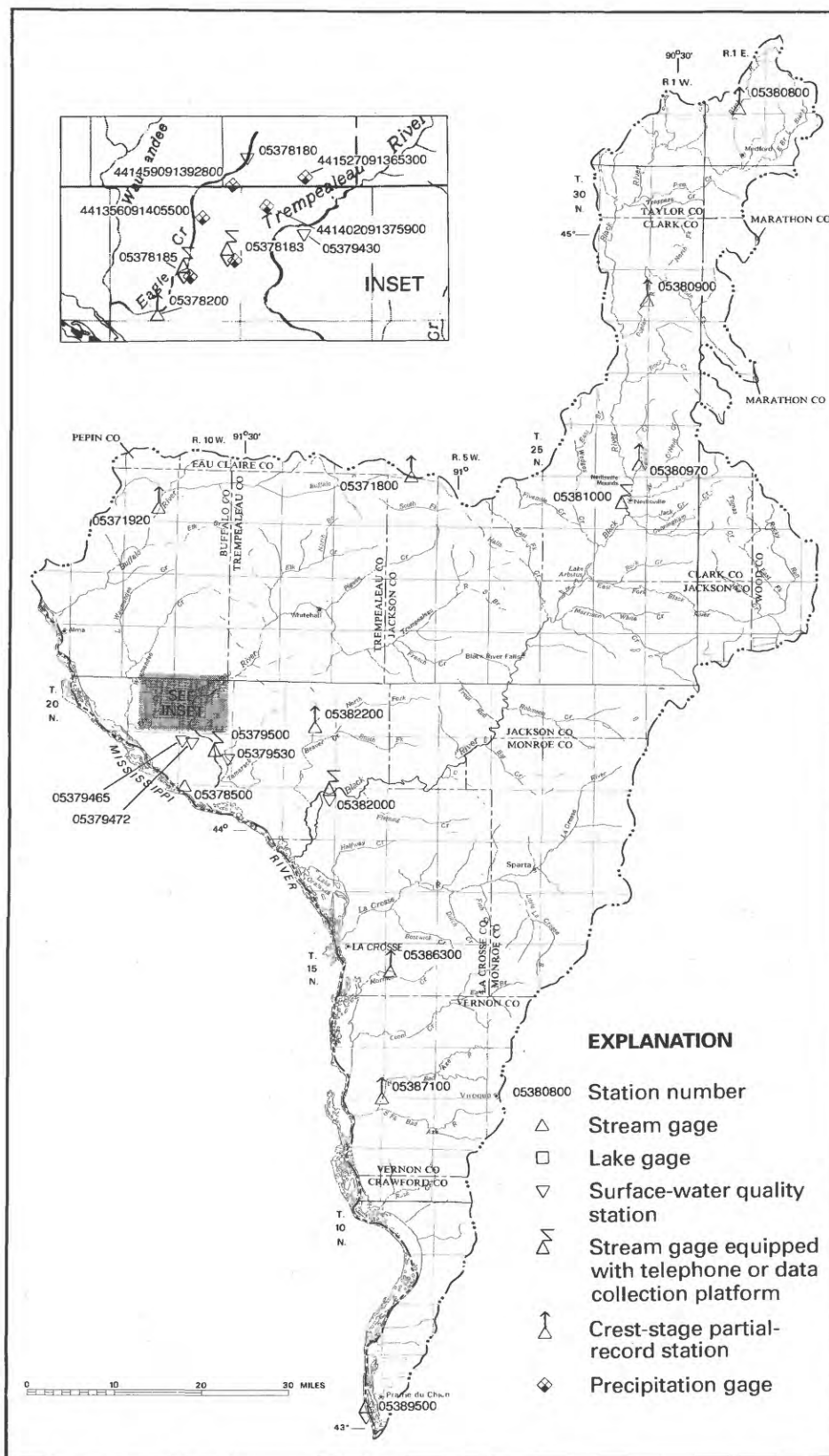
FOR 1992 WATER YEAR

WATER YEARS 1969 - 1992

ANNUAL TOTAL	14616.1	14789.0	
ANNUAL MEAN	40.0	40.4	34.0
HIGHEST ANNUAL MEAN			55.8
LOWEST ANNUAL MEAN			21.2
HIGHEST DAILY MEAN	762	Mar 23	2190
LOWEST DAILY MEAN	8.1	Oct 2	(a).00
ANNUAL SEVEN-DAY MINIMUM	13	Jan 1	.91
INSTANTANEOUS PEAK FLOW			993
INSTANTANEOUS PEAK STAGE			16.68
INSTANTANEOUS LOW FLOW			3.6
10 PERCENT EXCEEDS	64		54
50 PERCENT EXCEEDS	21		21
90 PERCENT EXCEEDS	14		17

(a) 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

(b) 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



WAUMANDEE CREEK BASIN

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441459091392800 EAGLE CREEK RAIN GAGE E3-1006, LOSINSKI FARM, NEAR FOUNTAIN CITY, WI

LOCATION.--Lat 44°14'59", long 91°39'28", in NE 1/4 SE 1/4 sec.36, T.21 N., R.11 W., Buffalo County, Hydrologic Unit 07040003, on Eagle Valley Road, 0.3 mi west of junction with Glencoe-Waumandee Road, near Fountain City.

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on July 12, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 9, 13, Dec. 6-9, 21-23, 29, Jan. 2-4, 8, 30, and Mar. 15, 16, 20, 22, 23.
Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Feb. 15, 19, 20.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.22 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 4.22 in., Sept. 16.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	1.74	.00	.00	.00	.00	.00	.00	.00	.00	1.18	.00
2	.00	.00	.00	.00	.00	.00	.00	.04	.00	.70	.34	.35
3	.00	.00	.00	.00	.00	.51	.00	.00	.00	.01	.08	.00
4	.12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.30
5	.26	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.91
6	.02	.00	.00	.00	.00	.02	.08	.00	.03	.00	.02	.00
7	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.33	.07
8	.00	.00	.00	.00	.00	.06	.05	.00	.01	.27	.00	.00
9	.00	.00	.00	.00	.00	.62	.00	.00	.00	.03	.00	.28
10	.00	.00	.00	.00	.00	.00	.04	.00	.00	.02	.07	.00
11	.00	.00	.00	.00	.00	.00	.00	.07	.00	.02	.02	.00
12	.00	.00	.86	.00	.00	.00	.00	.00	.00	.02	.00	.00
13	.04	.00	.01	.00	.00	.00	.01	.00	.00	.99	.00	.12
14	.08	.54	.00	.00	.00	.00	.00	.02	.06	.00	.00	.69
15	.00	.05	.00	.00	.00	.00	.74	.00	.00	.04	.00	.08
16	.00	.01	.00	.00	.00	.00	.06	1.18	.46	.00	.00	4.22
17	.00	.79	.00	.00	.00	.00	.00	.15	.69	.00	.01	.06
18	.07	.33	.00	.00	.00	.00	.23	.00	.05	.00	.00	.01
19	.00	.00	.00	.00	.00	.00	.30	.00	.04	.04	.00	.00
20	.00	.00	.00	.00	.00	.00	1.16	.00	.00	.00	.00	.00
21	.00	.08	.00	.00	.00	.00	.09	.59	.00	.00	.00	.00
22	.00	.00	.00	.30	.02	.00	.05	.30	.00	.99	.00	.00
23	1.13	.00	.00	.00	.11	.00	.00	.00	.17	.01	.00	.00
24	.21	.00	.00	.00	.12	.00	.00	.00	.01	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.09	.00
26	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.01	.04
27	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.06
28	.08	.00	.00	.00	.00	.07	.00	.00	.01	.00	.00	.00
29	.01	.74	.00	.00	.00	.40	.00	.00	.01	.00	.00	.00
30	.00	.14	.00	.00	---	.01	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	2.03	4.42	0.87	0.30	0.26	1.77	2.81	2.43	1.54	3.14	2.15	7.19

WAUMANDEE CREEK BASIN

05378180 EAGLE CREEK, AT SCHAFFNER ROAD, NEAR FOUNTAIN CITY, WI

LOCATION.--Lat 44°14'01", long 91°40'52", in NW 1/4 SE 1/4 sec.3, T.20 N., R.6 W., Buffalo County, Hydrologic Unit 07040003, at Schaffner Road, about 7.2 mi northeast of Fountain City.

DRAINAGE AREA.--4.52 mi².

PERIOD OF RECORD.--July 1990 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)
APR 1992									
20...	1711	--	95	4730	--	--	--	--	--
JUL									
13...	1710	--	76	2790	--	--	--	--	--
SEP									
16...	1139	107	--	2300	--	--	--	--	--
*16...	1148	107	--	2100	--	--	--	--	--
16...	1420	--	--	--	5	9	20	64	85

DATE	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	SED. TOTAL, FALL DIAM. % FINER THAN .062 MM (80186)	SED. TOTAL, FALL DIAM. % FINER THAN .125 MM (80187)	SED. TOTAL, FALL DIAM. % FINER THAN .250 MM (80188)	SED. TOTAL, FALL DIAM. % FINER THAN .500 MM (80189)
SEP 1992								
16...	--	--	--	--	94	96	98	100
16...	--	--	--	--	96	98	99	100
16...	88	90	95	100	--	--	--	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

217

441356091405500 EAGLE CREEK RAIN GAGE E2-1005, SCHAFFNER FARM, NEAR FOUNTAIN CITY, WI

LOCATION.--Lat 44°13'56", long 91°40'55", in SW 1/4 SE 1/4 sec.3, T.20 N., R.11 W., Buffalo County, Hydrologic Unit 07040003, on Schaffner Valley Road, 1.7 mi north of junction with CTR G, near Fountain City.

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on July 19, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 12, 13, Dec. 6-8, 20-22, 24, Jan. 6, 8, 29, 30, Feb. 22, 24, and Mar. 14, 16, 20, 22, 23. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Feb. 18-20.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.23 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 4.23 in., Sept. 16.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	3.06	.00	.00	.00	.00	.00	.00	.00	.00	.59	.00
2	.00	.00	.00	.00	.00	.00	.00	.03	.00	.81	.38	.46
3	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	.16	.01
4	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.32
5	.26	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.97
6	.01	.00	.00	.00	.00	.01	.07	.00	.03	.00	.06	.00
7	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.36	.08
8	.00	.00	.00	.00	.00	.05	.07	.00	.01	.30	.00	.00
9	.00	.01	.00	.00	.00	.77	.00	.00	.00	.04	.00	.43
10	.00	.00	.00	.00	.00	.00	.07	.00	.00	.04	.02	.00
11	.00	.00	.01	.00	.00	.00	.01	.08	.00	.07	.09	.00
12	.00	.00	.86	.00	.00	.00	.00	.00	.00	.03	.01	.00
13	.06	.00	.01	.00	.00	.00	.00	.00	.00	1.29	.00	.14
14	.09	.62	.00	.00	.00	.00	.00	.03	.14	.00	.00	.81
15	.00	.10	.00	.00	.00	.00	.89	.00	.00	.06	.00	.03
16	.00	.01	.00	.00	.00	.00	.05	1.48	.48	.00	.00	4.23
17	.00	.98	.00	.00	.00	.00	.00	.09	.99	.00	.02	.06
18	.08	.29	.00	.00	.00	.00	.27	.00	.19	.00	.00	.01
19	.00	.00	.00	.00	.00	.00	.35	.00	.06	.01	.00	.00
20	.00	.00	.00	.00	.00	.00	1.36	.00	.00	.00	.00	.00
21	.00	.11	.00	.00	.00	.00	.13	.50	.00	.00	.00	.00
22	.00	.00	.00	.33	.00	.00	.04	.44	.00	1.10	.00	.00
23	1.30	.00	.00	.00	.00	.00	.00	.00	.35	.00	.00	.00
24	.17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.08	.00	.00	.14	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.10	.00	.00	.00	.00	.11	.00	.00	.04	.00	.00	.00
29	.00	.87	.01	.00	.00	.34	.00	.00	.03	.00	.00	.00
30	.00	.17	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.21	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	2.43	6.22	0.89	0.33	0.00	1.66	3.31	2.73	2.32	3.75	1.83	7.60

WAUMANDEE CREEK BASIN

441527091365300 JOOS VALLEY CREEK RAIN GAGE J3-1003, HANSEN FARM, NEAR ARCADIA, WI

LOCATION.--Lat 44°15'27", long 91°36'53", in NE 1/4 NW 1/4 sec.32, T.21 N., R.10 W., Buffalo County, Hydrologic Unit 07040003, on Hannon Road, 0.1 mi north of the junction with Pausy Pass, near Arcadia.

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on July 12, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 12, 13, Dec. 6, 7, 9, 21, Jan. 8, Feb. 23-24, 26, and Mar. 14, 16, 22, 23. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Feb. 20.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.25 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 4.25 in., Sept. 16.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	2.89	.00	.00	.00	.00	.00	.00	.00	.00	1.24	.00
2	.00	.00	.00	.00	.00	.00	.00	.03	.00	.79	.33	.45
3	.00	.00	.00	.00	.00	.51	.00	.00	.00	.01	.01	.00
4	.09	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.31
5	.22	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.86
6	.11	.00	.00	.00	.00	.03	.05	.00	.03	.00	.05	.01
7	.00	.00	.00	.00	.00	.01	.01	.00	.00	.00	.41	.04
8	.00	.00	.00	.00	.00	.04	.05	.00	.00	.32	.00	.00
9	.00	.00	.00	.00	.00	.71	.01	.00	.01	.03	.00	.43
10	.00	.00	.00	.00	.00	.00	.05	.00	.00	.02	.04	.01
11	.00	.00	.00	.00	.00	.00	.01	.11	.00	.06	.04	.00
12	.00	.00	.86	.00	.00	.00	.00	.01	.00	.03	.00	.00
13	.04	.00	.00	.00	.00	.00	.00	.00	.00	1.15	.00	.10
14	.02	.66	.00	.00	.00	.00	.00	.02	.17	.00	.00	.76
15	.00	.08	.00	.00	.00	.00	.90	.00	.00	.03	.00	.10
16	.00	.00	.00	.00	.00	.00	.07	1.35	.52	.00	.00	4.25
17	.00	1.04	.00	.00	.00	.00	.00	.09	.73	.04	.00	.05
18	.06	.34	.00	.00	.00	.00	.30	.00	.07	.00	.00	.01
19	.01	.00	.00	.00	.00	.00	.32	.00	.06	.23	.00	.00
20	.00	.00	.00	.00	.00	.00	1.17	.00	.00	.00	.00	.00
21	.00	.12	.00	.00	.00	.00	.10	.92	.00	.00	.00	.00
22	.00	.00	.00	.21	.00	.00	.03	.47	.01	1.23	.00	.00
23	.69	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00
24	.19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.01	.00	.00	.00	.00	.00	.00	.04	.00	.00	.13	.00
26	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.05
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04
28	.10	.00	.00	.00	.00	.01	.00	.00	.10	.00	.00	.00
29	.01	.65	.00	.00	.00	.27	.00	.00	.02	.00	.00	.00
30	.00	.08	.00	.00	---	.06	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	1.56	5.86	0.86	0.21	0.00	1.74	3.07	3.05	1.82	3.94	2.25	7.47

441402091395900 JOOS VALLEY CREEK RAIN GAGE J2-1002, SLABY FARM, NEAR FOUNTAIN CITY, WI

LOCATION.--Lat 44°14'02", long 91°37'59", in NE 1/4 SE 1/4 sec.1, T.20 N., R.11 W., Buffalo County, Hydrologic Unit 07040003, on Slaby Farm entrance road just off Joos Valley Road, and approximately 3.1 mi northeast of the junction of Joos Valley Road and CTH G, near Fountain City.

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on July 12, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11-13, Dec. 6-9, 21-25, 27, 29, Jan. 6, 8, Feb. 22, 24, and Mar. 14-17, 20, 22. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Feb. 15, 18-20.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.62 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 4.62 in., Sept. 16.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2.67	.00	.00	.00	.00	.00	.00	.00	.00	1.17	.00
2	.00	.00	.00	.00	.00	.00	.00	.02	.00	.71	.39	.39
3	.00	.00	.00	.00	.00	.22	.00	.00	.00	.00	.04	.01
4	.11	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.33
5	.27	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.78
6	.01	.00	.00	.00	.00	.01	.06	.00	.03	.00	.06	.01
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.41	.06
8	.00	.00	.00	.00	.00	.05	.06	.00	.01	.32	.00	.00
9	.00	.00	.00	.00	.00	.81	.00	.00	.00	.03	.00	.54
10	.00	.00	.00	.00	.00	.00	.08	.00	.00	.02	.04	.00
11	.00	.00	.00	.00	.00	.00	.00	.12	.00	.09	.03	.00
12	.00	.00	.98	.00	.00	.00	.00	.00	.00	.04	.01	.00
13	.04	.00	.00	.00	.00	.00	.01	.00	.00	1.38	.00	.06
14	.10	.64	.01	.00	.00	.00	.00	.02	.14	.00	.00	.73
15	.00	.10	.00	.00	.00	.00	.96	.00	.00	.05	.00	.02
16	.00	.00	.00	.00	.00	.00	.08	1.74	.67	.01	.00	4.62
17	.00	.98	.00	.00	.00	.00	.00	.13	.92	.00	.01	.04
18	.09	.35	.00	.00	.00	.00	.30	.00	.12	.00	.01	.00
19	.00	.00	.00	.00	.00	.00	.32	.00	.02	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	1.27	.00	.00	.00	.00	.00
21	.00	.10	.00	.01	.00	.00	.09	.79	.00	.00	.00	.00
22	.00	.00	.00	.30	.00	.00	.04	.56	.01	1.33	.00	.00
23	.67	.00	.00	.01	.00	.00	.00	.00	.23	.00	.00	.00
24	.20	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.09	.00	.00	.15	.00
26	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.05
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
28	.10	.00	.00	.00	.00	.14	.00	.00	.06	.00	.00	.00
29	.00	.71	.00	.03	.00	.43	.00	.00	.04	.00	.01	.00
30	.00	.07	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.01	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	1.60	5.62	0.99	0.35	0.00	1.74	3.27	3.48	2.26	3.98	2.33	7.65

WAUMANDEE CREEK BASIN

05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI

LOCATION.--Lat 44°12'54", long 91°39'54", in NE 1/4 NW 1/4 sec.14, T.20 N., R.11 W., Buffalo County, Hydrologic Unit 07040003, on left bank at bridge on private road, 6.3 mi northeast of Fountain City.

DRAINAGE AREA.--5.89 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 800 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 5-8, 25-27, Dec. 2-7, 15-19, Jan. 16-20, and Feb. 9, 10. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	25	5.0	3.6	3.0	8.1	4.1	4.0	3.2	2.8	5.5	2.6
2	2.5	7.8	4.3	3.6	3.0	5.1	3.9	3.9	3.2	4.6	5.2	3.1
3	2.5	6.9	4.1	3.6	3.4	5.2	4.0	3.9	3.2	3.3	3.7	2.9
4	2.6	6.2	4.0	3.5	3.3	6.7	3.9	3.8	3.2	3.0	3.5	3.1
5	2.8	5.8	4.0	3.4	3.2	5.6	3.7	3.7	3.2	3.0	3.3	3.6
6	3.1	5.4	3.8	3.4	3.2	5.5	3.7	3.5	3.4	2.9	3.4	3.9
7	2.8	5.0	4.2	3.4	2.8	5.0	3.7	3.3	3.2	2.9	4.0	3.2
8	2.8	5.2	4.5	3.4	2.7	4.8	3.6	3.4	3.1	3.4	3.6	3.0
9	2.7	5.7	4.3	3.4	2.5	8.8	3.7	3.4	3.1	3.0	3.3	3.9
10	2.6	5.7	4.3	3.2	2.6	5.5	3.6	3.3	3.0	3.1	3.2	3.1
11	2.7	5.7	4.1	3.2	2.7	5.1	3.7	3.6	3.0	3.0	3.0	2.9
12	2.7	5.0	7.5	3.3	2.7	4.7	3.5	3.4	2.9	3.2	3.1	2.7
13	2.7	4.6	5.7	3.3	2.4	4.5	3.5	3.4	2.9	5.9	3.1	2.8
14	2.8	6.1	4.6	3.1	2.5	4.5	3.5	3.4	3.1	4.2	3.0	4.5
15	2.8	7.3	4.2	2.7	2.5	4.3	4.8	3.3	2.8	3.7	2.9	3.3
16	2.8	5.5	4.0	2.6	2.5	4.6	5.4	6.7	3.7	3.5	3.0	63
17	2.8	7.3	3.9	2.6	4.1	4.6	4.4	5.4	4.5	3.2	3.0	7.3
18	2.7	10	3.6	2.5	3.3	4.5	4.2	4.0	4.2	3.2	3.0	5.9
19	2.7	5.4	3.5	2.7	2.9	4.3	5.6	3.7	3.4	3.2	2.9	5.2
20	2.7	4.9	4.1	3.0	2.6	4.2	8.9	3.6	3.1	3.1	2.9	4.9
21	2.7	4.8	3.9	3.2	2.5	4.0	7.5	5.0	2.9	3.0	2.8	4.7
22	2.8	4.6	4.0	3.5	2.4	4.0	6.0	5.7	3.0	4.9	2.8	4.2
23	3.1	4.5	3.9	3.2	2.5	4.4	5.4	4.6	3.5	4.2	2.7	3.8
24	5.2	4.6	3.7	3.0	2.5	4.2	5.2	4.0	3.3	3.5	2.7	3.6
25	3.3	3.9	3.7	3.0	2.5	4.2	5.0	3.9	3.0	3.4	2.9	3.5
26	3.1	3.6	3.7	2.9	3.6	4.0	4.7	4.0	2.9	3.3	2.9	3.6
27	3.0	3.8	3.6	2.9	6.2	3.7	4.5	3.7	2.8	3.1	2.8	3.5
28	3.0	4.0	3.6	2.9	6.5	3.9	4.3	3.6	2.8	3.1	2.8	3.3
29	3.0	5.8	3.6	2.9	4.6	4.8	4.3	3.4	2.9	3.0	2.7	3.3
30	2.9	7.0	3.6	3.0	---	4.4	4.1	3.4	2.7	3.0	2.7	3.3
31	3.2	---	3.6	3.2	---	4.3	---	3.2	---	3.0	2.6	---
TOTAL	89.6	187.1	128.6	97.2	91.2	151.5	136.4	121.2	95.2	105.7	99.0	171.7
MEAN	2.89	6.24	4.15	3.14	3.14	4.89	4.55	3.91	3.17	3.41	3.19	5.72
MAX	5.2	25	7.5	3.6	6.5	8.8	8.9	6.7	4.5	5.9	5.5	63
MIN	2.5	3.6	3.5	2.5	2.4	3.7	3.5	3.2	2.7	2.8	2.6	2.6
CFSM	.49	1.06	.70	.53	.53	.83	.77	.66	.54	.58	.54	.97
IN.	.57	1.18	.81	.61	.58	.96	.86	.77	.60	.67	.63	1.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	1990	1991	1992	1990	1991	1992	1990	1991	1992	1990	1991	1992
MEAN	2.65	4.16	3.03	2.51	2.61	4.27	4.43	4.80	3.23	3.13	3.69	3.83
MAX	2.89	6.24	4.15	3.14	3.14	4.89	4.55	5.70	3.30	3.41	4.91	5.72
(WY)	1992	1992	1992	1992	1992	1992	1992	1991	1991	1992	1990	1992
MIN	2.40	2.09	1.92	1.89	2.05	3.66	4.31	3.91	3.17	2.66	2.98	2.68
(WY)	1991	1991	1991	1991	1991	1991	1991	1992	1992	1990	1991	1991

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1990 - 1992

ANNUAL TOTAL	1315.0	1474.4	
ANNUAL MEAN	3.60	4.03	3.53
HIGHEST ANNUAL MEAN			4.03
LOWEST ANNUAL MEAN			3.03
HIGHEST DAILY MEAN	25	63	63
LOWEST DAILY MEAN	1.6	2.4	1.5
ANNUAL SEVEN-DAY MINIMUM	1.7	2.6	1.6
INSTANTANEOUS PEAK FLOW		284	(a)574
INSTANTANEOUS PEAK STAGE		8.63	9.46
INSTANTANEOUS LOW FLOW		(b)1.9	(b).54
ANNUAL RUNOFF (CFSM)	.61	.68	.60
ANNUAL RUNOFF (INCHES)	8.31	9.31	8.14
10 PERCENT EXCEEDS	5.3	5.4	5.0
50 PERCENT EXCEEDS	3.1	3.5	3.1
90 PERCENT EXCEEDS	2.0	2.7	2.1

(a) From rating curve extended above 10 ft³/s on basis of step-backwater method

(b) Result of freezeup

05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1990 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 1990 to current year.

DISSOLVED OXYGEN: July 1990 to current year.

SUSPENDED-SOLIDS DISCHARGE: July 1990 to current year.

TOTAL-PHOSPHORUS DISCHARGE: July 1990 to current year.

INSTRUMENTATION.--Water-quality sampler July 1990 to current year; continuous water-temperature recorder July 1990 to current year; dissolved-oxygen recorder July 1990 to current year.

REMARKS.--Chemical analyses by the Wisconsin State Laboratory of Hygiene. Suspended-sediment and particle-size analyses by U.S. Geological Survey Laboratory. Samples are point samples unless otherwise indicated.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 31.0°C, June 27-28, 1991; minimum observed, 0.0°C, on many days during 1991 and 1992 winter periods.

DISSOLVED OXYGEN: Maximum observed, 15.8 mg/L, Apr. 26, 1991; minimum observed, 4.3 mg/L, June 28, 1991.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 906 tons, Sept. 16, 1992; minimum daily, 0.04 ton, Nov. 8-9, 1990.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,950 lb, Aug. 26, 1990; minimum daily, 0.22 lb, Nov. 9, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 28.0°C, June 12; minimum observed, 0.0°C, Nov. 1-2, 23-24, 27, 30, Dec. 1-4, 14-15, Jan. 14-20, Feb. 8-9, 12, and Mar. 10, 12.

DISSOLVED OXYGEN: Maximum observed, 15.0 mg/L, Apr. 17, 18; minimum observed, 4.9 mg/L, May 16.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 906 tons, Sept. 16; minimum daily, 0.06 ton, Oct. 20-22.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,790 lb, Sept. 16; minimum daily, 0.38 lb, Apr. 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)
OCT 1991							
*22...	1240	2.8	--	<1.0	500	180	8
23...	2340	9.1	--	--	--	--	868
29...	1308	3.0	--	<1.0	--	--	16
NOV							
01...	0110	9.0	--	--	--	--	392
01...	0145	13	--	--	--	--	1030
01...	0250	18	--	--	--	--	1680
01...	0325	23	--	--	--	--	2130
01...	0350	28	--	--	--	--	3010
01...	0740	34	--	--	--	--	1320
01...	0945	42	--	--	--	--	1620
01...	1020	50	--	--	--	--	2060
01...	1050	58	--	--	--	--	3200
01...	1220	46	--	--	--	--	2640
01...	1330	36	--	--	--	--	1700
01...	1610	19	--	--	--	--	700
01...	1935	12	--	--	--	--	312
*02...	0820	7.5	--	--	--	--	82
14...	1940	9.7	--	--	--	--	372
17...	2000	9.7	--	--	--	--	318
17...	2110	14	--	--	--	--	712
17...	2200	18	--	--	--	--	1100
18...	0025	22	--	7.9	--	--	1060
18...	0035	22	--	4.7	--	--	468
18...	1020	9.0	--	4.0	--	--	160
29...	1930	9.5	--	--	--	--	280
30...	0730	7.5	--	--	--	--	80
DEC							
*11...	1242	4.1	--	<1.0	--	--	10
JAN 1992							
*21...	1407	3.2	0.5	<1.0	--	--	22
FEB							
*19...	1346	2.8	--	<1.0	--	--	12
27...	1340	11	--	--	--	--	1020

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

		SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)			
OCT 1991										
22...		314	84	4	0.759	<0.005	0.030			
23...		1090	150	84	0.554	--	1.00			
29...		346	86	4	0.935	0.021	0.060			
NOV										
01...		744	124	52	0.733	--	0.670			
01...		1270	180	124	0.819	--	1.66			
01...		1900	266	250	--	--	--			
01...		2280	276	260	0.612	--	3.38			
01...		3150	330	320	0.525	--	3.93			
01...		1510	204	180	0.642	--	2.48			
01...		1890	200	180	0.740	--	2.45			
01...		2200	234	230	--	--	--			
01...		3490	292	300	0.661	--	3.49			
01...		2830	272	260	0.962	--	3.22			
01...		1820	202	180	1.16	--	2.21			
01...		982	176	110	1.54	--	2.29			
01...		580	132	24	--	--	--			
02...		412	102	5	1.60	--	0.240			
14...		684	120	40	1.14	--	0.850			
17...		640	110	36	1.11	0.174	0.560			
17...		988	152	92	--	--	--			
17...		1390	154	112	0.936	0.305	1.88			
18...		1310	140	92	0.987	0.323	1.74			
18...		726	104	44	--	--	--			
18...		458	94	24	--	--	--			
29...		512	86	28	1.02	0.092	0.240			
30...		342	74	9	1.26	0.093	0.190			
DEC										
11...		350	92	2	1.72	0.023	0.030			
JAN 1992										
21...		354	88	4	1.49	0.006	0.040			
FEB										
19...		324	80	<2	1.16	0.017	0.040			
27...		1290	204	120	0.087	3.77	3.48			
DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
MAR 1992										
01...	1305	11	10	670	890	124	65	0.833	1.12	1.42
01...	1400	15	17	1730	1940	212	170	0.555	1.37	2.84
01...	2110	8.9	14	548	758	118	52	0.918	1.30	1.83
03...	1209	4.2	--	36	348	72	6	1.32	0.089	0.120
*03...	1210	4.2	<1.0	34	344	76	7	1.31	0.075	0.090
04...	0005	12	--	132	410	88	20	1.21	0.435	0.460
04...	1651	6.0	7.1	632	862	116	56	1.23	0.616	0.970
*04...	1656	6.0	3.4	102	382	80	14	1.20	0.424	0.420
09...	0215	12	6.4	1220	1470	146	92	1.22	0.257	1.21
09...	0245	16	15	2690	2930	262	230	1.11	0.425	3.05
09...	0725	9.9	6.6	1050	1300	160	90	1.31	0.246	1.26
*10...	1121	7.2	1.4	244	570	96	16	1.58	0.060	0.240
10...	1124	7.2	2.1	200	522	98	16	1.59	0.061	0.230
12...	1010	7.7	--	150	484	102	14	--	--	--
*16...	1209	4.3	<1.0	28	340	104	3	1.35	0.011	0.040
30...	1357	4.3	1.5	26	308	84	6	1.07	0.014	0.040
APR										
*14...	1158	3.6	<1.0	9	322	88	4	1.12	<0.005	0.020
15...	2210	7.9	--	420	702	114	32	--	--	0.600
20...	1505	8.5	8.0	944	1190	142	80	0.906	0.056	0.800
20...	1530	11	13	1090	1310	160	88	0.884	0.085	1.12
20...	1545	14	22	2420	2550	256	180	0.729	0.171	2.46
20...	1615	18	30	4000	3920	348	330	0.576	0.210	4.00
20...	1635	22	24	6030	5970	528	550	0.425	0.363	6.56
20...	1935	15	13	2880	3020	274	240	1.26	0.290	2.71
21...	0320	8.9	4.9	720	1030	154	60	1.70	0.156	1.22
21...	1127	6.7	1.9	144	484	96	14	1.86	0.095	0.210
21...	1132	6.7	--	174	498	98	20	1.83	0.084	0.270
22...	1132	6.0	1.2	47	394	94	8	1.70	0.052	0.110
27...	1522	4.4	0.9	22	346	94	4	1.51	0.007	0.050

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)
MAY 1992							
*11...	1212	4.0	--	--	9	2.8	45
16...	1640	6.9	--	--	140	--	2160
16...	1700	15	--	--	170	--	3420
16...	1710	21	--	--	470	--	5170
16...	1720	27	--	--	410	--	7300
16...	1750	33	--	--	540	--	9800
16...	1835	23	--	--	50	--	8080
16...	1905	16	--	--	370	--	4740
17...	0855	5.5	--	--	19	--	142
21...	1730	6.9	--	--	35	8.9	1250
21...	1750	9.2	--	--	74	11	1190
21...	1820	15	--	--	330	21	2960
21...	1825	18	--	--	190	24	3400
21...	1940	11	--	--	90	21	3170
21...	2250	5.8	--	--	62	7.2	524
22...	1151	4.2	--	--	<5	1.5	75
*22...	1153	4.2	--	--	8	2.2	88
22...	1835	6.7	--	--	10	--	740
22...	1855	9.9	--	--	67	--	1520
22...	1910	15	--	--	300	--	3710
22...	2205	8.8	--	--	97	--	1130
27...	1147	3.8	--	--	<5	1.2	31
JUN							
*10...	1230	3.1	--	--	<5	1.6	20
*16...	1352	4.7	--	--	22	2.8	88
17...	0515	6.5	--	--	70	8.2	440
17...	0535	8.9	--	--	71	10	940
17...	2305	6.8	--	--	--	--	504
22...	0949	3.1	--	--	<5	1.1	30

DATE	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
MAY 1992						
11...	330	84	7	0.818	0.019	0.080
16...	2330	196	155	0.543	0.105	1.70
16...	3330	254	230	0.369	0.167	0.980
16...	5070	428	420	0.327	0.338	4.72
16...	7280	506	440	0.403	0.751	6.58
16...	9370	636	700	0.409	0.645	8.70
16...	7950	728	740	0.554	0.971	9.70
16...	4870	464	440	0.836	0.992	5.22
17...	440	88	14	1.16	0.137	0.250
21...	1520	156	108	0.675	0.133	1.11
21...	1510	156	98	0.663	0.157	1.16
21...	3100	306	276	0.570	0.293	3.60
21...	3670	298	276	0.497	0.238	3.49
21...	3410	420	392	0.584	0.387	4.46
21...	794	132	76	0.860	0.266	1.03
22...	410	86	11	1.11	0.118	0.140
22...	410	82	12	1.25	0.112	0.160
22...	1050	160	84	0.936	0.168	1.02
22...	1750	228	176	0.880	0.201	2.00
22...	3940	426	372	0.666	0.346	4.51
22...	1360	202	152	0.852	0.259	1.80
27...	356	90	6	1.24	0.026	0.060
JUN						
10...	328	94	4	0.888	0.045	0.060
16...	404	94	15	0.931	0.149	0.210
17...	670	138	69	0.566	0.213	0.820
17...	1220	152	108	0.692	0.240	1.08
17...	798	184	64	--	--	0.860
22...	370	96	6	1.10	0.062	0.070

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
JUL 1992												
02...	0615	6.8	--	--	--	912	1160	122	84	0.644	0.102	0.870
02...	0630	10	--	--	--	1300	1510	160	132	0.647	0.166	1.60
*07...	0950	3.0	16.0	9.2	<1.0	22	354	80	5	0.826	0.037	0.060
13...	1450	6.6	--	--	--	340	--	--	--	--	0.072	0.470
13...	1510	9.5	--	--	7.0	580	750	118	56	0.553	0.098	0.710
13...	1530	12	--	--	9.9	792	992	138	78	0.485	0.141	1.00
13...	1550	16	--	--	14	1420	1550	174	122	0.517	0.190	1.61
13...	1935	9.3	--	--	8.1	436	650	124	48	0.787	0.206	0.850
*21...	1430	3.0	24.0	10.5	1.4	26	304	78	5	0.503	0.024	0.060
22...	1615	6.3	--	--	--	109	--	--	--	--	--	0.240
22...	1740	9.0	--	--	--	323	--	--	--	--	--	0.580
AUG												
01...	1935	7.9	--	--	--	411	--	--	--	--	0.020	0.460
01...	2015	11	--	--	9.8	744	974	132	62	0.698	0.086	0.920
01...	2020	14	--	--	15	1490	1730	192	112	0.815	0.132	1.78
01...	2025	19	--	--	--	2810	--	--	--	--	0.170	3.16
01...	2030	22	--	--	>22	3860	4230	342	280	0.609	0.285	4.85
01...	2235	15	--	--	--	1780	--	--	--	--	0.244	2.57
01...	2400	8.8	--	--	10	1400	1550	194	175	0.955	0.167	2.67
*04...	1120	3.7	16.5	10.6	1.9	26	360	86	6	0.819	0.013	0.050
18...	1545	3.1	22.0	10.0	1.4	9	270	80	4	0.457	<0.005	0.040
SEP												
*01...	1500	2.8	18.0	10.4	1.6	16	284	74	4	0.531	0.010	0.040
05...	2035	7.1	--	--	--	500	--	--	--	0.492	0.097	0.910
14...	0545	5.4	--	--	--	342	--	--	--	--	0.094	0.500
*14...	1600	4.4	19.0	11.2	2.7	57	380	98	9	0.760	0.079	0.240
16...	0235	6.1	--	--	13	332	626	136	52	0.648	0.430	1.02
16...	0415	24	--	--	--	3070	--	--	--	--	0.352	3.30
16...	0430	47	--	--	21	6110	6110	410	430	0.309	0.541	5.27
16...	0450	88	--	--	--	8120	--	--	--	--	0.674	7.29
16...	0515	159	--	--	--	8500	--	--	--	--	0.770	7.09
16...	0535	240	--	--	19	10820	10200	606	740	0.240	0.725	8.26
16...	0545	278	--	--	15	11840	11400	648	760	0.662	0.269	8.68
16...	0635	247	--	--	18	7040	6860	478	560	0.341	0.857	6.35
16...	0715	193	--	--	15	5000	4860	344	460	0.433	0.551	5.40
16...	0900	133	--	--	--	2980	--	--	--	--	0.298	3.72
16...	0925	187	--	--	15	3600	3550	248	300	0.628	0.286	3.58
16...	0935	217	--	--	5.5	3780	3900	256	340	0.619	0.274	3.46
16...	1000	260	--	--	--	5300	--	--	--	--	0.389	5.20
16...	1100	127	--	--	--	4610	--	--	--	--	0.434	5.59
16...	1146	63	--	--	10	3130	3080	264	280	0.538	0.266	4.14
16...	1148	62	--	--	7.8	3620	3570	308	320	0.552	0.291	4.01
16...	1215	48	--	--	--	2460	--	--	--	--	0.266	3.34
*17...	1613	6.7	--	--	--	54	--	--	--	--	0.108	0.180
18...	0001	6.5	--	--	1.1	58	390	74	10	1.14	0.119	0.170
18...	1250	5.9	--	--	--	44	--	--	--	--	0.074	0.130
19...	1250	5.3	--	--	--	29	--	--	--	--	0.051	0.100
30...	1515	3.3	15.5	13.0	1.7	32	350	90	4	1.04	0.005	0.050

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA) (00929)
NOV 1991								
17...	2110	--	14	56	--	30	--	2.4
DEC								
*11...	1242	--	4.1	68	--	34	--	2.3
MAR 1992								
*03...	1210	--	4.2	64	--	32	--	2.5
APR								
21...	1127	--	6.7	68	--	32	--	2.3
22...	1132	--	6.0	71	--	34	--	2.7
MAY								
*11...	1212	--	4.0	60	--	33	--	2.3
16...	1710	--	21	140	--	61	--	3.0
16...	1905	--	16	98	--	43	--	3.5
21...	1750	--	9.2	72	--	37	--	2.7
21...	1940	--	11	73	--	38	--	3.9
21...	2250	--	5.8	56	--	29	--	2.7
22...	1151	--	4.2	66	--	33	--	2.5
*22...	1153	--	4.2	68	--	33	--	2.3
22...	1835	--	6.7	67	--	33	--	2.2
22...	1910	--	15	89	--	48	--	3.1
22...	2205	--	8.8	58	--	29	--	2.4
27...	1147	--	3.8	66	--	34	--	2.3
JUN								
*10...	1230	--	3.1	60	--	34	--	2.5
*16...	1352	--	4.7	63	--	32	--	3.1
17...	0535	--	8.9	73	--	35	--	2.5
SEP								
16...	0535	--	240	--	16	--	7.0	--
16...	0545	--	278	--	16	--	7.0	--
16...	0635	--	247	--	14	--	5.0	--

DATE	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, TOTAL RECOVER- -ABLE (UG/L) (01119)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, TOTAL RECOVER- -ABLE (UG/L) (01094)
NOV 1991							
17...	200	<20	--	23000	930	80	--
DEC							
11...	50	<20	--	390	120	<10	--
MAR 1992							
03...	50	<20	--	780	220	<10	--
APR							
21...	80	<20	--	4000	320	30	--
22...	60	<20	--	1700	240	20	--
MAY							
11...	50	<20	--	820	190	<10	--
16...	700	77	--	85000	4800	290	--
16...	800	94	--	98000	5200	340	--
21...	200	29	--	22000	1400	70	--
21...	800	70	--	75000	4400	270	--
21...	200	26	--	17000	950	70	--
22...	80	<20	--	1900	240	<10	--
22...	80	<20	--	2400	260	<10	--
22...	200	<20	--	23000	1000	30	--
22...	800	94	--	91000	4300	610	--
22...	300	22	--	32000	1600	110	--
27...	60	<20	--	700	150	<10	--
JUN							
10...	50	<20	--	490	98	10	--
16...	80	<20	--	2600	300	20	--
17...	200	27	--	20000	1200	60	--
SEP							
16...	--	--	88	--	--	--	470
16...	--	--	88	--	--	--	370
16...	--	--	62	--	--	--	370

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SED. TOTAL, FALL DIAM. % FINER THAN .062 MM (80186)	SED. TOTAL, FALL DIAM. % FINER THAN .125 MM (80187)	SED. TOTAL, FALL DIAM. % FINER THAN .250 MM (80188)	SED. TOTAL, FALL DIAM. % FINER THAN .500 MM (80189)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 1992								
20...	1658	23	--	--	--	--	5840	96
MAY								
16...	1720	27	--	--	--	--	7040	96
16...	1750	33	--	--	--	--	8980	97
16...	1835	23	--	--	--	--	7690	99
21...	1820	15	--	--	--	--	2920	98
21...	1825	18	--	--	--	--	3680	98
21...	1940	11	--	--	--	--	3150	99
22...	1151	4.2	--	--	--	--	98	96
22...	1153	4.2	--	--	--	--	89	95
22...	1855	9.9	--	--	--	--	1550	96
22...	1910	15	--	--	--	--	3680	98
22...	2205	8.8	--	--	--	--	1160	99
JUN								
*17...	1235	4.3	--	--	--	--	102	94
JUL								
13...	1530	12	--	--	--	--	787	95
13...	1550	16	--	--	--	--	1410	95
13...	1724	15	--	--	--	--	1060	92
13...	1935	9.3	--	--	--	--	421	95
AUG								
01...	2025	19	--	--	--	--	2760	93
01...	2030	22	--	--	--	--	3880	94
01...	2235	15	--	--	--	--	1820	98
SEP								
05...	2035	7.1	--	--	--	--	484	95
16...	0515	159	94	98	100	--	8230	--
*16...	0932	203	95	99	100	--	2860	--
16...	1000	260	94	98	100	--	5200	--
16...	1146	63	98	99	100	--	4770	--
*16...	1148	62	94	97	99	100	2820	--
*16...	1252	35	84	89	94	100	1960	--

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
JUN 1992												
17...	1244	4.1	1	3	8	19	26	29	36	46	76	100

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

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05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	16.5	9.0	12.0	4.5	.0	3.0	.5	.0	.5	4.5	3.5	4.0
2	19.0	12.0	14.5	.5	.0	.0	.5	.0	.5	4.5	3.5	4.0
3	12.5	9.0	11.0	.5	.5	.5	.5	.0	.5	5.0	3.5	4.5
4	9.5	7.0	8.5	1.0	.5	.5	.5	.0	.5	6.0	3.0	4.5
5	11.0	7.0	9.0	2.0	.5	1.5	.5	.5	.5	4.0	3.0	3.5
6	9.5	6.5	8.0	2.0	.5	1.0	.5	.5	.5	4.5	3.5	4.0
7	13.5	4.5	8.5	1.0	.5	.5	3.5	.5	1.5	4.5	3.0	3.5
8	16.0	7.5	11.0	1.0	.5	.5	5.0	2.5	4.0	4.5	2.5	3.5
9	13.5	8.0	10.5	2.5	.5	1.5	4.5	1.5	3.0	4.0	.5	3.0
10	10.0	6.0	8.0	4.5	2.5	3.5	4.5	2.0	3.0	1.0	.5	.5
11	14.0	7.0	10.5	5.0	4.0	4.5	3.0	.5	2.0	3.5	.5	1.5
12	13.5	7.0	9.5	5.5	4.0	4.5	3.5	2.0	3.0	4.0	2.0	3.0
13	10.5	6.0	8.0	8.0	4.0	6.0	3.5	.5	2.0	3.0	.5	2.0
14	9.0	6.5	8.0	5.5	4.0	4.5	1.5	.0	.5	.5	.0	.5
15	11.0	5.0	7.5	7.0	4.5	5.5	.5	.0	.5	.5	.0	.0
16	14.5	6.0	9.5	6.5	3.0	4.5	.5	.5	.5	.5	.0	.0
17	16.0	9.5	12.0	5.5	3.0	4.5	.5	.5	.5	.5	.0	.5
18	9.5	4.5	7.5	8.0	5.5	6.5	.5	.5	.5	.0	.0	.0
19	9.5	2.5	5.5	8.0	5.0	6.0	.5	.5	.5	.0	.0	.0
20	10.5	5.0	7.5	8.0	4.0	5.5	1.0	.5	.5	.5	.0	.5
21	13.5	7.0	9.5	6.5	4.5	5.5	2.0	.5	1.0	.5	.5	.5
22	15.5	8.0	11.0	6.5	3.0	5.5	3.0	1.0	2.0	.5	.5	.5
23	15.5	9.5	12.5	2.5	.0	1.0	3.5	1.5	2.5	.5	.5	.5
24	14.5	10.0	12.5	.5	.0	.5	2.5	.5	1.5	.5	.5	.5
25	9.5	8.0	9.0	.5	.5	.5	2.0	.5	1.0	.5	.5	.5
26	9.5	8.0	8.5	.5	.5	.5	3.0	1.0	2.0	1.0	.5	1.0
27	10.0	8.0	9.0	.5	.0	.5	4.0	3.0	3.5	2.0	1.0	1.5
28	11.0	8.5	9.5	1.5	.5	.5	3.5	3.0	3.5	1.5	1.0	1.0
29	12.0	5.5	10.0	2.5	1.0	1.5	5.0	3.0	4.0	2.0	1.0	2.0
30	8.0	4.0	5.5	2.5	.0	1.5	4.0	3.0	3.5	3.5	2.0	2.5
31	4.5	3.5	4.0	---	---	---	4.5	3.5	4.0	4.0	2.5	3.0
MONTH	19.0	2.5	9.3	8.0	.0	2.7	5.0	.0	1.7	6.0	.0	1.8
FEBRUARY				MARCH			APRIL			MAY		
1	3.5	1.0	2.0	7.5	3.0	4.5	8.5	2.5	5.0	25.0	12.0	18.0
2	4.5	1.0	2.5	8.0	2.0	4.0	12.0	1.0	6.0	18.5	11.5	15.0
3	5.0	2.5	3.0	5.5	3.5	4.5	13.5	4.0	7.5	19.0	7.5	12.5
4	5.0	1.5	3.5	6.5	3.0	4.5	14.0	3.5	8.0	16.0	8.0	12.0
5	4.5	1.0	2.5	7.0	5.0	6.0	15.5	5.5	9.5	18.0	6.0	11.5
6	4.5	2.0	3.0	7.0	5.5	6.5	16.0	6.5	10.5	19.5	5.5	12.0
7	2.0	.5	1.5	7.5	5.5	6.5	16.5	7.0	11.0	20.5	8.0	13.5
8	1.0	.0	.5	7.5	6.0	6.5	9.5	5.0	7.0	22.5	8.5	15.0
9	.5	.0	.5	6.0	.5	2.0	16.0	5.0	10.0	23.0	9.5	16.0
10	1.5	.5	1.0	4.0	.0	1.0	9.5	5.0	7.0	23.0	10.5	16.5
11	2.0	.5	1.0	4.5	.5	1.5	8.5	3.5	6.0	20.5	14.0	17.0
12	1.0	.0	.5	5.5	.0	1.5	12.0	.5	5.5	22.0	13.5	17.0
13	2.0	.5	1.5	4.5	.5	2.0	6.0	4.0	5.0	20.0	9.5	14.5
14	3.0	2.0	2.5	6.0	.5	3.0	12.0	4.5	7.0	17.4	10.7	13.3
15	3.5	2.0	3.0	8.0	.5	3.0	7.5	6.0	7.0	22.8	11.3	16.0
16	5.0	2.5	4.0	7.5	.5	3.5	9.0	5.5	7.0	19.0	13.5	15.5
17	4.0	2.5	3.5	10.0	1.5	5.0	10.0	6.5	8.0	19.0	13.0	15.5
18	3.0	1.0	2.5	9.5	1.5	4.5	11.5	7.0	9.0	22.0	10.0	15.5
19	5.0	2.0	3.5	10.5	1.0	5.0	13.5	10.5	11.5	24.0	10.5	17.0
20	4.0	1.0	3.0	11.5	3.0	6.0	12.0	10.5	11.5	23.5	12.0	18.0
21	4.0	.5	2.0	3.5	.5	2.0	11.0	7.0	9.0	23.5	13.5	18.0
22	5.5	2.0	3.5	8.0	.5	3.0	8.5	6.0	7.0	24.5	14.5	19.0
23	6.5	2.0	4.0	11.5	1.0	5.5	8.5	6.0	7.0	20.0	12.0	15.0
24	5.5	2.5	4.0	13.5	2.5	7.5	8.0	6.0	7.0	19.0	8.5	13.0
25	5.0	1.0	3.0	12.5	5.0	8.0	9.5	6.0	7.5	14.5	10.0	12.0
26	7.5	.5	3.0	10.0	3.0	5.5	11.5	6.0	8.5	18.5	9.0	13.0
27	6.0	3.0	4.0	12.5	1.0	6.0	17.0	4.0	10.0	19.0	8.0	13.0
28	4.0	2.0	3.0	6.0	3.5	4.5	15.0	5.5	10.0	23.5	9.0	15.5
29	7.0	.5	3.0	6.0	3.0	4.5	20.5	8.0	13.5	21.5	9.5	15.0
30	---	---	---	13.5	3.5	7.5	21.5	9.0	14.5	22.5	10.5	16.0
31	---	---	---	7.5	4.0	6.0	---	---	---	25.0	10.5	17.0
MONTH	7.5	.0	2.6	13.5	.0	4.5	21.5	.5	8.4	25.0	5.5	15.1

WAUMANDEE CREEK BASIN

05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

WATER TEMPERATURE. DEGREES CELSIUS. WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.0	12.5	18.0	25.5	15.5	20.0	24.0	14.0	18.5	18.5	11.0	14.5
2	23.5	13.0	18.0	19.5	16.0	18.5	24.0	16.0	19.5	17.0	15.0	16.0
3	26.0	13.5	19.0	22.0	14.0	17.0	22.5	14.5	18.0	21.5	12.0	16.0
4	23.5	13.0	18.0	24.5	13.0	18.0	23.5	12.5	17.5	17.5	12.5	14.0
5	25.5	11.5	18.0	25.0	12.5	18.5	23.5	13.5	18.0	21.0	13.0	16.5
6	20.5	14.5	17.0	23.5	13.0	18.0	18.0	14.0	15.5	22.0	15.0	17.5
7	24.0	11.0	17.0	18.5	16.0	17.0	16.0	14.0	15.0	16.5	13.0	14.5
8	18.0	13.5	15.0	26.0	15.5	20.0	26.5	14.5	19.5	20.0	11.0	15.0
9	25.0	12.5	18.0	23.0	15.0	19.0	26.0	17.0	21.0	17.0	12.5	14.0
10	27.0	14.5	20.0	26.0	16.0	20.0	26.0	18.0	21.5	14.5	10.5	12.5
11	27.0	14.5	20.5	24.5	16.0	19.5	24.0	14.5	19.0	19.5	10.0	14.0
12	28.0	15.0	21.0	22.5	16.5	18.5	20.5	15.0	17.0	19.0	12.5	15.5
13	27.0	15.5	20.5	17.0	14.5	16.0	20.0	13.5	16.0	18.0	14.5	16.0
14	27.5	16.5	21.0	20.0	14.0	17.0	19.5	11.0	15.5	20.0	15.0	16.5
15	25.0	15.0	19.0	21.5	13.5	17.5	21.5	11.0	16.0	22.5	14.5	18.0
16	20.5	14.5	17.0	25.5	15.5	20.0	22.5	11.5	16.5	19.0	17.5	18.0
17	24.5	17.0	19.5	23.0	15.0	19.0	20.5	12.0	16.0	18.0	15.5	16.5
18	22.0	15.5	18.0	25.0	14.0	19.5	23.0	14.5	18.0	16.5	12.5	15.0
19	15.5	12.0	14.0	21.5	14.5	17.5	23.5	12.5	17.5	15.5	10.0	12.5
20	22.5	9.0	15.0	22.0	13.5	17.0	23.5	12.5	17.5	14.0	11.5	12.5
21	22.5	9.0	15.5	24.5	12.0	17.5	23.5	13.5	18.0	17.0	13.0	14.0
22	15.0	12.5	14.0	16.5	13.0	14.5	24.5	14.5	19.0	16.0	10.0	12.5
23	23.0	12.5	16.0	17.5	13.0	14.5	24.5	16.0	19.5	16.0	9.0	12.0
24	23.5	13.5	18.0	19.5	12.0	16.0	25.5	17.0	20.5	17.0	10.0	13.0
25	24.0	13.0	18.0	17.5	14.5	16.0	19.5	15.5	17.5	16.5	10.0	13.5
26	24.0	12.0	17.5	24.5	15.0	19.0	22.0	13.5	17.0	14.5	12.0	14.0
27	24.0	11.0	17.0	26.0	14.0	19.5	19.0	13.5	15.5	16.5	9.5	12.5
28	26.0	13.0	19.0	25.0	16.5	20.0	20.5	10.5	15.5	14.5	9.0	11.5
29	22.0	15.5	18.0	21.5	14.0	18.0	23.5	13.5	17.5	14.5	7.0	10.5
30	25.5	13.0	18.5	20.0	13.5	16.0	20.5	12.5	16.0	16.5	8.0	12.0
31	---	---	---	24.0	13.0	18.0	19.5	11.5	15.0	---	---	---
MONTH	28.0	9.0	17.8	26.0	12.0	18.0	26.5	10.5	17.5	22.5	7.0	14.3

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[illegible]

WAUMANDEE CREEK BASIN

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05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	14.5	7.7	11.1
2	---	---	---	---	---	---	---	---	---	14.2	8.7	11.1
3	---	---	---	---	---	---	---	---	---	13.8	8.9	11.3
4	---	---	---	---	---	---	---	---	---	13.9	9.4	11.4
5	---	---	---	---	---	---	---	---	---	14.0	9.1	11.7
6	---	---	---	---	---	---	---	---	---	13.7	9.1	11.7
7	---	---	---	---	---	---	---	---	---	14.1	8.9	11.6
8	---	---	---	---	---	---	---	---	---	13.9	8.2	11.2
9	---	---	---	---	---	---	---	---	---	13.8	7.7	10.7
10	---	---	---	---	---	---	---	---	---	13.2	7.7	10.4
11	---	---	---	---	---	---	---	---	---	12.9	8.0	9.9
12	---	---	---	---	---	---	---	---	---	12.7	8.1	10.0
13	---	---	---	---	---	---	---	---	---	12.3	8.2	10.4
14	---	---	---	---	---	---	---	---	---	12.6	8.3	10.2
15	---	---	---	---	---	---	13.9	10.6	11.8	12.1	7.1	9.6
16	---	---	---	---	---	---	14.1	11.1	12.4	11.6	4.9	8.8
17	---	---	---	---	---	---	15.0	11.1	12.8	10.0	8.2	9.2
18	---	---	---	---	---	---	15.0	9.9	12.5	11.6	8.6	10.1
19	---	---	---	---	---	---	12.3	9.0	10.6	11.2	8.1	9.6
20	---	---	---	---	---	---	12.2	7.3	10.1	10.7	7.4	9.2
21	---	---	---	---	---	---	11.4	9.3	10.7	10.3	6.6	8.7
22	---	---	---	---	---	---	12.3	8.5	10.8	9.2	6.5	8.1
23	---	---	---	---	---	---	13.1	8.1	10.9	10.3	7.8	8.9
24	---	---	---	---	---	---	13.4	8.2	11.2	11.5	9.0	10.1
25	---	---	---	---	---	---	14.0	8.4	11.7	11.3	9.7	10.3
26	---	---	---	---	---	---	13.7	7.6	11.3	12.0	9.3	10.6
27	---	---	---	---	---	---	13.8	5.9	10.7	12.0	9.1	10.6
28	---	---	---	---	---	---	13.8	10.1	12.0	12.1	8.2	10.3
29	---	---	---	---	---	---	14.2	9.3	11.9	12.0	8.5	10.2
30	---	---	---	---	---	---	14.7	8.8	11.9	12.5	8.2	10.2
31	---	---	---	---	---	---	---	---	---	12.2	7.8	10.0
MONTH	---	---	---	---	---	---	---	---	---	14.5	4.9	10.2
	JUNE			JULY			AUGUST			SEPTEMBER		
1	12.5	7.5	9.9	12.5	7.2	9.2	13.2	6.0	9.4	13.3	7.8	9.7
2	12.4	7.5	9.5	9.1	7.4	8.3	9.7	7.1	8.4	10.1	7.9	8.5
3	12.1	6.9	9.3	12.2	8.3	10.0	10.6	6.9	8.6	11.8	7.9	9.5
4	11.5	7.4	9.2	12.8	7.7	9.9	11.1	7.1	8.7	11.2	8.6	9.4
5	11.5	7.0	9.3	13.1	8.0	10.0	10.9	7.0	8.7	11.4	6.9	9.3
6	11.5	7.9	9.3	12.6	7.4	9.9	11.6	7.6	9.2	11.2	7.3	8.9
7	11.9	7.6	9.8	10.5	7.8	9.1	10.2	8.4	8.9	10.3	8.6	9.5
8	12.1	8.5	10.0	11.2	7.4	8.9	11.6	6.9	9.2	11.8	8.4	10.0
9	12.2	7.7	9.7	12.1	7.7	9.4	11.1	6.8	8.8	11.1	8.7	9.5
10	12.3	7.2	9.3	11.9	7.6	9.4	11.4	6.9	8.6	11.9	9.6	10.5
11	11.7	6.4	9.1	12.3	7.4	9.5	11.1	6.6	8.7	12.6	9.2	10.8
12	11.2	5.5	8.6	11.8	7.7	9.1	11.9	7.2	9.0	12.5	9.2	10.6
13	10.8	5.6	8.1	12.0	7.6	9.3	12.0	7.3	9.5	12.2	9.3	10.3
14	9.8	5.7	7.6	10.3	7.6	8.8	12.5	7.1	9.7	11.5	8.9	9.9
15	10.3	7.1	8.4	10.2	7.4	8.8	12.9	6.9	10.0	12.4	8.7	10.3
16	9.3	7.4	8.6	10.2	7.2	8.6	13.6	6.7	9.8	9.4	5.2	8.5
17	9.0	7.5	8.0	11.6	8.0	9.3	12.5	6.6	9.4	10.4	9.2	9.7
18	9.3	6.7	8.3	12.2	7.0	9.3	11.7	6.1	8.6	10.3	9.2	9.8
19	10.6	8.4	9.6	11.5	7.2	9.2	11.3	6.2	8.4	11.1	9.5	10.2
20	12.0	8.4	10.2	12.3	7.4	9.7	11.7	6.6	8.8	10.4	9.1	9.8
21	12.0	8.3	10.0	12.3	7.4	9.6	11.6	6.9	9.0	9.8	8.9	9.4
22	11.2	8.9	9.7	10.3	7.7	8.6	12.1	7.1	9.1	11.0	9.3	10.1
23	10.8	7.8	9.2	10.8	8.2	9.5	12.3	6.2	8.7	11.1	9.3	10.3
24	10.9	8.0	9.2	11.2	7.8	9.4	10.8	5.6	8.0	11.6	9.2	10.4
25	11.6	7.9	9.7	11.0	8.0	9.2	10.9	6.7	8.5	11.9	8.4	10.2
26	12.7	8.2	10.1	11.4	7.0	9.0	12.1	8.0	9.9	11.2	8.5	10.0
27	12.8	8.1	10.4	11.9	6.7	9.1	13.0	9.7	10.7	13.0	9.7	11.0
28	12.4	7.7	10.1	11.1	6.5	8.5	13.2	9.0	10.7	13.9	8.9	11.5
29	11.6	7.7	9.3	11.1	7.3	9.0	12.4	8.2	10.0	14.6	9.3	11.9
30	11.6	7.4	9.3	12.0	8.1	9.7	13.0	8.8	10.4	13.1	9.9	11.5
31	---	---	---	12.8	7.2	9.7	13.1	8.6	10.4	---	---	---
MONTH	12.8	5.5	9.3	13.1	6.5	9.3	13.6	5.6	9.2	14.6	5.2	10.0

05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED(TONS PER DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	332	1.6	.95	.65	68	.82	1.2	1.1	1.1	51	.57
2	1.0	9.7	1.3	.94	.66	3.3	.74	1.3	1.0	9.9	23	1.4
3	.97	7.9	1.1	.93	.73	5.3	.71	1.3	1.0	1.2	1.4	1.3
4	.95	6.3	1.0	.89	.72	12	.66	1.3	1.1	1.1	.99	1.5
5	.99	5.3	.97	.86	.69	3.3	.61	1.3	1.0	1.0	.88	7.4
6	1.0	4.4	.86	.85	.69	2.4	.58	1.3	1.1	.96	.89	6.0
7	.91	3.6	.89	.84	.61	1.7	.55	1.2	1.0	.94	1.0	1.2
8	.86	3.4	.89	.85	.59	1.2	.51	1.3	1.0	1.1	.91	.79
9	.79	3.3	.80	.82	.54	46	.50	1.4	1.0	1.0	.83	3.7
10	.73	2.9	.74	.78	.56	3.5	.47	1.4	.97	1.1	.79	1.5
11	.72	2.6	.67	.76	.59	2.4	.45	1.5	.94	1.1	.74	1.2
12	.69	2.1	8.0	.78	.59	1.9	.41	1.5	.88	1.2	.73	.94
13	.66	1.7	2.4	.77	.52	1.6	.39	1.5	.87	21	.72	.82
14	.64	16	1.5	.71	.53	1.3	.38	1.5	.90	1.6	.68	6.4
15	.63	21	1.3	.62	.54	1.1	4.7	1.4	.79	1.3	.66	518
16	.60	8.2	1.3	.59	.55	1.0	6.6	109	2.1	1.2	.66	1790
17	.56	28	1.2	.59	4.9	.99	2.6	7.3	9.9	1.1	.65	7.2
18	.53	40	1.1	.56	1.2	.97	1.5	5.1	5.9	1.1	.66	4.3
19	.50	5.2	1.1	.60	.65	.93	3.8	4.5	1.7	1.1	.62	2.9
20	.48	4.3	1.2	.66	.56	.91	107	4.1	1.4	1.0	.62	2.5
21	.46	3.7	1.2	.70	.53	.85	24	37	1.2	.97	.61	2.3
22	.46	3.2	1.2	.76	.53	.86	3.9	33	1.1	5.8	.60	1.9
23	1.5	2.9	1.1	.69	.54	.95	2.8	3.1	1.8	1.5	.58	1.6
24	12	2.6	1.1	.64	.54	.91	2.3	1.9	1.7	1.1	.57	1.4
25	1.6	2.0	1.0	.66	.54	.90	1.9	1.6	1.5	1.1	.62	1.3
26	1.4	1.6	1.0	.63	3.5	.85	1.5	1.4	1.4	1.1	.63	1.3
27	1.2	1.5	1.0	.62	34	.79	1.3	1.2	1.3	1.0	.62	1.2
28	1.1	1.5	.99	.62	11	.84	1.2	1.2	1.2	1.0	.60	1.1
29	.98	5.5	.98	.62	4.0	1.0	1.2	1.1	1.2	.96	.58	.97
30	.94	6.6	.97	.64	---	.94	1.2	1.1	1.1	.96	.58	.92
31	1.2	---	.96	.69	---	.89	---	1.1	---	.97	.56	---
TOTAL	38.15	539.0	41.42	22.62	72.25	169.58	175.28	234.1	49.15	67.56	94.98	2373.61

CAL YR 1991	TOTAL 3748.56
WTR YR 1992	TOTAL 3877.70

WAUMANDEE CREEK BASIN

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05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on July 12, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 5, 10, 23, 24, 26, Dec. 6, 20, Jan. 8, Feb. 24, and Mar. 20. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Feb. 18, 19.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.58 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.58 in., Sept. 16.

 RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
 DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2.86	.00	.00	.00	.00	.00	.00	.00	.00	.24	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.66	.37	.41
3	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.12	.00
4	.13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.32
5	.27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.67
6	.01	.00	.00	.00	.00	.00	.02	.00	.01	.00	.04	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.35	.07
8	.00	.00	.00	.00	.00	.04	.03	.00	.00	.31	.00	.00
9	.00	.00	.00	.00	.00	.94	.00	.00	.00	.03	.00	.48
10	.00	.00	.00	.00	.00	.00	.05	.00	.00	.03	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.08	.00	.13	.08	.00
12	.00	.00	.76	.00	.00	.00	.00	.01	.00	.04	.01	.00
13	.04	.00	.00	.00	.00	.00	.00	.00	.00	1.42	.00	.04
14	.06	.43	.00	.00	.00	.00	.00	.03	.30	.00	.00	.79
15	.00	.06	.00	.00	.00	.00	.86	.00	.00	.04	.00	.00
16	.00	.00	.00	.00	.00	.00	.06	1.46	.51	.01	.00	3.58
17	.00	.28	.00	.00	.00	.00	.00	.09	.83	.00	.02	.00
18	.06	.65	.00	.00	.00	.00	.22	.00	.20	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.28	.00	.02	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	1.28	.00	.00	.00	.00	.00
21	.00	.06	.00	.00	.00	.00	.09	.52	.00	.00	.00	.00
22	.00	.08	.00	.23	.00	.00	.03	.45	.00	1.01	.00	.00
23	.80	.00	.00	.00	.00	.00	.00	.00	.46	.00	.00	.00
24	.18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.15	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.04	.00	.00	.00	.00	.17	.00	.00	.06	.00	.00	.00
29	.00	.70	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00
30	.00	.02	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.19	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	1.78	5.14	0.76	0.23	0.00	1.27	2.92	2.74	2.39	3.68	1.38	6.42

WAUMANDEE CREEK BASIN

05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI

LOCATION.--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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 770 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 26, 27, Dec. 2-6, 19, Jan. 15-19, 24, and Feb. 8-10, 12. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	82	11	7.2	6.5	17	9.2	9.4	8.0	7.8	9.8	6.4
2	6.1	14	9.6	7.2	6.6	12	9.2	9.0	8.0	10	9.8	7.0
3	6.2	11	8.8	7.2	7.0	12	9.2	8.8	7.9	8.2	7.5	7.1
4	6.2	9.6	8.6	7.2	7.0	15	9.0	8.8	7.8	7.8	7.3	7.3
5	6.5	9.2	8.6	7.2	6.9	12	8.7	8.7	7.8	7.8	7.2	8.5
6	6.9	8.6	8.4	7.2	7.0	12	8.7	8.6	7.8	7.8	7.2	9.3
7	6.4	8.0	9.0	7.2	6.8	11	8.6	8.4	7.7	7.8	7.9	7.4
8	6.3	7.9	9.0	7.6	6.2	11	8.3	8.2	7.6	8.3	8.2	7.4
9	6.3	7.9	9.1	7.9	6.1	19	8.5	8.2	7.6	8.0	7.4	8.4
10	6.3	8.0	8.9	7.5	6.1	12	8.5	8.0	7.6	8.0	7.3	7.4
11	6.3	7.9	8.6	7.6	6.4	11	8.5	8.2	7.7	8.0	7.0	7.2
12	6.4	8.1	14	7.6	6.4	10	8.2	8.0	7.8	8.0	6.9	7.2
13	6.2	8.7	11	7.4	6.5	9.9	8.1	7.7	7.8	13	6.9	7.2
14	6.4	12	9.6	7.4	6.5	9.9	8.2	7.8	7.8	9.4	6.9	9.5
15	6.5	14	8.8	7.2	6.4	9.5	10	7.9	7.8	8.8	6.9	8.0
16	6.6	10	8.4	6.4	6.4	9.9	11	13	8.6	8.2	6.8	140
17	6.7	14	8.3	6.4	8.0	10	9.4	12	9.9	7.8	6.8	18
18	6.4	23	7.8	6.2	7.5	10	9.4	9.1	9.4	7.8	6.9	14
19	6.3	12	7.6	5.9	6.9	9.8	12	8.7	8.6	7.7	7.0	12
20	6.2	11	7.7	6.2	6.9	9.5	20	8.4	8.1	7.4	7.0	11
21	6.3	10	7.8	6.2	6.9	9.7	18	9.8	8.0	7.3	7.0	10
22	6.3	9.7	7.8	6.7	6.9	9.6	13	11	8.0	10	6.9	9.3
23	6.4	9.8	7.8	7.0	6.9	10	12	9.7	8.5	9.1	6.9	8.9
24	14	9.9	7.4	6.8	7.0	10	11	8.5	8.5	7.9	7.0	8.8
25	7.6	9.1	7.3	6.5	7.0	9.8	11	8.5	8.1	7.8	6.9	8.5
26	7.6	8.6	7.2	6.5	8.0	9.5	10	8.5	8.0	7.7	7.0	8.6
27	7.1	8.8	7.2	6.5	12	9.0	9.9	8.2	7.8	7.3	7.0	8.4
28	6.6	8.7	7.2	6.5	13	9.1	9.9	8.1	7.8	6.9	7.0	8.1
29	6.7	12	7.2	6.5	9.8	10	9.7	8.0	7.8	6.9	6.9	7.8
30	6.5	15	7.2	6.6	---	9.5	9.4	8.1	7.8	6.9	6.9	8.0
31	6.8	---	7.2	6.7	---	9.3	---	8.0	---	6.9	6.5	---
TOTAL	209.1	388.5	264.1	214.2	211.6	338.0	306.6	273.3	241.6	252.3	224.7	396.7
MEAN	6.75	12.9	8.52	6.91	7.30	10.9	10.2	8.82	8.05	8.14	7.25	13.2
MAX	14	82	14	7.9	13	19	20	13	9.9	13	9.8	140
MIN	6.0	7.9	7.2	5.9	6.1	9.0	8.1	7.7	7.6	6.9	6.5	6.4
CFSM	.47	.91	.60	.48	.51	.76	.71	.62	.56	.57	.51	.92
IN.	.54	1.01	.69	.56	.55	.88	.80	.71	.63	.66	.58	1.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	1990	1991	1992	1990	1991	1992	1990	1991	1992	1990	1991	1992
MEAN	6.59	9.26	6.71	5.80	6.21	9.44	10.9	12.6	8.39	7.88	10.3	9.03
MAX	6.75	12.9	8.52	6.91	7.30	10.9	11.5	16.4	8.73	8.14	16.8	13.2
(WY)	1992	1992	1992	1992	1992	1992	1991	1991	1991	1992	1992	1992
MIN	6.44	5.58	4.90	4.70	5.09	7.98	10.2	8.82	8.05	7.39	6.97	6.31
(WY)	1991	1991	1991	1991	1991	1991	1992	1992	1992	1990	1991	1991

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1990 - 1992

ANNUAL TOTAL	3170.4		3320.7									
ANNUAL MEAN	8.69		9.07									
HIGHEST ANNUAL MEAN									8.41			
LOWEST ANNUAL MEAN									9.07			1992
HIGHEST DAILY MEAN									7.75			1991
LOWEST DAILY MEAN												
ANNUAL SEVEN-DAY MINIMUM	82	Nov 1	140	Sep 16					140	Sep 16		1992
INSTANTANEOUS PEAK FLOW	4.1	Jan 25	5.9	Jan 19					3.9	Dec 3		1990
INSTANTANEOUS LOW FLOW	4.4	Jan 25	6.3	Jan 16					4.4	Jan 25		1991
ANNUAL RUNOFF (CFSM)			584	Sep 16					(a)919	Aug 26		1990
ANNUAL RUNOFF (INCHES)			8.12	Sep 16					9.02	Aug 26		1990
ANNUAL RUNOFF (CFSM)			5.2	Jan 14					(b)1.7	Dec 3		1990
ANNUAL RUNOFF (INCHES)	.61		.63						.59			
10 PERCENT EXCEEDS	8.25		8.64						7.99			
50 PERCENT EXCEEDS	13		11						12			
90 PERCENT EXCEEDS	7.2		8.0						7.2			
	4.9		6.5						5.2			

(a) From rating curve extended above 70 ft³/s on basis of step-backwater method

(b) Result of freezeup

05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1990 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 1990 to current year.

DISSOLVED OXYGEN: July 1990 to current year.

SUSPENDED-SOLIDS DISCHARGE: July 1990 to current year.

TOTAL-PHOSPHORUS DISCHARGE: July 1990 to current year.

INSTRUMENTATION.--Water-quality sampler July 1990 to current year; continuous water-temperature recorder July 1990 to current year; dissolved-oxygen recorder July 1990 to current year.

REMARKS.--Chemical analyses by the Wisconsin State Laboratory of Hygiene. Suspended-sediment and particle-size analyses by U.S. Geological Survey Laboratory. Samples are point samples unless otherwise indicated.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 27.5°C, June 27-28, 1991; minimum observed, 0.0°C, on many days during 1991 and 1992 winter period.

DISSOLVED OXYGEN: Maximum observed, 14.9 mg/L, Apr. 12; minimum observed, 4.2 mg/L, July 21, 1991.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 3,170 tons, May 16, 1991; minimum daily, 0.10 ton, Sept. 29-30, 1990 and Oct. 24-27, 1991.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 4,680 lb, May 16, 1991; minimum daily, 0.74 lb., Jan. 25, 1991.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 24.5°C, June 12, 14; minimum observed, 0.0°C, Nov. 7-8, 23-26, Dec. 1-6, 15, 17-19, Jan. 10, 13-19, 23-25, Feb. 7-9, 11-12, and Mar. 10, 12-13, 15, 22.

DISSOLVED OXYGEN: Maximum observed, 14.9 mg/L, Apr. 12; minimum observed, 5.2 mg/L, Aug. 1.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 1,650 tons, Sept. 16; minimum daily, 0.36 ton, Apr. 14.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 3,260 lb, Sept. 16; minimum daily, 1.3 lb, Apr. 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)
OCT 1991							
*22...	1155	6.3	--	<1.0	450	150	38
24...	0050	21	--	--	--	--	3120
24...	0115	33	--	--	--	--	6510
*29...	1140	6.6	--	1.2	--	--	46
NOV							
01...	0205	20	--	--	--	--	2130
01...	0300	33	--	--	--	--	3360
01...	0350	47	--	--	--	--	3360
01...	0420	65	--	--	--	--	3220
01...	0510	85	--	--	--	--	4750
01...	0745	107	--	--	--	--	2560
01...	0905	133	--	--	--	--	2940
01...	1000	164	--	--	--	--	2600
01...	1045	196	--	--	--	--	2680
01...	1115	232	--	--	--	--	3270
01...	1315	178	--	--	--	--	2980
01...	1350	131	--	--	--	--	2360
01...	1435	96	--	--	--	--	3650
01...	1545	64	--	--	--	--	2160
02...	0405	16	--	--	--	--	1420
14...	2015	20	--	--	--	--	1420
17...	2030	20	--	--	--	--	1540
17...	2145	32	--	--	--	--	2180
17...	2245	45	--	--	--	--	3070
18...	0810	25	--	4.9	--	--	1320
29...	2020	20	--	--	--	--	916
30...	0820	15	--	--	--	--	352
DEC							
*11...	1408	8.4	--	<1.0	--	--	40
JAN 1992							
*21...	1522	6.3	2.5	<1.0	--	--	38
FEB							
*19...	1422	6.9	--	<1.0	--	--	26
MAR							
01...	1400	25	--	14	--	--	2730
01...	1515	37	--	15	--	--	3830
01...	2115	19	--	14	--	--	4560
03...	1259	9.9	--	--	--	--	140
*03...	1302	9.9	--	<1.0	--	--	102
03...	2240	25	--	--	--	--	2290
04...	1621	12	--	3.2	--	--	284
04...	1624	12	--	3.3	--	--	240
09...	0245	25	--	17	--	--	3230
09...	0335	37	--	18	--	--	4220
09...	0920	18	--	8.2	--	--	1400
*10...	1307	13	--	<1.0	--	--	328
10...	1311	13	--	1.5	--	--	488
16...	1254	9.7	--	<1.0	--	--	77
*30...	1458	9.6	--	1.4	--	--	37

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 1991						
22...	376	84	6	0.975	0.012	0.060
24...	3220	250	280	1.08	--	2.71
24...	6670	408	400	0.825	--	5.03
29...	406	88	5	1.01	0.048	0.120
NOV						
01...	2300	218	112	1.10	--	2.30
01...	3860	280	370	--	--	--
01...	4700	346	250	0.911	--	4.00
01...	3640	400	280	0.838	--	3.95
01...	5050	292	320	0.790	--	4.16
01...	3040	320	380	0.829	--	3.20
01...	2990	236	230	0.763	--	3.22
01...	2820	320	340	--	--	--
01...	2850	232	170	0.744	--	3.12
01...	3310	258	210	0.689	--	3.51
01...	3140	340	340	0.854	--	3.63
01...	2640	280	240	0.951	--	3.12
01...	5000	288	280	--	--	--
01...	3780	232	200	1.14	--	2.58
02...	1660	148	84	1.60	--	1.13
14...	1820	156	88	1.17	--	1.49
17...	1890	176	100	1.22	0.250	1.50
17...	2530	196	140	1.04	0.352	2.02
17...	3340	222	188	--	--	--
18...	1650	146	84	--	--	--
29...	1200	116	60	0.360	7.36	0.700
30...	640	90	24	1.35	0.143	0.410
DEC						
11...	374	92	4	1.44	0.024	0.060
JAN 1992						
21...	374	94	5	1.49	<0.005	0.050
FEB						
19...	346	80	2	1.14	0.019	0.050
MAR						
01...	3310	212	210	0.844	1.00	2.52
01...	3340	228	230	0.637	0.970	3.40
01...	4850	272	260	0.925	0.793	3.24
03...	474	80	12	1.43	0.110	0.180
03...	414	78	11	1.45	0.106	0.160
03...	2890	218	180	1.18	0.641	2.94
04...	548	84	20	1.32	0.409	0.490
04...	544	86	24	1.34	0.389	0.490
09...	3350	270	250	1.30	0.811	3.94
09...	4360	304	360	1.22	0.655	4.07
09...	1550	154	130	1.48	0.529	1.67
10...	644	88	40	1.56	0.068	0.290
10...	764	80	40	1.55	0.075	0.350
16...	406	90	10	1.41	0.031	0.080
30...	328	76	4	1.12	0.009	0.060

05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)
APR 1992							
*14...	1312	8.4	--	--	--	<1.0	16
20...	1540	20	--	--	--	17	2140
20...	1610	28	--	--	--	15	3860
20...	1705	51	--	--	--	22	6040
20...	2100	28	--	--	--	16	4770
21...	0900	16	--	--	--	4.0	800
*21...	1356	15	--	--	--	2.4	408
21...	1402	15	--	--	--	--	396
*22...	0947	13	--	--	--	1.6	242
*27...	1407	9.9	--	--	--	0.6	81
MAY							
*11...	1353	8.4	--	--	<5	1.8	60
16...	1705	15	--	--	95	--	1680
16...	1725	26	--	--	200	--	3940
16...	1745	37	--	--	390	--	6450
16...	1825	47	--	--	330	--	6520
16...	1950	26	--	--	240	--	3640
17...	0750	12	--	--	77	--	1810
21...	1845	15	--	--	92	11	2110
22...	1357	8.8	--	--	8	2.2	140
22...	1359	8.8	--	--	16	1.7	143
22...	1905	15	--	--	110	--	1650
*27...	1353	8.4	--	--	<5	1.4	83
JUN							
*10...	1345	7.6	--	--	12	2.7	81
*16...	1423	9.9	--	--	25	3.2	250
*17...	1332	9.5	--	--	42	6.0	174
*22...	1107	8.0	--	--	<5	1.7	92
JUL							
02...	0710	15	--	--	--	--	1580
*07...	0850	7.8	15.0	8.8	--	1.4	82
13...	1535	15	--	--	--	9.3	1430
13...	1615	23	--	--	--	15	2100
*21...	1330	7.2	18.0	9.0	--	1.4	60
22...	1800	14	--	--	--	--	1450
27...	1407	7.4	--	--	--	<1.0	19
AUG							
01...	2100	16	--	--	--	8.6	1520
01...	2115	25	--	--	--	19	3260
*04...	0930	7.2	12.0	9.6	--	1.7	62
*18...	1445	7.0	19.0	10.0	--	1.5	29

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

		SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)					
APR 1992												
14...		332	88	6	1.11	0.005	0.030					
20...		2370	208	250	1.05	0.230	2.66					
20...		3530	248	420	1.02	0.183	2.82					
20...		6160	400	540	0.838	0.315	4.58					
20...		4510	310	280	1.27	0.327	3.20					
21...		1110	126	64	1.70	0.129	0.770					
21...		712	104	28	1.71	0.103	0.400					
21...		706	98	38	1.73	0.102	0.430					
22...		586	92	20	1.66	0.074	0.250					
27...		414	90	10	1.61	0.016	0.090					
MAY												
11...		352	80	8	0.908	0.022	0.060					
16...		1970	218	108	0.924	0.303	1.56					
16...		4180	378	320	0.918	0.575	3.93					
16...		6490	428	450	0.748	0.815	6.42					
16...		6290	414	440	0.648	0.607	5.36					
16...		3820	322	320	1.11	0.710	3.93					
17...		2030	154	196	1.42	0.261	1.32					
21...		2370	192	130	0.761	0.187	1.51					
22...		462	80	16	1.31	0.091	0.220					
22...		470	78	15	1.31	0.089	0.230					
22...		1940	268	216	1.12	0.482	3.99					
27...		424	96	8	1.33	0.038	0.120					
JUN												
10...		410	108	11	1.05	0.089	0.150					
16...		586	106	24	1.06	0.143	0.370					
17...		532	142	23	1.16	0.218	0.480					
22...		424	112	11	1.11	0.062	0.140					
JUL												
02...		1840	182	132	0.857	0.117	1.72					
07...		420	94	11	1.08	0.043	0.150					
13...		1510	136	108	0.801	0.098	1.17					
13...		2050	176	132	0.770	0.198	1.91					
21...		376	80	7	0.934	0.029	0.100					
22...		--	--	--	--	--	1.11					
27...		36	<10	4	0.011	<0.005	0.020					
AUG												
01...		1790	154	115	0.731	0.061	1.23					
01...		3390	262	210	0.887	0.184	3.13					
04...		394	86	6	1.04	0.031	0.100					
18...		326	82	4	0.722	0.014	0.070					
DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)
SEP 1992												
*01...	1400	6.5	15.0	10.9	1.4	24	328	72	4	0.766	<0.005	0.060
05...	2205	15	--	--	--	952	--	--	--	0.737	0.288	1.55
*14...	1445	10	--	--	3.8	122	456	100	18	0.911	0.152	0.470
16...	0330	16	--	--	--	1240	--	--	--	--	0.227	1.51
16...	0440	75	--	--	--	2710	--	--	--	--	0.192	2.24
16...	0455	132	--	--	--	3170	--	--	--	--	0.240	3.16
16...	0510	219	--	--	15	4280	4360	306	310	0.444	0.386	3.90
16...	0550	438	--	--	16	6230	5870	398	850	0.423	0.612	5.22
16...	0610	554	--	--	--	6300	--	--	--	--	0.570	6.14
16...	0630	584	--	--	8.1	6780	6860	504	490	0.343	0.547	5.38
16...	0810	328	--	--	--	2940	--	--	--	--	0.459	4.12
16...	1005	391	--	--	12	6080	6860	474	460	0.618	0.276	5.77
16...	1020	414	--	--	12	7500	7180	422	520	0.621	0.286	5.66
16...	1055	381	--	--	9.5	5540	4940	368	440	0.545	0.374	4.56
16...	1205	244	--	--	6.5	3160	3340	292	340	0.656	0.255	3.79
16...	1345	98	--	--	--	2180	--	--	--	--	0.186	2.90
16...	1520	48	--	--	--	1420	--	--	--	--	0.173	2.19
16...	1522	48	--	--	--	1320	--	--	--	--	0.176	2.21
17...	0710	19	--	--	2.2	252	566	88	26	1.17	0.109	0.420
17...	2035	16	--	--	1.8	192	528	85	20	1.22	0.081	0.250
*30...	1405	8.2	12.0	11.8	1.3	23	354	82	3	1.02	0.017	0.060

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

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05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA) (00929)
DEC 1991								
*11...	1408	--	8.4	68	--	34	--	2.3
MAR 1992								
*03...	1302	--	9.9	66	--	33	--	2.8
APR								
*21...	1356	--	15	73	--	36	--	2.6
*22...	0947	--	13	72	--	34	--	2.4
MAY								
*11...	1353	--	8.4	60	--	33	--	2.3
16...	1705	--	15	79	--	41	--	2.5
16...	1725	--	26	140	--	67	--	3.1
17...	0750	--	12	100	--	50	--	3.0
21...	1845	--	15	90	--	46	--	2.7
22...	1357	--	8.8	66	--	33	--	2.4
22...	1359	--	8.8	64	--	34	--	2.5
22...	1905	--	15	79	--	41	--	3.5
*27...	1353	--	8.4	65	--	34	--	2.6
JUN								
*10...	1345	--	7.6	64	--	33	--	2.3
*16...	1423	--	9.9	67	--	34	--	2.5
*17...	1332	--	9.5	62	--	31	--	3.2
SEP								
16...	1005	--	391	--	12	--	5.0	--
16...	1020	--	414	--	14	--	6.0	--
16...	1055	--	381	--	12	--	5.0	--

DATE	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, TOTAL RECOVER- ABLE (UG/L) (01119)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, TOTAL RECOVER- ABLE (UG/L) (01094)
DEC 1991							
11...	50	<20	--	880	150	<10	--
MAR 1992							
03...	60	<20	--	1800	260	<10	--
APR							
21...	100	<20	--	7600	470	50	--
22...	80	<20	--	3800	340	20	--
MAY							
11...	50	<20	--	910	170	10	--
16...	300	22	--	29000	2000	110	--
16...	500	48	--	58000	<40	240	--
17...	200	20	--	20000	1400	110	--
21...	300	21	--	29000	1900	90	--
22...	80	<20	--	2800	270	<10	--
22...	80	<20	--	2900	250	<10	--
22...	300	42	--	32000	1600	150	--
27...	60	<20	--	1700	190	<10	--
JUN							
10...	60	<20	--	1500	170	<10	--
16...	90	<20	--	4800	430	20	--
17...	100	<20	--	4400	340	<10	--
SEP							
16...	--	--	51	--	--	--	250
16...	--	--	56	--	--	--	210
16...	--	--	47	--	--	--	240

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)	CARBO- FURAN WATER WHOLE TOT. REC (UG/L) (82615)	CHLOR- DYRIFOS TOTAL RECOVER (UG/L) (38932)	CIS- PERME- THRIN WATER WHOLE REC (UG/L) (82418)	CYAN- AZINE TOTAL (UG/L) (81757)	DICAMBA (MED- IBEN) (BAN- VEL D) TOTAL (UG/L) (82052)	DIMETH- OATE WATER WHOLE TOTAL (UG/L) (39009)	EPTC WATER WHOLE REC (UG/L) (81894)
MAY 1992											
*28...	1148	8.2	<0.10	0.1	<0.3	<1.0	<1.0	<0.30	<0.30	<1.0	<1.0
JUN											
*17...	1053	11	<0.10	1.4	<0.3	<1.0	<1.0	<0.30	0.26	<1.0	<1.0

DATE	TIME	FONOFOS (DY- FONATE) WATER WHOLE TOT. REC (UG/L) (82614)	METOLA- CHLOR IN WATER WHOLE TOT. REC (UG/L) (39356)	METHO- MYL TOTAL (UG/L) (39051)	PARA- THION, TOTAL (UG/L) (39540)	PENDI- METH- ALIN TOTAL (UG/L) (79190)	PHORATE TOTAL (UG/L) (39023)	TERBU- FOS WAT. WH REC (UG/L) (82088)	TRANS PERME THRIN WATER WHOLE REC (UG/L) (82420)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	2,4-D, TOTAL (UG/L) (39730)
MAY 1992											
28...		<0.20	<0.20	<1.0	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50
JUN											
17...		<0.20	0.75	<1.0	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SED. TOTAL, FALL DIAM. % FINER THAN .062 MM (80186)	SED. TOTAL, FALL DIAM. % FINER THAN .125 MM (80187)	SED. TOTAL, FALL DIAM. % FINER THAN .250 MM (80188)	SED. TOTAL, FALL DIAM. % FINER THAN .500 MM (80189)	SED. TOTAL, FALL DIAM. % FINER THAN 1.00 MM (80190)	SED. TOTAL, FALL DIAM. % FINER THAN 1.00 MM (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 1992									
20...	1639	38	--	--	--	--	--	5140	76
20...	1723	53	--	--	--	--	--	7690	66
MAY									
16...	1745	37	--	--	--	--	--	6310	82
16...	1825	47	--	--	--	--	--	6430	89
16...	1950	26	--	--	--	--	--	3760	91
21...	1845	15	--	--	--	--	--	1820	89
22...	1357	8.8	--	--	--	--	--	156	91
*22...	1359	8.8	--	--	--	--	--	150	92
22...	1905	15	--	--	--	--	--	1600	92
JUN									
*17...	1448	9.0	--	--	--	--	--	168	87
JUL									
13...	1535	15	--	--	--	--	--	1520	73
13...	1615	23	--	--	--	--	--	2470	60
13...	1657	32	--	--	--	--	--	3180	51
13...	1735	30	--	--	--	--	--	2770	51
AUG									
01...	2100	16	--	--	--	--	--	1900	78
SEP									
05...	2205	15	--	--	--	--	--	1010	75
16...	0810	328	89	92	98	100	--	2790	--
*16...	1326	100	77	80	85	97	100	2520	--
16...	1334	99	90	92	94	100	--	1950	--
16...	1520	48	91	94	98	100	--	1440	--
*16...	1522	48	94	98	99	100	--	1270	--
*16...	1539	44	90	94	97	100	--	1370	--

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)
JUN 1992											
17...	1513	9.0	1	9	27	63	91	99	100	--	--
SEP											
16...	1326	100	0	1	15	77	97	98	99	99	100

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

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05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.5	9.0	11.5	5.0	.5	3.0	1.5	.0	.5	4.5	3.5	4.0
2	16.5	11.5	13.5	2.0	1.0	1.5	1.5	.0	.5	4.5	3.5	4.0
3	11.5	9.0	10.5	2.5	1.0	1.5	2.0	.0	1.0	5.0	4.0	4.5
4	9.5	7.0	8.5	2.5	.5	1.5	.5	.0	.0	6.0	3.5	4.5
5	10.5	7.5	9.0	3.0	2.0	2.5	1.0	.0	.5	4.0	3.5	3.5
6	9.5	7.0	8.0	2.5	.5	1.5	2.0	.0	1.0	4.5	4.0	4.0
7	11.5	5.0	8.0	1.5	.0	.5	4.0	1.5	3.0	4.5	3.5	4.0
8	14.5	7.5	10.5	2.0	.0	1.0	5.0	3.0	4.0	4.5	3.0	4.0
9	12.5	8.0	10.0	3.5	.5	2.0	4.0	2.0	3.0	4.5	1.0	3.5
10	9.5	6.0	8.0	4.5	3.5	4.0	4.5	2.0	3.5	2.0	.0	1.0
11	13.0	7.0	10.0	5.0	4.5	4.5	3.0	1.0	2.0	4.0	1.0	2.0
12	12.0	7.0	9.5	5.5	4.5	5.0	3.5	2.5	3.0	4.0	2.5	3.5
13	9.5	6.0	8.0	7.5	4.5	6.0	3.5	1.0	2.5	3.5	.0	2.5
14	9.0	7.0	8.0	5.5	4.0	5.0	2.0	.5	1.0	1.0	.0	.5
15	9.5	5.5	7.0	6.5	4.5	5.5	.5	.0	.5	.0	.0	.0
16	13.0	6.0	9.0	6.0	3.5	4.5	2.0	.5	1.0	.5	.0	.0
17	14.5	9.5	11.5	6.0	3.5	4.5	2.5	.0	1.5	1.0	.0	.5
18	9.5	5.0	7.5	8.0	5.0	6.5	1.0	.0	.5	.0	.0	.0
19	8.5	3.0	5.5	7.5	5.5	6.0	1.0	.0	.5	.5	.0	.5
20	10.0	5.5	7.5	7.0	4.0	5.5	2.0	.5	1.5	1.5	.5	1.0
21	12.0	7.0	9.0	6.5	4.5	5.5	2.5	1.0	1.5	2.5	.5	1.5
22	14.0	7.5	10.5	6.5	3.5	5.5	3.5	1.5	2.5	2.5	1.5	1.5
23	14.0	9.0	11.5	3.0	.0	1.0	3.5	1.5	3.0	2.0	.0	1.0
24	14.0	9.5	12.5	1.5	.0	.5	3.0	1.0	2.0	1.5	.0	.5
25	9.5	8.5	9.0	2.0	.0	1.0	2.5	.5	1.5	2.0	.0	1.0
26	9.5	8.0	8.5	1.5	.0	.5	3.5	1.0	2.5	2.0	.5	1.5
27	9.5	8.0	9.0	2.5	.5	1.5	4.5	3.5	4.0	2.5	2.0	2.5
28	10.5	8.5	9.5	2.0	.5	1.5	4.0	3.5	3.5	2.0	.5	1.5
29	11.5	6.0	10.0	3.0	2.0	2.5	5.0	3.0	4.0	3.0	1.5	2.0
30	7.0	4.0	5.5	3.0	.5	2.0	4.0	3.5	4.0	4.0	2.0	3.0
31	5.0	4.0	4.5	---	---	---	4.5	3.5	4.0	4.5	3.0	3.5
MONTH	16.5	3.0	9.0	8.0	.0	3.1	5.0	.0	2.0	6.0	.0	2.2
	FEBRUARY			MARCH			APRIL			MAY		
1	4.0	1.5	2.5	7.0	3.0	4.0	7.5	3.0	5.0	22.5	11.5	16.5
2	5.0	1.5	3.0	7.0	2.0	4.0	11.0	1.0	5.5	17.5	11.0	14.5
3	5.5	2.5	3.5	5.5	3.0	4.5	11.5	4.0	7.0	17.5	7.5	12.0
4	5.0	2.0	3.5	6.0	3.0	4.5	12.0	4.0	7.5	14.5	8.0	11.0
5	4.5	1.5	2.5	6.5	5.0	5.5	14.0	5.5	9.0	16.5	6.0	11.0
6	4.5	2.5	3.5	6.5	5.5	6.0	14.5	6.0	10.0	17.5	6.0	11.5
7	2.5	.0	1.5	7.0	5.5	6.0	15.5	7.0	10.5	18.5	8.0	12.5
8	1.0	.0	.5	7.0	5.5	6.5	9.0	5.0	7.0	20.5	8.5	14.0
9	1.5	.0	.5	6.0	.5	2.0	14.5	5.0	9.0	21.0	9.5	14.5
10	3.5	.5	2.0	3.5	.0	1.0	9.0	5.0	7.0	21.5	10.0	15.5
11	2.5	.0	1.0	4.5	.5	2.0	8.0	4.0	6.0	19.5	13.5	16.0
12	2.0	.0	1.0	5.0	.0	2.0	10.5	1.0	5.0	20.0	13.0	16.0
13	3.0	1.0	2.0	4.5	.0	2.0	6.0	4.0	5.0	18.5	9.5	13.5
14	3.5	2.5	3.0	5.5	1.0	3.0	11.0	5.0	7.0	16.0	10.5	12.5
15	4.0	3.0	3.5	7.0	.0	3.0	7.5	6.0	7.0	20.0	11.0	15.0
16	5.5	3.0	4.0	6.5	.5	3.5	8.5	5.5	7.0	17.5	13.0	15.0
17	4.5	3.0	4.0	8.5	2.0	4.5	9.5	6.5	8.0	17.5	13.0	14.5
18	3.5	1.5	3.0	8.5	2.0	4.5	10.5	7.0	8.5	19.5	9.5	14.0
19	5.0	2.5	3.5	9.0	1.5	4.5	12.5	10.0	11.0	21.5	10.0	15.5
20	4.5	1.5	3.0	9.5	3.0	5.5	11.5	10.0	11.0	22.0	11.5	16.5
21	4.0	1.0	2.5	3.5	.5	2.5	11.0	7.0	8.5	22.0	13.0	17.0
22	5.5	2.5	4.0	7.0	.0	3.0	8.5	6.0	7.0	22.5	14.0	17.5
23	6.5	2.5	4.5	10.0	1.0	5.0	8.0	6.0	7.0	18.0	11.5	14.5
24	5.5	3.0	4.5	12.0	3.0	7.0	7.5	6.0	7.0	17.0	8.5	12.5
25	5.0	2.0	3.5	11.5	5.0	7.5	9.0	6.0	7.5	13.5	10.0	11.5
26	7.0	1.0	3.5	8.0	3.0	5.5	10.5	6.0	8.0	17.0	9.0	12.5
27	6.5	3.0	4.0	11.0	1.5	5.5	15.5	4.5	9.5	18.0	8.0	12.5
28	4.0	2.0	3.5	6.0	3.5	4.5	14.0	5.5	9.5	21.0	8.5	14.0
29	6.0	1.0	3.0	5.5	3.5	4.5	18.5	7.5	12.5	20.0	9.5	14.0
30	---	---	---	12.0	3.5	7.0	19.5	9.0	13.5	20.0	10.0	14.5
31	---	---	---	7.0	4.0	5.5	---	---	---	22.0	10.5	16.0
MONTH	7.0	.0	2.9	12.0	.0	4.4	19.5	1.0	8.1	22.5	6.0	14.1

WALIMANDEE CREEK BASIN

05378185 EAGLE CREEK. AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	21.5	12.0	16.5	22.5	14.5	18.0	21.5	13.0	17.0	16.5	10.5	13.5
2	21.0	12.5	17.0	18.0	15.0	17.0	21.0	15.5	18.0	15.5	14.5	15.0
3	23.5	12.5	17.5	19.5	13.5	16.0	19.5	13.5	16.0	18.5	11.5	15.0
4	21.0	12.5	16.5	21.5	12.5	16.5	20.5	12.0	16.0	15.5	11.5	13.0
5	22.5	11.0	16.5	22.0	12.0	16.5	20.5	12.5	16.5	19.0	12.5	15.5
6	18.5	14.0	15.5	21.0	12.0	16.5	16.0	13.0	14.5	19.0	14.5	16.5
7	21.5	10.5	15.5	16.5	15.0	15.5	15.0	13.0	14.0	15.0	12.5	13.5
8	16.5	13.0	14.5	23.0	14.5	18.0	23.0	13.5	17.5	17.0	10.5	14.0
9	22.5	12.0	16.5	20.0	14.0	17.0	23.0	15.5	19.0	15.5	12.5	13.5
10	23.5	13.5	18.0	22.5	15.0	18.5	23.0	17.0	19.5	13.5	10.5	12.0
11	24.0	13.5	18.5	21.5	14.5	18.0	21.5	13.0	17.0	17.0	9.5	12.5
12	24.5	14.0	19.0	20.0	15.5	17.0	18.0	14.0	15.5	17.0	12.0	14.0
13	24.0	14.5	19.0	16.0	13.5	15.0	17.5	12.5	15.0	16.5	13.5	15.0
14	24.5	15.5	19.5	18.0	13.5	15.5	17.5	10.5	14.0	17.5	14.5	15.5
15	22.5	14.5	18.0	19.0	12.5	16.0	16.5	10.5	14.5	20.0	13.5	16.5
16	18.5	14.0	16.0	22.5	14.5	18.0	19.5	11.0	15.0	18.5	16.5	17.5
17	23.0	16.5	18.5	20.0	14.0	17.0	18.0	11.5	14.5	17.5	15.0	16.0
18	20.0	14.5	16.5	22.0	13.0	17.5	20.0	13.5	16.5	15.5	12.0	14.5
19	15.0	12.0	13.5	19.0	13.5	16.0	20.5	11.5	15.5	14.0	10.0	12.0
20	19.5	9.0	14.0	19.0	12.5	15.5	20.5	11.5	15.5	13.5	11.0	12.0
21	19.5	9.0	14.0	21.0	11.0	15.5	20.5	13.0	16.5	15.5	12.5	13.5
22	14.0	12.0	13.0	15.5	13.0	14.0	21.5	13.5	17.0	14.5	10.0	12.0
23	19.5	12.0	14.5	16.0	12.5	14.0	22.0	14.5	18.0	14.5	8.5	11.5
24	20.5	13.0	16.0	17.5	11.5	14.5	22.5	16.0	19.0	15.0	10.0	12.0
25	21.5	12.5	16.5	16.0	13.5	14.5	18.0	14.5	16.5	15.0	9.5	12.5
26	21.0	11.5	16.0	21.5	14.0	17.5	19.0	13.0	15.5	14.0	12.0	13.5
27	21.0	10.5	15.5	22.5	13.0	17.5	16.5	12.5	14.5	15.0	9.0	12.0
28	23.0	12.0	17.0	21.5	15.0	18.0	18.0	10.0	14.0	13.0	9.0	11.0
29	19.0	14.5	16.5	19.0	13.0	16.0	20.5	12.5	16.0	12.5	7.0	10.0
30	22.0	12.0	16.5	17.5	13.0	15.0	18.5	12.0	15.0	14.5	8.0	11.0
31	---	---	---	21.0	12.0	16.0	17.0	11.0	14.0	---	---	---
MONTH	24.5	9.0	16.4	23.0	11.0	16.4	23.0	10.0	16.0	20.0	7.0	13.5

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[illegible]

WAUMANDEE CREEK BASIN

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05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	11.2	7.6	9.4
2	---	---	---	---	---	---	---	---	---	11.7	8.2	9.8
3	---	---	---	---	---	---	---	---	---	12.1	8.7	10.3
4	---	---	---	---	---	---	---	---	---	11.9	9.0	10.3
5	---	---	---	---	---	---	---	---	---	12.2	8.9	10.5
6	---	---	---	---	---	---	---	---	---	12.5	8.7	10.7
7	---	---	---	---	---	---	---	---	---	12.2	8.4	10.3
8	---	---	---	---	---	---	---	---	---	12.1	8.1	10.1
9	---	---	---	---	---	---	---	---	---	12.2	8.2	10.1
10	---	---	---	---	---	---	13.4	10.6	11.8	12.3	8.2	10.2
11	---	---	---	---	---	---	14.3	11.7	12.6	11.6	8.6	9.8
12	---	---	---	---	---	---	14.9	11.1	13.1	12.1	8.8	10.1
13	---	---	---	---	---	---	14.3	11.6	12.7	12.3	9.0	10.6
14	---	---	---	---	---	---	14.4	10.6	12.4	12.2	9.1	10.4
15	---	---	---	---	---	---	12.6	10.8	11.5	12.0	8.4	10.2
16	---	---	---	---	---	---	12.4	10.7	11.4	11.0	5.8	9.1
17	---	---	---	---	---	---	12.9	10.5	11.6	9.3	8.2	8.8
18	---	---	---	---	---	---	12.8	9.9	11.3	10.5	8.3	9.4
19	---	---	---	---	---	---	11.0	9.2	10.0	10.4	8.0	9.2
20	---	---	---	---	---	---	11.2	8.4	9.8	10.1	8.0	9.0
21	---	---	---	---	---	---	---	---	---	9.9	6.6	8.7
22	---	---	---	---	---	---	---	---	---	9.3	6.3	8.3
23	---	---	---	---	---	---	11.2	10.7	10.9	9.9	8.0	9.1
24	---	---	---	---	---	---	11.4	10.8	11.1	10.8	8.7	9.7
25	---	---	---	---	---	---	12.0	10.9	11.3	10.3	9.5	9.9
26	---	---	---	---	---	---	---	---	---	10.8	9.0	9.8
27	---	---	---	---	---	---	---	---	---	11.0	9.1	10.0
28	---	---	---	---	---	---	11.7	9.5	10.6	11.1	8.9	10.0
29	---	---	---	---	---	---	11.5	8.5	10.2	11.5	9.3	10.4
30	---	---	---	---	---	---	11.6	8.3	10.0	11.9	9.6	10.6
31	---	---	---	---	---	---	---	---	---	12.2	9.1	10.7
MONTH	---	---	---	---	---	---	---	---	---	12.5	5.8	9.9
JUNE				JULY			AUGUST			SEPTEMBER		
1	12.4	9.8	10.9	9.2	7.1	8.3	10.2	5.2	9.0	11.3	9.0	10.2
2	12.4	9.6	10.8	8.6	7.0	7.9	8.9	7.4	8.3	9.8	9.1	9.3
3	12.3	8.6	10.4	9.4	8.1	8.8	9.9	8.4	9.1	10.9	8.8	9.8
4	11.4	9.3	10.2	9.8	7.6	8.7	10.0	8.0	9.0	10.5	9.5	10.0
5	11.4	8.7	10.1	9.7	7.6	8.8	9.8	8.1	8.9	10.6	7.1	9.5
6	10.9	9.4	10.0	9.8	7.9	8.8	9.8	8.8	9.3	9.9	7.3	9.0
7	11.5	8.7	10.2	9.1	8.4	8.8	9.7	8.9	9.3	10.2	9.1	9.8
8	10.9	9.5	10.2	9.2	7.9	8.6	9.8	7.6	8.8	10.7	8.9	9.8
9	10.8	8.2	9.5	10.0	8.5	9.1	9.4	7.3	8.4	10.0	9.2	9.5
10	10.4	8.1	9.2	9.8	8.2	9.0	8.8	7.3	8.0	11.0	9.9	10.5
11	10.7	7.9	9.4	9.9	8.1	9.1	9.4	7.7	8.6	11.8	9.7	10.8
12	10.6	7.9	9.2	9.6	8.3	8.8	9.7	8.4	9.0	11.4	9.9	10.7
13	10.4	7.8	9.1	9.9	7.2	8.9	10.1	8.9	9.4	11.1	10.1	10.7
14	10.0	7.4	8.9	9.1	8.3	8.7	10.8	8.9	9.9	10.7	9.6	10.2
15	9.9	8.0	9.0	9.6	8.2	8.9	11.2	8.8	10.0	11.0	9.2	10.1
16	9.5	8.1	8.8	9.2	7.6	8.5	11.3	9.0	10.1	9.7	5.7	8.3
17	8.5	7.6	8.0	9.4	7.9	8.7	11.5	9.1	10.3	9.9	8.9	9.5
18	9.0	7.9	8.5	9.6	7.8	8.7	11.2	8.7	9.8	10.4	9.4	9.8
19	9.8	8.8	9.5	9.4	8.1	8.7	11.2	8.6	9.9	11.1	9.7	10.4
20	10.7	8.3	9.6	9.5	8.1	8.8	11.4	8.7	10.1	10.5	9.6	10.1
21	10.7	8.2	9.5	9.7	8.1	8.8	11.4	8.7	10.0	10.0	9.0	9.6
22	9.8	9.1	9.4	9.4	8.4	8.9	10.9	8.6	9.7	10.6	9.7	10.1
23	9.5	7.8	8.9	9.4	8.6	9.0	10.9	8.3	9.5	11.2	9.7	10.5
24	9.3	7.7	8.5	9.8	8.5	9.2	10.4	8.0	9.1	10.8	9.4	10.2
25	9.5	7.9	8.7	9.7	9.0	9.3	10.2	8.4	9.3	10.8	9.3	10.1
26	9.9	8.1	9.0	9.6	8.1	8.9	11.1	8.7	9.8	10.1	9.6	9.8
27	10.2	8.0	9.1	10.2	7.8	9.1	10.8	9.3	9.8	11.1	9.6	10.4
28	9.7	7.4	8.7	9.6	8.2	8.9	11.1	8.8	10.0	11.6	10.1	10.9
29	9.4	8.1	8.6	10.3	8.6	9.4	10.5	8.2	9.4	12.3	10.7	11.5
30	9.5	7.6	8.7	10.2	8.9	9.6	10.8	8.9	9.7	12.2	9.6	11.0
31	---	---	---	10.5	8.4	9.5	11.1	9.3	10.1	---	---	---
MONTH	12.4	7.4	9.4	10.5	7.0	8.9	11.5	5.2	9.4	12.3	5.7	10.1

WAUMANDEE CREEK BASIN

05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (TONS PER DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	632	1.9	.97	.57	139	.82	1.9	1.8	1.8	16	.42
2	1.3	40	1.6	.96	.57	9.4	.78	1.8	1.8	16	3.0	.46
3	1.3	8.0	1.4	.95	.60	19	.74	1.7	1.7	3.1	1.5	.47
4	1.3	2.4	1.3	.93	.59	39	.69	1.7	1.7	2.6	1.2	.48
5	1.3	2.1	1.2	.92	.58	6.2	.63	1.6	1.7	2.2	1.1	4.5
6	1.3	1.8	1.1	.91	.58	4.8	.59	1.5	1.7	1.9	1.1	7.4
7	1.2	1.6	1.2	.90	.55	3.5	.55	1.5	1.7	1.7	1.1	3.4
8	1.1	1.5	1.1	.93	.49	2.7	.51	1.4	1.7	1.8	1.1	3.2
9	1.1	1.4	1.1	.96	.48	78	.49	1.4	1.7	1.8	.94	3.5
10	1.0	1.3	1.0	.89	.47	8.4	.46	1.3	1.7	1.7	.88	3.0
11	.99	1.2	.93	.90	.49	3.7	.44	1.3	1.7	1.7	.80	2.8
12	.96	1.1	17	.88	.48	3.2	.40	1.3	1.7	1.7	.75	2.6
13	.90	1.2	2.0	.85	.48	2.1	.37	1.2	1.7	44	.71	2.5
14	.89	13	1.7	.83	.48	2.1	.36	1.2	1.7	4.5	.68	3.1
15	.87	7.9	1.5	.80	.46	2.0	1.8	1.2	1.7	2.9	.64	2.3
16	.85	2.8	1.4	.70	.45	2.1	4.9	85	2.7	2.4	.60	1650
17	.83	40	1.4	.69	1.4	2.0	1.1	39	8.1	2.0	.56	12
18	.77	94	1.3	.66	1.2	1.9	.67	5.7	5.1	1.8	.55	6.5
19	.73	6.0	1.2	.62	.55	1.8	3.3	4.6	2.5	1.6	.54	4.6
20	.69	1.8	1.2	.64	.48	1.6	164	3.8	2.2	1.4	.53	3.6
21	.67	1.7	1.2	.64	.48	1.6	52	9.1	2.1	1.2	.52	3.0
22	.65	1.6	1.2	.68	.47	1.5	8.9	25	2.0	15	.52	2.3
23	.67	1.6	1.2	.70	.47	1.4	6.1	8.9	3.0	3.6	.51	1.9
24	52	1.5	1.1	.67	.48	1.4	4.6	3.0	3.1	2.7	.51	1.6
25	1.0	1.4	1.1	.63	.47	1.3	3.6	2.6	2.8	2.4	.49	1.3
26	.99	1.3	1.1	.62	1.4	1.2	2.8	2.2	2.6	2.2	.49	1.1
27	.91	1.3	1.0	.61	19	1.1	2.3	1.9	2.3	1.9	.48	.91
28	.83	1.2	1.0	.61	9.5	1.0	2.1	1.8	2.2	1.6	.48	.76
29	.83	11	1.0	.59	4.5	1.1	2.0	1.8	2.1	1.5	.46	.62
30	.81	13	1.0	.60	---	.95	1.9	1.8	1.9	1.4	.46	.54
31	.87	---	.99	.60	---	.88	---	1.8	---	1.3	.43	---
TOTAL	81.01	896.7	54.42	23.84	48.72	345.93	269.90	220.0	70.4	133.4	39.63	1730.86

CAL YR 1991 TOTAL 7594.63

WTR YR 1992 TOTAL 3914.81

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	1390	20	2.8	1.8	218	2.7	4.1	5.6	5.6	30	2.1
2	4.6	79	15	2.8	1.8	21	2.6	3.8	5.7	36	6.3	2.3
3	4.5	41	11	2.7	1.9	46	2.5	3.6	5.7	8.4	4.0	2.3
4	4.3	25	9.4	2.7	1.9	117	2.3	3.5	5.7	7.5	3.9	2.4
5	4.3	18	7.9	2.6	1.9	26	2.1	3.4	5.8	7.1	3.8	16
6	4.4	15	6.5	2.6	1.9	21	2.0	3.2	5.9	6.6	3.7	14
7	3.9	12	5.8	2.5	1.8	16	1.9	3.1	6.0	6.3	4.0	3.9
8	3.7	10	5.0	2.6	1.7	13	1.8	2.9	6.0	6.8	4.0	3.8
9	3.6	8.9	4.2	2.7	1.6	181	1.7	2.8	6.0	6.5	3.5	4.1
10	3.4	7.8	3.5	2.5	1.6	18	1.7	2.7	6.1	6.5	3.4	3.6
11	3.3	6.7	2.9	2.5	1.7	12	1.6	2.7	6.0	6.5	3.1	3.4
12	3.2	5.9	36	2.4	1.7	11	1.5	2.6	5.9	6.5	3.0	3.3
13	3.0	5.5	12	2.3	1.8	9.1	1.4	2.5	5.6	84	3.0	3.2
14	2.9	41	5.4	2.3	1.8	5.3	1.3	2.5	5.4	20	2.9	20
15	2.8	74	4.6	2.2	1.7	4.5	9.9	2.6	5.2	12	2.8	7.2
16	2.8	19	4.3	1.9	1.7	4.3	19	156	10	9.6	2.7	3260
17	2.7	71	4.2	1.9	7.5	4.3	5.5	59	29	7.8	2.6	36
18	2.5	228	3.9	1.8	4.0	4.2	3.3	11	17	6.7	2.6	14
19	2.3	27	3.7	1.7	2.0	4.0	8.6	8.1	8.0	5.7	2.6	7.7
20	2.2	11	3.7	1.7	1.8	3.8	240	6.1	7.0	4.7	2.6	5.5
21	2.1	9.5	3.7	1.7	1.7	3.8	89	29	6.5	4.0	2.5	5.1
22	2.1	8.3	3.6	1.8	1.7	3.7	19	84	6.0	32	2.5	4.4
23	2.2	7.6	3.5	1.9	1.6	3.7	13	48	8.8	14	2.5	4.1
24	208	7.0	3.3	1.8	1.6	3.7	9.8	24	8.1	9.2	2.5	3.8
25	14	5.8	3.2	1.8	1.6	3.5	7.8	15	7.4	7.1	2.4	3.5
26	11	5.0	3.1	1.8	8.0	3.3	6.2	9.3	7.1	5.5	2.4	3.4
27	7.7	4.7	3.1	1.8	68	3.1	5.0	5.8	6.6	4.1	2.4	3.1
28	5.5	4.2	3.0	1.8	29	3.1	4.7	5.3	6.3	3.1	2.4	2.9
29	4.5	21	3.0	1.7	14	3.4	4.5	5.3	6.1	2.5	2.3	2.7
30	4.2	38	2.9	1.8	---	3.1	4.2	5.5	5.9	1.9	2.3	2.6
31	4.4	---	2.9	1.8	---	2.9	---	5.5	---	1.5	2.1	---
TOTAL	334.8	2206.9	204.3	66.9	170.8	776.8	476.6	522.9	226.4	345.7	120.8	3450.4

CAL YR 1991 TOTAL 14259.47

WTR YR 1992 TOTAL 8903.3

WAUMANDEE CREEK BASIN

243

05378185 EAGLE CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on July 12, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 2, 26, Dec. 20, Jan. 8, 25, Feb. 24, Mar. 16, 20, 21. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Feb. 18.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.43 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.43 in., Sept. 16.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2.75	.00	.00	.00	.00	.00	.00	.00	.00	.21	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.66	.40	.48
3	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.08	.00
4	.16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.36
5	.31	.03	.12	.00	.00	.01	.00	.00	.00	.00	.00	.70
6	.02	.00	.00	.00	.00	.00	.02	.00	.02	.00	.06	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.43	.07
8	.00	.00	.00	.00	.00	.06	.03	.00	.00	.33	.00	.00
9	.00	.00	.00	.00	.00	.91	.00	.00	.00	.03	.00	.54
10	.00	.08	.00	.00	.00	.00	.06	.00	.00	.06	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.06	.00	.13	.12	.00
12	.00	.00	.84	.00	.00	.00	.00	.00	.00	.05	.01	.00
13	.03	.00	.00	.00	.00	.00	.00	.00	.00	1.52	.00	.05
14	.06	.51	.00	.00	.00	.00	.00	.00	.48	.00	.00	.89
15	.00	.00	.00	.00	.00	.00	.90	.00	.00	.03	.00	.00
16	.00	.00	.00	.00	.00	.00	.03	1.63	.55	.00	.00	3.43
17	.00	.92	.00	.00	.00	.00	.00	.09	.90	.00	.03	.01
18	.08	.15	.00	.00	.00	.00	.23	.00	.20	.00	.00	.01
19	.00	.00	.00	.00	.00	.00	.27	.00	.06	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	1.21	.00	.00	.00	.00	.00
21	.00	.07	.00	.00	.00	.00	.03	.43	.00	.00	.00	.00
22	.00	.06	.00	.26	.00	.00	.00	.59	.00	1.17	.00	.00
23	.85	.09	.00	.00	.00	.00	.00	.00	.42	.00	.00	.00
24	.17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.11	.00	.00	.15	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
28	.08	.00	.00	.00	.00	.23	.00	.00	.04	.00	.00	.00
29	.01	.84	.00	.00	.00	.14	.00	.00	.01	.00	.00	.00
30	.00	.03	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.50	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	2.27	5.53	0.96	0.26	0.00	1.37	2.78	2.91	2.68	3.98	1.49	6.59

TREMPEALEAU RIVER BASIN

05379430 TROUT RUN, AT COUNTY TRUNK J, NEAR ARCADIA, WI

LOCATION.--Lat 44°12'49", long 91°34'07", in NW 1/4 NW 1/4 sec.15, T.20 N., R.10 W., Trempealeau County, Hydrologic Unit 07040005, on right bank at County Trunk J, 5 mi southwest of Arcadia.

DRAINAGE AREA.--7.66 mi².

PERIOD OF RECORD.--July to September 1992.

REMARKS.--All samples are equal-width increment (EWI) samples.

WATER-QUALITY DATA, JULY TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA-TILE ON IGNI-TION, TOTAL (MG/L) (00505)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
JUL 1992												
07...	1131	3.2	13.5	9.6	1.6	91	460	88	17	0.913	0.055	0.280
21...	1530	3.7	16.5	9.2	2.3	124	494	94	20	0.935	0.064	0.390
AUG												
04...	1315	4.4	16.0	9.2	2.5	129	500	96	18	0.928	0.085	0.330
18...	1630	3.4	16.0	9.8	2.2	62	424	94	13	0.901	0.057	0.270
SEP												
01...	1600	3.3	14.0	10.2	2.2	46	404	76	10	0.861	0.032	0.210
15...	1115	3.3	15.0	11.2	16	202	618	142	36	0.888	0.110	0.750
16...	1030	--	11.0	--	6.9	2010	2090	190	190	1.16	0.240	4.04
30...	1638	4.2	12.0	10.8	1.4	19	396	84	4	0.862	0.038	0.140

05379465 BOHRIS VALLEY CREEK, AT BRANDHORST ROAD, NEAR DODGE, WI

LOCATION.--Lat 44°08'37", long 91°35'41", in SW 1/4 SW 1/4 sec.5, T.19 N., R.10 W., Buffalo County, Hydrologic Unit 07040005, on left bank at Brandhorst Road, 3 mi west of Dodge.

DRAINAGE AREA.--9.53 mi².

PERIOD OF RECORD.--July to September 1992.

REMARKS.--All samples are equal-width increment (EWI) samples.

WATER-QUALITY DATA, JULY TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA-TILE ON IGNI-TION, TOTAL (MG/L) (00505)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
JUL 1992												
07...	1330	2.0	14.0	9.7	1.0	12	342	86	5	0.336	0.046	0.070
22...	0830	2.2	13.0	8.0	1.4	12	336	80	5	0.342	0.050	0.070
AUG												
04...	1600	2.2	17.0	9.1	2.0	7	334	76	2	0.262	0.034	0.070
19...	1020	2.4	13.0	10.2	1.2	6	320	84	2	0.305	0.019	0.060
SEP												
02...	1015	2.3	14.0	11.0	1.3	17	328	74	4	0.285	0.075	0.060
15...	0845	2.3	13.5	10.2	1.5	14	346	80	4	0.374	0.088	0.120
16...	1145	5.9	--	--	5.8	1580	1750	166	180	0.547	0.070	2.50

05379472 BOHRIS VALLEY CREEK, AT COUNTY TRUNK P, NEAR DODGE, WI

LOCATION.--Lat 44°08'44", long 91°35'50", in NE 1/4 SE 1/4 sec.5, T.19 N., R.10 W., Buffalo County, Hydrologic Unit 07040005, on left bank at County Trunk P, 2 1/2 mi west of Dodge.

DRAINAGE AREA.--9.53 mi².

PERIOD OF RECORD.--July to September 1992.

REMARKS.--All samples are equal-width increment (EWI) samples.

WATER-QUALITY DATA, JULY TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDED (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
JUL 1992												
07...	1300	4.1	14.5	9.4	1.0	20	366	88	4	0.591	0.042	0.120
22...	0920	4.5	13.0	9.0	1.6	19	348	84	8	0.631	0.061	0.120
AUG												
04...	1445	4.3	15.0	16.0	1.5	7	342	86	2	0.560	0.033	0.100
19...	0900	3.9	11.5	9.2	0.8	7	332	74	2	0.526	0.024	0.080
SEP												
02...	0915	4.1	14.0	10.2	1.5	11	330	76	5	0.525	0.023	0.120
15...	0945	4.3	14.0	11.2	1.6	12	356	94	3	0.642	0.071	0.160
16...	1115	--	--	--	8.7	2060	2340	226	240	0.665	0.171	4.10

TREMPEALEAU RIVER BASIN

05379500 TREMPEALEAU RIVER AT DODGE, WI

LOCATION.--Lat 44°07'55", long 91°33'14", in SE 1/4 sec.10, T.19 N., R.10 W., Trempealeau County, Hydrologic Unit 07040005, near left bank on downstream side of highway bridge in Dodge, 9.0 mi upstream from mouth.

DRAINAGE AREA.--643 mi².

PERIOD OF RECORD.--December 1913 to September 1919, April 1934 to current year.

REVISED RECORDS.--WSP 1238: Drainage area. WSP 1388: 1919(M). WSP 1438: 1914, 1915-18(M), 1934-44(M), 1946-49(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 661.42 ft above National Geodetic Vertical Datum of 1929. Prior to July 14, 1977, nonrecording gage at same site and datum. Prior to Oct. 1, 1966, datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 4-13, Nov. 24 to Jan. 7, and Jan. 12 to Feb. 18. Records good except those for ice-affected periods, which are fair. Data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	300	903	1100	450	410	862	571	571	407	351	329	303
2	298	1600	800	460	410	1100	538	557	401	386	410	317
3	297	1870	640	470	450	1080	520	532	397	450	379	389
4	294	1800	620	460	500	1020	514	509	391	386	383	376
5	301	860	600	460	470	1050	503	490	388	356	373	422
6	310	660	580	470	480	1170	494	479	385	344	356	558
7	314	560	580	480	450	1220	494	471	383	337	355	633
8	314	580	640	487	420	1090	503	467	374	350	372	547
9	307	600	680	495	390	1130	498	462	375	367	364	537
10	300	620	760	494	420	1190	487	456	371	364	356	496
11	299	680	720	495	450	1040	493	450	366	328	341	455
12	298	840	680	460	430	868	493	448	362	335	332	428
13	294	580	780	430	420	726	478	445	357	378	330	402
14	294	539	900	390	470	658	472	437	352	501	328	454
15	294	752	620	360	540	617	499	438	361	490	325	652
16	294	975	520	330	620	590	712	455	403	463	323	1230
17	292	805	520	370	640	605	836	659	437	407	319	2890
18	292	1090	520	440	700	637	757	725	511	381	320	7170
19	292	1310	540	450	658	642	737	682	516	372	312	5650
20	290	1150	540	450	437	628	879	616	477	367	306	3970
21	288	853	560	450	422	609	1340	516	424	367	302	2560
22	288	700	580	450	411	577	1550	500	401	368	300	1420
23	287	657	600	440	405	559	1560	521	395	473	300	879
24	333	600	600	430	412	585	1160	505	399	477	299	749
25	571	580	560	410	429	621	876	479	409	437	297	686
26	444	580	520	400	429	627	757	465	389	401	303	647
27	377	640	490	400	506	579	689	451	371	379	305	623
28	348	740	470	400	778	541	632	442	360	364	306	598
29	341	720	470	400	963	565	603	433	355	351	305	579
30	343	840	450	410	---	609	588	425	355	340	303	550
31	347	---	450	410	---	603	---	414	---	335	303	---
TOTAL	9941	25684	19090	13501	14520	24398	21233	15500	11872	12005	10236	37170
MEAN	321	856	616	436	501	787	708	500	396	387	330	1239
MAX	571	1870	1100	495	963	1220	1560	725	516	501	410	7170
MIN	287	539	450	330	390	541	472	414	352	328	297	303
CFSM	.50	1.33	.96	.68	.78	1.22	1.10	.78	.62	.60	.51	1.93
IN.	.58	1.49	1.10	.78	.84	1.41	1.23	.90	.69	.69	.59	2.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	MEAN	363	378	316	272	321	822	665	471	471	392	340	393
MAX	1314	856	953	679	878	2325	2146	1320	1378	1038	1050	1239	
(WY)	1955	1992	1983	1973	1981	1936	1965	1973	1942	1978	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1914 - 1992

ANNUAL TOTAL	183412		215150									
ANNUAL MEAN	502		588									
HIGHEST ANNUAL MEAN										434		
LOWEST ANNUAL MEAN										813		1973
HIGHEST DAILY MEAN	1870	Nov 3					7170	Sep 18	12900	Apr 4	1956	
LOWEST DAILY MEAN	230	Jan 26					287	Oct 23	98	Jan 10	1938	
ANNUAL SEVEN-DAY MINIMUM	243	Jan 25					290	Oct 17	106	Jan 7	1938	
INSTANTANEOUS PEAK FLOW							8230	Sep 18	17400	Apr 4	1956	
INSTANTANEOUS PEAK STAGE							11.44	Sep 18	(a)10.35	Apr 4	1956	
INSTANTANEOUS LOW FLOW							286	Oct 23				
ANNUAL RUNOFF (CFSM)	.78		.91							.68		
ANNUAL RUNOFF (INCHES)	10.61		12.45							9.18		
10 PERCENT EXCEEDS	799		864							701		
50 PERCENT EXCEEDS	424		470							325		
90 PERCENT EXCEEDS	278		314							192		

(a) Datum then in use

05379530 PINE CREEK, AT WHISTLER PASS ROAD, NEAR DODGE, WI

LOCATION.--Lat 44°06'42", long 91°31'07", in NW 1/4 NE 1/4 sec.24, T.19 N., R.10 W., Trempealeau County,
Hydrologic Unit 07040005, on right bank at Whistler Pass Road, 3 mi south of Dodge.

DRAINAGE AREA.--10.37 mi².

PERIOD OF RECORD.--July to September 1992.

REMARKS.--All samples are equal-width increment (EWI) samples.

WATER-QUALITY DATA, JULY TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDED (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
JUL 1992												
07...	1445	4.1	14.5	9.4	1.1	39	510	108	7	0.852	0.058	0.140
22...	1015	4.6	13.0	8.8	2.0	51	496	92	9	0.844	0.073	0.160
AUG												
04...	1600	4.1	18.0	8.7	2.6	33	506	100	7	0.883	0.052	0.140

05381000 BLACK RIVER AT NEILLSVILLE, WI

LOCATION.--Lat 44°33'34", long 90°36'52", in sec.15, T.24 N., R.2 W., Clark County, Hydrologic Unit 07040007, on right bank at downstream side of bridge on U.S. Highway 10 in Neillsville, 1.0 mi downstream from O'Neill Creek, and 2.6 mi upstream from Cunningham Creek.

DRAINAGE AREA.--749 mi².

PERIOD OF RECORD.--April 1905 to March 1909, October 1913 to current year. Monthly discharge for some periods published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1914. WSP 1438: 1905, 1906-8(M), 1914-17(M), 1918-19, 1920-25(M), 1926-27, 1928-29(M), 1930, 1931(M), 1932, 1933(M), 1934, 1935(M), 1936. WSP 1508: 1950. WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 962.34 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1934, nonrecording gage; Oct. 24, 1934, to June 16, 1977, water-stage recorder; June 17, 1977, to Nov. 19, 1977, nonrecording gage at site 150 ft downstream at datum 1.58 ft lower.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 4-13, 25-27, Dec. 1-8, 15-26, and Jan. 16 to Mar. 19. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	5860	2900	274	200	290	2220	441	120	216	78	52
2	120	10600	2100	270	200	370	1700	389	112	178	91	72
3	113	7660	1600	276	200	490	1500	341	105	151	82	92
4	111	2700	1200	277	210	840	1420	307	99	157	80	115
5	113	1400	900	273	210	2200	1430	273	100	209	88	141
6	120	900	720	302	200	5400	1520	244	92	201	109	375
7	127	560	660	290	190	6600	1910	221	90	170	101	284
8	135	490	740	288	180	5400	2250	205	85	146	96	243
9	154	440	726	293	170	3500	1900	189	85	127	89	278
10	160	400	692	264	170	2400	1510	176	83	114	115	256
11	148	370	642	285	170	1800	1300	163	79	107	87	194
12	138	350	1190	303	160	1300	1270	158	74	122	84	157
13	132	370	2840	286	160	1000	1230	155	71	1180	82	135
14	129	492	2290	231	150	840	1210	150	66	1230	85	430
15	123	1970	1400	241	160	740	3910	152	64	782	81	760
16	122	2480	900	240	170	740	7200	1290	67	513	76	3000
17	124	1950	680	240	170	760	5450	4580	141	362	69	2290
18	129	7390	450	230	170	700	3470	1380	190	271	68	3730
19	129	6640	400	220	180	720	3330	964	149	229	61	1920
20	123	4300	370	200	180	770	4390	688	159	210	56	1140
21	119	2580	370	200	180	690	4700	484	145	175	53	701
22	116	1720	370	210	180	614	3560	363	127	156	49	488
23	115	1300	320	230	190	582	2720	364	114	175	46	367
24	332	976	300	200	200	836	1960	279	105	165	45	298
25	440	680	280	200	190	2080	1440	242	98	142	48	248
26	640	580	290	190	200	2990	1060	224	95	131	51	219
27	712	540	319	200	210	2420	828	197	88	117	50	221
28	595	595	296	170	240	2080	668	174	85	105	47	210
29	662	646	280	200	270	1840	578	157	94	94	44	191
30	959	3420	276	200	---	1890	504	141	106	86	47	187
31	985	---	277	200	---	2310	---	128	---	83	49	---
TOTAL	8251	70359	26778	7483	5460	55192	68138	15219	3088	8104	2207	18794
MEAN	266	2345	864	241	188	1780	2271	491	103	261	71.2	626
MAX	985	10600	2900	303	270	6600	7200	4580	190	1230	115	3730
MIN	111	350	276	170	150	290	504	128	64	83	44	52
CFSM	.36	3.13	1.15	.32	.25	2.38	3.03	.66	.14	.35	.10	.84
IN.	.41	3.49	1.33	.37	.27	2.74	3.38	.76	.15	.40	.11	.93

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1992, 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
MEAN	384	452	191	109	120	1267	1942	875	804	305	232	543
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

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1905 - 1992

ANNUAL TOTAL	312481		289073				
ANNUAL MEAN	856		790		598		
HIGHEST ANNUAL MEAN					1213		1942
LOWEST ANNUAL MEAN					160		1931
HIGHEST DAILY MEAN	10600	Nov 2	10600	Nov 2	38200		Sep 10 1938
LOWEST DAILY MEAN	53	Sep 2	44	Aug 29		.70 (a)	Aug 10 1936
ANNUAL SEVEN-DAY MINIMUM	59	Jan 27	47	Aug 23	1.0		Aug 10 1936
INSTANTANEOUS PEAK FLOW			11600	Nov 1	48800		Sep 10 1938
INSTANTANEOUS PEAK STAGE			12.85	Nov 1	23.80		Sep 10 1938
INSTANTANEOUS LOW FLOW			42	Aug 29	.60		Aug 15 1936
ANNUAL RUNOFF (CFSM)	1.14		1.05		.80		
ANNUAL RUNOFF (INCHES)	15.52		14.36		10.86		
10 PERCENT EXCEEDS	2420		2210		1500		
50 PERCENT EXCEEDS	307		241		143		
90 PERCENT EXCEEDS	74		86		35		

(a) Also occurred Aug. 11, 14-16, 1936

(a) Gage height, 14.63 ft

BLACK RIVER BASIN

05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954 to current year. National Stream-Quality Accounting Network data collection began in March 1979.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	
OCT 1991												
16...	1230	--	620	152	8.3	10.0	3.5	11.4	768	100	120	
DEC 18...	0900	3400	--	112	7.4	0.0	4.0	13.2	790	87	170	
MAR 1992												
04...	1140	--	2490	129	7.5	2.0	15	13.6	746	100	400	
APR 15...	1030	--	2630	98	7.5	5.5	3.5	12.2	747	99	110	
AUG 05...	1000	--	775	122	8.3	19.0	4.1	9.3	752	102	760	
DATE		STREP-TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
OCT 1991												
16...	32		62	15	5.9	3.5	2.8	60	50	8.4	7.4	0.20
DEC 18...	710		36	8.7	3.5	3.8	3.4	27	22	11	8.0	<0.10
MAR 1992												
04...	>2000		46	11	4.4	3.9	2.5	43	36	7.5	7.1	<0.10
APR 15...	43		36	8.7	3.4	2.8	2.0	32	26	6.3	5.5	0.20
AUG 05...	290		55	13	5.4	3.5	1.8	54	44	7.5	6.7	0.10
DATE		SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 1991												
16...	8.3		89	84	<0.010	0.610	0.010	0.020	0.40	0.130	0.080	0.070
DEC 18...	10		97	65	0.010	0.620	0.090	0.080	0.50	0.090	0.070	0.050
MAR 1992												
04...	12		78	74	0.010	0.860	0.200	0.170	0.70	0.270	0.060	0.070
APR 15...	6.0		79	53	<0.010	0.450	0.060	0.050	0.50	0.090	0.050	0.040
AUG 05...	6.4		91	71	<0.010	<0.050	0.020	<0.010	1.0	0.240	0.040	0.030

BLACK RIVER BASIN

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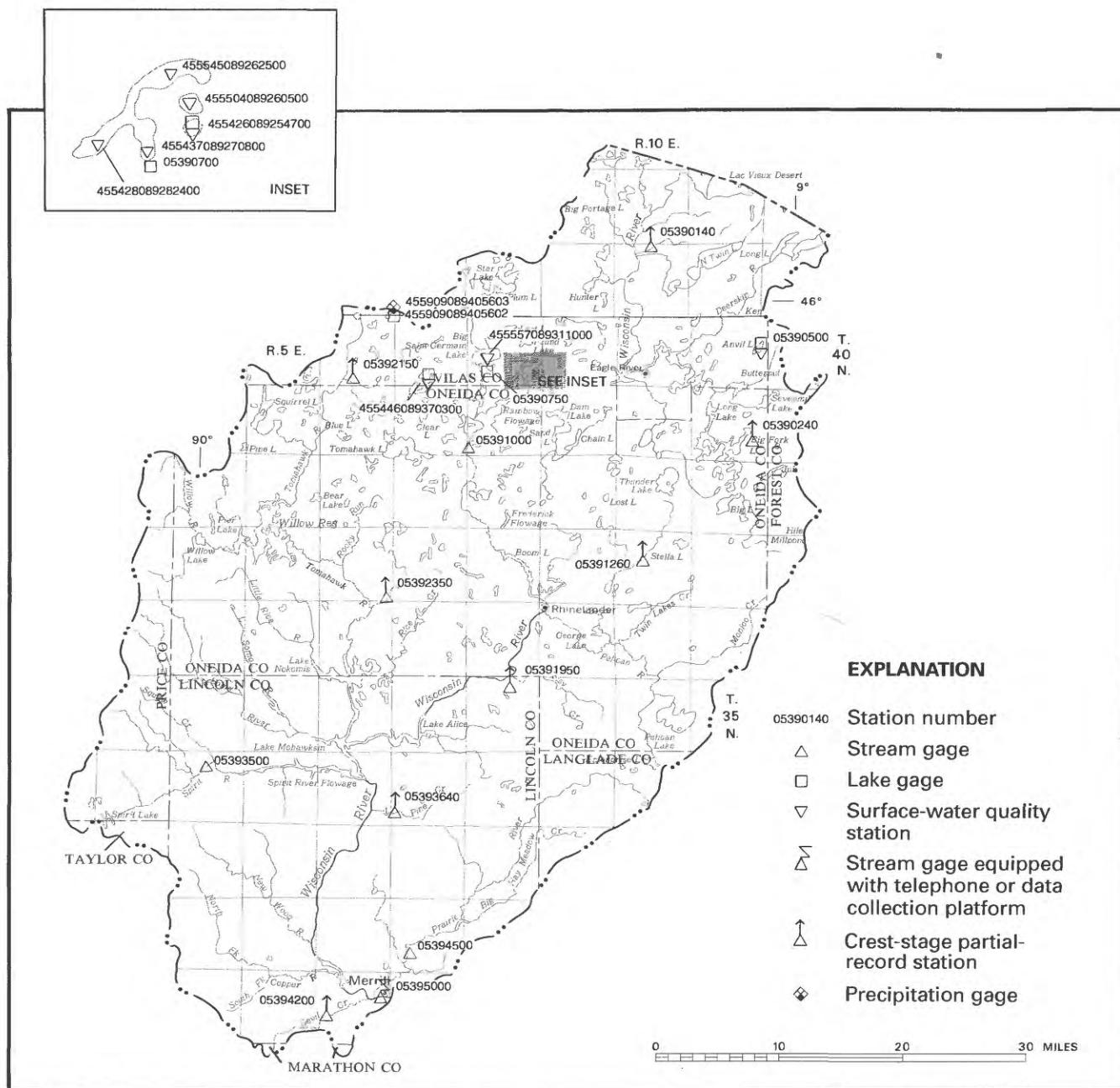
05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 1991							
16...	1230	620	20	16	<3	340	<4
MAR 1992							
04...	1140	2490	60	13	<3	420	<4
APR							
15...	1030	2630	50	17	<3	310	<4
AUG							
05...	1000	775	<10	12	<3	230	<4

DATE	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)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
OCT 1991						
16...	33	<10	2	<1	34	<6
MAR 1992						
04...	27	<10	<1	<1	30	<6
APR						
15...	13	<10	<1	<1	25	<6
AUG						
05...	7	<10	1	<1	32	<6

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1991								
03...	1330	--	606	153	13.5	--	--	--
16...	1230	--	620	152	10.0	8	13	84
NOV								
13...	1135	--	1390	135	3.5	--	--	--
DEC								
18...	0900	3400	--	112	0.0	4	37	94
JAN 1992								
22...	0935	--	952	186	0.0	--	--	--
MAR								
04...	1140	--	2490	129	2.0	108	726	84
APR								
15...	1030	--	2630	98	5.5	30	213	42
MAY								
28...	0908	--	1230	120	15.0	--	--	--
JUL								
28...	1320	--	840	124	23.0	--	--	--
AUG								
05...	1000	--	775	122	19.0	32	67	96
SEP								
01...	1405	--	534	141	18.0	--	--	--



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

UPPER WISCONSIN RIVER BASIN

MISSISSIPPI RIVER MAIN STEM

05389500 MISSISSIPPI RIVER AT MCGREGOR, IA

LOCATION.--Lat 43°01'29", long 91°10'21", in SE 1/4 SE 1/4 sec.22, T.95 N., R.3 W., Clayton County, Hydrologic Unit 07060001, on right bank in city park at east end of Main Street in McGregor, 2.6 mi upstream from Wisconsin River, 4.3 mi downstream from Yellow River, and at mile 633.4 upstream from Ohio River.

DRAINAGE AREA.--67,500 mi², approximately.

PERIOD OF RECORD.--August 1936 to current year.

REVISED RECORDS.--WDR IA-75-1: 1974.

GAGE.--Water-stage recorder. Datum of gage is 604.84 ft above National Geodetic Vertical Datum. Prior to June 1, 1937, and since June 2, 1939, auxiliary water-stage recorder; June 1, 1937 to June 1, 1939, auxiliary nonrecording gage 14.1 mi upstream in tailwater of dam 9, at datum 5.30 ft lower.

REMARKS.--Estimated daily discharges: Jan. 15 to Feb. 20. Records good except those for estimated daily discharges, which are fair. Minor flow regulation caused by navigation dams. U.S. Army Corps of Engineers data collection platform at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1828, that of Apr. 24, 1965.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38800	29300	77600	43600	28000	35800	79600	102000	31600	37600	30800	23500
2	37000	34800	65800	42700	28000	40100	78700	98300	30400	37300	30700	23600
3	36000	39500	51500	42200	28000	43200	77600	94900	30600	38100	30600	23800
4	35300	47400	41400	41700	28000	46800	76100	91700	29600	38900	29300	24500
5	35500	56100	39000	41600	28000	50700	74200	88000	27500	40300	27200	26000
6	35500	63600	44400	41300	29000	54000	71600	84300	26400	41200	25400	28400
7	34400	68200	49800	40500	29000	56400	68400	80400	26100	41200	23500	29300
8	32400	70600	54000	39200	29000	61900	67400	76400	25400	42700	23800	31200
9	29600	72200	56300	38400	28000	71100	64800	69000	22900	46000	26600	33200
10	25800	69000	61000	37000	27000	74900	61800	63200	18900	48800	28400	33900
11	23400	61400	66100	36200	26500	80000	60900	57500	16300	50700	29200	34400
12	25000	52500	71200	36600	26000	89700	61200	49200	16300	53700	29300	33900
13	27700	45600	75000	36600	25000	98100	61300	44300	20000	55800	30200	31100
14	27100	41200	77700	34800	25000	103000	60000	41400	26900	58100	31000	28400
15	27600	38200	76700	26000	26000	106000	59200	40600	26100	58600	31200	28900
16	26100	39300	72400	24000	27000	106000	59800	39200	24500	58700	31300	32400
17	25200	41300	67300	23500	27500	106000	59700	39700	23800	59100	31400	39500
18	24400	45800	62600	24000	28000	104000	59400	41900	23900	59500	29700	48100
19	24400	50600	58200	26000	29000	103000	61600	42800	28100	59600	27300	56700
20	24800	56600	57200	27000	29500	101000	68000	43400	35500	57900	22700	65200
21	25600	62000	57900	29000	28800	98900	74400	44400	38100	53400	19600	76500
22	26400	66600	58800	28000	28000	96300	81700	45400	39100	48700	16100	78700
23	26500	72100	58100	27000	27800	92800	86300	46300	40000	46100	15300	75100
24	25400	78000	58700	26000	27800	90400	88300	44500	39200	43100	17800	64200
25	25900	83900	58000	25000	28500	88000	91800	39900	38400	42600	21500	52500
26	26000	87400	58200	25500	29300	85900	97400	35800	38000	42600	23300	42500
27	25700	87100	56500	27000	29300	83000	102000	33900	38000	40300	22700	34400
28	25700	86500	55200	28000	30100	80800	104000	33200	38100	37700	21100	29700
29	26400	85500	52500	28000	31300	80400	105000	33600	38000	35100	20700	25900
30	26300	83000	50100	28000	---	80000	104000	33400	38100	32800	20900	20700
31	26300	---	46000	28000	---	79900	---	32700	---	31800	22900	---
TOTAL	882200	1815300	1835200	1002400	812400	2488100	2266200	1711300	895800	1438000	791500	1176200
MEAN	28460	60510	59200	32340	28010	80260	75540	55200	29860	46390	25530	39210
MAX	38800	87400	77700	43600	31300	106000	105000	102000	40000	59600	31400	78700
MIN	23400	29300	39000	23500	25000	35800	59200	32700	16300	31800	15300	20700
CFSM	.42	.90	.88	.48	.42	1.19	1.12	.82	.44	.69	.38	.58
IN.	.49	1.00	1.01	.55	.45	1.37	1.25	.94	.49	.79	.44	.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1992, BY WATER YEAR (WY)

	MEAN	27950	28060	21490	18600	19070	38650	72790	59250	47740	38190	25960	27910
MAX	114600	64840	59200	35700	48540	103800	164800	119200	98910	79970	69240	72890	
(WY)	1987	1983	1992	1983	1984	1983	1965	1975	1944	1978	1972	1986	
MIN	9874	10870	9506	7665	9934	13190	27780	18240	13420	11220	10330	10650	
(WY)	1937	1938	1937	1940	1940	1940	1990	1977	1988	1988	1964	1940	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1936 - 1992

ANNUAL TOTAL	17807800	17114600	
ANNUAL MEAN	48790	46760	35520
HIGHEST ANNUAL MEAN			63250
LOWEST ANNUAL MEAN			17400
HIGHEST DAILY MEAN	104000	May 18	276000
LOWEST DAILY MEAN	10000	Jan 27	6200
ANNUAL SEVEN-DAY MINIMUM	10500	Jan 25	6490
ANNUAL RUNOFF (CFSM)	.72		.53
ANNUAL RUNOFF (INCHES)	9.81		7.15
10 PERCENT EXCEEDS	85300		73300
50 PERCENT EXCEEDS	50100		25800
90 PERCENT EXCEEDS	12700		12900

WISCONSIN RIVER BASIN
05390500 ANVIL LAKE NEAR EAGLE RIVER, WI

LAKE-STAGE RECORDS

LOCATION.--Lat 45°57'07", long 89°03'26", in NW 1/4 NE 1/4 sec.13, T.40 N., R.11 E., Vilas County, Hydrologic Unit 07070001, 9.6 mi east of Eagle River.

DRAINAGE AREA.--4.11 mi². Area of Anvil Lake, 380 acres.

PERIOD OF RECORD.--August 1936 to September 1981 (fragmentary), June 1985 to current year.

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

GAGE.--Nonrecording gage. Datum of gage is 90.00 ft above datum assumed by Wisconsin Department of Natural Resources; gage readings have been reduced to elevations above this datum. Prior to Aug. 13, 1950, staff gage 0.3 mi southeast at same datum; Aug. 14 to Sept. 30, 1981, staff gage 0.2 mi east at same datum. Gage read by James Sachse through October 1988, and Albert Korecky thereafter.

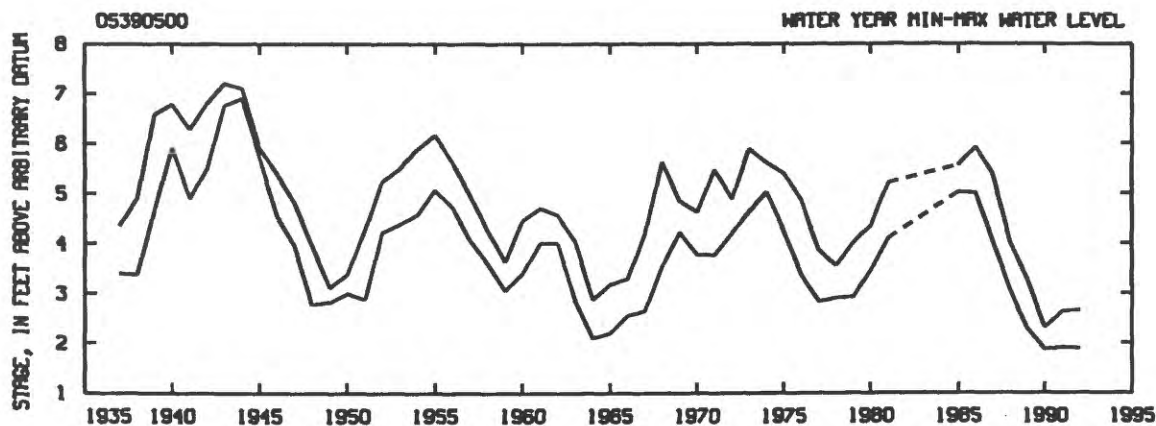
REMARKS.--Add 90 ft to obtain elevation above datum assumed for this lake by Wisconsin Department of Natural Resources. Lake has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 7.20 ft, May 3, 7, 17, 21, 24, 28, June 20 and 24, 1943; minimum observed, 1.87 ft Sept. 1, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 2.66 ft, May 18; minimum observed, 1.89 ft, Oct. 16.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	2.51	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	2.39	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	2.14	---
5	---	---	---	---	---	---	---	---	---	---	---	1.98
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	1.91	---	---	---	---	---	---	---	2.45	2.31	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	2.56	---	---	---	1.98
12	---	---	---	---	---	---	---	---	---	---	2.12	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	1.89	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	2.66	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	2.30	---	2.12
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	2.60	2.30	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	1.98	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	2.21	---	---
30	---	---	---	---	---	---	---	---	2.34	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---



05390500 ANVIL LAKE NEAR EAGLE RIVER, WI--CONTINUED

WATER-QUALITY RECORDS

LOCATION.--Lat 45°56'39", long 89°03'44", in NE 1/4 SW 1/4 sec.13, T.40 N., R.11 E., Vilas County, Hydrologic Unit 07070001, near center of lake, and 9.2 mi east of Eagle River.

PERIOD OF RECORD.--June 1985 to current year.

REMARKS.--Secchi-disc readings made by Albert Korecky.

TRANSPARENCY, SECCHI-DISC (IN METERS), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SECCHI DISC (M) (00078)	DATE	SECCHI DISC (M) (00078)
OCT 1991		JUN 1992	
02...	1.60	30...	4.70
09...	1.50	JUL	
16...	1.50	29...	3.00
MAY 1992		AUG	
11...	2.90	04...	2.60
18...	3.30	12...	2.80
24...	2.70	27...	2.40
JUN		SEP	
01...	4.60	05...	2.40
09...	4.80	11...	2.20
24...	4.00	22...	2.70

WISCONSIN RIVER BASIN

455426089254700 ALMA LAKE NEAR ST. GERMAIN. WI

LOCATION.--Lat 45°54'26", long 89°25'47", in NE 1/4 sec.36, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, 3 mi east of St. Germain.

LAKE-STAGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1990, May to September 1992.

GAGE.--Staff gage read by John P. Seibel. Elevation of gage is 1,617 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observer, 12.35 ft, Apr. 11, 12, 1986; minimum observed, 8.98 ft, Oct. 26, 27, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.38 ft, May 18; minimum observed, 10.88 ft, Sept. 11.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

455426089254700 ALMA LAKE NEAR ST. GERMAIN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to September 1990 secchi depth only; February to August 1992.

REMARKS.--Lake sampled near center of southern lobe of lake at deep hole. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 20 TO AUGUST 25, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 20		May 12		June 22		July 22		Aug. 25	
Depth of sample (ft)	3.0	17	1.5	17	1.5	16	1.5	17	1.5	17
Lake stage (ft)	---	---	---	11.18	---	11.11	---	11.22	---	10.92
Specific conductance ($\mu\text{S}/\text{cm}$)	31	29	22	24	23	25	23	25	24	28
pH (units)	7.1	6.7	6.6	6.9	6.1	6.4	6.8	6.8	5.9	5.9
Water temperature ($^{\circ}\text{C}$)	1.5	4.0	16.5	10.5	18.5	18.0	19.5	18.5	21.5	21.0
Color (Pt-Co. scale)	---	---	5	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.70	1.3	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	3.0	---	2.6	---	2.8	---	3.2
Dissolved oxygen	9.3	4.8	10.4	9.7	9.2	9.0	8.9	4.2	8.2	5.2
Calcium, dissolved (Ca)	---	---	1.8	1.5	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	<1.0	<1.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	<1.0	<1.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.4	0.4	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	6	6	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	<5.0	<5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	<1.0	<1.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	<0.0	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	<0.2	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	<10	60	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.02	0.02	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	<0.00	0.01	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.30	0.40	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.007	0.015	0.011	0.014	0.012	0.019	0.012	0.013
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	4.0	---	4.0	---	3.6	---	4.5	---

2-20-92

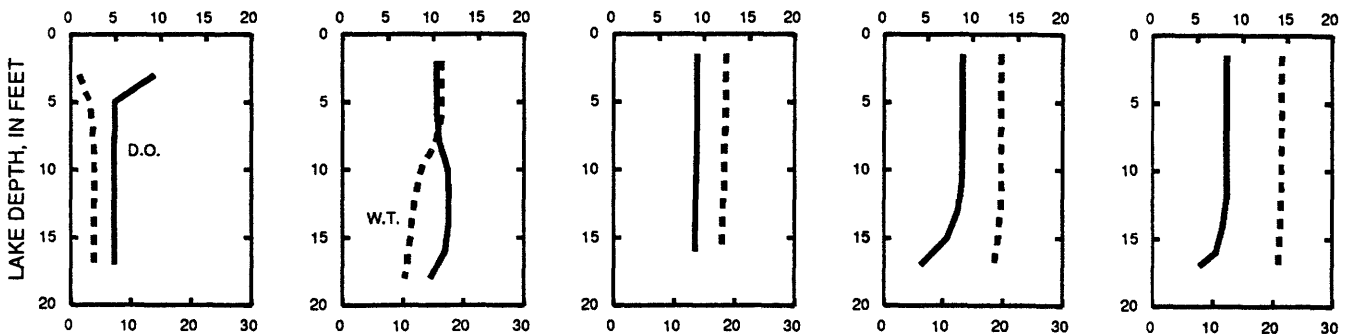
5-12-92

6-22-92

7-22-92

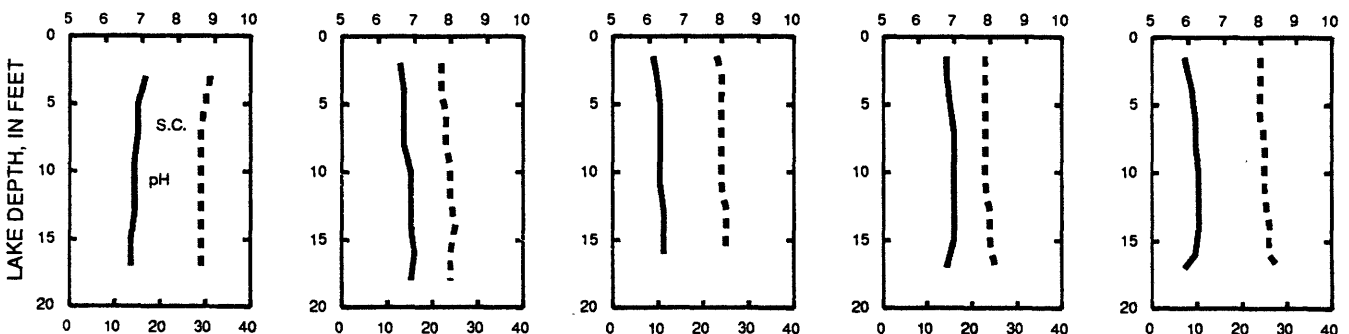
8-25-92

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

WISCONSIN RIVER BASIN

455504089260500 MOON LAKE NEAR ST. GERMAIN, WI

LOCATION.--Lat 45°55'04", long 89°26'05", in SE 1/4 SE 1/4 sec.25, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, 2.9 mi northeast of St. Germain.

PERIOD OF RECORD.--May 1985 to September 1988 and October 1989 to September 1990, secchi depth only; February to August 1992.

REMARKS.--The stage of Moon Lake is the same as Alma Lake; lake stages read at Alma Lake. Lake sampled near center of lake at depth of about 38 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 20 TO AUGUST 25, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 20		May 12		June 22		July 22		Aug. 25	
Depth of sample (ft)	3.0	32	1.5	36	1.5	30	1.5	30	1.5	37
Lake stage (ft)	---		11.18		11.11		11.22		10.92	
Specific conductance (μS/cm)	30	33	23	26	24	29	24	29	24	46
pH (units)	8.3	7.0	6.6	6.3	6.4	6.3	6.7	6.8	6.7	6.6
Water temperature (°C)	1.5	4.5	15.5	6.5	17.5	9.0	19.5	10.5	21.0	11.0
Color (Pt-Co. scale)	---		5		---		---		---	
Turbidity (NTU)	---		0.60		---		---		---	
Secchi-depth (meters)	---		3.5		4.2		4.4		4.5	
Dissolved oxygen	10.9	0.9	10.3	6.3	9.5	2.0	9.1	2.5	8.5	0.1
Calcium, dissolved (Ca)	---		2.0		---		---		---	
Magnesium, dissolved (Mg)	---		<1.0		---		---		---	
Sodium, dissolved (Na)	---		<1.0		---		---		---	
Potassium, dissolved (K)	---		0.4		---		---		---	
Alkalinity, as CaCO ₃	---		7		---		---		---	
Sulfate, dissolved (SO ₄)	---		<5.0		---		---		---	
Chloride, dissolved (Cl)	---		<1.0		---		---		---	
Fluoride, dissolved (F)	---		<0.0		---		---		---	
Silica, dissolved (SiO ₂)	---		<0.2		---		---		---	
Solids, dissolved, at 180°C	---		14		22		---		---	
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---		0.02		0.06		---		---	
Nitrogen, ammonia, dissolved (as N)	---		0.00		0.03		---		---	
Nitrogen, amm. + org., total (as N)	---		<0.20		0.30		---		---	
Phosphorus, total (as P)	---		0.004		0.013		0.009		0.020	
Phosphorus, ortho, dissolved (as P)	---		<0.002		<0.002		---		---	
Iron, dissolved (Fe) μg/L	---		<50		<50		---		---	
Manganese, dissolved (Mn) μg/L	---		<40		<40		---		---	
Chlorophyll a, phytoplankton (μg/L)	---		2.0		2.0		2.7		2.5	

2-20-92

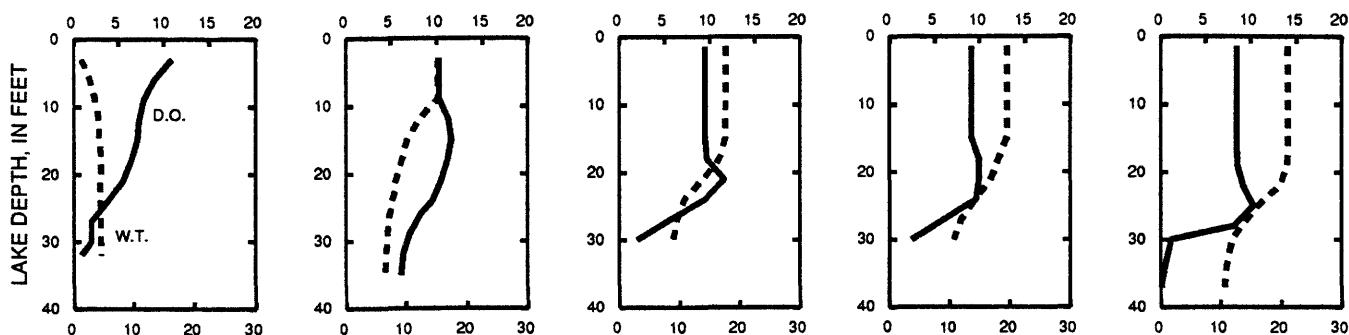
5-12-92

6-22-92

7-22-92

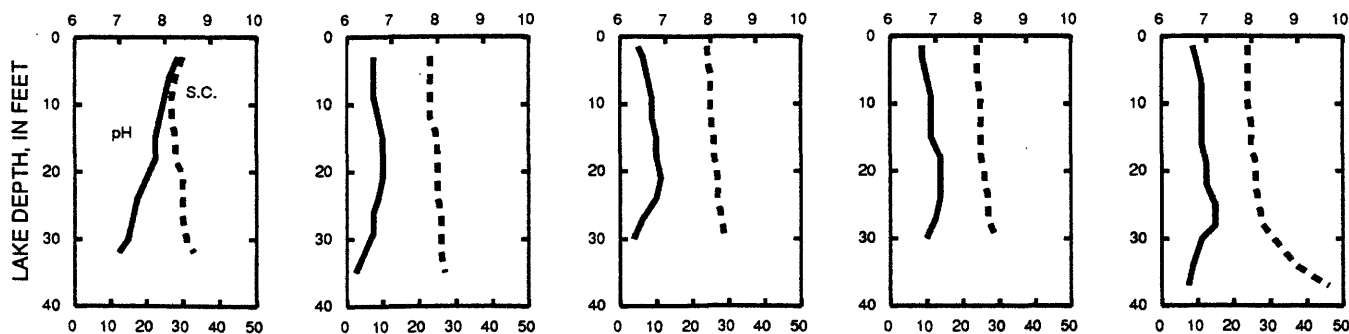
8-25-92

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

455545089262500 LITTLE ST. GERMAIN LAKE, NORTHEAST BAY, NEAR ST. GERMAIN, WI

LOCATION.--Lat 45°55'45", long 89°26'25", in SW 1/4 SE 1/4 sec.24, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, near St. Germain.

PERIOD OF RECORD.--April 1991 to current year.

REMARKS.--Lake sampled in northeast bay at a lake depth of about 12 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MAY 13 TO AUGUST 26, 1992
(Milligrams per liter unless otherwise indicated)

	May 13	June 23	July 22	Aug. 26
	-----	-----	-----	-----
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	13.53	13.75	13.74	13.50
Specific conductance (μS/cm)	69	70	72	70
pH (units)	7.5	7.4	7.6	7.4
Water temperature (°C)	16.5	16.5	19.5	20.5
Secchi-depth (meters)	1.3	1.2	1.2	0.8
Dissolved oxygen	9.9	8.6	8.8	7.3
Nitrogen, NO2 + NO3, diss. (as N)	<0.01	---	---	---
Nitrogen, ammonia, dissolved (as N)	<0.00	---	---	---
Nitrogen, amm. + org., total (as N)	0.40	---	---	---
Phosphorus, total (as P)	0.033	0.044	0.036	0.070
Chlorophyll a, phytoplankton (μg/L)	12	26	29	55

455428089282400 LITTLE ST. GERMAIN LAKE, WEST BAY, AT ST. GERMAIN, WI

LOCATION.--Lat 45°54'28", long 89°28'24", in SW 1/4 NE 1/4 sec.34, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, at St. Germain.

PERIOD OF RECORD.--April 1991 to current year.

REMARKS.--Lake sampled in west bay at a lake depth of about 53 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 19 TO AUGUST 26, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 19		May 13		June 23		July 22		Aug. 26	
Depth of sample (ft)	4.0	48	1.5	52	1.5	52	1.5	52	1.5	52
Lake stage (ft)	12.30		13.53		13.75		13.74		13.50	
Specific conductance ($\mu\text{S}/\text{cm}$)	77	110	70	76	72	104	74	109	73	109
pH (units)	6.6	6.6	7.4	7.2	7.2	7.0	7.1	7.2	6.9	6.9
Water temperature ($^{\circ}\text{C}$)	1.0	3.5	14.0	6.5	17.0	6.0	19.5	6.5	20.0	7.0
Color (Pt-Co. scale)	---	---	10	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.00	2.0	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.2		3.4		3.2		3.0	
Dissolved oxygen	10.6	0.2	11.6	5.7	9.4	0.2	9.4	0.2	8.8	0.2
Hardness, as CaCO_3	---	---	32	32	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	8.0	8.1	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	2.8	2.9	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.0	2.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.5	0.6	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	32	33	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	<5.0	<5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	1.0	1.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	7.8	9.1	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	54	58	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	<0.01	0.10	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	<0.00	0.11	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.70	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.012	0.023	0.011	0.060	0.011	0.120	0.011	0.200
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.003	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	50	160	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	140	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	9.0	---	5.0	---	3.1	---	4.9	---

2-19-92

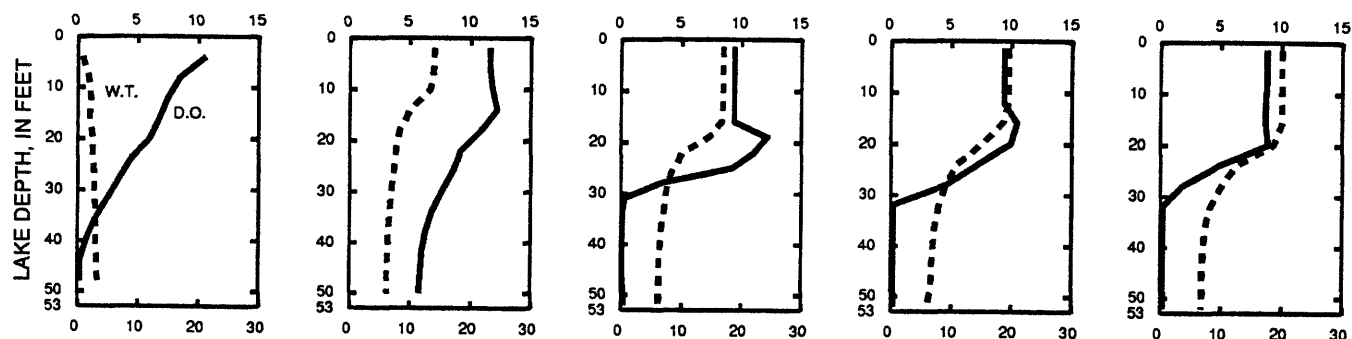
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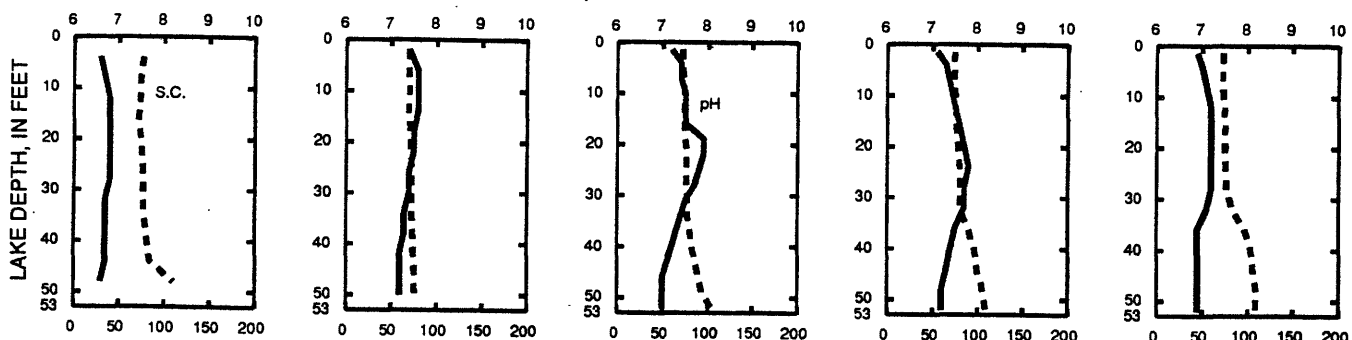
8-26-92

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

455437089270800 LITTLE ST. GERMAIN LAKE, SOUTH BAY, NEAR ST. GERMAIN, WI

LOCATION.--Lat 45°54'37", long 89°27'08", in NW 1/4 NE 1/4 sec.35, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, 1.7 mi east of St. Germain.

PERIOD OF RECORD.--April 1991 to current year.

REMARKS.--Lake sampled in south bay at a lake depth of about 22 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 19 TO AUGUST 26, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 19		May 13		June 23		July 22		Aug. 26	
Depth of sample (ft)	3.0	17	1.5	22	1.5	21	1.5	20	1.5	20
Lake stage (ft)	12.30		13.53		13.75		13.74		13.50	
Specific conductance (µS/cm)	95	105	72	77	68	109	69	86	65	79
pH (units)	8.2	7.3	7.5	7.1	7.1	6.9	7.5	7.0	7.6	7.1
Water temperature (°C)	0.5	4.5	16.0	10.0	16.5	13.0	19.5	15.5	20.0	17.5
Color (Pt-Co. scale)	---	---	20	50	---	---	---	---	---	---
Turbidity (NTU)	---	---	2.2	5.4	---	---	---	---	---	---
Secchi-depth (meters)	---		1.6		2.0		2.2		1.8	
Dissolved oxygen	0.4	0.3	9.8	2.1	8.9	0.1	9.5	0.1	8.1	0.1
Hardness, as CaCO ₃	---	---	33	35	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	8.4	8.9	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	2.8	3.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	1.8	1.8	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.6	0.6	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	33	35	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	<5.0	<5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	1.0	1.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	11	13	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	56	62	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	<0.01	0.01	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	<0.00	0.17	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.70	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.037	0.048	0.021	0.083	0.030	0.072	0.027	0.092
Phosphorus, ortho, dissolved (as P)	---	---	0.003	0.011	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	550	1200	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	350	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	15	---	11	---	9.6	---	12	---

2-19-92

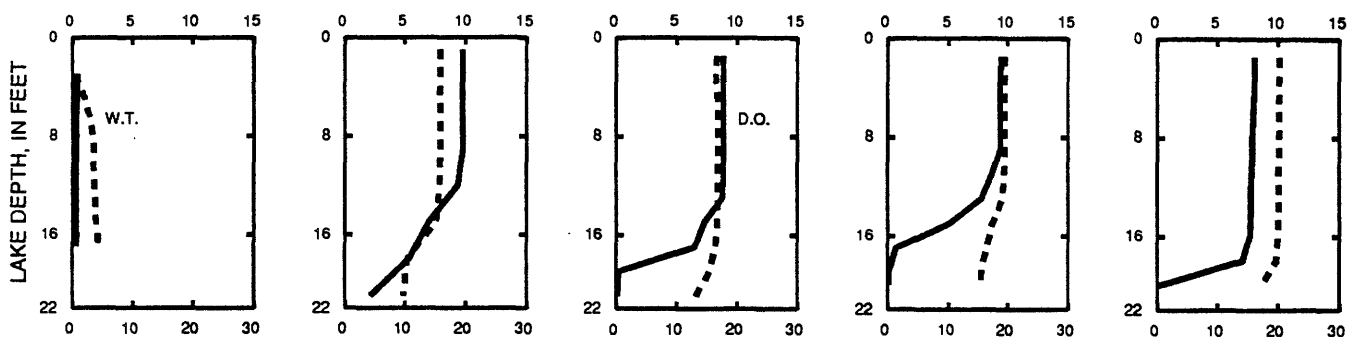
5-13-92

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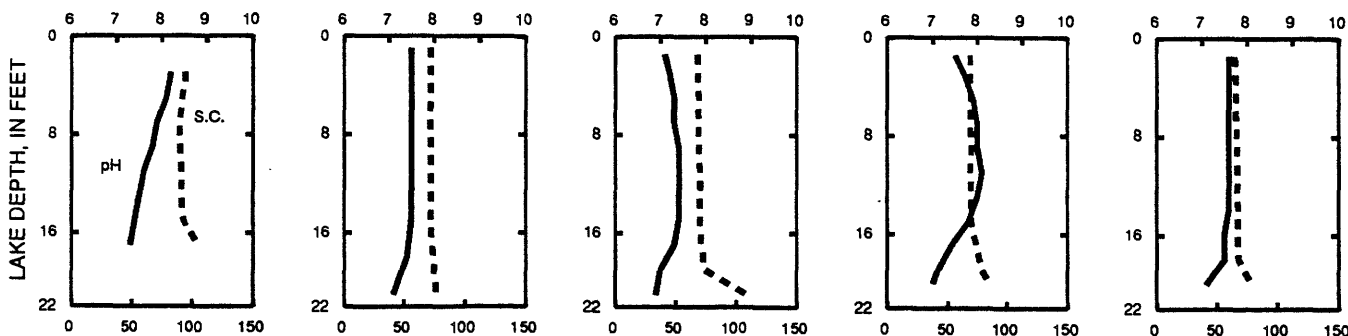
8-26-92

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

WISCONSIN RIVER BASIN

05390700 LITTLE ST. GERMAIN LAKE NEAR EAGLE RIVER, WI

LOCATION.--Lat 45°53'55", long 89°27'00", in SW 1/4 SE 1/4 sec.35, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, 9.6 mi west of Eagle River.

DRAINAGE AREA.--19.0 mi².

PERIOD OF RECORD.--October 1990 to current year.

GAGE.--Staff gage mounted on the dam wall at lake outlet. Datum of gage is 1,600 ft, above National Geodetic Vertical Datum of 1929.

REMARKS.--Lake level controlled at the dam outlet.

COOPERATION.--Gage readings furnished by Wisconsin Valley Improvement Company.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 13.86 ft, May 23, 1992; minimum observed, 12.00 ft, Jan. 3 and Feb. 3, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 13.86 ft, May 23; minimum observed, 12.00 ft, Jan. 3 and Feb. 3.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.74	13.42	12.98	12.16	---	---	12.94	13.64	13.70	13.74	13.66	13.48
2	13.76	13.48	---	---	---	12.32	12.96	13.62	13.70	13.78	13.64	13.46
3	13.74	13.46	12.96	12.00	12.00	12.20	12.98	13.60	13.68	13.82	13.64	13.54
4	13.72	13.40	---	---	12.20	---	13.00	13.60	13.68	13.78	13.62	13.52
5	13.74	13.38	---	12.20	---	12.32	13.00	13.58	13.72	13.74	13.60	13.52
6	13.76	13.38	12.84	---	---	12.30	13.02	13.56	13.70	13.74	13.56	13.58
7	13.76	13.36	---	12.20	12.20	12.32	13.04	13.54	13.72	13.76	13.54	13.58
8	13.74	13.32	12.84	---	---	12.46	13.06	13.54	13.70	13.76	13.56	13.58
9	13.74	13.30	---	---	---	12.48	13.08	13.52	13.68	13.76	13.56	13.58
10	13.72	13.24	12.66	12.30	---	12.60	13.10	13.48	13.68	13.76	13.60	13.58
11	13.72	13.22	---	---	12.18	12.68	13.20	13.48	13.68	13.74	13.58	13.56
12	13.72	13.20	---	---	---	12.68	13.22	13.54	13.68	13.74	13.56	13.56
13	13.70	13.18	12.60	---	---	12.66	13.22	13.54	13.68	13.76	13.56	13.56
14	13.75	13.16	---	12.22	12.18	12.64	13.24	13.54	13.66	13.76	13.54	13.62
15	13.72	13.18	12.60	---	---	12.66	13.24	13.60	13.64	13.72	13.54	13.64
16	13.72	13.16	---	---	---	12.66	13.32	13.62	13.62	13.74	13.52	13.72
17	13.70	13.14	12.58	12.18	---	12.68	13.34	13.78	13.64	13.76	13.52	13.76
18	13.70	13.20	---	---	12.20	12.70	13.36	13.76	13.70	13.74	13.56	13.80
19	13.70	13.22	---	---	---	12.72	13.42	13.74	13.72	13.74	13.54	13.74
20	13.68	13.22	12.58	---	---	12.76	13.44	13.78	13.72	13.80	13.54	13.70
21	13.72	13.22	---	12.08	12.26	12.80	13.54	13.74	13.70	13.72	13.52	13.70
22	13.70	13.18	---	---	12.10	12.78	13.58	13.72	13.68	13.74	13.50	13.72
23	13.68	13.16	---	---	---	12.80	13.60	13.86	13.74	13.74	13.48	13.70
24	13.68	13.22	12.62	12.10	---	12.80	13.62	13.78	13.80	13.74	13.48	13.70
25	13.68	13.26	---	---	12.28	12.82	13.62	13.68	13.80	13.72	13.48	13.68
26	13.64	13.12	---	---	---	12.84	13.64	13.72	13.82	13.74	13.50	13.70
27	13.58	13.12	12.38	---	---	12.86	13.64	13.72	13.78	13.72	13.48	13.78
28	13.50	13.08	---	12.02	12.30	12.86	13.64	13.76	13.74	13.72	13.46	13.80
29	13.48	13.04	---	---	---	12.88	13.62	13.74	13.80	13.68	13.44	13.74
30	13.50	13.06	---	---	---	12.90	13.66	13.72	13.74	13.66	13.48	13.72
31	13.44	---	12.16	12.20	---	12.92	---	13.72	---	13.66	13.50	---
MEAN	13.68	13.24	---	---	---	---	13.31	13.65	13.71	13.74	13.54	13.64
MAX	13.76	13.48	---	---	---	---	13.66	13.86	13.82	13.82	13.66	13.80
MIN	13.44	13.04	---	---	---	---	12.94	13.48	13.62	13.66	13.44	13.46

455557089311000 BIG ST. GERMAIN LAKE NEAR ST. GERMAIN, WI

LOCATION.--Lat 45°55'57", Long 89°31'10", in NE 1/4 SW 1/4 sec.20, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, 2.5 mi northwest of St. Germain.

DRAINAGE AREA.--73.1 mi².

PERIOD OF RECORD.--February to August 1992.

REMARKS.--Lake sampled near center of lake at deep hole. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 19 TO AUGUST 26, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 19		May 14		June 24		July 23		Aug. 26	
Depth of sample (ft)	3.0	27	1.5	30	1.5	31	1.5	31	1.5	31
Lake stage (ft)	10.48		10.58		10.63		10.52		10.58	
Specific conductance (μS/cm)	93	99	85	86	86	112	87	99	81	83
pH (units)	8.3	7.4	7.7	7.3	6.7	6.7	7.2	6.9	7.1	7.4
Water temperature (°C)	0.5	4.0	12.0	9.0	15.5	12.0	19.0	15.5	20.0	19.5
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.8	3.6	---	---	---	---	---	---
Secchi-depth (meters)	---		1.8		2.5		3.4		2.0	
Dissolved oxygen	12.4	1.0	11.3	7.9	8.2	0.1	9.1	0.1	8.2	3.5
Hardness, as CaCO ₃	---	---	38	38	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	10	10	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	3.2	3.2	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.1	2.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.7	0.7	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	36	36	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	<5.0	<5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	2.0	2.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	12	13	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	64	64	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	<0.01	0.02	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.03	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.30	0.30	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.024	0.034	0.016	0.051	0.016	0.071	0.023	0.023
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.003	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	110	160	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	110	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	11	---	7.0	---	6.0	---	13	---

2-19-92

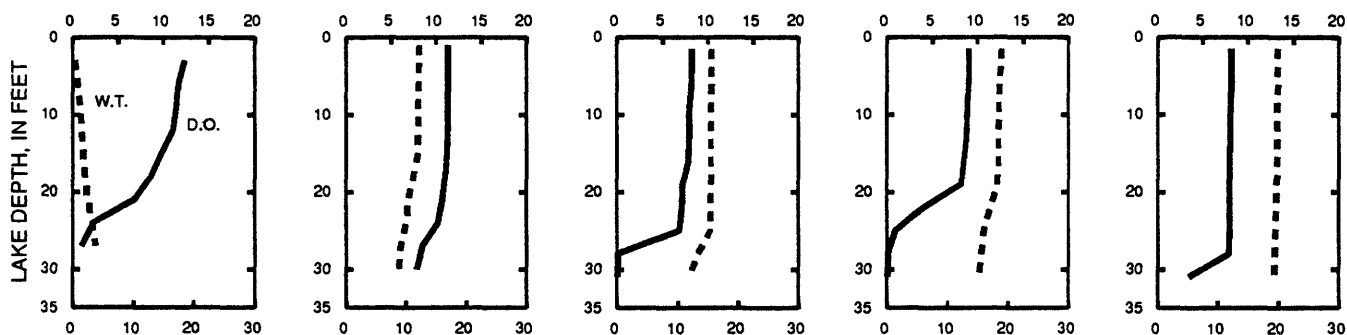
5-14-92

6-24-92

7-23-92

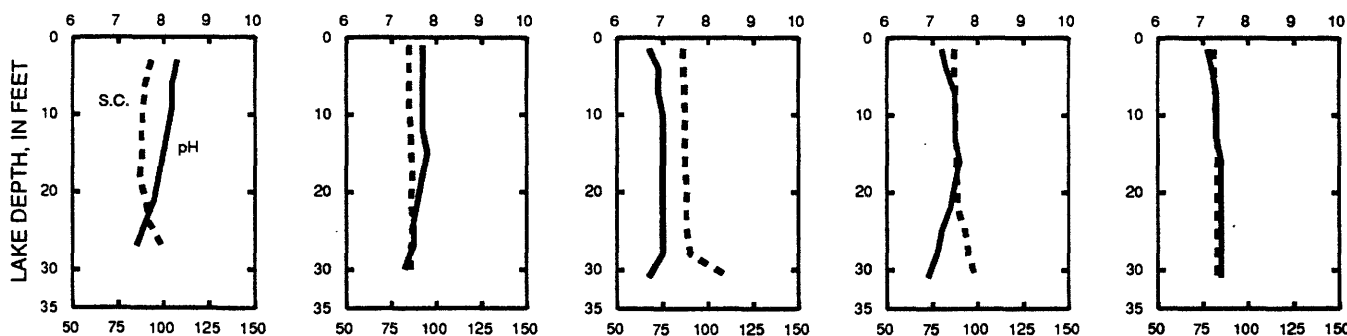
8-26-92

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

WISCONSIN RIVER BASIN

05390750 BIG ST. GERMAIN LAKE NEAR LAKE TOMAHAWK, WI

LOCATION.--Lat 45°55'00", long 89°31'55", in NE 1/4 SE 1/4 sec.30, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, at dam outlet, 7.7 mi northeast of Lake Tomahawk.

DRAINAGE AREA.--73.1 mi².

PERIOD OF RECORD.--October to September 1992. Lake stages for previous years were recorded by Wisconsin Valley Improvement Company.

GAGE.--Nonrecording staff gage. Datum of gage is 1,580 ft, above National Geodetic Vertical Datum of 1929.

COOPERATION.--Lake stages provided by Wisconsin Valley Improvement Company.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.72 ft, May 17; minimum, 8.48 ft, Feb. 21.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.52	9.94	9.72	9.26	---	---	9.36	10.38	10.52	10.50	10.48	10.56
2	10.56	10.08	---	---	---	---	9.36	10.40	10.52	10.60	10.50	10.58
3	10.54	10.02	9.70	9.12	---	8.50	9.36	10.42	10.50	10.64	10.52	10.60
4	10.52	9.98	---	---	8.68	---	9.36	10.44	10.48	10.58	10.52	10.56
5	10.54	9.98	---	---	---	---	9.36	10.44	10.52	10.54	10.50	10.54
6	10.56	9.98	9.68	---	---	8.54	9.36	10.44	10.54	10.60	10.52	10.56
7	10.56	9.96	---	9.10	8.66	8.62	9.38	10.46	10.54	10.60	10.52	10.54
8	10.54	9.92	9.68	---	---	8.64	9.40	10.50	10.54	10.58	10.56	10.52
9	10.52	9.88	---	---	---	8.64	9.42	10.50	10.54	10.58	10.54	10.52
10	10.52	9.84	9.70	8.98	---	8.76	9.42	10.50	10.56	10.58	10.60	10.52
11	10.52	9.82	---	---	8.52	8.90	9.50	10.54	10.56	10.56	10.58	10.52
12	10.52	9.80	---	---	---	9.04	9.50	10.60	10.56	10.56	10.56	10.52
13	10.50	9.76	9.68	---	---	9.16	9.50	10.58	10.56	10.56	10.56	10.50
14	10.50	9.76	---	8.96	8.50	9.24	9.52	10.60	10.58	10.56	10.54	10.60
15	10.50	9.74	9.68	---	---	9.30	9.54	10.60	10.52	10.54	10.52	10.60
16	10.50	9.72	---	---	---	9.32	9.60	10.62	10.50	10.56	10.52	10.68
17	10.48	9.70	9.66	8.96	---	9.36	9.62	10.72	10.56	10.56	10.52	10.58
18	10.50	9.72	---	---	8.50	9.38	9.64	10.64	10.60	10.56	10.56	10.58
19	10.48	9.74	---	---	---	9.38	9.68	10.58	10.58	10.54	10.56	10.54
20	10.48	9.72	9.62	---	---	9.40	9.74	10.54	10.56	10.52	10.56	10.68
21	10.50	9.70	---	8.94	8.48	9.40	9.82	10.52	10.56	10.50	10.56	10.58
22	10.50	9.72	---	---	---	9.36	9.86	10.52	10.54	10.52	10.56	10.64
23	10.24	9.72	---	---	---	9.38	9.92	10.58	10.60	10.52	10.54	10.58
24	10.00	9.74	9.46	8.94	---	9.36	9.94	10.56	10.64	10.52	10.54	10.52
25	10.00	9.74	---	---	8.50	9.36	9.98	10.52	10.66	10.56	10.56	10.46
26	10.10	9.70	---	---	---	9.36	10.02	10.50	10.62	10.58	10.60	10.52
27	10.02	9.70	9.38	---	---	9.36	10.04	10.48	10.58	10.56	10.58	10.60
28	10.04	9.70	---	8.86	8.52	9.36	10.08	10.50	10.50	10.52	10.56	10.52
29	10.04	9.68	---	---	---	9.36	10.18	10.50	10.54	10.50	10.56	10.48
30	10.02	9.70	---	---	---	9.36	10.38	10.50	10.52	10.50	10.56	10.48
31	9.94	---	9.26	8.72	---	9.36	---	10.50	---	10.48	10.56	---
MAX	10.56	10.08	---	---	---	---	10.38	10.72	10.66	10.64	10.60	10.68
MIN	9.94	9.68	---	---	---	---	9.36	10.38	10.48	10.48	10.48	10.46

05391000 WISCONSIN RIVER AT RAINBOW LAKE, NEAR LAKE TOMAHAWK, WI

LOCATION.--Lat 45°49'50", long 89°33'08", in NE 1/4 NE 1/4 sec.36, T.39 N., R.7 E., Oneida County, Hydrologic Unit 07070001, on right bank 500 ft downstream from Gilmore Creek, 0.4 mi downstream from Rainbow Lake, and 2.3 mi northeast of Lake Tomahawk.

DRAINAGE AREA.--757 mi².

PERIOD OF RECORD.--July 1936 to current year. Prior to October 1955, published as "at Rainbow Reservoir, near Lake Tomahawk."

REVISED RECORDS.--WSP 895: 1937(M). WSP 1508: 1944. WDR WI-83-1: Drainage area. WDR WI-80-1: Datum.

GAGE.--Water-stage recorder. Datum of gage is 1,569.05 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).

REMARKS.--No estimated daily discharges. Record good. Flow regulated by Rainbow Lake and 12 smaller reservoirs upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	639	505	961	892	939	896	438	838	632	549	505	454
2	643	421	954	883	939	879	439	765	630	553	497	409
3	643	384	1050	880	927	871	440	724	629	551	476	327
4	640	500	1160	880	922	863	439	725	629	548	476	389
5	639	588	1150	883	922	833	442	725	628	549	475	451
6	636	579	1150	882	922	811	339	727	628	547	466	457
7	573	589	1140	878	919	809	269	730	626	546	487	424
8	671	585	1140	876	918	805	273	660	626	549	495	334
9	598	588	1140	876	918	796	276	613	626	551	496	293
10	639	583	1140	876	915	782	282	614	625	546	498	283
11	636	580	1130	876	905	778	285	610	625	544	494	331
12	637	585	1130	877	905	773	289	605	631	547	495	369
13	641	588	1070	879	901	769	294	617	636	442	498	367
14	640	640	1010	880	895	762	296	630	635	481	497	328
15	632	683	1000	880	897	755	298	627	573	549	496	302
16	633	686	1010	880	897	751	263	640	544	553	497	325
17	629	691	1000	880	897	767	241	598	437	552	496	341
18	623	776	1000	880	897	782	244	582	367	551	466	342
19	628	819	951	876	910	771	253	590	478	551	447	329
20	636	820	879	859	919	766	264	592	543	548	455	319
21	642	898	875	854	913	756	280	588	542	550	457	318
22	644	943	877	852	906	738	289	734	549	560	455	337
23	645	940	875	847	899	726	284	888	547	488	453	416
24	592	944	876	847	895	713	298	943	549	598	449	462
25	444	948	877	847	921	702	298	931	553	571	450	463
26	376	950	873	847	943	688	301	862	555	562	452	468
27	473	945	873	847	931	681	398	707	561	523	452	469
28	546	943	872	846	917	674	575	658	556	501	452	463
29	559	944	870	847	910	664	640	631	555	505	457	458
30	547	962	872	894	---	657	762	632	551	463	457	454
31	550	---	887	940	---	524	---	632	---	468	458	---
TOTAL	18674	21607	30792	27041	26499	23542	10489	21418	17266	16596	14704	11482
MEAN	602	720	993	872	914	759	350	691	576	535	474	383
MAX	671	962	1160	940	943	896	762	943	636	598	505	469
MIN	376	384	870	846	895	524	241	582	367	442	447	283

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1992, BY WATER YEAR (WY)

MEAN	669	691	770	833	830	657	417	723	749	685	597	612
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	322	138	173	228	237	243	268
(WY)	1988	1949	1949	1990	1977	1990	1949	1949	1987	1988	1988	1948

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1936 - 1992

ANNUAL TOTAL	262745	240110	686
ANNUAL MEAN	720	656	1062
HIGHEST ANNUAL MEAN			359
LOWEST ANNUAL MEAN			2820
HIGHEST DAILY MEAN	2030	May 31	1160
LOWEST DAILY MEAN	212	Mar 30	241
ANNUAL SEVEN-DAY MINIMUM	224	Mar 28	262
INSTANTANEOUS PEAK FLOW			1170
INSTANTANEOUS PEAK STAGE		3.63	Dec 3
INSTANTANEOUS LOW FLOW			7.59
10 PERCENT EXCEEDS	1090	923	1050
50 PERCENT EXCEEDS	676	629	661
90 PERCENT EXCEEDS	437	367	308

WISCONSIN RIVER BASIN

455446089370300 LITTLE ARBOR VITAE LAKE NEAR WOODRUFF, WI

LOCATION.--Lat 45°54'46", long 89°37'03", in SW 1/4 SE 1/4 sec.28, T.40 N., R.7 E., Vilas County, Hydrologic Unit 07070001, 4 mi northeast of Woodruff.

LAKE-STAGE RECORDS

PERIOD OF RECORD.--February 1991 to current year.

GAGE.--Nonrecording gage. Staff read by Glyn A. Roberts. Elevation of lake is 1,603 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 7.90 ft, Nov. 4, 1991 and Apr. 23, 1992; minimum observed, 7.72 ft, Feb. 28 and June 12, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 7.90 ft, Nov. 4 and Apr. 23; minimum observed, 7.76 ft, Aug. 16, 21.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	7.84	7.84	---	---
2	---	---	---	---	---	7.84	7.84	7.84	---	---	7.78	---
3	7.78	---	---	7.84	---	---	---	---	---	7.88	---	---
4	---	7.90	---	---	---	---	---	---	---	7.84	---	---
5	---	---	7.88	---	7.86	---	7.85	---	---	---	7.78	7.80
6	7.82	---	---	---	---	---	---	7.82	---	7.84	---	---
7	7.78	---	---	---	---	---	---	---	7.84	---	---	---
8	---	---	---	---	---	7.86	---	---	7.84	---	---	---
9	---	---	---	7.86	---	---	---	---	---	---	---	---
10	---	7.84	7.87	---	---	---	7.85	---	---	7.84	---	---
11	---	---	---	7.86	---	---	---	---	7.82	---	7.80	---
12	---	---	---	---	7.84	---	---	7.85	---	---	---	7.78
13	7.78	---	---	---	---	7.86	---	---	7.82	7.84	---	---
14	---	---	---	---	---	---	---	---	7.82	7.86	---	---
15	7.80	---	---	---	---	---	7.86	7.86	7.88	---	---	---
16	---	7.86	7.88	7.86	---	---	---	---	---	---	7.76	7.80
17	---	7.86	---	---	---	---	---	---	---	---	---	---
18	---	7.89	---	---	7.84	7.84	---	---	---	---	---	---
19	---	7.88	---	---	7.82	7.84	---	7.88	---	---	---	7.86
20	---	---	---	7.86	---	---	7.88	---	---	7.82	---	7.84
21	7.80	---	7.86	---	---	---	---	7.86	7.82	7.80	7.76	7.82
22	7.78	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	7.84	---	7.90	---	7.82	7.80	---	7.80
24	7.80	---	---	---	---	---	---	7.82	7.81	---	---	---
25	---	7.88	---	7.86	---	7.84	---	---	7.84	---	---	---
26	---	---	---	---	---	---	7.87	---	---	---	7.80	---
27	---	---	7.84	---	---	---	---	---	7.82	---	---	7.84
28	---	---	---	---	---	---	---	7.82	---	---	---	---
29	---	---	---	---	7.84	---	---	---	---	7.78	---	---
30	7.88	7.87	7.84	7.86	---	---	---	---	---	---	---	7.82
31	---	---	---	---	---	7.84	---	---	---	---	7.82	---

455446089370300 LITTLE ARBOR VITAE LAKE NEAR WOODRUFF, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1991 to current year.

REMARKS.--Lake sampled at deep hole in lake at a lake depth of about 32 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 19 TO AUGUST 26, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 19		May 12		June 24		July 21		Aug. 26	
Depth of sample (ft)	3.0	29	1.5	30	1.5	29	1.5	28	1.5	30
Lake stage (ft)	7.82		7.85		7.81		7.80		7.80	
Specific conductance ($\mu\text{S}/\text{cm}$)	122	237	102	104	112	190	111	135	105	106
pH (units)	8.1	7.7	7.3	7.5	7.0	6.8	7.9	7.4	8.0	7.8
Water temperature ($^{\circ}\text{C}$)	1.0	6.0	15.0	10.0	16.5	15.0	20.0	16.0	20.5	19.5
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	2.4	4.9	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.2		1.3		2.4		1.0	
Dissolved oxygen	7.0	0.2	10.3	5.0	7.9	0.1	8.8	0.1	7.9	6.6
Hardness, as CaCO_3	---	---	51	51	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	14	14	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	4.0	3.9	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.6	2.5	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.7	0.7	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	51	50	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	<5.0	<5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	3.0	3.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	12	14	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	72	74	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.09	0.09	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.04	0.08	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.30	0.60	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.019	0.053	0.044	0.123	0.037	0.080	0.061	0.064
Phosphorus, ortho, dissolved (as P)	---	---	0.003	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	220	250	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	200	270	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	5.0	---	17	---	16	---	32	---

2-19-92

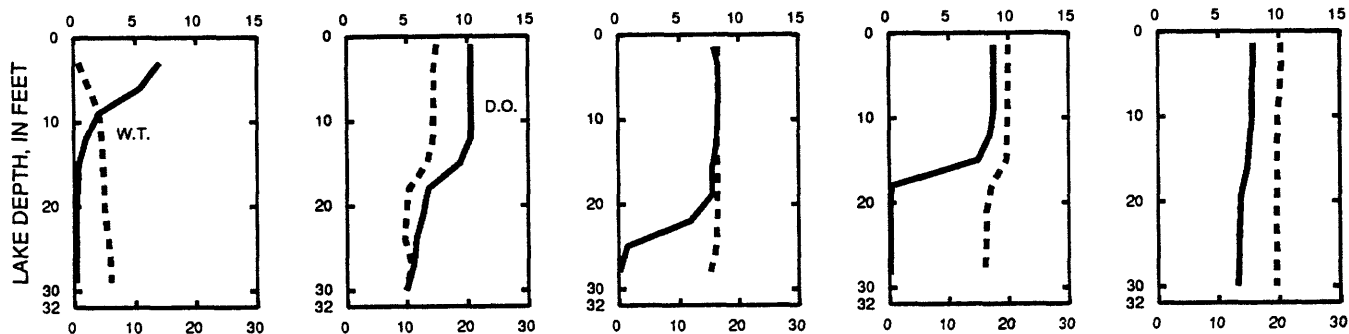
5-12-92

6-24-92

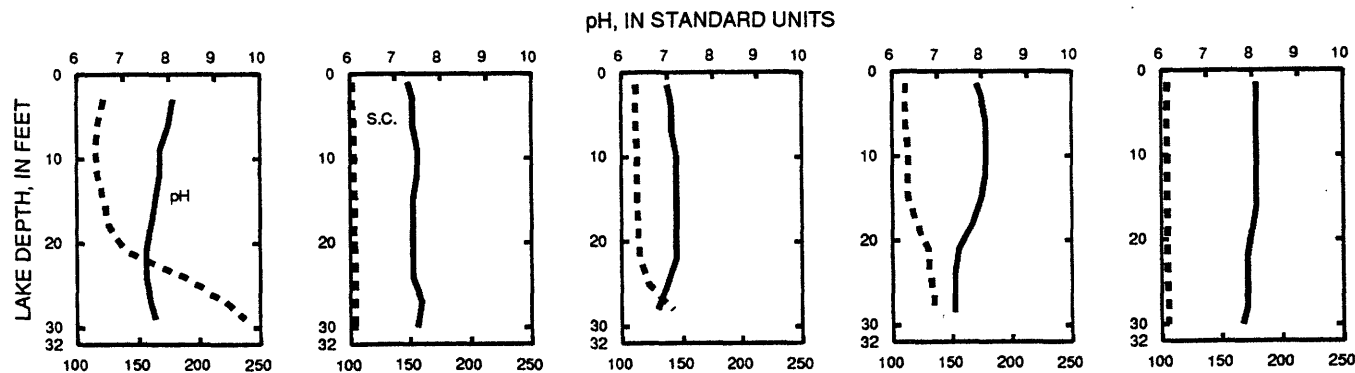
7-21-92

8-26-92

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

WISCONSIN RIVER BASIN

455909089405602 VANDERCOOK LAKE NEAR WOODRUFF, WI

LOCATION.--Lat 45°59'09", long 89°40'56", in SW 1/4 NE 1/4 SE 1/4 sec.36, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07070001, at north end of lake on dirt road off County Trunk Highway M, 6.1 mi north of Woodruff.

DRAINAGE AREA.--1.11 mi². Area of lake, 0.17 mi².

PERIOD OF RECORD.--November 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,600.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for periods of missing record, Feb. 11-26 and Feb. 28 to Mar. 19. Lake does not have surface inlet or outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 32.26 ft, Apr. 8-10, 1986; minimum observed gage height, 28.97 ft, Oct. 28, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 30.73 ft, Apr. 23-24; minimum observed gage height, 29.84 ft, Oct. 23.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.87	30.05	30.38	---	30.46	30.49	30.54	30.71	30.55	30.43	30.39	30.24
2	29.89	30.10	30.38	---	30.46	30.49	30.54	30.70	30.54	30.53	30.38	30.25
3	29.89	30.09	30.39	---	30.46	30.49	30.54	30.69	30.53	30.56	30.37	30.26
4	29.88	30.08	30.40	---	30.45	30.48	30.55	30.68	30.52	30.55	30.35	30.25
5	29.90	30.08	30.40	---	30.45	30.50	30.54	30.67	30.53	30.55	30.34	30.25
6	29.92	30.09	30.40	---	30.45	30.53	30.55	30.66	30.52	30.54	30.33	30.26
7	29.91	30.08	30.42	30.42	30.45	30.54	30.55	30.66	30.52	30.53	30.33	30.26
8	29.91	30.08	30.41	---	30.45	30.56	30.55	30.65	30.51	30.54	30.33	30.25
9	29.91	30.08	30.41	---	30.44	30.58	30.55	30.64	30.50	30.55	30.32	30.24
10	29.90	30.09	30.41	---	30.44	30.59	30.56	30.63	30.49	30.56	30.37	30.23
11	29.89	30.10	---	---	30.44	30.59	30.61	30.63	30.48	30.55	30.35	30.22
12	29.89	30.09	---	---	30.43	30.58	30.61	30.64	30.47	30.57	30.33	30.21
13	29.88	30.10	---	---	30.44	30.58	30.60	30.61	30.46	30.59	30.31	30.21
14	29.90	30.10	---	---	30.44	30.58	30.61	30.60	30.44	30.59	30.30	30.27
15	29.90	30.12	---	---	30.44	30.58	30.61	30.60	30.41	30.58	30.29	30.28
16	29.89	30.11	---	---	30.43	30.58	30.65	30.64	30.39	30.57	30.29	30.33
17	29.89	30.11	---	---	30.43	30.57	30.65	30.70	30.42	30.56	30.29	30.35
18	29.87	30.17	---	---	30.43	30.57	30.65	30.69	30.43	30.54	30.30	---
19	29.86	30.17	---	---	30.43	30.57	30.67	30.68	30.42	30.54	30.29	---
20	29.85	30.17	---	---	30.44	30.56	30.69	30.68	30.39	30.53	30.27	---
21	29.85	30.17	---	---	30.44	30.56	30.72	30.67	30.38	30.52	30.25	---
22	29.85	30.17	---	30.43	30.44	30.55	30.72	30.67	30.37	30.51	30.25	---
23	29.84	30.23	---	30.46	30.44	30.54	30.73	30.68	30.38	30.49	30.24	---
24	29.90	30.26	---	30.45	30.46	30.54	30.73	30.65	30.41	30.48	30.23	---
25	29.91	30.26	---	30.45	30.49	30.55	30.72	30.63	30.43	30.47	30.25	---
26	29.91	30.26	---	30.45	30.49	30.55	30.72	30.62	30.45	30.46	30.25	---
27	29.90	30.28	---	30.46	30.49	30.54	30.72	30.60	30.44	30.45	30.24	---
28	29.91	30.27	---	30.46	30.50	30.54	30.71	30.60	30.44	30.43	30.24	---
29	29.94	30.28	---	30.46	30.49	30.54	30.72	30.59	30.45	30.41	30.23	---
30	29.93	30.38	---	30.46	---	30.55	30.71	30.58	30.43	30.40	30.23	---
31	29.93	---	---	30.46	---	30.54	---	30.57	---	30.39	30.24	---
MEAN	29.89	30.15	---	---	30.45	30.55	30.63	30.65	30.46	30.52	30.30	---
MAX	29.94	30.38	---	---	30.50	30.59	30.73	30.71	30.55	30.59	30.39	---
MIN	29.84	30.05	---	---	30.43	30.48	30.54	30.57	30.37	30.39	30.23	---

WISCONSIN RIVER BASIN

269

455909089405603 VANDERCOOK LAKE RAIN GAGE NEAR WOODRUFF, WI

LOCATION.--Lat 45°59'09", long 89°40'56", in SW 1/4 NE 1/4 SE 1/4 sec.36, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07070001, at north end of lake on dirt road off County Trunk Highway M, 6.1 mi north of Woodruff.

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

GAGE.--Standard 8-inch collector above a 3-inch stand pipe with water-stage recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.98 in., Aug. 10, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.82 in., July 2.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	1.74	---	---	---	---	---	.00	.00	.14	.12	.00
2	.19	.04	---	---	---	---	---	.03	.00	1.82	.00	.26
3	.00	---	---	---	---	---	---	.01	.00	.03	.00	.01
4	.02	---	---	---	---	---	---	.00	.25	.01	.00	.06
5	.57	---	---	---	---	---	---	.00	.01	.00	.01	.11
6	.16	---	---	---	---	---	---	.00	.17	.00	.00	.04
7	.00	---	---	---	---	---	---	.00	.00	.00	.12	.05
8	.00	---	---	---	---	---	---	.00	.01	.31	.02	.03
9	.00	---	---	---	---	---	---	.00	.01	.01	.63	.01
10	.01	---	---	---	---	---	---	.00	.00	.30	.00	.00
11	.03	---	---	---	---	---	---	.06	.00	.00	.05	.00
12	.03	---	---	---	---	---	---	.04	.00	.58	.00	.00
13	.06	---	---	---	---	---	---	.00	.00	.08	.00	.27
14	.15	---	---	---	---	---	---	.00	.00	.00	.00	.48
15	.06	---	---	---	---	---	---	.22	.00	.00	.00	.04
16	.00	---	---	---	---	---	.04	.85	.05	.00	.00	.80
17	.00	---	---	---	---	---	.00	.25	.55	.00	.41	.15
18	.00	---	---	---	---	---	.00	.00	.13	.00	.02	.25
19	.03	---	---	---	---	---	.23	.00	.06	.07	.00	.00
20	.00	---	---	---	---	---	.48	.00	.01	.00	.00	.00
21	.02	---	---	---	---	---	.04	.00	.00	.02	.00	.00
22	.01	---	---	---	---	---	.09	.42	.00	.00	.01	.00
23	.23	---	---	---	---	---	.01	.00	.42	.00	.00	.00
24	.45	---	---	---	---	---	.01	.00	.44	.00	.30	.00
25	.06	---	---	---	---	---	.00	.00	.61	.00	.23	.00
26	.05	---	---	---	---	---	.00	.00	.00	.00	.01	.64
27	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.01
28	.10	---	---	---	---	---	.00	.00	.28	.00	.00	.00
29	.14	---	---	---	---	---	.00	.00	.01	.00	.32	.01
30	.01	---	---	---	---	---	.00	.00	.03	.00	.28	.00
31	.36	---	---	---	---	---	---	.00	---	.00	.03	---
TOTAL	2.86	---	---	---	---	---	---	1.88	3.04	3.37	2.56	3.22

WISCONSIN RIVER BASIN

05393500 SPIRIT RIVER AT SPIRIT FALLS, WI

LOCATION.--Lat 45°26'58", long 89°58'47", in NW 1/4 sec.10, T.34 N., R.4 E., Lincoln County, Hydrologic Unit 07070001, on right bank 40 ft downstream of bridge 0.2 mi south of Spirit Falls, 0.6 mi upstream from Squaw Creek, and 2.0 mi downstream from Richie Creek.

DRAINAGE AREA.--81.6 mi².

PERIOD OF RECORD.--April 1942 to current year.

REVISED RECORDS.--WSP 1308: 1943(M), 1948-50(M). WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,461.63 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 4, 1982, nonrecording gage 40 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 5-16 and Nov. 25 to Apr. 6. Records good except those for ice-affected periods, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	702	320	40	22	36	280	96	24	20	13	16
2	28	2210	300	39	24	47	260	88	22	28	17	18
3	27	1080	230	40	23	60	250	76	25	37	18	28
4	25	569	210	42	22	80	250	66	25	30	16	27
5	32	320	200	40	22	100	280	60	25	24	14	29
6	52	230	200	40	22	220	340	54	22	21	12	36
7	51	170	180	39	21	360	579	48	22	18	12	39
8	42	140	160	38	20	440	569	44	22	18	13	39
9	38	120	150	40	19	350	420	40	19	19	13	35
10	34	110	140	36	18	280	314	37	16	20	15	30
11	32	100	140	38	18	230	231	34	15	28	16	28
12	31	96	150	38	17	170	196	38	14	74	13	24
13	29	98	160	35	17	150	192	38	15	139	12	21
14	32	110	130	31	18	130	163	34	12	84	11	42
15	36	130	110	28	19	120	214	32	11	56	10	60
16	36	180	98	25	20	130	595	50	11	39	9.8	163
17	34	172	86	25	21	120	688	357	20	31	9.5	292
18	31	571	74	22	22	120	518	459	30	28	20	273
19	28	801	68	21	23	110	553	252	26	27	19	183
20	33	462	64	21	23	100	768	147	23	27	15	118
21	28	307	60	22	23	96	716	102	20	25	12	88
22	26	241	56	23	24	98	550	80	18	27	11	68
23	25	188	54	24	24	100	414	99	16	28	11	53
24	60	165	52	23	25	120	319	84	16	27	10	44
25	153	140	50	22	26	200	257	66	20	24	9.3	40
26	111	130	50	21	27	250	201	55	24	22	10	38
27	83	130	48	21	28	230	164	50	21	20	9.6	48
28	72	120	46	22	32	210	138	43	17	19	9.4	44
29	105	120	44	23	34	210	120	35	21	17	9.2	35
30	168	230	42	23	---	250	107	31	22	15	18	32
31	131	---	41	22	---	300	---	27	---	13	19	---
TOTAL	1641	10142	3713	924	654	5417	10646	2722	594	1005	406.8	1991
MEAN	52.9	338	120	29.8	22.6	175	355	87.8	19.8	32.4	13.1	66.4
MAX	168	2210	320	42	34	440	768	459	30	139	20	292
MIN	25	96	41	21	17	36	107	27	11	13	9.2	16
CFSM	.65	4.14	1.47	.37	.28	2.14	4.35	1.08	.24	.40	.16	.81
IN.	.75	4.62	1.69	.42	.30	2.47	4.85	1.24	.27	.46	.19	.91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1992, BY WATER YEAR (WY)

	70.2	73.2	39.4	20.5	18.4	112	322	154	93.9	44.8	29.5	74.9
MEAN	70.2	73.2	39.4	20.5	18.4	112	322	154	93.9	44.8	29.5	74.9
MAX	306	338	293	71.8	69.8	467	697	408	397	209	149	340
(WY)	1986	1992	1976	1960	1984	1946	1951	1973	1943	1968	1990	1986
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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1942 - 1992

ANNUAL TOTAL	51696	39855.8	86.9
ANNUAL MEAN	142	109	140
HIGHEST ANNUAL MEAN			36.3
LOWEST ANNUAL MEAN			1973
HIGHEST DAILY MEAN	2210	2210	3260
LOWEST DAILY MEAN	10	9.2	1.0
ANNUAL SEVEN-DAY MINIMUM	11	9.8	1.4
INSTANTANEOUS PEAK FLOW		2470	(a)4180
INSTANTANEOUS PEAK STAGE		7.14	10.00
INSTANTANEOUS LOW FLOW		8.4	1.0
ANNUAL RUNOFF (CFSM)	1.74	1.33	1.06
ANNUAL RUNOFF (INCHES)	23.57	18.17	14.46
10 PERCENT EXCEEDS	321	264	216
50 PERCENT EXCEEDS	53	38	27
90 PERCENT EXCEEDS	17	16	7.9

(a) From rating curve extended above 2,500 ft³/s

LOCATION.--Lat 45°14'09", long 89°38'59", on line between secs.20 and 29, T.32 N., R.7 E., Lincoln County, Hydrologic Unit 07070002, on left bank 40 ft upstream from bridge on County Trunk Highway C, 1.5 mi upstream from Meadow Creek, 4.5 mi northeast of Merrill, and 8.0 mi upstream from mouth.

PERIOD OF RECORD.--January 1914 to September 1931, August 1939 to current year. Monthly discharge for some periods published in WSP 1308.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,297.22 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 9, 1968, nonrecording gage 40 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 4-16, Nov. 22 to Dec. 20, Jan. 9-13, 15-17, 24-26, Jan. 31 to Feb. 1, Feb. 7-13, and Mar. 6 to Apr. 4. Records good except those for ice-affected periods and discharges below 120 ft³/s for June 11 to Sept. 30, which are fair.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)												
MEAN	165	169	112	92.5	89.1	191	434	258	210	137	131	172
MAX	527	388	199	169	158	676	899	723	536	401	494	656
(WY)	1942	1920	1992	1960	1930	1973	1916	1960	1940	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

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1914 - 1992	
ANNUAL TOTAL	81429		74155			
ANNUAL MEAN	223		203		180	
HIGHEST ANNUAL MEAN					272	1942
LOWEST ANNUAL MEAN					108	1931
HIGHEST DAILY MEAN	1710	Jun 2	1070	Apr 21	4200	Aug 31 1941
LOWEST DAILY MEAN	79	Sep 1	77	Aug 16	35	Oct 26 1947
ANNUAL SEVEN-DAY MINIMUM	83	Aug 27	79	Aug 11	52	Dec 28 1948
INSTANTANEOUS PEAK FLOW			(a)1100	Apr 21	(b)5800	Aug 31 1941
INSTANTANEOUS PEAK STAGE			(c)5.06	Dec 4	(d)9.45	Aug 31 1941
INSTANTANEOUS LOW FLOW			74	(e)Feb 9, 12	34	Oct 26 1947
ANNUAL RUNOFF (CFSM)	1.21		1.10		.98	
ANNUAL RUNOFF (INCHES)	16.46		14.99		13.29	
10 PERCENT EXCEEDS	459		374		348	
50 PERCENT EXCEEDS	142		140		115	
90 PERCENT EXCEEDS	88		94		75	

- (a) Gage height, 5.03 ft
- (b) Based on rating curve extended above 2,200 ft³/s
- (c) Ice jam
- (d) From flood marks
- (e) Part of each day, result of freezeup

WISCONSIN RIVER BASIN

05395000 WISCONSIN RIVER AT MERRILL, WI

LOCATION.--Lat 45°10'41", long 89°40'52", on line between secs.12 and 13, T.31 N., R.6 E., Lincoln County, Hydrologic Unit 07070002, on left bank 300 ft downstream from U.S. Highway 51 bridge at east end of Merrill, and 0.5 mi downstream from Prairie River.

DRAINAGE AREA.--2,760 mi².

PERIOD OF RECORD.--November 1902 to current year.

REVISED RECORDS.--WSP 1308: 1904-7, 1909-11, 1913. WSP 1508: 1908, 1915-16(M), 1917, 1920-21(M), 1925(M), 1930, 1935-36. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,228.85 ft above National Geodetic Vertical Datum of 1929. Prior to June 18, 1903, nonrecording gage at different datum. June 18, 1903, to Sept. 10, 1914, nonrecording gage at present datum.

REMARKS.--Estimated daily discharges: Aug. 23, 24, Sept. 15, 16, and ice-affected periods, Dec. 15 to Jan. 14, Jan. 18 to Feb. 9, and Feb. 11 to Mar. 4. Records for Aug. 25 to Sept. 1, and Sept. 17, 18 were furnished by Wisconsin Valley Improvement Company. Records good. Flow regulated by 20 reservoirs and 9 powerplants upstream from station. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

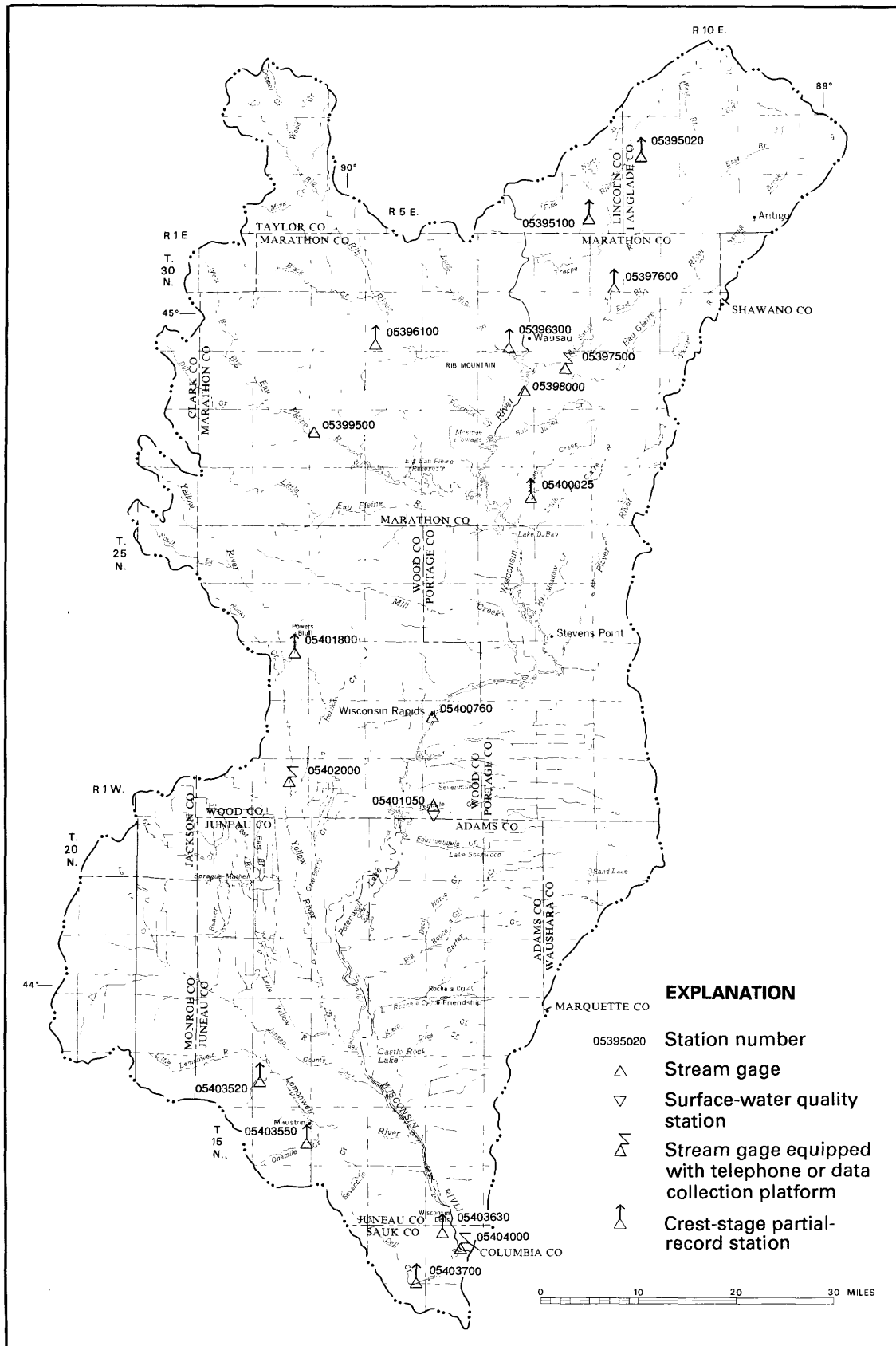
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1950	4320	5810	2700	2600	2600	4580	3440	2090	1790	1540	1530
2	2420	9450	5820	3000	2500	2700	3810	3310	2380	1640	1580	1570
3	2010	9480	5370	2900	2800	2700	3660	2990	2060	1570	1470	1640
4	2030	5930	4660	3000	2700	2800	3370	2850	2220	1470	1310	1760
5	2030	3870	4280	3200	2600	3000	3490	3130	2080	1710	1250	1560
6	2230	3040	5120	2900	2600	3270	4260	2680	2000	1630	1560	2060
7	2010	2870	4870	2800	3000	4050	6860	2250	1950	1550	1360	1820
8	2090	2870	4280	2900	2700	5710	8370	2430	2040	1290	1360	1760
9	2320	2190	4470	3000	2600	5720	5700	2460	2040	1480	1400	1480
10	2180	2150	4130	3000	2270	4400	5980	2480	1720	1980	1490	1670
11	2110	2120	4330	3000	2600	3740	4570	2400	1930	1810	1270	1790
12	2050	2400	4310	3100	2500	3990	3910	2420	2020	2190	1310	1530
13	1780	2490	4620	3000	2600	4100	3570	2560	1770	2430	1420	1440
14	2020	2440	4630	2800	2700	3570	3720	2170	1690	1960	1620	2060
15	2130	2730	4300	2680	2600	3290	3840	1960	1700	1650	1550	2100
16	2190	3080	3800	2890	2600	2950	6350	2570	1750	1860	1440	2900
17	2110	3020	3500	2810	2700	3010	7430	3920	1690	1670	1320	4580
18	1940	5730	3000	2400	2600	3520	6920	4680	2140	1760	1150	4110
19	1920	7530	3300	2300	2600	3180	6510	4300	1900	1530	1450	3520
20	1970	6800	3100	2700	2600	3330	7140	2820	1520	1880	1410	2850
21	1970	5070	3000	2500	2700	3170	8110	2530	1330	1670	1600	2440
22	1980	4460	3000	2400	2500	3180	8250	2510	1220	1710	1330	2340
23	2150	4320	3000	2700	2500	3260	6730	3220	1330	1580	1200	1570
24	2360	3770	2900	3100	2600	2650	6200	2980	1500	1710	1400	1930
25	3010	3970	3100	3000	2600	3080	4840	2820	2170	1420	1450	1860
26	2490	3530	3100	2900	2500	3820	4330	2720	1940	1350	1420	1740
27	2340	3250	3000	2800	2500	3980	4030	2520	1800	1580	1340	2660
28	2380	3940	3000	3000	2500	3660	3660	2420	1540	1900	1300	2870
29	2340	3540	2900	3200	2600	3580	3060	2200	1620	1390	1330	2090
30	2790	5290	3000	2800	---	3780	3020	2350	1660	1120	1610	2010
31	2390	---	2800	2700	---	4210	---	2350	---	1580	1490	---
TOTAL	67690	125650	120500	88180	75470	110000	156270	86440	54800	51860	43730	65240
MEAN	2184	4188	3887	2845	2602	3548	5209	2788	1827	1673	1411	2175
MAX	3010	9480	5820	3200	3000	5720	8370	4680	2380	2430	1620	4580
MIN	1780	2120	2800	2300	2270	2600	3020	1960	1220	1120	1150	1440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1992, BY WATER YEAR (WY)

	MEAN	2547	2387	2068	1969	1913	2604	4764	3725	3123	2359	2078	2560
MAX	8654	4632	3887	3138	3063	6275	11500	8928	9923	5862	5451	9069	
(WY)	1912	1939	1992	1939	1932	1935	1916	1904	1905	1968	1912	1903	
MIN	760	775	830	820	820	980	1348	1082	810	724	719	873	
(WY)	1977	1977	1911	1911	1911	1909	1990	1987	1988	1988	1934	1987	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1903 - 1992
ANNUAL TOTAL	1197450	1045830	
ANNUAL MEAN	3281	2857	2660
HIGHEST ANNUAL MEAN			4558
LOWEST ANNUAL MEAN			1348
HIGHEST DAILY MEAN	16500	9480	36400
LOWEST DAILY MEAN	1610	1120	90
ANNUAL SEVEN-DAY MINIMUM	1830	1350	194
INSTANTANEOUS PEAK FLOW		10400	(a)49400
INSTANTANEOUS PEAK STAGE		9.12	18.26
10 PERCENT EXCEEDS	5750	4500	4780
50 PERCENT EXCEEDS	2400	2600	2090
90 PERCENT EXCEEDS	1900	1500	1220

(a) From rating curve extended above 20,000 ft³/s



CENTRAL WISCONSIN RIVER BASIN

WISCONSIN RIVER BASIN

05397500 EAU CLAIRE RIVER AT KELLY, WI

LOCATION.--Lat 44°55'06", long 89°33'00", on line between secs.9 and 10, T.28 N., R.8 E., Marathon County, Hydrologic Unit 07070002, on right bank 50 ft downstream from County Highway SS bridge, 0.7 mi northeast of Kelly, 1.3 mi upstream from Big Sandy Creek, 4.5 mi upstream from mouth, and 5.0 mi southeast of Wausau.

DRAINAGE AREA.--375 mi².

PERIOD OF RECORD.--January 1914 to November 1926, August 1939 to current year.

REVISED RECORDS.--WSP 1508: 1915, 1916-17(M), 1919-26(M), 1940(M), 1945(M), 1950(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,177.88 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 17, 1953, nonrecording gage at site 50 ft upstream at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Ice-affected period, Nov. 5 to Mar. 29. Records good except those for ice-affected period, which is fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	547	740	160	120	130	660	308	159	121	69	124
2	100	1190	640	160	130	140	599	285	148	112	84	134
3	99	961	540	170	120	150	533	264	138	105	89	184
4	99	790	470	170	120	160	496	241	133	102	92	236
5	105	660	410	160	110	180	502	226	149	98	84	211
6	105	520	370	160	120	220	628	211	137	93	78	246
7	113	420	360	160	120	660	938	198	126	89	75	296
8	117	350	370	150	110	1100	1240	188	122	89	79	283
9	110	370	340	150	110	1400	1430	181	118	90	82	251
10	105	330	330	150	100	1200	1020	167	114	91	83	234
11	102	300	320	150	94	1100	715	154	111	90	77	212
12	102	290	350	160	98	940	542	152	107	124	75	184
13	100	330	520	150	100	760	554	158	104	196	71	159
14	105	370	580	150	100	660	521	189	105	179	69	306
15	109	430	460	140	100	540	608	178	100	150	66	568
16	113	500	380	150	100	460	1690	219	98	126	66	1050
17	113	640	320	140	100	380	1770	1300	113	109	64	1320
18	121	820	260	130	100	330	1500	878	125	99	69	1570
19	108	660	220	140	98	290	1220	786	126	97	79	1670
20	102	500	230	140	96	270	1200	505	118	97	77	1080
21	101	420	220	140	98	260	1270	370	108	94	73	571
22	100	360	200	150	100	250	1190	304	101	93	71	400
23	99	330	200	140	100	250	961	517	100	93	68	324
24	121	320	190	140	110	250	729	457	103	91	67	275
25	184	380	180	130	110	320	582	349	128	88	69	241
26	227	450	180	130	110	520	492	286	179	84	86	232
27	210	410	180	130	110	470	435	248	152	81	85	485
28	190	390	180	130	110	430	386	221	134	78	90	557
29	235	540	180	120	120	420	353	199	130	73	93	483
30	302	820	180	130	---	446	334	183	124	71	119	367
31	316	---	170	120	---	586	---	172	---	69	127	---
TOTAL	4215	15398	10270	4500	3114	15272	25098	10094	3710	3172	2476	14253
MEAN	136	513	331	145	107	493	837	326	124	102	79.9	475
MAX	316	1190	740	170	130	1400	1770	1300	179	196	127	1670
MIN	99	290	170	120	94	130	334	152	98	69	64	124
CFSM	.36	1.37	.88	.39	.29	1.31	2.23	.87	.33	.27	.21	1.27
IN.	.42	1.53	1.02	.45	.31	1.51	2.49	1.00	.37	.31	.25	1.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)												
MEAN	204	233	140	90.3	85.1	358	751	364	294	158	146	211
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

SUMMARY STATISTICS			FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1914 - 1992	
ANNUAL TOTAL			126796		111572			
ANNUAL MEAN			347		305		252	
HIGHEST ANNUAL MEAN							440	
LOWEST ANNUAL MEAN							131	
HIGHEST DAILY MEAN			4000	Mar 24	1770	Apr 17	7180	Aug 21 1926
LOWEST DAILY MEAN			75	Sep 1	64	Aug 17	25	(a) Jan 6 1926
ANNUAL SEVEN-DAY MINIMUM			80	Feb 14	69	Aug 12	26	Jan 10 1926
INSTANTANEOUS PEAK FLOW					(b) 2020	Apr 16	(c) 8300	Aug 21 1926
INSTANTANEOUS PEAK STAGE					(d) 8.40	Nov 18	(e) 10.14	Mar 24 1991
INSTANTANEOUS LOW FLOW					59	Aug 24	(f) 8.0	Jul 17 1944
ANNUAL RUNOFF (CFSM)		.93			.81		.67	
ANNUAL RUNOFF (INCHES)		12.58			11.07		9.13	
10 PERCENT EXCEEDS		762			660		540	
50 PERCENT EXCEEDS		180			170		126	
90 PERCENT EXCEEDS		92			90		60	

(a) Also occurred Jan. 10-15, 17, 18, 1926, and Oct. 3, 1948

(b) Gage height, 4.82 ft

(c) From rating curve extended above 6,000 ft³/s, gage height, 8.4 ft from graph based on gage readings

(d) Ice jam, from high-water mark

(e) Ice jam

(f) Probably result of temporary regulation

05398000 WISCONSIN RIVER AT ROTHSCILD, WI

LOCATION.--Lat 44°53'09", long 89°38'05", in sec.26, T.28 N., R.7 E., Marathon County, Hydrologic Unit 07070002, on left bank at Rothschild, 0.5 mi downstream from Rothschild Dam, 1.7 mi north of bridge on U.S. Highway 51, 2.0 mi downstream from Eau Claire River, and 5.0 mi upstream from Black Creek.

DRAINAGE AREA.--4,020 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,125.86 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1975, at datum 10.00 ft higher. Auxiliary water-stage recorder in Mosinee Pond 8 mi downstream. Prior to July 23, 1964, nonrecording auxiliary gage at same site and datum, read hourly.

REMARKS.--Estimated daily discharges: Ice-affected period, Dec. 15 to Mar. 4. Records good except those for ice-affected period, which is fair. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2500	5530	10600	3100	3000	2800	8210	4660	3050	2290	1900	1960
2	2940	17300	9700	3400	2800	3000	6940	4750	2530	2040	2360	2270
3	2500	17400	8470	3400	3000	3000	6500	4320	2740	1930	2140	2500
4	2420	11200	7580	3400	3000	3200	5930	3910	2740	1970	1670	2530
5	2510	6650	6140	3700	3000	3720	6260	4120	2710	2050	1480	2560
6	2760	5330	5910	3500	2800	5540	7710	3980	2600	1910	1470	3110
7	2520	4530	6630	3300	3200	9270	11200	3160	2450	2360	1810	3200
8	2500	4030	6340	3400	3200	13600	14200	3370	2490	2060	2030	2890
9	2570	3730	6120	3300	2800	15000	11200	3210	2730	1960	1420	3040
10	2770	3480	5870	3400	2400	9670	9680	3350	2120	2250	1420	2570
11	2640	3300	5640	3400	2700	8400	8100	3290	2180	2330	1620	2780
12	2390	2780	6150	3500	2600	7770	6850	3170	2610	3020	1590	2530
13	2270	3610	7340	3500	2700	7010	6240	3300	2390	3760	1580	2010
14	2420	3560	8510	3300	2800	6080	6200	3190	2040	3410	1530	4000
15	2490	4570	7400	3000	2800	5280	7500	2520	2030	2480	1660	5240
16	2750	5500	6000	3100	2700	4710	16800	4230	2060	2450	1400	6420
17	2710	5140	4900	3200	2800	4290	18100	12200	2380	2230	1460	9720
18	2370	9730	4200	2900	2800	4880	13900	9440	2630	2160	1670	10100
19	2350	16000	3900	2700	2800	4630	12600	7630	2680	2030	1750	8500
20	2390	12300	4000	3000	2800	4460	13900	5430	2020	2180	1750	6130
21	2320	9050	3700	3100	2900	4450	14200	3960	1830	2050	1610	4660
22	2370	7480	3600	3000	2700	4200	14100	4050	1510	2130	1390	3760
23	2340	6820	3600	3000	2600	4270	11800	5040	1520	2100	1320	3650
24	3030	5760	3400	3400	2700	4050	10100	4700	2030	1970	1720	2840
25	3650	5470	3300	3400	2800	4970	8160	4230	2450	1610	1600	2670
26	3770	5080	3500	3200	2800	7270	6970	4010	2880	1650	1890	2780
27	3340	4450	3600	3200	2700	7140	6070	3670	2470	1840	1510	4550
28	3110	4730	3500	3300	2800	6340	5490	3470	2280	2090	1490	4860
29	3400	5330	3500	3900	2800	5840	4980	3100	2000	1940	1470	3920
30	3900	7920	3500	3600	---	6230	4650	2960	2180	1270	2180	3330
31	4020	---	3400	3200	---	7510	---	3210	---	1400	1730	---
TOTAL	86020	207760	170000	101800	81500	188580	284540	135630	70330	66920	51620	121080
MEAN	2775	6925	5484	3284	2810	6083	9485	4375	2344	2159	1665	4036
MAX	4020	17400	10600	3900	3200	15000	18100	12200	3050	3760	2360	10100
MIN	2270	2780	3300	2700	2400	2800	4650	2520	1510	1270	1320	1960

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1992, BY WATER YEAR (WY)

	MEAN	3203	3247	2712	2468	2361	4255	7438	4656	3725	2795	2367	3177
MAX	10020	7262	5484	3787	4051	13300	14640	13930	10110	7219	4729	9079	
(WY)	1986	1986	1992	1973	1984	1973	1967	1960	1968	1978	1978	1980	
MIN	837	863	973	1025	1023	1613	2081	1515	924	933	932	1000	
(WY)	1949	1977	1977	1990	1977	1956	1990	1987	1988	1988	1988	1989	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1945 - 1992	
ANNUAL TOTAL	1793220		1565780			
ANNUAL MEAN	4913		4278		3533	
HIGHEST ANNUAL MEAN					5953	
LOWEST ANNUAL MEAN					1686	
HIGHEST DAILY MEAN	25700	Mar 24	18100	Apr 17	44500	Mar 31 1967
LOWEST DAILY MEAN	1700	Feb 27	1270	Jul 30	575	Jun 16 1988
ANNUAL SEVEN-DAY MINIMUM	1970	Feb 21	1540	Aug 10	757	Nov 28 1976
INSTANTANEOUS PEAK FLOW			21700	Nov 2	49200	(a) Apr 12 1965
INSTANTANEOUS PEAK STAGE			22.00	Nov 2	(b) 18.46	(a) Apr 12 1965
INSTANTANEOUS LOW FLOW					575	Jun 16 1988
10 PERCENT EXCEEDS	9530		8120		6550	
50 PERCENT EXCEEDS	3400		3200		2580	
90 PERCENT EXCEEDS	2200		1920		1470	

(a) Also occurred Mar. 31, 1967

(b) Datum then in use

WISCONSIN RIVER BASIN

05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI

LOCATION.--Lat 44°49'19", long 90°04'46", on line between sec.13, T.27 N., R.3 E., and sec.18, T.27 N., R.4 E., Marathon County, Hydrologic Unit 07070002, on left bank 15 ft 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 and crest-stage gage. Datum of gage is 1,154.24 ft above National Geodetic Vertical Datum of 1929. July 24, 1914, to Dec. 31, 1925, nonrecording gage at site 0.5 mi upstream at different datum. Apr. 30, 1937, to Sept. 15, 1938, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 8-13, 25-28, and Dec. 1 to Mar. 27. Records good except those for ice-affected periods, which are fair.

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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	2670	1400	41	18	30	784	82	17	22	11	15
2	18	3850	760	41	19	38	446	74	15	17	18	13
3	17	916	680	41	18	52	403	64	14	15	25	15
4	20	430	520	42	18	130	478	53	14	13	23	22
5	19	244	450	41	17	400	514	45	12	12	20	27
6	22	153	420	39	18	1200	595	35	12	10	16	100
7	19	113	440	38	18	2800	885	31	11	9.8	14	103
8	21	70	410	39	17	2500	717	27	11	9.9	15	77
9	20	56	370	41	15	1900	400	28	11	10	15	73
10	20	52	330	40	16	1100	292	26	11	12	13	77
11	19	50	320	39	15	680	236	25	10	17	12	66
12	18	48	560	37	13	520	279	26	9.2	91	12	58
13	18	52	480	34	14	430	465	25	8.7	592	11	48
14	21	84	300	32	14	420	393	25	8.6	234	10	664
15	20	923	210	28	15	490	2970	23	8.0	126	9.2	326
16	19	706	160	23	15	500	3470	2000	8.6	75	8.5	1030
17	19	414	130	19	15	450	1220	2580	18	49	7.9	714
18	19	3770	110	18	16	410	605	418	39	35	7.8	1010
19	18	1610	94	18	16	400	1290	200	36	29	7.3	420
20	17	662	80	19	16	370	1480	125	25	26	7.5	206
21	17	376	72	20	16	350	1100	87	20	22	7.6	140
22	17	273	64	22	16	320	739	68	16	21	7.2	96
23	18	237	58	23	17	290	512	67	14	24	6.7	73
24	29	181	54	21	17	440	326	53	13	24	6.2	57
25	68	140	52	20	18	1300	232	41	13	21	6.8	41
26	64	130	50	19	19	1400	179	36	12	18	7.4	33
27	49	130	49	18	21	740	145	31	12	16	6.7	50
28	40	140	48	18	25	648	122	27	11	16	6.3	63
29	51	166	47	19	28	490	109	23	16	15	6.0	48
30	117	2190	45	20	---	694	94	21	27	13	6.9	37
31	124	---	42	19	---	1150	---	18	---	12	23	---
TOTAL	975	20836	8805	889	500	22642	21480	6384	453.1	1606.7	354.0	5702
MEAN	31.5	695	284	28.7	17.2	730	716	206	15.1	51.8	11.4	190
MAX	124	3850	1400	42	28	2800	3470	2580	39	592	25	1030
MIN	17	48	42	18	13	30	94	18	8.0	9.8	6.0	13
CFSM	.14	3.10	1.27	.13	.08	3.26	3.20	.92	.07	.23	.05	.85
IN.	.16	3.46	1.46	.15	.08	3.76	3.57	1.06	.08	.27	.06	.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

MEAN	107	129	49.0	20.0	25.5	424	586	240	77.0	70.7	167
MAX	728	695	446	138	372	1202	1551	1016	1203	642	1572
(WY)	1942	1992	1966	1973	1984	1976	1951	1973	1980	1978	1938
MIN	2.26	4.34	2.50	.40	.51	8.77	51.7	15.8	5.16	2.71	1.50
(WY)	1954	1954	1990	1977	1977	1956	1946	1977	1988	1988	1953

05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI--CONTINUED

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1914 - 1992	
ANNUAL TOTAL	99869.3		90626.8		176	
ANNUAL MEAN	274		248		355	
HIGHEST ANNUAL MEAN					47.6	
LOWEST ANNUAL MEAN					26100	
HIGHEST DAILY MEAN	5400	Mar 23	3850	Nov 2	(a) Sep 9 1938	
LOWEST DAILY MEAN	4.5	Sep 2	6.0	Aug 29	.00 (a) Jan 22 1961	
ANNUAL SEVEN-DAY MINIMUM	5.4	Aug 27	6.6	Aug 23	.00 Jan 22 1961	
INSTANTANEOUS PEAK FLOW			(b) 10600	May 16	(c) 41000 Sep 9 1938	
INSTANTANEOUS PEAK STAGE			(d) 16.36	Mar 6	(e) 24.50 Sep 9 1938	
INSTANTANEOUS LOW FLOW			5.6	Aug 24	.00 (f) Aug 17 1947	
ANNUAL RUNOFF (CFSM)	1.22		1.11		.79	
ANNUAL RUNOFF (INCHES)	16.59		15.05		10.67	
10 PERCENT EXCEEDS	707		680		370	
50 PERCENT EXCEEDS	42		38		24	
90 PERCENT EXCEEDS	13		12		4.2	

(a) Also occurred Jan. 23 to Feb. 5, 1961

(b) Gage height, 15.12 ft

(c) Based on rating curve extended above 24,000 ft³/s

(d) Ice affected

(e) From flood marks

(f) Also occurred Jan. 22 to Feb. 5, 1961

WISCONSIN RIVER BASIN

05400760 WISCONSIN RIVER AT WISCONSIN RAPIDS. WI

LOCATION.--Lat 44°23'41", long 89°49'31", in SW 1/4 sec.8, T.22 N., R.6 E., Wood County, Hydrologic Unit 07070003, at Consolidated Water Power Company, 0.2 mi upstream from U.S. Highway 13 bridge in Wisconsin Rapids.

DRAINAGE AREA.--5,420 mi².

PERIOD OF RECORD.--May 1914 to March 1950 (published as "near Nekoosa"), October 1957 to current year.

REVISÉD 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 National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.). May 1914 to March 1950, at site 9.6 mi downstream at different datum. March 1950 to Sept. 30, 1981, at Centralia Powerplant at Nekoosa Papers, Inc., 2.6 mi downstream. March 1950 to Dec. 31, 1973, datum was 887.83 ft above National Geodetic Vertical Datum. Jan. 1, 1974, changed to present datum.

REMARKS.--No estimated daily discharges. 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 of Wisconsin Rapids powerplant into Cranberry Creek, a tributary of Yellow River, for cranberry culture. These diversions, in cubic feet per second, for water year October 1991 to September 1992, were as follows:

Oct. 1-2	100	July 3	43	July 30	31	Sept. 15	100
Oct. 3	90	July 4-29	100	Sept. 14	46	Sept. 16	52

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 1991 TO SEPTEMBER 1992

COND, WATER YEAR 0
DAILY MEAN VALUES

DAY	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2730	6630	14300	4290	4290	3650	10600	6360	4090	2510	1600	2210
2	2610	16000	13700	4400	4290	4020	10500	5530	3950	2370	2660	2780
3	2460	21300	12500	4470	4270	3700	10600	5290	3320	2240	2690	3140
4	2330	17200	10300	4390	4320	4950	9060	3790	2440	2520	2840	2490
5	3300	8210	7890	4400	3620	5480	8170	3620	2390	2480	2470	2950
6	2930	6730	6610	5020	4170	7680	10000	4310	2550	2100	2140	3650
7	3540	5620	7980	4800	4360	14300	13700	3830	2390	2150	2090	4290
8	3630	4680	8450	5200	4280	17500	17200	3370	2840	2240	2020	3440
9	2910	4590	7850	5060	4270	19900	15500	3200	3120	1900	2230	3770
10	2940	5150	7010	4860	4080	11800	12500	3230	3070	1790	2000	3600
11	2800	4290	7660	4480	4070	9280	12600	3850	3090	2450	1560	3590
12	3950	3860	8690	4500	4090	10300	9090	3470	2910	4680	2200	3100
13	3620	3650	9170	4750	3540	11200	7510	3470	2770	5130	2200	2480
14	3540	3270	10800	3880	3450	9410	7970	3470	2790	3980	1790	4080
15	3370	3940	10500	4530	3450	7850	10200	3470	3060	2810	1560	5910
16	2180	6250	9010	4060	4040	6140	22000	6610	2420	2760	1740	11000
17	2440	6560	7680	4010	4050	6340	26700	20300	2680	2310	1970	13200
18	2960	13500	6440	4150	3980	6240	22000	17300	2820	2230	1950	14400
19	3200	18000	5500	4000	4210	6220	19400	12500	3070	2490	2130	13400
20	3000	18500	5370	3590	3870	6870	21900	8920	2580	2520	2130	10200
21	3040	14700	5440	3230	4170	7010	22000	6790	2470	1960	2280	7010
22	3120	10800	5400	3590	3670	6330	20800	6900	2800	2560	1760	5210
23	3040	9420	5010	4640	3660	5910	18300	10200	2570	2290	1720	3700
24	3430	8620	4250	4490	4040	6030	15500	8370	2200	2360	1700	3260
25	4000	6250	4220	3780	3940	6560	11800	5740	2240	2320	2630	3160
26	4170	6010	4320	3550	3630	8890	9330	5080	3230	2310	2310	3870
27	3680	6410	4660	3890	3660	10100	7860	4500	2230	2020	2040	4280
28	2790	6240	4860	4560	3690	10700	6930	3400	2180	1870	2440	7620
29	3960	6500	4930	4160	3640	10200	6620	3990	2750	1530	1820	5150
30	4500	11200	4650	4130	---	8390	6320	3700	2960	2080	1350	4560
31	4190	---	4300	4290	---	10700	---	3860	---	1760	1900	---
TOTAL	100360	264080	229450	133150	114800	263650	402660	188420	83980	76720	63920	161500
MEAN	3237	8803	7402	4295	3959	8505	13420	6078	2799	2475	2062	5383
MAX	4500	21300	14300	5200	4360	19900	26700	20300	4090	5130	2840	14400
MIN	2180	3270	4220	3230	3450	3650	6320	3200	2180	1530	1350	2210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	WATER YEAR 1914 - 1922, AT WATER LEAK (#1)				WATER YEAR 1923 - 1930, AT WATER LEAK (#1)				WATER YEAR 1931 - 1937, AT WATER LEAK (#1)			
MEAN	4115	4396	3314	3043	3127	6521	11020	7013	6002	3542	3074	4402
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

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1914 - 1992	
ANNUAL TOTAL	2391120		2082690			
ANNUAL MEAN	6551		5690		4956	
HIGHEST ANNUAL MEAN					8499	1973
LOWEST ANNUAL MEAN					2107	1977
HIGHEST DAILY MEAN	39300	Mar 28	26700	Apr 17	63200	Sep 12 1938
LOWEST DAILY MEAN	2180	Oct 16	1350	Aug 30	165	Aug 12 1934
ANNUAL SEVEN-DAY MINIMUM	2640	Jan 23	1860	Aug 11	790	Jun 18 1988
INSTANTANEOUS PEAK FLOW				Apr 17	70400	Sep 12 1938
10 PERCENT EXCEEDS	13700		11200		9700	
50 PERCENT EXCEEDS	3860		4080		3350	
90 PERCENT EXCEEDS	2780		2220		1750	

(a) From rating curve extended above 58,000 ft³/s

WISCONSIN RIVER BASIN

279

05401050 TENMILE CREEK NEAR NEKOOSA, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 44°15'44", long 89°48'38", in NE 1/4 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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1962-63. October 1963 to September 1979, October 1987 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 967.39 ft above National Geodetic Vertical Datum of 1929. Prior to May 13, 1964, and June 2, 1988 to May 2, 1989, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 21-31 and ice-affected periods, Dec. 1, 3, 4, 16-20, Jan. 15 to Feb. 24, and Feb. 28 to Mar. 7. Records good except those for periods of estimated record, which are fair. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	41	68	59	46	46	80	97	65	41	33	28
2	30	44	67	58	47	47	79	94	64	42	34	31
3	29	43	66	58	49	49	77	90	63	40	33	30
4	29	44	62	58	45	54	77	88	62	39	33	29
5	29	45	59	57	43	60	75	88	62	39	32	29
6	29	45	59	57	45	66	74	86	60	38	32	31
7	30	42	67	57	42	72	78	84	59	38	32	31
8	29	43	71	57	40	77	80	83	58	39	33	31
9	30	42	77	57	42	90	80	83	58	38	30	33
10	30	44	73	56	43	101	79	80	57	37	30	32
11	29	45	69	55	40	118	82	80	55	36	29	37
12	29	45	75	56	39	91	85	81	54	47	31	36
13	29	46	91	56	42	85	85	80	53	44	30	36
14	29	47	90	48	42	82	85	75	52	47	30	45
15	28	49	77	54	42	78	89	74	51	49	30	48
16	28	50	82	62	43	76	113	74	51	48	29	102
17	28	50	76	58	44	77	128	89	55	44	29	166
18	28	57	72	54	45	75	120	95	53	43	29	179
19	28	61	78	54	47	73	123	88	51	42	29	166
20	28	61	72	56	43	73	132	87	50	41	28	150
21	27	60	70	56	43	72	133	81	49	40	27	139
22	28	59	70	58	44	71	129	77	49	40	27	128
23	28	63	66	56	42	70	122	79	48	40	26	121
24	29	66	62	54	41	70	118	76	48	39	26	117
25	30	63	58	54	42	75	114	75	47	37	27	114
26	30	62	56	54	43	77	111	73	45	37	30	112
27	30	65	58	54	44	74	107	73	45	36	27	123
28	30	61	58	54	44	72	103	72	44	35	27	124
29	32	64	58	54	45	73	100	70	43	34	28	113
30	32	70	58	52	---	76	98	68	43	33	31	107
31	35	---	60	50	---	80	---	67	---	33	29	---
TOTAL	910	1577	2125	1723	1257	2300	2956	2507	1594	1236	921	2468
MEAN	29.4	52.6	68.5	55.6	43.3	74.2	98.5	80.9	53.1	39.9	29.7	82.3
MAX	35	70	91	62	49	118	133	97	65	49	34	179
MIN	27	41	56	48	39	46	74	67	43	33	26	28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992, BY WATER YEAR (WY)

	MEAN	49.9	51.6	47.5	35.0	33.2	68.1	105	89.7	74.8	54.8	43.3	51.1
MAX	129	100	107	79.8	90.5	192	192	170	205	143	105	98.1	100
(WY)	1973	1973	1966	1973	1966	1973	1979	1973	1973	1968	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1964 - 1992

ANNUAL TOTAL	23324		21574										
ANNUAL MEAN	63.9		58.9										
HIGHEST ANNUAL MEAN										58.8			
LOWEST ANNUAL MEAN										113			1973
HIGHEST DAILY MEAN	192	Apr 15	179	Sep 18						30.2			1964
LOWEST DAILY MEAN	27	Sep 10	26	Aug 23, 24						427	Mar	31	1979
ANNUAL SEVEN-DAY MINIMUM	28	Sep 5	27	Aug 19						10	(a)Feb 13-15		1964
INSTANTANEOUS PEAK FLOW			190	Sep 17						10	Feb	22	1964
INSTANTANEOUS PEAK STAGE			5.92	Sep 17						456	Mar	31	1979
INSTANTANEOUS LOW FLOW			25	Aug 24						6.62	Mar	31	1979
10 PERCENT EXCEEDS	118		91							9.5	Dec	16	1964
50 PERCENT EXCEEDS	49		54										
90 PERCENT EXCEEDS	30		29										

(a) Also occurred Feb. 22 to Mar. 2, 1964 and Feb. 2-4, 11, 12, 1965

WISCONSIN RIVER BASIN

05401050 TENMILE CREEK NEAR NEKOOSA, WI--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	
OCT 1991												
29...	1215	--	32	202	7.9	9.0	5.0	9.8	746	87	180	
JAN 1992												
15...	1110	54	--	318	7.9	0.0	6.0	13.2	749	92	K14	
MAR												
13...	1215	--	76	318	8.0	2.5	51	12.4	--	--	K3	
MAY												
21...	1108	--	80	333	8.0	17.0	6.3	8.4	741	90	340	
JUL												
22...	0907	--	40	293	7.9	13.0	5.5	8.5	738	83	320	
AUG												
26...	1110	--	29	237	7.9	13.5	2.3	8.5	740	84	430	
DATE		STREP-TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
OCT 1991												
29...	89	130	32	13	2.2	0.90	129	106	17	8.5	0.10	
JAN 1992												
15...	K5	160	39	16	2.4	1.0	147	120	19	9.4	0.20	
MAR												
13...	24	180	41	18	2.6	1.0	137	112	23	11	<0.10	
MAY												
21...	54	170	41	17	2.4	1.0	130	106	25	9.9	0.20	
JUL												
22...	280	150	37	15	2.3	0.80	142	116	18	8.6	<0.10	
AUG												
26...	290	120	30	12	2.2	0.80	127	104	13	6.4	<0.10	
DATE		SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 1991												
29...	11	161	158	0.020	2.10	0.040	0.040	0.20	0.020	0.010	0.010	
JAN 1992												
15...	12	166	186	0.020	3.10	0.080	0.080	0.80	0.050	0.020	<0.010	
MAR												
13...	11	209	190	0.020	3.40	0.080	0.080	0.70	0.020	0.020	<0.010	
MAY												
21...	8.9	196	184	0.030	3.10	0.030	0.030	0.60	0.050	0.020	<0.010	
JUL												
22...	10	182	173	0.020	2.50	0.030	0.020	0.50	0.040	0.010	0.020	
AUG												
26...	11	151	144	<0.010	1.30	0.030	0.040	0.20	0.020	0.010	<0.010	

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	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)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
OCT 1991							
29...	<4	82	<10	<1	<1	37	<6
JAN 1992							
15...	<4	120	<10	<1	<1	40	<6
MAY							
21...	<4	42	<10	<1	<1	42	<6
AUG							
26...	<4	87	<10	<1	<1	35	<6

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	AMETRYN WATER, DISS, REC, (UG/L) (38401)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)
AUG 1992 26...	1110	29	<0.05	<0.05	<0.05	<0.20	<0.05

[illegible]

WISCONSIN RIVER BASIN

05402000 YELLOW RIVER AT BABCOCK, WI

LOCATION.--Lat 44°18'05", long 90°07'15", in NW 1/4 sec.14, T.21 N., R.3 E., Wood County, Hydrologic Unit 07070003, on right bank at downstream side of bridge on State Highway 80 at Babcock, 1.9 mi upstream from Hemlock Creek.

DRAINAGE AREA.--215 mi².

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

REVISED RECORDS.--WSP 1308: 1944(M), 1946-47(M), 1949(M). WDR WI-77-1: Drainage area. WDR WI-82-1: 1981 (P).

GAGE.--Water-stage recorder. Datum of gage is 954.75 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1948, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Mar. 18-20, 28-29, Aug. 17 to Sept. 6, and ice-affected periods, Nov. 4-8, 24-30, Dec. 2-12, Dec. 14 to Jan. 2, Jan. 11-20, 23-28, Feb. 6-12, and Mar. 10-17. Records good except those for estimated daily discharges, which are poor. There is a large recreation dam about 5.0 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	67	726	56	32	40	935	109	36	20	12	16
2	16	274	1200	58	32	49	803	98	31	20	14	19
3	17	1250	800	58	32	73	459	85	28	20	13	25
4	18	900	450	58	31	106	405	72	25	20	12	37
5	30	300	280	59	31	315	348	63	23	21	12	50
6	40	140	230	61	27	1040	325	55	22	21	12	70
7	39	130	200	61	25	2980	348	50	19	19	12	145
8	40	110	230	64	23	3770	442	45	19	19	13	173
9	42	93	210	66	22	2910	401	42	17	19	15	143
10	50	75	190	66	24	1800	303	38	16	19	17	118
11	54	65	180	66	22	1200	241	36	15	18	20	114
12	58	60	240	62	21	900	237	36	15	26	21	95
13	56	55	492	58	24	640	356	35	14	29	19	75
14	55	57	1100	52	23	560	361	31	13	39	17	66
15	58	83	800	48	23	520	348	29	12	57	16	109
16	57	300	390	45	23	560	1790	31	13	63	15	527
17	52	455	250	42	23	420	2510	831	17	49	14	1940
18	53	636	200	37	24	320	1310	3670	24	35	14	1380
19	57	2100	150	35	27	270	877	1290	28	29	13	2120
20	62	1500	130	35	27	240	1150	516	30	37	13	1130
21	64	783	110	34	26	267	1360	264	34	48	13	832
22	61	542	100	32	26	294	1020	133	31	34	13	416
23	60	244	96	29	27	196	850	118	30	30	13	203
24	70	200	90	29	28	178	570	143	29	28	18	145
25	51	170	82	28	30	366	385	133	28	25	25	112
26	26	160	78	28	30	1060	293	96	28	23	21	74
27	36	150	70	28	31	1210	215	76	26	21	17	84
28	49	140	66	29	33	780	167	65	21	18	15	92
29	54	160	64	32	36	560	135	56	20	15	14	99
30	56	200	58	32	---	571	119	48	20	13	15	84
31	54	---	54	32	---	759	---	42	---	12	14	---
TOTAL	1450	11399	9316	1420	783	24954	19063	8336	684	847	472	10493
MEAN	46.8	380	301	45.8	27.0	805	635	269	22.8	27.3	15.2	350
MAX	70	2100	1200	66	36	3770	2510	3670	36	63	25	2120
MIN	15	55	54	28	21	40	119	29	12	12	12	16
CFSM	.22	1.77	1.40	.21	.13	3.74	2.96	1.25	.11	.13	.07	1.63
IN.	.25	1.97	1.61	.25	.14	4.32	3.30	1.44	.12	.15	.08	1.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1992, BY WATER YEAR (WY)

	MEAN	106	113	65.7	27.9	37.3	404	532	242	140	62.1	46.2	132
MAX	561	508	374	132	373	1353	1319	1183	599	453	371	1169	
(WY)	1987	1983	1966	1973	1966	1973	1952	1973	1944	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1944 - 1992

ANNUAL TOTAL	78444.4	89217	159	
ANNUAL MEAN	215	244	376	
HIGHEST ANNUAL MEAN			37.4	1973
LOWEST ANNUAL MEAN				1977
HIGHEST DAILY MEAN	4320	Mar 24	10300	Apr 2 1952
LOWEST DAILY MEAN	6.1	Sep 4	1.4	(b) Sep 14-19 1948
ANNUAL SEVEN-DAY MINIMUM	6.4	Aug 30	12	Jul 31 1948
INSTANTANEOUS PEAK FLOW			4310	May 18 1952
INSTANTANEOUS PEAK STAGE			13.17	May 18 1952
INSTANTANEOUS LOW FLOW			11	(c) Jul 31 1985
ANNUAL RUNOFF (CFSM)	1.00		1.13	
ANNUAL RUNOFF (INCHES)	13.57		15.44	
10 PERCENT EXCEEDS	626		781	
50 PERCENT EXCEEDS	52		56	
90 PERCENT EXCEEDS	14		17	

(a) Also occurred July 31, Aug. 1, 4-7

(b) Also occurred Sept. 25, 26, 1948

(c) Also occurred Aug. 1, 5-7

05404000 WISCONSIN RIVER NEAR WISCONSIN DELLS, WI

LOCATION.--Lat 43°36'22", long 89°45'25", in NW 1/4 sec.14, T.13 N., R.6 E., Sauk County, Hydrologic Unit 07070003, on right bank 0.5 mi downstream from Dell Creek and 1.8 mi southeast of Wisconsin Dells.

DRAINAGE AREA.--8,090 mi².

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS.--WSP 1728: 1936(M). WSP 1914: 1951, 1953-55. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 801.48 ft above National Geodetic Vertical Datum 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.-- No estimated daily discharges. Records good, except those for Dec. 15 to Feb. 29, which are fair. 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 Co. at Wisconsin Dells. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4000	6630	14000	7880	6330	7180	9800	9810	5460	3160	3040	2590
2	4220	8920	15500	8620	7460	6530	9690	9360	7070	3540	3130	3050
3	3970	11700	15500	8650	7560	5970	9630	9150	6940	4830	3150	3510
4	3860	18700	15400	8610	7030	6380	9600	9090	6870	4310	3170	4110
5	4150	19700	15900	7850	7330	7270	9460	7920	5170	3460	2910	3890
6	3840	11500	17200	8070	7640	8610	9520	5800	4510	3510	2890	4250
7	3670	8610	11700	8120	7710	9280	11100	4580	4380	3140	3050	5030
8	3740	8630	9760	8200	7150	10800	13100	4710	4180	3120	3050	6350
9	3990	8090	10900	8240	7160	13600	16600	4360	3600	2880	3040	6250
10	3910	6100	11700	8010	5590	10800	17800	4390	4070	2950	3310	5600
11	3890	5070	11800	7880	5650	9870	16200	4470	3660	2990	3150	5380
12	4010	6900	11000	6860	6570	10900	14500	4820	4110	3240	2860	5020
13	4200	8000	11600	6350	7560	11100	14300	4340	3780	5370	2890	4760
14	4090	5780	12300	6390	7760	10800	9650	4630	4030	8930	2880	5830
15	4240	5180	14200	6910	7620	10700	9070	4340	4310	8350	2880	9580
16	4560	5180	14700	7760	6850	10600	14400	4320	4560	5290	2630	12000
17	4330	7110	10700	8920	6200	10500	27300	10500	4660	3740	2130	18400
18	4080	9260	9640	9040	6360	10200	32400	19400	4270	4090	2250	20500
19	4030	12600	9110	9110	6790	10100	31400	12500	4130	4040	2480	21200
20	4250	15300	8660	9570	7510	10100	32800	8900	4510	3370	2800	18900
21	4420	19100	8500	9300	7430	10200	31100	8670	4360	3460	2760	18800
22	4120	18700	8430	7830	6400	10000	28700	9020	3640	3110	2810	18100
23	4330	17800	8380	7000	4960	9920	28200	14000	3460	3190	2800	12600
24	4500	15700	8340	7030	4590	9920	27900	17300	3390	3660	2690	11100
25	4780	10700	7280	8080	4630	10100	22200	13500	3300	3300	2620	10100
26	5580	8440	6300	7680	6200	10000	16800	9950	2920	3210	3500	8810
27	6050	8690	5520	7550	6920	9940	12900	8240	3120	3190	4120	9530
28	6270	8510	5990	7290	7260	11600	11700	8680	3020	3250	3620	9030
29	5910	8590	6290	6430	7420	12400	10400	8460	2910	3180	2870	9890
30	5070	11000	6360	7130	---	11400	9880	6680	3210	3100	2840	7410
31	5950	---	6420	6390	---	10300	---	5480	---	3030	2500	---
TOTAL	138010	316190	329080	242750	195640	307070	518100	257370	127600	119990	90820	281570
MEAN	4452	10540	10620	7831	6746	9905	17270	8302	4253	3871	2930	9386
MAX	6270	19700	17200	9570	7760	13600	32800	19400	7070	8930	4120	21200
MIN	3670	5070	5520	6350	4590	5970	9070	4320	2910	2880	2130	2590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1992, BY WATER YEAR (WY)

	MEAN	5870	6268	5086	4719	4994	8401	12920	9505	8385	5259	4197	5994
MAX	19120	13900	10740	7831	9610	25620	25050	26990	23910	13350	8350	25900	
(WY)	1987	1983	1966	1992	1984	1973	1951	1960	1943	1978	1953	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

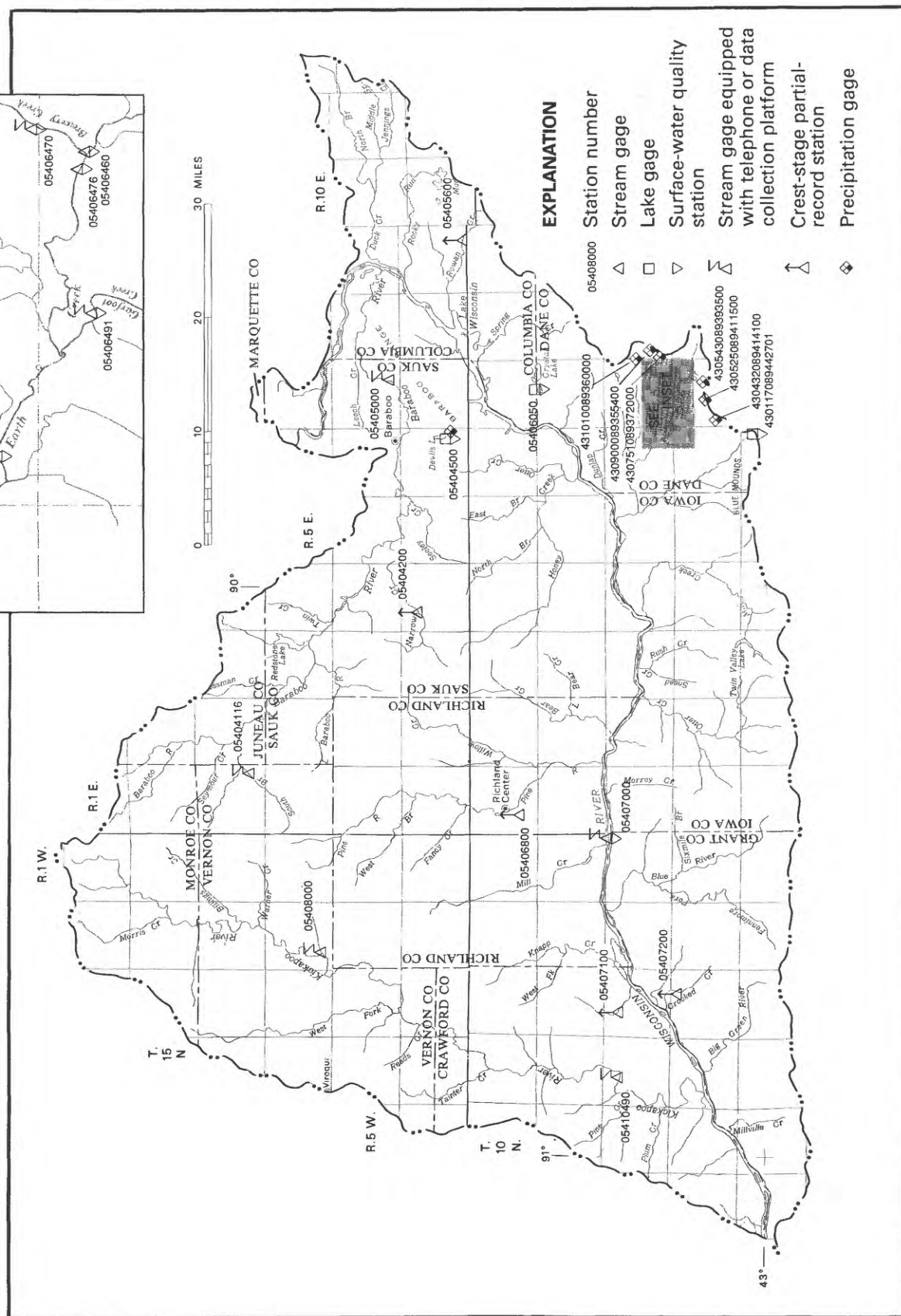
FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1935 - 1992

ANNUAL TOTAL	3055900		2924190		6796		
ANNUAL MEAN	8372		7990		12420		1973
HIGHEST ANNUAL MEAN					2993		1977
LOWEST ANNUAL MEAN					71200		Sep 14 1938
HIGHEST DAILY MEAN	36200	Mar 29	32800	Apr 20	1060		Aug 19 1936
LOWEST DAILY MEAN	3180	Sep 22	2130	Aug 17	1210		Aug 10 1988
ANNUAL SEVEN-DAY MINIMUM	3510	Aug 29	2550	Aug 16	72200		Sep 14 1938
INSTANTANEOUS PEAK FLOW			33300	Apr 18	(a)23.83		Sep 14 1938
INSTANTANEOUS PEAK STAGE			13.56	Apr 18	12200		
10 PERCENT EXCEEDS	15500		14300		5150		
50 PERCENT EXCEEDS	6050		6970		2830		
90 PERCENT EXCEEDS	3890		3130				

(a) Present datum



WISCONSIN RIVER BASIN

285

05404116 SOUTH BRANCH BARABOO RIVER AT HILLSBORO, WI

LOCATION.--Lat 43°39'10", long 90°20'09", in NE 1/4 NE 1/4 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 National Geodetic Vertical Datum of 1929 (levels by Mid-State Associates, Baraboo, WI).

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 3-9, 25-28, and Jan. 17-21. Records are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	66	22	11	8.7	65	14	19	13	12	11	12
2	8.1	30	15	11	11	41	12	17	13	14	12	16
3	7.9	14	16	11	25	33	13	15	12	14	11	17
4	8.8	11	14	11	27	114	12	15	12	12	11	13
5	17	11	14	11	11	51	11	15	12	11	11	13
6	12	11	14	11	10	58	11	14	12	11	10	24
7	9.8	e9.6	15	11	8.6	43	13	14	12	12	11	13
8	9.2	e9.2	17	11	7.0	36	11	14	12	15	14	12
9	8.7	e9.8	18	12	6.8	74	14	14	12	13	12	16
10	8.2	11	16	11	7.4	42	13	13	12	12	11	13
11	8.4	11	16	11	7.2	25	17	14	12	11	10	11
12	8.2	11	44	14	6.5	19	11	16	11	19	9.8	10
13	8.0	13	34	14	7.0	16	9.9	14	11	28	10	9.9
14	8.7	16	17	9.8	7.3	15	10	13	11	50	10	789
15	8.6	26	15	8.4	7.8	14	30	14	11	17	9.7	188
16	8.4	16	13	7.1	7.8	15	105	17	20	15	9.4	1190
17	8.1	15	13	7.6	9.8	21	44	65	48	14	9.3	142
18	7.8	85	11	6.6	11	15	33	20	18	13	9.6	112
19	8.0	22	10	6.8	8.8	13	66	16	15	15	9.0	36
20	8.0	17	11	6.8	8.9	13	68	15	14	20	8.6	27
21	8.0	15	12	8.0	8.4	11	84	14	13	14	8.2	24
22	8.0	14	12	12	9.0	12	49	15	12	15	8.1	21
23	8.0	26	12	21	14	15	36	23	15	22	8.0	19
24	10	20	12	9.1	14	28	30	16	23	16	8.1	18
25	21	13	10	8.5	9.1	30	27	16	15	15	9.5	17
26	13	12	11	8.1	19	19	25	16	13	14	16	19
27	12	13	11	8.1	74	13	23	15	12	13	11	25
28	11	13	11	7.8	91	12	21	14	12	12	9.9	19
29	20	16	11	7.9	31	22	21	14	13	11	16	17
30	15	57	11	8.4	---	21	19	14	14	11	14	17
31	13	---	11	8.9	---	17	---	13	---	12	12	---
TOTAL	318.7	613.6	469	310.9	474.1	923	852.9	524	435	483	330.2	2859.9
MEAN	10.3	20.5	15.1	10.0	16.3	29.8	28.4	16.9	14.5	15.6	10.7	95.3
MAX	21	85	44	21	91	114	105	65	48	50	16	1190
MIN	7.8	9.2	10	6.6	6.5	11	9.9	13	11	11	8.0	9.9
CFSM	.26	.52	.39	.26	.42	.76	.73	.43	.37	.40	.27	2.44
IN.	.30	.58	.45	.30	.45	.88	.81	.50	.41	.46	.31	2.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1992, BY WATER YEAR (WY)

	MEAN	8.33	12.5	9.62	10.8	11.9	38.3	24.8	18.3	28.1	10.2	9.85	27.4
MAX	10.3	20.5	15.1	13.1	16.3	50.8	53.7	29.5	75.3	15.6	15.7	95.3	
(WY)	1992	1992	1992	1989	1992	1989	1991	1991	1990	1992	1990	1992	
MIN	6.79	8.14	4.42	8.95	6.91	25.7	8.47	13.2	8.38	5.83	6.69	6.12	
(WY)	1990	1991	1990	1991	1989	1991	1990	1989	1989	1989	1988	1990	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1988 - 1992

ANNUAL TOTAL	6674.6	8594.3											
ANNUAL MEAN	18.3	23.5								17.9			
HIGHEST ANNUAL MEAN										23.5		1992	
LOWEST ANNUAL MEAN										13.0		1989	
HIGHEST DAILY MEAN	422	Apr 8	1190	Sep 16						1190	Sep 16	1992	
LOWEST DAILY MEAN	6.6	Sep 1	6.5	Feb 12						(a)3.3	Dec 22,23	1989	
ANNUAL SEVEN-DAY MINIMUM	6.9	Aug 27	7.0	Feb 8						3.5	Dec 20	1989	
INSTANTANEOUS PEAK FLOW			3560	Sep 16						(b)4010	Jun 29	1990	
INSTANTANEOUS PEAK STAGE			14.26	Sep 16						(c)15.60	Jun 29	1990	
ANNUAL RUNOFF (CFSM)	.47		.60							.46			
ANNUAL RUNOFF (INCHES)	6.35		8.18							6.23			
10 PERCENT EXCEEDS	31		30							25			
50 PERCENT EXCEEDS	11		13							9.0			
90 PERCENT EXCEEDS	8.0		8.3							5.1			

(a) Result of freezeup

(b) From rating curve extended above 1,100 ft³/s, on basis of contracted-area measurement

(c) From floodmark on gage house

WISCONSIN RIVER BASIN

05404500 DEVILS LAKE NEAR BARABOO, WI

LOCATION.--Lat 43°25'18", long 89°43'38", in SW 1/4 SE 1/4 sec.13 (revised), T.11 N., R.6 E., Sauk County, Hydrologic Unit 07070004, in Devils Lake State Park, 3.5 mi south of Baraboo.

DRAINAGE AREA.--4.79 mi². Area of Devils Lake, 361 acres.

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, National Geodetic Vertical Datum of 1929.

REMARKS.--Lake has no surface outlet.

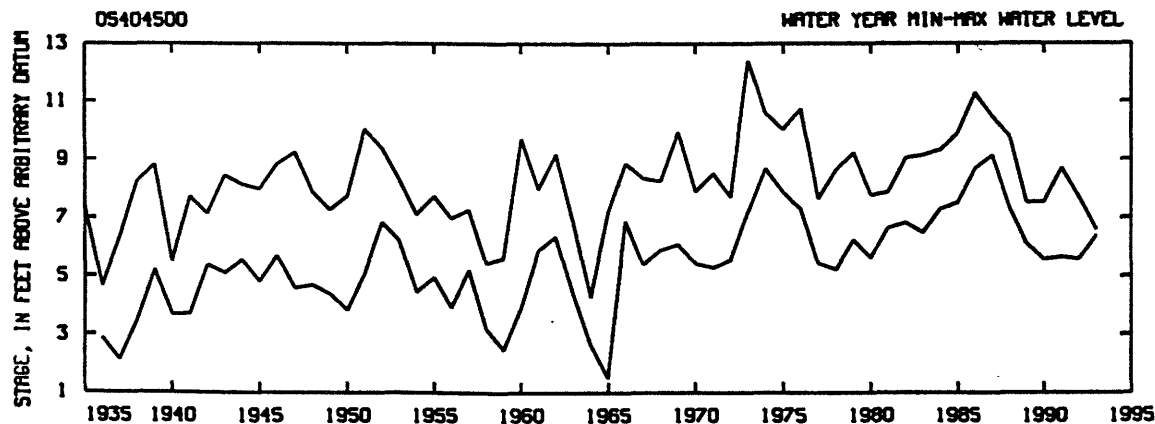
COOPERATION.--Gage readings furnished by Kenneth Lange of Devils Lake State Park October through November 1988 and Sept. 21, 1989; other readings furnished by P. S. Druckenmil.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.40 ft, May 31, June 1, 1973; minimum observed, 1.49 ft Feb. 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 7.69 ft, May 18; minimum observed, 5.57 ft, Oct. 11-24.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.64	5.82	6.25	6.55	---	6.45	7.12	7.66	7.45	---	6.50	6.01
2	5.63	5.87	6.26	6.55	---	6.46	7.11	7.64	7.43	---	6.49	6.01
3	5.62	5.85	6.29	6.54	---	6.46	7.11	7.63	7.40	---	6.48	6.00
4	5.63	5.84	6.30	6.54	---	6.52	7.11	7.62	7.38	---	6.45	5.99
5	5.66	5.83	6.31	6.54	---	6.56	7.10	7.61	7.35	---	6.44	5.97
6	5.64	5.82	6.32	6.53	---	6.62	7.10	7.60	7.33	---	6.41	6.03
7	5.63	5.80	6.33	6.53	---	6.68	7.08	7.58	7.29	---	6.41	6.04
8	5.61	5.80	6.34	6.54	---	6.72	7.08	7.56	7.27	---	6.43	6.03
9	5.60	5.78	6.35	6.55	---	6.85	7.10	7.55	7.25	---	6.42	6.05
10	5.58	5.77	6.36	6.55	---	6.94	7.12	7.54	7.22	---	6.40	6.04
11	5.57	5.77	6.37	6.54	---	6.96	7.19	7.55	7.20	---	6.37	6.03
12	5.57	5.77	6.43	6.55	---	6.98	7.19	7.60	7.18	---	6.35	6.01
13	5.57	5.76	6.49	6.56	---	6.98	7.20	7.58	7.16	---	6.32	5.99
14	5.57	5.77	6.50	6.55	---	6.99	7.20	7.57	7.13	6.82	6.30	6.19
15	5.57	5.81	6.51	6.55	---	7.00	7.25	7.55	7.11	6.80	6.28	6.31
16	5.57	5.82	6.53	6.54	---	7.01	7.32	7.54	7.09	6.79	6.26	6.45
17	5.57	5.83	6.53	6.52	---	7.02	7.35	7.68	7.08	6.77	6.24	6.66
18	5.57	5.92	6.53	6.51	---	7.02	7.37	7.69	7.05	6.75	6.21	6.71
19	5.57	5.93	6.53	6.48	---	7.02	7.46	7.68	7.02	6.74	6.19	6.72
20	5.57	5.94	6.55	6.48	---	7.02	7.54	7.67	6.99	6.72	6.18	6.71
21	5.57	5.94	6.57	6.49	6.46	7.04	7.59	7.66	6.96	6.70	6.16	6.71
22	5.57	5.94	6.57	6.50	6.45	7.07	7.62	7.65	6.94	6.68	6.14	6.68
23	5.57	6.02	6.57	---	6.45	7.07	7.63	7.65	---	6.67	6.12	6.67
24	5.57	6.06	6.56	---	6.46	7.07	7.65	7.62	---	6.65	6.10	6.64
25	5.66	6.07	6.57	---	6.46	7.08	7.66	7.59	---	6.63	6.10	6.62
26	5.67	6.08	6.56	---	6.46	7.08	7.67	7.57	---	6.62	6.11	6.63
27	5.67	6.11	6.56	---	6.45	7.08	7.67	7.55	---	6.60	6.09	6.66
28	5.68	6.11	6.56	---	6.45	7.08	7.67	7.53	---	6.58	6.06	6.63
29	5.74	6.14	6.56	---	6.45	7.11	7.66	7.51	---	6.56	6.08	6.61
30	5.74	6.22	6.55	---	---	7.12	7.66	7.49	---	6.54	6.06	6.60
31	5.74	---	6.55	---	---	7.12	---	7.47	---	6.52	6.03	---
MAX	5.74	6.22	6.57	---	---	7.12	7.67	7.69	---	---	6.50	6.72
MIN	5.57	5.76	6.25	---	---	6.45	7.08	7.47	---	---	6.03	5.97



05405000 BARABOO RIVER NEAR BARABOO, WI

LOCATION.--Lat 43°28'51", long 89°38'09", in NW 1/4 sec.35, T.12 N., R.7 E., Sauk County, Hydrologic Unit 07070004, on left bank 50 ft downstream from highway bridge, 0.3 mi downstream from Rowley Creek and 5.3 mi east of Baraboo.

DRAINAGE AREA.--609 mi².

PERIOD OF RECORD.--December 1913 to March 1922. September 1942 to current year.

REVISED RECORDS.--WSP 455: 1915. WSP 505: 1917(M). WSP 1438: 1914, 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 National Geodetic Vertical Datum of 1929. Dec. 18, 1913, to Mar. 31, 1922, nonrecording gage at bridge 2.3 mi upstream at datum 7.6 ft higher. Sept. 24, 1942, to June 10, 1963, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 5-14, Dec. 3-10, 15-20, 24-27, Jan. 15-28, and Feb. 1, 8-17. Records good except those for ice-affected periods, which are fair. Apparent occasional regulation at low flow by dams upstream. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	674	1100	258	210	1110	526	431	214	181	183	196
2	172	898	825	258	215	1090	498	404	203	193	176	194
3	170	943	600	259	235	1020	452	372	198	204	163	202
4	175	865	540	268	296	1070	416	345	203	203	183	183
5	211	600	520	272	430	1210	396	322	194	203	172	206
6	226	400	500	274	430	1170	382	304	190	188	179	229
7	293	310	520	273	398	1150	373	292	186	189	178	218
8	323	270	540	273	320	1080	368	283	192	191	180	238
9	296	250	560	288	250	1130	384	272	169	194	181	284
10	252	250	560	302	200	1220	407	266	183	197	189	276
11	223	250	518	306	200	1100	547	270	182	204	191	248
12	202	240	557	302	200	1040	527	292	172	225	185	240
13	195	250	779	337	190	970	477	298	182	243	172	233
14	201	280	828	360	180	764	461	270	176	304	181	501
15	185	343	560	220	180	574	458	252	205	349	158	1010
16	188	426	540	200	190	494	630	242	177	387	168	1830
17	194	480	540	200	200	484	811	376	182	357	172	2810
18	196	676	520	200	226	478	861	446	171	272	162	3730
19	203	857	490	190	259	481	1040	467	214	229	163	4330
20	202	812	450	190	274	474	1270	469	293	212	163	4410
21	183	760	369	180	287	442	1250	361	255	209	163	4190
22	198	630	319	180	287	421	1150	283	210	229	159	3640
23	188	617	306	190	302	400	1060	261	199	228	156	2760
24	223	865	290	210	385	416	986	256	198	222	158	1620
25	479	902	280	220	448	529	865	260	202	227	157	891
26	578	720	260	220	405	638	723	267	208	235	189	518
27	544	567	260	220	415	639	633	251	210	224	168	494
28	458	466	253	220	799	577	565	240	203	212	191	520
29	468	416	253	209	1070	508	511	234	179	185	219	469
30	511	818	254	204	---	510	462	226	183	193	200	411
31	574	---	256	204	---	521	---	220	---	186	195	---
TOTAL	8684	16835	15147	7487	9481	23710	19489	9532	5933	7075	5454	37081
MEAN	280	561	489	242	327	765	650	307	198	228	176	1236
MAX	578	943	1100	360	1070	1220	1270	469	293	387	219	4410
MIN	170	240	253	180	180	400	368	220	169	181	156	183
CFSM	.46	.92	.80	.40	.54	1.26	1.07	.50	.32	.37	.29	2.03
IN.	.53	1.03	.93	.46	.58	1.45	1.19	.58	.36	.43	.33	2.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	MEAN	276	320	234	240	318	825	675	415	402	290	247	312
MAX	842	942	518	945	1135	1759	1750	1518	1332	1224	1018	1285	
(WY)	1973	1986	1985	1946	1966	1948	1951	1973	1920	1978	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 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1914 - 1992
ANNUAL TOTAL	144168	165908	
ANNUAL MEAN	395	453	379
HIGHEST ANNUAL MEAN			744
LOWEST ANNUAL MEAN			158
HIGHEST DAILY MEAN	2070	4410	7540
LOWEST DAILY MEAN	114	156	26
ANNUAL SEVEN-DAY MINIMUM	126	160	72
INSTANTANEOUS PEAK FLOW		4470	(a)7900
INSTANTANEOUS PEAK STAGE		20.67	(b)17.50
ANNUAL RUNOFF (CFSM)	.65	.74	.62
ANNUAL RUNOFF (INCHES)	8.81	10.13	8.46
10 PERCENT EXCEEDS	752	865	752
50 PERCENT EXCEEDS	270	273	230
90 PERCENT EXCEEDS	156	182	135

(a) From rating curve extended above 6,000 ft³/s

(b) Estimated, site and datum then in use

WISCONSIN RIVER BASIN

05406050 FISH LAKE NEAR SAUK CITY, WI

LOCATION.--Lat 43°17'02", long 89°39'15", in NE 1/4 SW 1/4 sec.3, T.9 N., R.7 E., Dane County, Hydrologic Unit 07070005, on south side of lake near Ganser's Tavern and Dance Hall, 0.4 mi southwest of Crystal Lake, and 3.1 mi east of Sauk City.

DRAINAGE AREA.--2.23 mi² (revised). Area of Fish Lake, 252 acres.

PERIOD OF RECORD.--November 1966 to September 1981, April 1985 to September 1987, April 1989 to October 22, 1990 (fragmentary); continuous record since Oct. 23, 1990.

REVISED RECORDS.--WDR WI-77-1: Drainage area. WDR WI-87-1: All published readings in the 1987 water year are invalid because the observer read the wrong staff gage. In the 1987 water year only one reading by the USGS is valid: May 7, 1987, water surface 10.52 ft. In the 1988 water year only one reading by the USGS is valid: May 16, 1988, water surface 10.83 ft.

GAGE.--Nonrecording gage in lake bed. Datum of gage is 848.07 ft above National Geodetic Vertical Datum of 1919. Staff gage read by James Vennie. Water-stage recorder since Oct. 23, 1990.

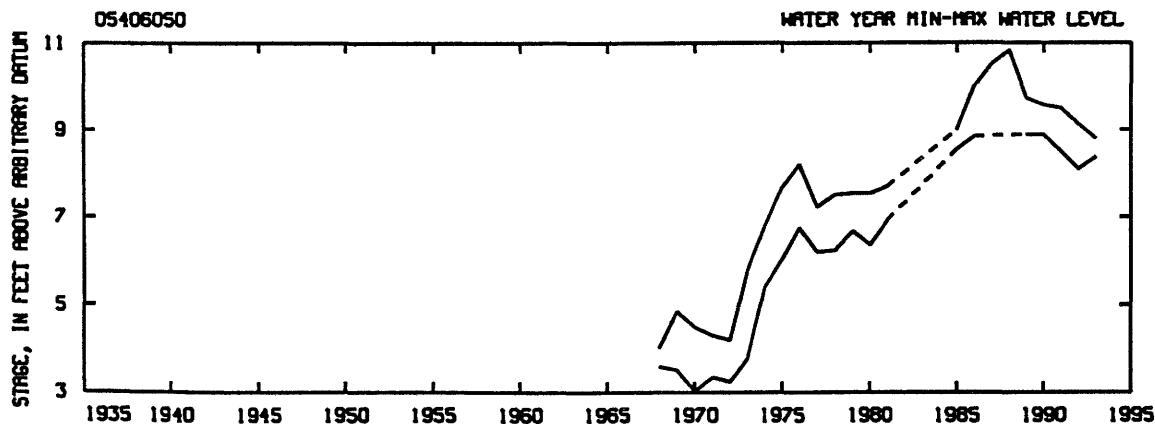
REMARKS.--Lake has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 10.83 ft, May 16, 1988; minimum observed, 3.02 ft, Aug. 29, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 9.12 ft, Apr. 21 to May 2; minimum observed, 8.09 ft, Sept. 5.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.49	8.77	---	---	8.84	8.96	9.00	9.12	8.79	8.41	8.46	8.12
2	8.49	8.77	---	---	8.85	8.96	8.99	9.12	8.77	8.40	8.45	8.11
3	8.49	8.73	---	---	8.85	8.96	8.99	9.10	8.75	8.44	8.43	8.11
4	8.51	---	---	---	8.85	8.97	8.98	9.09	8.74	8.44	8.41	8.10
5	8.55	8.71	---	---	8.85	8.97	8.97	9.07	8.72	8.42	8.39	8.09
6	8.54	8.70	---	---	8.85	8.98	8.97	9.06	8.70	8.41	8.38	8.15
7	8.52	8.69	---	---	8.85	8.98	8.95	9.04	8.68	8.40	8.36	8.17
8	8.52	8.69	---	---	8.85	8.98	8.95	9.03	8.67	8.43	8.38	8.18
9	8.51	8.68	---	---	8.84	9.02	8.96	9.02	8.65	8.45	8.38	8.22
10	8.50	8.68	---	---	8.83	9.05	8.97	9.00	8.63	8.46	8.38	8.23
11	8.49	8.68	---	---	8.83	9.05	9.02	8.98	8.62	8.46	8.35	8.22
12	8.48	8.68	---	---	8.83	9.05	9.02	8.98	8.61	8.49	8.34	8.21
13	8.47	8.68	---	---	8.83	9.05	9.02	8.99	8.59	8.54	8.32	8.19
14	8.48	8.70	---	---	8.83	9.05	9.02	8.97	8.57	8.62	8.30	8.30
15	8.46	8.73	---	---	8.88	8.84	9.04	8.96	8.58	8.62	8.29	8.37
16	8.45	8.73	---	---	8.88	8.85	9.03	9.06	8.94	8.60	8.27	8.46
17	8.44	8.74	---	---	8.87	8.85	9.03	9.06	8.97	8.60	8.26	8.59
18	8.43	8.78	---	---	8.87	8.87	9.03	9.06	8.97	8.57	8.24	8.64
19	8.43	8.77	---	---	8.86	8.89	9.03	9.08	8.96	8.58	8.23	8.65
20	8.42	8.77	---	---	8.86	8.91	9.03	9.11	8.95	8.56	8.21	8.64
21	8.41	8.77	---	---	8.85	8.90	9.02	9.12	8.93	8.54	8.20	8.63
22	8.40	---	---	---	8.84	8.90	9.04	9.12	8.92	8.52	8.18	8.63
23	8.40	---	---	---	8.84	8.90	9.03	9.12	8.92	8.50	8.16	8.62
24	8.43	---	---	---	8.85	8.90	9.03	9.12	8.91	8.50	8.15	8.60
25	8.61	---	---	---	8.85	8.91	9.03	9.12	8.89	8.50	8.15	8.59
26	8.62	---	---	---	8.85	8.91	9.03	9.12	8.87	8.49	8.18	8.58
27	8.63	---	---	---	8.85	8.92	9.02	9.12	8.85	8.48	8.18	8.60
28	8.63	---	---	---	8.85	8.95	9.02	9.12	8.84	8.46	8.16	8.60
29	8.67	---	---	---	8.85	8.96	9.02	9.12	8.83	8.44	8.16	8.59
30	8.69	---	---	---	8.85	---	9.02	9.12	8.82	8.43	8.15	8.58
31	8.70	---	---	---	8.84	---	9.01	---	8.80	---	8.13	---
MAX	8.70	---	---	---	---	9.05	9.12	9.12	8.79	8.62	8.46	8.65
MIN	8.40	---	---	---	---	8.96	8.95	8.80	8.43	8.40	8.13	8.09



430117089442701 STEWART LAKE AT MT. HOREB, WI

LOCATION.--Lat 43°01'17", long 89°44'27", in NE 1/4 SE 1/4 sec.2, T.6 N., R.6 E., Dane County, Hydrologic Unit 07070005, at Mt. Horeb.

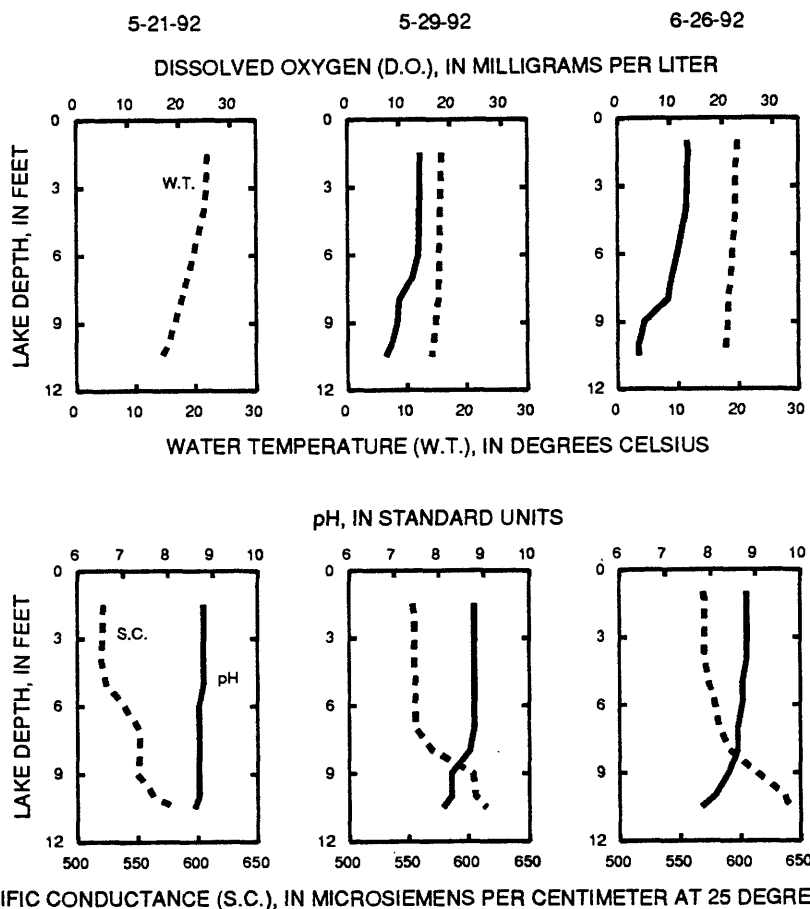
PERIOD OF RECORD.--May to September 1992.

REMARKS.--Lake sampled near reservoir outlet at lake depth of about 12 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MAY 21 TO JULY 17, 1992
(Milligrams per liter unless otherwise indicated)

	May 21		May 29		June 05	June 12
Depth of sample (ft)	1.5	10	1.5	10	1.5	1.5
Lake stage (ft)	---	---	---	---	---	---
Specific conductance ($\mu\text{S}/\text{cm}$)	522	564	554	615	---	---
pH (units)	8.8	8.7	8.8	8.1	---	---
Water temperature ($^{\circ}\text{C}$)	22.0	15.0	16.0	14.0	---	---
Secchi-depth (meters)	---	0.9	---	2.4	2.9	2.8
Dissolved oxygen	13.8	---	14.3	7.5	---	---
Phosphorus, total (as P)	0.012	0.019	0.017	0.037	0.018	0.017
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	1.0	---	4.0	---	2.0	2.0

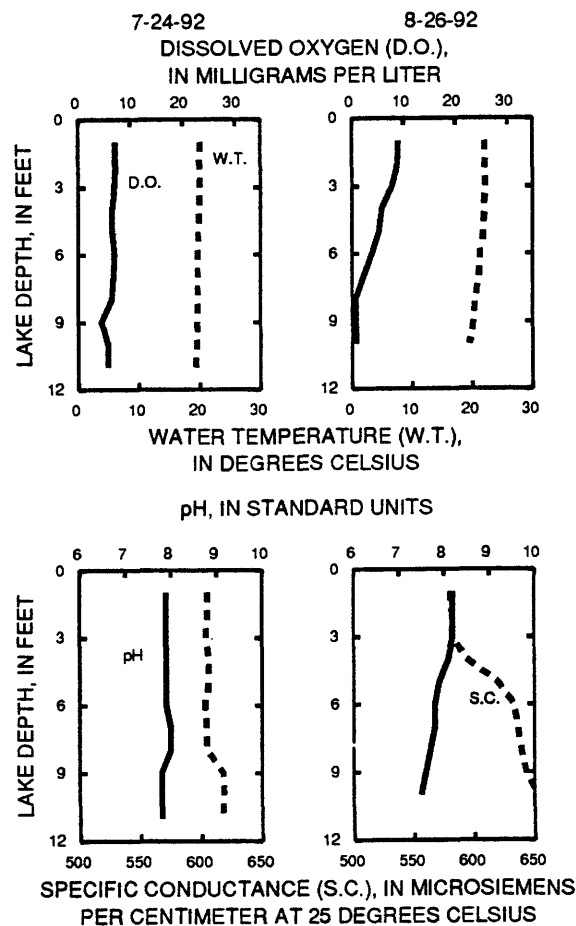
	June 19	June 26	July 01	July 10	July 17
Depth of sample (ft)	1.5	1.5	1.5	1.5	1.5
Lake stage (ft)	---	---	---	---	---
Specific conductance ($\mu\text{S}/\text{cm}$)	---	569	---	---	---
pH (units)	---	8.8	---	---	---
Water temperature ($^{\circ}\text{C}$)	---	20.0	---	---	---
Secchi-depth (meters)	2.8	3.7	3.4	2.7	1.9
Dissolved oxygen	---	13.4	---	---	---
Phosphorus, total (as P)	0.017	0.019	0.020	0.030	0.034
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	3.0	3.0	6.0	10	16



WATER-QUALITY DATA, JULY 24 TO SEPTEMBER 25, 1992
(Milligrams per liter unless otherwise indicated)

	July 24	July 31	Aug. 06	Aug. 14	Aug. 21
Depth of sample (ft)	1.5	1.5	1.5	1.5	1.5
Lake stage (ft)	17.25	17.25	17.25	17.25	17.25
Specific conductance ($\mu\text{S}/\text{cm}$)	605	---	---	---	---
pH (units)	7.9	---	---	---	---
Water temperature ($^{\circ}\text{C}$)	20.0	---	---	---	---
Secchi-depth (meters)	1.2	0.7	0.6	0.8	1.0
Dissolved oxygen	7.2	---	---	---	---
Phosphorus, total (as P)	0.048	0.076	0.042	0.049	0.039
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	40	49	28	30	31

	Aug. 26	Sep. 04	Sep. 11	Sep. 18	Sep. 25
Depth of sample (ft)	1.5	1.5	1.5	1.5	1.5
Lake stage (ft)	17.25	17.29	17.30	17.29	17.29
Specific conductance ($\mu\text{S}/\text{cm}$)	581	---	---	---	---
pH (units)	8.2	---	---	---	---
Water temperature ($^{\circ}\text{C}$)	22.0	---	---	---	---
Secchi-depth (meters)	0.6	1.0	1.2	1.2	1.3
Dissolved oxygen	9.1	---	---	---	---
Phosphorus, total (as P)	0.044	0.040	0.032	0.032	0.029
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	28	15	14	14	13



WISCONSIN RIVER BASIN

291

05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI

LOCATION.--Lat 43°06'38", long 89°38'44", in NW 1/4 SE 1/4 sec.3, T.7 N., R.7 E., Dane County, Hydrologic Unit 07070005, on left bank at bridge at County Trunk P at Cross Plains.

DRAINAGE AREA.--12.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1986, October 1989 to current year.

REVISED RECORDS.--WDR WI-90-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 880 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 25-28. Records fair except those for July 8-28, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	18	12	9.7	8.3	15	10	9.8	8.0	6.5	9.2	7.8
2	5.9	16	10	9.6	8.6	15	9.6	9.6	8.3	8.3	8.9	8.2
3	6.0	12	9.2	9.8	9.5	14	9.3	9.1	7.7	7.7	8.5	8.1
4	7.1	10	8.2	9.4	9.8	14	9.1	8.8	6.8	7.5	8.5	7.7
5	7.6	9.2	8.1	9.1	8.9	14	8.8	8.8	6.7	7.7	8.4	7.9
6	6.9	8.8	7.8	9.3	8.8	14	8.6	8.7	6.9	7.6	8.4	9.4
7	6.6	8.0	8.2	9.1	8.8	12	8.7	8.8	6.7	7.7	8.6	8.4
8	6.5	7.9	10	9.4	8.2	12	8.7	8.9	6.8	10	9.3	8.4
9	6.3	7.7	11	10	8.2	14	9.7	9.7	6.8	8.2	9.0	10
10	6.0	7.5	11	9.5	8.6	13	9.1	8.9	6.9	7.8	8.5	9.1
11	6.1	7.4	11	9.4	9.1	11	9.4	9.0	7.1	7.8	8.8	8.5
12	6.1	7.4	13	9.5	9.0	11	9.2	8.5	7.0	9.7	9.1	8.1
13	6.3	7.5	13	9.7	9.1	10	8.8	8.6	7.1	14	8.7	7.9
14	6.5	7.9	12	8.9	9.0	10	8.9	8.2	7.0	13	8.8	8.8
15	6.5	11	11	8.6	9.0	10	10	9.2	7.3	11	8.8	8.6
16	6.4	9.8	11	8.0	8.7	10	11	8.7	7.4	9.7	8.7	14
17	6.4	9.3	11	8.6	9.2	11	11	8.9	7.3	8.5	8.7	12
18	6.4	14	11	8.5	9.8	10	10	8.6	7.0	8.5	8.8	16
19	6.7	12	10	8.4	10	9.7	14	8.5	6.6	8.3	8.8	13
20	6.5	11	10	8.4	11	9.5	15	8.0	6.4	8.5	8.6	12
21	6.4	10	11	8.2	11	9.3	14	7.9	6.3	9.0	8.3	12
22	6.4	9.9	10	8.1	13	9.7	12	8.1	6.2	9.8	7.0	10
23	6.0	12	10	8.2	14	9.7	12	9.1	6.8	9.5	6.9	9.3
24	13	11	10	8.0	14	9.9	12	8.5	7.7	9.5	6.9	8.6
25	31	10	10	8.0	13	11	11	8.5	7.5	11	7.5	8.4
26	13	9.4	10	8.2	13	10	11	8.5	7.0	9.7	8.5	11
27	12	9.2	9.9	8.1	19	9.9	11	8.6	6.1	9.2	9.3	12
28	9.3	9.0	9.7	8.1	21	9.5	10	8.6	6.4	9.5	9.4	9.7
29	12	10	9.4	8.2	16	10	9.8	8.1	6.4	9.3	12	9.4
30	10	17	9.5	8.4	---	11	9.6	8.1	6.5	9.3	8.6	9.0
31	9.7	---	9.6	8.4	---	11	---	8.0	---	9.3	8.0	---
TOTAL	257.2	309.9	317.6	272.8	315.6	350.2	311.3	269.3	208.7	283.1	267.5	293.3
MEAN	8.30	10.3	10.2	8.80	10.9	11.3	10.4	8.69	6.96	9.13	8.63	9.78
MAX	31	18	13	10	21	15	15	9.8	8.3	14	12	16
MIN	5.6	7.4	7.8	8.0	8.2	9.3	8.6	7.9	6.1	6.5	6.9	7.7
CFSM	.65	.81	.80	.69	.85	.88	.81	.68	.54	.71	.67	.76
IN.	.75	.90	.92	.79	.92	1.02	.90	.78	.61	.82	.78	.85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1992, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
MEAN	10.3	11.8	10.7	10.0	11.8	16.0	14.3	12.8	12.4	11.8	10.1	10.6
MAX	15.6	22.1	17.5	15.9	17.4	20.5	20.0	18.9	19.0	17.5	15.0	16.6
(WY)	1986	1986	1986	1986	1986	1985	1986	1986	1985	1985	1986	1986
MIN	5.97	5.88	5.81	5.78	5.92	11.3	7.98	8.35	6.96	7.88	6.79	5.70
(WY)	1991	1991	1991	1991	1991	1992	1990	1990	1992	1990	1990	1991

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1985 - 1992

ANNUAL TOTAL	3249.9		3456.5			
ANNUAL MEAN	8.90		9.44		11.9	
HIGHEST ANNUAL MEAN					17.6	1986
LOWEST ANNUAL MEAN					7.96	1991
HIGHEST DAILY MEAN	36	Mar 2	31	Oct 25	79	Jul 25 1985
LOWEST DAILY MEAN	5.0	Sep 11	5.6	Oct 1	5.0	Sep 11 1991
ANNUAL SEVEN-DAY MINIMUM	5.2	Sep 5	6.3	Oct 8	5.2	Sep 5 1991
INSTANTANEOUS PEAK FLOW			76	Oct 24	123	Mar 8 1990
INSTANTANEOUS PEAK STAGE			10.42	Oct 24	12.80	Jul 25 1985
ANNUAL RUNOFF (CFSM)	.70		.74		.93	
ANNUAL RUNOFF (INCHES)	9.45		10.05		12.62	
10 PERCENT EXCEEDS	13		12		20	
50 PERCENT EXCEEDS	8.2		9.0		10	
90 PERCENT EXCEEDS	5.6		6.9		5.9	

05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to September 1986, October 1989 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: January 1985 to September 1986, October 1989 to current year.

DISSOLVED OXYGEN: April 1984 to September 1986, April 1989 to current year.

INSTRUMENTATION.--Continuous water temperature recorder January 1985 to September 1986, October 1989 to current year. Dissolved oxygen recorder April 1984 to September 1986, April 1989 to current year.

REMARKS.--Suspended-sediment, total phosphorus, and total nitrogen discharge were calculated for the period October 1984 to June 1986.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 23.0°C, July 25, 1985; minimum observed, 0.5°C, Mar. 8, 1990, Mar. 2, 1991.

DISSOLVED OXYGEN: Maximum observed, 16.5 mg/L, May 8, 1990; minimum observed, 3.0 mg/L, July 25, 1985.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 19.0°C, June 12-13, July 8; minimum observed, 2.5°C, Jan. 15-16 and Feb. 28-29.

DISSOLVED OXYGEN: Maximum observed, 16.4 mg/L, June 9; minimum observed, 4.9 mg/L, Aug. 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					APR 1992				
02...	0922	6.3	590	11.0	28...	0756	10	580	8.0
NOV					JUN				
20...	0920	12	540	8.0	02...	0759	9.2	570	11.0
DEC					JUL				
26...	0948	9.8	560	6.0	06...	0916	7.5	590	11.5
JAN 1992					AUG				
30...	0846	8.8	560	7.0	17...	0925	8.3	580	11.5
MAR									
12...	0906	10	595	4.5					

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	12.0	9.0	10.5	10.0	7.5	9.0	6.5	4.0	5.0	7.0	6.5	6.5
2	12.5	10.5	11.5	7.5	5.0	6.0	6.0	5.0	5.5	7.5	6.5	7.0
3	12.5	9.5	11.0	6.5	4.5	5.5	7.0	4.5	6.0	8.0	7.0	7.5
4	10.5	10.0	10.5	7.5	5.0	6.0	6.0	4.0	5.0	7.5	7.0	7.0
5	12.0	9.0	10.0	7.0	5.5	6.5	6.5	4.5	5.5	7.0	6.5	7.0
6	11.5	8.5	10.0	6.5	5.0	6.0	7.0	4.5	6.0	7.5	7.0	7.0
7	12.5	8.0	10.0	7.5	4.5	6.0	9.0	7.0	7.5	7.5	6.5	7.0
8	14.0	9.0	11.0	8.0	5.0	6.0	8.0	6.0	7.0	7.0	6.5	7.0
9	13.0	9.5	11.0	8.0	5.5	6.5	7.5	5.5	6.5	7.0	6.0	6.5
10	12.0	8.5	10.0	7.5	6.5	7.0	8.0	6.0	6.5	7.5	5.0	6.0
11	13.0	9.5	11.0	8.0	7.0	7.5	8.0	5.5	6.5	8.5	5.5	6.5
12	11.5	9.0	10.0	8.0	7.0	7.5	7.5	6.0	7.0	7.0	6.0	6.5
13	11.0	8.0	9.5	10.0	7.0	8.0	7.0	5.5	6.0	6.5	5.0	6.0
14	10.5	9.0	9.5	9.0	6.5	8.0	6.5	4.0	5.0	6.5	4.0	5.0
15	11.0	8.0	9.5	9.0	7.5	8.5	5.0	3.5	4.5	5.0	2.5	4.0
16	12.0	7.5	9.5	9.0	6.5	7.5	6.5	4.0	5.5	5.5	2.5	4.5
17	13.5	9.0	11.0	8.0	6.5	7.5	6.5	4.5	5.5	6.0	3.0	5.0
18	10.5	8.0	9.5	10.0	7.5	8.5	6.0	4.0	4.5	5.5	3.0	3.5
19	10.5	7.0	9.0	9.5	8.0	8.5	6.5	4.0	5.0	6.0	3.5	4.5
20	11.0	8.0	9.5	9.5	7.0	8.0	6.5	5.5	6.0	7.0	4.5	5.5
21	12.0	8.5	10.0	8.5	6.5	7.5	8.0	5.0	6.0	8.5	5.0	6.5
22	13.5	9.5	11.0	9.5	7.5	8.5	7.0	5.5	6.5	7.5	6.0	7.0
23	14.0	10.5	12.0	8.5	6.0	7.5	7.0	5.0	6.5	6.5	3.5	5.5
24	15.0	12.0	13.0	7.0	5.0	6.0	7.5	5.0	6.0	6.5	3.0	4.5
25	14.5	11.0	12.5	---	---	---	7.5	5.0	6.0	7.0	4.0	5.5
26	11.0	10.0	10.5	---	---	---	8.0	5.5	6.5	6.5	5.0	5.5
27	10.5	10.0	10.5	---	---	---	7.5	6.5	7.0	6.5	5.0	6.0
28	11.0	10.0	10.5	---	---	---	7.0	6.5	7.0	7.5	5.5	6.5
29	12.5	10.0	11.5	7.5	6.5	7.0	8.0	6.0	6.5	7.5	5.5	6.5
30	10.0	8.5	9.0	6.5	4.0	5.0	7.5	6.0	6.5	8.0	6.5	7.0
31	9.0	8.5	8.5	---	---	---	7.0	6.5	7.0	7.5	5.5	6.5
MONTH	15.0	7.0	10.4	---	---	---	9.0	3.5	6.0	8.5	2.5	6.0

WISCONSIN RIVER BASIN

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05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	8.5	5.0	6.0	9.5	4.5	6.5	7.5	5.5	6.5	17.5	10.0	13.0
2	9.5	5.5	7.0	8.5	4.5	6.0	11.0	5.0	7.5	15.0	9.5	12.0
3	9.5	5.5	7.0	6.5	5.5	6.0	11.0	6.5	8.0	15.0	8.5	11.0
4	8.0	5.5	6.5	9.5	5.5	7.0	12.0	6.5	8.5	11.5	8.5	9.5
5	9.0	5.0	6.5	8.0	6.5	7.0	13.0	6.5	9.0	14.0	7.0	10.0
6	7.5	5.5	6.5	8.0	7.0	7.5	12.5	7.0	9.5	15.0	5.0	10.0
7	7.5	4.5	6.0	8.5	7.5	8.0	14.0	8.0	10.0	15.5	8.0	11.0
8	7.0	4.0	5.0	11.5	7.5	9.0	11.0	7.0	9.0	16.5	8.0	11.5
9	8.0	4.0	5.5	8.5	4.0	6.5	13.0	8.0	9.5	16.5	8.5	12.0
10	6.5	5.0	6.0	6.5	3.5	4.5	8.5	7.5	8.0	17.5	9.5	13.0
11	8.5	4.5	6.0	8.5	4.0	5.5	9.5	7.0	8.0	17.5	10.0	13.0
12	7.5	4.0	5.5	9.0	4.5	5.5	11.5	5.5	8.0	14.5	10.5	12.5
13	7.0	5.5	6.5	9.5	4.5	6.5	8.5	7.0	7.5	16.5	9.5	12.5
14	7.0	6.5	6.5	8.5	5.5	6.5	9.5	7.5	8.0	15.0	9.5	11.5
15	7.5	4.0	6.0	10.0	4.5	6.5	9.5	7.5	8.0	15.0	10.0	12.0
16	8.0	6.0	7.0	8.5	5.0	6.5	8.5	8.0	8.0	17.5	10.0	13.0
17	8.0	6.0	7.0	10.5	5.5	7.5	9.0	7.5	8.0	18.0	11.0	13.5
18	7.0	5.0	6.0	8.5	5.5	6.5	11.0	8.0	9.0	17.5	10.0	13.0
19	8.0	6.0	6.5	10.5	5.0	7.0	13.0	9.5	11.5	18.0	9.5	13.0
20	8.5	4.5	6.5	10.5	5.5	7.5	13.0	11.0	12.0	18.0	10.0	13.5
21	8.0	4.5	6.0	6.0	4.5	5.0	11.5	8.0	9.5	18.0	10.5	13.5
22	9.5	3.5	6.5	10.0	5.0	6.5	9.5	7.5	8.5	18.5	11.0	14.0
23	8.0	4.0	5.5	11.0	4.5	7.0	9.0	7.5	8.5	13.0	10.5	12.0
24	5.5	4.0	5.0	11.5	5.5	8.0	10.0	7.5	8.5	11.0	8.5	9.5
25	6.5	5.0	5.5	11.5	6.5	8.0	9.5	7.5	8.5	11.5	8.5	9.5
26	9.0	4.0	5.5	9.0	5.0	7.0	9.5	8.0	8.5	13.0	9.0	10.5
27	8.0	3.0	5.0	11.0	4.5	7.0	13.5	7.0	9.5	15.0	8.0	11.0
28	5.0	2.5	4.0	9.0	6.0	7.0	14.0	7.5	10.0	15.5	8.5	11.5
29	6.5	2.5	4.5	7.0	6.5	7.0	15.0	9.0	11.0	16.5	8.5	12.0
30	---	---	---	11.5	6.5	8.5	16.0	9.0	12.0	16.5	9.5	12.0
31	---	---	---	10.5	6.5	8.0	---	---	---	17.5	9.5	13.0
MONTH	9.5	2.5	6.0	11.5	3.5	6.9	16.0	5.0	8.9	18.5	5.0	11.9
JUNE				JULY			AUGUST			SEPTEMBER		
1	16.0	10.5	12.5	17.5	11.5	14.5	17.0	12.0	14.5	15.5	11.0	13.5
2	18.0	10.5	14.0	16.0	12.0	13.5	17.5	12.0	15.0	15.5	13.0	14.0
3	18.0	10.0	13.5	16.0	13.0	14.0	16.5	13.5	15.0	16.5	12.5	14.0
4	15.5	10.0	12.5	17.5	11.0	14.0	16.0	12.5	14.0	15.5	11.5	13.5
5	18.0	11.0	14.0	16.0	11.0	13.5	16.0	11.5	14.0	17.0	12.0	14.5
6	14.0	10.5	12.0	17.0	10.5	13.5	16.5	12.5	14.5	15.5	14.0	14.5
7	17.5	10.0	13.5	15.0	11.5	13.5	16.0	11.5	14.0	15.5	13.0	14.0
8	15.5	10.5	13.0	19.0	13.0	15.5	15.0	12.5	14.0	15.5	12.5	14.0
9	16.5	11.0	13.5	16.5	12.5	14.5	18.0	14.0	15.5	13.5	12.0	13.0
10	17.0	10.5	13.5	17.5	12.5	15.0	18.5	13.5	16.0	14.0	11.5	13.0
11	18.0	11.5	14.5	16.0	11.5	14.0	17.0	14.5	15.5	15.0	11.0	13.0
12	19.0	11.0	14.5	16.0	12.5	14.0	15.0	13.0	14.0	15.5	11.0	13.5
13	19.0	11.5	15.0	15.5	13.5	14.5	14.5	12.0	13.5	16.5	12.5	14.5
14	18.5	12.0	15.0	15.0	13.0	14.0	15.5	12.0	13.5	15.0	13.5	14.5
15	14.5	11.5	13.0	14.5	12.0	13.5	15.5	11.0	13.5	16.5	13.0	14.5
16	15.0	11.0	13.0	16.0	12.0	14.0	16.0	11.0	13.5	16.5	14.0	15.5
17	19.0	13.5	15.5	17.0	12.0	14.5	15.5	11.5	13.5	16.0	14.5	15.5
18	16.0	12.5	14.0	16.0	12.0	14.0	16.5	13.0	14.5	17.0	13.0	15.5
19	14.0	12.0	13.0	17.0	12.0	14.5	15.5	11.5	14.0	14.5	11.5	13.0
20	16.5	10.5	13.5	15.0	12.0	13.5	15.5	11.5	14.0	14.0	11.5	12.5
21	16.5	9.5	12.5	16.0	11.5	13.5	16.5	12.0	14.0	14.0	12.5	13.0
22	12.0	10.0	11.0	13.5	11.5	12.0	15.5	11.5	13.5	14.5	11.0	12.5
23	14.5	11.0	12.5	12.5	11.5	12.0	16.0	12.0	14.0	14.5	10.0	12.0
24	17.0	11.0	13.5	15.5	11.0	13.5	16.5	13.0	15.0	14.5	10.5	12.5
25	18.0	11.0	14.0	14.5	12.5	13.5	17.0	13.0	15.0	14.0	10.5	12.5
26	16.5	11.5	13.5	17.5	13.0	15.0	15.0	13.0	13.5	14.0	12.5	13.0
27	16.5	9.5	13.0	17.5	12.5	15.0	14.0	12.5	13.0	15.0	11.5	13.0
28	17.0	10.0	13.5	17.0	12.5	15.0	14.5	11.0	12.5	13.5	11.0	12.0
29	17.5	11.0	14.0	16.5	12.5	14.5	17.0	12.5	14.5	13.5	9.5	11.5
30	17.0	11.5	14.0	14.5	12.5	13.0	15.5	12.5	14.0	13.5	10.0	12.0
31	---	---	---	14.5	12.5	13.0	15.0	11.0	13.0	---	---	---
MONTH	19.0	9.5	13.5	19.0	10.5	13.9	18.5	11.0	14.1	17.0	9.5	13.5

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	10.0	---	---	8.3	6.2	7.5	---	---	---	---	---	---
2	9.5	7.4	8.2	10.2	8.0	9.2	---	---	---	---	---	---
3	10.3	7.4	8.6	10.5	9.3	9.8	---	---	---	---	---	---
4	8.8	7.3	7.9	10.4	9.2	9.7	---	---	---	---	---	---
5	10.2	7.4	8.5	9.9	8.9	9.3	---	---	---	---	---	---
6	10.4	7.8	8.8	10.3	8.9	9.6	---	---	---	---	---	---
7	10.6	8.0	9.0	10.8	9.5	10.0	---	---	---	---	---	---
8	10.4	7.6	8.7	10.6	9.5	9.9	---	---	---	---	---	---
9	10.4	7.7	8.7	10.5	9.2	9.7	---	---	---	---	---	---
10	10.6	7.8	8.9	9.9	9.1	9.4	---	---	---	---	---	---
11	10.4	7.7	8.7	9.9	9.0	9.3	---	---	---	---	---	---
12	10.2	7.8	8.7	---	---	---	---	---	---	---	---	---
13	10.5	7.7	8.9	---	---	---	---	---	---	---	---	---
14	9.7	7.6	8.4	---	---	---	---	---	---	---	---	---
15	10.8	8.1	9.1	---	---	---	---	---	---	---	---	---
16	10.5	8.0	9.1	---	---	---	---	---	---	---	---	---
17	10.5	7.9	8.8	---	---	---	---	---	---	---	---	---
18	10.8	7.8	9.0	---	---	---	---	---	---	---	---	---
19	11.4	8.4	9.5	---	---	---	---	---	---	---	---	---
20	11.2	8.3	9.4	---	---	---	---	---	---	---	---	---
21	11.1	8.2	9.3	---	---	---	---	---	---	---	---	---
22	10.7	7.7	8.9	---	---	---	---	---	---	---	---	---
23	10.7	7.4	8.7	---	---	---	---	---	---	---	---	---
24	8.8	6.5	7.6	---	---	---	---	---	---	---	---	---
25	7.3	5.2	6.1	---	---	---	---	---	---	---	---	---
26	7.6	6.8	7.2	---	---	---	---	---	---	---	---	---
27	8.6	7.4	8.0	---	---	---	---	---	---	---	---	---
28	8.4	7.7	8.0	---	---	---	---	---	---	---	---	---
29	8.0	7.2	7.6	---	---	---	---	---	---	---	---	---
30	10.0	7.5	8.7	---	---	---	---	---	---	---	---	---
31	9.2	8.0	8.6	---	---	---	---	---	---	---	---	---
MONTH	11.4	---	---	---	---	---	---	---	---	---	---	---
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	15.5	8.2	11.0
9	---	---	---	---	---	---	---	---	---	14.7	8.2	10.7
10	---	---	---	---	---	---	---	---	---	14.9	8.2	10.9
11	---	---	---	---	---	---	---	---	---	14.9	7.5	10.2
12	---	---	---	---	---	---	---	---	---	13.4	7.4	10.1
13	---	---	---	---	---	---	---	---	---	14.3	8.1	10.7
14	---	---	---	---	---	---	---	---	---	14.6	8.1	10.1
15	---	---	---	---	---	---	---	---	---	14.2	8.1	10.2
16	---	---	---	---	---	---	---	---	---	13.1	7.8	10.2
17	---	---	---	---	---	---	---	---	---	14.2	7.5	10.3
18	---	---	---	---	---	---	---	---	---	14.5	8.3	11.0
19	---	---	---	---	---	---	---	---	---	15.2	8.8	11.4
20	---	---	---	---	---	---	---	---	---	15.4	7.9	11.4
21	---	---	---	---	---	---	---	---	---	15.3	7.7	10.8
22	---	---	---	---	---	---	---	---	---	15.2	7.1	10.5
23	---	---	---	---	---	---	---	---	---	13.8	6.7	9.4
24	---	---	---	---	---	---	---	---	---	13.7	8.2	10.8
25	---	---	---	---	---	---	---	---	---	14.2	8.7	10.9
26	---	---	---	---	---	---	---	---	---	14.5	8.6	11.2
27	---	---	---	---	---	---	---	---	---	14.7	8.1	11.4
28	---	---	---	---	---	---	---	---	---	14.8	8.1	10.8
29	---	---	---	---	---	---	---	---	---	15.7	7.8	11.3
30	---	---	---	---	---	---	---	---	---	16.0	7.8	11.2
31	---	---	---	---	---	---	---	---	---	16.2	7.6	11.1

WISCONSIN RIVER BASIN

295

05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	15.9	7.6	11.0	14.2	7.0	10.2	13.0	6.6	9.3	---	---	---
2	16.2	7.6	11.2	10.3	5.9	7.5	12.9	6.4	9.1	---	---	---
3	16.0	7.7	11.2	13.1	6.0	9.1	11.8	6.1	8.3	---	---	---
4	15.3	7.6	10.9	13.4	7.1	9.8	12.4	6.1	8.8	---	---	---
5	16.0	7.5	11.0	13.7	6.9	9.9	12.4	6.5	9.1	---	---	---
6	13.8	7.6	10.5	13.7	7.2	10.0	12.7	6.4	9.1	---	---	---
7	15.9	8.0	11.3	12.2	6.8	9.2	12.7	6.5	9.1	---	---	---
8	14.7	7.9	11.1	12.5	6.3	8.8	10.1	5.8	7.6	---	---	---
9	16.4	7.8	11.2	14.7	6.2	9.8	12.0	5.4	8.2	---	---	---
10	15.0	7.8	11.0	13.0	6.9	9.5	10.3	5.4	7.5	---	---	---
11	15.1	7.3	10.5	13.5	6.7	9.5	11.5	4.9	7.5	---	---	---
12	15.1	7.3	10.6	10.6	5.8	7.6	11.3	5.7	7.9	---	---	---
13	14.9	7.1	10.4	9.9	5.0	6.8	11.5	6.4	8.5	---	---	---
14	15.1	7.0	10.2	10.1	5.0	7.4	11.6	6.4	8.6	---	---	---
15	13.3	7.4	9.8	---	---	---	12.2	6.6	8.8	---	---	---
16	12.9	7.6	10.1	---	---	---	12.0	6.6	8.7	---	---	---
17	13.9	7.1	9.7	13.5	6.3	9.4	11.6	6.4	8.6	---	---	---
18	12.9	7.4	9.9	13.5	6.5	9.4	11.3	5.9	8.1	---	---	---
19	12.7	7.7	10.1	13.8	6.5	9.2	12.0	6.2	8.5	---	---	---
20	13.9	8.0	10.7	13.4	6.4	9.5	12.0	6.5	8.7	---	---	---
21	14.0	8.3	10.8	13.5	6.6	9.7	11.9	6.5	8.7	---	---	---
22	12.3	8.1	9.8	8.6	6.5	7.5	11.9	6.4	8.7	---	---	---
23	13.0	7.2	9.8	11.4	6.6	8.5	11.7	6.4	8.6	---	---	---
24	12.9	6.9	9.6	13.5	6.9	9.7	11.6	5.8	8.3	---	---	---
25	12.7	7.2	9.7	10.3	6.3	7.9	11.0	5.5	7.7	---	---	---
26	12.9	7.1	9.8	12.8	6.4	9.1	8.8	5.0	6.7	---	---	---
27	13.5	7.6	10.2	13.0	6.3	9.1	10.1	6.0	7.8	---	---	---
28	13.4	7.5	10.0	12.9	6.3	9.1	11.0	6.7	8.4	---	---	---
29	13.3	7.1	9.8	12.9	6.1	9.1	10.0	5.6	7.6	---	---	---
30	13.7	7.1	9.9	10.5	6.2	7.9	10.5	5.5	7.8	---	---	---
31	---	---	---	10.6	6.3	8.0	10.7	6.3	8.1	---	---	---
MONTH	16.4	6.9	10.4	---	---	---	13.0	4.9	8.3	---	---	---

WISCONSIN RIVER BASIN

431010089360000 BREWERY CREEK RAIN GAGE #1 NEAR CROSS PLAINS, WI

LOCATION.--Lat 43°10'10", long 89°36'00", in NE 1/4 SE 1/4 sec.13, T.8 N., R.7 E., Dane County, Hydrologic Unit 07070005, on Whipporwill Road, 0.5 mi south of intersection with County Trunk K.

PERIOD OF RECORD.--October 1989 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established Oct. 27, 1989. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 29, Dec. 3, 6, 8, 21, 24, Jan. 2, 25, Feb. 15, 18, 19, 24, 25, and Mar. 5, 25. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Mar. 29.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.74 in., Oct. 24, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.74 in., Oct. 24.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.79	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.02	.00	.00	.00	.00	.00	.00	.00	.00	.48	.06	.42
3	.17	.00	.00	.00	.00	.13	.00	.00	.00	.07	.01	.01
4	.65	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.02	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.47
7	.00	.00	.00	.00	.00	.00	.04	.00	.00	.01	.62	.03
8	.00	.00	.00	.08	.00	.06	.33	.00	.00	1.31	.00	.00
9	.00	.00	.00	.01	.00	.45	.03	.00	.00	.00	.00	.54
10	.00	.00	.00	.00	.00	.00	.18	.00	.00	.36	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.28	.00	.15	.00	.00
12	.00	.09	.34	.11	.00	.00	.00	.00	.00	.62	.16	.00
13	.09	.00	.01	.00	.00	.00	.00	.00	.00	1.31	.00	.00
14	.01	.33	.00	.00	.00	.00	.02	.00	.00	.00	.00	.54
15	.01	.29	.00	.00	.00	.00	.45	.00	.40	.00	.00	.00
16	.00	.00	.00	.00	.00	.30	.32	.00	.04	.05	.00	1.25
17	.00	.52	.00	.00	.00	.00	.00	.34	.12	.00	.02	.04
18	.00	.16	.00	.00	.00	.00	.18	.00	.03	.00	.03	.59
19	.22	.00	.00	.00	.00	.00	.63	.00	.00	.01	.00	.00
20	.00	.00	.00	.00	.00	.00	.19	.00	.01	.00	.00	.44
21	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.01
22	.00	.03	.00	.12	.00	.00	.00	.64	.02	.45	.00	.00
23	.00	.54	.00	.02	.00	.00	.15	.13	.18	.02	.00	.00
24	3.74	.00	.00	.00	.00	.00	.05	.00	.01	.00	.00	.00
25	.18	.00	.00	.00	.00	.00	.02	.00	.00	.00	.43	.00
26	.33	.00	.00	.00	.00	.01	.00	.00	.00	.00	.01	.89
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.01
28	.34	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00
29	.56	.00	.00	.00	.00	.00	.01	.00	.00	.00	1.12	.00
30	.00	.06	.00	.00	---	.00	.00	.00	.00	.16	.00	.00
31	.35	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	6.93	2.81	0.35	0.34	0.00	1.09	2.65	1.39	0.81	5.00	2.48	5.24

WISCONSIN RIVER BASIN

297

430900089355400 BREWERY CREEK RAIN GAGE #2 NEAR CROSS PLAINS, WI

LOCATION.--Lat 43°09'00", long 89°35'54", in SW 1/4 SW 1/4 sec.19, T.8 N., R.8 E., Dane County, Hydrologic Unit 07070005, at the intersection of County Trunk P and County Trunk K.

PERIOD OF RECORD.--October 1989 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established Oct. 28, 1989. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 27, 29, Dec. 6, 8, 11, 20, 21, Jan. 2, Feb. 15, 16, 18, 19, 24, and Mar. 5, 13, 22, 25. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Mar. 29. Unpublished rainfall data collected at this site during 1985-86 water years are available for inspection at the District Office.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.24 in., Oct. 24, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.24 in., Oct. 24.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.83	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.59	.07	.34
3	.18	.00	.00	.00	.00	.01	.00	.00	.00	.07	.00	.00
4	.80	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.04	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.60
7	.00	.00	.00	.00	.00	.01	.08	.00	.00	.01	.69	.03
8	.00	.00	.00	.07	.00	.05	.37	.00	.00	1.34	.00	.00
9	.00	.00	.00	.01	.00	.44	.06	.00	.00	.00	.00	.58
10	.00	.00	.00	.00	.00	.00	.16	.00	.00	.22	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.30	.00	.16	.00	.00
12	.00	.14	.35	.11	.00	.00	.00	.00	.00	.60	.18	.00
13	.12	.00	.01	.00	.00	.00	.00	.00	.00	1.35	.00	.00
14	.01	.36	.00	.00	.00	.00	.02	.00	.00	.00	.00	.54
15	.00	.29	.00	.00	.00	.00	.43	.00	.21	.00	.00	.00
16	.00	.00	.00	.00	.00	.29	.30	.00	.03	.04	.00	1.18
17	.00	.56	.00	.00	.00	.00	.00	.32	.13	.00	.04	.02
18	.03	.14	.00	.00	.00	.00	.17	.00	.03	.00	.03	.81
19	.20	.01	.00	.00	.00	.00	.69	.00	.00	.02	.00	.00
20	.00	.00	.00	.00	.00	.00	.22	.00	.01	.00	.00	.50
21	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.01
22	.00	.04	.00	.10	.00	.00	.00	.71	.04	.49	.00	.00
23	.00	.56	.00	.03	.00	.00	.18	.14	.07	.02	.00	.00
24	3.24	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00
25	.24	.00	.00	.00	.00	.00	.03	.00	.00	.01	.59	.00
26	.35	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.99
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.01
28	.36	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00	.00
29	.28	.00	.00	.00	.00	.00	.02	.00	.00	.00	1.22	.00
30	.00	.05	.00	.00	---	.00	.00	.00	.00	.18	.00	.00
31	.46	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	6.57	2.98	0.36	0.32	0.00	0.97	2.83	1.47	0.52	5.10	2.84	5.61

WISCONSIN RIVER BASIN

430751089372000 BREWERY CREEK RAIN GAGE #3 NEAR CROSS PLAINS, WI

LOCATION.--Lat 43°07'51", long 89°37'20", in NE 1/4 NE 1/4 sec.35, T.8 N., R.7 E., Dane County, Hydrologic Unit 07070005, on County Trunk P, 1.9 mi north of intersection with U.S. Highway 14.

PERIOD OF RECORD.--October 1989 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established Oct. 28, 1989. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 27, 29, Dec. 3, 6, 9, 20, 21, 23, 24, Jan. 2, Feb. 15, 18, 19, 24, and Mar. 5, 13, 22, 25. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Mar. 29.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.47 in., Oct. 24, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.47 in., Oct. 24.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.84	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.70	.02	.30
3	.14	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.01
4	.80	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.59
7	.00	.00	.00	.00	.00	.01	.03	.00	.00	.05	.72	.03
8	.00	.00	.00	.08	.00	.05	.39	.00	.00	1.20	.00	.00
9	.00	.00	.00	.02	.00	.42	.05	.00	.00	.00	.00	.63
10	.00	.00	.00	.00	.00	.00	.25	.00	.00	.04	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.29	.00	.17	.00	.00
12	.00	.11	.39	.08	.00	.00	.00	.00	.00	.75	.21	.00
13	.11	.00	.00	.00	.00	.00	.00	.00	.00	1.50	.00	.00
14	.00	.39	.00	.00	.00	.01	.02	.00	.00	.00	.00	.50
15	.00	.31	.00	.00	.00	.00	.49	.00	.05	.00	.00	.00
16	.00	.00	.00	.00	.00	.30	.27	.00	.04	.06	.00	1.14
17	.00	.57	.00	.00	.00	.00	.00	.31	.15	.00	.02	.03
18	.03	.16	.00	.00	.00	.00	.09	.00	.03	.00	.02	.80
19	.13	.01	.00	.00	.00	.00	.60	.00	.02	.01	.00	.00
20	.00	.00	.00	.00	.00	.00	.10	.00	.01	.00	.00	.54
21	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00
22	.00	.05	.00	.10	.00	.00	.00	.75	.05	.52	.00	.00
23	.00	.55	.00	.03	.00	.00	.17	.22	.15	.03	.00	.00
24	3.47	.00	.00	.00	.00	.00	.07	.00	.01	.00	.00	.00
25	.26	.00	.00	.00	.00	.00	.02	.00	.00	.03	.62	.00
26	.37	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.80
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00
28	.35	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00
29	.34	.00	.00	.00	.00	.00	.02	.00	.00	.00	1.29	.00
30	.00	.06	.00	.00	---	.00	.00	.00	.01	.19	.00	.00
31	.44	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	6.72	3.05	0.39	0.31	0.00	0.93	2.61	1.57	0.52	5.29	2.94	5.37

WISCONSIN RIVER BASIN

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05406470 BREWERY CREEK AT CROSS PLAINS, WI

LOCATION (REVISED).--Lat 43°07'09", long 89°38'25", in SW 1/4 SW 1/4 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 current year.

GAGE.--Water-stage recorder. Elevation of gage is 900 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 4-11, Dec. 15 to Feb. 29, and Mar. 13, 17. Records poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	7.8	3.2	.28	.33	8.3	.68	.70	.38	.27	.30	.24
2	.08	3.5	1.3	.28	.36	1.4	.64	.67	.37	.45	.28	.31
3	.11	1.6	.95	.28	.45	.96	.59	.62	.39	.39	.29	.31
4	.45	1.2	.74	.28	.40	.85	.55	.59	.40	.32	.28	.27
5	1.1	.94	.70	.28	.37	.92	.51	.51	.41	.26	.24	.21
6	1.1	.85	.66	.28	.35	1.0	.53	.50	.43	.24	.21	.43
7	.69	.83	.68	.28	.34	.96	.55	.47	.42	.24	.34	.41
8	.57	.84	.70	.30	.34	.83	.56	.48	.43	.68	.39	.33
9	.51	.93	.72	.35	.33	1.5	.76	.47	.44	.54	.33	.61
10	.42	.83	.74	.33	.33	1.5	.74	.43	.44	.33	.28	.69
11	.40	.83	.78	.31	.33	1.0	.82	.46	.47	.31	.27	.44
12	.39	.80	1.5	.30	.33	.80	.70	.45	.49	.63	.30	.35
13	.34	.72	1.5	.30	.33	.70	.67	.43	.52	1.7	.24	.35
14	.39	.77	1.0	.35	.33	.60	.66	.40	.53	2.7	.25	.51
15	.35	2.5	.80	.40	.33	.60	.89	.39	.53	1.0	.25	.61
16	.28	1.3	.60	.37	.33	.62	1.1	.37	.53	.73	.27	1.3
17	.30	1.0	.45	.35	.34	.65	1.0	.48	.57	.62	.25	2.3
18	.34	4.1	.40	.34	.36	.61	.98	.40	.54	.54	.25	2.7
19	.26	1.7	.35	.33	.40	.62	2.5	.39	.50	.46	.25	1.7
20	.25	1.0	.32	.33	.45	.50	2.0	.39	.46	.40	.22	1.0
21	.26	.80	.30	.33	.60	.49	1.5	.39	.41	.39	.18	1.4
22	.27	.70	.29	.33	.90	1.0	1.2	.44	.41	.44	.16	1.2
23	.27	1.5	.28	.36	1.5	.72	1.0	.70	.43	.51	.14	.85
24	2.9	1.1	.28	.34	3.0	.77	1.1	.46	.43	.51	.13	.73
25	30	.86	.28	.33	2.0	1.0	.99	.44	.39	.45	.21	.66
26	3.2	.75	.28	.33	3.0	.85	.93	.43	.37	.48	.25	.90
27	2.0	.73	.28	.33	12	.72	.84	.43	.34	.43	.24	2.0
28	1.5	.57	.28	.33	16	.61	.79	.42	.34	.36	.20	1.2
29	2.6	1.0	.28	.33	9.0	.75	.76	.41	.32	.31	.82	.92
30	2.1	5.3	.28	.33	---	.77	.70	.39	.31	.31	.65	.83
31	1.5	---	.28	.33	---	.74	---	.39	---	.33	.29	---
TOTAL	54.99	47.35	21.20	9.99	55.13	33.34	27.24	14.50	13.00	17.33	8.76	25.76
MEAN	1.77	1.58	.68	.32	1.90	1.08	.91	.47	.43	.56	.28	.86
MAX	30	7.8	3.2	.40	.16	8.3	2.5	.70	.57	2.7	.82	2.7
MIN	.06	.57	.28	.28	.33	.49	.51	.37	.31	.24	.13	.21
CFSM	.23	.20	.09	.04	.25	.14	.12	.06	.06	.07	.04	.11
IN.	.27	.23	.10	.05	.27	.16	.13	.07	.06	.08	.04	.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1992, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
MEAN	1.59	1.86	1.17	1.16	2.23	3.12	1.74	1.20	1.61	2.36	1.30	1.82
MAX	2.87	4.73	2.56	2.10	5.42	4.75	3.20	3.18	3.29	6.83	3.76	4.94
(WY)	1986	1986	1986	1990	1985	1990	1986	1986	1986	1985	1986	1986
MIN	.25	.16	.12	.011	.15	1.08	.64	.47	.40	.22	.22	.11
(WY)	1991	1991	1991	1991	1991	1992	1990	1992	1991	1990	1990	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1985 - 1992

ANNUAL TOTAL	320.23	328.59	
ANNUAL MEAN	.88	.90	1.76
HIGHEST ANNUAL MEAN			3.44
LOWEST ANNUAL MEAN			.58
HIGHEST DAILY MEAN	30	30	142
LOWEST DAILY MEAN	.00	.06	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.18	.00
INSTANTANEOUS PEAK FLOW		90	231
INSTANTANEOUS PEAK STAGE		11.45	13.51
INSTANTANEOUS LOW FLOW		.06	.00
ANNUAL RUNOFF (CFSM)	.11	.12	.23
ANNUAL RUNOFF (INCHES)	1.55	1.59	3.11
10 PERCENT EXCEEDS	2.0	1.5	3.6
50 PERCENT EXCEEDS	.32	.46	1.0
90 PERCENT EXCEEDS	.01	.28	.13

(a) Also occurred many days during 1991 water year

WISCONSIN RIVER BASIN

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to September 1986, October 1989 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1984 to September 1986, October 1989 to current year.

DISSOLVED OXYGEN: April 1990 to June 30, 1991 (discontinued).

SUSPENDED-SOLIDS DISCHARGE: October 1989 to September 1992 (discontinued).

SUSPENDED-SEDIMENT DISCHARGE: October 1984 to June 1986, October 1989 to current year.

TOTAL-PHOSPHORUS DISCHARGE: October 1984 to June 1986, October 1989 to current year.

INSTRUMENTATION.--Water-quality sampler December 1984 to June 1986, October 1989 to current year; continuous water temperature recorder November 1984 to September 1986, October 1989 to current year; dissolved oxygen recorder April 1990 to June 1991.

REMARKS.--Total-nitrogen discharge was published for the period October 1984 to June 1986. Suspended-solids discharge were published for the period October 1989 to September 1991. 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.

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, and 1992 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, 243 tons, June 29, 1990; 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.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 493 tons, July 25, 1985; minimum daily, 0.0 ton Oct. 1-2, 1992.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,830 lb, July 25, 1985; 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, 30.5°C, June 13; minimum observed, 0.0°C, Mar. 18-19, 21-24, 27, and Apr. 2, 12.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 89 tons, Oct. 25; minimum observed, 0.00 ton, Oct. 1-2.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 592 lb, Oct. 25; minimum daily, 0.07 lb, Oct. 1.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					APR 1992				
02...	0951	0.06	650	13.0	28...	0850	0.79	805	4.5
NOV					JUN				
20...	1023	0.96	695	5.5	02...	0900	0.37	895	16.5
DEC					JUL				
26...	1203	0.28	715	0.5	06...	1000	0.24	645	16.5
JAN 1992					08...	1745	0.55	--	0.0
30...	1116	0.33	790	1.5	14...	0814	3.5	615	16.0
FEB					AUG				
28...	1230	26	230	2.0	17...	1023	0.25	675	14.0
MAR									
12...	0953	1.6	700	0.0					
17...	1421	0.65	650	10.0					

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)	CARBO- FURAN WATER WHOLE TOT.REC (UG/L) (82615)	CHLOR- DYRIFOS TOTAL RECOVER (UG/L) (38932)	CIS- PERME- THRIN WATER WHOLE REC (UG/L) (82418)	CYAN- AZINE TOTAL (UG/L) (81757)	DICAMBA (MED- IBEN) (BAN- VEL D) TOTAL (UG/L) (82052)	DIMETH- OATE WATER WHOLE TOTAL (UG/L) (39009)	EPTC WATER WHOLE REC (UG/L) (81894)
MAY 1992											
*28...	1350	0.35	<0.10	<0.1	<0.3	<1.0	<1.0	<0.30	<0.20	<1.0	<1.0

DATE	TIME	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	METHO- MYL TOTAL (UG/L) (39051)	METOLA- CHLOR IN WATER TOTAL (UG/L) (39356)	PARA- THION, TOTAL (UG/L) (39540)	PENDI- METH- ALIN TOTAL (UG/L) (79190)	PHORATE TOTAL (UG/L) (39023)	TERBU- FOS WAT, WH REC (UG/L) (82088)	TRANS PERME- THRIN WATER WHOLE REC (UG/L) (82420)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	2,4-D, TOTAL (UG/L) (39730)
MAY 1992											
28...		<0.20	<1.0	<0.20	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA) (00929)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
OCT 1991												
10...	1315	--	0.44	8.3	1.0	--	--	81	44	5.2	2	438
22...	1210	--	0.25	8.4	1.2	--	--	--	--	--	<2	406
24...	2145	--	11	7.8	8.7	--	--	29	17	2.2	944	1060
24...	2245	--	36	7.4	130	--	--	61	43	6.7	3060	3920
25...	0230	--	84	7.7	26	--	--	42	26	2.9	2160	2350
25...	0700	--	48	7.7	15	--	--	20	13	2.7	624	860
25...	0830	--	38	7.6	11	--	--	19	12	2.7	292	564
25...	1600	--	8.9	7.9	6.1	--	--	36	18	3.7	50	350
*26...	1221	--	2.9	8.0	6.5	--	--	63	30	6.2	35	420
26...	1222	--	2.9	8.1	6.6	--	--	61	30	5.8	34	430
*27...	1331	--	1.8	8.2	2.8	--	--	78	37	6.9	7	462
NOV												
01...	0915	--	5.3	7.9	17	--	--	45	22	5.4	146	412
01...	1000	--	9.1	7.6	>50	--	--	40	22	5.4	700	960
*01...	1342	--	10	7.8	22	--	--	45	22	5.4	228	584
01...	1343	--	10	7.8	22	--	--	46	23	5.9	288	594
01...	1344	--	10	--	--	--	--	--	--	--	--	--
01...	1445	--	13	7.8	13	--	--	43	22	4.8	220	510
01...	1533	--	15	8.0	7.4	--	--	42	21	4.3	168	458
01...	1536	--	16	--	--	--	--	--	--	--	--	--
02...	0115	--	6.1	8.0	5.3	--	--	49	24	5.0	49	378
*02...	0755	--	3.9	8.2	2.9	--	--	65	31	6.2	22	394
18...	0430	--	4.5	--	--	--	--	--	--	--	--	--
30...	0145	--	5.0	7.4	--	--	--	42	22	13	260	564
30...	0500	--	8.1	7.7	--	--	--	48	26	7.0	216	528
DEC												
01...	0330	--	4.9	8.1	--	--	--	70	37	6.7	33	426
*10...	1555	--	0.83	8.2	<1.0	--	--	78	40	7.6	10	440
JAN 1992												
*09...	0830	0.35	--	8.0	26	54000	65000	75	39	8.5	58	504
09...	0845	0.35	--	--	--	--	--	--	--	--	--	--
DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA) (00929)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	
FEB 1992												
*22...	1046	0.90	--	7.6	--	16	52	28	71	26	576	
*27...	1117	12	--	7.3	--	15	29	15	12	70	342	
27...	1645	12	--	7.7	--	32	21	12	5.7	536	744	
27...	1715	12	--	7.7	--	34	26	14	6.5	640	852	
27...	1745	12	--	7.8	--	30	24	14	7.3	748	936	
27...	1904	12	--	7.7	--	19	15	8.4	6.2	476	618	
27...	1905	12	--	7.8	--	--	--	--	--	436	578	
*27...	2027	12	--	7.6	--	--	--	--	--	324	474	
27...	2028	12	--	7.6	--	--	--	--	--	308	454	
*27...	2029	12	--	--	--	--	--	--	--	--	--	
27...	2330	12	--	7.6	--	17	14	7.7	6.2	134	292	
*28...	0913	16	--	7.5	--	16	19	11	6.1	164	362	
28...	1145	16	--	7.4	--	--	20	11	5.7	420	600	
28...	1245	16	--	7.4	--	--	22	11	5.3	508	928	
28...	1345	16	--	7.4	--	--	23	12	4.8	748	904	
28...	1515	16	--	7.4	--	--	22	12	4.9	864	1030	
28...	2045	16	--	7.4	--	--	15	8.2	4.2	356	518	
*29...	0838	--	7.8	7.6	--	--	26	13	4.8	29	236	
MAR												
01...	1430	--	23	7.5	--	--	24	14	4.0	980	1120	
01...	1630	--	30	7.5	--	--	24	16	3.6	1340	1550	
10...	1045	--	1.8	7.9	--	--	78	40	11	17	472	
*17...	1515	--	0.63	8.6	--	2.0	75	40	9.7	11	422	
18...	1200	--	0.63	--	--	--	--	--	--	--	--	
20...	1203	--	0.51	--	--	--	--	--	--	--	--	
APR												
14...	1430	--	0.67	8.6	--	1.4	77	43	7.1	17	404	
19...	0615	--	3.0	8.0	--	4.0	74	36	7.5	29	430	
19...	2235	--	2.7	--	--	--	--	--	--	--	--	
20...	1330	--	1.8	8.2	--	3.2	78	38	7.8	44	450	
23...	1203	--	0.96	--	--	--	--	--	--	--	--	
30...	1630	--	0.59	8.8	16	3.6	66	43	8.6	30	372	

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	PHOS- PHORUS TOTAL (MG/L) AS P (00665)	BARIUM, TOTAL RECOV- ERABLE (UG/L) AS BA (01007)	COPPER, TOTAL RECOV- ERABLE (UG/L) AS CU (01042)	IRON, TOTAL RECOV- ERABLE (UG/L) AS FE (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L) AS MN (01055)	ZINC, TOTAL RECOV- ERABLE (UG/L) AS ZN (01092)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 1991											
10...	120	<2	0.274	0.029	0.270	80	<20	110	58	<10	35
22...	110	<2	0.098	0.023	0.190	--	--	--	--	--	11
24...	124	104	0.247	0.178	1.38	200	34	22000	1100	110	1050
24...	680	560	0.615	5.42	15.9	800	220	120000	4500	640	3700
25...	316	290	0.843	0.444	5.00	500	66	65000	2700	290	2250
25...	154	96	0.940	0.246	3.00	200	27	27000	1000	130	820
25...	122	56	1.06	0.131	2.41	200	23	18000	660	90	455
25...	120	20	2.14	0.017	1.13	90	<20	5000	180	40	102
26...	140	12	2.79	0.395	0.790	90	<20	2000	130	30	42
26...	142	10	2.78	0.389	0.790	90	<20	2000	130	30	45
27...	140	2	2.99	0.171	0.370	90	20	400	79	40	32
NOV											
01...	120	36	1.55	1.57	1.47	90	<20	5000	230	60	136
01...	246	190	1.08	3.34	6.20	200	70	26000	920	230	762
01...	182	60	2.54	1.43	3.00	100	<20	10000	390	70	--
01...	178	80	2.51	1.40	3.03	100	20	14000	420	90	354
01...	--	--	--	--	--	--	--	--	--	--	269
01...	144	52	2.10	0.729	1.88	100	24	11000	370	80	319
01...	116	32	1.80	0.326	1.27	100	<20	8800	330	60	270
01...	--	--	--	--	--	--	--	--	--	--	254
02...	124	12	2.60	0.388	1.27	90	<20	4900	150	30	82
02...	126	6	3.34	0.262	0.750	90	<20	2400	110	40	43
18...	--	--	--	--	--	--	--	--	--	--	204
30...	184	68	1.35	6.74	3.04	100	<20	5900	260	90	278
30...	140	34	2.99	1.43	1.40	100	<20	6600	330	50	272
DEC											
01...	110	5	3.74	0.178	0.330	80	<20	1300	110	20	37
10...	134	3	3.18	0.091	0.120	70	<20	270	100	<10	--
JAN 1992											
09...	164	28	1.73	3.44	1.28	90	<20	1900	260	30	--
09...	--	--	--	--	--	--	--	--	--	--	50
FEB 1992											
22...	156	10	1.66	4.92	0.970	60	<20	680	72	10	59
27...	128	20	1.14	4.63	1.66	50	<20	2600	260	40	95
27...	178	88	0.595	4.63	3.91	100	30	12000	720	100	539
27...	182	92	0.596	4.23	3.91	100	36	17000	920	120	664
27...	190	92	0.706	3.57	3.66	200	33	23000	1100	150	734
27...	130	64	0.526	2.90	2.49	100	26	15000	750	110	429
27...	124	64	0.482	2.93	2.44	--	--	--	--	--	439
27...	116	52	0.557	3.10	2.30	--	--	--	--	--	--
27...	114	50	0.557	3.13	2.35	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	310
27...	104	26	0.747	3.29	2.02	50	<20	4900	290	70	109
28...	118	26	0.907	3.43	2.40	60	20	5300	320	60	196
28...	144	64	0.752	3.39	3.04	100	24	12000	600	110	394
28...	168	64	0.696	3.34	3.20	100	28	13000	720	110	557
28...	156	88	0.663	3.17	3.36	100	32	19000	930	120	778
28...	162	104	0.629	2.95	3.36	200	28	20000	1100	140	831
28...	106	52	0.741	2.62	2.27	100	<20	12000	610	70	406
29...	80	9	1.39	2.10	1.21	40	<20	1600	180	40	--
MAR											
01...	156	100	1.17	1.13	2.98	200	33	29000	1400	140	931
01...	206	160	0.856	1.65	3.76	300	46	46000	1900	200	1380
10...	154	3	3.88	0.406	0.230	80	<20	490	260	<10	54
17...	130	6	2.46	0.102	0.160	70	<20	490	180	<10	--
18...	--	--	--	--	--	--	--	--	--	--	38
20...	--	--	--	--	--	--	--	--	--	--	60
APR											
14...	144	8	1.82	0.012	0.110	60	<20	350	270	<10	20
19...	126	6	2.75	0.225	0.290	90	<20	1100	320	40	--
19...	--	--	--	--	--	--	--	--	--	--	63
20...	138	8	2.96	0.074	0.290	80	<20	1000	260	50	15
23...	--	--	--	--	--	--	--	--	--	--	48
30...	122	9	0.872	0.018	0.200	60	22	390	170	40	11

WISCONSIN RIVER BASIN

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05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
MAY 1992							
14...	1730	0.41	8.5	9	1.1	4	412
26...	1600	0.32	8.7	<5	1.6	6	412
JUN							
10...	1200	0.44	8.3	8	3.1	11	420
22...	1620	0.41	8.2	7	1.4	6	404
JUL							
08...	0800	3.1	7.9	33	7.2	197	384
*08...	1732	0.55	8.1	15	1.8	19	302
12...	1100	2.3	7.6	18	3.2	20	222
13...	1630	2.1	7.9	23	4.1	24	304
13...	1815	3.5	7.5	120	33	272	550
14...	1816	18	8.0	23	3.9	18	236
*20...	1215	0.41	8.1	7	<1.0	10	474
AUG							
*03...	1415	0.28	8.0	12	2.3	20	458
*19...	1255	0.25	8.0	8	1.6	41	468
29...	0445	6.1	7.5	30	5.3	170	258
29...	0615	1.6	7.5	18	3.8	55	180
29...	1005	0.52	8.0	8	2.0	16	354
SEP							
*01...	1045	0.25	8.0	9	1.2	8	430
09...	0545	2.0	7.8	--	5.1	122	270
10...	1230	0.71	8.1	--	1.9	4	--
16...	1145	1.8	7.9	30	6.4	90	332
16...	1215	4.4	7.8	28	5.2	164	298
16...	2330	1.8	7.6	290	70	100	724
17...	1050	2.5	7.8	30	4.3	12	348
*17...	1055	2.4	--	--	--	--	--
17...	2330	1.3	7.9	21	2.0	12	428
18...	0345	2.8	7.8	28	4.4	112	382
18...	0415	4.9	7.7	36	5.8	256	512
18...	1045	1.8	7.8	29	2.7	18	432
19...	0415	2.5	7.8	26	2.6	18	364
*20...	1630	0.83	8.0	7	1.8	6	452
*26...	1845	1.6	7.9	--	4.9	29	312

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
MAY 1992						
14...	182	<2	0.922	0.101	0.190	36
26...	180	2	0.635	0.054	0.140	28
JUN						
10...	164	3	0.392	0.420	0.410	11
22...	148	3	0.330	0.052	0.290	13
JUL						
08...	25	25	0.351	0.195	0.560	--
08...	<10	4	0.329	0.073	0.540	15
12...	66	5	0.332	0.203	0.600	--
13...	90	6	0.486	0.101	0.580	--
13...	170	66	0.986	2.24	3.63	--
14...	86	5	4.55	0.282	0.820	--
20...	156	2	0.502	0.077	0.410	49
AUG						
03...	150	3	0.464	0.088	0.340	79
19...	128	7	0.487	0.032	0.320	14
29...	50	21	0.288	0.196	0.370	164
29...	48	10	0.644	0.227	0.320	52
29...	90	4	0.911	0.041	0.290	177
SEP						
01...	116	3	0.698	0.038	0.360	90
09...	68	24	0.386	0.121	0.380	96
10...	--	2	0.916	0.066	0.420	123
16...	90	22	0.589	0.298	0.490	92
16...	62	28	0.495	0.375	0.500	165
16...	296	76	0.010	3.74	5.72	75
17...	104	4	1.12	0.531	0.910	19
17...	--	--	--	--	--	16
17...	120	4	1.15	0.157	0.690	--
18...	94	19	0.716	0.152	0.560	112
18...	110	48	0.654	0.169	0.820	265
18...	128	7	0.900	0.196	0.860	21
19...	108	4	1.25	0.226	0.810	23
20...	124	<2	1.42	0.066	0.360	31
26...	78	12	0.977	0.187	0.320	26

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	13.5	10.0	11.5	10.5	6.5	9.0	1.0	.50	.50	.50	.50	.50
2	15.5	13.0	14.0	6.5	.50	3.0	.50	.50	.50	.50	.50	.50
3	14.0	11.0	13.0	1.5	.50	1.0	.50	.50	.50	.50	.50	.50
4	13.0	10.5	12.0	1.0	.50	.50	.50	.50	.50	.50	.50	.50
5	12.0	9.5	10.5	1.0	.50	.50	.50	.50	.50	.50	.50	.50
6	11.5	8.0	9.5	1.0	.50	.50	.50	.50	.50	.50	.50	.50
7	11.0	6.0	8.5	1.0	.50	.50	.50	.50	.50	1.0	.50	.50
8	14.5	8.0	11.0	1.0	.50	.50	.50	.50	.50	.50	.50	.50
9	14.5	10.5	12.5	1.0	.50	.50	1.0	.50	.50	.50	.50	.50
10	12.5	8.5	10.5	.50	.50	.50	1.5	.50	1.0	.50	.50	.50
11	13.5	9.5	11.5	.50	.50	.50	3.0	.50	1.0	1.0	.50	.50
12	12.0	9.5	11.0	.50	.50	.50	6.0	1.0	3.5	1.0	.50	.50
13	10.5	6.5	9.0	1.0	.50	.50	4.0	1.0	2.5	1.0	.50	.50
14	10.5	8.5	10.0	2.5	.50	1.0	2.5	.50	1.0	.50	.50	.50
15	10.5	7.0	8.5	7.5	2.5	6.0	.50	.50	.50	.50	.50	.50
16	12.0	5.5	8.5	7.5	3.0	4.5	.50	.50	.50	.50	.50	.50
17	15.0	9.5	12.0	6.5	2.5	4.0	.50	.50	.50	.50	.50	.50
18	13.0	8.5	11.0	10.0	6.5	8.5	.50	.50	.50	.50	.50	.50
19	9.5	5.5	8.0	9.5	6.0	7.5	.50	.50	.50	.50	.50	.50
20	11.5	7.0	9.5	9.0	3.5	6.5	.50	.50	.50	.50	.50	.50
21	14.0	9.0	11.0	6.5	2.0	4.5	.50	.50	.50	.50	.50	.50
22	16.0	11.5	13.0	7.5	3.5	5.5	.50	.50	.50	.50	.50	.50
23	18.0	11.5	14.5	6.0	2.5	5.0	.50	.50	.50	.50	.50	.50
24	18.0	15.0	16.5	3.0	.50	1.5	.50	.50	.50	.50	.50	.50
25	16.0	11.5	13.5	1.0	.50	.50	.50	.50	.50	.50	.50	.50
26	11.5	9.5	10.5	1.0	.50	.50	.50	.50	.50	.50	.50	.50
27	11.0	9.5	10.0	.50	.50	.50	.50	.50	.50	.50	.50	.50
28	12.5	10.0	11.0	.50	.50	.50	.50	.50	.50	.50	.50	.50
29	15.0	11.0	13.0	1.0	.50	.50	.50	.50	.50	.50	.50	.50
30	10.5	6.5	8.0	4.0	.50	2.5	.50	.50	.50	.50	.50	.50
31	7.0	5.5	6.0	---	---	---	.50	.50	.50	.50	.50	.50
MONTH	18.0	5.5	10.9	10.5	.50	2.6	6.0	.50	.71	1.0	.50	.50
FEBRUARY				MARCH			APRIL			MAY		
1	.50	.50	.50	8.0	.50	3.0	5.0	.50	3.0	26.0	11.0	18.5
2	.50	.50	.50	8.5	.50	4.0	11.5	.00	4.5	20.0	12.0	16.5
3	.50	.50	.50	9.0	2.5	3.5	11.5	1.0	6.0	18.5	7.5	12.5
4	.50	.50	.50	11.5	2.5	6.0	13.5	2.0	6.5	13.5	7.0	10.5
5	.50	.50	.50	8.0	4.5	6.0	16.5	1.5	8.0	17.5	4.0	10.5
6	.50	.50	.50	8.5	5.5	7.0	15.5	4.0	9.5	20.5	3.5	11.5
7	.50	.50	.50	8.0	5.5	6.5	18.5	7.0	11.5	22.0	6.5	13.5
8	.50	.50	.50	14.0	5.5	9.0	12.0	3.5	8.0	24.5	7.5	15.5
9	.50	.50	.50	8.5	.50	4.0	16.5	6.0	10.0	26.0	9.5	17.0
10	.50	.50	.50	2.0	.50	.50	9.0	4.5	6.0	26.5	12.0	18.5
11	.50	.50	.50	3.0	.50	1.0	9.0	4.0	5.5	25.5	14.0	18.5
12	.50	.50	.50	4.5	.50	1.5	13.0	.00	6.0	22.0	15.0	18.5
13	.50	.50	.50	5.5	.50	2.0	6.5	3.0	4.5	24.0	11.5	17.5
14	.50	.50	.50	5.5	.50	2.5	9.0	3.5	5.5	20.5	12.0	15.5
15	.50	.50	.50	7.5	.50	2.5	9.5	4.5	6.5	22.5	12.0	17.0
16	.50	.50	.50	5.0	.50	2.5	7.5	6.0	6.5	25.5	13.5	19.5
17	.50	.50	.50	12.5	1.0	5.5	8.0	4.5	6.5	27.0	17.5	21.0
18	.50	.50	.50	6.5	.00	3.0	13.0	5.5	8.5	26.0	14.0	19.0
19	.50	.50	.50	10.0	.00	4.0	16.0	10.0	12.5	27.0	12.5	19.0
20	.50	.50	.50	11.0	1.0	4.5	15.5	11.0	13.0	---	---	---
21	.50	.50	.50	2.0	.00	.50	12.0	5.5	8.0	---	---	---
22	.50	.50	.50	2.5	.00	.50	9.5	4.0	6.5	---	---	---
23	.50	.50	.50	8.0	.00	3.0	9.0	4.5	7.0	21.0	14.5	17.5
24	.50	.50	.50	13.0	.00	5.5	10.5	6.0	7.5	14.0	9.0	11.0
25	.50	.50	.50	14.0	2.0	6.5	10.0	4.5	7.0	13.0	7.5	9.5
26	.50	.50	.50	8.5	1.0	4.5	11.0	5.5	7.5	16.0	9.0	12.0
27	.50	.50	.50	11.5	.00	4.5	20.0	2.5	10.0	20.5	7.5	13.5
28	1.0	.50	.50	8.0	.50	4.0	18.0	2.5	9.5	21.5	10.0	15.5
29	4.0	.50	1.0	4.5	2.5	3.5	23.0	7.5	14.5	23.5	10.5	16.5
30	---	---	---	15.5	2.5	7.5	23.5	8.5	15.5	23.5	13.0	17.5
31	---	---	---	11.5	2.5	6.5	---	---	---	26.5	12.5	19.0
MONTH	4.0	.50	.52	15.5	.00	4.0	23.5	.00	8.0	---	---	---

WISCONSIN RIVER BASIN

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05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	25.5	15.0	20.0	27.5	17.0	22.0	24.5	15.5	19.5	20.5	13.0	16.5
2	28.5	16.0	21.5	23.0	20.0	21.0	24.0	18.5	20.5	21.5	16.5	18.5
3	27.5	15.0	20.5	23.0	18.0	20.0	22.5	17.0	19.0	22.5	16.5	18.5
4	23.0	16.0	19.5	26.5	15.5	20.5	21.5	14.5	18.0	20.5	14.5	17.5
5	27.5	17.5	21.5	24.0	15.5	19.5	23.5	15.5	19.0	23.0	16.0	19.0
6	21.5	16.5	19.0	25.5	15.0	20.0	23.0	14.0	18.5	21.5	18.5	20.0
7	25.5	14.5	19.5	22.0	17.5	20.0	20.0	17.0	18.5	20.5	17.5	19.0
8	22.5	15.5	19.0	29.5	20.0	23.5	26.0	18.0	21.5	20.5	15.5	18.0
9	25.5	17.0	20.5	26.0	19.5	22.0	28.0	19.5	23.5	16.5	15.0	16.0
10	26.5	16.0	21.0	27.0	20.0	23.0	27.0	21.0	24.0	17.0	13.0	15.0
11	29.0	19.0	23.0	25.5	18.0	22.0	24.0	17.5	20.5	18.5	12.5	15.0
12	30.0	18.5	23.5	24.0	20.5	22.0	20.5	16.5	18.5	19.0	13.0	15.5
13	30.5	20.0	25.0	20.5	18.0	19.5	19.5	15.0	17.0	21.5	15.0	18.0
14	30.0	21.5	25.0	18.0	16.5	17.5	20.0	15.0	17.5	20.0	18.0	19.0
15	22.0	18.5	20.0	22.0	15.0	18.0	21.0	13.0	16.5	21.5	17.5	19.0
16	21.5	17.0	19.0	23.0	18.0	20.0	21.5	13.0	16.5	20.0	19.0	19.5
17	27.5	20.0	23.0	24.5	17.0	20.5	21.5	13.5	17.0	19.0	18.0	18.5
18	22.5	19.0	20.5	24.0	17.5	20.0	23.0	17.0	19.5	19.5	15.5	18.0
19	20.0	17.0	18.5	25.5	18.0	21.0	22.0	14.5	18.0	16.5	12.5	14.5
20	22.5	14.0	17.5	23.0	18.5	20.5	22.5	14.0	18.0	15.5	12.0	13.5
21	21.5	11.5	16.5	22.5	17.5	19.5	23.0	14.0	18.0	16.5	14.0	15.0
22	15.5	13.0	14.5	18.5	15.5	17.0	23.0	14.5	18.5	16.5	12.0	14.0
23	20.0	13.5	16.5	17.0	15.0	16.0	24.5	16.5	20.0	16.0	9.0	12.0
24	23.0	14.5	18.0	22.5	14.5	18.0	26.0	19.0	22.0	16.5	10.0	12.5
25	24.5	15.0	19.5	19.0	17.5	18.5	26.0	19.5	22.5	16.0	10.0	13.0
26	22.0	16.0	19.0	25.5	18.5	21.0	22.0	17.0	19.0	16.5	14.5	15.5
27	22.5	12.5	17.5	25.0	17.5	20.5	17.5	14.5	16.5	16.5	12.5	14.5
28	24.0	13.5	18.5	25.0	18.0	21.0	18.0	12.5	15.0	15.0	10.5	12.5
29	25.0	17.5	21.0	22.5	18.0	20.5	22.0	14.5	18.0	14.0	7.5	10.5
30	25.5	17.5	21.0	19.5	16.5	17.5	21.0	15.5	18.0	15.5	8.0	11.0
31	---	---	---	22.5	15.0	18.5	20.0	13.5	16.5	---	---	---
MONTH	30.5	11.5	20.0	29.5	14.5	20.0	28.0	12.5	18.9	23.0	7.5	16.0

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

WISCONSIN RIVER BASIN

307

05406476 BLACK EARTH CREEK AT MILLS STREET AT CROSS PLAINS, WI

LOCATION.--Lat 43°06'48", long 89°39'00", in SW 1/4 NE 1/4 sec.3, T.7 N., R.7 E., Dane County, Hydrologic Unit 07070005, on right bank, at Mills Street at Cross Plains.

DRAINAGE AREA.--25.5 mi², of which 2.8 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	28	15	10	9.2	24	11	11	9.7	6.3	11	9.1
2	7.9	20	12	10	9.6	16	11	11	9.5	9.2	11	9.8
3	8.0	16	12	10	12	15	11	11	8.7	8.1	11	9.5
4	9.8	13	11	10	11	15	10	11	8.0	7.1	11	9.3
5	9.9	13	11	10	9.6	15	10	11	7.5	7.3	11	9.4
6	8.5	12	11	10	9.5	15	10	11	7.8	7.3	11	11
7	7.9	12	11	10	9.5	13	10	11	7.7	7.6	12	9.9
8	7.7	11	13	10	9.2	12	10	11	7.7	12	11	9.8
9	7.5	11	12	11	9.1	16	11	11	7.5	9.0	9.6	12
10	7.4	11	13	10	8.8	13	11	10	7.2	8.3	9.5	11
11	7.8	11	12	10	8.7	12	11	11	7.1	8.4	9.5	10
12	7.9	11	15	11	8.5	11	10	10	7.0	11	9.8	9.2
13	8.0	11	16	11	8.6	10	10	10	6.8	16	9.4	9.0
14	8.2	12	14	10	8.6	10	10	10	6.7	16	9.2	10
15	8.3	16	13	9.9	8.7	10	12	11	6.8	13	9.2	9.9
16	9.3	14	12	9.5	8.7	11	13	9.9	6.7	11	9.1	17
17	9.4	14	12	9.5	9.1	11	13	10	7.1	10	9.0	16
18	9.5	21	11	9.5	9.5	10	12	9.8	7.3	10	9.0	19
19	9.2	16	10	9.2	9.6	10	18	9.8	6.9	9.9	9.0	15
20	9.8	14	11	9.5	11	10	18	9.7	6.7	9.7	8.9	14
21	9.9	13	11	9.5	11	9.8	16	9.6	6.8	9.7	8.8	13
22	10	12	11	9.7	13	11	15	10	6.8	11	7.5	12
23	9.9	15	11	9.8	16	10	14	12	7.9	11	7.3	11
24	23	14	11	9.5	17	11	14	11	8.5	11	7.2	10
25	66	13	10	9.5	14	12	13	11	8.2	12	8.6	9.7
26	18	12	10	9.3	14	12	13	10	7.7	11	8.5	12
27	15	12	10	9.3	31	11	12	10	6.7	9.8	8.9	13
28	13	12	10	9.3	45	11	12	10	6.9	11	8.9	11
29	16	13	10	9.3	24	12	12	10	6.3	9.9	14	9.8
30	14	23	10	9.4	---	12	11	10	6.2	11	10	9.4
31	14	---	10	9.4	---	12	---	10	---	11	9.4	---
TOTAL	379.2	426	361	304.1	373.5	382.8	364	323.8	222.4	315.6	299.3	340.8
MEAN	12.2	14.2	11.6	9.81	12.9	12.3	12.1	10.4	7.41	10.2	9.65	11.4
MAX	66	28	16	11	45	24	18	12	9.7	16	14	19
MIN	7.4	11	10	9.2	8.5	9.8	10	9.6	6.2	6.3	7.2	9.0
CFSM	.54	.63	.51	.43	.57	.54	.53	.46	.33	.45	.43	.50
IN.	.62	.70	.59	.50	.61	.63	.60	.53	.36	.52	.49	.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	8.89	9.82	8.34	8.47	9.74	16.9	11.9	10.9	10.8	9.70	9.60	8.72
MEAN	8.89	9.82	8.34	8.47	9.74	16.9	11.9	10.9	10.8	9.70	9.60	8.72
MAX	12.2	14.2	11.6	10.5	12.9	24.1	15.7	12.9	14.9	10.2	10.4	11.4
(WY)	1992	1992	1992	1990	1992	1990	1991	1991	1990	1992	1991	1992
MIN	6.25	6.22	5.69	5.13	7.06	12.3	7.95	9.49	7.41	9.32	8.75	6.85
(WY)	1991	1991	1991	1991	1991	1992	1990	1990	1992	1990	1990	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1990 - 1992

ANNUAL TOTAL	4000.3	4092.5	10.3
ANNUAL MEAN	11.0	11.2	11.2
HIGHEST ANNUAL MEAN			1992
LOWEST ANNUAL MEAN			1991
HIGHEST DAILY MEAN	66	Oct 25	118
LOWEST DAILY MEAN	4.7	Jan 6	4.7
ANNUAL SEVEN-DAY MINIMUM	4.7	Jan 4	4.7
INSTANTANEOUS PEAK FLOW		153	238
INSTANTANEOUS PEAK STAGE		8.09	8.74
INSTANTANEOUS LOW FLOW		5.7	(a)1.5
ANNUAL RUNOFF (CFSM)	.48	.49	.46
ANNUAL RUNOFF (INCHES)	6.56	6.71	6.18
10 PERCENT EXCEEDS	15	15	14
50 PERCENT EXCEEDS	10	10	9.0
90 PERCENT EXCEEDS	6.2	7.9	6.2

(a) Result of freezeup

05406476 BLACK EARTH CREEK AT MILLS STREET AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1989 to current year.

DISSOLVED OXYGEN: April 1990 to current year.

INSTRUMENTATION.--Continuous water temperature recorder since November 1989 and continuous dissolved oxygen recorder since April 1990.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 23.5°C, July 4, 1990; minimum observed, 0.0°C, Dec. 21, 1989, Mar. 8-9, and Dec. 3, 1991.

DISSOLVED OXYGEN: Maximum observed, 19.0 mg/L, May 14, 1992; minimum observed, 3.7 mg/L, July 22, 1991.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 20.0°C, July 2; minimum observed, 2.0°C, Jan. 15-16 and Feb. 22.

DISSOLVED OXYGEN: Maximum observed, 19.0 mg/L, May 14; minimum observed, 4.1 mg/L, Oct. 25 and Sept. 17.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					APR 1992				
02...	1009	7.8	595	12.0	28...	0957	12	590	9.5
NOV					JUN				
20...	1115	14	565	8.0	02...	1011	9.6	565	13.0
DEC					JUL				
26...	1050	9.9	565	7.0	06...	1116	7.3	590	13.0
JAN 1992					AUG				
30...	0951	9.3	570	7.0	17...	1145	8.6	570	13.5
MAR									
12...	1112	11	565	5.5					

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	12.0	9.0	10.5	10.0	7.0	9.5	5.5	3.5	4.5	6.5	6.5	6.5
2	12.5	10.5	11.5	7.0	4.5	5.5	5.0	4.0	4.5	7.5	4.0	7.0
3	12.5	9.5	11.0	6.0	4.5	5.0	6.5	4.0	5.5	7.5	7.0	7.0
4	11.0	10.0	10.5	7.0	4.5	5.5	5.5	3.0	4.0	7.0	6.5	7.0
5	12.0	8.5	10.0	6.5	5.5	6.0	5.5	3.0	5.0	7.0	5.0	6.5
6	11.5	8.5	9.5	6.5	5.0	6.0	6.5	4.0	5.0	7.5	6.5	7.0
7	12.5	7.5	9.5	7.0	4.0	5.5	8.0	4.0	7.0	7.0	6.5	6.5
8	14.0	9.0	11.0	7.5	4.5	5.5	7.5	5.5	6.5	7.0	6.5	6.5
9	13.5	9.5	11.5	7.5	5.0	6.0	7.0	5.0	6.0	7.0	6.0	6.5
10	12.0	8.5	10.0	7.0	6.0	6.5	7.5	5.5	6.0	7.0	4.5	5.5
11	13.0	9.5	11.0	7.5	6.5	7.0	7.5	4.0	6.0	8.0	5.5	6.5
12	11.5	9.0	10.0	8.0	6.5	7.0	7.5	6.0	6.5	7.0	6.0	6.0
13	11.0	7.5	9.5	9.5	6.5	7.5	7.0	5.0	5.5	6.0	5.0	6.0
14	10.5	9.0	10.0	8.5	6.5	7.5	6.0	3.5	4.5	5.5	3.0	4.5
15	11.0	8.0	9.5	8.5	5.0	8.0	4.5	3.0	4.0	4.5	2.0	3.5
16	12.5	7.5	9.5	7.5	6.0	7.0	6.5	3.5	5.0	5.5	2.0	4.0
17	13.5	9.0	11.0	7.5	6.0	7.0	6.0	4.0	5.0	5.5	2.5	4.5
18	11.0	8.0	9.5	10.0	7.0	8.5	5.5	3.5	4.5	5.0	2.5	3.0
19	11.0	7.0	9.0	9.5	7.5	8.5	6.0	3.5	5.0	5.5	3.0	4.0
20	11.5	8.0	9.5	9.0	7.0	8.0	6.0	4.5	5.5	7.0	4.0	5.5
21	12.5	8.5	10.5	8.5	6.0	7.0	7.5	4.5	6.0	8.0	5.0	6.0
22	14.0	10.0	12.0	9.5	7.0	8.0	7.0	5.0	6.0	7.0	5.5	6.5
23	14.5	11.5	13.0	8.0	5.5	7.0	7.0	5.0	6.0	6.0	3.0	5.0
24	15.0	13.0	12.5	6.0	4.0	5.0	7.5	4.5	5.5	6.0	2.5	4.0
25	---	---	---	6.0	4.0	5.0	7.5	4.5	5.5	6.5	3.5	5.0
26	---	---	---	6.5	4.0	5.0	8.0	5.5	6.5	6.0	4.5	5.0
27	11.5	10.5	11.0	7.0	5.0	6.0	7.5	6.5	7.0	6.0	4.5	5.5
28	12.0	10.5	11.0	6.0	5.0	5.5	7.0	6.5	6.5	7.0	5.0	5.5
29	13.5	11.0	12.5	6.5	5.0	6.0	7.5	5.5	6.5	7.0	5.0	6.0
30	11.0	9.0	9.5	5.5	3.0	4.5	7.5	5.5	6.5	7.5	5.5	6.5
31	9.0	8.5	8.5	---	---	---	7.0	6.5	6.5	7.0	5.0	6.0
MONTH	---	---	---	10.0	3.0	6.5	8.0	3.0	5.6	8.0	2.0	5.6

05406476 BLACK EARTH CREEK AT MILLS STREET AT CROSS PLAINS, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	7.5	4.0	5.5	---	---	---	---	---	---	---	---	---
2	8.5	4.0	6.0	---	---	---	---	---	---	---	---	---
3	8.5	4.0	5.5	---	---	---	---	---	---	---	---	---
4	7.5	4.5	5.5	---	---	---	---	---	---	---	---	---
5	8.5	4.5	5.5	---	---	---	---	---	---	---	---	---
6	7.0	4.5	5.5	---	---	---	---	---	---	---	---	---
7	6.5	3.5	5.0	---	---	---	---	---	---	---	---	---
8	6.0	3.0	4.0	---	---	---	---	---	---	---	---	---
9	7.0	3.0	4.5	---	---	---	---	---	---	---	---	---
10	6.0	4.0	5.0	---	---	---	---	---	---	---	---	---
11	7.5	3.5	5.5	---	---	---	---	---	---	---	---	---
12	7.0	3.0	4.5	---	---	---	---	---	---	---	---	---
13	6.5	4.0	5.5	---	---	---	---	---	---	---	---	---
14	6.0	5.5	6.0	---	---	---	---	---	---	---	---	---
15	7.0	3.0	5.5	---	---	---	---	---	---	---	---	---
16	7.0	5.5	6.0	---	---	---	---	---	---	---	---	---
17	7.0	5.0	6.0	---	---	---	---	---	---	---	---	---
18	6.0	4.0	5.0	---	---	---	---	---	---	---	---	---
19	6.5	5.0	5.5	---	---	---	---	---	---	---	---	---
20	7.5	3.5	5.5	---	---	---	---	---	---	---	---	---
21	6.5	3.5	5.0	---	---	---	---	---	---	---	---	---
22	8.5	2.0	5.0	---	---	---	---	---	---	---	---	---
23	6.5	2.5	4.0	---	---	---	---	---	---	---	---	---
24	4.0	2.5	3.5	---	---	---	---	---	---	---	---	---
25	5.0	3.5	4.0	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
JUNE				JULY			AUGUST			SEPTEMBER		
1	---	---	---	18.0	11.5	15.0	18.0	12.5	15.5	15.5	11.0	13.5
2	---	---	---	20.0	12.5	14.5	17.0	13.5	15.0	17.5	13.0	14.5
3	---	---	---	17.0	13.0	14.5	16.0	13.0	14.5	16.5	12.5	14.5
4	---	---	---	18.0	11.5	14.5	16.0	12.0	14.0	15.5	11.5	13.5
5	---	---	---	16.5	11.0	13.5	16.5	12.5	14.5	17.0	12.5	15.0
6	---	---	---	17.5	10.5	14.0	16.5	12.0	14.5	17.5	14.0	15.0
7	---	---	---	15.0	12.0	14.0	17.0	13.0	14.5	15.5	13.0	14.5
8	---	---	---	19.5	13.0	16.5	18.5	14.0	16.5	15.5	12.5	14.0
9	---	---	---	17.5	13.0	15.0	19.0	14.0	16.5	14.0	12.5	13.0
10	---	---	---	18.0	12.5	15.0	18.0	15.0	16.0	14.0	11.5	13.0
11	---	---	---	17.0	11.5	14.5	17.0	13.0	15.0	15.5	11.5	13.5
12	---	---	---	19.0	13.0	15.0	15.5	13.5	14.0	15.5	11.5	13.5
13	---	---	---	17.0	14.0	15.0	15.0	12.0	13.5	17.0	12.5	14.5
14	---	---	---	15.0	13.5	14.5	15.5	12.5	14.0	16.5	14.0	15.0
15	---	---	---	17.0	12.5	14.5	16.0	11.5	14.0	17.0	13.5	15.0
16	---	---	---	16.5	12.5	14.5	16.5	11.5	14.0	18.0	14.5	16.0
17	---	---	---	17.0	12.0	14.5	16.5	11.5	14.0	16.5	15.0	16.0
18	---	---	---	16.5	12.0	14.0	17.0	13.5	15.0	18.0	13.5	16.0
19	---	---	---	17.5	12.0	14.5	16.0	12.0	14.0	15.0	11.5	13.0
20	16.5	10.5	13.5	15.5	12.5	14.0	16.5	12.0	14.0	14.0	11.5	13.0
21	16.5	9.0	12.5	16.0	12.0	14.0	16.5	12.0	14.5	14.5	13.0	13.5
22	12.0	10.0	11.0	14.0	12.0	12.5	16.0	11.5	14.0	14.5	11.0	12.5
23	15.0	11.0	13.0	13.0	11.5	12.0	17.0	12.5	14.5	14.5	9.5	12.0
24	17.5	11.5	14.0	16.0	11.5	13.5	17.5	13.5	15.5	14.5	10.0	12.5
25	18.5	11.5	14.5	14.5	13.0	13.5	19.5	13.0	15.5	14.0	10.5	12.5
26	17.0	12.0	14.5	18.0	13.5	15.5	16.0	13.5	14.0	14.5	13.0	13.5
27	17.0	10.0	13.5	17.5	13.0	15.5	14.0	12.5	13.5	15.0	11.5	13.0
28	17.5	10.0	14.0	18.0	13.0	15.5	14.5	11.0	13.0	13.5	11.0	12.0
29	18.0	11.5	14.5	17.0	13.0	15.0	17.5	12.5	15.0	13.5	9.0	11.0
30	17.5	12.0	14.5	15.0	13.5	13.5	16.0	13.0	14.5	14.0	9.5	12.0
31	---	---	---	17.0	12.5	14.5	15.0	11.5	13.5	---	---	---
MONTH	---	---	---	20.0	10.5	14.4	19.5	11.0	14.5	18.0	9.0	13.7

05406476 BLACK EARTH CREEK AT MILLS STREET AT CROSS PLAINS, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	10.4	7.8	9.0	8.9	6.9	7.8	---	---	---	---	---	---
2	9.6	7.4	8.3	10.5	8.4	9.6	---	---	---	---	---	---
3	10.6	7.5	8.8	10.8	9.6	10.2	---	---	---	---	---	---
4	8.9	7.4	8.1	11.2	9.5	10.2	---	---	---	---	---	---
5	10.0	7.4	8.5	10.3	9.2	9.8	---	---	---	---	---	---
6	10.6	7.9	9.0	10.8	9.4	10.1	---	---	---	---	---	---
7	10.6	8.1	9.1	11.4	10.0	10.5	---	---	---	---	---	---
8	10.4	7.4	8.7	11.3	9.7	10.5	---	---	---	---	---	---
9	10.6	7.5	8.8	10.8	9.8	10.3	---	---	---	---	---	---
10	11.0	7.9	9.1	10.5	9.5	10.0	---	---	---	---	---	---
11	10.7	7.9	8.9	10.4	9.3	9.8	---	---	---	---	---	---
12	10.5	8.0	9.0	---	---	---	---	---	---	---	---	---
13	11.0	7.9	9.2	---	---	---	---	---	---	---	---	---
14	10.3	7.8	8.8	---	---	---	---	---	---	---	---	---
15	11.2	8.4	9.5	---	---	---	---	---	---	---	---	---
16	11.1	8.4	9.6	---	---	---	---	---	---	---	---	---
17	10.9	8.2	9.2	---	---	---	---	---	---	---	---	---
18	11.3	8.1	9.3	---	---	---	---	---	---	---	---	---
19	11.5	8.6	9.7	---	---	---	---	---	---	---	---	---
20	11.2	8.5	9.5	---	---	---	---	---	---	---	---	---
21	10.9	8.2	9.3	---	---	---	---	---	---	---	---	---
22	10.6	7.9	8.9	---	---	---	---	---	---	---	---	---
23	10.7	7.7	8.8	---	---	---	---	---	---	---	---	---
24	8.5	6.0	7.3	---	---	---	---	---	---	---	---	---
25	7.4	4.1	6.3	---	---	---	---	---	---	---	---	---
26	8.3	7.0	7.6	---	---	---	---	---	---	---	---	---
27	8.9	7.8	8.3	---	---	---	---	---	---	---	---	---
28	8.7	7.8	8.2	---	---	---	---	---	---	---	---	---
29	8.3	7.2	7.5	---	---	---	---	---	---	---	---	---
30	9.8	7.6	8.8	---	---	---	---	---	---	---	---	---
31	9.5	8.0	8.8	---	---	---	---	---	---	---	---	---
MONTH	11.5	4.1	8.7	---	---	---	---	---	---	---	---	---
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	14.9	7.7	10.8
9	---	---	---	---	---	---	---	---	---	15.6	8.0	11.0
10	---	---	---	---	---	---	---	---	---	16.4	8.2	11.6
11	---	---	---	---	---	---	---	---	---	17.7	8.3	11.2
12	---	---	---	---	---	---	---	---	---	16.3	8.2	11.7
13	---	---	---	---	---	---	---	---	---	18.9	9.3	13.2
14	---	---	---	---	---	---	---	---	---	19.0	9.9	13.0
15	---	---	---	---	---	---	---	---	---	14.6	7.0	10.6
16	---	---	---	---	---	---	---	---	---	13.7	7.2	10.0
17	---	---	---	---	---	---	---	---	---	15.0	7.4	10.2
18	---	---	---	---	---	---	---	---	---	16.2	7.9	11.1
19	---	---	---	---	---	---	---	---	---	15.9	8.1	11.3
20	---	---	---	---	---	---	---	---	---	15.0	7.7	10.9
21	---	---	---	---	---	---	---	---	---	15.3	7.6	10.7
22	---	---	---	---	---	---	---	---	---	15.0	6.7	10.2
23	---	---	---	---	---	---	---	---	---	12.7	6.4	8.9
24	---	---	---	---	---	---	---	---	---	13.6	7.9	10.4
25	---	---	---	---	---	---	---	---	---	13.2	7.6	10.1
26	---	---	---	---	---	---	---	---	---	14.2	8.5	11.1
27	---	---	---	---	---	---	---	---	---	15.1	8.5	11.7
28	---	---	---	---	---	---	---	---	---	16.0	8.2	11.4
29	---	---	---	---	---	---	---	---	---	17.3	7.7	12.0
30	---	---	---	---	---	---	---	---	---	17.2	7.6	11.7
31	---	---	---	---	---	---	---	---	---	17.6	8.1	11.8

05406476 BLACK EARTH CREEK AT MILLS STREET AT CROSS PLAINS, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.1	7.7	12.1	15.2	7.0	10.6	12.2	6.3	8.8	11.7	7.0	8.9
2	17.3	7.6	11.7	10.8	5.9	7.3	11.7	5.8	8.3	10.3	6.4	7.6
3	17.5	7.3	11.1	13.9	5.9	9.3	11.7	6.2	8.5	11.1	6.2	8.3
4	15.8	6.8	10.8	14.3	7.0	10.3	12.1	6.6	9.0	11.3	6.8	8.5
5	16.5	6.9	11.1	14.7	6.9	10.3	12.3	6.5	9.0	10.9	6.5	8.2
6	14.9	7.1	10.6	14.7	7.0	10.4	12.7	6.5	9.1	9.8	5.7	7.4
7	15.9	7.4	11.3	13.2	6.4	9.3	10.2	5.9	7.6	10.2	6.4	7.7
8	16.5	7.6	11.6	12.9	5.9	8.8	12.0	5.6	8.3	11.0	6.4	8.4
9	16.5	7.5	11.1	14.1	5.9	9.5	11.9	5.7	8.4	8.5	6.7	7.2
10	15.7	7.5	11.2	13.5	6.4	9.5	11.5	5.6	7.8	10.5	6.4	8.4
11	16.4	7.4	11.2	14.0	6.4	9.7	11.9	6.3	8.6	11.0	7.1	8.6
12	17.3	7.6	12.1	11.0	5.7	7.6	11.7	5.9	8.2	11.0	7.1	8.6
13	17.5	8.0	12.3	10.0	5.1	6.8	11.8	6.6	8.8	10.9	6.7	8.4
14	17.9	8.0	12.3	10.0	5.1	7.5	12.1	6.6	8.9	9.4	6.4	7.3
15	16.5	8.7	11.4	13.7	6.7	9.6	12.6	6.8	9.2	10.6	6.6	8.0
16	14.5	7.8	10.8	13.6	5.9	9.4	12.5	6.8	9.1	7.6	4.8	6.2
17	12.9	6.6	9.4	13.7	6.3	9.7	12.2	6.7	9.0	7.8	4.1	6.3
18	12.6	6.2	9.0	14.0	6.4	9.7	11.7	6.0	8.4	7.9	5.6	6.4
19	12.1	6.6	9.2	14.1	6.5	9.4	11.9	6.5	8.7	10.2	6.4	8.1
20	13.3	6.8	9.8	14.1	6.4	9.8	12.3	6.6	8.8	10.1	7.0	8.1
21	12.9	6.8	9.6	14.4	6.8	10.2	12.2	6.6	8.8	9.5	6.7	7.8
22	11.0	6.6	8.4	8.6	6.7	7.6	12.4	6.5	9.0	10.9	7.3	8.8
23	13.8	6.4	9.3	11.4	6.8	8.5	12.5	6.5	9.0	11.1	7.9	9.2
24	14.0	6.9	10.0	13.7	6.9	9.9	12.4	6.1	8.7	11.0	8.0	9.1
25	13.9	7.1	10.1	10.6	6.4	8.0	11.6	5.3	8.0	10.9	7.8	8.9
26	14.0	7.1	10.3	12.9	6.4	9.2	9.7	5.1	7.1	9.4	7.2	7.8
27	14.9	7.7	10.8	12.4	6.2	8.9	11.1	6.6	8.6	10.7	7.1	8.6
28	14.7	7.4	10.6	12.3	6.2	8.7	11.9	7.2	9.1	11.2	7.8	9.3
29	15.1	7.1	10.5	12.4	6.2	8.6	10.4	5.9	8.0	11.5	8.6	9.7
30	15.0	7.0	10.4	9.9	6.2	7.5	11.1	5.8	8.2	11.3	8.2	9.5
31	---	---	---	12.4	6.5	9.1	11.1	6.7	8.5	---	---	---
MONTH	18.1	6.2	10.7	15.2	5.1	9.1	12.7	5.1	8.6	11.7	4.1	8.2

430432089414100 GARFOOT CREEK RAIN GAGE #1 NEAR CROSS PLAINS, WI

LOCATION.--Lat 43°04'32", long 89°41'41", in SW 1/4 SE 1/4 sec.17, T.7 N., R.7 E., Dane County, Hydrologic Unit 07070005, on Garfoot Road, 2.8 mi south of intersection with County Trunk KP.

PERIOD OF RECORD.--October 1989 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established Oct. 13, 1989. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Mar. 5, 12, 13, 22, 25. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Mar. 29.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.19 in., June 28, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.50 in., July 13.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	.00	.01	.00	.00	.00	.00	.00
2	---	---	---	---	---	.00	.00	.00	.00	.88	.01	.47
3	---	---	---	---	---	.00	.00	.00	.00	.03	.07	.00
4	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
5	---	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
6	---	---	---	---	---	.01	.00	.00	.00	.00	.00	.70
7	---	---	---	---	---	.00	.01	.00	.00	.06	.72	.05
8	---	---	---	---	---	.05	.35	.00	.00	1.04	.01	.00
9	---	---	---	---	---	.50	.06	.00	.00	.00	.00	.62
10	---	---	---	---	---	.02	.10	.00	.00	.04	.00	.00
11	---	---	---	---	---	.13	.01	.28	.00	.10	.00	.00
12	---	---	---	---	---	.00	.00	.00	.00	1.47	.17	.00
13	---	---	---	---	---	.00	.00	.00	.00	1.50	.00	.00
14	---	---	---	---	---	.00	.04	.00	.01	.00	.00	.42
15	---	---	---	---	---	.00	.51	.00	.48	.00	.00	.00
16	---	---	---	---	---	.24	.28	.01	.04	.13	.00	1.39
17	---	---	---	---	---	.00	.00	.27	.26	.00	.02	.10
18	---	---	---	---	---	.00	.10	.00	.00	.00	.01	.89
19	---	---	---	---	---	.00	.43	.00	.00	.04	.00	.00
20	---	---	---	---	---	.00	.05	.00	.01	.00	.00	.63
21	---	---	---	---	---	.00	.05	.00	.00	.00	.00	.01
22	---	---	---	---	---	.00	.00	.46	.04	.57	.00	.00
23	---	---	---	---	---	.00	.19	.12	.18	.08	.00	.00
24	---	---	---	---	---	.00	.06	.00	.01	.00	.00	.00
25	---	---	---	---	---	.00	.02	.00	.00	.06	.78	.00
26	---	---	---	---	---	.00	.07	.01	.00	.00	.00	.79
27	---	---	---	---	.00	.00	.00	.00	.00	.00	.00	.01
28	---	---	---	---	.00	.15	.00	.00	.00	.00	.00	.00
29	---	---	---	---	.00	.00	.01	.00	.00	.00	1.45	.00
30	---	---	---	---	.00	.00	.00	.00	.08	.21	.00	.00
31	---	---	---	---	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	---	---	---	---	---	1.10	2.35	1.15	1.11	6.21	3.24	6.08

WISCONSIN RIVER BASIN

313

430525089411500 GARFOOT CREEK RAIN GAGE #2 NEAR CROSS PLAINS, WI

LOCATION.--Lat 43°05'25", long 89°41'15", in SW 1/4 SW 1/4 sec.8, T.7 N., R.7 E., Dane County, Hydrologic Unit 07070005, on Garfoot Road, 1.6 mi south of intersection with County Trunk KP.

PERIOD OF RECORD.--October 1989 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established Oct. 12, 1989. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 27, 29, Dec. 6-9, 20-22, 24, Jan. 2, 25, 30, Feb. 13, 15-19, 24-26, and Mar. 5, 13, 22, 25. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Mar. 29. Unpublished rainfall data collected at this site during 1985-86 water years are available for inspection at the District office.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.85 in., Oct. 24, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.85 in., Oct. 24.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.96	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.01	.42
3	.13	.00	.00	.00	.00	.00	.00	.00	.00	---	.03	.00
4	.82	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
5	.27	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
6	.03	.00	.00	.00	.00	.02	.00	.00	.00	---	.00	.59
7	.00	.00	.00	.00	.00	.00	.01	.00	.00	---	.73	.04
8	.00	.00	.00	.13	.00	.04	.38	.00	.00	---	.00	.00
9	.00	.00	.00	.01	.00	.50	.03	.00	.00	---	.00	.56
10	.00	.00	.00	.00	.00	.00	.15	.00	.00	.03	.00	.00
11	.00	.00	.00	.00	.00	.09	.00	.28	.00	.11	.00	.01
12	.00	.02	.41	.14	.00	.00	.00	.00	.00	1.02	.20	.00
13	.12	.00	.01	.01	.00	.00	.00	.00	.00	1.32	.00	.00
14	.01	.31	.00	.00	.00	.01	.04	.00	.00	.00	.00	.36
15	.01	.29	.00	.00	.00	.00	.48	.00	.75	.00	.00	.00
16	.00	.00	.00	.00	.00	.29	.29	.00	.04	.10	.00	1.31
17	.00	.62	.00	.00	.00	.00	.00	.28	.20	.00	.03	.05
18	.03	.10	.00	.00	.00	.00	.10	.00	.01	.00	.01	.91
19	.19	.01	.00	.00	.00	.00	.43	.00	.00	.02	.00	.00
20	.00	.00	.00	.00	.00	.00	.05	.00	.01	.00	.00	.64
21	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.01
22	.00	.05	.00	.12	.00	.00	.00	.39	---	.55	.00	.00
23	.00	.50	.00	.03	.00	.00	.16	.16	---	.06	.00	.00
24	2.85	.00	.00	.00	.00	.00	.06	.00	---	.00	.00	.00
25	.24	.00	.00	.00	.00	.00	.02	.01	---	.05	.61	.00
26	.44	.00	.00	.00	.00	.00	.06	.00	---	.00	.00	.68
27	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00	.01
28	.43	.00	.00	.00	.00	.17	.00	.00	---	.00	.00	.00
29	.44	.00	.00	.00	.00	.00	.02	.00	---	.00	1.09	.00
30	.00	.06	.00	.00	---	.00	.00	.00	---	.19	.00	.00
31	.43	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	6.44	2.92	0.42	0.44	0.00	1.12	2.32	1.12	---	---	2.71	5.59

430543089393500 GARFOOT CREEK RAIN GAGE #3 NEAR CROSS PLAINS, WI

LOCATION.--Lat 43°05'43", long 89°39'35", in NW 1/4 SW 1/4 sec.10, T.7 N., R.7 E., Dane County, Hydrologic Unit 07070005, on Stage Coach Road, 0.5 mi west of intersection with County Trunk P.

PERIOD OF RECORD.--October 1989 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established Oct. 27, 1989. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 27, 29, Dec. 6, 9, 14, 20, 21, 24-26, Jan. 2, 30, Feb. 15-20, 22, 24, 26, and Mar. 5, 13, 22, 25. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Mar. 29.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.47 in., Oct. 24, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.47 in., Oct. 24.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.95	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.19	.01	.30
3	.13	.00	.00	.00	.00	.00	.00	.00	.00	.04	.01	.01
4	.86	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.05	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.66
7	.00	.00	.00	.00	.00	.01	.01	.00	.00	.12	.68	.05
8	.00	.00	.00	.09	.00	.04	.38	.00	.00	.89	.00	.00
9	.00	.01	.00	.01	.00	.48	.03	.00	.00	.00	.00	.61
10	.00	.00	.00	.00	.00	.00	.17	.00	.00	.04	.00	.00
11	.00	.00	.00	.00	.00	.07	.00	.31	.00	.09	.00	.00
12	.00	.07	.40	.03	.00	.00	.00	.00	.00	1.17	.21	.00
13	.10	.00	.00	.00	.00	.00	.00	.00	.00	1.53	.00	.00
14	.01	.34	.00	.00	.00	.01	.04	.00	.01	.00	.00	.42
15	.01	.29	.00	.00	.00	.01	.48	.00	.35	.01	.00	.00
16	.00	.00	.00	.00	.00	.32	.29	.00	.04	.10	.00	1.32
17	.00	.56	.00	.00	.00	.00	.00	.26	.18	.00	.02	.03
18	.02	.15	.00	.00	.00	.00	.06	.00	.03	.00	.00	.87
19	.18	.01	.00	.00	.00	.00	.54	.00	.01	.01	.00	.00
20	.00	.00	.00	.00	.00	.00	.08	.00	.01	.00	.00	.55
21	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.01
22	.00	.05	.00	.12	.00	.00	.00	.43	.06	.58	.00	.00
23	.00	.51	.00	.03	.00	.00	.18	.21	.21	.07	.00	.00
24	3.47	.00	.00	.00	.00	.00	.06	.00	.01	.00	.00	.00
25	.35	.00	.00	.00	.00	.00	.03	.00	.00	.05	.73	.00
26	.38	.00	.00	.00	.00	.00	.03	.00	.00	.00	.01	.67
27	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.01
28	.42	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00	.00
29	.35	.00	.00	.00	.00	.00	.03	.00	.00	.00	1.21	.00
30	.00	.07	.00	.00	---	.00	.00	.00	.01	.20	.00	.00
31	.48	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	7.07	3.01	0.40	0.28	0.00	1.11	2.46	1.21	0.92	6.09	2.90	5.51

WISCONSIN RIVER BASIN

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05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI

LOCATION (REVISED).--Lat 43°06'37", long 89°40'46", in NW 1/4 SW 1/4 sec.4, T.7 N., R.7 E., Dane County, Hydrologic Unit 07070005, on left bank at bridge on Garfoot Road, 0.5 mi upstream from Black Earth Creek.

DRAINAGE AREA.--5.39 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1986, October 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 860 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 23-25, Nov. 18-19, 23-26, and ice-affected periods, Jan. 15-16, and Feb. 9. Records are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	17	5.4	3.4	3.2	6.0	4.1	4.1	3.5	3.0	2.8	2.7
2	2.6	6.7	4.5	3.4	3.5	5.1	3.8	4.1	3.3	3.4	2.8	2.7
3	2.6	4.6	4.3	3.4	4.3	5.0	3.8	3.9	3.2	3.2	2.7	2.9
4	4.0	3.9	4.0	3.5	4.1	4.9	3.8	4.0	3.2	2.8	2.6	2.7
5	5.7	3.8	3.8	3.6	3.8	5.0	4.0	4.0	3.1	2.7	2.6	2.5
6	4.7	3.9	3.8	3.6	3.8	5.3	4.0	3.9	3.2	2.8	2.6	3.1
7	4.4	3.7	3.9	3.6	3.4	5.3	4.0	3.7	3.2	2.8	2.8	2.8
8	4.4	3.6	5.1	3.7	3.4	5.0	3.9	3.6	3.2	3.7	3.0	2.8
9	4.2	3.6	4.8	4.4	3.4	7.2	4.4	3.6	3.2	3.2	2.8	3.6
10	3.8	3.6	4.3	4.0	3.4	5.4	4.3	3.6	3.6	3.1	2.8	3.1
11	3.8	3.6	4.1	4.0	3.4	4.5	4.2	3.7	3.4	3.0	2.8	2.8
12	4.0	3.7	5.8	4.1	3.4	4.2	4.1	3.8	3.4	4.1	2.8	2.9
13	4.2	3.9	5.3	4.0	3.4	3.8	3.9	3.8	3.4	6.2	2.8	2.9
14	4.4	4.3	4.5	3.7	3.4	3.8	4.0	3.8	3.5	5.5	2.8	3.1
15	4.3	7.2	4.1	3.5	3.5	3.7	4.8	3.8	3.8	3.9	2.8	3.1
16	4.1	5.0	3.8	3.3	3.6	3.8	5.7	3.8	3.8	3.6	2.8	8.6
17	4.0	4.4	3.9	3.2	3.6	4.2	5.0	4.0	3.7	3.4	2.7	4.9
18	3.9	10	3.7	3.2	3.6	4.0	4.6	3.8	3.8	3.4	2.6	10
19	3.7	4.9	3.6	3.2	3.6	3.8	5.6	3.7	3.6	3.4	2.6	4.1
20	3.7	4.4	3.6	3.2	4.5	3.8	5.8	3.6	3.5	3.3	2.6	3.5
21	3.7	4.0	3.6	3.2	5.1	3.6	5.1	3.6	3.4	3.2	2.6	5.2
22	3.9	3.9	3.6	3.4	5.9	3.6	4.7	3.6	3.3	3.3	2.6	3.5
23	4.0	5.5	3.6	3.6	6.5	3.7	4.6	4.0	3.2	3.4	2.6	2.9
24	5.7	4.8	3.6	3.5	5.7	4.7	4.7	3.6	3.2	3.2	2.4	2.8
25	31	4.2	3.6	3.4	5.3	5.0	4.6	3.4	3.2	3.2	2.5	2.7
26	7.9	3.6	3.5	3.2	5.9	4.5	4.4	3.4	3.2	3.2	2.6	3.1
27	5.8	3.7	3.4	3.2	10	4.1	4.4	3.4	3.2	3.0	2.6	4.3
28	4.7	3.8	3.4	3.2	8.6	3.9	4.2	3.4	2.8	2.8	2.8	3.1
29	7.8	4.4	3.4	3.2	5.6	4.2	4.2	3.4	2.8	2.7	3.6	3.0
30	5.2	14	3.4	3.2	---	4.4	4.1	3.5	3.0	2.7	2.8	3.0
31	4.7	---	3.4	3.2	---	4.3	---	3.7	---	2.8	2.8	---
TOTAL	163.4	157.7	124.8	108.3	130.9	139.8	132.8	115.3	99.9	104.0	84.7	108.4
MEAN	5.27	5.26	4.03	3.49	4.51	4.51	4.43	3.72	3.33	3.35	2.73	3.61
MAX	31	17	5.8	4.4	10	7.2	5.8	4.1	3.8	6.2	3.6	10
MIN	2.5	3.6	3.4	3.2	3.2	3.6	3.8	3.4	2.8	2.7	2.4	2.5
CFSM	.98	.98	.75	.65	.84	.84	.82	.69	.62	.62	.51	.67
IN.	1.13	1.09	.86	.75	.90	.96	.92	.80	.69	.72	.58	.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1992, BY WATER YEAR (WY)

	4.48	4.90	3.84	3.52	4.34	6.48	5.22	4.42	4.05	4.19	3.50	4.07
MEAN	4.48	4.90	3.84	3.52	4.34	6.48	5.22	4.42	4.05	4.19	3.50	4.07
MAX	6.02	8.76	5.49	5.01	6.22	9.87	7.43	6.40	5.34	6.64	4.84	6.27
(WY)	1985	1986	1986	1986	1985	1986	1986	1986	1986	1985	1986	1986
MIN	2.19	2.59	2.10	2.10	2.72	4.51	2.74	3.38	3.33	2.44	2.56	2.06
(WY)	1991	1991	1990	1991	1991	1992	1990	1990	1992	1990	1990	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1985 - 1992

ANNUAL TOTAL	1420.1	1470.0	
ANNUAL MEAN	3.89	4.02	
HIGHEST ANNUAL MEAN			4.42
LOWEST ANNUAL MEAN			6.35
HIGHEST DAILY MEAN	31	Oct 25	81
LOWEST DAILY MEAN	2.0	Jan 7	(a)1.7
ANNUAL SEVEN-DAY MINIMUM	2.1	Jan 28	2.6
INSTANTANEOUS PEAK FLOW			65
INSTANTANEOUS PEAK STAGE			5.42
INSTANTANEOUS LOW FLOW			2.4
ANNUAL RUNOFF (CFSM)	.72	.75	(b)Aug 23
ANNUAL RUNOFF (INCHES)	9.80	10.15	11.13
10 PERCENT EXCEEDS	5.0	5.2	6.1
50 PERCENT EXCEEDS	3.4	3.7	3.9
90 PERCENT EXCEEDS	2.2	2.8	2.3

(a) Also occurred Aug. 9, 10, Sept. 30, Oct. 1, 2, 1990

(b) Also occurred Aug. 24-27, Sept. 5-6

(c) Also occurred Oct. 27, 1990

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to September 1986, October 1989 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1984 to September 1986, October 1989 to current year.

DISSOLVED OXYGEN: April 1984 to September 1985, April 1990 to current year.

SUSPENDED-SOLIDS DISCHARGE: October 1989 to September 1991.

SUSPENDED-SEDIMENT DISCHARGE: October 1984 to June 1986, October 1989 to current year.

TOTAL-PHOSPHORUS DISCHARGE: October 1984 to June 1986, October 1989 to current year.

INSTRUMENTATION.--Water-quality sampler December 1984 to June 1986, October 1989 to current year; continuous water temperature recorder November 1984 to September 1986, October 1989 to current year; dissolved oxygen recorder April 1984 to September 1985, April 1990 to current year.

REMARKS.--Total-nitrogen discharge were published for the period October 1984 to June 1986. Suspended-solids discharge were published for the period October 1989 to September 1991. 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.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 24.5°C, July 25, 1985; minimum observed, 0.0°C, on several days during 1985, 1986, 1990, and 1991.

DISSOLVED OXYGEN: Maximum observed, 17.4 mg/L, Apr. 11, 1990; minimum observed, 1.5 mg/L, Aug. 17, 1990.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 77 tons, June 29, 1990; minimum daily, 0.04 ton, Feb. 26-27, and Aug. 7, 9-10, 1990.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 62 tons, July 25, 1985; minimum, 0.06 ton, Oct. 1-3, 1991.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 747 lb, July 25, 1985; minimum daily, 0.47 lb, Dec. 24, 1989.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 20.5°C, May 1; minimum observed, 0.5°C, Jan. 15-19.

DISSOLVED OXYGEN: Maximum observed, 13.7 mg/L, June 7; minimum observed, 1.3 mg/L, July 8.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 32 tons, Oct. 25; minimum daily, 0.06 ton, Oct. 1-3.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 272 lb, Oct. 25; minimum daily, 0.48 lb, Nov. 28.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					APR 1992				
02...	1211	2.6	535	12.5	28...	1348	4.1	515	13.0
26...	1040	7.9	525	9.5	JUN				
NOV					02...	1102	3.3	540	13.0
20...	1354	4.2	525	8.5	JUL				
DEC					06...	1307	2.8	540	15.5
26...	1301	3.4	525	6.5	AUG				
JAN 1992					17...	1310	2.6	535	13.5
30...	1216	3.2	525	5.5					
MAR									
12...	1505	3.8	535	6.5					

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)	CARBO- FURAN WATER WHOLE TOT.REC (UG/L) (82615)	CHLOR- DYRIFOS TOTAL RECOVER (UG/L) (38932)	CIS- PERME- THRIN WATER WHOLE REC (UG/L) (82418)	CYAN- AZINE TOTAL (UG/L) (81757)	DICAMBA (MED- IBEN) (BAN- VEL D) TOTAL (UG/L) (82052)	DIMETH- OATE WATER WHOLE TOTAL (UG/L) (39009)	EPTC WATER WHOLE REC (UG/L) (81894)
MAY 1992											
*28...	1330	3.4	<0.10	<0.1	<0.3	<1.0	<1.0	<0.30	<0.30	<1.0	<1.0

DATE	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	METHO- MYL TOTAL (UG/L) (39051)	METOLA- CHLOR IN WHOLE WATER (UG/L) (39356)	PARA- THION, TOTAL (UG/L) (39540)	PENDI- METH- ALIN TOTAL (UG/L) (79190)	PHORATE TOTAL (UG/L) (39023)	TERBU- FOS WAT, WH REC (UG/L) (82088)	TRANS PERME- THRIN WATER WHOLE REC (UG/L) (82420)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	2,4-D, TOTAL (UG/L) (39730)
MAY 1992										
28...	<0.20	<1.0	<0.20	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCOCI FECAL, KF AGAR (COLS./ 100 ML) (31673)	CALCIUM TOTAL RECOV- ERABLE (MG/L) AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L) AS MG) (00927)	SODIUM, TOTAL RECOV- ERABLE (MG/L) AS NA) (00929)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
OCT 1991											
*10...	1130	3.8	8.3	2.3	16000	2400	61	36	4.3	12	354
*22...	1310	3.6	8.2	3.5	56000	9200	--	--	--	12	348
*25...	1250	24	--	--	--	--	--	--	--	--	--
*26...	1208	9.3	7.7	4.4	--	--	54	30	4.8	70	460
*27...	1315	5.6	8.0	2.5	--	--	61	33	4.9	23	418
NOV											
01...	0930	9.1	8.1	6.8	--	--	63	34	6.3	148	542
01...	1030	17	8.0	22	--	--	64	34	5.9	500	876
01...	1100	22	8.0	11	--	--	53	28	4.7	425	740
01...	1130	24	8.0	7.7	--	--	50	27	4.6	472	772
*01...	1146	27	7.9	10	--	--	46	25	4.2	608	884
*01...	1147	28	--	--	--	--	--	--	--	--	--
01...	1157	29	8.0	10	--	--	45	25	4.4	620	912
01...	1245	38	7.8	18	--	--	36	21	3.7	732	1000
01...	1445	42	7.8	10	--	--	33	19	3.4	284	582
01...	1507	41	--	--	--	--	--	--	--	--	--
01...	1508	41	--	--	--	--	--	--	--	--	--
01...	1945	20	8.1	5.9	--	--	51	28	4.8	108	470
02...	0740	7.0	8.0	2.3	--	--	52	28	4.1	41	366
18...	0130	8.8	--	--	--	--	--	--	--	--	--
30...	0015	15	7.9	--	--	--	52	30	5.2	320	604
30...	0130	24	7.9	--	--	--	49	27	4.8	644	908
30...	0200	25	7.8	--	--	--	47	26	5.0	920	1160
30...	0230	28	7.7	--	--	--	38	21	4.5	904	1100
30...	0330	28	7.6	--	--	--	32	18	3.7	616	810
30...	0815	16	7.8	--	--	--	38	20	3.9	188	456
30...	1800	7.3	8.1	--	--	--	49	26	4.5	50	360
DEC											
*10...	1540	4.2	8.0	<1.0	--	--	58	33	4.5	38	368
JAN 1992											
*09...	0915	4.7	8.0	4.4	6600	23000	53	31	4.5	30	354
DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	CALCIUM TOTAL RECOV- ERABLE (MG/L) AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L) AS MG) (00927)	SODIUM, TOTAL RECOV- ERABLE (MG/L) AS NA) (00929)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLATILE ON IGNI- TION, TOTAL (MG/L) (00505)
FEB 1992											
*22...	0738	3.9	7.8	--	9.5	56	32	6.7	23	380	108
26...	1745	9.7	7.8	--	10	49	29	4.9	278	584	132
*27...	1044	4.9	7.8	--	3.6	53	30	5.2	16	314	108
27...	1515	9.4	7.8	--	7.2	42	24	4.4	210	468	114
27...	1545	14	7.7	--	7.9	42	24	4.3	440	680	134
27...	1615	18	7.8	--	11	30	18	3.8	728	912	156
27...	1645	20	7.6	--	13	28	17	3.1	848	1000	158
27...	1715	22	7.7	--	12	31	19	3.3	864	1050	162
27...	1815	23	7.7	--	14	28	17	3.7	784	952	146
27...	1844	23	7.7	--	10	26	16	3.7	660	834	138
*27...	1845	23	7.7	--	--	--	--	--	640	814	140
27...	2009	21	7.7	--	--	--	--	--	288	478	110
27...	2016	21	7.9	--	--	--	--	--	320	510	110
27...	2130	15	7.8	--	14	27	16	3.3	202	394	102
*28...	1005	6.3	7.9	--	4.2	50	28	4.9	31	316	114
28...	1330	9.1	7.9	--	--	47	26	5.3	98	382	110
28...	1615	12	7.8	--	--	33	18	3.8	164	394	112
*29...	0816	5.3	7.9	--	--	52	29	4.7	26	316	98
MAR											
09...	1115	8.8	8.0	--	9.9	96	53	10	174	752	206
*10...	1005	5.3	7.9	--	--	63	35	5.3	34	380	124
*17...	1501	4.0	8.1	--	3.7	57	32	4.8	22	354	116
*18...	1230	4.0	--	--	--	--	--	--	--	--	--
APR											
*14...	1405	4.0	8.4	--	1.8	58	35	5.7	4	326	122
*20...	1350	5.7	8.2	--	3.1	57	32	5.1	14	346	114
*30...	1610	4.0	8.7	24	2.1	56	34	4.7	7	312	90
MAY											
*14...	1700	3.8	8.5	<5	<1.0	--	--	--	6	344	134
*26...	1530	3.4	8.3	<5	1.5	--	--	--	15	332	112
JUN											
*10...	1115	3.6	8.2	7	2.8	--	--	--	23	350	138
*22...	1600	3.2	8.2	<5	2.7	--	--	--	17	356	148
JUL											
*08...	1700	4.0	7.9	32	4.4	--	--	--	54	400	12
13...	1930	9.7	7.8	68	9.9	--	--	--	206	582	178
*20...	1300	3.2	7.9	8	3.5	--	--	--	25	372	126
AUG											
*03...	1145	2.8	8.0	8	2.2	--	--	--	20	480	148
*19...	1140	3.2	7.9	<5	2.0	--	--	--	24	346	94
*19...	1145	2.6	--	--	--	--	--	--	--	--	--
29...	0950	5.1	7.7	36	4.8	--	--	--	81	346	90

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 1991											
10...	96	4	2.08	0.042	0.120	<40	<20	190	<40	<10	9
22...	100	6	2.03	0.065	0.340	--	--	--	--	--	14
25...	--	--	--	--	--	--	--	--	--	--	110
26...	174	20	6.51	0.131	0.610	80	<20	2100	91	30	85
27...	156	7	5.65	0.075	0.270	70	<20	710	53	20	24
NOV											
01...	154	28	3.91	0.218	0.940	90	<20	3300	140	60	150
01...	292	190	2.90	0.812	4.40	200	32	12000	440	160	558
01...	188	90	2.41	0.404	1.93	100	<20	9500	290	90	427
01...	168	76	2.50	0.247	1.36	100	<20	11000	300	80	474
01...	170	88	2.56	0.334	1.86	100	27	13000	410	100	--
01...	--	--	--	--	--	--	--	--	--	--	650
01...	186	96	2.47	0.350	1.95	100	<20	14000	420	100	703
01...	204	120	1.69	0.851	3.10	200	24	19000	720	120	826
01...	152	56	2.02	0.524	1.98	100	<20	12000	350	80	394
01...	--	--	--	--	--	--	--	--	--	--	315
01...	--	--	--	--	--	--	--	--	--	--	327
01...	146	32	3.99	0.316	1.22	100	<20	5400	170	50	149
02...	118	10	5.08	0.112	0.370	60	<20	1500	69	20	46
18...	--	--	--	--	--	--	--	--	--	--	291
30...	138	52	2.02	0.863	1.22	90	<20	6500	220	60	274
30...	148	72	2.58	0.281	1.22	100	<20	11000	400	100	676
30...	176	104	2.64	0.387	1.82	200	<20	17000	560	110	924
30...	176	104	2.10	0.761	1.98	200	<20	16000	570	110	978
30...	144	80	1.86	0.952	1.82	100	<20	12000	420	90	634
30...	120	28	2.74	0.541	1.03	80	<20	4700	160	40	261
30...	108	7	3.90	0.224	0.400	60	<20	1500	70	30	53
DEC											
10...	108	9	2.79	0.050	0.090	40	<20	410	<40	10	--
JAN 1992											
09...	106	9	2.28	0.335	0.270	40	<20	920	60	20	30
DATE	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	
FEB 1992											
22...	8	2.30	1.58	0.430	40	<20	840	64	20	21	
26...	38	1.99	1.40	0.970	70	<20	4900	190	50	--	
27...	6	2.16	0.336	0.330	<40	25	610	55	30	18	
27...	28	1.86	0.619	0.780	70	<20	4200	150	40	211	
27...	52	1.72	0.754	1.20	90	<20	7500	270	60	481	
27...	88	--	--	--	100	22	15000	530	90	741	
27...	96	1.03	1.13	2.32	100	23	17000	640	100	820	
27...	96	1.16	1.08	2.05	200	22	16000	640	100	882	
27...	84	0.760	1.02	2.14	100	26	16000	630	100	825	
27...	76	1.04	0.832	1.56	100	21	13000	550	80	689	
27...	76	1.05	0.858	1.68	--	--	--	--	--	669	
27...	36	1.17	0.720	1.14	--	--	--	--	--	299	
27...	36	1.15	0.718	1.20	--	--	--	--	--	--	
27...	26	1.36	0.647	1.02	60	<20	4400	220	50	206	
28...	3	2.15	0.383	0.480	40	<20	1000	76	30	31	
28...	20	2.07	0.757	0.890	50	27	2400	130	50	101	
28...	40	1.47	0.876	1.12	60	24	5300	220	60	179	
29...	8	2.34	0.168	0.230	40	<20	860	63	120	29	
MAR											
09...	26	5.18	0.788	0.970	100	<20	3700	230	50	183	
10...	6	3.70	0.065	0.150	60	<20	860	67	<10	40	
17...	9	2.50	0.058	0.140	40	<20	460	47	<10	--	
18...	--	--	--	--	--	--	--	--	--	32	
APR											
14...	3	2.23	0.023	0.270	<40	<20	140	<40	<10	15	
20...	5	2.90	0.040	0.160	50	<20	250	42	20	10	
30...	3	2.10	0.028	0.060	<40	<20	110	<40	<10	29	
MAY											
14...	2	2.02	0.063	0.080	--	--	--	--	--	30	
26...	3	2.26	0.064	0.090	--	--	--	--	--	20	
JUN											
10...	8	2.25	0.069	0.140	--	--	--	--	--	18	
22...	6	2.12	0.048	0.090	--	--	--	--	--	17	
JUL											
08...	12	3.03	0.141	0.580	--	--	--	--	--	54	
13...	41	6.27	0.329	1.01	--	--	--	--	--	--	
20...	11	2.40	0.051	0.200	--	--	--	--	--	20	
AUG											
03...	6	2.22	0.051	0.110	--	--	--	--	--	27	
19...	8	2.07	0.030	0.100	--	--	--	--	--	--	
19...	--	--	--	--	--	--	--	--	--	16	
29...	22	1.83	0.150	0.590	--	--	--	--	--	73	

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
SEP 1992							
*01...	1010	2.6	8.0	22	6.4	16	342
*16...	0950	3.0	--	--	--	--	--
16...	1430	8.8	7.9	75	10	340	656
16...	1500	15	7.9	130	12	540	836
16...	1545	21	7.8	100	12	612	834
16...	2230	9.7	7.8	53	6.2	94	412
17...	1015	4.7	7.8	38	3.1	36	386
*17...	1020	4.7	--	--	--	--	--
18...	0545	8.3	7.8	100	11	300	610
18...	0630	16	7.7	92	8.2	332	604
18...	0715	22	7.7	89	7.9	356	620
18...	1120	17	7.6	75	8.4	108	422
18...	1315	11	7.6	65	--	92	410
20...	1625	3.2	8.0	14	1.6	15	352

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
SEP 1992						
01...	94	6	2.07	0.074	0.230	24
16...	--	--	--	--	--	73
16...	156	84	1.80	0.191	1.11	320
16...	196	128	2.14	0.144	1.42	499
16...	184	148	2.77	0.081	1.61	515
16...	118	20	2.24	0.134	0.780	100
17...	114	14	2.22	0.092	0.420	32
17...	--	--	--	--	--	31
18...	152	76	1.76	0.202	1.54	283
18...	140	80	1.76	0.131	1.15	308
18...	142	84	2.21	0.122	1.28	356
18...	120	32	2.27	0.223	1.25	120
18...	136	22	2.52	0.156	0.960	94
20...	102	4	2.24	0.068	0.160	21

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	11.5	9.0	10.5	10.0	6.5	9.0	4.5	2.5	3.5	5.5	5.5	5.5
2	13.0	11.0	12.0	6.5	4.5	5.5	4.0	3.0	3.5	6.5	5.5	6.0
3	12.0	9.5	11.0	5.5	4.0	4.5	5.0	2.5	4.0	7.0	6.0	6.5
4	11.0	10.0	10.0	6.0	3.5	4.5	3.0	1.0	2.0	6.5	6.0	6.0
5	12.0	9.0	10.5	5.5	4.0	4.5	4.0	2.0	3.0	6.5	5.5	6.0
6	11.0	8.5	9.5	5.5	3.0	4.5	5.0	1.5	3.0	6.5	6.0	6.0
7	11.0	7.0	9.0	5.0	1.5	3.0	7.0	5.0	6.0	6.5	5.5	6.0
8	13.5	8.5	11.0	5.5	1.5	3.5	7.0	4.5	6.0	6.5	5.5	6.0
9	12.5	9.5	11.0	6.0	2.5	4.0	6.5	4.0	5.0	6.0	5.0	5.5
10	11.5	7.5	9.5	5.5	4.0	5.0	7.0	5.0	5.5	5.5	3.5	4.5
11	12.5	9.0	11.0	6.5	5.5	6.0	7.0	4.0	5.5	7.0	4.5	5.5
12	11.0	8.5	10.0	7.0	5.5	6.0	6.5	5.0	6.0	6.0	5.0	5.5
13	10.5	7.0	9.0	9.0	5.5	7.0	6.0	4.0	5.0	5.5	3.5	5.0
14	10.0	8.5	9.5	8.0	5.5	7.0	5.0	2.5	3.5	4.0	2.0	3.0
15	10.5	7.0	8.5	8.0	6.5	7.5	3.5	1.5	2.5	3.0	.5	1.5
16	11.0	6.0	8.5	8.0	5.5	6.5	5.0	1.5	3.5	4.0	.5	1.5
17	13.5	8.5	11.0	7.5	5.5	6.5	5.0	3.0	4.0	4.0	.5	3.0
18	11.0	7.0	9.0	10.0	7.0	8.0	3.5	1.5	2.5	2.5	.5	1.0
19	9.0	5.5	7.5	9.0	7.0	8.0	4.5	1.5	3.0	4.0	.5	2.0
20	10.5	6.5	8.5	9.0	6.0	7.5	5.5	4.0	4.5	5.0	2.5	4.0
21	12.0	7.5	9.5	8.0	5.0	6.5	6.0	3.5	4.5	7.0	3.5	5.0
22	14.0	9.0	11.5	9.0	6.5	7.5	6.0	3.5	5.0	6.5	5.0	5.5
23	---	---	---	7.5	5.0	6.5	5.5	3.0	5.0	5.5	1.5	4.0
24	---	---	---	5.0	3.5	4.5	6.0	2.5	4.0	4.0	1.0	2.5
25	---	---	---	4.5	2.5	3.5	6.0	2.5	4.0	5.5	2.0	3.5
26	---	---	---	5.0	2.0	3.5	6.5	4.0	5.0	4.5	2.5	3.5
27	---	---	---	6.5	4.0	5.0	6.5	5.5	6.0	5.0	2.5	4.0
28	11.5	10.5	11.0	5.0	4.0	4.5	6.0	5.5	5.5	6.0	3.5	4.5
29	13.5	10.5	12.5	6.5	4.5	5.5	6.5	4.5	5.5	6.0	3.5	5.0
30	10.5	8.0	9.0	6.0	3.0	3.5	6.5	4.5	5.5	7.0	5.0	6.0
31	9.0	8.0	8.0	---	---	---	6.0	5.5	5.5	6.5	4.0	5.5
MONTH	---	---	---	10.0	1.5	5.6	7.0	1.0	4.4	7.0	.5	4.5

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	6.5	3.0	4.5	10.5	4.0	6.0	7.0	4.5	5.5	20.5	10.0	14.5
2	7.5	4.0	5.5	9.5	3.5	6.0	10.5	3.0	6.0	16.5	10.0	13.0
3	8.5	4.0	5.5	6.5	5.0	5.5	10.0	4.5	7.0	16.0	8.0	11.5
4	6.5	4.0	5.0	10.0	5.5	7.0	11.5	5.0	7.5	12.5	8.0	10.0
5	7.0	3.0	5.0	8.0	6.0	7.0	13.0	4.5	8.0	15.0	6.5	10.0
6	6.5	4.0	5.0	8.0	6.5	7.5	13.5	6.0	9.0	16.5	6.0	10.5
7	6.0	2.5	4.5	8.0	6.5	7.0	14.5	8.0	10.0	17.5	7.5	11.5
8	4.5	1.5	2.5	11.5	6.5	8.5	11.0	5.5	8.0	18.5	7.5	12.5
9	5.5	1.0	3.0	7.5	2.0	5.0	13.0	7.0	9.5	18.5	8.5	13.0
10	5.0	3.0	4.0	5.5	1.5	3.0	8.0	6.5	7.0	19.5	10.0	14.0
11	6.0	2.0	4.5	7.0	2.0	4.0	8.5	6.0	7.0	19.0	11.0	14.0
12	5.5	1.5	3.0	7.5	2.0	4.0	11.0	3.5	7.0	16.0	11.5	13.5
13	5.5	4.0	5.0	8.5	2.0	4.5	7.5	5.5	6.5	18.0	9.5	13.0
14	5.5	5.0	5.5	7.5	4.0	5.0	9.0	6.0	7.0	15.5	10.0	12.0
15	6.0	2.5	4.5	8.5	2.5	5.0	9.0	6.5	7.5	17.0	10.0	13.0
16	7.0	5.0	6.0	7.5	3.0	5.0	7.5	6.5	7.0	19.5	10.5	14.5
17	7.0	5.0	6.0	10.0	4.0	6.5	8.0	6.5	7.0	19.5	12.5	15.0
18	5.5	3.5	4.5	7.0	3.5	5.0	11.0	7.0	9.0	18.5	11.0	14.0
19	6.5	4.5	5.5	10.0	3.0	6.0	13.0	9.5	11.0	19.0	9.5	13.5
20	7.0	2.5	5.0	9.5	4.5	6.0	13.0	10.5	11.5	19.5	10.5	14.5
21	6.0	2.5	4.0	4.0	2.0	3.5	11.0	7.0	8.5	19.5	11.5	15.0
22	8.0	2.0	4.5	9.5	2.5	5.0	10.0	6.5	7.5	20.0	12.0	15.0
23	6.5	2.5	4.0	10.5	2.0	5.5	9.0	6.5	8.0	14.5	11.0	13.0
24	4.5	3.0	4.0	11.5	3.5	6.5	9.5	7.0	8.0	11.0	8.5	9.5
25	5.0	3.5	4.0	10.5	4.5	6.5	9.5	6.5	8.0	11.5	8.0	9.5
26	7.5	2.5	4.0	8.0	3.5	6.0	9.5	7.0	8.0	12.5	9.0	10.5
27	7.0	2.0	4.0	10.5	3.0	6.0	14.0	6.0	9.5	15.5	7.0	11.0
28	5.0	2.0	3.5	8.5	3.5	6.0	14.5	5.5	9.5	17.0	8.0	11.5
29	7.5	2.5	4.5	6.0	5.5	5.5	16.5	8.5	12.0	17.5	8.0	12.5
30	---	---	---	12.0	5.0	7.5	17.5	8.0	12.5	17.5	9.5	13.0
31	---	---	---	10.5	5.0	7.0	---	---	---	19.0	9.5	13.5
MONTH	8.5	1.0	4.5	12.0	1.5	5.8	17.5	3.0	8.3	20.5	6.0	12.6

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992[illegible]

WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	12.5	5.8	9.1
9	---	---	---	---	---	---	---	---	---	10.6	5.2	7.6
10	---	---	---	---	---	---	---	---	---	9.1	4.6	6.8
11	---	---	---	---	---	---	---	---	---	8.6	4.6	6.1
12	---	---	---	---	---	---	---	---	---	8.7	4.4	6.3
13	---	---	---	---	---	---	---	---	---	10.0	4.9	7.5
14	---	---	---	---	---	---	---	---	---	13.5	7.5	10.0
15	---	---	---	---	---	---	---	---	---	12.7	7.9	10.2
16	---	---	---	---	---	---	---	---	---	13.1	6.9	9.7
17	---	---	---	---	---	---	---	---	---	10.2	5.1	7.4
18	---	---	---	---	---	---	---	---	---	10.1	5.9	8.0
19	---	---	---	---	---	---	---	---	---	11.6	6.9	9.2
20	---	---	---	---	---	---	---	---	---	11.1	7.3	9.2
21	---	---	---	---	---	---	---	---	---	10.4	6.4	8.5
22	---	---	---	---	---	---	---	---	---	8.7	5.6	7.4
23	---	---	---	---	---	---	---	---	---	9.9	6.6	8.1
24	---	---	---	---	---	---	---	---	---	11.1	8.2	9.9
25	---	---	---	---	---	---	---	---	---	10.6	9.1	9.8
26	---	---	---	---	---	---	---	---	---	12.0	9.3	10.6
27	---	---	---	---	---	---	---	---	---	12.0	8.7	10.4
28	---	---	---	---	---	---	---	---	---	11.5	7.8	9.7
29	---	---	---	---	---	---	---	---	---	9.6	6.2	8.1
30	---	---	---	---	---	---	---	---	---	9.2	5.7	7.4
31	---	---	---	---	---	---	---	---	---	10.8	5.5	8.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	10.4	7.3	8.6	10.4	7.4	8.9	10.2	6.9	8.7	10.8	7.6	9.1
2	9.2	5.1	7.5	9.2	6.4	7.9	9.8	7.2	8.4	9.6	7.2	8.4
3	11.0	6.6	9.4	10.2	6.8	8.6	10.4	7.7	9.0	10.2	7.4	8.4
4	11.4	8.4	9.9	10.4	7.8	8.9	10.7	8.0	9.3	10.3	7.3	8.9
5	13.1	9.0	10.8	10.7	7.6	9.3	10.3	7.9	9.1	9.8	6.3	8.3
6	12.9	9.0	11.2	10.6	8.0	9.2	10.8	7.7	9.2	8.6	5.7	7.2
7	13.7	9.3	11.6	10.2	7.9	9.0	10.1	7.0	8.6	9.1	6.7	7.8
8	11.9	7.4	9.9	9.2	1.3	7.8	10.2	7.1	8.4	10.1	6.9	8.2
9	10.2	6.9	8.8	10.5	6.9	8.6	10.1	6.7	8.5	8.5	6.6	7.8
10	11.6	7.9	9.8	9.9	7.4	8.5	9.6	7.1	8.2	10.2	7.8	8.9
11	---	---	---	10.3	7.4	8.8	10.1	7.2	8.5	10.5	8.1	9.1
12	---	---	---	8.6	5.9	7.7	10.1	7.5	8.7	10.4	7.8	9.1
13	---	---	---	8.5	5.9	7.2	10.3	8.1	9.0	10.0	7.1	8.6
14	---	---	---	9.2	6.0	7.9	10.3	7.9	9.0	9.1	7.1	7.9
15	---	---	---	10.1	7.4	8.9	10.8	7.8	9.2	9.5	7.0	8.2
16	10.9	8.3	9.8	10.3	7.8	8.8	10.5	7.6	9.0	7.6	2.8	6.7
17	9.0	7.3	8.3	10.1	8.0	8.9	10.2	6.7	8.8	7.9	6.0	7.1
18	9.4	7.4	8.5	10.9	8.1	9.2	9.9	7.0	8.3	7.6	5.0	6.6
19	9.5	7.5	8.5	10.4	7.8	9.0	10.7	7.5	9.0	9.8	6.5	8.4
20	9.4	7.4	8.4	10.8	8.1	9.3	10.5	7.7	9.1	9.9	7.5	8.8
21	9.8	7.1	8.8	10.6	8.2	9.3	10.5	7.1	8.8	8.7	6.7	7.6
22	10.3	7.8	9.4	9.5	8.1	8.9	10.3	7.1	8.6	10.2	7.4	9.0
23	10.4	8.2	9.3	10.1	8.3	9.1	9.9	6.8	8.3	10.6	8.9	9.7
24	10.4	8.4	9.2	10.5	8.0	9.3	9.7	6.2	8.1	10.7	8.2	9.5
25	10.3	8.0	9.1	9.9	8.1	8.9	9.5	4.8	7.5	10.6	7.9	9.4
26	10.3	8.3	9.3	10.3	7.9	8.9	9.2	6.3	7.7	9.4	6.7	8.3
27	10.8	8.1	9.6	10.3	7.7	9.0	10.2	7.9	8.9	10.0	7.1	8.5
28	10.7	8.0	9.3	10.3	7.7	8.9	10.7	8.1	9.3	10.3	8.7	9.4
29	10.7	7.7	9.0	10.6	7.8	9.0	8.8	5.7	7.9	10.2	9.3	9.7
30	10.7	7.7	9.0	9.9	8.0	9.1	10.2	7.0	8.4	10.2	9.0	9.7
31	---	---	---	10.4	7.9	9.2	10.4	7.8	9.0	---	---	---
MONTH	---	---	---	10.9	1.3	8.8	10.8	4.8	8.7	10.8	2.8	8.5

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

WTR YR 1992 TOTAL 199.79 MAX 32 MIN .06

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	151	12	3.7	6.0	7.7	4.4	1.4	2.0	4.3	1.8	3.3
2	1.7	14	8.6	3.8	6.6	5.2	4.2	1.4	2.0	5.6	1.7	3.3
3	1.7	8.1	7.1	4.0	8.1	4.6	4.3	1.3	2.0	5.8	1.6	3.5
4	4.8	6.2	5.5	4.3	7.9	4.1	4.4	1.4	2.0	5.8	1.5	3.2
5	11	5.4	4.4	4.5	7.4	3.8	4.7	1.4	2.0	6.4	1.5	3.0
6	3.0	5.0	3.7	4.7	7.5	3.7	4.8	1.4	2.2	7.3	1.5	3.7
7	2.9	4.2	3.3	4.9	6.8	3.3	4.9	1.4	2.2	8.3	1.6	3.3
8	2.9	3.7	8.5	5.3	6.8	2.8	5.0	1.4	2.3	12	1.7	3.3
9	2.7	3.4	2.8	6.5	6.9	23	5.7	1.4	2.4	1.7	1.6	5.2
10	2.5	3.0	2.2	5.9	7.0	5.6	5.8	1.4	2.7	1.7	1.6	3.6
11	2.7	2.7	2.1	6.0	7.1	2.7	5.7	1.5	2.5	1.6	1.6	3.2
12	3.1	2.5	11	6.2	7.1	1.9	5.7	1.6	2.4	6.2	1.6	3.3
13	3.5	2.4	2.9	6.0	7.2	1.3	5.6	1.6	2.3	18	1.6	3.2
14	4.0	2.4	2.5	5.7	7.3	.99	5.7	1.6	2.3	7.9	1.6	3.4
15	4.3	19	2.4	5.4	7.6	.72	6.4	1.6	2.4	2.3	1.5	3.4
16	4.5	2.2	2.3	5.2	7.9	.56	7.0	1.7	2.3	2.4	1.5	45
17	4.8	1.8	2.4	5.1	7.9	1.5	5.7	1.8	2.2	2.6	1.5	10
18	5.1	40	2.4	5.1	8.0	3.1	4.8	1.7	2.1	2.9	1.4	51
19	5.3	1.6	2.4	5.2	8.1	3.0	5.3	1.7	2.0	3.2	1.4	4.1
20	5.8	1.3	2.5	5.2	10	3.0	5.1	1.6	1.9	3.5	1.4	3.1
21	6.3	1.1	2.6	5.4	12	3.0	4.0	1.7	1.7	3.3	1.4	12
22	6.9	.91	2.7	5.7	13	3.1	3.4	1.7	1.6	3.2	1.4	3.0
23	6.9	10	2.8	6.1	12	3.2	3.0	1.9	1.7	3.2	1.4	2.5
24	21	7.4	2.9	5.9	9.0	4.1	2.8	1.7	1.9	2.9	1.3	2.4
25	272	.72	3.0	5.9	7.0	4.5	2.5	1.6	2.2	2.8	1.4	2.3
26	27	.56	3.1	5.6	14	4.2	2.2	1.7	2.4	2.7	1.4	2.6
27	11	.52	3.1	5.7	57	3.9	2.0	1.7	2.7	2.4	1.4	7.6
28	6.4	.48	3.2	5.7	29	3.8	1.7	1.7	2.7	2.2	1.5	2.6
29	23	2.4	3.3	5.8	7.3	4.2	1.5	1.8	3.0	2.0	5.7	2.5
30	6.4	82	3.4	5.8	---	4.5	1.4	1.9	3.6	1.9	3.2	2.4
31	5.3	---	3.6	5.9	---	4.5	---	2.1	---	1.9	3.3	---
TOTAL	470.2	385.99	124.7	166.2	309.5	125.57	129.7	49.8	67.7	138.0	54.6	205.0

WTR YR 1992 TOTAL 2226.96

WISCONSIN RIVER BASIN

05406497 BLACK EARTH CREEK AT SOUTH VALLEY ROAD NEAR BLACK EARTH, WI

LOCATION.--Lat 43°07'30", long 89°42'35", in NE 1/4 SW 1/4 sec.31, T.8 N., R.7 E., Dane County, Hydrologic Unit 07070005, on right bank, at bridge on South Valley Road, 2.1 mi southeast of Black Earth.

DRAINAGE AREA.--40.6 mi², of which 2.8 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 820 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected period, Jan. 15-18. Records good except those for ice-affected period, which is fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	88	42	28	25	48	31	31	26	24	26	27
2	21	67	37	28	26	40	30	30	26	26	25	28
3	21	47	35	28	29	36	29	29	26	24	25	29
4	24	41	32	28	30	35	29	29	25	23	25	27
5	27	38	31	28	26	36	28	29	25	23	25	28
6	24	36	30	28	26	37	29	29	25	22	24	32
7	23	33	32	28	26	35	29	29	25	23	26	28
8	23	31	36	29	25	34	29	29	25	29	27	28
9	22	30	36	31	25	44	32	28	25	24	25	34
10	22	30	35	29	25	38	30	28	25	24	24	30
11	22	31	34	29	25	34	31	29	24	23	23	28
12	21	31	41	29	25	32	29	29	25	29	24	27
13	21	31	42	30	25	31	29	29	25	38	23	26
14	22	33	37	28	25	30	29	29	24	40	23	28
15	22	46	34	27	25	30	33	29	26	30	23	27
16	22	38	32	26	25	30	36	28	25	28	22	45
17	22	34	32	26	26	32	34	29	26	26	22	40
18	22	56	31	26	27	31	33	28	25	25	22	51
19	22	44	30	25	28	30	40	27	26	25	23	36
20	22	39	30	26	30	29	43	27	26	26	23	31
21	22	35	30	26	32	29	39	27	25	26	23	38
22	23	34	30	26	36	29	37	27	25	26	22	31
23	23	42	30	27	44	29	36	33	26	27	22	27
24	29	39	29	26	46	32	36	27	28	26	22	26
25	191	34	29	25	37	35	34	27	27	26	24	26
26	60	32	29	25	37	33	34	27	26	27	27	29
27	49	32	29	25	62	31	33	28	25	26	26	34
28	44	31	29	25	91	30	32	27	25	26	26	28
29	57	32	29	25	53	32	32	27	25	26	38	26
30	50	70	28	26	---	32	31	26	25	25	29	26
31	43	---	28	25	---	32	---	26	---	26	27	---
TOTAL	1037	1205	1009	838	962	1036	977	877	762	819	766	921
MEAN	33.5	40.2	32.5	27.0	33.2	33.4	32.6	28.3	25.4	26.4	24.7	30.7
MAX	191	88	42	31	91	48	43	33	28	40	38	51
MIN	21	30	28	25	25	29	28	26	24	22	22	26
CFSM	.88	1.06	.86	.72	.88	.88	.86	.75	.67	.70	.65	.81
IN.	1.02	1.19	.99	.82	.95	1.02	.96	.86	.75	.81	.75	.91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	MEAN	25.2	26.8	23.5	23.7	24.9	40.2	32.9	28.2	28.0	24.9	22.8	23.6
MAX	33.5	40.2	32.5	27.0	33.2	48.2	43.9	31.5	31.1	26.4	24.7	30.7	
(WY)	1992	1992	1992	1992	1992	1990	1991	1991	1990	1992	1992	1992	
MIN	19.8	19.2	18.5	18.7	20.7	33.4	22.2	24.8	25.4	23.8	21.5	18.1	
(WY)	1991	1991	1990	1991	1990	1992	1990	1990	1992	1990	1990	1990	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1990 - 1992

ANNUAL TOTAL	10837		11209									
ANNUAL MEAN	29.7		30.6							27.1		
HIGHEST ANNUAL MEAN										30.6		1992
LOWEST ANNUAL MEAN										24.9		1990
HIGHEST DAILY MEAN	191	Oct 25	191	Oct 25						218	Jun 29	1990
LOWEST DAILY MEAN	17	Jan 29	21	Oct 1-3, 12-13						17	Many days	
ANNUAL SEVEN-DAY MINIMUM	18	Jan 27	22	Oct 9						17	Aug 29	1990
INSTANTANEOUS PEAK FLOW			315	Oct 25						(a)410	Mar 9	1990
INSTANTANEOUS PEAK STAGE			6.69	Oct 25						(b)7.35	Jun 29	1990
INSTANTANEOUS LOW FLOW			20	(c)Oct 3						(d)9.4	Jan 22	1991
ANNUAL RUNOFF (CFSM)	.79		.81							.72		
ANNUAL RUNOFF (INCHES)	10.66		11.03							9.73		
10 PERCENT EXCEEDS	42		38							36		
50 PERCENT EXCEEDS	27		28							24		
90 PERCENT EXCEEDS	19		23							19		

(a) Gage height, 7.26 ft

(b) Backwater from vegetation

(c) Also occurred Oct. 12, 13, 16, 18-21

(d) Result of freezeup

05406497 BLACK EARTH CREEK AT SOUTH VALLEY ROAD NEAR BLACK EARTH, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1989 to current year.

DISSOLVED OXYGEN: April 1990 to current year.

INSTRUMENTATION.--Continuous water temperature recorder since November 1989 and continuous dissolved oxygen recorder since April 1990.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 24.0°C, June 27, 1991; minimum observed, 0.0°C, Dec. 3, 12, 14-25, 1989, Mar. 8-9, 1990, Dec. 3-4, 22-27, 30-31, 1990, Jan. 3-4, 7, Feb. 15-16, 1991, and Jan. 15-16, 18-19, 1992.

DISSOLVED OXYGEN: Maximum observed, 18.3 mg/L, Apr. 28, 1991 and May 8, 1992; minimum observed, 3.9 mg/L, July 2, 1991.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 21.5°C, Aug. 9; minimum observed, 0.0°C, Jan. 15-16, 18-19.

DISSOLVED OXYGEN: Maximum observed, 18.3 mg/L, May 8; minimum observed, 4.3 mg/L, May 12.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					APR 1992				
02...	1348	22	605	13.5	28...	1259	34	580	11.5
NOV					JUN				
20...	1306	39	580	9.0	02...	1347	26	590	17.0
DEC					JUL				
26...	1410	30	575	6.5	06...	1216	21	610	16.0
JAN 1992					AUG				
30...	1322	27	585	6.0	17...	1410	22	600	15.5
MAR									
12...	1403	32	595	6.0					

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	12.0	10.5	11.5	10.0	7.0	9.5	4.5	2.5	3.5	5.5	5.0	5.5
2	14.0	12.0	13.0	7.0	4.0	5.0	4.0	3.0	3.5	6.5	5.5	6.0
3	13.0	11.0	12.0	5.0	3.5	4.5	5.0	3.0	4.0	7.0	6.0	6.5
4	12.0	10.0	11.0	5.5	3.5	4.5	3.0	1.5	2.0	6.5	6.0	6.0
5	12.0	9.0	10.0	5.5	4.5	5.0	3.5	2.5	3.0	6.0	5.5	5.5
6	11.0	8.5	9.5	5.5	3.5	5.0	5.0	2.0	3.0	6.0	5.5	6.0
7	11.5	7.5	9.5	5.0	2.5	3.5	7.0	5.0	6.5	6.0	5.5	6.0
8	14.0	9.0	11.5	5.5	2.5	4.0	7.5	5.5	7.0	6.0	5.5	5.5
9	14.0	11.0	12.5	6.0	3.5	4.5	6.0	4.5	5.5	6.0	5.0	6.0
10	12.0	9.0	11.0	6.0	4.5	5.5	7.0	5.0	6.0	5.0	3.5	4.5
11	13.5	10.0	11.5	7.0	6.0	6.5	6.5	4.5	5.5	6.0	4.0	5.0
12	12.5	9.5	11.0	8.0	6.5	7.0	7.5	6.0	6.5	6.0	5.0	5.5
13	11.0	8.0	9.5	9.0	6.5	7.5	6.0	4.5	5.5	5.5	4.0	5.0
14	10.5	9.0	9.5	9.0	6.5	7.5	5.5	2.5	3.5	4.0	2.0	3.0
15	10.5	8.0	9.0	9.0	7.5	8.5	3.0	1.5	2.5	3.0	.0	1.5
16	11.5	6.5	9.0	8.0	6.0	7.0	4.5	1.5	3.0	2.5	.0	1.0
17	13.5	9.5	11.5	8.0	6.0	6.5	4.5	3.5	4.0	3.0	.5	2.5
18	11.5	8.0	10.0	10.0	8.0	9.0	3.0	1.5	2.5	.5	.0	.5
19	9.5	6.0	8.0	9.5	8.0	8.5	4.0	1.5	2.5	3.0	.0	1.0
20	10.5	7.0	9.0	9.0	7.5	8.5	5.0	4.0	4.5	4.0	2.0	3.0
21	12.0	8.0	10.0	8.0	6.0	7.5	5.5	4.0	4.5	5.5	3.0	4.5
22	14.0	10.5	12.0	8.5	7.0	8.0	5.5	3.5	4.5	6.0	4.5	5.5
23	15.5	12.0	13.5	8.5	5.5	7.0	6.0	4.0	5.0	6.0	2.0	4.5
24	15.5	14.0	15.0	5.0	3.5	4.5	5.0	2.5	4.0	2.5	.5	1.5
25	15.0	12.0	13.5	4.0	3.0	3.5	5.0	2.5	4.0	4.0	1.5	3.0
26	12.0	10.0	11.0	5.0	2.5	3.5	6.0	3.5	5.0	4.0	2.0	3.0
27	10.5	10.0	10.5	6.5	4.5	5.5	6.5	5.5	6.0	4.5	2.5	3.5
28	11.5	10.5	11.0	5.0	4.5	5.0	6.0	5.5	6.0	6.0	4.0	4.5
29	13.5	11.5	12.5	7.5	5.0	5.5	6.5	5.0	5.5	5.5	4.0	4.5
30	11.0	8.5	9.0	7.5	3.0	4.5	6.0	4.5	5.5	6.5	5.0	5.5
31	8.5	8.0	8.0	---	---	---	6.0	5.5	5.5	6.0	4.5	5.5
MONTH	15.5	6.0	10.8	10.0	2.5	6.1	7.5	1.5	4.5	7.0	.0	4.2

WISCONSIN RIVER BASIN

05406497 BLACK EARTH CREEK AT SOUTH VALLEY ROAD NEAR BLACK EARTH, WI--CONTINUED

WATER TEMPERATURE. DEGREES CELSIUS. WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	5.5	3.0	4.5	10.0	4.0	6.5	7.5	5.5	6.5	19.5	11.5	15.5
2	7.0	4.0	5.5	8.5	4.5	6.5	10.0	4.0	7.0	17.0	13.0	14.5
3	7.5	4.5	6.0	7.5	6.0	6.5	10.0	5.5	8.0	15.5	9.5	12.5
4	6.0	4.5	5.5	10.0	6.0	8.0	11.5	6.0	8.5	12.5	9.0	11.0
5	6.0	3.0	5.0	9.0	7.5	8.5	12.5	6.0	9.0	14.5	8.0	11.0
6	5.5	4.0	5.0	9.5	8.0	8.5	12.5	7.5	10.0	16.0	7.5	12.0
7	5.0	3.0	4.0	9.0	8.0	8.5	14.0	9.0	11.5	17.0	9.0	13.0
8	3.5	1.0	2.0	12.0	8.0	10.0	10.5	7.5	9.5	17.5	9.5	13.5
9	3.5	.5	2.0	10.0	3.5	7.0	13.0	8.0	10.0	18.0	10.5	14.5
10	5.0	3.0	4.0	5.5	2.5	4.0	10.5	7.0	8.0	19.0	12.0	15.5
11	5.5	3.0	4.5	7.0	2.5	5.0	8.5	6.5	7.5	18.0	13.0	15.5
12	4.0	1.5	3.0	7.5	3.0	5.0	10.0	4.5	7.5	16.5	13.5	15.0
13	5.0	4.0	4.5	8.0	3.0	5.5	8.0	6.0	7.0	17.5	11.5	14.5
14	5.5	5.0	5.0	7.5	5.0	6.5	9.0	6.5	7.5	15.0	11.5	13.5
15	5.0	2.5	4.0	8.5	4.0	6.5	9.0	7.0	8.0	16.5	11.5	14.0
16	6.5	5.0	5.5	8.0	4.0	6.5	8.5	8.0	8.0	19.0	12.5	16.0
17	6.5	5.5	6.0	10.5	6.0	8.0	8.5	7.0	8.0	19.5	15.0	17.0
18	5.5	4.0	5.0	8.0	5.5	7.0	11.0	7.5	9.0	18.5	13.0	16.0
19	6.5	5.0	5.5	10.0	4.5	7.5	14.0	10.5	12.0	19.0	12.0	15.5
20	7.0	4.0	5.5	10.0	6.0	7.5	14.0	12.0	13.0	19.0	13.0	16.0
21	5.5	3.0	4.5	7.0	3.0	4.5	12.5	8.0	9.5	19.0	14.0	16.5
22	7.5	4.0	5.5	9.5	3.0	6.0	9.5	7.0	8.0	19.0	14.5	17.0
23	6.0	2.5	4.5	10.5	3.5	7.0	9.0	7.5	8.5	17.5	13.0	15.0
24	4.0	3.0	4.0	12.0	5.5	8.5	9.5	8.0	8.5	12.5	9.5	10.5
25	5.0	3.5	4.5	11.5	6.5	9.0	9.5	7.5	8.5	11.0	8.5	9.5
26	7.0	3.0	5.0	9.0	5.5	7.5	10.0	7.5	8.5	12.0	9.5	11.0
27	7.5	2.0	5.0	10.0	4.0	7.0	14.0	7.0	10.0	15.0	9.0	12.0
28	4.5	1.5	3.0	8.5	5.0	7.0	14.0	7.0	11.0	16.5	10.0	13.0
29	6.5	1.5	4.0	7.5	6.5	7.0	16.5	9.5	12.5	16.5	10.5	13.5
30	---	---	---	12.0	6.5	9.0	17.0	10.0	13.5	16.5	11.5	14.5
31	---	---	---	10.5	6.5	8.5	---	---	---	18.0	12.0	15.0
MONTH	7.5	.5	4.6	12.0	2.5	7.1	17.0	4.0	9.1	19.5	7.5	14.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	17.0	13.5	15.5	19.5	15.0	17.0	19.5	14.0	16.5	17.0	13.0	15.0
2	19.0	13.5	16.0	17.5	15.5	16.5	19.5	16.0	17.5	17.5	15.0	16.0
3	18.5	13.5	16.0	17.5	15.0	16.0	17.5	15.0	16.0	18.5	15.0	16.5
4	16.5	13.5	15.0	19.0	13.5	16.0	17.5	13.0	15.5	17.0	13.5	15.5
5	19.5	14.0	16.5	18.0	14.0	16.0	18.5	14.0	16.0	19.0	14.5	16.5
6	16.5	14.0	15.0	18.0	13.0	15.5	18.0	13.5	16.0	18.5	16.5	17.0
7	18.5	12.5	15.5	16.5	14.5	15.5	16.5	15.0	15.5	17.0	15.0	16.0
8	16.5	13.5	15.5	20.5	15.0	17.5	20.5	16.0	18.0	17.5	14.5	16.0
9	18.5	14.0	16.0	19.5	16.0	17.5	21.5	17.0	19.0	15.0	14.0	14.5
10	18.5	14.5	16.5	20.5	16.0	18.0	20.0	17.0	18.5	15.0	12.5	14.0
11	20.5	15.0	17.5	19.0	16.0	17.5	19.0	15.0	17.0	16.0	12.5	14.0
12	20.5	15.5	18.0	18.0	16.5	17.0	17.0	14.5	15.5	16.5	12.5	14.5
13	21.0	16.5	18.5	17.5	16.0	16.5	15.5	13.0	14.5	18.0	14.0	16.0
14	21.0	17.0	19.0	17.0	15.0	16.0	16.5	13.5	15.0	17.0	15.5	16.0
15	18.0	15.0	16.0	18.0	14.0	16.0	17.0	12.5	14.5	18.0	15.0	16.0
16	16.5	14.5	15.5	18.0	15.5	16.5	17.0	12.5	15.0	17.5	16.0	16.5
17	21.0	16.0	18.5	19.0	15.0	17.0	17.0	13.0	15.5	17.0	16.5	17.0
18	18.0	16.5	17.0	19.0	15.0	17.0	18.5	15.0	16.5	18.0	15.0	16.5
19	16.5	14.0	15.5	19.5	15.0	17.0	17.5	13.5	15.5	15.0	12.0	13.5
20	17.0	12.5	14.5	18.5	15.5	17.0	17.5	13.0	15.0	14.0	12.0	13.0
21	16.5	12.0	14.5	18.0	15.0	16.5	18.0	13.0	15.5	15.0	13.5	14.0
22	14.0	12.0	12.5	16.0	13.5	14.5	18.0	14.0	16.0	14.5	12.0	13.5
23	15.5	12.0	13.5	14.0	13.5	13.5	19.0	14.5	17.0	14.0	10.0	12.0
24	17.0	13.0	15.0	18.0	13.0	15.5	20.0	16.0	18.0	14.5	11.0	13.0
25	18.0	13.5	16.0	16.0	15.0	15.5	20.0	16.5	18.0	14.5	11.0	13.0
26	18.0	14.5	16.0	19.5	15.0	17.0	18.0	14.5	16.0	15.0	14.0	14.0
27	17.5	12.5	15.0	20.0	15.5	17.5	15.5	13.5	14.5	15.0	12.5	14.0
28	18.5	13.0	15.5	20.0	15.5	17.5	15.5	12.0	14.0	14.0	11.5	12.5
29	19.5	15.0	17.0	18.5	15.5	17.0	18.5	13.5	16.0	13.0	9.5	11.0
30	19.5	15.0	17.0	16.0	14.0	14.5	18.5	15.0	16.5	14.0	10.0	12.0
31	---	---	---	18.0	13.0	15.5	16.5	13.5	15.0	---	---	---
MONTH	21.0	12.0	16.0	20.5	13.0	16.4	21.5	12.0	16.1	19.0	9.5	14.6
YEAR	21.5	.0	10.3									

WISCONSIN RIVER BASIN

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05406497 BLACK EARTH CREEK AT SOUTH VALLEY ROAD NEAR BLACK EARTH, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	9.4	7.8	8.6	9.1	8.1	8.7	---	---	---	---	---	---
2	10.4	8.4	9.4	10.9	8.6	10.2	---	---	---	---	---	---
3	11.3	9.1	10.0	11.9	10.7	11.1	---	---	---	---	---	---
4	11.3	9.3	10.1	12.2	10.6	11.2	---	---	---	---	---	---
5	13.5	8.9	10.9	11.4	10.3	10.8	---	---	---	---	---	---
6	9.8	8.3	9.0	12.0	10.3	11.0	---	---	---	---	---	---
7	10.0	8.4	9.1	12.5	10.9	11.5	---	---	---	---	---	---
8	10.8	8.7	9.6	12.6	10.8	11.5	---	---	---	---	---	---
9	11.3	8.6	9.7	12.2	10.4	11.2	---	---	---	---	---	---
10	13.2	7.6	9.9	11.4	10.4	10.8	---	---	---	---	---	---
11	12.7	7.2	9.2	11.1	10.1	10.5	---	---	---	---	---	---
12	12.8	7.2	9.4	---	---	---	---	---	---	---	---	---
13	13.9	8.0	10.0	---	---	---	---	---	---	---	---	---
14	12.6	7.9	9.4	---	---	---	---	---	---	---	---	---
15	14.2	8.5	10.5	---	---	---	---	---	---	---	---	---
16	14.1	7.8	10.3	---	---	---	---	---	---	---	---	---
17	14.3	7.4	9.9	---	---	---	---	---	---	---	---	---
18	14.5	7.3	9.8	---	---	---	---	---	---	---	---	---
19	15.6	8.8	11.2	---	---	---	---	---	---	---	---	---
20	16.0	8.8	11.1	---	---	---	---	---	---	---	---	---
21	15.8	8.2	10.9	---	---	---	---	---	---	---	---	---
22	15.5	7.4	10.3	---	---	---	---	---	---	---	---	---
23	15.6	6.9	9.8	---	---	---	---	---	---	---	---	---
24	12.2	6.5	8.0	---	---	---	---	---	---	---	---	---
25	7.2	5.3	6.2	---	---	---	---	---	---	---	---	---
26	8.5	7.2	8.0	---	---	---	---	---	---	---	---	---
27	9.5	8.2	8.9	---	---	---	---	---	---	---	---	---
28	9.5	8.5	9.0	---	---	---	---	---	---	---	---	---
29	8.7	7.7	8.2	---	---	---	---	---	---	---	---	---
30	10.8	8.0	9.5	---	---	---	---	---	---	---	---	---
31	10.3	9.1	9.7	---	---	---	---	---	---	---	---	---
MONTH	16.0	5.3	9.5	---	---	---	---	---	---	---	---	---
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	18.3	6.8	11.8
10	---	---	---	---	---	---	---	---	---	17.8	6.5	11.3
	---	---	---	---	---	---	---	---	---	17.3	6.2	10.9
11	---	---	---	---	---	---	---	---	---	15.9	5.7	9.7
12	---	---	---	---	---	---	---	---	---	13.9	4.3	9.1
13	---	---	---	---	---	---	---	---	---	15.8	6.4	10.5
14	---	---	---	---	---	---	---	---	---	15.6	6.6	10.0
15	---	---	---	---	---	---	---	---	---	15.3	6.9	10.7
16	---	---	---	---	---	---	---	---	---	14.9	6.0	9.9
17	---	---	---	---	---	---	---	---	---	15.5	5.6	9.7
18	---	---	---	---	---	---	---	---	---	16.0	6.5	10.6
19	---	---	---	---	---	---	---	---	---	16.2	6.7	10.9
20	---	---	---	---	---	---	---	---	---	16.4	6.6	10.8
21	---	---	---	---	---	---	---	---	---	15.7	6.3	10.3
22	---	---	---	---	---	---	---	---	---	14.4	6.0	9.5
23	---	---	---	---	---	---	---	---	---	12.6	5.2	8.1
24	---	---	---	---	---	---	---	---	---	13.7	7.5	10.6
25	---	---	---	---	---	---	---	---	---	14.3	9.0	11.1
26	---	---	---	---	---	---	---	---	---	13.9	8.7	10.9
27	---	---	---	---	---	---	---	---	---	14.7	8.2	11.1
28	---	---	---	---	---	---	---	---	---	15.1	7.9	10.8
29	---	---	---	---	---	---	---	---	---	14.9	7.6	10.9
30	---	---	---	---	---	---	---	---	---	14.9	7.3	10.6
31	---	---	---	---	---	---	---	---	---	14.6	7.0	10.5

WISCONSIN RIVER BASIN

05406497 BLACK EARTH CREEK AT SOUTH VALLEY ROAD NEAR BLACK EARTH, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	14.2	6.8	10.3	---	---	---	14.4	6.3	9.7	14.0	6.6	9.8
2	14.2	6.7	10.2	---	---	---	14.0	6.1	9.0	---	---	---
3	14.4	6.6	10.2	11.5	6.9	9.3	13.7	6.3	9.4	---	---	---
4	13.5	6.8	10.1	11.8	8.6	10.0	13.8	6.8	9.8	---	---	---
5	14.0	6.6	9.8	14.4	8.5	9.8	14.2	6.6	9.7	---	---	---
6	12.4	6.4	9.3	11.8	8.4	9.6	14.3	6.5	9.8	---	---	---
7	14.0	6.9	10.1	12.3	8.6	9.5	11.0	6.2	8.1	---	---	---
8	13.8	6.5	9.7	10.8	8.3	9.5	13.8	5.3	8.7	---	---	---
9	13.9	6.8	9.7	---	---	---	12.7	5.5	8.6	---	---	---
10	13.9	6.7	10.0	---	---	---	12.6	5.1	7.9	---	---	---
11	13.8	6.3	9.7	---	---	---	14.1	6.1	9.2	---	---	---
12	13.8	6.0	9.6	11.1	8.5	9.6	13.1	6.4	8.8	---	---	---
13	13.9	5.9	9.5	---	---	---	13.7	7.0	9.7	---	---	---
14	13.9	5.6	9.2	---	---	---	13.5	7.1	9.8	---	---	---
15	12.3	5.9	8.7	---	---	---	14.6	7.1	10.1	---	---	---
16	13.0	6.4	9.5	12.6	6.4	9.1	14.5	6.9	10.0	---	---	---
17	13.2	6.3	9.1	13.5	6.6	9.5	13.9	6.8	9.8	---	---	---
18	12.6	5.6	9.0	14.2	6.6	9.7	14.1	6.3	9.2	---	---	---
19	13.0	6.7	9.8	14.5	6.7	9.5	14.4	6.5	9.7	---	---	---
20	15.0	7.5	10.9	14.3	6.6	9.9	14.4	6.6	9.8	8.1	6.5	7.1
21	15.0	7.4	11.0	14.4	6.6	10.0	14.7	6.5	9.8	7.9	6.1	6.8
22	12.9	7.4	9.8	9.4	6.8	8.1	14.7	6.3	9.6	8.6	6.4	7.5
23	14.1	7.8	10.4	11.7	7.2	9.0	14.2	6.0	9.3	8.9	7.3	7.9
24	14.2	7.2	10.3	14.6	7.0	10.4	14.0	5.6	8.8	10.3	7.1	8.9
25	16.4	7.1	10.6	11.5	6.5	8.3	12.5	5.2	8.0	10.6	8.1	9.5
26	15.2	7.4	11.0	13.8	6.4	9.6	10.2	4.6	7.1	10.7	8.4	9.4
27	---	---	---	13.8	6.1	9.4	12.4	6.8	9.2	11.4	8.1	10.0
28	---	---	---	14.0	6.2	9.3	13.7	7.4	10.0	9.8	8.1	8.9
29	---	---	---	13.9	6.1	9.4	10.7	6.0	8.2	10.1	8.8	9.5
30	---	---	---	11.2	6.3	8.3	13.0	5.9	8.9	10.7	9.1	9.7
31	---	---	---	14.3	6.9	10.0	13.3	6.8	9.5	---	---	---
MONTH	---	---	---	---	---	---	14.7	4.6	9.2	---	---	---

WISCONSIN RIVER BASIN

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05406500 BLACK EARTH CREEK AT BLACK EARTH, WI

LOCATION.--Lat 43°08'03", long 89°43'56", in SW 1/4 sec.25, T.8 N., R.6 E., Dane County, Hydrologic Unit 07070005, on right bank, 0.8 mi east of Black Earth and 2.1 mi upstream from Vermont Creek.

DRAINAGE AREA.--45.6 mi², of which 2.8 mi² probably is noncontributing.

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

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

GAGE.--Water-stage recorder. Datum of gage is 812.95 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Ice-affected period, Jan. 16-18. Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	95	50	32	30	52	32	34	28	25	28	30
2	23	76	42	32	31	45	30	32	29	29	26	31
3	23	50	39	32	36	40	30	32	29	27	26	32
4	27	43	36	32	38	39	28	31	28	24	25	29
5	34	39	34	31	33	40	27	31	27	24	24	28
6	26	37	33	31	32	43	28	30	28	23	24	35
7	24	34	33	31	30	42	28	30	27	24	27	31
8	24	31	41	32	29	40	28	30	27	33	32	30
9	23	30	42	37	28	53	32	30	28	26	27	39
10	22	29	40	34	28	48	30	30	27	26	25	35
11	22	29	38	32	28	42	32	31	27	26	25	31
12	21	29	47	34	27	40	29	32	27	34	27	30
13	21	29	50	36	28	38	29	32	26	44	27	29
14	22	31	44	34	28	37	29	31	26	50	26	34
15	22	47	40	31	29	34	35	30	27	35	25	33
16	21	40	38	31	28	35	40	30	25	31	26	50
17	21	36	37	30	29	38	38	31	27	29	26	49
18	20	58	35	30	32	36	36	29	26	28	26	56
19	21	47	34	29	32	33	45	29	26	28	25	40
20	21	41	35	28	36	32	49	27	25	28	25	33
21	21	38	35	30	41	32	46	27	23	29	25	43
22	21	36	35	31	44	32	42	28	23	28	24	33
23	22	45	35	33	56	32	41	36	24	30	24	29
24	32	43	35	31	57	35	41	29	26	27	24	27
25	176	38	34	31	45	40	40	28	25	27	25	27
26	66	36	34	29	44	38	39	27	25	28	29	32
27	51	35	34	30	69	34	38	28	23	26	26	41
28	43	33	34	30	94	32	36	28	24	26	25	32
29	62	36	33	31	60	34	35	27	25	27	42	29
30	54	79	33	31	---	35	34	27	26	29	31	28
31	46	---	33	31	---	34	---	28	---	28	29	---
TOTAL	1055	1270	1163	977	1122	1185	1047	925	784	899	826	1026
MEAN	34.0	42.3	37.5	31.5	38.7	38.2	34.9	29.8	26.1	29.0	26.6	34.2
MAX	176	95	50	37	94	53	49	36	29	50	42	56
MIN	20	29	33	28	27	32	27	27	23	23	24	27
CFSM	.80	.99	.88	.74	.90	.89	.82	.70	.61	.68	.62	.80
IN.	.92	1.10	1.01	.85	.98	1.03	.91	.80	.68	.78	.72	.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1992, BY WATER YEAR (WY)

	30.1	31.1	28.7	27.9	31.2	47.7	40.2	36.0	34.2	32.0	28.7	30.8
MEAN	30.1	31.1	28.7	27.9	31.2	47.7	40.2	36.0	34.2	32.0	28.7	30.8
MAX	50.4	70.2	48.0	51.6	57.0	85.3	68.1	91.2	68.6	76.7	48.4	66.0
(WY)	1987	1986	1988	1974	1985	1961	1959	1973	1974	1960	1960	1980
MIN	15.9	16.1	14.8	15.1	16.0	16.9	22.5	18.7	14.4	14.0	15.5	15.3
(WY)	1967	1967	1965	1959	1959	1968	1957	1965	1965	1965	1958	1958

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1954 - 1992

ANNUAL TOTAL	12121	12279	
ANNUAL MEAN	33.2	33.5	33.2
HIGHEST ANNUAL MEAN			53.4
LOWEST ANNUAL MEAN			19.8
HIGHEST DAILY MEAN	223	176	702
LOWEST DAILY MEAN	19	20	12
ANNUAL SEVEN-DAY MINIMUM	19	21	13
INSTANTANEOUS PEAK FLOW		243	1750
INSTANTANEOUS PEAK STAGE		3.65	6.58
INSTANTANEOUS LOW FLOW		20	(b)4.8
ANNUAL RUNOFF (CFSM)	.78	.78	.78
ANNUAL RUNOFF (INCHES)	10.54	10.67	10.55
10 PERCENT EXCEEDS	48	44	48
50 PERCENT EXCEEDS	29	31	28
90 PERCENT EXCEEDS	21	25	18

(a) Also occurred July 26, 29, 1965

(b) Result of freezeup

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 43°11'54", long 90°26'26", in NW 1/4 sec.1, T.8 N., R.1 W., Grant County, Hydrologic Unit 07070005, on left bank at bridge on State Highway 80, 0.5 mi upstream from Eagle Mill Creek and 1.0 mi north of Muscoda.

DRAINAGE AREA.--10,400 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1902 to December 1903, 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 National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1929, nonrecording gage on bridge 200 ft upstream at same datum. Nov. 22, 1929, to Mar. 15, 1930, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 1-11 and ice-affected periods, Dec. 17-31 and Jan. 16 to Feb. 23. Records good except those for estimated daily discharges, which are fair. 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 less than 20 ft³/s was diverted out of basin through Portage Canal to Fox River throughout the year. Gage-height telemeter and data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4970	7740	13000	8790	8000	10400	12800	12300	7950	3850	4120	3670
2	5170	9130	14000	9090	8400	10800	12200	12000	6630	3820	4070	3680
3	5170	8730	15000	9470	9000	10500	11400	11800	6680	4060	3930	3560
4	5190	11700	17000	11000	9000	9890	11000	11600	8250	4310	3880	3680
5	5610	13400	17000	11000	9400	9610	11000	11300	7960	5150	3890	4000
6	5280	17400	17000	10700	9400	9960	11000	11100	7360	5270	3870	4950
7	5210	18200	18000	10100	9400	10600	11000	9590	6460	4300	3900	5570
8	5220	13500	19000	9960	9400	12000	11000	7470	5620	4340	4040	5440
9	5040	10100	16000	10100	10000	12400	12100	6950	5390	4560	3980	6250
10	4950	9810	14000	10000	7600	13100	14200	6710	5330	4390	3950	7660
11	4960	9880	14000	10100	7600	14100	17000	6420	4750	4190	3900	7420
12	5030	8320	14200	9750	7800	13300	17500	6400	4810	4200	3920	7130
13	5030	7690	15100	9710	7400	12500	16800	6610	4780	4110	4230	6620
14	5070	8900	15000	9040	8400	12600	15400	6750	4980	5380	3900	6970
15	5060	9840	13700	8800	9600	12600	14900	6270	5360	8060	3690	9290
16	5060	8410	11500	6600	10000	12600	12200	6160	5320	10000	3660	12400
17	5200	7780	9600	5000	9600	12300	13000	6560	5110	8820	3640	17300
18	5460	8170	12000	5400	9000	12200	17100	7150	5270	6510	3610	20000
19	5690	10200	12000	7800	9000	11900	22300	12300	5480	4890	3310	21100
20	5210	12100	10000	8000	8400	11300	28000	17000	5960	5060	3160	22600
21	4910	13200	10000	7800	8800	11400	32300	13000	5320	5430	3110	23500
22	4760	15500	10000	9000	9400	12000	33400	11000	4850	4790	3510	23400
23	5600	18700	11000	10000	9400	11400	33100	10700	5020	4700	3400	22400
24	5300	19500	11000	9200	8620	11400	31700	10900	4680	4540	3460	21900
25	6110	18800	11000	8800	7710	11600	29900	13600	4480	4280	3520	17800
26	7360	16400	11000	7800	7030	11700	29100	16200	4220	4520	3690	15500
27	7840	12300	10000	8000	7740	11600	26100	13600	4380	4430	3660	14000
28	7650	10900	8600	8000	9320	11500	20100	11400	4080	4240	4030	12400
29	8290	10900	8200	8200	10500	12100	15400	10300	3590	4190	4850	11900
30	8260	10900	8200	8600	---	12800	14000	9870	3860	4150	4420	11700
31	7970	---	8600	8000	---	12900	---	9330	---	4170	3810	---
TOTAL	177630	358100	394700	273810	254920	365060	557000	312340	163930	154710	118110	353790
MEAN	5730	11940	12730	8833	8790	11780	18570	10080	5464	4991	3810	11790
MAX	8290	19500	19000	11000	10500	14100	33400	17000	8250	10000	4850	23500
MIN	4760	7690	8200	5000	7030	9610	11000	6160	3590	3820	3110	3560

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	MEAN	7354	7726	6493	5949	6506	10930	16840	11840	10330	7168	5797	7209
MAX	25460	17130	13100	11400	12020	30400	37650	32270	24630	17780	11610	31280	
(WY)	1987	1986	1966	1973	1966	1973	1922	1960	1943	1978	1924	1938	
MIN	2638	2662	2616	3209	3113	3501	4788	4621	3091	2754	2567	2651	
(WY)	1977	1977	1977	1924	1924	1934	1964	1977	1988	1988	1988	1976	

SUMMARY STATISTICS

	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1914 - 1992
ANNUAL TOTAL	3583710	3484100	
ANNUAL MEAN	9818	9519	8676
HIGHEST ANNUAL MEAN			16030
LOWEST ANNUAL MEAN			4145
HIGHEST DAILY MEAN	36300	33400	79500
LOWEST DAILY MEAN	3750	3110	1460
ANNUAL SEVEN-DAY MINIMUM	4210	3350	1900
INSTANTANEOUS PEAK FLOW		33500	80800
INSTANTANEOUS PEAK STAGE		7.47	11.48
10 PERCENT EXCEEDS	16800	16100	15300
50 PERCENT EXCEEDS	7780	8800	6800
90 PERCENT EXCEEDS	4960	4070	3860

WISCONSIN RIVER BASIN

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05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1971, 1975 to current year. National Stream-Quality Accounting
Network data collection began in October 1974.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	
OCT 1991												
22...	1100	4590	259	8.4	11.0	3.9	11.2	742	105	34	21	
DEC												
12...	1130	14200	205	7.3	1.0	5.1	13.0	729	96	47	59	
MAR 1992												
18...	1045	12800	205	8.0	4.0	6.3	12.8	747	100	K11	75	
APR												
30...	1015	14200	176	7.6	12.0	4.5	10.5	751	99	K11	K8	
AUG												
14...	1230	3910	249	8.2	20.5	3.7	8.7	766	96	260	110	
DATE		HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 1991												
22...	110	26	12	10	2.3	115	1	97	16	13	<0.10	
DEC												
12...	78	19	7.5	9.9	3.0	75	--	62	19	17	<0.10	
MAR 1992												
18...	85	20	8.5	9.2	2.5	82	--	67	8.1	8.8	0.20	
APR												
30...	75	18	7.3	6.7	2.2	71	--	58	13	11	0.20	
AUG												
14...	110	25	12	8.4	2.2	133	--	109	12	13	0.10	
DATE		SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT 1991												
22...	1.3	153	140	<0.010	0.290	0.030	0.030	0.80	0.050	0.010	<0.010	
DEC												
12...	7.2	139	123	0.020	0.740	0.130	0.150	0.60	0.030	0.070	0.050	
MAR 1992												
18...	9.8	101	113	0.020	0.960	0.150	0.140	0.50	0.080	0.100	0.050	
APR												
30...	7.4	116	104	<0.010	0.680	0.030	0.030	<0.20	0.030	<0.010	0.010	
AUG												
14...	6.3	146	146	0.020	0.380	0.030	0.020	0.70	0.070	0.010	0.020	

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

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 1991 22...	1100	4590	<10	21	<3	69	<4
MAR 1992 18...	1045	12800	30	20	<3	700	<4
APR 30...	1015	14200	30	19	<3	300	<4
AUG 14...	1230	3910	<10	19	<3	30	<4

DATE	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)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
OCT 1991 22...	7	<10	<1	<1	46	<6
MAR 1992 18...	9	<10	<1	<1	37	<6
APR 30...	9	<10	2	<1	33	<6
AUG 14...	6	<10	1	<1	43	<6

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1991 22...	1100	4590	259	11.0	11	136	62
DEC 12...	1130	14200	205	1.0	24	920	31
MAR 1992 18...	1045	12800	205	4.0	33	1140	35
APR 30...	1015	14200	176	12.0	22	843	55
AUG 14...	1230	3910	249	20.5	10	106	90

WISCONSIN RIVER BASIN

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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 National Geodetic Vertical Datum of 1929. Prior to Dec. 4, 1939, nonrecording gage on highway bridge at same datum.

REMARKS.--Estimated daily discharges: Aug. 25, 26, and ice-affected periods, Nov. 4-13, Nov. 24 to Dec. 12, Dec. 14-30, and Jan. 11 to Feb. 19. Records good except those for estimated daily discharges, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	335	320	144	130	267	198	206	143	122	116	113
2	108	611	210	144	130	533	187	198	141	124	117	119
3	108	247	200	144	140	359	180	181	143	135	117	146
4	108	180	190	144	150	675	179	178	139	125	113	129
5	131	170	180	144	150	446	172	176	138	118	112	121
6	148	160	170	144	130	424	168	169	135	116	108	260
7	130	150	180	144	110	382	177	166	135	114	111	190
8	126	140	200	144	110	299	180	164	134	127	129	151
9	122	140	200	152	110	722	175	163	134	131	121	150
10	118	150	190	151	110	616	173	161	133	122	155	168
11	116	150	200	130	110	303	207	158	130	122	187	142
12	116	150	210	140	110	253	182	169	128	133	126	133
13	116	150	391	150	110	217	168	164	125	181	122	128
14	115	161	220	120	110	212	167	154	124	257	119	970
15	115	224	180	130	110	196	209	154	123	162	116	825
16	115	202	170	140	110	184	654	155	138	139	114	1540
17	115	172	170	130	110	194	595	358	210	130	112	2320
18	114	366	170	130	110	187	357	236	175	126	112	751
19	113	292	170	130	110	180	381	180	144	131	110	384
20	113	208	160	130	108	174	486	168	137	173	108	277
21	113	186	160	130	107	171	819	161	130	135	107	239
22	113	178	160	130	108	169	524	160	126	129	107	216
23	113	180	160	130	119	171	398	198	131	159	106	194
24	116	170	150	130	136	193	331	171	155	148	104	183
25	190	160	150	130	130	221	293	160	138	134	103	175
26	166	160	150	130	135	202	271	160	128	133	133	175
27	150	160	150	130	208	179	251	159	123	126	129	203
28	138	160	150	130	383	171	232	155	122	121	120	182
29	148	170	150	130	383	205	221	152	121	118	128	167
30	161	360	150	130	---	237	214	149	125	116	142	165
31	141	---	150	130	---	212	---	147	---	119	118	---
TOTAL	3904	6242	5761	4215	4077	8954	8749	5430	4108	4226	3722	10916
MEAN	126	208	186	136	141	289	292	175	137	136	120	364
MAX	190	611	391	152	383	722	819	358	210	257	187	2320
MIN	108	140	150	120	107	169	167	147	121	114	103	113
CFSM	.47	.78	.70	.51	.53	1.09	1.10	.66	.51	.51	.45	1.37
IN.	.55	.87	.81	.59	.57	1.25	1.22	.76	.57	.59	.52	1.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1992, BY WATER YEAR (WY)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
MEAN	143	151	130	126	157	310	272	188	187	157	139	159
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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1939 - 1992

ANNUAL TOTAL	60793	70304	
ANNUAL MEAN	167	192	
HIGHEST ANNUAL MEAN			177
LOWEST ANNUAL MEAN			277
HIGHEST DAILY MEAN	699	Apr 15	97.1
LOWEST DAILY MEAN	98	Sep 2	7730
ANNUAL SEVEN-DAY MINIMUM	99	Sep 1	36
INSTANTANEOUS PEAK FLOW			49
INSTANTANEOUS PEAK STAGE			14300
ANNUAL RUNOFF (CFSM)	.63	11.47	14.92
ANNUAL RUNOFF (INCHES)	8.50	.72	.66
10 PERCENT EXCEEDS	234	9.83	9.03
50 PERCENT EXCEEDS	147	281	257
90 PERCENT EXCEEDS	110	150	130
		113	85

WISCONSIN RIVER BASIN

05410490 KICKAPOO RIVER AT STEUBEN, WI

LOCATION.--Lat 43°10'58", long 90°51'30", in NE 1/4 SW 1/4 sec.9, T.8 N., R.4 W., Crawford County, Hydrologic Unit 07070006, on right bank at upstream corner of town road bridge at Steuben and 18.6 mi upstream from mouth.

DRAINAGE AREA.--687 mi².

PERIOD OF RECORD.--May 1933 to current year. 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 National Geodetic Vertical Datum of 1929. May 1933 to Oct. 19, 1938, nonrecording gage at same site at datum 1.7 ft higher. Oct. 20, 1938 to September 1982, recording gage at site 1.2 mi downstream at datum 0.36 ft higher.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 6-12, Nov. 26 to Dec. 13, Dec. 15-28, and Jan. 13 to Feb. 14. Records good except those for ice-affected periods, which are poor. Data-collection platform and gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	321	545	660	435	380	774	623	607	424	380	383	380
2	323	930	620	432	400	729	581	584	418	381	381	365
3	325	1120	600	431	410	865	560	560	412	382	378	373
4	340	904	560	431	410	824	542	541	409	387	378	398
5	358	656	540	432	410	1000	530	523	405	379	370	398
6	374	560	520	432	410	1050	515	513	400	366	365	408
7	393	500	540	430	390	907	502	502	397	361	366	492
8	389	460	560	433	370	856	508	491	393	385	383	535
9	369	450	580	440	360	828	527	486	393	477	391	467
10	358	450	580	446	360	1020	523	480	391	418	406	445
11	352	460	560	446	360	1130	531	474	388	390	546	443
12	347	460	540	438	360	926	530	475	383	397	504	431
13	343	465	580	440	360	728	526	479	379	433	454	406
14	342	469	755	440	370	651	498	476	374	597	425	635
15	341	498	660	430	378	611	506	462	371	651	398	1260
16	342	553	520	420	375	586	572	455	382	548	387	1420
17	342	582	500	410	376	578	826	493	469	457	378	2710
18	339	627	500	400	390	562	1030	609	552	427	375	5100
19	336	816	500	400	403	551	894	641	506	417	372	4030
20	333	817	490	400	413	532	844	520	440	413	367	3140
21	335	649	490	400	415	521	1050	482	412	441	359	2540
22	336	580	490	400	397	519	1200	469	400	447	354	1970
23	338	566	470	400	399	512	1210	473	398	443	352	1230
24	346	562	470	400	412	511	1030	485	403	459	350	843
25	382	543	460	390	426	543	855	489	412	462	350	737
26	430	470	460	390	417	581	775	457	412	439	370	694
27	469	470	450	390	433	574	722	455	390	423	443	685
28	425	480	450	380	567	532	679	451	380	411	423	685
29	420	520	449	380	725	544	649	443	374	399	387	660
30	426	560	442	380	---	610	624	437	374	391	375	619
31	433	---	440	380	---	652	---	430	---	388	391	---
TOTAL	11307	17722	16436	12856	11876	21807	20962	15442	12241	13349	12161	34499
MEAN	365	591	530	415	410	703	699	498	408	431	392	1150
MAX	469	1120	755	446	725	1130	1210	641	552	651	546	5100
MIN	321	450	440	380	360	511	498	430	371	361	350	365
CFSM	.53	.86	.77	.60	.60	1.02	1.02	.73	.59	.63	.57	1.67
IN.	.61	.96	.89	.70	.64	1.18	1.14	.84	.66	.72	.66	1.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1992, BY WATER YEAR (WY)

	MEAN	408	425	370	353	418	790	691	505	489	468	412	446
MAX	798	858	781	846	1276	1856	1748	1415	981	1901	1180	1331	
(WY)	1973	1983	1985	1946	1966	1946	1959	1973	1947	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1933 - 1992	
ANNUAL TOTAL	166394		200658			
ANNUAL MEAN	456		548		482	
HIGHEST ANNUAL MEAN					756	
LOWEST ANNUAL MEAN					273	
HIGHEST DAILY MEAN	1230		5100		12600	
LOWEST DAILY MEAN	270		321		165	
ANNUAL SEVEN-DAY MINIMUM	277		337		165	
INSTANTANEOUS PEAK FLOW			5320		16500	
INSTANTANEOUS PEAK STAGE			14.38		(b)14.81	
INSTANTANEOUS LOW FLOW			321		(b)161	
ANNUAL RUNOFF (CFSM)	.66		.80		.70	
ANNUAL RUNOFF (INCHES)	9.01		10.87		9.53	
10 PERCENT EXCEEDS	653		761		732	
50 PERCENT EXCEEDS	420		449		388	
90 PERCENT EXCEEDS	314		368		255	

(a) Also occurred Jan. 4-9, Feb. 5-7, 1959

(b) Site and datum then in use

RESERVOIRS IN WISCONSIN RIVER BASIN

The 24 reservoirs listed below are used to stabilize the flow of the Wisconsin and Tomahawk Rivers for power generation and are also used for recreational purposes. The first 21 reservoirs are owned and operated by the Wisconsin Valley Improvement Co., which furnishes the gage heights and capacity tables. Revised capacity tables for all 21 reservoirs were received from the Company in April 1957 and were used to compute month-end usable contents beginning Sept. 30, 1955. Another revised capacity table for Burnt Rollways Reservoir was used to compute month-end usable contents beginning Sept. 30, 1964. Lake Dubay is owned by the Consolidated Water Power Co. Petenwell and Castle Rock are owned and operated by the Wisconsin River Power Co., which furnished the gage heights and capacity tables for those two reservoirs. Month-end contents are computed by the U.S. Geological Survey. The usable capacity of these reservoirs is usually less in summer than in winter because the allowable summer drawdown is limited by the Department of Natural Resources in the interest of riparian property owners. There are occasionally formal or informal changes in capacity and in minimum drawdown levels. Usable capacity figures listed below are for winter regulation.

- 05390100 Lac Vieux Desert on Wisconsin River, lat 46°07'18", long 89°09'07", in SE 1/4 NW 1/4 sec.17, T.42 N., R.11 E., Vilas County, 4.8 mi northwest of Phelps, used as a reservoir since 1908, has a usable capacity of 652,000,000 ft³. Drainage area, 34.4 mi².
- 05390150 Twin Lakes on Twin River, lat 46°01'20", long 89°10'05", in SW 1/4 NE 1/4 sec.19, T.41 N., R.11 E., Vilas County, 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°53'57", long 89°27'08", in SE 1/4 sec.35, T.40 N., R.8 E., Vilas County, 9.6 mi west of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 79,000,000 ft³. Drainage area, 19 mi².
- 05390750 Big St. Germain Lake on St. Germain River, lat 45°55'06", long 89°31'55", in SE 1/4 sec.30, T.40 N., R.8 E., Vilas County, 5.0 mi south of Sayer, 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 Rhineland city limits, used as a reservoir since 1908, has a usable capacity of 218,000,000 ft³. Drainage area, 95 mi².
- 05392100 Minocqua Lake on Tomahawk River, lat 45°52'35", long 89°43'38", on line between secs.10 and 15, T.39 N., R.6 E., Oneida County, 1.0 mi west of Minocqua, used as a reservoir since 1910, has a usable capacity of 628,000,000 ft³. Drainage area, 72.5 mi².
- 05392200 Squirrel Lake on Squirrel River, lat 45°50'37", long 89°54'13", in NE 1/4 sec.30, T.39 N., R.5 E., Oneida County, 9.4 mi west of Minocqua, used as a reservoir since 1908, has a usable capacity of 182,000,000 ft³. Drainage area, 15.2 mi².
- 05392300 Willow Reservoir on Tomahawk River, lat 45°42'45", long 89°50'38", in NE 1/4 sec.10, T.37 N., R.5 E., Oneida County, 8.8 mi southwest of Hazelhurst, used as a reservoir since 1927, has a usable capacity of 3,302,000,000 ft³. Drainage area, 310 mi².
- 05392500 Lake Nokomis on Tomahawk River, lat 45°32'20", long 89°44'48", in NW 1/4 sec.9, T.35 N., R.6 E., Lincoln County, at U.S. Geological Survey river gaging station, 0.5 mi east of Bradley, used as a reservoir since 1912, has a usable capacity of 1,808,000,000 ft³. Drainage area, 544 mi².
- 05393600 Spirit River Flowage on Spirit River, lat 45°26'18", long 89°44'30", in NE 1/4 sec.16, T.34 N., R.6 E., Lincoln County, 2.0 mi south of Tomahawk, used as a reservoir since 1923, has a usable capacity of 756,000,000 ft³. Drainage area, 158 mi².

WISCONSIN RIVER BASIN

RESERVOIRS IN WISCONSIN RIVER BASIN--CONTINUED

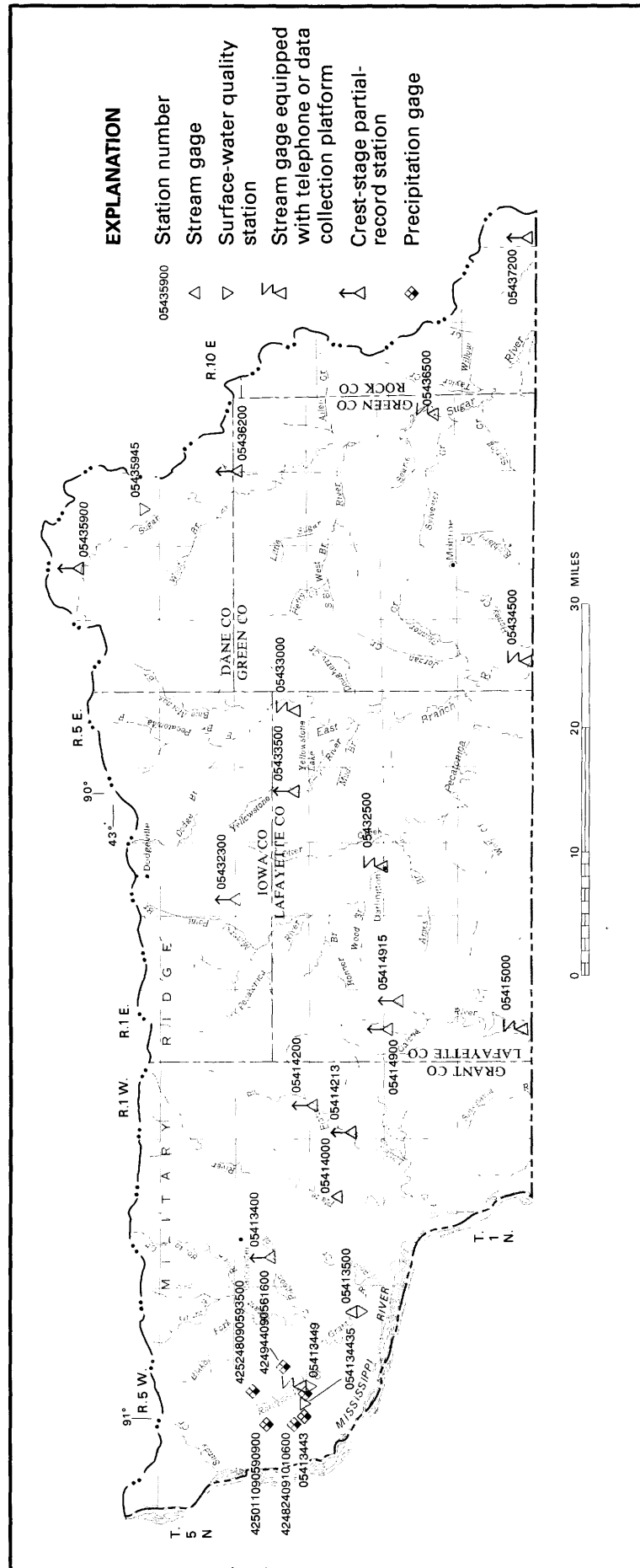
- 05399600 Big Eau Pleine Reservoir on Big Eau Pleine River, lat 44°43'52", long 89°45'35", in SW 1/4 sec.14, T.26 N., R.6 E., Marathon County, 3.0 mi northeast of Dancy, used as a reservoir since 1937, has a capacity of 4,457,000,000 ft³. Drainage area, 363 mi².
- 05400295 Lake Dubay on Wisconsin River, lat 44°39'54", long 89°39'03", in sec.10, T.25 N., R.7 E., Wood County, 1.5 mi downstream of Little Eau Pleine River, and 10.5 mi northwest of Stevens Point, has a usable capacity of 2,117,000,000 ft³. Drainage area, 4,900 mi².
- 05401400 Petenwell Flowage on Wisconsin River, lat 44°03'26", long 90°01'18", in SE 1/4 sec.4, T.18 N., R.4 E., Adams County, 5.2 mi upstream from Roche a Cri Creek, 2.4 mi west of 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 1991 to SEPTEMBER 1992

	LAC VIEUX DESERT	TWIN LAKES	BUCKATABON LAKE	SEVENMILE LAKE	LOWER NINEMILE LAKE	BURNT ROLLWAYS RESERVOIR	LONG LAKE	DEERSKIN LAKE
SEPT. 30.....	311	270	114	61	95	549	168	17
OCT. 31.....	285	264	100	63	100	594	123	20
NOV. 30.....	203	201	91	40	89	536	98	19
DEC. 31.....	127	72	69	10	57	366	47	14
JAN. 31.....	84	30	53	0	19	10	8	9
FEB. 28.....	36	5	44	0	28	0	9	6
MAR. 31.....	84	61	81	26	36	200	71	9
APR. 30.....	216	164	115	63	80	505	224	13
MAY 31.....	254	208	115	61	97	555	233	14
JUNE 30.....	224	223	116	63	98	591	206	14
JULY 31.....	248	248	115	62	102	533	196	14
AUG. 31.....	234	239	115	60	103	542	159	15
SEPT. 30.....	284	267	115	62	103	581	174	16

	SUGAR CAMP RESERVOIR	LITTLE ST. GERMAIN LAKE	BIG ST. GERMAIN LAKE	PICKEREL LAKE	RAINBOW LAKE	SOUTH PELICAN LAKE	NORTH PELICAN LAKE	MINOCCUA LAKE
SEPT. 30.....	404	72	161	267	1,341	261	136	493
OCT. 31.....	372	59	120	258	1,339	284	142	508
NOV. 30.....	425	42	104	251	2,130	292	133	511
DEC. 31.....	412	5	73	230	2,011	300	84	468
JAN. 31.....	299	5	37	178	1,857	228	44	285
FEB. 28.....	40	11	24	165	1,055	182	38	169
MAR. 31.....	287	38	80	242	435	238	64	290
APR. 30.....	393	69	150	255	1,924	346	128	414
MAY 31.....	397	71	158	266	1,982	269	141	499
JUNE 30.....	414	72	158	267	1,502	254	141	534
JULY 31.....	403	69	156	265	1,369	261	134	499
AUG. 31.....	399	62	162	270	848	249	141	516
SEPT. 30.....	386	72	156	269	1,690	292	140	505

	SQUIRREL LAKE	WILLOW RESERVOIR	LAKE NOKOMIS	SPIRIT RIVER FLOWAGE	BIG EAU PLEINE RESERVOIR	LAKE DUBAY	PETENWELL FLOWAGE	CASTLE ROCK FLOWAGE
SEPT. 30.....	166	2,280	1,126	470	3,551	4,060	17,439	5,664
OCT. 31.....	175	1,763	1,028	442	2,830	4,175	17,571	5,709
NOV. 30.....	160	3,083	1,752	733	4,430	4,144	17,597	5,812
DEC. 31.....	154	2,888	1,450	628	4,256	4,150	17,351	5,735
JAN. 31.....	66	2,012	1,074	392	3,220	3,891	14,634	5,456
FEB. 28.....	10	1,337	643	168	1,674	2,808	13,874	2,985
MAR. 31.....	94	1,950	822	477	3,705	4,014	17,439	5,046
APR. 30.....	170	3,056	1,654	679	4,304	4,255	17,029	5,824
MAY 31.....	166	3,026	1,560	675	4,224	4,213	17,967	5,844
JUNE 30.....	170	2,372	1,365	477	3,554	4,110	17,703	5,923
JULY 31.....	166	2,169	1,232	461	3,135	4,082	17,597	5,870
AUG. 31.....	169	1,507	1,016	280	2,579	4,132	17,650	5,780
SEPT. 30.....	169	1,854	1,268	512	3,453	4,132	17,588	5,799



PECATONICA-SUGAR RIVER BASIN

Base from U S Geological Survey
State base map, 1968

GRANT RIVER BASIN

425248090593500 RATTLESNAKE CREEK RAIN GAGE #1, ON HOLLY ROAD, NEAR BLOOMINGTON, WI

LOCATION.--Lat 42°52'48", long 90°59'35", in NE 1/4 SW 1/4 sec.29, T.5 N., R.5 W., Grant County, Hydrologic Unit 07060003, on Holly Road, 0.6 mi north of intersection with Maine Road, near Bloomington.

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Oct. 16, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 12, Dec. 6, 8, 10, 21-24, Jan. 7, 8, 12, 25, Feb. 10, 13, 15, 17, 18, 24, and Mar. 11, 12, 22. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Mar. 14.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.06 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.83 in., Oct. 24.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.01	.00	.00	.02	.00	.00	.00	.00	.00	.20	.09	.15
3	.22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.01
4	.65	.00	.00	.00	.00	.00	.00	.03	.00	.20	.01	.00
5	.21	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.01
6	.04	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.81
7	.00	.00	.00	.00	.00	.00	.01	.00	.00	.70	.86	.57
8	.00	.00	.00	.00	.00	.11	.21	.00	.00	.38	.00	.00
9	.00	.00	.00	.00	.00	.40	.00	.00	.00	.00	.00	.57
10	.00	.00	.00	.00	.00	.00	.05	.00	.00	.01	.74	.00
11	.02	.00	.00	.00	.00	.00	.01	.10	.00	.00	.00	.00
12	.00	.00	.66	.00	.00	.00	.00	.00	.00	.84	.24	.00
13	.02	.00	.00	.00	.00	.00	.00	.00	.00	.99	.01	.00
14	.01	.27	.00	.00	.00	.00	.00	.00	.00	.01	.00	1.68
15	.00	.04	.00	.00	.00	.00	.90	.01	.00	.06	.00	.00
16	.00	.00	.00	.00	.00	.00	.13	.12	.63	.17	.00	.28
17	.00	.80	.00	.00	.00	.00	.00	.73	.05	.00	.08	.05
18	.03	.05	.00	.00	.00	.00	.15	.00	.00	.00	.00	.37
19	.13	.01	.00	.00	.00	.00	.41	.00	.26	.01	.00	.00
20	.00	.00	.11	.00	.00	.00	.80	.00	.00	.00	.00	.23
21	.00	.02	.00	.00	.00	.00	.03	.27	.00	.00	.00	.00
22	.00	.01	.00	.43	.00	.00	.00	.20	.11	.32	.00	.00
23	.04	.01	.00	.00	.00	.00	.07	.01	.03	.04	.00	.00
24	1.83	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
25	.09	.00	.00	.00	.00	.01	.01	.00	.00	.95	.73	.00
26	.49	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.46
27	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.13	.00	.00	.00	.00	.19	.01	.00	.00	.00	.00	.00
29	.23	.74	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.87	.00	.00
31	.39	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	4.54	3.18	0.77	0.45	0.00	0.82	2.84	1.48	1.09	5.75	2.79	5.19

GRANT RIVER BASIN

339

425011090590900 RATTLESNAKE CREEK RAIN GAGE #2, ON DODGE ROAD, NEAR NORTH ANDOVER, WI

LOCATION.--Lat 42°50'11", long 90°59'09", in NW 1/4 SE 1/4 sec.8, T.4 N., R.5 W., Grant County, Hydrologic Unit 07060003, on Dodge Road, 0.3 mi west of intersection with Maine Road, near North Andover.

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Oct. 16, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 4, 5, 7-9, 24, 26, Dec. 4, 5, 7, 17-19, 21, 22, 24, Jan. 7, 8, 12, 24, Feb. 9, 14, 16, 18, 19, 24, and Mar. 11, 12, 22. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Mar. 14 and 20.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.32 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.23 in., Apr. 15.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.06	.00	.00	.00	.00	.00	---	.00	.00	.00	.00
2	.02	.03	.00	.02	.00	.00	.00	---	.00	.23	.07	.27
3	.21	.48	.00	.00	.00	.00	.00	---	.00	.00	.05	.00
4	.68	.00	.00	.00	.00	.02	.00	---	.00	.14	.01	.00
5	.28	.00	.00	.00	.00	.04	.00	---	.00	.00	.00	.00
6	.04	.00	.00	.00	.00	.00	.02	---	.00	.00	.00	1.04
7	.00	.00	.00	.00	.00	.00	.00	---	.00	.53	.84	1.22
8	.00	.00	.00	.00	.00	.12	.16	---	.00	.46	.00	.00
9	.00	.00	.00	.00	.00	.33	.00	---	.00	---	.00	.59
10	.00	.00	.00	.00	.00	.00	.05	---	.00	---	.80	.00
11	.10	---	.00	.00	.00	.00	.00	---	.00	---	.00	.00
12	.00	---	.65	.00	.00	.00	.00	---	.00	.90	.26	.00
13	.02	---	.01	.00	.00	.00	.00	---	.00	1.11	.00	.00
14	.01	---	.00	.00	.00	.00	.00	---	.05	.00	.00	.91
15	.00	---	.00	.00	.00	.00	1.23	---	.00	.06	.00	.00
16	.00	---	.00	.00	.00	.00	.11	.11	.72	.19	.00	.28
17	.56	---	.00	.00	.00	.00	.00	.69	.08	.00	.08	.00
18	.07	---	.00	.00	.00	.00	---	.00	.00	.00	.00	.31
19	.14	---	.00	.00	.00	.00	---	.00	.27	.00	.00	.00
20	.53	---	.19	.00	.00	.00	---	.00	.00	.00	.00	.30
21	.08	.00	.00	.00	.00	.00	---	.27	.00	.00	.00	.01
22	.00	.00	.00	.45	.00	.00	---	.03	.11	.40	.00	.00
23	.00	.00	.00	.00	.00	.00	---	.01	.02	.05	.00	.00
24	1.05	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.01
25	.05	.00	.00	.00	.00	.02	---	.00	.00	.46	.69	.00
26	.54	.00	.00	.00	.00	.00	---	.00	.00	.14	.00	.39
27	.00	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00
28	.16	.31	.00	.00	.00	.22	---	.00	.00	.00	.00	.00
29	.22	.98	.00	.00	.00	.09	---	.00	.00	.00	.00	.01
30	.01	.00	.00	.00	---	.00	---	.00	.00	1.00	.00	.00
31	.40	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	5.17	---	0.85	0.47	0.00	0.84	---	---	1.25	---	2.80	5.34

GRANT RIVER BASIN

424944090561600 RATTLESNAKE CREEK RAIN GAGE #3, ON HUDSON ROAD, NEAR NORTH ANDOVER, WI

LOCATION.--Lat 42°49'44", long 90°56'16", in SW 1/4 SW 1/4 sec.11, T.4 N., R.5 W., Grant County, Hydrologic Unit 07060003, on Hudson Road, 0.6 mi east of intersection with Wisconsin Highway 133, near North Andover.

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Oct. 16, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 12, Dec. 8, 9, 21, Jan. 7, 8, 12, Feb. 15, 17, 18, 24, and Mar. 12, 22. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Mar. 14.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.63 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.36 in., July 30.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.02	.00	.00	.03	.00	.01	.00	.00	.00	.37	.06	.19
3	.25	.00	.00	.01	.00	.00	.00	.00	.00	.00	.02	.00
4	.74	.00	.00	.00	.00	.04	.00	.04	.00	.17	.00	.00
5	.27	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.01
6	.04	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	1.34
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.48	1.04	1.23
8	.00	.00	.00	.00	.00	.14	.17	.00	.00	.45	.01	.00
9	.00	.00	.00	.00	.00	.31	.00	.00	.00	---	.00	.63
10	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.67	.00
11	.04	.00	.00	.00	.00	.00	.00	.24	.00	.00	.00	.00
12	.00	.00	.59	.00	.00	.00	.00	.00	.00	.89	.23	.00
13	.01	.00	.01	.00	.00	.00	.00	.00	.00	1.07	.01	.00
14	.01	.30	.00	.00	.00	.00	.04	.00	.01	.00	.00	.42
15	.00	.02	.00	.00	.00	.00	1.11	.01	.00	.05	.00	.00
16	.00	.00	.00	.00	.00	.00	.10	.14	.88	.17	.00	.23
17	.00	.62	.00	.00	.00	.00	.00	.38	.01	.00	.10	.08
18	.03	.04	.00	.00	.00	.00	.23	.00	.00	.00	.00	.33
19	.12	.00	.00	.00	.00	.00	.51	.00	.26	.00	.00	.00
20	.00	.00	.05	.00	.00	.00	.72	.00	.00	.00	.00	.33
21	.00	.01	.00	.00	.00	.00	.02	.03	.00	.00	.00	.00
22	.00	.04	.00	.40	.00	.00	.00	.08	.11	.32	.00	.00
23	.00	.23	.00	.00	.00	.00	.11	.01	.01	.06	.00	.00
24	1.01	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
25	.03	.00	.00	.00	.00	.02	.00	.00	.00	.28	.58	.00
26	.52	.00	.00	.00	.00	.00	.00	.00	.00	.11	.00	.54
27	.00	.17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
28	.15	.00	.00	.00	.00	.14	.09	.00	.00	.00	.00	.00
29	.29	.57	.00	.00	.00	.07	.00	.00	.00	.01	.00	.00
30	.00	.01	.00	.00	---	.00	.00	.00	.00	1.36	.00	.00
31	.44	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	3.97	3.23	0.65	0.44	0.00	0.77	3.17	0.93	1.28	---	2.72	5.34

GRANT RIVER BASIN

341

424824091010600 RATTLESNAKE CREEK RAIN GAGE #4, ON PRIDE ROAD, NEAR NORTH ANDOVER, WI

LOCATION.--Lat 42°48'24", long 91°01'06", in NE 1/4 SE 1/4 sec.24, T.4 N., R.6 W., Grant County, Hydrologic Unit 07060003, on Pride Road, 0.1 mi south of intersection with Fairview Road, near North Andover.

PERIOD OF RECORD.--October 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Oct. 16, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 12, Dec. 6, 8, 9, 21-23, Jan. 7, 8, 9, 12, 25, Feb. 10, 17, 18, 24, and Mar. 11, 12, 22. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Mar. 14 and 20.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.89 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.22 in., Apr. 15.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.03	.00	.00	.02	.00	.00	.00	.00	.00	.34	.08	.16
3	.29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00
4	.76	.00	.00	.00	.00	.00	.00	.01	.00	.06	.01	.00
5	.28	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
6	.01	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	1.14
7	.00	.00	.00	.00	.00	.00	.01	.00	.00	---	.84	.99
8	.00	.01	.00	.00	.00	.12	.16	.00	.00	---	.00	.00
9	.00	.01	.00	.00	.00	.31	.00	.00	.00	---	.00	.66
10	.00	.00	.00	.00	.00	.00	.02	.00	.00	---	.30	.00
11	.10	.00	.00	.00	.00	.00	.00	.07	.00	---	.00	.00
12	.00	.00	.64	.00	.00	.00	.00	.00	.00	1.02	.21	.00
13	.02	.00	.02	.00	.01	.00	.00	.00	.00	1.02	.00	.00
14	.00	.25	.00	.00	.00	.00	.01	.00	.00	.01	.00	.71
15	.00	.03	.00	.00	.21	.00	1.22	.04	.00	.05	.00	.00
16	.00	.00	.00	.00	.00	.00	.10	.07	.54	.18	.00	.27
17	.00	.92	.00	.00	.00	.00	.00	.62	.10	.00	.08	.01
18	.03	.05	.00	.00	.00	.00	.17	.00	.00	.00	.00	.34
19	.12	.02	.00	.00	.00	.00	.40	.00	.38	.10	.00	.00
20	.00	.00	.07	.00	.00	.00	1.06	.00	.00	.00	.00	.36
21	.00	.00	.00	.00	.00	.00	.02	.15	.00	.00	.00	.01
22	.00	.04	.00	.45	.00	.00	.00	.08	.09	.36	.00	.00
23	.00	.00	.00	.00	.00	.00	.09	.01	.09	.09	.00	.00
24	1.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.04	.00	.00	.00	.00	.01	.00	.00	.00	.30	.63	.00
26	.53	.00	.00	.00	.00	.00	.01	.00	.00	.19	.00	.49
27	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.19	.00	.00	.00	.00	.19	.08	.00	.00	.00	.00	.01
29	.20	.74	.00	.00	.00	.08	.00	.00	.00	.01	.00	.00
30	.01	.00	.00	.00	---	.00	.00	.00	.00	1.16	.00	.00
31	.42	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	4.09	3.19	0.73	0.47	0.22	0.74	3.36	1.05	1.20	---	2.21	5.15

GRANT RIVER BASIN

05413443 KUENSTER CREEK ON TEXAS ROAD, NEAR NORTH ANDOVER, WI

LOCATION.--Lat 42°47'29", long 90°57'19", in NW 1/4 SW 1/4 sec.27, T.4 N., R.5 W., Grant County, Hydrologic Unit 07060003, on Texas Road, 0.7 mi north of junction with Ramsey Road, near North Andover.

PERIOD OF RECORD.--November 1991 to September 1992 (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established on Nov. 15, 1991. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Dec. 6, 8, 9, 21-23, Jan. 7, 8, 12, and Feb. 10, 17, 18, 24. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Mar. 14 and 20.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.06 in., July 12, 13, and Sept. 6.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	---	---	.00	.02	.00	.00	.00	.00	.00	.57	.09	.30
3	---	---	.00	.00	.00	.00	.00	.00	.00	.01	.06	.00
4	---	---	.00	.00	.00	.05	.00	.02	.00	.02	.01	.00
5	---	---	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
6	---	---	.00	.00	.00	.00	.02	.00	.00	.00	.00	1.06
7	---	---	.00	.00	.00	.00	.00	.00	.00	.67	.96	.52
8	---	---	.00	.00	.00	.08	.21	.00	.00	.43	.00	.00
9	---	---	.00	.00	.00	.27	.00	.00	.00	.01	.00	.38
10	---	---	.00	.00	.00	.00	.01	.00	.00	.00	.30	.00
11	---	---	.00	.00	.00	.00	.00	.09	.00	.01	---	.00
12	---	---	.57	.00	.00	.00	.00	.00	.00	1.06	---	.00
13	---	---	.01	.00	.00	.00	.00	.00	.00	1.06	---	.00
14	---	---	.00	.00	.00	.00	.04	.00	.01	.00	---	.48
15	---	.00	.00	.00	.33	.00	.72	.04	.00	.06	---	.00
16	---	.00	.00	.00	.00	.00	.12	.06	.53	.14	---	.26
17	---	.78	.00	.00	.00	.00	.00	.39	.05	.00	---	.00
18	---	.08	.00	.00	.00	.00	.23	.00	.00	.00	---	.45
19	---	.02	.00	.00	.00	.00	.32	.00	.36	.19	---	.00
20	---	.00	.13	.00	.00	.00	.96	.00	.00	.00	.00	.37
21	---	.00	.00	.00	.00	.00	.02	.31	.00	.00	.00	.00
22	---	.03	.00	.42	.00	.03	.00	.22	.08	.29	.00	.00
23	---	.03	.00	.01	.00	.00	.11	.01	.05	.07	.00	.00
24	---	.00	.00	.00	.00	.00	.01	.00	.01	.00	.00	.00
25	---	.00	.00	.00	.00	.02	.00	.00	.00	.35	.57	.01
26	---	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.33
27	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	---	.00	.00	.00	.00	.18	.04	.00	.00	.00	.01	.00
29	---	.96	.00	.00	.00	.07	.00	.00	.00	.02	.00	.00
30	---	.00	.00	.00	---	.00	.00	.00	.00	.95	.00	.00
31	---	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	---	---	0.71	0.45	0.33	0.73	2.81	1.14	1.09	6.05	---	4.16

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI

LOCATION.--Lat 42°47'27", long 90°57'26", in NW 1/4 SW 1/4 sec.27, T.4 N., R.5 W., Grant County, Hydrologic Unit 07060003, on right bank 50 ft upstream from Muskellunge Road, 1.75 mi southeast of North Andover.

DRAINAGE AREA.--9.59 mi².

PERIOD OF RECORD.--October 1991 to September 1992.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1991 to September 1992.

DISSOLVED OXYGEN: October 1991 to September 1992.

INSTRUMENTATION.--Continuous water temperature recorder and dissolved oxygen recorder since Oct. 5, 1991. Automatic pump sampler since Oct. 5, 1991.

REMARKS.--Water-quality analyses by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 29.0°C, Aug. 9; minimum observed, 0.0°C, on many days.

DISSOLVED OXYGEN: Maximum observed, 19.9 mg/L, Oct. 23; minimum observed, 0.8 mg/L, July 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					APR 1992				
10...	1405	3.0	715	11.5	02...	1200	3.8	675	5.5
NOV					MAY				
01...	1230	17	630	9.5	06...	1050	3.8	670	11.0
21...	1120	4.5	745	4.0	JUN				
JAN 1992					17...	1036	3.2	710	22.5
09...	1145	10	460	1.5	JUL				
FEB					24...	0954	3.2	750	15.5
24...	1210	18	370	1.5	SEP				
					24...	1215	2.6	680	12.0

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	9.5	3.5	7.5	.5	.0	.0	2.0	2.0	2.0
2	---	---	---	3.5	.0	1.0	.5	.0	.0	3.0	2.0	2.5
3	---	---	---	.5	.0	.5	.5	.0	.0	3.5	3.0	3.5
4	---	---	---	1.0	.5	.5	.5	.0	.0	3.5	2.5	3.0
5	11.5	7.5	9.5	.5	.5	.5	.5	.0	.0	3.0	2.0	2.5
6	10.5	6.5	8.5	.5	.5	.5	.5	.0	.5	3.5	2.5	3.0
7	11.5	5.5	8.5	1.0	.5	.5	.5	.0	.5	3.0	2.0	2.5
8	15.5	8.5	12.0	.5	.5	.5	.5	.0	.5	2.5	2.0	2.5
9	15.0	10.5	13.0	.5	.5	.5	.5	.0	.5	2.0	.5	1.5
10	12.0	9.0	11.0	.5	.5	.5	1.5	.0	.5	.5	.0	.0
11	15.0	10.0	12.0	1.5	.5	.5	2.5	.5	1.5	2.0	.0	1.0
12	14.0	9.0	11.5	3.5	1.5	2.5	3.5	2.0	2.5	2.5	1.5	2.0
13	11.0	7.5	9.5	6.0	2.5	4.0	3.0	.5	2.0	2.0	.0	1.5
14	10.0	6.5	9.0	7.0	3.0	4.5	2.0	.0	.5	.0	.0	.0
15	9.0	5.0	7.0	8.5	6.5	7.5	.5	.0	.0	.0	.0	.0
16	11.0	4.5	7.5	7.0	4.5	6.0	.5	.0	.5	.0	.0	.0
17	14.0	8.5	11.0	7.0	4.0	5.0	.5	.0	.5	.0	.0	.0
18	11.5	6.0	8.5	10.5	7.5	9.0	.5	.0	.0	.0	.0	.0
19	7.5	3.0	5.5	9.0	7.0	8.0	.5	.0	.0	.0	.0	.0
20	9.0	4.0	6.5	8.0	5.0	6.5	.0	.0	.0	.5	.0	.0
21	11.5	6.0	8.5	6.5	3.0	5.0	.0	.0	.0	.5	.0	.0
22	14.5	9.5	11.5	6.5	4.5	5.5	.0	.0	.0	.0	.0	.0
23	17.0	12.0	14.5	4.5	.0	1.5	.5	.0	.0	.0	.0	.0
24	16.5	14.5	15.5	.5	.0	.5	.5	.0	.0	.0	.0	.0
25	14.0	11.0	12.0	.5	.0	.5	.0	.0	.0	.5	.0	.0
26	---	---	---	.5	.0	.5	.5	.0	.0	.5	.0	.0
27	---	---	---	.5	.0	.5	1.0	.0	.5	.5	.0	.0
28	12.5	10.0	10.5	.5	.0	.5	2.0	1.0	1.5	.5	.0	.0
29	14.5	8.5	12.5	.5	.5	.5	3.0	1.0	2.0	.5	.0	.0
30	8.5	5.5	6.5	1.0	.0	.5	2.0	.0	1.0	.5	.0	.5
31	5.5	5.0	5.0	---	---	---	3.0	2.0	2.5	.5	.5	.5
MONTH	---	---	---	10.5	.0	2.7	3.5	.0	.6	3.5	.0	.9

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	.5	.5	.5	11.0	3.5	7.0	6.0	3.5	4.5	25.0	14.5	19.5
2	.5	.5	.5	11.0	4.5	8.0	9.5	1.0	5.5	21.0	14.0	17.5
3	.5	.5	.5	8.0	5.5	6.5	11.0	4.0	7.5	18.5	9.5	14.0
4	2.0	.5	1.0	8.5	5.0	6.5	13.0	5.0	8.5	16.5	10.5	13.5
5	3.0	.5	1.5	9.0	7.0	8.0	14.0	5.5	9.5	18.0	9.5	13.5
6	4.0	.5	2.0	11.5	8.0	9.5	14.5	7.5	11.0	19.0	8.0	13.5
7	2.5	.5	1.5	11.0	9.0	10.0	17.0	10.5	13.5	20.5	10.0	15.5
8	.5	.5	.5	13.0	8.5	10.5	12.5	9.0	10.5	22.5	11.0	16.5
9	.5	.5	.5	11.0	1.5	7.0	15.0	7.5	11.0	23.5	12.5	18.0
10	.5	.5	.5	2.0	.5	1.0	12.0	7.5	9.5	24.0	14.0	19.0
11	.5	.5	.5	1.0	.0	.5	10.5	6.5	8.0	21.0	16.5	19.5
12	.5	.5	.5	3.0	.0	1.5	9.0	3.0	6.5	22.0	16.5	19.0
13	.5	.5	.5	3.0	.0	1.5	6.5	5.0	6.0	21.0	13.5	17.5
14	.5	.5	.5	4.5	1.5	3.0	11.0	5.5	7.5	18.5	14.0	16.5
15	1.5	.5	.5	7.0	.5	3.5	15.0	7.0	10.5	20.0	13.0	16.0
16	4.5	1.5	3.0	6.5	1.0	4.0	12.0	9.5	10.5	24.5	14.5	19.0
17	4.0	2.5	3.0	10.0	3.5	6.5	10.0	8.5	9.5	23.0	17.5	20.0
18	2.5	1.0	2.0	6.0	3.0	4.5	13.0	8.0	10.0	24.5	15.5	20.0
19	3.5	1.5	2.5	8.0	.5	4.5	16.0	13.0	14.5	25.0	15.0	20.0
20	5.0	.5	2.0	8.5	3.5	5.5	16.0	14.0	15.0	26.0	16.5	21.5
21	2.5	.5	1.0	4.5	.5	2.0	13.5	7.5	10.0	23.5	18.0	21.0
22	5.0	.5	2.0	6.5	.5	3.0	9.5	6.0	7.5	25.5	18.5	21.5
23	5.0	.5	2.0	10.0	.5	5.0	9.5	6.5	7.5	22.5	16.5	19.0
24	2.5	1.5	2.0	12.5	3.5	8.0	9.0	7.0	8.0	18.0	13.5	15.5
25	3.0	.5	1.5	12.5	6.0	9.0	10.0	6.5	8.0	15.5	12.0	13.5
26	5.5	.5	2.5	10.0	5.0	7.0	10.5	6.5	8.5	16.5	10.5	13.5
27	7.0	2.5	4.5	10.0	2.0	6.0	16.0	5.5	10.5	18.5	10.0	14.5
28	5.5	3.5	4.5	6.0	4.0	5.0	15.5	7.0	11.5	20.5	11.5	16.0
29	7.0	1.5	4.0	5.5	4.0	4.5	20.5	10.0	15.0	22.5	13.0	18.0
30	---	---	---	12.5	4.0	8.0	22.0	12.0	17.0	23.0	14.5	19.0
31	---	---	---	10.5	5.0	7.0	---	---	---	25.5	15.5	20.5
MONTH	7.0	.5	1.7	13.0	.0	5.6	22.0	1.0	9.7	26.0	8.0	17.5
JUNE				JULY			AUGUST			SEPTEMBER		
1	24.5	18.0	21.5	27.5	21.0	24.0	25.5	16.5	21.0	21.0	14.5	18.0
2	27.0	19.5	23.0	25.0	20.5	22.5	25.5	19.5	22.0	20.5	18.0	19.0
3	26.5	18.0	22.5	23.0	18.0	20.5	25.0	18.0	21.5	22.5	16.5	19.5
4	26.0	19.0	22.5	25.0	18.0	21.0	23.5	16.5	20.0	22.5	15.0	19.0
5	26.5	19.5	23.0	24.0	18.5	21.0	25.0	17.5	21.0	23.0	17.5	20.5
6	23.0	19.5	21.0	---	---	---	24.5	17.5	21.0	24.0	19.0	21.0
7	24.5	16.5	20.5	---	---	---	21.5	19.0	19.5	21.5	19.0	20.0
8	21.5	18.0	20.0	28.0	21.0	24.0	27.0	17.5	22.0	21.0	15.0	18.0
9	25.5	18.0	21.5	26.0	21.0	23.5	29.0	21.0	25.0	18.5	16.0	17.0
10	25.0	19.0	22.0	27.0	21.5	24.0	27.5	22.5	24.5	16.5	13.0	15.0
11	26.5	19.0	22.5	24.5	20.0	22.5	25.0	18.5	22.0	19.0	12.0	15.5
12	26.0	20.0	23.0	24.5	21.0	22.5	22.5	18.5	20.5	19.0	13.5	16.5
13	25.5	19.5	22.5	23.0	19.5	20.5	21.5	15.0	18.5	22.5	15.5	19.0
14	27.5	20.5	23.5	20.0	18.0	19.0	21.0	16.5	18.5	21.0	19.0	20.0
15	24.5	20.0	21.5	24.0	16.5	20.0	21.5	15.0	18.0	23.0	18.0	20.0
16	21.0	18.0	19.5	25.5	20.0	22.5	22.0	14.5	18.5	21.5	20.0	21.0
17	26.5	20.0	22.5	26.0	19.0	22.5	22.5	15.0	19.0	22.5	20.0	21.0
18	23.0	19.0	21.0	26.5	19.0	23.0	24.0	18.5	20.5	21.0	16.0	19.0
19	22.5	18.0	20.0	26.5	20.0	23.0	23.0	16.0	19.5	17.0	12.5	15.0
20	22.5	16.0	19.0	24.0	19.5	22.0	23.0	16.0	19.5	15.5	13.0	14.0
21	21.5	15.0	18.5	23.5	18.0	21.0	24.0	16.0	20.0	16.5	14.5	15.5
22	18.5	15.0	16.5	21.5	16.5	18.0	24.5	16.5	20.5	17.0	11.5	14.0
23	21.5	15.0	18.0	17.0	16.0	16.5	25.5	18.5	22.0	16.5	9.5	13.0
24	23.5	17.0	20.0	21.0	15.5	18.0	27.0	20.5	24.0	17.0	10.5	13.5
25	24.5	18.5	21.5	21.5	18.0	19.5	26.5	22.0	23.5	16.5	10.5	13.5
26	23.5	17.5	20.5	26.0	19.5	22.5	22.0	18.0	19.5	17.5	15.0	16.0
27	23.0	16.0	19.5	26.5	19.0	23.0	21.0	17.0	18.5	17.5	11.5	14.5
28	24.0	17.0	20.5	26.5	20.5	23.5	21.5	14.5	18.0	15.5	10.5	13.0
29	26.5	19.5	22.5	25.0	20.5	22.5	24.5	16.5	20.0	14.5	8.0	11.5
30	26.5	20.5	23.5	21.5	16.5	18.5	21.5	16.0	19.0	16.0	9.0	12.5
31	---	---	---	23.0	15.0	19.0	21.5	14.5	18.0	---	---	---
MONTH	27.5	15.0	21.1	---	---	---	29.0	14.5	20.5	24.0	8.0	16.8

GRANT RIVER BASIN

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054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	10.5	5.1	7.9	---	---	---	---	---	---
2	---	---	---	13.0	10.6	12.4	---	---	---	---	---	---
3	---	---	---	13.4	12.7	13.1	---	---	---	---	---	---
4	---	---	---	13.6	13.0	13.3	---	---	---	---	---	---
5	11.0	6.3	9.4	---	---	---	---	---	---	---	---	---
6	14.0	9.1	10.9	---	---	---	---	---	---	---	---	---
7	14.9	8.1	10.9	---	---	---	---	---	---	---	---	---
8	13.7	6.7	9.6	---	---	---	---	---	---	---	---	---
9	16.4	6.7	10.4	---	---	---	---	---	---	---	---	---
10	18.0	8.1	12.2	---	---	---	---	---	---	---	---	---
11	15.6	7.3	10.8	---	---	---	---	---	---	---	---	---
12	16.4	7.3	10.6	---	---	---	---	---	---	---	---	---
13	14.9	7.5	10.4	---	---	---	---	---	---	---	---	---
14	13.2	8.0	10.2	---	---	---	---	---	---	---	---	---
15	19.0	10.3	13.3	---	---	---	---	---	---	---	---	---
16	17.5	8.3	12.6	---	---	---	---	---	---	---	---	---
17	17.0	7.4	10.9	---	---	---	---	---	---	---	---	---
18	15.1	7.2	10.1	---	---	---	---	---	---	---	---	---
19	15.6	8.9	11.6	---	---	---	---	---	---	---	---	---
20	14.8	7.3	10.4	---	---	---	---	---	---	---	---	---
21	13.2	6.0	8.8	---	---	---	---	---	---	---	---	---
22	12.1	4.9	7.7	---	---	---	---	---	---	---	---	---
23	19.9	4.1	9.3	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	10.2	8.4	9.3	---	---	---	---	---	---	---	---	---
29	8.2	3.9	7.2	---	---	---	---	---	---	---	---	---
30	12.6	7.5	10.7	---	---	---	---	---	---	---	---	---
31	12.7	9.7	11.3	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	14.0	6.2	9.9
8	---	---	---	---	---	---	---	---	---	13.4	5.4	9.3
9	---	---	---	---	---	---	---	---	---	12.8	4.9	8.5
10	---	---	---	---	---	---	---	---	---	11.7	4.7	7.8
11	---	---	---	---	---	---	---	---	---	10.5	4.8	7.0
12	---	---	---	---	---	---	---	---	---	10.0	5.6	7.4
13	---	---	---	---	---	---	---	---	---	10.5	5.8	8.0
14	---	---	---	---	---	---	---	---	---	10.6	6.1	8.0
15	---	---	---	---	---	---	---	---	---	10.5	6.6	8.5
16	---	---	---	---	---	---	---	---	---	10.4	5.2	7.8
17	---	---	---	---	---	---	---	---	---	9.1	5.1	7.1
18	---	---	---	---	---	---	---	---	---	10.2	5.5	7.7
19	---	---	---	---	---	---	---	---	---	10.6	5.5	7.9
20	---	---	---	---	---	---	---	---	---	10.5	5.0	7.7
21	---	---	---	---	---	---	---	---	---	10.1	5.1	7.1
22	---	---	---	---	---	---	---	---	---	10.4	4.8	7.1
23	---	---	---	---	---	---	---	---	---	11.1	5.4	8.1
24	---	---	---	---	---	---	---	---	---	11.7	7.5	9.6
25	---	---	---	---	---	---	---	---	---	12.3	8.3	9.9
26	---	---	---	---	---	---	---	---	---	12.2	8.6	10.4
27	---	---	---	---	---	---	---	---	---	12.3	8.1	10.2
28	---	---	---	---	---	---	---	---	---	12.5	7.5	9.9
29	---	---	---	---	---	---	---	---	---	12.6	7.1	9.7
30	---	---	---	---	---	---	---	---	---	12.9	6.9	9.7
31	---	---	---	---	---	---	---	---	---	13.2	6.2	9.4

GRANT RIVER BASIN

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	13.6	6.1	9.2	13.4	3.8	7.8	10.5	4.8	7.3	11.8	6.7	8.6
2	13.4	5.6	8.9	8.1	3.5	5.3	10.0	4.7	6.9	9.5	6.5	7.6
3	13.9	5.6	9.0	12.9	.9	7.1	10.1	5.1	7.4	10.9	5.9	8.0
4	14.9	5.5	9.2	13.5	4.3	7.8	11.0	5.4	8.0	11.6	6.5	8.5
5	14.8	5.5	9.3	13.8	4.3	8.4	11.3	5.9	8.1	10.8	6.0	7.9
6	13.9	5.6	9.0	---	---	---	11.3	5.8	8.1	8.9	4.7	6.6
7	15.6	6.6	10.3	---	---	---	8.5	3.8	6.8	8.7	5.6	7.0
8	14.3	6.3	9.6	11.9	3.4	6.7	8.9	3.5	5.7	10.3	4.2	7.1
9	15.9	6.2	10.0	12.5	3.4	7.0	9.1	4.1	6.2	8.5	6.6	7.5
10	16.1	5.8	9.9	12.5	4.0	7.3	8.9	4.0	5.9	10.7	6.4	8.6
11	16.1	5.6	9.7	12.5	4.0	7.2	10.1	5.0	7.3	11.4	7.6	9.2
12	14.3	5.0	8.7	10.3	3.7	5.8	10.4	5.7	7.8	11.5	7.3	9.1
13	13.1	4.7	8.1	8.0	2.7	5.4	11.6	6.9	9.1	11.8	6.2	8.7
14	14.1	4.5	8.2	7.0	.8	4.3	11.5	6.8	8.9	10.3	6.2	7.5
15	14.5	4.4	8.7	10.0	4.7	7.2	11.6	7.0	9.0	10.4	6.0	7.7
16	12.0	4.7	7.5	10.4	4.7	7.2	11.8	6.7	8.9	8.3	6.0	7.0
17	12.6	2.7	7.1	11.3	4.6	7.5	11.4	6.1	8.6	9.0	6.1	7.2
18	12.2	4.6	7.9	11.6	4.6	7.6	10.6	6.0	7.9	7.6	3.9	6.0
19	14.1	5.1	8.4	11.7	4.5	7.1	11.5	6.2	8.4	11.1	5.9	8.5
20	14.9	5.9	9.5	11.7	4.9	7.6	11.4	6.2	8.5	10.7	7.6	8.8
21	15.4	6.1	10.0	11.5	5.3	8.0	11.7	6.2	8.5	9.7	5.7	8.0
22	---	---	---	7.9	4.9	6.5	11.7	6.2	8.4	12.0	7.6	9.7
23	15.3	6.1	10.2	9.5	6.4	7.7	11.4	5.7	8.0	12.7	8.4	10.2
24	15.0	5.7	9.4	11.5	5.9	8.4	11.1	5.2	7.6	12.8	8.3	10.2
25	14.4	5.1	9.0	9.4	5.5	7.2	9.8	5.1	6.7	13.0	7.8	10.1
26	15.1	5.0	9.3	10.4	4.9	7.3	9.0	5.4	7.0	11.1	7.9	8.7
27	15.3	5.6	9.5	10.4	4.6	7.2	10.7	6.9	8.4	12.8	7.9	9.8
28	15.2	5.2	9.3	10.2	4.5	6.9	11.0	6.5	8.6	13.6	7.8	10.4
29	14.6	4.4	8.4	10.2	4.6	7.0	10.7	6.0	7.9	13.8	8.8	10.9
30	13.5	4.1	7.8	8.8	3.2	6.4	10.8	6.0	8.1	14.2	8.3	10.7
31	---	---	---	9.1	2.6	5.7	11.4	6.7	8.6	---	---	---
MONTH	---	---	---	---	---	---	11.8	3.5	7.8	14.2	3.9	8.5

GRANT RIVER BASIN

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05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI

LOCATION.--Lat 42°46'49", long 90°56'32", in SE 1/4 NE 1/4 sec.34, T.4 N., R.5 W., Grant County, Hydrologic Unit 07060003, on right bank 100 ft upstream of Atkinson Road, 2.7 mi southeast of North Andover.

DRAINAGE AREA.--42.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 5, 1987 to current year.

REVISED RECORD.--WDR WI-89-1: 1987-88.

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

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 3-9, 24-27, Dec. 1-9, 14-26, Jan. 14 to Feb. 4, Feb. 8-15, and Mar. 10-13. Records good except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	62	36	19	13	26	18	21	9.7	14	15	11
2	15	32	27	20	15	26	18	20	9.7	16	13	12
3	15	21	25	20	60	25	18	18	9.7	15	13	12
4	20	20	23	21	40	26	18	18	10	16	13	11
5	24	18	23	20	21	27	18	18	10	16	13	11
6	18	17	23	20	20	29	18	17	11	15	13	20
7	15	17	25	20	18	29	18	17	11	17	17	17
8	15	16	27	50	17	27	18	17	10	19	19	30
9	15	16	25	52	16	38	20	17	11	16	15	22
10	14	17	25	23	15	26	19	17	11	14	20	17
11	15	18	25	27	15	25	19	17	11	13	16	14
12	15	18	52	63	14	24	17	17	13	20	14	13
13	14	19	37	43	14	24	18	15	13	26	13	12
14	14	22	26	24	14	24	18	15	14	27	12	18
15	14	26	25	23	15	23	27	15	14	17	12	21
16	14	21	24	22	15	24	33	15	18	16	12	17
17	14	20	22	21	17	24	24	18	15	15	12	17
18	14	43	22	21	26	22	23	14	13	13	13	21
19	14	28	21	20	33	22	34	13	14	14	13	16
20	14	24	21	20	195	22	49	13	15	14	12	15
21	15	22	20	22	87	22	45	13	14	13	12	18
22	15	22	20	50	153	22	33	13	14	14	12	16
23	15	28	20	100	110	23	30	12	16	15	11	14
24	20	25	19	30	117	23	28	11	16	15	11	13
25	28	24	19	20	50	22	26	11	15	16	12	13
26	26	22	19	18	30	20	24	11	14	18	14	14
27	21	21	19	17	33	19	22	11	14	15	12	17
28	18	21	19	15	30	19	22	10	14	14	11	15
29	21	27	20	14	25	22	23	10	15	13	11	13
30	18	68	20	13	---	20	21	10	15	22	11	13
31	17	---	19	13	---	19	---	9.7	---	20	10	---
TOTAL	521	755	748	861	1228	744	719	453.7	390.1	508	407	473
MEAN	16.8	25.2	24.1	27.8	42.3	24.0	24.0	14.6	13.0	16.4	13.1	15.8
MAX	28	68	52	100	195	38	49	21	18	27	20	30
MIN	14	16	19	13	13	19	17	9.7	9.7	13	10	11
CFSM	.40	.59	.57	.66	1.00	.57	.57	.35	.31	.39	.31	.37
IN.	.46	.66	.66	.76	1.08	.65	.63	.40	.34	.45	.36	.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992
MEAN	12.0	14.8	14.2	19.3	24.4	28.9
MAX	16.8	25.2	24.1	27.8	44.5	37.6
(WY)	1992	1992	1992	1992	1988	1989
MIN	8.14	7.96	6.06	6.91	8.35	20.5
(WY)	1991	1991	1990	1991	1991	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1987 - 1992

ANNUAL TOTAL	8349.9	7807.8	
ANNUAL MEAN	22.9	21.3	17.3
HIGHEST ANNUAL MEAN			21.3
LOWEST ANNUAL MEAN			11.9
HIGHEST DAILY MEAN	1030	195	1030
LOWEST DAILY MEAN	6.4	9.7	5.0
ANNUAL SEVEN-DAY MINIMUM	6.5	9.8	5.4
INSTANTANEOUS PEAK FLOW		(b)725	(c)7000
INSTANTANEOUS PEAK STAGE		(d)5.27	11.20
ANNUAL RUNOFF (CFSM)	.54	.50	.41
ANNUAL RUNOFF (INCHES)	7.33	6.85	5.55
10 PERCENT EXCEEDS	29	28	26
50 PERCENT EXCEEDS	18	18	13
90 PERCENT EXCEEDS	7.4	12	7.3

(a) Also occurred June 1-3

(b) Gage height, 5.24 ft

(c) On basis of contracted-opening measurement

(d) Ice jam

GRANT RIVER BASIN

05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 1987 to current year.

DISSOLVED OXYGEN: July 1987 to current year.

SUSPENDED-SOLIDS DISCHARGE: October 1991 to September 1992.

TOTAL-PHOSPHORUS DISCHARGE: October 1991 to September 1992.

INSTRUMENTATION.--Continuous water temperature and dissolved oxygen recorder since July 17, 1987. Automatic pump sampler since July 17, 1987.

REMARKS.--Water-quality analyses by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 32.0°C, July 10, 1989; minimum observed, 0.0°C, on many days.

DISSOLVED OXYGEN: Maximum observed, 18.3 mg/L, Apr. 29, 1988, May 7, 1989; minimum observed, 0.0 mg/L, Sept. 17, 1987, and June 30, 1991.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 2,640 tons, Feb. 20, 1992; minimum daily observed, 0.08 ton, May 14, 1992.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 6,760 lb, Feb. 20, 1992; minimum daily observed, 1.9 lb, May 13, 1992.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 27.5°C, Aug. 9; minimum observed, 0.0°C, on many days.

DISSOLVED OXYGEN: Maximum observed, 16.3 mg/L, Oct. 23; minimum observed, 0.9 mg/L, Sept. 6.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 2,640 tons, Feb. 20; minimum daily observed, 0.08 ton, May 14.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 6,760 lb, Feb. 20; minimum daily observed, 1.9 lb, May 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					APR 1992				
10...	1005	14	700	10.0	02...	1330	18	675	5.5
NOV					MAY				
01...	1350	90	580	9.0	06...	1249	18	640	13.0
21...	1028	22	745	4.5	JUN				
JAN 1992					17...	1409	16	685	23.5
09...	1030	48	430	1.5	JUL				
FEB					24...	0840	15	750	15.5
25...	1300	32	390	1.5	SEP				
					24...	1058	14	720	11.5

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)	CARBO- FURAN WATER WHOLE TOT.REC (UG/L) (82615)	CHLOR- DYRIFOS TOTAL RECOVER (UG/L) (38932)	CIS- PERME- THRIN WATER WHOLE REC (UG/L) (82418)	CYAN- AZINE TOTAL (UG/L) (81757)	DICAMBA (MED- IBEN) (BAN- VEL D) TOTAL (UG/L) (82052)	DIMETH- OATE WATER WHOLE TOTAL (UG/L) (39009)	EPTC WATER WHOLE REC (UG/L) (81894)
MAY 1992											
*28...	1105	11	<0.10	0.1	<0.3	<1.0	<1.0	<0.30	<0.20	<1.0	<1.0

DATE	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	METHO- MYL TOTAL (UG/L) (39051)	METOLA- CHLOR IN WHOLE WATER (UG/L) (39356)	PARA- THION, TOTAL (UG/L) (39540)	PENDI- METH- ALIN TOTAL (UG/L) (79190)	PHORATE TOTAL (UG/L) (39023)	TERBU- FOS WAT, WH REC (UG/L) (82088)	TRANS PERME- THRIN WATER WHOLE REC (UG/L) (82420)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	2,4-D, TOTAL (UG/L) (39730)
MAY 1992										
28...	<0.20	<1.0	<0.20	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

GRANT RIVER BASIN

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05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOC CI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT 1991												
*01...	1510	--	14	8.5	<5	<3.0	--	--	80	45	8.0	3
24...	2345	--	33	8.3	16	4.9	--	--	75	41	7.5	70
26...	1315	--	33	8.1	63	12	--	--	72	40	9.7	78
27...	1100	--	21	8.2	54	7.5	--	--	74	40	9.1	41
*27...	1101	--	21	8.1	34	6.4	--	--	76	41	9.3	17
*31...	1050	--	16	8.2	12	<1.0	--	--	87	47	9.0	4
NOV												
01...	0645	--	35	8.3	26	6.7	--	--	78	41	8.7	85
01...	0845	--	78	8.2	44	10	--	--	83	42	8.9	240
01...	0930	--	87	7.9	130	32	--	--	80	43	9.3	620
*01...	1350	--	90	7.9	120	34	--	--	65	35	8.2	380
*05...	1610	18	--	8.3	<5	1.1	--	--	83	42	7.8	10
30...	0100	--	62	8.3	11	--	--	--	69	39	8.2	59
30...	0300	--	84	8.2	48	--	--	--	66	38	8.2	196
DEC												
02...	1117	27	--	8.2	<5	1.8	--	--	80	44	8.5	17
*10...	1340	--	24	8.2	8	1.7	--	--	79	42	8.0	9
JAN 1992												
*09...	1030	--	48	7.7	45	26	32000	--	41	22	5.0	120
12...	1915	--	143	7.7	120	>19	--	--	51	27	5.2	644
*14...	1045	24	--	7.9	35	6.6	5200	18000	64	34	6.0	29
22...	1930	50	--	7.7	250	>50	--	--	69	31	5.5	2080
*23...	1215	100	--	7.3	99	28	--	--	26	14	3.5	184
FEB												
03...	1545	60	--	7.8	--	31	--	--	67	35	6.6	1710
03...	1615	60	--	7.8	--	30	--	--	60	31	5.5	2310
03...	1645	60	--	7.9	--	29	--	--	58	30	5.0	2120
03...	1715	60	--	7.8	--	32	--	--	62	31	5.0	2300
03...	1815	60	--	7.7	--	43	--	--	66	32	5.0	2330
*05...	1100	--	19	7.9	--	11	--	--	56	30	5.7	31
*17...	1100	--	15	8.1	19	4.4	--	--	83	45	8.0	10
20...	1500	--	131	7.8	150	34	--	--	59	31	8.9	376
20...	1945	--	528	7.7	460	56	--	--	110	54	5.2	6560
20...	2115	--	398	7.7	380	57	--	--	140	61	4.3	6780
20...	2245	--	276	7.6	480	50	--	--	99	47	4.5	5120
21...	0030	--	188	7.6	380	43	--	--	63	32	4.6	3180
21...	0345	--	117	7.6	290	38	--	--	51	26	4.1	1870
21...	1200	--	67	7.7	210	33	--	--	60	30	5.1	1550
22...	1515	--	150	7.8	130	--	--	--	71	35	5.4	1240
22...	1615	--	265	7.8	64	--	--	--	67	36	4.2	1910
22...	1715	--	371	7.7	190	--	--	--	54	27	4.1	1810
22...	2145	--	321	7.6	390	--	--	--	160	79	3.5	7880
22...	2330	--	214	7.5	260	--	--	--	120	62	3.1	3520
23...	0145	--	126	7.5	440	--	--	--	76	39	2.9	2550
*24...	1330	--	74	7.8	61	11	--	--	35	19	4.1	58
24...	1630	--	162	7.7	160	--	--	--	96	52	5.2	1600
24...	1715	--	204	7.7	150	--	--	--	53	29	4.9	1120
24...	1815	--	229	7.6	390	--	--	--	68	34	3.7	3190

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE TOTAL AT 105 DEG. C, TOTAL (MG/L) (00500)
MAR 1992										
*17...	1045	24	8.2	<5	1.1	78	44	7.9	7	468
APR										
*14...	0915	18	8.2	--	1.3	79	48	7.9	<2	434
19...	0915	40	8.4	--	3.8	74	41	8.9	32	454
20...	0915	33	8.2	--	7.8	74	40	9.2	28	484
20...	1029	33	8.2	--	7.3	76	41	9.4	26	484
*20...	1030	33	8.1	33	6.4	75	40	9.1	20	478
20...	1515	52	8.3	54	9.8	74	40	9.1	51	498
20...	1715	75	8.2	70	21	77	40	9.3	228	688
*21...	1040	42	8.0	78	18	67	35	8.4	86	510
21...	1057	42	8.1	64	18	68	36	8.3	104	544
*30...	1345	22	8.6	9	1.6	74	44	8.0	7	428

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

GRANT RIVER BASIN

05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDED (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	BARIUM, TOTAL RECOV- ERABLE (UG/L) AS BA) (01007)	COPPER, TOTAL RECOV- ERABLE (UG/L) AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L) AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L) AS MN) (01055)	ZINC, TOTAL RECOV- ERABLE (UG/L) AS ZN) (01092)
OCT 1991											
01...	428	136	<2	5.54	0.013	0.070	100	<20	90	<40	<10
24...	516	152	16	4.84	0.025	0.270	100	<20	1600	130	30
26...	572	194	32	3.79	0.997	1.43	100	<20	1900	200	40
27...	530	170	15	4.19	0.983	1.17	100	<20	1200	120	30
27...	500	156	9	4.29	1.01	1.12	100	<20	850	78	30
31...	488	158	2	5.44	0.199	0.400	90	20	300	43	30
NOV											
01...	530	142	17	5.26	0.679	0.680	100	20	2300	160	50
01...	690	166	36	5.22	0.801	0.890	100	<20	4300	310	<10
01...	1050	258	120	4.10	1.97	2.83	200	33	17000	940	130
01...	792	216	100	3.89	2.78	3.16	200	60	13000	730	120
05...	526	166	<2	6.94	0.172	0.180	80	<20	340	64	10
30...	460	114	9	5.98	0.306	0.260	90	<20	1400	120	20
30...	588	162	34	5.38	1.19	0.910	100	<20	4200	260	50
DEC											
02...	482	144	4	7.55	0.232	0.240	90	<20	430	78	20
10...	480	156	4	6.97	0.340	0.240	90	<20	200	64	<10
JAN 1992											
09...	434	156	38	3.26	3.29	1.82	90	20	3500	250	50
12...	934	196	100	3.44	1.31	2.12	200	<20	15000	770	110
14...	424	138	9	5.00	0.866	0.680	90	<20	1700	120	20
22...	2340	326	280	2.90	2.53	4.06	400	45	42000	2000	240
23...	446	146	48	1.84	2.78	2.08	90	<20	6300	360	50
FEB											
03...	1920	252	190	3.85	2.52	2.88	300	35	27000	1400	180
03...	2440	290	240	2.99	2.17	3.33	400	36	40000	1800	220
03...	2280	276	220	2.72	2.26	3.37	400	30	33000	1700	210
03...	2420	286	230	2.80	2.22	3.34	400	68	37000	1800	230
03...	2430	304	250	2.38	3.14	3.15	400	38	38000	1900	210
05...	378	134	9	4.41	2.02	0.860	80	<20	1200	150	20
17...	474	148	7	7.74	0.555	0.280	90	<20	210	54	10
20...	792	194	52	4.09	5.28	2.15	100	<20	6100	400	80
20...	6350	482	560	1.57	3.72	8.44	900	80	95000	4300	450
20...	6740	498	540	1.12	3.89	8.04	900	71	77000	4500	400
20...	4610	442	480	1.17	3.93	6.48	700	56	63000	3300	320
21...	2860	340	360	1.21	4.18	4.84	500	52	43000	2200	220
21...	1940	276	210	1.32	3.84	3.90	300	33	30000	1500	160
21...	1790	272	170	1.90	3.59	3.42	300	31	23000	1300	140
22...	1370	214	160	3.19	2.33	3.49	200	<20	15000	940	70
22...	1840	242	300	2.07	1.89	3.12	300	24	29000	1500	110
22...	2030	256	170	2.03	2.18	3.46	300	25	28000	1400	120
22...	5820	586	970	0.954	2.42	6.61	800	64	79000	4500	320
22...	3800	430	340	0.869	2.23	5.24	600	46	53000	3400	220
23...	2450	302	400	0.879	2.22	4.96	400	34	39000	2100	160
24...	334	102	16	2.72	1.96	1.36	70	<20	3200	230	<10
24...	1770	308	220	2.92	1.98	2.77	300	31	22000	1400	130
24...	1430	224	120	2.91	1.97	2.48	200	22	19000	1000	110
24...	2850	310	360	1.64	2.33	5.08	400	31	40000	2000	160

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDED (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	BARIUM, TOTAL RECOV- ERABLE (UG/L) AS BA) (01007)	COPPER, TOTAL RECOV- ERABLE (UG/L) AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L) AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L) AS MN) (01055)	ZINC, TOTAL RECOV- ERABLE (UG/L) AS ZN) (01092)
MAR 1992										
17...	162	4	6.65	0.029	0.090	80	<20	270	66	<10
APR										
14...	158	2	6.19	0.024	0.040	80	<20	<50	<40	<10
19...	120	8	5.21	0.073	0.250	90	<20	680	130	30
20...	132	10	4.11	1.12	0.940	100	<20	610	160	10
20...	134	9	4.10	1.07	0.940	100	<20	610	160	20
20...	140	8	4.07	1.13	0.930	100	<20	540	160	<10
20...	154	12	3.93	1.12	1.02	100	<20	1100	200	30
20...	196	36	3.92	1.65	1.72	100	<20	4400	430	70
21...	172	24	3.66	1.89	1.95	100	<20	3700	370	60
21...	188	26	3.64	1.78	1.88	100	<20	2800	360	40
30...	134	2	5.18	0.033	0.170	80	<20	140	84	<10

GRANT RIVER BASIN

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05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
MAY 1992							
*14...	1306	15	8.5	7	2.6	2	470
*26...	1300	11	8.3	<5	1.5	11	454
JUN							
*09...	1225	11	8.4	<5	1.7	8	456
*16...	1300	20	8.2	16	1.5	12	426
16...	1600	25	8.3	10	1.8	30	450
16...	2030	22	8.5	20	3.3	4	418
*18...	1130	14	8.1	15	1.0	5	448
*22...	1330	14	8.3	<5	1.2	4	476
JUL							
*06...	1325	14	8.2	10	1.3	6	466
*21...	1335	14	8.3	<5	1.6	5	504
AUG							
*04...	1245	13	8.2	10	2.3	7	464
*18...	1200	14	8.1	8	1.4	8	464
*31...	1230	11	8.1	6	1.1	4	438
SEP							
06...	0645	26	8.0	--	--	70	502
07...	2300	33	8.0	--	6.2	59	524
*08...	1030	27	7.9	--	9.0	57	448
08...	1031	27	7.8	--	9.1	56	448
09...	1345	26	7.9	54	8.9	48	480
10...	1021	18	7.9	--	2.7	12	466
15...	0545	24	7.8	26	5.9	48	538
15...	1350	20	7.9	38	7.2	19	482
*20...	1315	14	8.1	14	1.8	15	486

DATE	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TILE, SUS- PENDED (MG/L) (00535)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
MAY 1992					
14...	176	<2	4.70	0.035	0.160
26...	164	3	5.86	0.078	0.160
JUN					
09...	180	2	4.93	0.026	0.160
16...	156	4	4.09	0.065	0.210
16...	138	6	4.13	0.014	0.220
16...	154	2	3.85	0.049	0.200
18...	148	2	4.25	0.054	0.300
22...	214	<2	4.58	0.012	0.160
JUL					
06...	162	2	4.27	0.023	0.180
21...	184	3	4.34	0.021	0.280
AUG					
04...	128	4	4.35	0.037	0.320
18...	140	4	4.38	0.029	0.220
31...	116	3	4.27	0.026	0.180
SEP					
06...	142	12	4.23	0.094	0.380
07...	148	11	3.63	0.314	0.700
08...	144	15	2.84	0.582	1.30
08...	142	15	2.87	0.639	1.33
09...	150	18	2.83	0.785	1.58
10...	132	5	3.89	0.342	0.840
15...	190	10	4.33	0.157	0.670
15...	188	7	3.34	0.682	1.27
20...	134	4	4.46	0.052	0.510

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

GRANT RIVER BASIN

05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	13.5	11.5	12.5	9.5	5.5	7.5	.50	.00	.50	2.5	2.5	2.5
2	14.5	13.5	13.5	6.0	.50	2.5	.50	.00	.50	3.5	2.5	3.0
3	13.5	12.0	13.0	1.0	.00	.50	.50	.00	.50	4.0	3.5	3.5
4	12.5	10.5	11.5	1.0	.00	.50	.50	.00	.00	4.0	3.5	4.0
5	11.5	9.5	10.5	1.0	.50	1.0	.50	.00	.50	3.5	3.0	3.5
6	11.0	9.0	9.5	1.0	.50	.50	.50	.00	.50	3.5	3.0	3.5
7	11.0	7.5	9.5	.50	.50	.50	.50	.50	.50	3.5	3.0	3.5
8	14.0	9.5	12.0	1.0	.50	.50	.50	.50	.50	3.0	2.5	3.0
9	15.0	12.0	13.5	1.0	.50	.50	1.5	.50	1.0	2.5	1.5	2.5
10	13.5	11.0	12.5	1.0	.50	.50	2.5	1.0	2.0	1.5	.50	1.0
11	13.5	11.5	12.5	1.5	1.0	1.0	2.5	1.5	2.0	2.0	.50	1.0
12	13.0	10.5	11.5	2.5	1.0	2.0	4.0	2.0	3.5	3.0	2.0	2.5
13	11.0	9.0	10.5	5.0	2.5	4.0	3.5	1.5	2.5	2.0	1.0	2.0
14	10.5	8.5	9.5	6.0	4.0	4.5	2.5	.00	1.0	1.0	.50	.50
15	9.0	7.0	8.0	8.0	6.0	7.5	.50	.00	.50	.50	.50	.50
16	10.0	6.0	8.0	7.0	5.5	6.0	.50	.00	.50	.50	.50	.50
17	12.5	9.0	10.5	6.5	5.0	5.5	.50	.00	.50	.50	.50	.50
18	11.5	8.0	10.0	9.5	6.5	8.5	.50	.00	.50	.50	.50	.50
19	7.5	5.5	6.5	9.0	7.5	8.5	.50	.00	.50	.50	.50	.50
20	8.0	5.5	7.0	7.5	5.5	7.0	.50	.50	.50	.50	.50	.50
21	10.0	7.0	8.5	6.0	4.5	5.5	1.0	.50	.50	.50	.50	.50
22	12.5	9.5	11.0	6.0	5.5	5.5	1.0	.50	.50	.50	.50	.50
23	15.5	12.0	13.5	5.5	.50	3.0	1.0	.50	.50	.50	.00	.50
24	16.0	15.0	15.5	1.0	.00	.50	1.0	.50	.50	.50	.00	.50
25	15.0	12.0	13.0	.50	.00	.50	.50	.50	.50	.50	.00	.50
26	11.5	10.0	11.0	.50	.00	.50	1.0	.50	.50	.50	.00	.50
27	10.5	10.0	10.0	1.0	.50	.50	1.0	.50	1.0	.50	.00	.50
28	12.0	10.5	11.0	.50	.50	.50	2.0	1.0	1.5	.50	.00	.50
29	13.5	10.5	12.5	1.5	.50	1.0	3.0	2.0	2.0	.50	.00	.50
30	10.5	6.5	8.0	2.0	.00	1.5	2.0	1.0	1.5	1.0	.00	.50
31	6.5	5.5	6.0	---	---	---	3.0	2.0	2.5	1.0	.00	.50
MONTH	16.0	5.5	10.7	9.5	.00	2.9	4.0	.00	.97	4.0	.00	1.4
FEBRUARY			MARCH			APRIL			MAY			
1	1.0	.00	.50	8.5	4.5	6.5	6.5	4.0	5.5	21.5	15.0	18.0
2	1.5	.00	.50	9.0	6.0	7.5	7.5	2.5	5.0	20.0	15.5	17.5
3	2.5	.50	1.0	8.0	6.5	7.0	9.0	4.5	6.5	16.0	11.5	14.0
4	2.0	.50	1.0	7.5	6.0	6.5	10.5	5.5	8.0	15.0	11.0	13.0
5	2.0	.50	1.5	8.5	7.0	8.0	11.5	6.0	8.5	15.0	10.5	12.5
6	3.0	1.0	2.0	10.5	8.5	9.0	12.5	8.0	10.0	15.5	9.0	12.5
7	2.5	.00	1.5	10.5	10.0	10.0	14.5	10.5	12.5	17.0	10.5	14.0
8	.50	.00	.00	11.5	9.0	10.5	12.5	9.5	10.5	18.5	12.0	15.0
9	.50	.00	.00	11.0	3.5	8.5	12.5	8.0	10.0	20.0	13.5	16.5
10	.50	.00	.50	3.5	.50	1.5	11.0	8.0	9.5	21.0	15.0	18.0
11	1.0	.00	.50	1.5	.50	1.0	9.0	7.0	8.0	19.5	17.0	18.5
12	1.0	.00	.50	2.5	.50	1.0	7.5	4.5	6.5	20.0	17.0	18.5
13	1.0	.50	.50	3.0	.50	1.5	6.5	5.5	6.0	19.0	15.0	17.0
14	1.0	.50	.50	4.0	2.0	3.0	9.0	5.5	7.0	17.5	15.0	16.5
15	1.5	.00	1.0	5.5	2.0	3.5	11.5	7.0	9.0	18.0	14.0	16.0
16	3.5	1.0	2.5	5.5	2.5	4.0	11.0	9.5	10.0	21.5	15.0	18.0
17	4.0	3.0	3.5	8.0	4.5	6.0	9.5	8.5	9.0	22.0	18.5	20.0
18	3.0	2.0	2.5	6.5	4.5	5.5	11.0	8.0	9.0	22.0	17.0	19.5
19	3.5	2.0	3.0	6.5	2.5	4.5	14.5	11.0	13.0	22.5	16.5	19.5
20	4.5	.50	2.0	7.5	4.5	5.5	15.0	14.0	14.0	23.5	17.5	20.5
21	2.5	.50	1.0	5.0	2.0	3.5	14.0	8.0	10.5	22.0	18.5	20.5
22	4.5	1.0	2.5	5.0	1.0	3.0	8.0	6.5	7.0	23.5	19.0	21.0
23	4.5	.50	2.0	7.0	2.5	4.5	8.0	6.5	7.0	22.0	17.5	19.5
24	3.0	1.5	2.5	9.5	5.0	7.0	8.0	7.0	7.5	17.5	14.5	16.0
25	2.5	.50	1.5	10.5	7.5	9.0	8.0	6.5	7.0	15.0	12.5	13.5
26	4.0	1.0	2.5	9.0	6.0	7.5	8.5	7.0	7.5	14.5	11.5	13.0
27	5.5	3.5	4.5	8.0	4.0	6.0	12.0	6.0	9.0	16.5	11.0	13.5
28	5.5	4.5	5.0	6.0	4.5	5.0	13.0	8.0	10.5	17.5	12.0	15.0
29	5.5	2.5	4.0	5.0	4.5	5.0	16.5	10.5	13.0	19.5	13.0	16.5
30	---	---	---	9.5	4.5	7.0	18.5	13.0	15.5	20.0	14.5	17.5
31	---	---	---	9.0	6.5	7.5	---	---	---	22.0	15.0	18.5
MONTH	5.5	.00	1.7	11.5	.50	5.7	18.5	2.5	9.1	23.5	9.0	16.8

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[illegible]

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	14.4	6.6	9.9
8	---	---	---	---	---	---	---	---	---	13.9	6.0	9.3
9	---	---	---	---	---	---	---	---	---	12.6	5.4	8.4
10	---	---	---	---	---	---	---	---	---	12.6	4.6	7.7
11	---	---	---	---	---	---	---	---	---	10.3	4.5	6.9
12	---	---	---	---	---	---	---	---	---	10.9	4.3	7.0
13	---	---	---	---	---	---	---	---	---	11.1	4.4	7.1
14	---	---	---	---	---	---	---	---	---	14.4	4.0	8.8
15	---	---	---	---	---	---	---	---	---	15.3	7.0	10.3
16	---	---	---	---	---	---	---	---	---	14.5	5.8	9.7
17	---	---	---	---	---	---	---	---	---	13.0	5.3	8.3
18	---	---	---	---	---	---	---	---	---	12.8	5.2	8.1
19	---	---	---	---	---	---	---	---	---	13.1	4.9	8.5
20	---	---	---	---	---	---	---	---	---	12.4	5.7	8.5
21	---	---	---	---	---	---	---	---	---	10.7	5.4	7.3
22	---	---	---	---	---	---	---	---	---	10.5	5.1	7.0
23	---	---	---	---	---	---	---	---	---	10.5	5.3	7.5
24	---	---	---	---	---	---	---	---	---	12.0	7.1	9.5
25	---	---	---	---	---	---	---	---	---	12.2	8.3	9.9
26	---	---	---	---	---	---	---	---	---	12.5	8.9	10.5
27	---	---	---	---	---	---	---	---	---	12.8	8.6	10.5
28	---	---	---	---	---	---	---	---	---	12.5	8.3	10.2
29	---	---	---	---	---	---	---	---	---	13.1	7.9	10.1
30	---	---	---	---	---	---	---	---	---	13.0	7.4	9.8
31	---	---	---	---	---	---	---	---	---	12.9	6.9	9.5
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	JUNE			JULY			AUGUST			SEPTEMBER		
1	12.5	6.3	9.0	14.7	4.5	9.0	9.4	4.3	6.5	10.2	8.6	9.4
2	12.6	6.2	8.8	9.0	4.5	6.1	9.1	4.4	6.4	10.6	8.8	9.6
3	12.7	5.8	8.8	13.2	5.2	8.6	9.8	4.4	6.9	11.1	8.7	9.9
4	13.2	5.7	8.8	13.7	5.8	8.9	11.8	5.3	8.1	10.6	8.3	9.2
5	13.1	5.6	8.9	13.9	5.6	9.4	11.4	5.7	8.0	10.4	7.9	8.9
6	12.6	5.8	8.6	13.7	5.8	9.4	10.9	5.5	7.8	9.1	.09	7.0
7	14.0	6.6	9.9	10.8	5.5	7.7	7.9	4.2	6.1	---	---	---
8	13.3	6.4	9.7	12.1	4.4	7.8	8.0	4.0	5.8	---	---	---
9	14.4	7.1	10.1	12.7	3.7	7.2	9.4	3.8	5.9	---	---	---
10	13.5	5.8	9.2	11.3	4.1	7.3	6.6	3.3	4.5	---	---	---
11	12.4	5.4	8.5	11.0	3.9	6.8	9.5	3.1	6.5	---	---	---
12	11.1	4.7	7.5	11.8	3.8	7.0	9.7	4.8	7.1	---	---	---
13	10.7	4.0	6.9	8.8	3.3	6.2	11.2	6.4	8.5	---	---	---
14	9.6	3.3	6.2	7.2	1.5	5.6	11.5	6.9	8.9	---	---	---
15	13.8	3.3	8.4	10.7	5.3	7.7	12.2	7.3	9.4	---	---	---
16	10.4	5.3	7.3	11.1	5.5	7.9	12.4	7.6	9.6	---	---	---
17	11.9	4.8	7.7	11.8	5.5	8.2	12.8	7.4	9.7	---	---	---
18	12.4	4.5	7.9	12.0	5.5	8.4	11.6	6.8	8.7	---	---	---
19	13.0	5.5	8.4	11.9	5.4	7.9	12.3	6.9	9.1	---	---	---
20	13.8	5.7	9.4	12.4	5.5	8.6	11.9	6.9	8.9	---	---	---
21	14.2	6.1	9.9	12.5	6.2	9.0	11.6	6.7	8.7	---	---	---
22	10.8	6.1	8.4	8.2	6.0	7.1	11.7	6.5	8.7	---	---	---
23	14.5	7.4	10.4	9.7	7.2	8.4	12.1	6.3	8.9	---	---	---
24	13.9	6.3	9.8	12.2	7.3	9.2	11.6	6.5	8.7	---	---	---
25	14.1	6.0	9.7	10.1	6.1	7.8	11.0	6.1	8.1	---	---	---
26	14.2	5.9	9.7	11.0	5.4	7.7	10.0	7.3	8.6	---	---	---
27	14.7	6.1	10.0	10.9	4.9	7.4	11.1	8.7	9.9	---	---	---
28	14.6	5.9	10.0	11.6	4.7	7.6	12.3	9.4	10.5	12.0	8.4	9.9
29	14.6	5.4	9.5	11.4	5.3	7.9	12.1	9.2	10.4	12.8	9.3	10.7
30	14.4	4.9	9.3	8.4	5.7	6.4	12.1	9.1	10.5	12.8	9.4	10.7
31	---	---	---	6.9	3.8	5.1	11.7	8.7	9.8	---	---	---
MONTH	14.7	3.3	8.9	14.7	1.5	7.7	12.8	3.1	8.2	---	---	---

GRANT RIVER BASIN

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05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED(TONS PER DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	57	5.0	1.1	2.8	5.9	.17	.37	.25	.20	.26	.12
2	.12	7.6	1.4	1.2	3.6	5.4	.16	.32	.25	.23	.24	.14
3	.12	2.5	1.1	1.3	126	4.6	.16	.26	.24	.23	.24	.14
4	.71	1.2	.90	1.4	30	4.1	.16	.24	.25	.25	.24	.14
5	1.5	.58	.83	1.4	2.2	3.9	.14	.22	.25	.26	.24	.14
6	.16	.46	.77	1.5	1.5	3.8	.14	.19	.25	.78	.24	1.8
7	.14	.46	.77	1.6	1.3	3.3	.13	.17	.24	1.1	.33	.62
8	.15	.43	.77	33	1.1	2.8	.13	.16	.23	.30	1.1	3.3
9	.15	.43	.66	30	.92	19	.13	.14	.23	.25	.29	1.5
10	.14	.47	.63	2.2	.78	2.2	.12	.13	.20	.22	1.2	.68
11	.15	.47	.62	2.2	.71	1.8	.12	.12	.19	.20	.33	.48
12	.15	.48	1.4	5.0	.60	1.6	.10	.11	.20	1.2	.28	.46
13	.15	.52	1.0	3.4	.55	1.4	.10	.09	.18	2.5	.27	.47
14	.16	.59	.73	1.9	.50	1.3	.11	.08	.18	2.8	.26	1.4
15	.16	2.2	.73	1.8	.49	1.1	2.1	.09	.16	.78	.25	2.1
16	.16	.56	.73	1.7	.46	.99	4.9	.10	.66	.23	.25	.80
17	.17	.55	.69	1.7	.52	.67	.74	.15	.22	.21	.26	.78
18	.17	19	.72	1.7	6.3	.40	1.2	.14	.18	.19	.28	1.4
19	.17	.75	.71	1.6	12	.37	2.8	.14	.18	.19	.26	.66
20	.18	.65	.74	1.6	2640	.36	21	.16	.18	.18	.24	.59
21	.19	.59	.73	1.8	225	.34	21	.18	.16	.17	.22	.55
22	.19	.58	.76	75	1470	.33	6.8	.22	.15	.19	.20	.36
23	.20	.76	.79	101	191	.33	4.6	.24	.17	.22	.19	.24
24	1.4	.67	.78	2.6	392	.32	3.2	.25	.19	.22	.18	.18
25	3.9	.65	.81	1.9	49	.28	2.2	.28	.18	.24	.18	.13
26	3.5	.59	.84	1.9	11	.26	1.5	.32	.17	.27	.20	.10
27	1.8	.57	.88	2.1	11	.23	1.1	.31	.17	.24	.16	.10
28	.57	.58	.92	2.0	8.5	.22	.77	.30	.18	.22	.14	.12
29	.47	1.5	1.0	2.1	6.4	.25	.60	.28	.19	.22	.13	.18
30	.27	31	1.0	2.2	---	.22	.42	.27	.20	1.6	.12	.28
31	.20	---	1.0	2.5	---	.19	---	.26	---	1.2	.11	---
TOTAL	17.61	134.39	30.41	292.4	5196.23	67.96	76.80	6.29	6.48	17.09	8.89	19.96

WTR YR 1992 TOTAL 5874.51

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	635	48	22	23	62	5.6	17	8.4	13	25	9.9
2	5.5	69	35	22	26	58	5.4	14	8.4	15	23	11
3	5.6	34	32	23	442	50	5.4	10	8.4	14	22	10
4	30	26	30	23	216	46	5.3	9.2	8.8	15	22	9.3
5	47	18	30	22	97	43	5.0	7.8	9.0	16	22	8.9
6	6.9	16	30	22	84	42	4.8	6.4	9.2	14	21	30
7	5.8	16	32	22	70	38	4.7	5.4	9.3	38	38	24
8	5.9	15	35	223	59	32	4.6	4.6	8.9	52	52	187
9	5.7	15	32	426	51	133	5.0	3.9	9.2	17	22	102
10	5.4	16	33	96	44	25	4.7	3.3	9.0	16	61	77
11	5.6	16	32	178	40	22	4.5	2.9	9.4	15	23	36
12	5.6	17	67	645	34	19	4.0	2.5	11	24	19	28
13	5.4	18	47	322	31	17	3.9	1.9	11	127	18	23
14	5.5	20	33	95	28	16	2.8	6.9	12	142	16	56
15	5.4	58	31	81	27	14	59	13	11	21	16	95
16	5.3	19	30	75	26	13	95	13	18	21	15	45
17	5.4	18	27	69	26	12	4.8	16	3.5	20	15	47
18	5.3	212	27	66	40	11	5.5	12	17	18	15	70
19	5.4	70	26	61	49	9.9	36	11	19	19	15	44
20	5.4	21	26	59	6760	9.7	340	11	17	20	14	41
21	5.5	19	24	62	1250	9.4	431	11	14	19	14	45
22	5.6	18	24	389	3940	9.3	240	11	12	21	13	34
23	5.7	24	24	1080	1110	9.2	168	11	14	24	13	27
24	16	21	23	79	1690	9.1	123	9.5	14	23	12	23
25	41	20	22	50	381	8.3	87	9.4	13	25	13	21
26	123	18	22	43	108	7.6	63	9.4	13	28	15	20
27	100	17	22	39	108	6.9	46	9.1	12	25	13	38
28	12	18	22	33	88	6.8	34	9.0	13	22	12	16
29	21	26	23	29	67	7.7	28	8.7	14	22	11	13
30	25	228	22	26	---	6.8	20	8.7	14	79	11	11
31	35	---	22	24	---	6.2	---	8.3	---	61	10	---
TOTAL	567.2	1738	933	4406	16915	759.9	1846.0	276.9	350.5	986	611	1202.1

WTR YR 1992 TOTAL 30591.6

GRANT RIVER BASIN

05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--July 1987 to current year (non-frozen precipitation).

GAGE.--8-inch collector draining into a 3-inch inside-diameter standpipe.

REMARKS.--Gage established on July 1, 1987. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 4-12, 25, 26, Dec. 4-9, 15, 17, 21, 24, 25, 27, 28, Jan. 8, 10-12, 25, Feb. 10, 13-15, 18-21, 24, 25, and Mar. 11, 12, 22. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Nov. 24 and Mar. 14, 20.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.96 in., Aug. 8, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.41 in., July 13.

 RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
 DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	1.09	.00	.00	.02	.00	.00	.00	.00	.00	.04	.00
2	.03	.02	.00	.01	.09	.00	.00	.00	.00	.79	.08	.25
3	.23	.02	.00	.02	.05	.00	.00	.05	.02	.00	.06	.00
4	.71	.00	.00	.01	.01	.03	.00	.02	.06	.03	.00	.04
5	.20	.00	.00	.00	.00	.02	.00	.06	.02	.03	.00	.05
6	.04	.00	.00	.00	.00	.03	.00	.05	.00	.03	.02	.79
7	---	.00	.00	.00	.00	.04	.00	.00	.00	.61	1.02	.47
8	---	.00	.00	.00	.00	.28	.22	.00	.00	.48	.00	.01
9	---	.00	.00	.00	.00	.33	.00	.00	.00	.00	1.07	.49
10	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.37	.00
11	.02	.00	.00	.00	.00	.00	.00	.25	.03	.02	.00	.04
12	.00	.00	.56	.00	.00	.00	.00	.00	.00	.66	.23	.01
13	.01	.00	.03	.00	.00	.00	.00	.00	.00	1.41	.05	.00
14	.00	.28	.00	.00	.00	.00	.00	.00	.31	.06	.01	.28
15	---	.04	.00	.00	.00	.00	.62	.04	.01	.06	.00	.05
16	---	.00	.00	---	.00	.00	.16	.10	.87	.18	.00	.24
17	.02	.59	.00	---	.00	.00	.00	.21	.01	.05	.07	.00
18	.18	.06	.00	---	.00	.00	.25	.04	.00	.00	.03	.82
19	.00	.03	.00	---	.00	.00	.48	.00	.39	.17	.05	.00
20	.00	.00	.28	---	.00	.00	.75	.00	.00	.00	.00	.07
21	.01	.35	.00	.07	.00	.01	.02	.01	.00	.00	.00	.00
22	.00	.07	.00	.40	.00	.00	.01	.09	.11	.36	.00	.00
23	.01	.60	.00	.00	.00	.00	.15	.11	.06	.05	.00	.05
24	1.08	.00	.00	.00	.00	.00	.02	.06	.02	.04	.00	.98
25	.02	.00	.00	.00	.00	.05	.00	.07	.03	.18	.55	.00
26	.53	.00	.00	.00	.00	.00	.00	.03	.03	.07	.00	.35
27	.00	.19	.00	.00	.00	.00	.05	.00	.01	.00	.09	.00
28	.14	.00	.00	.00	.00	.22	.18	.01	.00	.00	.05	.02
29	.21	.60	.00	.00	.00	.12	.01	.00	.00	.05	.00	.01
30	.02	.00	.00	.00	---	.03	.00	.00	.00	1.12	.00	.00
31	.49	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	---	3.94	0.87	---	0.17	1.16	2.92	1.20	1.98	6.45	3.79	5.02

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LOCATION.--Lat 42°43'13", long 90°49'09", in NW 1/4 sec.23, T.3 N., R.4 W., Grant County, Hydrologic Unit 07060003, on right bank at downstream side of highway bridge at Burton, 5.9 mi northwest of Potosi and 9.5 mi upstream from mouth.

WATER-DISCHARGE RECORDS

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 4-11, 26-28, Dec. 2-30, and Jan. 14 to Feb. 16.
Records good except those for ice-affected periods, which are poor. Data-collection platform at station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	269	248	138	130	183	149	169	125	107	122	91
2	101	348	240	139	140	186	147	165	125	118	112	97
3	102	179	220	141	210	177	146	158	124	127	109	105
4	114	150	200	142	350	173	147	156	123	112	104	97
5	147	140	190	140	180	173	142	155	123	111	102	93
6	134	140	200	139	150	177	140	150	121	107	99	131
7	114	130	210	138	140	178	141	149	121	114	103	160
8	109	130	220	154	130	174	140	148	118	126	139	173
9	108	130	200	269	130	194	147	148	118	126	116	143
10	105	130	190	172	120	209	144	146	116	112	116	146
11	104	130	180	156	120	182	145	145	116	109	127	119
12	104	130	170	183	120	177	139	154	115	116	109	110
13	102	129	230	346	120	172	135	146	114	159	107	105
14	103	136	170	160	120	170	137	142	117	202	103	107
15	104	155	160	150	130	166	147	142	137	143	101	153
16	103	150	160	140	140	162	181	142	126	129	101	122
17	102	140	160	130	146	164	170	150	163	123	101	136
18	101	196	150	130	184	160	157	151	128	115	100	203
19	102	188	150	130	205	157	186	138	121	112	99	178
20	102	166	150	130	333	156	225	136	128	112	97	138
21	102	159	150	130	769	157	328	136	119	109	96	150
22	102	155	140	140	341	157	269	140	116	108	94	138
23	102	172	140	300	721	157	232	138	120	118	94	124
24	106	191	140	320	639	159	218	134	127	115	94	118
25	174	163	140	170	462	157	202	132	120	115	95	116
26	152	160	140	160	196	153	194	133	115	123	121	118
27	155	170	140	150	343	148	186	133	110	119	108	137
28	129	160	140	140	330	147	180	132	110	108	100	125
29	137	160	140	140	217	158	179	130	110	107	98	114
30	141	334	140	130	---	159	174	129	109	119	96	111
31	127	---	139	130	---	152	---	127	---	158	92	---
TOTAL	3588	5090	5347	5137	7316	5194	5227	4454	3635	3779	3255	3858
MEAN	116	170	172	166	252	168	174	144	121	122	105	129
MAX	174	348	248	346	769	209	328	169	163	202	139	203
MIN	100	129	139	130	120	147	135	127	109	107	92	91
CFSM	.43	.63	.64	.62	.94	.62	.65	.53	.45	.45	.39	.48
IN.	.50	.70	.74	.71	1.01	.72	.72	.62	.50	.52	.45	.75

MEAN	115	126	107	132	201	331	177	160	199	164	143	128
MAX	238	626	350	467	668	1057	505	489	920	626	502	327
(WY)	1962	1962	1973	1974	1948	1959	1973	1973	1947	1950	1943	1942
MIN	45.8	41.3	37.7	33.4	36.1	55.3	66.0	46.8	50.6	35.8	41.6	42.2
(WY)	1935	1938	1959	1959	1959	1958	1957	1958	1936	1936	1937	1958

GRANT RIVER BASIN

05413500 GRANT RIVER AT BURTON, WI--CONTINUED

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1935 - 1992	
ANNUAL TOTAL	59075		55880		165	
ANNUAL MEAN	162		153		341	
HIGHEST ANNUAL MEAN					59.3	
LOWEST ANNUAL MEAN					10700	
HIGHEST DAILY MEAN	4590	Jun 15	769	Feb 21	30	Jun 13 1947
LOWEST DAILY MEAN	48	Jan 23	91	Sep 1	31	(a)Aug 5 1936
ANNUAL SEVEN-DAY MINIMUM	49	Jan 21	96	Aug 19	31	(b)Aug 3 1936
INSTANTANEOUS PEAK FLOW			(c)1390	Feb 21	(d)25000	Jul 16 1950
INSTANTANEOUS PEAK STAGE			(e)17.20	Jan 23	24.82	Jul 16 1950
INSTANTANEOUS LOW FLOW			90	Sep 1	(f)21	Mar 4 1954
ANNUAL RUNOFF (CFSM)	.60		.57		.61	
ANNUAL RUNOFF (INCHES)	8.17		7.73		8.35	
10 PERCENT EXCEEDS	230		200		246	
50 PERCENT EXCEEDS	137		140		110	
90 PERCENT EXCEEDS	57		104		58	

(a) Also occurred Aug. 8, 9, 1936, Sept. 22, 1937, and Feb. 19, 20, 1959

(b) Also occurred Jan. 4, 1959

(c) Gage height, 13.45 ft

(d) From rating curve extended above 18,000 ft³/s on basis of slope-area measurement of peak flow

(e) Ice jam

(f) Result of freezeup

GRANT RIVER BASIN

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05413500 GRANT RIVER AT BURTON, WI--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1978 to current year. National Stream-Quality Accounting Network data collection began in October 1986.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water years 1978 to current year, monthly totals only for 1983.

REMARKS.--Sediment records for periods of no ice cover during considerable discharge (greater than 300 ft³/s) are good, except for Feb. 20-29, because sampling and analysis effort were concentrated on high-discharge periods. Records for most remaining periods are fair because of infrequent (about twice per week) sampling. Records for high-flow periods during ice cover are poor. Monthly load values are good. Most sediment samples were taken in a single vertical. Concentrations identified by an asterisk are from samples collected by the equal-width increment method.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 13,600 mg/L, July 13, 1979; minimum observed, 7 mg/L, Mar. 2, 1978.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 95,300 tons, June 17, 1978; minimum daily, 1.5 tons, Mar. 1, 2, 1978.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 436 mg/L, Apr. 21; minimum observed, 16 mg/L, Oct. 15.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,340 tons, Feb. 21; minimum daily, 5.3 tons, Oct. 21.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, SUS- PENDE D (MG/L) (80154)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, SUS- PENDE D (MG/L) (80154)
OCT 1991					MAY 1992			
03...	0820	--	102	57	06...	1150	149	66
07...	1000	--	114	36	07...	0845	148	96
11...	0905	--	104	42	11...	0830	142	128
14...	0920	--	102	50	14...	0920	142	147
*15...	1510	--	105	17	18...	0900	153	149
15...	1530	--	105	16	21...	0840	133	144
18...	0755	--	100	41	26...	0915	133	118
21...	0840	--	102	16	29...	1025	129	136
23...	0940	--	102	82	JUN			
*23...	1030	--	108	32	01...	0920	124	191
23...	1035	--	102	25	04...	0745	123	165
25...	1010	--	190	132	08...	0740	118	161
28...	0920	--	128	63	11...	1035	115	136
31...	0830	--	126	46	*11...	1125	116	123
NOV					*11...	1135	113	105
14...	0930	--	135	48	11...	1215	116	105
18...	0910	--	171	97	12...	0745	115	163
20...	0840	--	168	78	15...	0900	133	172
*25...	1520	--	155	41	18...	0815	129	174
25...	1530	--	156	45	22...	1520	117	90
DEC					*22...	1615	116	86
11...	1000	180	--	124	22...	1630	116	97
*11...	1030	180	--	104	25...	0945	120	126
11...	1050	180	--	233	29...	0910	110	118
JAN 1992					JUL			
*06...	1320	--	139	64	04...	1400	111	65
06...	1330	--	139	36	06...	0810	107	102
FEB					09...	0915	134	109
*19...	1245	--	213	184	13...	1135	153	146
19...	1250	--	213	180	15...	1025	142	128
MAR					20...	1030	110	114
02...	0930	--	188	90	23...	0935	119	101
07...	0900	--	178	111	27...	1040	117	112
09...	0900	--	183	134	30...	1515	119	134
20...	0930	--	156	30	AUG			
*20...	1020	--	131	31	06...	0835	99	63
20...	1030	--	156	37	11...	0815	133	140
25...	0930	--	157	67	12...	0839	109	142
28...	0940	--	145	45	*12...	0950	106	73
30...	0840	--	160	51	12...	1008	108	100
*30...	1230	--	159	26	13...	0910	107	131
30...	1240	--	159	29	17...	0955	100	95
APR					*19...	1505	99	24
02...	0850	--	148	29	19...	1517	99	33
06...	0930	--	141	43	22...	0800	94	118
08...	0920	--	139	53	25...	0845	93	131
13...	0935	--	135	69	28...	0805	100	72
16...	0915	--	172	103	29...	0830	97	95
20...	0750	--	219	189	31...	0830	92	93
21...	1015	--	366	436	SEP			
23...	0900	--	233	138	03...	0840	106	107
27...	0945	--	187	45	07...	0800	160	169
29...	0814	--	179	48	10...	0930	151	100
*29...	0840	--	192	43	14...	0905	103	116
30...	0830	--	175	58	17...	0830	134	138
MAY					22...	1105	138	88
04...	0945	--	156	67	24...	0820	118	108
*06...	1140	--	149	61	28...	0800	126	114

GRANT RIVER BASIN

05413500 GRANT RIVER AT BURTON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 1991												
23...	1030	--	108	626	8.4	12.0	2.5	9.9	741	94	140	210
DEC 11...	1030	180	--	632	8.2	0.5	12	12.9	742	92	590	3200
MAR 1992												
20...	1020	--	131	608	8.5	5.0	3.1	12.3	751	98	K18	K95
APR 29...	0840	--	192	628	8.3	11.5	5.0	9.8	747	92	170	230
JUN 11...	1135	--	113	638	8.2	20.0	20	7.9	745	89	380	150
AUG 12...	0950	--	106	626	8.2	20.5	14	7.5	759	84	590	240

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)
OCT 1991												
23...	340	75	36	8.6	2.2	344	7	294	28	20	0.10	4.0
DEC 11...	330	79	33	13	4.0	361	--	296	31	35	0.20	12
MAR 1992												
20...	330	74	36	9.1	2.1	332	5	280	26	24	0.10	5.6
APR 29...	350	83	35	7.3	2.0	334	8	288	27	21	<0.10	5.0
JUN 11...	340	78	35	7.7	1.7	440	--	361	27	24	0.10	11
AUG 12...	330	74	35	9.0	5.0	345	--	283	24	24	0.10	9.6

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1991												
23...	353	365	0.010	3.40	0.020	0.020	0.40	0.100	0.070	0.060	32	54
DEC 11...	425	408	0.060	5.00	0.230	0.210	0.60	0.160	0.260	0.160	104	77
MAR 1992												
20...	328	364	0.020	4.10	0.010	0.010	0.20	0.070	0.050	0.050	31	64
APR 29...	364	371	0.030	4.00	0.040	0.030	<0.20	0.100	0.060	0.070	43	83
JUN 11...	362	417	0.070	3.60	0.050	0.060	0.70	0.240	0.120	0.130	105	92
AUG 12...	364	365	0.050	3.00	0.070	0.060	0.70	0.300	0.220	0.200	73	89

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

GRANT RIVER BASIN

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05413500 GRANT RIVER AT BURTON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 1991							
23...	1030	108	<10	66	<3	5	5
MAR 1992							
20...	1020	131	<10	59	<3	8	<4
APR							
29...	0840	192	<10	64	<3	5	<4
AUG							
12...	0950	106	<10	74	<3	4	<4

DATE	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)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
OCT 1991						
23...	36	<10	<1	<1	79	<6
MAR 1992						
20...	65	<10	<1	<1	80	<6
APR						
29...	120	<10	2	<1	82	<6
AUG						
12...	53	<10	1	<1	79	<6

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					
15...	1510	--	105	655	9.5
23...	1030	--	108	626	12.0
NOV					
25...	1405	--	154	699	1.0
DEC					
11...	1030	180	--	632	0.5
JAN 1992					
06...	1326	--	137	703	4.0
FEB					
19...	1245	--	213	654	3.5
MAR					
20...	1020	--	131	608	5.0
30...	1230	--	162	639	8.0
APR					
29...	0840	--	192	628	11.5
MAY					
06...	1135	--	150	627	13.5
JUN					
11...	1135	--	113	638	20.0
22...	1620	--	116	625	17.0
AUG					
12...	0950	--	106	626	20.5
19...	1505	--	100	622	22.0

[illegible]

LOCATION.--Lat 42°43'52", long 90°38'25", in SW 1/4 sec.17, T.3 N., R.2 W., Grant County, Hydrologic Unit 07060003, on right bank just downstream from bridge on County Trunk Highway B, 0.8 mi upstream from Blakely Branch, 2.2 mi east of Rockville, 4.5 mi northeast of Potosi, and 15.2 mi upstream from mouth.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 7-10, Dec. 5, 6, 16-27, Jan. 15-27, and Feb. 8-12. Records good except those for ice-affected periods, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	208	151	87	86	126	95	116	78	62	65	52
2	57	192	140	88	86	126	93	113	77	71	63	57
3	58	128	132	89	136	119	94	109	76	78	61	64
4	66	111	110	89	238	116	93	107	76	67	60	56
5	81	104	110	88	103	116	89	106	76	65	59	53
6	73	98	110	87	95	119	88	103	74	63	58	88
7	64	84	116	87	90	119	88	102	74	65	63	82
8	63	80	119	104	76	116	86	101	72	73	81	79
9	61	80	117	140	76	133	93	101	72	74	66	71
10	59	80	109	106	76	133	90	98	71	65	63	73
11	59	79	106	99	74	121	90	99	70	62	62	63
12	58	79	127	148	72	117	84	106	69	74	60	60
13	56	79	142	175	79	111	82	99	69	109	59	59
14	57	82	123	106	78	110	84	95	81	123	58	60
15	57	105	107	86	83	107	95	94	76	82	57	64
16	56	96	100	86	79	104	117	94	73	77	56	65
17	57	90	96	82	78	105	110	100	84	72	56	86
18	56	141	92	80	99	102	105	93	72	67	56	166
19	56	129	90	78	113	98	133	88	71	66	55	116
20	56	118	88	78	178	97	154	87	72	68	54	88
21	56	111	86	78	286	97	224	85	68	65	54	95
22	57	106	86	100	214	97	193	86	67	66	53	83
23	57	121	86	350	502	97	164	88	71	71	53	74
24	60	131	86	100	519	102	152	84	72	69	53	70
25	126	110	86	100	250	102	141	83	68	69	57	68
26	101	107	86	96	158	97	134	84	66	71	67	69
27	97	114	88	94	300	92	128	83	64	68	59	77
28	82	108	89	90	274	91	124	82	64	64	56	70
29	99	108	90	90	150	101	123	80	63	62	55	65
30	107	204	89	90	---	102	119	79	62	68	54	63
31	91	---	87	90	---	97	---	78	---	77	52	---
TOTAL	2139	3383	3244	3261	4648	3370	3465	2923	2148	2233	1825	2236
MEAN	69.0	113	105	105	160	109	115	94.3	71.6	72.0	58.9	74.5
MAX	126	208	151	350	519	133	224	116	84	123	81	166
MIN	56	79	86	78	72	91	82	78	62	62	52	52
CFSM	.49	.79	.74	.74	1.13	.77	.81	.66	.50	.51	.41	.52
IN.	.56	.89	.85	.85	1.22	.88	.91	.77	.56	.58	.48	.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1992, BY WATER YEAR (WY)

MEAN	69.6	76.6	63.0	78.0	106	181	110	102	129	98.5	86.9	77.8
MAX	146	372	155	315	379	483	268	328	586	438	348	202
(WY)	1962	1962	1973	1946	1938	1959	1973	1960	1947	1950	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 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1935 - 1992
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ANNUAL TOTAL	36855		34875			
ANNUAL MEAN	101		95.3		98.2	
HIGHEST ANNUAL MEAN					184	1962
LOWEST ANNUAL MEAN					40.8	1958
HIGHEST DAILY MEAN	1490	Jun 15	519	Feb 24	7830	Jul 16 1950
LOWEST DAILY MEAN	28	Feb 15	52	(a) Aug 31	7.0	Dec 22 1939
ANNUAL SEVEN-DAY MINIMUM	33	Jan 23	54	Aug 18	18	Nov 1 1950
INSTANTANEOUS PEAK FLOW			913	Feb 24	(b) 43500	Jul 16 1950
INSTANTANEOUS PEAK STAGE			6.66	Feb 24	17.26	Jul 16 1950
INSTANTANEOUS LOW FLOW			52	(c) Aug 31	.00	Nov 24 1950
ANNUAL RUNOFF (CFSM)	.71		.67		.69	
ANNUAL RUNOFF (INCHES)	9.65		9.14		9.39	
10 PERCENT EXCEEDS	149		130		152	
50 PERCENT EXCEEDS	87		86		66	
90 PERCENT EXCEEDS	36		59		35	

(a) Also occurred Sept. 1

(b) From rating curve extended above 7,000 ft³/s on basis of slope-area measurement of peak flow

(c) Also occurred Sept. 1, 2, 5

GALENA RIVER BASIN

05415000 GALENA RIVER AT BUNCOMBE, WI

LOCATION.--Lat 42°30'49", long 90°22'40", in SW 1/4 sec.33, T.1 N., R.1 E., Lafayette County, Hydrologic Unit 07060005, on left bank at Buncombe, 0.6 mi upstream from Coon Branch, 1.5 mi upstream from Scrabble Branch, 2.0 mi upstream from Wisconsin-Illinois State line, and 3.5 mi southeast of Hazel Green.

DRAINAGE AREA.--125 mi².

PERIOD OF RECORD.--September 1939 to current year.

REVISED RECORDS.--WSP 1438: 1942(P), 1943(M), 1944(P), 1945(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 682.31 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 1, 1939, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 4-10, 25, 26, Dec. 2-6, 15-26, and Jan. 14 to Feb. 13. Records good except for ice-affected periods, which are fair. Gage-height telemeter at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of February 1937 reached a stage of about 17.1 ft, from information by local resident, discharge, 18,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	260	154	79	74	85	75	99	62	44	51	35
2	41	195	120	80	74	87	74	95	61	50	47	42
3	43	113	110	82	100	86	74	89	60	54	46	50
4	51	96	100	82	170	86	74	87	59	47	44	41
5	72	86	100	80	82	89	69	86	59	45	43	38
6	60	82	110	79	76	94	67	83	57	43	42	44
7	49	76	115	79	70	98	68	82	58	46	46	45
8	46	72	124	88	66	94	66	82	55	51	63	43
9	46	66	120	349	64	108	70	81	54	54	49	43
10	43	66	106	117	62	113	68	79	53	46	45	46
11	44	68	102	100	62	103	77	81	52	44	43	41
12	43	67	122	106	62	98	66	92	52	56	42	39
13	42	68	157	145	64	92	63	83	52	98	44	38
14	44	73	125	80	66	91	65	77	52	189	41	44
15	43	107	100	74	71	86	78	76	54	73	40	50
16	41	92	94	74	67	83	107	76	54	65	39	56
17	41	84	90	72	80	85	94	74	57	59	39	239
18	41	148	86	72	300	80	88	69	52	53	40	112
19	39	121	84	70	438	78	148	68	51	52	39	75
20	39	106	82	70	508	77	187	68	57	62	38	68
21	40	98	82	70	359	79	182	67	49	53	37	118
22	41	93	82	74	129	77	154	67	49	52	37	82
23	41	104	82	350	162	81	141	72	54	59	36	64
24	44	105	82	150	148	84	141	69	54	56	37	58
25	153	100	82	100	187	87	127	68	50	54	37	55
26	123	100	82	90	103	82	119	68	47	62	53	64
27	112	99	83	82	97	76	112	67	45	52	45	83
28	76	91	81	78	95	75	107	66	44	49	40	63
29	98	97	82	76	89	82	106	66	45	47	39	55
30	98	262	81	76	---	80	102	65	46	55	38	53
31	81	---	79	76	---	77	---	64	---	61	36	---
TOTAL	1815	3195	3099	3200	3925	2693	2969	2366	1594	1831	1316	1884
MEAN	58.5	106	100	103	135	86.9	99.0	76.3	53.1	59.1	42.5	62.8
MAX	153	262	157	350	508	113	187	99	62	189	63	239
MIN	39	66	79	70	62	75	63	64	44	43	36	35
CFSM	.47	.85	.80	.83	1.08	.69	.79	.61	.43	.47	.34	.50
IN.	.54	.95	.92	.95	1.17	.80	.88	.70	.47	.54	.39	.56

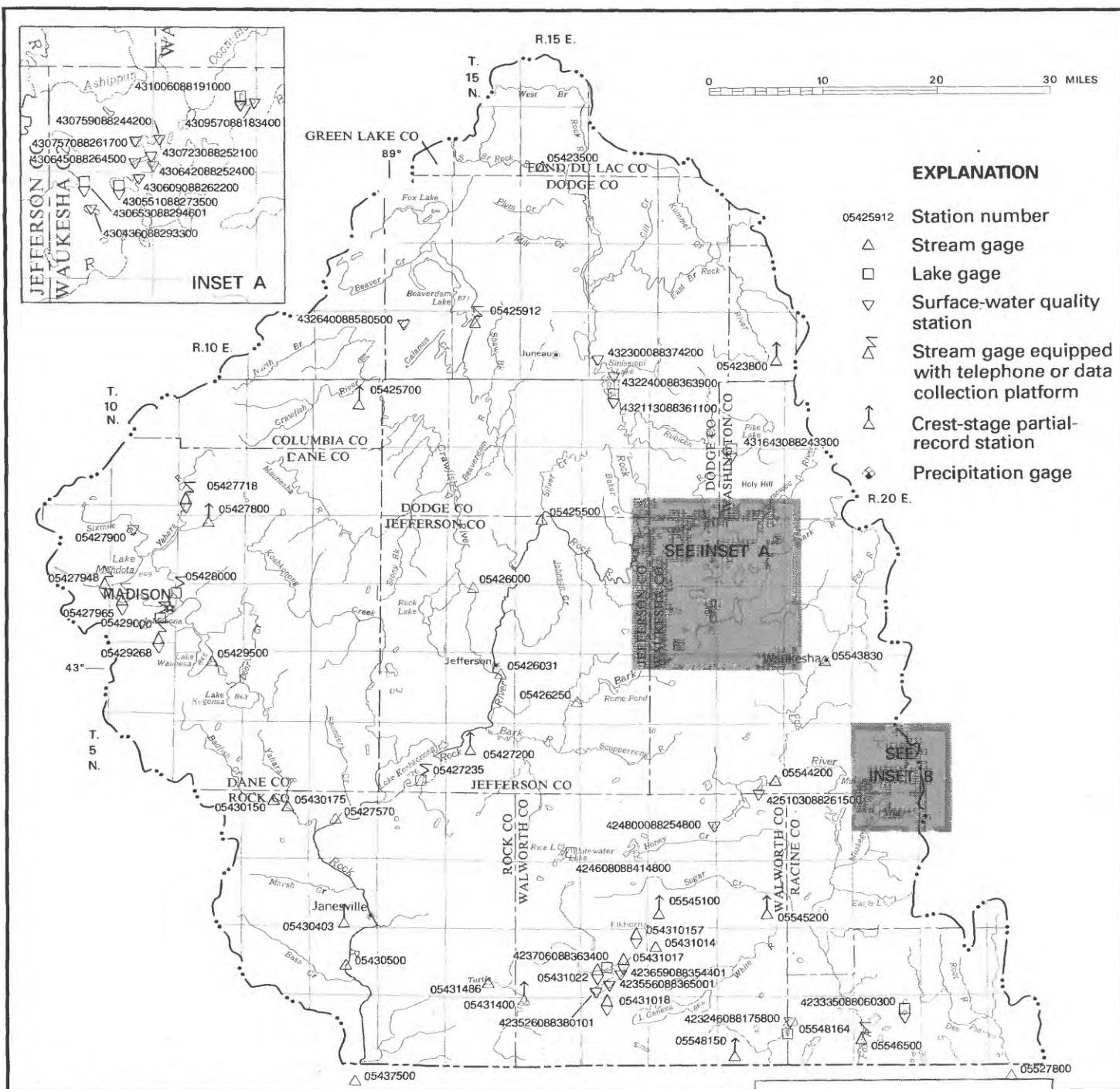
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1992, BY WATER YEAR (WY)

	MEAN	54.9	60.1	53.7	68.1	95.2	159	90.6	79.9	91.0	69.2	60.1	60.4
MAX	211	285	182	252	288	576	261	296	350	205	164	231	
(WY)	1987	1962	1983	1974	1953	1959	1973	1960	1969	1951	1942	1986	
MIN	16.6	18.9	15.6	13.2	17.2	21.3	22.1	19.1	17.6	13.3	17.3	17.9	
(WY)	1957	1965	1959	1940	1940	1957	1957	1958	1956	1965	1958	1955	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1939 - 1992
ANNUAL TOTAL	33636	29887	
ANNUAL MEAN	92.2	81.7	78.4
HIGHEST ANNUAL MEAN			159
LOWEST ANNUAL MEAN			27.1
HIGHEST DAILY MEAN	1200	508	5020
LOWEST DAILY MEAN	24	35	9.0
ANNUAL SEVEN-DAY MINIMUM	25	37	11
INSTANTANEOUS PEAK FLOW		1640	(a)29700
INSTANTANEOUS PEAK STAGE		7.71	19.57
INSTANTANEOUS LOW FLOW		34	.80
ANNUAL RUNOFF (CFSM)	.74	.65	.63
ANNUAL RUNOFF (INCHES)	10.01	8.89	8.53
10 PERCENT EXCEEDS	157	119	127
50 PERCENT EXCEEDS	75	73	49
90 PERCENT EXCEEDS	28	43	22

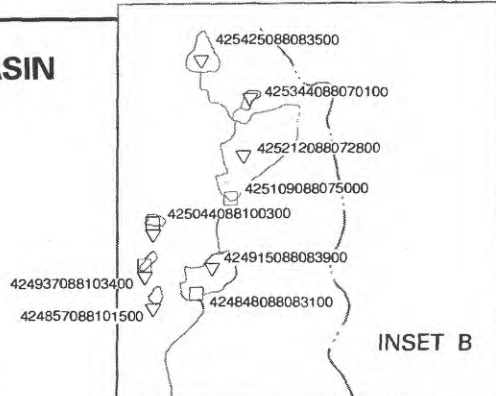
(a) From rating curve extended above 8,100 ft³/s on basis of slope-area measurements at gage heights 15.68 ft and 19.57 ft

(b) Also occurred Aug. 31 and Sept. 1



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

ROCK-FOX RIVER BASIN



LOCATION.--Lat 43°38'30", long 88°44'15", in NW 1/4 sec.33, T.14 N., R.15 E., Fond du Lac County, Hydrologic Unit 07090001, on left bank 260 ft upstream from U.S. Business Route 151 at Waupun, and 2.8 mi upstream from mouth.

PERIOD OF RECORD.--October 1948 to September 1969. March 1987 to current year. Monthly discharge for October 1948 published in WSP 1308.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 863.46 ft above National Geodetic Vertical Datum of 1929. October 1948 to September 1969, recording gage at site 150 ft downstream at same datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1992, BY WATER YEAR (WY)												
MEAN	16.8	20.0	15.7	9.83	13.4	65.9	66.6	29.4	20.2	18.7	12.5	12.9
MAX	86.8	106	80.0	40.7	105	176	241	107	73.0	139	115	76.2
(WY)	1955	1962	1966	1992	1966	1952	1959	1960	1969	1960	1960	1960
MIN	.63	.53	.16	.094	.079	5.40	7.80	3.54	1.36	.95	.56	.55
(WY)	1965	1965	1959	1959	1959	1964	1964	1958	1964	1964	1964	1963

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1949 - 1992		
ANNUAL TOTAL	15602.2			15444.7					
ANNUAL MEAN	42.7			42.2			25.3		
HIGHEST ANNUAL MEAN							60.1 1960		
LOWEST ANNUAL MEAN							2.47 1964		
HIGHEST DAILY MEAN	384	Mar	2	321	Oct	25	1280	Apr	4 1959
LOWEST DAILY MEAN	3.4	Sep	1	1.0	Sep	1	.00		(a)
ANNUAL SEVEN-DAY MINIMUM	4.3	Sep	5	1.9	Aug	26	.00	(b)	Sep 7 1958
INSTANTANEOUS PEAK FLOW				395	Oct	25	(c) 1500	Apr	3 1959
INSTANTANEOUS PEAK STAGE				5.01	Oct	25	7.97	Apr	3 1959
INSTANTANEOUS LOW FLOW				.80	(d) Aug	30	.00		(e)
ANNUAL RUNOFF (CFSM)	.67			.66			.40		
ANNUAL RUNOFF (INCHES)	9.13			9.03			5.40		
10 PERCENT EXCEEDS	100			94			61		
50 PERCENT EXCEEDS	23			30			8.6		
90 PERCENT EXCEEDS	6.1			4.7			.80		

- (a) Many days in 1958-59, 1963-64
- (b) Also occurred in 1959
- (c) From rating curve extended above 650 ft³/s
- (d) Also occurred Aug. 31 and Sept. 1, 5, 6, 8
- (e) No flow at times in 1949, 1953-54, 1958-59, 1963-64

432300088374200 SINISSIPPI LAKE, OFF SAM POINT, NEAR HUSTISFORD, WI

LOCATION.--Lat 43°23'00" long 88°37'42", in NW 1/4 NE 1/4 sec.31, T.11 N., R.16 E., Dodge County, Hydrologic Unit 07090001, 3 mi northwest of Hustisford.

PERIOD OF RECORD.--April 1991 to current year.

REMARKS.--Lake sampled about 0.5 mi west of Sam Point. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 28 TO AUGUST 24, 1992
(Milligrams per liter unless otherwise indicated)

	Apr. 28	June 25	July 20	Aug. 24
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	9.12	9.00	9.22	8.92
Specific conductance (μS/cm)	557	566	507	613
pH (units)	8.9	9.2	9.0	8.5
Water temperature (°C)	9.5	19.5	23.5	24.0
Color (Pt-Co. scale)	60	---	---	---
Turbidity (NTU)	11	---	---	---
Secchi-depth (meters)	0.2	0.2	0.2	0.2
Dissolved oxygen	16.1	17.2	11.9	7.4
Hardness, as CaCO ₃	290	---	---	---
Calcium, dissolved (Ca)	60	---	---	---
Magnesium, dissolved (Mg)	34	---	---	---
Sodium, dissolved (Na)	11	---	---	---
Potassium, dissolved (K)	3	---	---	---
Alkalinity, as CaCO ₃	240	---	---	---
Sulfate, dissolved (SO ₄)	32	---	---	---
Chloride, dissolved (Cl)	31	---	---	---
Fluoride, dissolved (F)	0.1	---	---	---
Silica, dissolved (SiO ₂)	0.4	---	---	---
Solids, dissolved, at 180°C	352	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	0.75	---	---	---
Nitrogen, ammonia, dissolved (as N)	0.03	---	---	---
Nitrogen, amm. + org., total (as N)	2.3	---	---	---
Phosphorus, total (as P)	0.197	0.460	0.580	0.630
Phosphorus, ortho, dissolved (as P)	0.002	---	---	---
Iron, dissolved (Fe) μg/L	<50	---	---	---
Manganese, dissolved (Mn) μg/L	<40	---	---	---
Chlorophyll a, phytoplankton (μg/L)	130	340	450	360

432240088363000 SINISSIPPI LAKE, OFF BUTTERNUT ISLAND, NEAR HUSTISFORD, WI

LOCATION.--Lat 43°22'40" long 88°63'90", in NE 1/4 SW 1/4 sec.32, T.11 N., R.16 E., Dodge County, Hydrologic Unit 07090001, 2.4 mi northwest of Hustisford.

PERIOD OF RECORD.--April 1991 to current year.

REMARKS.--Lake sampled about 0.5 mi southeast of Butternut Island. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 28 TO AUGUST 24, 1992
(Milligrams per liter unless otherwise indicated)

	Apr. 28	June 25	July 20	Aug. 24
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	9.12	9.00	9.22	8.92
Specific conductance (μS/cm)	551	584	495	599
pH (units)	9.0	9.1	9.0	8.6
Water temperature (°C)	8.5	19.0	23.0	24.0
Secchi-depth (meters)	0.2	0.2	0.1	0.5
Dissolved oxygen	16.8	17.5	10.5	9.0
Phosphorus, total (as P)	0.154	0.410	0.590	0.610
Chlorophyll a, phytoplankton (μg/L)	170	250	460	360

ROCK RIVER BASIN

432113088361100 SINISSIPPI LAKE, OFF ANTHONY ISLAND, AT HUSTISFORD, WI

LOCATION.--Lat 43°21'13" long 88°36'11", in NW 1/4 NE 1/4 sec.9, T.10 N., R.16 E., Dodge County, Hydrologic Unit 07090001, at Hustisford.

DRAINAGE AREA.--511 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--April 1991 to current year.

GAGE.--Nonrecording gage. Datum of gage is 90.00 ft above datum assumed by Wisconsin Department of Natural Resources; gage readings have been reduced to elevation above this datum. Staff, mounted to abutment, is read by Dick Joiner.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 9.54 ft, Oct. 26, 1991; minimum observed, 8.60 ft, Sept. 22, 29, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 9.54 ft, Oct. 26; minimum observed, 8.60 ft, Sept. 22, 29.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	9.18	9.10	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	9.40	---	---	---	---
5	---	---	---	---	---	---	---	---	9.10	---	9.10	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	9.50	9.40	---	9.10	8.80	---	---
8	---	---	---	---	---	---	---	---	---	---	---	8.70
9	---	---	---	---	---	---	---	---	---	8.80	---	8.65
10	---	---	---	---	---	---	---	---	---	---	9.00	---
11	---	9.30	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	9.20	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	9.30	---	---	9.22	---	---
15	---	---	---	---	---	---	---	9.25	---	---	---	8.65
16	---	---	---	---	---	---	---	---	9.00	---	---	---
17	---	---	---	---	---	9.50	---	---	---	---	---	---
18	---	---	---	---	---	---	---	9.30	---	---	9.00	---
19	---	---	---	---	---	---	---	---	---	9.20	---	---
20	---	---	---	---	---	---	---	---	---	9.22	---	---
21	---	---	---	---	---	---	9.35	---	---	---	---	---
22	---	---	---	---	---	---	---	9.20	---	---	---	8.60
23	---	---	---	---	---	---	---	---	9.00	---	---	---
24	---	---	---	---	---	---	---	---	---	---	8.92	---
25	---	---	---	---	---	---	9.30	---	9.00	---	8.90	---
26	9.54	---	---	---	---	---	---	9.20	8.98	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	9.12	---	---	---	---	---
29	---	---	---	---	---	---	---	9.20	---	9.15	---	8.60
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	9.45	---	---	---	---	---	---

432113088361100 SINISSIPPI LAKE, OFF ANTHONY ISLAND, AT HUSTISFORD, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1991 to current year.

REMARKS.--Lake sampled 0.25 mi southwest of Anthony Island at a lake depth of about 7 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 07 TO AUGUST 24, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 07	Apr. 28	June 25	July 20	Aug. 24
Depth of sample (ft)	1.0	1.5	1.5	1.5	1.5
Lake stage (ft)	---	9.12	9.00	9.22	8.92
Specific conductance ($\mu\text{S}/\text{cm}$)	872	525	617	498	575
pH (units)	8.1	9.2	8.9	8.8	8.8
Water temperature ($^{\circ}\text{C}$)	4.0	8.5	19.5	23.0	23.5
Color (Pt-Co. scale)	---	70	---	---	---
Turbidity (NTU)	---	21	---	---	---
Secchi-depth (meters)	---	0.2	0.2	0.2	0.2
Dissolved oxygen	20.0	17.9	14.6	10.0	10.3
Hardness, as CaCO_3	---	270	---	---	---
Calcium, dissolved (Ca)	---	57	---	---	---
Magnesium, dissolved (Mg)	---	32	---	---	---
Sodium, dissolved (Na)	---	11	---	---	---
Potassium, dissolved (K)	---	3	---	---	---
Alkalinity, as CaCO_3	---	230	---	---	---
Sulfate, dissolved (SO_4)	---	30	---	---	---
Chloride, dissolved (Cl)	---	30	---	---	---
Fluoride, dissolved (F)	---	0.1	---	---	---
Silica, dissolved (SiO_2)	---	<0.2	---	---	---
Solids, dissolved, at 180°C	---	318	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	0.21	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	0.03	---	---	---
Nitrogen, amm. + org., total (as N)	---	2.6	---	---	---
Phosphorus, total (as P)	---	0.230	0.310	0.480	0.610
Phosphorus, ortho, dissolved (as P)	---	0.004	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	<50	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	<40	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	240	140	370	320

2-7-92

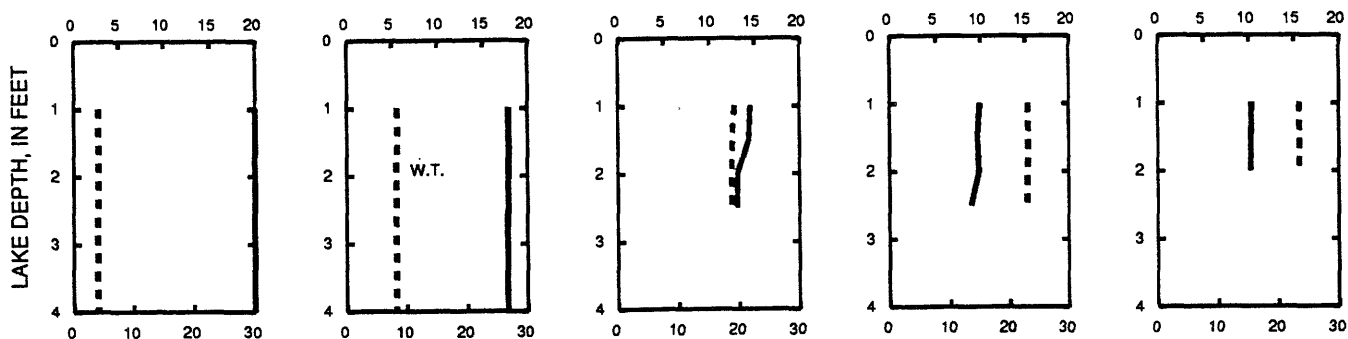
4-28-92

6-25-92

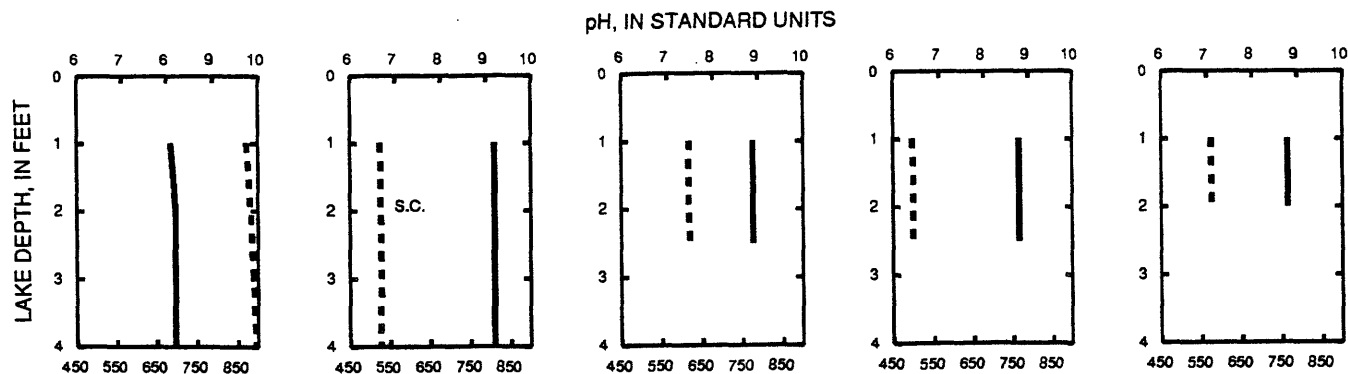
7-20-92

8-24-92

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

431006088191000 LAKE KEESUS, NORTH BAY, NEAR MERTON, WI

LOCATION.--Lat 43°10'06" long 88°19'10", in NW 1/4 SW 1/4 sec.12, T.8 N., R.18 E., Waukesha County, Hydrologic Unit 07090001, 1.4 mi northwest of Merton.

LAKE-STAGE RECORDS

PERIOD OF RECORD.--April 1991 to current year.

GAGE.--Staff read by Laura Milbrath. Elevation of lake is 957 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 11.21 ft, Apr. 16, 1991; minimum observed, 10.50 ft, Sept. 3 and 9, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.10 ft, July 15; minimum observed, 10.86 ft, Aug. 24.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	10.96	10.94
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	10.94	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	10.96	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	10.98	10.98
13	---	---	---	---	---	---	---	---	---	---	10.98	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	11.10	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	10.93	---	10.94	---
19	---	---	---	---	---	---	---	---	10.94	---	---	11.22
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	10.97	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	10.98	10.86	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	10.90	---	---	---
27	---	---	---	---	---	---	---	---	---	10.96	---	---
28	---	---	---	---	---	---	---	---	---	---	11.00	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	10.88	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1991 to current year.

REMARKS.--Lake sampled in north bay at a lake depth of about 30 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 23 TO AUGUST 12, 1992
(Milligrams per liter unless otherwise indicated)

	Apr. 23	June 18	July 21	Aug. 12
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	---	10.93	10.97	10.98
Specific conductance (μS/cm)	354	327	337	334
pH (units)	7.8	8.7	8.6	8.5
Water temperature (°C)	8.0	21.0	22.5	23.0
Secchi-depth (meters)	2.3	2.0	3.2	2.8
Dissolved oxygen	10.8	8.8	9.0	8.9
Phosphorus, total (as P)	0.041	0.019	0.019	0.017
Chlorophyll a, phytoplankton (μg/L)	8.0	9.0	3.0	4.5

430957088183400 LAKE KEESUS, EAST BAY, NEAR MERTON, WI

LOCATION.--Lat 43°09'57" long 88°18'34", in SW 1/4 SE 1/4 sec.12, T.8 N., R.18 E., Waukesha County, Hydrologic Unit 07090001, 1.2 mi north of Merton.

PERIOD OF RECORD.--April 1991 to current year.

REMARKS.--Lake sampled in east bay at a lake depth of about 46 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 12, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 23		June 18		July 21		Aug. 12	
Depth of sample (ft)	1.5	43	1.5	41	1.5	41	1.5	42	1.5	41
Lake stage (ft)	---		---		10.93		10.97		10.98	
Specific conductance ($\mu\text{S}/\text{cm}$)	336	385	351	364	326	371	332	403	331	425
pH (units)	8.6	7.6	8.4	8.2	8.4	7.4	8.5	7.3	8.4	7.2
Water temperature ($^{\circ}\text{C}$)	3.0	3.5	8.0	6.5	21.0	7.5	23.0	7.5	23.0	7.5
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.3	1.5	---	---	---	---	---	---
Secchi-depth (meters)	---		2.3		2.0		3.0		3.0	
Dissolved oxygen	13.0	0.3	10.7	6.7	8.5	0.6	8.7	0.0	8.7	0.1
Hardness, as CaCO_3	---	---	170	180	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	33	34	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	22	22	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	5.8	5.8	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	160	160	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	8.0	8.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	13	13	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	0.4	0.9	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	192	190	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.03	0.03	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.11	0.29	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.0	1.0	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.028	0.034	0.021	0.360	0.024	0.490	0.019	0.410
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	180	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	9.0	---	8.0	---	3.1	---	4.1	---

2-5-92

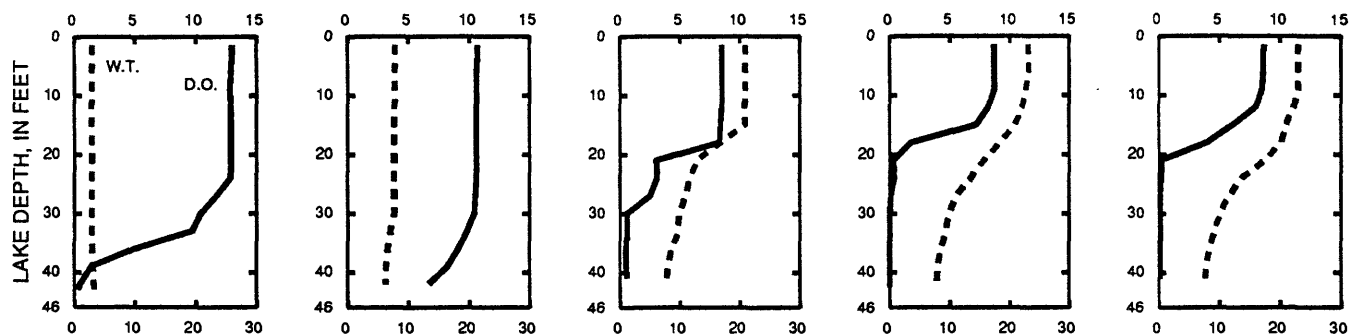
4-23-92

6-18-92

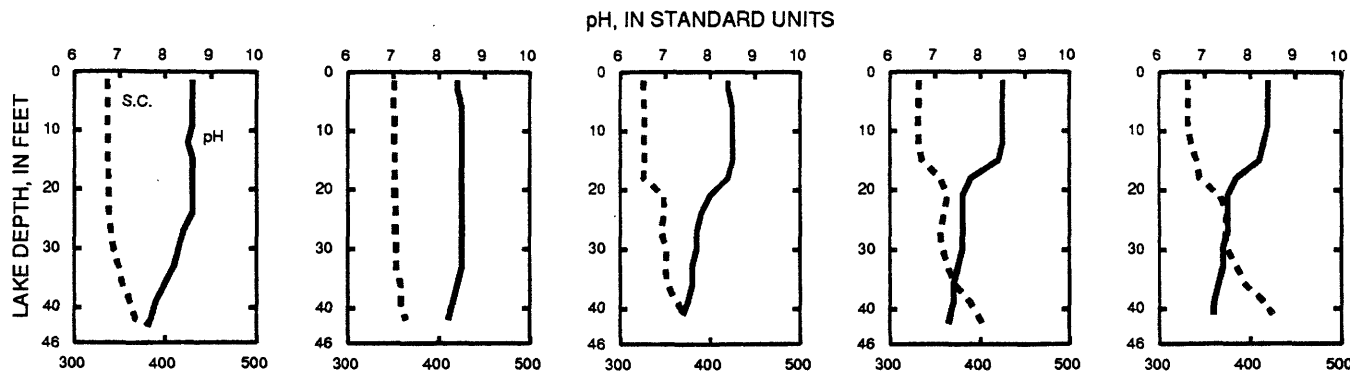
7-21-92

8-12-92

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

LOCATION.--Lat 43°16'43" long 88°24'33", in NW 1/4 NE 1/4 sec.6, T.9 N., R.18 E., Washington County, Hydrologic Unit 07090001, 3.2 mi southwest of Hartford.

PERIOD OF RECORD.--June 1991 to current year.

GAGE.--Staff read by Bill Noennig at his residence. Elevation of lake is 969 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 11.68 ft, Sept. 20, 1992; minimum observed, 10.84 ft, Sept. 10, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.68 ft, Sept. 20; minimum observed, 10.97 ft, May 28.

[illegible]

431643088243300 DRUID LAKE NEAR HARTFORD, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1991 to current year.

REMARKS.--Lake sampled near center at a lake depth of about 54 ft. Lake ice-covered during February sampling.
Water-quality analyses by Wisconsin State Laboratory of Hygiene.WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 18, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 23		June 15		July 15		Aug. 18	
Depth of sample (ft)	1.5	48	1.5	48	1.5	49	1.5	50	1.5	51
Lake stage (ft)	---		---		11.08		11.38		11.01	
Specific conductance ($\mu\text{S}/\text{cm}$)	599	664	590	599	598	605	560	628	573	635
pH (units)	8.7	7.8	8.5	8.4	8.5	7.7	8.3	7.6	8.4	7.5
Water temperature ($^{\circ}\text{C}$)	2.5	2.0	8.0	6.0	21.5	7.0	22.5	7.0	21.5	7.0
Color (Pt-Co. scale)	---		35	30	---		---		---	
Turbidity (NTU)	---		0.90	0.90	---		---		---	
Secchi-depth (meters)	---		2.5	---	1.2	---	1.5	---	2.2	---
Dissolved oxygen	12.0	0.5	12.2	10.7	9.2	0.8	8.7	0.1	9.5	0.0
Hardness, as CaCO_3	---		320	320	---		---		---	
Calcium, dissolved (Ca)	---		68	70	---		---		---	
Magnesium, dissolved (Mg)	---		36	36	---		---		---	
Sodium, dissolved (Na)	---		9.8	9.8	---		---		---	
Potassium, dissolved (K)	---		2	1	---		---		---	
Alkalinity, as CaCO_3	---		270	260	---		---		---	
Sulfate, dissolved (SO_4)	---		35	36	---		---		---	
Chloride, dissolved (Cl)	---		25	25	---		---		---	
Fluoride, dissolved (F)	---		0.1	0.1	---		---		---	
Silica, dissolved (SiO_2)	---		4.0	4.5	---		---		---	
Solids, dissolved, at 180°C	---		360	366	---		---		---	
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---		0.72	0.71	---		---		---	
Nitrogen, ammonia, dissolved (as N)	---		0.11	0.16	---		---		---	
Nitrogen, amm. + org., total (as N)	---		1.1	1.0	---		---		---	
Phosphorus, total (as P)	---		0.030	0.018	0.023	0.111	0.012	0.141	0.007	0.210
Phosphorus, ortho, dissolved (as P)	---		0.002	0.002	---		---		---	
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---		<50	<50	---		---		---	
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---		<40	<40	---		---		---	
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---		17	---	9.0	---	4.9	---	4.4	---

2-5-92

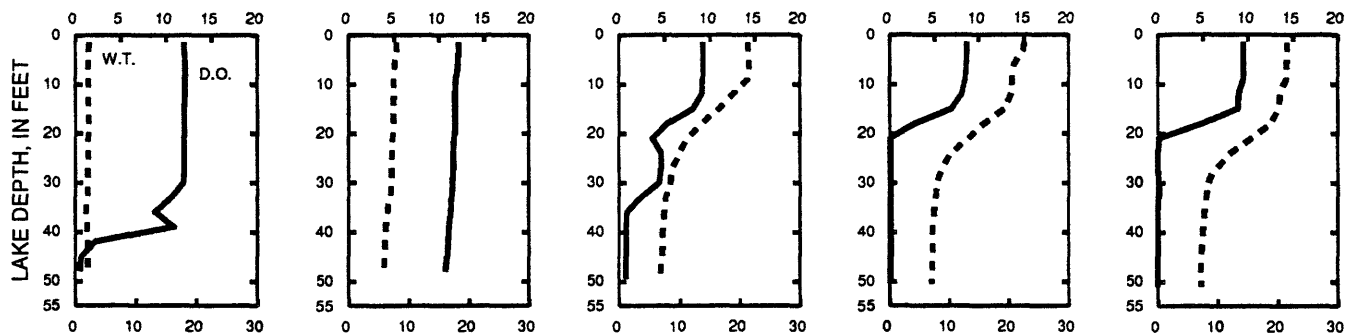
4-23-92

6-15-92

7-15-92

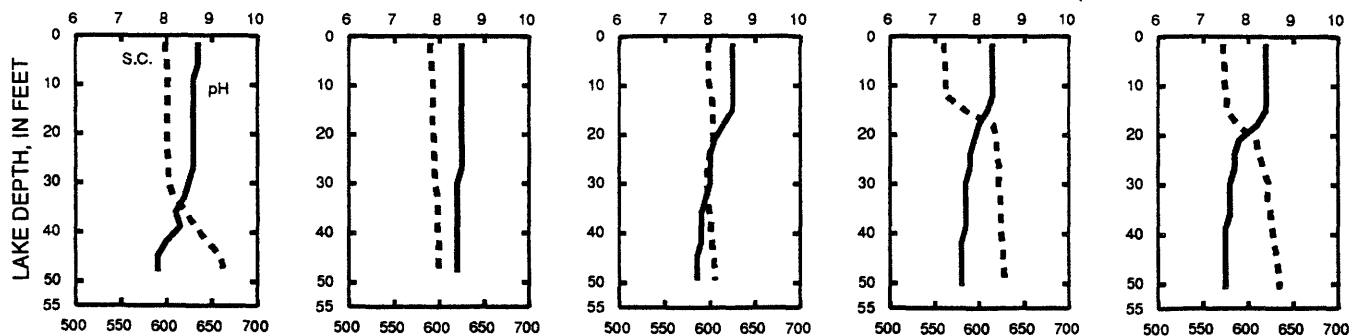
8-18-92

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

430723088252100 OKAUCHEE LAKE AT OKAUCHEE, WI

LOCATION.--Lat 43°07'23", Long 88°25'21", in NE 1/4 NE 1/4, sec.36, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Okauchee.

DRAINAGE AREA.--80.7 mi².

PERIOD OF RECORD.--February 1984 to current year.

REMARKS.--A detailed water quality management plan has been developed for Okauchee Lake by Southeastern Wisconsin Regional Planning Commission; previous water-quality data are available in this report. Lake sampled near center at a lake depth of about 88 feet. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 18, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 09		June 16		July 21		Aug. 18	
Depth of sample (ft)	3.0	90	1.5	88	1.5	90	1.5	92	1.5	90
Lake stage (ft)	---		4.80		4.71		4.74		4.75	
Specific conductance (µS/cm)	511	550	517	519	523	---	523	565	508	558
pH (units)	8.5	8.3	8.3	8.4	8.2	---	8.5	7.7	8.5	7.6
Water temperature (°C)	2.5	2.5	5.5	4.5	20.5	---	22.5	6.5	21.0	6.5
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.60	0.60	---	---	---	---	---	---
Secchi-depth (meters)	---		3.6		1.8		2.5		1.4	
Dissolved oxygen	14.3	6.8	12.7	12.2	8.5	---	9.0	0.0	9.4	0.1
Hardness, as CaCO ₃	---	---	270	270	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	51	52	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	35	35	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	10	11	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	220	220	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	35	35	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	26	26	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.1	<0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	2.3	2.6	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	316	320	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.33	0.35	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.04	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.60	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.013	0.014	0.012	0.046	0.013	0.136	0.010	0.133
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	6.0	---	4.0	---	4.6	---	5.4	---

2-5-92

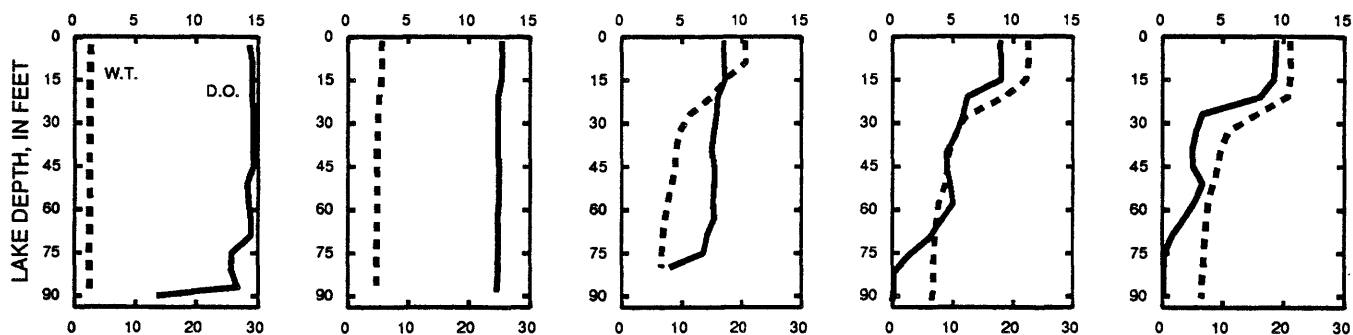
4-9-92

6-16-92

7-21-92

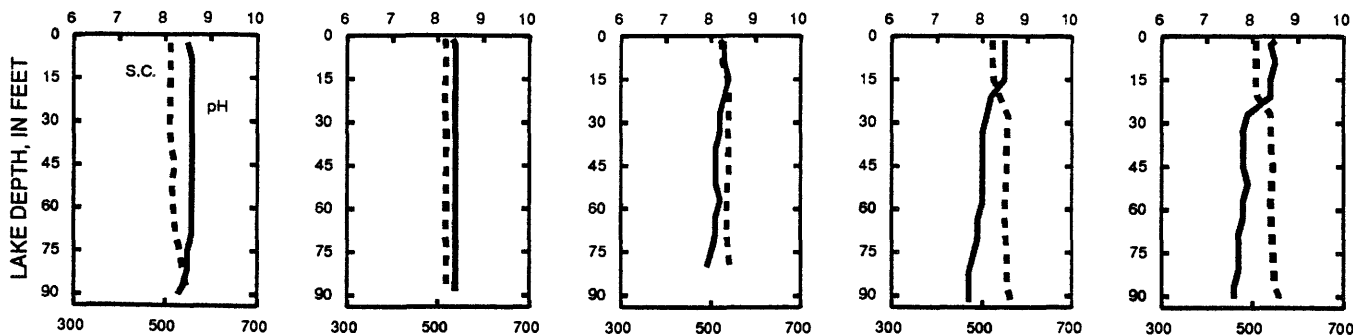
8-18-92

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

ROCK RIVER BASIN

375

430759088244200 OKAUCHEE LAKE, NO. 1, NEAR OKAUCHEE, WI

LOCATION.--Lat 43°07'59", long 88°24'42", in NE 1/4 NW 1/4 sec.30, T.8 N., R.18 E., Waukesha County, Hydrologic Unit 07090001, near Okauchee.

PERIOD OF RECORD.--April 1986 to current year.

REMARKS.--Sampling site is located in Crane's Nest Bay, in the northeast part of the lake, at a depth of 10 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 09 TO AUGUST 18, 1992
(Milligrams per liter unless otherwise indicated)

	Apr. 09	June 16	July 21	Aug. 18
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.80	4.71	4.74	4.75
Specific conductance (μS/cm)	526	521	545	533
pH (units)	8.4	8.4	8.4	8.5
Water temperature (°C)	7.0	21.0	23.0	20.5
Secchi-depth (meters)	3.3	1.7	2.0	1.2
Dissolved oxygen	13.1	9.6	8.4	9.6
Phosphorus, total (as P)	0.017	0.016	0.050	0.019
Chlorophyll a, phytoplankton (μg/L)	6.0	4.0	5.9	13

430645088264500 OKAUCHEE LAKE, NO. 2, AT OKAUCHEE, WI

LOCATION.--Lat 43°06'45", long 88°26'45", in NE 1/4 NE 1/4 sec.35, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Okauchee.

PERIOD OF RECORD.--April 1986 to current year.

REMARKS.--Sampling site is located in Lower Okauchee Lake, at a depth of 10 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 09 TO AUGUST 18, 1992
(Milligrams per liter unless otherwise indicated)

	Apr. 09	June 16	July 21	Aug. 18
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.80	4.71	4.74	4.75
Specific conductance (μS/cm)	504	493	510	494
pH (units)	8.5	8.4	8.4	8.5
Water temperature (°C)	8.5	22.5	23.5	22.0
Secchi-depth (meters)	3.3	2.3	1.8	1.6
Dissolved oxygen	13.0	8.3	8.5	9.0
Phosphorus, total (as P)	0.008	0.026	0.021	0.012
Chlorophyll a, phytoplankton (μg/L)	3.0	3.0	4.8	6.1

430642088252400 OKAUCHEE LAKE, NO. 3, AT OKAUCHEE, WI

LOCATION.--Lat 43°06'42", long 88°25'24", in NE 1/4 NE 1/4 sec.36, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Okauchee.

PERIOD OF RECORD.--April 1986 to current year.

REMARKS.--Sampling site is located in Ice House Bay, in the south bay of Okauchee Lake, at a depth of 10 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 09 TO AUGUST 18, 1992
(Milligrams per liter unless otherwise indicated)

	Apr. 09	June 16	July 21	Aug. 18
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.80	4.71	4.74	4.75
Specific conductance (μS/cm)	510	503	515	501
pH (units)	8.5	8.4	8.4	8.5
Water temperature (°C)	8.0	22.0	23.5	21.0
Secchi-depth (meters)	3.4	2.2	2.0	1.8
Dissolved oxygen	12.6	8.8	8.6	9.3
Phosphorus, total (as P)	0.010	0.016	0.014	0.011
Chlorophyll a, phytoplankton (μg/L)	4.0	5.0	4.1	7.0

ROCK RIVER BASIN

430757088261700 OKAUCHEE LAKE, NO. 4, AT OKAUCHEE, WI

LOCATION.--Lat 43°07'57", long 88°26'17", in NW 1/4 NW 1/4 sec.25, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Okauchee.

PERIOD OF RECORD.--June 1986 to current year.

REMARKS.--Sampling site is located near Crazyman's Island, in the northwest bay of Okauchee Lake, at a depth of 10 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 09 TO AUGUST 18, 1991
(Milligrams per liter unless otherwise indicated)

	Apr. 09	June 16	July 21	Aug. 18
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.80	4.71	4.74	4.75
Specific conductance (μ S/cm)	511	518	527	505
pH (units)	8.4	8.4	8.5	8.5
Water temperature ($^{\circ}$ C)	7.0	21.5	22.0	21.0
Secchi-depth (meters)	3.4	1.2	1.8	1.4
Dissolved oxygen	12.6	9.3	8.9	9.5
Phosphorus, total (as P)	0.010	0.015	0.015	0.010
Chlorophyll a, phytoplankton (μ g/L)	4.0	5.0	3.2	5.3

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LOCATION.--Lat 43°05'51", long 88°27'35", in NW 1/4 SE 1/4 sec.2, T.7 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Oconomowoc.

PERIOD OF RECORD.--April 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 9.28 ft, Oct. 5, 1986; minimum observed, 6.84 ft, Feb. 5, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 8.16 ft, July 15; minimum observed, 7.26 ft, Feb. 5.

[illegible]

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1986 to current year.

REMARKS.--Lake sampled near center at a lake depth of about 60 ft. Lake ice-covered during February sampling.
Water-quality analyses by Wisconsin State Laboratory of Hygiene.WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 12, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 08		June 17		July 15		Aug. 12	
Depth of sample (ft)	1.5	62	1.5	63	1.5	58	1.5	58	1.5	56
Lake stage (ft)	7.26		7.73		8.10		8.16		7.99	
Specific conductance ($\mu\text{S}/\text{cm}$)	452	545	505	506	507	527	513	554	511	564
pH (units)	8.6	7.8	8.4	8.4	8.2	7.7	8.3	7.7	8.4	7.6
Water temperature ($^{\circ}\text{C}$)	2.0	3.0	5.5	5.0	21.0	8.0	21.0	8.0	22.5	8.0
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	<0.50	<0.50	---	---	---	---	---	---
Secchi-depth (meters)	---		6.3		1.8		3.1		2.4	
Dissolved oxygen	12.2	4.4	12.2	11.9	8.7	0.8	8.4	0.1	9.7	0.1
Hardness, as CaCO_3	---	---	250	250	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	46	46	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	34	34	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	12	12	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	210	210	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	34	34	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	28	28	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	3.0	3.1	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	304	304	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.25	0.25	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.09	0.09	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.50	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.008	0.005	0.008	0.071	0.007	0.047	0.004	0.040
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	2.0	---	3.0	---	2.0	---	2.4	---

2-5-92

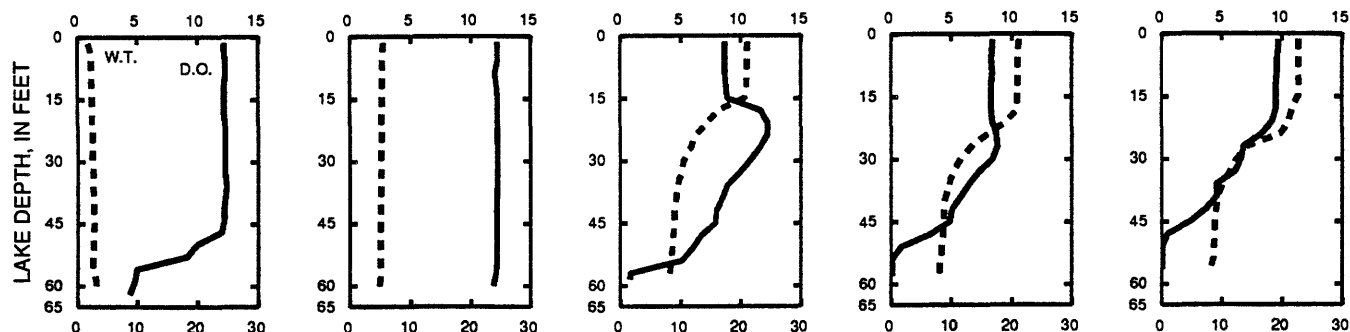
4-8-92

6-17-92

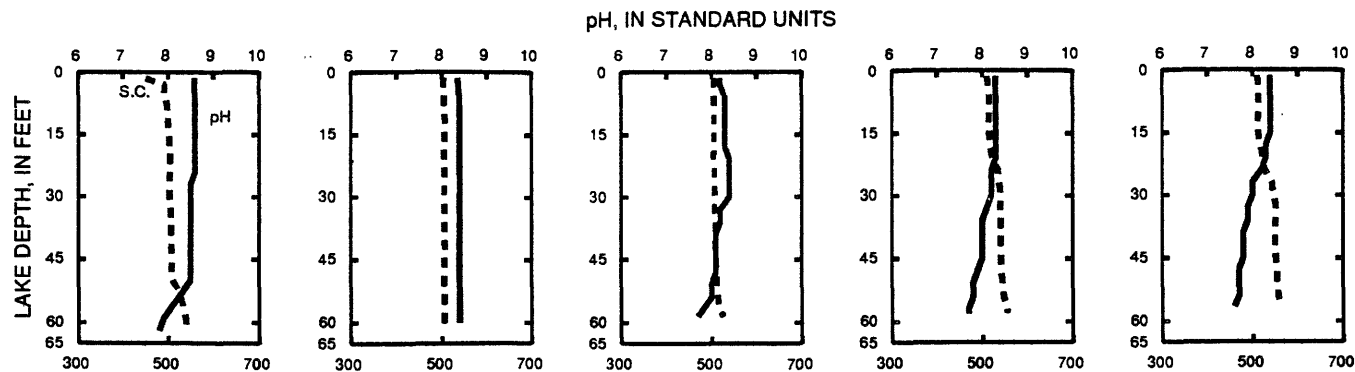
7-15-92

8-12-92

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

430609088262200 OCONOMOWOC LAKE NO. 2 (OFF HEWITT POINT) AT OCONOMOWOC, WI

WATER-QUALITY RECORDS

LOCATION.--Lat 43°06'09", long 88°26'22", in NW 1/4 NW 1/4 sec.1, T.7 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at Oconomowoc.

PERIOD OF RECORD.--March 1986 to current year.

REMARKS.--Sampling site is located in northeast bay near Hewitt Point at a lake depth of about 48 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 12, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 08		June 17		July 15		Aug. 12	
Depth of sample (ft)	1.5	48	1.5	48	1.5	47	1.5	48	1.5	47
Lake stage (ft)	7.26		7.73		8.10		8.16		7.99	
Specific conductance (μS/cm)	492	578	530	530	532	556	538	592	532	599
pH (units)	8.0	7.6	8.3	8.3	8.3	7.6	8.4	7.6	8.3	7.5
Water temperature (°C)	3.0	4.0	6.5	5.5	21.0	8.0	21.5	8.0	23.0	8.0
Secchi-depth (meters)	---		6.5		2.0		2.7		2.4	
Dissolved oxygen	12.7	5.4	12.2	12.1	8.6	0.9	8.5	0.3	10.0	0.3
Phosphorus, total (as P)	---	---	<0.004	0.005	<0.004	0.041	0.006	0.045	0.005	0.050
Chlorophyll a, phytoplankton(μg/L)	---	---	1.0	---	3.0	---	1.8	---	1.8	---

2-5-92

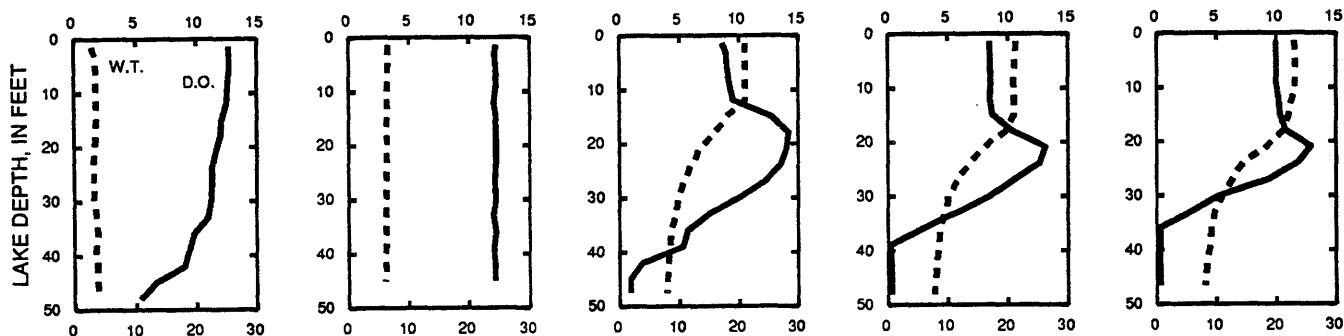
4-8-92

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7-15-92

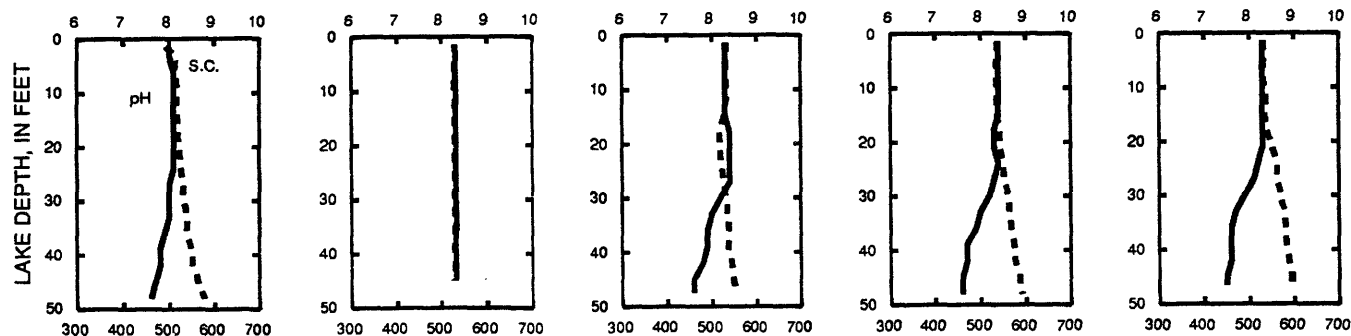
8-12-92

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

ROCK RIVER BASIN

430653088294601 CENTER OF FOWLER LAKE AT OCONOMOWOC, WI

LOCATION.--Lat 43°06'53", long 88°29'46", in SE 1/4 NW 1/4 sec.33, T.8 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, within City of Oconomowoc, at center of Fowler Lake.

DRAINAGE AREA.--87.8 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--January to December 1984, October 1986 to current year.

GAGE.--Staff gage at outlet read by City of Oconomowoc Engineering Department.

REMARKS.--Flows regulated at upstream lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 9.45 ft, Oct. 6, 7, 9, 1986; minimum observed, 7.82 ft, Sept. 12, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 9.06 ft, Nov. 18 and Apr. 16; minimum observed, 8.00 ft, May 26.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	8.70	8.50	---	---
2	8.77	---	---	8.83	---	---	8.80	---	---	---	---	---
3	---	---	---	---	8.86	---	---	---	---	---	---	8.75
4	---	---	---	---	---	8.92	---	---	---	---	---	---
5	---	---	9.00	---	---	---	---	8.76	---	---	8.58	---
6	---	9.02	---	---	---	---	---	---	---	---	---	---
7	---	---	---	8.80	---	---	8.64	---	---	8.74	---	---
8	---	---	---	---	---	---	---	---	---	---	---	8.78
9	---	---	---	---	---	---	---	---	8.74	---	---	---
10	8.80	---	8.96	---	---	---	---	---	---	---	---	---
11	---	---	---	---	8.91	9.01	---	---	---	---	---	---
12	---	---	---	---	---	---	---	8.82	---	---	8.62	---
13	---	9.05	---	---	---	---	---	---	---	8.96	---	---
14	---	---	---	8.83	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	8.76	---	---	---	---	---	9.06	---	8.64	---	---	---
17	---	---	---	---	---	---	---	---	---	---	8.68	---
18	---	9.06	8.93	---	---	8.94	---	---	---	---	---	9.00
19	---	---	---	---	8.88	---	---	8.86	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	8.83	---	---	9.04	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	8.31	---	9.04
24	---	---	---	---	---	8.87	---	---	---	---	---	---
25	8.80	---	---	---	---	---	---	---	8.62	---	8.74	---
26	---	---	8.88	---	---	---	---	8.00	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	8.84	---	---	---	---	---	---	8.94
29	---	---	---	8.85	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	9.00	---	---	---	---	---
31	9.00	---	---	---	---	---	---	---	---	8.04	---	---

430653088294601 CENTER OF FOWLER LAKE AT OCONOMOWOC, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January to December 1984 and February 1987 to current year.

REMARKS.--Lake sampled near center at a lake depth of 52 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 13, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 09		June 16		July 15		Aug. 13	
Depth of sample (ft)	1.5	48	1.5	48	1.5	47	1.5	47	1.5	48
Lake stage (ft)	---	---	8.84	---	8.60	---	8.87	---	8.72	---
Specific conductance ($\mu\text{S}/\text{cm}$)	504	530	517	513	494	541	484	559	491	572
pH (units)	8.6	8.1	8.4	8.3	8.4	7.6	8.2	7.6	8.4	7.5
Water temperature ($^{\circ}\text{C}$)	2.5	3.0	9.5	5.0	22.0	6.5	23.0	6.5	22.0	6.5
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.90	0.60	---	---	---	---	---	---
Secchi-depth (meters)	---	---	4.1	---	2.0	---	3.4	---	3.0	---
Dissolved oxygen	13.4	5.7	11.7	11.5	8.9	0.9	7.2	0.1	8.2	0.2
Hardness, as CaCO_3	---	---	260	260	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	46	47	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	35	35	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	14	13	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	210	210	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	34	34	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	30	30	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.1	<0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	2.3	2.7	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	310	308	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.21	0.22	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.05	0.07	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.50	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.007	0.007	0.011	0.163	0.012	0.139	0.010	0.180
Phosphorus, ortho, dissolved (as P)	---	---	0.003	0.003	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	2.0	---	3.0	---	3.2	---	2.9	---

2-5-92

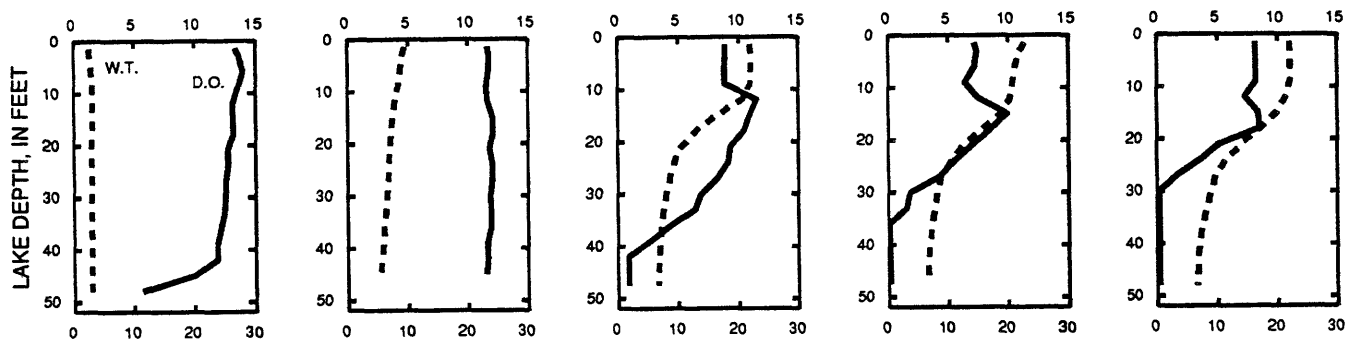
4-9-92

6-16-92

7-15-92

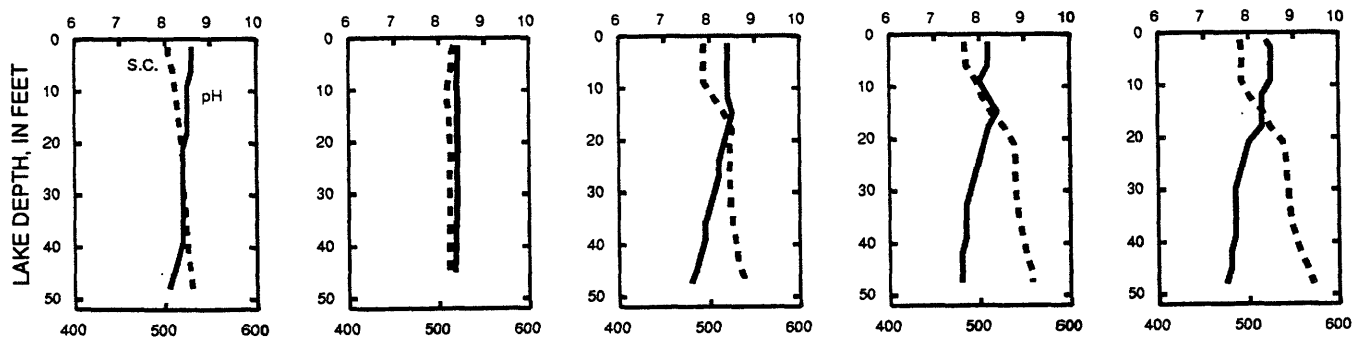
8-13-92

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

LOCATION.--Lat 43°04'36" long 88°29'33", in NE 1/4 NW 1/4 sec.16, T.7 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, near Oconomowoc.

PERIOD OF RECORD.--April to September 1992.

REMARKS.--Lake sampled near center of lake at a depth of about 37 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 21 TO AUGUST 27, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 21		Apr. 08		June 09		July 23		Aug. 27	
Depth of sample (ft)	1.5	36	1.5	38	1.5	36	1.5	34	1.5	35
Lake stage (ft)	---	---	12.11	---	11.36	---	11.18	---	11.04	---
Specific conductance (μS/cm)	558	590	510	511	550	556	518	558	508	593
pH (units)	8.2	7.9	8.5	8.5	8.5	7.7	8.3	7.8	8.5	7.5
Water temperature (°C)	2.5	4.0	7.0	6.5	22.5	10.5	21.0	13.5	22.0	13.5
Color (Pt-Co. scale)	---	---	5	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.90	0.90	---	---	---	---	---	---
Sacchi-depth (meters)	---	4.7	---	2.8	---	5.1	---	2.4	---	2.5
Dissolved oxygen	14.2	5.5	12.3	12.1	8.9	0.1	8.9	0.6	8.0	0.7
Hardness, as CaCO ₃	---	---	220	220	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	34	35	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	33	32	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	22	22	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	170	180	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	30	29	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	48	49	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	2.8	3.0	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	300	302	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.40	0.39	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.25	0.26	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.90	0.90	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.006	0.008	0.006	0.007	0.008	0.020	0.005	<0.020
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	2.0	---	1.0	---	3.7	---	4.4	---

2-21-92

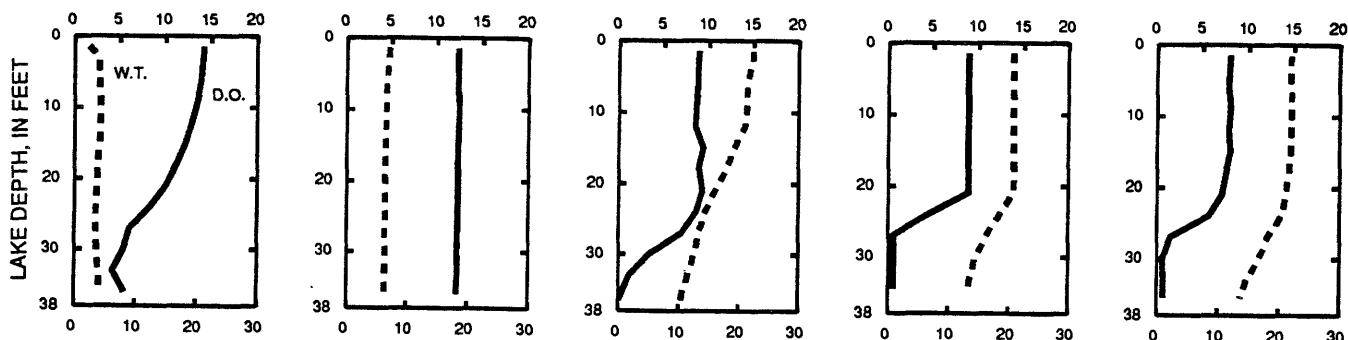
4-8-92

6-9-92

7-23-92

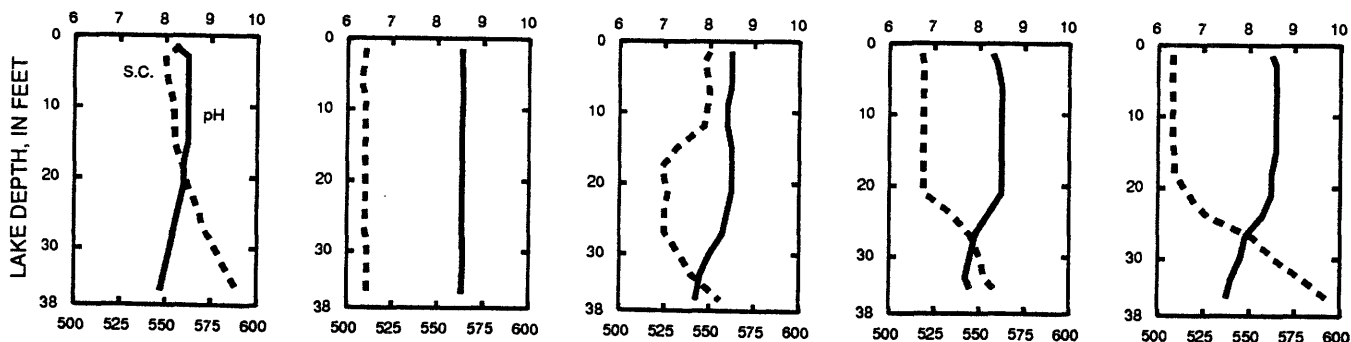
8-27-92

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

05425500 ROCK RIVER AT WATERTOWN, WI

LOCATION.--Lat 43°11'17", long 88°43'34", in SW 1/4 sec.4, T.8 N., R.15 E., Jefferson County, Hydrologic Unit 07090001, on left bank, 700 ft downstream from Milwaukee Street bridge, 1.1 mi downstream from Silver Creek, at Watertown.

DRAINAGE AREA.--969 mi².

PERIOD OF RECORD.--June 1931 to September 1970, October 1976 to current year.

REVISED RECORDS.--WSP 1438: 1933,1935(M), 1937(M), 1938-39, 1945(M); WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 792.58 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 26, 1933, nonrecording gage at site 700 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 17 to Jan. 2, Jan. 14-19, 24, 25, and Feb. 7-15. Records good except those for ice-affected periods, which are poor. Some regulation caused by manipulation of gates at dams on Horicon Marsh, Lake Sinissippi, and other dams in the basin. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	1260	1550	780	356	975	1460	1610	157	62	105	119
2	158	1330	1410	760	358	1050	1400	1580	146	66	98	118
3	153	1330	1250	726	377	1070	1330	1550	141	68	96	120
4	177	1300	1000	720	400	1120	1270	1510	133	63	89	175
5	220	1300	922	755	419	1180	1240	1430	132	64	91	190
6	275	1330	868	777	415	1250	1220	1360	136	68	91	195
7	329	1260	1040	796	370	1310	1200	1290	145	69	94	177
8	366	1240	1290	796	350	1350	1190	1240	152	98	94	214
9	338	1370	1490	887	330	1460	1200	1210	152	92	95	213
10	280	1390	1510	939	330	1530	1200	1160	152	125	97	316
11	242	1390	1510	957	370	1420	1210	1140	133	129	97	343
12	225	1380	1550	942	400	1530	1210	1130	107	143	99	341
13	204	1370	1640	941	420	1590	1190	1110	92	188	98	325
14	174	1380	1520	800	440	1610	1170	1050	82	236	104	303
15	170	1510	1180	600	450	1630	1200	973	87	285	118	131
16	192	1530	1050	580	489	1690	1280	844	96	327	117	219
17	198	1500	940	600	494	1730	1370	643	109	344	109	269
18	183	1520	880	700	501	1740	1370	463	106	299	102	435
19	176	1490	860	840	513	1710	1410	352	109	273	95	590
20	162	1450	840	885	551	1720	1450	333	107	254	88	666
21	152	1400	820	891	576	1740	1450	298	95	234	79	637
22	159	1350	880	919	590	1740	1450	246	91	201	69	537
23	180	1320	920	936	648	1740	1470	214	85	191	64	405
24	233	1300	960	840	698	1750	1520	207	80	182	117	369
25	336	1280	940	760	684	1790	1580	206	78	170	66	281
26	537	1260	920	743	675	1760	1590	204	77	147	81	313
27	740	1270	900	709	709	1720	1610	195	77	128	150	305
28	864	1270	880	673	863	1680	1610	178	75	116	173	283
29	1010	1280	860	550	926	1640	1610	165	69	112	184	303
30	1120	1570	840	440	---	1590	1620	161	65	119	158	365
31	1180	---	820	373	---	1530	---	161	---	114	137	---
TOTAL	10892	40930	34040	23615	14702	47345	41080	24213	3266	4967	3255	9257
MEAN	351	1364	1098	762	507	1527	1369	781	109	160	105	309
MAX	1180	1570	1640	957	926	1790	1620	1610	157	344	184	666
MIN	152	1240	820	373	330	975	1170	161	65	62	64	118
CFSM	.36	1.41	1.13	.79	.52	1.58	1.41	.81	.11	.17	.11	.32
IN.	.42	1.57	1.31	.91	.56	1.82	1.58	.93	.13	.19	.12	.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1992, BY WATER YEAR (WY)

	MEAN	344	403	331	282	338	954	1278	661	382	300	215	253
MAX	2981	2034	1148	1055	1627	2448	3875	2278	1208	1454	1540	1552	
(WY)	1987	1986	1986	1946	1938	1985	1979	1960	1984	1984	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1931 - 1992

ANNUAL TOTAL	257749		257562										
ANNUAL MEAN	706		704							480			
HIGHEST ANNUAL MEAN										1114		1986	
LOWEST ANNUAL MEAN										64.5		1964	
HIGHEST DAILY MEAN	2080	Apr 15	1790	Mar 25					4970		Apr 4 1959		
LOWEST DAILY MEAN	59	Sep 2	62	Jul 1					.90		(a) Oct 15 1939		
ANNUAL SEVEN-DAY MINIMUM	65	Aug 31	65	Jun 30					1.1		Sep 15 1932		
INSTANTANEOUS PEAK FLOW			1860	Mar 16					(b) 5080		Mar 31 1979		
INSTANTANEOUS PEAK STAGE			4.18	Mar 16					6.32		Apr 4 1959		
ANNUAL RUNOFF (CFSM)	.73		.73						.50				
ANNUAL RUNOFF (INCHES)	9.90		9.89						6.74				
10 PERCENT EXCEEDS	1580		1520						1280				
50 PERCENT EXCEEDS	402		578						246				
90 PERCENT EXCEEDS	154		97						36				

(a) Also occurred Sept. 9, 1944

(b) Gage height, 6.19 ft

ROCK RIVER BASIN

05425912 BEAVERDAM RIVER AT BEAVER DAM, WI

LOCATION.--Lat 43°26'57", long 88°50'21", in NE 1/4 SW 1/4 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.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 839.42 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by dam 0.8 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	236	221	81	141	191	170	322	14	6.6	5.8	7.1
2	11	284	219	81	140	231	131	348	18	7.5	4.2	7.8
3	11	268	223	81	139	254	99	328	18	9.8	4.5	8.5
4	16	235	218	80	139	255	80	298	15	8.3	5.4	7.0
5	26	239	218	79	134	290	71	291	15	6.9	5.2	6.2
6	21	236	216	80	129	309	54	277	12	5.7	6.2	11
7	12	232	212	80	125	310	43	211	14	5.6	8.8	7.8
8	8.8	226	210	83	120	306	40	174	11	12	13	10
9	13	219	208	86	116	325	28	168	9.4	9.9	11	11
10	12	213	207	87	115	336	22	153	8.5	17	14	10
11	12	209	201	87	111	304	45	87	8.2	9.1	12	7.7
12	12	204	206	90	72	295	54	57	8.4	16	12	6.8
13	8.0	201	206	101	37	284	39	67	7.4	21	9.8	5.7
14	11	201	203	111	29	273	73	53	6.9	21	8.2	11
15	12	208	196	120	40	264	95	53	8.7	13	7.2	5.2
16	7.8	207	189	125	33	214	143	46	7.1	8.8	7.5	17
17	7.5	205	154	121	32	160	168	66	7.9	9.6	6.8	15
18	11	217	99	119	50	155	161	56	6.3	9.1	7.4	22
19	8.8	219	98	116	75	158	188	35	5.3	8.4	6.4	7.6
20	7.8	221	99	88	95	207	223	25	5.1	9.5	8.1	6.4
21	7.4	211	100	72	103	164	280	13	4.5	7.9	9.6	9.5
22	6.5	213	99	72	102	154	315	8.9	4.0	7.6	8.8	14
23	6.9	211	97	76	103	171	316	13	4.4	8.0	9.0	8.0
24	21	259	95	75	121	200	354	8.5	7.3	7.4	9.1	7.1
25	73	220	93	77	175	208	372	7.5	8.7	6.8	9.6	7.8
26	107	208	92	80	195	234	370	8.2	11	9.8	10	11
27	106	210	90	82	191	221	361	7.6	8.5	7.6	9.5	14
28	128	206	87	84	191	203	339	7.7	7.4	7.0	9.1	19
29	230	210	86	100	190	207	337	7.5	8.3	6.3	8.0	11
30	287	224	84	112	---	222	327	8.9	7.0	5.6	10	11
31	260	---	82	128	---	221	---	8.6	---	5.6	8.0	---
TOTAL	1472.5	6652	4808	2854	3243	7326	5298	3214.4	277.3	294.4	264.2	303.2
MEAN	47.5	222	155	92.1	112	236	177	104	9.24	9.50	8.52	10.1
MAX	287	284	223	128	195	336	372	348	18	21	14	22
MIN	6.5	201	82	72	29	154	22	7.5	4.0	5.6	4.2	5.2
CFSM	.30	1.41	.99	.59	.71	1.51	1.12	.66	.06	.06	.05	.06
IN.	.35	1.58	1.14	.68	.77	1.74	1.26	.76	.07	.07	.06	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1992, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	117	151	115	93.7	67.4	168	163	62.8
MAX	446	350	289	281	182	240	325	125
(WY)	1987	1986	1986	1986	1986	1990	1986	1987
MIN	2.89	6.66	17.1	27.0	20.8	10.9	45.5	4.55
(WY)	1989	1989	1989	1991	1988	1988	1990	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1985 - 1992
ANNUAL TOTAL	31925.0	36007.0	
ANNUAL MEAN	87.5	98.4	97.6
HIGHEST ANNUAL MEAN			206
LOWEST ANNUAL MEAN			39.0
HIGHEST DAILY MEAN	329	372	572
LOWEST DAILY MEAN	4.6	4.0	.64
ANNUAL SEVEN-DAY MINIMUM	8.0	5.2	.77
INSTANTANEOUS PEAK FLOW		401	(a)754
INSTANTANEOUS PEAK STAGE		7.99	9.35
ANNUAL RUNOFF (CFSM)	.56	.63	.62
ANNUAL RUNOFF (INCHES)	7.56	8.53	8.45
10 PERCENT EXCEEDS	236	236	272
50 PERCENT EXCEEDS	30	72	48
90 PERCENT EXCEEDS	13	7.2	5.6

(a) Result of drawdown of Beaver Dam Lake

05426000 CRAWFISH RIVER AT MILFORD, WI

LOCATION.--Lat 43°06'00", long 88°50'58", in SW 1/4 sec.4, T.7 N., R.14 E., Jefferson County, Hydrologic Unit 07090002, on left bank near upstream side of highway bridge in Milford, 1.4 mi downstream from Rock Creek and 9.8 mi upstream from mouth.

DRAINAGE AREA.--762 mi².

PERIOD OF RECORD.--June 1931 to current year.

REVISED RECORDS.--WSP 975: 1937-38. WSP 1438: 1932-33(M), 1935(M), 1937, 1938-41(M), 1943-44(M), 1947-48(M).
WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 779.40 ft above National Geodetic Vertical Datum of 1929. Prior to July 28, 1966, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Oct. 2-6 and ice-affected period, Dec. 4 to Feb. 27. Records good except those for estimated daily discharges, which are poor. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	1120	1170	520	240	923	894	1220	181	87	113	88
2	160	1130	1170	520	250	1040	863	1210	165	74	117	65
3	150	1210	942	520	270	1160	810	1170	155	92	116	91
4	160	1210	880	520	300	1240	811	1100	166	83	115	79
5	180	1200	840	500	320	1300	746	1060	179	91	105	69
6	210	1190	780	500	330	1320	677	984	159	82	98	98
7	222	1130	800	500	310	1340	679	902	162	59	85	100
8	230	1150	1000	500	280	1340	635	860	137	84	107	117
9	247	1070	1100	540	260	1410	614	811	127	120	108	119
10	233	980	1200	580	250	1520	598	740	132	150	116	131
11	214	939	1200	600	240	1330	622	673	130	159	114	128
12	208	902	1200	600	230	1370	647	653	123	182	106	115
13	168	863	1300	560	220	1320	630	666	114	253	106	99
14	169	849	1300	540	200	1280	661	609	108	354	99	127
15	170	901	1200	500	190	1240	677	564	128	402	100	139
16	133	937	1100	460	180	1130	745	498	146	446	95	158
17	119	946	940	420	180	1160	792	491	115	468	79	239
18	179	990	800	380	190	1140	832	473	156	454	82	339
19	155	1070	680	370	200	1110	932	420	181	414	83	391
20	123	1100	640	360	220	1050	1070	385	174	392	71	422
21	112	1080	620	340	250	997	1150	352	145	355	67	477
22	118	1080	600	320	280	986	1230	311	118	309	67	504
23	107	1050	580	300	300	907	1320	323	126	284	65	463
24	136	1090	560	280	350	868	1380	299	126	255	63	428
25	290	1050	560	260	390	862	1400	265	114	232	69	391
26	476	964	540	250	450	898	1410	255	118	232	119	345
27	721	964	540	240	520	921	1410	240	108	208	124	316
28	830	977	520	240	672	886	1350	227	86	178	117	291
29	952	956	520	240	795	896	1320	217	100	168	86	262
30	1090	1070	520	240	---	918	1300	212	96	150	96	249
31	1130	---	520	240	---	897	---	196	---	142	101	---
TOTAL	9578	31168	26322	12940	8867	34759	28205	18386	4075	6959	2989	6840
MEAN	309	1039	849	417	306	1121	940	593	136	224	96.4	228
MAX	1130	1210	1300	600	795	1520	1410	1220	181	468	124	504
MIN	107	849	520	240	180	862	598	196	86	59	63	65
CFSM	.41	1.36	1.11	.55	.40	1.47	1.23	.78	.18	.29	.13	.30
IN.	.47	1.52	1.29	.63	.43	1.70	1.38	.90	.20	.34	.15	.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1992, BY WATER YEAR (WY)

	MEAN	271	295	244	235	289	1038	957	463	299	234	167	242
MAX	2565	1958	1065	1278	1576	2473	3206	2337	1046	1156	825	1881	
(WY)	1987	1986	1983	1946	1938	1948	1959	1973	1984	1950	1953	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1931 - 1992

ANNUAL TOTAL	184789	191088	396	1986
ANNUAL MEAN	506	522	1095	1964
HIGHEST ANNUAL MEAN			61.8	1964
LOWEST ANNUAL MEAN			6130	Apr 6 1959
HIGHEST DAILY MEAN	1940	1520	Mar 10	Apr 6 1959
LOWEST DAILY MEAN	49	59	Jul 7	Sep 15 1958
ANNUAL SEVEN-DAY MINIMUM	57	69	Aug 19	Sep 11 1958
INSTANTANEOUS PEAK FLOW		(a)1570	Mar 10	Apr 6 1959
INSTANTANEOUS PEAK STAGE		(b)5.62	Dec 17	Apr 6 1959
ANNUAL RUNOFF (CFSM)	.66	.69		
ANNUAL RUNOFF (INCHES)	9.02	9.33		
10 PERCENT EXCEEDS	1220	1160	1060	
50 PERCENT EXCEEDS	241	382	174	
90 PERCENT EXCEEDS	100	104	36	

(a) Gage height, 5.05 ft

(b) Backwater from ice

ROCK RIVER BASIN

05426031 ROCK RIVER AT JEFFERSON, WI

LOCATION.--Lat 42°59'46", long 88°48'26", in sec.2, T.6 N., R.14 E., Jefferson County, Hydrologic Unit 07090001, on right bank 30 ft downstream from bridge on State Highwys 26, in Jefferson.

DRAINAGE AREA.--1,850 mi².

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

GAGE.--Water-stage recorder. Datum of gage 774.97 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Natural Resources). Auxiliary water-stage recorder 6.9 mi downstream from base gage to provide slope data.

REMARKS.--Estimated daily discharges: Ice-affected period, Dec. 4 to Feb. 25. Records good except for ice-affected period and discharges less than 200 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	326	2430	2980	1400	660	1910	2440	2860	367	183	255	241
2	330	2580	2930	1300	660	2060	2360	2810	344	199	243	243
3	308	2680	2280	1300	700	2240	2190	2730	319	208	233	236
4	332	2660	2100	1300	760	2370	2080	2620	313	214	227	242
5	418	2600	1900	1300	800	2660	2040	2560	337	188	218	255
6	462	2570	1800	1400	780	2750	2000	2470	339	183	210	297
7	504	2590	1800	1400	760	2730	1950	2370	334	186	217	310
8	554	2710	2400	1400	740	2740	1860	2300	329	216	243	306
9	589	2630	2700	1500	700	2840	1840	2220	317	256	234	366
10	567	2620	2800	1500	680	3060	1800	2090	307	276	235	391
11	500	2600	2900	1600	660	2840	1790	2010	300	287	236	434
12	454	2460	2900	1600	660	2900	1800	2020	279	335	248	440
13	401	2400	3000	1600	680	2940	1800	2060	254	464	224	432
14	370	2440	3000	1500	680	2930	1830	1910	255	677	210	455
15	364	2600	2700	1400	680	2870	1870	1810	239	758	210	450
16	369	2630	2300	1200	700	2840	2050	1690	268	852	210	419
17	377	2610	2000	1200	720	2880	2250	1550	307	869	210	644
18	323	2700	1800	1200	740	2890	2350	1200	324	845	202	877
19	329	2790	1700	1300	780	2880	2450	863	311	763	198	1060
20	312	2830	1500	1300	800	2820	2650	776	286	703	193	1180
21	303	2700	1500	1300	860	2740	2750	735	265	612	192	1380
22	319	2480	1500	1300	920	2720	2790	681	251	512	194	1400
23	282	2320	1500	1300	1000	2670	2860	618	236	453	189	1210
24	364	2420	1600	1200	1100	2650	2910	509	240	411	191	1060
25	673	2400	1500	1200	1200	2670	2950	476	230	400	221	927
26	953	2330	1500	1100	1260	2700	2980	448	211	381	273	806
27	1430	2360	1500	1000	1380	2720	3020	436	204	349	255	820
28	1820	2360	1500	940	1660	2640	3010	420	209	316	264	745
29	1930	2370	1400	840	1800	2610	3000	395	192	289	302	668
30	2090	2810	1400	740	---	2590	2950	378	189	276	299	659
31	2300	---	1400	680	---	2540	---	375	---	267	264	---
TOTAL	20653	76680	63790	39300	25520	83400	70620	46390	8356	12928	7100	18953
MEAN	666	2556	2058	1268	880	2690	2354	1496	279	417	229	632
MAX	2300	2830	3000	1600	1800	3060	3020	2860	367	869	302	1400
MIN	282	2320	1400	680	660	1910	1790	375	189	183	189	236
CFSM	.36	1.38	1.11	.69	.48	1.45	1.27	.81	.15	.23	.12	.34
IN.	.42	1.54	1.28	.79	.51	1.68	1.42	.93	.17	.26	.14	.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1992, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	1310	1469	1258	733	925	2581	2882	1506	900	796	583	988			
MAX	5569	3912	2384	1380	1738	4375	7584	3223	2269	2352	1470	3487			
(WY)	1987	1986	1986	1985	1984	1985	1979	1979	1984	1978	1980	1986			
MIN	182	335	229	317	374	776	1562	538	159	115	79.2	129			
(WY)	1989	1990	1990	1990	1989	1980	1984	1989	1988	1988	1988	1988			

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1978 - 1992

ANNUAL TOTAL	464185	473690	
ANNUAL MEAN	1272	1294	1308
HIGHEST ANNUAL MEAN			2327
LOWEST ANNUAL MEAN			671
HIGHEST DAILY MEAN	3470	Apr 16	10200
LOWEST DAILY MEAN	93	Sep 1	42
ANNUAL SEVEN-DAY MINIMUM	118	Aug 31	60
INSTANTANEOUS PEAK FLOW		(a)3110	10300
INSTANTANEOUS PEAK STAGE		(b)5.57	10.84
ANNUAL RUNOFF (CFSM)	.69	.70	.71
ANNUAL RUNOFF (INCHES)	9.33	9.53	9.61
10 PERCENT EXCEEDS	2940	2740	2890
50 PERCENT EXCEEDS	644	1030	880
90 PERCENT EXCEEDS	300	236	254

(a) Gage height, 5.08 ft

(b) Ice affected

05426250 BARK RIVER NEAR ROME, WI

LOCATION.--Lat 42°57'39", long 88°40'09", in SE 1/4 SW 1/4 sec.24, T.6 N., R.15 E., Jefferson County, Hydrologic Unit 07090001, on left bank just upstream from bridge on Cushman Road, 2.8 mi southwest of Rome.

DRAINAGE AREA.--122 mi².

PERIOD OF RECORD.--November 1979 to September 1982. October 1982 to September 1983 (fragmentary). October 1983 to present.

GAGE.--Water-stage recorder. Elevation of gage is 810 ft, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 4 to Jan. 6, Feb. 16-20, and ice-affected period, Jan. 14-20. Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	132	148	70	63	106	127	112	57	14	77	36
2	26	118	156	72	62	109	128	106	15	17	75	48
3	28	118	166	76	64	114	126	104	31	20	63	50
4	42	123	140	80	66	120	126	110	36	22	19	41
5	91	119	120	80	67	133	124	108	53	24	17	39
6	91	113	110	80	67	164	124	103	77	23	23	44
7	89	91	120	85	65	164	117	95	75	30	36	46
8	90	69	150	86	62	160	106	94	53	44	40	50
9	85	75	160	94	74	165	87	90	13	41	39	41
10	80	75	150	99	77	168	94	92	13	37	52	58
11	76	75	140	101	79	165	102	89	19	43	67	29
12	72	75	150	103	80	163	96	57	23	47	29	32
13	70	79	160	103	83	158	104	77	25	56	62	35
14	71	83	170	96	83	158	106	87	27	85	56	46
15	71	105	150	90	88	158	124	88	42	108	53	64
16	60	111	140	82	94	158	165	84	66	101	57	70
17	37	114	130	76	80	158	181	78	62	97	51	102
18	39	123	120	80	76	158	206	73	58	92	34	140
19	43	132	110	78	80	158	219	73	53	74	33	144
20	46	164	100	76	90	157	209	61	18	68	32	134
21	47	141	96	82	92	155	189	44	13	73	32	131
22	55	118	90	79	95	151	169	49	15	84	32	119
23	69	115	88	82	100	141	155	62	18	84	32	109
24	70	111	86	82	101	136	155	69	26	79	27	111
25	80	107	82	78	101	133	155	66	45	79	27	100
26	91	103	78	75	101	120	153	73	43	79	48	82
27	94	105	74	71	101	123	150	88	38	61	30	87
28	94	105	72	70	103	133	132	65	38	21	29	84
29	114	116	70	68	104	136	111	62	33	21	33	83
30	129	155	70	67	---	132	112	85	15	28	34	83
31	122	---	70	66	---	130	---	81	---	48	33	---
TOTAL	2197	3270	3666	2527	2398	4484	4152	2525	1100	1700	1272	2238
MEAN	70.9	109	118	81.5	82.7	145	138	81.5	36.7	54.8	41.0	74.6
MAX	129	164	170	103	104	168	219	112	77	108	77	144
MIN	25	69	70	66	62	106	87	44	13	14	17	29
CFSM	.58	.89	.97	.67	.68	1.19	1.13	.67	.30	.45	.34	.61
IN.	.67	1.00	1.12	.77	.73	1.37	1.27	.77	.34	.52	.39	.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1992, BY WATER YEAR (WY)

	MEAN	77.4	102	88.5	69.4	80.3	134	146	94.5	56.6	51.7	53.6	73.3
MAX	214	214	138	105	118	248	254	152	114	115	103	212	
(WY)	1987	1986	1986	1985	1985	1986	1982	1990	1984	1986	1980	1986	
MIN	23.6	48.6	34.2	40.4	34.5	59.8	85.7	48.1	13.3	7.66	6.04	15.4	
(WY)	1989	1990	1990	1989	1989	1980	1989	1989	1988	1988	1988	1988	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1980 - 1992

ANNUAL TOTAL	30561		31529									
ANNUAL MEAN	83.7		86.1							86.0		
HIGHEST ANNUAL MEAN										137		1986
LOWEST ANNUAL MEAN										52.9		1989
HIGHEST DAILY MEAN	215	Mar 30	219	Apr 19					407		Apr 5	1982
LOWEST DAILY MEAN	16	Aug 6	13	Jun 9,10,21					3.6		Aug 4	1988
ANNUAL SEVEN-DAY MINIMUM	17	Aug 28	19	Jun 30					3.8		Aug 1	1988
INSTANTANEOUS PEAK FLOW			220	Apr 18					(a)443		Apr 6	1982
INSTANTANEOUS PEAK STAGE			1.75	Apr 18					2.40		Oct 1	1986
INSTANTANEOUS LOW FLOW			12	Jun 9,10					3.0		Aug 4	1988
ANNUAL RUNOFF (CFSM)	.69		.71						.71			
ANNUAL RUNOFF (INCHES)	9.32		9.61						9.58			
10 PERCENT EXCEEDS	155		150						157			
50 PERCENT EXCEEDS	72		82						74			
90 PERCENT EXCEEDS	29		32						30			

(a) Gage height, 2.39 ft

ROCK RIVER BASIN

424608088414800 WHITEWATER LAKE NEAR WHITEWATER, WI

LOCATION.--Lat 42°46'08", long 88°41'48", in NW 1/4 NW 1/4 sec.35, T.4 N., R.15 E., Walworth County, Hydrologic Unit 07090001, at outlet, 5.0 mi southeast of Whitewater and 10.0 mi north of Delavan.

DRAINAGE AREA.--10.9 mi², of which 8.5 mi² is non-contributing.

PERIOD OF RECORD.--November 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is 880.98 ft above National Geodetic Vertical Datum of 1929 (Wisconsin Railroad Commission benchmark).

REMARKS.--No estimated daily gage heights. Records good except May 13-22 and July 1 to Aug. 26, which are fair. Point of zero flow of dam crest is 10.97 ft. Rainfall data published in Water Resources Data for 1991 for this station number are now stored under station number 424559088420300.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 10.30 ft, Apr. 16, 1991; minimum daily gage height, 8.89 ft, Oct. 2, 3, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 9.82 ft, date unknown, occurred between Mar. 27 and May 12; minimum daily gage height, 8.89 ft, Oct. 2, 3.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.90	9.29	9.45	9.55	9.59	9.69	---	---	9.43	9.07	9.14	9.12
2	8.89	9.30	9.45	9.56	9.59	9.69	---	---	9.42	9.10	9.13	9.12
3	8.89	9.27	9.50	9.56	9.59	9.68	---	---	9.42	9.12	9.12	9.12
4	8.95	9.26	9.51	9.57	9.59	9.68	---	---	9.41	9.10	9.11	9.11
5	9.06	9.26	9.50	9.57	9.59	9.68	---	---	9.41	9.09	9.10	9.11
6	9.06	9.25	9.50	9.57	9.59	9.69	---	---	9.41	9.08	9.10	9.11
7	9.05	9.25	9.50	9.56	9.58	9.70	---	---	9.40	9.07	9.09	9.12
8	9.05	9.25	9.50	9.57	9.58	9.70	---	---	9.38	9.10	9.12	9.11
9	9.04	9.24	9.50	9.58	9.57	9.73	---	---	9.37	9.11	9.13	9.13
10	9.04	9.24	9.50	9.58	9.57	9.76	---	---	9.35	9.10	9.16	9.12
11	9.04	9.23	9.50	9.58	9.58	9.76	---	---	9.34	9.08	9.15	9.11
12	9.03	9.23	9.52	9.58	9.57	9.76	---	---	9.33	9.11	9.14	9.10
13	9.02	9.24	9.56	9.58	9.57	9.75	---	9.66	9.32	9.23	9.14	9.09
14	9.02	9.24	9.56	9.58	9.57	9.74	---	9.65	9.30	9.33	9.12	9.10
15	9.01	9.28	9.56	9.58	9.59	9.74	---	9.65	9.27	9.31	9.12	9.12
16	9.01	9.28	9.56	9.58	9.59	9.73	---	9.64	9.26	9.31	9.12	9.16
17	9.00	9.29	9.55	9.58	9.59	9.73	---	9.61	9.27	9.29	9.11	9.22
18	8.98	9.33	9.54	9.57	9.62	9.72	---	9.59	9.26	9.26	9.10	9.23
19	8.98	9.32	9.54	9.57	9.67	9.72	---	9.57	9.23	9.25	9.10	9.22
20	8.98	9.31	9.55	9.57	9.67	9.71	---	9.55	9.21	9.23	9.09	9.22
21	8.97	9.31	9.56	9.57	9.67	9.71	---	9.54	9.19	9.22	9.08	9.22
22	8.97	9.30	9.56	9.57	9.67	9.74	---	9.53	9.17	9.20	9.07	9.21
23	8.97	9.33	9.56	9.58	9.67	9.74	---	9.54	9.15	9.22	9.08	9.20
24	9.01	9.32	9.56	9.58	9.67	9.74	---	9.53	9.15	9.21	9.08	9.19
25	9.11	9.31	9.56	9.59	9.68	9.74	---	9.52	9.16	9.21	9.07	9.17
26	9.13	9.31	9.56	9.59	9.68	9.74	---	9.50	9.15	9.18	9.13	9.18
27	9.15	9.33	9.56	9.59	9.68	---	---	9.49	9.13	9.17	9.14	9.19
28	9.16	9.33	9.56	9.58	9.68	---	---	9.48	9.12	9.12	9.14	9.18
29	9.23	9.39	9.56	9.58	9.69	---	---	9.47	9.09	9.10	9.16	9.17
30	9.23	9.47	9.55	9.59	---	---	---	9.46	9.08	9.15	9.15	9.16
31	9.23	---	9.55	9.59	---	---	---	9.45	---	9.17	9.13	---
MAX	9.23	9.47	9.56	9.59	9.69	---	---	---	9.43	9.33	9.16	9.23
MIN	8.89	9.23	9.45	9.55	9.57	---	---	---	9.08	9.07	9.07	9.09

LOCATION.--Lat 42°51'27", long 88°56'27", in NW 1/4 NE 1/4 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.

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

REMARKS.--Estimated daily lake levels: Oct. 2-6. Records good except Oct. 2-6, Nov. 26, Dec. 4, 6, 18, and 19, which are fair. Lake level regulated by dam at Indianford. Gage-height telemeter at station.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.52 ft, Dec. 14, 15; minimum, 5.91 ft, Aug. 16.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.11	7.21	8.18	7.57	6.51	7.14	8.16	8.37	6.26	6.08	6.00	6.11
2	6.14	7.49	8.26	7.52	6.47	7.23	8.11	8.38	6.23	6.09	6.05	6.10
3	6.22	7.60	8.30	7.46	6.42	7.34	8.06	8.32	6.23	6.17	6.09	6.17
4	6.31	7.68	8.18	7.39	6.40	7.45	7.99	8.25	6.22	6.16	6.13	6.18
5	6.12	7.75	8.11	7.32	6.38	7.56	7.90	8.19	6.26	6.15	6.13	6.18
6	6.18	7.80	8.11	7.27	6.39	7.70	7.84	8.11	6.25	6.13	6.13	6.23
7	6.28	7.79	8.12	7.23	6.38	7.81	7.79	8.05	6.25	6.12	6.13	6.27
8	6.30	7.77	8.11	7.19	6.36	7.90	7.72	7.99	6.23	6.19	6.21	6.31
9	6.31	7.73	8.13	7.19	6.32	8.06	7.67	7.91	6.22	6.23	6.23	6.24
10	6.31	7.72	8.19	7.19	6.31	8.17	7.60	7.82	6.22	6.25	6.25	6.20
11	6.30	7.72	8.28	7.22	6.29	8.16	7.58	7.74	6.20	6.24	6.24	6.17
12	6.30	7.72	8.36	7.24	6.26	8.20	7.52	7.66	6.19	6.29	6.19	6.16
13	6.26	7.71	8.42	7.26	6.24	8.24	7.47	7.63	6.19	6.39	6.16	6.15
14	6.28	7.70	8.49	7.25	6.23	8.26	7.45	7.57	6.20	6.49	6.10	6.18
15	6.26	7.76	8.50	7.16	6.25	8.27	7.45	7.51	6.16	6.49	6.04	6.22
16	6.22	7.79	8.37	7.06	6.25	8.27	7.51	7.43	6.15	6.51	6.00	6.28
17	6.21	7.83	8.29	7.01	6.24	8.29	7.54	7.39	6.19	6.53	5.98	6.42
18	6.22	7.92	8.21	6.96	6.25	8.27	7.60	7.27	6.25	6.52	5.99	6.53
19	6.17	7.98	8.18	6.92	6.28	8.27	7.72	7.14	6.25	6.50	6.01	6.53
20	6.13	8.03	8.13	6.89	6.32	8.26	7.84	7.01	6.24	6.48	6.02	6.55
21	6.12	8.06	8.09	6.86	6.37	8.24	7.96	6.89	6.20	6.42	6.04	6.64
22	6.12	8.08	8.04	6.83	6.43	8.28	8.06	6.78	6.16	6.36	6.04	6.72
23	6.13	8.04	8.00	6.83	6.50	8.24	8.16	6.74	6.16	6.30	6.04	6.71
24	6.18	8.08	7.96	6.82	6.59	8.22	8.25	6.62	6.16	6.27	6.05	6.70
25	6.30	8.06	7.92	6.81	6.69	8.21	8.28	6.51	6.16	6.21	6.06	6.67
26	6.34	8.00	7.88	6.78	6.78	8.23	8.32	6.44	6.16	6.18	6.14	6.64
27	6.44	7.98	7.84	6.75	6.84	8.23	8.36	6.38	6.11	6.12	6.16	6.62
28	6.55	7.96	7.79	6.70	6.92	8.20	8.35	6.35	6.10	6.05	6.15	6.55
29	6.75	7.97	7.74	6.67	7.02	8.21	8.38	6.33	6.10	5.98	6.14	6.48
30	6.93	8.10	7.69	6.63	---	8.21	8.38	6.31	6.08	5.96	6.19	6.41
31	7.06	---	7.63	6.57	---	8.20	---	6.28	---	5.97	6.16	---
MEAN	6.31	7.83	8.11	7.05	6.44	8.04	7.90	7.33	6.19	6.25	6.10	6.38
MAX	7.06	8.10	8.50	7.57	7.02	8.29	8.38	8.38	6.26	6.53	6.25	6.72
MIN	6.11	7.21	7.63	6.57	6.23	7.14	7.45	6.28	6.08	5.96	5.98	6.10

ROCK RIVER BASIN

05427570 ROCK RIVER AT INDIANFORD, WI

LOCATION.--Lat 42°48'15", long 89°05'25", in SW 1/4 SW 1/4 sec.16, T.4 N., R.12 E., Rock County, Hydrologic Unit 07090001, on right bank 50 ft upstream from bridge on County Trunk Highways F and M, 250 ft upstream from dam in Indianford, and 1.8 mi upstream from Yahara River.

DRAINAGE AREA.--2,630 mi².

PERIOD OF RECORD.--May 1975 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 763.84 ft above National Geodetic Vertical Datum of 1929 (Rock County Surveyor benchmark). Prior to Oct. 1, 1990, at datum 0.10 ft lower.

REMARKS.--No estimated daily discharges. Records fair. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	248	2080	3300	2510	1320	1910	3360	3470	745	251	139	544
2	306	1800	3470	2450	1260	2130	3250	3560	553	246	217	298
3	620	2360	3410	2360	1220	2270	3140	3560	448	230	267	294
4	837	2600	2980	2280	1210	2370	3120	3530	440	222	293	318
5	655	2800	2810	2200	1170	2510	2960	3470	455	288	303	299
6	704	2880	2830	2130	1160	2690	2800	3320	430	295	287	336
7	754	2850	3040	2100	1180	2820	2810	3180	441	269	291	368
8	739	2790	3210	2070	1160	2930	2750	3160	454	292	312	891
9	852	2770	3260	2030	1130	3250	2680	3070	449	324	333	1150
10	873	2770	3290	2030	1080	3470	2680	2940	437	338	338	806
11	872	2760	3450	2060	1130	3220	2540	2790	427	359	577	735
12	890	2730	3520	2080	1090	3430	2530	2730	369	364	706	686
13	812	2710	3630	2160	1040	3470	2540	2720	345	772	712	638
14	734	2730	3490	2160	1050	3540	2600	2640	378	1250	636	692
15	762	2810	3580	2030	1090	3570	2600	2520	403	1360	602	762
16	673	2880	3250	1800	1030	3450	2660	2370	349	1360	549	770
17	654	2940	3320	1790	1080	3630	2690	2370	230	1380	285	1290
18	788	2970	3270	1770	1110	3730	2750	2400	276	1440	183	1550
19	708	3110	3220	1720	1080	3570	2860	2180	460	1350	215	1600
20	623	3190	3170	1690	1060	3550	3010	2040	492	1380	204	1640
21	517	3190	3130	1700	1180	3610	3040	1900	432	1360	204	1770
22	484	3230	3050	1660	1240	3580	3110	1720	373	1340	214	1850
23	482	3040	3050	1590	1320	3460	3380	1790	379	1320	208	1840
24	502	3100	2980	1630	1380	3430	3460	1690	390	1210	204	1810
25	857	3120	2930	1650	1460	3380	3530	1510	354	1150	243	1800
26	1080	3020	2870	1600	1520	3420	3600	1300	363	1110	433	1710
27	1160	2960	2830	1550	1610	3460	3680	1060	352	1070	451	1660
28	1520	3100	2770	1510	1700	3410	3580	874	293	963	503	1630
29	1650	3090	2710	1430	1820	3450	3610	816	301	733	487	1590
30	1950	2940	2640	1420	---	3390	3700	789	283	624	452	1520
31	2130	---	2580	1370	---	3320	---	753	---	341	529	---
TOTAL	26436	85320	97040	58530	35880	99420	91020	72222	12101	24991	11377	32847
MEAN	853	2844	3130	1888	1237	3207	3034	2330	403	806	367	1095
MAX	2130	3230	3630	2510	1820	3730	3700	3560	745	1440	712	1850
MIN	248	1800	2580	1370	1030	1910	2530	753	230	222	139	294
CFSM	.32	1.08	1.19	.72	.47	1.22	1.15	.89	.15	.31	.14	.42
IN.	.37	1.21	1.37	.83	.51	1.41	1.29	1.02	.17	.35	.16	.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1992, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	1568	1814	1751	1156	1260	3029	3862	2216	1269	1095	819	1168						
MAX	7729	5047	3745	2622	2403	6113	9466	4477	3353	3269	1815	3911						
(WY)	1987	1986	1986	1985	1988	1985	1979	1979	1984	1978	1986	1986						
MIN	216	297	262	254	283	795	1538	317	185	158	130	182						
(WY)	1977	1977	1977	1977	1977	1977	1977	1977	1988	1988	1988	1988						

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1975 - 1992

ANNUAL TOTAL	609177	647184	
ANNUAL MEAN	1669	1768	
HIGHEST ANNUAL MEAN			1750
LOWEST ANNUAL MEAN			3171
HIGHEST DAILY MEAN	4320	3730	509
LOWEST DAILY MEAN	130	139	11700
ANNUAL SEVEN-DAY MINIMUM	172	205	39
INSTANTANEOUS PEAK FLOW		3880	85
INSTANTANEOUS PEAK STAGE		13.55	11900
ANNUAL RUNOFF (CFSM)	.63	.67	(a)16.23
ANNUAL RUNOFF (INCHES)	8.62	9.15	.67
10 PERCENT EXCEEDS	3660	3410	9.04
50 PERCENT EXCEEDS	1040	1630	3730
90 PERCENT EXCEEDS	462	322	1240
			320

(a) Datum then in use

ROCK RIVER BASIN

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05427718 YAHARA RIVER AT WINDSOR, WI

LOCATION.--Lat 43°12'32", long 89°21'09", in NW 1/4 NE 1/4 sec.31, T.9 N., R.10 E., Dane County, Hydrologic Unit 07090001, at bridge on road to Lake Windsor Country Club.

DRAINAGE AREA.--73.6 mi².

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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 25-28, Dec. 2-7, 14-18, Jan. 14-20, 24, 25, and Feb. 8, 9, 12, 13. Records good except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	37	27	13	11	62	16	17	11	9.9	12	8.2
2	9.0	32	18	13	11	66	15	16	10	13	12	9.6
3	9.0	22	16	13	15	33	15	15	9.8	12	12	11
4	10	18	15	13	14	27	15	15	9.9	11	11	9.0
5	13	17	14	13	12	24	14	15	10	10	11	8.4
6	12	16	14	13	11	25	14	14	9.6	9.9	10	11
7	11	14	15	13	11	26	14	14	9.8	9.2	11	9.8
8	11	13	19	14	11	23	14	14	9.3	45	16	9.5
9	10	13	19	15	11	32	19	14	9.1	18	12	14
10	9.8	13	17	15	11	26	16	14	9.2	16	11	11
11	9.6	13	17	14	10	22	24	14	9.3	13	11	9.5
12	9.1	13	26	15	10	18	19	15	8.8	24	11	9.2
13	9.1	13	28	17	10	16	17	14	8.7	43	10	9.3
14	9.7	16	19	13	10	16	16	13	9.2	52	10	13
15	11	28	17	12	10	15	20	13	60	26	9.8	12
16	9.3	23	15	11	11	15	28	13	31	20	9.8	38
17	9.0	19	14	11	11	17	24	13	21	17	9.6	37
18	9.0	33	14	11	12	16	20	12	16	16	9.7	76
19	9.3	25	14	12	13	15	39	12	14	16	9.5	38
20	9.1	21	14	13	14	15	46	12	13	18	9.3	25
21	9.5	18	14	13	17	15	30	12	12	15	9.0	23
22	9.0	17	14	12	18	15	26	12	12	14	9.1	20
23	9.0	23	14	12	27	15	24	15	12	15	9.3	17
24	15	22	14	11	25	17	24	12	12	15	9.3	15
25	76	16	13	11	18	20	22	12	11	14	9.8	15
26	36	15	14	11	18	19	20	12	11	14	12	17
27	28	15	13	11	55	16	20	12	11	13	11	31
28	22	15	13	11	90	16	19	11	11	12	9.4	20
29	28	17	13	11	64	17	18	11	11	12	11	17
30	25	44	13	11	---	18	17	11	10	11	9.6	16
31	21	---	13	11	---	17	---	11	---	12	8.4	---
TOTAL	476.5	601	500	389	561	694	625	410	401.7	546.0	325.6	559.5
MEAN	15.4	20.0	16.1	12.5	19.3	22.4	20.8	13.2	13.4	17.6	10.5	18.6
MAX	76	44	28	17	90	66	46	17	60	52	16	76
MIN	9.0	13	13	11	10	15	14	11	8.7	9.2	8.4	8.2
CFSM	.21	.27	.22	.17	.26	.30	.28	.18	.18	.24	.14	.25
IN.	.24	.30	.25	.20	.28	.35	.32	.21	.20	.28	.16	.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1992, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	13.8	13.9	12.0	12.1	17.6	41.2	20.2	14.6	16.0	15.0	14.7	16.9					
MAX	23.1	20.0	16.4	23.4	38.2	135	33.3	23.0	28.7	31.8	26.5	50.1					
(WY)	1982	1992	1981	1980	1981	1976	1976	1978	1978	1978	1981	1980					
MIN	7.75	8.78	8.54	6.50	4.76	11.8	14.0	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1976 - 1992

ANNUAL TOTAL	5591.9	6089.3	
ANNUAL MEAN	15.3	16.6	16.2
HIGHEST ANNUAL MEAN			20.5
LOWEST ANNUAL MEAN			10.9
HIGHEST DAILY MEAN	277	Mar 2	90
LOWEST DAILY MEAN	5.9	Aug 26	8.2
ANNUAL SEVEN-DAY MINIMUM	6.1	Aug 23	9.1
INSTANTANEOUS PEAK FLOW			(a)159
INSTANTANEOUS PEAK STAGE			3.92
INSTANTANEOUS LOW FLOW			(b)3.4
ANNUAL RUNOFF (CFSM)	.21		.23
ANNUAL RUNOFF (INCHES)	2.83		3.08
10 PERCENT EXCEEDS	25		26
50 PERCENT EXCEEDS	11		14
90 PERCENT EXCEEDS	6.9		9.6
			7.6

(a) Gage height, 3.73 ft

(b) Result of freezeup

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 current year.

INSTRUMENTATION.--Water-quality sampler since March 1990.

REMARKS.--Records good. Bacteria analyses by Wisconsin State Laboratory of Hygiene. 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, 8 mg/L, Dec. 4, 1990.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,240 tons, June 29, 1990; minimum daily, 0.16 ton, Jan. 6-7, 1991.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 2.70 mg/L, Mar. 14, 1990; minimum observed, 0.01 mg/L, Jan. 31, 1991.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,850 lb, Mar. 2, 1991; minimum daily, 0.81 lb, Jan. 31, 1991.

TOTAL ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.10 mg/L, Mar. 2, 3, 1991; minimum observed, <0.01 mg/L, Nov. 13, 1990.

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, 2,250 mg/L, July 2; minimum observed, 10 mg/L, Aug. 31.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 152 tons, June 15; minimum daily, 0.22 ton, Sept. 1.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.90 mg/L, July 8; minimum observed, 0.01 mg/L, Jan. 31.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 594 lb, Feb. 28; minimum daily, 0.59 lb, Jan. 31.

TOTAL ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.00 mg/L, Nov. 1; minimum observed, 0.01 mg/L, Dec. 27 Apr. 2.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 376 lb, Feb. 28; minimum daily, 0.73 lb, Dec. 27-28.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	SEDI- MENT, SUS- PENDE D (MG/L) (80154)
OCT 1991					
01...	1540	9.0	0.050	0.030	38
15...	1700	23	0.200	0.040	91
*17...	0815	9.0	0.050	0.020	59
24...	1645	21	0.300	0.120	97
24...	1715	26	0.370	0.100	209
24...	2315	23	0.280	0.160	51
24...	2345	32	--	--	68
24...	2400	36	0.370	0.200	--
25...	0100	57	1.40	0.590	683
25...	0130	64	--	--	825
25...	0200	71	1.60	0.690	--
25...	0245	85	--	--	498
25...	0315	94	0.690	0.420	--
25...	0415	110	--	--	455
25...	0500	123	1.00	0.480	406
25...	0730	114	1.00	0.500	261
25...	0900	95	0.910	0.480	268
25...	0901	95	0.950	0.460	--
25...	1033	84	--	--	230
*25...	1034	84	--	--	288
25...	1115	80	0.840	0.500	--
25...	1500	65	--	--	294
25...	1715	58	0.640	0.430	--
26...	0100	43	0.540	0.350	60
*26...	1007	35	0.450	0.310	42
26...	1010	34	0.440	0.320	42
27...	0700	29	--	--	32
28...	1300	22	--	--	22
28...	1900	21	0.150	0.090	--
29...	1300	30	--	--	33
29...	1900	32	0.120	0.090	41
30...	0700	27	--	--	35
31...	1300	20	--	--	26
31...	1900	20	0.360	0.170	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE.

ROCK RIVER BASIN

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05427718 YAHARA RIVER AT WINDSOR, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
NOV 1991						
01...	1130	--	30	--	--	29
01...	1415	--	43	1.30	1.00	--
01...	1500	--	48	--	--	122
01...	1545	--	54	0.600	0.360	--
01...	2145	--	47	--	--	76
02...	0230	--	40	0.530	0.330	--
02...	1205	--	32	--	--	45
04...	0230	--	20	0.130	0.090	16
14...	2245	--	21	0.200	0.030	--
15...	0445	--	25	--	--	33
15...	0745	--	31	0.300	0.220	--
15...	1345	--	30	--	--	28
15...	1730	--	41	0.560	0.110	201
15...	1800	--	31	0.310	0.060	89
16...	1800	--	22	--	--	15
16...	2400	--	21	0.110	0.070	--
17...	1500	--	31	0.210	0.090	128
17...	1530	--	20	--	--	45
18...	0130	--	22	--	--	37
18...	0330	--	28	0.400	0.220	--
18...	0500	--	33	--	--	84
18...	0615	--	39	0.320	0.170	85
18...	1215	--	37	0.290	0.190	49
19...	0015	--	29	0.260	0.210	--
19...	1215	--	25	--	--	22
*20...	1542	--	20	0.090	0.070	18
23...	1000	--	23	0.100	0.060	29
23...	1415	--	29	0.140	0.090	35
23...	2015	--	26	--	--	31
24...	1415	--	22	--	--	27
24...	2015	--	21	0.090	0.060	--
29...	2215	--	23	0.140	0.070	50
29...	2345	--	29	0.310	0.140	--
30...	0100	--	36	--	--	131
30...	0145	--	43	0.250	0.170	--
30...	0230	--	50	--	--	273
30...	0315	--	56	0.450	0.240	210
30...	0845	--	49	0.380	0.230	--
30...	1345	--	42	--	--	77
DEC						
01...	0145	--	33	0.230	0.160	--
01...	1345	--	22	--	--	66
02...	0145	18	--	0.100	0.080	--
02...	0745	18	--	--	--	51
04...	0515	15	--	--	--	39
12...	1400	--	29	0.330	0.140	124
12...	1700	--	34	0.360	0.190	127
12...	2300	--	33	0.300	0.170	62
13...	1100	--	29	0.210	0.130	30
19...	1512	--	14	0.050	0.020	18
*27...	1500	--	13	0.040	0.010	33
JAN 1992						
*31...	1345	--	11	0.010	0.020	16
FEB						
22...	2000	--	29	0.770	0.270	139
23...	1700	--	30	0.610	0.290	153
23...	1815	--	36	0.650	0.310	161
23...	2000	--	41	0.760	0.400	182
24...	0100	--	34	0.800	0.420	93
24...	0700	--	28	0.730	0.330	32
*27...	0648	--	20	0.380	0.220	34
27...	1415	--	30	0.640	0.250	199
27...	1445	--	40	--	--	385
27...	1515	--	52	0.920	0.290	--
27...	1545	--	64	--	--	539
27...	1600	--	71	0.800	0.360	--
27...	1615	--	78	--	--	757
27...	1630	--	85	1.60	0.410	--
27...	1715	--	104	--	--	889
27...	1745	--	115	1.60	0.480	--
27...	1830	--	131	1.40	0.530	720
27...	2245	--	109	1.20	0.630	291
27...	2400	--	97	--	--	241
28...	0130	--	85	0.990	0.550	--
28...	0500	--	64	1.00	0.570	136
28...	1100	--	68	0.970	0.630	141

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
FEB 1992						JUN 1992					
28...	1318	81	1.30	0.840	161	16...	0830	32	--	--	222
*28...	1319	82	1.30	0.860	137	16...	1318	27	0.370	0.220	187
28...	1430	95	1.30	0.880	201	16...	1319	27	0.440	0.290	123
28...	1630	115	1.50	0.920	213	16...	2030	24	--	--	123
28...	1945	127	1.40	0.930	186	17...	0830	22	0.510	0.320	--
28...	2300	109	1.30	0.880	176	18...	0230	18	--	--	73
29...	0200	85	1.40	0.920	175	18...	0830	17	0.230	0.150	--
*29...	0748	46	1.30	0.860	104	23...	1036	12	0.090	0.070	35
29...	0754	46	1.20	0.790	93	JUL					
29...	1930	68	1.20	0.920	104	02...	0945	23	1.60	0.080	2250
MAR						02...	2030	19	--	--	133
01...	0315	50	--	--	74	08...	0800	22	0.250	0.090	96
01...	0545	49	--	--	75	08...	0815	30	--	--	149
01...	0830	46	0.800	0.620	60	08...	0845	45	0.660	0.190	--
01...	1500	61	1.30	0.740	305	08...	0930	64	--	--	829
01...	1730	84	1.40	0.810	286	08...	1000	77	1.90	0.170	--
02...	0515	94	0.970	0.700	278	08...	1030	84	--	--	2100
02...	0730	82	--	--	223	08...	1115	94	1.30	0.320	--
02...	0930	72	0.740	0.580	--	08...	1145	102	--	--	1720
02...	1445	50	0.650	0.470	98	08...	1215	112	1.90	0.410	1650
03...	0845	34	--	--	51	08...	1445	97	--	--	749
*04...	0953	26	0.280	0.170	55	08...	1515	85	1.30	0.320	--
04...	0957	26	0.260	0.180	37	08...	1615	64	--	--	512
09...	1230	34	--	--	39	08...	1700	52	1.10	0.280	--
09...	1830	37	0.210	0.110	40	08...	1900	34	--	--	351
*11...	1240	19	0.110	0.070	18	09...	1015	18	0.190	0.100	55
11...	1530	29	--	--	43	10...	1230	20	0.190	0.090	69
29...	0845	35	0.380	0.050	1270	12...	1200	20	0.380	0.140	110
APR						12...	1400	28	--	--	164
*02...	1425	15	0.020	<0.010	20	12...	1530	35	--	--	216
16...	1145	31	0.120	0.050	58	12...	1600	43	--	--	270
16...	1345	38	0.160	0.060	72	12...	1645	48	--	--	145
16...	1945	31	0.200	0.100	55	13...	0115	23	--	--	73
19...	0630	31	0.120	0.050	54	13...	1021	30	0.320	0.170	64
19...	1745	33	0.240	0.080	128	13...	1200	33	--	--	93
19...	1815	45	--	--	210	13...	1445	40	0.460	0.260	--
19...	1845	56	0.540	0.110	--	13...	1830	54	--	--	115
19...	2000	64	--	--	308	13...	1900	60	0.630	0.290	--
19...	2100	74	0.610	0.130	--	13...	1945	71	--	--	197
19...	2130	84	--	--	762	13...	2030	80	0.710	0.300	--
19...	2200	93	1.20	0.170	881	13...	2100	87	--	--	261
20...	0015	80	--	--	480	13...	2130	96	0.730	0.310	281
20...	0115	70	0.500	0.160	--	13...	2215	106	0.750	0.300	225
20...	0330	60	--	--	366	14...	0130	91	--	--	153
*20...	0819	48	0.460	0.230	278	14...	0345	71	0.550	0.270	123
20...	0821	47	0.500	0.210	214	14...	0904	53	0.480	0.310	101
20...	1630	37	0.310	0.190	--	14...	1945	36	--	--	78
20...	2230	35	--	--	83	15...	1345	25	0.240	0.140	45
21...	1630	29	0.160	0.100	28	17...	0145	18	--	--	49
*24...	1150	24	0.070	0.040	92	19...	0215	17	--	--	60
MAY						19...	2345	28	--	--	196
*27...	1310	12	0.060	0.020	26	20...	1015	17	--	--	51
JUN						AUG					
*15...	0930	30	0.480	0.150	140	07...	2345	20	--	--	79
15...	1015	37	--	--	472	08...	0045	27	0.770	0.570	103
15...	1030	43	0.420	0.300	--	08...	0500	18	--	--	64
15...	1045	49	--	--	482	17...	1715	9.8	0.150	0.040	30
15...	1115	63	--	--	854	26...	0200	19	0.090	0.050	62
15...	1130	72	0.590	0.210	--	*31...	1645	8.4	0.100	0.070	10
15...	1200	97	--	--	2200	SEP					
15...	1215	112	0.700	0.220	--	02...	2315	19	--	--	48
15...	1245	137	--	--	1970	09...	1115	20	0.180	0.080	41
15...	1315	151	0.640	0.290	1700	09...	1215	28	0.180	0.070	61
*15...	1431	156	0.530	0.290	1010	09...	1500	18	0.140	0.070	24
15...	1432	155	0.560	0.310	1200	*10...	1345	11	--	--	31
*15...	1435	155	0.400	0.270	929	14...	1730	21	--	--	56
15...	1545	137	--	--	909	16...	1200	19	0.680	0.300	31
15...	1630	121	0.690	0.500	--	16...	1315	51	1.30	0.620	394
15...	1715	104	--	--	841	16...	1345	42	1.20	0.490	748
15...	1800	90	1.10	0.580	--	16...	1515	50	--	--	612
15...	2030	67	--	--	674	16...	1545	60	0.990	0.390	--
15...	2230	58	0.420	0.220	--	16...	1600	67	--	--	515
16...	0345	40	0.510	0.270	--	16...	1630	79	0.860	0.330	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05427718 YAHARA RIVER AT WINDSOR, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
SEP 1992					
16...	1700	91	--	--	617
16...	1730	101	0.930	0.240	519
16...	1930	86	0.770	0.310	289
16...	2015	73	--	--	303
16...	2100	63	0.470	0.270	--
16...	2200	54	--	--	310
17...	0300	46	0.740	0.340	--
17...	0730	37	--	--	180
17...	1330	35	--	--	79
18...	0130	29	0.380	0.200	76
18...	0545	57	0.230	0.120	299
22...	0920	20	0.190	0.090	53
23...	1815	16	0.110	0.060	27
26...	1830	19	0.190	0.090	61
26...	2345	37	0.280	0.120	118
27...	1145	32	0.270	0.150	54
28...	1145	20	0.170	0.100	29
*30...	1345	15	0.130	0.050	61

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1991					MAR 1992				
01...	1535	8.8	710	12.0	02...	1057	63	302	2.5
25...	1010	92	396	13.5	04...	0950	26	603	4.0
30...	1115	24	720	8.0	APR				
NOV					02...	1422	16	750	6.5
20...	1345	21	725	8.0	MAY				
DEC					27...	1258	12	750	13.5
27...	1458	13	735	4.5	JUN				
JAN 1992					15...	1450	151	208	15.0
31...	1340	12	830	3.0	16...	1330	27	544	17.5
FEB					AUG				
27...	0700	20	653	3.0	17...	1716	9.5	615	17.5
28...	1320	89	309	3.0	31...	1645	8.4	720	17.5
29...	0746	46	323	0.5	SEP				
					30...	1330	15	750	12.5

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05427718 YAHARA RIVER AT WINDSOR. WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

[illegible]

PHOSPHORUS ORTHO WATER, WHOLE, TOTAL, LBS/DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

WTR YR 1992 TOTAL 4060.02

ROCK RIVER BASIN

05427900 SIXMILE CREEK NEAR WAUNAKEE, WI

LOCATION.--Lat 43°10'29", long 89°25'58", in NE 1/4 NW 1/4 sec.16, T.8 N., R.9 E., Dane County, Hydrologic Unit 07090001, on right bank at bridge on town road, 1.5 mi southeast of Waunakee.

DRAINAGE AREA.--41.1 mi².

PERIOD OF RECORD.--April to December 1991 (discontinued).

REMARKS.--Bacteria analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ALKA- LITY LAB (MG/L AS CACO3) (90410)
NOV 1991												
11...	1415	6.3	653	8.0	2.0	2.5	12.9	743	95	17	1700	295
DEC												
29...	1630	5.4	726	8.4	2.5	2.9	16.1	734	123	13	100	318

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
NOV 1991											
11...	28	34	0.20	0.020	3.50	0.180	0.60	0.110	0.080	0.070	12
DEC											
29...	38	39	0.20	0.020	4.70	0.040	0.40	0.080	0.070	0.050	12

ROCK RIVER BASIN

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05427948 PHEASANT BRANCH AT MIDDLETON, WI

LOCATION.--Lat 43°06'12", long 89°30'42", in NE 1/4 NW 1/4 sec.11, T.7 N., R.8 E., Dane County, Hydrologic Unit 07090001, on left bank at bridge on U.S. Highway 12, 2.5 mi upstream from Lake Mendota, at Middleton.

DRAINAGE AREA.--18.3 mi², of which 1.22 mi² is noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder, crest-stage gage, parshall flume, and concrete control. Datum of gage is 901.5 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 8, Jan. 17, 27, and Feb. 10, 11. Records fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	38	7.3	1.9	.86	26	2.1	1.8	.87	.64	.75	.76
2	.52	15	3.8	2.0	.98	6.9	1.8	1.6	.86	5.3	.75	1.5
3	.54	4.1	3.2	2.0	4.3	3.6	1.7	1.5	.84	4.0	.75	2.3
4	3.5	3.2	2.6	2.0	5.1	3.2	1.6	1.5	.83	.86	.73	.90
5	5.8	2.7	2.3	1.9	1.4	3.5	1.4	1.4	.87	.76	.70	.74
6	1.6	2.2	2.0	1.9	1.1	3.7	1.4	1.3	.82	.88	.68	10
7	.88	1.7	3.4	1.8	.94	3.8	1.5	1.3	.84	1.0	3.7	1.8
8	.74	1.6	6.0	2.1	.87	3.7	1.7	1.3	.90	13	3.5	.91
9	.81	1.5	4.4	2.9	.81	8.2	2.6	1.2	.91	3.5	1.0	9.1
10	1.1	1.4	3.5	2.4	.80	4.8	1.7	1.1	.77	.82	.79	2.4
11	.63	1.4	3.5	2.1	.82	3.1	1.7	1.5	.77	.75	.61	1.0
12	.59	1.4	15	2.6	.83	2.6	1.3	1.3	.75	21	1.1	.80
13	.57	1.5	11	3.4	.89	2.2	1.3	1.1	.77	27	.66	.72
14	.72	3.0	4.7	2.4	.88	2.0	1.3	1.1	6.8	15	.60	4.0
15	.61	17	3.4	1.9	.96	1.9	5.5	1.1	1.3	2.7	.58	2.3
16	.55	5.6	3.1	1.5	.97	3.1	5.2	1.0	.76	2.1	.59	29
17	.58	4.8	2.9	1.4	1.4	3.5	3.3	1.2	1.5	1.4	.58	17
18	.76	26	2.4	1.4	2.0	2.9	2.4	.97	1.7	1.2	.56	35
19	.67	6.6	2.2	1.3	3.6	2.4	26	.98	.88	1.1	.56	6.7
20	.55	4.0	2.4	1.2	5.2	2.1	10	.96	.89	.98	.50	3.7
21	.52	3.4	2.5	1.1	4.6	1.8	7.9	.97	.67	.93	.51	4.3
22	.54	2.9	2.3	1.1	5.2	2.0	3.9	1.8	.72	2.1	.54	2.8
23	.81	10	2.3	1.4	13	2.0	3.7	7.3	.79	1.9	.58	2.0
24	19	4.5	2.3	.93	17	3.0	3.6	1.3	.84	1.1	.68	1.7
25	68	2.9	2.1	.91	7.3	4.7	3.1	1.1	.67	.96	6.2	1.6
26	14	2.4	2.1	.87	5.5	3.7	2.8	1.0	.65	.97	10	2.1
27	6.8	2.6	2.1	.86	43	2.9	2.5	.99	.61	.91	1.2	2.7
28	4.4	2.1	2.1	.88	91	2.3	2.2	.95	.61	.86	.69	1.5
29	11	6.3	2.0	.87	32	3.4	2.0	.92	.61	.86	17	1.2
30	5.4	42	1.9	.93	---	2.9	1.9	.88	.63	1.1	3.4	1.2
31	4.9	---	1.9	.94	---	2.4	---	.87	---	.81	.91	---
TOTAL	157.61	221.8	112.7	50.89	253.31	124.3	109.1	43.29	31.43	116.49	61.40	151.73
MEAN	5.08	7.39	3.64	1.64	8.73	4.01	3.64	1.40	1.05	3.76	1.98	5.06
MAX	68	42	15	3.4	91	26	26	7.3	6.8	27	17	35
MIN	.52	1.4	1.9	.86	.80	1.8	1.3	.87	.61	.64	.50	.72
CFSM	.30	.43	.21	.10	.51	.23	.21	.08	.06	.22	.12	.30
IN.	.34	.48	.25	.11	.55	.27	.24	.09	.07	.25	.13	.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1992, BY WATER YEAR (WY)

	MEAN	2.39	2.93	2.31	2.20	5.17	10.8	4.63	2.68	3.94	4.28	2.81	3.60
MAX	6.42	12.3	6.11	7.52	18.2	29.3	12.1	6.15	17.8	15.1	6.66	13.0	
(WY)	1987	1986	1985	1989	1985	1976	1975	1978	1978	1978	1981	1980	
MIN	.86	.67	.34	.36	.46	1.63	.95	.96	.92	.94	1.07	.74	
(WY)	1977	1991	1990	1991	1978	1981	1990	1977	1989	1976	1976	1976	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1974 - 1992

ANNUAL TOTAL	1559.57	1434.05	
ANNUAL MEAN	4.27	3.92	4.00
HIGHEST ANNUAL MEAN			6.25
LOWEST ANNUAL MEAN			2.78
HIGHEST DAILY MEAN	174	Mar 2	349
LOWEST DAILY MEAN	.31	Jan 26	.17
ANNUAL SEVEN-DAY MINIMUM	.31	Jan 26	.55
INSTANTANEOUS PEAK FLOW			154
INSTANTANEOUS PEAK STAGE			6.09
INSTANTANEOUS LOW FLOW			.49
ANNUAL RUNOFF (CFSM)	.25	.23	.23
ANNUAL RUNOFF (INCHES)	3.40	3.12	3.18
10 PERCENT EXCEEDS	9.2	7.0	5.3
50 PERCENT EXCEEDS	1.3	1.7	1.6
90 PERCENT EXCEEDS	.39	.70	.71

(a) Gage height, 7.54 ft

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 to September 1992.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: January to September 1992.

INSTRUMENTATION.--Automatic pumping sampler since December 1977.

REMARKS.--Records goodfair. 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.

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.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 2,590 mg/L, Apr. 19; minimum observed, 17 mg/L, Dec. 9.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 170 tons, Feb. 28; minimum daily, 0.03 ton, Oct. 1-3.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 3.00 mg/L, Feb. 28; minimum observed, 0.12 mg/L, July 8.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,210 lb, Feb. 28; minimum daily, 0.30 lb, Aug. 20, 21.

TOTAL ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 2.40 mg/L, Feb. 29; minimum observed, 0.03 mg/L, May 22.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 966 lb, Feb. 28; minimum daily, 0.13 lb, Sept. 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ALKA- LITY LAB (MG/L AS CAC03) (90410)
NOV 1991												
*11...	1500	1.5	1180	7.4	3.5	7.0	8.8	743	68	36	2000	320
DEC												
*28...	1730	2.1	1250	7.9	4.0	31	11.0	734	88	24	1000	362

DATE	TIME	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTH, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
NOV 1991												
11...	310	42	0.20	0.080	8.90	0.680	1.6	0.150	0.020	0.030		98
DEC												
28...	200	100	0.20	0.110	6.40	0.540	1.3	0.210	0.040	0.020		31

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT 1991				NOV 1991			
04...	1705	11	67	15...	0835	25	338
05...	0010	9.6	73	*15...	1052	21	104
05...	0610	7.4	34	15...	1053	21	206
*25...	0825	91	688	16...	0835	5.3	35
25...	1136	53	388	17...	2350	22	285
*25...	1137	53	415	18...	0450	42	540
25...	1435	38	222	18...	0842	32	209
26...	0700	8.7	66	*18...	0843	32	154
29...	0125	7.4	41	19...	1350	5.3	23
29...	1325	14	39	23...	0850	11	63
29...	1925	13	26	23...	1450	17	89
30...	0725	5.7	25	24...	0250	6.2	46
31...	2105	9.6	39	29...	2105	10	52
NOV				29...	2400	51	646
01...	0305	11	41	30...	0230	81	1100
01...	0945	35	269	30...	0830	45	286
01...	1140	60	424	DEC			
01...	1440	71	287	01...	1300	6.2	27
01...	1910	50	309	*09...	1045	4.1	17
02...	1740	7.7	99	12...	1015	9.6	166
14...	1805	8.3	88	12...	1445	21	507
15...	0130	10	108	12...	2045	27	276
				14...	0245	5.7	190

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

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05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
FEB 1992						APR 1992					
03...	2020	10	--	--	253	20...	1215	8.7	--	--	44
04...	0220	13	--	--	190	20...	2335	17	0.700	0.440	121
20...	1850	9.2	0.740	0.380	321	21...	1135	7.9	--	--	52
21...	1015	7.0	0.400	0.270	47	21...	1735	6.2	--	--	152
*21...	1016	7.0	0.380	0.270	42	*22...	1023	3.9	0.510	0.370	31
22...	2130	11	1.10	0.770	110	22...	1025	3.9	0.520	0.370	--
23...	0330	7.9	2.10	1.30	171	22...	1026	3.9	--	--	20
23...	1530	11	1.60	1.00	97	*29...	1130	2.1	0.240	0.150	--
23...	2025	22	--	--	251	29...	1131	2.1	--	--	39
24...	0225	24	1.90	1.20	163	29...	1133	2.1	0.210	0.130	--
24...	0825	17	--	--	60	MAY					
24...	1126	14	1.80	1.30	48	22...	2335	14	0.720	0.030	346
*24...	1127	14	--	--	51	22...	2345	40	--	--	787
25...	0225	11	--	--	66	22...	2355	57	1.90	0.050	1720
25...	2025	6.2	2.20	1.60	57	23...	0110	37	--	--	1220
27...	0305	14	2.00	1.50	58	23...	0255	12	--	--	382
27...	0905	11	2.10	1.60	41	*23...	0846	4.7	0.320	0.140	117
27...	1450	22	1.60	1.10	96	23...	0848	4.6	0.360	0.130	--
27...	1610	37	1.60	1.00	--	23...	0850	4.6	--	--	157
27...	1700	58	--	--	1170	JUL					
27...	1730	80	2.80	1.00	--	02...	1500	14	0.410	0.150	501
27...	1805	105	--	--	2420	02...	1515	29	0.220	0.160	274
27...	1935	129	2.10	1.40	1670	02...	1830	5.7	--	--	191
27...	2235	104	2.70	1.70	695	02...	2200	9.2	0.350	0.350	--
28...	0305	64	2.20	1.60	227	03...	0400	8.7	--	--	102
28...	0735	59	2.10	1.80	160	08...	0840	13	0.190	0.110	153
*28...	1158	89	2.60	2.20	307	08...	0845	23	--	--	377
28...	1159	90	2.70	2.20	398	08...	0855	38	--	--	373
28...	1310	118	--	--	1480	*08...	0946	36	0.120	0.080	--
28...	1440	141	2.90	2.10	--	*08...	0947	35	--	--	401
28...	1610	154	3.00	1.90	1130	08...	0948	35	--	--	405
28...	1740	147	--	--	1130	08...	0949	35	0.160	0.090	--
28...	1910	131	2.30	2.00	--	08...	1040	23	--	--	339
28...	2035	104	--	--	469	08...	1440	23	--	--	386
28...	2255	58	2.20	2.00	--	08...	2040	14	0.260	0.170	--
29...	0025	43	--	--	148	09...	0240	8.7	--	--	92
*29...	0920	22	1.90	1.80	66	12...	1150	13	0.210	0.140	202
29...	1355	23	1.90	1.70	--	12...	1210	24	--	--	180
29...	1855	46	--	--	197	12...	1435	52	0.310	0.230	461
29...	2025	51	2.80	2.40	283	12...	1735	43	--	--	810
29...	2155	43	--	--	211	12...	1905	48	0.890	0.150	--
MAR						12...	2035	46	--	--	440
01...	0930	9.6	1.80	1.50	--	13...	0100	22	0.270	0.300	--
01...	1325	21	--	--	283	13...	0700	13	--	--	97
01...	1625	62	2.60	2.10	700	13...	1409	17	0.560	0.450	--
01...	1755	52	--	--	569	13...	1555	19	--	--	114
01...	2220	23	1.90	1.30	--	13...	1825	51	--	--	272
02...	0900	6.2	1.10	0.850	66	13...	1955	51	0.490	0.170	--
*04...	0829	3.2	0.580	0.440	33	13...	2125	49	--	--	252
04...	0830	3.2	0.560	0.430	23	14...	0025	34	1.20	0.870	--
09...	1040	9.6	0.380	0.200	167	14...	0615	21	--	--	96
*09...	1640	13	0.450	0.240	108	14...	0727	20	--	--	122
10...	1030	5.3	0.740	0.450	26	*14...	0728	20	--	--	86
16...	1935	9.6	0.320	0.040	172	14...	1815	5.3	0.930	0.640	31
*17...	1318	3.6	0.170	0.140	49	AUG					
17...	1319	3.6	0.180	0.150	33	07...	1910	10	1.60	0.070	740
APR						07...	2020	21	1.30	0.120	342
15...	0630	13	0.220	0.070	209	07...	2255	9.6	1.40	0.630	194
*15...	1103	3.9	0.590	0.220	307	*11...	1005	0.67	--	--	35
15...	1105	3.9	--	--	240	25...	1910	16	0.160	0.080	289
15...	1106	3.9	0.510	0.190	--	25...	1920	29	--	--	339
15...	1505	9.6	--	--	66	25...	2050	34	0.390	0.140	195
16...	0935	10	0.340	0.120	94	26...	0020	9.6	0.410	0.340	67
16...	1805	5.7	--	--	100	*26...	0741	15	--	--	65
19...	0100	11	0.360	0.170	194	*26...	0742	15	0.420	0.340	--
19...	0130	23	--	--	654	26...	0743	15	--	--	72
19...	0145	40	0.950	0.070	693	26...	1220	11	--	--	42
19...	0315	33	--	--	1290	29...	0540	11	0.390	0.330	116
19...	0445	39	1.60	0.110	2590	29...	0550	23	--	--	351
19...	0615	34	--	--	935	29...	0605	38	0.520	0.450	554
20...	0015	19	--	--	139	29...	1420	25	--	--	248
*20...	0925	9.6	0.990	0.720	48	29...	2020	15	0.280	0.220	--
20...	0926	9.6	0.940	0.700	154	30...	0220	7.9	--	--	96

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
SEP 1992					
06...	0335	13	0.130	0.050	200
06...	0400	24	0.350	0.240	323
06...	0610	12	--	--	83
06...	1810	8.7	0.300	0.230	44
*08...	1048	0.93	--	--	44
09...	0645	13	1.10	0.520	222
09...	0655	24	0.690	0.240	229
*09...	1055	6.2	0.510	0.330	--
*09...	1056	6.2	--	--	62
09...	1057	6.2	--	--	61
09...	1300	10	--	--	56
09...	1900	12	--	--	101
*14...	0955	0.70	--	--	94
14...	1225	11	0.490	0.090	154
*15...	0600	3.0	--	--	29
16...	1210	12	0.530	0.180	219
16...	1250	51	--	--	756
16...	1315	76	0.520	0.120	1240
16...	1445	71	--	--	606
16...	1745	64	0.550	0.290	608
16...	2045	50	--	--	255
16...	2215	41	1.10	0.710	--
16...	2345	35	--	--	193
*17...	0644	22	--	--	74
*17...	0645	22	1.60	1.10	--
17...	0646	21	1.60	1.10	--
17...	0647	21	--	--	85
17...	1145	14	1.20	0.950	--
17...	1745	13	--	--	64
18...	0420	29	--	--	396
18...	0450	70	0.720	0.200	2480
*18...	0544	65	0.520	0.280	--
*18...	0545	64	--	--	472
18...	0620	56	--	--	421
18...	0920	60	--	--	485
18...	1220	49	--	--	234
18...	1350	41	0.650	0.420	--
18...	2120	24	--	--	158
19...	0300	12	1.20	1.00	--
19...	0900	5.7	--	--	46

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	30	.88	.15	.06	27	.19	.18	.07	.05	.07	.07
2	.03	7.0	.27	.15	.08	2.1	.16	.16	.07	3.0	.07	.33
3	.03	.67	.21	.16	2.4	.45	.15	.14	.07	1.1	.07	.48
4	.59	.28	.16	.15	2.2	.24	.14	.14	.07	.09	.06	.11
5	.74	.22	.14	.14	.16	.23	.13	.13	.07	.07	.06	.07
6	.13	.18	.11	.14	.11	.24	.12	.12	.07	.08	.06	3.4
7	.07	.13	.22	.14	.09	.26	.13	.11	.07	.11	3.0	.21
8	.05	.12	.46	.15	.08	.25	.15	.11	.08	10	.71	.11
9	.06	.11	.23	.21	.07	2.3	.27	.10	.08	.80	.11	3.2
10	.10	.10	.17	.17	.07	.43	.16	.09	.06	.08	.08	.36
11	.05	.10	.16	.15	.07	.21	.17	.14	.06	.07	.06	.11
12	.04	.10	14	.20	.07	.17	.13	.11	.06	27	.19	.08
13	.04	.11	7.2	.27	.08	.14	.12	.09	.06	16	.07	.06
14	.05	.51	1.8	.18	.08	.13	.11	.09	1.9	4.1	.06	1.2
15	.04	11	.48	.14	.08	.12	3.3	.08	.14	.23	.06	.21
16	.04	.66	.30	.10	.08	.83	1.2	.08	.08	.18	.06	43
17	.04	1.1	.27	.10	.16	.42	.73	.11	.27	.12	.06	4.4
18	.06	17	.23	.10	.30	.26	.40	.08	.24	.10	.06	37
19	.06	.62	.21	.09	.72	.21	58	.08	.09	.09	.05	1.2
20	.04	.25	.22	.09	2.0	.18	2.0	.08	.09	.08	.05	.47
21	.04	.20	.22	.08	.87	.15	1.6	.08	.06	.07	.05	.60
22	.04	.17	.20	.08	1.3	.20	.35	2.6	.06	.37	.05	.24
23	.07	2.2	.21	.11	6.9	.21	.36	15	.07	.23	.05	.15
24	29	.55	.20	.07	4.2	.50	.40	.13	.08	.11	.06	.12
25	124	.28	.18	.06	1.2	.64	.35	.10	.06	.09	3.4	.10
26	4.9	.18	.18	.06	.79	.41	.31	.10	.05	.09	2.3	.27
27	1.0	.19	.18	.06	124	.29	.27	.09	.05	.08	.13	.36
28	.54	.16	.17	.06	170	.21	.24	.09	.05	.07	.06	.13
29	1.4	3.4	.17	.06	13	.36	.22	.08	.05	.07	13	.10
30	.38	57	.16	.06	---	.28	.20	.08	.05	.13	.78	.08
31	.41	---	.15	.07	---	.23	---	.08	---	.08	.11	---
TOTAL	164.07	134.59	29.74	3.75	331.22	39.65	72.06	20.65	4.28	64.74	25.00	98.22
WTR YR 1992	TOTAL 987.97											

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				2.02	.82	308	1.47	1.86	.88	.42	.47	.50
2				2.07	1.02	46.4	1.24	1.65	.84	6.94	.46	1.78
3				2.12	10.2	15.1	1.16	1.48	.79	5.05	.44	3.02
4				2.04	11.1	9.66	1.08	1.42	.76	.76	.42	.81
5				1.95	1.53	8.17	.97	1.31	.77	.57	.40	.48
6				1.90	1.06	6.84	.92	1.22	.70	.59	.38	16.8
7				1.85	.91	5.63	.97	1.16	.69	.75	23.1	2.06
8				2.05	.84	4.36	1.17	1.11	.81	14.9	18.7	.73
9				2.88	.78	17.7	2.15	1.02	.85	3.16	1.85	28.8
10				2.33	.77	16.2	1.38	.94	.70	.57	.80	4.09
11				2.04	.79	6.48	1.65	1.56	.67	.51	.43	.97
12				2.95	.80	3.73	1.21	1.35	.63	55.6	.87	.62
13				4.24	.86	2.59	1.12	1.09	.65	72.0	.45	.46
14				2.68	.84	1.99	1.09	.98	27.2	85.4	.40	10.3
15				1.99	.93	1.52	16.0	.92	2.33	8.05	.38	4.87
16				1.44	.93	4.39	8.48	.87	.93	2.13	.38	105
17				1.35	1.53	4.00	4.08	1.24	4.39	1.05	.37	106
18				1.32	2.38	2.47	2.55	.92	3.76	.84	.35	124
19				1.24	5.91	1.76	192	.89	1.08	.71	.34	33.2
20				1.19	12.4	1.33	48.0	.84	1.03	.60	.30	6.62
21				1.10	10.1	1.03	31.8	.82	.61	.53	.30	6.36
22				1.06	20.8	1.35	10.9	7.04	.61	2.80	.31	3.23
23				1.72	120	1.49	7.80	37.6	.67	1.90	.32	1.86
24				1.01	165	2.98	7.27	1.73	.73	.89	.37	1.28
25				.88	78.8	4.13	5.72	1.42	.53	.70	12.0	.98
26				.84	44.0	2.43	4.70	1.29	.49	.67	22.7	2.59
27				.83	528	1.86	3.85	1.18	.45	.59	2.11	4.41
28				.84	1210	1.48	3.11	1.10	.44	.52	.88	1.60
29				.84	381	2.96	2.48	1.03	.42	.49	33.1	.97
30				.90	---	2.18	2.05	.96	.42	.86	4.12	.71
31				.90	---	1.77	---	.91	---	.54	.77	---
TOTAL				52.57	2614.10	491.98	368.37	78.91	55.83	271.09	128.27	475.10

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

PHOSPHORUS ORTHO WATER, WHOLE, TOTAL, LBS/DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				1.04	.42	252	1.29	1.18	.36	.15	.24	.41
2				1.07	.52	35.4	1.09	1.05	.35	4.83	.24	1.46
3				1.09	5.25	11.7	1.01	.94	.33	4.48	.23	2.46
4				1.05	5.73	7.43	.94	.89	.31	.56	.22	.57
5				1.00	.79	5.95	.84	.82	.32	.37	.20	.24
6				.98	.55	4.64	.80	.76	.29	.36	.19	12.3
7				.95	.47	3.55	.84	.72	.29	.45	4.41	1.60
8				1.06	.43	2.56	1.01	.69	.33	9.64	8.75	.56
9				1.48	.40	9.84	1.90	.64	.34	2.15	.86	16.7
10				1.20	.40	9.64	1.21	.58	.28	.38	.36	2.69
11				1.05	.41	3.67	1.29	.97	.27	.34	.19	.52
12				1.49	.41	1.87	.76	.84	.26	21.4	.40	.24
13				2.12	.44	1.11	.56	.68	.27	50.2	.21	.13
14				1.35	.43	.73	.44	.61	11.7	62.5	.19	1.93
15				1.02	.48	.47	5.33	.57	.97	5.76	.19	1.07
16				.74	.48	.76	3.07	.54	.38	1.48	.18	51.6
17				.69	.79	2.26	1.58	.77	1.84	.73	.18	72.2
18				.68	1.20	2.10	1.11	.58	1.62	.59	.17	76.9
19				.64	3.01	1.48	26.0	.56	.46	.50	.17	28.3
20				.61	6.63	1.11	27.9	.53	.43	.42	.15	5.73
21				.57	6.70	.86	22.5	.51	.25	.38	.15	5.45
22				.54	14.6	1.17	7.92	.65	.26	1.55	.16	2.66
23				.86	77.2	1.25	5.68	3.90	.28	.99	.17	1.37
24				.51	117	2.56	5.14	.71	.30	.49	.19	.83
25				.45	58.9	3.54	3.94	.58	.21	.38	5.95	.56
26				.43	33.1	2.09	3.16	.53	.19	.36	18.7	1.34
27				.43	333	1.59	2.53	.49	.18	.31	1.76	2.27
28				.43	966	1.27	1.99	.45	.17	.28	.76	.82
29				.43	348	2.61	1.57	.43	.16	.26	27.6	.50
30				.46	---	1.92	1.31	.39	.15	.45	3.37	.37
31				.46	---	1.56	---	.38	---	.28	.63	---
TOTAL				26.88	1983.74	378.69	134.71	23.94	23.55	173.02	77.17	293.78

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI

LOCATION.--Lat 43°04'45", long 89°28'15", in NW 1/4 SE 1/4 sec.18, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in city park near the junction of Spring Harbor Drive and University Avenue in Madison.

DRAINAGE AREA.--3.29 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1976 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 855.3 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records are good except those for periods of flow between 0.00 ft³/s and 0.3 ft³/s, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	22	.15	.11	.17	2.5	.17	.00	.00	.00	.02	.06
2	.05	.50	.08	.19	.78	.29	.06	.00	.00	14	.01	6.0
3	.18	.01	.04	.42	2.2	.24	.03	.00	.00	.79	.75	.63
4	13	.00	.07	.14	.51	.28	.00	.00	.00	.06	.10	.06
5	2.9	.00	.10	.09	.18	.36	.00	.00	.00	.00	.00	.00
6	.12	.00	.10	.09	.15	.30	.00	.00	.00	.00	.00	8.5
7	.02	.00	3.2	.07	.15	.17	.34	.00	.00	1.4	13	.16
8	.00	.00	2.1	1.4	.08	.19	2.6	.00	.00	22	.91	.30
9	.00	.00	.19	1.6	.00	6.0	2.6	.00	.00	.19	.01	10
10	.00	.00	.11	.07	.12	.21	.90	.00	.00	.32	.00	.58
11	.00	.01	.09	.09	.15	.14	.23	1.7	.00	.39	.00	.03
12	.00	.26	11	1.8	.15	.06	.06	.27	.13	30	1.1	.00
13	.60	.27	.39	.24	.11	.05	.04	.08	7.0	25	.02	.00
14	.40	4.2	.10	.01	.09	.01	.15	.00	12	1.2	.00	6.5
15	.00	7.9	.01	.05	.13	.00	11	.00	.09	.07	.00	.35
16	.00	.39	.00	.07	.36	3.4	4.2	.00	.22	1.5	.00	21
17	.00	5.1	.00	.05	1.7	.49	.14	.39	7.6	.08	.00	9.8
18	.48	9.9	.00	.02	2.2	.14	.80	.01	.31	.00	.00	18
19	.14	.24	.00	.00	3.7	.05	16	.00	.29	.00	.00	.39
20	.04	.11	.08	.00	3.1	.06	1.4	.00	.41	.16	.00	4.3
21	.00	.10	.39	.02	.95	.06	1.4	.00	.06	.01	.00	1.3
22	.00	.03	.18	.60	2.6	1.7	.11	1.1	.16	3.9	.00	.38
23	.00	8.1	.21	1.0	2.8	.88	2.7	4.2	.42	1.3	.00	.83
24	31	.15	.17	.07	3.4	1.3	.73	.13	1.6	.10	.00	.37
25	18	.03	.11	.05	1.2	.63	.12	.04	.08	.08	15	.00
26	5.7	.00	.18	.05	1.2	.20	.51	.10	.00	.02	7.4	5.7
27	1.3	.89	.16	.05	7.6	.14	.16	.04	.00	.00	.08	.77
28	2.5	.11	.12	.10	7.5	.35	.02	.00	.00	.00	.00	.02
29	6.3	13	.01	.10	1.0	3.1	.18	.00	.00	.00	21	.00
30	.19	12	.03	.42	---	.29	.07	.00	.00	2.3	.20	.09
31	3.6	---	.05	.34	---	.91	---	.00	---	.16	.00	---
TOTAL	86.52	85.30	19.42	9.31	44.28	24.50	46.72	8.06	30.37	105.03	59.60	96.12
MEAN	2.79	2.84	.63	.30	1.53	.79	1.56	.26	1.01	3.39	1.92	3.20
MAX	31	22	11	1.8	7.6	6.0	16	4.2	12	30	21	21
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CFSM	.85	.86	.19	.09	.46	.24	.47	.08	.31	1.03	.58	.97
IN.	.98	.96	.22	.11	.50	.28	.53	.09	.34	1.19	.67	1.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1992, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	1.15	1.22	.62	.42	1.18	2.19	1.58	1.19	1.78	1.85	1.90	1.82					
MAX	3.19	2.84	1.99	1.73	3.09	5.06	4.00	2.71	5.00	4.78	4.24	4.97					
(WY)	1985	1992	1985	1990	1981	1976	1991	1990	1984	1978	1981	1980					
MIN	.30	.027	.000	.000	.050	.49	.54	.26	.33	.30	.36	.11					
(WY)	1979	1977	1990	1977	1978	1981	1985	1992	1987	1976	1988	1976					

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1976 - 1992

ANNUAL TOTAL	742.53	615.23	
ANNUAL MEAN	2.03	1.68	
HIGHEST ANNUAL MEAN			1.42
LOWEST ANNUAL MEAN			1.96
HIGHEST DAILY MEAN	54	31	.97
LOWEST DAILY MEAN	.00	.00	1980
ANNUAL SEVEN-DAY MINIMUM	.00	.00	1988
INSTANTANEOUS PEAK FLOW		252	77
INSTANTANEOUS PEAK STAGE		2.64	.00
ANNUAL RUNOFF (CFSM)	.62	.51	.00
ANNUAL RUNOFF (INCHES)	8.40	6.96	.00
10 PERCENT EXCEEDS	4.9	5.3	.00
50 PERCENT EXCEEDS	.05	.12	.00
90 PERCENT EXCEEDS	.00	.00	.00

(a) 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 September 1992.

INSTRUMENTATION.--Automatic pumping sampler.

REMARKS.--Records fair. Samples are point samples unless otherwise indicated.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 1,570 mg/L, July 8; minimum observed, 13 mg/L, Sept. 21.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 30 tons, July 8; minimum daily, 0.00 ton, on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT 1991				APR 1992			
24...	1125	37	347	20...	2310	25	625
24...	1140	119	343	21...	0040	11	373
24...	1205	152	551	23...	1500	18	129
24...	1335	81	217	MAY			
24...	1920	33	137	11...	1700	5.8	436
25...	0030	113	144	11...	1745	18	1340
26...	1835	5.0	44	11...	1930	6.1	102
NOV				22...	2310	16	728
01...	0750	8.7	42	22...	2315	33	734
01...	0915	60	100	23...	0140	14	103
01...	1000	126	277	*23...	0801	5.5	40
01...	1055	69	148	23...	0802	5.5	35
01...	1830	11	62	JUN			
FEB 1992				13...	2235	58	1310
03...	1410	8.2	200	13...	2245	117	1290
18...	1740	5.5	238	13...	2255	178	1240
19...	1235	5.2	77	13...	2320	130	1070
19...	1835	4.1	470	14...	0020	57	479
20...	1515	7.2	740	14...	0755	8.2	70
22...	2020	4.4	149	17...	1200	27	789
24...	1400	6.7	98	17...	1205	72	815
26...	1655	4.4	54	17...	1230	95	1140
27...	1330	7.7	152	17...	1330	45	459
27...	1415	19	428	17...	1408	38	221
28...	0910	5.8	106	*17...	1409	38	247
28...	1104	16	319	17...	1535	12	112
*28...	1105	16	253	24...	0740	12	372
28...	1710	10	102	JUL			
MAR				02...	0820	7.2	396
01...	1200	6.1	287	02...	0855	23	531
01...	1800	3.4	55	02...	1110	7.2	62
09...	0305	6.7	424	02...	1405	33	465
09...	0715	7.2	280	02...	1410	131	617
09...	0955	6.7	111	02...	1515	61	643
09...	1355	7.2	538	02...	1900	12	98
*09...	1445	21	219	07...	0520	9.1	281
09...	1650	7.7	158	08...	0805	139	456
16...	1815	7.7	502	08...	0825	192	1230
16...	1900	24	459	08...	0830	114	1570
16...	1910	48	1090	*08...	0909	94	663
16...	2215	4.1	126	08...	0911	91	559
22...	1335	9.1	357	08...	1550	35	164
28...	2355	7.2	149	08...	1810	6.1	138
29...	0555	4.4	37	12...	1040	24	345
APR				12...	1105	53	785
07...	2400	11	642	12...	1200	125	230
09...	0325	8.7	43	12...	1300	60	476
15...	0525	10	478	12...	1425	146	417
15...	0600	25	494	12...	1605	47	105
15...	0605	42	1180	12...	2355	5.2	41
15...	0835	11	107	13...	0830	15	63
15...	1030	22	321	13...	1005	54	63
15...	1032	22	227	13...	1340	6.7	33
15...	1150	12	233	13...	1635	23	68
15...	1325	4.4	91	13...	1715	87	155
15...	2110	39	1370	13...	1735	117	280
16...	1335	3.6	17	13...	1830	85	186
18...	2320	17	596	13...	2125	37	56
18...	2350	40	669	14...	0015	8.2	31
19...	0110	61	368	16...	0350	11	62
19...	0310	41	190	22...	1250	6.7	79
19...	0540	10	86	22...	1850	7.7	30
19...	1245	21	349	30...	1325	9.6	160

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
AUG 1992				SEP 1992			
03...	1805	11	345	09...	0550	78	185
07...	1745	29	445	09...	0600	57	228
07...	1800	47	288	09...	0610	110	838
07...	1815	67	225	09...	0705	54	384
07...	2300	29	49	09...	1000	19	117
08...	0115	4.4	30	*09...	1018	15	108
12...	0735	6.4	64	09...	1105	7.2	88
25...	1825	39	368	14...	1105	22	216
25...	1840	72	357	14...	1145	41	578
25...	1845	112	622	14...	1515	11	66
25...	2030	77	578	16...	1225	27	211
25...	2220	33	161	16...	1245	142	316
26...	0210	19	80	16...	1250	198	590
*26...	0651	12	48	16...	1315	146	749
26...	0653	12	48	16...	1450	53	259
29...	0435	6.4	41	16...	2220	7.2	219
29...	0500	66	116	17...	0515	7.2	59
29...	0525	130	414	17...	0545	86	270
29...	0630	73	391	*17...	0612	92	392
29...	0900	33	659	17...	0614	89	414
29...	1455	18	135	17...	0640	55	369
SEP				17...	1030	7.7	137
02...	1655	32	346	18...	0340	25	383
02...	1700	41	488	18...	0405	117	644
02...	1720	61	391	18...	0605	57	158
02...	1835	21	213	18...	1055	22	131
02...	2215	6.7	54	20...	1930	12	192
06...	0225	33	397	20...	1950	27	161
06...	0230	56	139	21...	0220	4.1	13
06...	0240	32	100	23...	0010	8.2	160
06...	0250	95	1120	26...	1225	10	154
06...	0330	38	236	26...	1300	33	244
06...	0955	8.7	30	26...	1420	16	73
09...	0540	11	202	26...	2330	5.8	37

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	8.0	.17	.00	.19	.95	.19	.00	.00	.00	.00	.00
2	.06	.01	.10	.01	.76	.02	.07	.00	.00	16	.00	3.4
3	.20	.00	.05	.02	2.0	.01	.04	.00	.00	.02	.51	.02
4	10	.00	.09	.01	.52	.01	.00	.00	.00	.00	.01	.00
5	2.6	.00	.12	.00	.20	.01	.00	.00	.00	.00	.00	.00
6	.24	.00	.12	.00	.17	.01	.00	.00	.00	.00	.00	5.5
7	.00	.00	2.8	.00	.17	.01	.36	.00	.00	.21	5.0	.18
8	.00	.00	2.0	1.4	.10	.01	2.4	.00	.00	30	.06	.01
9	.00	.00	.21	1.5	.00	3.8	2.4	.00	.00	.03	.00	10
10	.00	.00	.13	.00	.00	.01	.90	.00	.00	.02	.00	.60
11	.00	.00	.11	.00	.01	.00	.26	2.2	.00	.04	.00	.00
12	.00	.01	8.9	1.7	.01	.00	.00	.01	.15	22	.11	.00
13	.05	.01	.41	.27	.00	.00	.00	.00	21	8.2	.00	.00
14	.01	3.7	.12	.00	.00	.00	.01	.00	8.9	.06	.00	4.7
15	.00	6.6	.01	.06	.15	.00	15	.00	.00	.00	.00	.37
16	.00	.41	.00	.09	.38	5.5	1.5	.00	.01	.18	.00	22
17	.00	4.4	.00	.06	1.6	.07	.01	.02	12	.00	.00	7.4
18	.03	8.1	.00	.03	2.0	.00	1.3	.00	.01	.00	.00	14
19	.00	.27	.00	.00	3.3	.00	9.7	.00	.02	.00	.00	.02
20	.00	.13	.00	.00	2.8	.00	1.6	.00	.01	.01	.00	1.2
21	.00	.12	.03	.03	.94	.07	1.1	.00	.00	.00	.00	.07
22	.00	.04	.01	.62	2.4	1.6	.00	1.7	.18	.46	.00	.04
23	.00	6.7	.01	.99	2.6	.85	2.5	1.8	.44	.02	.00	.23
24	23	.17	.01	.09	3.0	1.3	.71	.00	1.5	.00	.00	.06
25	14	.04	.01	.06	1.2	.62	.14	.00	.10	.00	25	.00
26	4.9	.00	.01	.06	.14	.23	.52	.00	.00	.00	1.3	1.6
27	.11	.90	.01	.06	5.5	.16	.18	.00	.00	.00	.00	.04
28	2.3	.13	.00	.12	3.1	.37	.00	.00	.00	.00	.00	.00
29	.18	10	.00	.12	.18	2.8	.01	.00	.00	.00	21	.00
30	.00	9.7	.00	.44	---	.32	.00	.00	.00	.62	.00	.01
31	.48	---	.00	.36	---	.90	---	.00	---	.00	.00	---
TOTAL	58.16	59.44	15.43	8.10	33.42	19.63	40.90	5.73	44.32	77.87	52.99	71.45

WTR YR 1992 TOTAL 487.44

LOCATION.--Lat 43°05'42", long 89°22'12", in SE 1/4 sec.12, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in city boat house at dam at outlet, in Madison.

PERIOD OF RECORD.--December 1902 to May 1903. January 1916 to current year (incomplete).

REVISED RECORDS.--WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above National Geodetic Vertical Datum of 1929, or 5.60 ft below city of Madison datum. Prior to Oct. 1, 1979, at datum 7.82 ft higher; prior to Nov. 15, 1971, nonrecording gage at same site and datum.

REMARKS.--Records good except those for Aug. 8-19, which are fair. Lake level regulated by concrete dam with two 12-foot gates and 20-foot lock at outlet. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.01 ft, Apr. 5, 1959; minimum observed, 8.02 ft, Feb. 24 to Mar. 10, 1920, current datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.56 ft, Nov. 2; minimum, 9.32 ft, Feb. 14.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.95	10.41	9.96	9.79	9.47	9.53	9.67	9.98	9.77	9.59	10.03	9.96
2	9.95	10.48	9.93	9.79	9.46	9.57	9.66	10.00	9.77	9.64	10.02	9.97
3	9.96	10.43	9.95	9.78	9.45	9.60	9.64	9.97	9.75	9.70	10.02	10.01
4	10.00	10.39	9.94	9.76	9.44	9.61	9.64	9.95	9.74	9.68	10.02	9.99
5	10.07	10.36	9.92	9.75	9.43	9.63	9.62	9.94	9.74	9.66	10.00	9.97
6	10.05	10.37	9.91	9.74	9.42	9.64	9.61	9.93	9.72	9.64	9.99	10.04
7	10.03	10.33	9.90	9.73	9.41	9.66	9.61	9.92	9.71	9.63	9.98	10.04
8	10.02	10.29	9.91	9.73	9.40	9.66	9.61	9.91	9.68	9.73	10.05	10.04
9	10.03	10.26	9.91	9.73	9.38	9.72	9.63	9.91	9.66	9.77	9.97	10.08
10	10.03	10.25	9.90	9.72	9.38	9.74	9.61	9.89	9.66	9.77	9.95	10.10
11	10.03	10.23	9.89	9.71	9.37	9.73	9.64	9.89	9.66	9.77	9.93	10.07
12	10.02	10.20	9.93	9.71	9.36	9.72	9.63	9.90	9.65	9.83	9.90	10.04
13	10.00	10.15	9.95	9.71	9.35	9.71	9.61	9.90	9.64	9.94	9.91	10.03
14	10.03	10.13	10.00	9.70	9.34	9.70	9.62	9.87	9.65	10.04	9.91	10.06
15	10.01	10.16	9.96	9.68	9.37	9.70	9.65	9.86	9.62	10.06	9.91	10.10
16	9.99	10.14	9.94	9.67	9.36	9.69	9.69	9.84	9.61	10.07	9.92	10.16
17	9.98	10.11	9.94	9.65	9.35	9.71	9.72	9.86	9.66	10.09	9.93	10.28
18	10.00	10.15	9.91	9.64	9.37	9.71	9.72	9.83	9.69	10.08	9.95	10.35
19	9.99	10.16	9.90	9.62	9.38	9.70	9.81	9.82	9.68	10.08	9.95	10.34
20	9.97	10.13	9.90	9.61	9.37	9.68	9.89	9.81	9.66	10.08	9.94	10.31
21	9.97	10.09	9.91	9.60	9.37	9.69	9.91	9.81	9.65	10.05	9.92	10.31
22	9.97	10.07	9.90	9.59	9.36	9.71	9.93	9.82	9.64	10.05	9.91	10.27
23	9.97	10.07	9.89	9.58	9.36	9.70	9.94	9.90	9.64	10.07	9.90	10.21
24	10.03	10.08	9.88	9.56	9.39	9.69	9.98	9.88	9.65	10.07	9.90	10.15
25	10.23	10.01	9.87	9.57	9.40	9.69	9.97	9.87	9.65	10.06	9.92	10.10
26	10.28	9.96	9.86	9.55	9.40	9.71	9.98	9.86	9.64	10.07	9.98	10.09
27	10.31	9.98	9.85	9.54	9.41	9.68	9.98	9.85	9.62	10.06	9.97	10.12
28	10.31	9.93	9.84	9.53	9.45	9.66	9.98	9.83	9.61	10.06	9.95	10.07
29	10.36	9.92	9.83	9.52	9.49	9.68	9.98	9.82	9.60	10.05	9.97	10.01
30	10.38	9.98	9.82	9.50	---	9.69	9.98	9.81	9.60	10.04	10.01	9.97
31	10.36	---	9.81	9.49	---	9.68	---	9.80	---	10.04	9.97	---
MEAN	10.07	10.17	9.90	9.65	9.40	9.68	9.76	9.88	9.67	9.92	9.96	10.11
MAX	10.38	10.48	10.00	9.79	9.49	9.74	9.98	10.00	9.77	10.09	10.05	10.35
MIN	9.95	9.92	9.81	9.49	9.34	9.53	9.61	9.80	9.60	9.59	9.90	9.95

CAL YR 1991	MEAN 9.95	MAX 10.48	MIN 9.19
WTR YR 1992	MEAN 9.85	MAX 10.48	MIN 9.34

ROCK RIVER BASIN

409

05429000 LAKE MONONA AT MADISON, WI

LOCATION.--Lat 43°03'48", long 89°23'49", in SW 1/4 sec.23, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in Brittingham Park, in Madison.

DRAINAGE AREA.--279 mi². Area of Lake Monona, 5.3 mi².

PERIOD OF RECORD.--September 1915 to current year (fragmentary) in reports of the Geological Survey. For 1856 to March 1917 in reports of Wisconsin Railroad Commission, volume 19.

REVISED RECORDS.--WSP 1338: Lake area. WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above National Geodetic Vertical Datum of 1929, or 5.60 ft below city of Madison datum. Prior to Oct. 1, 1979, datum 3.61 ft higher; prior to Nov. 15, 1971, nonrecording gage at same site and datum.

REMARKS.--Records good, no estimated daily lake levels. 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, 7.27 ft, July 28, 1929; minimum observed, 3.22 ft, Jan. 20, 1965, current datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 5.45 ft, Dec. 3; minimum, 4.22 ft, Feb. 13, 14.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.89	5.24	5.43	4.48	4.29	4.41	4.38	4.90	4.89	4.66	5.05	5.21
2	4.89	5.21	5.43	4.47	4.29	4.41	4.37	4.87	4.90	4.71	5.04	5.19
3	4.89	5.17	5.44	4.46	4.28	4.41	4.38	4.84	4.91	4.73	5.02	5.16
4	4.94	5.14	5.37	4.45	4.28	4.41	4.38	4.84	4.91	4.73	5.01	5.12
5	4.96	5.12	5.32	4.43	4.27	4.41	4.38	4.83	4.91	4.74	5.01	5.09
6	4.95	5.07	5.27	4.42	4.27	4.43	4.38	4.81	4.91	4.74	5.00	5.12
7	4.95	5.03	5.23	4.41	4.25	4.45	4.38	4.80	4.90	4.77	5.02	5.10
8	4.95	4.99	5.19	4.44	4.24	4.45	4.38	4.81	4.90	4.85	5.08	5.03
9	4.93	4.96	5.15	4.46	4.23	4.48	4.42	4.81	4.89	4.90	5.08	5.05
10	4.91	4.93	5.11	4.46	4.24	4.47	4.44	4.83	4.88	4.90	5.07	5.00
11	4.88	4.91	5.06	4.45	4.24	4.46	4.43	4.84	4.88	4.91	5.04	4.97
12	4.85	4.94	5.07	4.45	4.23	4.45	4.40	4.87	4.87	5.01	5.04	4.94
13	4.85	4.97	5.08	4.45	4.23	4.43	4.42	4.85	4.86	5.19	5.02	4.91
14	4.83	5.01	5.02	4.44	4.22	4.42	4.43	4.86	4.86	5.28	5.01	4.91
15	4.80	5.10	4.95	4.43	4.25	4.40	4.47	4.86	4.84	5.27	5.00	4.92
16	4.79	5.12	4.92	4.43	4.25	4.39	4.53	4.87	4.83	5.25	5.00	4.96
17	4.78	5.15	4.88	4.41	4.25	4.41	4.57	4.87	4.84	5.22	5.00	5.09
18	4.75	5.26	4.84	4.39	4.28	4.41	4.60	4.86	4.83	5.20	5.00	5.20
19	4.72	5.27	4.81	4.39	4.30	4.37	4.72	4.86	4.81	5.18	5.00	5.27
20	4.71	5.28	4.79	4.38	4.31	4.35	4.83	4.86	4.79	5.15	5.00	5.30
21	4.69	5.28	4.78	4.36	4.32	4.38	4.88	4.85	4.75	5.14	5.00	5.34
22	4.69	5.28	4.75	4.36	4.32	4.37	4.88	4.84	4.74	5.14	5.00	5.32
23	4.70	5.32	4.71	4.36	4.33	4.36	4.89	4.90	4.73	5.14	5.00	5.31
24	4.84	5.29	4.68	4.35	4.35	4.36	4.91	4.88	4.72	5.12	5.01	5.31
25	5.11	5.27	4.65	4.35	4.37	4.36	4.91	4.86	4.71	5.13	5.05	5.30
26	5.17	5.27	4.62	4.35	4.37	4.34	4.90	4.86	4.69	5.11	5.21	5.30
27	5.20	5.28	4.58	4.34	4.38	4.32	4.91	4.85	4.68	5.10	5.19	5.32
28	5.21	5.28	4.55	4.33	4.40	4.34	4.90	4.86	4.68	5.08	5.17	5.28
29	5.23	5.29	4.53	4.32	4.40	4.38	4.91	4.88	4.67	5.07	5.24	5.26
30	5.20	5.42	4.51	4.31	---	4.38	4.91	4.88	4.66	5.08	5.24	5.24
31	5.17	---	4.49	4.30	---	4.38	---	4.88	---	5.07	5.23	---
MEAN	4.92	5.16	4.94	4.40	4.29	4.40	4.61	4.85	4.81	5.02	5.06	5.15
MAX	5.23	5.42	5.44	4.48	4.40	4.48	4.91	4.90	4.91	5.28	5.24	5.34
MIN	4.69	4.91	4.49	4.30	4.22	4.32	4.37	4.80	4.66	4.66	5.00	4.91

CAL YR 1991 MEAN 4.84 MAX 5.87 MIN 3.61
WTR YR 1992 MEAN 4.80 MAX 5.44 MIN 4.22

ROCK RIVER BASIN

05429268 NINE SPRINGS CREEK STORM SEWER TRIBUTARY AT MADISON, WI

LOCATION.--Lat 43°02'03", long 89°23'35", in SW 1/4 SE 1/4 sec.35, T.6 N., R.9 E., Dane County, Hydrologic Unit 07090001, on Syene Road 0.25 mi north of Steward Street in Madison.

DRAINAGE AREA.--0.18 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1991 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Estimated daily discharge: Mar. 11. Records are good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	4.3	.24	.24	.21	.33	.19	.33	.20	.44	.38	.16
2	.41	.39	.17	.52	.36	.24	.19	.25	.25	2.0	.35	1.5
3	.62	.30	.25	.53	.50	.25	.22	.24	.28	.45	.76	.43
4	3.3	.32	.19	.28	.26	.25	.20	.24	.47	.39	.46	.38
5	1.3	.28	.17	.28	.19	.32	.19	.23	.43	.36	.43	.33
6	.34	.24	.24	.35	.24	.38	.26	.25	.34	.40	.43	2.3
7	.43	.22	1.2	.30	.17	.24	.59	.36	.35	.97	3.1	.41
8	.42	.30	.76	1.0	.11	.23	.94	.42	.32	3.2	.49	.44
9	.47	.25	.31	.73	.18	1.3	.52	.26	.33	.42	.37	1.8
10	.39	.22	.28	.51	.19	.21	.64	.21	.29	.42	.35	.37
11	.45	.30	.28	.58	.19	.20	.28	.62	.30	.53	.33	.34
12	.32	.43	2.5	1.0	.21	.19	.18	.30	.29	5.3	.78	.33
13	.68	.36	.33	.48	.19	.24	.35	.30	.30	5.1	.39	.41
14	.49	1.4	.25	.46	.32	.17	.28	.26	.29	.47	.41	1.9
15	.40	1.6	.09	.26	.27	.15	1.9	.22	.33	.39	.30	.43
16	.39	.27	.20	.19	.39	.86	1.3	.22	.32	.91	.18	3.6
17	.38	1.4	.19	.23	.82	.35	.23	.21	1.1	.46	.34	3.2
18	.55	1.7	.14	.14	.94	.19	.49	.20	.40	.36	.40	2.0
19	.28	.44	.23	.16	1.2	.20	3.7	.19	.50	.36	.36	.27
20	.26	.32	.31	.15	1.1	.23	.68	.18	.41	.43	.33	1.4
21	.36	.31	.38	.22	.45	.20	.39	.22	.34	.43	.33	.59
22	.41	.32	.28	.50	.82	.59	.24	.32	.45	1.4	.27	.41
23	.39	1.8	.34	.60	.59	.51	.98	1.3	.39	.76	.18	.30
24	7.7	.23	.35	.20	.87	.46	.46	.25	.72	.46	.35	.21
25	5.0	.25	.29	.15	.51	.30	.24	.26	.42	.44	7.1	.53
26	2.3	.25	.38	.17	.48	.22	.54	.24	.44	.37	.55	2.5
27	.38	.94	.41	.16	.58	.19	.31	.25	.34	.50	.30	.48
28	1.4	.25	.27	.27	.42	.41	.23	.31	.32	.36	.16	.44
29	1.7	2.9	.26	.22	.20	.86	.28	.31	.37	.44	3.5	.38
30	.42	2.9	.32	.37	---	.25	.24	.26	.39	1.2	.40	.41
31	1.2	---	.33	.27	---	.22	---	.23	---	.47	.34	---
TOTAL	33.51	25.19	11.94	11.52	12.96	10.74	17.24	9.44	11.68	30.19	24.42	28.25
MEAN	1.08	.84	.39	.37	.45	.35	.57	.30	.39	.97	.79	.94
MAX	7.7	4.3	2.5	1.0	1.2	1.3	3.7	1.3	1.1	5.3	7.1	3.6
MIN	.26	.22	.09	.14	.11	.15	.18	.18	.20	.36	.16	.16
CFSM	6.01	4.66	2.14	2.06	2.48	1.92	3.19	1.69	2.16	5.41	4.38	5.23
IN.	6.93	5.21	2.47	2.38	2.68	2.22	3.56	1.95	2.41	6.24	5.05	5.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1992	1992	1992	1992	1991	1991	1991	1992	1992	1992
MEAN	1.08	.84	.39	.37	.45	.35	.67	.40	.52	.97	.78	.90
MAX	1.08	.84	.39	.37	.45	.35	.77	.50	.65	.97	.79	.94
(WY)	1992	1992	1992	1992	1992	1992	1991	1991	1991	1992	1992	1992
MIN	1.08	.84	.39	.37	.45	.35	.57	.30	.39	.96	.78	.86
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1991	1991	1991

SUMMARY STATISTICS

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	227.08		
ANNUAL MEAN	.62		
HIGHEST ANNUAL MEAN		.62	
LOWEST ANNUAL MEAN		.62	1992
HIGHEST DAILY MEAN	7.7	Oct 24	11 Jul 21 1991
LOWEST DAILY MEAN	.09	Dec 15	.09 Dec 15 1991
ANNUAL SEVEN-DAY MINIMUM	.18	Feb 7	.18 Feb 7 1992
INSTANTANEOUS PEAK FLOW	78	(a)Oct 24	78 (b)Jul 21 1991
INSTANTANEOUS PEAK STAGE	3.35	(a)Oct 24	3.35 (b)Jul 21 1991
INSTANTANEOUS LOW FLOW	.04	(c)Dec 15	.04 (c)Dec 15 1991
ANNUAL RUNOFF (CFSM)	3.45		3.45
ANNUAL RUNOFF (INCHES)	46.93		46.83
10 PERCENT EXCEEDS	1.3		1.3
50 PERCENT EXCEEDS	.35		.38
90 PERCENT EXCEEDS	.20		.20

(a) Also occurred Oct. 25, Nov. 30, July 8, 12, and Aug. 25

(b) Also occurred Oct. 24, 25, Nov. 30, 1991, July 8, 12, and Aug. 25, 1992

(c) Also occurred Dec. 16, 18, 1991, and Jan. 18, 1992

05429268 NINE SPRINGS CREEK STORM SEWER TRIBUTARY AT MADISON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1990 to current year.

REMARKS.--Samples are point samples. Chemical analyses by Wisconsin State Laboratory of Hygiene and U.S. Geological Survey National Water Quality Laboratory.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	ENDING TIME	RUNOFF VOLUME, MILLIONS OF CUBIC FEET (99905)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 1991									
03-04	2241	0015	0.021	--	16	3000	23000	10	3.0
04-05	0923	0941	0.338	--	74	--	--	5.9	2.0
13-13	1925	2128	0.024	--	30	180	9700	7.0	2.0
26-26	0902	1402	0.157	--	4.6	--	--	4.8	2.0
28-29	1549	1146	0.200	--	6.2	--	--	8.9	3.0
OCT 31-NOV 01	1335	1432	0.420	--	5.1	--	--	6.2	2.0
NOV									
14-15	1252	0308	0.189	--	9.2	--	--	8.9	2.0
17-18	1940	0349	0.178	--	4.6	--	--	5.7	2.0
DEC									
12-12	0235	1620	0.186	--	9.3	--	--	8.0	2.0
JAN 1992									
08-09	2131	0102	0.056	--	13	310	28000	7.5	3.0
MAR									
09-09	0147	0805	0.400	--	16	--	--	7.5	2.0
28-29	2217	0404	0.042	--	--	--	--	6.3	2.0
APR									
08-09	1945	0104	0.058	--	7.9	--	--	7.0	2.0
15-15	0456	0651	0.068	--	9.8	--	--	6.5	2.0
15-15	2046	2154	0.030	--	10	--	--	6.9	2.0
16-16	0621	1044	0.066	--	5.8	--	--	7.8	2.0
18-19	2317	0325	0.151	--	5.6	--	--	7.9	2.0
23-23	1216	1702	0.058	--	14	--	--	10	3.0
MAY									
11-11	1644	1730	0.022	--	45	--	--	13	3.0
JUN									
17-17	1200	1248	0.049	--	19	--	--	7.0	2.0
24-24	0644	0730	0.015	--	16	--	--	6.4	2.0
JUL									
02-02	0810	1008	0.040	--	25	--	--	11	3.0
02-02	1356	1545	0.079	--	8.6	--	--	5.6	2.0
08-08	0757	1054	0.222	--	5.6	--	--	5.0	2.0
13-13	0709	1243	0.184	--	3.6	--	--	5.3	2.0
13-13	1523	2158	0.221	--	3.9	--	--	6.0	2.0
16-16	0221	0415	0.029	--	10	--	--	7.1	2.0
AUG									
29-29	0400	0825	0.260	26	4.0	--	--	--	--
SEP									
06-06	0213	0730	0.153	24	--	--	--	5.5	2.0
09-09	0531	0910	0.112	29	5.4	--	--	6.7	3.0
16-16	1221	1656	0.267	31	4.9	--	--	5.8	2.0
17-17	0419	0906	0.227	24	--	--	--	6.0	2.0
18-18	0332	0803	0.131	26	--	--	--	6.2	2.0

ROCK RIVER BASIN

05429268 NINE SPRINGS CREEK STORM SEWER TRIBUTARY AT MADISON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CADMIUM TOTAL RECOVER- ABLE (UG/L) (01113)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
OCT 1991									
03-04	--	208	280	0.475	--	0.460	--	1	<0.2
04-05	--	80	164	0.293	--	0.250	0.088	1	2.7
13-13	--	52	136	0.585	--	0.470	0.350	0	<0.2
26-26	--	27	126	0.223	--	0.120	0.059	0	<0.2
28-29	--	46	138	0.653	--	0.140	0.044	1	0.5
OCT 31-NOV 01	--	60	158	0.441	--	0.220	0.050	1	<0.2
NOV									
14-15	--	78	256	0.463	--	0.230	0.053	1	0.2
17-18	--	42	144	0.514	--	0.130	0.045	1	<0.2
DEC									
12-12	--	132	364	0.421	--	0.320	--	1	0.6
JAN 1992									
08-09	--	216	400	0.605	--	0.390	0.048	2	0.5
MAR									
09-09	--	436	556	0.639	--	0.530	0.044	3	<0.2
28-29	--	68	244	0.557	--	0.160	0.053	1	<0.2
APR									
08-09	--	78	172	0.924	--	0.170	0.052	1	<0.2
15-15	--	322	408	0.816	--	0.390	--	2	<0.2
15-15	--	392	480	1.19	--	0.450	--	2	<0.2
16-16	--	88	192	0.864	--	0.210	--	1	<0.2
18-19	--	400	466	0.484	--	0.470	0.045	1	1.4
23-23	--	113	196	0.486	--	0.220	0.041	1	1.0
MAY									
11-11	--	430	576	1.36	--	0.850	0.340	3	0.5
JUN									
17-17	--	524	638	0.745	--	0.640	0.165	2	<0.2
24-24	--	350	412	0.792	--	0.490	0.069	1	<0.2
JUL									
02-02	--	205	322	1.12	--	0.390	0.147	1	0.3
02-02	--	128	166	0.497	--	0.220	0.068	1	<0.2
08-08	--	364	428	0.279	--	0.370	0.067	1	<0.2
13-13	--	62	114	0.185	--	0.140	0.048	0	<0.2
13-13	--	70	136	0.300	--	0.150	0.047	0	<0.2
16-16	--	29	80	0.385	--	0.170	0.116	0	<0.2
AUG									
29-29	2.0	80	134	0.393	0.267	0.180	0.061	--	--
SEP									
06-06	4.0	53	114	0.358	0.196	0.170	--	--	--
09-09	3.0	85	152	1.24	0.229	0.180	0.066	--	--
16-16	6.0	53	314	0.232	0.147	0.480	0.088	--	--
17-17	3.0	120	190	0.251	0.180	0.290	0.074	--	--
18-18	3.0	74	138	0.295	0.232	0.220	0.057	--	--

05429268 NINE SPRINGS CREEK STORM SEWER TRIBUTARY AT MADISON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CHRO- MIUM, TOTAL RECOVER- ABLE (UG/L) (01118)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR) (01030)	COPPER, TOTAL RECOVER- ABLE (UG/L) (01119)	COPPER, DIS- SOLVED (UG/L) AS CU) (01040)	LEAD, TOTAL RECOVER- ABLE (UG/L) (01114)	LEAD, DIS- SOLVED (UG/L) AS PB) (01049)	ZINC, TOTAL RECOVER- ABLE (UG/L) (01094)	ZINC, DIS- SOLVED (UG/L) AS ZN) (01090)
OCT 1991								
03-04	12	<3	18	5	14	<3	200	200
04-05	5	<3	18	4	15	<3	120	150
13-13	3	<3	19	14	11	<3	140	150
26-26	5	<3	38	<3	11	<3	<10	50
28-29	4	<3	10	<3	11	<3	120	120
OCT 31-NOV 01	4	<3	14	<3	20	<3	150	92
NOV								
14-15	7	<3	30	4	28	<3	180	64
17-18	4	<3	12	4	23	<3	110	95
DEC								
12-12	10	<3	35	4	44	<3	200	76
JAN 1992								
08-09	12	<3	40	5	60	<3	290	120
MAR								
09-09	20	<3	54	<3	82	<3	430	56
28-29	4	<3	14	7	22	<3	140	77
APR								
08-09	5	<3	18	8	22	<3	160	55
15-15	12	<3	41	4	60	<3	370	65
15-15	15	<3	35	6	68	<3	410	81
16-16	7	<3	15	3	21	<3	170	87
18-19	15	<3	30	4	60	<3	300	240
23-23	6	<3	20	4	24	<3	190	190
MAY								
11-11	20	5	74	29	68	<3	810	260
JUN								
17-17	10	<3	48	7	79	<3	420	160
24-24	11	<3	46	5	66	<3	420	56
JUL								
02-02	8	<3	34	14	37	<3	420	240
02-02	4	<3	15	4	21	<3	170	120
08-08	9	<3	30	<3	43	<3	200	65
13-13	<3	<3	10	<3	11	<3	70	70
13-13	<3	<3	10	<3	13	<3	90	41
16-16	<3	<3	14	4	13	<3	110	71
AUG								
29-29	--	--	8	--	13	--	100	--
SEP								
06-06	--	--	7	<3	11	<3	120	61
09-09	--	--	11	<3	14	<3	140	69
16-16	--	--	13	<3	24	<3	120	43
17-17	--	--	21	<3	20	<3	100	26
18-18	--	--	12	<3	12	<3	90	32

DATE	TIME	ENDING TIME	RUNOFF VOLUME, MILLIONS OF CUBIC FEET (99905)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)	CAPTAN WATER WHOLE REC (UG/L) (39640)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DYRIFOS TOTAL RECOVER (UG/L) (38932)	CYAN- AZINE TOTAL (UG/L) (81757)	DCPA WATER UNFLTRD REC (UG/L) (39770)	DI- AZINON, TOTAL (UG/L) (39570)
JUL 1992											
02-02	0810	1008	0.040	<1.7	0.2	<1.0	<0.5	<1.0	<0.30	<0.50	<0.50
08-08	0757	1054	0.222	<0.50	<0.1	<1.0	<0.8	<1.0	<0.30	<0.30	<0.50
13-13	0709	1243	0.184	<0.10	<0.1	<1.0	<0.5	<1.0	<0.30	<0.10	<0.50
13-13	1523	2158	0.221	<0.10	<0.1	<1.0	<0.5	<1.0	<0.30	<0.10	<0.50

DATE	DICAMBA (MED- IBEN) (BAN- VEL D) (UG/L) (82052)	DIMETH- OATE WATER WHOLE TOTAL (UG/L) (39009)	DISUL- FOTON WATER WHOLE TOT.REC (UG/L) (82617)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	PENDI- METH- ALIN TOTAL (UG/L) (79190)	P,P' DDT, TOTAL (UG/L) (39300)	SEVIN, TOTAL (UG/L) (39750)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	2,4-D, TOTAL (UG/L) (39730)
JUL 1992											
02-02	<2.9	<3.0	<1.0	<0.40	<1.2	<2.0	<1.00	<0.70	<2.5	<1.0	<7.8
08-08	<0.50	<1.0	<1.0	<0.050	<1.0	<0.10	<1.00	<0.20	<1.0	<1.0	<0.70
13-13	<0.20	<1.0	<1.0	<0.050	<1.0	<0.10	<1.00	<0.10	<1.0	<1.0	<1.2
13-13	<0.20	<1.0	<1.0	<0.050	<1.0	<0.10	<1.00	<0.10	<1.0	<1.0	<0.50

05429268 NINE SPRINGS CREEK STORM SEWER TRIBUTARY AT MADISON, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.--November 1990 to current year (non-frozen precipitation).

GAGE.--Tipping bucket rain gage with electronic datalogger.

REMARKS.--Gage established Nov. 1, 1990. Recorded precipitation interpreted as collector snowmelt; rainfall estimated to be 0.00 for Nov. 11, 27, Dec. 3, 6, 14, 21, 24, Jan. 2, 23, 28, Feb. 16, 18, 25, and Mar. 12, 22. Recorded precipitation interpreted as a combination of collector rainfall and snowmelt; rainfall estimated to be 0.00 for Oct. 18, Dec. 13, 20, Jan. 22, Feb. 24, and Mar. 29.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.31 in., July 21, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.06 in., Aug. 25.

 RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
 DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.80	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.66	.01	.33
3	.14	.00	.00	.00	.00	.00	.00	.00	.00	.02	.13	.00
4	.76	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00
5	.16	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.64
7	.00	.00	.00	.00	.00	.00	.01	.00	.00	.20	.88	.01
8	.00	.00	.00	.25	.00	.01	.27	.00	.00	.97	.00	.00
9	.00	.00	.00	.01	.00	.25	.05	.00	.00	.00	.00	.48
10	.00	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.16	.00	.08	.00	.00
12	.00	.00	.58	.16	.00	.00	.00	.00	.00	1.45	.16	.00
13	.15	.00	.00	.00	.00	.00	.00	.00	.00	1.26	.00	.00
14	.01	.42	.00	.00	.00	.00	.02	.00	.00	.00	.00	.54
15	.00	.24	.00	.00	.00	.00	.53	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.25	.23	.00	.01	.16	.00	.94
17	.00	.48	.00	.00	.00	.00	.01	.00	.36	.00	.00	.62
18	.00	.15	.00	.00	.00	.00	.11	.00	.01	.00	.00	.44
19	.00	.03	.00	.00	.00	.00	.82	.00	.07	.01	.00	.00
20	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.45
21	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.01
22	.00	.01	.00	.00	.00	.00	.00	.09	.05	.34	.00	.00
23	.00	.44	.00	.00	.00	.00	.24	.26	.01	.05	.00	.00
24	1.88	.00	.00	.00	.00	.00	.05	.00	.05	.00	.00	.00
25	.95	.00	.00	.00	.00	.01	.00	.00	.00	.04	2.06	.00
26	.52	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.58
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.28	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00
29	.25	.58	.00	.00	.00	.00	.03	.00	.00	.00	.98	.00
30	.02	.40	.00	.00	---	.00	.00	.00	.00	.32	.00	.00
31	.25	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	5.37	3.55	0.58	0.42	0.00	0.74	2.61	0.51	0.61	5.56	4.22	5.04

LOCATION.--Lat 43°00'32", long 89°18'18", in SW 1/4 sec.3, T.6 N., R.10 E., Dane County, Hydrologic Unit 07090001, on left bank just upstream from bridge on U.S. Highway 51, at dam at outlet of Lake Waubesa and 1.0 mi southwest of McFarland.

REVISED RECORDS.--WSP 805, WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Natural Resources). September 1930 to Dec. 22, 1934, nonrecording gage at same site at datum 0.40 ft higher. Dec. 23, 1934 to Sept. 30, 1982, recording gage at same site at datum 0.40 ft higher.

REMARKS.--No estimated daily discharges. Records fair except those for June 10 to Aug. 5, which are poor. Flow regulated by dams at outlets of Lake Mendota and Lake Waubesa. The Madison Metropolitan Sewerage District diverted an average of 59 ft³/s of effluent into the Badfish Creek basin during 1992 water year. The data were provided by the Madison Metropolitan Sewerage District. Prior to 1958 the effluent was discharged into the Yahara River above Mc Farland. Gage-height telemeter at station for Lake Waubesa stage.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	324	340	206	172	196	150	155	66	4.4	85	189
2	24	331	341	205	170	197	150	152	68	3.2	73	177
3	25	321	349	205	169	197	148	146	69	2.9	62	193
4	34	322	354	202	167	197	147	143	67	3.2	56	191
5	50	315	343	200	165	198	144	137	74	3.2	58	176
6	46	308	333	198	165	201	142	133	69	3.5	65	174
7	61	296	324	197	163	206	143	108	64	5.0	60	173
8	92	285	318	197	162	210	145	90	62	11	78	163
9	88	272	313	204	159	218	138	95	61	20	77	159
10	84	263	305	203	157	227	131	95	58	25	78	155
11	79	257	298	200	157	221	133	93	62	35	77	145
12	72	251	302	199	155	215	133	95	67	46	74	132
13	69	250	308	203	153	210	130	98	67	60	43	120
14	67	253	306	202	151	205	128	99	60	93	14	119
15	66	268	297	200	156	201	108	99	56	145	16	125
16	63	272	286	202	157	195	85	102	52	147	16	128
17	59	271	278	197	155	200	97	97	55	140	17	150
18	57	287	268	191	161	198	102	102	53	123	16	222
19	54	293	262	188	167	197	128	107	52	104	16	279
20	46	292	259	185	167	194	146	82	49	89	15	275
21	38	287	258	182	170	193	151	57	42	79	16	295
22	35	283	254	181	171	197	154	57	38	77	15	310
23	127	285	250	185	175	196	158	62	35	79	14	302
24	196	288	243	185	184	194	165	60	39	75	17	295
25	270	285	238	184	190	194	167	60	39	73	19	294
26	317	281	232	185	190	158	166	61	31	71	36	294
27	326	285	227	182	190	132	167	62	25	71	36	302
28	321	286	223	180	196	134	164	63	21	71	34	303
29	323	293	219	177	196	140	161	64	22	69	41	298
30	322	331	215	176	---	146	162	64	20	69	42	295
31	316	---	211	174	---	149	---	66	---	81	127	---
TOTAL	3752	8635	8754	5975	4890	5916	4243	2904	1543	1878.4	1393	6433
MEAN	121	288	282	193	169	191	141	93.7	51.4	60.6	44.9	214
MAX	326	331	354	206	196	227	167	155	74	147	127	310
MIN	24	250	211	174	151	132	85	57	20	2.9	14	119
CFSM	.37	.88	.86	.59	.52	.58	.43	.29	.16	.19	.14	.66
IN.	.43	.98	1.00	.68	.56	.67	.48	.33	.18	.21	.16	.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1900-1964, AT RAINIER LAKE (W)												
MEAN	116	150	147	138	155	249	257	173	135	132	106	105
MAX	401	355	375	376	363	599	719	520	396	432	305	354
(WY)	1981	1986	1986	1986	1938	1937	1959	1933	1933	1960	1950	1938
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

ANNUAL TOTAL	54341.2		56316.4						
ANNUAL MEAN	149		154			155			
HIGHEST ANNUAL MEAN						274			1960
LOWEST ANNUAL MEAN						63.8			1964
HIGHEST DAILY MEAN	493	Apr 16	354	Dec 4		853	Apr	11	1959
LOWEST DAILY MEAN	6.3	Sep 9	2.9	Jul 3		1.2	Jun	27	1979
ANNUAL SEVEN-DAY MINIMUM	9.5	Sep 5	3.6	Jul 1		2.0	Jun	22	1979
INSTANTANEOUS PEAK FLOW			361	Dec 4		(a)867	Apr	10	1959
INSTANTANEOUS PEAK STAGE			5.07	Dec 4		(b)6.33	Jul 23,24		1950
ANNUAL RUNOFF (CFSM)	.46		.47			.47			
ANNUAL RUNOFF (INCHES)	6.18		6.41			6.45			
10 PERCENT EXCEEDS	322		295			310			
50 PERCENT EXCEEDS	103		155			129			
90 PERCENT EXCEEDS	25		36			37			

(b) Datum then in use, backwater from aquatic vegetation

ROCK RIVER BASIN

05430150 BADFISH CREEK NEAR COOKSVILLE, WI

LOCATION.--Lat 42°50'00", long 89°11'48", in SW 1/4 SE 1/4 sec.4, T.4 N., R.11 E., Rock County, Hydrologic Unit 07090001, on right bank, 20 ft upstream from bridge on State Highway 59, 2.2 mi east of Cooksville, and 2.2 mi above the mouth.

DRAINAGE AREA.--82.6 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 810 ft, from topographic map.

REMARKS.--Estimated daily discharges: Aug. 4 and ice-affected periods, Jan. 16, 19. Records good except those for estimated daily discharges and July 13, 14, 17, 18, and Aug. 3, which are fair. Approximately 59 percent of flow is effluent from Nine Springs treatment plant. (Data provided by Madison Metropolitan Sewerage District.)

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	140	162	79	79	99	98	101	74	107	72	79
2	66	145	130	80	78	105	96	100	77	109	65	82
3	67	108	119	84	86	105	94	92	79	122	63	88
4	79	99	107	81	92	103	90	93	82	107	63	80
5	91	95	103	80	85	104	87	93	85	96	65	76
6	77	92	100	83	84	110	88	92	80	102	69	94
7	74	86	102	85	83	110	89	94	79	99	72	84
8	75	85	122	86	79	103	89	94	81	107	82	98
9	75	81	133	103	75	128	95	91	89	106	68	99
10	72	79	118	96	81	129	94	87	88	98	68	94
11	74	81	111	89	80	108	96	88	91	93	73	87
12	71	82	128	88	80	99	89	98	94	99	77	82
13	69	82	146	95	78	94	88	93	97	193	75	79
14	74	85	119	91	72	90	90	88	96	195	73	87
15	76	125	104	89	78	87	101	89	99	132	69	94
16	74	111	101	88	74	89	120	87	106	125	66	179
17	76	98	98	85	81	92	115	84	111	110	66	261
18	76	155	94	84	93	90	102	84	113	86	73	178
19	73	130	91	82	115	90	151	86	112	78	71	129
20	71	113	92	80	148	88	156	87	108	78	72	107
21	74	104	88	86	154	87	136	88	101	75	72	133
22	77	101	85	83	132	86	122	87	100	77	70	112
23	78	106	85	87	142	87	112	85	111	85	67	99
24	118	105	85	82	148	95	116	73	112	79	70	95
25	172	97	78	80	125	110	106	69	113	78	77	92
26	159	93	75	77	113	105	100	76	111	73	96	90
27	154	97	82	81	119	100	103	78	107	71	76	95
28	118	93	80	81	128	92	104	77	101	75	74	90
29	126	98	78	82	106	102	97	76	108	72	115	88
30	114	290	80	81	---	106	101	73	111	74	85	86
31	104	---	82	82	---	102	---	72	---	76	78	---
TOTAL	2769	3256	3178	2630	2888	3095	3125	2675	2916	3077	2282	3137
MEAN	89.3	109	103	84.8	99.6	99.8	104	86.3	97.2	99.3	73.6	105
MAX	172	290	162	103	154	129	156	101	113	195	115	261
MIN	65	79	75	77	72	86	87	69	74	71	63	76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1992, BY WATER YEAR (WY)

	MEAN	92.6	99.7	94.5	86.8	98.4	122	116	98.7	100	96.5	87.6	92.9
MAX	139	162	129	122	157	174	148	117	147	156	109	138	
(WY)	1987	1986	1983	1988	1985	1986	1983	1984	1980	1984	1980	1981	
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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1977 - 1992

ANNUAL TOTAL	31915	35028	
ANNUAL MEAN	87.4	95.7	99.2
HIGHEST ANNUAL MEAN			121
LOWEST ANNUAL MEAN			80.4
HIGHEST DAILY MEAN	560	290	782
LOWEST DAILY MEAN	57	63	35
ANNUAL SEVEN-DAY MINIMUM	63	67	48
INSTANTANEOUS PEAK FLOW		366	870
INSTANTANEOUS PEAK STAGE		6.21	8.11
10 PERCENT EXCEEDS	118	123	130
50 PERCENT EXCEEDS	78	90	90
90 PERCENT EXCEEDS	65	73	71

(a) Also occurred Sept. 17

ROCK RIVER BASIN

417

05430175 YAHARA RIVER NEAR FULTON, WI

LOCATION.--Lat 42°49'50", long 89°10'09", in NE 1/4 NE 1/4 sec.10, T.4 N., R.11 E., Rock County, Hydrologic Unit 07090001, on right bank, 700 ft downstream from Badfish Creek, 2,000 ft upstream from bridge on State Highway 59, and 2.8 mi northwest of Fulton.

DRAINAGE AREA.--517 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 792.7 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 4-6, 15-19, 24, Jan. 16-21, and Feb. 12. Records good except for ice-affected periods, which are fair. Diurnal fluctuation caused by powerplant at Stebbensville 1.5 mi upstream, and additional regulation from other dams and powerplants upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	506	737	420	287	399	341	304	147	143	140	214
2	135	521	639	386	379	401	273	407	204	144	219	209
3	135	470	500	403	216	401	290	274	150	155	221	256
4	165	415	400	396	403	335	309	385	150	142	208	386
5	264	400	540	315	302	421	310	327	198	133	138	321
6	242	443	600	432	282	425	267	233	150	135	139	306
7	143	456	635	376	403	423	295	397	148	135	245	389
8	227	454	665	364	258	418	339	313	217	138	242	324
9	192	451	667	435	272	439	276	267	155	143	146	394
10	227	446	611	419	258	470	302	154	153	132	144	344
11	282	424	560	385	324	390	358	132	203	116	255	371
12	327	442	578	381	300	457	282	199	154	122	224	247
13	377	434	624	385	377	443	306	241	155	163	199	247
14	233	352	590	375	257	403	281	274	210	209	148	408
15	356	482	380	368	296	397	346	256	152	251	144	300
16	315	521	580	360	388	400	380	165	158	245	139	476
17	231	505	580	330	253	408	312	242	233	250	137	643
18	234	558	500	290	342	366	270	256	161	258	142	460
19	212	526	500	260	360	396	365	227	156	152	138	440
20	243	497	516	320	424	392	362	216	232	137	134	464
21	216	491	444	400	416	388	382	160	150	137	137	492
22	242	491	455	318	463	386	418	232	148	172	135	525
23	237	498	459	379	464	310	291	165	154	146	127	467
24	308	510	450	318	373	404	415	153	156	265	127	455
25	390	566	373	274	449	416	257	167	156	281	133	437
26	472	495	434	363	396	408	272	179	152	238	145	431
27	492	479	441	332	401	399	334	198	149	220	135	425
28	387	507	435	398	437	307	374	223	146	212	132	444
29	435	541	417	258	414	307	270	153	151	232	163	454
30	425	904	414	285	---	278	387	151	150	247	143	429
31	381	---	344	397	---	318	---	182	---	196	135	---
TOTAL	8660	14785	16068	11122	10194	12105	9664	7232	4998	5649	5014	11758
MEAN	279	493	518	359	352	390	322	233	167	182	162	392
MAX	492	904	737	435	464	470	418	407	233	281	255	643
MIN	135	352	344	258	216	278	257	132	146	116	127	209
CFSM	.54	.95	1.00	.69	.68	.76	.62	.45	.32	.35	.31	.76
IN.	.62	1.06	1.16	.80	.73	.87	.70	.52	.36	.41	.36	.85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1992, BY WATER YEAR (WY)

	MEAN	329	399	406	341	354	450	422	325	281	267	243	308
MAX	596	711	558	542	585	756	661	458	515	824	383	574	
(WY)	1987	1986	1983	1986	1986	1985	1985	1987	1978	1978	1979	1980	
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 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1977 - 1992
ANNUAL TOTAL	111939	117249	
ANNUAL MEAN	307	320	345
HIGHEST ANNUAL MEAN			483
LOWEST ANNUAL MEAN			262
HIGHEST DAILY MEAN	1040	Mar 2	2160
LOWEST DAILY MEAN	118	Sep 8	60
ANNUAL SEVEN-DAY MINIMUM	123	Sep 5	104
INSTANTANEOUS PEAK FLOW			3040
INSTANTANEOUS PEAK STAGE			8.36
ANNUAL RUNOFF (CFSM)	.59	6.09	.67
ANNUAL RUNOFF (INCHES)	8.05	8.44	9.07
10 PERCENT EXCEEDS	570	491	557
50 PERCENT EXCEEDS	243	314	314
90 PERCENT EXCEEDS	138	144	141

ROCK RIVER BASIN

05430500 ROCK RIVER AT AFTON, WI

LOCATION.--Lat 42°36'33", long 89°04'14", in NE 1/4 sec.28, T.2 N., R.12 E., Rock County, Hydrologic Unit 07090001, on right bank in Afton, 0.3 mi downstream from highway bridge and 1.1 mi upstream from Bass Creek.

DRAINAGE AREA.--3,340 mi².

PERIOD OF RECORD.--January 1914 to current year. Monthly discharge for January 1914 published in WSP 1303.

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 National Geodetic Vertical Datum 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.--Estimated daily discharges: Ice-affected periods, Dec. 6-8, 16-21, Jan. 16-23, and Feb. 10, 12-13. Records are good except those for ice-affected periods, which are fair, and periods of discharge below 800 ft³/s, which are poor. Diurnal fluctuation caused by powerplants above station. Data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	466	2640	4160	3010	1840	2380	3780	3910	1080	516	455	748
2	432	2370	4240	3000	1730	2560	3600	3830	1020	468	487	798
3	619	2630	4260	2880	1680	2720	3510	3870	749	458	519	630
4	1270	2990	3750	2820	1660	2850	3510	3750	753	400	498	565
5	1260	3170	3470	2730	1710	2960	3460	3790	810	450	572	802
6	1020	3270	3600	2600	1600	3160	3190	3690	834	507	466	783
7	1060	3320	3800	2560	1620	3300	3120	3450	792	470	543	810
8	1020	3330	4000	2550	1670	3370	3200	3470	776	475	746	1010
9	1080	3290	4060	2530	1490	3600	3030	3290	857	510	638	1560
10	1150	3200	4030	2600	1500	4030	3020	3170	782	520	528	1400
11	1300	3150	4090	2550	1510	3740	3090	2920	752	514	644	966
12	1290	3130	4290	2550	1500	3860	2930	2840	766	576	1020	1160
13	1290	3200	4370	2600	1530	3950	2750	2690	557	1060	1120	1120
14	1300	3150	4340	2650	1510	3980	2730	2730	460	1470	983	1130
15	1080	3250	4070	2560	1540	3930	2820	2700	742	1630	876	1270
16	1220	3380	3900	2400	1570	3890	3060	2520	627	1630	780	1230
17	1070	3450	4100	2300	1530	3950	2950	2410	542	1610	595	1760
18	1110	3570	4000	2200	1530	4060	2950	2380	521	1560	365	2160
19	1050	3550	3900	2100	1800	4020	3200	2340	573	1570	395	2000
20	1010	3680	3800	2200	1730	3930	3320	2110	841	1470	375	2040
21	873	3680	3700	2200	1850	3960	3420	1960	968	1470	413	2280
22	863	3780	3640	2100	1800	4050	3420	1870	653	1430	425	2310
23	843	3710	3610	2100	1910	3840	3560	1870	654	1480	420	2310
24	918	3580	3560	1960	1980	3800	3830	1820	647	1300	371	2240
25	1230	3720	3430	2090	2060	3810	3860	1630	626	1450	381	2220
26	1560	3600	3390	2030	2110	3850	3740	1540	609	1470	468	2190
27	1710	3580	3400	2090	2130	3870	4010	1400	583	1340	630	2080
28	1880	3580	3350	1990	2220	3930	3940	1230	554	1170	654	1960
29	2130	3780	3260	1960	2350	3760	3830	1130	536	1090	894	1980
30	2250	3830	3190	1800	---	3760	4020	1070	432	968	564	1930
31	2510	---	3110	1650	---	3630	---	1030	---	938	736	---
TOTAL	37864	100560	117910	73550	50730	112450	100900	78710	21106	31990	18731	45442
MEAN	1221	3352	3804	2373	1749	3627	3263	2539	704	1032	604	1515
MAX	2510	3830	4070	3010	2350	4060	4030	3910	1080	1630	1120	2310
MIN	432	2370	3110	1600	1490	2380	2750	1030	432	470	365	565
CFSM	.37	1.00	1.14	.71	.52	1.09	1.01	.76	.21	.31	.18	.45
IN.	.42	1.12	1.31	.82	.57	1.25	1.12	.88	.24	.36	.21	.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	MEAN	1364	1541	1444	1288	1506	3346	4105	2463	1644	1300	1031	1167
MAX	8219	5883	4395	3558	5647	8958	10010	7911	4651	5388	5376	5088	
(WY)	1987	1986	1986	1960	1938	1918	1979	1973	1973	1917	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1914 - 1992

ANNUAL TOTAL	760983	789943											
ANNUAL MEAN	2085	2158											
HIGHEST ANNUAL MEAN										1853			
LOWEST ANNUAL MEAN										3749			1973
HIGHEST DAILY MEAN	5310	Apr 19	4370	Dec 13	13000	Mar 23,24	1929						
LOWEST DAILY MEAN	339	Sep 9	365	Aug 18	42	Aug 25,26	1934						
ANNUAL SEVEN-DAY MINIMUM	400	Sep 5	395	Aug 18	115	Aug 24	1934						
INSTANTANEOUS PEAK FLOW			4490	Dec 12	(a)13000	Mar 23	1929						
INSTANTANEOUS PEAK STAGE			7.23	Dec 12,(b)19	(b)13.05	Feb 5	1916						
ANNUAL RUNOFF (CFSM)	.62		.65		.55								
ANNUAL RUNOFF (INCHES)	8.48		8.80		7.54								
10 PERCENT EXCEEDS	4230		3830		3990								
50 PERCENT EXCEEDS	1350		2050		1270								
90 PERCENT EXCEEDS	722		563		458								

(a) Gage height, 11.81 ft

(b) Backwater from ice

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI

LOCATION.--Lat 42°38'29", long 88°31'18", in SW 1/4 SW 1/4 sec.8, T.2 N., R.17 E., Walworth County, Hydrologic Unit 07090001, on left bank 5 ft upstream of Petrie Road bridge, 2.5 mi upstream from Delavan Lake inlet at Mound Road, and 2.5 mi southeast of Elkhorn.

DRAINAGE AREA.--4.96 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 960 ft, from topographic map.

REMARKS.--Estimated daily discharges: Sept. 3-4 and ice-affected periods, Jan. 16-31 and Feb. 1, 6-14. Records good except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	17	35	1.5	.62	5.9	5.8	3.5	.32	.13	1.4	.06
2	.06	16	20	1.9	.73	6.9	4.7	3.1	.32	.22	.89	.08
3	.07	7.4	14	2.9	1.5	7.8	4.4	2.4	.31	.30	.77	.16
4	2.0	3.7	10	3.7	2.1	7.7	4.3	2.0	.32	.16	.51	.12
5	8.4	2.3	7.4	3.7	1.4	7.4	3.4	2.0	.35	.11	.39	.11
6	1.5	1.6	5.9	3.7	1.0	14	3.3	1.7	.33	.09	.33	.14
7	.42	.86	13	3.6	.80	34	3.3	1.7	.32	.07	.33	.17
8	.32	.64	44	5.4	.60	22	2.8	1.8	.30	.11	.82	.16
9	.22	.53	36	13	.50	24	2.9	1.8	.27	.13	.49	.29
10	.15	.50	23	12	.43	25	2.8	1.4	.21	.11	.34	.66
11	.11	.47	18	8.8	.40	14	3.2	1.4	.19	.14	.29	.31
12	.08	.46	28	7.4	.34	11	2.1	1.6	.17	2.7	.27	.20
13	.06	.46	45	7.9	.36	7.6	1.8	1.7	.20	35	.41	.14
14	.09	.56	26	6.8	.38	6.5	1.9	1.3	.45	117	.31	.15
15	.06	4.8	15	4.9	.63	5.5	2.6	1.1	.32	60	.21	.25
16	.05	4.7	10	3.0	.60	4.9	13	.92	.26	34	.20	5.3
17	.04	3.2	7.9	2.2	.58	5.7	15	.82	.79	21	.18	29
18	.06	6.3	4.7	1.7	10	5.3	11	.52	1.4	13	.16	23
19	.06	5.9	3.5	1.4	19	4.8	9.1	.46	.48	8.3	.13	13
20	.05	4.6	3.4	1.2	16	4.3	8.1	.42	.34	5.3	.15	7.0
21	.05	3.3	3.4	1.0	17	3.5	7.1	.38	.28	3.7	.17	8.6
22	.06	2.5	3.2	.90	12	3.7	5.5	.40	.26	2.9	.12	6.5
23	.05	2.5	3.1	1.5	11	3.6	5.2	.53	.29	2.9	.13	3.4
24	.17	2.3	2.3	1.1	7.4	6.8	8.3	.43	.34	2.4	.16	2.4
25	1.4	1.4	1.9	.80	6.3	15	8.6	.41	.35	2.1	.12	1.8
26	1.9	.93	1.8	.64	5.8	14	7.0	.37	.31	2.5	.11	1.4
27	3.7	1.1	1.6	.60	5.8	10	6.0	.35	.28	1.7	.19	1.6
28	1.8	1.2	1.7	.56	7.7	8.1	5.0	.34	.23	1.2	.15	1.2
29	22	17	2.1	.60	6.3	8.3	4.7	.33	.18	.96	.11	.71
30	25	71	1.8	.68	---	8.4	4.1	.33	.13	1.4	.16	.63
31	16	---	1.5	.74	---	7.4	---	.34	---	2.2	.08	---
TOTAL	85.98	185.21	394.2	105.82	137.27	313.1	167.0	35.35	10.30	321.83	10.08	108.54
MEAN	2.77	6.17	12.7	3.41	4.73	10.1	5.57	1.16	.34	10.4	.33	3.62
MAX	25	71	45	13	19	34	15	3.5	1.4	117	1.4	29
MIN	.04	.46	1.5	.56	.34	3.5	1.8	.33	.13	.07	.08	.06
CFSM	.31	.69	1.42	.38	.53	1.13	.62	.13	.04	1.16	.04	.40
IN.	.36	.77	1.64	.44	.57	1.30	.69	.15	.04	1.34	.04	.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1992, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	2.56	5.32	5.09	2.11	5.79	9.74	6.46	4.47	2.26
MAX	8.56	24.1	12.7	4.77	15.0	22.2	12.4	13.2	8.84
(WY)	1987	1986	1992	1988	1984	1986	1991	1990	1986
MIN	.12	.28	.32	.15	.50	3.78	1.03	.33	.11
(WY)	1989	1990	1990	1991	1989	1988	1989	1989	1988

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1984 - 1992

ANNUAL TOTAL	1640.72	1875.18	
ANNUAL MEAN	4.50	5.12	4.16
HIGHEST ANNUAL MEAN			8.74
LOWEST ANNUAL MEAN			1.89
HIGHEST DAILY MEAN	87	117	285
LOWEST DAILY MEAN	.03	.04	.03
ANNUAL SEVEN-DAY MINIMUM	.04	.05	.04
INSTANTANEOUS PEAK FLOW		248	359
INSTANTANEOUS PEAK STAGE		8.42	8.84
ANNUAL RUNOFF (CFSM)	.50	.57	.46
ANNUAL RUNOFF (INCHES)	6.81	7.79	6.30
10 PERCENT EXCEEDS	14	14	9.9
50 PERCENT EXCEEDS	.53	1.6	.94
90 PERCENT EXCEEDS	.05	.14	.10

(a) Also occurred Jan. 30 to Feb. 2, July 20, and Sept. 11, 1991.

(b) Also occurred Aug. 1, 1987

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI

LOCATION---Lat 42°39'03", long 88°33'03", in NW 1/4 NE 1/4 sec.12, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on left bank 200 ft downstream of 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.

GAGE---Water-stage recorder. Datum of gage is 924.70 ft above National Geodetic Vertical Datum of 1929 (Wisconsin Department of Transportation benchmark).

REMARKS---Estimated daily discharges: Sept. 19-30 and ice-affected period, Jan. 15-31. Records good except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.71	13	7.2	2.8	.95	2.6	2.0	1.7	.66	.59	1.1	.74
2	.72	6.5	5.2	3.4	1.1	2.8	1.8	1.5	.72	8.2	1.0	5.6
3	.76	4.2	4.8	4.1	1.5	2.8	1.8	1.4	.76	.98	1.0	3.0
4	31	3.6	4.2	3.8	1.5	2.7	1.8	1.3	.87	.64	1.2	2.1
5	8.3	3.4	4.0	3.5	1.3	2.7	1.5	1.3	.88	.54	1.1	1.3
6	1.9	3.1	3.8	3.5	1.3	10	1.5	1.2	.60	.56	.95	6.0
7	1.5	2.7	8.9	3.5	1.2	8.2	1.5	1.2	.54	.65	3.4	1.0
8	1.3	2.6	17	5.2	.97	4.4	1.4	1.2	.58	1.4	1.9	1.0
9	1.0	2.5	8.9	6.6	.82	11	1.4	1.2	.60	.79	.98	4.9
10	.93	2.5	6.6	4.9	.99	5.2	1.5	1.1	.61	.93	1.1	1.6
11	.93	2.5	5.6	4.1	.99	3.3	2.1	1.6	.61	.95	.89	1.1
12	.83	2.6	18	4.0	.95	2.8	1.3	2.6	.63	9.8	2.1	.89
13	.74	2.7	12	4.2	1.0	2.6	1.2	1.6	.62	47	1.4	.84
14	1.2	3.8	6.7	3.7	.97	2.4	1.2	1.1	.61	54	.85	2.9
15	.97	8.4	4.8	2.5	1.2	2.2	3.4	1.1	.71	7.1	.76	3.2
16	.91	4.5	4.3	1.3	1.1	2.2	14	.94	.74	4.6	.69	28
17	.94	3.7	4.1	1.2	1.6	2.3	4.1	.83	3.8	2.9	.83	22
18	1.7	8.1	3.7	.90	13	2.2	2.8	.79	.79	2.2	.97	4.3
19	1.2	5.1	3.4	.80	9.8	2.0	2.5	.89	.61	1.9	.84	2.9
20	.84	4.6	3.5	.74	9.0	1.8	2.6	.96	.49	1.8	.87	2.5
21	.94	3.9	3.5	.70	4.9	1.7	3.1	.95	.37	1.5	.68	4.0
22	1.0	3.7	3.4	.80	4.7	2.0	2.5	.97	.49	1.6	.62	2.4
23	.86	5.1	3.4	1.3	3.4	2.0	4.6	1.7	.58	1.5	.59	1.7
24	22	3.9	3.2	.90	3.1	4.0	4.2	.77	1.7	1.3	.71	1.3
25	11	3.5	3.1	.80	3.4	5.1	3.2	.70	.53	2.6	.92	1.0
26	13	3.3	3.2	.74	2.9	3.8	2.5	.72	.49	1.4	2.9	.80
27	6.1	4.3	3.0	.80	2.9	2.7	2.3	.75	.47	1.2	2.1	1.0
28	5.1	3.8	3.0	.80	3.2	2.2	2.1	.70	.40	1.1	.99	.70
29	32	22	3.0	.90	2.7	3.1	2.1	.69	.50	1.0	3.2	.50
30	9.0	30	3.1	.90	---	2.6	1.8	.70	.53	5.0	.93	.45
31	5.7	---	3.0	.90	---	2.3	---	.61	---	1.5	.84	---
TOTAL	165.08	173.6	171.6	74.28	82.44	107.7	79.8	34.77	22.49	167.23	38.41	109.72
MEAN	5.33	5.79	5.54	2.40	2.84	3.47	2.66	1.12	.75	5.39	1.24	3.66
MAX	32	30	18	6.6	13	11	14	2.6	3.8	54	3.4	28
MIN	.71	2.5	3.0	.70	.82	1.7	1.2	.61	.37	.54	.59	.45
CFSM	1.23	1.33	1.28	.55	.66	.80	.61	.26	.17	1.24	.29	.84
IN.	1.41	1.49	1.47	.64	.71	.92	.68	.30	.19	1.43	.33	.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1992, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	2.89	4.25	3.18	1.57	3.57	5.70	4.28	3.04	1.88
MAX	7.23	13.3	6.55	2.40	8.81	10.7	7.48	7.11	4.27
(WY)	1986	1986	1985	1992	1985	1986	1987	1990	1986
MIN	.43	.58	.49	.77	.33	3.18	1.28	.79	.54
(WY)	1989	1990	1990	1984	1989	1987	1989	1989	1988

SUMMARY STATISTICS

	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1984 - 1992
ANNUAL TOTAL	1289.89	1227.12	
ANNUAL MEAN	3.53	3.35	3.09
HIGHEST ANNUAL MEAN			5.70
LOWEST ANNUAL MEAN			1.70
HIGHEST DAILY MEAN	54	54	110
LOWEST DAILY MEAN	.35	.37	.11
ANNUAL SEVEN-DAY MINIMUM	.48	.50	.13
INSTANTANEOUS PEAK FLOW		109	162
INSTANTANEOUS PEAK STAGE		8.47	9.55
ANNUAL RUNOFF (CFSM)	.81	.77	.71
ANNUAL RUNOFF (INCHES)	11.06	10.52	9.67
10 PERCENT EXCEEDS	7.4	6.2	6.5
50 PERCENT EXCEEDS	1.7	1.8	1.3
90 PERCENT EXCEEDS	.55	.70	.45

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1983 to current year.

TOTAL-PHOSPHORUS DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Automatic pumping sampler since October 1983.

REMARKS.--Records good. Samples are point samples unless otherwise indicated.

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 and May 12, 1990.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 60 tons, Mar. 27, 1991; minimum daily, 0.01 ton on many days.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 8.20 mg/L, Aug. 7, 1984; minimum observed, 0.01 mg/L, Jan. 16 and Mar. 14, 1990.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 216 lb, May 25, 1984; minimum daily, 0.03 lb, Sept. 23-24, 1987.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 783 mg/L, Feb. 18; minimum observed, 5 mg/L, Feb. 18, Mar. 7, and Sept. 21.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 20 tons, July 13; minimum daily, 0.01 ton, Feb. 9-14, and June 19-23, 28.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.5 mg/L, Mar. 6; minimum observed, 0.02 mg/L, Apr. 13.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 105 lb, July 13; minimum daily, 0.12 lb, Sept. 30.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT 1991					OCT 1991				
04...	0015	3.4	0.290	29	29...	0515	13	0.180	26
04...	0115	3.8	--	46	29...	0715	42	0.400	149
04...	0215	3.1	--	21	29...	0815	74	--	103
04...	1115	6.2	0.400	112	29...	0915	80	0.300	91
04...	1215	16	--	157	29...	1015	73	0.400	67
04...	1315	21	0.370	--	29...	1115	60	--	56
04...	1415	25	--	71	29...	1215	51	0.340	--
04...	1515	57	0.410	--	29...	1315	48	--	30
04...	1615	72	--	92	*29...	1400	45	0.310	28
04...	1715	76	--	87	29...	1415	43	--	27
04...	1815	85	0.370	--	29...	1615	28	0.290	--
04...	1915	89	--	73	29...	1815	21	--	18
04...	2015	88	0.440	--	29...	1915	19	0.250	--
04...	2115	78	--	46	29...	2215	15	--	14
04...	2215	62	0.440	--	29...	2315	14	0.210	--
04...	2315	47	--	33	30...	0315	11	--	16
05...	0015	33	0.370	--	30...	0415	10	0.180	--
05...	0115	23	--	24	30...	1215	9.3	--	11
05...	0315	13	0.290	--	30...	1315	9.3	0.150	--
05...	0415	11	--	15	*30...	1355	9.2	0.150	12
05...	0615	7.8	0.260	--	*31...	1040	5.6	0.120	31
05...	0715	7.4	--	13	31...	1200	5.6	0.090	8
*05...	0900	9.1	0.220	12	31...	1300	5.6	0.090	--
05...	0945	9.3	0.200	11	31...	1400	5.4	--	14
05...	1045	8.9	--	7	31...	1700	5.3	--	21
05...	1245	6.8	0.180	--	31...	1800	5.3	0.080	--
05...	1345	6.0	--	9	31...	2100	5.0	--	36
05...	1545	4.9	0.150	--	31...	2200	5.0	0.070	--
05...	1645	4.4	--	9	NOV				
05...	1945	3.5	0.130	--	01...	0200	5.0	--	28
05...	2045	3.3	--	9	01...	0300	4.9	0.110	--
05...	2345	2.7	--	12	01...	0900	4.9	--	29
06...	0145	2.5	0.100	--	01...	1000	5.0	0.100	--
06...	0245	2.4	--	10	*01...	1200	29	0.260	135
*06...	0850	2.1	0.090	24	01...	1215	32	0.360	123
*07...	0825	1.3	0.050	34	01...	1315	33	--	68
*07...	1440	1.6	0.060	54	*01...	1405	29	0.270	53
*08...	0950	1.2	0.050	13	01...	1415	29	0.260	--
*08...	1230	1.3	0.060	14	01...	1515	24	--	42
*25...	1100	8.1	0.180	11	01...	1615	21	0.330	--
28...	1915	6.1	0.220	70	01...	1715	19	--	28
28...	2115	8.0	--	67	01...	1815	17	0.270	--
28...	2215	9.1	0.230	--	01...	2015	14	--	23
29...	0015	11	--	49	01...	2115	13	0.160	--
29...	0115	17	0.280	--	02...	0015	10	--	25
29...	0215	18	--	50	02...	0115	9.5	0.180	--
29...	0315	15	0.190	--	02...	0615	7.6	--	19

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
NOV 1991					DEC 1991				
02...	0715	7.2	0.090	--	08...	1215	20	0.270	--
*02...	0840	6.9	0.130	43	*09...	1115	8.3	0.190	30
02...	1430	5.6	0.110	--	09...	1530	8.3	--	9
02...	1530	5.6	--	31	09...	1600	8.3	0.130	--
*02...	1531	5.6	0.260	34	12...	0930	8.5	--	126
02...	2230	4.7	0.110	27	12...	1030	14	0.590	--
*03...	0930	4.3	0.080	197	12...	1330	17	--	80
11...	0830	2.5	0.050	95	12...	1430	17	0.250	--
*14...	1545	5.1	--	71	12...	1630	16	--	52
14...	1645	5.3	0.230	--	12...	1730	30	--	583
14...	2145	5.1	--	39	12...	1830	46	0.670	--
14...	2245	5.4	0.110	--	12...	1930	48	--	498
15...	0045	6.7	--	49	12...	2030	44	0.520	--
15...	0145	7.1	0.200	--	12...	2130	37	--	211
15...	0445	14	0.280	--	12...	2330	26	0.450	--
15...	0545	14	--	51	13...	0030	22	--	196
15...	0645	13	0.220	--	13...	0330	16	--	136
15...	0745	11	--	22	13...	0430	15	0.240	--
15...	0945	9.8	0.180	--	*13...	0930	11	0.180	26
15...	1045	9.1	--	10	13...	1015	10	--	22
*15...	1150	8.5	0.170	--	13...	1115	10	0.200	--
*15...	1155	8.5	--	11	13...	1515	9.3	--	17
15...	1345	7.8	--	22	13...	2115	8.3	--	21
15...	1445	7.4	0.130	--	13...	2215	8.1	0.120	--
15...	1800	6.4	--	17	*30...	0830	3.0	0.050	42
15...	1830	6.2	0.120	--	JAN 1992				
16...	0130	5.3	--	25	*03...	0935	3.8	0.100	16
16...	0230	5.0	0.100	--	FEB				
16...	1130	4.5	--	11	*04...	1225	1.5	0.050	6
16...	1230	4.4	0.060	--	18...	1315	16	0.840	783
18...	0200	6.7	--	95	18...	1415	23	--	453
18...	0400	14	--	86	18...	1515	25	--	173
18...	0500	13	0.110	--	18...	1615	27	0.650	--
18...	0600	12	--	52	18...	1715	29	--	127
18...	0700	11	0.170	--	18...	1815	29	0.960	--
18...	0900	8.9	--	13	18...	2015	31	0.820	64
*18...	1056	8.3	--	7	18...	2115	27	--	56
18...	1057	8.3	0.130	--	18...	2215	22	0.530	--
*18...	1058	8.3	0.120	--	18...	2315	19	--	32
18...	1330	7.8	--	22	19...	0015	17	0.620	--
18...	1430	7.4	0.110	--	19...	0115	17	--	25
23...	1045	9.8	0.220	65	19...	0415	16	--	29
23...	1145	8.4	--	41	19...	0515	12	0.180	--
29...	0900	10	0.240	80	19...	0715	8.9	--	15
29...	1200	25	--	106	19...	0915	7.4	0.340	--
29...	1400	29	0.280	--	19...	1015	7.0	--	5
29...	1500	29	--	42	*19...	1055	7.0	0.350	14
29...	1900	27	--	32	19...	1230	7.4	0.340	--
29...	2000	28	0.240	--	19...	1330	8.2	--	28
29...	2300	74	0.690	--	19...	1530	8.6	0.530	--
29...	2400	87	--	329	19...	1630	8.6	--	17
30...	0100	88	0.420	--	19...	1930	7.6	0.360	--
30...	0200	85	--	243	19...	2030	6.8	--	11
30...	0400	63	0.490	--	*20...	1055	3.4	0.430	9
30...	0500	51	--	141	20...	1645	9.8	--	120
30...	0700	32	0.360	--	20...	1745	17	--	116
30...	0800	26	--	47	20...	1845	25	0.440	--
30...	1445	14	--	35	20...	1945	28	--	106
30...	1545	14	0.230	--	20...	2045	26	0.460	--
30...	1945	11	--	21	20...	2145	20	--	50
30...	2045	11	0.200	--	20...	2345	12	0.320	--
DEC					21...	0045	9.8	--	28
01...	0045	9.1	--	19	21...	0245	7.6	0.270	--
01...	0145	8.9	0.190	--	21...	0345	6.6	--	14
01...	0645	7.8	--	19	22...	1600	7.0	--	39
01...	0745	7.6	0.180	--	22...	1700	8.2	0.240	--
*02...	0855	5.1	0.090	44	22...	1800	8.4	--	32
07...	1315	8.9	--	35	22...	1900	8.4	0.210	--
07...	1415	10	0.180	--	22...	2100	7.2	--	24
07...	1515	11	--	38	22...	2200	6.4	0.170	--
07...	1815	14	0.180	--	*24...	1015	3.0	0.080	19
07...	1915	14	--	25	MAR				
08...	0115	14	--	15	06...	1600	19	1.50	707
08...	0215	15	0.180	--	06...	1700	27	--	408
08...	0615	17	--	23	06...	1800	31	0.300	--
08...	0715	18	0.220	--	06...	1900	32	--	168
08...	1115	20	--	30	06...	2000	27	0.310	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
MAR 1992					JUL 1992				
06...	2100	23	--	9	12...	1430	39	0.170	58
06...	2300	18	0.310	--	12...	1530	34	--	51
06...	2400	15	--	45	12...	1630	29	0.290	--
07...	0400	9.8	--	20	12...	1730	21	--	36
07...	0600	9.3	0.150	--	12...	1930	5.9	0.230	34
07...	0900	8.4	--	8	13...	1200	79	0.660	333
07...	1400	7.4	0.120	--	13...	1300	107	--	254
07...	1500	7.2	--	5	13...	1400	108	--	105
*09...	0850	4.9	0.060	15	*13...	1405	107	0.360	87
09...	1200	7.2	--	32	13...	1500	98	0.350	--
09...	1300	7.2	0.110	--	13...	1800	43	0.340	52
*09...	1425	7.4	--	25	13...	1900	84	--	279
09...	1426	7.4	--	22	13...	2000	108	--	399
*09...	1427	7.4	0.120	--	13...	2100	108	0.440	--
09...	1428	7.5	0.140	--	13...	2200	104	--	78
09...	1540	21	--	253	13...	2400	84	0.430	--
09...	1600	24	0.280	--	14...	0100	70	--	36
09...	1800	26	--	88	14...	0300	42	0.300	--
09...	1900	24	0.280	--	14...	0400	34	--	27
09...	2100	19	--	46	14...	0700	17	0.210	--
09...	2400	11	0.200	--	14...	0800	15	--	20
10...	0100	9.8	--	14	14...	0900	28	--	61
*10...	0740	5.0	--	43	14...	1000	94	0.420	--
10...	0741	5.0	--	31	*14...	1100	107	0.340	89
*10...	0742	5.0	0.150	--	14...	1200	108	--	73
10...	0743	5.0	0.180	--	14...	1300	104	0.370	--
*19...	1130	2.1	0.060	50	14...	1400	98	--	68
24...	1815	7.8	--	50	14...	1600	77	0.350	--
24...	1915	7.8	0.050	--	14...	1700	63	--	32
24...	2015	7.8	--	32	14...	2000	31	0.220	--
24...	2215	7.2	0.060	--	14...	2100	25	--	18
24...	2315	6.6	--	16	14...	2400	15	0.180	--
APR					15...	0100	13	--	20
*13...	0830	1.2	0.020	77	15...	0400	9.3	--	30
15...	0800	12	--	368	15...	0600	8.1	--	14
15...	0900	13	0.090	--	15...	0700	7.8	0.150	--
15...	2345	10	--	346	*15...	1200	6.4	--	73
16...	0045	15	0.130	186	15...	1201	6.4	--	18
16...	0145	11	--	141	*15...	1202	6.4	0.130	--
16...	0245	7.8	0.110	54	15...	1203	6.4	0.120	--
16...	0845	12	0.150	127	*20...	0855	1.8	0.070	74
16...	0945	27	--	145	30...	1245	14	0.060	85
*16...	1030	30	0.190	224	30...	1445	19	0.120	76
16...	1200	28	--	136	30...	1545	15	--	51
16...	1300	26	0.310	--	30...	1645	9.5	0.110	--
16...	1500	22	--	41	30...	1745	6.5	--	30
16...	1600	19	0.210	--	*31...	0940	1.5	0.080	52
16...	1700	15	--	28	AUG				
16...	1900	11	0.170	--	07...	2115	19	--	140
16...	2000	9.6	--	17	07...	2215	26	0.130	85
16...	2200	7.6	0.130	13	07...	2315	14	--	37
*17...	0900	4.1	0.080	11	*08...	0915	1.5	0.140	9
23...	1715	12	0.170	371	*17...	1325	0.94	0.110	--
23...	1815	16	0.130	155	*17...	1330	0.94	--	31
23...	1915	12	--	116	*20...	1045	0.74	0.060	32
23...	2015	9.1	0.070	--	*26...	0830	1.3	0.160	--
23...	2115	7.8	--	30	29...	1045	15	0.110	86
*24...	1100	4.4	0.050	19	29...	1145	9.5	--	54
MAY					29...	1245	5.8	0.130	33
*05...	0920	1.3	0.030	--	SEP				
*05...	0950	1.3	--	31	02...	2015	22	0.130	233
*16...	1415	0.93	0.130	--	02...	2115	38	0.160	171
*18...	0840	0.75	0.080	80	02...	2215	29	--	54
JUN					02...	2315	17	--	37
*15...	1415	0.79	--	37	03...	0015	9.3	0.230	46
*16...	1000	0.66	0.110	46	*03...	1000	2.7	0.080	--
*18...	1030	0.70	0.130	7	06...	0700	27	--	191
JUL					06...	0800	40	0.320	120
01...	1130	0.59	--	109	06...	0900	26	--	44
01...	1230	0.63	--	258	06...	1000	12	--	27
01...	1330	0.66	--	288	*08...	0835	0.99	0.120	30
*02...	1140	49	0.370	107	09...	1045	14	--	102
02...	1230	58	0.550	--	09...	1145	15	0.310	--
02...	1330	40	0.760	--	09...	1245	15	--	48
*03...	0915	0.98	0.160	--	09...	1345	10	0.270	--
12...	1230	25	0.090	265	09...	1445	7.1	--	30
12...	1330	43	--	183	*10...	1005	1.6	0.120	25

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
SEP 1992					
14...	1430	--	14	--	138
14...	1530	--	17	0.300	97
*15...	1000	--	1.1	0.100	30
16...	1545	--	43	0.240	62
16...	1645	--	94	0.890	528
16...	1745	--	104	0.610	266
16...	1845	--	101	--	112
16...	1945	--	92	--	86
16...	2045	--	78	0.360	--
16...	2245	--	44	--	36
17...	0045	--	23	0.270	--
17...	0145	--	17	--	29
17...	0345	--	10	--	25
17...	0445	--	10	0.210	--
17...	0545	--	17	--	25
17...	0645	--	33	--	40
17...	0745	--	50	0.280	--
17...	0845	--	57	--	43
*17...	0855	--	57	0.240	31
17...	0915	--	57	0.240	--
17...	1015	--	52	--	22
17...	1215	--	32	--	15
17...	1415	--	19	0.330	--
17...	1515	--	15	--	13
17...	1715	--	10	0.210	--
17...	1815	--	9.1	--	17
*18...	0845	--	4.7	0.150	20
20...	0130	2.5	--	0.090	--
20...	0230	2.5	--	--	26
20...	0730	2.5	--	--	12
20...	1030	2.5	--	0.060	--
20...	1330	2.5	--	--	16
20...	1830	2.5	--	--	14
20...	1930	2.5	--	0.080	--
20...	2030	2.5	--	--	35
20...	2130	2.5	--	0.290	--
20...	2230	2.5	--	--	41
20...	2330	2.5	--	0.220	--
21...	0030	4.0	--	--	26
*21...	0910	4.0	--	0.090	5
21...	0930	4.0	--	--	8
21...	1030	4.0	--	0.070	--
21...	1130	4.0	--	--	11
21...	1530	4.0	--	0.090	--
21...	2030	4.0	--	--	20
21...	2130	4.0	--	0.090	--
22...	0530	2.4	--	0.140	--
22...	0630	2.4	--	--	28
*22...	1015	2.4	--	0.080	27

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	1.7	.45	.20	.02	.09	.07	.12	.10	.02	.14	.04
2	.02	.52	.57	.19	.02	.10	.06	.11	.10	3.8	.12	1.5
3	.02	1.7	.48	.18	.03	.09	.06	.11	.10	.05	.11	.36
4	5.8	1.7	.36	.16	.02	.08	.06	.11	.12	.02	.13	.22
5	.35	1.5	.28	.15	.02	.08	.05	.11	.11	.02	.10	.12
6	.11	1.2	.23	.14	.02	4.9	.05	.10	.08	.02	.09	1.3
7	.15	1.0	.63	.14	.02	.30	.04	.09	.07	.02	.67	.08
8	.05	.85	1.2	.20	.02	.10	.04	.08	.07	.08	.09	.08
9	.04	.77	.51	.24	.01	2.0	.04	.08	.07	.04	.03	.65
10	.03	.70	.17	.17	.01	.39	.04	.07	.07	.03	.04	.11
11	.03	.63	.15	.14	.01	.29	.11	.09	.07	.03	.04	.07
12	.03	.53	12	.13	.01	.26	.07	.29	.07	2.2	.14	.05
13	.02	.44	2.2	.14	.01	.26	.22	.08	.06	20	.11	.05
14	.04	.54	.39	.12	.01	.25	.22	.05	.06	7.2	.07	.56
15	.03	.65	.29	.08	.02	.24	1.7	.07	.07	.37	.06	.30
16	.03	.18	.27	.04	.02	.25	3.3	.10	.08	.29	.06	11
17	.03	.10	.27	.03	.02	.28	.13	.13	.76	.25	.07	1.5
18	.15	.77	.26	.03	5.0	.28	.08	.17	.02	.26	.08	.22
19	.06	.28	.24	.02	.53	.26	.07	.19	.01	.30	.07	.13
20	.04	.23	.26	.02	1.5	.21	.07	.19	.01	.33	.07	.14
21	.04	.18	.27	.02	.21	.16	.09	.19	.01	.24	.05	.17
22	.04	.16	.28	.02	.28	.17	.07	.19	.01	.22	.05	.17
23	.03	.41	.29	.03	.20	.08	1.1	.32	.01	.18	.04	.12
24	5.1	.20	.28	.02	.16	.26	.24	.14	.14	.12	.04	.09
25	.64	.15	.29	.02	.17	.21	.17	.12	.02	.22	.08	.07
26	1.1	.13	.31	.02	.14	.15	.14	.12	.02	.05	.28	.05
27	.13	.14	.30	.02	.13	.11	.14	.13	.02	.04	.11	.06
28	.37	.11	.31	.02	.13	.09	.13	.11	.01	.03	.03	.04
29	4.7	6.3	.34	.02	.11	.12	.14	.11	.02	.03	.38	.03
30	.34	12	.33	.02	---	.10	.12	.11	.02	.72	.06	.02
31	.36	---	.26	.02	---	.08	---	.09	---	.20	.05	---
TOTAL	19.90	35.77	24.47	2.75	8.85	12.24	8.82	3.97	2.38	37.38	3.46	19.30

WTR YR 1992 TOTAL 179.29

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	16.5	6.26	1.10	.27	.87	.48	.34	.33	.17	.44	.26
2	.17	5.00	2.62	1.60	.32	.90	.42	.29	.37	23.3	.38	4.40
3	.20	1.90	2.03	2.16	.42	.87	.40	.24	.39	1.03	.36	2.01
4	67.9	1.46	1.59	2.03	.41	.80	.39	.22	.46	.50	.41	.77
5	11.3	1.29	1.31	1.81	.34	.75	.31	.21	.46	.38	.33	.42
6	.89	1.11	1.10	1.77	.34	20.3	.29	.20	.32	.36	.28	7.61
7	.44	.93	7.17	1.72	.31	6.82	.28	.20	.29	.38	1.89	.73
8	.38	.82	21.7	2.53	.26	2.04	.26	.20	.32	1.24	1.37	.65
9	.33	.76	8.32	3.15	.22	11.8	.25	.19	.33	.54	.54	6.13
10	.29	.71	3.48	2.27	.27	4.41	.25	.18	.34	.43	.49	1.19
11	.29	.68	2.05	1.84	.27	1.71	.37	.25	.34	.31	.31	.87
12	.25	.65	40.3	1.76	.26	1.37	.16	.65	.36	9.64	.81	.91
13	.22	.62	13.8	1.82	.28	1.21	.13	.38	.35	105	.63	1.07
14	.36	2.12	4.21	1.58	.26	1.05	.13	.35	.35	86.2	.40	4.41
15	.28	8.22	2.87	1.04	.33	.91	1.11	.49	.42	5.43	.39	2.79
16	.26	1.77	2.41	.53	.30	.83	13.9	.60	.39	2.69	.38	69.5
17	.26	1.07	2.22	.48	.43	.85	1.96	.46	5.40	1.52	.48	29.9
18	3.32	5.28	1.89	.35	48.1	.75	1.13	.35	.64	1.05	.47	3.32
19	1.76	2.61	1.64	.31	19.5	.64	.94	.39	.36	.81	.33	1.16
20	.78	2.02	1.58	.28	20.2	.55	.88	.42	.25	.65	.28	1.35
21	.64	1.44	1.50	.26	5.98	.49	.98	.42	.16	.47	.21	2.40
22	.51	1.15	1.40	.29	4.23	.76	.73	.44	.18	.42	.19	1.23
23	.32	3.36	1.34	.45	2.42	.67	2.12	.79	.18	.35	.17	.69
24	35.5	1.98	1.17	.31	1.42	1.07	1.20	.35	1.04	.25	.20	.50
25	14.7	1.52	1.10	.27	1.40	1.61	.82	.33	.26	.68	.38	.37
26	11.0	1.26	1.05	.24	1.17	1.15	.61	.34	.23	.30	2.43	.28
27	2.91	1.40	.94	.26	1.10	.78	.54	.36	.20	.23	1.84	.33
28	3.19	1.11	.88	.25	1.17	.62	.46	.34	.15	.20	.49	.22
29	53.1	42.4	.86	.28	.95	.83	.46	.34	.17	.18	1.81	.15
30	7.86	62.7	.87	.27	---	.67	.37	.34	.17	2.42	.52	.12
31	3.24	---	.97	.27	---	.57	---	.30	---	.68	.37	---
TOTAL	222.83	173.84	140.63	33.28	112.93	68.65	32.33	10.96	15.21	247.81	19.58	145.74

WTR YR 1992 TOTAL 1223.79

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 NE 1/4 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. Acoustical velocity meter used to determine discharges equal to or greater than 20 ft³/s for period from Oct. 1, 1985 to May 7, 1987.

REMARKS.--Daily mean discharges were estimated based on discharges upstream at Jackson Creek near Elkhorn (05431014) and Jackson Creek Tributary near Elkhorn (054310157). Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.81	46	75	5.7	2.2	15	13	8.5	1.3	.84	3.8	.86
2	.84	37	44	7.1	2.5	16	11	7.5	1.3	8.6	2.7	5.8
3	.90	18	32	9.8	4.4	18	10	6.1	1.4	1.6	2.5	3.3
4	35	11	23	11	5.6	18	10	5.2	1.5	.95	2.2	2.3
5	24	7.9	18	11	4.0	17	8.1	5.2	1.6	.75	1.9	1.5
6	4.8	6.2	16	11	3.3	37	7.9	4.5	1.2	.74	1.6	6.3
7	2.3	4.4	34	10	2.8	74	7.9	4.5	1.2	.79	4.0	1.3
8	1.9	3.8	103	16	2.2	47	6.9	4.7	1.2	1.6	3.5	1.3
9	1.4	3.5	79	32	1.8	58	7.1	4.7	1.1	1.0	1.9	5.5
10	1.2	3.5	52	28	1.8	54	7.0	3.8	1.0	1.1	1.8	2.9
11	1.1	3.4	41	21	1.8	30	8.3	4.3	.98	1.2	1.5	1.7
12	.99	3.5	73	18	1.6	24	5.4	5.7	.96	15	2.6	1.3
13	.86	3.6	100	19	1.7	18	4.7	4.9	1.0	115	2.2	1.1
14	1.4	4.9	58	17	1.7	15	4.9	3.6	1.5	282	1.5	3.2
15	1.1	18	34	12	2.4	13	8.5	3.2	1.3	124	1.2	3.7
16	1.0	14	23	7.1	2.3	12	39	2.7	1.2	71	1.1	38
17	1.0	9.9	19	5.5	2.7	13	33	2.4	5.3	44	1.2	79
18	1.8	20	13	4.2	32	12	24	1.8	3.5	27	1.3	49
19	1.3	17	10	3.5	47	11	20	1.8	1.5	18	1.1	28
20	.94	14	10	3.0	40	10	19	1.8	1.1	12	1.2	16
21	1.0	10	10	2.7	38	8.5	17	1.7	.92	8.7	1.0	21
22	1.1	8.6	9.6	2.6	28	9.2	13	1.7	1.0	7.3	.85	15
23	.96	10	9.4	4.2	24	9.0	15	2.7	1.2	7.2	.84	8.3
24	22	8.4	7.7	3.0	17	17	20	1.6	2.4	6.0	1.0	6.0
25	14	6.2	6.8	2.4	15	34	20	1.5	1.2	6.7	1.1	4.5
26	17	5.1	6.7	1.9	14	31	16	1.4	1.1	6.3	3.1	3.5
27	13	6.4	6.1	2.0	14	22	14	1.4	1.0	4.5	2.5	4.1
28	8.6	6.1	6.3	1.9	18	18	12	1.4	.85	3.4	1.3	3.0
29	75	55	7.1	2.1	15	19	11	1.3	.85	2.9	3.4	1.9
30	58	168	6.6	2.2	---	19	9.8	1.3	.78	7.7	1.2	1.6
31	37	---	5.9	2.3	---	16	---	1.3	---	5.8	1.0	---
TOTAL	332.30	533.4	939.2	279.2	346.8	714.7	403.5	104.2	42.44	793.67	58.09	320.96
MEAN	10.7	17.8	30.3	9.01	12.0	23.1	13.4	3.36	1.41	25.6	1.87	10.7
MAX	75	168	103	32	47	74	39	8.5	5.3	282	4.0	79
MIN	.81	3.4	5.9	1.9	1.6	8.5	4.7	1.3	.78	.74	.84	.86
CFSM	.49	.82	1.39	.41	.55	1.06	.62	.15	.06	1.17	.09	.49
IN.	.57	.91	1.60	.48	.59	1.22	.69	.18	.07	1.35	.10	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1992, BY WATER YEAR (WY)

	8.56	14.0	12.8	5.78	15.2	26.3	17.3	11.9	5.90	7.00	3.17	8.89
MEAN	8.56	14.0	12.8	5.78	15.2	26.3	17.3	11.9	5.90	7.00	3.17	8.89
MAX	25.9	54.5	30.3	11.6	36.5	68.3	33.5	32.9	17.0	25.6	7.13	37.4
(WY)	1987	1986	1992	1988	1984	1986	1987	1990	1986	1992	1989	1986
MIN	.67	1.14	1.12	1.11	1.31	10.7	3.28	1.44	.76	.61	.50	.61
(WY)	1989	1990	1990	1991	1989	1988	1989	1989	1988	1988	1988	1988

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1984 - 1992

ANNUAL TOTAL	4503.77	4868.46	
ANNUAL MEAN	12.3	13.3	11.4
HIGHEST ANNUAL MEAN			23.4
LOWEST ANNUAL MEAN			5.38
HIGHEST DAILY MEAN	224	(a)282	633
LOWEST DAILY MEAN	.43	(a).74	(a).22
ANNUAL SEVEN-DAY MINIMUM	.57	(a).95	(a).25
ANNUAL RUNOFF (CFSM)	.57	.61	.52
ANNUAL RUNOFF (INCHES)	7.69	8.31	7.09
10 PERCENT EXCEEDS	34	34	28
50 PERCENT EXCEEDS	3.5	5.5	3.4
90 PERCENT EXCEEDS	.66	1.1	.73

(a) Estimated

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 current year.

TOTAL-PHOSPHORUS DISCHARGE: 1984 and 1985 water years (unpublished) to current year.

REMARKS.--Records poor. Daily mean discharges are estimated based on discharges from upstream stations 05431014 and 054310157. Samples are equal-width increment unless otherwise indicated.

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, 1992, and Sept. 26, 1992.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 200 tons, Dec. 29, 1984; minimum daily, 0.00 ton, Sept. 26, 1990, and many days during 1992 water year.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 3.8 mg/L, May 27, 1985; minimum observed, 0.01 mg/L, Mar. 7, 1990.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,240 lb, July 14, 1992; minimum daily, 0.10 lb, Dec. 28, 1989.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 132 mg/L, July 1; minimum observed, 0 mg/L, July 17 and Sept. 26.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 13 tons, Nov. 30; minimum daily, 0.00 ton, on many days.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.2 mg/L, July 13; minimum observed, 0.05 mg/L, Oct. 7, Nov. 15, and Jan. 3.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,240 lb, July 14; minimum daily, 0.45 lb, Feb. 12.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT 1991				
05...	0945	24	0.580	3
06...	0910	4.8	0.120	4
07...	1055	2.3	0.070	3
07...	1500	2.3	0.050	1
08...	1010	1.9	0.260	2
08...	1420	1.9	0.240	1
25...	1140	14	0.510	3
NOV				
01...	1230	46	0.330	9
01...	1435	46	0.320	4
02...	0930	37	0.300	64
04...	1130	11	0.140	5
04...	1540	11	0.110	6
15...	1210	18	0.110	9
15...	1410	18	0.050	4
18...	1310	20	0.130	4
DEC				
02...	1430	44	0.300	23
09...	1230	79	0.150	7
09...	1525	79	0.180	--
09...	1530	79	--	8
10...	1145	52	0.190	8
10...	1430	52	0.180	8
11...	1130	41	0.180	7
11...	1520	41	0.180	7
12...	1125	73	0.180	7
13...	1025	100	0.110	--
13...	1030	100	--	5
13...	1450	100	0.110	8
14...	0935	58	0.290	120
14...	1500	58	0.150	39
16...	1545	23	0.420	21
17...	1345	19	0.190	19
JAN 1992				
03...	1135	9.8	0.050	3
FEB				
04...	1445	5.6	0.060	4
19...	1205	47	0.140	6
19...	1505	47	--	9
19...	1515	47	0.140	--
20...	1145	40	0.410	12
20...	1445	40	--	27
20...	1450	40	0.450	--
21...	1005	38	0.290	1
21...	1505	38	--	5
21...	1520	38	0.380	--
22...	0930	28	0.310	16
22...	1500	28	0.370	12

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
FEB 1992					JUL 1992				
23...	0910	24	0.310	8	16...	1530	71	0.280	4
24...	1525	17	0.200	6	17...	1040	44	0.250	1
25...	1025	15	0.160	8	17...	1525	44	0.250	0
26...	1030	14	0.140	1	18...	0925	27	0.250	3
26...	1455	14	0.130	5	19...	0925	18	0.220	3
27...	0930	14	0.110	5	20...	1055	12	0.240	1
28...	1025	18	0.070	7	31...	1025	5.8	0.510	2
MAR					AUG				
19...	1345	11	--	38	01...	0935	3.8	0.350	3
19...	1400	11	0.100	--	01...	1345	3.8	0.360	4
APR					02...	0915	2.7	0.390	7
16...	1120	39	0.100	12	02...	1405	2.7	0.440	14
16...	1520	39	0.100	10	03...	0950	2.5	0.600	17
17...	0920	33	0.110	7	08...	0945	3.5	0.670	0
18...	0900	24	0.090	9	08...	1445	3.5	0.490	2
19...	0910	20	0.140	8	09...	0920	1.9	0.490	2
20...	0945	19	0.170	8	09...	1350	1.9	0.420	11
21...	0925	17	0.190	6	10...	0945	1.8	0.500	2
24...	1150	20	0.180	7	10...	1540	1.8	0.270	2
24...	1545	20	0.130	7	13...	1000	2.2	0.840	1
25...	0910	20	0.140	10	13...	1545	2.2	0.840	1
25...	1450	20	0.110	--	14...	0940	1.5	0.840	1
26...	0855	16	0.100	10	14...	1525	1.5	0.720	1
26...	1450	16	--	10	15...	0845	1.2	0.760	1
26...	1451	16	0.100	--	17...	1420	1.2	0.530	--
27...	0845	14	0.170	--	17...	1425	1.2	--	7
27...	0930	14	0.150	--	20...	1020	1.2	0.500	6
27...	0945	14	--	9	26...	0915	3.1	0.510	3
28...	0930	12	--	22	26...	1535	3.1	0.550	2
29...	1450	11	--	8	27...	0855	2.5	0.600	2
MAY					28...	1025	1.3	0.650	3
05...	1150	5.2	0.640	14	28...	1505	1.3	0.620	3
18...	0940	1.8	0.770	5	29...	0920	3.4	0.540	4
JUN					30...	0920	1.2	0.370	7
03...	1640	1.4	0.360	5	SEP				
16...	1305	1.2	0.590	7	03...	1035	3.3	0.480	3
18...	1120	3.5	0.320	5	03...	1535	3.3	0.310	5
18...	1400	3.5	0.290	4	04...	1045	2.3	0.440	3
19...	1115	1.5	0.660	3	10...	1040	2.9	0.430	5
19...	1410	1.5	0.610	3	10...	1535	2.9	0.350	9
20...	0915	1.1	0.730	5	11...	1000	1.7	0.640	4
20...	1510	1.1	0.710	4	11...	1515	1.7	0.470	--
21...	0925	0.92	0.640	3	11...	1530	1.7	--	2
22...	0955	1.0	0.680	3	12...	0850	1.3	0.610	4
JUL					12...	1300	1.3	0.340	5
01...	1350	0.84	0.770	132	13...	0915	1.1	0.450	5
02...	0640	8.6	0.670	3	14...	1000	3.2	0.450	3
03...	0950	1.6	0.990	3	17...	1010	79	0.720	3
03...	1400	1.6	0.570	15	17...	1535	79	0.820	3
04...	0925	0.95	0.520	15	18...	0925	49	0.810	3
*04...	1315	0.95	0.590	--	18...	1530	49	0.710	3
04...	1340	0.95	--	7	19...	0905	28	0.710	5
05...	0925	0.75	--	4	19...	1610	28	0.700	3
*05...	0930	0.75	1.10	--	20...	0905	16	0.560	1
05...	1330	0.75	0.940	4	21...	1035	21	0.490	3
06...	0945	0.74	0.850	2	21...	1530	21	0.500	3
13...	1315	115	1.20	--	22...	1050	15	0.500	6
13...	1320	115	--	13	22...	1530	15	0.350	3
14...	1605	282	0.760	--	23...	1010	8.3	0.370	2
14...	1610	282	--	10	23...	1530	8.3	0.260	4
15...	1330	124	0.420	16	24...	0930	6.0	0.400	2
15...	1525	124	0.410	13	25...	0935	4.5	0.320	2
16...	0940	71	0.300	5	26...	1005	3.5	0.230	0

* SINGLE VERTICAL SAMPLE

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.96	5.4	.06	.02	.21	.30	.21	.02	.11	.04	.01
2	.00	4.5	2.8	.07	.02	.20	.25	.21	.02	.10	.08	.12
3	.00	.97	1.5	.09	.04	.20	.22	.19	.02	.04	.11	.04
4	.17	.19	.76	.10	.05	.17	.21	.18	.02	.03	.06	.02
5	.17	.12	.42	.10	.04	.15	.16	.19	.02	.01	.03	.02
6	.04	.08	.26	.10	.03	1.7	.15	.16	.01	.00	.02	.14
7	.01	.05	.59	.09	.02	5.5	.14	.15	.01	.00	.04	.02
8	.01	.04	2.5	.15	.02	2.8	.12	.14	.01	.01	.01	.02
9	.00	.03	1.7	.30	.01	2.5	.12	.13	.01	.01	.03	.11
10	.00	.03	1.1	.26	.01	1.7	.11	.10	.01	.01	.01	.05
11	.00	.02	.80	.19	.01	.88	.13	.10	.01	.01	.00	.02
12	.00	.02	1.3	.17	.01	.82	.08	.13	.01	.34	.02	.01
13	.00	.02	3.0	.18	.01	.72	.07	.10	.01	3.8	.01	.01
14	.00	.06	9.7	.16	.01	.70	.07	.07	.01	8.4	.01	.03
15	.00	.29	2.8	.11	.02	.71	.21	.06	.01	4.2	.00	.03
16	.00	.16	1.4	.07	.03	.77	1.1	.05	.02	.92	.01	.30
17	.00	.11	.97	.05	.04	.97	.70	.04	.12	.10	.02	.65
18	.01	.23	.56	.04	.50	1.1	.58	.03	.04	.19	.02	.44
19	.00	.19	.36	.03	.95	1.1	.45	.03	.01	.13	.02	.27
20	.00	.15	.30	.03	1.5	.79	.41	.03	.01	.03	.02	.07
21	.00	.10	.26	.03	.50	.50	.30	.02	.01	.02	.01	.17
22	.00	.09	.23	.02	.93	.40	.23	.02	.01	.02	.01	.17
23	.00	.10	.21	.04	.53	.29	.27	.04	.01	.02	.01	.07
24	.22	.08	.16	.03	.29	.59	.39	.02	.02	.01	.01	.03
25	.13	.06	.13	.02	.24	1.7	.54	.02	.01	.02	.01	.01
26	.13	.04	.12	.02	.12	1.4	.44	.02	.01	.02	.02	.00
27	.09	.05	.10	.02	.19	.80	.41	.02	.01	.01	.01	.00
28	.05	.05	.09	.02	.30	.54	.57	.02	.01	.01	.01	.00
29	.84	2.5	.10	.02	.23	.50	.28	.02	.01	.01	.04	.00
30	.64	13	.08	.02	---	.48	.22	.02	.01	.13	.02	.00
31	.33	---	.07	.02	---	.39	---	.02	---	.05	.02	---
TOTAL	2.84	24.29	39.77	2.61	6.67	31.28	9.23	2.54	0.51	18.76	0.73	2.83

WTR YR 1992 TOTAL 142.06

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.31	81.1	142	1.70	.70	5.10	5.99	14.4	2.80	2.88	7.60	1.45
2	1.36	56.7	71.8	2.02	.80	5.17	4.87	15.2	2.67	34.5	6.24	15.9
3	1.46	19.8	41.8	2.66	1.42	5.53	4.26	14.8	2.75	6.45	7.71	7.54
4	87.1	7.89	23.4	2.99	1.81	5.25	4.09	15.1	2.88	3.15	6.31	5.11
5	60.4	4.36	14.3	3.00	1.28	4.71	3.19	17.6	3.02	3.85	4.87	3.50
6	3.36	3.13	9.87	3.02	1.03	34.7	2.99	15.8	2.23	3.39	3.66	16.3
7	.94	2.03	23.8	2.76	.86	113	2.87	16.0	2.19	3.39	12.1	2.86
8	2.24	1.60	102	4.44	.67	67.9	2.41	17.0	2.16	6.45	10.9	2.57
9	1.80	1.35	72.3	8.94	.54	74.7	2.38	17.2	1.95	3.79	4.74	13.5
10	1.52	1.24	51.7	7.87	.53	61.9	2.26	14.1	1.74	3.91	3.69	6.58
11	1.38	1.10	39.9	5.93	.52	31.1	2.57	16.2	1.68	4.01	1.82	4.90
12	1.23	1.03	66.6	5.12	.45	23.0	1.61	21.8	1.62	74.7	8.33	3.24
13	1.05	1.04	69.5	5.43	.47	15.9	1.35	19.0	1.66	699	9.81	2.61
14	1.69	2.00	64.2	4.89	.46	12.2	1.35	14.2	2.45	1240	6.37	7.99
15	1.31	7.71	44.3	3.47	.84	9.77	4.02	12.8	2.68	308	4.75	10.7
16	1.18	5.14	45.0	2.06	1.20	8.32	21.2	10.9	3.61	115	3.77	128
17	1.17	5.02	22.8	1.61	1.63	8.31	18.7	9.85	15.9	60.3	3.53	322
18	2.07	13.4	11.3	1.23	21.7	7.08	13.0	7.41	6.83	35.6	3.65	202
19	1.48	11.7	7.18	1.03	38.8	6.02	15.3	7.11	4.81	21.9	3.03	105
20	1.06	9.36	5.96	.89	78.9	5.40	17.5	6.79	4.17	15.4	3.22	48.4
21	1.11	6.52	5.26	.81	70.1	4.59	17.2	6.12	3.25	11.1	2.56	56.8
22	1.21	5.47	4.80	.78	51.5	4.97	13.1	5.84	3.63	9.10	2.08	35.1
23	1.04	6.20	4.47	1.27	38.5	4.86	14.8	8.85	4.25	8.80	1.95	14.7
24	50.6	5.08	3.47	.91	19.5	11.9	17.3	5.01	8.20	7.20	2.21	11.9
25	38.2	3.66	2.91	.73	13.1	33.8	13.3	4.48	3.96	7.89	2.60	7.51
26	44.0	2.93	2.73	.58	10.2	26.8	9.23	3.99	3.51	7.27	8.82	4.26
27	31.6	3.59	2.36	.62	7.88	15.1	11.8	3.81	3.08	5.10	8.16	3.60
28	19.7	3.34	2.31	.59	7.06	9.97	11.9	3.63	2.53	3.78	4.38	1.89
29	161	52.3	2.48	.66	5.37	9.86	13.0	3.22	2.45	3.16	9.43	.86
30	117	323	2.19	.69	---	9.48	13.9	3.07	2.17	20.3	2.44	.52
31	70.3	---	1.86	.73	---	7.67	---	2.93	---	15.3	1.83	---
TOTAL	710.87	648.79	964.55	79.43	377.82	644.06	267.44	334.21	106.83	2744.67	162.56	1047.29

WTR YR 1992 TOTAL 8088.52

423526088380101 DELAVAN LAKE, AT SW END, NEAR DELAVAN LAKE, WI

LOCATION.--Lat 42°35'26", long 88°38'01", sec.32, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.2 mi².

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

REMARKS.--Lake ice-covered during February sampling.

WATER-QUALITY DATA, OCTOBER 22, 1991 TO MAY 06, 1992
(Milligrams per liter unless otherwise indicated)

	Oct. 22		Feb. 20		Mar. 24		May 06	
Depth of sample (ft)	1.5	32	1.5	32	1.5	32	1.5	32
Lake stage (ft)	4.64		5.34		5.16		5.07	
Specific conductance (μS/cm)	595	597	606	618	595	601	628	630
pH (units)	8.3	8.3	9.0	8.9	8.7	8.7	8.6	8.6
Water temperature (°C)	11.5	11.5	1.5	3.0	3.0	3.5	11.5	10.5
Color (Pt-Co. scale)	---	---	---	---	5	5	---	---
Turbidity (NTU)	---	---	---	---	1.00	0.80	---	---
Secchi-depth (meters)	4.6		2.1		2.1		7.6	
Dissolved oxygen	9.6	9.6	18.1	17.2	13.9	13.6	11.0	10.9
Hardness, as CaCO ₃	---	---	---	---	250	250	---	---
Calcium, dissolved (Ca)	---	---	---	---	46	46	---	---
Magnesium, dissolved (Mg)	---	---	---	---	33	34	---	---
Sodium, dissolved (Na)	---	---	---	---	27	28	---	---
Potassium, dissolved (K)	---	---	---	---	3	3	---	---
Alkalinity, as CaCO ₃	170	170	---	---	180	180	---	---
Sulfate, dissolved (SO ₄)	---	---	---	---	41	41	---	---
Chloride, dissolved (Cl)	---	---	---	---	66	66	---	---
Fluoride, dissolved (F)	---	---	---	---	0.2	0.2	---	---
Silica, dissolved (SiO ₂)	---	---	---	---	0.3	0.4	---	---
Solids, dissolved, at 180°C	---	---	---	---	325	331	---	---
Nitrogen, nitrate, total (as N)	---	---	---	---	0.71	0.70	---	---
Nitrogen, nitrite, total (as N)	---	---	---	---	0.04	0.04	---	---
Nitrogen, NO ₂ + NO ₃ , total (as N)	---	---	---	---	0.75	0.74	---	---
Nitrogen, ammonia, total (as N)	---	---	---	---	0.01	0.02	---	---
Nitrogen, organic, total (as N)	---	---	---	---	0.89	0.78	---	---
Nitrogen, amm. + org., total (as N)	---	---	---	---	0.90	0.80	---	---
Nitrogen, total (as N)	---	---	---	---	1.7	1.5	---	---
Phosphorus, total (as P)	0.021	0.025	0.026	0.010	0.020	0.018	0.023	0.022
Phosphorus, ortho, dissolved (as P)	0.004	0.004	0.002	0.002	<0.001	<0.001	0.005	0.004
Aluminum, total (μg/L)	---	---	---	---	60	210	30	30
Alum., diss. (μg/L) (0.45 μm filter)	80	80	---	---	20	20	10	20
Iron, dissolved (Fe) μg/L	---	---	---	---	4	7	---	---
Manganese, dissolved (Mn) μg/L	---	---	---	---	<1	1	---	---
Chlorophyll a, phytoplankton (μg/L)	1.7	---	8.7	---	2.6	---	1.2	---

Note: Duplicate total phosphorus sample Mar. 24 at 1.5 ft = 0.018 mg/L.

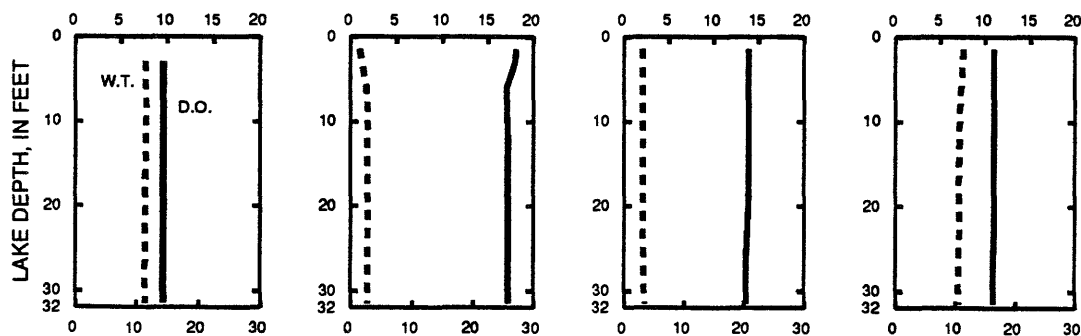
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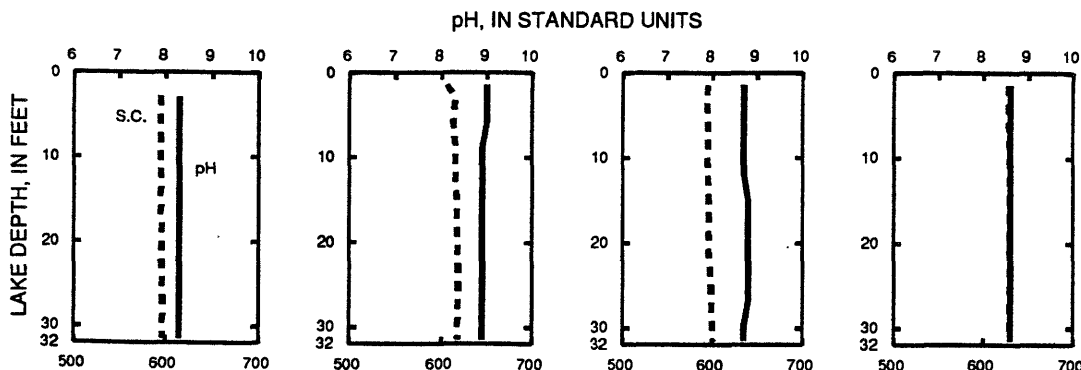
3-24-92

5-6-92

DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



WATER TEMPERATURE (W.T.), IN DEGREES CELSIUS

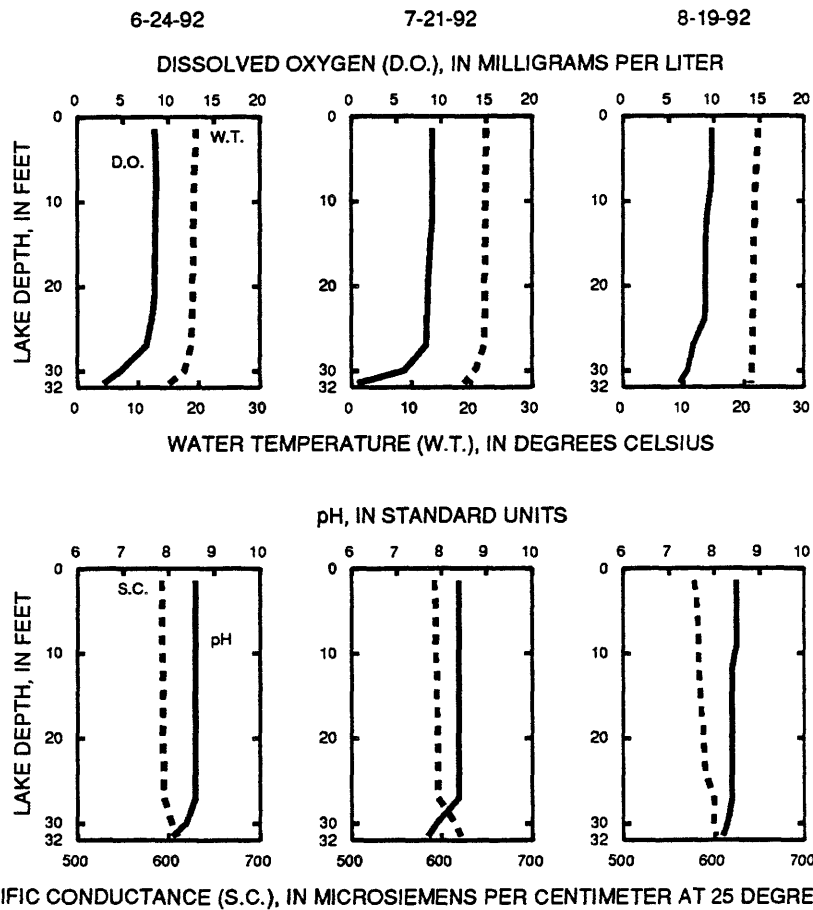


SPECIFIC CONDUCTANCE (S.C.), IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

423526088380101 DELAVAN LAKE, AT SW END, NEAR DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, JUNE 24 TO AUGUST 19, 1992
(Milligrams per liter unless otherwise indicated)

	June 24		July 21			Aug. 19	
Depth of sample (ft)	1.5	32	1.5	30	32	1.5	32
Lake stage (ft)		5.01		5.12			4.93
Specific conductance ($\mu\text{S}/\text{cm}$)	593	611	593	616	622	578	602
pH (units)	8.6	8.1	8.4	7.9	7.7	8.5	8.2
Water temperature ($^{\circ}\text{C}$)	19.5	15.0	22.5	20.5	19.0	22.0	21.0
Secchi-depth (meters)		4.7		2.3			2.1
Dissolved oxygen	8.5	2.9	9.0	5.9	0.7	9.8	6.2
Phosphorus, total (as P)	0.015	0.038	0.015	0.028	0.043	0.009	0.011
Phosphorus, ortho, dissolved (as P)	<0.001	0.024	<0.001	0.011	0.021	0.001	0.001
Aluminum, total ($\mu\text{g}/\text{L}$)	40	30	60	---	60	40	50
Alum., diss. ($\mu\text{g}/\text{L}$) (0.45 μm filter)	30	20	30	---	20	40	40
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	2.0	---	0.6	---	---	2.7	---



423556088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI

LOCATION.--Lat 42°35'56", long 88°36'50", sec.28, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.2 mi².

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

REMARKS.--Lake ice-covered during February sampling.

WATER-QUALITY DATA, OCTOBER 22, 1991 TO MARCH 24, 1992
(Milligrams per liter unless otherwise indicated)

	Oct. 22		Feb. 20			Mar. 24	
Depth of sample (ft)	1.5	51	1.5	42	54	1.5	52
Lake stage (ft)		4.64		5.34			5.16
Specific conductance (μS/cm)	592	602	597	637	828	594	604
pH (units)	8.4	8.4	8.7	8.4	7.7	8.8	8.8
Water temperature (°C)	11.5	11.5	1.0	3.0	4.0	3.0	3.0
Color (Pt-Co. scale)	---	---	---	---	---	5	5
Turbidity (NTU)	---	---	---	---	---	0.90	1.2
Secchi-depth (meters)		4.9		2.4			3.1
Dissolved oxygen	9.6	9.4	18.9	9.6	0.5	13.7	13.3
Hardness, as CaCO ₃	---	---	---	---	---	250	250
Calcium, dissolved (Ca)	---	---	---	---	---	45	46
Magnesium, dissolved (Mg)	---	---	---	---	---	33	34
Sodium, dissolved (Na)	---	---	---	---	---	27	27
Potassium, dissolved (K)	---	---	---	---	---	3	3
Alkalinity, as CaCO ₃	170	170	---	---	---	180	180
Sulfate, dissolved (SO ₄)	---	---	---	---	---	42	42
Chloride, dissolved (Cl)	---	---	---	---	---	68	67
Fluoride, dissolved (F)	---	---	---	---	---	0.3	<0.1
Silica, dissolved (SiO ₂)	---	---	---	---	---	0.4	0.4
Solids, dissolved, at 180°C	---	---	---	---	---	321	335
Nitrogen, nitrate, total (as N)	---	---	---	---	---	0.71	0.71
Nitrogen, nitrite, total (as N)	---	---	---	---	---	0.04	0.04
Nitrogen, NO ₂ + NO ₃ , total (as N)	---	---	---	---	---	0.75	0.75
Nitrogen, ammonia, total (as N)	---	---	---	---	---	0.03	0.04
Nitrogen, organic, total (as N)	---	---	---	---	---	0.97	0.76
Nitrogen, amm. + org., total (as N)	---	---	---	---	---	1.0	0.80
Nitrogen, total (as N)	---	---	---	---	---	1.7	1.5
Phosphorus, total (as P)	0.020	0.021	0.011	0.038	0.139	0.017	0.017
Phosphorus, ortho, dissolved (as P)	0.003	0.005	0.001	0.026	0.120	<0.001	<0.001
Aluminum, total (μg/L)	---	---	---	---	---	50	40
Alum., diss. (μg/L) (0.45 μm filter)	80	70	---	---	---	30	30
Alum., diss. (μg/L) (0.10 μm filter)	---	---	---	---	---	30	30
Iron, dissolved (Fe) μg/L	---	---	---	---	---	11	6
Manganese, dissolved (Mn) μg/L	---	---	---	---	---	<1	1
Chlorophyll a, phytoplankton (μg/L)	1.6	---	3.7	---	---	3.9	---

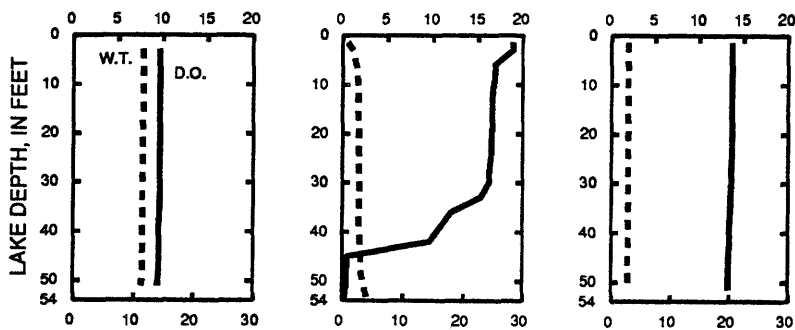
Note: Duplicate total phosphorus sample Mar. 24, 1.5 ft = 0.020 mg/L.

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2-20-92

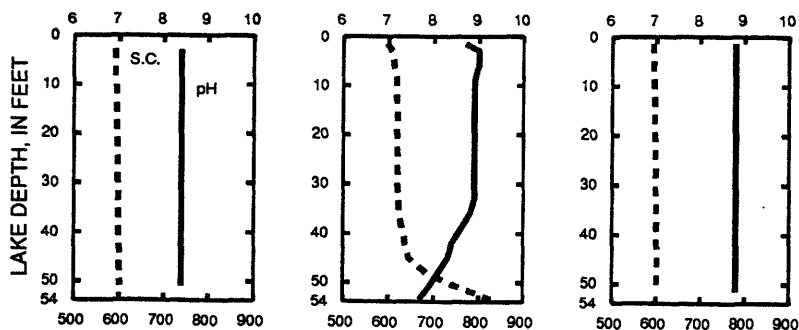
3-24-92

DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



WATER TEMPERATURE (W.T.), IN DEGREES CELSIUS

pH, IN STANDARD UNITS



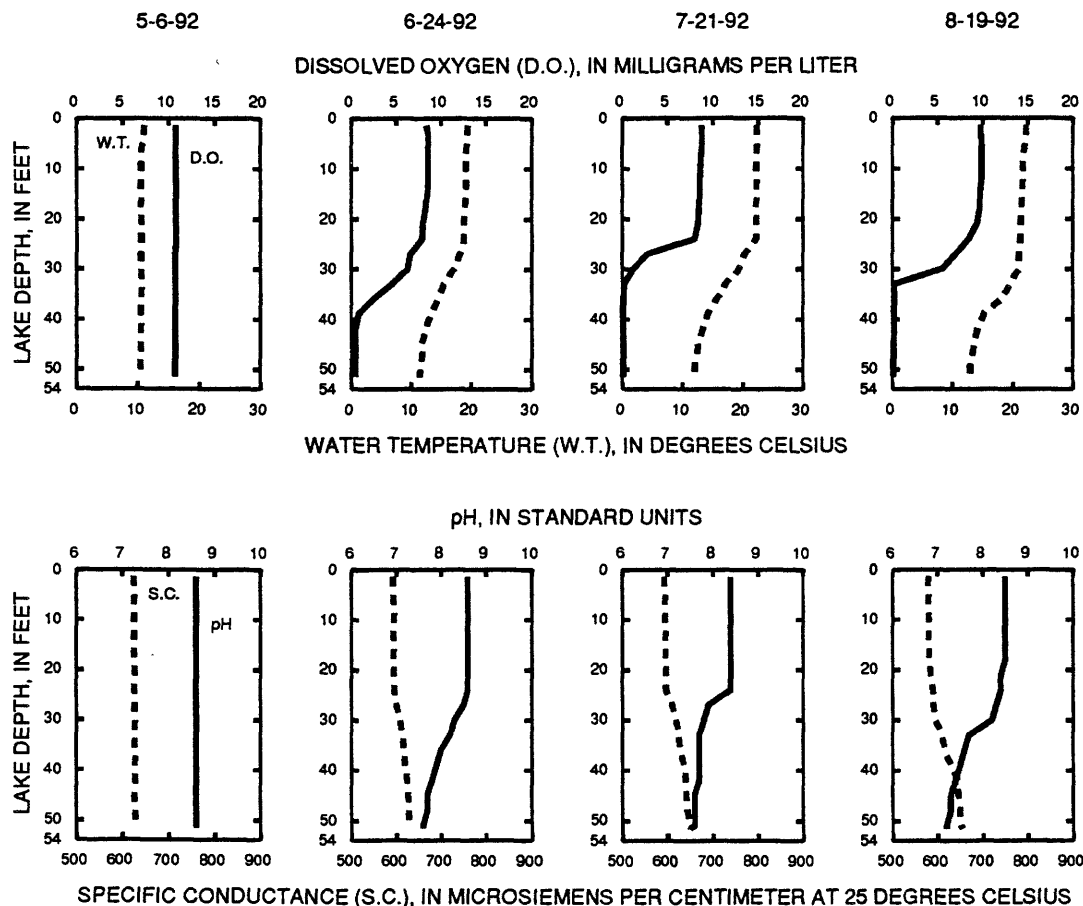
SPECIFIC CONDUCTANCE (S.C.), IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

423556088365001 DELAVAN LAKE, AT CENTER, NEAR DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, MAY 06 TO AUGUST 19, 1992
(Milligrams per liter unless otherwise indicated)

	May 06				June 24			
Depth of sample (ft)	1.5	52			1.5	36	45	52
Lake stage (ft)		5.07				5.01		
Specific conductance ($\mu\text{S}/\text{cm}$)	625	630			593	618	627	631
pH (units)	8.6	8.6			8.6	8.0	7.7	7.6
Water temperature ($^{\circ}\text{C}$)	11.0	10.5			19.5	14.5	12.0	11.5
Secchi-depth (meters)		7.5				4.4		
Dissolved oxygen	10.8	10.7			8.4	2.4	0.5	0.5
Phosphorus, total (as P)	0.017	0.022			0.018	0.016	0.156	0.206
Phosphorus, ortho, dissolved (as P)	0.005	0.005			<0.001	<0.001	0.124	0.179
Aluminum, total ($\mu\text{g}/\text{L}$)	20	30			30	---	---	30
Alum., diss. ($\mu\text{g}/\text{L}$) (0.45 μm filter)	20	20			30	---	---	20
Alum., diss. ($\mu\text{g}/\text{L}$) (0.10 μm filter)	20	20			30	---	---	20
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	1.4	---			2.2	---	---	---

	July 21				Aug. 19			
Depth of sample (ft)	1.5	24	39	52	1.5	30	42	52
Lake stage (ft)		5.12				4.93		
Specific conductance ($\mu\text{S}/\text{cm}$)	594	597	637	651	580	595	645	655
pH (units)	8.4	8.4	7.7	7.5	8.5	8.2	7.4	7.2
Water temperature ($^{\circ}\text{C}$)	22.5	22.0	14.0	12.0	22.0	21.0	14.0	13.0
Secchi-depth (meters)		2.4				2.4		
Dissolved oxygen	8.8	8.0	0.1	0.1	9.8	5.6	0.2	0.1
Phosphorus, total (as P)	0.015	0.017	0.081	0.234	0.008	0.008	0.136	---
Phosphorus, ortho, dissolved (as P)	<0.001	<0.001	0.057	0.220	0.001	0.001	0.135	0.225
Aluminum, total ($\mu\text{g}/\text{L}$)	50	---	---	20	50	---	---	30
Alum., diss. ($\mu\text{g}/\text{L}$) (0.45 μm filter)	30	---	---	<10	40	---	---	10
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	6.4	---	---	---	1.9	---	---	---

Note: Duplicate chlorophyll a sample July 21, 1.5 ft = 6.8 $\mu\text{g}/\text{L}$.

423659088354401 DELAVAN LAKE, AT NORTH END, NEAR LAKE LAWN, WI

LOCATION.--Lat 42°36'59", long 88°35'44", sec.22, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.2 mi².

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

REMARKS.--Lake ice-covered during February sampling.

WATER-QUALITY DATA, OCTOBER 22, 1990 TO MAY 06, 1992
(Milligrams per liter unless otherwise indicated)

	Oct. 22		Feb. 20		Mar. 24		May 06	
Depth of sample (ft)	1.5	32	1.5	32	1.5	32	1.5	32
Lake stage (ft)		4.64		5.34		5.16		5.21
Specific conductance (μS/cm)	587	594	627	631	594	607	625	626
pH (units)	8.5	8.4	8.6	8.7	8.8	8.9	8.6	8.6
Water temperature (°C)	11.5	11.5	2.5	2.5	3.0	4.0	10.5	10.0
Color (Pt-Co. scale)	---	---	---	---	5	5	---	---
Turbidity (NTU)	---	---	---	---	0.80	1.2	---	---
Secchi-depth (meters)		3.7		2.7		2.7		7.5
Dissolved oxygen	10.1	9.8	16.3	15.8	13.8	13.9	10.7	10.8
Hardness, as CaCO ₃	---	---	---	---	250	250	---	---
Calcium, dissolved (Ca)	---	---	---	---	46	46	---	---
Magnesium, dissolved (Mg)	---	---	---	---	34	33	---	---
Sodium, dissolved (Na)	---	---	---	---	27	27	---	---
Potassium, dissolved (K)	---	---	---	---	3	3	---	---
Alkalinity, as CaCO ₃	170	170	---	---	180	180	---	---
Sulfate, dissolved (SO ₄)	---	---	---	---	41	42	---	---
Chloride, dissolved (Cl)	---	---	---	---	66	67	---	---
Fluoride, dissolved (F)	---	---	---	---	0.1	0.2	---	---
Silica, dissolved (SiO ₂)	---	---	---	---	0.4	0.4	---	---
Solids, dissolved, at 180°C	---	---	---	---	326	336	---	---
Nitrogen, nitrate, total (as N)	---	---	---	---	0.75	0.89	---	---
Nitrogen, nitrite, total (as N)	---	---	---	---	0.04	0.05	---	---
Nitrogen, NO ₂ + NO ₃ , total (as N)	---	---	---	---	0.79	0.94	---	---
Nitrogen, ammonia, total (as N)	---	---	---	---	0.02	0.01	---	---
Nitrogen, organic, total (as N)	---	---	---	---	0.88	0.79	---	---
Nitrogen, amm. + org., total (as N)	---	---	---	---	0.90	0.80	---	---
Nitrogen, total (as N)	---	---	---	---	1.7	1.7	---	---
Phosphorus, total (as P)	0.021	0.022	0.017	0.070	0.015	0.017	0.018	0.020
Phosphorus, ortho, dissolved (as P)	0.003	0.003	0.001	0.001	<0.001	<0.001	0.005	0.005
Aluminum, total (μg/L)	---	---	---	---	70	60	40	30
Alum., diss. (μg/L) (0.45 μm filter)	70	70	---	---	30	20	20	10
Iron, dissolved (Fe) μg/L	---	---	---	---	7	<3	---	---
Manganese, dissolved (Mn) μg/L	---	---	---	---	2	2	---	---
Chlorophyll a, phytoplankton (μg/L)	2.4	---	3.5	---	2.5	---	2.1	---

Note: Duplicate total phosphorus sample Mar. 24 at 1.5 ft = 0.016 mg/L.

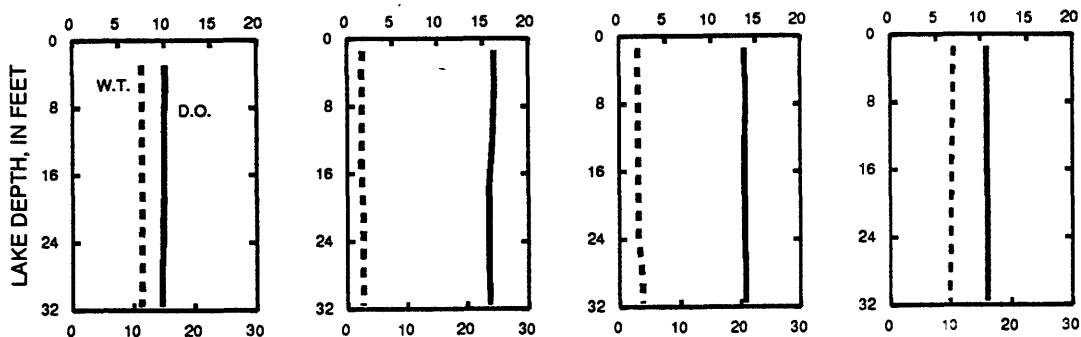
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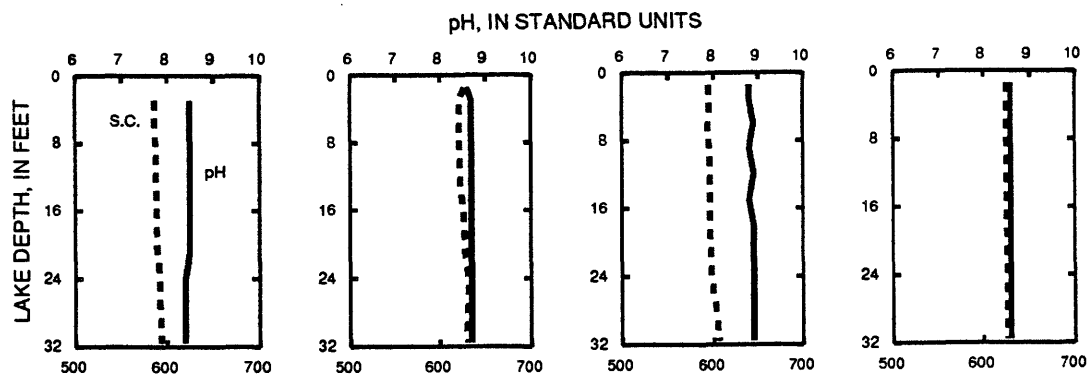
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5-6-92

DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



WATER TEMPERATURE (W.T.), IN DEGREES CELSIUS

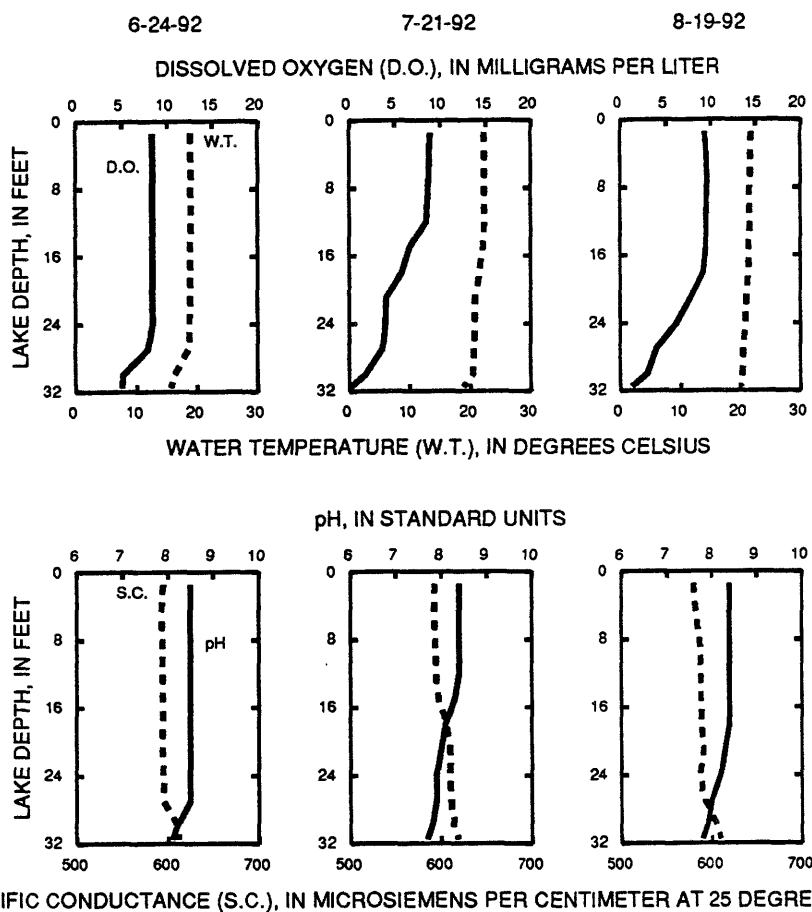


SPECIFIC CONDUCTANCE (S.C.), IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

423659088354401 DELAVAN LAKE, AT NORTH END, NEAR LAKE LAWN, WI--CONTINUED

WATER-QUALITY DATA, JUNE 24 TO AUGUST 19, 1992
(Milligrams per liter unless otherwise indicated)

	June 24		July 21			Aug. 19	
Depth of sample (ft)	1.5	32	1.5	30	32	1.5	32
Lake stage (ft)		5.01		5.12			4.93
Specific conductance ($\mu\text{S}/\text{cm}$)	595	612	593	614	619	580	610
pH (units)	8.5	8.1	8.4	7.8	7.7	8.4	7.8
Water temperature ($^{\circ}\text{C}$)	19.0	15.5	22.5	20.5	19.0	22.0	20.0
Secchi-depth (meters)		4.9		2.3			2.3
Dissolved oxygen	8.4	5.1	9.0	1.8	0.2	9.4	1.3
Phosphorus, total (as P)	0.017	0.078	0.016	0.048	0.051	0.010	0.008
Phosphorus, ortho, dissolved (as P)	<0.001	<0.001	<0.001	0.027	0.027	0.002	0.001
Aluminum, total ($\mu\text{g}/\text{L}$)	40	200	40	---	40	30	30
Alum., diss. ($\mu\text{g}/\text{L}$) (0.45 μm filter)	30	30	30	---	30	40	30
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	1.4	---	5.4	---	---	2.1	---



ROCK RIVER BASIN

423706088363400 DELAVAN LAKE NEAR DELAVAN, WI

LOCATION.--Lat 42°36'27", long 88°36'19", in SW 1/4 NE 1/4 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.

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 National Geodetic Vertical Datum of 1929. Prior to Sept. 5, 1989, staff gage at bridge on North Shore Drive at same datum.

REMARKS.--Estimated daily gage heights: Dec. 26 to Jan. 3 and Jan. 10-23. Records good except estimated daily gage heights, which are fair. Lake was ice covered from Dec. 3-7 and Dec. 16 to Mar. 9. Lake levels controlled by Town of Delavan.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 5.85 ft, Sept. 30, 1986; minimum daily, -4.44 ft Nov. 6, 1989 (Lake drawn down for lake rehabilitation program).

EXTREMES FOR CURRENT YEAR.--Maximum daily gage height, 5.70 ft, Dec. 3; minimum daily, 4.43 ft, Oct. 2, 3.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.44	5.21	5.63	5.18	5.29	5.27	5.28	5.14	5.10	4.95	4.94	4.98
2	4.43	5.20	5.65	5.17	5.29	5.28	5.27	5.14	5.09	4.99	4.93	4.98
3	4.43	5.17	5.70	5.18	5.27	5.28	5.27	5.11	5.09	5.02	4.93	5.02
4	4.52	5.13	5.67	5.19	5.28	5.27	5.28	5.09	5.08	5.01	4.93	5.02
5	4.68	5.09	5.61	5.19	5.28	5.28	5.27	5.08	5.09	5.01	4.92	5.01
6	4.68	5.06	5.55	5.19	5.26	5.30	5.27	5.07	5.10	4.99	4.91	5.05
7	4.68	5.02	5.55	5.19	5.26	5.37	5.25	5.06	5.10	4.98	4.91	5.06
8	4.67	4.99	5.56	5.20	5.25	5.41	5.23	5.06	5.09	4.99	4.95	5.07
9	4.68	4.94	5.58	5.23	5.23	5.46	5.21	5.06	5.08	5.00	4.95	5.10
10	4.68	4.91	5.58	5.23	5.23	5.47	5.19	5.07	5.07	5.00	4.96	5.11
11	4.68	4.91	5.56	5.22	5.23	5.43	5.18	5.08	5.07	5.01	4.96	5.10
12	4.67	4.92	5.55	5.22	5.21	5.37	5.16	5.11	5.06	5.07	4.95	5.09
13	4.66	4.93	5.61	5.23	5.20	5.32	5.12	5.13	5.06	5.17	4.97	5.07
14	4.66	4.95	5.61	5.23	5.19	5.27	5.12	5.12	5.06	5.42	4.95	5.07
15	4.66	5.02	5.62	5.25	5.21	5.22	5.13	5.12	5.04	5.47	4.94	5.09
16	4.64	5.05	5.58	5.26	5.22	5.17	5.21	5.12	5.02	5.42	4.93	5.16
17	4.64	5.06	5.54	5.26	5.21	5.16	5.25	5.13	5.04	5.37	4.93	5.31
18	4.64	5.12	5.49	5.26	5.25	5.13	5.26	5.12	5.07	5.30	4.92	5.36
19	4.66	5.16	5.46	5.25	5.34	5.11	5.25	5.11	5.07	5.24	4.93	5.36
20	4.65	5.19	5.43	5.24	5.34	5.11	5.26	5.11	5.06	5.18	4.92	5.34
21	4.64	5.20	5.40	5.24	5.33	5.11	5.25	5.11	5.04	5.12	4.91	5.34
22	4.64	5.21	5.35	5.26	5.31	5.15	5.22	5.11	5.03	5.06	4.90	5.25
23	4.64	5.23	5.30	5.30	5.27	5.15	5.22	5.14	5.02	5.02	4.90	5.13
24	4.70	5.25	5.27	5.33	5.24	5.16	5.23	5.13	5.01	4.98	4.89	5.06
25	4.85	5.25	5.27	5.32	5.22	5.18	5.23	5.11	5.01	4.98	4.89	5.01
26	4.90	5.25	5.26	5.31	5.22	5.21	5.21	5.11	5.01	4.99	4.94	4.97
27	4.95	5.27	5.24	5.30	5.23	5.22	5.20	5.10	4.99	5.00	4.97	4.93
28	4.97	5.30	5.22	5.29	5.24	5.23	5.18	5.10	4.99	5.01	4.97	4.88
29	5.07	5.39	5.21	5.29	5.25	5.25	5.16	5.10	4.98	5.00	4.99	4.83
30	5.15	5.55	5.20	5.28	---	5.27	5.16	5.10	4.96	5.00	5.00	4.78
31	5.18	---	5.19	5.28	---	5.28	---	5.10	---	4.96	4.99	---
MEAN	4.71	5.13	5.47	5.24	5.25	5.25	5.22	5.10	5.05	5.09	4.94	5.08
MAX	5.18	5.55	5.70	5.33	5.34	5.47	5.28	5.14	5.10	5.47	5.00	5.36
MIN	4.43	4.91	5.19	5.17	5.19	5.11	5.12	5.06	4.96	4.95	4.89	4.78

CAL YR 1991 MEAN 4.85 MAX 5.70 MIN 4.32
WTR YR 1992 MEAN 5.13 MAX 5.70 MIN 4.43

05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI

LOCATION.--Lat 42°36'53", long 88°37'29", in SW 1/4 SE 1/4 sec.20, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on right bank 25 ft upstream from bridge on Borg Road, 1.4 mi southeast of Delavan, and 0.2 mi downstream from Delavan Lake dam outlet.

DRAINAGE AREA.--42.1 mi², 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 920 ft, from topographic map

REMARKS.--Estimated daily discharges: Oct. 28 to Nov. 18, July 16-21, and July 24 to Aug. 11. Records good except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	30	8.6	13	12	13	16	25	.15	.15	.17	3.1
2	.12	45	29	13	12	17	16	25	.15	.17	.15	7.4
3	.11	45	57	14	13	23	16	23	.15	.29	.15	.09
4	1.1	45	54	14	13	23	17	18	.15	.14	.15	.41
5	.84	44	53	14	13	23	17	9.9	.14	.20	.15	4.4
6	.53	44	51	14	12	24	21	9.3	.13	7.8	.15	.91
7	.47	43	50	14	12	25	32	3.5	.13	.07	.15	1.4
8	.44	43	49	14	12	25	32	.72	.14	4.2	.20	6.5
9	.33	42	50	14	11	37	33	1.3	.13	.33	.17	4.9
10	.40	20	50	14	11	56	33	.14	.13	6.5	.16	5.1
11	.54	.20	49	14	10	54	31	.14	.47	3.3	.26	.10
12	.39	.15	50	14	9.7	53	30	.14	.12	11	.28	.19
13	.29	.15	51	14	9.7	53	18	.14	.12	10	.37	3.9
14	.44	.14	38	14	9.9	52	13	.14	.13	120	.15	1.3
15	.33	.13	25	13	10	52	13	.15	.13	170	.14	8.1
16	.16	.12	47	13	10	42	16	.17	.13	120	.14	33
17	.16	.12	46	13	9.7	35	22	.21	.18	90	.14	21
18	.18	.12	46	13	11	30	31	.15	.15	90	.14	22
19	.17	.10	51	13	28	27	34	.15	.14	70	.14	23
20	.15	.09	54	13	50	19	37	.15	.13	52	.15	58
21	.16	.09	51	13	49	14	37	.14	.15	52	.14	100
22	.15	.09	49	13	48	14	35	.15	.15	53	.15	81
23	.15	.09	49	13	48	14	35	.14	.16	48	.14	50
24	1.2	.08	39	13	47	14	34	.14	.20	30	.14	48
25	.76	.07	17	13	40	14	33	.14	.15	.30	.14	48
26	1.2	.07	18	13	13	14	32	.14	2.7	.20	.13	47
27	.88	.08	17	13	13	14	31	.14	.12	.15	.13	45
28	.80	.09	17	12	13	14	29	.14	.12	.15	.14	43
29	1.1	.96	17	12	13	14	27	.14	2.2	.15	.14	41
30	1.0	4.7	14	12	---	16	26	.14	14	.15	.14	18
31	.90	---	13	12	---	16	---	.15	---	.20	.14	---
TOTAL	15.56	408.64	1209.6	411	563.0	841	797	118.96	23.05	940.45	5.04	725.80
MEAN	.50	13.6	39.0	13.3	19.4	27.1	26.6	3.84	.77	30.3	.16	24.2
MAX	1.2	45	57	14	50	56	37	25	14	170	.37	100
MIN	.11	.07	8.6	12	9.7	13	13	.14	.12	.07	.13	.09
AC-FT	31	811	2400	815	1120	1670	1580	236	46	1870	10	1440
CFSM	.01	.34	.98	.33	.49	.68	.67	.10	.02	.76	.00	.61
IN.	.01	.38	1.13	.38	.53	.79	.74	.11	.02	.88	.00	.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1992, BY WATER YEAR (WY)

	MEAN	35.3	26.2	22.5	15.8	22.4	29.7	27.1	11.3	8.31	8.94	2.98	22.7
MAX	127	93.1	51.1	37.7	42.4	71.2	50.7	37.3	32.9	39.0	9.50	110	
(WY)	1990	1986	1986	1985	1984	1986	1991	1987	1984	1986	1987	1989	
MIN	.000	.003	.000	.31	.71	.41	.000	.006	.014	.025	.011	.020	
(WY)	1991	1991	1990	1990	1990	1990	1990	1990	1990	1990	1991	1990	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1984 - 1992

ANNUAL TOTAL	5635.29	6059.10	
ANNUAL MEAN	15.4	16.6	19.4
HIGHEST ANNUAL MEAN			38.7
LOWEST ANNUAL MEAN			11.0
HIGHEST DAILY MEAN	88	Apr 17	170
LOWEST DAILY MEAN	.00	Jan 2	.07
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 9	.08
INSTANTANEOUS PEAK FLOW			194
INSTANTANEOUS PEAK STAGE			8.22
ANNUAL RUNOFF (AC-FT)	11180	12020	14050
ANNUAL RUNOFF (CFSM)	.39	.42	.49
ANNUAL RUNOFF (INCHES)	5.27	5.66	6.62
10 PERCENT EXCEEDS	47	49	56
50 PERCENT EXCEEDS	8.1	11	6.1
90 PERCENT EXCEEDS	.00	.14	.00

(a) Also occurred Nov. 26 and July 7

(b) Also occurred many days during the 1990 and 1991 water years (lake drawn down for lake rehabilitation program)

(c) Also occurred in 1991 water year

(d) Gage height, 7.92 ft

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 October 1989 to September 30, 1991 (discontinued).

TOTAL-PHOSPHORUS DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Automatic pumping sampler from October to December 1983. Manual samples from January 1984 to present.

REMARKS.--Records good except for periods Oct. 28 to Nov. 18, July 16-21, and July 24 to Aug. 11, which are fair. Samples collected using equal-width increment method.

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.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 6.00 mg/L, Jan. 5, 1990; minimum observed, <0.01 mg/L, Mar. 9-10, 1990, and several days during 1992 water year.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 432 lb, May 28, 1984; minimum daily, 0.00 lb, Aug. 9, 13, 1987, and many days during 1990 and 1991 water years.

EXTREMES FOR CURRENT YEAR.--

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.44 mg/L, Dec. 2; minimum observed, <0.01 mg/L, on several days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 46.5 lb, July 14; minimum daily, 0.01 lb, May 10 and Aug. 14-16.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 1991					MAR 1992				
08...	0845	--	0.37	0.110	09...	1005	--	27	0.030
NOV					09...	1520	--	47	0.030
01...	1220	30	--	0.090	19...	1020	--	26	0.030
01...	1425	30	--	0.090	APR				
02...	0915	45	--	0.110	13...	0900	--	13	0.020
02...	1555	45	--	0.080	16...	1055	--	16	0.170
03...	0830	45	--	0.070	16...	1505	--	17	0.040
04...	1140	45	--	0.040	17...	0910	--	17	0.180
04...	1430	45	--	0.060	18...	0815	--	28	<0.010
11...	0855	0.20	--	0.090	19...	0855	--	34	<0.010
15...	1200	0.13	--	0.130	20...	0850	--	39	<0.010
15...	1350	0.13	--	0.130	21...	0915	--	37	<0.010
18...	1015	0.12	--	0.090	24...	1130	--	35	<0.010
DEC					24...	1525	--	34	0.150
02...	0920	--	10	0.040	25...	0850	--	33	0.010
02...	1405	--	38	0.440	25...	1435	--	33	<0.010
09...	1210	--	49	0.030	26...	0845	--	32	<0.010
09...	1510	--	51	0.030	26...	1430	--	31	<0.010
10...	1130	--	51	0.030	27...	0850	--	31	0.020
10...	1410	--	51	0.030	28...	0915	--	29	<0.010
11...	1100	--	49	0.030	MAY				
11...	1450	--	49	0.030	05...	1455	--	10	<0.010
12...	1100	--	52	0.020	18...	0855	--	0.15	0.050
13...	1015	--	52	0.040	JUN				
13...	1440	--	53	0.040	15...	1445	--	0.13	0.130
14...	0900	--	47	0.040	16...	1445	--	0.16	0.180
14...	1445	--	46	0.050	18...	1100	--	0.13	0.160
15...	0715	--	1.4	0.110	19...	1350	--	0.14	0.130
16...	1525	--	47	0.040	20...	1450	--	0.13	0.110
17...	1325	--	46	0.050	22...	0900	--	0.15	0.090
30...	0900	--	12	0.060	JUL				
JAN 1992					03...	0935	--	0.19	0.160
03...	1320	--	14	0.040	04...	0905	--	0.12	0.100
FEB					05...	1330	--	0.12	0.050
04...	0945	--	13	0.020	06...	0900	--	0.13	0.110
19...	1155	--	10	0.080	13...	1225	--	0.75	0.210
19...	1450	--	45	0.080	14...	1545	--	181	0.070
20...	1130	--	50	0.040	15...	1310	--	181	0.030
20...	1430	--	50	0.030	15...	1545	--	183	0.020
21...	0945	--	49	0.030	16...	0915	120	--	0.050
21...	1455	--	49	0.020	16...	1510	120	--	0.060
22...	0855	--	48	0.030	17...	1025	90	--	0.070
22...	1445	--	48	0.020	17...	1500	90	--	0.030
23...	0855	--	48	0.020	18...	0910	90	--	0.060
24...	1100	--	47	0.080	19...	0905	70	--	0.030
24...	1510	--	47	0.030	20...	0925	52	--	0.070
25...	1010	--	46	0.030	21...	1600	52	--	0.020
26...	1015	--	13	0.030	31...	1005	0.20	--	0.100
26...	1440	--	13	0.030	AUG				
27...	0915	--	13	0.030	01...	0920	0.17	--	0.060
28...	1015	--	13	0.030	02...	0900	0.15	--	0.050

WATER-QUALITY DATA. WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
AUG 1992					SEP 1992			
03...	0900	0.15	--	0.040	13...	0900	1.1	0.040
08...	0930	0.20	--	0.030	14...	0855	0.12	0.040
11...	0950	0.26	--	0.020	17...	0925	29	0.040
13...	0950	--	0.71	0.010	17...	1515	18	0.030
13...	1545	--	0.37	0.010	18...	0905	25	0.030
14...	0930	--	0.15	<0.010	18...	1500	26	0.040
17...	1405	--	0.14	0.020	19...	0850	24	0.040
20...	0940	--	0.14	0.150	19...	1550	23	0.040
26...	0855	--	0.13	0.070	20...	0820	23	0.040
27...	0835	--	0.13	0.050	21...	0935	101	0.040
28...	1000	--	0.16	0.030	21...	1510	99	0.050
30...	0905	--	0.13	0.030	22...	1035	96	0.050
SEP					22...	1515	96	0.040
03...	1020	--	0.09	0.070	23...	1000	49	0.030
03...	1520	--	0.09	0.080	23...	1515	49	0.030
04...	1025	--	0.10	0.080	24...	0920	48	0.030
10...	1025	--	51	0.080	25...	0920	48	0.020
10...	1520	--	1.2	0.070	26...	0955	47	0.030
11...	0945	--	0.10	0.050				

[illegible]

LOCATION.--Lat 42°35'50", long 88°49'45", in SW 1/4 sec.27, T.2 N., R.14 E., Rock County, Hydrologic Unit 07090001, on left bank 25 ft downstream from bridge on Carvers Rock Road, 3.3 mi northeast of Clinton, 13 mi northeast of Beloit, and 17.8 mi upstream from mouth.

PERIOD OF RECORD.--September 1939 to current year. Prior to January 1980, all records published as "Turtle Creek near Clinton" (05431500).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 823 ft. from topographic map. Prior to January 16, 1940, non-recording gage, and January 17, 1940 to December 1979, water-stage recorder at site 1.8 mi downstream at a different datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 5-9, 25-29, Dec. 3-8, 15-26, Jan. 14 to Feb. 1, and Feb. 8-17. Records good except those for ice-affected periods, which are fair. Some seasonal regulation caused by dams used to maintain levels of Turtle and Delavan Lakes.

DAILY MEAN VALUES

DAY	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	137	267	106	88	136	134	133	68	53	125	70
2	44	178	201	108	87	136	129	132	68	63	103	67
3	46	144	170	113	89	142	127	131	67	64	81	77
4	75	126	160	113	99	146	123	127	68	62	72	72
5	223	130	150	113	94	146	116	116	77	59	65	66
6	136	120	150	113	94	154	113	93	71	56	62	66
7	85	110	170	113	91	189	115	94	68	54	63	81
8	65	110	250	114	70	192	125	90	66	58	75	78
9	59	110	272	138	80	206	127	83	65	60	73	78
10	55	105	228	143	70	289	128	82	63	61	68	105
11	55	94	210	135	70	258	130	82	65	60	65	90
12	53	73	217	128	68	219	128	86	65	68	65	75
13	54	70	318	127	68	207	122	95	65	127	69	65
14	57	71	256	110	66	201	115	83	63	445	66	63
15	55	105	200	90	66	195	109	79	61	464	64	72
16	54	118	160	110	66	175	169	76	60	287	61	102
17	53	105	150	98	78	169	201	73	66	258	59	342
18	48	125	140	98	255	155	173	72	96	225	60	276
19	55	150	140	96	421	143	175	72	78	201	61	182
20	56	134	140	96	255	131	177	72	64	183	59	146
21	54	105	130	96	229	126	174	71	61	159	58	152
22	51	94	130	100	198	121	167	71	60	139	56	158
23	53	96	130	110	194	122	147	77	60	139	53	168
24	71	99	120	94	192	129	162	80	56	134	53	179
25	220	70	120	94	203	159	166	76	54	129	55	165
26	143	50	120	94	192	164	158	74	55	114	69	150
27	157	60	118	94	150	152	152	73	56	90	73	150
28	147	72	115	94	136	141	146	73	56	77	72	140
29	141	90	115	90	139	143	140	71	56	72	100	123
30	163	359	114	90	---	148	137	70	55	82	119	117
31	132	---	109	90	---	141	---	69	---	129	82	---
TOTAL	2702	3410	5270	3308	3908	5135	4285	2676	1933	4172	2206	3675
MEAN	87.2	114	170	107	135	166	143	86.3	64.4	135	71.2	122
MAX	223	359	318	143	421	289	201	133	96	464	125	342
MIN	42	50	109	90	66	121	109	69	54	53	53	63
CFSM	.44	.58	.86	.54	.69	.84	.73	.44	.33	.68	.36	.62
IN.	.51	.64	1.00	.63	.74	.97	.81	.51	.37	.79	.42	.70

MEAN	103	108	104	105	139	234	172	124	105	93.9	84.5	96.3
MAX	312	388	343	315	518	664	757	486	320	458	278	482
(WY)	1974	1986	1983	1946	1949	1959	1973	1973	1974	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

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1939 - 1992	
ANNUAL TOTAL	37203		42680			
ANNUAL MEAN	102		117		122	
HIGHEST ANNUAL MEAN					289	1973
LOWEST ANNUAL MEAN					43.0	1958
HIGHEST DAILY MEAN	792	Mar 2	464	Jul 15	6400	Apr 21 1973
LOWEST DAILY MEAN	32	Aug 16	42	Oct 1	16	Sep 13 1958
ANNUAL SEVEN-DAY MINIMUM	33	Aug 23	53	Oct 17	17	Sep 9 1958
INSTANTANEOUS PEAK FLOW			(a)570	Jul 14	(b)16500	Apr 21 1973
INSTANTANEOUS PEAK STAGE			(c)6.98	Dec 19	(d)12.85	Apr 21 1973
INSTANTANEOUS LOW FLOW			(e)23	Feb 8	(e)8.0	Dec 29 1956
ANNUAL RUNOFF (CFSM)	.52		.59		.62	
ANNUAL RUNOFF (INCHES)	7.04		8.07		8.44	
10 PERCENT EXCEEDS	187		193		226	
50 PERCENT EXCEEDS	80		105		82	
90 PERCENT EXCEEDS	37		59		42	

(e) Result of freezeup

ROCK RIVER BASIN

441

05432500 PECATONICA RIVER AT DARLINGTON, WI

LOCATION.--Lat 42°40'40", long 90°07'07", in NE 1/4 sec.3, T.2 N., R.3 E., Lafayette County, Hydrologic Unit 07090003, on right bank in Darlington, 0.3 mi downstream from Vinegar Branch, and 3.6 mi upstream from Otter Creek.

DRAINAGE AREA.--273 mi².

PERIOD OF RECORD.--September 1939 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 802.42 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 19, 1939, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 9, 10, Dec. 4-7, 15-27, Jan. 15-22, and Feb. 8-14. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	430	451	204	192	322	201	231	145	110	127	89
2	106	807	334	206	189	309	194	223	143	116	113	92
3	109	426	311	211	248	276	191	209	141	141	111	107
4	115	320	270	212	518	260	191	203	139	132	110	98
5	168	283	270	208	305	260	183	201	139	117	107	91
6	165	266	270	205	214	276	177	194	136	112	104	105
7	132	221	300	205	201	285	175	190	137	112	108	128
8	123	214	326	216	150	274	173	188	133	136	143	115
9	122	210	335	526	150	288	181	188	132	129	132	109
10	117	210	286	356	160	334	185	186	131	117	111	119
11	113	207	274	258	150	267	186	183	129	110	106	108
12	111	198	299	264	150	252	177	215	126	126	105	98
13	107	199	418	366	150	234	166	197	126	222	106	95
14	109	209	338	283	160	227	167	183	130	289	102	102
15	110	284	250	180	170	221	185	180	127	192	100	119
16	107	300	240	170	177	210	223	178	144	150	98	125
17	105	247	230	170	168	211	224	178	159	144	97	223
18	105	367	230	170	235	205	202	179	142	130	96	198
19	106	397	230	170	343	197	278	167	130	128	96	210
20	106	318	220	170	454	193	381	164	132	142	94	148
21	106	285	220	170	702	193	382	161	126	129	92	186
22	106	270	220	200	366	197	346	159	122	122	92	169
23	106	290	220	341	607	197	315	166	129	142	90	135
24	116	352	220	380	842	207	317	165	130	139	91	121
25	405	269	220	233	685	221	294	159	126	135	93	114
26	385	225	220	225	342	213	277	160	120	140	145	118
27	368	293	220	208	440	195	264	159	115	130	122	156
28	230	266	217	199	723	187	250	156	113	119	100	144
29	243	258	215	192	561	209	247	152	114	114	96	121
30	311	472	214	192	---	229	242	149	113	119	93	113
31	238	---	207	194	---	212	---	148	---	149	92	---
TOTAL	4956	9093	8275	7284	9752	7361	6974	5571	3929	4293	3272	3856
MEAN	160	303	267	235	336	237	232	180	131	138	106	129
MAX	405	807	451	526	842	334	382	231	159	289	145	223
MIN	105	198	207	170	150	187	166	148	113	110	90	89
CFSM	.59	1.11	.98	.86	1.23	.87	.85	.66	.48	.51	.39	.47
IN.	.68	1.24	1.13	.99	1.33	1.00	.95	.76	.54	.58	.45	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1992, BY WATER YEAR (WY)

	MEAN	127	138	120	156	214	382	236	187	220	171	139	135
MAX	302	674	338	546	738	951	731	780	773	795	564	487	
(WY)	1985	1962	1983	1960	1953	1959	1959	1960	1969	1950	1951	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1939 - 1992

ANNUAL TOTAL	81854	74616	
ANNUAL MEAN	224	204	185
HIGHEST ANNUAL MEAN			346
LOWEST ANNUAL MEAN			66.5
HIGHEST DAILY MEAN	1110	842	11200
LOWEST DAILY MEAN	64	89	24
ANNUAL SEVEN-DAY MINIMUM	66	93	25
INSTANTANEOUS PEAK FLOW		973	(b)22000
INSTANTANEOUS PEAK STAGE		8.05	20.71
INSTANTANEOUS LOW FLOW		89	(d)17
ANNUAL RUNOFF (CFSM)	.82	.75	.68
ANNUAL RUNOFF (INCHES)	11.15	10.17	9.23
10 PERCENT EXCEEDS	406	328	312
50 PERCENT EXCEEDS	192	184	119
90 PERCENT EXCEEDS	73	106	55

(a) Also occurred July 26, 27, 30, 1965

(b) From rating curve extended above 11,000 ft³/s on basis of slope-area determination of peak flow

(c) Also occurred Aug. 25 and Sept. 1, 2

(d) Result of freezeup

LOCATION.--Lat 42°47'10" long 89°51'40", in SE 1/4 sec. 26, T.4 N., R.5 E., Lafayette County, Hydrologic Unit 07090003, on left bank at downstream side of bridge on State Highway 78, 1.8 mi south of Blanchardville and 4.5 mi upstream from Sawmill Creek.

PERIOD OF RECORD.--September 1939 to September 1986, October 1987 to current year.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 8-10, Dec. 3-8, 16-26, Jan. 15-31, and Feb. 9-13. Records fair except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	308	281	160	152	219	175	165	122	103	105	91
2	91	454	214	160	146	242	171	161	121	110	102	93
3	91	226	200	160	170	211	169	153	119	132	101	98
4	95	192	190	162	268	199	169	150	119	112	100	91
5	117	181	180	162	164	204	162	150	121	107	99	90
6	111	179	180	160	152	214	157	147	116	105	97	100
7	98	156	190	160	148	211	157	146	116	105	102	107
8	97	160	200	163	129	201	153	145	113	111	129	95
9	97	160	223	228	130	221	163	146	113	112	108	95
10	95	160	198	192	140	262	161	144	112	105	102	104
11	94	157	194	172	130	198	165	142	111	103	99	94
12	93	152	214	174	120	189	155	150	111	124	100	92
13	92	152	295	203	130	180	147	145	110	176	111	91
14	94	161	220	173	138	178	148	139	121	208	101	94
15	94	223	187	160	141	176	155	138	114	135	97	105
16	93	209	180	150	139	171	175	138	117	124	97	117
17	93	176	180	140	136	174	174	138	131	120	97	201
18	93	326	170	140	149	170	162	137	122	112	95	172
19	92	274	170	130	161	167	183	133	116	110	95	152
20	92	214	170	130	185	165	218	133	113	116	93	118
21	92	197	170	130	325	164	216	131	110	110	92	163
22	92	191	170	140	218	167	195	131	109	108	92	137
23	92	207	170	210	425	166	187	134	114	120	92	114
24	101	236	170	200	552	172	197	133	114	116	91	109
25	462	188	170	190	329	191	187	131	111	112	96	106
26	283	179	170	180	203	181	183	133	109	115	172	111
27	258	205	166	170	309	169	179	131	106	109	109	150
28	180	184	164	160	500	162	173	129	105	104	99	124
29	212	181	164	160	368	186	172	127	104	102	97	109
30	290	395	164	150	---	200	169	126	104	106	94	106
31	191	---	161	150	---	182	---	124	---	113	91	---
TOTAL	4166	6383	5875	5119	6257	5892	5177	4330	3424	3645	3155	3429
MEAN	134	213	190	165	216	190	173	140	114	118	102	114
MAX	462	454	295	228	552	262	218	165	131	208	172	201
MIN	91	152	161	130	120	162	147	124	104	102	91	90
CFSM	.61	.96	.86	.75	.98	.86	.78	.63	.52	.53	.46	.52
IN.	.70	1.07	.89	.86	1.05	.99	.87	.73	.58	.61	.53	.58

MEAN	108	115	107	123	164	264	189	154	157	133	112	114
MAX	252	311	278	354	597	574	547	584	356	436	253	331
(WY)	1985	1962	1983	1960	1948	1950	1959	1973	1944	1950	1981	1981
MIN	54.9	55.8	47.6	46.4	52.1	62.7	71.5	54.5	59.6	48.2	43.7	44.6
(WY)	1965	1965	1959	1959	1959	1957	1957	1958	1958	1958	1958	1958

(a) Also occurred on Sept. 1, 22, 23, 29, Oct. 2, 6, 1958, and Dec. 19, 20, 1964
(b) Result of freezeup

05434500 PECATONICA RIVER AT MARTINTOWN, WI

LOCATION.--Lat 42°30'34", long 89°47'58", in SE 1/4 sec.32, T.1 N., R.6 E., Green County, Hydrologic Unit 07090003, on right bank about 400 ft downstream from highway bridge in Martintown, 0.3 mi upstream from Wisconsin-Illinois State line and 8.8 mi downstream from Skinner Creek.

DRAINAGE AREA.--1,034 mi².

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1308: 1949-50(M). WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 757.83 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 6, 1940, nonrecording gage at same site and datum. Auxiliary recording gage 1.2 mi downstream, at same datum, which records stage above 7.4 ft.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 17-26, Jan. 17 to Feb. 4, and Feb. 11-16. Records good except those for ice-affected periods, which are fair. 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	383	1020	1750	762	740	1490	816	824	540	423	514	372
2	388	1380	1660	757	740	1230	780	800	532	431	498	358
3	385	1600	1390	761	760	1080	758	772	522	433	457	385
4	413	1420	1120	767	960	1010	746	745	518	487	441	408
5	480	1080	998	764	1140	962	735	724	518	482	438	382
6	554	910	1180	767	1020	959	717	713	519	445	419	377
7	584	826	1390	757	803	978	699	700	510	433	419	400
8	529	736	1310	760	722	973	689	687	507	435	455	430
9	469	697	1280	867	593	968	686	679	500	477	513	424
10	437	769	1190	1110	594	1020	692	674	492	480	502	412
11	443	737	1100	1100	640	1080	715	668	487	446	448	417
12	421	687	1070	927	620	992	716	670	479	439	428	411
13	412	660	1200	885	620	913	691	686	472	520	423	389
14	411	660	1310	951	620	871	667	686	471	771	429	386
15	401	741	1210	912	620	846	667	656	483	888	427	418
16	415	878	954	633	640	824	720	643	493	746	402	433
17	426	922	920	700	668	799	808	630	518	607	396	603
18	406	958	880	660	1020	800	819	618	546	553	392	759
19	403	1170	860	640	1490	779	814	613	529	515	390	755
20	396	1230	840	620	1520	756	918	597	497	508	384	669
21	403	1080	840	620	1620	750	1080	586	482	510	379	669
22	393	962	820	620	1740	750	1100	580	473	498	375	695
23	411	922	820	700	1470	752	1050	582	471	494	373	659
24	406	958	820	800	1510	759	1000	593	477	517	367	557
25	502	1000	820	900	1710	812	1000	594	481	526	367	503
26	912	877	800	880	1750	846	968	587	467	520	376	477
27	1330	785	839	860	1440	823	925	586	440	516	472	489
28	1160	888	816	800	1250	780	890	580	444	494	493	548
29	955	924	790	760	1450	761	861	570	431	467	420	548
30	898	1500	782	740	---	792	841	559	427	463	388	499
31	996	---	774	740	---	839	---	549	---	498	379	---
TOTAL	17122	28977	32533	24520	30470	27994	24568	20151	14726	16022	13164	14832
MEAN	552	966	1049	791	1051	903	819	650	491	517	425	494
MAX	1330	1600	1750	1110	1750	1490	1100	824	546	888	514	759
MIN	383	660	774	620	593	750	667	549	427	423	367	358
CFSM	.53	.93	1.01	.76	1.02	.87	.79	.63	.47	.50	.41	.48
IN.	.62	1.04	1.17	.88	1.10	1.01	.88	.72	.53	.58	.47	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1992, BY WATER YEAR (WY)

	MEAN	515	573	500	580	798	1423	939	764	762	688	543	550
MAX	1226	2429	1492	2049	2512	3155	2943	3200	1944	2772	1531	1920	1920
(WY)	1987	1962	1983	1960	1953	1950	1960	1973	1974	1969	1951	1965	1965
MIN	187	211	162	147	182	259	327	234	233	181	167	166	166
(WY)	1957	1965	1959	1959	1959	1957	1957	1958	1965	1965	1958	1958	1958

SUMMARY STATISTICS

	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1940 - 1992
ANNUAL TOTAL	287095	265079	
ANNUAL MEAN	787	724	719
HIGHEST ANNUAL MEAN			1421
LOWEST ANNUAL MEAN			292
HIGHEST DAILY MEAN	2830	1750	14600
LOWEST DAILY MEAN	270	358	132
ANNUAL SEVEN-DAY MINIMUM	279	374	140
INSTANTANEOUS PEAK FLOW		1780	15100
INSTANTANEOUS PEAK STAGE		9.71	21.46
INSTANTANEOUS LOW FLOW		350	(b).00
ANNUAL RUNOFF (CFSM)	.76	.70	.70
ANNUAL RUNOFF (INCHES)	10.33	9.54	9.45
10 PERCENT EXCEEDS	1410	1100	1290
50 PERCENT EXCEEDS	677	686	492
90 PERCENT EXCEEDS	320	412	250

(a) Also occurred Feb. 26

(b) Result of regulation

ROCK RIVER BASIN

05435945 BADGER MILL CREEK NEAR VERONA, WI

LOCATION.--Lat 42°57'52", long 89°33'54", in NE 1/4 SE 1/4 sec.28, T.6 N., R.8 E., Dane County, Hydrologic Unit 07090004, 2.0 mi southwest of Verona at bridge on State Highway 69.

PERIOD OF RECORD.--June to September 1992.

REMARKS.--Bacteria analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ALKA- LITY LAB (MG/L AS CACO3) (90410)
JUN 1992												
29...	1105	2.7	656	8.4	18.0	1.7	14.6	737	160	15	9700	--
JUL												
30...	0920	3.4	700	7.9	14.0	9.0	8.8	740	88	<10	17000	305
AUG												
21...	1340	2.9	681	8.1	20.5	1.1	10.1	748	115	<10	1200	304

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
JUN 1992											
29...	22	34	<0.10	0.060	4.70	0.030	0.30	0.070	0.050	0.040	10
JUL											
30...	24	39	0.10	0.050	4.90	0.030	<0.20	0.050	0.030	0.030	21
AUG											
21...	24	37	0.20	0.060	5.20	0.040	0.20	0.080	0.050	0.060	10

ROCK RIVER BASIN

445

05436500 SUGAR RIVER NEAR BRODHEAD, WI

LOCATION.--Lat 42°36'42", long 89°23'53", in SW 1/4 sec.26, T.2 N., R.9 E., Green County, Hydrologic Unit 07090004, on left bank at downstream side of highway bridge, 1.2 mi southwest of Brodhead, and 1.9 mi upstream from Sylvester Creek.

DRAINAGE AREA.--523 mi².

PERIOD OF RECORD.--January 1914 to current year. Monthly discharge 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1938, nonrecording gage 20 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 7-9, 26, Dec. 4-6, 15-27, Jan. 14-28, Jan. 31 to Feb. 2, and Feb. 8-17. Records good except those for ice-affected periods, which are fair. Some regulation from dam and powerplant upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	438	1000	312	280	544	389	340	234	168	235	191
2	180	524	1120	315	290	485	361	343	228	174	217	183
3	181	610	985	320	300	445	342	327	223	179	208	192
4	218	606	500	323	356	433	331	314	221	199	200	200
5	238	469	450	323	390	421	322	309	223	193	197	186
6	283	368	460	321	335	422	313	303	224	182	194	184
7	279	290	508	319	300	433	308	298	219	176	194	199
8	248	280	589	323	270	432	302	296	215	184	211	242
9	227	290	614	358	230	445	302	294	210	190	235	232
10	216	305	603	433	230	494	306	290	209	190	215	221
11	209	289	561	432	230	494	323	288	204	188	195	222
12	200	278	525	381	230	443	335	292	198	184	190	208
13	196	263	585	372	220	395	317	294	197	257	207	194
14	196	282	638	360	220	369	304	286	194	359	210	198
15	217	330	500	300	220	354	310	279	197	426	205	197
16	205	413	410	330	220	343	339	275	195	375	194	228
17	195	461	380	320	240	339	382	272	203	307	190	401
18	184	488	360	320	327	337	410	261	211	265	195	670
19	208	560	340	310	530	333	458	258	205	242	173	697
20	188	616	330	310	631	324	579	263	201	239	178	624
21	191	561	350	310	711	324	681	286	193	237	172	524
22	192	451	330	300	809	323	655	257	191	227	174	475
23	193	413	320	300	822	324	561	264	194	233	171	449
24	210	432	320	290	705	326	493	275	198	263	163	368
25	306	438	320	280	730	371	471	266	200	252	164	306
26	445	280	320	270	744	436	454	259	189	246	168	285
27	573	392	320	270	627	421	430	257	185	242	199	283
28	653	380	320	270	508	377	406	254	184	227	208	294
29	612	397	320	271	523	367	366	248	182	214	192	287
30	520	809	320	273	---	400	366	242	181	218	197	270
31	454	---	315	270	---	415	---	238	---	233	229	---
TOTAL	8593	12713	15013	9886	12228	12369	11916	8728	6108	7269	6080	9210
MEAN	277	424	484	319	422	399	397	282	204	234	196	307
MAX	653	809	1120	433	822	544	681	343	234	426	235	697
MIN	176	263	315	270	220	323	302	238	181	168	163	183
CFSM	.53	.81	.93	.61	.81	.76	.76	.54	.39	.45	.38	.59
IN.	.61	.90	1.07	.70	.87	.88	.85	.62	.43	.52	.43	.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1992, BY WATER YEAR (WY)

	MEAN	279	301	265	288	419	672	448	355	333	278	248	292
MAX	788	836	597	1168	1690	1698	1138	1368	853	964	694	1579	
(WY)	1928	1962	1929	1916	1938	1929	1923	1973	1974	1950	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 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1914 - 1992
ANNUAL TOTAL	119784	120113	
ANNUAL MEAN	328	328	348
HIGHEST ANNUAL MEAN			615
LOWEST ANNUAL MEAN			172
HIGHEST DAILY MEAN	2260	Mar 3	10800
LOWEST DAILY MEAN	140	Aug 30	51
ANNUAL SEVEN-DAY MINIMUM	147	Aug 28	71
INSTANTANEOUS PEAK FLOW			1210
INSTANTANEOUS PEAK STAGE		3.74	Dec 2
INSTANTANEOUS LOW FLOW		134	Oct 18
ANNUAL RUNOFF (CFSM)	.63	.63	.67
ANNUAL RUNOFF (INCHES)	8.52	8.54	9.04
10 PERCENT EXCEEDS	557	524	560
50 PERCENT EXCEEDS	271	294	250
90 PERCENT EXCEEDS	162	192	148

(a) From rating curve extended above 7,500 ft³/s
(b) From floodmarks

LOCATION.--Lat 42°33'35" long 88°06'03", in NE 1/4 SW 1/4 sec.11, T.1 N., R.20 E., Kenosha County, Hydrologic Unit 07120004, at Salem.

PERIOD OF RECORD.--February to September 1992.

GAGE-HEIGHT READINGS.--Additional gage-height readings were obtained as follows: July 10, 10.50 ft; July 28, 10.55 ft; Aug. 10, 10.50 ft; and Aug. 15, 10.48 ft.

REMARKS.--Lake sampled near center of lake at a depth of about 25 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 04 TO AUGUST 17, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 02		June 09		July 27		Aug. 17	
Depth of sample (ft)	1.5	23	1.5	24	1.5	23	1.5	23	1.5	23
Lake stage (ft)	---	---	11.02	---	10.74	---	10.58	---	10.44	---
Specific conductance (μS/cm)	590	675	636	637	642	675	630	738	647	788
pH (units)	8.6	7.8	8.6	8.6	8.7	7.5	8.4	7.1	8.5	7.0
Water temperature (°C)	4.0	3.5	5.5	5.5	21.5	13.0	24.0	13.5	22.5	14.5
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.6	1.8	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.4	---	2.2	---	1.1	---	0.8	---
Dissolved oxygen	16.5	2.9	13.6	13.6	10.7	0.1	10.1	0.2	9.5	0.0
Hardness, as CaCO ₃	---	---	260	270	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	50	52	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	33	34	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	32	32	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	180	180	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	45	45	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	72	71	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	1.1	1.1	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	386	386	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	1.2	1.2	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.02	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.80	1.0	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.037	0.027	0.020	0.023	0.026	0.060	0.022	0.184
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.003	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	19	---	9.0	---	12	---	12	---

2-4-92

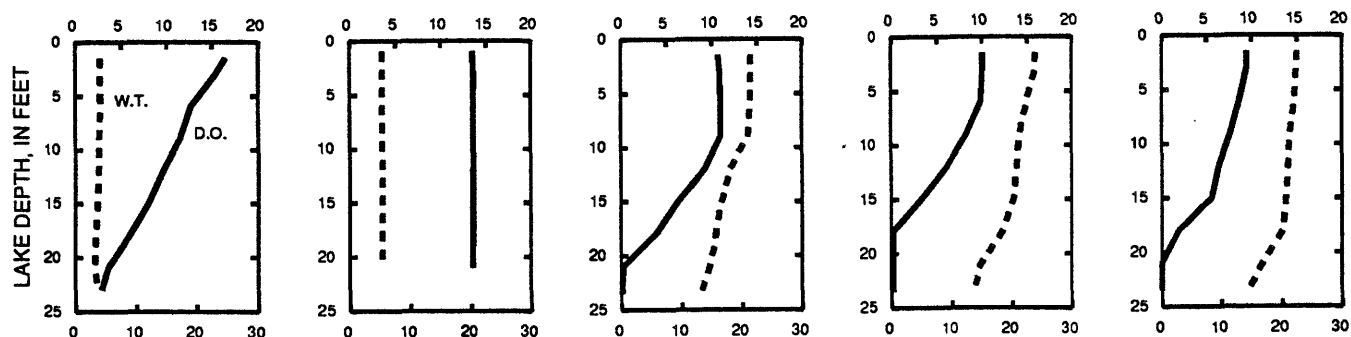
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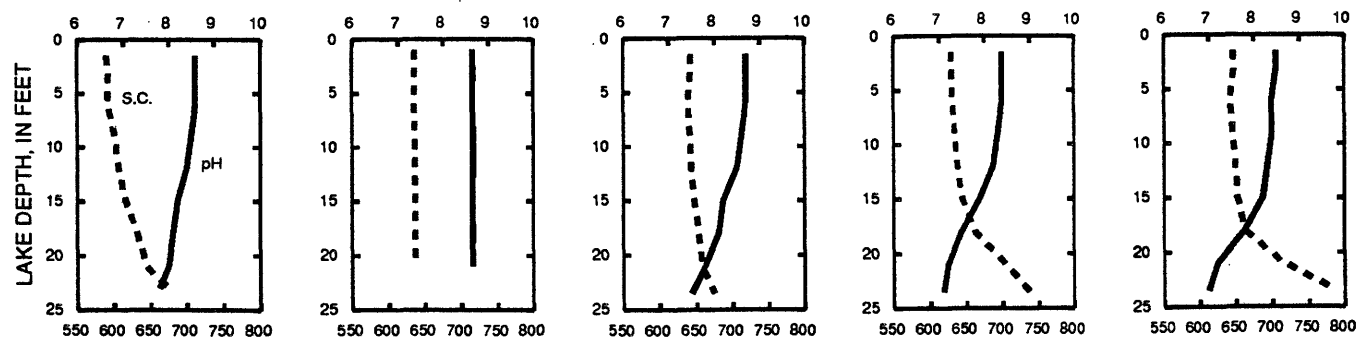
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DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



WATER TEMPERATURE (W.T.), IN DEGREES CELSIUS

pH, IN STANDARD UNITS



SPECIFIC CONDUCTANCE (S.C.), IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

ILLINOIS RIVER BASIN

447

05543830 FOX RIVER AT WAUKESHA, WI

LOCATION.--Lat 43°00'17", long 88°14'37", in SW 1/4 sec.3, T.6 N., R.18 E., Waukesha County, Hydrologic Unit 07120006, on left bank 20 ft downstream from Prairie Street bridge in Waukesha, 1.0 mi downstream from dam and 3.2 mi downstream from Pewaukee River.

DRAINAGE AREA.--126 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 793.04 ft above National Geodetic Vertical Datum of 1929 (levels by city of Waukesha).

REMARKS.--Estimated daily discharges: Aug. 26 to Sept. 23 and ice-affected periods, Dec. 5, 6, Jan. 15-17, and Feb. 9, 10. Records good except those for estimated daily discharges, which are fair. There is occasional regulation from mill dam 1.0 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	280	336	97	71	159	171	145	50	30	41	44
2	49	288	299	102	70	163	160	120	65	31	34	44
3	55	273	236	114	72	166	148	105	42	31	36	70
4	132	235	222	126	81	165	142	96	40	31	41	52
5	205	204	210	128	77	167	136	94	41	29	43	45
6	239	180	200	125	78	187	133	88	40	28	30	40
7	192	150	207	123	76	216	129	83	36	27	47	44
8	143	132	254	129	59	235	125	80	34	41	63	70
9	117	117	298	147	58	264	134	79	35	38	59	120
10	103	107	290	157	58	300	140	73	36	39	42	100
11	90	103	270	156	60	294	147	77	34	34	37	80
12	79	103	302	150	56	275	148	98	32	43	51	50
13	75	105	355	146	56	247	138	99	37	126	59	42
14	81	118	357	135	57	222	131	87	32	211	51	90
15	82	164	287	110	63	196	143	81	34	163	40	120
16	75	180	267	100	62	184	245	74	32	115	34	150
17	69	174	236	90	61	189	323	66	61	90	34	200
18	71	186	195	86	80	190	305	60	76	78	34	160
19	63	191	172	76	114	182	283	59	74	58	31	140
20	62	184	153	72	116	176	274	57	61	39	30	130
21	61	176	141	72	122	167	253	53	47	44	28	150
22	59	165	136	77	119	157	226	60	39	49	30	130
23	56	159	128	85	140	156	209	74	38	42	28	110
24	108	157	119	73	142	160	205	76	37	39	29	101
25	192	144	114	74	131	184	204	61	34	40	39	92
26	230	133	111	69	123	204	195	56	33	36	60	94
27	223	134	107	67	124	203	185	57	31	37	90	108
28	211	131	105	68	148	195	176	54	29	40	86	106
29	253	170	104	70	161	190	174	48	29	35	60	102
30	278	295	102	70	---	188	166	43	30	38	52	92
31	262	---	99	71	---	181	---	41	---	39	48	---
TOTAL	3952	5138	6412	3165	2635	6162	5548	2344	1239	1721	1387	2876
MEAN	127	171	207	102	90.9	199	185	75.6	41.3	55.5	44.7	95.9
MAX	278	295	357	157	161	300	323	145	76	211	90	200
MIN	37	103	99	67	56	156	125	41	29	27	28	40
CFSM	1.01	1.36	1.64	.81	.72	1.58	1.47	.60	.33	.44	.36	.76
IN.	1.17	1.52	1.89	.93	.78	1.82	1.64	.69	.37	.51	.41	.85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1992, BY WATER YEAR (WY)

	MEAN	75.6	81.7	85.4	61.8	83.9	200	205	120	76.3	63.6	55.4	75.7
MAX	346	303	207	188	213	451	489	371	165	188	146	385	
(WY)	1987	1986	1992	1973	1984	1974	1973	1990	1975	1969	1980	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	1964	1963	1977	1964	1963	1963	1963	

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1963 - 1992

ANNUAL TOTAL	46770	42579	
ANNUAL MEAN	128	116	101
HIGHEST ANNUAL MEAN			172
LOWEST ANNUAL MEAN			31.6
HIGHEST DAILY MEAN	747	357	2160
LOWEST DAILY MEAN	25	27	(a)3.2
ANNUAL SEVEN-DAY MINIMUM	29	30	3.3
INSTANTANEOUS PEAK FLOW		479	2260
INSTANTANEOUS PEAK STAGE		4.57	7.42
INSTANTANEOUS LOW FLOW		12	(b)3.0
ANNUAL RUNOFF (CFSM)	1.02	.92	.80
ANNUAL RUNOFF (INCHES)	13.81	12.57	10.86
10 PERCENT EXCEEDS	268	224	222
50 PERCENT EXCEEDS	97	100	60
90 PERCENT EXCEEDS	36	36	16

(a) Also occurred Jan. 1, 1964

(b) Result of freezeup

425103088261500 EAGLE SPRING LAKE AT EAGLEVILLE, WI

LOCATION.--Lat 42°51'03" long 88°26'15", in SE 1/4 NW 1/4 sec.36, T.5 N., R.17 E., Waukesha County, Hydrologic Unit 07120006, at Eagleville.

DRAINAGE AREA.--33.2 mi².

PERIOD OF RECORD.--April 1991 to current year.

REMARKS.--Lake sampled near southeast end of lake at a lake depth of about 8 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 04 TO AUGUST 11, 1991
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 07		June 01		July 14		Aug. 11	
Depth of sample (ft)	1.0	4.0	1.5	3.0	1.5	4.0	1.5	8.0	1.5	7.5
Lake stage (ft)	---	---	10.66	10.66	10.65	10.65	10.80	10.80	10.58	10.58
Specific conductance (μS/cm)	510	598	460	460	472	474	446	475	490	507
pH (units)	7.6	7.8	8.3	8.4	8.5	8.5	8.2	8.1	8.2	8.1
Water temperature (°C)	4.5	6.0	9.5	9.5	21.0	20.0	22.0	22.0	26.0	24.5
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.2	1.00	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.4	1.4	1.6	1.6	1.9	1.9	1.7	1.7
Dissolved oxygen	17.8	18.2	12.2	12.2	13.6	13.7	8.1	8.1	11.7	8.3
Hardness, as CaCO ₃	---	---	250	250	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	51	52	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	30	30	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	5.0	5.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	1	1	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	220	220	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	20	20	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	13	13	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	3.5	3.5	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	276	274	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	1.2	1.2	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.02	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.50	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.006	0.007	0.023	0.039	0.016	0.015	0.014	<0.020
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	5.0	---	5.0	---	7.4	---	6.5	---

2-4-92

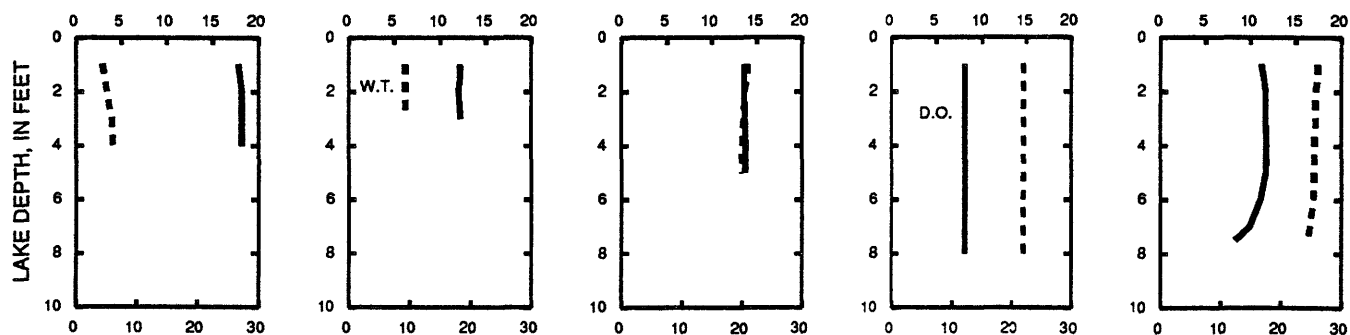
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6-1-92

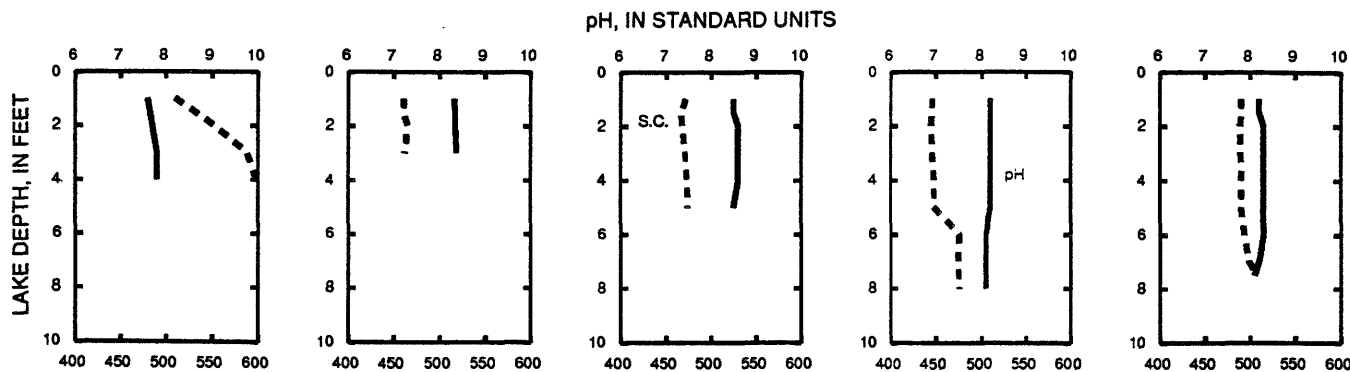
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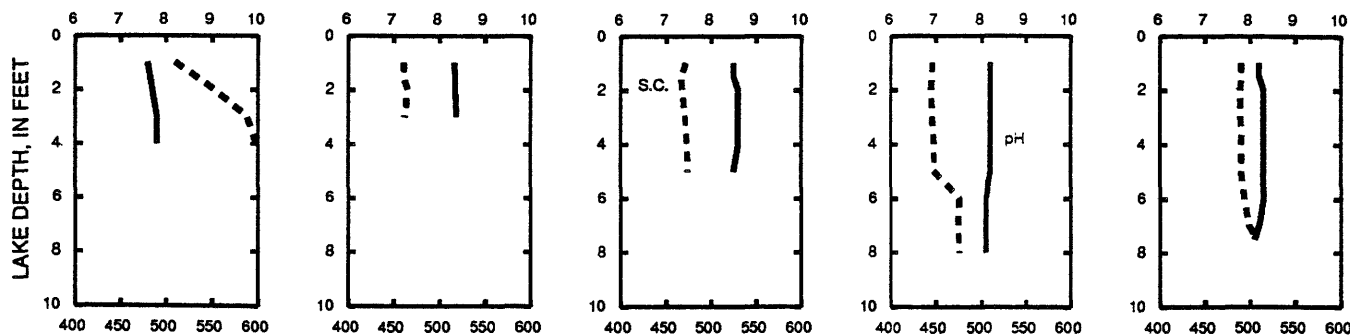
DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



WATER TEMPERATURE (W.T.), IN DEGREES CELSIUS



pH, IN STANDARD UNITS



SPECIFIC CONDUCTANCE (S.C.), IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

ILLINOIS RIVER BASIN

449

05544200 MUKWONAGO RIVER AT MUKWONAGO, WI

LOCATION.--Lat 42°51'24", long 88°19'40", in NE 1/4 NE 1/4 sec.35, T.5 N., R.18 E., Waukesha County, Hydrologic Unit 07120006, on left bank 100 ft upstream from bridge on State Highway 83 in Mukwonago, 100 ft downstream from railroad bridge, and 800 ft downstream from dam.

DRAINAGE AREA.--74.1 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 779.23 ft above National Geodetic Vertical Datum of 1929 (South-eastern Wisconsin Regional Planning Commission bench mark). Prior to Oct. 19, 1981, at datum 0.85 ft higher.

REMARKS.--Estimated daily discharges: Ice-affected period, Jan. 19-21. Records good except those for ice-affected period, which is fair. Discharge affected by manipulation of gates at dams 800 ft and 11.4 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	170	118	37	41	69	67	55	30	23	25	36
2	14	164	120	39	41	68	65	54	28	25	53	24
3	17	149	119	42	42	67	63	52	28	28	38	22
4	38	105	111	44	44	66	62	43	30	47	26	23
5	67	68	104	47	45	66	59	40	30	32	26	22
6	67	53	96	64	44	85	58	40	26	22	25	32
7	86	45	94	74	43	98	37	38	27	22	24	37
8	90	36	93	72	42	118	30	31	29	28	50	43
9	85	34	71	83	40	143	34	28	30	44	53	55
10	68	36	64	84	40	149	48	28	29	52	53	58
11	59	36	64	81	39	119	59	31	27	47	29	46
12	54	37	70	78	39	104	59	33	25	47	19	39
13	49	38	77	75	40	98	57	48	23	80	21	24
14	50	40	86	72	42	92	56	53	22	121	23	22
15	47	47	95	66	44	64	66	57	16	117	23	26
16	45	73	97	61	44	47	85	54	14	119	22	74
17	45	97	92	44	42	35	88	52	33	119	22	114
18	43	96	84	30	45	33	86	43	64	90	22	104
19	23	92	79	30	52	37	87	28	63	44	21	94
20	17	86	76	29	69	39	86	23	61	31	20	84
21	20	67	72	27	75	39	85	22	57	45	22	50
22	22	60	48	25	75	46	81	24	28	46	20	36
23	24	62	38	37	73	60	53	28	17	46	18	36
24	29	65	40	43	71	76	45	30	18	47	17	35
25	43	61	41	46	69	83	49	31	19	42	16	34
26	59	57	26	46	66	81	54	33	19	45	35	34
27	152	56	21	45	65	77	76	31	24	44	44	36
28	185	54	25	43	66	73	82	28	25	39	44	36
29	190	61	29	42	67	71	78	31	26	26	43	34
30	182	106	32	41	---	71	60	29	25	24	40	21
31	174	---	34	41	---	70	---	30	---	28	34	---
TOTAL	2057	2151	2216	1588	1505	2344	1915	1148	893	1570	928	1331
MEAN	66.4	71.7	71.5	51.2	51.9	75.6	63.8	37.0	29.8	50.6	29.9	44.4
MAX	190	170	120	84	75	149	88	57	64	121	53	114
MIN	13	34	21	25	39	33	30	22	14	22	16	21
CFSM	.90	.97	.96	.69	.70	1.02	.86	.50	.40	.68	.40	.60
IN.	1.03	1.08	1.11	.80	.76	1.18	.96	.58	.45	.79	.47	.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1992, BY WATER YEAR (WY)

	50.7	57.4	57.7	46.3	53.4	80.8	78.7	63.5	48.7	43.7	43.5	50.5
MEAN	50.7	57.4	57.7	46.3	53.4	80.8	78.7	63.5	48.7	43.7	43.5	50.5
MAX	98.7	110	83.7	77.8	83.7	151	147	155	138	76.1	83.5	88.7
(WY)	1987	1986	1983	1974	1974	1974	1979	1975	1975	1978	1979	1986
MIN	25.5	29.2	26.2	22.8	31.1	43.9	43.3	16.9	14.4	13.3	18.5	23.5
(WY)	1990	1977	1990	1977	1978	1981	1977	1977	1988	1988	1991	1976

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1973 - 1992

ANNUAL TOTAL	18130.4		19646									
ANNUAL MEAN	49.7		53.7							56.1		
HIGHEST ANNUAL MEAN										90.3		1974
LOWEST ANNUAL MEAN										30.8		1977
HIGHEST DAILY MEAN	190	Oct 29	190	Oct 29						275	Mar 6	1974
LOWEST DAILY MEAN	9.4	Sep 24	13	Oct 1						1.8	Dec 23	1975
ANNUAL SEVEN-DAY MINIMUM	12	Sep 24	19	Aug 19						6.8	Oct 31	1988
INSTANTANEOUS PEAK FLOW			204	Oct 27						(a)300	Mar 5	1976
INSTANTANEOUS PEAK STAGE			3.02	Oct 27						3.55	Sep 29	1986
ANNUAL RUNOFF (CFSM)	.67		.72							.76		
ANNUAL RUNOFF (INCHES)	9.10		9.86							10.28		
10 PERCENT EXCEEDS	94		92							102		
50 PERCENT EXCEEDS	42		45							48		
90 PERCENT EXCEEDS	15		23							22		

(a) Gage height, 2.50 ft, datum then in use

425425088083500 LITTLE MUSKEGO LAKE AT MUSKEGO, WI

LOCATION.--Lat 42°54'25", long 88°08'35", in SE 1/4 NW 1/4 sec.9, T.5 N., R.20 E., Waukesha County, Hydrologic Unit 07120006, at Muskego.

DRAINAGE AREA.--11.6 mi².

PERIOD OF RECORD.--October 1986 to current year.

REVISIONS.--The labels for dissolved oxygen and water temperature for the plot of 2-24-87 are reversed. Dissolved oxygen is the solid line and water temperature is the dashed line.

REMARKS.--Lake sampled about 1,000 ft north-northwest of dam outlet at an approximate lake depth of 65 ft. An aeration system operated from April to November 1987-91 was not operated in 1992; during the years the system was operating the lake's physical and chemical measurements may have been disrupted. Water-quality analyses by Wisconsin State Laboratory of Hygiene. Lake ice-covered during February sampling. Published previously as station number 425450088083500.

WATER-QUALITY DATA, FEBRUARY 06 TO MAY 27, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 06		Apr. 08		May 07		May 27			
Depth of sample (ft)	1.5	66	1.5	60	1.5	36	66	1.5	21	65
Lake stage (ft)	---	---	---	---	98.00	---	---	98.22	---	---
Specific conductance (μS/cm)	651	745	673	677	706	716	721	612	668	703
pH (units)	8.6	7.9	8.4	8.7	8.8	8.5	8.0	8.6	8.3	7.8
Water temperature (°C)	4.0	3.5	8.0	5.0	12.0	9.5	7.0	15.5	13.5	7.5
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.7	2.5	---	---	---	---	---	---
Secchi-depth (meters)	3.8	---	1.3	---	1.3	---	---	1.6	---	---
Dissolved oxygen	17.2	8.5	13.0	11.8	11.9	7.8	3.3	10.8	6.0	0.2
Hardness, as CaCO3	---	---	270	270	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	54	53	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	34	34	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	39	39	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	210	210	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	42	42	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	75	75	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	0.8	0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	396	398	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.32	0.33	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.03	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.60	---	---	---	---	---	---
Phosphorus, total (as P)	0.010	0.220	0.019	0.019	0.018	0.019	0.022	0.020	0.014	0.092
Phosphorus, ortho, dissolved (as P)	0.003	0.157	0.003	---	0.002	0.002	0.006	<0.002	<0.002	0.060
Arsenic, dissolved (as As) (μg/L)	---	---	<10	<10	<10	<10	<10	---	---	<10
Iron, dissolved (Fe) μg/L	---	---	<50	80	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	5.0	---	13	---	17	---	---	26	---	---

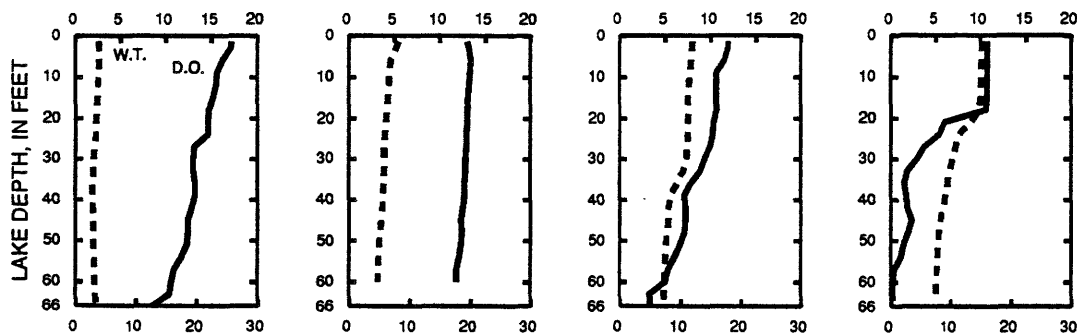
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4-8-92

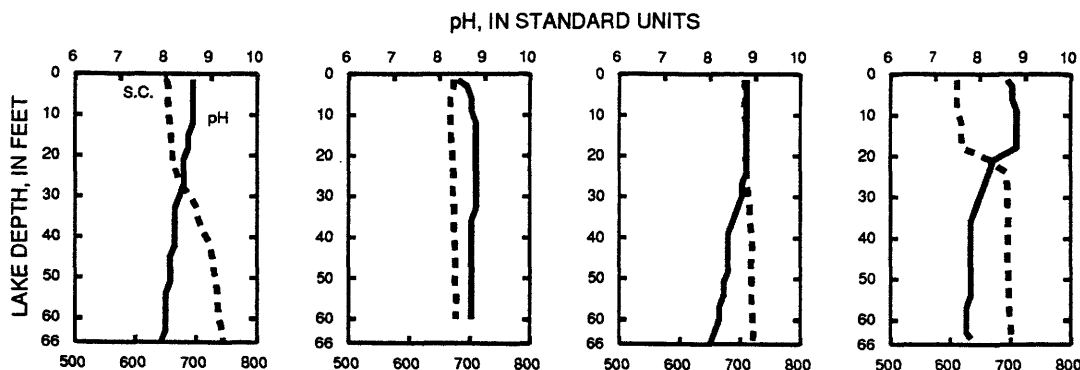
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DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



WATER TEMPERATURE (W.T.), IN DEGREES CELSIUS



SPECIFIC CONDUCTANCE (S.C.), IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

425425088083500 LITTLE MUSKEGO LAKE AT MUSKEGO, WI--CONTINUED

WATER-QUALITY DATA, JUNE 10 TO AUGUST 05, 1992
(Milligrams per liter unless otherwise indicated)

	June 10			June 24			July 08		
Depth of sample (ft)	1.5	15	63	1.5	21	64	1.5	21	64
Lake stage (ft)	98.25			98.34			98.41		
Specific conductance ($\mu\text{S}/\text{cm}$)	712	647	714	609	681	705	606	688	710
pH (units)	7.8	8.5	7.8	8.6	7.9	7.7	8.8	7.9	7.7
Water temperature ($^{\circ}\text{C}$)	8.0	16.0	7.5	19.5	14.0	8.0	22.0	14.5	8.0
Secchi-depth (meters)	2.2			3.5			3.0		
Dissolved oxygen	0.1	7.1	0.1	9.1	2.9	0.1	9.5	2.6	0.1
Phosphorus, total (as P)	0.015	0.009	0.100	0.018	0.020	0.100	0.019	0.012	0.154
Phosphorus, ortho, dissolved (as P)	<0.002	<0.002	0.082	<0.002	<0.002	0.092	0.004	0.002	0.133
Arsenic, dissolved (as As) ($\mu\text{g}/\text{L}$)	---	---	<10	---	---	<10	---	---	<10
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	5.0	---	---	4.0	---	---	6.0	---	---

	July 22			Aug. 05		
Depth of sample (ft)	1.5	24	64	1.5	24	66
Lake stage (ft)	98.73			98.74		
Specific conductance ($\mu\text{S}/\text{cm}$)	590	680	694	600	677	700
pH (units)	8.9	7.8	7.6	8.8	7.9	7.6
Water temperature ($^{\circ}\text{C}$)	22.5	14.0	8.5	22.0	15.5	8.5
Secchi-depth (meters)	1.8			2.3		
Dissolved oxygen	9.2	0.6	0.9	8.9	0.7	0.9
Phosphorus, total (as P)	0.018	0.020	0.180	0.013	0.020	0.180
Phosphorus, ortho, dissolved (as P)	0.002	0.002	0.153	0.002	<0.002	0.157
Arsenic, dissolved (as As) ($\mu\text{g}/\text{L}$)	---	---	<10	---	---	<10
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	7.5	---	---	7.4	---	---

6-10-92

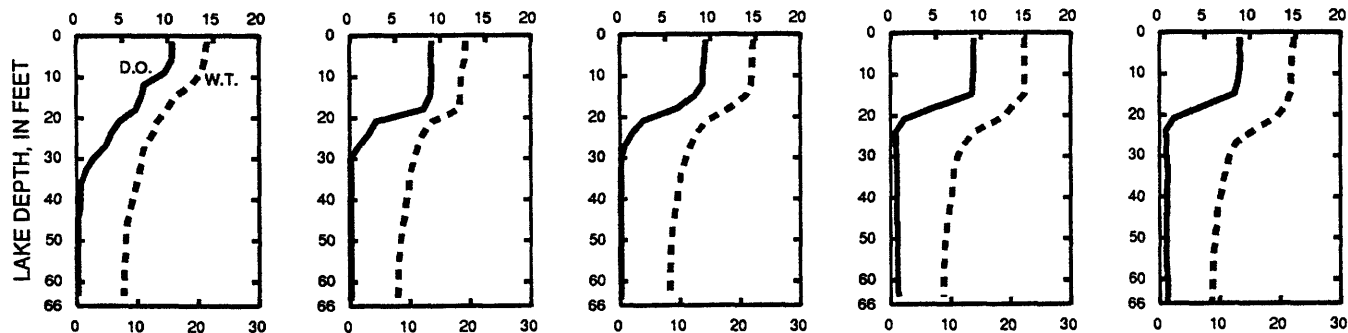
6-24-92

7-8-92

7-22-92

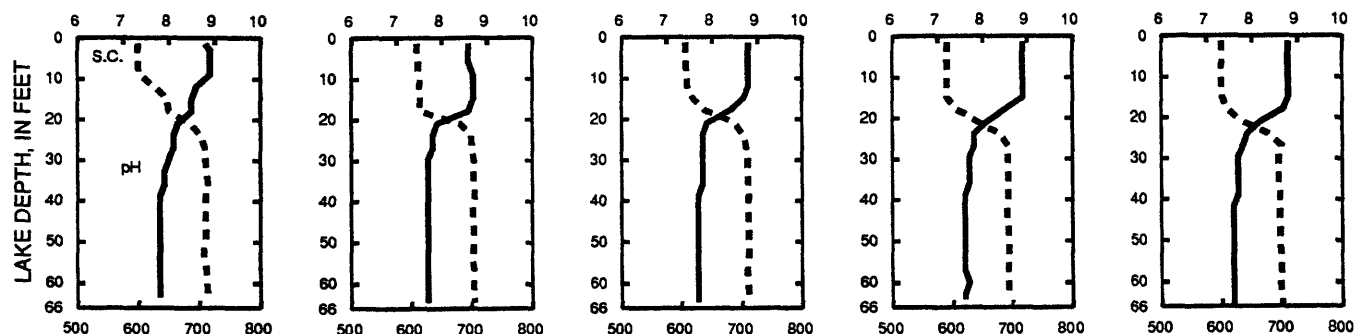
8-5-92

DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



WATER TEMPERATURE (W.T.), IN DEGREES CELSIUS

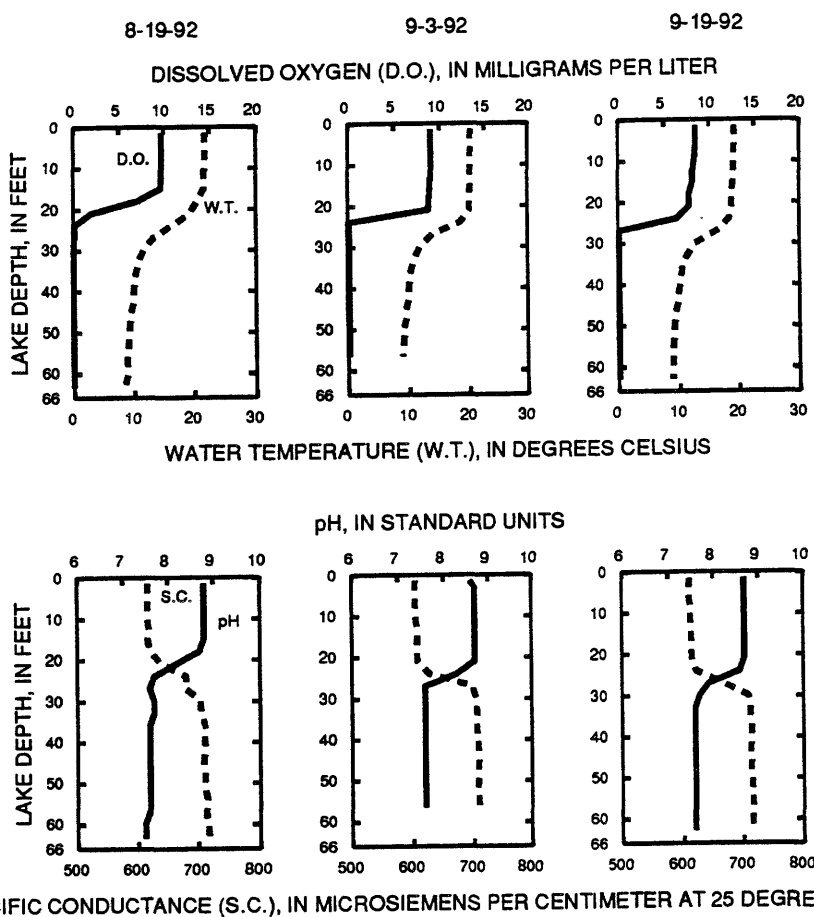
pH, IN STANDARD UNITS



SPECIFIC CONDUCTANCE (S.C.), IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

WATER-QUALITY DATA, AUGUST 19 TO SEPTEMBER 19, 1992
(Milligrams per liter unless otherwise indicated)

	Aug. 19			Sep. 03			Sep. 19		
Depth of sample (ft)	1.5	24	63	1.5	27	56	1.5	30	63
Lake stage (ft)	98.73			98.76			98.94		
Specific conductance ($\mu\text{S}/\text{cm}$)	617	681	718	604	699	709	611	709	716
pH (units)	8.8	7.7	7.5	8.6	7.6	7.6	8.7	7.7	7.6
Water temperature ($^{\circ}\text{C}$)	22.0	16.5	8.5	20.0	14.0	9.0	19.0	12.5	9.0
Secchi-depth (meters)	1.9			2.1			2.2		
Dissolved oxygen	9.8	0.1	0.0	9.1	0.1	0.1	8.5	0.1	0.1
Phosphorus, total (as P)	0.013	0.016	0.220	0.015	0.024	0.210	0.013	0.065	0.240
Phosphorus, ortho, dissolved (as P)	0.002	0.003	0.182	0.002	0.013	0.189	<0.002	0.054	0.200
Arsenic, dissolved (as As) ($\mu\text{g}/\text{L}$)	---	---	<10	---	---	<10	---	---	<10
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	9.5	---	---	8.8	---	---	12	---	---



425344088070100 BIG MUSKEGO LAKE, BASS BAY, NEAR MUSKEGO, WI

LOCATION.--Lat 42°53'44", long 88°07'01", in SW 1/4 NE 1/4 sec.15, T.5 N., R.20 E., Waukesha County, Hydrologic Unit 07120006, 1.3 mi southeast of Muskego.

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

REMARKS.--Lake sampled near center of lake at depth of about 26 ft. Lake ice-covered during February sampling. Lake stages read at outlet of Big Muskego Lake. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 06 TO AUGUST 19, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 06		Apr. 09		June 24		July 22		Aug. 19	
Depth of sample (ft)	1.5	24	1.5	23	1.5	22	1.5	23	1.5	22
Lake stage (ft)	---	---	---	11.81	---	---	---	11.33	---	11.21
Specific conductance ($\mu\text{S}/\text{cm}$)	544	756	541	553	522	593	511	600	534	654
pH (units)	8.7	7.4	8.7	8.5	8.4	7.2	8.4	7.1	8.4	7.0
Water temperature ($^{\circ}\text{C}$)	4.0	3.5	8.5	7.0	18.5	14.0	22.5	16.0	22.0	16.5
Secchi-depth (meters)	---	---	---	0.9	---	1.0	---	1.0	---	1.3
Dissolved oxygen	19.4	0.8	16.2	12.7	9.3	0.1	9.1	0.5	8.9	0.0
Phosphorus, total (as P)	---	---	0.026	0.047	0.050	0.270	0.036	0.280	0.036	0.490
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	19	---	17	---	14	---	14	---

2-6-92

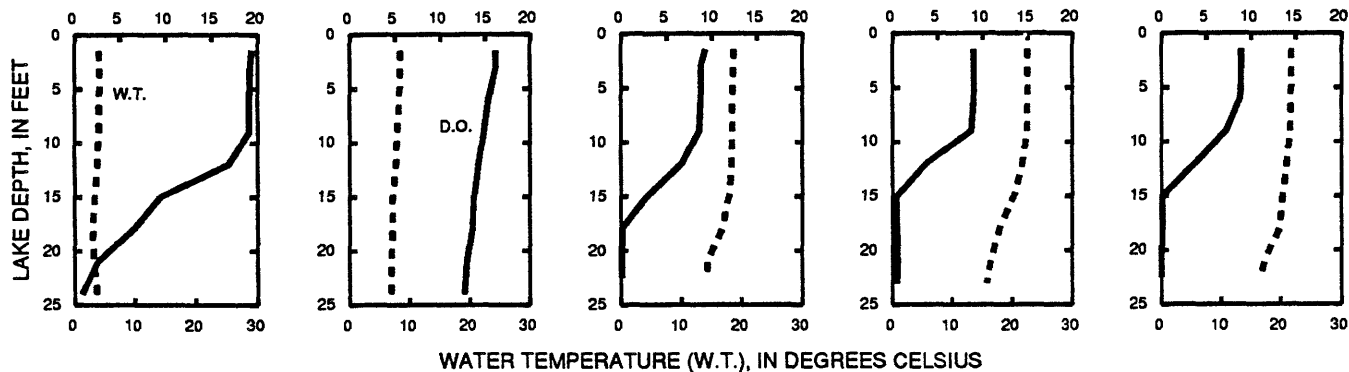
4-9-92

6-24-92

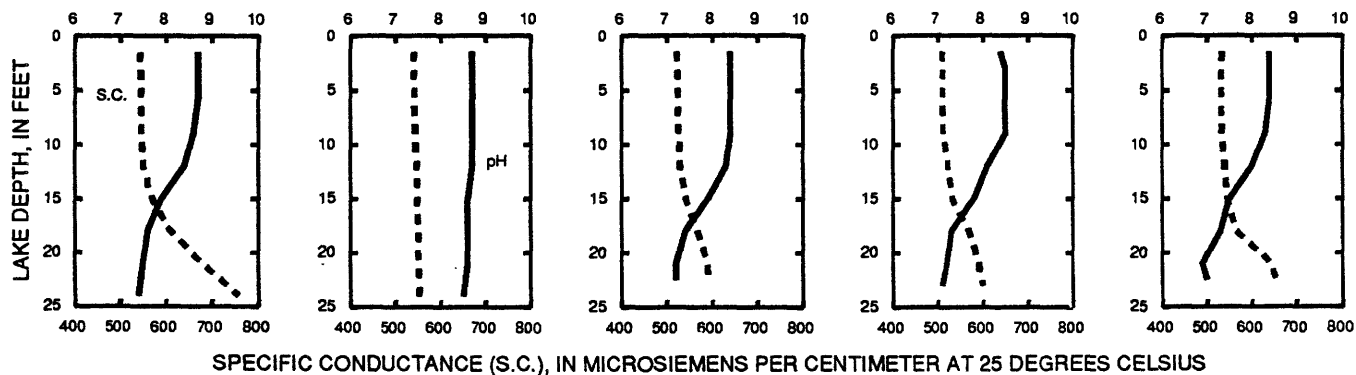
7-22-92

8-19-92

DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



pH, IN STANDARD UNITS



ILLINOIS RIVER BASIN

425212088072800 BIG MUSKEGO LAKE, SOUTH SITE, NEAR MUSKEGO, WI

LOCATION.--Lat 42°52'12", long 88°07'28", in NW 1/4 NW 1/4 sec.27, T.5 N., R.20 E., Waukesha County, Hydrologic Unit 07120006, near Muskego.

DRAINAGE AREA.--33.9 mi².

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

REMARKS.--Lake sampled at south end of lake at a depth of about 3 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 06 TO AUGUST 19, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 06		Apr. 09	June 24		July 22		Aug. 19	
Depth of sample (ft)	0.5	2.5	1.5	0.5	2.0	0.5	2.0	0.5	1.5
Lake stage (ft)	---	---	11.81	---	---	11.33	---	11.21	---
Specific conductance (μS/cm)	404	687	563	524	524	492	492	543	540
pH (units)	8.4	8.3	8.4	9.2	9.1	9.0	9.1	8.8	8.8
Water temperature (°C)	2.0	5.0	11.0	18.5	18.5	20.5	21.0	21.5	21.0
Color (Pt-Co. scale)	---	---	20	---	---	---	---	---	---
Turbidity (NTU)	---	---	7.4	---	---	---	---	---	---
Secchi-depth (meters)	---	---	0.6	0.3	---	0.4	---	0.2	---
Dissolved oxygen	16.5	17.3	10.6	10.7	10.7	10.0	10.0	9.8	9.6
Hardness, as CaCO ₃	---	---	250	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	50	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	30	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	25	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	190	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	46	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	49	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	344	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.25	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.03	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.1	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.049	0.150	0.140	0.095	0.125	0.135	0.137
Phosphorus, ortho, dissolved (as P)	---	---	0.002	<0.002	<0.002	0.002	0.002	0.002	0.002
Iron, dissolved (Fe) μg/L	---	---	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	55	44	---	37	---	39	---

455

LOCATION.--Lat 42°51'09", long 88°07'50", in SE 1/4 NE 1/4 sec.33, T.5 N., R.20 E., Waukesha County, Hydrologic Unit 071200006, on left bank 8 ft upstream of dam outlet of Muskego Lake, 700 ft north of Muskego Dam Drive, 2 mi northeast of Wind Lake.

PERIOD OF RECORD.--October 1987 to September 1989. January 1991 to current year.

REMARKS.--Records good. Lake levels regulated by concrete dam with one 5-foot lift gate.

EXTREMES FOR PERIOD OF RECORD.--Maximum instantaneous gage height, 12.60 ft, Oct. 7, 1991; minimum instantaneous, 9.81 ft, Sept. 20, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum instantaneous gage-height, 12.60 ft, Oct. 7; minimum instantaneous, 11.02 ft, July 6.

[illegible]

LOCATION.--Lat 42°49'15", long 88°08'39", in NW 1/4 SW 1/4 sec.9, T.4 N., R.20 E., Racine County, Hydrologic Unit 07120006, at Wind Lake.

PERIOD OF RECORD.--February 1985 to current year.

REMARKS.--Lake sampled near center at a lake depth of about 50 feet. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 06 TO AUGUST 13, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 06		Apr. 14		June 23		July 16		Aug. 13	
Depth of sample (ft)	1.5	48	1.5	50	1.5	50	1.5	51	1.5	49
Lake stage (ft)	7.36		7.84		7.38		7.72		7.63	
Specific conductance (µS/cm)	559	637	541	541	551	603	529	617	535	633
pH (units)	8.1	7.5	8.3	8.4	8.4	7.2	8.2	7.3	8.2	7.2
Water temperature (°C)	4.5	3.5	7.0	6.5	18.5	12.0	22.0	12.5	21.5	12.5
Color (Pt-Co. scale)	---	---	35	50	---	---	---	---	---	---
Turbidity (NTU)	---	---	3.7	4.2	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.0		1.3		1.3		1.2	
Dissolved oxygen	13.9	4.9	11.9	11.4	9.6	0.1	7.9	0.1	6.0	0.1
Hardness, as CaCO ₃	---	---	240	240	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	49	50	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	29	28	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	22	22	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	180	180	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	50	50	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	58	45	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.2	0.2	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	<0.2	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	342	342	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.30	0.29	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.10	0.11	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.2	1.2	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.045	0.044	0.044	0.370	0.029	0.450	0.036	0.520
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	21	---	24	---	14	---	20	---

2-6-92

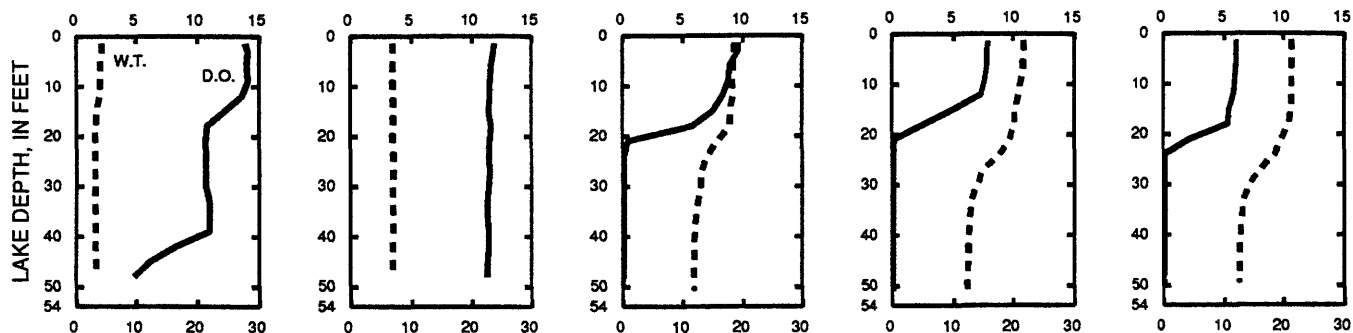
4-14-92

6-23-92

7-16-92

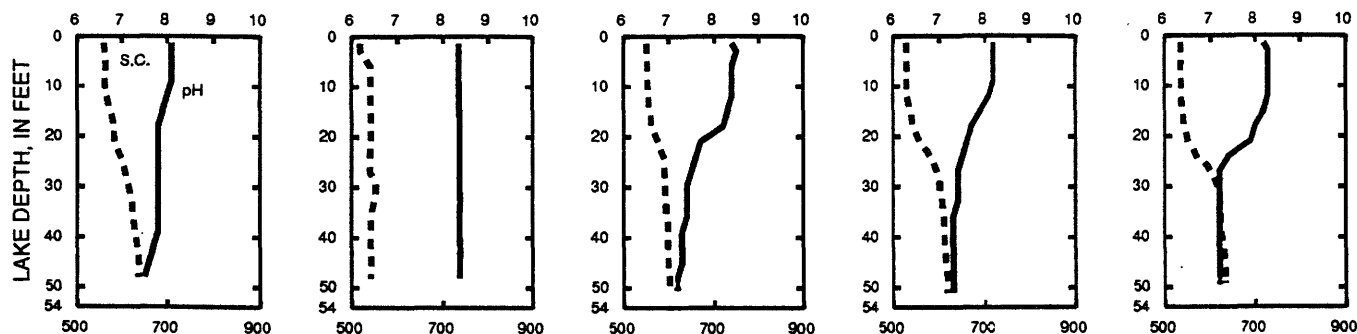
8-13-92

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

457

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.44 ft, Apr. 20; minimum recorded, 6.72 ft, Nov. 8.

[illegible]

LOCATION.--Lat 42°50'44" long 88°10'03", in SW 1/4 SW 1/4 sec.32, T.5 N., R.20 E., Waukesha County, Hydrologic Unit 07120006, at Wind Lake.

PERIOD OF RECORD.--June 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 8.05 ft, Dec. 1, 1991; minimum observed, 6.71 ft, Aug. 30, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 8.05 ft, Dec. 1; minimum observed, 6.85 ft, July 3.

[illegible]

425044088100300 DENOON LAKE AT WIND LAKE, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1991 to current year.

REMARKS.--Lake sampled near center at a lake depth of about 56 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 06 TO AUGUST 13, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 06		Apr. 08		June 22		July 16		Aug. 13	
Depth of sample (ft)	1.5	51	1.5	52	1.5	51	1.5	57	1.5	52
Lake stage (ft)	---	---	7.60	---	6.95	---	7.35	---	7.13	---
Specific conductance ($\mu\text{S}/\text{cm}$)	480	509	486	491	460	515	431	523	428	533
pH (units)	8.4	7.6	8.6	8.6	9.0	7.7	8.6	7.5	8.8	7.4
Water temperature ($^{\circ}\text{C}$)	3.0	3.0	7.0	5.5	19.5	7.5	23.0	8.0	22.0	8.0
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.2	1.2	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.5	---	1.5	---	1.8	---	2.4	---
Dissolved oxygen	14.2	3.1	14.0	13.1	11.7	0.2	9.4	0.1	8.4	0.2
Hardness, as CaCO_3	---	---	220	220	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	43	43	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	28	28	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	15	15	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	170	170	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	38	38	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	32	32	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	<0.2	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	292	292	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.39	0.39	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.04	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.90	0.90	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.024	0.020	0.020	0.170	0.015	0.192	0.016	0.240
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.003	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	22	---	11	---	7.1	---	5.4	---

2-6-92

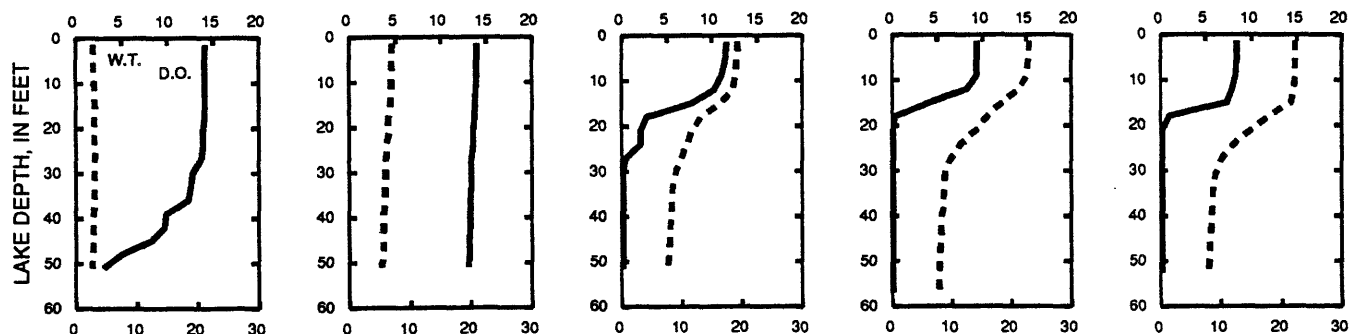
4-8-92

6-22-92

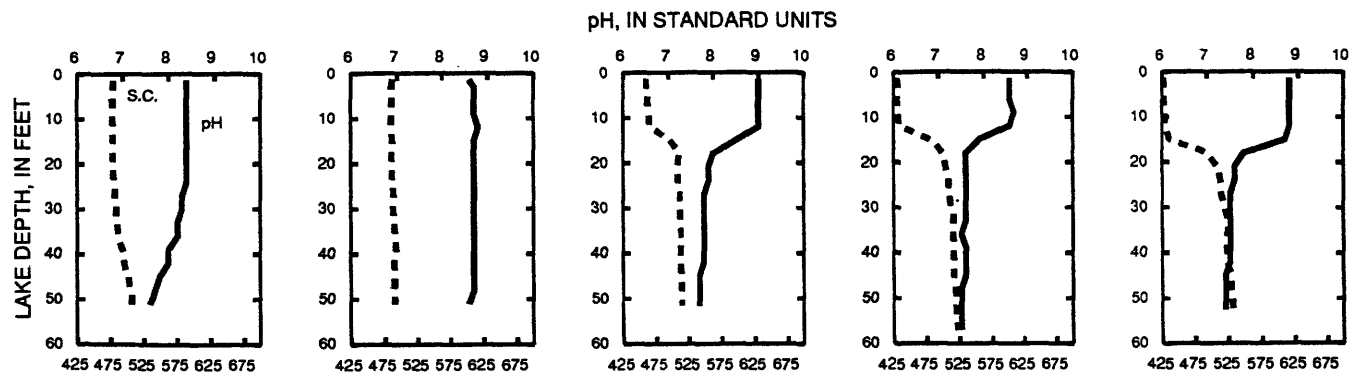
7-18-92

8-13-92

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

424937088103400 LONG (KEE NONG GO-MONG) LAKE AT WIND LAKE, WI

LOCATION.--Lat 42°49'37", long 88°10'34", in NW 1/4 NE 1/4 sec.7, T.4 N., R.20 E., Racine County, Hydrologic Unit 07120006, at Wind Lake.

DRAINAGE AREA.--4.29 mi².

LAKE-STAGE RECORDS

PERIOD OF RECORD.--February 1988 to September 1989, February 1991 to current year.

GAGE.--Staff gage at lake outlet read by Marilyn Starck. Datum of gage is 771.62 ft above National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 6.39 ft, Sept. 10, 1989; minimum observed, less than 3.92 ft, Sept. 6, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 5.98 ft, Nov. 2; minimum observed, 5.00 ft, Oct. 3 and July 7.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	5.42	5.54	5.48	---	---	5.62	---
2	---	5.98	---	---	---	---	---	---	---	---	---	---
3	5.00	---	---	---	5.28	---	---	---	---	5.02	---	---
4	---	---	5.76	---	---	5.44	---	---	5.32	---	---	---
5	---	---	---	---	---	---	5.48	---	---	---	---	5.48
6	5.24	---	---	---	---	---	---	---	---	---	5.58	---
7	---	5.96	---	---	---	---	---	5.40	---	5.00	---	---
8	---	---	---	---	---	---	5.44	---	---	---	---	---
9	---	5.92	5.72	---	---	---	5.44	---	5.26	5.10	---	---
10	---	---	---	---	5.30	---	---	---	---	---	5.58	---
11	---	5.92	---	---	---	---	---	5.32	---	---	---	5.58
12	5.20	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	5.22	---	---	---	---	5.60	---	---	---	---	---	---
15	---	---	---	---	---	---	---	5.36	---	5.54	5.56	---
16	---	5.66	---	---	---	---	---	---	5.16	5.57	---	5.52
17	---	---	---	---	---	---	5.58	---	---	---	---	5.66
18	---	5.68	---	---	---	---	---	---	---	5.58	---	---
19	5.20	---	---	---	---	5.54	---	---	---	---	5.52	---
20	---	---	---	---	---	---	5.58	---	5.16	---	5.50	---
21	5.18	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	5.36	5.56	---	---	---	---	---	---
23	5.16	5.68	---	---	---	---	---	---	5.12	---	---	5.68
24	---	---	---	---	---	---	---	---	5.12	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	5.54	---	---	---	5.50	---
27	---	5.52	---	---	---	---	---	---	---	---	---	5.68
28	5.70	---	---	---	---	5.56	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	5.62	---	---
30	---	5.72	---	---	---	---	---	---	---	---	---	---
31	5.90	---	---	---	---	---	---	5.38	---	---	---	---

424937088103400 LONG (KEE NONG GO-MONG) LAKE AT WIND LAKE, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1988 to August 1989, February 1991 to current year.

REMARKS.--Lake sampled in southwest end of lake at an approximate lake depth of 26 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 04 TO AUGUST 11, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 09		June 23		July 16		Aug. 11	
Depth of sample (ft)	1.5	24	1.5	26	1.5	25	1.5	25	1.5	25
Lake stage (ft)	---	---	---	5.44	---	5.12	---	5.57	---	5.58
Specific conductance ($\mu\text{S}/\text{cm}$)	484	553	488	493	480	533	443	537	510	627
pH (units)	7.6	7.4	8.0	8.1	8.4	7.2	8.4	7.2	8.3	7.1
Water temperature ($^{\circ}\text{C}$)	4.0	3.5	9.0	6.0	18.0	9.5	22.5	11.0	25.5	11.0
Color (Pt-Co. scale)	---	---	50	50	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.2	1.1	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	1.4	---	1.8	---	1.6	---	2.1
Dissolved oxygen	12.3	3.8	12.6	10.7	9.2	0.2	8.3	0.2	9.3	0.2
Hardness, as CaCO_3	---	---	240	240	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	50	48	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	28	28	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	12	12	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	180	180	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	48	49	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	26	26	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	0.6	0.8	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	312	310	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.13	0.16	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.06	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.1	1.1	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.020	0.025	0.023	0.330	0.025	0.310	0.022	0.490
Phosphorus, ortho, dissolved (as P)	---	---	0.003	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	25	---	12	---	13	---	5.9	---

2-4-92

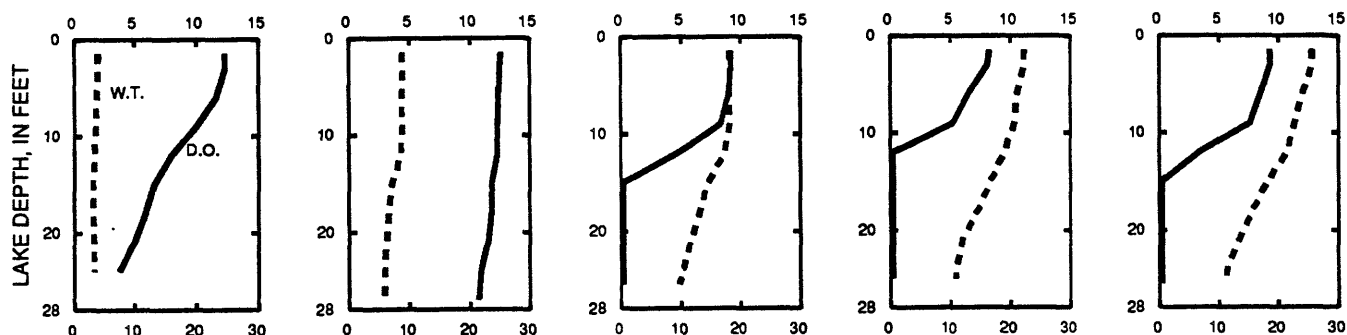
4-9-92

6-23-92

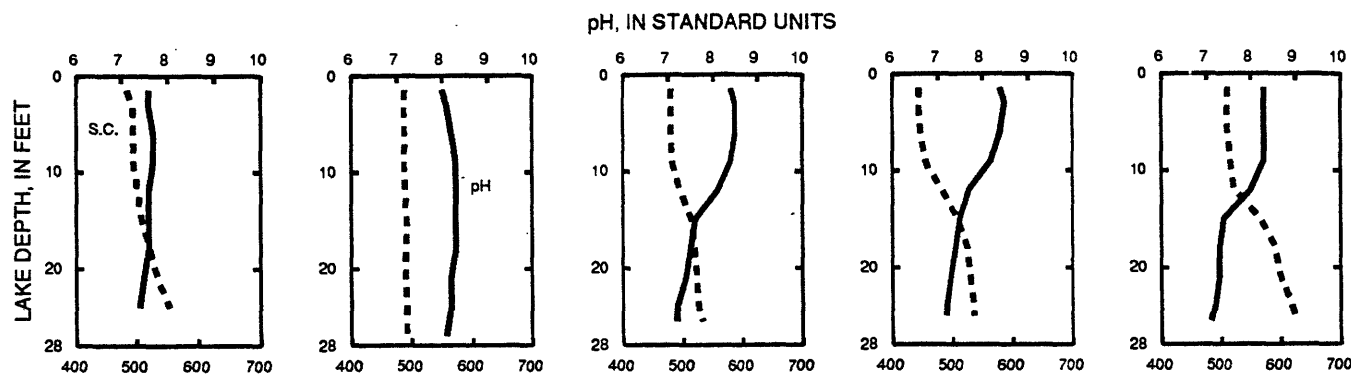
7-16-92

8-11-92

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

LOCATION.--Lat 42°48'57", long 88°10'15", in SE 1/4 SE 1/4 sec.7, T.4 N., R.20 E., Racine County, Hydrologic Unit 07120006, at Wind Lake.

DRAINAGE AREA.--5.16 mi².

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

REMARKS.--Lake sampled near southwest end at a lake depth of about 70 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 06 TO AUGUST 20, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 06		Apr. 14		June 23		July 23		Aug. 20	
Depth of sample (ft)	1.5	72	1.5	70	1.5	68	1.5	69	1.5	70
Lake stage (ft)	---	---	---	5.42	---	---	---	4.55	---	4.38
Specific conductance (μS/cm)	477	494	463	462	472	492	439	474	443	486
pH (units)	8.3	7.6	8.4	8.2	8.5	7.6	8.5	7.6	8.6	7.5
Water temperature (°C)	3.0	3.5	6.5	5.0	19.5	6.0	21.0	6.0	23.0	6.0
Color (Pt-Co. scale)	---	---	30	35	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.70	0.50	---	---	---	---	---	---
Secchi-depth (meters)	---	---	3.8	---	3.2	---	2.6	---	3.5	---
Dissolved oxygen	12.8	0.8	12.1	11.3	9.5	0.1	8.4	0.7	9.5	0.0
Hardness, as CaCO ₃	---	---	230	230	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	46	46	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	28	29	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	12	12	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	180	180	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	41	41	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	27	27	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.2	0.2	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	1.1	1.3	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	298	294	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.17	0.17	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.08	0.09	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.4	1.0	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.023	0.010	0.011	0.090	0.011	0.080	0.009	0.080
Phosphorus, ortho, dissolved (as P)	---	---	0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	1.0	---	3.0	---	3.9	---	3.0	---

2-6-92

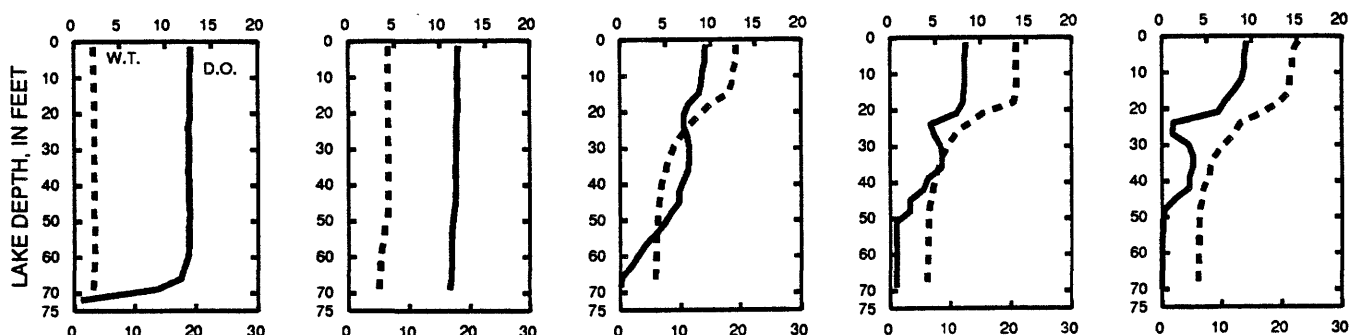
4-14-92

6-23-92

7-23-92

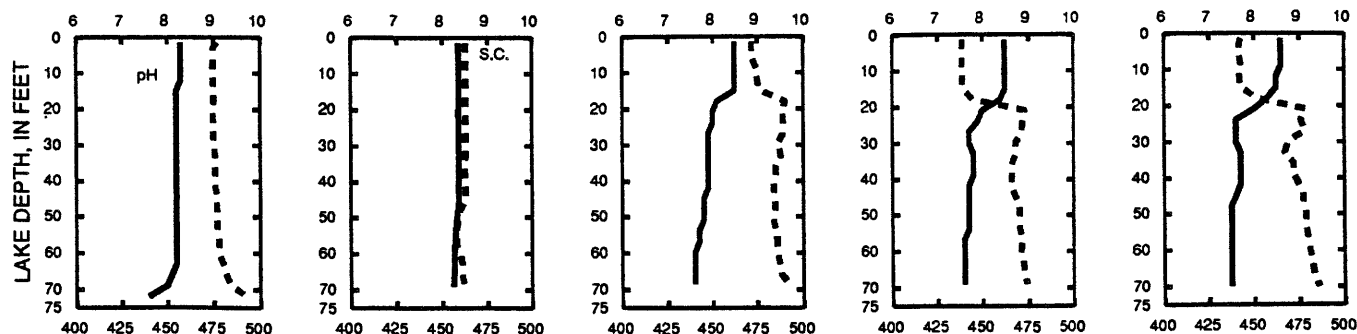
8-20-92

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

424800088254800 BOOTH LAKE NEAR EAST TROY, WI

LOCATION.--Lat 42°48'00", long 88°25'48", in SW 1/4 SE 1/4 sec.13, T.4 N., R.17 E., Walworth County, Hydrologic Unit 07120006, 1.6 mi northwest of East Troy.

PERIOD OF RECORD.--February to August 1992.

REMARKS.--Lake sampled near center of lake at deep hole. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 04 TO AUGUST 11, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 07		June 01		July 14		Aug. 11	
Depth of sample (ft)	1.5	21	1.5	22	1.5	21	1.5	20	1.5	20
Lake stage (ft)	---		10.93		10.76		10.88		10.72	
Specific conductance (µS/cm)	323	343	307	309	317	326	319	347	284	329
pH (units)	7.9	8.0	8.3	8.3	8.5	7.8	8.1	7.4	8.3	7.4
Water temperature (°C)	4.0	4.5	7.5	7.5	20.5	16.5	23.0	22.0	25.0	21.0
Color (Pt-Co. scale)	---	---	<5	<5	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.50	<0.50	---	---	---	---	---	---
Secchi-depth (meters)	---		5.2		2.7		1.8		1.1	
Dissolved oxygen	13.6	7.5	11.7	11.5	10.0	4.8	8.9	0.5	10.3	0.3
Hardness, as CaCO ₃	---	---	160	160	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	30	30	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	20	20	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	6.0	6.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	1	1	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	130	130	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	18	18	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	12	12	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	<0.2	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	184	184	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.11	0.12	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.24	0.25	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.80	0.80	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.005	0.004	0.010	0.033	0.011	0.020	0.010	<0.020
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	1.0	---	3.0	---	6.2	---	4.4	---

2-4-92

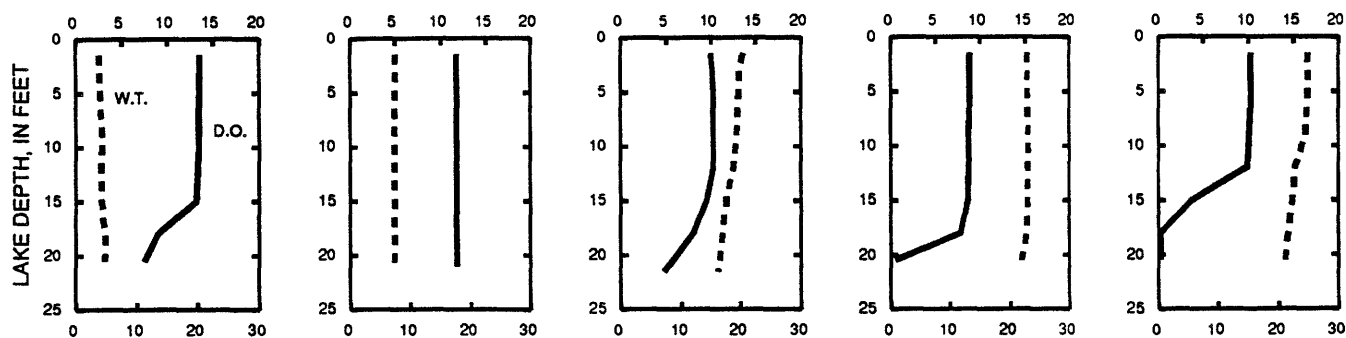
4-7-92

6-1-92

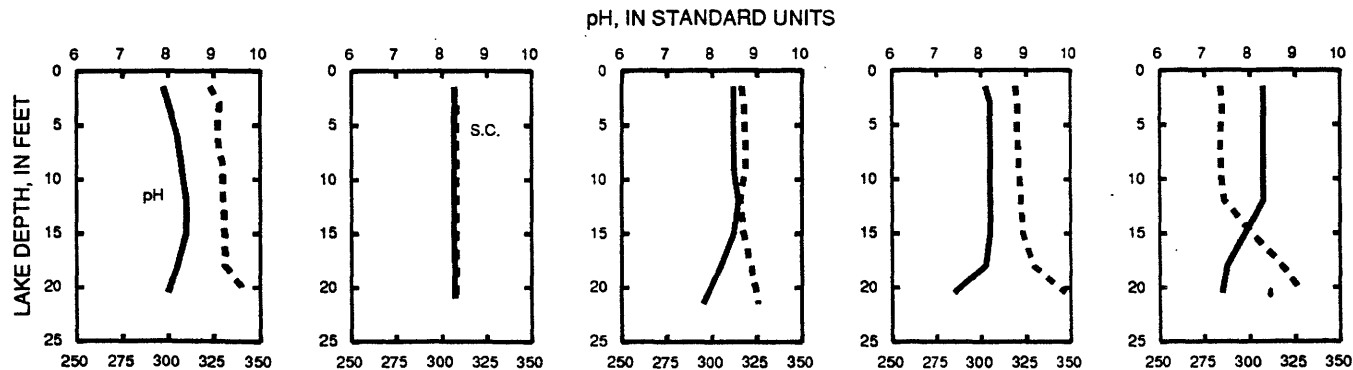
7-14-92

8-11-92

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

ILLINOIS RIVER BASIN

05546500 FOX RIVER AT WILMOT, WI

LOCATION.--Lat 42°30'40", long 88°10'45", in SW 1/4 sec.30, T.1 N., R.20 E., Kenosha County, Hydrologic Unit 07120006, on right bank 100 ft downstream from bridge on County Trunk Highway C, 300 ft upstream from Wilmot Dam, 1.0 mi north of Wisconsin-Illinois State line, and 6.0 mi upstream from Fox Chain of Lakes.

DRAINAGE AREA.--868 mi².

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1308: 1943(M), 1945(M). WDR WI-67-1: Drainage area.

GAGE.--Water-stage recorder and concrete dam until Sept. 15, 1992. Datum of gage is 735.22 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 1, 1965, nonrecording gage at bridge 100 ft upstream at same datum, and concrete dam.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 4, 17, 18, and Jan. 17, 18. Records are good, except for estimated periods and Feb. 19 to Mar. 25, Apr. 7, 8, and June 22 to Sept. 14, which are fair. Three 6-ft lift gates in Wilmot dam were in operation until Feb. 19, when they were damaged by high flows. The gates were totally removed Mar. 25 and the remaining concrete spillway was removed Sept. 15; discharge through gates computed by weir and orifice formulas and added to flow over dam. Gage-height telemeter and data-collection platform at station.

REVISIONS.--Revised figures of discharge for the water year 1991, superseding those published in the Water Resources Data-Wisconsin report for 1991, are given below.

Mar. 3....1,450	Mar. 6....1,160	Mar. 9....1,020	Mar. 12.....805			
4....1,390	7....1,150	10.....959	13.....714			
5....1,230	8....1,060	11.....894	14.....646			
Month	Total	Mean	Max	Min	Cfs	In.
Mar 1991	35,765	1,154	2,770	541	1.33	1.53
Wtr Yr 1991	222,401	609	2,770	100	.70	9.53

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	1450	1670	499	358	837	977	961	293	159	339	297
2	151	1450	1700	437	382	832	925	894	275	170	293	292
3	151	1440	1510	515	414	853	859	886	268	187	277	256
4	215	1370	1000	572	426	865	789	838	223	207	268	273
5	775	1280	719	604	452	884	786	663	236	178	255	270
6	781	1220	881	616	463	920	741	634	257	182	241	238
7	806	1100	1170	694	484	1080	470	530	230	198	251	240
8	618	970	1570	694	376	1280	401	429	227	198	280	271
9	591	771	1760	803	337	1330	431	440	208	221	295	359
10	590	760	1770	935	427	1530	456	449	196	225	300	353
11	572	656	1720	931	368	1630	517	448	186	225	294	357
12	537	522	1680	889	304	1510	596	424	190	272	295	363
13	499	554	1740	886	370	1390	617	416	193	357	277	348
14	382	424	1880	876	342	1270	577	438	185	1020	259	290
15	322	364	1770	605	360	1220	610	433	179	1410	224	303
16	328	642	1560	386	376	1180	759	484	195	1390	205	423
17	332	699	1400	440	374	1160	1240	445	280	950	189	931
18	321	757	1300	540	401	1130	1430	394	272	775	160	1150
19	340	774	899	531	715	1070	1370	403	290	641	148	1060
20	347	972	1030	511	916	836	1270	378	278	501	159	937
21	319	988	1240	480	898	831	1250	380	295	289	159	771
22	279	900	1330	469	903	902	1250	381	308	168	164	652
23	197	863	1240	487	880	895	1180	323	293	99	165	591
24	216	884	1020	452	872	874	1230	296	286	109	170	483
25	712	857	924	458	907	1030	1310	348	275	162	175	385
26	986	784	872	449	981	1090	1220	346	243	206	233	345
27	1210	831	750	444	961	1180	1120	357	244	229	257	390
28	1220	775	608	440	889	1140	976	358	237	235	275	384
29	1160	845	631	409	872	1100	779	333	196	208	350	389
30	1330	1270	622	329	---	1070	845	308	173	237	333	374
31	1480	---	532	333	---	1030	---	315	---	385	305	---
TOTAL	17928	27172	38498	17714	16808	33949	26981	14732	7211	11793	7595	13775
MEAN	578	906	1242	571	580	1095	899	475	240	380	245	459
MAX	1480	1450	1880	935	981	1630	1430	961	308	1410	350	1150
MIN	151	364	532	329	304	831	401	296	173	99	148	238
CFSM	.67	1.04	1.43	.66	.67	1.26	1.04	.55	.28	.44	.28	.53
IN.	.77	1.16	1.65	.76	.72	1.45	1.16	.63	.31	.51	.33	.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1992, BY WATER YEAR (WY)

MEAN	389	470	449	407	501	1143	1056	677	478	367	318	338
MAX	1931	1536	1755	1818	1354	2434	2841	2078	1205	1382	902	1763
(WY)	1987	1986	1983	1960	1974	1979	1960	1973	1973	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

ILLINOIS RIVER BASIN

465

05546500 FOX RIVER AT WILMOT, WI--CONTINUED

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1940 - 1992	
ANNUAL TOTAL	249194		234156		550	
ANNUAL MEAN	683		640		1152	
HIGHEST ANNUAL MEAN					174	1973
LOWEST ANNUAL MEAN					7100	Apr 1 1960
HIGHEST DAILY MEAN	2770	Mar 29	1880	Dec 14	35	Sep 9 1958
LOWEST DAILY MEAN	100	Aug 30	99	Jul 23	41	Sep 7 1958
ANNUAL SEVEN-DAY MINIMUM	106	Aug 27	161	Aug 18	7520	Mar 31 1960
INSTANTANEOUS PEAK FLOW			1900	Dec 14	(a)9.25	Mar 31 1960
INSTANTANEOUS PEAK STAGE			6.52	Dec 14	.00	(b)Oct 26 1945
INSTANTANEOUS LOW FLOW					.63	
ANNUAL RUNOFF (CFSM)	.79		.74		8.60	
ANNUAL RUNOFF (INCHES)	10.68		10.04		1250	
10 PERCENT EXCEEDS	1450		1260		350	
50 PERCENT EXCEEDS	541		484		119	
90 PERCENT EXCEEDS	151		208			

(a) From graph based on gage readings

(b) Also occurred Aug. 10, 1990

423246088175800 POWERS LAKE AT POWERS LAKE, WI

LOCATION.--Lat 42°32'46", long 88°17'58", in NW 1/4 SE 1/4 sec.13, T.1 N., R.18 E., Walworth County, Hydrologic Unit 07120006, at Powers Lake.

DRAINAGE AREA.--3.42 mi².

PERIOD OF RECORD.--March 1986 to current year.

REMARKS.--Lake sampled near center at a lake depth of about 32 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 04 TO AUGUST 17, 1992
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 02		June 18		July 27		Aug. 17	
Depth of sample (ft)	1.5	31	1.5	32	1.5	32	1.5	32	1.5	33
Lake stage (ft)	---		10.27		9.84		9.89		9.83	
Specific conductance (μS/cm)	477	503	476	477	484	498	470	530	471	531
pH (units)	7.9	8.2	8.6	8.6	8.3	7.7	8.3	7.5	8.5	7.5
Water temperature (°C)	4.0	4.5	5.0	5.0	22.0	14.0	22.5	14.5	22.5	15.5
Color (Pt-Co. scale)	---	---	10	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.50	0.60	---	---	---	---	---	---
Secchi-depth (meters)	---		4.9		3.3		2.4		2.7	
Dissolved oxygen	15.8	9.5	13.2	13.2	8.1	1.2	9.8	0.3	9.2	0.0
Hardness, as CaCO ₃	---	---	240	240	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	37	38	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	35	35	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	14	14	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	180	180	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	36	36	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	31	31	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	6.4	6.3	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	288	284	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.11	0.10	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.02	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.50	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.006	<0.004	0.007	0.011	0.010	0.040	0.005	0.055
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	2.0	---	3.0	---	3.7	---	2.8	---

2-4-92

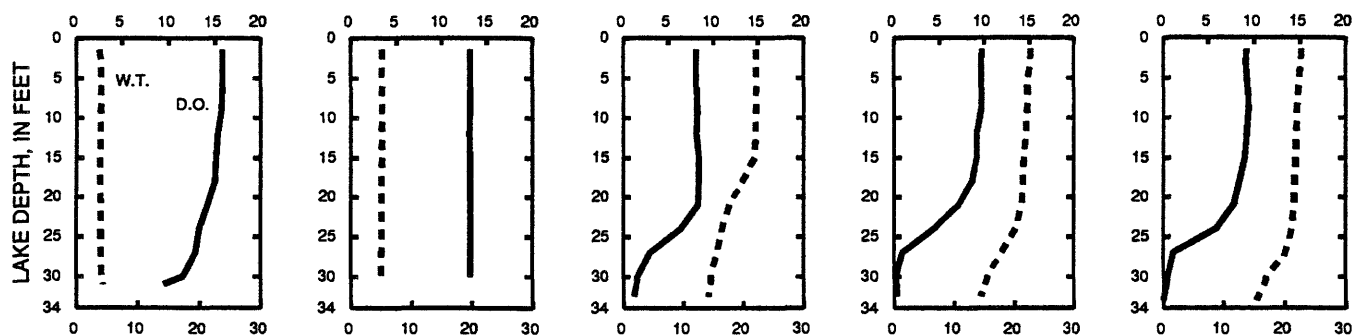
4-2-92

6-18-92

7-27-92

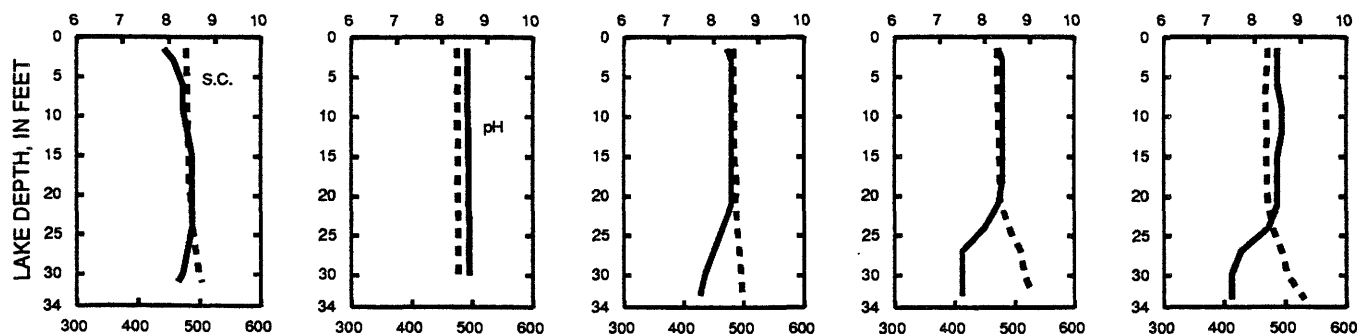
8-17-92

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

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 and 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 these 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 and for special studies 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 minimum has been determined.

MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

Station number and name	Location and drainage area	Period of record	Water year 1992 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE SUPERIOR								
04024400 Stony Brook near Superior, WI	Lat 46°35'01", long 92°07'10", in SE 1/4 sec.4, T.47 N., R.14 W., Douglas County, 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 is 1.86 mi ² .	1959-92	07-02-92	15.86	244	09-02-85	35.23	595
04025200 Pearson Creek near Maple, WI	Lat 46°38'51", long 91°42'55", on common boundary of secs.11 and 14, T.48 N., R.11 W., Douglas County, Hydrologic Unit 04010301, at box culvert on State Highway 13, 4.0 mi north of Maple. Drainage area is 4.07 mi ² .	1957-92	07-02-92	14.16	380	09-02-85	31.83	1,440
04026200 Sand River Tributary near Red Cliff, WI	Lat 46°53'53", long 90°56'47", in NE 1/4 sec.14, T.51 N., R.5 W., Bayfield County, Hydrologic Unit 04010301, at box culvert on State Highway 13, 8.0 mi northwest of Red Cliff. Drainage area is 1.09 mi ² .	1959-92	04-21-92	11.36	69	05-23-64	16.86	624
*04026300 Sioux River near Washburn, WI	Lat 46°41'20", long 90°57'02", in NE 1/4 sec.35, T.49 N., R.5 W., Bayfield County, Hydrologic Unit 04010301, on County Trunk High- way C, 2.5 mi west of Washburn. Drainage area is 33.9 mi ² .	1959-65 1966# 1967-92	07-02-92	C20.23	F1,000	09-02-85	29.45	2,200
04026450 Bad River near Mellen, WI	Lat 46°16'14", long 90°42'26", in NE 1/4 NW 1/4 sec.26, T.44 N., R.3 W., Ashland County, Hydrologic Unit 04010302, on left bank 150 ft downstream from bridge on U.S. Forest Service Road, 4.4 mi south- west of Mellen. Drainage area is 82.0 mi ² .	1971-75# 1976-92	07-02-92	8.65	2,750	07-02-92	8.65	2,750
*04027200 Pearl Creek at Grandview, WI	Lat 46°22'05", long 91°05'27", in NE 1/4 sec.22, T.45 N., R.6 W., Bayfield County, Hydrologic Unit 04010302, at box culvert on U.S. Highway 63, 0.8 mi east of Grandview. Drainage area is 16.9 mi ² .	1960-92	07-02-92	28.47	1,920	07-02-92	28.47	1,920

STREAMS TRIBUTARY TO LAKE MICHIGAN

*04059900 Allen Creek Tributary near Alvin, WI	Lat 45°58'05", long 88°47'24", on north boundary sec.7, T.40 N., R.14 E., Forest County, Hydrologic Unit 04030106, at culvert on State Highway 70, 2.2 mi southeast of Alvin. Drainage area is 1.22 mi ² .	1960-92	04-16-92	10.74	12		05-22-83	11.38	23
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DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Station number and name	Location and drainage area	Period of record	MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS			Period of record maximum		
			Water year 1992 maximum Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED								
04063640 North Branch Pine River at Windsor Dam near Alvin, WI	Lat 45°55'43", long 88°51'38", in SE 1/4 sec.21, T.40 N., R.13 E., Forest County, Hydrologic Unit 04030108, at bridge on country road, at Windsor Dam, 3.8 mi up- stream from confluence of North and South Forks, 4.0 mi southwest of Alvin. Drainage area is 27.8 mi ² .	1967-68# 1970-92	04-16-92	2.71	79	04-09-80	3.89	165
04063688 South Branch Popple River near Newald, WI	Lat 45°44'42", long 88°35'31", in NW 1/4 sec.26, T.38 N., R.15 E., Florence County, Hydrologic Unit 04030108, at corrugated twin barrel culverts on U.S. Forest Service Road 2159, 5.4 mi east of Newald. Drainage area is 9.47 mi ² .	1970-92	09-19-92	11.55	40	04-15-71	12.81	71
*04063800 Woods Creek near Fence, WI	Lat 45°49'53", long 88°23'17", in SE 1/4 sec.29, T.39 N., R.17 E., Florence County, Hydrologic Unit 04030108, at box culvert on State Highway 101, 6.0 mi north of Fence. Drainage area is 41.90 mi ² .	1958-92	04-16-92	F11.65	240	05-07-65	15.80	853
04064800 Little Popple River near Aurora, WI	Lat 45°47'34", long 88°11'40", in SW 1/4 sec.1, T.38 N., R.18 E., Florence County, Hydrologic Unit 04030108, at 3-barrel corrugated culvert on County Trunk Highway N, 5.5 mi west of Aurora. Drainage area is 35.0 mi ² .	1970-92	04-16-92	12.46	286	05-31-70	15.5	595
04067760 Peshtigo River near Cavour, WI	Lat 45°39'20", long 88°38'52", in SW 1/4 sec.29, T.37 N., R.15 E., Forest County, Hydrologic Unit 04040105, at bridge on U.S. High- way 8, 0.7 mi northwest of Cavour. Drainage area is 150 mi ² .	1970-92	04-16-92	13.15	870	06-10-79	15.06	1,440
04067800 Armstrong Creek near Armstrong Creek, WI	Lat 45°39'29", long 88°28'44", in W 1/2 sec.27, T.37 N., R.16 E., Forest County, Hydrologic Unit 04040105, at bridge on U.S. High- way 8, 1.8 mi northwest of Armstrong Creek. Drainage area is 23.2 mi ² .	1958-92	09-16-92	11.40	287	09-16-92	11.40	287
04069700 North Branch Oconto River near Wabeno, WI	Lat 45°26'19", long 88°37'40", in SW 1/4 sec.9, T.34 N., R.15 E., Forest County, 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 is 34.1 mi ² .	1970-92	04-16-92	11.65	112	06-14-81	13.62	420
04071700 North Branch Little River near Coleman, WI	Lat 45°00'37", long 88°02'43", on common boundary of secs.2 and 3, T.29 N., R.20 E., Oconto County, Hydrologic Unit 04030104, at bridge on U.S. Highway 141, 3.8 mi south of Coleman. Drainage area is 21.4 mi ² .	1958-92	03-09-92	12.77	235	03-30-67	14.50	640
*04071800 Pensaukee River near Pulaski, WI	Lat 44°45'48", long 88°15'07", in NE 1/4 sec.1, T.26 N., R.18 E., Shawano County, Hydrologic Unit 04030103, at bridge on State High- way 32, 6.1 mi north of Pulaski. Drainage area is 48.80 mi ² .	1961-92	04-16-92	13.15	520	05-28-73	17.10	1,700
*04073400 Bird Creek at Wautoma, WI	Lat 44°06'00", long 89°18'00", in S 1/2 sec.34, T.19 N., R.10 E., Waushara County, Hydrologic Unit 04030201, at concrete culvert on State Highway 21, 0.2 mi west of Wautoma. Drainage area is 4.14 mi ² .	1959-92	09-16-92	11.85	85	03-07-73	13.07	190

Station number and name	Location and drainage area	Period of record	MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS			Period of record maximum		
			Water year 1992 maximum Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED								
04074300 Mud Creek near Nashville, WI	Lat 45°34'19", long 89°02'39", in SW 1/4 sec.30, T.36 N., R.12 E., Forest County, Hydrologic Unit 04030202, at concrete circular culvert on U.S. Highway 8, 3.5 mi north of Nashville. Drainage area is 9.05 mi ² .	1970-92	04-16-92	12.55	65	06-14-81	14.06	105
*04074700 Hunting River near Elcho, WI	Lat 45°25'10", long 89°11'15", in N 1/2 sec.24, T.34 N., R.10 E., Langlade County, Hydrologic Unit 04030202, at twin culverts on U.S. Highway 45 and State Highway 47, 1.5 mi south of Elcho. Drainage area is 9.00 mi ² .	1958-92	04-16-92	11.61	62	09-28-59	12.98	200
*04074850 Lily River near Lily, WI	Lat 45°20'59", long 88°49'52", in SE 1/4 sec.11, T.33 N., R.13 E., Langlade County, 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 is 45.6 mi ² .	1970-92	04-16-92	9.79	53	10-29-74	11.00	158
04075200 Evergreen Creek near Langlade, WI	Lat 45°10'11", long 88°48'12", in NW 1/4 sec.18, T.31 N., R.14 E., Langlade County, Hydrologic Unit 04030202, on culvert on State Highway 64, 3.5 mi southwest of Langlade. Drainage area is 8.09 mi ² .	1959-65 1966-72 1973-92	04-16-92 1991	F10.55 B	34 E<25	07-11-82	11.66	80
04079700 Spaulding Creek near Big Falls, WI	Lat 44°38'13", long 89°01'20", on common boundary of secs.14 and 15, T.25 N., R.12 E., Waupaca County, Hydrologic Unit 04030202, at culvert on County Trunk Highway E, 1.5 mi north of Big Falls. Drainage area is 5.57 mi ² .	1959-65 1966 1967-92	04-16-92	F10.55	90	05-07-60	11.64	101
04081900 Sawyer Creek at Oshkosh, WI	Lat 44°02'00", long 88°35'00", in SW 1/4 sec.15, T.18 N., R.16 E., Winnebago County, 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 is 12.10 mi ² .	1961-92	04-16-92	10.39 GH10.66	210	09-11-86	17.47	2,350
*04085030 Apple Creek near Kaukauna, WI	Lat 44°19'15", long 88°17'33", on west boundary sec.2, T.21 N., R.18 E., Outagamie County, Hydrologic Unit 04030204, at bridge on State Highway 55, 3.0 mi north of Kaukauna. Drainage area is 15.2 mi ² .	1960-92	03-09-92	14.54	1,010	10-18-84	15.29	1,510
04085300 Neshota River Tributary near Denmark, WI	Lat 44°23'43", long 87°52'13", in NE 1/4 sec.7, T.22 N., R.22 E., Brown County, Hydrologic Unit 04030101, at box culvert on U.S. Highway 141, 3.8 mi northwest of Denmark. Drainage area is 4.31 mi ² .	1959-92	04-16-92	12.42	140	06-23-90	16.46	1,040
*04085400 Killsnake River near Chilton, WI	Lat 44°03'33", long 88°08'36", in E 1/2 sec.6, T.18 N., R.20 E., Calumet County, Hydrologic Unit 04030101, at bridge on country road, 2.4 mi northeast of Chilton. Drainage area is 29.4 mi ² .	1961-92	03-06-92	F10.31	180	03-30-79	14.37	1,840
*04087050 Little Menomonee River near Freistadt, WI	Lat 43°12'24", long 88°02'24", on common boundary of secs.29 32, T.9 N., R.21 E., Ozaukee County, Hydrologic Unit 04040003, at bridge on Dones Bay Road, 2.0 mi south of Freistadt. Drainage area is 8.00 mi ² .	1958-92	11-29-91	11.38	140	04-21-73	13.14	360

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

			MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS						
Station number and name	Location and drainage area	Period of record	Water year 1992 maximum			Period of record maximum			
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)	
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED									
04087100 Honey Creek at Milwaukee, WI	Lat 42°58'41", long 87°59'52", in SE 1/4 sec.15, T.6 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, 400 ft upstream from bridge on S. 68TH Street, 6.0 mi southwest of mouth of Milwaukee River, at Milwaukee. Drainage area is 3.26 mi ² .	1959-92	06-17-92	20.31	410	12-02-82	22.60	1,050	
*04087200 Oak Creek near South Milwaukee, WI	Lat 42°52'58", long 87°53'31", on common boundary of secs.21 and 22, T.5 N., R.22 E., Milwaukee County, Hydrologic Unit 04040002, at bridge on West Nicholson Road, 3.0 mi southwest of South Milwaukee. Drainage area is 13.8 mi ² .	1958-92	10-24-91	15.69	305	03-30-60	17.49	1,100	
04087230 West Branch Root River Canal Tributary near North Cape, WI	Lat 42°45'44", long 88°01'04", in SE 1/4 sec.33, T.4 N., R.21 E., Racine County, Hydrologic Unit 04040002, at culvert on County Trunk Highway U, 3.0 mi southeast of North Cape. Drainage area is 3.99 mi ² .	1962-92	11-30-91	12.07	95	08-17-87	12.88	182	
*04087250 Pike Creek near Kenosha, WI	Lat 42°36'12", long 87°53'41", in W 1/2 sec.27, T.2 N., R.22 E., Kenosha County, Hydrologic Unit 04040002, at box culvert on State Highway 43, 3.0 mi northwest of Kenosha. Drainage area is 7.25 mi ² .	1960-92	11-30-91	13.74	60	09-17-78	17.6	220	
ST. CROIX RIVER BASIN									
*05333100 Little Frog Creek near Minong, WI	Lat 46°05'48", long 91°46'39", in NW 1/4 sec.29, T.42 N., R.11 W., Washburn County, Hydrologic Unit 07030002, at culvert on country road, 2.5 mi east of Minong. Drainage area is 13.0 mi ² .	1961-92	04-21-92	15.84	190	05-11-82	16.31	600	
*05335380 Bashaw Brook near Shell Lake, WI	Lat 45°47'02", long 92°07'51", in SW 1/4 sec.8, T.38 N., R.14 W., Burnett County, Hydrologic Unit 07030001, at twin box culverts on country road, 10.5 mi north- west of Shell Lake. Drainage area is 26.6 mi ² .	1959-65 1966# 1967-92	04-21-92	12.72	105	04-11-65	14.90	600	
*05340300 Trade River near Frederic, WI	Lat 45°37'41", long 92°29'19", in SW 1/4 sec.4, T.36 N., R.17 W., Polk County, Hydrologic Unit 07030005, at box culvert on State Highways 35 and 48, 2.5 mi south- west of Frederic. Drainage area is 6.34 mi ² .	1958-92	07-02-92	11.89	140	06-12-84	18.89	1,050	
05341900 Kinnickinnic River Tributary at River Falls, WI	Lat 44°49'57", long 92°38'23", in NE 1/4 sec.14, T.27 N., R.19 W., Pierce County, Hydrologic Unit 07030005, at bridge on County Trunk Highway FF, 1.6 mi south- west of River Falls. Drainage area is 7.26 mi ² .	1959-92	04-20-92	12.42	800	08-09-88	15.99	5,200	
CHIPPEWA RIVER BASIN									
05357360 Bear River near Powell, WI	Lat 46°04'40", long 90°00'52", in NE 1/4 sec.32, T.42 N., R.4 E., Iron County, Hydrologic Unit 07050002, at bridge on State High- way 182, 3.0 mi west of Powell. Drainage area is 120 mi ² .	1970-92	04-16-92	12.15	412	04-16-82	12.83	720	
05357390 Weber Creek near Mercer, WI	Lat 46°11'16", long 90°07'57", in SE 1/4 sec.21, T.43 N., R.3 E., Iron County, Hydrologic Unit 07050002, at culvert on U.S. High- way 51, 3.7 mi northeast of Mercer. Drainage area is 7.10 mi ² .	1970-92	07-02-92	12.00	152	08-17-72	12.65	270	

MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

Station number and name	Location and drainage area	Period of record	Water year 1992 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
CHIPPEWA RIVER BASIN--CONTINUED								
05358100 Smith Creek near Park Falls, WI	Lat 45°57'06", long 90°28'07", in NE 1/4 sec.15, T.40 N., R.1 W., Price County, Hydrologic Unit 07050002, at culvert on State High- way 13, 1.5 mi northwest of Park Falls. Drainage area is 9.46 mi ² .	1970-92	04-16-92	12.28	146	09-08-85	14.49	330
*05359600 Price Creek near Phillips, WI	Lat 45°43'33", long 90°40'12", in SW 1/4 sec.31, T.38 N., R.2 W., Price County, Hydrologic Unit 07050002, at culvert on County Trunk Highway W, 13.0 mi west of Phillips. Drainage area is 16.9 mi ² .	1958-65 1966# 1967-92	04-16-92	12.06	133	09-22-59	15.78	400
*05361400 Hay Creek near Prentice, WI	Lat 45°32'32", long 90°21'37", in SE 1/4 sec.4, T.35 N., R.1 E., Price County, Hydrologic Unit 07050004, at culvert on U.S. High- way 8, 3.5 mi west of Prentice. Drainage area is 22.6 mi ² .	1961-92	04-16-92 05-16-90 04-05-89 04-04-88 10-12-86 09-08-85 04-06-84 03-05-83 04-03-82 06-14-81 09-21-80 04-20-79 07-26-78 04-21-77 03-24-76 04-24-75 06-09-74 03-11-73 09-26-72 04-11-71 04-07-70 04-10-69	F12.45 11.44 12.36 12.32 11.79 12.01 11.57 12.47 13.53 13.33 12.63 12.67 11.51 EF10.90 12.65 13.30 EF11.46 13.73 13.21 14.40 11.17 13.48	480 E245 E455 E450 E320 E375 E275 E485 E790 E730 E530 E540 E260 E155 E545 E720 E245 E850 E700 E630 E195 E770	03-31-86	14.47	1,090
05361420 Douglas Creek near Prentice, WI	Lat 45°31'06", long 90°15'28", in NE 1/4 sec.17, T.35 N., R.2 E., Price County, Hydrologic Unit 07050004, at culvert on County Trunk Highway C, 2.3 mi southeast of intersection with State Highway 13 at Prentice. Drainage area is 25.2 mi ² .	1970-92	04-16-92	12.98	465	06-14-81	15.80	1,200
05361600 North Fork Jump River near Phillips, WI	Lat 45°37'45", long 90°23'32", in SW 1/4 sec.5, T.36 N., R.1 E., Price County, Hydrologic Unit 07050004, at culvert on State High- way 13, 4.0 mi south of Phillips. Drainage area is 10.5 mi ² .	1970-92	04-16-92	11.91	140	06-14-81	12.72	250
*05364000 Yellow River at Cadott, WI	Lat 44°57'21", long 91°08'48", in NE 1/4 sec.31, T.29 N., R.6 W., Chippewa County, Hydrologic Unit 07050005, at bridge on State High- way 27, at Cadott. Drainage area is 364 mi ² .	1943-61# 1962-92	04-22-92	10.51	4,150	07-27-86	15.82	16,600
05364100 Seth Creek near Cadott, WI	Lat 44°59'24", long 91°08'48", in SW 1/4 sec.17, T.29 N., R.6 W., Chippewa County, Hydrologic Unit 07050005, at culvert on State Highway 27, 3.1 mi north of Cadott. Drainage area is 3.25 mi ² .	1962-92	04-16-92	13.93	345	09-22-86	18.00	785
05364500 Duncan Creek at Bloomer, WI	Lat 45°07'00", long 91°30'00", in sec. 8, T.30 N., R.9 W., Chippewa County, Hydrologic Unit 07050005, 0.2 mi below Bloomer dam, at Bloomer. Drainage area is 50.3 mi ² .	1945-51# 1958-92	04-22-92	8.04	2,650	06-29-79	11.81	5,400
*05365700 Goggle-Eye Creek near Thorp, WI	Lat 44°58'40", long 90°48'00", on west boundary sec.19, T.29 N., R.3 W., Clark County, Hydrologic Unit 07050006, at culvert on State Highway 73, 1.3 mi north of Thorp. Drainage area is 6.42 mi ² .	1958-92	04-16-92 11-01-91	12.79 DH12.97	400 --	06-05-80	21.68	2,880

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Station number and name	Location and drainage area	Period of record	MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS				Period of record maximum		
			Water year 1992 maximum			Date	Gage height (ft)	Dis- charge (ft ³ /s)	
			Date	Gage height (ft)	Dis- charge (ft ³ /s)				
CHIPPEWA RIVER BASIN--CONTINUED									
*05366500 Eau Claire River near Fall Creek, WI	Lat 44°48'35", long 91°16'50", in NW 1/4 sec.19, T.27 N., R.7 W., Eau Claire County, Hydrologic Unit 07050006, 500 ft east of County Trunk Highway K, 3.2 mi north of Fall Creek. Drainage area is 760 mi ² .	1943-55# 1958-92	04-16-92	10.44	7,200	09-21-86	17.77	20,800	
05367030 Willow Creek near Eau Claire, WI	Lat 44°44'11", long 91°26'48", on common boundary of secs.14 and 15, T.26 N., R.9 W., Eau Claire County, Hydrologic Unit 07050005, at box culvert on State Highway 93, 4.0 mi south of Eau Claire. Drainage area is 3.83 mi ² .	1958-92	1992	B	<60	07-08-59	14.12	400	
*05367480 East Branch Pine Creek Tributary near Dallas, WI	Lat 45°16'50", long 91°48'30", in SW 1/4 sec.1, T.32 N., R.12 W., Barron County, Hydrologic Unit 07050007, at culvert on County Trunk Highway O, 1.5 mi north of Dallas. Drainage area is 3.95 mi ² .	1960-92	04-21-92	12.06	80	08-28-60	18.75	735	
05367700 Lightning Creek at Almena, WI	Lat 45°25'17", long 92°01'57", in NW 1/4 sec.19, T.34 N., R.13 W., Barron County, Hydrologic Unit 07050007, at bridge on County Trunk Highway P, at Almena. Drainage area is 19.0 mi ² .	1958-92	04-21-92	12.00	350	03-30-67	12.39	1,550	
05370600 Arkansaw Creek Tributary near Arkansaw, WI	Lat 44°38'31", long 92°03'09", in SW 1/4 sec.14, T.25 N., R.14 W., Pepin County, Hydrologic Unit 07050005, at box culvert on U.S. Highway 10, 1.2 mi northwest of Arkansaw. Drainage area is 2.61 mi ² .	1959-92	09-16-92	14.82	525	09-16-92	14.82	525	
*05370900 Spring Creek near Durand, WI	Lat 44°34'13", long 91°57'48", in S 1/2 sec.9, T.24 N., R.13 W., Buffalo County, Hydrologic Unit 07050005, at bridge on country road, 4.0 mi south of bridge on Chippewa River at Durand. Drainage area is 6.45 mi ² .	1962-92	09-16-92	14.04	360	08-23-75	15.71	860	
BUFFALO RIVER BASIN									
05371800 Buffalo River Tributary near Osseo, WI	Lat 44°35'01", long 91°05'40", in S 1/2 sec.3, T.24 N., R.6 W., Jackson County, Hydrologic Unit 07040003, at culvert on U.S. High- way 10, 6.5 mi east of Osseo. Drainage area is 1.44 mi ² .	1960-92	09-16-92	11.55	82	09-12-78	12.85	188	
05371920 Buffalo River near Mondovi, WI	Lat 44°31'36", long 91°41'46", in SW 1/4 SE 1/4 sec.27, T.24 N., R.11 W., Buffalo County, Hydro- logic Unit 07040003, at bridge on State Highway 88, 4.0 mi south of Mondovi. Drainage area is 279 mi ² .	1974-92	09-16-92	14.74	3,300	09-10-75	15.39	5,180	
WAUMANDEE CREEK BASIN									
*05378200 Eagle Creek near Fountain City, WI	Lat 44°09'49", long 91°42'28", in SW 1/4 sec.33, T.20 N., R.11 W., Buffalo County, Hydrologic Unit 07040003, at bridge on County Trunk Highway G, 2.5 mi north of Fountain City. Drainage area is 26.6 mi ² .	1961-92	09-16-92	D14.40	F960	07-07-78	18.35	6,000	
BLACK RIVER BASIN									
05380800 Black River Tributary near Whittlesey, WI	Lat 45°12'34", long 90°19'05", in SW 1/4 sec.35, T.32 N., R.1 E., Taylor County, Hydrologic Unit 07040007, at bridge on State High- way 13, 1.1 mi south of Whittlesey. Drainage area is 2.12 mi ² .	1960-92	11-02-91	10.97	57	09-21-90	13.33	305	

			MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS					
Station number and name	Location and drainage area	Period of record	Water year 1992 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
BLACK RIVER BASIN--CONTINUED								
*05380900 Poplar River near Owen, WI	Lat 44°53'10", long 90°34'17", in NW 1/4 sec.25, T.28 N., R.2 W., Clark County, Hydrologic Unit 07040007, at bridge on County Trunk Highway N, 4.2 mi south of Owen. Drainage area is 157 mi ² .	1958-65 1966# 1967-92	03-06-92	18.50	9,100	06-06-80	20.12	12,500
*05380970 Cawley Creek near Neillsville, WI	Lat 44°36'42", long 90°34'31", in SW 1/4 sec.25, T.25 N., R.2 W., Clark County, Hydrologic Unit 07040007, at bridge on State High- way 73, 3.7 mi north of Neillsville. Drainage area is 38.6 mi ² .	1961-92	04-16-92	18.62	5,400	09-22-86	20.62	7,880
*05382200 French Creek near Ettrick, WI	Lat 44°11'04", long 91°18'49", in NE 1/4 sec.27, T.20 N., R.8 W., Trempealeau County, Hydrologic Unit 07040007, at bridge on County Trunk Highways D and T, 2.5 mi west of Ettrick. Drainage area is 14.3 mi ² .	1960-92	04-16-92	10.96	375	04-28-75	13.16	1,350
MORMON CREEK BASIN								
*05386300 Mormon Creek near La Crosse, WI	Lat 43°46'00", long 91°08'27", in NE 1/4 sec.19, T.15 N., R.6 W., La Crosse County, Hydrologic Unit 07060001, at bridge on country road, 6.0 mi southeast of La Crosse. Drainage area is 25.5 mi ² .	1961-92	11-01-91	10.46	525	07-02-78	20.60	6,600
BAD AXE RIVER BASIN								
*05387100 North Fork Bad Axe River near Genoa, WI	Lat 43°33'10", long 91°08'58", in SW 1/4 sec.36, T.13 N., R.7 W., Vernon County, Hydrologic Unit 07060001, at bridge on State High- way 56, 4.1 mi southeast of Genoa. Drainage area is 80.8 mi ² .	1959-65 1966# 1967-92	03-09-92	13.08	860	08-27-59	19.59	10,000
WISCONSIN RIVER BASIN								
*05390140 Muskrat Creek at Conover, WI	Lat 46°03'27", long 89°15'24", in SW 1/4 sec.4, T.41 N., R.10 E., Vilas County, Hydrologic Unit 07070001, at corrugated culvert on U.S. Highway 45, 0.1 mi north of Conover. Drainage area is 10.2 mi ² .	1970-92	04-16-92	11.83	90	04-11-71	13.26	122
05390240 Fourmile Creek near Three Lakes, WI	Lat 45°50'17", long 89°04'32", in NE 1/4 sec.26, T.39 N., R.11 E., Oneida County, Hydrologic Unit 07070001, at 2-barrel corrugated culvert on Fourmile Creek Road, 5.5 mi northeast of Three Lakes. Drainage area is 10.3 mi ² .	1970-92	04-16-92 --	11.88 G12.22	76 --	05-29-91	13.00	122
05391260 Gudegast Creek near Starks, WI	Lat 45°41'41", long 89°15'42", in NW 1/4 sec.16, T.37 N., R.10 E., Oneida County, Hydrologic Unit 07070001, at corrugated culvert on country road, 3.0 mi northwest of Starks. Drainage area is 14.0 mi ² .	1970-92	04-16-92	11.56	51	05-09-90	13.33	130
05391950 Squaw Creek near Harrison, WI	Lat 45°32'47", long 89°29'16", in SW 1/4 sec.3, T.35 N., R.8 E., Lincoln County, Hydrologic Unit 07070001, at culvert on County Trunk Highway A, 5.0 mi northeast of Harrison. Drainage area is 3.23 mi ² .	1970-92	04-16-92	10.92	23	04-30-84	11.32	32

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Station number and name	Location and drainage area	Period of record	MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS				Period of record maximum		
			Water year 1992 maximum		Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
			Date						
WISCONSIN RIVER BASIN--CONTINUED									
*05392150 Mishonagon Creek near Woodruff, WI	Lat 45°54'41", long 89°45'30", in NE 1/4 sec.32, T.40 N., R.6 E., Vilas County, Hydrologic Unit 07070001, at twin culverts on State Highway 47, 3.0 mi north- west of Woodruff. Drainage area is 17.6 mi ² .	1958-92	11-01-91	F9.18	36	08-17-72	11.33	117	
*05392350 Bearskin Creek near Harshaw, WI	Lat 45°38'43", long 89°41'12", in SW 1/4 sec.36, T.37 N., R.6 E., Oneida County, Hydrologic Unit 07070001, at culvert on County Trunk Highway K, 2.1 mi south- west of Harshaw. Drainage area is 31.1 mi ² .	1958-65 1966# 1967-92	04-16-92	9.73	81	06-14-81	10.97	180	
05393640 Little Pine Creek near Irma, WI	Lat 45°23'37", long 89°40'20", in NW 1/4 sec.31, T.34 N., R.7 E., Lincoln County, Hydrologic Unit 07070002, at box culvert on U.S. Highway 51, 3.0 mi north of Irma. Drainage area is 22.0 mi ² .	1970-92	04-16-92	12.50	97	06-14-81	14.38	310	
*05394200 Devil Creek near Merrill, WI	Lat 45°08'56", long 89°47'13", in N 1/2 sec.30, T.31 N., R.6 E., Lincoln County, Hydrologic Unit 07070002, at culvert on County Trunk Highway F, 5.8 mi southwest of Merrill. Drainage area is 9.58 mi ² .	1961-92	04-16-92	12.67	230	06-13-90	17.98	1,600	
05395020 Lloyd Creek near Doering, WI	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 is 7.80 mi ² .	1970-92	04-16-92	12.67	230	06-13-90	>16.00	>1,000	
05395100 Trappe River Tributary near Merrill, WI	Lat 45°08'07", long 89°30'08", in SW 1/4 sec.28, T.31 N., R.8 E., Lincoln County, Hydrologic Unit 07070002, at culvert on County Trunk Highway P, 9.5 mi southeast of Merrill. Drainage area is 1.58 mi ² .	1959-92	04-16-92 04-09-91 03-28-89 03-09-88 09-25-85 07-11-84 03-17-83 04-03-82 03-31-79 07-23-78 05-16-76 04-23-75 04-13-74 03-12-73 09-26-72 04-13-71 06-26-69 06-21-68 04-02-67	12.48 12.55 13.00 11.91 12.25 12.28 12.42 12.34 12.58 12.88 12.27 11.52 11.21 12.42 12.53 12.95 13.60 17.09 13.12	105 E110 E140 E67 E90 E92 E102 E95 E113 E135 E91 E42 E25 E102 E109 E139 E186 E360 E150	06-13-90	17.57	390	
05396100 Pet Brook near Edgar, WI	Lat 44°56'40", long 89°57'05", in SE 1/4 sec.31, T.29 N., R.5 E., Marathon County, Hydrologic Unit 07070002, at culvert on State High- way 29, 1.5 mi northeast of Edgar. Drainage area 6.86 mi ² .	1962-92	04-15-92	16.07	1,000	06-06-80	20.40	2,280	
05396300 Wisconsin River Tributary at Wausau, WI	Lat 44°57'28", long 89°39'52", in NE 1/4 NW 1/4 sec.34, T.29 N., R.7 E., Marathon County, Hydro- logic 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 is 1.10 mi ² .	1982-92	04-15-92	7.60	410	06-12 or 13-90	9.11	740	
05397600 Big Sandy Creek near Wausau, WI	Lat 45°01'55", long 89°27'00", in SE 1/4 sec.31, T.30 N., R.9 E., Marathon County, Hydrologic Unit 07070002, at bridge on State High- way 52, 10.0 mi northeast of Wausau. Drainage area is 11.5 mi ² .	1959-92	04-16-92	11.98	335	09-27-59	15.18	2,120	

Station number and name	Location and drainage area	Period of record	MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS			Period of record maximum		
			Water year	1992 maximum		Date	Gage height (ft)	Dis-charge (ft ³ /s)
			Date			Date	Gage height (ft)	Dis-charge (ft ³ /s)
WISCONSIN RIVER BASIN--CONTINUED								
05400025 Johnson Creek near Knowlton, WI	Lat 44°44'19", long 89°36'39", in SE 1/4 NE 1/4 sec.13, T.26 N., R.7 E., Marathon County, Hydrologic Unit 07070002, at bridge on County Trunk Highway X, 2.7 mi east of Knowlton. Drainage area is 25.1 mi ² .	1973-92	04-15-92	13.68	380	06-06-80	21.78	3,700
05401800 Yellow River Tributary near Pittsville, WI	Lat 44°28'58", long 90°07'05", on common boundary of secs.11 and 14, T.23 N., R.3 E., Wood County, Hydrologic Unit 07070003, at bridge on County Trunk Highway C, 2.0 mi north of Pittsville. Drainage area is 7.23 mi ² .	1959-92	11-18-91	11.31	150	05-02-73	13.82	810
*05403520 Webster Creek at New Lisbon, WI	Lat 43°51'23", long 90°10'25", in NE 1/4 sec.19, T.16 N., R.3 E., Juneau County, Hydrologic Unit 07070003, at bridge on State High- way 80, 1.2 mi south of New Lisbon. Drainage area is 11.8 mi ² .	1961-92	09-16-92	13.97	290	08-17 or 18-90	15.12	580
*05403550 Onemile Creek near Mauston, WI	Lat 43°45'50", long 90°04'45", in SE 1/4 sec.24, T.15 N., R.3 E., Juneau County, Hydrologic Unit 07070003, at bridge on State High- way 58, 2.4 mi south of Mauston. Drainage area is 30.2 mi ² .	1958-92	09-14-92	17.09	2,250	06-17-84	17.18	2,800
05403630 Hulbert Creek near Wisconsin Dells, WI	Lat 43°37'37", long 89°48'36", in SE 1/4 SW 1/4 sec.5, T.13 N., R.6 E., Sauk County, Hydrologic Unit 07070003, 1.6 mi upstream from mouth, and 2.0 mi west of Wisconsin Dells. Drainage area is 11.2 mi ² .	1971-77# 1978-92	09-14-92	5.69	380	08-08-80	6.41	470
05403700 Dell Creek near Lake Delton, WI	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. Drainage area is 44.9 mi ² .	1957-65# 1966-70 1971-80# 1983-92	09-14-92	9.80	1,800	09-14-92	9.80	1,800
*05404200 Narrows Creek at Loganville, WI	Lat 43°26'32", long 90°02'06", in SE 1/4 sec.8, T.11 N., R.4 E., Sauk County, Hydrologic Unit 07070004, at bridge on State Highways 23 and 154, 0.2 mi north of Loganville. Drainage area is 40.1 mi ² .	1958-65 1966# 1967-92	09-16-92	16.28	5,650	06-29-90	16.74	7,200
*05405600 Rowan Creek at Poynette, WI	Lat 43°23'13", long 89°23'25", in S 1/2 sec.35, T.11 N., R.9 E., Columbia County, Hydrologic Unit 07070005, at bridge on U.S. Highway 51, at Poynette. Drainage area is 10.4 mi ² .	1961-92	10-25-91	12.20	210	09-09-65	17.90	2,260
05406800 Rocky Branch near Richland Center, WI	Lat 43°18'52", long 90°23'22", in E 1/2 sec.29, T.10 N., R.1 E., Richland County, Hydrologic Unit 07070005, at culvert on State Highway 80, 1.5 mi south of Richland Center. Drainage area is 1.68 mi ² .	1960-92	09-14-92	12.45	110	08-26-72	17.40	870
*05407100 Richland Creek near Plugtwn, WI	Lat 43°11'12", long 90°44'23", in NW 1/4 sec.9, T.8 N., R.3 W., Crawford County, Hydrologic Unit 07070005, at bridge on U.S. High- way 61, 2.0 mi south of Plugtwn. Drainage area is 19.2 mi ² .	1958-92	09-14-92	13.79	395	08-04-82	18.87	4,400
*05407200 Crooked Creek near Boscobel, WI	Lat 43°06'27", long 90°42'18", in SE 1/4 sec.2, T.7 N., R.3 W., Grant County, Hydrologic Unit 07070005, at bridge on U.S. High- way 61, 1.6 mi south of Boscobel. Drainage area is 12.9 mi ² .	1959-92	09-14-92	13.16	720	07-27-64	18.21	2,460

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Station number and name	Location and drainage area	Period of record	MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS			Period of record maximum					
			Water year	1992 maximum		Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
GRANT RIVER BASIN											
*05413400 Pigeon Creek near Lancaster, WI	Lat 42°49'00", long 90°43'20", in SW 1/4 sec.15, T.4 N., R.3 W., Grant County, Hydrologic Unit 07060003, at culvert on country road, 2.0 mi south of Lancaster. Drainage area is 6.93 mi ² .	1960-65 1966# 1967-92	1992	B	<150	01-24-67	20.85	2,800			
PLATTE RIVER BASIN											
*05414200 Bear Branch near Platteville, WI	Lat 42°45'46", long 90°30'06", in NW 1/4 sec.4, T.3 N., R.1 W., Grant County, Hydrologic Unit 07060003, at box culvert on State Highway 81, 2.3 mi northwest of Platteville. Drainage area is 2.72 mi ² .	1958-92	1992	B	<290	06-20-74	20.35	1,330			
05414213 Little Platte River near Platteville, WI	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 is 79.7 mi ² .	1987-90# 1991-92	02-23-92	10.13	960	06-29-90	15.35	3,800			
GALENA RIVER BASIN											
*05414900 Pats Creek near Elk Grove, WI	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 is 8.50 mi ² .	1960-92	02-20-92	11.83	250	06-29-69	17.32	7,040			
05414915 Madden Branch Tributary near Belmont, WI	Lat 42°40'03", long 90°19'45", in NE 1/4 NE 1/4 sec.11, T.2 N., R.1 E., Lafayette County, Hydrologic Unit 07090003, at State Highway 81, 4.7 mi south of Belmont. Drainage area is 2.83 mi ² .	1981-82# 1984-92	02-20-92	7.53	175	06-29-90	14.29	1,800			
ROCK RIVER BASIN											
*05423800 East Branch Rock River Tributary near Slinger, WI	Lat 43°23'06", long 88°18'29", in S 1/2 sec.26, T.11 N., R.18 E., Washington County, Hydrologic Unit 07090001, at culvert on U.S. High- way 41, 4.0 mi northwest of Slinger. Drainage area is 4.42 mi ² .	1960-92	10-04-91	F12.30	215	08-14-72	13.12	340			
*05425700 Robbins Creek at Columbus, WI	Lat 43°20'48", long 89°01'55", in SE 1/4 sec.11, T.10 N., R.12 E., Columbia County, Hydrologic Unit 07090002, at culvert on U.S. Highway 16, at Columbus. Drainage area is 8.01 mi ² .	1960-92	02-27-92	11.69	137	09-08-85	14.70	335			
*05427200 Allen Creek near Fort Atkinson, WI	Lat 42°53'54", long 88°51'35", in NE 1/4 sec.17, T.5 N., R.14 E., Jefferson County, Hydrologic Unit 07090001, at box culvert on State Highway 26, 2.5 mi southwest of Fort Atkinson. Drainage area is 10.2 mi ² .	1958-92	1992	B	<25	03-29-60	13.24	380			
05427800 Token Creek near Madison, WI	Lat 43°10'52", Long 89°19'28", in SW 1/4SW 1/4 sec.4, T.8 N., R.10 E., Dane County, Hydrologic Unit 07090001, at culvert on U.S. Highway 51, 8 mi northeast of State Capitol in Madison. Drainage area is 24.3 mi ² .	1961-65 1966# 1967-75 1976-81# 1982-92	02-27-92	F11.30	140	03-12-76	14.16	576			
05430403 Fisher Creek Tributary at Janesville, WI	Lat 42°40'18", long 89°03'31", in SW 1/4 SE 1/4 sec.34, T.3 N., R.12 E., Rock County, Hydrologic Unit 07090001, at Culvert on Rockport Road, 0.4 mi west of South Crosby Avenue, and 0.6 mi upstream from County Trunk High- way D, at Janesville. Drainage area is 1.42 mi ² .	1982-92	09-16-92	7.53	770	06-29-90	7.62	830			

Station number and name	Location and drainage area	Period of record	MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS			Period of record maximum		
			Water year	1992 maximum		Date	Gage height (ft)	Dis- charge (ft ³ /s)
ROCK RIVER BASIN--CONTINUED								
*05431400 Little Turtle Creek at Allens Grove, WI	Lat 42°34'46", long 88°45'33", in NE 1/4 sec.6, T.1 N., R.15 E., Walworth County, Hydrologic Unit 07090001, at bridge on country road, 0.2 mi south of Allens Grove. Drainage area is 42.4 mi ² .	1962-92	1992	B	<280	04-21-73	18.28	8,400
*05432300 Rock Branch near Mineral Point, WI	Lat 42°50'02", long 90°09'15", in SE 1/4 sec.8, T.4 N., R.3 E., Iowa County, Hydrologic Unit 07090003, at box culvert on State Highway 23, 2.5 mi south of Mineral Point. Drainage area is 4.83 mi ² .	1959-92	11-01-91	F11.78	210	01-24-67	16.19	1,180
*05433500 Yellowstone River near Blanchard- ville, WI	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 High- way F, 7.0 mi west-southwest of Blanchardville. Drainage area is 28.5 mi ² .	1954-65# 1966-92	11-01-91	6.77	620	03-29-60	10.47	4,500
05435900 Sugar River Tributary near Pine Bluff, WI	Lat 43°02'48", long 89°38'42", in SE 1/4 sec.27, T.7 N., R.7 E., Dane County, Hydrologic Unit 07090004, at culvert on County Trunk Highway J, 1.1 mi southeast of Pine Bluff. Drainage area is 7.42 mi ² .	1961-92	11-01-91 --	11.40 GH11.47	65 --	01-24-67	15.02	460
*05436200 Gill Creek near Brooklyn, WI	Lat 42°49'38", long 89°26'43", in NW 1/4 sec.16, T.4 N., R.9 E., Green County, Hydrologic Unit 07090004, at culvert on State Highway 92, 4.3 mi west of Brooklyn. Drainage area is 3.33 mi ² .	1961-92	11-30-91	F12.57	72	03-31-65	15.06	370
*05437200 East Fork Raccoon Creek Tributary near Beloit, WI	Lat 42°30'44", long 89°06'40", on common boundary of secs.30 and 31, T.1 N., R.12 E., Rock County, Hydrologic Unit 07090003, at culvert on State Highway 81, 2.9 mi west of Beloit. Drainage area is 4.64 mi ² .	1958-92	09-16-92	F11.49	75	06-25-78	15.35	690
ILLINOIS RIVER BASIN								
05545100 Sugar Creek at Elkhorn, WI	Lat 42°41'05", long 88°30'50", in SW 1/4 sec.29, T.3 N., R.17 E., Walworth County, Hydrologic Unit 07120006, at culvert on State Highway 11, 2.0 mi northeast of Elkhorn. Drainage area is 6.63 mi ² .	1962-92	07-14-92	11.45	45	04-21-73	17.47	900
05545200 White River Tributary near Burlington, WI	Lat 42°41'03", long 88°21'37", on common boundary of secs.27 and 34, T.3 N., R.18 E., Walworth County, Hydrologic Unit 07120006, at box culvert on State Highway 11, 4.5 mi west of Burlington. Drainage area is 2.42 mi ² .	1958-92	11-29-91	F10.50	35	04-21-73	14.10	290
*05548150 North Branch Nippersink Creek near Genoa City, WI	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, Hydro- logic Unit 07120006, at bridge on County Trunk Highway B, 3.0 mi west of Genoa City. Drainage area is 13.6 mi ² .	1962-92	11-29-91	10.43	85	09-25-86	13.63	475

* Also a low-flow partial-record station

Operated as a continuous-record station

B Peak did not reach bottom of gage

C Backwater from debris

D Backwater from beaver dam

E Revised

F Estimated

G Backwater from ice

H Annual maximum stage also occurred at different date from discharge peak

MEASUREMENTS AT MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1992

Stream	Tributary to	Location	Drainage Area (mi ²)	Measured Previously (Water Years)	Date	Measurements Discharge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE MICHIGAN						
Portage Canal	Fox River	Lat 43°32'19", long 89°27'32", in NE 1/4 NW 1/4 sec.8, T.12 N., R.9 E., Columbia County, Hydrologic Unit 04030201, at bridge on U.S. Highway 51, at Portage.	0.05	1965-66 1969-71 1974 1983 1991	06-16-92	14.9
CHIPPEWA RIVER BASIN						
North Creek	Trout River	Lat 46°04'43", long 89°40'02", in SW 1/4 NW 1/4 sec.31, T.42 N., R.7 E., Vilas County, Hydrologic Unit 0705002, at inlet to Trout Lake, 2.6 mi southwest of Boulder Junction.	3.58	--	10-15-91 11-20-91 01-03-92 02-18-92 04-02-92 04-22-92 06-03-92 08-05-92 09-10-92	2.85 3.70 2.94 2.43 3.42 6.71 3.00 2.86 1.57
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 0705002, at County Trunk Highway N, near Boulder Junction.	--	1991	10-15-91 11-20-91 01-03-92 02-18-92 04-02-92 04-22-92 06-03-92 08-04-92 09-10-92	6.31 7.70 4.12 3.12 3.84 7.75 0.12 1.62 2.22
WAUMANDEE CREEK BASIN						
Eagle Creek	Waumandee Creek	Lat 44°14'01", long 91°40'52", in NW 1/4 SE 1/4 sec.3, T.20 N., R.6 W., Buffalo County, Hydrologic Unit 07040003, at Schaffner Valley Road, about 7.2 mi northeast of Fountain City.	4.52	1991	09-16-92	107
TREMPEALEAU RIVER BASIN						
Trout Run Creek	Trempealeau River	Lat 44°12'49", long 91°34'07", in NW 1/4 NW 1/4 sec.15, T.20 N., R.10 W., Trempealeau County, Hydrologic Unit 0704005, about 350 ft downstream of County Highway J bridge, 5 mi north of Dodge.	7.66	--	07-07-92 07-21-92 08-04-92 08-18-92 09-01-92 09-15-92 09-30-92	3.22 3.72 4.37 3.43 3.29 3.31 4.16
Bohris Valley Creek	Trempealeau River	Lat 44°08'37", long 91°36'41", in SW 1/4 SE 1/4 sec.5, T.19 N., R.10 W., Buffalo County, Hydrologic Unit 0704005, about 300 ft upstream of Brandhorst Road, 3 mi west of Dodge.	4.83	--	07-07-92 07-22-92 08-04-92 08-19-92 09-02-92 09-15-92 09-16-92	2.03 2.22 2.20 2.36 2.30 2.29 5.96
Bohris Valley Creek	Trempealeau River	Lat 44°08'44", long 91°35'50", in NE 1/4 SE 1/4 sec.5, T.19 N., R.10 W., Buffalo County, Hydrologic Unit 0704005, about 600 ft downstream of County Highway P, 2 mi west of Dodge.	9.53	--	07-07-92 07-22-92 08-04-92 08-19-92 09-02-92 09-15-92	4.06 4.48 4.32 3.94 4.18 4.26

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1992

Stream	Tributary to	Location	Drainage Area (mi ²)	Measured Previously (Water Years)	Measurements	
					Date	Discharge (ft ³ /s)
WISCONSIN RIVER BASIN						
Wisconsin River	Mississippi River	Lat 45°17'41", long 89°47'34", in SW 1/4 SW 1/4 sec.31, T.33 N., R.6 E., Lincoln County, Hydrologic Unit 0707001, 0.5 mi downstream from powerplant at Grandfather Dam, 9.5 mi northwest of Merrill.	2,280	1989-91	06-05-92	2,100
					06-09-92	812
					08-19-92	929
					09-25-92	2,433
					09-29-92	2,036
					09-30-92	2,390
ROCK RIVER BASIN						
Sixmile Creek	Yahara River	Lat 43°10'29", long 89°25'58", in NE 1/4 NW 1/4 sec.16, T.8 N., R.9 E., Dane County, Hydrologic Unit 0709001, on right bank at bridge on town road, 1.5 mi southeast of Waunakee.	41.1	1976-81# 1991	11-11-91	6.3
					12-29-91	5.4

Operated as a continuous-record station

Water-quality partial-record stations are particular sites where chemical-quality, biological, physical, and/or sediment data are collected systematically over a period of years for use in hydrologic analyses.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
STREAMS TRIBUTARY TO LAKE SUPERIOR									
04024430 NEMADJI RIVER NEAR SOUTH SUPERIOR, WI (LAT 46 38 00N LONG 092 05 38W)									
OCT 1991					APR 1992				
03...	1200	180	150	9.5	06...	1700	2060	127	3.5
NOV					MAY				
21...	1045	2600	140	1.0	19...	1020	297	116	15.0
JAN 1992					JUL				
07...	0900	219	210	0.0	01...	1100	242	190	14.5
FEB					SEP				
20...	1500	120	240	0.0	08...	1340	257	175	15.5
04025500 BOIS BRULE RIVER AT BRULE, WI (LAT 46 32 16N LONG 091 35 43W)									
OCT 1991					APR 1992				
03...	0930	153	120	8.5	02...	1240	231	110	6.0
NOV					07...	1030	381	85	3.5
21...	0920	320	100	2.0	MAY				
JAN 1992					19...	1545	180	118	18.5
07...	1205	163	150	0.0	JUL				
FEB					07...	0730	289	90	15.5
20...	1110	148	148	1.5	SEP				
					08...	1545	153	125	14.5
04027500 WHITE RIVER NEAR ASHLAND, WI (LAT 46 29 50N LONG 090 54 15W)									
OCT 1991					APR 1992				
02...	0815	200	174	10.0	07...	1220	546	110	4.0
NOV					MAY				
20...	1530	700	160	2.0	21...	1130	245	172	19.5
JAN 1992					JUL				
07...	1615	218	188	0.0	06...	1440	1720	80	17.5
FEB					SEP				
19...	1540	195	192	0.0	09...	1440	242	165	15.0
STREAMS TRIBUTARY TO LAKE MICHIGAN									
04066003 MENOMINEE RIVER BELOW PEMENE CRK NR PEMBINE, WI (LAT 45 34 46N LONG 087 47 13)									
OCT 1991					MAY 1992				
04...	1210	1220	255	10.5	27...	1100	2460	210	18.5
APR 1992					JUL				
08...	1200	6980	207	4.5	17...	1150	2720	230	21.0
04069500 PESHTIGO RIVER AT PESHTIGO, WI (LAT 45 02 49N LONG 087 44 40W)									
OCT 1991					JUL 1992				
07...	0807	468	278	10.5	16...	1950	727	252	22.0
MAR 1992					SEP				
30...	1114	991	300	4.5	25...	1200	356	270	14.5
MAY									
15...	1018	1110	238	15.5					
04071000 OCONTO RIVER NEAR GILLET, WI (LAT 44 51 53N LONG 088 18 00W)									
OCT 1991					MAR 1992				
04...	0900	307	290	11.0	26...	0918	809	266	1.5
NOV					MAY				
21...	1118	926	220	5.0	13...	0847	624	245	16.5
DEC					JUL				
26...	1219	584	285	1.5	15...	1800	549	270	20.5
FEB 1992					SEP				
25...	1208	426	303	1.0	23...	1655	921	230	13.0
04071858 PENSANKEE RIVER NEAR PENSANKEE, WI (LAT 44 49 08N LONG 087 57 12W)									
OCT 1991					MAR 1992				
01...	1403	14	595	13.0	26...	1221	276	361	1.5
NOV					MAY				
19...	1405	208	605	7.0	13...	1151	42	536	18.0
DEC					JUL				
20...	1450	45	670	2.0	16...	1215	33	510	22.0
FEB 1992					SEP				
25...	1500	16	659	1.5	24...	1020	13	540	12.5

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED									
04073500		FOX RIVER AT BERLIN, WI (LAT 43 57 14N LONG 088 57 08W)							
OCT 1991					MAY 1992				
02...	1135	656	364	13.0	28...	1725	1050	390	17.0
NOV					JUL				
13...	1000	1840	410	0.5	21...	1750	750	352	24.0
JAN 1992					SEP				
07...	1130	1400	430	1.0	17...	1215	1410	277	19.0
FEB									
28...	1040	1230	410	3.0					
04079000		WOLF RIVER AT NEW LONDON, WI (LAT 44 23 32N LONG 088 44 25W)							
OCT 1991					APR 1992				
01...	1615	1010	300	11.0	09...	1610	3280	290	8.5
NOV					JUL				
12...	1555	2810	337	0.0	21...	1520	1550	330	22.5
JAN 1992					SEP				
09...	1425	1570	345	0.0	16...	1830	1640	315	18.5
FEB									
27...	1221	1070	378	0.0					
		DATE	TIME	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	CHLORO- PHYLL A TRICHR. UNCORR. WHOLE TOTAL (UG/L) (32210)			
040844128		FOX RIVER AT STATE HIGHWAY 114 AT NEENAH, WI (LAT 44 11 20 LONG 088 27 34W)							
		JUN 1992							
		08...	1415	--	--	10.0			
		AUG							
		04...	1200	--	--	67.5			
		31...	1200	26	17	111			
		NOV							
		17...	1240	18	14	55.2			
DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
04085200		KEWAUNEE RIVER NEAR KEWAUNEE, WI (LAT 44 27 30N LONG 087 33 23W)							
OCT 1991					MAR 1992				
02...	1150	15	650	14.0	27...	0837	98	637	2.0
NOV					MAY				
20...	1419	56	760	8.0	14...	1023	48	672	14.0
DEC					JUL				
23...	0938	45	768	1.5	30...	1130	16	650	20.0
FEB 1992									
26...	1315	44	734	1.5					
04085281		EAST TWIN RIVER AT MISHICOT, WI (LAT 44 14 16N LONG 087 38 11W)							
OCT 1991					MAR 1992				
02...	1404	11	620	14.0	26...	1540	86	590	4.0
NOV					MAY				
20...	1201	74	641	6.5	14...	1226	54	454	15.5
DEC					JUL				
23...	1127	45	697	2.0	29...	1710	12	690	23.0
FEB 1992									
26...	1520	33	650	2.0					
04086000		SHEBOYGAN RIVER AT SHEBOYGAN, WI (LAT 43 44 25N LONG 087 45 35W)							
OCT 1991					JUN 1992				
08...	1455	--	665	11.0	18...	1400	--	600	22.0
JAN 1992					AUG				
13...	1435	--	560	1.0	12...	1500	--	540	20.5

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED									
04086600 MILWAUKEE RIVER NEAR CEDARBURG, WI (LAT 43 16 49N LONG 087 56 34W)									
OCT 1991					JUN 1992				
09...	1325	--	640	13.5	19...	1235	--	780	19.0
JAN 1992					AUG				
14...	1120	--	600	0.0	13...	1245	--	650	21.5
FEB									
26...	1215	--	590	1.5					
04087030 MENOMONEE RIVER AT MENOMONEE FALLS, WI (LAT 43 10 22N LONG 088 06 14W)									
OCT 1991					JUN 1992				
09...	1505	--	790	12.5	19...	1505	--	780	18.0
FEB 1992					AUG				
26...	1405	--	580	2.0	13...	1455	--	710	18.5
04087088 UNDERWOOD CREEK AT WAUWATOSA, WI (LAT 43 03 17N LONG 088 02 46W)									
OCT 1991					MAR 1992				
28...	1000	18	1160	10.5	02...	1120	12	1500	6.5
DEC					16...	1210	11	1410	9.0
09...	1045	35	1410	4.5	JUN				
JAN 1992					03...	1130	4.7	1080	25.5
22...	0915	7.1	1550	1.0	JUL				
28...	1020	5.6	1850	2.0	06...	0950	3.8	1160	22.5
04087159 KINNICKINNIC R AT S. 11TH ST AT MILWAUKEE, WI (LAT 42 59 51N LONG 087 55 35W)									
OCT 1991					JUN 1992				
28...	1532	20	1130	12.0	03...	1615	8.7	673	26.0
JAN 1992					JUL				
22...	1540	8.0	1240	1.0	06...	1605	5.8	692	27.5
28...	1115	6.3	2030	3.0	AUG				
MAR					11...	1605	6.1	732	27.0
02...	1420	9.0	1400	7.0	SEP				
APR					23...	1502	6.6	913	19.5
20...	1400	138	1350	20.5					
04087204 OAK CREEK AT SOUTH MILWAUKEE, WI (LAT 42 55 30N LONG 087 52 12W)									
OCT 1991					APR 1992				
29...	1646	122	648	13.0	21...	0800	25	1210	12.5
DEC					JUN				
10...	0820	66	1170	2.5	04...	0945	2.9	1330	19.5
11...	0928	46	1200	4.0	JUL				
JAN 1992					07...	1212	1.8	1120	22.5
23...	1236	13	1740	1.5	AUG				
MAR					12...	1044	4.8	1010	19.5
03...	1300	19	1270	4.5	SEP				
					24...	1337	8.2	1100	15.0
04087220 ROOT RIVER NEAR FRANKLIN, WI (LAT 42 52 25N LONG 087 59 45W)									
OCT 1991					APR 1992				
29...	1135	167	679	12.5	21...	1120	50	1030	12.5
DEC					JUN				
10...	1048	116	1060	3.5	04...	1244	6.4	1160	18.5
10...	1715	109	1050	4.5	JUL				
11...	0625	88	1070	2.5	07...	1035	5.6	888	20.5
11...	1300	82	1070	4.5	AUG				
JAN 1992					12...	1300	5.1	852	19.5
23...	1030	22	1260	1.0	SEP				
MAR					24...	1055	8.5	860	12.0
03...	1105	35	1120	4.5					
04087233 ROOT RIVER CANAL NEAR FRANKLIN, WI (LAT 42 48 55N LONG 087 59 40W)									
OCT 1991					JUN 1992				
29...	0900	152	692	12.0	04...	1500	5.8	1020	20.0
DEC					JUL				
11...	1120	164	662	4.5	07...	0805	2.6	1140	20.5
JAN 1992					AUG				
23...	0843	26	918	1.0	12...	0845	4.6	1020	20.5
MAR					SEP				
03...	0845	53	826	4.0	24...	0933	30	905	12.0
APR									
21...	1358	59	799	13.0					

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED									
04087240 ROOT RIVER AT RACINE, WI (LAT 42 45 05N LONG 087 49 25W)									
OCT 1991					MAR 1992				
21...	1513	45	801	9.5	30...	1553	274	843	6.0
NOV					MAY				
27...	0800	132	706	1.0	14...	0740	49	931	18.0
JAN 1992					JUN				
07...	0820	114	1040	2.5	12...	0925	14	990	21.0
FEB					JUL				
19...	1605	323	997	0.5	02...	1133	10	693	22.0
MAR					AUG				
09...	1442	523	759	7.0	27...	1620	32	954	20.0
04087257 PIKE RIVER NEAR RACINE, WI (LAT 42 38 49N LONG 087 51 38W)									
OCT 1991					MAR 1992				
21...	1240	8.7	610	9.5	09...	1322	73	834	7.0
NOV					30...	1305	57	792	5.5
26...	1518	26	663	3.0	MAY				
JAN 1992					13...	1600	16	644	19.0
06...	1520	27	860	4.0	JUL				
FEB					02...	0753	6.9	448	20.5
19...	1248	128	546	1.5	AUG				
					28...	0742	19	605	17.0
ST. CROIX RIVER BASIN									
05333500 ST. CROIX RIVER NEAR DANBURY, WI (LAT 46 04 28N LONG 092 14 50W)									
OCT 1991					APR 1992				
03...	1610	1400	135	9.5	02...	1000	2050	100	3.0
NOV					06...	1320	2280	110	4.0
21...	1215	3680	120	1.5	23...	1345	5460	56	5.5
JAN 1992					MAY				
06...	1415	1530	135	0.0	18...	1545	1510	115	19.5
FEB					JUL				
18...	1030	1400	150	0.0	06...	1430	3900	84	18.0
					SEP				
					04...	1100	1300	125	17.5
05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI (LAT 45 24 25N LONG 092 38 49W)									
OCT 1991					MAR 1992				
21...	1420	2550	148	16.5	27...	1035	11300	122	2.0
NOV					MAY				
29...	1105	7250	142	0.0	01...	1105	11400	130	15.0
DEC					28...	0950	6280	145	16.0
16...	1140	5840	158	0.0	JUL				
JAN 1992					27...	0900	3780	160	21.5
27...	1110	1820	215	0.0	SEP				
FEB					30...	1405	2480	202	15.5
25...	1145	4630	240	0.0					

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
CHIPPEWA RIVER BASIN										
05356000 CHIPPEWA RIVER AT BISHOPS BRIDGE NEAR WINTER, WI (LAT 45 50 57N LONG 091 04 44)										
OCT 1991										
04...	1130	436	75	--	11.0	--	--	--	--	--
NOV										
20...	1020	2000	60	--	2.5	--	--	--	--	--
JAN 1992										
08...	1500	1220	92	--	1.5	--	--	--	--	--
FEB										
18...	1300	642	112	--	2.0	--	--	--	--	--
APR										
09...	1045	281	72	--	4.0	--	--	--	--	--
MAY										
05...	1550	1160	49	6.5	12.5	6.7	<0.010	0.066	0.060	<0.010
26...	1310	1140	65	--	17.5	--	--	--	--	--
JUL										
14...	1430	2170	66	7.2	21.5	6.2	<0.010	<0.050	0.060	<0.010
24...	1015	503	65	--	20.5	--	--	--	--	--
AUG										
19...	1050	589	78	7.3	21.5	5.8	<0.010	<0.050	<0.010	<0.010
SEP										
11...	1100	426	100	--	16.5	--	--	--	--	--

454657091300600 BIG SISSABAGAMA TRIBUTARY NEAR STONE LAKE, WI (LAT 45 46 57N LONG 091 30 06W)

MAY 1992							
11...	1000	0.0	65	8.1	13.0	0.020	
JUN							
09...	0905	0.0	25	7.9	19.5	0.078	
JUL							
23...	1015	0.0	73	8.2	20.5	0.026	
AUG							
19...	1030	2.0	69	8.0	21.5	0.098	

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
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05356500 CHIPPEWA RIVER NEAR BRUCE, WI (LAT 45 27 08N LONG 091 15 39W)

OCT 1991					APR 1992				
25...	1120	1310	100	7.0	22...	1720	8090	42	6.5
DEC					JUN				
24...	1210	2340	90	0.0	03...	0950	896	90	21.0
FEB 1992					23...	1315	762	110	16.5
03...	1130	1680	100	0.0	SEP				
MAR					01...	1130	836	106	16.5
05...	1540	2090	120	0.0					

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
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CHIPPEWA RIVER BASIN--CONTINUED

05360500

FLAMBEAU RIVER NEAR BRUCE, WI (LAT 45 22 21N LONG 091 12 34W)

OCT 1991										
25...	1220	1410	103	--	7.5	--	--	--	--	--
DEC										
24...	1250	1800	95	--	0.0	--	--	--	--	--
FEB 1992										
03...	1230	1200	145	--	0.5	--	--	--	--	--
MAR										
05...	1410	1480	128	--	0.0	--	--	--	--	--
APR										
22...	1645	8190	70	--	6.0	--	--	--	--	--
MAY										
05...	1050	3480	95	7.0	11.0	6.5	<0.010	0.093	0.040	<0.010
JUN										
23...	1030	516	120	--	14.5	--	--	--	--	--
JUL										
14...	1245	3650	97	7.1	20.0	5.9	<0.010	0.092	0.050	0.010
AUG										
19...	0915	995	106	7.2	20.5	5.7	<0.010	<0.050	0.030	<0.010
SEP										
01...	1225	1120	115	--	19.0	--	--	--	--	--
23...	1250	1670	110	--	16.0	--	--	--	--	--

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
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05362000

JUMP RIVER AT SHELDON, WI (LAT 45 18 29N LONG 090 57 23W)

OCT 1991					APR 1992				
01...	1340	500	86	0.0	22...	1400	3400	52	8.0
01...	1350	177	125	12.5	JUN				
NOV					18...	1530	150	160	21.0
14...	1340	500	86	1.5	AUG				
JAN 1992					11...	1435	130	144	24.5
08...	1405	295	125	0.0					
FEB									
25...	1520	128	183	0.0					

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
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05365500

CHIPPEWA RIVER AT CHIPPEWA FALLS, WI (LAT 44 55 37N LONG 091 24 33W)

OCT 1991										
01...	1500	8310	125	--	14.0	--	--	--	--	--
NOV										
04...	1115	33800	110	--	2.0	--	--	--	--	--
25...	1155	11200	82	--	0.5	--	--	--	--	--
DEC										
17...	1730	9670	105	--	0.0	--	--	--	--	--
JAN 1992										
28...	1420	4910	145	--	0.0	--	--	--	--	--
MAR										
10...	1345	19600	120	--	0.0	--	--	--	--	--
13...	1310	11900	95	--	0.0	--	--	--	--	--
18...	1220	8080	123	--	1.5	--	--	--	--	--
APR										
13...	1230	8170	105	--	2.0	--	--	--	--	--
22...	1820	32000	64	--	4.5	--	--	--	--	--
MAY										
06...	1115	9120	90	--	10.5	--	--	--	--	--
06...	1350	9340	70	7.6	12.5	5.9	<0.010	0.140	0.040	<0.010
JUL										
01...	1140	5220	135	--	20.0	--	--	--	--	--
15...	1210	9600	114	7.7	21.5	6.7	0.010	0.290	0.360	0.040
AUG										
18...	1415	5100	134	8.0	21.5	6.9	0.020	0.490	0.600	0.050
SEP										
23...	1625	5310	130	--	17.0	--	--	--	--	--

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	
CHIPPEWA RIVER BASIN--CONTINUED										
05365707 NORTH FORK EAU CLAIRE RIVER NEAR THORP, WI (LAT 44 58 25N LONG 090 50 57W)										
OCT 1991					MAR 1992					
01...	1140	6.8	710	11.0	06...	1325	617	76	0.5	
NOV					24...	1308	52	188	1.5	
14...	1140	34	435	1.0	APR					
DEC					21...	1130	502	127	10.0	
19...	1150	26	200	0.0	JUN					
FEB 1992					18...	1155	25	193	19.0	
03...	1340	5.0	245	0.0	AUG					
					11...	1150	3.1	185	22.0	
05368000 HAY RIVER AT WHEELER, WI (LAT 45 02 52N LONG 091 54 39W)										
OCT 1991					APR 1992					
22...	1815	250	388	10.5	21...	1440	1780	165	8.5	
NOV					22...	1020	3070	160	8.5	
13...	1035	319	372	3.0	MAY					
18...	1330	765	300	3.5	12...	1310	347	350	17.5	
DEC					JUL					
18...	1010	350	150	0.0	14...	1100	354	315	19.0	
30...	1148	315	358	0.5	SEP					
JAN 1992					11...	1105	224	372	14.0	
28...	1310	259	372	0.0						
MAR										
18...	1525	465	320	4.5						
DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
05369000 RED CEDAR RIVER AT MENOMONIE, WI (LAT 44 53 02N LONG 091 55 57W)										
OCT 1991										
11...	0949	1240	220	--	10.5	--	--	--	--	
DEC										
18...	0845	972	222	--	0.0	--	--	--	--	
JAN 1992										
30...	0735	1790	256	--	0.0	--	--	--	--	
MAR										
17...	1545	1940	190	--	1.5	--	--	--	--	
APR										
22...	1140	5170	205	--	6.0	--	--	--	--	
MAY										
06...	0900	2570	171	7.4	14.0	9.2	0.010	0.750	0.020	
12...	1125	2400	193	--	18.0	--	--	--	--	
JUN										
11...	1605	419	260	--	21.5	--	--	--	--	
JUL										
15...	0815	2070	218	7.2	22.5	12	0.030	0.720	0.150	
20...	1715	1140	200	--	21.5	--	--	--	--	
AUG										
07...	0910	1050	205	--	21.0	--	--	--	--	
18...	1050	1330	232	7.8	21.5	12	0.020	0.450	0.040	
SEP										
17...	1510	1830	315	--	19.5	--	--	--	--	
05370000 EAU GALLE RIVER AT SPRING VALLEY, WI (LAT 44 51 10N LONG 092 14 17W)										
MAY 1992										
06...	1050	26	275	8.5	14.0	4.6	0.020	0.640	0.020	
JUL										
15...	1010	17	241	8.4	21.5	4.1	0.030	0.740	0.040	
AUG										
18...	1220	16	281	8.7	21.5	4.8	0.020	0.061	<0.010	

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
TREMPEALEAU RIVER BASIN									
05379500 TREMPEALEAU RIVER AT DODGE, WI (LAT 44 07 55N LONG 091 33 14W)									
OCT 1991					MAY 1992				
03...	1222	301	315	13.0	27...	1730	457	299	17.0
DEC					JUL				
17...	1400	523	346	0.0	28...	1055	363	296	22.0
JAN 1992					SEP				
23...	0930	443	315	0.0	16...	1720	1460	175	19.5
MAR					17...	0820	1830	155	19.0
03...	1725	1030	230	3.0	18...	1255	7560	110	18.5
APR									
14...	1505	482	314	7.0					
BLACK RIVER BASIN									
05381000 BLACK RIVER AT NEILLSVILLE, WI (LAT 44 33 34N LONG 090 36 52W)									
OCT 1991					MAR 1992				
03...	1450	112	163	13.5	04...	1320	739	175	0.5
NOV					APR				
15...	1205	2240	129	1.5	14...	1420	1240	115	3.5
18...	1600	8870	108	3.0	JUL				
JAN 1992					23...	1100	173	137	18.0
08...	1510	288	155	0.0					
WISCONSIN RIVER BASIN									
05391000 WISCONSIN R AT RAINBOW LK NEAR LAKE TOMAHAWK, WI (LAT 45 49 50N LONG 089 33 08)									
NOV 1991					APR 1992				
16...	1600	679	85	2.5	23...	1445	308	85	5.5
APR 1992					JUL				
01...	1215	454	90	3.5	21...	1830	560	80	20.0
05393500 SPIRIT RIVER AT SPIRIT FALLS, WI (LAT 45 26 58N LONG 089 58 47W)									
OCT 1991					APR 1992				
02...	1110	27	107	10.0	21...	1515	752	44	9.0
NOV					MAY				
19...	1515	763	43	1.5	29...	1530	34	87	17.0
DEC					JUL				
26...	1550	50	92	0.0	21...	1140	24	110	16.5
FEB 1992					SEP				
26...	1145	27	123	0.0	24...	1330	44	95	13.0
05394500 PRAIRIE RIVER NEAR MERRILL, WI (LAT 45 14 09N LONG 089 38 59W)									
OCT 1991					APR 1992				
01...	1055	101	180	8.5	02...	1345	259	105	4.0
NOV					22...	1510	958	53	7.5
19...	1130	573	82	2.0	MAY				
DEC					21...	1000	219	117	16.5
27...	1253	142	162	1.5	JUL				
FEB 1992					16...	1640	124	162	18.0
21...	1345	142	180	0.0	SEP				
					25...	1515	128	145	14.5
05395000 WISCONSIN RIVER AT MERRILL, WI (LAT 45 10 41N LONG 089 40 52W)									
SEP 1992									
11...	1440	2020	105	16.0					
05397500 EAU CLAIRE RIVER AT KELLY, WI (LAT 44 55 06N LONG 089 33 00W)									
OCT 1991					APR 1992				
01...	1330	105	235	11.0	03...	1435	556	118	3.5
NOV					MAY				
18...	1600	895	116	2.0	22...	1120	301	169	19.5
DEC					JUL				
27...	1230	178	222	0.0	17...	1230	111	260	21.5
FEB 1992					SEP				
20...	1610	97	275	0.0	22...	1205	406	128	12.5

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
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WISCONSIN RIVER BASIN--CONTINUED

05398000 WISCONSIN RIVER AT ROTHSCILD, WI (LAT 44 53 09N LONG 089 38 05W)

MAY 1992										
07...	0930	3000	105	7.0	12.5	6.5	0.010	0.230	0.060	<0.010
JUL 16...	1130	2510	142	7.6	22.0	5.1	<0.010	0.250	0.030	0.020
AUG 20...	0850	1720	174	7.6	21.5	1.7	<0.010	<0.050	0.020	<0.010

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
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05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI (LAT 44 49 19N LONG 090 04 46W)

OCT 1991					APR 1992					
01...	1625	17	242	14.0	06...	1520	590	140	6.5	
NOV 20...	1415	657	145	2.5	MAY 22...	1405	66	173	22.5	
DEC 27...	1610	49	226	0.5	JUL 30...	1200	13	320	23.0	
FEB 1992					SEP 22...	1537	84	191	17.5	
17...	1620	15	330	0.0						

05400760 WISCONSIN RIVER AT WISCONSIN RAPIDS, WI (LAT 44 23 41N LONG 089 49 31W)

OCT 1991					MAY 1992					
02...	1725	2440	270	14.5	28...	1040	3460	152	19.0	

05402000 YELLOW RIVER AT BABCOCK, WI (LAT 44 18 05N LONG 090 07 15W)

OCT 1991					MAR 1992					
03...	0955	16	150	11.5	04...	1050	99	220	2.0	
NOV 14...	1205	56	143	3.5	MAY 27...	1640	76	112	15.0	
JAN 1992					JUL 22...	1640	32	141	18.0	
08...	1000	63	158	1.0						

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
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05404000 WISCONSIN RIVER NEAR WISCONSIN DELLS, WI (LAT 43 36 22N LONG 089 45 25W)

OCT 1991										
15...	1430	3500	190	--	9.5	--	--	--	--	--
NOV 19...	1245	12500	215	--	3.5	--	--	--	--	--
MAR 1992										
03...	1435	5860	220	--	3.5	--	--	--	--	--
APR 08...	1330	13700	155	--	7.5	--	--	--	--	--
MAY 07...	1415	3930	154	7.6	14.5	3.0	0.010	0.430	0.050	<0.010
11...	1405	3600	120	--	17.5	--	--	--	--	--
JUL 16...	1400	4600	169	7.9	23.5	3.9	<0.010	0.053	0.030	<0.010
17...	1137	3930	175	--	23.0	--	--	--	--	--
AUG 20...	1120	3380	189	7.7	22.5	4.3	0.010	0.130	0.170	<0.010
25...	1100	3490	190	--	23.5	--	--	--	--	--

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
WISCONSIN RIVER BASIN--CONTINUED									
05404116 SOUTH BRANCH BARABOO RIVER AT HILLSBORO, WI (LAT 43 39 10N LONG 090 20 09W)									
OCT 1991					MAR 1992				
01...	1130	7.9	545	9.5	31...	1340	17	400	8.5
25...	1100	30	470	11.5	MAY				
31...	1115	11	475	4.5	01...	1328	20	425	19.5
DEC					28...	1320	14	430	16.0
02...	1110	14	445	0.5	JUN				
30...	1130	11	465	0.5	26...	1127	14	470	17.5
JAN 1992					AUG				
31...	1017	8.9	465	1.0	04...	1125	11	480	16.0
FEB					26...	1337	14	470	16.5
28...	0905	59	260	0.5	SEP				
MAR					15...	1110	70	250	17.5
04...	1520	155	205	1.5	29...	1153	18	460	8.5
05...	1115	37	265	2.5					
05405000 BARABOO RIVER NEAR BARABOO, WI (LAT 43 28 51N LONG 089 38 09W)									
OCT 1991					MAY 1992				
16...	1320	184	400	8.5	14...	1335	267	370	17.5
NOV					JUN				
26...	1250	684	300	0.5	25...	1048	198	380	17.5
JAN 1992					AUG				
06...	1245	274	360	1.0	18...	1134	160	410	19.0
FEB					SEP				
19...	1320	262	400	1.5	15...	1410	1110	260	19.5
MAR					17...	1000	2790	130	19.0
03...	1110	1010	245	3.0	18...	1130	3800	123	18.5
APR					21...	1250	4110	120	17.0
01...	1055	507	325	5.5					
05408000 KICKAPOO RIVER AT LA FARGE, WI (LAT 43 34 27N LONG 090 38 35W)									
OCT 1991					MAR 1992				
16...	1020	110	470	6.5	04...	1030	874	260	3.5
NOV					31...	1140	209	430	7.0
20...	1230	204	445	5.0	MAY				
JAN 1992					05...	1325	177	455	11.5
07...	1215	145	450	3.0	JUN				
31...	1250	136	440	0.0	26...	0930	126	475	16.5
FEB					AUG				
28...	1250	439	335	2.0	26...	1140	177	390	18.0
MAR					SEP				
02...	1135	658	260	4.0	17...	1150	2430	190	19.0
05410490 KICKAPOO RIVER AT STEUBEN, WI (LAT 43 10 58N LONG 090 51 30W)									
OCT 1991					MAY 1992				
15...	0950	338	509	7.5	06...	0845	521	493	12.0
NOV					JUN				
25...	0915	545	506	3.0	22...	1035	406	495	16.0
JAN 1992					AUG				
06...	1025	428	519	4.0	19...	1010	367	502	18.5
FEB					SEP				
19...	0910	413	503	3.0	17...	1405	2720	242	20.0
MAR					18...	1037	5270	176	19.5
04...	1055	818	354	5.0					
30...	0920	616	488	5.5					
PLATTE RIVER BASIN									
05414000 PLATTE RIVER NEAR ROCKVILLE, WI (LAT 42 43 52N LONG 090 38 25W)									
OCT 1991					MAR 1992				
15...	1712	57	633	9.5	30...	1435	101	606	9.5
NOV					MAY				
27...	1110	114	696	2.0	06...	1335	106	599	14.0
JAN 1992					JUN				
06...	1520	87	674	4.5	23...	1100	70	632	16.5
FEB					AUG				
19...	1450	109	611	4.5	19...	1714	56	599	21.5

DATE	TIME	DIS-CHARGE,	SPE-CIFIC	TEMPER-ATURE	DATE	TIME	DIS-CHARGE,	SPE-CIFIC	TEMPER-ATURE
		INST. CUBIC FEET PER SECOND	CON-DUCT-ANCE (US/CM)				CON-DUCT-ANCE (US/CM)	CON-DUCT-ANCE (US/CM)	
		(00061)	(00095)	(DEG C)			(00061)	(00095)	(DEG C)
				(00010)					(00010)

05415000 GALENA RIVER AT BUNCOMBE. WI (LAT 42' 30 49N LONG 090 22 40W)

OCT 1991					MAR 1992				
17...	1145	40	891	13.5	31...	1146	77	850	9.0
NOV					MAY				
27...	1350	104	922	1.5	05...	1238	88	833	14.5
JAN 1992					JUN				
07...	1203	80	935	3.5	23...	1430	53	878	20.5
FEB					AUG				
21...	1120	226	306	2.0	25...	1430	35	868	27.5

05423500 SOUTH BRANCH ROCK RIVER AT WAUPUN, WI (LAT 43 38 30N LONG 088 44 15W)

OCT 1991					APR 1992				
01...	0950	5.3	970	11.5	30...	1040	73	695	13.5
NOV					MAY				
01...	1005	85	720	8.0	28...	1603	24	905	17.5
DEC					JUL				
27...	1010	44	770	7.0	01...	0915	6.1	955	21.0
JAN 1992					31...	1015	4.2	1080	19.5
31...	0825	26	960	1.0	AUG				
FEB					11...	1130	3.2	1020	22.5
27...	1000	30	947	3.5	31...	1137	1.4	1120	17.0
APR					SEP				
02...	0928	65	820	2.5	25...	1435	22	930	15.5

DATE	TIME
------	------

05424060 ROCK RIVER NEAR HORICON, WI (LAT 43 24 58N LONG 088 38 40W)

APR 1992		
28...	1120	0.186
JUN		
25...	1420	0.600
JUL		
20...	1450	0.470
AUG		
24...	1320	0.730

DATE	TIME	DIS-CHARGE,	SPE-CIFIC	TEMPER- ATURE WATER	DATE	TIME	DIS-CHARGE,	SPE-CIFIC	TEMPER- ATURE WATER
		CUBIC FEET PER SECOND (00061)	CON- DUCT- ANCE (US/CM) (00095)				CUBIC FEET PER SECOND (00061)	CON- DUCT- ANCE (US/CM) (00095)	
				(DEG C) (00010)					(DEG C) (00010)

05425500 ROCK RIVER AT WATERTOWN, WI (LAT 43 11 17N LONG 088 43 34W)

OCT 1991					AUG 1992				
02...	1400	--	620	13.5	04...	1110	--	520	21.5
JUN 1992					SEP				
17...	1140	--	370	22.5	30...	1050	--	550	14.0

05425912 BEAVERDAM RIVER AT BEAVER DAM, WI (LAT 43 26 57N LONG 088 50 21W)

OCT 1991					APR 1992				
01...	0917	11	505	12.5	02...	1140	139	505	3.0
08...	1230	7.1	515	12.5	MAY				
NOV					28...	1018	7.6	550	16.5
01...	1552	207	410	8.0	JUL				
DEC					01...	0919	6.1	500	19.5
27...	1250	90	545	4.0	31...	0925	5.4	525	19.0
JAN 1992					AUG				
31...	1057	113	585	3.0	11...	0920	8.9	520	22.0
FEB					31...	1020	7.1	510	18.0
27...	0850	180	625	3.5	SEP				
					30...	1200	11	520	14.5

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
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ROCK RIVER BASIN--CONTINUED

05426000 CRAWFISH RIVER AT MILFORD, WI (LAT 43 06 00N LONG 088 50 58W)									
OCT 1991					AUG 1992				
02...	0955	--	600	13.5	04...	1310	--	530	23.5
JUN 1992									
25...	1440	--	800	25.0					

05426031 ROCK RIVER AT JEFFERSON, WI (LAT 42 59 46N LONG 088 48 26W)									
JUN 1992					AUG 1992				
25...	1035	--	670	21.5	17...	1115	--	580	22.5

05426250 BARK RIVER NEAR ROME, WI (LAT 42 57 39N LONG 088 40 09W)									
OCT 1991					MAR 1992				
22...	1112	47	569	10.0	31...	1200	126	596	8.5
NOV					MAY				
27...	1325	104	536	1.5	07...	0907	94	597	12.5
JAN 1992					JUN				
07...	1525	87	603	6.5	09...	1155	12	693	20.5
29...	0945	61	771	0.0	JUL				
FEB					07...	0957	28	674	21.5
20...	1518	86	684	1.5	AUG				
					28...	1500	29	810	18.5

05427570 ROCK RIVER AT INDIANFORD, WI (LAT 42 48 15N LONG 089 05 25W)									
OCT 1991					APR 1992				
16...	0840	699	602	9.0	28...	0745	3570	544	9.0
JAN 1992					MAY				
30...	0745	1430	890	2.0	28...	0930	778	625	15.5
MAR					JUL				
17...	0855	3690	554	3.5	29...	0930	693	550	24.0
APR					AUG				
03...	0740	3140	496	5.0	20...	0900	207	476	22.0

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
------	------	---	--	--	---	--	--	--	--	--	--

05427968 LAKE MENDOTA AT DEEP HOLE AT MADISON, WI (LAT 43 05 54N LONG 089 24 28W)											
JUL 1992											
23...	1410	1.50	425	8.6	20.5	7.6	1.1	<0.010	<0.050	0.080	<0.010
23...	1415	80.5	477	7.6	10.0	0.2	2.5	0.040	0.140	0.830	0.290

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
------	------	--	--	---	--	--	--	--	--

05428000 LAKE MENDOTA AT MADISON, WI (LAT 43 05 42N LONG 089 22 12W)									
MAY 1992									
08...	1130		450	8.6	12.5	0.30	0.020	0.310	0.060
JUL									
21...	1130		408	8.5	23.5	0.40	<0.010	<0.050	0.050
AUG									
21...	0920		416	8.5	22.5	1.0	<0.010	<0.050	0.030

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
------	------	--	--	---	--	--	--	--	--

ROCK RIVER BASIN--CONTINUED

05429000 LAKE MONONA AT MADISON, WI (LAT 43 03 48N LONG 089 23 49W)

MAY 1992									
08...	0950	479	8.6	14.0	0.30	0.010	0.053	0.040	<0.010
JUL									
21...	1015	455	8.5	23.5	1.2	0.010	<0.050	0.050	<0.010
AUG									
21...	0815	453	8.9	22.0	1.2	<0.010	<0.050	0.020	<0.010

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
------	------	---	--	--	---	--	--	--	--	--

05429500 YAHARA RIVER NEAR MC FARLAND, WI (LAT 43 00 32N LONG 089 18 18W)

OCT 1991										
09...	0805	86	478	--	12.0	--	--	--	--	--
18...	1035	56	428	--	10.5	--	--	--	--	--
NOV										
14...	1305	252	370	--	7.5	--	--	--	--	--
25...	1153	285	428	--	1.5	--	--	--	--	--
DEC										
23...	0935	251	432	--	1.5	--	--	--	--	--
JAN 1992										
09...	1248	203	531	--	2.0	--	--	--	--	--
29...	1212	176	531	--	3.5	--	--	--	--	--
FEB										
18...	1043	161	521	--	3.0	--	--	--	--	--
MAR										
13...	1125	208	510	--	3.0	--	--	--	--	--
APR										
02...	1110	149	477	--	5.0	--	--	--	--	--
23...	0940	154	492	--	8.5	--	--	--	--	--
MAY										
07...	1135	94	494	--	15.5	--	--	--	--	--
08...	1050	89	503	8.7	15.0	0.20	0.020	0.190	0.070	<0.010
JUN										
01...	1025	62	513	--	20.0	--	--	--	--	--
11...	1037	57	504	--	24.0	--	--	--	--	--
24...	1303	40	527	--	23.0	--	--	--	--	--
JUL										
21...	1100	75	465	8.4	23.5	3.0	0.010	<0.050	0.040	<0.010
21...	1130	75	485	--	24.0	--	--	--	--	--
AUG										
05...	1038	55	485	--	23.0	--	--	--	--	--
21...	0850	15	482	8.6	22.0	3.2	<0.010	<0.050	0.020	<0.010
21...	0900	15	482	--	22.0	--	--	--	--	--
26...	1405	37	520	--	21.5	--	--	--	--	--
SEP										
24...	0835	294	501	--	17.0	--	--	--	--	--

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
------	------	---	--	---	------	------	---	--	---

05430150 BADFISH CREEK NEAR COOKSVILLE, WI (LAT 42 50 00N LONG 089 11 48W)

OCT 1991					MAY 1992				
18...	0840	78	1400	12.0	11...	1052	90	1270	18.5
DEC					JUN				
10...	0825	124	910	6.5	03...	0948	83	1410	18.0
JAN 1992					JUL				
10...	1048	96	1400	5.0	24...	0830	82	1290	16.5
FEB					AUG				
17...	0952	78	1410	7.5	24...	0920	74	1490	21.0
APR					SEP				
02...	0913	102	1290	6.0	24...	1202	102	1280	15.0

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
ROCK RIVER BASIN--CONTINUED									
05430175 YAHARA RIVER NEAR FULTON, WI (LAT 42 49 50N LONG 089 10 09W)									
OCT 1991					APR 1992				
16...	1110	385	930	10.0	02...	0742	170	1300	5.0
NOV					MAY				
25...	1000	581	808	2.0	11...	0920	142	1230	18.0
JAN 1992					JUN				
10...	0825	447	1290	4.5	03...	0817	148	1420	17.5
FEB					30...	1358	151	1230	23.5
25...	1247	442	1110	5.5	AUG				
					25...	1319	135	1810	25.0
05430500 ROCK RIVER AT AFTON, WI (LAT 42 36 33N LONG 089 04 14W)									
OCT 1991					APR 1992				
17...	1016	1020	670	10.5	01...	1040	4000	534	6.5
DEC					MAY				
10...	1040	4050	569	1.5	12...	1225	3000	569	18.5
JAN 1992					JUN				
09...	0802	2570	784	2.5	30...	1044	585	615	22.0
FEB					AUG				
25...	0840	2040	796	4.0	24...	1150	406	780	23.0
05431486 TURTLE CREEK AT CARVERS ROCK ROAD NR CLINTON, WI (LAT 42 35 50N LONG 088 49 45)									
OCT 1991					APR 1992				
17...	1250	56	786	12.0	01...	0910	139	726	4.5
NOV					MAY				
26...	0928	43	685	0.0	12...	1032	85	698	18.5
JAN 1992					JUN				
06...	1010	113	821	3.0	26...	1037	56	990	18.0
FEB					SEP				
21...	1400	225	634	2.5	03...	1042	80	857	19.0
05432500 PECATONICA RIVER AT DARLINGTON, WI (LAT 42 40 40N LONG 090 07 07W)									
OCT 1991					MAR 1992				
17...	0835	106	706	9.0	31...	0835	217	680	7.5
NOV					MAY				
29...	0930	248	759	2.0	05...	0840	205	686	12.0
JAN 1992					JUN				
07...	0930	210	743	3.5	24...	0900	131	698	17.0
FEB					AUG				
21...	0940	786	366	2.0	25...	0742	90	679	23.0
05433000 EAST BR PECATONICA R NR BLANCHARDVILLE, WI (LAT 42 47 10N LONG 089 51 40W)									
OCT 1991					MAR 1992				
17...	1550	93	593	12.5	31...	1553	182	560	9.0
NOV					MAY				
29...	1230	181	612	3.0	05...	1620	152	578	13.5
JAN 1992					JUN				
07...	1620	158	618	4.0	24...	1255	114	595	18.0
08...	1445	163	622	4.5	AUG				
FEB					24...	1513	91	558	23.5
20...	1605	168	562	5.0					
05434500 PECATONICA RIVER AT MARTINTOWN, WI (LAT 42 30 34N LONG 089 47 58W)									
OCT 1991					MAR 1992				
16...	1145	414	664	8.5	27...	1315	838	641	7.0
NOV					MAY				
26...	1115	873	675	1.0	07...	1213	716	640	14.5
JAN 1992					JUN				
08...	1320	766	696	4.0	25...	1350	468	654	20.0
FEB					AUG				
20...	1315	1610	465	3.5	24...	1213	361	618	22.5

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
ROCK RIVER BASIN--CONTINUED									
05436500		SUGAR RIVER NEAR BRODHEAD, WI (LAT 42 36 42N LONG 089 23 53W)							
OCT 1991					MAR 1992				
16...	0830	206	614	7.5	27...	0845	431	603	5.0
NOV					MAY				
26...	0900	327	649	0.5	07...	0810	299	598	14.0
JAN 1992					JUN				
08...	0935	321	637	3.5	25...	0855	201	606	20.0
FEB					AUG				
20...	0915	636	432	2.5	24...	0810	162	590	23.0
ILLINOIS RIVER BASIN									
05543830		FOX RIVER AT WAUKESHA, WI (LAT 43 00 17N LONG 088 14 37W)							
OCT 1991					JUN 1992				
28...	0750	211	823	10.0	03...	0940	40	1390	19.0
DEC					JUL				
09...	0855	292	1130	2.0	06...	0758	27	1390	19.5
JAN 1992					AUG				
22...	0810	78	1170	1.5	11...	0835	37	1250	20.5
MAR					SEP				
02...	0845	168	886	5.0	23...	0855	33	993	12.5
APR									
20...	0820	265	807	13.0					
05544200		MUKWONAGO RIVER AT MUKWONAGO, WI (LAT 42 51 24N LONG 088 19 40W)							
OCT 1991					MAY 1992				
22...	0915	22	457	10.0	14...	1305	53	518	19.0
NOV					JUN				
27...	1112	57	470	1.5	09...	1000	30	494	22.0
JAN 1992					JUL				
07...	1200	72	588	2.5	07...	1150	23	485	23.5
FEB					AUG				
20...	1305	74	593	2.0	28...	1301	45	702	20.5
MAR									
31...	1017	73	500	7.0					
05546500		FOX RIVER AT WILMOT, WI (LAT 42 30 40N LONG 088 10 45W)							
JAN 1992					MAY 1992				
06...	1305	616	883	2.5	13...	1240	405	743	21.0
FEB					JUN				
21...	1050	883	834	1.5	05...	1000	227	790	20.5
MAR					JUL				
09...	1135	1300	759	9.0	01...	1430	167	669	26.5
11...	1130	1650	541	1.5	15...	1030	1410	645	20.5
26...	1510	1140	736	7.5	AUG				
APR					27...	1137	254	944	20.5
08...	1212	580	705	12.0	SEP				
16...	1120	752	726	9.0	29...	1054	394	780	14.0

GROUND-WATER RECORDS

Bob Blancher.
838 9891

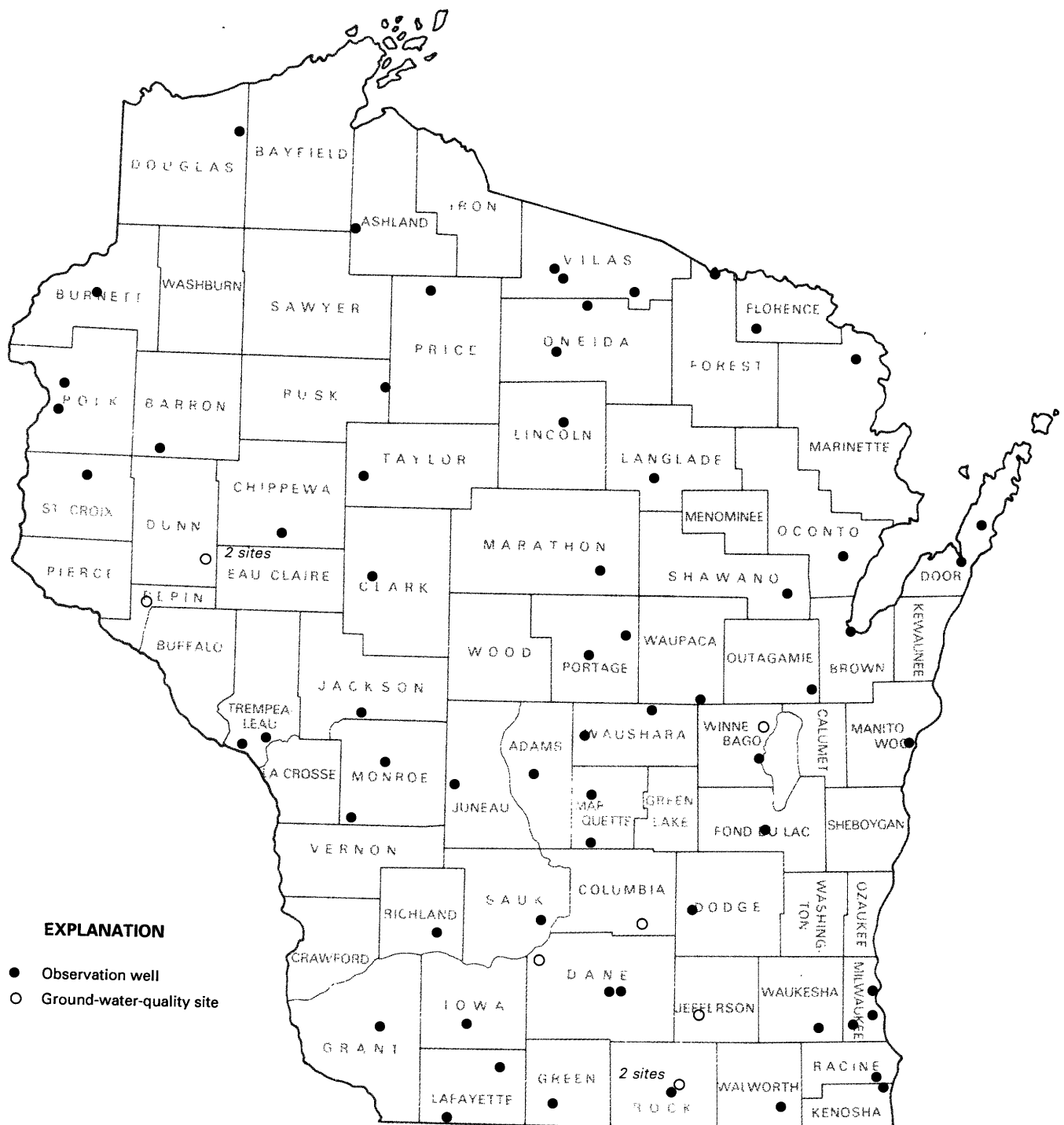


Figure 6. Location of observation wells and ground-water-quality sites in Wisconsin.

796-18
1089 858 108

ADAMS COUNTY

435759089490001. Local number, AD-17/06E/08-0076.

LOCATION.--Lat 43°57'59", long 89°49'00", Hydrologic Unit 07070003. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water table well, diameter 1 1/4 in, depth 21 ft, cased to 19 ft, well point 19-21 ft.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Altitude of land-surface is 955 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--September 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.61 ft below land-surface datum. May 29, 1973; lowest water level measured, 18.14 ft below land-surface datum, Mar. 7, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	15.60	DEC 23	14.45	FEB 24	15.37	APR 20	13.70	JUN 15	14.97	AUG 10	15.60
28	15.69	30	14.44	MAR 4	15.30	27	13.68	22	14.64	18	15.25
NOV 4	15.36	JAN 6	14.48	9	14.94	MAY 4	13.75	29	15.08	24	16.13
11	15.20	13	14.22	17	14.40	12	13.91	JUL 6	15.25	31	15.80
19	15.10	21	14.80	23	14.08	18	14.43	13	15.10	SEP 8	15.88
25	14.90	28	15.33	30	14.22	26	13.80	20	15.10	14	15.79
DEC 4	14.38	FEB 3	15.13	APR 8	14.46	JUN 1	14.09	27	15.20	21	14.10
9	14.40	10	15.07	13	14.45	8	14.40	AUG 3	15.60	28	13.90
16	14.15	17	15.23								

ASHLAND COUNTY

460936090531701. Local number, AS-43/04W/32-0006.

LOCATION.--Lat 46°09'36", long 90°53'17", Hydrologic Unit 07050001. Owner: U.S. Forest Service.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in, depth 89 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface datum is 1,470 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of hole in pump base, at land-surface datum.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.4 ft below land-surface datum, Mar. 24, 1985; lowest water level measured, 32.4 ft below land-surface datum, Apr. 1, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	28.83	NOV 22	28.60	MAR 31	27.90	APR 23	27.65	JUN 18	26.90	SEP 28	27.10

GROUND-WATER LEVELS

BARRON COUNTY

451514091582101. Local number, BR-33/13W/21-0046.

LOCATION.--Lat 45°15'14", long 91°58'21", Hydrologic Unit 07050007. Owner: Edward Thuftin.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in, depth 65 ft.

INSTRUMENTATION.--Water level measured bi-monthly by observer.

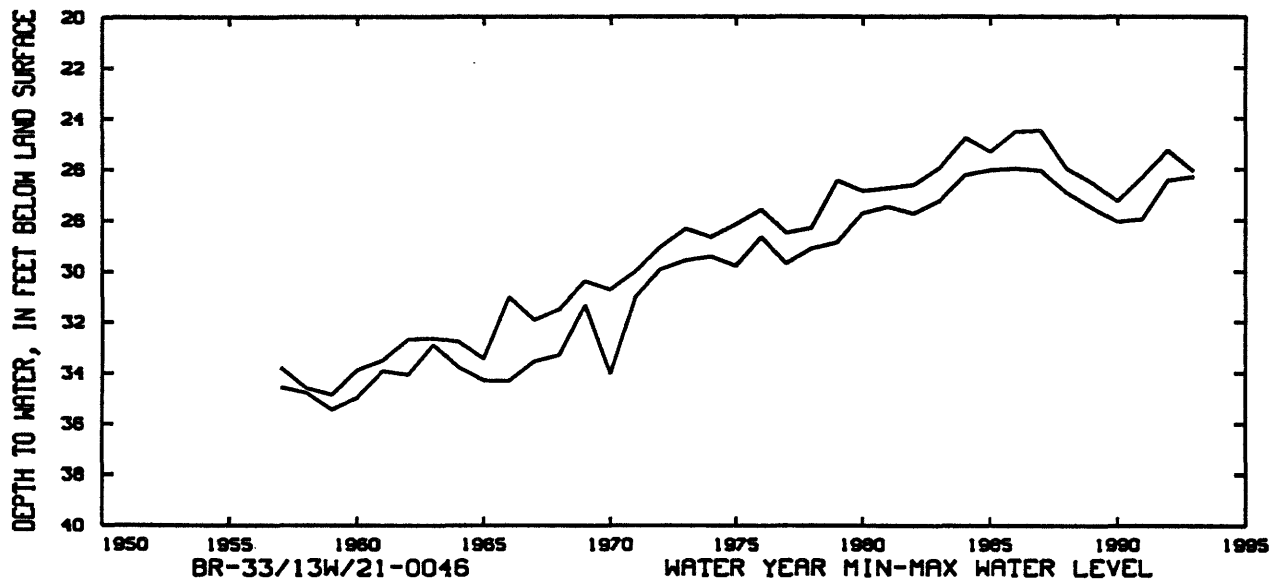
DATUM.--Altitude of land-surface is 1,115 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.47 ft below land-surface datum, Nov. 5, 1986; lowest water level measured, 35.45 ft below land-surface datum, May 13, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	26.34	NOV 18	26.34	JAN 27	26.30	MAY 1	25.26	JUL 14	25.54	AUG 31	25.89
10	26.42	25	26.36	FEB 17	26.25	12	25.27	27	25.62	SEP 11	25.94
21	26.41	DEC 16	26.08	MAR 18	25.94	28	25.29	AUG 6	25.78	30	26.03
NOV 13	26.44	30	26.19	27	25.96	JUN 29	25.48				



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 bi-monthly by observer.

DATUM.--Altitude of land-surface is 590 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of 3 in pipe, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.24 ft below land-surface datum, May 3, 1961; lowest water level measured, 248.97 ft below land-surface datum, Aug. 30, 1955.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	104.75	DEC 18	99.78	FEB 12	94.17	APR 15	92.39	MAY 27	96.86	JUL 15	102.26
16	103.09	JAN 8	96.54	19	93.74	22	92.55	JUN 3	96.60	22	102.95
NOV 6	105.01	15	96.00	MAR 4	93.33	MAY 7	93.16	18	100.24	SEP 2	107.62
27	101.15	22	95.14	11	94.69	13	94.30	24	101.13	16	108.98
DEC 4	100.23	29	94.98	18	92.40	20	96.43	JUL 7	102.23	23	109.58
11	100.36	FEB 5	94.79	APR 1	92.34						

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 1/2-46 ft.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Altitude of land-surface is 981 ft above National Geodetic Vertical Datum of 1929. 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, 37.32 ft below land-surface datum, Mar. 3, 1938.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	33.57	DEC 6	33.38	FEB 7	33.30	APR 10	33.32	JUN 12	33.15	AUG 7	33.01
11	33.47	13	33.36	14	33.32	17	33.27	19	33.11	14	33.10
18	33.56	20	33.52	21	33.35	24	33.35	26	33.10	21	37.90
25	33.52	27	33.35	28	33.27	MAY 1	33.12	JUL 3	33.05	28	33.04
NOV 1	33.42	JAN 3	33.36	MAR 6	33.35	8	33.21	10	33.06	SEP 4	33.06
8	33.56	10	33.33	13	33.34	15	33.25	17	33.06	11	33.09
15	33.45	17	33.29	20	33.33	22	33.17	24	33.11	18	32.97
22	33.46	24	33.40	27	33.35	29	33.16	31	33.06	25	33.04
29	33.39	31	33.36	APR 3	33.19	JUN 5	33.07				

GROUND-WATER LEVELS

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.--Altitude of land-surface is 965 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole in pump base, 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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	30.10	NOV 26	30.10	JAN 13	29.64	MAR 3	30.11	APR 20	29.00	JUN 1	29.33
15	30.09	DEC 3	30.18	19	29.32	9	29.99	27	29.53	5	29.49
21	29.95	9	29.91	26	30.09	16	29.45	MAY 4	29.31	9	29.46
29	29.92	15	30.21	FEB 3	29.54	22	29.63	11	28.93	15	29.46
NOV 4	30.39	23	29.73	10	29.77	29	29.75	18	29.58	22	29.31
11	30.22	30	29.97	18	29.68	APR 5	29.58	25	29.19	28	29.25
19	30.13	JAN 7	29.78	26	29.56	12	30.13				

CLARK COUNTY

444525090443201. Local number, CK-26/03W/04-0001.

LOCATION.--Lat 44°45'25", long 90°44'32", Hydrologic Unit 07050006. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 150 ft cased to 53 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 1,210 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, at land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 51.93 ft below land-surface datum Dec. 18, 1986; lowest water level measured, 70.64 ft below land-surface datum, Sept. 17, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	58.84	NOV 15	58.79	FEB 17	57.82	MAY 26	56.03	JUL 23	56.55	SEP 18	56.79
23	58.74	JAN 8	57.33	APR 14	57.12						

DANE COUNTY

430429089230301. Local number, DN-07/09E/23-0005.

LOCATION.--Lat 43°04'29", long 89°23'03", Hydrologic Unit 07090001. Owner: State of Wisconsin.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in, depth 346 ft, cased to 265 ft, open end.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Altitude of land-surface is 930 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 3.50 ft below land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 83.37 ft below land-surface datum, Jan. 2, 1961; lowest water level measured, 120.75 ft below land-surface datum, Aug. 31, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	112.18	DEC 16	101.90	FEB 10	102.37	APR 6	100.33	JUN 1	109.05	AUG 10	120.09
14	113.00	23	101.69	17	107.34	13	103.36	22	114.44	17	113.52
21	109.54	30	96.80	24	107.52	20	108.30	29	118.05	25	123.34
28	111.26	JAN 6	104.00	MAR 2	107.04	27	109.55	JUL 6	113.64	31	120.75
NOV 11	108.08	13	106.86	9	107.09	MAY 4	107.43	13	120.07	SEP 8	116.09
18	106.67	21	109.53	16	105.77	11	115.10	20	117.65	21	112.23
DEC 2	106.10	27	101.83	23	107.56	18	116.70	27	105.84	28	113.29
9	107.48	FEB 3	102.72	30	107.06	26	109.57	AUG 3	116.93		

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.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 870 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.63 ft below land-surface datum, Mar. 23, 1986; lowest water level measured, 32.76 ft below land-surface datum, June 30, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.09	27.24	25.92	25.75	25.85	25.93	25.51	25.05	27.99	27.02	27.70	27.75
10	28.24	26.26	26.10	26.38	25.98	26.06	26.15	25.82	28.68	27.69	27.49	27.58
15	28.15	26.64	25.89	26.35	26.38	25.77	25.85	26.28	27.16	27.41	27.84	27.84
20	27.30	26.91	26.31	26.64	26.42	26.13	24.66	27.85	27.53	27.63	28.31	26.30
25	28.22	26.48	25.40	26.65	25.98	25.77	24.92	25.12	27.94	27.50	28.82	27.49
EOM	27.48	25.35	25.93	26.59	26.40	26.04	25.22	27.70	28.96	27.87	27.91	27.51

WTR YEAR 1992 MAX 29.66 JUN 14 MIN 24.66 APR 19

DODGE COUNTY

432407088552701. Local number, DG-11/13E/23-0081.

LOCATION.--Lat 43°24'15", long 88°55'26", Hydrologic Unit 07090002. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 125 ft, cased to 57 ft, open end.

INSTRUMENTATION.--Water level measured bi-monthly by observer.

DATUM.--Altitude of land-surface is 880 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole in side of casing, 1.30 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.94 ft below land-surface datum, Sept. 30, 1986; lowest water level measured, 26.67 ft below land-surface datum, Feb. 3, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	21.39	DEC 2	16.30	JAN 2	17.95	FEB 26	20.09	APR 8	17.85	MAY 20	18.78
4	21.34	4	16.00	14	17.66	MAR 3	18.32	30	16.85	JUN 1	19.37
NOV 1	17.96	10	17.36	FEB 3	18.63	APR 1	16.40	MAY 5	16.32	24	19.66

DOOR COUNTY

455757087151701. Local number, DR-29/27E/30-0007.

LOCATION.--Lat 45°57'57", long 87°15'17", Hydrologic Unit 04030102. Owner: Fred Peterson.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 4 in, depth 84 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 725 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.00 ft below land-surface datum, Mar. 22, 1979; lowest water level measured, 56.12 ft below land-surface datum, Feb. 21, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	48.01	DEC 23	36.95	FEB 26	46.04	MAR 27	30.14	MAY 14	42.64	JUL 30	45.24
NOV 20	41.47										

445055087213801. Local number, DR-27/26E/05-0265

LOCATION.--Lat 44°50'55", long 87°21'38", Hydrologic Unit 04030102. Owner: U.S. Geol. Survey.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled observation, diameter 6 in, depth 442 ft, cased to 170 ft, open end.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 616 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.57 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.57 ft above land-surface datum, June 18, 1974; lowest water level, 35.33 ft below land-surface datum, Feb. 1, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.85	28.83	21.95	20.96	22.52	19.88	10.40	6.59	14.93	21.94	25.31	28.93
10	28.60	30.08	22.64	20.05	23.65	10.65	10.50	8.31	17.56	21.04	26.57	28.76
15	29.70	30.18	16.29	18.64	24.37	10.75	8.66	10.15	18.07	19.99	27.53	27.48
20	30.66	29.28	16.80	19.43	24.29	11.75	3.04	10.97	18.05	21.78	27.66	26.76
25	29.95	28.03	18.42	20.71	25.83	11.73	4.55	12.10	17.99	23.34	28.47	27.75
EOC	28.69	24.65	20.23	21.83	25.47	10.83	4.37	14.36	19.75	25.36	27.83	27.71
WTR YEAR 1992	MAX	31.07	OCT 19	MIN	2.50	APR 21						

GROUND-WATER LEVELS

FLORENCE COUNTY

454622088324802. Local number, FL-38/15E/18-0093.

LOCATION.--Lat 45°46'22", long 88°32'48", Hydrologic Unit 04030108. Owner: U.S. Forest Service.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in.

DATUM.--Datum of gage is approximately 1,400 ft above National Geodetic Vertical Datum of 1929.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 64.69 ft, May 18, 1992; minimum observed water level, 62.04 ft, Mar. 10-11, 1990.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63.86	64.00	64.10	63.92	63.81	63.75	63.89	64.44	64.54	---	---	63.93
2	63.86	64.09	64.07	63.93	63.81	63.74	63.89	64.43	64.54	---	---	63.97
3	63.86	64.08	64.06	63.94	63.81	63.74	63.90	64.41	64.53	---	---	64.06
4	63.85	64.04	64.03	63.93	63.80	63.74	63.88	64.42	64.52	---	---	64.02
5	63.85	64.02	64.03	63.92	63.80	63.75	63.87	64.41	64.50	---	---	64.00
6	63.85	63.99	64.03	63.93	63.81	63.89	63.92	64.42	64.50	---	---	64.03
7	63.85	63.95	64.03	63.91	63.80	63.93	64.07	64.43	---	---	---	64.05
8	63.85	63.93	64.01	63.92	63.78	63.97	64.13	64.43	---	---	---	64.05
9	63.85	63.93	64.00	63.92	63.77	64.02	64.16	64.44	---	---	---	64.04
10	63.84	63.91	64.00	63.91	63.77	63.99	64.19	64.44	---	---	---	64.03
11	63.84	63.90	63.99	63.91	63.76	63.97	64.21	64.45	---	---	---	64.01
12	63.83	63.90	64.03	63.92	63.76	63.95	64.18	64.46	---	---	---	63.98
13	63.82	63.90	64.06	63.90	63.77	63.94	64.17	64.46	---	---	---	63.97
14	63.82	63.89	64.06	63.90	63.76	63.92	64.17	64.46	---	---	---	63.98
15	63.82	63.89	64.03	63.89	63.76	63.90	64.18	64.48	---	---	---	64.01
16	63.82	63.90	64.02	63.90	63.76	63.90	64.24	64.56	---	---	---	64.10
17	63.82	63.90	64.02	63.88	63.75	63.89	64.29	64.68	---	---	---	64.13
18	63.80	63.93	63.98	63.86	63.75	63.88	64.34	64.69	---	---	63.97	64.10
19	63.79	63.93	63.98	63.87	63.75	63.88	64.44	64.67	---	---	63.97	64.06
20	63.79	63.92	63.98	63.87	63.75	63.87	64.56	64.65	---	---	63.96	64.05
21	63.79	63.91	63.99	63.86	63.74	63.86	64.60	64.64	---	---	63.95	64.04
22	63.78	63.89	64.00	63.86	63.74	63.86	64.56	64.64	---	---	63.95	64.00
23	63.77	63.90	63.99	63.88	63.74	63.85	64.51	64.62	---	---	63.95	63.98
24	63.77	63.92	63.97	63.85	63.74	63.84	64.48	64.61	---	---	63.94	63.96
25	63.82	63.90	63.96	63.84	63.74	63.87	64.46	64.61	---	---	63.93	63.95
26	63.83	63.90	63.95	63.83	63.75	63.88	64.44	64.60	---	---	63.98	63.96
27	63.83	63.92	63.94	63.83	63.75	63.86	64.42	64.59	---	---	63.98	64.03
28	63.82	63.90	63.94	63.82	63.76	63.86	64.43	64.58	---	---	63.96	64.01
29	63.88	63.92	63.95	63.83	63.74	63.86	64.43	64.57	---	---	63.94	63.99
30	63.91	64.10	63.93	63.83	---	63.88	64.42	64.56	---	---	63.95	63.98
31	63.91	---	63.92	63.82	---	63.90	---	64.55	---	---	63.93	---
MEAN	63.83	63.94	64.00	63.88	63.77	63.88	64.25	64.53	---	---	---	64.02
MAX	63.91	64.10	64.10	63.94	63.81	64.02	64.60	64.69	---	---	---	64.13
MIN	63.77	63.89	63.92	63.82	63.74	63.74	63.87	64.41	---	---	---	63.93

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.

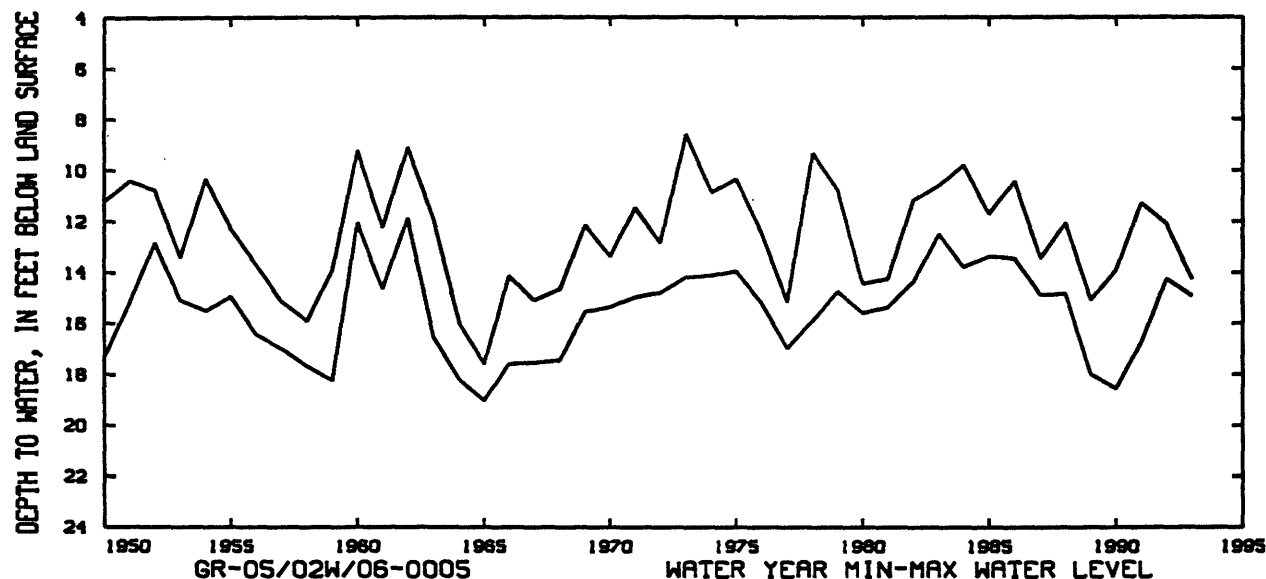
DATUM.--Altitude of land-surface is 980 ft above National Geodetic Vertical Datum of 1929. Measuring point: edge of pump base, 0.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.60 ft below land-surface datum, May 22, 1973; lowest water level measured, 19.03 ft below land-surface datum, Aug. 17, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	13.65	DEC 18	12.61	FEB 21	13.05	APR 29	12.12	JUN 18	12.25	SEP 2	14.26
29	13.59	FEB 4	12.65	MAR 20	12.93	MAY 21	12.22	JUL 24	12.95	18	13.67
NOV 21	13.15										



GREEN COUNTY

423815089404201. Local number, GN-02/07E/21-0001.

LOCATION.--Lat 42°38'15", long 89°40'12", Hydrologic Unit 07090003. Owner: Eric Welty.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 75 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 995 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 4.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.96 ft below land-surface datum, Apr. 13, 1966; lowest water level measured, 69.72 ft below land-surface datum, Feb. 17, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	60.52	JAN 8	52.58	MAR 27	56.05	MAY 7	54.80	AUG 24	59.80	SEP 21	59.79
NOV 26	57.97	FEB 20	54.06	APR 15	56.61	JUN 25	57.49				

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 monthly by observer.

DATUM.--Altitude of land-surface is 1,200 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole pump base, at land-surface datum.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.40 ft below land-surface datum, May 17, 1960; lowest water level measured, 68.81 ft below land-surface datum, Aug. 18, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	57.27	JAN 6	51.54	MAR 30	55.65	MAY 5	54.47	AUG 25	56.14	SEP 21	57.50
NOV 25	53.76	FEB 19	54.67	APR 15	55.87	JUN 24	54.76				

JACKSON COUNTY

441051090470901. Local number, JA-20/03W/30-0005.

LOCATION.--Lat 44°10'51", long 90°47'09", Hydrologic Unit 07040007. Owner: Robert Foulker.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 190 ft, cased to 54 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 845 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, at land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.53 ft below land-surface datum, May 22, 1973; lowest water level measured, 22.60 ft below land-surface datum, Dec. 19, 1958.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 9	20.50	JAN 10	19.15	APR 3	19.09	JUN 12	19.17	AUG 5	19.74	SEP 1	19.54
NOV 22	19.80	MAR 13	19.47	MAY 1	18.70						

JUNEAU COUNTY

435515090152901. Local number, JU-17/02E/28-0098.

LOCATION.--Lat 43°55'15", long 90°15'29", Hydrologic Unit 07070003. Owner: Wis. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 71 ft, cased to 42 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 930 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.86 ft below land-surface datum, May 24, 1973; lowest water level measured, 13.90 ft below land-surface datum, Jan. 10, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 9	12.85	NOV 22	12.30	MAR 13	11.97	MAY 1	11.73	AUG 5	13.02	SEP 1	13.25
23	12.91	JAN 10	12.20	APR 3	11.95	JUN 24	12.54				

KENOSHA COUNTY

423907087521701. Local number, KE-02/22E/11-0006.

LOCATION.--Lat 42°39'07", long 87°52'17", Hydrologic Unit 04040002. Owner: Kenosha County.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 1,751 ft, cased to 492 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 639 ft above National Geodetic Vertical Datum of 1929. Measuring point: end of 3/4-in. plastic pipe, 1.35 ft above land-surface datum.

REMARKS.--Water level affected by regional pumping of wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.10 ft below land-surface datum, Dec. 3, 1947; lowest water level measured, 216.72 ft below land-surface datum, July 1, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	214.25	NOV 26	213.00	JUL 1	216.72

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.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 1,000 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.74 ft below land-surface datum, Nov. 8, 1986; lowest water level, 130.99 ft below land-surface datum, Nov. 6, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	40.84	41.09	39.85		37.59	37.07	36.96	35.34	34.62	35.35	36.10	36.56
10	41.00	40.99	39.25	37.88	37.66	37.11	36.69	35.04	35.01	35.47	36.02	36.79
15	40.89	41.01	38.89	37.89	37.41	37.35	36.77	34.93	34.98	35.48	36.36	36.79
20	41.27	40.80		37.75	37.67	37.01	36.18	35.10	35.18	35.84	36.32	36.62
25	41.15	40.84	38.20	37.86	37.38	36.76	36.06	34.97	34.98	35.83	36.23	36.65
ECM	41.45	40.60		37.69	37.08	36.62	35.38	35.01	35.14	35.93	36.54	36.67

WTR YEAR 1992 MAX 41.55 OCT 30 MIN 34.60 JUN 4

424620089590001. Local number, LF-04/04E/35-0078.

LOCATION.--Lat 42°46'20", long 89°58'57", Hydrologic Unit 07090003. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 3/4 in, depth 29 ft, cased to 16 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 850 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 0.20 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.89 ft below land-surface datum, May 23, 1974; lowest water level measured, 19.81 ft below land-surface datum, Mar. 3, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	16.00	JAN 7	14.43	MAR 31	12.32	MAY 5	12.49	AUG 25	16.46	SEP 21	16.19
NOV 29	16.39	FEB 21	13.35	APR 15	13.13	JUN 24	15.44				

GROUND-WATER LEVELS

LANGLADE COUNTY

450933089084801. Local number, LA-31/11E/20-0064.

LOCATION.--Lat 45°09'33", long 89°08'48", Hydrologic Unit 07070002. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2 in, depth 20 ft, cased to 18 ft, well point 18-20 ft.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Land-surface datum is 1,508 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of collar on casing, 0.30 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.16 ft below land-surface datum, June 4, 1973; lowest water level measured, 16.46 ft below land-surface datum, Jan. 31, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	13.28	JAN 6	13.10	MAR 30	13.19	MAY 18	11.95	JUL 6	12.70	AUG 24	13.53
21	13.51	FEB 3	13.43	APR 6	13.05	26	12.08	14	12.85	31	13.55
28	13.57	24	13.70	13	12.85	JUN 1	12.15	20	12.95	SEP 7	13.45
NOV 4	13.33	MAR 2	13.75	20	12.45	8	12.18	27	12.97	14	13.40
25	13.13	9	13.51	27	11.95	15	12.40	AUG 3	13.15	21	13.27
DEC 2	13.02	16	13.41	MAY 4	11.98	23	12.40	10	13.40	28	12.75
JAN 2	12.99	23	13.28	12	12.05	30	12.50	17	13.37		

LINCOLN COUNTY

452318089402501. Local number, LN-34/06E/36-0060.

LOCATION.--Lat 45°23'18", long 89°40'25", Hydrologic Unit 07070002. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in, depth 22 ft, cased to 20 ft, well point 20-22 ft.

INSTRUMENTATION.--Water level measured bi-monthly by observer.

DATUM.--Altitude of land-surface is 1,435 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of pipe, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.79 ft below land-surface datum, Oct. 9, 1985; lowest water level measured, 10.38 ft below land-surface datum, Jan. 17, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	8.63	OCT 23	8.75	FEB 12	8.53	MAR 4	7.74	MAR 31	7.64	JUL 10	8.57
9	8.65	JAN 8	7.99	19	8.55	11	7.80	JUN 25	8.39	16	8.60
16	8.68	FEB 4	8.53	26	7.94	16	7.75	JUL 3	8.51		

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.

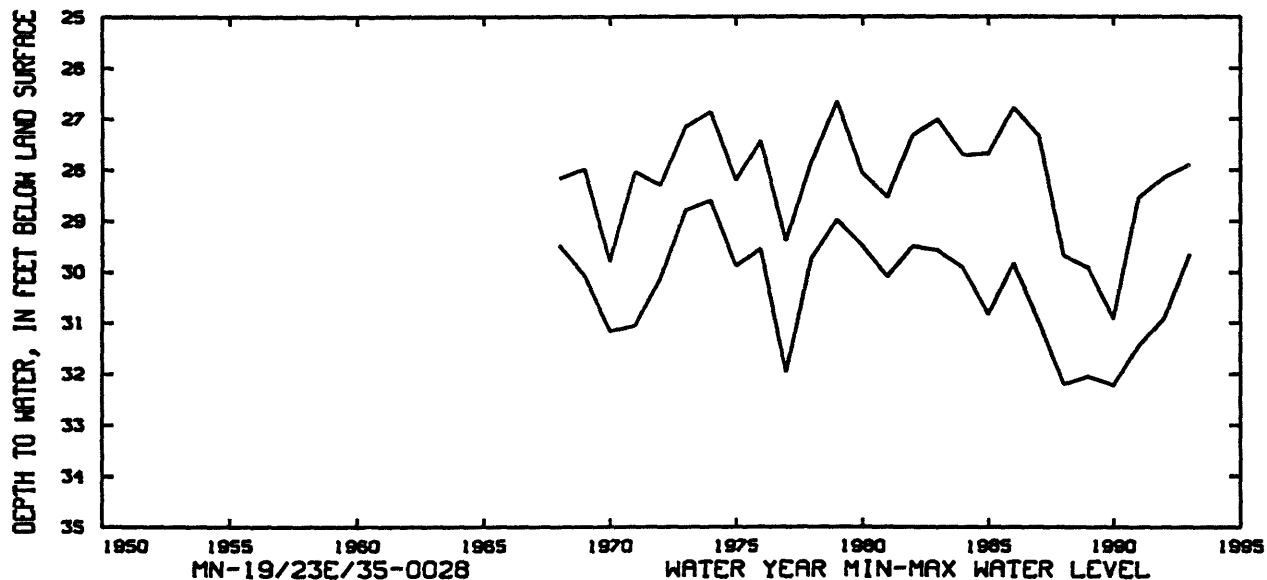
DATUM.--Altitude of land-surface is 670 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole in pump base, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.66 ft below land-surface datum, June 11, 1979; lowest water level measured, 32.22 ft below land-surface datum, Dec. 28, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	30.90	DEC 17	29.48	FEB 18	30.04	APR 14	29.14	JUN 16	29.90	AUG 11	30.19
8	30.83	23	29.74	25	30.14	21	28.37	23	29.62	17	30.25
15	30.83	JAN 2	29.59	26	30.41	28	28.16	29	29.20	25	30.40
22	30.83	7	29.63	MAR 2	30.06	MAY 5	28.14	JUL 5	29.56	SEP 1	30.33
29	30.56	14	29.50	11	29.66	13	28.34	14	29.07	8	30.15
NOV 5	30.28	20	29.67	17	29.53	19	28.52	21	29.42	15	30.13
12	30.22	29	29.72	24	29.45	26	28.64	28	29.80	24	29.66
20	30.29	FEB 4	29.85	30	29.41	JUN 2	29.38	29	30.16	29	29.37
DEC 10	29.78	11	30.01	APR 8	29.34	9	29.46				



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 1/4 in, depth 27 ft, cased to 25 ft, well point 25-27 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 1,229 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of pipe, 0.80 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.77 ft below land-surface datum, July 21, 1973; lowest water level measured, 26.09 ft below land-surface datum, Mar. 30, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	20.36	DEC 15	20.20	FEB 17	19.73	APR 19	18.82	JUN 14	17.88	AUG 9	17.62
13	20.36	22	20.19	23	19.73	26	18.78	21	17.82	16	17.64
20	20.36	29	20.15	MAR 1	19.77	MAY 3	18.63	29	17.72	23	17.66
27	20.36	JAN 5	19.95	8	19.18	10	18.63	JUL 5	17.72	30	17.70
NOV 3	20.41	12	19.90	15	19.14	17	18.40	12	17.68	SEP 5	17.71
10	20.44	19	19.85	22	19.14	24	18.22	19	17.68	13	17.68
17	20.39	26	19.81	29	19.00	31	17.88	26	17.64	20	17.57
24	20.41	FEB 2	19.77	APR 5	18.98	JUN 6	17.98	AUG 2	17.62	27	17.59
DEC 8	20.30	9	19.72	12	18.98						

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.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 980 ft above National Geodetic Vertical Datum of 1929. Measuring point: pointer on float gage, 4.00 ft above land-surface datum.

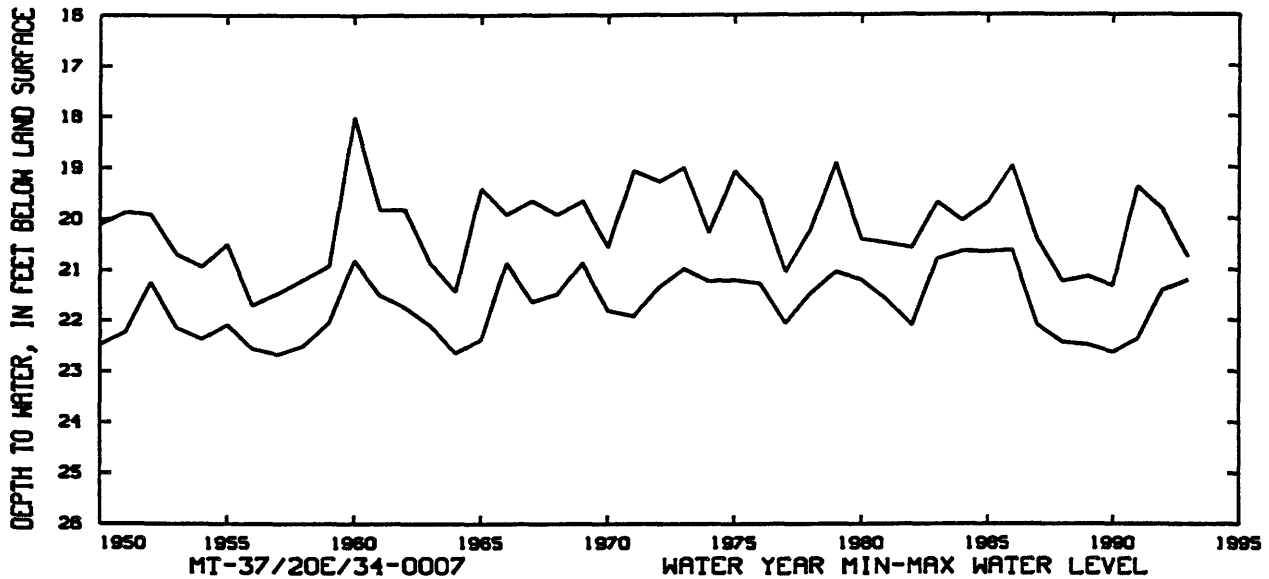
PERIOD OF RECORD.--March 1939 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.01 ft below land-surface datum, May 17, 1960; lowest water level measured, 23.26 ft below land-surface datum, Nov. 2, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	21.00	DEC 10	20.85	FEB 11	21.28	APR 14	20.76	JUN 16	20.31	AUG 11	20.88
8	21.06	17	20.83	18	21.32	21	20.54	23	20.41	18	20.93
15	21.08	24	20.89	25	21.37	28	19.94	30	20.49	25	21.02
22	21.11	JAN 2	20.97	MAR 3	21.41	MAY 5	19.82	JUL 7	20.53	SEP 1	21.10
29	21.15	7	21.01	10	21.24	12	19.84	14	20.60	8	21.11
NOV 12	20.88	14	21.06	17	21.11	19	19.89	15	20.59	15	21.16
19	20.90	21	21.13	24	21.11	26	19.89	21	20.65	22	21.10
26	20.91	28	21.19	31	21.05	JUN 2	20.03	28	20.72	29	21.14
DEC 3	20.89	FEB 4	21.23	APR 7	20.95	9	20.17	AUG 4	20.82		

MARINETTE COUNTY



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 monthly by observer.

DATUM.--Altitude of land-surface is 880 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, at land-surface datum.

PERIOD OF RECORD.--October 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.89 ft below land-surface datum, Oct. 24, 1986; lowest water level measured, 18.21 ft below land-surface datum, Feb. 18, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	15.52	DEC 12	15.10	FEB 25	15.50	APR 7	15.26	JUN 2	14.98	SEP 25	15.03
NOV 5	15.36	JAN 13	14.27	MAR 12	15.32	MAY 19	15.00	JUN 29	15.10		

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 monthly by observer.

DATUM.--Altitude of land-surface is 800 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4 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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	17.50	DEC 12	15.38	FEB 25	16.39	MAY 19	15.63	JUN 29	16.83	SEP 25	16.79
NOV 5	16.35	JAN 13	15.34	APR 7	15.67	JUN 2	16.09				

425819087551201. Local number, ML-06/22E/20-0085.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 110.00 ft below land-surface datum, 1938; lowest water level, 328.11 ft below land-surface datum, Sept. 30, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	322.96	324.05	324.39	323.32	323.60	323.79	324.67	325.28			325.47	327.25
10	323.16	324.15	323.83	323.32	323.35	323.80	324.80	325.18		323.06	325.76	327.38
15	323.16	324.15	323.60	323.36	323.30	324.17	325.15	325.04		323.40	326.45	327.54
20	323.61	324.25	323.60	323.62	323.30	324.22	324.72	324.74		324.04	326.57	327.68
25	323.65	324.41	323.32	324.05	323.30	324.33	325.08	324.25		324.52	326.80	328.00
EQM	323.95	324.50	323.32	324.08	323.40	324.51	325.20	323.81		324.95	327.01	328.11

WTR YEAR 1992 MAX 342.30 MAR 27 MIN 322.87 JUL 8

430412087545801. Local number. ML-07/22E/17-0120.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.67 ft below land-surface datum, Mar. 19, 1986;
lowest water level, 144.20 ft below land-surface datum, Aug. 29, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 14	139.93	FEB 26	139.45	MAR 27	140.54	MAY 6	139.34	JUN 19	138.11	AUG 13	136.86

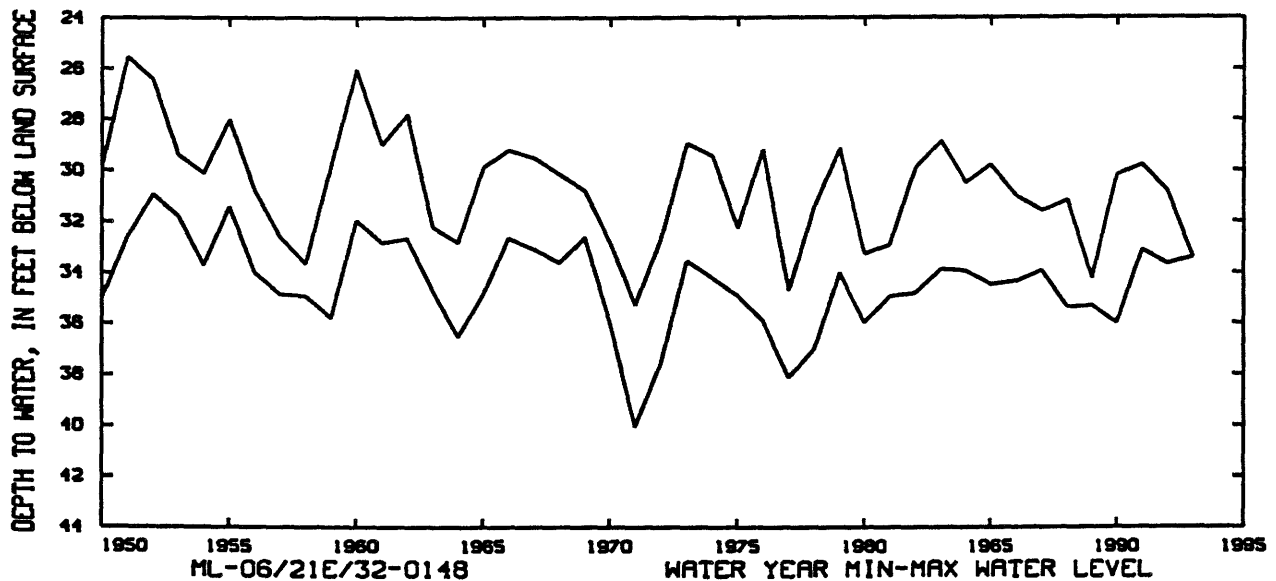
425613088014301. Local number, ML-06/21E/32-0148.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.44 ft below land-surface datum, May 3, 1951;
lowest water level measured, 40.03 ft below land-surface datum, Aug. 13, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[illegible]

MILWAUKEE COUNTY



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.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 1,100 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 0.50 ft above land-surface datum.

REMARKS.--No measurements made in 1981-82 water year.

PERIOD OF RECORD.--July 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.66 ft below land-surface datum, Mar. 19, 1986; lowest water level measured, 18.23 ft below land-surface datum, Mar. 27, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	LOWEST VALUE											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.83	6.25	7.12	7.49	7.65	6.38	6.78	6.52	6.63	6.81	6.89	6.97
10	6.83	7.39	7.25	7.54	7.69	5.95	6.77	6.53	6.68	6.81	6.87	6.84
15	6.87	7.44	7.02	7.62	7.69	6.74	6.81	6.57	6.73	6.77	6.80	6.28
20	6.97	6.84	7.25	7.67	7.68	6.83	6.27	6.56	6.74	6.82	6.87	6.15
25	6.97	7.22	7.34	7.67	7.71	6.85	6.21	6.58	6.74	6.80	6.91	6.57
EOM	6.92	7.08	7.47	7.69	7.39	6.70	6.39	6.63	6.78	6.85	6.97	6.71
WTR YEAR 1992 MAX			7.74	FEB 11	MIN	5.24	SEP 17					

MONROE COUNTY

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.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 909 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.43 ft below land-surface datum, May 8, 1973; lowest water level, 8.30 ft below land-surface datum, Mar. 5, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.15	6.85	6.33	6.28	6.76	6.58	5.99	5.06	5.70	6.34	6.62	7.10
10	7.23	6.67	6.22	6.41	6.83	6.42	5.99	5.24	5.82	6.46	6.70	7.09
15	7.28	6.64	6.17	6.52	6.90	5.96	6.01	5.41	5.93	6.34	6.80	6.93
20	7.34	6.64	6.05	6.56	6.94	5.90	5.75	5.43	6.02	6.31	6.89	4.89
25	7.40	6.60	6.02	6.63	6.99	5.96	4.91	5.48	6.11	6.39	6.99	4.98
EOM	7.43	6.52	6.18	6.74	6.91	6.00	4.87	5.60	6.22	6.52	7.05	5.21

WTR YEAR 1992 MAX 7.43 OCT 29 MIN 4.85 APR 29

OCONTO COUNTY

445054088025201. Local number, OC-27/20E/03-0020.

LOCATION.--Lat 44°50'54", long 88°02'52", Hydrologic Unit 04030104. Owner: Wis. Dept. of Transportation.

AQUIFER.--Prairie du Chien.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 100 ft, cased to 88 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 640 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole in pump base, 2.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.07 ft below land-surface datum, June 20, 1969; lowest water level measured, 13.52 ft below land-surface datum, Aug. 27, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	10.57	DEC 21	10.34	FEB 25	10.44	MAY 13	10.15	JUL 16	10.85

ONEIDA COUNTY

455213089323501. Local number, ON-39/08E/18-0022.

LOCATION.--Lat 45°52'13", long 89°32'35", Hydrologic Unit 07070001. Owner: Wisconsin Valley Improvement Co.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Jettied unused water-table well, diameter 6 in, depth 27 ft, cased to 27 ft, open end.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 1,607 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 6.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.29 ft below land-surface datum, May 28, 1973; lowest water level, 19.29 ft below land-surface datum, Apr. 9, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.16	15.26	14.92	14.78	15.15	15.55	15.73	14.83	14.09	14.34	14.83	15.29
10	15.20	15.27	14.84	14.80	15.21	15.61	15.70	14.69	14.11	14.37	14.92	15.32
15	15.21	15.13	14.83	14.86	15.28	15.66	15.64	14.59	14.17	14.45	15.00	15.39
20	15.27	15.07	14.78	14.90	15.37	15.65	15.44	14.45	14.24	14.54	15.09	15.39
25	15.28	15.03	14.77	15.00	15.43	15.66	15.24	14.28	14.23	14.61	15.16	15.43
ECM	15.31	14.95	14.79	15.06	15.45	15.69	14.95	14.17	14.26	14.73	15.24	15.48

WTR YEAR 1992 MAX 15.73 APR 5 MIN 14.09 JUN 5

454026089425301. Local number, ON-37/06E/27-0023.

LOCATION.--Lat 45°40'26", long 89°42'53", Hydrologic Unit 07070001. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in, depth 37 ft, cased to 35 ft, well point 35-37 ft.

INSTRUMENTATION.--Water level measured bi-monthly by observer.

DATUM.--Altitude of land-surface is 1,529 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.35 ft below land-surface datum, July 22, 1973; lowest water level measured, 34.29 ft below land-surface datum, June 6, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	31.03	DEC 4	30.10	JAN 27	30.81	APR 15	28.80	JUL 6	28.30	SEP 8	30.02
14	31.02	11	30.00	FEB 13	30.83	MAY 28	30.20	28	29.75	21	30.03
28	31.15	JAN 9	30.58	MAR 25	31.10	JUN 5	30.05				

OUTAGAMIE COUNTY

441840088115001. Local number, OU-21/19E/04-0326.

LOCATION.--Lat 44°18'40", long 88°11'50", Hydrologic Unit 04030204. Owner: Outagamie County, Rapid Croche.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 280 ft, cased to 82 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 660 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in. hole in pump base, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--October 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.10 ft below land-surface datum, Apr. 20, 1970; lowest water level measured, 93.42 ft below land-surface datum, Oct. 3, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	93.43	DEC 26	86.47	FEB 26	84.44	MAR 25	88.45	MAY 12	84.59	JUL 28	91.80

GROUND-WATER LEVELS

POLK COUNTY

453013092314601. Local number, PK-35/17W/08-0040.

LOCATION.--Lat 45°30'13", long 92°31'46", Hydrologic Unit 07030005. Owner: Village of Milltown.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in, depth 52 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 1,250 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, at land-surface datum.

PERIOD OF RECORD.--September 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.55 ft below land-surface datum, Jul 23, 1986; lowest water level measured, 41.38 ft below land-surface datum, July 22, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	32.73	DEC 16	32.24	FEB 21	32.38	MAY 1	31.64	JUN 29	31.52	AUG 31	31.62
NOV 29	32.64	JAN 27	32.22	MAR 27	32.07	28	31.48	JUL 27	31.23	SEP 30	31.85

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.--Digital water-level recorder--60-minute punch.

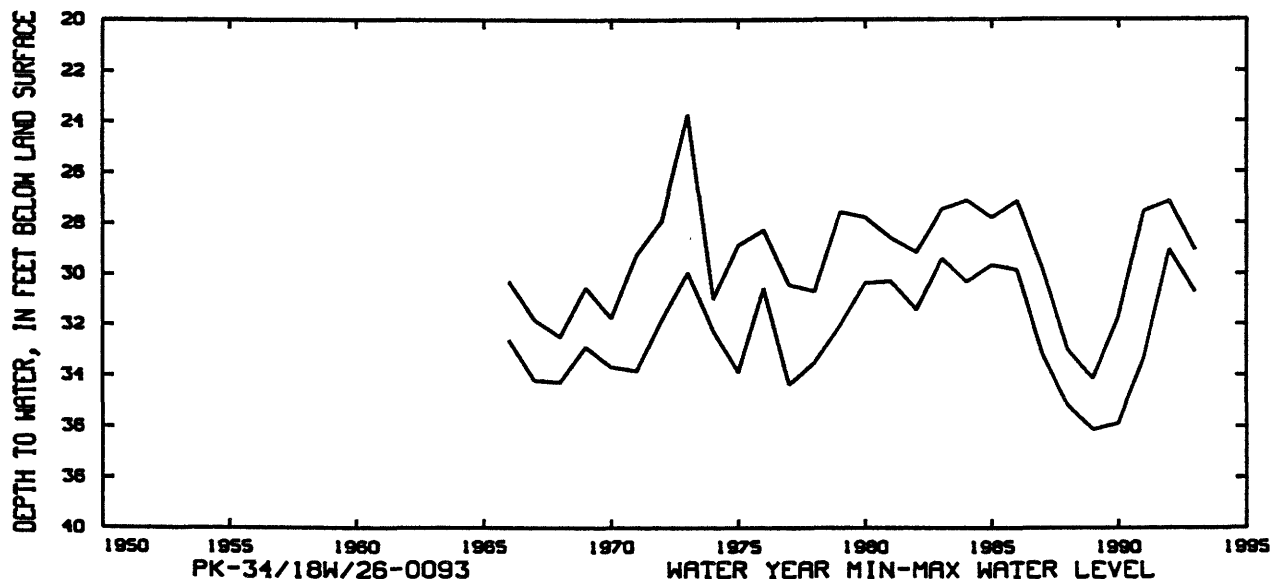
DATUM.--Altitude of land-surface is 1,140 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--March 10, 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.72 ft below land-surface datum, June 20, 1973; lowest water level measured, 36.13 ft below land-surface datum, Mar. 22, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	27.34	DEC 2	27.25	FEB 3	27.71	APR 6	27.45	JUN 8	27.44	AUG 12	28.17
8	27.34	9	27.22	10	27.79	13	27.53	15	27.44	21	28.06
15	27.38	16	27.18	17	27.94	20	27.44	26	27.43	27	28.45
22	27.37	23	27.24	24	28.02	27	27.32	30	27.59	SEP 3	28.58
29	27.42	30	27.34	MAR 2	28.11	MAY 4	27.24	JUL 1	27.70	9	28.58
NOV 7	27.60	JAN 6	27.37	9	27.85	11	27.15	14	27.60	15	28.05
12	27.55	13	27.46	16	27.65	18	27.28	21	27.87	22	28.90
19	27.54	20	27.53	22	27.54	26	27.27	27	27.93	28	29.05
25	27.46	27	27.67	30	27.49	JUN 1	27.26	AUG 5	28.00		



PORTAGE COUNTY

443127089174101. Local number, PT-24/10E/28-0015.

LOCATION.--Lat 44°31'27", long 89°17'41", Hydrologic Unit 04030202. Owner: Lawrence Krogwold.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven unused water-table well, diameter 2 in, depth 52 ft, cased to 50 ft, screened 50-52 ft.

INSTRUMENTATION.--Water level measured bi-monthly by observer.

DATUM.--Altitude of land-surface is 1,133 ft above National Geodetic Vertical Datum of 1929. Measuring point: rim of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.50 ft below land-surface datum, Aug. 4, 1973; lowest water level measured, 38.81 ft below land-surface datum, Nov. 12, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	34.38	DEC 14	34.36	FEB 22	34.38	APR 18	34.34	JUN 13	34.24	AUG 8	34.12
19	34.37	28	34.36	MAR 7	34.39	MAY 2	34.32	27	34.19	22	34.11
NOV 2	34.36	JAN 11	34.34	21	34.38	16	34.29	JUL 11	34.17	SEP 5	34.08
16	34.36	25	34.36	APR 4	34.34	30	34.25	25	34.13	19	34.08
30	34.36	FEB 8	34.35								

442623089302701. Local number, PT-23/08E/25-0376.

LOCATION.--Lat 44°26'23", long 89°30'27", Hydrologic Unit 07070003. Owner: U. S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water table well, diameter 1 1/4 in, depth 36 ft, cased to 34 ft, well point 34-36 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

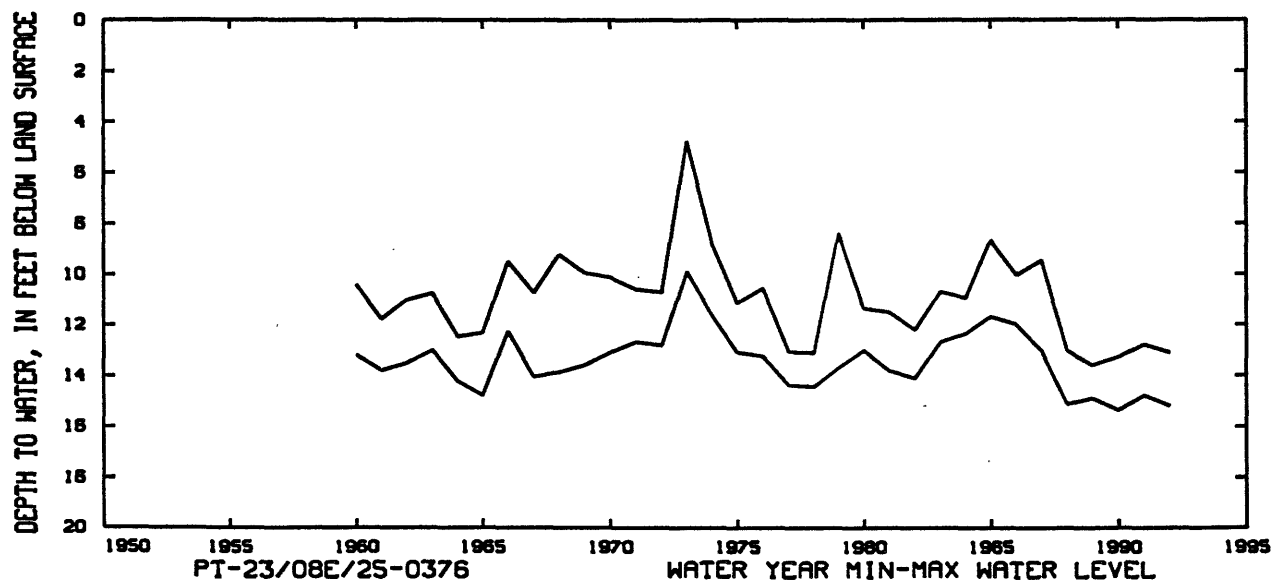
DATUM.--Altitude of land-surface is 1,099 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 4.20 ft above land-surface datum.

PERIOD OF RECORD.--December 1, 1959, to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.77 ft below land-surface datum, June 5, 1973; lowest water level measured, 15.37 ft below land-surface datum, Feb. 15, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	15.00	DEC 20	14.80	FEB 21	14.90	APR 21	13.60	JUN 19	13.60	AUG 18	14.60
NOV 19	15.20	JAN 23	14.60	MAR 19	13.80	MAY 22	13.10	JUL 20	14.20		



PRICE COUNTY

455448090263401. Local number, PR-40/01W/24-0006.

LOCATION.--Lat 45°54'48", long 90°26'34", Hydrologic Unit 07050002. Owner: Wis. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Jettied unused water-table well, diameter 8 in, depth 13 ft, cased to 13 ft.

INSTRUMENTATION.--Water level measured bi-monthly by observer.

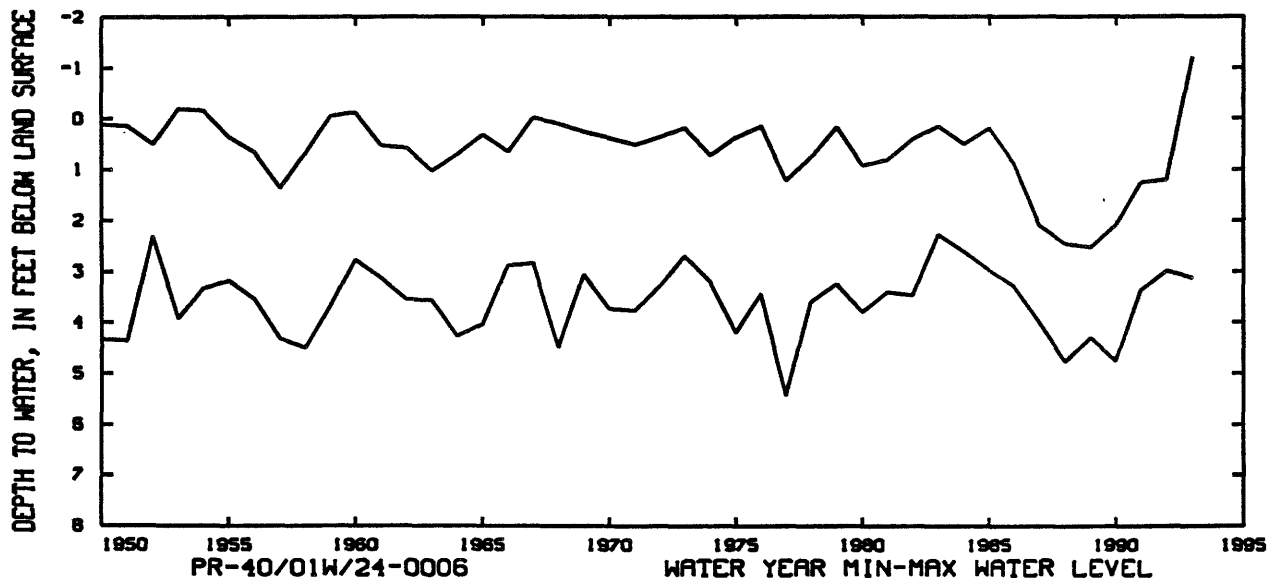
DATUM.--Altitude of land-surface is 1,510 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 5.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.41 ft above land-surface datum, June 29, 1946; lowest water level measured, 5.67 ft below land-surface datum, Oct. 31, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	2.50	DEC 6	1.50	JAN 31	2.37	MAR 20	1.69	MAY 8	1.36	SEP 8	2.78
10	2.00	13	1.32	FEB 14	2.40	APR 3	1.56	JUN 29	1.30	14	2.99
NOV 15	1.20	20	1.62	21	1.90	24	1.25	JUL 27	2.41	24	1.93
22	1.40	JAN 10	1.71	MAR 13	1.70						



RACINE COUNTY

424202087542301. Local number, RA-03/22E/21-0005.

LOCATION.--Lat 42°42'02", long 87°54'23", Hydrologic Unit 04040002. Owner: Chicago, Milwaukee, St. Paul and Pacific Railroad Co.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in, depth 1,176 ft, cased to 586 ft, 10 in liner 976-1,083 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 730 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

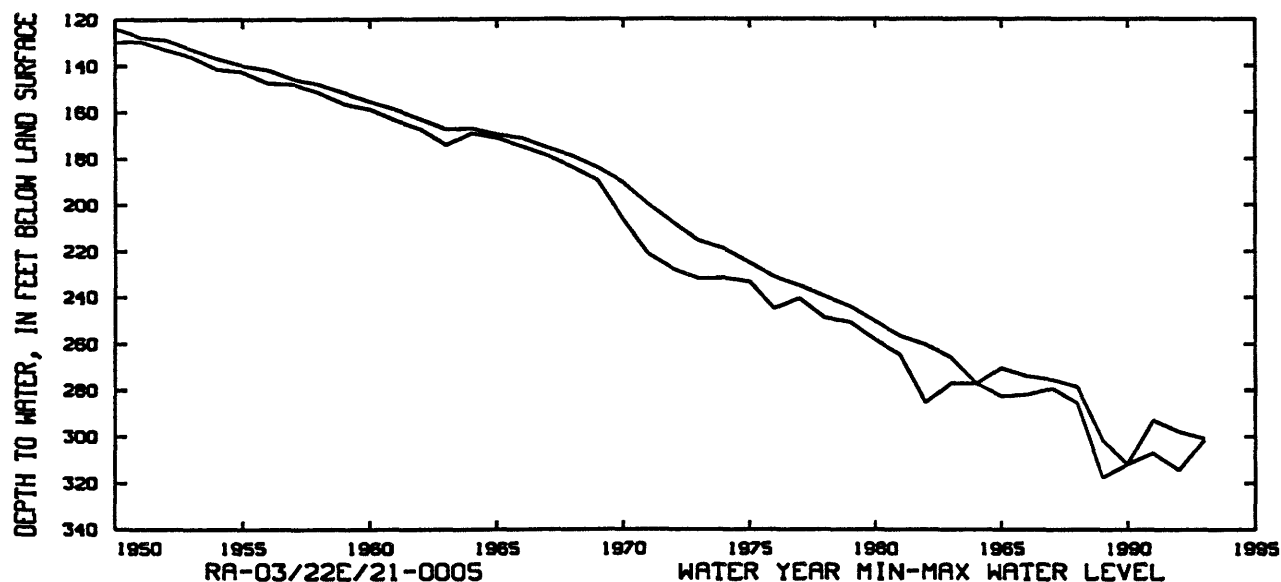
REMARKS.--Water level affected by regional pumping of wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 109.00 ft below land-surface datum, July 29, 1946; lowest water level measured, 317.52 ft below land-surface datum, July 29, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	298.34	DEC 10	297.91	MAR 30	305.52	JUN 5	303.14	AUG 28	302.43	SEP 25	301.96
NOV 27	297.94	JAN 7	301.11	MAY 14	314.39	JUL 2	313.75				



GROUND-WATER LEVELS

RICHLAND COUNTY

431840090203201. Local number, RI-10/01E/26-0023.

LOCATION.--Lat 43°18'40", long 90°20'32", Hydrologic Unit 07070005. Owner: Koch Tractor, Inc.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in, depth 160 ft, cased to 135 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 725 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of 1-in breather pipe, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.11 ft below land-surface datum, May 22, 1973; lowest water level measured, 16.45 ft below land-surface datum, Mar. 14, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 14	14.76	JAN 30	13.95	MAR 25	13.66	MAY 28	13.45	JUL 20	13.79	AUG 25	14.08
DEC 16	14.44	FEB 20	14.01								

ROCK COUNTY

423956089022301. Local number, RO-02/12E/02-0003.

LOCATION.--Lat 42°39'56", long 89°02'23", Hydrologic Unit 07090001. Owner: School for the Blind, Janesville.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 470 ft, cased to 113 ft, open end.

INSTRUMENTATION.--Water level measured weekly by observer.

DATUM.--Altitude of land-surface is 824 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/4-in hole cap of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.27 ft below land-surface datum, Apr. 2 and 16, 1986; lowest water level measured, 67.22 ft below land-surface datum, Sept. 30, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	57.81	DEC 5	56.60	FEB 27	62.29	APR 23	60.12	JUN 25	63.99	AUG 20	61.51
10	56.76	JAN 2	61.85	MAR 5	62.31	30	59.96	JUL 3	64.78	27	62.91
16	57.38	9	61.89	12	59.22	MAY 7	59.31	9	64.55	3	63.51
24	57.11	17	62.05	20	57.32	21	59.52	23	63.30	10	59.99
NOV 1	56.86	30	62.18	26	56.12	28	60.22	30	60.64	17	61.62
7	56.74	FEB 6	62.20	APR 2	55.67	JUN 4	60.55	AUG 6	58.42	24	63.95
14	57.32	13	61.97	9	60.08	11	59.95	13	60.65	30	67.22
21	55.39	20	62.45	16	60.14	18	63.04				

RUSK COUNTY

453107090420101. Local number, RU-35/03W/14-0089.

LOCATION.--Lat 45°31'07", long 90°42'01", Hydrologic Unit 07050004. Owner: Hawkins Cemetery.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled public-supply water-table well, diameter 6 in, depth 25 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 1,380 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.25 ft below land-surface datum, June 12, 1991; lowest water level measured, 23.50 ft below land-surface datum, Mar. 2, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	12.05	DEC 10	9.85	FEB 5	12.24	APR 13	10.98	JUL 21	13.19	AUG 13	13.86
NOV 6	11.39	JAN 6	11.10	MAR 4	13.04	JUN 30	12.66				

45081209223601. Local number, SC-31/16W/29-0094.

LOCATION.--Lat 45°08'12", long 92°22'36", Hydrologic Unit 07030005. Owner: Cylon Methodist Church.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 4 in, depth 73 ft, cased to 63 ft, open end.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 1,059 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing. 2.90 ft above land-surface datum.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.80 ft below land-surface datum, May 4, 1992;
lowest water level measured, 36.04 ft below land-surface datum, Sept. 13, 1961.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE		WATER LEVEL	DATE		WATER LEVEL	DATE		WATER LEVEL	DATE		WATER LEVEL
OCT 8	29.27	DEC 10	29.35	MAR 4	29.66	MAY 4	27.80	JUL 5	28.60	SEP 12	29.35
NOV 1	29.33	FEB 10	29.39	APR 2	29.00	JUN 1	28.85	AUG 10	29.33		

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.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 884 ft above National Geodetic Vertical Datum of 1929. Measuring point:
hole in platform. at land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--March to September 1989.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 78.22 ft below land-surface datum, June 5, 1992; lowest water level, 83.29 ft below land-surface datum, Mar. 6, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	80.75	81.78	81.23	80.32	80.43	80.97	80.06	78.98	78.22	78.55	78.95	79.40
10	80.94	82.08	81.03	80.21	80.39	80.55	79.82	78.82	78.46	78.60	78.77	79.42
15	81.00	81.95	81.03	80.31	80.31	80.48	79.73	78.72	78.45	78.65	78.96	79.21
20	81.31	81.56	80.93	80.31	80.43	80.20	79.33	78.57	78.45	78.80	79.00	79.26
25	81.49	81.53	80.65	80.50	80.40	80.07	79.33	78.36	78.36	78.84	79.22	79.46
EQM	81.62	81.37	80.51	80.58	80.43	80.00	79.09	78.34	78.53	78.84	79.38	79.61

WTR YEAR 1992 MAX 82.19 NOV 7 MIN 78.16 JUN 4

444203088214601. Local number, SH-26/18E/30-0001.

LOCATION.--Lat 44°42'03", long 88°21'46", Hydrologic Unit 04030103. Owner: Wis. Dept. of Transportation.

AQUIFER.--Prairie du Chien.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in, depth 132 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 917 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of plastic pipe, 0.43 ft below land-surface datum.

PERIOD OF RECORD.--April 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.75 ft below land-surface datum, Oct. 15, 1986;
lowest water level measured, 65.15 ft below land-surface datum, Feb. 22, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	57.25	JAN 14	55.00	APR 8	54.33	JUN 4	53.80	JUN 30	55.02	SEP 22	55.98
DEC 4	55.19	FEB 26	56.99								

GROUND-WATER LEVELS

TAYLOR COUNTY

450947090483901. Local number, TA-31/04W/13-0001.

LOCATION.--Lat 45°09'47", long 90°48'39", Hydrologic Unit 07050005. Owner: Village of Gilman.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 18 in, depth 26 ft, cased to 16 ft, screened 16-26 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 1,200 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--April 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.93 ft below land-surface datum, Apr. 18, 1982; lowest water level, 13.11 ft below land-surface datum, Oct. 15, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.73	6.69	7.92	9.19	9.41	9.16	8.27	8.90	9.70	9.17	9.73	10.01
10	9.67	8.21	8.47	9.21	9.33	7.54	8.16	9.27	9.86	9.26	9.73	9.99
15	9.69	8.29	8.06	9.17	9.34	8.25	8.18	9.43	9.92	8.74	9.83	10.00
20	9.75	6.74	8.69	9.13	9.39	8.61	7.07	9.00	9.73	9.17	9.96	9.36
25	9.30	7.88	8.96	9.12	9.60	8.55	7.52	9.11	9.80	9.46	10.05	9.56
ECM	9.01	7.65	9.14	9.27	9.62	8.29	8.38	9.47	9.56	9.74	10.08	9.70

WTR YEAR 1991 MAX 10.19 AUG 29 MIN 5.85 NOV 3

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.--Altitude of land-surface is 820 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 133.18 ft below land-surface datum, Jan. 13, 1955; lowest water level measured, 144.95 ft below land-surface datum, Oct. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	139.97	DEC 17	137.31	FEB 26	138.76	APR 11	137.60	JUN 16	138.08	AUG 3	138.87
NOV 8	138.60	JAN 26	138.45	MAR 19	137.49	MAY 27	137.79	JUL 2	138.59	SEP 13	138.43

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.--Altitude of land-surface is 740 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of breather pipe, at land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.26 ft below land-surface datum, Nov. 9, 1987; lowest water level measured, 57.11 ft below land-surface datum, Mar. 16, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	49.30	DEC 9	49.10	FEB 4	48.70	APR 11	48.40	JUN 8	48.50	SEP 13	48.00
NOV 8	49.20	JAN 6	48.90	MAR 9	48.95	MAY 7	48.30	AUG 6	48.11		

523

455958089420501. Local number. VI-41/06E/26-0895.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 22 ft, cased to 20 ft, screened 20-22 ft.

DATUM.--Datum of gage is 1.600 ft above National Geodetic Vertical Datum of 1929.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 27.08 ft, Apr. 26-28, 1986; minimum observed water level, 22.64 ft, Mar. 14, 1990.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.83	24.77	25.05	25.18	25.09	24.99	25.00	25.84	25.88	25.64	25.56	25.21
2	24.83	24.81	25.06	25.19	25.09	24.98	25.00	25.86	25.88	25.63	25.56	25.21
3	24.82	24.83	25.08	25.19	25.09	24.97	25.02	25.86	25.87	25.67	25.55	25.20
4	24.81	24.85	25.08	25.19	25.09	24.97	25.02	25.86	25.87	25.67	25.53	25.19
5	24.81	24.89	25.08	25.19	25.10	24.97	25.02	25.87	25.86	25.67	25.52	25.19
6	24.81	24.90	25.09	25.19	25.11	24.97	25.02	25.87	25.85	25.67	25.50	25.18
7	24.80	24.90	25.11	25.18	25.11	24.97	25.02	25.89	25.83	25.67	25.50	25.17
8	24.80	24.90	25.12	25.18	25.09	24.98	25.03	25.90	25.81	25.68	25.49	25.17
9	24.80	24.92	25.12	25.18	25.07	25.01	25.05	25.90	25.80	25.68	25.47	25.16
10	24.79	24.92	25.12	25.18	25.07	25.01	25.08	25.90	25.80	25.68	25.45	25.16
11	24.79	24.92	25.12	25.18	25.05	25.01	25.12	25.90	25.78	25.68	25.44	25.15
12	24.79	24.93	25.13	25.18	25.04	25.02	25.12	25.90	25.77	25.69	25.43	25.15
13	24.79	24.95	25.14	25.18	25.07	25.02	25.16	25.90	25.77	25.69	25.41	25.14
14	24.79	24.94	25.14	25.18	25.07	25.02	25.18	25.90	25.75	25.69	25.40	25.13
15	24.79	24.94	25.14	25.18	25.07	25.02	25.20	25.90	25.73	25.69	25.40	25.13
16	24.79	24.94	25.15	25.18	25.06	25.03	25.22	25.90	25.72	25.69	25.39	25.13
17	24.79	24.94	25.15	25.18	25.04	25.03	25.24	25.90	25.74	25.69	25.39	25.13
18	24.76	24.96	25.15	25.16	25.04	25.02	25.27	25.90	25.72	25.68	25.37	25.12
19	24.76	24.96	25.15	25.15	25.04	25.02	25.29	25.90	25.69	25.68	25.35	25.12
20	24.76	24.96	25.17	25.15	25.03	25.02	25.32	25.91	25.67	25.67	25.34	25.12
21	24.76	24.97	25.17	25.15	25.01	25.02	25.36	25.91	25.66	25.65	25.33	25.12
22	24.75	24.98	25.18	25.15	25.01	25.02	25.42	25.92	25.66	25.64	25.32	25.12
23	24.74	24.99	25.18	25.16	25.01	25.02	25.48	25.92	25.66	25.64	25.31	25.12
24	24.74	25.00	25.18	25.14	25.01	25.02	25.54	25.92	25.65	25.63	25.30	25.12
25	24.73	25.00	25.18	25.13	25.01	25.01	25.60	25.92	25.65	25.63	25.28	25.12
26	24.73	25.01	25.18	25.12	25.01	25.01	25.65	25.92	25.65	25.63	25.27	25.12
27	24.73	25.02	25.18	25.13	25.01	25.00	25.70	25.92	25.65	25.63	25.26	25.11
28	24.73	25.02	25.18	25.12	25.01	24.99	25.74	25.92	25.65	25.63	25.26	25.11
29	24.73	25.03	25.19	25.12	24.99	24.99	25.78	25.92	25.65	25.61	25.25	25.11
30	24.73	25.05	25.19	25.12	---	24.99	25.80	25.92	25.65	25.59	25.23	25.11
31	24.73	---	25.18	25.12	---	25.00	---	25.90	---	25.58	25.	

GROUND-WATER LEVELS

VILAS COUNTY

455910089403701. Local number, VI-41/07E/31-0085.

LOCATION.--Lat 45°59'10", long 89°40'37", Hydrologic Unit 07070001. Owner: State of Wisconsin.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Augered water-table observation well, diameter 3 in., depth 60 ft, cased to 57 ft, well screened 57-60 ft.

PERIOD OF RECORD.--November 1980 to current year.

DATUM.--Datum of gage is 1,600 ft above National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed water level, 33.83 ft, Apr. 14, 1986; minimum observed water level, 29.27 ft, May 15-17, 1990.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.65	31.65	31.76	---	31.70	31.56	31.48	32.24	32.14	32.32	32.38	32.20
2	31.66	31.66	31.76	---	31.71	31.54	31.48	32.23	32.16	32.32	32.38	32.20
3	31.64	31.66	31.78	---	31.70	31.52	31.50	32.22	32.16	32.33	32.37	32.19
4	31.63	31.65	31.77	---	31.69	31.52	31.47	32.20	32.16	32.33	32.35	32.17
5	31.64	31.67	31.77	---	31.70	31.52	31.45	32.19	32.16	32.33	32.33	32.17
6	31.64	31.66	31.77	---	31.72	31.53	31.47	32.19	32.16	32.33	32.33	32.16
7	31.64	31.65	31.77	31.74	31.70	31.53	31.47	32.20	32.16	32.33	32.33	32.16
8	31.64	31.65	31.76	---	31.67	31.53	31.48	32.18	32.16	32.34	32.33	32.16
9	31.64	31.67	31.75	---	31.66	31.55	31.50	32.16	32.16	32.35	32.32	32.16
10	31.63	31.67	---	---	31.66	31.55	31.55	32.16	32.16	32.35	32.31	32.15
11	31.65	31.67	---	---	31.62	31.56	31.57	32.16	32.16	32.35	32.31	32.14
12	31.64	31.69	---	---	31.63	31.56	31.58	32.16	32.16	32.35	32.31	32.13
13	31.64	31.71	---	---	31.63	31.56	31.61	32.16	32.16	32.35	32.31	32.13
14	31.65	31.72	---	---	31.63	31.56	31.62	32.16	32.16	32.35	32.29	32.12
15	31.65	31.72	---	---	31.63	31.53	31.62	32.16	32.16	32.35	32.28	32.12
16	31.64	31.70	---	---	31.62	31.55	31.63	32.16	32.16	32.36	32.27	32.12
17	31.64	31.72	---	---	31.60	31.56	31.65	32.17	32.17	32.37	32.27	32.13
18	31.60	31.75	---	---	31.61	31.56	31.67	32.17	32.18	32.37	32.27	32.14
19	31.60	31.74	---	---	31.61	31.56	31.69	32.17	32.18	32.37	32.25	32.14
20	31.60	31.74	---	---	31.60	31.56	31.75	32.17	32.18	32.38	32.25	32.14
21	31.63	31.76	---	---	31.57	31.56	31.87	32.17	32.18	32.38	32.24	32.13
22	31.62	31.76	---	31.81	31.58	31.55	32.02	32.17	32.18	32.38	32.23	32.09
23	31.61	31.77	---	31.81	31.56	31.52	32.16	32.17	32.18	32.38	32.23	32.07
24	31.61	31.78	---	31.77	31.56	31.50	32.20	32.17	32.18	32.38	32.22	32.07
25	31.60	31.77	---	31.75	31.56	31.50	32.22	32.17	32.25	32.38	32.21	32.08
26	31.59	31.77	---	31.73	31.59	31.49	32.25	32.17	32.32	32.38	32.20	32.08
27	31.59	31.78	---	31.72	31.59	31.47	32.25	32.17	32.32	32.38	32.20	32.08
28	31.58	31.76	---	31.72	31.61	31.47	32.25	32.16	32.32	32.38	32.20	32.06
29	31.60	31.78	---	31.73	31.59	31.46	32.25	32.11	32.32	32.38	32.21	32.05
30	31.57	31.77	---	31.73	---	31.47	32.24	32.11	32.32	32.38	32.21	32.05
31	31.59	---	---	31.71	---	31.48	---	32.11	---	32.38	32.20	---
MEAN	31.62	31.71	---	---	31.63	31.53	31.76	32.17	32.19	32.36	32.28	32.13
MAX	31.66	31.78	---	---	31.72	31.56	32.25	32.24	32.32	32.38	32.38	32.20
MIN	31.57	31.65	---	---	31.56	31.46	31.45	32.11	32.14	32.32	32.20	32.05

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.--Altitude of land-surface is 1,640 ft above National Geodetic Vertical Datum of 1929. 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, 10.60 ft below land-surface datum, July 21, 1968; lowest water level measured, 14.92 ft below land-surface datum, Aug. 10, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	12.93	DEC 16	13.11	FEB 18	12.55	APR 15	12.39	JUN 23	12.19	SEP 16	12.75
NOV 15	12.33	JAN 14	12.25	MAR 16	12.58	MAY 14	11.84	AUG 26	12.77		

WALWORTH COUNTY

423532088254601. Local number, WW-02/17E/36-0037.

LOCATION.--Lat 42°35'32", long 88°25'46", Hydrologic Unit 07120006. Owner: Lake Geneva Water Works.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, 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.--Altitude of land-surface is 860 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 129.48 ft below land-surface datum, Feb. 14, 1962; lowest water level measured, 222.67 ft below land-surface datum, June 19, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	210.66	DEC 27	212.91	FEB 25	216.35	APR 15	212.84	JUN 19	222.67	SEP 29	216.62
NOV 26	212.86	JAN 29	211.38	MAR 20	214.36	MAY 25	212.69	AUG 25	222.37		

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.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 962 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 126.28 ft below land-surface datum, June 10, 1974; lowest water level, 138.14 ft below land-surface datum, Feb. 2, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	133.97	133.71	133.33	133.36	132.74	132.65	132.52	132.45	133.23	133.78	133.55	133.72
10	134.01	133.55	133.20	132.80	132.78	132.48	132.41	132.58	134.00	133.35	133.48	133.71
15	133.95	133.47	133.10	132.75	132.69	132.55	132.46	132.63	134.12	133.12	133.52	133.79
20	134.05	133.44	133.42	132.71	132.70	132.45	132.22	132.92	133.34	133.15	133.69	133.59
25	133.95	133.61	133.41	132.79	132.66	132.40	132.30	132.94	133.42	133.19	134.20	133.66
EOY	133.82	133.46	133.44	132.72	132.68	132.36	132.30	133.30	134.23	133.30	133.75	133.78

WTR YEAR 1992 MAX 134.36 JUN 13 MIN 132.21 MAY 1

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.--Altitude of land-surface is 764 ft above National Geodetic Vertical Datum of 1929. Measuring point: hole in cap, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.65 ft below land-surface datum, Apr. 7, 1979; lowest water level measured, 15.91 ft below land-surface datum, Feb. 23, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	14.24	DEC 7	13.33	FEB 22	13.65	APR 18	13.36	JUN 13	13.20	AUG 8	14.09
12	14.17	14	13.39	28	13.53	25	12.87	20	13.18	15	14.12
19	14.13	28	13.38	MAR 7	13.45	MAY 2	12.31	27	13.16	22	14.29
26	14.05	JAN 11	13.53	14	13.59	9	12.21	JUL 4	13.21	29	14.38
NOV 2	13.79	18	13.60	21	13.56	16	12.93	11	13.49	SEP 5	14.43
9	13.63	25	13.56	28	13.59	23	12.99	18	13.62	12	14.49
16	13.55	FEB 1	13.49	APR 4	13.54	30	13.04	25	13.85	19	14.13
23	13.46	8	13.53	11	13.42	JUN 6	13.15	AUG 1	14.05	26	14.02
30	13.35	15	13.58								

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.--Digital water-level recorder--60-minute punch.

DATUM.--Altitude of land-surface is 1,080 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.88 ft below land-surface datum, July 5, 1973; lowest water level, 15.71 ft below land-surface datum, June 10, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.31	10.67	10.69	10.23	10.98			10.03	9.77	10.11	10.47	10.83
10	10.36	10.69	10.66	10.22	11.02		10.52	10.00	9.79	10.19	10.52	10.87
15	10.42	10.69	10.63	10.86	11.06		10.52	9.93	9.85	10.26	10.57	10.90
20	10.47	10.69	10.32	10.88	11.12		10.49		9.91	10.32	10.63	10.83
25	10.53	10.69	10.25	10.90			10.44		9.97	10.36	10.71	10.49
ECM	10.63	10.69	10.24	10.94			10.21		10.04	10.41	10.78	10.32

WTR YEAR 1992 MAX 11.16 FEB 24 MIN 9.77 JUN 3

WAUSHARA COUNTY

441414089091101. Local number, WS-20/11E/02-0053.

LOCATION.--Lat 44°14'14", long 89°09'11", Hydrologic Unit 04030202. Owner: Merle Knox.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in, depth 177 ft, cased to 172 ft, screened 172-177 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 923 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.78 ft below land-surface datum, Oct. 18, 1986; lowest water level measured, 40.41 ft below land-surface datum, Mar. 4, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	36.62	DEC 18	36.22	FEB 20	36.30	APR 18	35.72	JUN 22	36.54	AUG 20	36.00
NOV 14	36.54	JAN 18	36.13	MAR 16	37.07	MAY 18	35.12	JUL 17	37.10	SEP 26	36.04

WINNEBAGO COUNTY

440122088324601. Local number, WI-18/16E/23-0006.

LOCATION.--Lat 44°01'22", long 88°32'46", Hydrologic Unit 04030201. Owner: City of Oshkosh.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in, depth 200 ft.

INSTRUMENTATION.--Water level measured monthly by observer.

DATUM.--Altitude of land-surface is 765 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of 1 in pipe, at land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.20 ft below land-surface datum, Apr. 26, 1979; lowest water level measured, 39.75 ft below land-surface datum, Sept. 1, 1960.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	20.00	DEC 27	18.82	MAR 12	19.18	MAY 29	18.80	JUL 29	20.42	SEP 29	20.13
DEC 2	19.15	JAN 31	19.05	31	18.15	JUN 29	20.56	AUG 28	20.70		

GEOLOGICAL UNIT.--110QRNR, rocks of the Quaternary System of the Cenozoic Erathem. 350SLRN, rocks of the Silurian System. 360ODVC, rocks of the Ordovician System of the Paleozoic Erathem. 365CMPL, rocks of the Champlanian Series of the Ordovician System. 365SNNP, rocks of the Sinnipee Group. 365STPR, St. Peter Sandstone. 368PRDC, Prairie du Chien Group of the Ordovician System. 372SCRX, rocks of the St. Croix Series of the Cambrian System of the Paleozoic Erathem. 372TMPL, rock of the Trempealeau Group of Cambrian System. 400BCPX, Precambrian crystalline rocks of the basement complex.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

STATION	NUMBER	LOCAL IDENT- IFIER	GEO- LOGIC UNIT	DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
COLUMBIA COUNTY										
431938089102401	CO-10/11E/15-0078		372SCRX	08-18-92	222.00	619	7.5	10.5	5.2	--
DANE COUNTY										
431136089470201	DN-08/06E/04-1143		110QRNR	08-19-92	220.00	536	7.3	11.0	1	--
DUNN COUNTY										
444620091430601	DU-27/11W/33-0340		110QRNR	08-20-92	154.00	198	7.2	11.5	7.5	--
444828091423301	DU-27/11W/22-0341		110QRNR	08-20-92	50.00	268	6.8	10.5	4.3	--
JEFFERSON COUNTY										
425847088524401	JE-06/14E/18-0878		368PRDC	08-19-92	221.00	628	7.3	11.5	5.5	0.370
PEPIN COUNTY										
443642092012301	PP-25/14W/25-0067		110QRNR	08-20-92	104.00	418	6.5	12.0	7.2	--
ROCK COUNTY										
424103088534201	RO-03/13E/36-0602		110QRNR	08-25-92	60.00	662	7.2	11.5	9.5	--
			110QRNR	08-25-92	60.00	662	7.3	11.5	8.6	--
			110QRNR	08-25-92	60.00	654	7.2	10.5	--	--
			110QRNR	08-26-92	60.00	655	7.2	10.5	9.0	--
			110QRNR	08-26-92	60.00	655	7.2	10.0	9.1	--
424334088571101	RO-03/13E/15-0601		110QRNR	08-26-92	60.00	656	7.2	10.0	9.0	--
			110QRNR	08-19-92	284.00	615	7.5	10.5	8.2	--
WINNEBAGO COUNTY										
440846088350401	WI-19/16E/04-0608		365SNNP	08-18-92	82.00	930	7.5	10.5	1.2	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

			NITRO- GEN, NITRITE DIS- SOLVED	NITRO- GEN, NO2+NO3 SOLVED	NITRO- GEN, AMMONIA SOLVED	PHOS- PHORUS ORTHO, SOLVED	ACRO- LEIN TOTAL	ACRYLO- NITRILE TOTAL	BENZENE WHOLE, TOTAL	BROMO- BENZENE WATER, FORM TOTAL	CARBON- TETRA- CHLO- RIDE TOTAL	
STATION	NUMBER	DATE	(MG/L) AS N) (00613)	(MG/L) AS N) (00631)	(MG/L) AS N) (00608)	(MG/L) AS P) (00671)	(UG/L) (34210)	(UG/L) (34215)	(UG/L) (34030)	(UG/L) (81555)	(UG/L) (32104)	(UG/L) (32102)

COLUMBIA COUNTY--CONTINUED

431938089102401	08-18-92	<0.010	7.60	0.030	<0.010	<20	<20	<0.2	<0.2	<0.2	<0.2
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DANE COUNTY--CONTINUED

431136089470201	08-19-92	<0.010	<0.050	0.060	<0.010	<20	<20	<0.2	<0.2	<0.2	<0.2
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DUNN COUNTY--CONTINUED

444620091430601	08-20-92	<0.010	8.80	0.030	0.100	<20	<20	<0.2	<0.2	<0.2	<0.2
444828091423301	08-20-92	<0.010	14.0	0.030	<0.010	<20	<20	<0.2	<0.2	<0.2	<0.2

JEFFERSON COUNTY--CONTINUED

425847088524401	08-19-92	0.010	0.380	0.030	<0.010	--	--	--	--	--	--
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PEPIN COUNTY--CONTINUED

443642092012301	08-20-92	<0.010	17.0	0.020	<0.010	--	--	--	--	--	--
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ROCK COUNTY--CONTINUED

424103088534201	08-25-92	<0.010	12.0	0.030	<0.010	--	--	--	--	--	--
	08-25-92	<0.010	11.0	0.030	<0.010	--	--	--	--	--	--
	08-25-92	<0.010	11.0	0.020	<0.010	--	--	--	--	--	--
	08-26-92	<0.010	11.0	0.020	<0.010	--	--	--	--	--	--
	08-26-92	<0.010	11.0	0.020	<0.010	--	--	--	--	--	--
	08-26-92	<0.010	11.0	0.020	<0.010	--	--	--	--	--	--
424334088571101	08-26-92	<0.010	11.0	0.020	<0.010	--	--	--	--	--	--
	08-19-92	<0.010	5.10	0.020	0.010	<20	<20	<0.2	<0.2	<0.2	<0.2

WINNEBAGO COUNTY--CONTINUED

440846088350401	08-18-92	<0.010	<0.050	0.060	<0.010	--	--	--	--	--	--
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STATION	NUMBER	DATE	CHLORO-	CHLORO-	CHLORO-	CHLORO-	CIS	CIS-1,2	DIBROMO	DI-	DI-	
			BENZENE	BROMO-	ETHANE	FORM	1,3-DI-	-DI-	CHLORO-	BROMO-	CHLORO-	
			TOTAL	METHANE	TOTAL	TOTAL	CHLORO-	ETHENE	PROPANE	WATER	METHANE	DI-
			(UG/L)	(UG/L)	(UG/L)	(UG/L)	PROPENE	WATER	WHOLE	WHOLE	FLUORO-	METHANE
			(34301)	(32105)	(34311)	(32106)	(34704)	(77093)	(82625)	(30217)	(34668)	

COLUMBIA COUNTY--CONTINUED

431938089102401	08-18-92	<0.20	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2	<0.2
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DANE COUNTY--CONTINUED

431136089470201	08-19-92	<0.20	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2	<0.2
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DUNN COUNTY--CONTINUED

444620091430601	08-20-92	<0.20	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2	<0.2
444828091423301	08-20-92	<0.20	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2	<0.2

JEFFERSON COUNTY--CONTINUED

425847088524401	08-19-92	--	--	--	--	--	--	--	--
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PEPIN COUNTY--CONTINUED

443642092012301	08-20-92	--	--	--	--	--	--	--	--
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ROCK COUNTY--CONTINUED

424103088534201	08-25-92	--	--	--	--	--	--	--	--
	08-25-92	--	--	--	--	--	--	--	--
	08-25-92	--	--	--	--	--	--	--	--
	08-26-92	--	--	--	--	--	--	--	--
	08-26-92	--	--	--	--	--	--	--	--

WINNEBAGO COUNTY--CONTINUED

440846088350401	08-18-92	--	--	--	--	--	--	--	--
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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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 25425, 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 (303)236-7476. 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, WI 53705.

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

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

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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