

Water Resources Data Wisconsin Water Year 1993

Volume 2. Upper Mississippi River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WI-93-2
Prepared in cooperation with the State of Wisconsin
and with other agencies

CALENDAR FOR WATER YEAR 1993

1992

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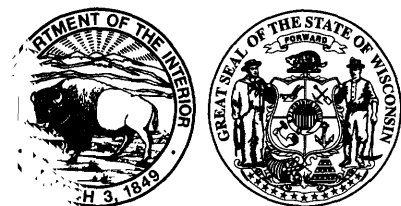
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Volume 2. Upper Mississippi River Basin

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WI-93-2
Prepared in cooperation with the State of Wisconsin
and with other agencies

U. S. DEPARTMENT OF THE INTERIOR
BRUCE BABBITT, Secretary

U. S. GEOLOGICAL SURVEY
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City of Thorp
Madison Metropolitan Sewerage District
Milwaukee Metropolitan Sewerage District
Green Bay Metropolitan Sewerage District
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Menominee Indian Tribe of Wisconsin
Oneida Indian Tribe of Wisconsin
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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
Park Lake Management District
City of Sparta
City of Brookfield
Town of Baraboo
Whitewater-Rice Lake Management District
Elkhart Lake Improvement Association

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PREFACE

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

This report is the culmination of a concerted effort by 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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Josef Habale, Madison, southwest

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Muskego Lake Outlet near Wind Lake (g).....	425109088075000	345
Wind Lake Drainage Canal:		
Wind Lake at Wind Lake (c).....	424915088083900	346
Wind Lake Outlet at Wind Lake (g).....	424848088083100	347
Denoon Lake at Wind Lake (c,g).....	425044088100300	348
Long (Kee Nong Go-Mong) Lake at Wind Lake (c,g).....	424937088103400	350
Waubesa Lake at Wind Lake (c).....	424857088101500	352
Eagle Creek:		
Eagle Lake near Kansasville (c).....	424207088072400	353
Honey Creek:		
Booth Lake near East Troy (c).....	424800088254800	354
Potter Lake near Mukwonago (c).....	424905088204000	355
Fox River at Wilmot (d).....	05546500	357
Nippersink Creek:		
North Branch Nippersink Creek:		
East Branch Nippersink Creek:		
Powers Lake at Powers Lake (c).....	423246088175800	358

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

IX

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
ST. CROIX RIVER BASIN			
Namekagon River at Trego, WI	05332000	433	1914-27
Loon Creek near Danbury, WI	05335010	17.6	1970-71
Bashaw Brook near Shell Lake, WI	05335380*	26.6	1964-66
Clam River near Webster, WI	05335500	361	1941-42
St. Croix River near Grantsburg, WI	05336000	2,980	1923-70
Wood River near Grantsburg, WI	05339000	185	1939-40
Rice Creek near Balsam Lake, WI	05341375	12.5	1988-89
Balsam Branch at Balsam Lake, WI	05341402	52.8	1988-90
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

Station name	Station number	Drainage area (sq mi)	Period of record
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
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
Pats Creek near Belmont, WI	05414894	5.42	1981-82
Madden Branch Tributary near Belmont, WI	05414915*	2.83	1981-82
Madden Branch near Meekers Grove, WI	05414920	15.04	1981-82
Galena River at Buncombe, WI	05415000	125	1939-92
APPLE RIVER BASIN			
Apple River near Shullsburg, WI	05418731	9.34	1981-82
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

Station name	Station number	Drainage area (sq mi)	Period of record
ROCK RIVER BASIN--CONTINUED			
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
Yahara River near Edgerton, WI	05430000	430	1917-18
Oregon Branch at Oregon, WI	05430030	9.93	1979-81
Badfish Creek at County Highway A near Stoughton, WI	05430095	40.9	1956-66, 1986-88
Badfish Creek near Stoughton, WI	05430100	41.3	1956-66
Delavan Lake Inlet at State Highway 50 at Lake Lawn, WI	05431017	21.8	1984-92
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

XII

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

The following daily- or continuous-record surface-water-quality stations were discontinued prior to the 1993 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)
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
Tennile 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

Station name	Station number	Drainage area (sq mi)	Type of record	Period of record (water year)
GALENA RIVER BASIN				
Little Platte River near Platteville, WI	05414213	79.7	T	1987-90
Sinsinawa River near Hazel Green, WI	05414800	24.9	DO	1987-90 ¹
Pats Creek near Belmont, WI	05414894	5.42	T	1987-90
			DO	1987-90 ¹
Madden Branch Tributary near Belmont, WI	05414915	2.83	T, SC, C	1981-82
			DO	1982 ¹
Madden Branch near Meekers Grove, WI	05414920	15.06	T, SC, C	1981-82
			DO	1981 ¹
			T, SC, C	1981-82
			DO	1981-82 ¹
			PH	1982 ¹
APPLE RIVER BASIN				
Apple River near Shullsburg, WI	05418731	9.34	T, SC, C	1981-82
			DO	1981 ¹
ROCK RIVER BASIN				
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
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." For the 1993 water year, the data are published in two volumes - one for the St. Lawrence River drainage basin (Volume 1) and one for the Upper Mississippi River drainage basin (Volume 2). All ground-water data appear in Volume 1. The following introductory material applies collectively to both volumes.

Water-resources data for Wisconsin for the 1993 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. These volumes contain discharge records from 141 gaging stations and peak stage and discharge from 100 crest-stage stations; stage for 32 lakes and contents for 24 reservoirs; water-quality data from 65 streams and from 63 lakes; precipitation from 27 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-93-2." 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. Kosciak, 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 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. Thormodsgard, 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, Phillip Meyer, Chairman, Sewer and Water Committee.
 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, J. William Roemer, Acting City Manager.
 City of Barron, Bard Kittleson, Mayor.
 Brown County Planning Commission, Ken Jaworski, Senior Planner.
 Lac du Flambeau Band of Lake Superior Chippewa, Thomas Maulson, President.
 Stockbridge/Munsee Indian Tribe, Leah Miller-Heath, President.
 Dane County Lakes and Watershed Division, Karin VanVlack, Watershed Management Coordinator.
 Park Lake Management District, David C. Roberts, Chairman.
 City of Sparta, Milo Seubert, Mayor.
 City of Brookfield, Kathryn C. Bloomberg, Mayor.
 Town of Baraboo, Peter Cleveland, Town Clerk.
 Whitewater-Rice Lake Management District, William Norris, Chairman.
 Elkhart Lake Improvement Association, Lee Verhulst, President.

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 38.79 inches for the 1993 water year was 122 percent of the normal annual precipitation of 31.77 inches for water years 1961-90. Average precipitation values ranged from 103 percent of normal in northwestern Wisconsin to 150 percent of normal in southwestern Wisconsin (Pamela Naber Knox, UW-Extension, Geological and Natural History Survey, written commun., 1993).

Runoff was variable for rivers throughout the State ranging from 99 percent in north-central Wisconsin to 278 percent in southwestern Wisconsin. Departure of runoff in the 1993 water year from long-term average runoff is shown in Figure 1. Runoff was lowest (99 percent of the average annual runoff from 1936-93) for the Wisconsin River at Rainbow Lake near Lake Tomahawk. Runoff was highest (278 percent of the average annual runoff from 1939-93) for the Pecatonica River at Darlington. The average annual runoff for the 1993 water year was the maximum for the period of record at 33 long-term stations (more than 10 years of record) in the southern half of Wisconsin.

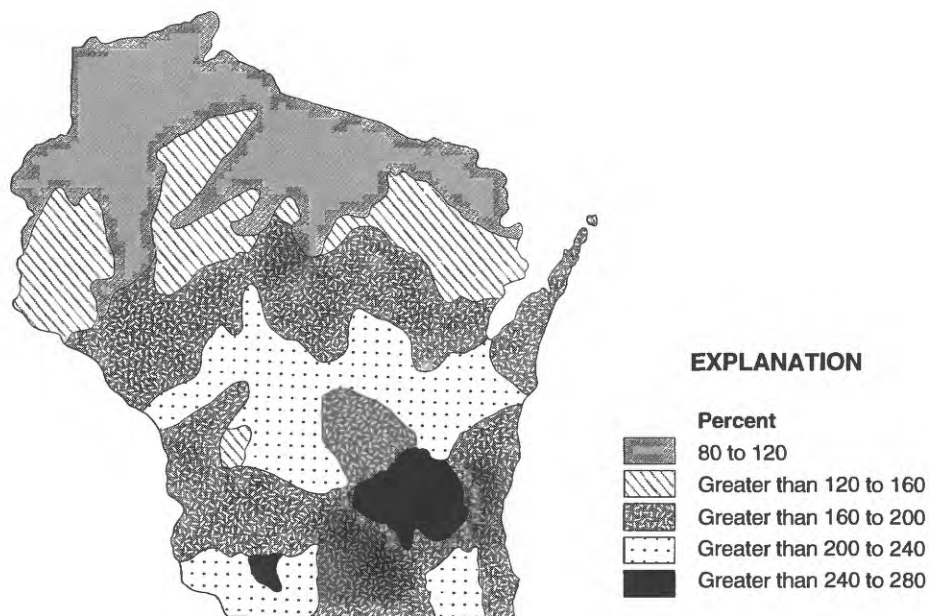


Figure 1. 1993 runoff as percent of long-term average runoff.

A comparison of the annual discharge for the individual water years (1916-93) 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 1993 water year to discharge for a 78-year base period at the same three gaging stations are shown in figure 3.

Spring runoff from snowmelt and major storms in the period March through September 1993, caused floods with discharges that equalled or exceeded those with a recurrence interval of 10 years (Krug and others, 1991) at a number of crest-stage gage and gaging stations.

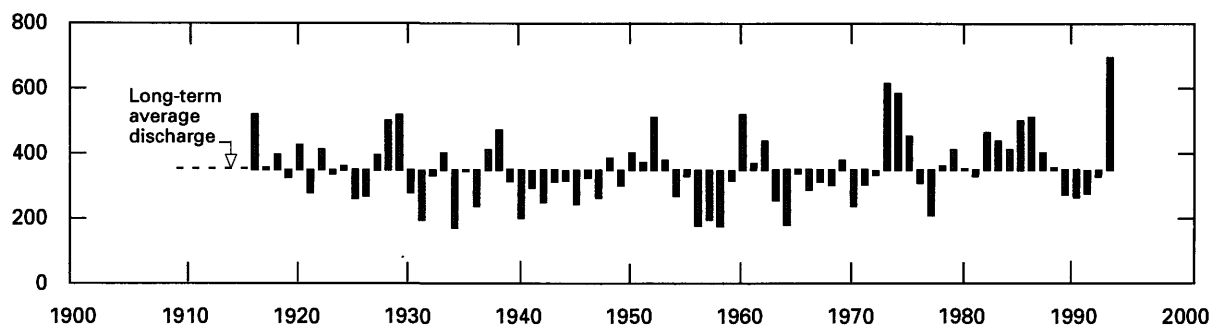
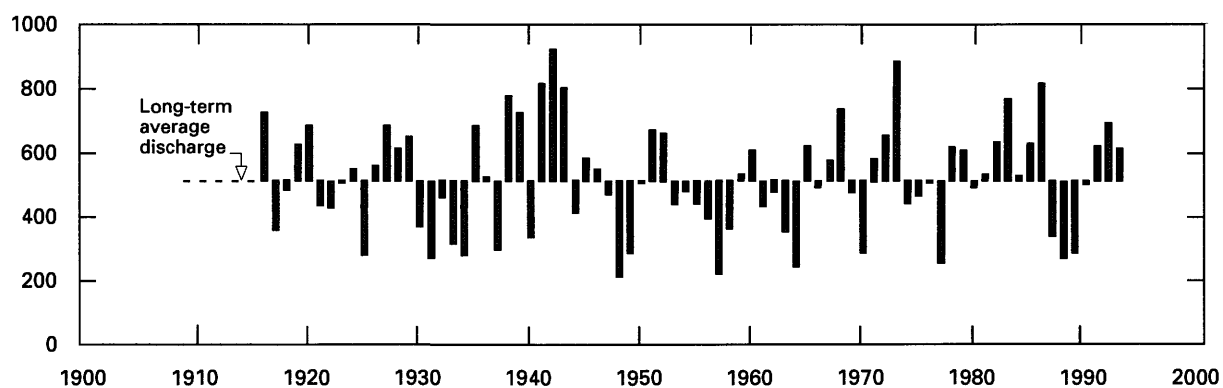
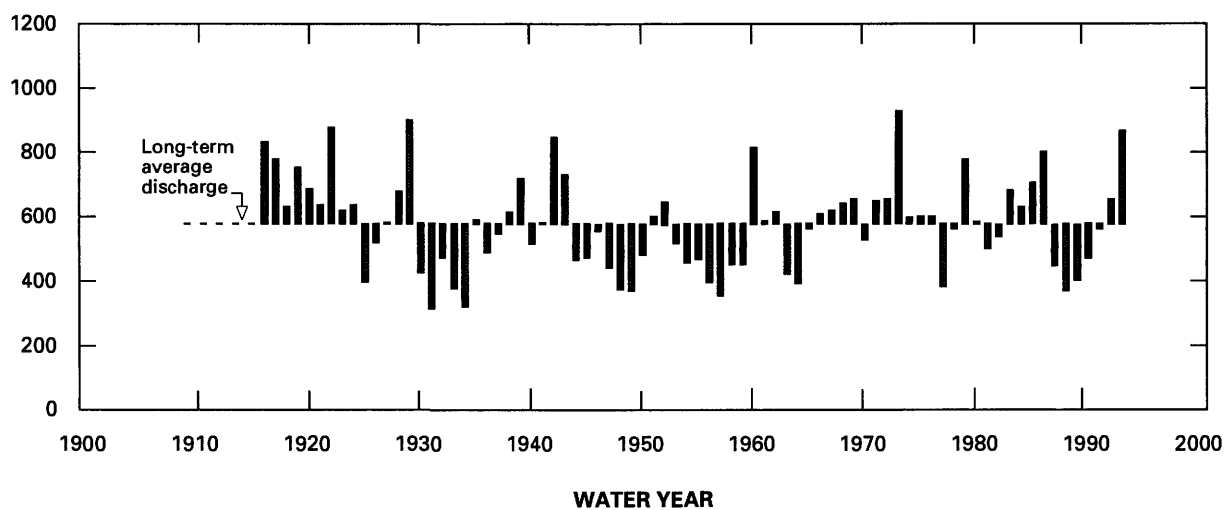
05436500 SUGAR RIVER NEAR BRODHEAD**05362000 JUMP RIVER AT SHELDON****04071000 OCONTO RIVER NEAR GILLETT**

Figure 2. Comparison of annual discharge at representative gaging stations to their long-term average discharge for water years 1916-1993.

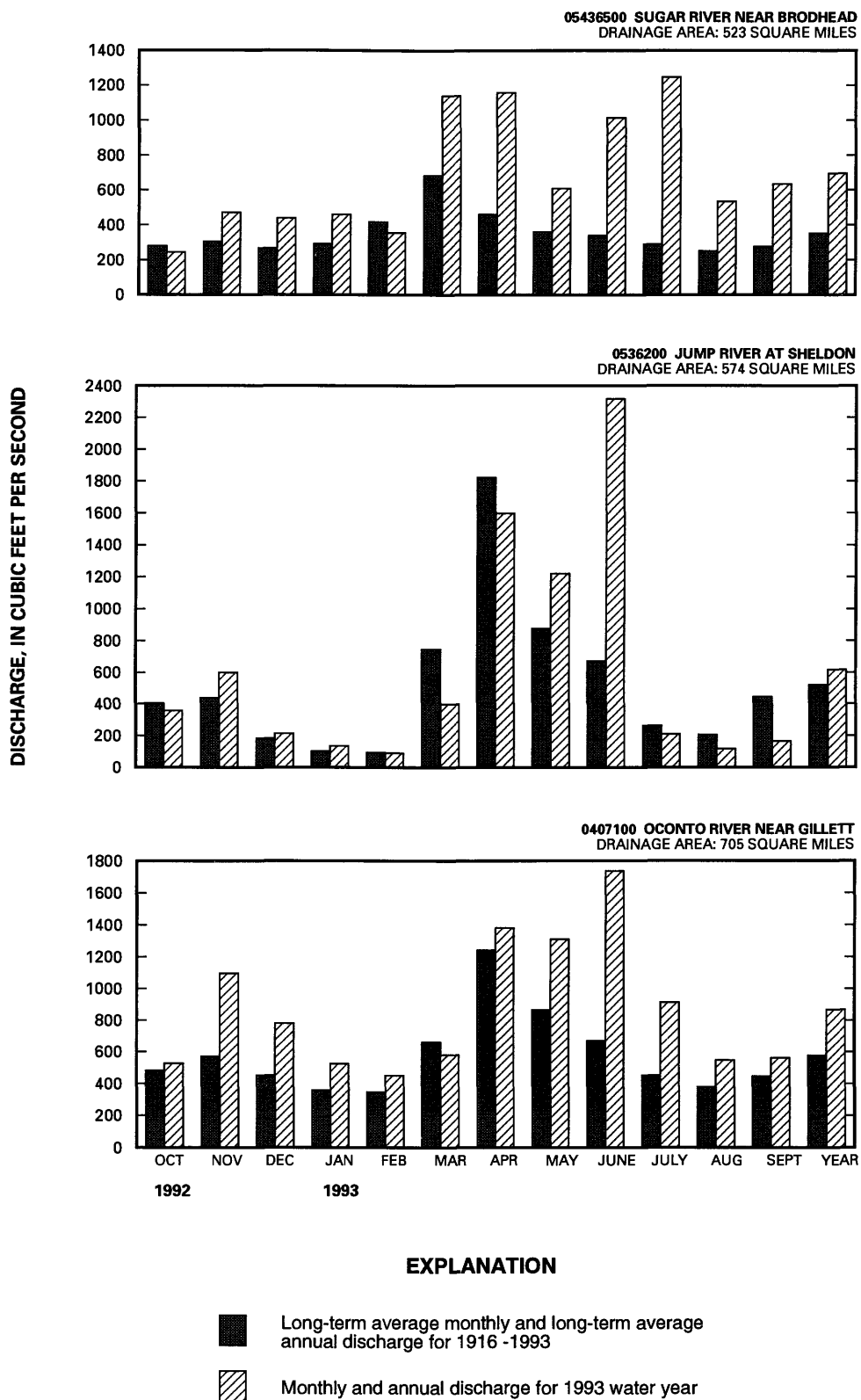


Figure 3. Comparison of discharge at representative gaging stations during 1993 water year with discharge for 1916-1993.

The unprecedented floods during June and July of 1993 began with wet antecedent conditions and above-normal runoff in south-central Wisconsin in May. Periods of flooding that stand out occurred on June 20-25, July 5-6, and July 18, although the two months were unusually wet in general and had frequent passes of thunderstorms from frontal systems. The worst flooding generally occurred in drainage basins of south-central and southwestern Wisconsin.

The unusual conditions were caused by a high-pressure center anchored on the East Coast, which drew up moist, unstable air into the Midwest. This high pressure kept other systems in the Midwest from moving east, reported meteorologists from the National Meteorological Center at Camp Spring, MD (Wisconsin State Journal, August 8, 1993). At the same time, a trough over the Rocky Mountains spawned rainstorms hitting the Midwest. The jet stream, normally farther north, stalled over southern Wisconsin, trapping warm, unstable air to the south (Wisconsin State Journal, July 7, 1993). The stalled low-pressure system was locked over the Midwest, ushering storms into Wisconsin, which first began in June. Storms recurred, sometimes affecting the same areas. Over the next two months there were over a dozen storm systems passing over the region. According to the Midwest Climate Center, the June-July period was the wettest since 1895 in parts of Wisconsin, Iowa, and Illinois (Wisconsin State Journal, August 8, 1993).

Rain totals for June in west-central Wisconsin at Hatfield and LaCrosse were 12.14 inches and 10.79 inches, respectively. Neillsville in north-central Wisconsin also had a total of 10.57 inches for June (Pamela Naber Knox, UW-Extension, Geological and Natural History Survey, written commun., 1993). The precipitation total for June at LaCrosse made it the wettest month in 93 years. A total of 8.35 inches of the 10.57 inch amount fell in the week ending June 20th (Interagency Hazard Mitigation Team Report Wisconsin, 1993). The heavy rains during the week ending June 20 caused flooding which destroyed a levee on the Black River on June 20 and caused significant flooding in Black River Falls. Over 700 people were evacuated in Jackson and Clark Counties. Interstate 94 near the Black River was closed for 7 hours on June 20. The Lake Arbutus Dam on the Black River near Hatfield experienced erosion around the left abutment and was in danger of failing (Wisconsin State Journal, June 21, 1993). The first flooding along the Mississippi River and evacuation of homes near Trempealeau and Prairie du Chien occurred from this storm. On June 22, the State Journal reported the majority of farm fields were saturated, and that 71-100 percent of farmers in counties throughout the State reported surplus soil moisture hurting the corn crop. Since April 1, southern Wisconsin received 16-17+ inches of rain; the normal amount is about 9 inches.

Rainfall totals for June also exceeded 10 inches at a number of precipitation stations in southwest and south-central Wisconsin. Rainfall amounts at Monroe, Beloit, Brodhead, Cuba City, Darlington, Blanchardville, Clinton, Platteville, and Lancaster were 14.53 inches, 14.39 inches, 13.11 inches, 13.03 inches, 12.68 inches, 11.84 inches, 11.04 inches, 10.75 inches, and 10.39 inches, respectively (Pamela Naber Knox, UW-Extension, Geological and Natural History Survey, written commun., 1993). New maximum monthly mean flows were set for June for the period of record at many of the gaging stations in the southern half of the State.

A second round of significant flooding occurred from heavy rains on July 5 in south-central Wisconsin, causing significant flood damage in the Madison area and on the Pecatonica River at Darlington and East Branch Pecatonica River near Blanchardville. Madison received a record rainfall of 3.75 inches the evening of July 5, more than the normal total for the month (Wisconsin State Journal, July 6 1993).

Tributaries of the Baraboo River near Baraboo were hit hard by an extremely intense rainstorm that dumped 7 inches of rain in one hour and 12 to 13 inches of rain in four hours near Devil's Lake on the night of July 17; Baraboo received 7.78 inches (Brian Hahn, National Weather Service, written commun., July 19, 1993). Resulting flash floods in small streams were responsible for the death of a 12-year-old boy (Wisconsin State Journal, July 19, 1993).

For July, Madison received 9.34 inches of rain, 5.95 inches above normal, which is the third wettest July on record (Brian Hahn, National Weather Service, written commun., August 1993); Baraboo received 14.79 inches, 10.99 inches above normal. Most of southern Wisconsin had rainfalls for July totalling more than 6 inches, and many areas had year-to-date totals equal to or greater than that for the entire year. New maximum monthly mean flows were also set for July for the period of record at many gaging stations in southern Wisconsin.

Preliminary flood damage estimates from the initial flooding on the Black River and other streams in southwestern Wisconsin totalled \$50 million on June 25 (Wisconsin State Journal, June 25, 1993). The Governor declared a state of emergency for 24 counties in the flood-stricken area. By the end of June, the Governor asked the President to declare 30 counties federal disaster areas. Damage estimates now totalled \$175 million, including \$125 million in damage to agriculture and \$50 million in damage to structures (Wisconsin State Journal, June 30, 1993). By this time commercial traffic on the Mississippi from St. Paul to St. Louis was halted because of the high water.

Additional flooding from the July storms raised the flood damage estimates up to a total of \$256 million, including \$131 million in damage to roads, bridges, homes, and businesses (Wisconsin State Journal, July 12, 1993). High water levels in Madison area lakes alone caused \$12 million in damage. As of August, 46 of the 72 Wisconsin counties had been declared federal disaster areas (Diane Kleiboer, Wisconsin Division of Emergency Government, oral commun., August 24, 1993). Forty of these counties were eligible for both individual and public disaster assistance. Final estimated damages in Wisconsin totalled \$800 million.

Peak discharges which had recurrence intervals that equalled or exceeded 10 years are summarized in the following table:

Station number	Station name	Date	Peak discharge (ft ³ /s)	Recurrence interval (years)
04073400	Bird Creek at Wautoma	June 18	160	25
04074700	Hunting Creek near Elcho	Sept. 13	150	20
04077400	Wolf River near Shawano	June 21	3,820	17
04081900	Sawyer Creek near Oshkosh	July 5	1,700	20
04085030	Apple Creek near Kaukauna	July 5	1,900	50
04085200	Kewaunee River near Kewaunee	July 6	6,010	14
04085400	Killsnake River near Chilton	June 8	1,470	15
04087050	Little Menomonee River nr Freistadt	Apr. 20	340	13
04087200	Oak Creek near South Milwaukee	Apr. 19	660	14
04087204	Oak Creek at South Milwaukee	Apr. 19	887	10
04087233	Root River Canal near Franklin	Apr. 20	1,260	17

Station number	Station name	Date	Peak discharge (ft ³ /s)	Recurrence interval (years)
05341900	Kinnickinnic River Tributary near River Falls	Mar. 28	2,700	10
05360500	Flambeau River near Bruce	June 21	16,500	10
05362000	Jump River at Sheldon	June 21	16,400	13
05364100	Seth Creek near Cadott	June 20	532	20
05366500	Eau Claire River near Fall Creek	June 20	24,500	45
05367030	Willow Creek near Eau Claire	June 19	260	10
05369500	Chippewa River at Durand	June 23	90,100	21
05371800	Buffalo River Tributary near Osseo	June 19	154	25
05371920	Buffalo River near Mondovi	June 20	4,000	25
05380900	Poplar River near Owen	June 20	10,800	20
05380970	Cawley Creek near Neillsville	June 20	7,000	25
05381000	Black River at Neillsville	June 20	30,400	24
05382000	Black River near Galesville	June 21	64,000	>100
05386300	Mormon Creek near LaCrosse	June 17	3,770	15
05393500	Spirit River at Spirit Falls	June 20	2,730	10
05397600	Big Sandy Creek near Wausau	June 17	1,300	22
05398000	Wisconsin River at Rothschild	June 21	44,400	10
05400760	Wisconsin River at Wisconsin Rapids	June 21	64,600	34
05401800	Yellow River Tributary nr Pittsville	June 9	715	12
05404000	Wisconsin River nr Wisconsin Dells	June 24	59,100	23
05405000	Baraboo River near Baraboo	July 18	6,340	19
05406500	Black Earth Creek at Black Earth	July 6	1,320	31
05407000	Wisconsin River at Muscoda	June 26	59,600	12
05414900	Pats Creek near Elk Grove	July 9	7,000	>100
05425500	Rock River at Watertown	Apr. 20	4,620	25
05425700	Robbins Creek near Columbus	July 5	344	15
05426000	Crawfish River at Milford	Apr. 23	4,140	12
05427948	Pheasant Branch at Middleton	July 6	746	18
05427965	Spring Harbor Storm Sewer at Madison	July 5	754	21
05429500	Yahara River near McFarland	Apr. 21	681	26
05430403	Fisher Creek Tributary at Janesville	June 30	680	18
05430500	Rock River at Afton	Apr. 23	10,700	10
05431486	Turtle Creek near Clinton	June 30	5,580	14
05432300	Rock Branch near Mineral Point	July 5	3,100	>100
05432500	Pecatonica River at Darlington	July 6	12,400	24
05433500	Yellowstone River nr Blanchardville	July 6	4,700	13
05435900	Sugar River Tributary nr Pine Bluff	July 5	800	>100
05436200	Gill Creek near Brooklyn	Mar. 23	285	45
05437200	East Fork Racoon Creek Tributary near Beloit	June 30	2,300	>100
05546500	Fox River at Wilnot	Apr. 22	5,060	14
05548150	North Branch Nippersink Creek nr Genoa City	June 30	350	30

References cited:

- Interagency Hazard Mitigation Team Report Wisconsin, FEMA 994 DR-WI, July 23, 1993, 49 p.
- Krug, W. R., Conger, D. H., and Gebert, W. A., 1991, Flood-frequency characteristics of Wisconsin Streams: U.S. Geological Survey Water-Resources Investigations Report 91-4128, 185 p.
- Wisconsin State Journal, 800 evacuated as 2 towns flood: Madison, Wis., June 21, 1993.
- _____, Relentless rain hits corn hardest: Madison, Wis., June 22, 1993.
- _____, Rain adds to flood woes: Madison, Wis., June 25, 1993.
- _____, Thompson to seek federal aid for 30 counties hit by floods: Madison, Wis., June 30, 1993.
- _____, Record rainfall in Madison: Madison, Wis., July 6, 1993.
- _____, Why so much rain? Jet stream stalled: Madison, Wis., July 7, 1993.
- _____, Flood damage \$256 million: Madison, Wis., July 12, 1993.
- _____, Baraboo hit hard: Madison, Wis., July 19, 1993.
- _____, When rivers overflow with rage: Madison, Wis., August 8, 1993.

Water Quality

Suspended-sediment and total phosphorus yields in southern Wisconsin for the 1993 water year were well above long-term average yields. The suspended-sediment yield at the Grant River at Burton in southwestern Wisconsin was 794 tons/mi² (tons per square mile), which is about three times the average yield for 1978-93. The total-phosphorus yield for Delavan Lake Inlet in southeastern Wisconsin for the 1993 water year was 725 lbs/mi² (pounds per square mile), which is about twice the average yield for the period 1984-93. Suspended-sediment and total-phosphorus yields at Silver Creek near Ripon were about 75 percent higher in the 1993 water year than the average annual yield for the period 1988-93.

Data collection began at ten sites operated by the National Water-Quality Assessment Program (NAWQA). Samples were collected at approximately monthly intervals and during storms from March through September. Data for these sites for the 1993 water year are included in this report; data collection will continue in the 1994 water year.

Ground-Water Levels

Maps showing the seasonal ground-water trends for the year (fig. 4) are based on water-level data from 26 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 1992; WINTER consists of measurements from January through March 1993; SPRING consists of measurements from April through June 1993; and SUMMER consists of measurements from July through September 1993. Mean seasonal water levels were compared to the long-term mean seasonal water levels. The 1993 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 1993 water year were normal to above normal for most of the wells in the State. The only counties having below normal ground-water levels were Door and Milwaukee in the FALL, Forest in the WINTER, and Chippewa in the SPRING, with no counties having ground-water levels below normal in the SUMMER. Most ground-water levels were above normal in the SUMMER, with only a narrow section in northern part of the State having normal ground-water levels. The large extent of the above normal ground-water levels can be attributed to the above normal rainfall during the 1993 water year.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream-Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in national or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, diverse, and geographically distributed part of the Nation's ground- and surface-water resources, and to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends.

Assessment activities have begun in more than one-third of the study units and ultimately will be conducted in 60 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Radiochemical Surveillance Network is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are from the 1993 water year that began October 1, 1992, and ended September 30, 1993. 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.

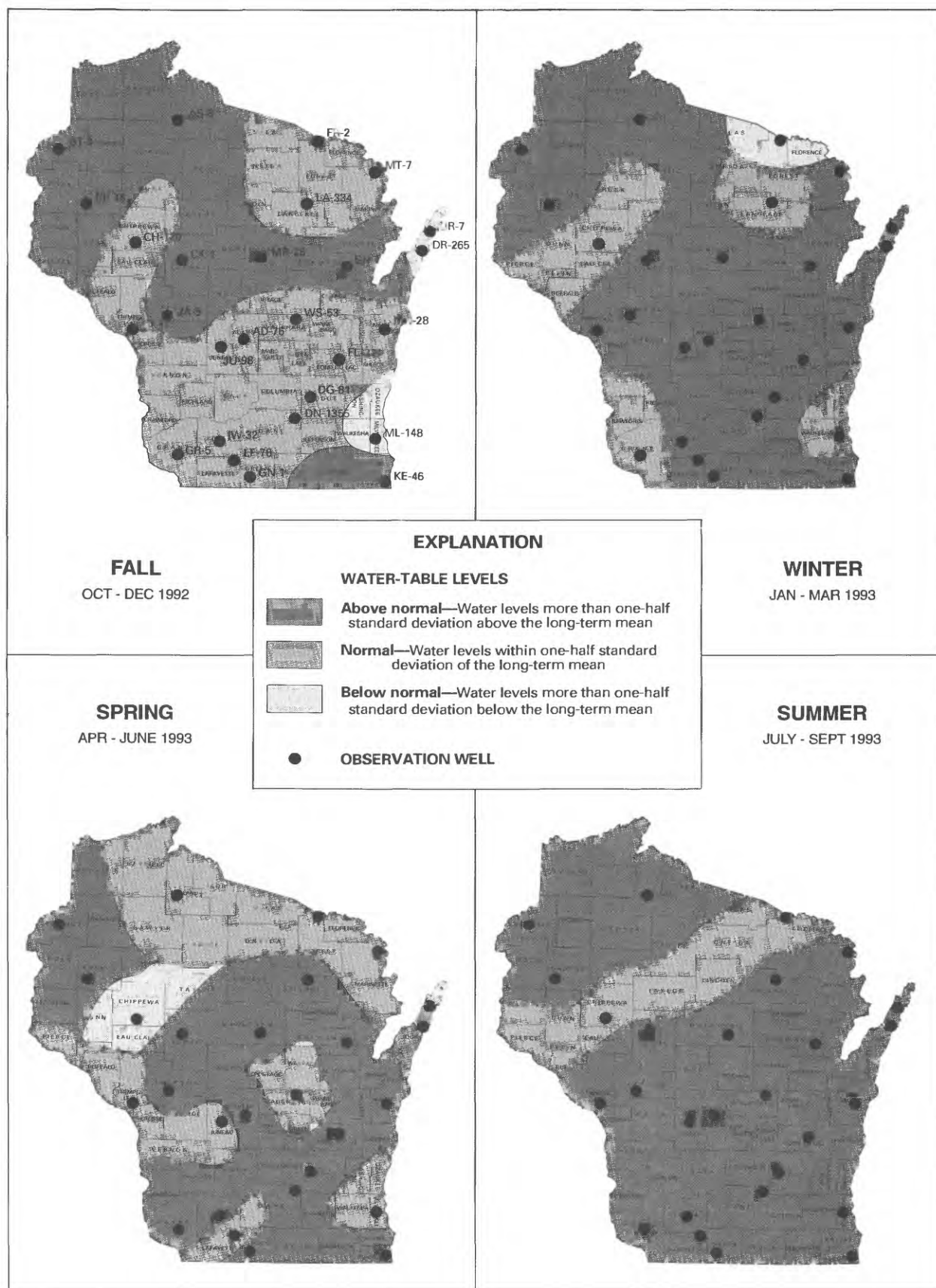


Figure 4. Relation of seasonal water-table levels to long-term means.

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 Volume 1 are in Part 04 (St. Lawrence River basin) and Volume 2 are in Part 05 (Upper Mississippi River basin).

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

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

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

Records of Stage and Water Discharge

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

Data Collection and Computation

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

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

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

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

Data Presentation

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

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

Station manuscripts

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

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

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

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

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

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

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

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

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

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

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

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

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

Data table of daily mean values

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

Statistics of monthly mean data

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

Summary statistics

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

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

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

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

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

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

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

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

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

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

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 time for the designated period.

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

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

Data collected at crest-stage partial-record stations are given in a table of annual maximum stages and discharges that follows the information for continuous-record sites. The crest-stage partial-record stations table is followed by a list of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for special reasons are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

Other Records Available

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

Records of Surface-Water Quality

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

Classification and Arrangement of Records

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

On-site Measurements and Sample Collection

In obtaining water-quality data, care is taken to assure that the data obtained represent the quality of the water at the time of sampling. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen concentration, are made on site when the samples are taken. To assure that measurements made in the laboratory also reflect the original quality of the water, prescribed procedures are followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on-site measurements and for collecting, treating, and shipping samples are 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 and total Kjeldahl nitrogen analyses done by the USGS National Water Quality Laboratory prior to Oct. 1, 1991. Some time after 1975, an error was introduced during a rewrite of the laboratory method for digestion of samples for total phosphorus or total Kjeldahl nitrogen analyses. The error resulted in incomplete digestion of samples causing a negative bias in the total phosphorus and total Kjeldahl nitrogen concentrations reported for many samples. The amount of bias is variable, but it generally increases with increasing concentrations of particulate phosphorus, suspended sediment, or organic carbon in the sample. In the absence of split-sample data, there is no scientifically defensible way to correct for the bias. Total phosphorus loads calculated using concentration data for samples analyzed prior to October 1991 may also have a sizeable negative bias. A new digestion procedure was implemented effective Oct. 1, 1991, that eliminated the bias.

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 Volume 1 of 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 Volume 1 of this report, water-level data are currently being collected for a total of 193 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 sea level and the distance of the measuring point (MP) above or below the lsd is given in each well description. Water levels are normally reported to a hundredth of a foot. The absolute value of the depth to water may be in error by a few tenths of a foot, but the error in determining the net change in water level between successive measurements is normally only a hundredth or a few hundredths of a foot.

Data Presentation

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

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

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

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

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

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

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

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

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

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

ACCESS 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 $44.5^{\circ}\text{C} + 0.2^{\circ}$ 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 $35^{\circ} + 1.0^{\circ}$ 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 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.

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.

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.

Sea level, in the report, refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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 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.

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.

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, Earth Science Information Center, Federal Center, Box 25286, MS 517, 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.
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- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
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- 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.
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- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
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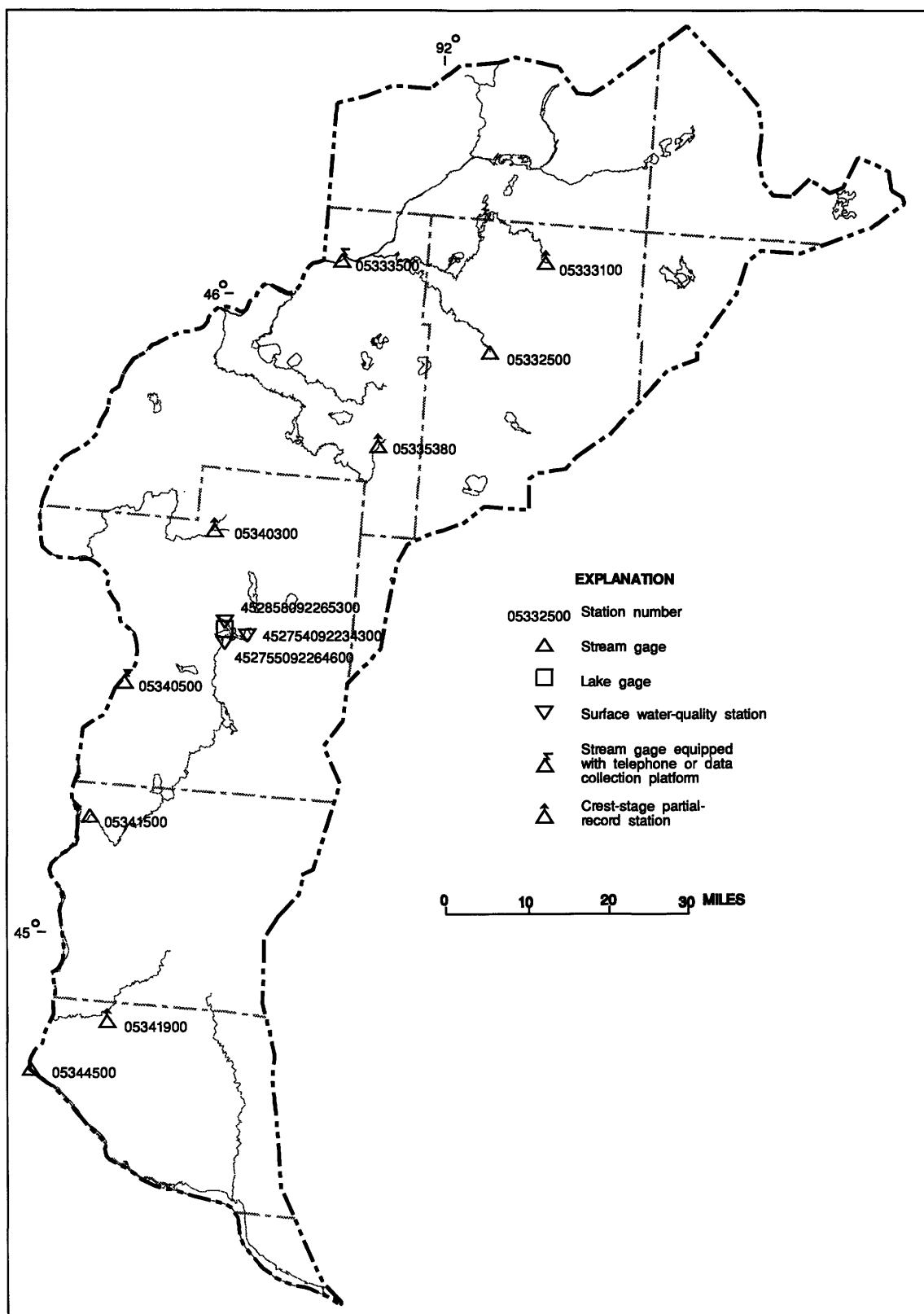
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- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
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- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathburn, Nobuhiro Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
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- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G. D. Bennett: USGS-- TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R. L. Cooley and R. L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
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- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
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- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
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- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S. A. Leake and D. E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R. L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 pages.
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- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.



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



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

ST. CROIX RIVER BASIN

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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	385	476	406	434	478	385	578	578	1080	488	403	399
2	385	476	481	434	403	385	578	888	787	594	403	359
3	385	476	481	434	403	385	578	1080	888	699	403	359
4	385	541	481	434	403	385	578	888	683	699	403	359
5	385	541	481	362	403	385	444	888	888	699	403	359
6	385	541	481	362	403	476	585	888	888	699	403	359
7	385	541	324	362	403	476	488	888	888	594	403	343
8	532	541	481	362	403	476	488	888	888	594	403	359
9	532	481	476	362	403	476	488	888	888	594	403	326
10	620	481	476	362	403	476	488	888	888	594	403	326
11	620	487	476	362	403	476	488	888	888	594	385	326
12	813	481	476	362	403	326	787	888	888	594	359	326
13	813	481	476	362	403	476	787	578	896	594	326	326
14	578	481	476	362	403	476	787	578	578	594	326	317
15	578	481	476	359	403	385	785	578	578	561	326	476
16	569	481	476	359	385	385	585	578	578	594	326	396
17	569	481	476	359	385	385	585	578	787	594	326	403
18	569	481	361	359	385	385	585	561	578	594	359	403
19	516	481	361	359	385	385	585	561	578	481	359	403
20	516	481	361	359	385	478	578	488	787	444	326	396
21	518	481	323	359	385	476	578	488	989	444	326	441
22	518	481	323	359	385	403	561	488	787	403	326	359
23	476	481	437	359	385	476	561	488	787	403	326	476
24	476	423	437	359	385	403	585	787	787	403	359	359
25	476	481	437	359	385	476	578	787	578	403	326	359
26	476	423	437	385	385	476	578	888	578	403	326	359
27	476	423	437	385	385	476	578	989	578	403	359	448
28	476	423	434	385	385	476	578	888	594	403	326	431
29	476	423	434	382	---	578	578	888	594	403	481	431
30	476	406	434	382	---	578	578	989	594	403	440	359
31	476	---	434	382	---	578	---	989	---	403	440	---
TOTAL	15840	14356	13550	11606	11125	13858	17598	23707	22768	16372	11483	11342
MEAN	511	479	437	374	397	447	587	765	759	528	370	378
MAX	813	541	481	434	478	578	787	1080	1080	699	481	476
MIN	385	406	323	359	385	326	444	488	578	403	326	317
CFSM	1.05	.98	.90	.77	.81	.92	1.20	1.57	1.56	1.08	.76	.77
IN.	1.21	1.09	1.03	.88	.85	1.06	1.34	1.81	1.74	1.25	.88	.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1993, BY WATER YEAR (WY)

	MEAN	436	432	379	348	342	437	692	636	564	485	407	472
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1928 - 1993

ANNUAL TOTAL	202995	183605	
ANNUAL MEAN	555	503	469
HIGHEST ANNUAL MEAN			607
LOWEST ANNUAL MEAN			300
HIGHEST DAILY MEAN	2910	Mar 13	5200
LOWEST DAILY MEAN	323	Dec 21	113
ANNUAL SEVEN-DAY MINIMUM	372	Aug 5	159
ANNUAL RUNOFF (CFSM)	1.14		.96
ANNUAL RUNOFF (INCHES)	15.47		13.07
10 PERCENT EXCEEDS	787		716
50 PERCENT EXCEEDS	487		411
90 PERCENT EXCEEDS	385		284

(a) Also occurred June 1

(b) Also occurred Sept. 7, 1930

25

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 sea level. 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1993, BY WATER YEAR (WY)												
MEAN	1182	1199	1010	896	885	1328	2333	1844	1535	1291	1060	1201
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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1914 - 1993	
ANNUAL TOTAL	579450		507987			
ANNUAL MEAN	1583		1392		1312	
HIGHEST ANNUAL MEAN					1982	
LOWEST ANNUAL MEAN					1986	
HIGHEST DAILY MEAN	5530	Apr 23	3220	May 28	8740	May 2 1954
LOWEST DAILY MEAN	840	Aug 17	769	Aug 22	405	(a) Aug 6 1934
ANNUAL SEVEN-DAY MINIMUM	898	Aug 15	803	Sep 5	417	Aug 12 1934
INSTANTANEOUS PEAK FLOW			(b) 3260	May 28	10200	May 6 1950
INSTANTANEOUS PEAK STAGE			(c) 5.24	Dec 19	8.22	May 6 1950
INSTANTANEOUS LOW FLOW			(d) 732	Aug 22	393	Aug 6, 13 1934
ANNUAL RUNOFF (CFSM)	1.00		.88		.83	
ANNUAL RUNOFF (INCHES)	13.64		11.96		11.29	
10 PERCENT EXCEEDS	2350		2170		2200	
50 PERCENT EXCEEDS	1400		1200		1070	
90 PERCENT EXCEEDS	1020		880		723	

(d) Also occurred Sept. 11

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 sea level. 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.--No estimated daily discharges. 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2490	2960	2840	2500	2410	2280	11800	6490	13000	9400	3220	4030
2	2210	3160	3110	2680	2480	2030	10600	6680	13700	10400	3000	4160
3	2410	3500	2890	2490	2460	2240	9820	7180	12900	9230	2980	4220
4	2020	3880	2930	2380	2720	2440	9680	7960	11700	10100	2740	3520
5	2450	3250	2470	2790	2650	2360	8720	8170	10300	11700	2640	3410
6	2200	3070	1730	2740	2710	2650	8390	7790	9000	12400	3010	3160
7	2430	4400	2240	2570	2470	2610	8140	7170	8130	12300	2880	3200
8	3130	4570	2070	2520	2550	2790	7900	7050	7730	11300	2280	2970
9	3080	3640	2630	2320	2560	2720	8400	7080	8150	10800	3510	2810
10	3480	3470	2660	2330	2520	3200	10400	7090	9790	13500	2780	2810
11	3850	4050	2730	2420	2680	2740	11800	7470	11800	14800	2580	2760
12	4230	4060	3010	2260	2660	3040	12300	7620	11200	14600	2680	2440
13	3780	4160	3200	2150	2460	3070	12100	7340	9570	12500	2680	3060
14	3840	4240	3110	2530	2570	2690	12000	7220	8990	10300	2580	3020
15	3830	4130	3460	2500	2540	2990	11400	6660	9260	9310	3260	2770
16	3690	3850	3260	2380	2660	2850	10700	6180	8980	8470	2870	2860
17	4700	3930	3250	2550	2380	2770	9700	5610	9640	7870	2790	3070
18	3580	3620	3010	2490	2320	2790	9340	5280	8180	7070	3030	2690
19	3350	3590	2520	2430	2210	2720	8360	4310	7750	6500	3340	2620
20	3270	3580	1810	2520	2060	2500	8090	4660	8220	6010	3270	3090
21	3220	3820	2290	2500	2210	2660	6620	4530	8450	5880	2770	3090
22	3340	3750	2340	2450	2260	2640	6470	3930	9560	4960	2840	3470
23	3440	3870	2290	2540	2040	2540	6000	3480	9810	4270	3520	3210
24	3330	3610	2280	2580	2250	3220	6210	4930	13200	4590	3030	3080
25	3250	3600	2320	2540	2100	3400	6080	6220	16200	4280	3310	2780
26	3220	3590	2350	2280	2520	4100	6510	8780	19700	4350	3150	2920
27	3170	3660	2220	2540	2160	5210	7080	9960	19700	3900	3210	2990
28	3100	2930	2420	2180	2070	5850	6790	10100	16400	3700	3040	3030
29	3070	2730	2340	2750	---	7970	6440	10500	14000	3440	3480	3160
30	2970	3070	2540	2570	---	10600	6480	10800	11600	3210	3460	2630
31	2900	---	2550	2320	---	11800	---	11200	---	3470	3620	---
TOTAL	99030	109740	80870	76800	67680	113470	264320	219440	336610	254610	93550	93030
MEAN	3195	3658	2609	2477	2147	3660	8811	7079	11220	8213	3018	3101
MAX	4700	4570	3460	2790	2720	11800	12300	11200	19700	14800	3620	4220
MIN	2020	2730	1730	2150	2040	2030	6000	3480	7730	3210	2280	2440
CFSM	.51	.59	.42	.40	.39	.59	1.41	1.13	1.80	1.32	.48	.50
IN.	.59	.65	.48	.46	.40	.68	1.58	1.31	2.01	1.52	.56	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 1993, BY WATER YEAR (WY)

	MEAN	3739	3406	2539	2156	2111	4163	9946	7509	5817	4125	2827	3482
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1902 - 1993

ANNUAL TOTAL	1773830	1809150	
ANNUAL MEAN	4847	4957	
HIGHEST ANNUAL MEAN			4331
LOWEST ANNUAL MEAN			8569
HIGHEST DAILY MEAN	22300	Apr 24	1754
LOWEST DAILY MEAN	1700	Aug 22	1754
ANNUAL SEVEN-DAY MINIMUM	2100	Aug 16	53900
INSTANTANEOUS PEAK FLOW			75
INSTANTANEOUS PEAK STAGE			754
ANNUAL RUNOFF (CFSM)	.78		54900
ANNUAL RUNOFF (INCHES)	10.57		25.19
10 PERCENT EXCEEDS	9350		.69
50 PERCENT EXCEEDS	3500		9.43
90 PERCENT EXCEEDS	2320		

ST. CROIX RIVER BASIN

27

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 05 TO AUGUST 09, 1993
(Milligrams per liter unless otherwise indicated)

	May 05	June 26	July 14	Aug. 09
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	7.99	8.24	7.74	7.45
Specific conductance (µS/cm)	229	204	213	210
pH (units)	8.2	7.7	7.9	8.2
Water temperature (°C)	14.0	21.5	22.0	21.5
Secchi-depth (meters)	1.8	1.3	1.7	1.2
Dissolved oxygen	11.3	8.6	8.7	8.5
Phosphorus, total (as P)	<0.020	0.027	0.024	0.025
Chlorophyll a, phytoplankton (µg/L)	4.5	9.7	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 05 TO AUGUST 09, 1993
(Milligrams per liter unless otherwise indicated)

	May 05	June 26	July 14	Aug. 09
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	7.99	8.24	7.74	7.45
Specific conductance (µS/cm)	184	177	179	175
pH (units)	8.3	7.8	8.3	8.8
Water temperature (°C)	13.5	20.5	21.5	21.5
Secchi-depth (meters)	3.0	2.7	1.7	0.9
Dissolved oxygen	11.2	8.7	8.8	9.2
Phosphorus, total (as P)	<0.020	0.036	0.019	0.049
Chlorophyll a, phytoplankton (µg/L)	2.8	7.1	17	60

452755092264600 BALSAM LAKE, OFF CEDAR ISLAND, AT BALSAM LAKE, WI

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.

DRAINAGE AREA.--52.7 mi².

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 March sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MARCH 04 TO AUGUST 09, 1993
(Milligrams per liter unless otherwise indicated)

	Mar. 04		May 05		June 26		July 14		Aug. 09	
Depth of sample (ft)	1.5	30	1.5	30	1.5	30	1.5	30	1.5	30
Lake stage (ft)	7.59		7.99		8.24		7.74		7.45	
Specific conductance (μS/cm)	193	230	189	188	184	193	185	195	180	188
pH (units)	8.2	7.9	8.2	8.2	7.6	7.5	8.2	7.6	8.4	8.0
Water temperature (°C)	1.5	5.0	11.5	8.5	19.5	15.5	21.0	18.5	21.5	20.5
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.90	0.80	---	---	---	---	---	---
Secchi-depth (meters)	---		1.8		3.0		4.0		1.5	
Dissolved oxygen	12.8	3.8	12.1	9.8	8.5	2.2	8.9	1.2	8.8	3.1
Hardness, as CaCO ₃	---	---	87	87	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	22	22	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	7.8	7.8	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	4.6	4.6	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	1	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	78	77	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	<5.0	<5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	9.0	9.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	<0.0	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	10	11	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	114	114	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.01	0.15	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.01	0.15	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.02	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.39	0.38	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.41	0.55	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.015	0.030	0.019	0.024	0.020	0.080	0.023	0.040
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	77	84	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	6.9	---	5.7	---	7.5	---	25	---

3-4-93

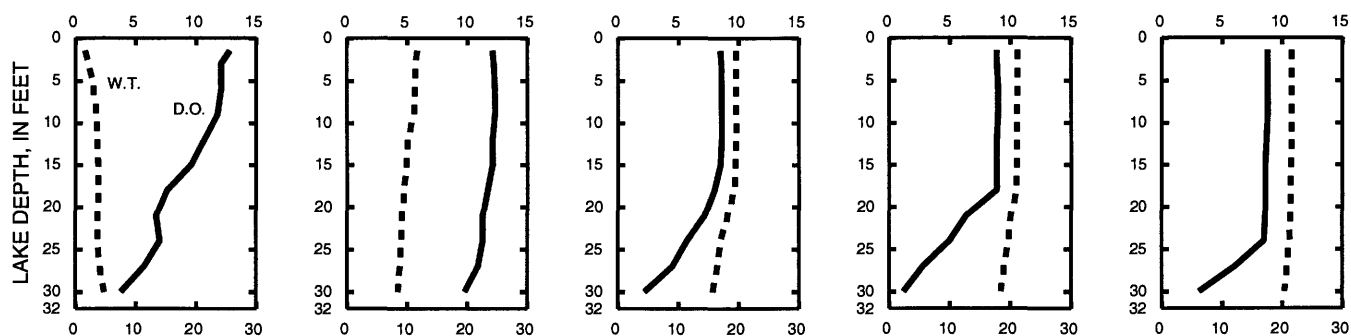
5-5-93

6-26-93

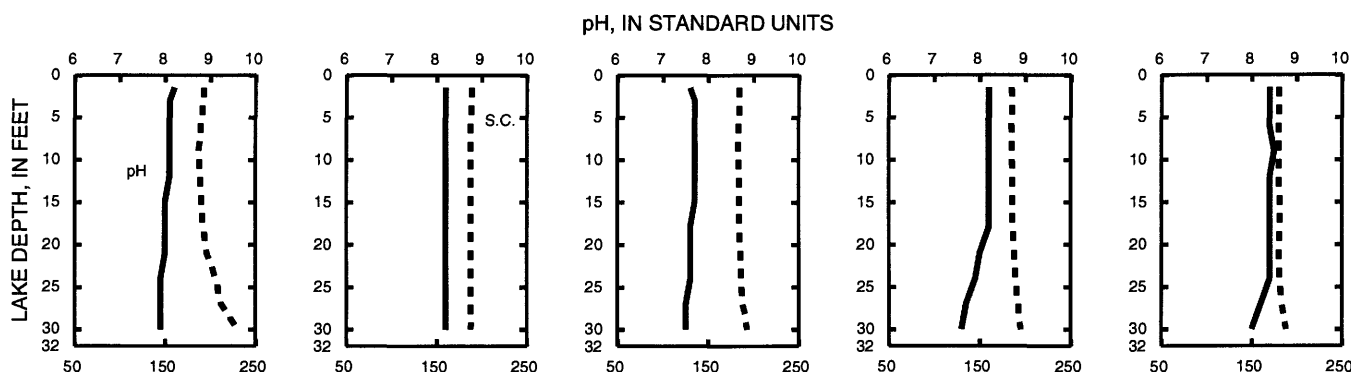
7-14-93

8-9-93

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

ST. CROIX RIVER BASIN

29

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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	255	346	361	241	370	326	961	425	521	659	367	366
2	250	408	377	261	360	325	777	560	609	603	332	389
3	273	389	357	337	332	360	876	628	566	556	321	361
4	256	382	313	310	342	360	633	572	495	790	376	364
5	265	369	220	273	375	320	525	634	397	815	380	361
6	221	462	157	294	373	358	524	612	503	695	361	353
7	308	448	221	277	375	332	488	616	476	637	343	347
8	332	502	280	282	373	343	604	544	505	758	324	327
9	318	423	341	318	368	353	605	637	493	696	377	343
10	342	422	383	317	349	367	643	585	504	769	565	334
11	398	341	387	285	305	371	727	572	519	793	432	333
12	361	326	331	316	302	302	781	608	497	634	423	318
13	417	339	372	320	326	277	760	733	565	695	420	359
14	309	339	377	338	257	278	785	700	544	659	420	354
15	351	407	377	319	232	332	704	702	568	650	427	257
16	389	414	373	318	234	424	680	545	664	650	463	274
17	447	314	355	314	268	274	745	439	765	499	527	298
18	257	336	305	295	316	275	682	407	811	421	370	288
19	269	343	316	314	331	381	636	436	1030	502	259	300
20	283	374	199	328	319	329	462	445	1250	606	384	334
21	311	369	233	321	327	333	393	433	1150	425	237	358
22	315	364	378	373	332	328	443	479	1050	432	264	390
23	380	307	378	369	301	329	466	478	1220	421	282	404
24	428	338	272	351	269	325	409	520	1190	370	272	375
25	435	418	238	297	283	318	443	487	1210	457	299	352
26	374	420	274	327	293	371	482	536	1290	495	271	340
27	343	393	310	341	324	470	528	618	1140	430	307	443
28	329	388	344	323	223	437	451	591	982	522	394	474
29	344	397	346	254	---	454	454	584	765	444	402	420
30	363	393	344	287	---	546	413	457	744	409	426	346
31	361	---	299	350	---	834	---	435	---	366	425	---
TOTAL	10284	11471	9818	9650	8859	11432	18080	17018	23023	17858	11450	10562
MEAN	332	382	317	311	316	369	603	549	767	576	369	352
MAX	447	502	387	373	375	834	961	733	1290	815	565	474
MIN	221	307	157	241	223	274	393	407	397	366	237	257
CFSM	.57	.66	.55	.54	.55	.64	1.04	.95	1.33	.99	.64	.61
IN.	.66	.74	.63	.62	.57	.73	1.16	1.09	1.48	1.15	.74	.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 1993, BY WATER YEAR (WY)

	MEAN	275	269	238	224	229	373	534	409	376	273	227	284
	MAX	623	536	479	416	411	730	1335	1000	1030	576	506	808
	(WY)	1904	1907	1992	1992	1966	1946	1965	1906	1905	1993	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1901 - 1993

ANNUAL TOTAL	145708	159505	
ANNUAL MEAN	398	437	308
HIGHEST ANNUAL MEAN			535
LOWEST ANNUAL MEAN			144
HIGHEST DAILY MEAN	1090	Apr 25	2510
LOWEST DAILY MEAN	157	Dec 6	7.0
ANNUAL SEVEN-DAY MINIMUM	223	Aug 1	49
ANNUAL RUNOFF (CFSM)	.69		.53
ANNUAL RUNOFF (INCHES)	9.36		7.22
10 PERCENT EXCEEDS	594	681	500
50 PERCENT EXCEEDS	373	374	242
90 PERCENT EXCEEDS	243	277	142

(a) Also occurred Sept. 30, 1929, July 19, 1932, and Aug. 2, 3, 1933

05344500 MISSISSIPPI RIVER AT PRESCOTT, WI

LOCATION.--Lat 44°44'45", long 92°48'00", in sec.9, T.26 N., R.20 W., Pierce County, Hydrologic Unit 07040001, on left bank at Prescott, 200 ft downstream from St. Croix River, 300 ft south of Chicago, Burlington & Quincy Railroad bridge, 800 ft south of bridge on U.S. Highway 10, and at mile 811.4 upstream from Ohio River.

DRAINAGE AREA.--44,800 mi², approximately.

PERIOD OF RECORD.--June 1928 to current year.

REVISED RECORDS.--WSP 1508: 1941. WRD MN-74: 1973.

GAGE.--Water-stage recorder. Datum of gage is 649.50 ft above sea level. 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10600	12100	15900	11900	7960	7660	41600	50900	49300	111000	55500	42700
2	9800	12400	15000	11600	9230	8240	48300	48900	51300	105000	54500	42500
3	9160	12400	14200	10800	8650	7840	52600	47700	53500	103000	53300	42000
4	9380	13700	14300	10900	9220	8430	61500	47600	54300	98800	52700	41900
5	8870	15400	14000	11000	9270	8630	68700	47900	54600	98200	51800	41100
6	9470	16900	13100	11900	9070	8610	73200	48700	54200	98000	50900	40800
7	9200	18400	12000	11100	9300	8630	77100	48100	53400	98300	50300	40800
8	9550	20300	11400	11000	8970	8510	77500	47300	52700	99000	49300	39900
9	10400	21500	11700	10600	9040	9090	75800	46600	52000	101000	48800	38300
10	10500	20100	11300	10300	8970	9170	73000	47900	51800	102000	52900	36600
11	12400	19700	12200	10100	9020	10200	70800	50400	52200	107000	49600	34400
12	18200	20600	13400	9960	9170	9570	69400	54700	53100	109000	42900	32100
13	21300	21600	14000	9810	8810	9220	67700	58400	51400	107000	41100	28900
14	21900	22200	14100	9560	8550	9540	66000	62400	49300	102000	39800	27400
15	22900	22500	14100	10100	9190	9160	64800	67400	49400	97600	38500	26300
16	23300	22500	14900	9910	8540	9360	63500	71800	50300	94000	38900	25700
17	22300	21400	14700	9160	8580	10000	62400	72300	50100	90600	39400	27200
18	22200	20900	14200	9800	8380	10300	61600	70100	50200	87100	39400	27700
19	18900	19700	13900	9300	8470	9140	60800	65300	54700	84000	41700	27400
20	17500	18600	12900	9120	7890	9120	58900	60700	59200	81500	47300	26600
21	16600	18400	11500	9510	7730	9870	58300	55900	65900	78900	53700	25400
22	15600	18500	10800	9380	8130	10200	55900	52000	73200	76300	56500	25400
23	15500	18100	11300	9150	8460	10100	54200	48200	84100	73300	57100	27700
24	15000	18400	11500	9510	8240	9470	53000	44900	96500	70300	56800	27700
25	14700	18400	11300	9010	7680	10300	52800	44800	111000	68600	54100	27500
26	14300	18400	10900	9020	7420	10700	52800	44300	121000	67200	51500	26800
27	13400	18300	9910	8330	8210	12800	53200	47300	130000	65100	49000	27800
28	14700	18100	10600	8370	7870	15100	53700	49700	128000	62300	47100	27700
29	13600	16900	11500	8870	---	22100	52800	50100	123000	60200	46000	27200
30	12600	15900	12200	8600	---	29000	52200	50300	117000	57800	44900	26100
31	12300	---	12300	7780	---	35200	---	49500	---	55800	43400	---
TOTAL	456130	552300	395110	305450	240020	355260	1834100	1652100	2096700	2709900	1498700	959600
MEAN	14710	18410	12750	9853	8572	11460	61140	53290	69890	87420	48350	31990
MAX	23300	22500	15900	11900	9300	35200	77500	72300	130000	111000	57100	42700
MIN	8870	12100	9910	7780	7420	7660	41600	44300	49300	55800	38500	25400
AC-FT	904700	1095000	783700	605900	476100	704700	3638000	3277000	4159000	5375000	2973000	1903000
CFSM	.33	.41	.28	.22	.19	.26	1.36	1.19	1.56	1.95	1.08	.71
IN.	.38	.46	.33	.25	.20	.29	1.52	1.37	1.74	2.25	1.24	.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1993, BY WATER YEAR (WY)

MEAN	13050	12700	9527	7984	7890	16680	39850	31320	25620	19940	12910	12730
MAX	49740	40360	21460	16060	21390	55010	117600	90100	69890	87420	48350	45950
(WY)	1987	1972	1983	1983	1966	1983	1965	1986	1993	1993	1993	1986
MIN	3526	3874	3379	3153	3519	4369	7215	6304	4185	3197	2366	3002
(WY)	1933	1977	1934	1935	1934	1934	1931	1931	1934	1934	1934	1976

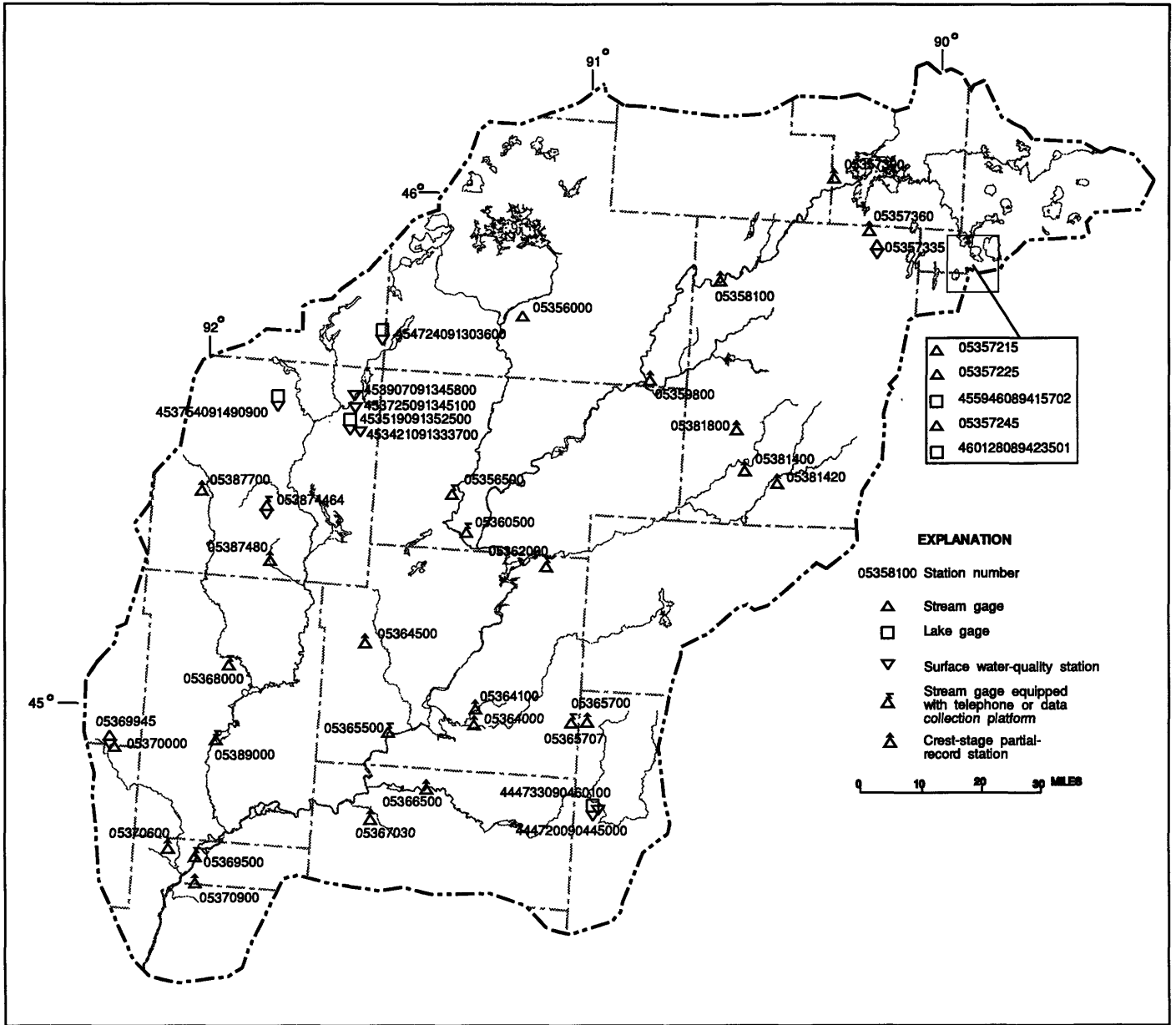
SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1928 - 1993

ANNUAL TOTAL	8062850		13055370				
ANNUAL MEAN	22030		35770		17560		
HIGHEST ANNUAL MEAN					38540		1986
LOWEST ANNUAL MEAN					4367		1934
HIGHEST DAILY MEAN	69400	Mar 14	130000	Jun 27	226000		Apr 18 1965
LOWEST DAILY MEAN	8870	Oct 5	7420	Feb 26	1380		Jul 13 1940
ANNUAL SEVEN-DAY MINIMUM	9350	Oct 2	7850	Feb 25	2190		Aug 11 1936
INSTANTANEOUS PEAK FLOW					228000		Apr 18 1965
INSTANTANEOUS PEAK STAGE			37.70	Jun 27	43.11		Apr 18 1965
ANNUAL RUNOFF (AC-FT)	15990000		25900000		12720000		
ANNUAL RUNOFF (CFSM)	.49		.80		.39		
ANNUAL RUNOFF (INCHES)	6.70		10.84		5.33		
10 PERCENT EXCEEDS	42100		73100		38700		
50 PERCENT EXCEEDS	16400		25700		11200		
90 PERCENT EXCEEDS	11500		9030		4960		



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

CHIPPEWA RIVER BASIN

CHIPPEWA RIVER BASIN

05356000 CHIPPEWA RIVER AT BISHOPS BRIDGE, NEAR WINTER, WI

LOCATION.--Lat 45°50'57", long 91°04'44", in SW 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. March, April, 1912, and December to April 1913, monthly discharge only published in WSP 1308.

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

GAGE.--Water-stage recorder. Datum of gage is 1,256.78 ft above sea level (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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	610	880	1510	916	872	933	289	257	1030	1600	298	491
2	610	891	1860	918	873	900	283	383	1020	1610	295	490
3	609	900	1870	915	870	874	277	305	1020	1600	296	487
4	608	826	1860	910	870	847	274	283	1010	1620	295	487
5	608	886	1860	910	869	845	274	272	1010	1620	296	487
6	609	884	1850	911	870	844	269	285	1020	1610	295	487
7	638	882	1840	909	867	845	267	327	1020	1600	295	487
8	620	878	1840	909	866	841	285	308	1300	1610	295	489
9	740	881	1840	908	869	842	309	306	1490	1600	299	496
10	826	898	1830	907	865	843	292	303	1720	1600	295	487
11	789	887	1530	903	865	840	288	307	1880	1590	295	488
12	776	883	941	906	863	840	283	720	1840	1570	303	487
13	771	880	942	904	862	838	286	641	1960	1550	301	494
14	769	874	1370	903	862	837	291	437	1800	1550	300	498
15	1280	873	1740	906	860	836	289	436	1690	1550	298	502
16	1760	832	1740	909	859	829	278	436	1690	1470	295	500
17	1760	887	1730	904	861	825	276	437	1720	498	295	499
18	1750	886	1300	907	860	826	276	438	1610	493	296	498
19	1750	886	947	905	856	826	274	440	527	572	295	498
20	1750	894	943	940	855	823	272	442	1370	645	351	505
21	1740	905	943	929	855	822	270	440	2110	416	395	513
22	1750	899	940	882	852	818	267	442	2050	274	395	620
23	1730	894	931	881	853	817	264	444	2720	284	395	705
24	1620	894	931	880	852	816	264	451	3740	319	392	705
25	786	851	932	880	848	819	264	463	4240	302	390	701
26	837	902	923	882	848	495	248	478	4220	295	391	705
27	837	901	923	879	849	284	242	780	4190	294	394	705
28	856	900	918	877	854	294	253	1010	3740	295	391	825
29	862	902	919	880	---	311	250	1020	2550	293	390	907
30	863	900	916	878	---	320	241	1030	1900	293	457	908
31	875	---	918	874	---	308	---	1040	---	303	492	---
TOTAL	32389	26536	41537	27922	24105	23038	8195	15361	59187	30926	10470	17151
MEAN	1045	885	1340	901	861	743	273	496	1973	998	338	572
MAX	1760	905	1870	940	873	933	309	1040	4240	1620	492	908
MIN	608	826	916	874	848	284	241	257	527	274	295	487

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1993, BY WATER YEAR (WY)

	MEAN	666	846	1000	921	764	435	507	745	809	659	623	691
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1912 - 1993

ANNUAL TOTAL	303292	316817	721	
ANNUAL MEAN	829	868	1124	1942
HIGHEST ANNUAL MEAN			258	1923
LOWEST ANNUAL MEAN				
HIGHEST DAILY MEAN	3560	Jul 9	4240	Jun 25
LOWEST DAILY MEAN	212	Jun 27	241	Apr 30
ANNUAL SEVEN-DAY MINIMUM	217	Jun 24	251	Apr 25
INSTANTANEOUS PEAK FLOW			4280	Jun 24
INSTANTANEOUS PEAK STAGE			8.53	Jun 24
INSTANTANEOUS LOW FLOW			233	Apr 26
10 PERCENT EXCEEDS	1480		1700	
50 PERCENT EXCEEDS	645		851	
90 PERCENT EXCEEDS	332		293	

(a) Also occurred May 1-5, 1925

CHIPPEWA RIVER BASIN

33

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 above sea level, 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, 6.02 ft, June 20; minimum observed, 5.40 ft, Dec. 3.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.52	5.51	5.50	---	---	---	5.61	5.92	5.97	5.86	5.73	5.64
2	5.49	5.58	5.45	---	---	---	5.52	5.99	5.96	5.91	5.70	5.63
3	5.49	5.60	5.40	---	---	---	5.50	5.99	5.94	5.90	5.70	5.63
4	5.49	5.60	---	---	---	---	5.51	5.98	5.92	5.91	5.69	5.60
5	5.49	5.60	---	---	---	5.46	5.51	5.98	5.89	5.90	5.70	5.59
6	---	5.59	---	---	---	---	5.49	5.96	5.89	5.89	5.69	5.57
7	5.59	5.58	---	---	---	---	5.50	5.97	5.88	5.92	5.69	5.55
8	5.67	5.58	---	---	---	---	5.55	5.96	5.91	5.93	5.68	5.54
9	5.73	5.58	---	---	---	---	5.61	5.94	5.96	5.94	5.70	5.57
10	5.72	5.58	---	---	---	---	5.62	5.97	5.95	5.93	---	5.55
11	5.70	5.57	---	---	---	---	5.69	5.97	5.94	5.89	5.71	5.54
12	5.69	5.58	---	---	---	---	5.70	5.93	5.92	5.87	5.70	5.54
13	5.68	5.57	---	---	---	---	5.71	5.92	5.92	5.88	5.70	5.62
14	5.67	5.56	---	---	---	---	5.77	5.92	5.90	5.87	5.72	5.62
15	5.64	5.55	---	---	---	---	5.78	5.88	5.89	5.86	5.72	5.62
16	5.64	5.54	---	---	---	---	5.77	5.86	5.88	5.84	5.70	5.63
17	5.63	5.53	---	---	---	---	5.77	5.84	5.95	5.83	5.69	5.61
18	5.62	5.51	---	---	---	---	5.81	5.85	5.94	5.82	5.69	5.61
19	5.61	5.51	---	---	---	---	5.83	5.85	5.97	5.79	5.69	5.62
20	5.60	5.54	---	---	---	---	5.86	5.83	6.02	5.78	5.67	5.64
21	5.59	5.55	---	---	---	---	5.86	5.83	6.01	5.77	5.67	5.64
22	5.58	5.56	---	---	---	---	5.86	5.85	5.99	5.74	5.66	5.67
23	5.59	5.56	---	---	---	---	5.85	5.88	5.77	5.72	5.66	5.64
24	5.58	5.57	---	---	---	---	5.91	5.90	5.99	5.71	5.65	5.64
25	5.57	5.57	---	---	---	---	5.89	5.89	5.93	5.78	5.64	5.65
26	5.57	5.57	---	---	---	---	5.87	5.89	5.93	5.77	5.64	5.66
27	5.56	5.56	---	---	---	---	5.86	5.90	5.90	5.76	5.67	5.66
28	5.54	5.56	---	---	---	---	5.90	5.88	5.88	5.77	5.65	5.68
29	5.53	5.55	---	---	---	---	5.92	5.88	5.87	5.74	5.64	5.68
30	5.52	5.52	---	---	---	---	5.92	5.94	5.86	5.74	5.68	5.66
31	5.52	---	---	---	---	---	---	5.97	---	5.73	5.67	---
MAX	---	5.60	---	---	---	---	5.92	5.99	6.02	5.94	---	5.68
MIN	---	5.51	---	---	---	---	5.49	5.83	5.77	5.71	---	5.54

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 376.

WATER-QUALITY DATA, MARCH 05 TO AUGUST 12, 1993
(Milligrams per liter unless otherwise indicated)

	Mar. 05		May 04		June 29		July 16		Aug. 12	
Depth of sample (ft)	1.5	42	1.5	45	1.5	47	1.5	42	1.5	48
Lake stage (ft)	5.46		5.98		5.87		5.84		5.70	
Specific conductance ($\mu\text{S}/\text{cm}$)	83	114	69	69	67	110	69	105	70	134
pH (units)	8.5	7.5	8.8	8.3	7.6	7.1	8.1	7.3	8.9	7.7
Water temperature ($^{\circ}\text{C}$)	1.5	5.0	9.5	7.5	19.0	10.5	22.0	12.0	25.0	11.0
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.6	3.8	---	---	---	---	---	---
Secchi-depth (meters)	---		1.5		2.1		2.4		1.5	
Dissolved oxygen	12.8	0.2	11.5	8.0	9.0	0.1	8.9	0.1	10.1	0.1
Hardness, as CaCO_3	---	---	32	32	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	8.4	8.4	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	2.7	2.7	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	1.5	1.6	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.8	0.8	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	30	31	---	---	---	---	---	---
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)	---	---	5.7	6.9	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	48	50	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	---	0.03	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	<0.01	0.03	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.08	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.59	0.32	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.60	0.43	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.025	0.047	0.016	0.196	0.020	0.130	0.021	0.120
Phosphorus, ortho, dissolved (as P)	---	---	0.003	0.009	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	80	190	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	150	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	17	---	9.5	---	8.1	---	22	---

3-5-93

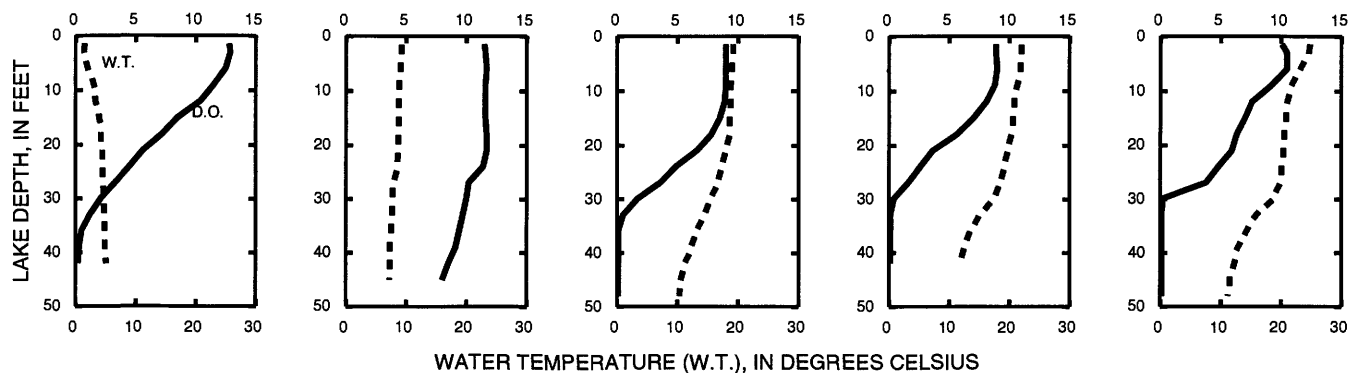
5-4-93

6-29-93

7-16-93

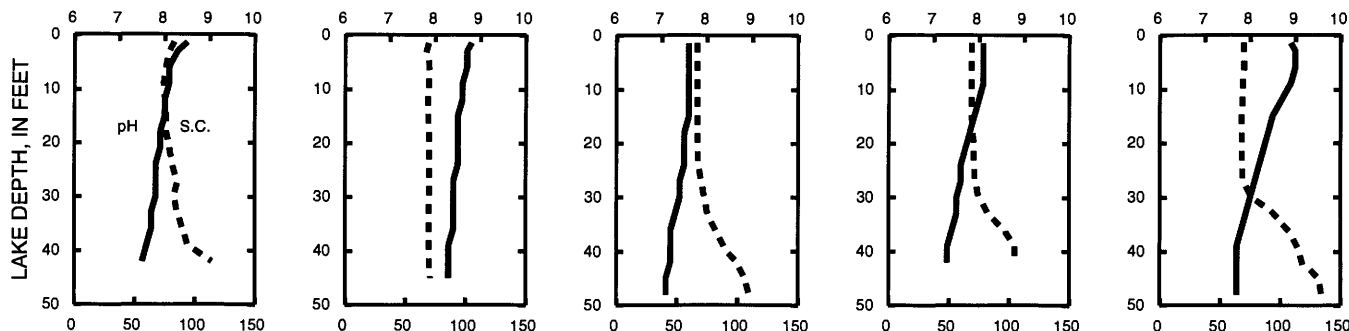
8-12-93

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

35

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 sea level. 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 period, Nov. 27 to Mar. 28. Records good except those for ice-affected period, which is 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	970	1320	1400	1600	1400	1100	3770	1480	3630	2590	821	784
2	955	1450	1800	1500	1400	1200	2840	4290	2830	2770	808	755
3	942	2140	2300	1400	1400	1300	2260	7110	2490	2960	722	729
4	931	2400	2200	1500	1400	1300	1960	5600	2100	2920	723	708
5	919	2120	2100	1500	1400	1300	1690	3920	1800	2970	701	691
6	917	1980	2100	1500	1400	1300	1680	2900	1710	2900	786	667
7	1280	1770	2100	1400	1400	1300	1600	2260	1700	2870	783	689
8	2530	1670	2100	1400	1400	1400	2150	2140	2570	3060	704	669
9	3160	1650	2100	1400	1400	1400	3560	1800	4100	3220	806	685
10	4650	1790	2100	1400	1400	1500	3990	1600	4540	2960	851	678
11	4730	2120	2000	1400	1400	1500	3350	1610	3910	2690	763	674
12	3780	2030	1800	1400	1400	1300	3220	1420	3280	2490	719	677
13	2640	1900	1500	1300	1400	1200	3080	1880	2960	2350	648	773
14	2240	1740	1300	1300	1400	1100	2830	1320	3100	2330	661	962
15	1960	1670	1500	1300	1300	1200	2960	1240	2730	2240	559	932
16	2430	1540	2100	1300	1200	1200	2860	1090	2510	2190	653	855
17	2600	1480	2100	1300	1100	1100	2430	1130	3510	1780	575	814
18	2510	1500	2100	1300	1000	1100	2040	1280	5690	1110	638	766
19	2410	1480	2000	1400	1000	1100	1850	1330	4480	1120	613	756
20	2380	1590	1500	1400	1100	1100	1690	1300	6180	1090	566	826
21	2360	2270	1600	1400	1200	1100	1510	1120	11900	1180	666	963
22	2340	2630	1600	1400	1200	1100	1310	1080	11900	865	635	980
23	2320	2360	1600	1400	1200	1200	1190	1090	8540	677	630	1070
24	2280	2110	1600	1400	1200	1200	1170	1410	7430	723	619	1110
25	1910	1940	1600	1400	1200	1300	1240	1640	7610	807	622	1110
26	1380	1740	1500	1300	1200	1500	1190	1470	6830	863	601	1020
27	1370	1600	1500	1300	1100	1600	1120	1350	6000	706	625	1060
28	1350	1600	1700	1300	1100	1800	1330	1790	5590	767	643	1110
29	1340	1500	1700	1300	---	2570	1600	1800	4430	700	627	1340
30	1320	1400	1700	1400	---	3570	1500	1890	3250	696	662	1360
31	1320	---	1600	1400	---	4410	---	3360	---	701	790	---
TOTAL	64224	54490	55900	43000	35700	46350	64970	64700	139300	57295	21220	26213
MEAN	2072	1816	1803	1387	1275	1495	2166	2087	4643	1848	685	874
MAX	4730	2630	2300	1600	1400	4410	3990	7110	11900	3220	851	1360
MIN	917	1320	1300	1300	1000	1100	1120	1080	1700	677	559	667

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1993, BY WATER YEAR (WY)

	MEAN	1254	1425	1400	1202	1036	1441	2666	1931	1772	1242	1040	1341
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1914 - 1993

ANNUAL TOTAL	631801	673362											
ANNUAL MEAN	1726	1845								1476			
HIGHEST ANNUAL MEAN										2290		1986	
LOWEST ANNUAL MEAN										666		1934	
HIGHEST DAILY MEAN	8540	Apr 22	11900	Jun 21, 22	24900	Sep 1	1941						
LOWEST DAILY MEAN	558	Jun 25	559	Aug 15	155	Jun 10	1932						
ANNUAL SEVEN-DAY MINIMUM	626	Jun 25	609	Aug 14	218	Aug 3	1925						
INSTANTANEOUS PEAK FLOW			12700	Jun 21	(a)25800	Sep 1	1941						
INSTANTANEOUS PEAK STAGE			12.34	Jun 21	(b)20.46	Sep 1	1941						
INSTANTANEOUS LOW FLOW			390	Aug 17	155	Jun 10	1932						
10 PERCENT EXCEEDS	2630		3120		2710								
50 PERCENT EXCEEDS	1600		1400		1100								
90 PERCENT EXCEEDS	854		723		500								

(a) From rating curve extended above 20,000 ft³/s

(b) From floodmarks

CHIPPEWA RIVER BASIN

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 sea level, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 21-26, Dec. 29 to Jan. 3, Jan. 26-29, Feb. 14-26, and Mar. 8-18. Records good except those for ice-affected periods, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	7.8	12	9.6	9.0	8.9	12	21	12	13	9.8	8.0
2	2.2	7.9	12	9.4	9.0	8.9	12	21	11	13	9.3	7.9
3	1.6	7.7	11	9.2	8.9	9.3	11	21	11	13	9.2	7.9
4	5.7	11	11	9.3	8.7	9.2	11	22	11	13	8.9	7.5
5	9.1	12	12	9.3	8.8	9.2	11	22	10	12	9.3	6.9
6	7.8	11	12	9.3	9.0	8.9	11	20	9.9	11	9.9	6.3
7	9.6	12	11	9.0	9.1	9.0	11	19	10	11	9.6	5.2
8	8.2	13	11	9.2	9.0	9.0	12	18	11	10	9.1	5.1
9	8.1	13	11	8.9	9.0	9.0	14	17	12	9.6	9.1	5.4
10	11	12	11	8.9	9.0	9.0	15	16	12	9.4	11	6.0
11	11	12	11	8.9	9.0	8.8	17	15	12	9.0	11	6.3
12	8.9	12	10	9.1	9.0	8.8	20	14	11	8.4	10	6.8
13	8.3	12	10	9.7	9.0	8.8	25	12	10	7.2	11	8.5
14	8.4	12	10	9.7	9.0	8.8	23	12	9.8	7.2	10	13
15	8.4	11	11	9.7	8.8	9.0	22	11	9.8	6.9	10	13
16	9.1	12	12	9.4	8.8	9.6	23	10	9.6	6.8	9.5	11
17	8.4	12	12	9.2	8.8	10	21	11	11	6.6	9.4	10
18	8.3	11	12	9.2	8.8	9.2	21	11	11	6.6	9.3	9.8
19	8.0	11	12	9.0	8.6	9.0	21	11	13	7.5	9.2	7.4
20	8.4	13	11	8.8	8.6	9.0	20	10	34	9.2	8.9	7.5
21	7.6	18	10	9.3	8.8	9.0	19	9.7	31	8.8	8.5	8.1
22	7.1	17	9.8	9.5	9.0	9.0	18	9.2	27	8.5	8.4	7.9
23	7.7	16	9.6	9.8	9.0	8.8	18	9.6	24	8.3	7.9	8.7
24	8.2	14	9.4	9.7	8.8	8.8	17	11	22	8.0	7.5	6.7
25	7.8	14	9.4	9.3	8.8	9.0	17	11	21	8.6	7.3	7.8
26	7.9	13	9.2	9.2	8.8	9.0	16	11	19	8.3	6.8	7.2
27	8.2	13	9.2	9.0	9.1	9.3	16	11	17	8.7	7.1	7.4
28	8.3	12	9.0	9.0	9.1	9.8	20	10	16	9.0	7.0	6.9
29	7.9	12	9.0	9.0	---	11	22	10	15	9.5	7.0	6.4
30	7.4	12	9.2	9.2	---	11	21	11	14	9.7	8.1	5.2
31	7.6	---	10	9.3	---	13	---	13	---	9.7	8.6	---
TOTAL	240.1	366.4	328.8	287.1	249.3	289.1	517	430.5	447.1	287.5	277.7	231.8
MEAN	7.75	12.2	10.6	9.26	8.90	9.33	17.2	13.9	14.9	9.27	8.96	7.73
MAX	11	18	12	9.8	9.1	13	25	22	34	13	11	13
MIN	1.6	7.7	9.0	8.8	8.6	8.8	11	9.2	9.6	6.6	6.8	5.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1993, BY WATER YEAR (WY)

	MEAN	15.2	16.2	12.1	9.62	8.85	10.1	17.8	14.4	11.9	12.0	7.64	10.1
MAX	22.7	20.2	13.5	9.98	8.90	10.9	18.3	14.9	14.9	15.0	8.96	12.6	
(WY)	1992	1992	1992	1992	1993	1992	1992	1992	1993	1991	1993	1992	
MIN	7.75	12.2	10.6	9.26	8.80	9.33	17.2	13.9	8.88	9.27	6.92	7.73	
(WY)	1993	1993	1993	1993	1992	1993	1993	1993	1992	1993	1992	1993	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1991 - 1993

ANNUAL TOTAL	4071.13	3952.4	
ANNUAL MEAN	11.1	10.8	12.1
HIGHEST ANNUAL MEAN			13.3
LOWEST ANNUAL MEAN			10.8
HIGHEST DAILY MEAN	44	Apr 23	56
LOWEST DAILY MEAN	.93	Aug 8	.93
ANNUAL SEVEN-DAY MINIMUM	1.1	Aug 2	1.1
INSTANTANEOUS PEAK FLOW			79
INSTANTANEOUS PEAK STAGE			2.36
INSTANTANEOUS LOW FLOW			.69
10 PERCENT EXCEEDS	16	17	19
50 PERCENT EXCEEDS	11	9.5	10
90 PERCENT EXCEEDS	7.6	7.6	6.7

CHIPPEWA RIVER BASIN

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05357225 STEVENSON CREEK, AT COUNTY HIGHWAY M, NEAR BOULDER JUNCTION, WI

LOCATION.--Lat 46°03'41", long 89°38'47", in NW 1/4 SE 1/4 sec.5, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07050002, at County Highway M, 3.6 mi south of Boulder Junction.

DRAINAGE AREA.--7.96 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,620 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharge: 1991 water year, May 29 to June 4; 1992 water year, Oct. 29 to Nov. 2, Nov. 16-22, Feb. 28 to May 31, June 8 to July 3, Sept. 18-30, and ice-affected periods, Nov. 3-15 and Nov. 23 to Feb. 27; 1993 water year, Oct. 3-4, 12-21, Oct. 24 to Nov. 28, and ice-affected period, Nov. 29 to Mar. 27. 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	---	---	---	---	---	---	---	3.3	9.4	25	7.3	1.1
2	---	---	---	---	---	---	---	3.1	7.4	5.5	4.1	.83
3	---	---	---	---	---	---	---	3.0	5.8	2.4	2.7	3.3
4	---	---	---	---	---	---	---	3.7	4.8	3.8	2.0	18
5	---	---	---	---	---	---	---	3.5	3.7	2.8	1.4	6.2
6	---	---	---	---	---	---	---	4.5	3.9	2.5	1.2	2.2
7	---	---	---	---	---	---	---	3.7	3.7	2.3	13	4.2
8	---	---	---	---	---	---	---	4.6	3.3	1.5	7.8	4.0
9	---	---	---	---	---	---	---	5.1	3.2	1.7	5.2	5.8
10	---	---	---	---	---	---	---	6.7	2.6	1.5	4.4	6.9
11	---	---	---	---	---	---	---	6.9	3.0	1.2	2.6	2.7
12	---	---	---	---	---	---	---	6.3	2.9	2.2	1.5	1.7
13	---	---	---	---	---	---	---	5.3	1.9	1.9	11	1.7
14	---	---	---	---	---	---	---	5.0	4.0	1.3	12	3.5
15	---	---	---	---	---	---	---	6.2	3.3	.91	9.3	3.1
16	---	---	---	---	---	---	---	9.1	2.2	.81	4.5	2.3
17	---	---	---	---	---	---	---	5.9	1.9	1.9	4.3	2.6
18	---	---	---	---	---	---	---	5.5	1.7	1.4	2.6	3.1
19	---	---	---	---	---	---	---	5.3	1.3	1.4	1.6	5.5
20	---	---	---	---	---	---	---	5.2	2.0	2.5	2.7	3.8
21	---	---	---	---	---	---	---	5.3	4.9	2.0	2.6	5.7
22	---	---	---	---	---	---	---	5.2	2.2	1.6	18	6.3
23	---	---	---	---	---	---	---	5.1	1.7	1.1	4.9	5.4
24	---	---	---	---	---	---	---	5.2	1.2	.85	1.7	3.7
25	---	---	---	---	---	---	---	9.9	1.0	1.3	1.2	6.2
26	---	---	---	---	---	---	---	9.8	.89	2.1	.91	5.2
27	---	---	---	---	---	---	---	4.2	15	2.5	.98	3.0
28	---	---	---	---	---	---	---	5.7	35	4.4	1.1	2.8
29	---	---	---	---	---	---	---	7.4	36	3.5	1.3	3.0
30	---	---	---	---	---	---	---	9.0	32	3.5	1.2	3.5
31	---	---	---	---	---	---	---	9.6	---	2.6	1.2	---
TOTAL	---	---	---	---	---	---	---	178.3	201.89	89.97	136.29	127.33
MEAN	---	---	---	---	---	---	---	5.75	6.73	2.90	4.40	4.24
MAX	---	---	---	---	---	---	---	9.9	36	25	18	18
MIN	---	---	---	---	---	---	---	3.0	.89	.81	.91	.83

SUMMARY STATISTICS

FOR 1991 WATER YEAR

HIGHEST DAILY MEAN
LOWEST DAILY MEAN
ANNUAL SEVEN-DAY MINIMUM
INSTANTANEOUS PEAK FLOW
10 PERCENT EXCEEDS
50 PERCENT EXCEEDS
90 PERCENT EXCEEDS

36 Jun 29
.81 Jul 16
1.1 Aug 27
39 Jun 29
9.2
3.3
1.2

CHIPPEWA RIVER BASIN

05357225 STEVENSON CREEK, AT COUNTY HIGHWAY 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	4.2	13	3.5	2.6	2.8	3.5	3.7	1.4	1.9	1.7	7.2	1.5
2	4.9	6.0	4.1	2.5	2.9	3.4	3.7	1.4	2.0	2.1	6.5	1.6
3	3.3	5.6	4.1	2.5	2.9	3.4	3.8	1.4	1.8	2.9	6.0	1.5
4	2.7	5.4	3.9	2.5	2.8	6.1	4.3	1.2	1.6	4.3	4.6	1.4
5	4.9	5.2	3.8	2.6	2.7	8.0	5.5	1.1	1.8	3.7	3.0	1.5
6	4.3	5.0	3.7	3.0	2.7	6.6	5.8	.97	1.7	3.1	2.3	1.7
7	3.4	4.9	3.6	3.3	2.6	6.5	5.1	1.1	1.8	2.7	2.2	1.7
8	3.4	4.8	3.5	3.3	2.6	6.2	5.3	1.2	1.7	4.2	2.2	1.8
9	3.5	4.8	3.4	3.2	2.5	5.5	3.4	1.2	1.6	5.3	2.0	1.4
10	3.0	4.7	3.4	3.1	2.5	4.7	2.6	1.3	1.5	4.0	1.9	1.3
11	3.9	4.6	3.7	3.2	2.5	4.3	4.5	1.3	1.5	3.2	1.8	1.2
12	3.9	4.5	3.8	3.3	2.5	4.2	4.1	1.2	1.4	3.4	1.7	1.1
13	3.0	4.5	3.7	3.1	2.4	4.1	4.1	1.0	1.3	2.8	1.6	1.2
14	4.7	4.4	3.6	2.9	2.4	3.8	4.5	1.5	1.3	2.5	1.5	2.4
15	2.6	4.5	3.5	2.8	2.4	3.7	4.3	3.1	1.2	2.2	1.6	5.0
16	3.7	4.4	3.4	2.7	2.4	3.6	3.3	4.1	1.2	2.0	1.5	3.0
17	3.7	6.7	3.3	2.6	2.4	3.4	2.7	3.3	1.3	1.9	1.7	2.4
18	2.7	7.1	3.2	2.5	2.4	3.4	2.7	2.3	1.3	1.8	1.9	2.4
19	2.3	4.7	3.1	2.5	2.5	3.4	3.1	2.0	1.3	1.8	1.9	1.9
20	3.0	4.4	3.1	2.6	2.6	3.4	3.3	1.7	1.2	1.7	3.5	1.8
21	3.8	4.8	3.1	2.7	2.8	3.4	2.8	1.8	1.2	1.7	4.4	1.6
22	3.4	3.9	3.1	2.9	3.0	3.4	2.3	2.1	1.2	1.8	4.2	1.4
23	3.5	3.8	3.1	3.0	3.2	3.8	2.0	1.7	1.2	1.6	3.9	1.1
24	6.1	3.7	3.1	2.9	3.3	4.2	1.7	1.2	1.3	1.6	3.8	5.8
25	4.7	3.7	3.0	2.8	3.5	4.0	1.4	1.1	1.4	1.5	4.0	3.6
26	4.1	4.3	3.0	2.6	3.6	3.6	1.3	1.1	1.4	1.4	3.6	4.1
27	3.9	4.2	3.0	2.5	3.8	3.7	1.3	1.2	1.4	1.3	2.9	3.3
28	3.7	4.0	2.9	2.4	3.9	4.2	1.3	1.4	1.4	3.3	2.4	2.2
29	4.4	3.8	2.8	2.4	3.5	4.6	1.3	1.7	1.5	6.7	2.3	2.1
30	3.7	3.6	2.8	2.5	---	4.5	1.3	1.9	1.6	7.1	2.5	2.1
31	8.8	---	2.7	2.6	---	4.0	---	2.0	---	6.8	1.8	---
TOTAL	121.2	149.0	104.0	86.1	82.1	134.6	96.5	50.97	44.0	92.1	92.4	205.5
MEAN	3.91	4.97	3.35	2.78	2.83	4.34	3.22	1.64	1.47	2.97	2.98	6.85
MAX	8.8	13	4.1	3.3	3.9	8.0	5.8	4.1	2.0	7.1	7.2	30
MIN	2.3	3.6	2.7	2.4	2.4	3.4	1.3	.97	1.2	1.3	1.5	1.1

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	3.91	4.97	3.35	2.78	2.83	4.34	3.22	3.70	4.10	2.94	3.69	5.55
MAX	3.91	4.97	3.35	2.78	2.83	4.34	3.22	5.75	6.73	2.97	4.40	6.85
(WY)	1992	1992	1992	1992	1992	1992	1992	1991	1991	1992	1991	1992
MIN	3.91	4.97	3.35	2.78	2.83	4.34	3.22	1.64	1.47	2.90	2.98	4.24
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1991	1992	1991

SUMMARY STATISTICS

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	1258.47	
ANNUAL MEAN	3.44	3.44
HIGHEST ANNUAL MEAN		3.44
LOWEST ANNUAL MEAN		3.44
HIGHEST DAILY MEAN	30	Sep 16 1991
LOWEST DAILY MEAN	.97	May 6 1991
ANNUAL SEVEN-DAY MINIMUM	1.2	May 4 1991
INSTANTANEOUS PEAK FLOW	(a)33	Sep 16 1991
INSTANTANEOUS PEAK STAGE	(b)9.55	Jan 4 1991
INSTANTANEOUS LOW FLOW	.33	Oct 19 1991
10 PERCENT EXCEEDS	5.0	6.1
50 PERCENT EXCEEDS	3.0	3.1
90 PERCENT EXCEEDS	1.4	1.3

(a) Gage height, 9.44 ft

(b) Ice jam

CHIPPEWA RIVER BASIN

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05357225 STEVENSON CREEK, AT COUNTY HIGHWAY M, NEAR BOULDER JUNCTION, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	3.2	3.1	2.7	3.0	2.7	3.9	4.0	4.6	3.7	2.1	5.7
2	2.2	4.8	3.0	2.7	2.8	2.6	3.7	4.8	4.6	3.9	2.1	5.3
3	2.2	4.5	2.9	2.8	2.8	2.6	3.6	5.1	4.6	3.8	2.3	5.2
4	2.3	4.4	2.7	2.8	2.7	2.6	3.5	6.0	4.2	3.8	2.3	4.8
5	2.2	4.2	2.6	2.8	2.7	2.6	3.6	5.5	3.8	3.8	2.4	4.5
6	2.4	4.5	2.5	2.8	2.7	2.6	3.8	5.0	4.0	3.5	2.7	4.4
7	5.1	4.2	2.5	2.7	2.7	2.6	3.7	4.6	4.2	3.3	2.7	4.4
8	3.8	3.7	2.5	2.7	2.7	2.6	4.4	4.4	5.1	3.4	2.7	4.4
9	4.9	4.1	2.6	2.6	2.7	2.6	4.9	4.8	6.1	3.7	3.0	5.0
10	4.6	4.7	2.6	2.5	2.6	2.6	4.3	4.3	6.3	3.6	4.5	4.7
11	3.9	4.4	2.7	2.4	2.6	2.6	4.8	3.9	5.3	3.5	3.5	4.5
12	3.6	3.9	2.6	2.3	2.6	2.7	4.5	3.7	4.6	3.3	3.2	4.5
13	3.2	3.6	2.6	2.2	2.6	2.7	4.5	3.5	4.2	2.8	3.3	5.6
14	3.4	3.4	2.6	2.2	2.6	2.7	4.1	3.6	4.1	2.6	3.3	6.5
15	3.4	3.4	2.9	2.2	2.6	2.7	4.2	3.5	3.9	2.4	3.5	5.5
16	3.8	3.4	3.0	2.2	2.6	2.7	4.7	3.4	3.8	2.4	3.6	4.7
17	3.4	3.4	2.8	2.3	2.6	2.7	4.5	3.4	4.9	2.4	3.5	4.4
18	3.0	3.4	2.8	2.4	2.6	2.7	4.7	3.4	4.8	2.1	3.4	4.1
19	3.3	4.0	2.7	2.5	2.7	2.7	4.8	3.3	4.9	1.9	3.3	3.9
20	3.6	4.5	2.6	2.5	2.7	2.7	4.4	3.4	10	1.7	6.6	4.2
21	3.3	4.9	2.6	2.5	2.7	2.8	4.3	3.4	7.7	1.7	8.8	4.3
22	3.5	4.6	2.6	2.5	2.6	2.8	4.5	3.4	6.1	1.5	8.6	4.0
23	3.5	4.2	2.6	2.6	2.6	2.8	4.9	3.8	5.3	1.6	8.0	3.8
24	3.3	3.8	2.7	2.7	2.6	2.8	4.5	4.5	5.0	1.6	7.4	3.7
25	3.2	3.6	2.7	2.8	2.7	3.0	4.4	4.1	4.7	2.2	6.8	3.5
26	3.2	3.4	2.7	2.9	2.8	3.3	4.1	4.1	4.2	2.0	6.3	3.7
27	3.2	3.5	2.8	2.9	2.8	3.9	4.0	4.0	4.0	2.0	7.1	3.6
28	3.2	3.5	2.8	3.0	2.8	4.6	5.0	3.9	3.9	2.3	6.2	3.3
29	3.2	3.1	2.8	3.1	---	4.7	4.5	3.8	3.7	2.3	5.7	2.4
30	3.0	3.1	2.8	3.1	---	4.7	4.2	4.8	3.6	2.0	6.5	2.5
31	3.0	---	2.7	3.1	---	4.8	---	5.0	---	2.0	6.5	---
TOTAL	102.0	117.4	84.1	81.5	75.2	93.2	129.0	128.4	146.2	82.8	141.9	131.1
MEAN	3.29	3.91	2.71	2.63	2.69	3.01	4.30	4.14	4.87	2.67	4.58	4.37
MAX	5.1	4.9	3.1	3.1	3.0	4.8	5.0	6.0	10	3.9	8.8	6.5
MIN	2.1	3.1	2.5	2.2	2.6	2.6	3.5	3.3	3.6	1.5	2.1	2.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1993, BY WATER YEAR (WY)

MEAN	3.60	4.44	3.03	2.70	2.76	3.67	3.76	3.85	4.36	2.85	3.98	5.15
MAX	3.91	4.97	3.35	2.78	2.83	4.34	4.30	5.75	6.73	2.97	4.58	6.85
(WY)	1992	1992	1992	1992	1992	1992	1993	1991	1991	1992	1993	1992
MIN	3.29	3.91	2.71	2.63	2.69	3.01	3.22	1.64	1.47	2.67	2.98	4.24
(WY)	1993	1993	1993	1993	1993	1993	1992	1992	1992	1993	1992	1991

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1991 - 1993

ANNUAL TOTAL	1187.77	1312.8	
ANNUAL MEAN	3.25	3.60	3.52
HIGHEST ANNUAL MEAN			3.60
LOWEST ANNUAL MEAN			3.44
HIGHEST DAILY MEAN	30	Sep 16	36
LOWEST DAILY MEAN	.97	May 6	.81
ANNUAL SEVEN-DAY MINIMUM	1.2	May 4	1.1
INSTANTANEOUS PEAK FLOW		12	39
INSTANTANEOUS PEAK STAGE		8.58	9.62
INSTANTANEOUS LOW FLOW		1.4	.33
10 PERCENT EXCEEDS	4.6	4.9	5.5
50 PERCENT EXCEEDS	2.8	3.4	3.3
90 PERCENT EXCEEDS	1.4	2.4	1.6

CHIPPEWA RIVER BASIN

455946089415702 LITTLE ROCK LAKE NEAR WOODRUFF, WI

LOCATION.--Lat 45°59'46", long 89°41'57", in NW 1/4 NW 1/4 sec.36, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07070001, 7 mi north of Woodruff, 800 ft west of U.S. Highway 51, and 200 ft southeast of boat landing.

DRAINAGE AREA.--0.22 mi². Area of lake, 0.07 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,600.00 ft above sea level.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 28.10 ft, Apr. 7-9, 1986; minimum observed gage height, 25.06 ft, Aug. 8, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 27.22 ft, June 21-22; minimum observed gage height, 26.53 ft, Oct. 5-6.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.56	26.60	26.75	26.81	26.82	26.71	26.71	26.96	26.97	27.10	26.94	26.78
2	26.56	26.63	26.75	26.80	26.81	26.70	26.70	26.98	26.96	27.11	26.92	26.77
3	26.56	26.66	26.75	26.80	26.81	26.70	26.70	27.00	26.95	27.11	26.91	26.79
4	26.54	26.66	26.75	26.80	26.80	26.70	26.70	27.05	26.94	27.11	26.90	26.77
5	26.53	26.66	26.76	26.80	26.80	26.69	26.70	27.07	26.94	27.11	26.90	26.75
6	26.53	26.66	26.76	26.80	26.79	26.69	26.70	27.07	26.93	27.10	26.91	26.74
7	26.58	26.65	26.76	26.79	26.79	26.69	26.69	27.07	26.95	27.08	26.91	26.73
8	26.59	26.65	26.75	26.78	26.79	26.69	26.70	27.06	26.98	27.08	26.90	26.75
9	26.68	26.65	26.75	26.78	26.79	26.69	26.74	27.06	27.03	27.07	26.90	26.77
10	26.72	26.66	26.75	26.77	26.79	26.69	26.75	27.05	27.04	27.07	26.92	26.78
11	26.73	26.67	26.75	26.77	26.78	26.69	26.79	27.05	27.04	27.06	26.92	26.77
12	26.71	26.67	26.75	26.77	26.78	26.69	26.82	27.03	27.04	27.05	26.92	26.77
13	26.69	26.66	26.75	26.79	26.77	26.68	26.82	27.01	27.02	27.04	26.91	26.83
14	26.69	26.66	26.75	26.80	26.77	26.68	26.82	27.00	27.02	27.04	26.90	26.90
15	26.68	26.65	26.76	26.80	26.76	26.67	26.84	26.98	27.02	27.03	26.89	26.90
16	26.68	26.65	26.79	26.80	26.75	26.69	26.89	26.96	27.00	27.02	26.88	26.88
17	26.67	26.65	26.79	26.80	26.74	26.68	26.90	26.94	27.04	27.01	26.87	26.88
18	26.66	26.65	26.79	26.79	26.73	26.68	26.90	26.95	27.06	27.01	26.86	26.86
19	26.65	26.65	26.79	26.79	26.73	26.68	26.91	26.95	27.07	27.00	26.85	26.85
20	26.65	26.70	26.79	26.78	26.73	26.68	26.91	26.93	27.19	26.97	26.83	26.85
21	26.65	26.78	26.78	26.79	26.73	26.68	26.91	26.92	27.22	26.96	26.81	26.85
22	26.65	26.78	26.78	26.80	26.73	26.68	26.90	26.91	27.22	26.94	26.80	26.85
23	26.66	26.78	26.78	26.81	26.73	26.67	26.90	26.92	27.21	26.93	26.79	26.85
24	26.66	26.78	26.77	26.82	26.72	26.67	26.91	26.95	27.20	26.91	26.78	26.84
25	26.65	26.78	26.78	26.82	26.71	26.67	26.92	26.95	27.20	26.95	26.77	26.83
26	26.64	26.77	26.78	26.82	26.71	26.67	26.92	26.94	27.17	26.97	26.76	26.82
27	26.63	26.77	26.78	26.83	26.71	26.67	26.92	26.93	27.16	26.97	26.79	26.82
28	26.63	26.77	26.78	26.83	26.71	26.68	26.96	26.93	27.14	26.97	26.79	26.82
29	26.62	26.76	26.78	26.82	---	26.68	26.96	26.93	27.13	26.97	26.77	26.82
30	26.61	26.76	26.79	26.82	---	26.69	26.96	26.94	27.11	26.96	26.78	26.80
31	26.60	---	26.81	26.82	---	26.71	---	26.97	---	26.95	26.79	---
MEAN	26.63	26.69	26.77	26.80	26.76	26.69	26.83	26.98	27.06	27.02	26.86	26.81
MAX	26.73	26.78	26.81	26.83	26.82	26.71	26.96	27.07	27.22	27.11	26.94	26.90
MIN	26.53	26.60	26.75	26.77	26.71	26.67	26.69	26.91	26.93	26.91	26.76	26.73

CHIPPEWA RIVER BASIN

41

Q5357245 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 sea level, from topographic map.

REMARKS.--Estimated daily discharges: Feb. 15-20, 23-27, Mar. 12-17, Apr. 6-13, and July 7-11. Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	32	43	42	42	35	36	52	49	56	37	32
2	34	34	43	44	42	34	36	52	48	56	35	31
3	34	34	43	42	42	33	35	55	47	56	34	31
4	33	35	43	42	41	33	35	58	46	56	33	30
5	32	35	43	43	41	33	35	61	45	56	34	29
6	31	35	42	43	41	33	36	62	45	53	35	28
7	35	35	41	42	40	33	36	61	46	53	34	27
8	36	35	41	42	40	34	37	60	49	52	33	28
9	38	35	41	42	40	34	38	61	53	52	33	29
10	40	36	41	43	40	34	39	61	54	52	36	30
11	39	36	41	42	39	35	40	60	53	51	36	29
12	38	36	40	41	39	35	42	59	53	51	36	30
13	37	36	40	42	39	35	43	57	53	49	35	35
14	36	36	40	43	38	35	45	57	52	49	35	40
15	35	36	41	43	38	35	45	55	50	48	35	40
16	36	37	43	42	38	35	46	53	50	47	35	39
17	35	39	43	42	38	35	49	52	52	45	35	38
18	34	38	42	42	38	35	50	52	53	45	34	37
19	33	39	43	42	38	35	50	51	53	43	34	37
20	33	41	42	41	38	35	50	50	65	42	33	38
21	33	45	42	42	37	35	49	49	68	40	32	38
22	33	46	42	42	36	35	49	48	68	39	31	37
23	33	46	41	43	36	35	48	48	67	37	31	37
24	34	46	41	43	36	34	48	51	66	37	31	36
25	33	46	42	43	36	34	48	51	65	39	31	35
26	33	45	43	44	36	34	49	50	63	39	30	35
27	33	44	41	43	35	34	48	49	62	39	31	35
28	33	44	40	43	35	34	48	49	61	40	31	34
29	33	44	41	42	---	34	51	47	59	40	31	34
30	32	44	41	43	---	34	52	49	57	39	32	33
31	32	---	43	42	---	35	---	51	---	38	33	---
TOTAL	1066	1170	1293	1315	1079	1064	1313	1671	1652	1439	1036	1012
MEAN	34.4	39.0	41.7	42.4	38.5	34.3	43.8	53.9	55.1	46.4	33.4	33.7
MAX	40	46	43	44	42	35	52	62	68	56	37	40
MIN	31	32	40	41	35	33	35	47	45	37	30	27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1993, BY WATER YEAR (WY)

	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
MEAN	32.8	43.3	49.9	44.0	39.5	39.6	48.6	56.8	49.6	48.6	31.8	32.4
MAX	34.4	47.7	58.1	45.5	40.4	44.9	53.4	60.0	57.1	54.2	35.8	33.7
(WY)	1993	1992	1992	1992	1992	1992	1992	1991	1991	1991	1991	1993
MIN	31.2	39.0	41.7	42.4	38.5	34.3	43.8	53.9	36.5	45.3	26.4	31.0
(WY)	1992	1993	1993	1993	1993	1993	1993	1993	1992	1992	1992	1991

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1991 - 1993

ANNUAL TOTAL	15146	15110	
ANNUAL MEAN	41.4	41.4	
HIGHEST ANNUAL MEAN			42.3
LOWEST ANNUAL MEAN			43.2
HIGHEST DAILY MEAN	64	Apr 25	68
LOWEST DAILY MEAN	22	Aug 20	27
ANNUAL SEVEN-DAY MINIMUM	22	Aug 18	29
INSTANTANEOUS PEAK FLOW			69
INSTANTANEOUS PEAK STAGE			1.82
INSTANTANEOUS LOW FLOW			13
10 PERCENT EXCEEDS	54		60
50 PERCENT EXCEEDS	41		42
90 PERCENT EXCEEDS	29		31

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 sea level.

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, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 6.11 ft, June 23; minimum observed gage height, 5.52 ft, Feb. 24.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

[illegible]

CHIPPEWA RIVER BASIN

43

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.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 1,580 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 30 to Jan. 8. Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	44	63	62	65	45	79	103	116	112	67	48
2	78	48	64	60	63	48	76	122	108	114	62	45
3	83	57	61	60	60	51	78	145	99	109	62	44
4	65	60	61	62	61	51	82	203	93	109	60	42
5	51	61	58	62	62	49	87	214	85	106	61	39
6	39	61	57	60	60	48	89	206	85	102	67	37
7	40	65	57	58	58	47	84	199	87	95	65	36
8	37	62	57	58	57	47	88	221	96	91	63	35
9	45	61	56	56	55	47	90	225	144	90	64	36
10	50	71	55	56	55	48	91	210	167	89	65	36
11	46	80	54	54	53	48	95	185	134	87	62	35
12	41	77	52	54	53	47	91	158	111	85	58	35
13	37	70	51	56	53	47	94	142	94	84	57	38
14	48	68	51	57	53	47	105	126	84	85	56	51
15	115	61	53	58	52	47	103	111	76	83	55	54
16	114	59	58	58	52	49	104	100	71	80	53	56
17	96	60	58	57	51	49	106	92	80	78	52	57
18	79	59	56	56	50	50	115	90	86	77	51	55
19	66	58	56	55	49	52	125	87	86	74	51	53
20	60	65	53	55	50	53	123	83	173	72	50	57
21	57	91	52	55	51	55	121	80	239	69	50	64
22	54	99	53	57	51	56	117	78	244	67	49	66
23	55	99	53	59	51	56	113	80	224	65	49	61
24	58	94	51	63	50	58	114	96	199	63	48	57
25	58	89	52	65	48	62	114	96	184	65	45	54
26	55	84	52	66	47	65	110	90	168	64	44	52
27	53	79	52	68	46	69	102	89	155	63	47	54
28	50	74	54	69	45	75	118	89	143	76	49	52
29	48	69	57	69	---	81	117	87	129	80	46	51
30	46	65	58	66	---	81	114	93	119	76	49	49
31	44	---	60	66	---	83	---	116	---	71	53	---
TOTAL	1790	2090	1725	1857	1501	1711	3045	4016	3879	2581	1710	1449
MEAN	57.7	69.7	55.6	59.9	53.6	55.2	101	130	129	83.3	55.2	48.3
MAX	115	99	64	69	65	83	125	225	244	114	67	66
MIN	22	44	51	54	45	45	76	78	71	63	44	35
CFSM	.71	.86	.68	.74	.66	.68	1.25	1.59	1.59	1.02	.68	.59
IN.	.82	.96	.79	.85	.69	.78	1.39	1.84	1.77	1.18	.78	.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1993, BY WATER YEAR (WY)

	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
MEAN	61.3	110	86.4	82.4	82.4	121	151	146	110	91.3	60.3	58.1
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	57.7	69.7	55.6	59.9	53.6	55.2	101	130	54.4	73.8	28.9	24.5
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1991 - 1993

ANNUAL TOTAL	33665	27354	89.7
ANNUAL MEAN	92.0	74.9	104
HIGHEST ANNUAL MEAN			74.9
LOWEST ANNUAL MEAN			327
HIGHEST DAILY MEAN	327	Apr 22	Apr 22 1992
LOWEST DAILY MEAN	15	Aug 29	Aug 29 1992
ANNUAL SEVEN-DAY MINIMUM	17	Aug 24	Aug 24 1992
INSTANTANEOUS PEAK FLOW		244	Jun 21
INSTANTANEOUS PEAK STAGE		2.66	Jun 21
INSTANTANEOUS LOW FLOW		15	Oct 1
ANNUAL RUNOFF (CFSM)	1.13	.92	1.10
ANNUAL RUNOFF (INCHES)	15.40	12.52	14.99
10 PERCENT EXCEEDS	179	115	170
50 PERCENT EXCEEDS	75	61	86
90 PERCENT EXCEEDS	29	47	45

(a) Gage height, 2.66 ft

(b) Also occurred Oct. 1, 1992

CHIPPEWA RIVER BASIN

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 period Dec. 30 to Jan. 8, which is poor.

COOPERATION.--Observer furnished by Lac du Flambeau Band of Lake Superior Chippewa.

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 19 mg/L, June 22, 1993; minimum observed, 0 mg/L, Nov. 25, 1991.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 11 tons, June 23, 1993; 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, 19 mg/L, June 22; minimum observed, 0.8 mg/L, Nov. 9.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 11 tons, June 23; minimum daily, 0.12 ton, Oct. 1 and Sept. 12-13.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.04 mg/L, Nov. 18; minimum observed, <0.01 mg/L, on several days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 39 lb, June 22; minimum daily, 1.1 lb, Oct. 1, 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	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 (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT 1992								
16...	1405	112	82	6.5	<0.010	--	<0.050	--
NOV								
09...	1350	60	93	1.0	<0.010	0.010	<0.050	<0.050
18...	1430	59	--	--	--	--	--	--
18...	1444	59	94	0.0	<0.010	0.030	0.068	<0.050
DEC								
11...	1135	68	102	0.0	0.020	0.020	0.062	<0.050
21...	1400	53	75	0.0	0.010	0.020	<0.050	<0.050
21...	1434	53	--	--	--	--	--	--
JAN 1993								
11...	1430	54	86	0.0	--	0.010	--	<0.050
11...	1435	54	--	--	--	--	--	--
FEB								
03...	1046	59	108	0.0	--	<0.010	--	0.067
MAR								
01...	1335	44	91	0.5	--	<0.010	--	0.059
04...	0930	51	116	0.0	--	<0.010	--	0.054
23...	1220	55	111	0.0	--	<0.010	--	<0.050
24...	1130	57	58	0.0	--	<0.010	--	<0.050
APR								
03...	1130	77	--	--	--	--	--	--
08...	1353	89	87	6.0	--	<0.010	--	<0.050
09...	0900	89	86	2.0	--	<0.010	--	<0.050
09...	1203	88	--	--	--	--	--	--
15...	1205	101	--	3.5	--	<0.010	--	<0.050
22...	1055	116	78	8.0	--	<0.010	--	<0.050
26...	1000	111	69	5.5	--	<0.010	--	<0.050
MAY								
02...	1307	125	--	--	--	--	--	--
03...	1307	139	64	8.0	--	<0.010	--	<0.050
04...	1520	217	67	8.5	--	<0.010	--	<0.050
05...	1240	211	62	10.5	--	<0.010	--	<0.050
06...	1123	207	--	14.0	--	<0.010	--	<0.050
24...	0930	95	--	13.5	--	<0.010	--	<0.050
JUN								
07...	1255	85	91	14.5	--	<0.010	--	<0.050
21...	1200	239	--	16.5	--	--	--	--
22...	1605	241	--	--	--	--	--	--
22...	1610	241	65	22.5	--	<0.010	--	<0.050
JUL								
20...	1549	72	99	23.5	--	<0.010	--	<0.050
AUG								
02...	1302	62	--	--	--	--	--	--
02...	1402	61	93	21.0	--	<0.010	--	<0.050
18...	1250	51	97	22.0	--	<0.010	--	<0.050
25...	1000	45	101	21.5	--	<0.010	--	<0.050
SEP								
02...	1200	45	76	17.0	--	<0.010	--	<0.050
07...	1240	34	--	15.0	--	<0.010	--	<0.050
13...	1327	39	--	15.5	--	<0.010	--	<0.050

CHIPPEWA RIVER BASIN

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05357335 BEAR RIVER NEAR MANITOWISH WATERS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	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 TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT 1992								
16...	0.030	--	0.40	<0.010	--	<0.010	--	2
NOV								
09...	0.010	0.020	0.30	0.020	<0.010	<0.010	<0.010	1
18...	--	--	--	--	--	--	--	1
18...	0.030	0.030	0.40	0.040	<0.010	<0.010	<0.010	--
DEC								
11...	0.030	0.040	0.20	<0.010	0.020	<0.010	<0.010	2
21...	0.040	0.040	0.30	<0.010	0.010	<0.010	<0.010	--
21...	--	--	--	--	--	--	--	2
JAN 1993								
11...	--	0.050	0.30	<0.010	0.010	--	<0.010	--
11...	--	--	--	--	--	--	--	2
FEB								
03...	--	0.060	0.40	0.020	<0.010	--	<0.010	--
MAR								
01...	--	0.050	<0.20	<0.010	<0.010	--	<0.010	2
04...	--	0.060	0.30	<0.010	<0.010	--	<0.010	2
23...	--	0.060	0.30	<0.010	<0.010	--	<0.010	8
24...	--	0.070	0.20	<0.010	<0.010	--	<0.010	3
APR								
03...	--	--	--	--	--	--	--	2
08...	--	0.050	0.30	<0.010	<0.010	--	<0.010	5
09...	--	0.040	0.40	0.010	0.010	--	<0.010	--
09...	--	--	--	--	--	--	--	5
15...	--	0.030	0.40	<0.010	<0.010	--	<0.010	3
22...	--	0.030	0.50	0.030	0.010	--	<0.010	4
26...	--	0.040	0.40	0.020	0.020	--	<0.010	4
MAY								
02...	--	--	--	--	--	--	--	3
03...	--	0.040	0.40	<0.010	<0.010	--	<0.010	--
04...	--	<0.010	0.30	0.010	0.020	--	<0.010	4
05...	--	0.050	0.30	<0.010	<0.010	--	<0.010	5
06...	--	0.080	0.80	0.020	<0.010	--	<0.010	3
24...	--	0.030	0.40	0.020	<0.010	--	<0.010	4
JUN								
07...	--	0.030	0.30	0.010	<0.010	--	<0.010	5
21...	--	--	--	--	--	--	--	4
22...	--	--	--	--	--	--	--	19
22...	--	0.040	0.80	0.030	0.030	--	<0.010	--
JUL								
20...	--	0.050	0.50	<0.010	0.010	--	<0.010	3
AUG								
02...	--	--	--	--	--	--	--	4
02...	--	0.020	3.3	0.020	<0.010	--	<0.010	--
18...	--	0.040	0.20	<0.010	<0.010	--	<0.010	2
25...	--	0.030	0.40	0.020	0.020	--	<0.010	2
SEP								
02...	--	0.090	0.50	0.020	<0.010	--	<0.010	3
07...	--	0.020	0.30	0.020	0.030	--	0.010	2
13...	--	0.040	0.30	0.010	<0.010	--	0.020	1

CHIPPEWA RIVER BASIN

05357335 BEAR RIVER NEAR MANITOWISH WATERS, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.13	.29	.31	.27	.18	.49	.96	1.4	3.2	.66	.39
2	.42	.14	.29	.30	.26	.23	.45	1.1	1.3	3.1	.62	.38
3	.45	.15	.28	.29	.25	.28	.45	1.4	1.2	2.7	.59	.36
4	.35	.16	.28	.30	.26	.33	.54	2.2	1.2	2.6	.55	.31
5	.27	.15	.27	.29	.26	.34	.67	2.7	1.1	2.3	.54	.28
6	.21	.15	.28	.28	.25	.35	.80	1.9	1.1	2.1	.56	.24
7	.22	.15	.28	.27	.24	.37	.89	1.8	1.1	1.8	.52	.22
8	.20	.14	.28	.26	.24	.39	1.1	2.0	1.3	1.6	.48	.19
9	.24	.13	.28	.25	.23	.42	1.1	2.1	1.9	1.5	.46	.18
10	.27	.16	.28	.24	.23	.45	1.1	2.0	2.2	1.4	.45	.16
11	.25	.20	.28	.23	.22	.48	1.0	1.7	1.7	1.3	.41	.14
12	.22	.20	.27	.23	.22	.50	.94	1.5	1.4	1.2	.37	.12
13	.20	.19	.27	.24	.22	.53	.91	1.4	1.2	1.1	.35	.12
14	.26	.20	.27	.24	.22	.56	.94	1.2	1.1	1.0	.32	.16
15	.62	.19	.29	.25	.22	.60	.87	1.1	.95	.95	.31	.17
16	.61	.19	.32	.25	.21	.66	.90	1.0	.88	.85	.28	.18
17	.50	.21	.33	.25	.21	.70	.95	.93	.99	.78	.26	.19
18	.40	.22	.32	.24	.20	.77	1.1	.92	1.0	.72	.25	.20
19	.32	.22	.33	.24	.20	.84	1.2	.91	1.0	.65	.25	.19
20	.28	.25	.31	.23	.20	.92	1.2	.88	2.1	.59	.25	.21
21	.26	.36	.31	.24	.21	1.0	1.2	.85	3.4	.57	.25	.25
22	.23	.39	.31	.24	.21	1.1	1.2	.84	9.8	.56	.25	.27
23	.23	.40	.31	.25	.21	1.1	1.2	.88	11	.55	.25	.25
24	.23	.39	.29	.27	.20	.54	1.2	1.1	9.1	.55	.24	.25
25	.22	.37	.29	.27	.20	.50	1.2	1.1	7.9	.57	.24	.24
26	.20	.35	.29	.28	.19	.50	1.1	1.0	6.7	.57	.24	.24
27	.19	.34	.28	.29	.19	.52	1.0	1.0	5.8	.57	.28	.26
28	.17	.32	.29	.29	.18	.54	1.1	1.0	5.0	.70	.30	.26
29	.16	.30	.30	.29	---	.56	1.1	1.0	4.3	.75	.31	.26
30	.15	.29	.30	.28	---	.53	1.1	1.1	3.7	.72	.35	.26
31	.14	---	.31	.28	---	.53	---	1.4	---	.68	.40	---
TOTAL	8.59	7.04	9.08	8.17	6.20	17.32	29.00	40.97	92.82	38.23	11.59	6.93

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	3.0	4.2	1.7	6.2	1.2	2.1	4.2	8.4	10	6.4	5.2
2	3.9	3.5	3.9	1.6	6.4	1.3	2.1	4.0	7.5	9.8	6.5	4.9
3	4.0	4.3	3.4	1.6	6.4	1.4	2.1	4.3	6.5	8.8	6.2	4.8
4	3.0	4.8	3.1	1.7	6.2	1.4	2.2	9.3	5.8	8.3	5.5	4.5
5	2.3	5.2	2.7	1.7	6.0	1.3	2.3	7.7	5.1	7.5	5.1	4.2
6	1.7	5.5	2.4	1.6	5.5	1.3	2.4	19	4.8	6.8	5.2	4.0
7	1.6	6.2	2.2	1.6	5.1	1.3	2.3	21	4.8	5.9	4.6	3.8
8	1.4	6.3	2.0	1.6	4.7	1.3	2.6	24	5.6	5.3	4.1	3.4
9	1.7	6.6	1.8	1.5	4.3	1.3	4.5	24	9.0	5.0	3.8	3.1
10	1.8	8.3	1.6	1.5	4.1	1.3	4.3	23	11	4.6	3.5	2.8
11	1.6	10	1.5	1.5	3.8	1.3	4.0	20	9.7	4.2	3.1	2.4
12	1.3	10	1.4	1.5	3.5	1.3	3.5	17	8.6	3.9	2.7	2.1
13	1.1	10	1.4	1.7	3.4	1.3	3.2	15	7.8	3.6	2.4	2.1
14	1.4	11	1.4	1.8	3.2	1.3	3.2	14	7.5	3.4	2.1	2.7
15	3.3	10	1.4	2.0	3.0	1.3	2.9	12	7.3	3.1	1.9	2.9
16	3.1	11	1.6	2.1	2.8	1.3	3.6	11	7.4	2.8	1.7	3.0
17	2.7	12	1.6	2.2	2.6	1.3	4.8	9.9	9.0	2.6	1.5	3.1
18	2.4	12	1.5	2.3	2.4	1.4	6.7	9.7	10	2.4	1.4	3.0
19	2.1	11	1.5	2.4	2.3	1.4	9.5	9.4	11	2.2	1.7	2.9
20	2.0	12	1.4	2.5	2.2	1.4	12	9.0	24	2.0	2.0	3.1
21	2.0	15	1.4	2.7	2.1	1.5	15	8.6	36	2.0	2.5	3.4
22	2.1	15	1.4	3.0	2.0	1.5	18	8.4	39	2.2	3.0	3.6
23	2.2	14	1.4	3.3	1.9	1.5	16	8.6	34	2.4	3.6	3.3
24	2.5	12	1.4	3.7	1.8	1.6	15	10	29	2.6	4.3	3.1
25	2.6	10	1.4	4.1	1.6	1.7	14	9.8	25	3.0	4.8	2.9
26	2.7	8.8	1.4	4.4	1.5	1.8	12	8.8	21	3.3	4.7	2.8
27	2.7	7.6	1.4	4.8	1.4	1.9	9.0	8.3	18	3.5	5.1	2.9
28	2.7	6.5	1.5	5.2	1.3	2.0	8.5	7.8	16	4.7	5.3	2.8
29	2.7	5.6	1.5	5.5	---	2.2	6.9	7.3	14	5.6	5.0	2.7
30	2.8	4.8	1.6	5.6	---	2.2	5.6	7.5	12	5.9	5.3	2.6
31	2.8	---	1.6	6.0	---	2.2	---	8.9	---	6.1	5.7	---
TOTAL	71.3	262.0	58.0	84.4	97.7	46.5	200.3	361.5	414.8	143.5	120.7	98.1

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 sea level.

REMARKS.--Estimated daily discharges: Mar. 29 to Apr. 14 and ice-affected period, Dec. 5 to Mar. 28. Records good except those for estimated daily discharges, 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	1130	1440	1200	1100	940	4400	2940	3840	3500	1520	1480
2	1080	1160	1390	1000	1100	1100	4000	4850	3790	1910	1560	1350
3	1190	1540	1530	1200	1100	1100	2500	6610	3170	2210	1770	1320
4	952	1800	1470	1100	1100	1100	2000	6240	2500	3320	1560	1200
5	874	1920	1300	1300	1100	1200	1800	5790	2290	3230	1210	1150
6	888	1570	1000	1100	1000	1000	1800	5630	1900	3250	1540	900
7	1550	1290	940	1100	1000	1000	1800	5130	2210	2950	1200	942
8	2620	1430	980	1100	1100	1200	1900	4550	2330	2900	1320	1020
9	3810	1530	1200	940	1100	1100	2500	3890	3130	2730	1600	995
10	4480	1590	1200	1100	1100	1100	3200	3610	3200	2130	1410	953
11	5020	1540	1300	1200	1000	1100	4000	3460	3300	2160	1410	832
12	4060	1710	1300	1100	980	1200	3800	3060	2970	2120	1320	817
13	3180	2010	1200	1200	1200	1100	3900	2750	2640	1990	1440	1020
14	2960	1930	1300	1200	1100	1000	3400	1800	2670	1810	1200	1020
15	2420	1270	1200	1200	1000	1000	3390	1710	3010	1820	1320	1450
16	2140	1540	1300	920	1100	1100	3720	1620	2860	1650	1400	1450
17	2270	1330	1300	1000	1000	820	3590	1840	2890	1690	1090	1380
18	2240	1330	1300	1000	980	1100	3020	1610	4340	1530	1060	1120
19	1780	1410	1300	1000	960	940	2710	1780	4230	1460	1260	1140
20	1630	1630	1200	840	900	1000	2650	1790	9060	1210	1020	1130
21	1560	2370	840	940	960	1000	2970	1670	15300	1330	1030	1350
22	1760	2650	1300	1000	1000	960	2180	1400	14100	1340	1130	1620
23	1540	2660	1200	1000	1100	980	2240	1660	10600	1260	1200	1190
24	1630	2750	1100	980	1000	1000	2320	1670	8140	958	820	1050
25	1470	2390	1100	980	920	920	2180	2150	6860	1200	1060	1080
26	1660	2230	820	1100	920	1400	1870	2120	5970	1210	1040	1080
27	1470	1940	1000	900	920	1700	1950	2320	4770	1090	1050	1040
28	1320	1600	1200	1100	820	1600	2260	2010	4720	1160	957	1270
29	1150	1630	1200	1000	---	1800	2590	2130	4020	1210	1370	1190
30	1310	1590	1300	1200	---	2400	2670	2280	4040	1400	1230	1050
31	1190	---	1300	940	---	3500	---	3310	---	1640	1490	---
TOTAL	62244	52470	37510	32940	28660	38460	83310	93380	144850	59368	39587	34589
MEAN	2008	1749	1210	1063	1024	1241	2777	3012	4828	1915	1277	1153
MAX	5020	2750	1530	1300	1200	3500	4400	6610	15300	3500	1770	1620
MIN	874	1130	820	840	820	820	1800	1400	1900	958	820	817

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1993, BY WATER YEAR (WY)

	MEAN	1749	1658	1287	1139	1128	1707	3571	2607	2102	1627	1455	1811
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1951 - 1993

ANNUAL TOTAL	673713	707368											
ANNUAL MEAN	1841	1938											
HIGHEST ANNUAL MEAN										1817			
LOWEST ANNUAL MEAN										2900		1973	
HIGHEST DAILY MEAN	8480	Apr 22	15300	Jun 21						993		1988	
LOWEST DAILY MEAN	765	Sep 13	817	Sep 12						17300	Apr 2	1986	
ANNUAL SEVEN-DAY MINIMUM	917	Jun 6	923	Sep 6						205	Oct 10	1976	
INSTANTANEOUS PEAK FLOW			16500	Jun 21						320	Nov 25	1976	
INSTANTANEOUS PEAK STAGE			10.11	Jun 21						(a)17600	Apr 2	1986	
10 PERCENT EXCEEDS	3220		3500							10.90	May 1	1954	
50 PERCENT EXCEEDS	1430		1380										
90 PERCENT EXCEEDS	983		980										

(a) Gage height, 10.45 ft

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 sea level. Prior to Feb. 9, 1939, and Sept. 1, 1941, to Apr. 1, 1953, Feb. 18, 1954, to Sept. 27, 1964, nonrecording gage at same site and datum. Apr. 2, 1953, to Feb. 18, 1954, nonrecording gage in creamery wellhouse 400 ft upstream at same datum. Feb. 9, 1939, to Aug. 31, 1941, and from Sept. 27, 1964, water-stage recorder at present site and datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 15-17, Nov. 28 to Dec. 13, and Dec. 17 to Mar. 30. Records good except those for ice-affected periods, which are poor. Gauge-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	168	260	160	120	70	2640	1210	1730	379	107	124
2	136	207	240	160	120	70	2050	2430	1400	330	130	129
3	126	337	230	160	120	74	1610	3740	1030	325	141	119
4	120	485	200	160	120	82	1300	3680	726	307	129	106
5	110	476	160	160	120	90	1100	3790	569	318	122	95
6	104	418	170	160	120	110	988	3290	467	299	122	87
7	141	354	230	150	110	140	939	2420	417	272	117	80
8	260	317	220	140	110	180	1300	1750	445	258	116	76
9	400	316	210	140	100	160	2300	1360	631	357	120	72
10	1070	317	210	130	100	150	2710	1080	823	370	132	74
11	1310	388	210	130	96	150	2470	1190	755	321	236	81
12	1060	427	220	120	94	140	2220	1330	593	283	199	80
13	803	391	220	130	90	130	2000	1090	479	253	154	106
14	633	333	230	130	86	120	1780	847	401	227	135	188
15	506	280	232	130	84	120	1730	668	368	216	132	383
16	427	270	249	130	80	110	1720	549	331	195	130	390
17	368	270	260	130	74	100	1620	464	1700	175	119	323
18	330	255	260	130	68	94	1660	413	3400	160	109	256
19	295	228	250	130	64	88	1840	397	3470	145	104	207
20	277	300	230	130	62	86	1960	380	10600	132	98	189
21	269	1420	240	130	62	86	1780	342	15800	118	95	189
22	267	2430	250	130	66	86	1460	311	10100	109	89	206
23	268	2060	230	130	70	86	1170	304	5100	105	83	202
24	249	1540	210	120	70	110	996	468	2810	98	78	188
25	226	1180	180	120	70	180	938	683	1760	97	76	170
26	213	882	160	120	70	290	855	621	1180	94	73	157
27	200	634	160	120	70	500	782	495	844	99	76	149
28	191	490	160	120	70	900	1050	445	632	106	78	159
29	182	410	170	120	---	1600	1560	403	518	102	80	169
30	172	370	170	120	---	2800	1440	413	442	100	97	184
31	173	---	170	120	---	3410	---	1290	---	106	103	---
TOTAL	11032	17953	6591	4160	2486	12312	47968	37853	69521	6456	3580	4938
MEAN	356	598	213	134	88.8	397	1599	1221	2317	208	115	165
MAX	1310	2430	260	160	120	3410	2710	3790	15800	379	236	390
MIN	104	168	160	120	62	70	782	304	331	94	73	72
CFSM	.62	1.04	.37	.23	.15	.69	2.78	2.12	4.02	.36	.20	.29
IN.	.71	1.16	.43	.27	.16	.80	3.10	2.44	4.49	.42	.23	.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1993, BY WATER YEAR (WY)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1990, SI WATER YEAR (WY)												
MEAN	405	437	182	101	93.5	745	1822	876	673	261	215	448
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

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1915 - 1993
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	FOR 1992 CALENDAR YEAR		FOR 1990 WATER YEAR		WATER YEARS 1915 - 1990	
ANNUAL TOTAL	186877		224850			
ANNUAL MEAN	511		616		520	
HIGHEST ANNUAL MEAN					923	1942
LOWEST ANNUAL MEAN					214	1948
HIGHEST DAILY MEAN	5400	Mar 9	15800	Jun 21	40800	Aug 31 1941
LOWEST DAILY MEAN	59	Aug 27	62	Feb 20, 21	11	Dec 18 1943
ANNUAL SEVEN-DAY MINIMUM	64	Aug 23	66	Feb 18	14	(a) Jan 25 1924
INSTANTANEOUS PEAK FLOW			16400	Jun 21	(b) 46000	Aug 31 1941
INSTANTANEOUS PEAK STAGE			13.20	Jun 21	(c) 18.80	Aug 31 1941
INSTANTANEOUS LOW FLOW					11	Dec 18 1943
ANNUAL RUNOFF (CFSM)	.89		1.07		.90	
ANNUAL RUNOFF (INCHES)	12.07		14.52		12.27	
10 PERCENT EXCEEDS	1400		1610		1300	
50 PERCENT EXCEEDS	218		210		150	
90 PERCENT EXCEEDS	92		87		45	

(a) Also occurred July 11, 1936

(b) From rating curve extended above 13,000 ft³/s on basis of contracted-opening measurement of peak flow

(c) From floodmark

CHIPPEWA RIVER BASIN

49

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 1983, October 1986 to current year. Monthly discharge for some periods published in WSP 1308.

REVISED RECORDS.--WSP 785: 1934(M). WSP 1508: 1897, 1905, 1918(M), 1924(M). WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 798.46 ft above sea level. 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.--No estimated daily discharges. 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3150	2640	4360	2200	3770	4010	9700	7200	13900	7760	4120	2780
2	982	4640	4010	2420	4060	4440	9840	13300	15100	7730	4720	2910
3	1950	3810	4540	2320	3920	5600	9880	25400	10500	6720	3480	3010
4	1590	7050	5230	4570	2960	5640	9830	26300	7440	8780	3640	2550
5	3740	7830	3520	3320	3090	3640	7460	23200	5550	7730	2480	1910
6	2390	5360	2880	3500	1510	3030	6430	16200	4530	8000	3400	980
7	4380	5050	2570	3090	886	1070	7090	15600	7200	6490	1950	2600
8	6360	3310	2990	2630	2710	4200	9810	12800	6290	8830	2200	2630
9	8890	4940	4440	2250	3530	6460	13700	9860	7100	7290	6300	2470
10	9860	4960	3740	1830	4340	5560	17000	9830	9840	7600	6190	2570
11	12700	5120	4920	4260	3710	5150	19000	9810	9840	8390	4750	1510
12	13700	5150	4870	4920	1920	4980	15200	9910	9830	7150	2980	1390
13	11600	6190	4240	3440	904	4720	16000	9810	9560	6160	4030	4880
14	6900	4920	4560	3330	1310	3970	15800	7830	7520	6120	1070	2860
15	6700	4570	3720	2990	5050	3880	13100	4170	8640	5190	2470	3660
16	5590	4470	5560	1070	5320	3790	13600	3930	5500	4500	3040	4540
17	5420	3980	4260	1080	5050	3290	13100	5960	11000	4690	3450	3480
18	5550	4640	4550	3180	4770	3250	9930	5000	22000	2740	2620	2900
19	4960	3300	4380	3320	3590	2500	10000	5100	25500	5160	3020	2030
20	6420	5910	3140	3840	1200	978	10100	4720	37200	3430	2560	4130
21	4760	8250	3660	3760	919	993	9920	4230	56300	3020	1600	3710
22	5530	9300	2990	2950	4250	1010	9000	3080	57300	2870	2210	3530
23	5540	10900	2900	1700	5480	1020	5680	3200	43300	3300	2510	3320
24	4310	9340	2720	958	5210	2230	6020	5370	29400	1540	2930	3790
25	4150	8080	2660	2540	4900	1990	5680	5240	22900	869	2830	3000
26	4180	7280	2580	3500	3740	5720	6220	8060	20000	4370	2030	2950
27	3040	5830	2100	4540	1010	9360	5960	5850	16500	2680	2180	3550
28	3660	5550	3760	3060	1160	9380	5580	7410	13700	1790	1310	3610
29	3920	3350	3720	2320	---	9370	7400	3600	14300	2730	748	3300
30	3820	5510	3650	1550	---	9490	9680	7280	11400	3390	4840	3370
31	2760	---	3670	1070	---	9600	---	9930	---	2480	2820	---
TOTAL	168502	171230	116890	87508	90269	140321	307710	289180	519140	159499	94478	89920
MEAN	5436	5708	3771	2823	3224	4526	10260	9328	17300	5145	3048	2997
MAX	13700	10900	5560	4920	5480	9600	19000	26300	57300	8830	6300	4880
MIN	982	2640	2100	958	886	978	5580	3080	4530	869	748	980

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1888 - 1993, BY WATER YEAR (WY)

	MEAN	4191	4183	2984	2567	2570	5325	11600	8662	7010	4318	3347	4430
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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1888 - 1993	
ANNUAL TOTAL	1921214		2234647			
ANNUAL MEAN	5249		6122			
HIGHEST ANNUAL MEAN					5094	
LOWEST ANNUAL MEAN					8868	
HIGHEST DAILY MEAN	34100	Apr 22	57300	Jun 22	95500	Sep 1 1941
LOWEST DAILY MEAN	480	Aug 15	748	Aug 29	40	Feb 4 1917
ANNUAL SEVEN-DAY MINIMUM	1800	Jun 5	1530	Mar 19	308	Jan 29 1917
INSTANTANEOUS PEAK FLOW			60300	Jun 21	102000	Sep 1 1941
INSTANTANEOUS PEAK STAGE			19.84	Jun 21	24.80	Sep 1 1941
10 PERCENT EXCEEDS	8590		10700		10600	
50 PERCENT EXCEEDS	4480		4380		3310	
90 PERCENT EXCEEDS	1710		1970		1220	

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 22 TO AUGUST 17, 1993
(Milligrams per liter unless otherwise indicated)

	Apr. 22	June 08	July 12	Aug. 17
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	1.89	2.02	1.47	1.78
Specific conductance (μ S/cm)	113	113	114	97
pH (units)	7.1	6.9	7.5	8.4
Water temperature ($^{\circ}$ C)	9.0	16.0	23.5	26.5
Secchi-depth (meters)	1.2	2.9	0.6	0.9
Dissolved oxygen	11.6	8.5	9.9	11.6
Phosphorus, total (as P)	0.093	0.120	0.180	0.250
Chlorophyll a, phytoplankton (μ g/L)	2.1	7.2	33	91

CHIPPEWA RIVER BASIN

51

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 above sea level, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 3.28 ft, June 20, 1993; minimum observed, 0.98 ft, July 16 and Aug. 26, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 3.28 ft, June 20; minimum observed, 0.98 ft, July 16 and Aug. 26.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	1.79	---	---	---	---	---	---	---	1.74	---	1.76
3	1.59	---	---	---	---	---	---	1.98	---	---	---	---
4	---	1.87	---	---	---	---	---	---	1.96	---	---	---
5	1.33	---	---	---	---	---	2.18	---	---	1.76	---	---
6	---	1.89	---	---	---	---	---	2.06	---	---	---	---
7	---	---	---	---	---	---	---	---	1.76	---	1.74	---
8	---	---	---	---	---	---	2.24	---	2.02	1.68	---	1.66
9	1.49	1.79	---	---	---	---	---	---	1.58	---	1.84	---
10	---	---	---	---	---	---	---	1.98	---	---	---	1.64
11	---	---	---	---	---	---	---	---	1.84	---	---	---
12	1.79	1.77	---	---	---	---	1.98	1.72	---	1.47	---	1.66
13	---	---	---	---	---	---	---	---	---	1.26	1.78	---
14	1.71	1.79	---	---	---	---	---	---	1.88	---	---	---
15	---	---	---	---	---	---	1.78	1.88	---	---	---	---
16	1.69	1.71	---	---	---	---	---	---	---	.98	1.82	1.86
17	---	---	---	---	---	---	---	---	1.68	---	1.78	---
18	1.69	1.69	---	---	---	---	2.18	1.76	---	1.08	1.74	---
19	---	---	---	---	---	---	---	---	---	---	---	1.84
20	---	---	---	---	---	---	---	---	3.28	---	---	---
21	---	1.05	---	---	---	---	1.82	---	---	---	1.68	1.78
22	---	---	---	---	---	---	1.89	---	1.74	1.28	---	---
23	1.68	1.17	---	---	1.64	---	---	1.78	---	---	---	---
24	---	---	---	---	---	---	---	---	---	1.26	1.07	1.86
25	---	1.97	---	---	---	---	1.83	---	1.58	---	---	---
26	---	---	---	---	---	---	---	---	---	1.48	.98	---
27	---	---	---	---	---	---	1.88	1.80	---	---	---	2.78
28	1.69	---	---	---	---	---	---	---	---	1.62	---	2.78
29	---	1.79	---	---	---	---	---	---	1.72	---	1.26	---
30	---	---	---	---	---	---	1.86	---	---	---	---	1.78
31	---	---	---	---	---	---	---	1.78	---	---	---	---

444733090460100 MEAD LAKE, WEST BAY, NEAR WILLARD, WI--CONTINUED

WATER-QUALITY RECORDS

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

REMARKS.--Lake sampled in west bay at a lake depth of about 18 ft. Lake ice-covered during February sampling.
Water-quality analyses by Wisconsin State Laboratory of Hygiene.WATER-QUALITY DATA, FEBRUARY 23 TO AUGUST 17, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 23		Apr. 22		June 08		July 12		Aug. 17	
Depth of sample (ft)	3.0	17	1.5	17	1.5	15	1.5	15	1.5	15
Lake stage (ft)	1.65		1.89		2.02		1.47		1.78	
Specific conductance ($\mu\text{S}/\text{cm}$)	163	181	112	117	100	102	101	115	86	102
pH (units)	6.4	6.6	6.5	6.6	6.5	6.5	7.7	6.5	8.6	6.4
Water temperature ($^{\circ}\text{C}$)	1.0	4.5	9.0	7.5	16.5	14.0	23.0	20.0	24.5	18.5
Color (Pt-Co, scale)	---	---	50	50	---	---	---	---	---	---
Turbidity (NTU)	---	---	5.9	10.0	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.0	---	2.8	---	0.7	---	0.8	---
Dissolved oxygen	9.0	1.1	11.4	11.2	8.1	3.0	8.4	0.8	11.4	0.1
Hardness, as CaCO_3	---	---	38	40	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	8.8	9.2	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	3.9	4.2	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	3.2	3.4	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	4	4	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	29	31	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	8.0	9.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	7.0	8.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	<0.0	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	5.2	5.4	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	82	82	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.32	0.30	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.32	0.30	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.03	0.04	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.67	0.76	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.70	0.80	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.0	1.1	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.105	0.142	0.118	0.138	0.134	0.244	0.165	0.460
Phosphorus, ortho, dissolved (as P)	---	---	0.050	0.052	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	170	190	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	3.7	---	19	---	31	---	68	---

2-23-93

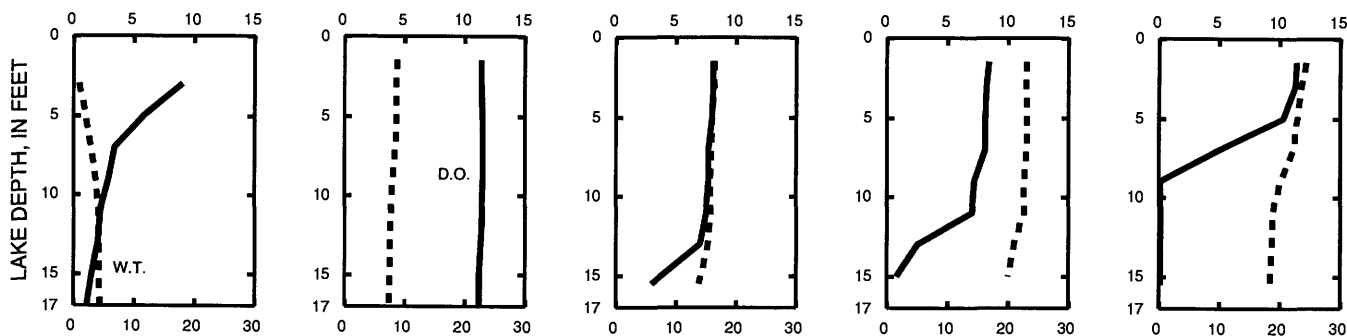
4-22-93

6-8-93

7-12-93

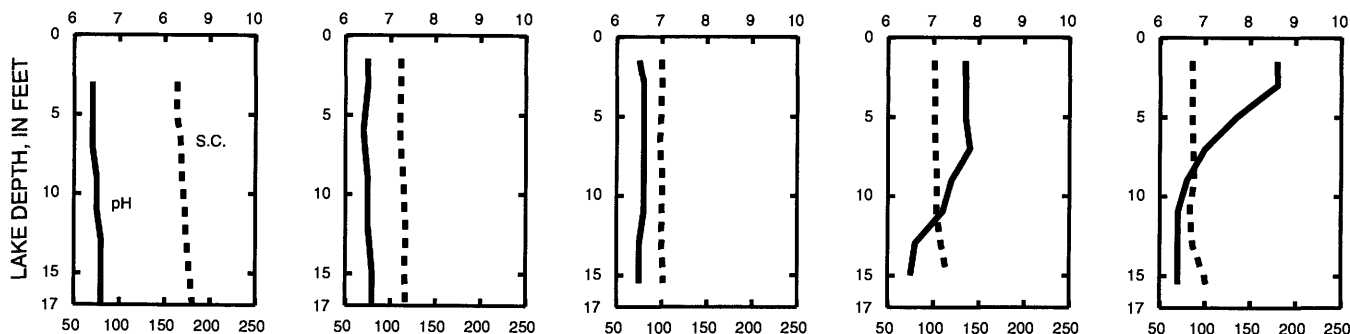
8-17-93

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

53

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 sea level, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 14-16, Nov. 27 to Dec. 1, Dec. 5-12, and Dec. 15 to Mar. 28. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	7.4	12	6.8	5.2	3.7	226	87	266	15	111	29
2	3.3	41	11	6.2	5.0	4.9	170	499	120	21	37	17
3	3.1	112	11	5.8	5.0	5.8	153	405	62	24	19	11
4	2.8	88	11	5.8	4.8	9.8	156	401	35	41	18	8.7
5	2.8	61	11	5.6	5.0	20	150	251	24	34	16	6.7
6	3.0	41	10	5.6	4.8	26	132	140	18	41	25	5.7
7	2.9	29	10	5.4	4.7	24	178	85	16	26	20	5.4
8	3.8	26	11	5.4	4.7	24	600	64	147	21	14	5.3
9	20	28	11	5.4	4.6	23	593	60	444	25	638	5.6
10	48	32	12	5.2	4.6	21	356	235	290	21	357	5.6
11	35	35	11	5.2	4.5	18	228	978	142	45	141	5.5
12	23	29	10	5.2	4.4	15	312	557	62	111	57	9.4
13	15	25	10	5.0	4.4	12	335	169	33	90	31	374
14	11	19	10	5.0	4.4	11	226	76	29	45	24	539
15	9.4	16	10	5.0	4.3	10	230	48	35	28	20	264
16	8.0	13	19	5.0	4.3	10	217	34	30	20	21	120
17	7.6	12	18	5.0	4.3	9.8	263	28	895	16	16	61
18	7.1	12	15	5.0	4.2	9.6	353	28	788	14	14	39
19	7.5	11	12	4.8	4.1	9.4	391	34	1010	11	16	29
20	7.2	122	10	4.6	4.1	9.2	308	28	3000	8.5	13	68
21	9.5	457	9.8	5.2	4.0	9.4	172	23	1620	6.5	9.3	160
22	12	332	9.6	5.8	4.0	9.8	103	20	566	5.1	7.7	91
23	13	168	9.6	6.6	3.9	11	71	51	183	4.1	6.6	64
24	11	87	9.2	5.8	3.8	17	61	245	83	4.0	5.5	44
25	10	57	8.8	5.2	3.7	120	57	176	89	6.8	4.8	34
26	9.5	42	8.6	4.7	3.7	350	45	93	58	6.9	4.3	30
27	10	31	9.0	4.5	3.7	460	89	58	39	5.6	31	34
28	9.3	23	9.2	4.5	3.6	600	209	44	29	22	20	51
29	9.4	16	8.8	4.3	---	618	141	34	22	20	12	91
30	7.2	13	8.2	4.3	---	481	89	232	20	11	46	61
31	6.4	---	7.4	4.5	---	433	---	522	---	307	56	---
TOTAL	332.2	1985.4	333.2	162.4	121.8	3385.4	6614	5705	10155	1056.5	1811.2	2268.9
MEAN	10.7	66.2	10.7	5.24	4.35	109	220	184	338	34.1	58.4	75.6
MAX	48	457	19	6.8	5.2	618	600	978	3000	307	638	539
MIN	2.8	7.4	7.4	4.3	3.6	3.7	45	20	16	4.0	4.3	5.3
CFSM	.21	1.30	.21	.10	.09	2.14	4.32	3.61	6.64	.67	1.15	1.48
IN.	.24	1.45	.24	.12	.09	2.47	4.82	4.16	7.41	.77	1.32	1.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1993, BY WATER YEAR (WY)

	MEAN	27.7	60.6	20.3	4.05	3.56	144	92.5	68.8	89.1	26.2	42.4	72.8
MAX	123	262	79.7	6.66	6.10	181	220	184	338	49.4	143	420	
(WY)	1987	1992	1992	1992	1988	1989	1993	1993	1993	1986	1986	1986	
MIN	2.17	3.57	.56	.28	.45	90.4	25.9	5.29	1.33	.31	.37	.81	
(WY)	1990	1990	1990	1990	1990	1987	1987	1987	1988	1988	1988	1988	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1986 - 1993

ANNUAL TOTAL	14700.7	33931.0											
ANNUAL MEAN	40.2	93.0											
HIGHEST ANNUAL MEAN										50.6			
LOWEST ANNUAL MEAN										93.0			1993
HIGHEST DAILY MEAN	680	Mar 6								28.5			1988
LOWEST DAILY MEAN	1.1	Aug 25											
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 22											
INSTANTANEOUS PEAK FLOW													
INSTANTANEOUS PEAK STAGE													
INSTANTANEOUS LOW FLOW													
ANNUAL RUNOFF (CFSM)	.79												
ANNUAL RUNOFF (INCHES)	10.72												
10 PERCENT EXCEEDS	108												
50 PERCENT EXCEEDS	9.2												
90 PERCENT EXCEEDS	2.8												

(a) From rating curve extended above 2,500 ft³/s on basis of step-backwater measurement of peak flow

CHIPPEWA RIVER BASIN

453907091345800 BALSAM LAKE NEAR BIRCHWOOD, WI

LOCATION.--Lat 45°39'07", long 91°34'58", in NE 1/4 NE 1/4 sec.34, T.37 N., R.10 W., Washburn County, Hydrologic Unit 07050007, 1.2 mi southwest of Birchwood.

PERIOD OF RECORD.--March to August 1993.

REMARKS.--Lake sampled near southern end of Balsam Lake at a lake depth of about 43 ft. Lake ice-covered during March sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MARCH 08 TO AUGUST 11, 1993
(Milligrams per liter unless otherwise indicated)

	Mar. 08		May 11		June 28		July 19		Aug. 11	
Depth of sample (ft)	1.5	39	1.5	39	1.5	43	1.5	40	1.5	38
Lake stage (ft)	9.69		10.46		10.90		10.40		10.65	
Specific conductance ($\mu\text{S}/\text{cm}$)	170	239	143	168	137	203	127	183	143	200
pH (units)	8.4	7.4	7.8	7.7	7.7	7.4	8.5	7.8	8.6	7.8
Water temperature ($^{\circ}\text{C}$)	1.0	4.5	15.0	6.5	19.5	7.0	24.0	7.5	24.0	8.0
Secchi-depth (meters)	---		2.4		3.3		2.1		2.1	
Dissolved oxygen	12.9	0.2	11.3	3.4	9.4	0.1	10.1	0.1	10.0	0.1
Phosphorus, total (as P)	---		<0.020		0.017 0.328		0.013 <0.020		0.012 0.360	
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---		9.4		5.1		8.4		9.3	

3-8-93

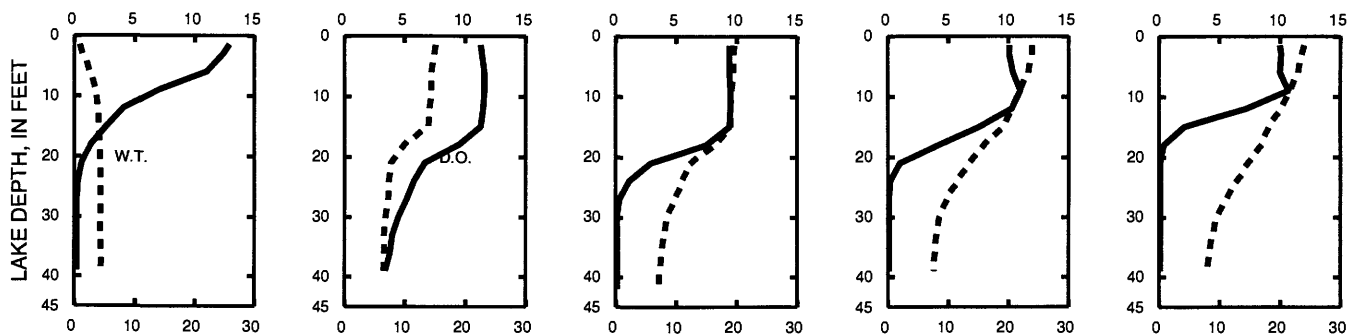
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7-19-93

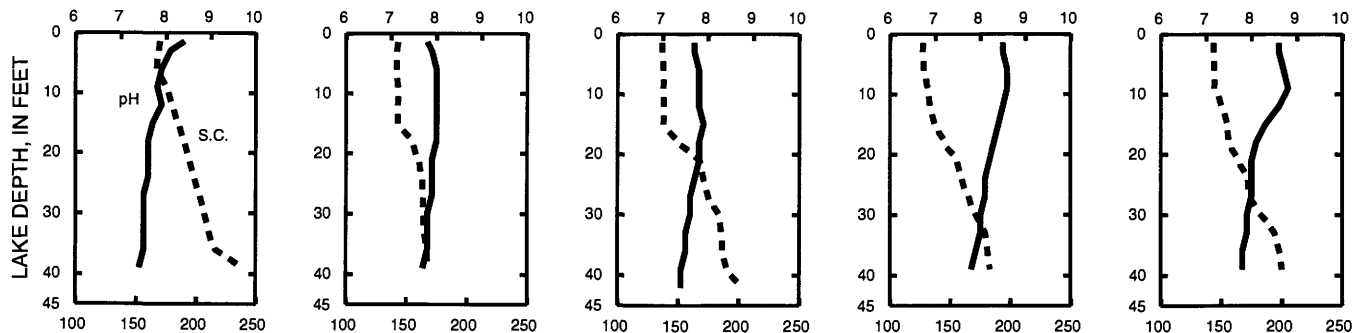
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DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



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

pH, IN STANDARD UNITS



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

453725091345100 RED CEDAR LAKE, DEEP HOLE, NEAR MIKANA, WI

LOCATION.--Lat 45°37'25", long 91°34'51", in NW 1/4 NW 1/4 sec.11, T.36 N., R.10 W., Barron County, Hydrologic Unit 07050007, 2.4 mi northeast of Mikana.

PERIOD OF RECORD.--March to August 1993.

REMARKS.--Lake sampled in northern part of lake at deep hole. Lake ice-covered during March sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MARCH 08 TO AUGUST 11, 1993
(Milligrams per liter unless otherwise indicated)

	Mar. 08		May 11		June 28		July 19		Aug. 11	
Depth of sample (ft)	1.5	39	1.5	48	1.5	48	1.5	50	1.5	48
Lake stage (ft)	9.69		10.46		10.90		10.40		10.65	
Specific conductance ($\mu\text{S}/\text{cm}$)	169	201	139	137	132	162	118	177	127	190
pH (units)	8.3	7.5	7.6	7.6	7.7	7.4	8.8	7.7	8.8	7.7
Water temperature ($^{\circ}\text{C}$)	0.5	5.0	13.5	7.5	19.5	12.0	23.0	12.5	24.5	13.0
Secchi-depth (meters)	---		2.0		2.1		1.5		1.5	
Dissolved oxygen	11.5	0.5	11.0	4.2	9.2	0.1	11.1	0.1	9.6	0.1
Phosphorus, total (as P)	---		0.020		0.014		0.020		0.016	
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---		8.9		8.0		28		18	

3-8-93

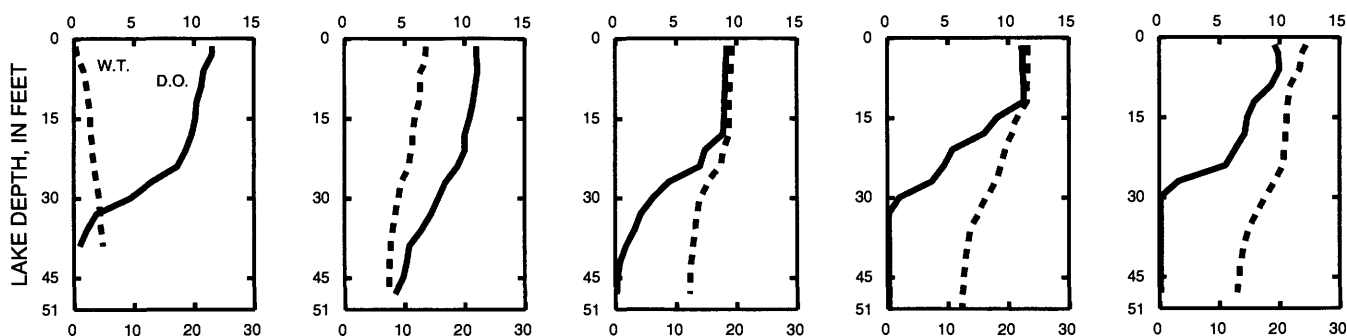
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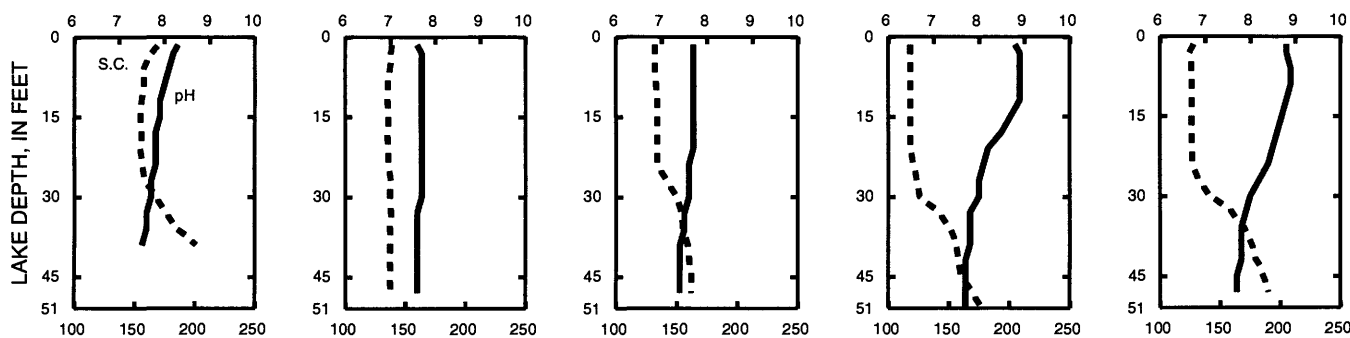
8-11-93

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

453421091333700 HEMLOCK LAKE NEAR MIKANA, WI

LOCATION.--Lat 45°34'21", long 91°33'37", in SE 1/4 SE 1/4 sec.26, T.36 N., R.10 W., Barron County, Hydrologic Unit 07050007, 2.5 mi southeast of Mikana.

PERIOD OF RECORD.--March to August 1993.

REMARKS.--Lake sampled at deep hole near center of lake. Lake ice-covered during March sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MARCH 08 TO AUGUST 11, 1993
(Milligrams per liter unless otherwise indicated)

	Mar. 08		May 11		June 28		July 19		Aug. 11	
Depth of sample (ft)	1.5	18	1.5	19	1.5	20	1.5	20	1.5	19
Lake stage (ft)	9.69		10.46		10.90		10.40		10.65	
Specific conductance (μS/cm)	123	128	80	83	68	72	73	98	87	106
pH (units)	8.3	7.7	7.3	7.3	7.2	6.9	8.8	7.5	8.5	7.5
Water temperature (°C)	1.5	4.5	16.5	11.0	19.0	14.5	23.5	15.5	23.0	17.5
Secchi-depth (meters)	---		1.8		1.1		1.2		0.8	
Dissolved oxygen	10.0	1.0	9.4	3.3	8.6	0.9	10.2	0.1	10.4	0.3
Phosphorus, total (as P)	---	---	0.020	---	0.044	0.069	0.045	0.240	0.036	0.050
Chlorophyll a, phytoplankton (μg/L)	---	---	8.1	---	22	---	42	---	61	---

3-8-93

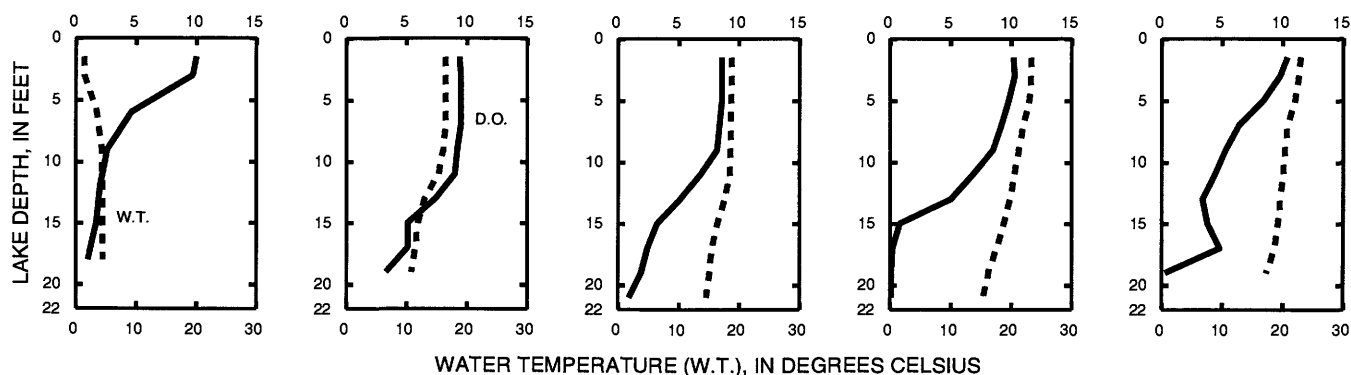
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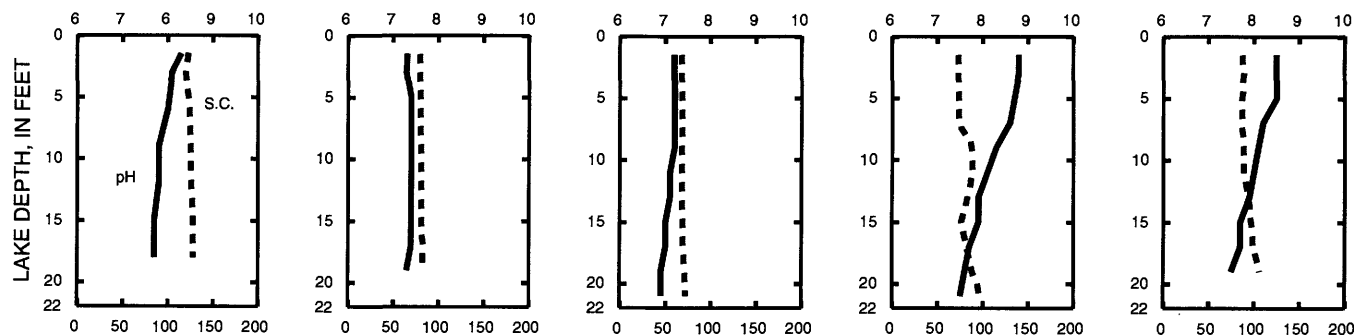
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DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



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

pH, IN STANDARD UNITS



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

LOCATION.--Lat 45°35'19", long 91°35'25", in SW 1/4 NE 1/4 sec.22, T.36 N., R.10 W., Barron County, Hydrologic Unit 07050007, at Mikana.

PERIOD OF RECORD.--March to September 1993.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 10.90 ft, June 11, 25, 28; minimum observed, 9.69 ft, Mar. 8.

[illegible]

453519091352500 RED CEDAR LAKE, SOUTH END, AT MIKANA, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March to August 1993.

REMARKS.--Lake sampled 0.2 mi northwest of Honeymoon Island. Lake ice-covered during March sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MARCH 08 TO AUGUST 11, 1993
(Milligrams per liter unless otherwise indicated)

	Mar. 08		May 11		June 28		July 19		Aug. 11	
Depth of sample (ft)	1.5	18	1.5	27	1.5	27	1.5	27	1.5	29
Lake stage (ft)	9.69		10.46		10.90		10.40		10.65	
Specific conductance ($\mu\text{S}/\text{cm}$)	134	150	134	132	130	130	115	119	125	133
pH (units)	8.2	7.7	7.6	7.6	7.3	7.5	8.8	8.0	8.5	8.0
Water temperature ($^{\circ}\text{C}$)	0.0	3.5	12.5	11.0	18.5	18.5	23.0	18.5	23.0	19.0
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.1	1.00	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.1		2.7		1.5		1.2	
Dissolved oxygen	6.5	9.2	10.5	7.1	9.0	8.9	11.0	3.5	9.6	1.5
Hardness, as CaCO_3	---	---	66	66	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	17	17	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	5.8	5.7	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.5	2.5	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.8	0.9	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	66	65	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	5.0	5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	2.0	2.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	15	15	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	96	96	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.08	0.09	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.08	0.09	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.02	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.39	0.29	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.30	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.48	0.39	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.019	0.031	0.017	0.095	0.020	<0.020	0.020	0.030
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 ($\mu\text{g}/\text{L}$)	---	---	10	---	7.1	---	25	---	23	---

3-8-93

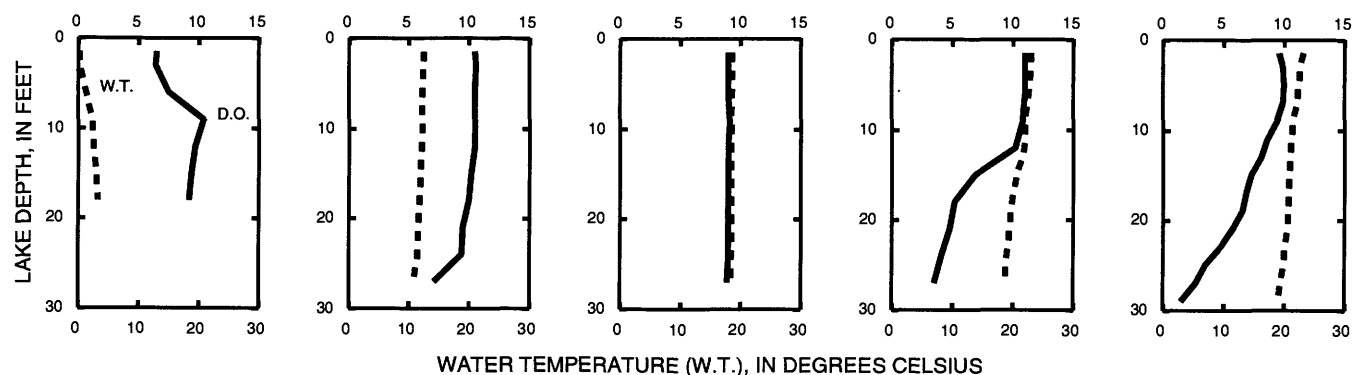
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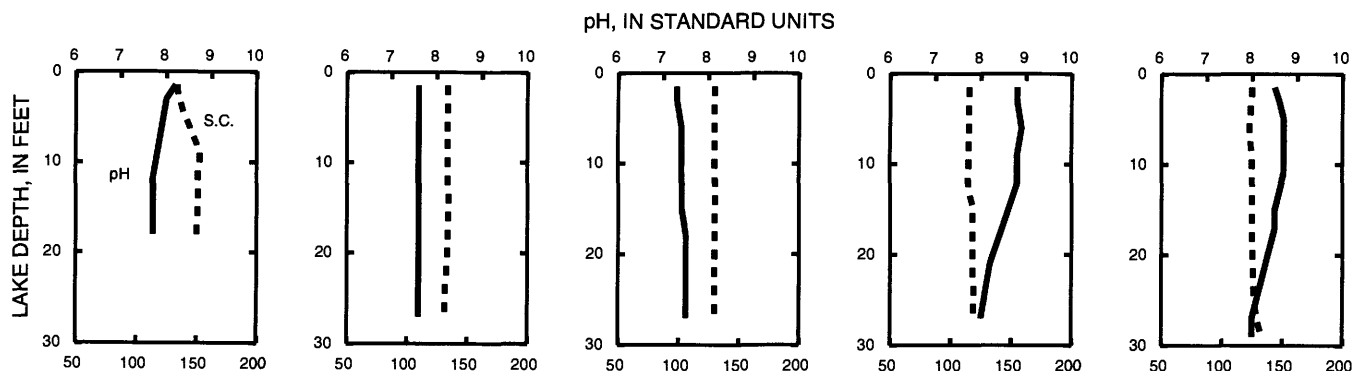
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8-11-93

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

CHIPPEWA RIVER BASIN

59

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 1992 to current year (discontinued).

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 above sea level, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 7.07 ft, July 7, 1992; minimum observed, 5.73 ft, Mar. 4, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 6.97 ft, June 24; minimum observed, 5.84 ft, Mar. 4.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.47	6.35	---	---	---	---	---	---	6.63	6.61	6.39	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	6.61	---	---	---	---
4	---	---	---	---	---	5.84	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	6.62	---	---	---	---
7	6.41	6.33	---	---	---	---	---	---	6.55	6.53	6.44	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	6.47	---
13	6.45	6.27	---	---	---	---	---	---	6.47	6.53	6.49	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	6.47	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	6.35	6.27	---	---	---	---	---	---	6.63	6.49	6.59	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	6.97	---	---	---
25	6.25	6.27	---	---	---	---	---	---	6.95	---	6.51	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	6.47	---	---	---	---
30	---	---	---	---	---	---	---	---	6.65	---	---	---
31	---	---	---	---	---	---	---	---	---	6.39	6.59	---

453754091490900 BEAR LAKE, AT DEEP HOLE, NEAR HAUGEN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1992 to current year (discontinued).

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 12, 1993
(Milligrams per liter unless otherwise indicated)

	Mar. 04		May 06		June 24		July 16		Aug. 12	
Depth of sample (ft)	1.5	81	1.5	78	1.5	73	1.5	70	1.5	74
Lake stage (ft)	5.84		6.62		6.97		6.47		6.47	
Specific conductance ($\mu\text{S}/\text{cm}$)	148	170	133	138	134	146	132	147	127	144
pH (units)	8.2	7.7	7.8	7.7	8.5	7.7	8.6	7.8	8.5	7.8
Water temperature ($^{\circ}\text{C}$)	1.0	3.0	14.5	6.0	21.0	8.0	22.5	8.5	26.0	8.5
Color (Pt-Co. scale)	---	---	25	20	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.80	1.4	---	---	---	---	---	---
Secchi-depth (meters)	---		1.8		2.4		1.5		1.5	
Dissolved oxygen	10.8	0.2	11.1	7.8	8.5	1.0	9.6	0.1	9.0	0.1
Hardness, as CaCO_3	---	---	70	73	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	18	19	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	6.0	6.3	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.1	2.2	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	1	1	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	69	72	---	---	---	---	---	---
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)	---	---	6.6	8.0	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	86	90	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.05	0.14	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.05	0.14	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.09	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.39	0.41	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.50	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.45	0.64	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.004	0.010	0.015	0.035	0.019	<0.020	0.018	0.050
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	130	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	4.5	---	8.0	---	16	---	18	---

3-4-93

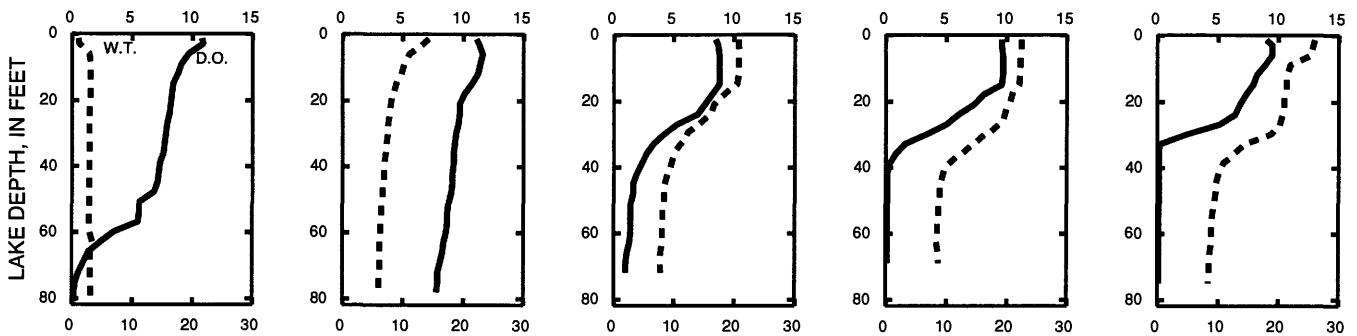
5-6-93

6-24-93

7-16-93

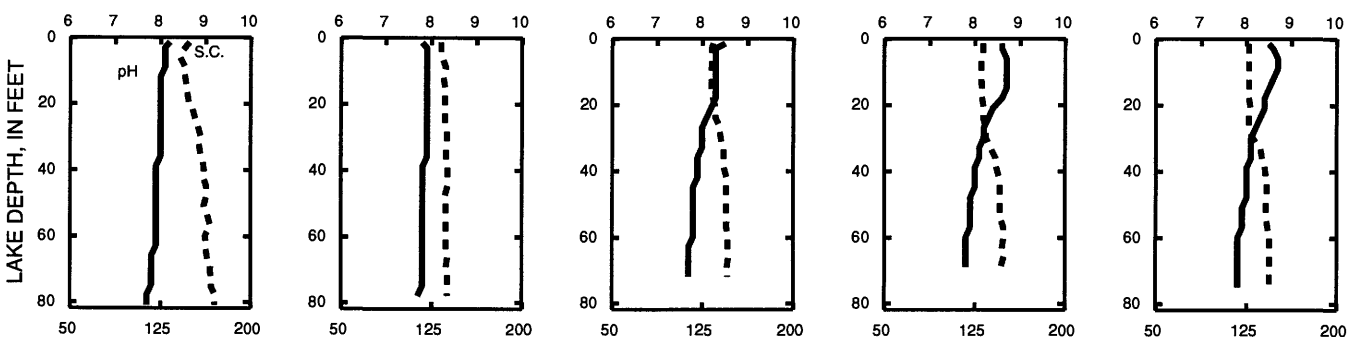
8-12-93

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

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053674464 YELLOW RIVER AT BARRON, WI

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.

DRAINAGE AREA.--153 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 1,090 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 6-12 and ice-affected periods, Dec. 19-21, 24-26, Jan. 1, 17, 18, 22, 25-29, Feb. 17-19, 23-26, and Mar. 13-19. Records good except those for estimated daily discharges, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	72	77	78	81	69	335	153	140	80	79	92
2	66	102	79	74	79	72	193	160	155	59	77	88
3	64	125	77	73	74	75	149	151	123	115	71	68
4	62	120	77	70	74	75	169	164	89	123	68	70
5	61	103	73	69	74	75	185	177	116	120	77	72
6	63	92	72	68	78	76	184	109	97	112	83	70
7	108	81	72	66	77	76	178	96	99	106	80	72
8	133	79	74	66	77	81	219	114	106	106	77	72
9	134	81	78	68	76	83	337	88	99	112	91	85
10	113	93	80	68	77	80	335	108	106	112	120	137
11	95	92	78	68	76	77	307	125	101	109	108	23
12	87	87	77	68	74	65	228	112	97	100	74	53
13	63	85	77	67	75	62	249	83	97	96	84	184
14	68	84	87	67	73	58	191	107	48	96	87	109
15	75	82	92	70	76	58	185	107	100	102	92	23
16	78	67	92	71	73	72	184	105	80	93	91	82
17	78	78	76	70	70	60	178	50	182	91	84	89
18	76	82	68	70	66	58	151	73	335	91	93	50
19	73	81	70	70	68	74	134	127	428	67	84	54
20	79	89	66	70	69	74	129	80	617	82	78	95
21	87	109	78	69	62	72	125	54	977	81	77	99
22	90	103	81	80	74	71	101	73	810	78	76	93
23	81	94	78	81	72	82	82	99	445	76	79	89
24	77	90	76	78	68	82	114	120	299	77	79	67
25	78	87	76	62	68	85	106	132	177	87	77	61
26	65	85	76	62	68	122	73	118	200	103	75	74
27	70	72	73	66	67	258	80	93	151	90	87	89
28	65	74	53	70	68	466	159	89	133	85	84	87
29	67	77	52	70	---	610	95	104	142	82	79	74
30	69	79	75	70	---	595	93	102	118	80	94	74
31	68	---	77	73	---	405	---	132	---	80	99	---
TOTAL	2458	2645	2337	2172	2034	4268	5248	3405	6667	2891	2604	2395
MEAN	79.3	88.2	75.4	70.1	72.6	138	175	110	222	93.3	84.0	79.8
MAX	134	125	92	81	81	610	337	177	977	123	120	184
MIN	61	67	52	62	62	58	73	50	48	59	68	23
CFSM	.52	.58	.49	.46	.47	.90	1.14	.72	1.45	.61	.55	.52
IN.	.60	.64	.57	.53	.49	1.04	1.28	.83	1.62	.70	.63	.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1993, BY WATER YEAR (WY)

	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
MEAN	76.8	129	88.4	76.4	75.9	162	191	106	150	99.0	76.9	112
MAX	79.3	170	101	82.7	79.1	187	206	110	222	105	84.0	177
(WY)	1993	1992	1992	1992	1992	1992	1992	1993	1993	1992	1993	1991
MIN	74.4	88.2	75.4	70.1	72.6	138	175	101	76.9	93.3	69.7	78.1
(WY)	1992	1993	1993	1993	1993	1993	1993	1992	1992	1993	1992	1992

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1991 - 1993

ANNUAL TOTAL	37469	39124										
ANNUAL MEAN	102	107										
HIGHEST ANNUAL MEAN									109			
LOWEST ANNUAL MEAN									111			1992
HIGHEST DAILY MEAN	847	Apr 21	977	Jun 21	977	Jun 21	1993		107			1993
LOWEST DAILY MEAN	52	Dec 29	23	Sep 11,15	23	Sep 11,15	1993		23			1993
ANNUAL SEVEN-DAY MINIMUM	64	Jul 29	62	Mar 12	62	Mar 12	1993		62			1993
INSTANTANEOUS PEAK FLOW			1080	Jun 21	1160	Apr 21	1992					
INSTANTANEOUS PEAK STAGE			5.73	Jun 21	5.89	Apr 21	1992					
INSTANTANEOUS LOW FLOW			7.3	Sep 11	7.3	Sep 11	1993					
ANNUAL RUNOFF (CFSM)	.67		.70		.71				.71			
ANNUAL RUNOFF (INCHES)	9.11		9.51		9.68				9.68			
10 PERCENT EXCEEDS	134		157		159				159			
50 PERCENT EXCEEDS	81		80		84				84			
90 PERCENT EXCEEDS	66		67		67				67			

CHIPPEWA RIVER BASIN
053674464 YELLOW RIVER AT BARRON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1991 to current year.

INSTRUMENTATION.--Continuous water temperature recorder since Aug. 30, 1991.

REMARKS.--Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum temperature, 25.5°C, Aug. 30, 1991; minimum, 0.0°C, for many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum temperature, 24.5°C, July 19; minimum, 0.0°C, many days December through April.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1992				MAR 1993			
23...	80	235	8.5	29...	692	145	2.5
DEC				MAY			
04...	75	200	1.0	28...	79	182	14.5
JAN 1993				JUL			
21...	71	270	1.0	02...	24	190	17.0
MAR				SEP			
11...	73	294	1.5	07...	68	218	16.0

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	13.0	11.5	12.0	5.0	3.5	4.5	1.5	1.0	1.0	.0	.0	.0
2	14.0	12.0	12.5	3.5	3.0	3.0	1.0	.5	1.0	.5	.0	.0
3	14.5	13.0	13.5	3.0	2.5	3.0	1.0	1.0	1.0	.5	.0	.5
4	14.5	13.0	13.5	2.5	2.0	2.5	1.0	.5	.5	.5	.0	.0
5	14.0	13.0	13.5	2.5	2.0	2.0	1.0	.0	.5	.5	.0	.0
6	13.0	12.5	13.0	2.0	1.5	1.5	1.0	.5	.5	---	---	---
7	12.5	11.0	11.5	2.0	1.0	1.5	1.0	.0	.5	---	---	---
8	11.0	10.0	10.5	2.0	1.5	1.5	1.0	.5	.5	---	---	---
9	10.0	9.0	9.5	3.0	2.0	2.5	.5	.0	.5	---	---	---
10	10.0	9.0	9.5	3.5	3.0	3.5	1.0	.5	.5	---	---	---
11	10.0	9.0	9.5	4.0	3.0	3.5	1.0	.5	.5	---	---	---
12	10.5	9.5	10.0	4.0	3.0	3.5	1.0	.5	.5	---	---	---
13	9.5	8.5	9.0	3.0	1.5	2.5	1.0	.5	1.0	.5	.0	.0
14	8.5	8.0	8.5	2.0	1.0	1.5	1.0	.5	.5	.5	.0	.0
15	8.0	7.0	7.5	2.0	1.0	1.5	1.0	.5	1.0	.5	.0	.0
16	7.0	6.0	6.5	2.5	2.0	2.0	1.0	.5	1.0	.5	.0	.0
17	6.5	5.0	5.5	2.5	1.5	2.0	1.0	.5	.5	.0	.0	.0
18	5.5	4.0	5.0	2.5	2.0	2.0	1.0	.5	1.0	.5	.0	.0
19	4.5	3.5	4.0	2.5	1.5	2.0	1.0	.0	.5	.5	.0	.0
20	4.0	3.5	3.5	2.5	2.0	2.5	1.0	.0	.5	.5	.0	.0
21	5.0	3.5	4.0	2.5	2.0	2.5	1.0	.0	.5	.5	.0	.5
22	7.0	4.5	5.5	2.0	2.0	2.0	.5	.0	.0	---	---	---
23	9.5	7.0	8.5	2.0	2.0	2.0	.0	.0	.0	.5	.0	.5
24	10.5	9.0	9.5	2.5	2.0	2.0	.0	.0	.0	.5	.0	.0
25	10.5	9.5	10.0	2.5	2.0	2.0	.0	.0	.0	.5	.0	.0
26	10.5	9.0	10.0	2.0	1.5	1.5	.0	.0	.0	.5	.0	.0
27	9.5	8.5	9.0	2.5	1.0	1.5	.5	.0	.0	.5	.0	.0
28	8.5	7.0	8.0	2.5	1.5	2.0	.5	.0	.5	.5	.0	.0
29	7.5	6.0	6.5	2.0	1.5	2.0	.5	.0	.5	.0	.0	.0
30	6.0	5.0	5.5	1.5	1.0	1.5	.5	.0	.5	1.0	.0	.0
31	5.5	5.0	5.5	---	---	---	.0	.0	.0	1.0	.0	.5
MONTH	14.5	3.5	8.7	5.0	1.0	2.2	1.5	.0	.5	---	---	---

CHIPPEWA RIVER BASIN

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053674464 YELLOW RIVER AT BARRON, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	1.0	.0	.5	1.5	.0	.5	1.0	.0	.5	13.5	11.5	12.5
2	1.0	.0	.5	1.5	.0	.5	3.0	.5	1.5	11.5	10.5	11.0
3	1.5	.0	.5	1.5	.0	.5	4.0	1.0	3.0	11.0	10.0	10.5
4	1.0	.0	.5	1.5	.0	.5	4.5	2.5	3.5	12.5	10.5	11.5
5	.5	.0	.5	2.0	.0	.5	5.0	3.5	4.5	15.0	12.5	13.5
6	.5	.0	.0	1.5	.0	.5	6.0	4.5	5.0	16.5	15.0	16.0
7	.5	.0	.5	1.5	.5	1.0	5.5	5.0	5.0	17.0	16.0	16.5
8	.5	.0	.0	2.5	.5	1.0	5.0	4.5	4.5	17.0	15.5	16.5
9	1.0	.0	.5	1.5	.5	1.0	4.5	3.5	4.0	18.0	16.5	17.0
10	.5	.0	.5	1.5	.5	1.0	5.0	3.5	4.5	19.0	17.5	18.0
11	.5	.0	.0	2.0	.0	.5	5.0	4.5	5.0	19.5	17.0	18.0
12	1.0	.0	.5	1.5	.0	.5	5.5	4.0	5.0	19.5	18.0	18.5
13	1.0	.0	.5	1.5	.0	.5	6.0	4.5	5.5	19.0	17.0	17.5
14	.5	.0	.0	1.5	.0	.5	6.0	5.5	6.0	19.5	17.5	18.0
15	.5	.0	.0	1.5	.0	.5	5.5	4.0	5.0	17.5	15.5	16.5
16	.5	.0	.0	1.5	.0	.5	5.0	3.5	4.5	16.0	14.5	15.0
17	.0	.0	.0	1.5	.0	.5	8.0	5.0	6.5	15.5	13.0	14.0
18	.5	.0	.0	1.5	.0	.5	10.5	7.5	9.0	15.0	11.5	13.5
19	.5	.0	.0	1.0	.0	.5	10.0	8.0	9.5	14.5	13.5	14.0
20	.5	.0	.0	1.5	.5	.5	8.5	7.0	8.0	14.5	13.0	13.5
21	1.0	.0	.0	2.0	.0	.5	9.5	7.0	8.5	16.0	12.5	14.0
22	.5	.0	.0	2.5	.0	1.0	10.5	8.5	9.5	15.5	13.5	14.5
23	.5	.0	.0	2.0	.0	1.0	11.0	10.0	10.5	15.0	14.5	15.0
24	.5	.0	.0	3.0	.5	1.5	10.5	9.5	10.5	14.5	12.5	13.5
25	.5	.0	.0	2.5	1.0	2.0	11.0	9.0	9.5	14.0	12.0	13.0
26	1.0	.0	.0	3.0	1.5	2.5	11.5	8.5	10.0	16.5	14.0	15.0
27	1.0	.0	.0	2.5	1.0	2.0	11.0	10.0	10.5	16.5	15.0	16.0
28	1.0	.0	.5	1.0	.5	1.0	13.0	10.0	11.5	15.5	14.5	15.0
29	---	---	---	1.0	.0	1.0	15.5	12.0	13.5	14.5	13.5	14.0
30	---	---	---	1.0	.5	1.0	14.0	10.0	12.5	13.5	11.5	13.0
31	---	---	---	1.0	.0	.5	---	---	---	12.5	11.0	12.0
MONTH	1.5	.0	.2	3.0	.0	.8	15.5	.0	6.9	19.5	10.0	14.7
JUNE			JULY			AUGUST			SEPTEMBER			
1	13.5	11.5	12.5	18.0	16.5	17.5	23.0	21.5	22.5	19.0	18.5	18.5
2	15.5	13.0	14.0	19.0	16.5	18.0	22.0	21.0	21.5	19.0	18.5	18.5
3	17.0	14.0	15.0	20.0	19.0	19.5	21.0	20.0	20.5	19.0	17.5	18.0
4	17.0	12.5	15.0	20.5	19.5	20.0	20.5	19.0	20.0	18.5	17.0	18.0
5	17.5	16.0	16.5	21.0	20.0	20.5	20.0	19.0	19.5	17.5	16.5	17.0
6	17.0	16.5	16.5	21.5	20.0	21.0	19.5	18.5	19.0	17.5	16.0	16.5
7	16.5	15.0	16.0	22.0	20.5	21.0	19.5	18.0	18.5	16.5	15.5	16.0
8	16.5	15.0	15.5	21.0	20.5	21.0	20.0	18.5	19.0	16.0	15.0	15.5
9	18.0	16.0	17.0	22.5	20.5	21.5	21.0	19.5	20.0	16.0	15.0	15.5
10	20.0	17.5	18.5	22.5	21.5	22.0	22.5	20.0	21.5	15.0	13.5	14.5
11	21.5	19.0	20.5	23.0	21.5	22.0	23.0	21.5	22.5	13.5	12.0	13.0
12	23.0	21.0	22.0	23.0	21.5	22.0	24.0	22.5	23.0	15.0	12.0	13.5
13	22.5	21.0	21.5	21.5	20.5	21.0	24.0	22.5	23.5	15.5	14.5	15.0
14	21.0	17.5	19.5	22.0	20.0	21.0	23.5	22.5	23.0	15.0	13.5	14.5
15	19.5	18.0	18.5	22.5	20.5	21.5	24.0	22.0	23.0	13.5	12.0	13.0
16	18.5	17.5	18.0	23.0	21.0	22.0	23.5	22.5	23.0	13.5	12.0	13.0
17	17.5	16.5	17.0	23.0	22.0	22.5	23.0	22.0	22.5	13.5	12.5	13.0
18	17.0	16.0	16.5	23.5	22.0	22.5	22.5	21.5	22.0	14.0	12.0	12.5
19	16.0	15.5	15.5	24.5	22.5	23.0	23.0	21.5	22.0	13.5	12.0	12.5
20	16.0	15.0	15.5	24.0	22.5	23.0	22.5	21.0	21.5	13.0	12.0	12.5
21	19.0	15.0	17.0	24.0	22.5	23.0	22.0	20.5	21.0	12.5	12.0	12.5
22	21.5	17.5	19.5	23.5	22.0	23.0	21.0	20.5	21.0	13.5	12.5	12.5
23	22.0	19.5	20.5	22.5	21.0	22.0	22.0	20.5	21.0	13.5	12.0	12.5
24	22.0	20.5	21.0	21.5	20.5	21.0	23.0	21.0	21.5	13.5	12.0	12.5
25	21.0	20.0	20.5	22.0	21.0	21.5	23.5	21.5	22.5	13.5	12.5	13.0
26	21.0	20.0	20.5	23.0	21.0	22.0	24.0	22.5	23.0	13.0	12.0	12.5
27	20.0	19.0	20.0	23.5	22.0	22.5	24.0	22.5	23.0	12.0	11.0	11.5
28	20.0	18.5	19.0	23.0	22.0	22.5	22.5	21.5	22.0	11.0	10.5	10.5
29	20.0	18.5	19.0	23.5	21.5	22.5	22.0	21.0	21.5	10.5	9.5	10.0
30	19.0	18.0	18.5	23.5	21.5	22.5	21.5	20.0	21.0	10.5	9.0	9.5
31	---	---	---	23.0	22.0	22.5	20.0	19.0	19.5	---	---	---
MONTH	23.0	11.5	17.9	24.5	16.5	21.5	24.0	18.0	21.5	19.0	9.0	13.9

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 sea level. Prior to Mar. 25, 1951, nonrecording gage.

REMARKS.--Estimated daily discharges: Ice-affected period, Dec. 18 to Mar. 6. Records good except those for ice-affected period, which is 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215	243	246	220	280	240	1190	388	439	500	445	333
2	217	285	249	230	270	250	774	579	401	593	353	308
3	215	353	245	240	260	250	649	668	366	564	291	298
4	211	350	242	240	250	240	593	516	341	593	277	290
5	207	317	220	240	250	230	586	451	323	541	271	282
6	209	296	251	240	250	230	584	426	313	487	272	274
7	288	286	257	220	250	240	572	422	308	455	266	270
8	426	276	245	220	240	245	734	426	338	451	266	276
9	392	268	244	220	240	250	1130	422	357	473	711	276
10	358	303	248	230	230	254	986	469	362	446	1720	270
11	305	338	246	230	230	247	744	530	350	437	1090	265
12	281	300	244	240	230	232	845	479	336	425	536	269
13	263	280	243	240	230	227	741	423	330	400	446	298
14	255	267	249	230	220	238	615	395	344	394	420	434
15	251	258	262	230	220	259	646	378	333	380	421	344
16	254	254	276	240	220	256	613	364	333	367	423	304
17	259	253	267	230	220	216	538	345	925	357	391	286
18	256	252	230	220	210	236	496	336	3120	351	374	277
19	250	251	230	230	210	254	493	336	2380	345	381	270
20	249	286	210	240	220	238	478	329	1810	335	363	285
21	255	414	230	240	230	233	445	323	2300	319	348	332
22	268	386	240	240	230	232	420	317	1780	311	335	313
23	263	326	230	230	220	234	406	344	1080	307	329	296
24	255	299	220	230	210	241	396	406	851	303	322	279
25	253	284	210	220	210	279	384	422	729	318	314	271
26	254	275	220	240	220	359	375	384	644	339	306	269
27	254	265	230	240	220	831	383	370	590	308	307	267
28	248	256	240	230	230	1170	442	360	547	296	316	269
29	245	254	240	220	---	1490	430	347	516	290	303	267
30	241	254	230	240	---	1790	400	357	503	282	323	262
31	238	---	220	260	---	1640	---	442	---	289	383	---
TOTAL	8135	8729	7414	7220	6500	13331	18088	12754	23349	12256	13303	8734
MEAN	262	291	239	233	232	430	603	411	778	395	429	291
MAX	426	414	276	260	280	1790	1190	668	3120	593	1720	434
MIN	207	243	210	220	210	216	375	317	308	282	266	262
CFSM	.63	.70	.57	.56	.56	1.03	1.44	.98	1.86	.95	1.03	.70
IN.	.72	.78	.66	.64	.58	1.19	1.61	1.14	2.08	1.09	1.18	.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1993, BY WATER YEAR (WY)

	MEAN	257	251	224	197	217	486	633	357	344	267	257	284
MAX	579	704	470	412	657	1021	2054	767	778	667	513	762	
(WY)	1986	1971	1966	1981	1981	1983	1965	1954	1993	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 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1951 - 1993

ANNUAL TOTAL	121188	139813	
ANNUAL MEAN	331	383	315
HIGHEST ANNUAL MEAN			424
LOWEST ANNUAL MEAN			152
HIGHEST DAILY MEAN	2820	Apr 22	3120 Jun 18
LOWEST DAILY MEAN	207	Oct 5	207 Oct 5
ANNUAL SEVEN-DAY MINIMUM	213	Sep 30	217 Feb 14
INSTANTANEOUS PEAK FLOW			3710 Jun 18
INSTANTANEOUS PEAK STAGE			11.01 Jun 18
INSTANTANEOUS LOW FLOW			189 Mar 17
ANNUAL RUNOFF (CFSM)	.79	.92	.75
ANNUAL RUNOFF (INCHES)	10.79	12.44	10.22
10 PERCENT EXCEEDS	427	585	485
50 PERCENT EXCEEDS	265	286	230
90 PERCENT EXCEEDS	224	230	150

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

(b) Result of freezeup

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(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 sea level. Prior to Dec. 9, 1930, nonrecording gage at bridge 400 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Ice-affected period, Dec. 19 to Mar. 24. Records good except those for ice-affected period, which is 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3840	4830	8140	5400	4400	4100	19500	13100	16500	13200	5580	5600
2	4330	5570	7320	4800	5800	5000	18300	13900	20800	12900	6960	6370
3	2710	7550	6920	5200	6400	6400	17800	21200	19500	12300	8890	5310
4	3030	7740	7820	5800	6600	8600	16300	28500	13600	14200	7450	4940
5	3060	10300	7450	6800	5800	9200	15600	29500	11600	13100	6150	4930
6	4860	10400	6420	6000	4500	8400	12000	27400	9670	13200	5050	4050
7	4810	8560	5590	5800	3800	7000	12500	21700	8650	12500	5760	3270
8	6550	7820	5500	5400	3600	5400	14800	20300	11000	11600	4090	4690
9	9340	6660	5820	5200	4400	6400	16100	16100	10200	12200	6580	4310
10	11700	7430	7040	5000	5400	11000	20600	14600	13500	11900	13000	4350
11	12100	7880	6790	5200	6600	10000	25500	14800	15400	12200	12900	4490
12	14700	8040	7600	5800	7000	9600	23900	15400	14600	12100	10900	3660
13	15000	8120	7790	7000	6600	9200	22000	16400	13600	11500	8200	3700
14	11200	8590	7120	6600	5200	8600	22200	15200	12200	9640	6680	8650
15	8840	7870	7570	5800	3600	8000	22400	12300	11400	10000	4860	8480
16	8410	6880	7330	5400	5800	8400	19000	8740	11100	9240	6200	9960
17	7350	7200	7960	4800	7800	8200	20000	8790	11600	8170	6510	9880
18	7760	6850	7200	4200	7400	7600	18300	9050	19700	7990	6310	7720
19	6950	6450	7200	4500	7000	7200	16600	8610	29900	6500	5770	6060
20	6850	6910	6800	5200	6800	6800	16900	8860	36800	8190	5680	5790
21	7840	10600	6000	5800	4000	6000	15900	8270	47700	6600	4750	7110
22	6860	11800	6400	6400	4100	6200	15500	7060	76000	6230	4250	6960
23	7040	14600	6000	5400	5800	5000	13100	6790	84600	5640	4460	7290
24	7730	15400	5600	4800	8200	4100	10800	7550	63600	5630	4800	6470
25	6120	12700	5000	4300	8000	5360	10700	9240	42100	4130	5210	7340
26	5730	11500	5000	5000	7600	5210	10100	10200	29400	3870	4950	5200
27	6430	10500	5200	5800	6600	12200	10300	12100	25900	6520	4670	5880
28	5050	8990	5600	6800	4300	15400	10300	9340	20700	5440	4450	6310
29	5330	8240	6000	6000	---	16800	10600	10300	19100	4940	3400	6260
30	5950	7380	6400	5000	---	17900	13700	8620	18700	5240	4120	5900
31	5370	---	6000	4300	---	18900	---	13600	---	5880	6720	---
TOTAL	222840	263360	204580	169500	163100	268170	491300	427520	739120	282750	195300	180930
MEAN	7188	8779	6599	5468	5825	8651	16380	13790	24640	9121	6300	6031
MAX	15000	15400	8140	7000	8200	18900	25500	29500	84600	14200	13000	9960
MIN	2710	4830	5000	4200	3600	4100	10100	6790	8650	3870	3400	3270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1993, BY WATER YEAR (WY)

	MEAN	6454	6813	5390	4786	4983	9715	15710	10520	9547	6277	4999	7026
MAX	20350	20190	11600	8181	11160	25120	34170	28220	37730	19070	10440	27950	
(WY)	1986	1992	1966	1984	1984	1973	1967	1954	1943	1968	1972	1941	
MIN	2103	2209	2335	2289	2404	3645	4718	3336	2699	2271	2026	1954	
(WY)	1977	1977	1934	1934	1990	1931	1931	1931	1934	1934	1934	1948	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1928 - 1993

ANNUAL TOTAL	2881350	3608470	
ANNUAL MEAN	7873	9886	
HIGHEST ANNUAL MEAN			11550
LOWEST ANNUAL MEAN			3992
HIGHEST DAILY MEAN	43000	Apr 23	84600
LOWEST DAILY MEAN	2050	Aug 30	2710
ANNUAL SEVEN-DAY MINIMUM	3080	Aug 26	3810
INSTANTANEOUS PEAK FLOW			90100
INSTANTANEOUS PEAK STAGE			15.76
INSTANTANEOUS LOW FLOW			2070
10 PERCENT EXCEEDS	12500		16800
50 PERCENT EXCEEDS	6720		7340
90 PERCENT EXCEEDS	3490		4680
			2940
			14400
			5560
			16.93
			1020
			Nov 24 1950
			Apr 2 1967
			Oct 28 1948
			Apr 2 1967
			Apr 2 1967
			Nov 24 1950

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 1992 TO SEPTEMBER 1993

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)	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						JUN 1993						
21...	1230	--	9220	130	9.0	16...	1150	11200	130	18.5		
29...	1100	--	6140	170	8.0	25...	1240	43500	120	20.5		
DEC 01...	1435	--	7860	115	1.0	JUL 14...	0745	10900	134	20.0		
MAR 1993						AUG 05...	1430	6400	155	22.0		
10...	1040	11000	--	190	1.0	31...	1100	6480	176	20.0		
APR 15...	1635	--	22300	115	4.0							
22...	0900	--	15600	112	6.0							
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 1992												
29...	1100	--	6140	170	7.8	8.0	3.1	11.6	736	101	K1100	
MAR 1993												
10...	1040	11000	--	190	6.5	1.0	3.4	13.1	740	95	K940	
APR 22...	0900	--	15600	112	7.0	6.0	2.6	12.4	743	102	K2500	
JUL 14...	0745	--	10900	134	7.2	20.0	2.4	--	745	--	230	
AUG 31...	1100	--	6480	176	6.9	20.0	1.7	7.7	733	88	400	
DATE	TIME	STREP-TOCOCCEI 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 1992												
29...	59	61	15	5.6	4.2	1.1	60	49	6.2	5.6	<0.10	
MAR 1993												
10...	360	67	17	5.9	5.6	1.2	67	55	6.4	6.6	<0.10	
APR 22...	78	39	9.4	3.7	3.1	2.2	39	32	6.7	5.3	<0.10	
JUL 14...	54	48	12	4.4	2.6	1.2	48	39	3.8	3.9	<0.10	
AUG 31...	110	60	15	5.5	3.6	2.4	62	51	4.9	5.4	0.10	
DATE	TIME	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)	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)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BARIUM, DIS-SOLVED (UG/L AS Ba) (01005)
OCT 1992												
29...	9.4	92	0.010	0.530	0.030	0.80	0.080	0.030	0.020	30	13	
MAR 1993												
10...	13	104	0.020	0.780	0.110	0.60	0.070	0.030	0.030	<10	12	
APR 22...	7.9	82	0.010	0.480	0.080	0.70	0.080	0.040	0.030	60	12	
JUL 14...	8.8	88	0.010	0.500	0.050	0.60	0.110	0.070	0.050	--	--	
AUG 31...	8.9	94	0.010	0.610	0.030	0.50	0.080	0.060	0.050	<10	12	

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 1992 TO SEPTEMBER 1993

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	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)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1992											
29...	<3	250	<4	14	<10	<1	<1	33	<6	44	87
MAR 1993											
10...	<3	450	<4	31	<10	<1	<1	32	<6	10	85
APR											
22...	<3	270	<4	14	<10	1	<1	24	<6	43	15
JUL											
14...	--	--	--	--	--	--	--	--	--	19	64
AUG											
31...	<3	230	<4	4	<10	<1	<1	33	<6	28	56
DATE	TIME	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)	
APR 1993											
22...	0900	15600	<0.6	<0.6	2.3	<0.6	2.1	<0.6	0.03	0.05	
AUG											
31...	1100	6480	<0.6	<0.6	2.6	0.8	2.2	0.8	0.04	0.08	

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 above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Periods of ice effect, Dec. 15-21, 24-30, Jan. 1-4, 6-14, 25, 29-31, Feb. 15-22, 24-27, and Mar. 14-16, 18. Records good for discharges less than 500 ft³/s, fair for estimated periods, and poor for discharges greater than 500 ft³/s.

REVISIONS.--The maximum discharge for water year 1992 has been revised to 2,230 ft³/s, Apr. 20, 1992, gage height, 6.27 ft; revised daily discharges for high-water periods in water year 1992 and monthly and annual discharges, in cubic feet per second, for the calendar year 1991 and water year 1992 are given below. Estimated daily discharges are poor. These figures supersede those published in the report for 1992.

Daily revisions are:

Nov. 18, 1991.....920 ft ³ /s	Apr. 16, 1992.....139 ft ³ /s	Apr. 22, 1992....e192 ft ³ /s
Nov. 19.....206 ft ³ /s	Apr. 19.....164 ft ³ /s	July 12.....574 ft ³ /s
Mar. 5, 1992.....286 ft ³ /s	Apr. 20.....e944 ft ³ /s	July 13.....110 ft ³ /s
Mar. 6.....e271 ft ³ /s	Apr. 21.....e675 ft ³ /s	Sept. 16.....209 ft ³ /s
Apr. 15.....137 ft ³ /s		

e Estimated

Monthly and annual revisions are:

	Total	Mean	Max	Min
November 1991	1,965.4	65.5	920	9.8
March 1992	1,481	47.8	286	12
April 1992	3,008	100	944	23
July 1992	1,110	35.8	574	12
September 1992	537.3	17.9	209	9.6
Cal Yr 1991	12,410.8	34.0	949	7.6
Wtr Yr 1992	11,083.9	30.3	944	7.7

CHIPPEWA RIVER BASIN

05369945 EAU GALLE RIVER AT LOW-WATER BRIDGE AT SPRING VALLEY, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	11	13	10	8.5	9.1	100	27	25	20	19	23
2	10	14	13	10	7.2	8.9	59	183	20	20	26	19
3	10	27	13	9.8	7.1	8.9	51	57	19	20	18	18
4	10	28	13	9.8	8.1	8.8	79	34	18	24	16	17
5	10	23	12	9.8	8.1	8.8	83	26	17	23	16	17
6	11	20	12	9.8	8.1	9.2	67	22	17	20	16	17
7	25	17	12	9.8	8.1	9.1	75	21	17	19	16	16
8	59	15	12	9.8	8.1	9.3	257	21	18	18	16	16
9	49	16	12	10	8.4	9.3	143	23	19	18	1470	16
10	25	128	12	10	8.5	9.6	65	34	19	18	131	16
11	19	64	12	10	8.5	9.2	142	42	18	79	35	16
12	15	29	12	11	8.1	9.1	159	27	17	34	24	17
13	13	21	11	11	8.1	8.9	60	21	18	22	21	18
14	12	18	11	10	8.1	8.8	68	19	19	20	21	29
15	12	15	11	10	8.0	8.6	131	18	19	18	23	21
16	12	14	11	10	8.0	8.4	84	18	20	18	24	17
17	11	14	11	9.9	8.2	8.3	38	18	1330	18	21	16
18	11	13	11	11	8.2	8.8	29	18	231	18	24	16
19	11	13	11	11	8.4	9.0	25	17	144	17	21	16
20	11	45	11	11	8.4	8.9	22	18	261	17	20	16
21	11	55	11	11	8.4	8.9	20	17	101	17	19	27
22	11	41	11	9.1	8.4	8.5	19	18	38	17	18	23
23	11	25	11	8.5	8.6	8.5	19	18	27	17	18	22
24	11	19	11	8.1	8.6	8.8	18	19	25	17	18	18
25	10	18	11	8.6	8.8	10	18	21	23	17	17	17
26	10	16	11	8.8	8.8	71	17	20	21	17	17	16
27	10	15	11	8.5	9.0	295	18	19	21	16	18	16
28	11	14	10	8.6	9.6	436	30	18	20	16	17	15
29	11	14	10	8.6	---	526	25	18	20	16	17	15
30	11	14	10	8.2	---	317	20	21	20	16	48	16
31	10	---	10	7.8	---	248	---	39	---	17	53	---
TOTAL	463	776	353	299.5	232.4	2116.7	1941	892	2582	644	2238	542
MEAN	14.9	25.9	11.4	9.66	8.30	68.3	64.7	28.8	86.1	20.8	72.2	18.1
MAX	59	128	13	11	9.6	526	257	183	1330	79	1470	29
MIN	10	11	10	7.8	7.1	8.3	17	17	17	16	16	15
CFSM	.31	.54	.24	.20	.17	1.43	1.35	.60	1.80	.43	1.51	.38
IN.	.36	.60	.27	.23	.18	1.64	1.51	.69	2.01	.50	1.74	.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1993, BY WATER YEAR (WY)

	MEAN	16.7	25.1	13.6	9.16	9.24	93.4	47.7	32.6	40.7	19.8	20.5	27.1
MAX	47.5	65.5	25.7	13.3	14.2	152	104	67.0	157	35.8	72.2	129	129
(WY)	1987	1992	1983	1987	1983	1990	1983	1991	1990	1992	1993	1986	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	9.34
(WY)	1990	1990	1990	1990	1990	1987	1987	1987	1988	1988	1988	1982	1982

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1982 - 1993

ANNUAL TOTAL	9725.0	13079.6	
ANNUAL MEAN	26.6	35.8	29.2
HIGHEST ANNUAL MEAN			40.9
LOWEST ANNUAL MEAN			14.8
HIGHEST DAILY MEAN	944	1470	2460
LOWEST DAILY MEAN	9.2	7.1	6.0
ANNUAL SEVEN-DAY MINIMUM	9.3	7.8	6.0
INSTANTANEOUS PEAK FLOW		5050	(b)6000
INSTANTANEOUS PEAK STAGE		8.06	(c)13.80
INSTANTANEOUS LOW FLOW		(d)6.1	4.7
ANNUAL RUNOFF (CFSM)	.55	.75	.61
ANNUAL RUNOFF (INCHES)	7.55	10.16	8.29
10 PERCENT EXCEEDS	34	52	34
50 PERCENT EXCEEDS	13	17	12
90 PERCENT EXCEEDS	9.9	8.6	7.6

(a) Also occurred Feb. 1, 1990

(b) From rating curve extended above 172 ft³/s on basis of indirect measurement of peak flow, gage height, 8.80 ft, but may have been exceeded on Mar. 27, 1989

(c) Backwater from reservoir

(d) Also occurred Jan. 28, 29

CHIPPEWA RIVER BASIN

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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 September 1993 (discontinued).

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, 22.5°C, Aug. 10; minimum, 0.0°C for many days December through April.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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					APR 1993				
22...	1220	11.0	495	7.5	13...	1150	61.0	262	4.5
NOV					MAY				
17...	1000	14.0	470	3.5	13...	1220	20.0	410	14.0
DEC					18...	1620	18.0	393	12.5
02...	1635	13.0	397	2.0	JUN				
28...	1510	10.0	370	0.0	18...	1345	172	228	16.5
JAN 1993					30...	1125	20.0	440	15.0
21...	1550	11.0	415	0.5	JUL				
FEB					19...	1346	17.0	470	18.0
01...	1110	8.50	455	1.0	AUG				
MAR					19...	0930	19.0	400	16.5
12...	1030	9.10	395	1.0					
30...	1050	234	160	1.5					

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	12.0	9.5	11.0	6.0	3.0	5.0	2.5	1.0	2.0	.5	.0	.0
2	12.5	10.5	11.5	4.0	2.5	3.0	2.5	2.0	2.0	.0	.0	.0
3	12.5	11.0	12.0	4.0	3.5	3.5	2.0	1.5	2.0	.0	.0	.0
4	12.0	10.5	11.5	3.5	3.0	3.5	2.0	.5	1.0	.0	.0	.0
5	12.5	11.0	11.5	4.0	3.0	3.5	.5	.0	.0	.0	.0	.0
6	12.0	11.0	11.5	3.0	2.5	3.0	.5	.0	.5	.0	.0	.0
7	11.0	10.0	10.5	3.5	2.5	3.0	1.0	.5	1.0	.0	.0	.0
8	10.5	9.5	10.0	4.0	3.0	3.0	1.5	1.0	1.0	.0	.0	.0
9	10.0	9.5	9.5	6.0	4.0	4.5	1.5	.5	1.0	.0	.0	.0
10	11.0	9.0	10.0	6.0	4.0	5.0	2.5	1.5	2.5	.0	.0	.0
11	10.0	8.0	9.5	4.0	3.0	4.0	2.5	2.0	2.0	.0	.0	.0
12	10.0	8.5	9.5	4.0	3.0	3.5	2.5	1.5	2.0	.0	.0	.0
13	8.5	6.5	7.5	3.0	2.0	2.5	3.0	2.5	2.5	.5	.0	.0
14	8.5	7.5	8.0	2.5	1.5	2.0	3.5	2.5	3.0	.5	.0	.0
15	8.0	6.5	7.0	2.0	1.0	1.5	4.0	3.5	3.5	.5	.0	.0
16	7.0	6.0	6.5	3.5	2.0	2.5	3.5	2.5	3.0	.5	.0	.0
17	6.5	5.0	5.5	4.5	3.5	4.0	2.5	1.0	2.0	.5	.0	.0
18	6.0	4.0	5.0	4.5	4.0	4.0	1.0	.5	.5	.0	.0	.0
19	4.5	3.0	3.5	4.5	4.0	4.0	1.0	.0	1.0	.5	.0	.0
20	5.0	4.0	4.5	4.0	1.5	3.5	.0	.0	.0	.5	.0	.0
21	7.0	5.0	6.0	2.5	1.5	2.0	.5	.0	.5	.5	.0	.0
22	10.5	6.5	8.0	2.5	2.5	2.5	.5	.0	.5	.5	.0	.5
23	11.5	9.5	10.5	3.0	2.5	3.0	.5	.0	.0	.5	.5	.5
24	11.0	9.0	9.5	4.0	3.0	3.5	.0	.0	.0	.5	.0	.0
25	9.5	7.5	8.5	4.0	3.5	4.0	.0	.0	.0	.5	.0	.0
26	9.5	7.5	8.5	3.5	2.0	2.5	.0	.0	.0	.5	.0	.0
27	7.5	5.5	6.5	2.0	1.0	1.5	.5	.0	.0	.5	.0	.0
28	7.0	5.5	6.0	2.0	.5	1.5	.5	.0	.0	.5	.0	.0
29	5.5	4.0	5.0	2.0	1.0	1.5	.0	.0	.0	.5	.0	.0
30	5.0	3.0	4.0	2.0	1.5	2.0	.5	.0	.0	.5	.0	.0
31	6.0	5.0	5.5	---	---	---	.5	.0	.0	1.0	.0	.5
MONTH	12.5	3.0	8.2	6.0	.5	3.1	4.0	.0	1.1	1.0	.0	.0

CHIPPEWA RIVER BASIN

05369945 EAU GALLE RIVER AT LOW-WATER BRIDGE AT SPRING VALLEY, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	1.0	.0	.5	1.0	.0	.5	4.5	.0	1.5	---	---	---
2	1.0	.0	.5	1.5	.0	.5	5.0	.0	2.5	---	---	---
3	1.5	.5	1.0	2.0	.5	1.0	5.5	1.0	3.5	---	---	---
4	1.0	.0	.5	2.5	.5	1.5	6.0	1.5	3.5	---	---	---
5	1.5	1.0	1.5	3.0	1.0	2.0	6.0	2.5	4.5	---	---	---
6	1.5	1.0	1.5	2.5	1.0	2.0	7.5	4.0	5.5	---	---	---
7	1.5	1.0	1.5	4.0	2.0	3.0	6.0	4.5	5.0	---	---	---
8	1.5	1.0	1.5	4.0	3.0	3.5	4.5	3.5	4.0	---	---	---
9	2.0	1.0	1.5	3.5	2.5	3.0	6.0	3.5	5.0	---	---	---
10	2.0	1.5	2.0	3.5	1.5	2.5	7.5	3.5	5.5	---	---	---
11	1.5	.5	1.0	3.0	1.0	2.0	7.0	4.0	5.0	---	---	---
12	1.5	.5	1.0	1.5	.0	1.0	5.5	3.5	4.5	---	---	---
13	2.0	1.0	1.5	1.5	.0	.5	7.0	3.5	5.0	---	---	---
14	1.5	.0	.5	1.0	.0	.5	6.5	4.5	5.5	---	---	---
15	.5	.0	.0	1.5	.0	.5	4.5	3.0	4.0	---	---	---
16	.5	.0	.0	2.5	.5	1.5	7.5	2.5	5.0	---	---	---
17	.5	.0	.0	1.5	.0	.5	9.5	4.5	7.0	---	---	---
18	.5	.0	.0	1.5	.0	.5	11.5	7.0	9.5	12.5	10.5	11.5
19	.5	.0	.0	1.5	.5	1.0	10.5	6.5	8.5	12.5	9.5	11.0
20	.5	.0	.0	2.5	1.5	2.0	10.0	5.0	7.5	12.0	9.0	10.5
21	.5	.0	.0	4.0	2.0	3.0	11.0	5.5	8.0	15.0	9.0	12.0
22	.5	.0	.0	4.0	2.0	3.0	12.0	6.5	9.0	13.5	10.5	12.5
23	.5	.0	.0	5.0	3.0	4.0	12.5	9.0	10.5	12.5	12.0	12.5
24	.5	.0	.0	6.0	3.5	5.0	11.0	8.5	10.0	12.0	10.5	11.5
25	.5	.0	.0	6.0	4.0	5.0	12.5	7.0	9.5	15.0	9.5	12.0
26	.5	.0	.0	8.0	.0	4.5	13.0	7.5	10.0	16.5	11.5	14.0
27	.5	.0	.0	2.0	.0	.5	11.5	9.5	10.5	15.0	13.5	14.0
28	.5	.0	.0	3.5	.0	1.0	---	---	---	15.0	12.0	13.5
29	---	---	---	3.5	.0	1.0	---	---	---	13.5	10.5	12.0
30	---	---	---	2.0	.0	1.0	---	---	---	13.0	10.0	11.5
31	---	---	---	1.5	.0	.5	---	---	---	13.0	9.5	11.0
MONTH	2.0	.0	.6	8.0	.0	1.9	---	---	---	---	---	---
JUNE			JULY			AUGUST			SEPTEMBER			
1	13.0	9.5	11.5	16.5	14.5	15.5	19.0	15.0	17.0	16.5	14.0	15.5
2	15.0	11.0	13.0	17.5	15.0	16.0	18.0	15.5	17.0	17.0	14.5	15.5
3	16.0	11.5	13.5	16.0	14.5	15.5	17.0	15.5	16.5	16.0	14.0	15.0
4	15.5	12.0	13.5	18.0	15.5	16.5	17.0	13.5	15.0	15.5	13.0	14.0
5	16.5	11.5	14.0	17.5	16.5	17.0	16.0	14.0	15.0	14.5	12.5	13.5
6	16.0	12.5	14.0	19.5	15.0	17.0	15.5	13.0	14.0	14.0	11.5	12.5
7	15.0	13.5	14.0	17.5	15.5	16.5	16.0	12.5	14.5	14.0	11.0	12.5
8	16.5	13.5	15.0	16.0	15.0	15.0	17.0	13.5	15.0	13.5	11.0	12.5
9	16.5	14.0	15.0	18.5	14.5	16.0	21.5	16.0	19.0	14.5	12.5	13.5
10	18.5	13.5	16.0	18.0	15.0	16.5	22.5	19.5	21.0	13.0	11.0	12.0
11	20.0	14.5	17.0	20.0	15.5	17.5	20.5	18.0	19.5	11.5	10.0	10.5
12	19.5	16.0	18.0	19.0	16.0	17.5	20.5	17.5	19.0	13.5	10.5	12.0
13	18.5	16.5	17.0	17.5	14.5	16.0	19.5	17.5	18.5	14.5	13.0	14.0
14	17.0	15.0	16.0	18.0	14.0	15.5	18.0	16.5	17.0	14.0	11.5	12.0
15	18.0	14.0	16.0	19.0	14.0	16.5	18.5	16.0	17.0	11.5	10.5	11.0
16	16.5	14.5	15.5	19.0	15.5	17.5	17.5	16.5	17.0	12.0	10.5	11.0
17	17.5	15.0	16.5	17.5	16.0	16.5	19.0	15.5	17.0	11.5	10.5	11.0
18	17.5	16.0	16.5	18.5	15.5	17.0	18.0	16.5	17.0	12.5	9.5	11.0
19	16.0	15.0	15.5	20.0	16.0	18.0	19.5	16.0	17.5	11.0	9.0	10.0
20	16.0	15.5	15.5	18.5	15.5	17.0	18.0	16.0	17.0	10.5	10.0	10.5
21	20.0	14.5	17.0	18.5	14.5	16.5	18.0	15.0	16.5	11.5	10.5	11.0
22	20.5	16.0	18.0	18.0	15.0	16.5	17.0	15.0	16.0	12.5	11.5	12.0
23	20.5	17.0	18.5	17.0	15.5	16.0	19.0	15.5	17.0	12.0	10.0	11.0
24	19.0	16.5	18.0	16.0	15.0	15.5	19.5	16.0	17.5	11.5	9.0	10.0
25	18.5	14.5	16.5	18.0	15.0	16.0	20.0	16.0	18.0	11.0	9.0	10.0
26	19.0	15.0	17.0	20.5	16.0	18.0	20.0	17.0	18.5	10.0	9.0	9.5
27	18.5	15.0	16.5	19.0	16.5	18.0	19.5	17.5	18.5	10.0	8.5	9.0
28	17.5	14.0	15.5	18.0	16.5	17.0	17.5	15.5	16.5	9.0	7.5	8.5
29	17.5	13.5	15.5	18.5	15.5	17.0	16.5	14.5	16.0	9.0	7.5	8.0
30	16.5	14.5	15.5	19.5	15.0	17.0	17.5	15.5	16.0	10.0	6.5	8.0
31	---	---	---	18.0	16.5	17.0	17.5	16.0	17.0	---	---	---
MONTH	20.5	9.5	15.7	20.5	14.0	16.6	22.5	12.5	17.0	17.0	6.5	11.5

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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.

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

GAGE.--Water-stage recorder, crest-stage gage, and v-notch sharp-crested weir. Datum of gage is 900.00 ft above sea level (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 sea level. Aug. 1, 1957, to June 6, 1966, nonrecording gage at downstream site at datum of 910.45 ft above sea level. June 7, 1966, to Oct. 31, 1968, nonrecording gage at downstream site at datum of 909.45 ft above sea level.

REMARKS.--Estimated daily discharges: Apr. 16-20. Records good except those for estimated period, which is fair. 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 sea level, 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.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	20	22	18	17	16	171	31	40	30	31	41
2	17	26	21	18	17	16	82	153	32	32	39	31
3	17	29	21	18	17	16	61	93	28	30	37	27
4	17	35	21	18	17	16	74	51	26	33	33	25
5	17	32	20	18	17	16	93	38	24	34	30	23
6	17	29	20	18	17	17	80	32	23	31	29	23
7	28	26	20	18	17	17	71	30	23	28	27	23
8	48	25	20	18	17	17	224	28	25	28	29	23
9	51	24	21	18	17	17	271	28	26	27	1000	23
10	37	75	21	17	17	18	107	32	26	26	307	23
11	30	80	20	17	17	17	104	43	25	75	81	23
12	25	42	20	19	17	17	253	35	24	68	45	24
13	22	31	20	20	17	17	96	31	25	38	34	27
14	21	27	21	19	17	16	63	28	28	32	32	31
15	20	25	21	18	17	16	129	25	27	28	34	33
16	20	23	21	18	17	16	128	24	27	27	35	28
17	20	22	21	18	16	16	70	24	875	27	33	25
18	19	22	21	17	16	16	48	24	446	27	32	24
19	19	21	21	17	16	16	41	24	175	27	33	23
20	20	43	20	17	16	16	38	23	296	27	30	26
21	20	130	20	18	17	16	31	23	214	27	28	31
22	19	66	19	18	17	16	30	23	93	27	26	34
23	19	40	19	18	17	16	28	25	53	27	25	31
24	19	32	18	17	16	16	29	28	38	28	24	28
25	19	28	18	17	16	17	28	28	34	31	25	26
26	19	25	18	18	16	39	27	28	32	32	25	26
27	19	24	18	18	16	310	29	28	30	31	26	24
28	18	24	18	17	16	430	33	28	29	31	25	25
29	18	23	19	17	---	552	35	26	29	29	25	24
30	18	22	19	17	---	413	32	29	30	29	31	23
31	18	---	18	17	---	377	---	41	---	30	62	---
TOTAL	688	1071	617	551	467	2531	2506	1104	2803	997	2273	798
MEAN	22.2	35.7	19.9	17.8	16.7	81.6	83.5	35.6	93.4	32.2	73.3	26.6
MAX	51	130	22	20	17	552	271	153	875	75	1000	41
MIN	17	20	18	17	16	16	27	23	23	26	24	23

MEAN	26.3	27.0	18.3	14.7	19.6	75.6	65.3	37.4	42.2	27.0	27.6	31.9
MAX	81.3	86.2	39.7	19.5	71.6	164	128	94.9	148	94.1	88.8	153
(WY)	1971	1971	1978	1992	1981	1989	1969	1973	1980	1978	1975	1986
MIN	10.4	7.24	4.22	5.21	5.77	10.1	19.5	12.4	11.6	12.5	5.95	9.61
(WY)	1970	1969	1969	1969	1969	1970	1987	1977	1969	1988	1969	1969

CHIPPEWA RIVER BASIN

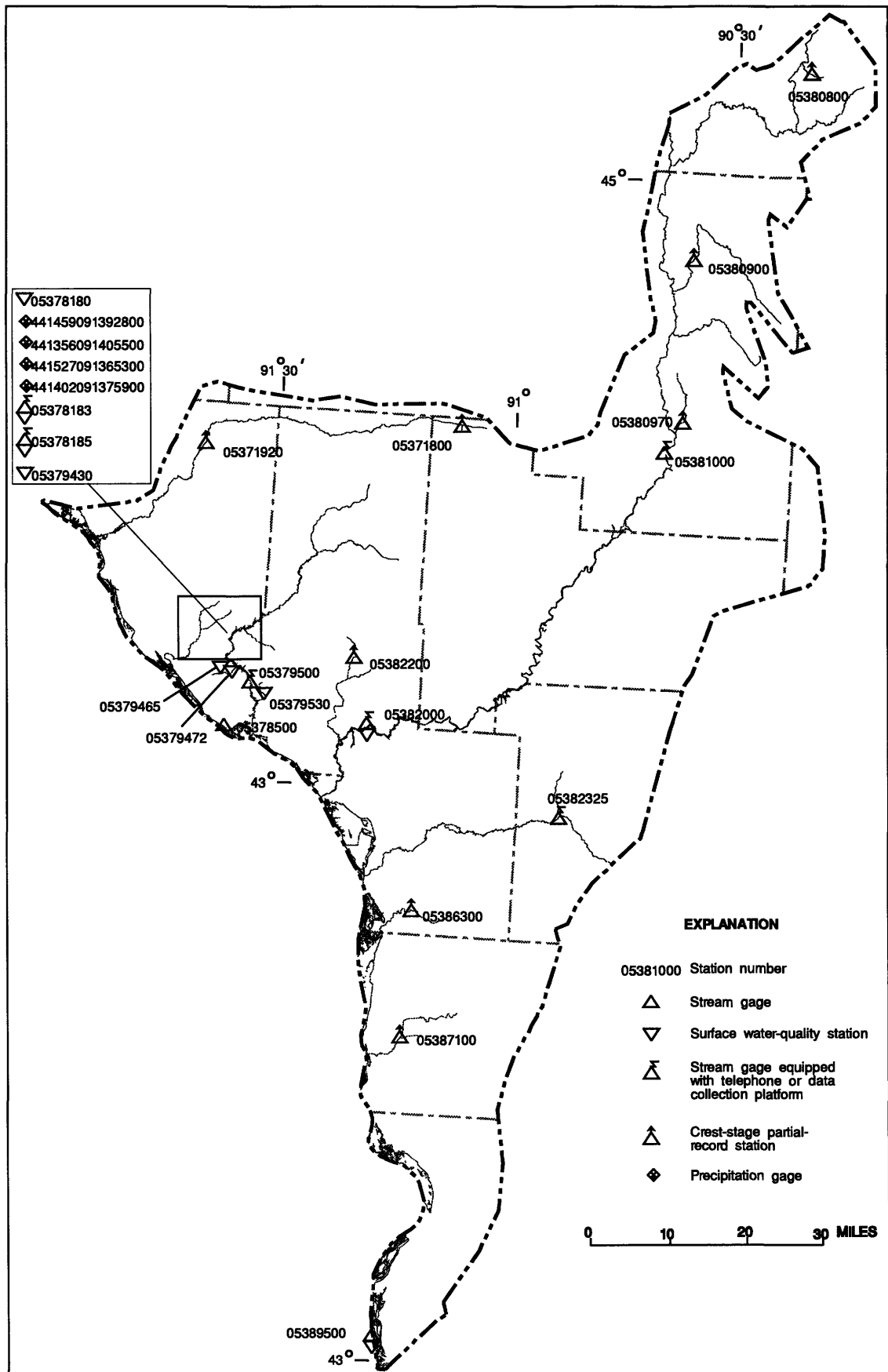
05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1969 - 1993	
ANNUAL TOTAL	13757.9		16406		34.5	
ANNUAL MEAN	37.6		44.9		55.8	
HIGHEST ANNUAL MEAN					21.2	
LOWEST ANNUAL MEAN					2190	
HIGHEST DAILY MEAN	744	Apr 21	1000	Aug 9	2190	Mar 28 1989
LOWEST DAILY MEAN	6.2	Sep 11	16	(a)Feb 17	(b).00	Aug 12-16 1971
ANNUAL SEVEN-DAY MINIMUM	16	Aug 16	16	Feb 24	.91	Sep 15 1969
INSTANTANEOUS PEAK FLOW			2170	Aug 9	(c)3030	Jun 7 1980
INSTANTANEOUS PEAK STAGE			18.65	Aug 9	(c)19.90	Jun 7 1980
INSTANTANEOUS LOW FLOW			15	Mar 16	(b).00	Aug 11-16 1971
10 PERCENT EXCEEDS	48		67		48	
50 PERCENT EXCEEDS	21		25		18	
90 PERCENT EXCEEDS	17		17		12	

(a) Also occurred on Feb. 18-20, Feb. 24 to Mar. 5, and Mar. 14-24

(b) Flow shut off at flood-control dam upstream due to request by Wisconsin Department of Natural Resources for eradication of rough fish to improve sport fishing

(c) Peak discharge and stage prior to construction of flood-control reservoir occurred Apr. 15, 1954, and was 7,000 ft³/s and 12.50 ft (datum then in use), respectively



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

TREMPEALEAU-BLACK RIVER BASIN

WAUMANDEE CREEK BASIN

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. Rainfall estimated to be 0.00 for Jan. 3, 4, 21-23, 26, 31, Mar. 1-3, 15, 16, 19, 22, and Apr. 1-3 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the period June 18-25.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.22 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.83 in., Apr. 19.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.50	.00	.00	.00	.00	.00	.78	.00	.01	.00	.00
2	.00	1.01	.00	.00	.00	.00	.00	.14	.02	1.03	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.28	.00	1.07	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00
6	.01	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
7	.01	.00	.00	.00	.00	.00	.50	.05	.76	.11	.00	.06
8	.22	.12	.00	.00	.00	.00	.26	.00	1.45	.04	.09	.01
9	.02	.08	.00	.00	.00	.00	.00	.00	.01	.01	.86	.00
10	.13	.00	.00	.00	.00	.00	.01	.63	.00	.00	.00	.00
11	.00	.01	.00	.00	.00	.00	.90	.00	.00	.36	.00	.34
12	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.01	.00	.16	.29	.00	1.60
14	.00	.00	.09	.00	.00	.00	.32	.00	.00	.00	.14	.02
15	.00	.00	.47	.00	.00	.00	.55	.00	.00	.01	1.11	.00
16	.02	.00	.00	.00	.00	.00	.26	.00	.71	.00	.10	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	1.41	.16	.01	.00
18	.00	.00	.00	.00	.00	.00	.21	.02	---	.00	1.28	.00
19	.00	.31	.00	.00	.00	.00	1.83	.00	---	.01	.00	.17
20	.22	1.09	.00	.00	.00	.00	.18	.00	---	.00	.00	.09
21	.00	.12	.00	.00	.00	.00	.00	.00	---	.00	.00	.08
22	.00	.00	.00	.00	.00	.00	.00	.09	---	.00	.00	.03
23	.00	.00	.00	.00	.00	.00	.00	.47	---	.02	.00	.00
24	.00	.00	.00	.00	.00	.00	.01	.15	---	.03	.00	.00
25	.00	.01	.00	.00	.00	.00	.00	.01	---	.29	.00	.00
26	.00	.00	.00	.00	.00	.00	.02	.03	.00	.00	.00	.07
27	.00	.00	.00	.00	.00	.00	1.13	.24	.00	.46	.00	.10
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.02
29	.00	.00	.00	.00	---	.00	.01	.00	.57	.00	.00	.00
30	.00	.00	.00	.00	---	.31	.00	1.34	.00	.00	1.77	.00
31	.00	---	.00	.00	---	1.36	---	.00	---	.19	.00	---
TOTAL	0.63	3.25	0.57	0.00	0.00	1.67	6.20	4.31	---	4.11	5.39	2.59

WAUMANDEE CREEK BASIN

77

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 1992 TO SEPTEMBER 1993

DATE	TIME	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 1993			
*19...	1720	1160	92
JUN			
08...	1712	4270	91
08...	1736	5060	92
JUL			
03...	1536	6040	97
03...	1611	7880	95

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

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 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 19, 1990. Rainfall estimated to be 0.00 for Dec. 29, Feb. 28, and Mar. 1, 2, 15, 16, 22 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the period Mar. 30 to Apr. 20.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.23 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.76 in., Sept. 13.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.70	.00	.00	.00	.00	---	.88	.00	.00	.00	.00
2	.00	.79	.00	.00	.00	.00	---	.15	.04	1.40	.00	.00
3	.00	.08	.00	.00	.00	.00	---	.30	.00	.94	.00	.00
4	.00	.00	.00	.00	.00	.00	---	.06	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	---	.00	.00	.03	.18	.00
6	.01	.00	.00	.00	.00	.00	---	.00	.00	.00	.01	.00
7	.03	.00	.00	.00	.00	.00	---	.05	.79	.11	.00	.01
8	.32	.01	.00	.00	.00	.00	---	.00	1.56	.05	.09	.00
9	.00	.08	.00	.00	.00	.00	---	.00	.01	.02	1.22	.00
10	.07	.00	.00	.00	.00	.00	---	.80	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	---	.00	.00	.42	.00	.41
12	.00	.02	.03	.00	.00	.00	---	.00	.00	.00	.00	.00
13	.00	.00	.11	.00	.00	.00	---	.00	.16	.38	.00	1.76
14	.00	.00	.29	.00	.00	.00	---	.01	.00	.00	.14	.01
15	.00	.00	.15	.00	.00	.00	---	.00	.00	.00	1.13	.01
16	.02	.00	.00	.00	.00	.00	---	.00	.76	.00	.13	.00
17	.01	.00	.00	.00	.00	.00	---	.00	1.36	.19	.00	.00
18	.00	.00	.00	.00	.00	.00	---	.00	.62	.03	1.39	.00
19	.00	.54	.00	.00	.00	.00	---	.00	1.32	.01	.00	.21
20	.20	1.12	.00	.00	.00	.00	---	.00	.07	.00	.00	.10
21	.00	.11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09
22	.00	.00	.00	.00	.00	.00	.00	.12	.00	.00	.00	.04
23	.00	.00	.00	.00	.00	.00	.01	.55	.11	.03	.00	.00
24	.00	.00	.00	.00	.00	.00	.01	.18	.14	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.25	.00	.00
26	.00	.00	.00	.00	.00	.00	.01	.03	.00	.00	.00	.09
27	.00	.00	.00	.00	.00	.00	1.12	.16	.00	.93	.01	.06
28	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.03
29	.00	.00	.00	.00	---	.00	.01	.02	.63	.00	.00	.00
30	.00	.00	.00	.00	---	---	.00	1.35	.00	.00	1.70	.00
31	.02	---	.00	.00	---	---	---	.00	---	.19	.01	---
TOTAL	0.68	3.45	0.58	0.00	0.00	---	---	4.66	7.57	4.98	6.01	2.82

WAUMANDEE CREEK BASIN

79

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. Rainfall estimated to be 0.00 for Oct. 22, Jan. 21-23, 26, 31, Mar. 1, 16, 22, 23, and Apr. 2, 3 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.25 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.05 in., Apr. 19.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.49	.00	.00	.00	.00	.00	.70	.00	.02	.00	.00
2	.00	.85	.00	.00	.00	.00	.00	.18	.01	1.06	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.30	.00	1.18	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.02	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
7	.01	.00	.00	.00	.00	.00	.44	.04	.90	.35	.00	.09
8	.18	.01	.00	.00	.00	.00	.26	.00	1.56	.04	.09	.01
9	.01	.02	.00	.00	.00	.00	.01	.01	.02	.01	.89	.01
10	.11	.00	.00	.00	.00	.00	.01	.53	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.57	.00	.00	.37	.00	.31
12	.00	.02	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
13	.00	.00	.01	.00	.00	.00	.00	.00	.31	.34	.00	1.39
14	.00	.00	.06	.00	.00	.00	.14	.00	.00	.00	.14	.02
15	.00	.00	.37	.00	.00	.00	.10	.00	.00	.00	1.11	.01
16	.01	.00	.00	.00	.00	.00	.01	.00	.67	.00	.04	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	1.18	.13	.01	.00
18	.00	.00	.00	.00	.00	.00	.24	.02	.52	.00	1.04	.00
19	.00	.24	.00	.00	.00	.00	2.05	.00	1.25	.01	.00	.18
20	.12	1.29	.00	.00	.00	.00	.01	.00	.06	.00	.00	.15
21	.00	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10
22	.00	.00	.00	.00	.00	.00	.00	.09	.00	.00	.00	.03
23	.00	.00	.00	.00	.00	.00	.00	.49	.03	.09	.00	.00
24	.00	.00	.00	.00	.00	.00	.02	.13	.36	.02	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.01	.00	.06	.00	.00
26	.00	.00	.00	.00	.00	.00	.01	.01	.00	.00	.02	.06
27	.00	.00	.00	.00	.00	.00	1.10	.95	.00	.47	.00	.06
28	.00	.00	.00	.01	.00	.00	.01	.00	.00	.01	.00	.01
29	.00	.00	.00	.00	---	.00	.01	.01	.57	.00	.00	.00
30	.00	.00	.00	.00	---	.18	.00	1.11	.00	.00	1.68	.00
31	.00	---	.00	.00	---	1.39	---	.00	---	.15	.00	---
TOTAL	0.44	3.01	0.44	0.01	0.00	1.57	5.02	4.62	7.44	4.33	5.05	2.43

WAUMANDEE CREEK BASIN

441402091375900 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. Rainfall estimated to be 0.00 for Jan. 3, 4, 21-23, 26, 31, Mar. 1-3, 11, 15, 16, 19, 22, and Apr. 1-3 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for June 29, July 13, and Sept. 21. Precipitation data previously published under number 441402091395900.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.62 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.16 in., Apr. 19.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.79	.00	.00	.00	.00	.00	.77	.00	.00	.00	.00
2	.00	.75	.00	.00	.00	.00	.00	.22	.01	1.32	.00	.00
3	.00	.03	.00	.00	.00	.00	.00	.28	.00	.53	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.01	.00	.03	.04	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.01	.00	.00	.00	.00	.00	.50	.04	.30	.25	.00	.01
8	.19	.02	.00	.00	.00	.00	.26	.00	1.57	.03	.08	.00
9	.01	.06	.00	.00	.00	.00	.01	.01	.02	.03	1.33	.01
10	.12	.00	.00	.00	.00	.00	.01	.58	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.78	.00	.00	.41	.00	.45
12	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.01	.00	.00	.00	.00	.00	.25	---	.00	1.65
14	.00	.00	.37	.00	.00	.00	.34	.00	.01	.00	.14	.04
15	.00	.00	.30	.00	.00	.00	.67	.00	.00	.00	1.27	.00
16	.02	.00	.00	.00	.00	.00	.64	.00	.81	.00	.03	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	1.13	.11	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.60	.00	1.09	.00
19	.00	.46	.00	.00	.00	.00	2.16	.00	1.43	.01	.00	.19
20	.30	1.12	.00	.00	.00	.00	.24	.00	.07	.00	.00	.12
21	.00	.12	.00	.00	.00	.00	.00	.00	.00	.00	.00	---
22	.00	.00	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.32	.04	.03	.00	.01
24	.00	.00	.00	.00	.00	.00	.00	.09	.50	.05	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.01	.00	.08	.00	.00
26	.00	.00	.00	.00	.00	.00	.01	.01	.00	.00	.01	.06
27	.00	.00	.00	.00	.00	.00	1.22	.14	.00	.97	.00	.10
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
29	.00	.00	.00	.00	---	.00	.01	.03	---	.00	.00	.00
30	.00	.00	.00	.00	---	.29	.01	1.33	.00	.00	2.08	.00
31	.01	---	.00	.00	---	1.51	---	.01	---	.25	.00	---
TOTAL	0.66	3.36	0.68	0.00	0.00	1.80	6.86	4.04	---	---	6.07	---

WAUMANDEE CREEK BASIN

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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 sea level, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Feb. 15-19 and Feb. 23-25. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	5.1	4.2	3.1	3.3	3.5	9.8	12	4.8	6.0	5.8	6.3
2	3.2	8.3	4.2	3.2	3.3	3.4	8.0	13	4.6	19	5.4	6.0
3	3.2	5.8	4.3	3.5	3.3	3.6	7.3	12	4.3	31	5.2	5.8
4	3.2	5.0	4.2	3.5	3.1	3.7	6.7	12	4.1	9.8	5.1	5.6
5	3.2	4.7	4.1	3.4	3.2	3.9	6.3	10	3.8	8.7	5.1	5.6
6	3.5	4.5	3.9	3.3	3.1	3.7	5.9	9.5	3.6	7.7	5.3	5.6
7	3.6	4.2	3.9	3.3	3.0	4.3	6.9	9.5	5.6	8.3	5.2	5.4
8	4.2	4.1	3.9	3.2	2.9	5.0	8.4	9.0	25	7.6	5.3	5.5
9	4.2	4.0	3.9	3.3	2.9	4.8	7.0	8.5	8.3	7.2	15	5.5
10	4.2	3.7	3.6	3.2	3.0	4.6	6.2	10	6.7	6.9	6.8	5.1
11	3.9	3.6	3.3	3.3	3.1	4.1	9.7	9.2	5.8	8.1	6.4	5.9
12	3.7	3.6	3.3	3.4	3.3	3.6	7.2	7.6	5.3	6.7	6.2	5.7
13	3.9	3.6	3.2	3.4	3.2	3.2	6.5	5.8	5.7	7.7	6.2	13
14	3.9	3.5	3.8	3.2	2.8	3.1	7.3	5.6	5.2	6.9	6.3	7.6
15	3.8	3.5	4.4	3.2	2.7	3.6	10	5.3	4.8	6.4	12	6.2
16	3.8	3.5	4.5	2.7	2.6	4.1	11	5.2	7.2	6.3	7.2	5.8
17	3.7	3.6	3.9	2.6	2.6	3.4	8.7	5.2	14	6.7	6.5	5.6
18	3.7	3.6	3.7	2.5	2.5	3.6	7.9	5.2	8.7	6.7	14	5.5
19	3.9	3.9	3.1	2.6	2.8	3.7	27	5.1	19	6.2	7.2	5.7
20	4.6	9.8	3.5	2.7	3.4	3.7	17	5.0	16	5.8	6.5	5.9
21	4.2	7.9	3.4	3.1	3.5	3.8	13	4.8	9.4	5.4	6.2	5.7
22	3.8	6.4	3.3	3.0	3.5	3.8	12	5.0	8.3	5.4	6.0	5.8
23	4.1	5.8	2.6	3.1	3.1	3.8	12	6.4	8.0	5.9	5.8	5.4
24	4.0	5.0	3.1	2.8	2.9	4.9	11	5.8	9.7	5.8	5.6	5.3
25	4.0	4.7	3.0	2.9	3.1	5.7	10	5.3	7.8	5.9	5.3	5.2
26	4.1	4.6	3.0	3.3	3.2	7.6	9.8	4.8	7.0	5.4	5.1	5.3
27	3.9	4.4	3.4	3.0	3.2	7.0	16	4.9	6.7	10	5.2	5.3
28	4.0	4.3	3.5	2.9	3.2	7.6	12	4.6	6.2	6.5	5.1	5.3
29	3.7	4.2	3.8	3.0	---	8.2	10	4.2	6.4	5.9	5.0	5.2
30	3.6	4.2	3.8	3.0	---	7.7	9.6	8.7	6.8	5.6	20	5.0
31	3.6	---	3.3	3.5	---	21	---	5.8	---	6.1	6.9	---
TOTAL	117.7	143.1	113.1	96.2	85.8	157.7	300.2	225.0	238.8	247.6	218.9	176.8
MEAN	3.80	4.77	3.65	3.10	3.06	5.09	10.0	7.26	7.96	7.99	7.06	5.89
MAX	4.6	9.8	4.5	3.5	3.5	21	27	13	25	31	20	13
MIN	3.2	3.5	2.6	2.5	2.5	3.1	5.9	4.2	3.6	5.4	5.0	5.0
CFSM	.64	.81	.62	.53	.52	.86	1.70	1.23	1.35	1.36	1.20	1.00
IN.	.74	.90	.71	.61	.54	1.00	1.90	1.42	1.51	1.56	1.38	1.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	1990	1991	1992	1993
MEAN	3.03	4.37	3.24	2.71
MAX	3.80	6.24	4.15	3.14
(WY)	1993	1992	1992	1993
MIN	2.40	2.09	1.92	1.89
(WY)	1991	1991	1991	1991

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1990 - 1993
ANNUAL TOTAL	1443.0	2120.9	
ANNUAL MEAN	3.94	5.81	4.29
HIGHEST ANNUAL MEAN			5.81
LOWEST ANNUAL MEAN			3.03
HIGHEST DAILY MEAN	63	31	63
LOWEST DAILY MEAN	2.4	2.5	1.5
ANNUAL SEVEN-DAY MINIMUM	2.6	2.7	1.6
INSTANTANEOUS PEAK FLOW		302	(b)574
INSTANTANEOUS PEAK STAGE		8.89	9.46
INSTANTANEOUS LOW FLOW		(c).85	(c).54
ANNUAL RUNOFF (CFSM)	.67	.99	.73
ANNUAL RUNOFF (INCHES)	9.11	13.40	9.90
10 PERCENT EXCEEDS	5.0	9.7	6.7
50 PERCENT EXCEEDS	3.5	5.0	3.4
90 PERCENT EXCEEDS	2.8	3.1	2.2

(a) Also occurred Feb. 18

(b) From rating curve extended above 10 ft³/s on basis of step-backwater method

(c) Result of freezeup

WAUMANDEE CREEK BASIN

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 September 1992 (discontinued).
 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, 1992, and 1993 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, 25.0°C, Aug. 10-11; minimum observed, 0.0°C, Dec. 19-20, 23-27, Jan. 18, 24-25, 27-28, Feb. 15-19, Mar. 12-15, 17-18, and Apr. 16.
 SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 885 tons, July 3; minimum daily, 0.09 ton, Feb. 16-18.
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,650 lb, July 3; minimum daily, 0.40 lb, Feb. 18.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE TOTAL (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TILE ON IGNI- TION, TOTAL PENDE (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 1992												
*13...	1515	--	4.1	1.6	--	12	330	82	2	0.976	0.023	0.040
*27...	1615	--	3.9	<1.0	--	12	304	88	2	0.891	0.009	0.030
NOV												
*18...	1500	--	3.6	1.0	--	14	308	78	3	1.06	<0.005	0.030
DEC												
*15...	1500	--	4.4	1.8	--	18	340	76	2	1.10	0.042	0.070
JAN 1993												
19...	1400	--	2.8	1.1	--	16	352	82	3	1.05	0.019	0.040
FEB												
*16...	0300	2.6	--	<1.0	--	13	310	78	2	1.27	<0.005	0.030
MAR												
*16...	1403	--	4.5	2.1	--	72	386	74	6	0.955	0.056	0.130
*24...	1214	--	4.3	1.2	--	53	360	74	4	0.853	0.050	0.110
24...	2030	--	6.5	16	--	154	470	110	22	0.890	1.93	1.98
26...	1321	--	7.1	9.1	--	69	410	86	7	0.909	0.432	0.610
*26...	1324	--	7.1	--	--	147	--	--	--	--	0.486	0.700
26...	1435	--	11	--	--	550	706	124	68	0.648	1.82	2.63
27...	0235	--	6.5	--	--	234	510	94	23	1.12	0.441	0.610
28...	1410	--	8.2	--	--	145	430	92	19	1.00	0.314	0.520
29...	1310	--	8.3	1.8	--	104	394	68	12	1.06	0.101	0.210
30...	0110	--	6.6	3.4	900	121	394	72	15	1.07	0.496	0.500
*30...	1424	--	8.0	3.0	2100	65	366	90	10	1.20	0.307	0.350
30...	2340	--	9.0	--	--	106	--	--	--	--	0.858	0.790
31...	0320	--	18	10	--	764	998	138	80	1.00	0.874	1.57
31...	1005	--	27	7.4	--	1490	1710	184	120	0.993	0.783	2.09
31...	1035	--	31	--	--	2270	--	--	--	--	--	--
31...	1115	--	38	9.6	--	4510	4570	348	290	0.853	0.818	4.04
31...	1955	--	13	8.5	--	368	602	110	44	1.24	0.671	1.17
APR												
01...	0755	--	9.4	--	--	92	--	--	--	--	0.125	0.200
01...	1955	--	9.9	--	--	90	--	--	--	--	0.515	0.480
02...	0755	--	7.7	--	--	35	370	92	6	1.52	0.080	0.120
02...	1955	--	8.5	--	--	55	374	94	10	1.39	0.154	0.190
03...	0755	--	6.9	--	--	28	--	--	--	--	0.061	0.090
03...	1955	--	7.7	--	--	51	368	84	7	1.39	0.115	0.190
04...	1225	--	6.6	--	--	27	--	--	--	--	<0.100	0.070
05...	0025	--	6.6	2.3	220	59	378	78	10	1.34	0.049	0.130
08...	0710	--	8.3	2.6	420	76	394	78	11	1.26	0.246	0.310
11...	0430	--	11	--	--	315	608	96	36	1.24	0.155	0.570
11...	1630	--	11	--	--	106	396	74	9	1.26	0.089	0.350
*13...	1441	--	6.4	<1.0	<10	10	318	80	4	1.24	<0.005	0.040
15...	1710	--	11	--	--	79	--	--	--	--	0.122	0.320
16...	0510	--	9.5	--	--	52	--	--	--	--	0.045	0.130
16...	1710	--	17	--	--	370	--	--	--	--	0.094	0.720
17...	0510	--	8.5	--	--	153	--	--	--	--	0.032	0.220
19...	0030	--	13	5.5	7400	358	644	118	54	1.11	0.068	0.780
19...	0210	--	21	6.3	20000	988	1240	136	86	0.852	0.177	1.34

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

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05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	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, SUS- 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 1993											
19...	1410	31	--	--	1570	--	--	--	--	0.807	2.49
19...	1740	43	12	--	3220	3350	248	216	0.968	0.448	3.24
19...	1811	43	8.4	--	2910	3030	222	196	0.976	0.408	2.90
*19...	1814	43	7.3	--	3270	3530	232	192	0.982	0.388	3.08
19...	2250	29	--	--	954	--	--	--	1.23	0.676	1.78
20...	2250	14	--	--	158	--	--	--	1.61	0.044	0.280
23...	1050	12	--	--	64	--	--	--	--	--	--
25...	1050	10	--	--	44	--	--	--	--	--	0.100
27...	0710	15	4.6	--	236	550	106	30	1.26	0.083	0.440
27...	0855	25	7.0	--	892	1160	154	88	1.10	0.164	1.51
27...	1414	14	2.8	4600	402	680	96	38	1.25	0.066	0.340
MAY											
*11...	1457	9.0	1.3	1700	24	336	84	4	1.19	0.017	0.070
*25...	1431	5.2	--	1700	44	--	--	--	1.12	0.050	0.100
JUN											
08...	1555	24	--	--	2340	--	--	--	--	0.165	2.51
08...	1615	53	--	--	8680	--	--	--	--	0.983	7.83
08...	1705	86	--	--	8320	--	--	--	--	1.44	8.98
08...	1820	185	--	--	14900	--	--	--	--	1.03	5.43
08...	1910	133	--	--	14300	--	--	--	--	1.18	8.18
08...	1935	75	--	--	12100	--	--	--	--	1.02	15.2
08...	2025	40	--	--	8600	--	--	--	--	0.706	11.2
08...	2310	14	--	--	3880	--	--	--	--	0.454	6.19
*14...	1352	5.3	1.2	1200	37	--	--	--	1.22	0.049	0.100
JUL											
02...	0055	34	--	--	2870	--	--	--	--	0.456	3.51
02...	0130	99	--	--	7690	--	--	--	--	0.302	7.91
02...	0205	68	--	--	7390	--	--	--	--	0.237	9.63
02...	0420	48	--	--	3690	--	--	--	--	0.152	3.59
*02...	0940	10	11	280000	820	1110	186	150	1.64	0.316	1.79
03...	1430	39	--	--	3300	--	--	--	--	0.089	2.50
03...	1455	177	--	--	13600	--	--	--	--	0.227	12.8
03...	1515	135	--	--	9700	--	--	--	--	0.249	12.0
03...	1600	295	--	--	18600	--	--	--	--	0.626	14.5
03...	1640	204	--	--	16300	--	--	--	--	0.699	15.4
03...	1800	45	--	--	7560	--	--	--	--	0.408	8.56
*06...	1153	7.8	1.4	4700	57	398	98	7	1.34	0.039	0.110
27...	1740	21	9.6	33000	1060	1440	--	95	--	0.175	1.32
27...	1755	65	30	120000	5600	5870	--	430	--	0.583	5.68
27...	1800	95	27	150000	6520	6940	--	470	--	0.697	6.68
27...	1825	61	8.4	110000	8220	8550	--	670	--	0.245	5.95
27...	1925	28	--	860000	1710	2210	--	240	--	0.656	3.56
*28...	1000	6.6	--	5300	76	408	--	8	--	0.051	0.160
AUG											
09...	0650	21	7.8	31000	1360	1600	--	108	--	0.089	1.26
09...	0705	56	--	110000	4110	4220	--	296	--	0.200	3.35
09...	0715	114	28	240000	7300	7520	--	492	--	0.470	6.23
09...	0725	134	16	230000	8300	8310	--	580	--	0.247	6.46
09...	0740	101	--	920000	7600	7650	--	496	--	0.267	7.54
09...	0830	61	--	350000	3390	3610	--	252	--	0.441	3.57
09...	1050	15	6.8	110000	704	922	--	88	--	0.203	1.11
15...	0510	16	7.1	--	544	844	--	68	--	0.256	0.700
15...	0630	26	8.6	--	1000	1250	--	100	--	0.204	1.24
15...	1150	14	4.3	--	286	558	--	36	--	0.156	0.490
18...	1000	17	--	--	890	1150	--	66	--	0.079	0.890
18...	1015	33	9.6	--	1710	1960	--	116	--	0.169	1.51
18...	1020	46	20	--	3390	3550	--	248	--	0.710	3.27
18...	1025	63	37	--	4840	5000	--	376	--	1.34	5.36
18...	1115	43	16	--	3390	3470	--	316	--	0.299	4.30
18...	1400	28	--	--	1030	1240	--	80	--	0.357	1.46
18...	1555	16	--	--	484	702	--	52	--	0.179	0.900
*19...	1222	7.1	1.6	--	55	400	--	8	--	0.059	0.170
*25...	1040	5.6	2.0	1900	36	--	--	--	1.01	0.016	0.070
30...	0425	17	--	--	924	1180	--	108	--	0.098	1.03
30...	0455	45	--	--	3060	3210	--	232	--	0.354	3.02
30...	0515	94	--	--	5590	5710	--	376	--	0.349	5.16
30...	0705	69	--	--	3160	3280	--	228	--	0.271	3.00
30...	0855	34	--	--	2260	2400	--	260	--	0.234	3.94
30...	1005	20	--	--	1380	1550	--	168	--	0.281	3.10
SEP											
*12...	1235	5.7	1.0	--	12	318	--	2	--	0.025	0.060
13...	1040	16	6.5	--	676	946	--	56	--	0.144	0.870
13...	1455	26	8.8	--	822	1090	--	72	--	0.315	1.34
13...	2055	14	3.6	--	254	486	--	34	--	0.149	0.660
*28...	1105	5.3	0.8	--	18	352	--	5	--	<0.005	0.050

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	INST. CUBIC FEET PER SECOND (00061)	DIS- CHARGE, SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 1993				
*19...	1318	28	1220	91
JUN				
08...	1659	78	8560	95
08...	1726	93	9930	96
08...	1754	76	8490	95
JUL				
03...	1548	199	8940	97
03...	1600	295	18400	94
03...	1627	248	17200	98
03...	1640	204	15800	98
04...	0130	11	7520	95
27...	1755	65	5530	94
27...	1800	95	7050	94
27...	1825	61	7020	98
AUG				
09...	0715	114	7290	98
09...	0725	134	8220	96
09...	0740	101	466	33
15...	0510	16	541	98
15...	0630	26	797	97
15...	1150	14	304	97
18...	1020	46	3370	96
18...	1025	63	4720	96
18...	1115	43	3280	98

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	18.5	10.0	13.5	6.5	3.0	5.0	3.5	1.5	2.5	.5	.5	.5
2	18.5	11.0	14.0	6.5	3.5	5.0	3.5	2.5	3.0	.5	.5	.5
3	17.5	11.0	14.0	5.5	4.0	4.5	3.0	2.0	2.5	1.0	.5	1.0
4	17.0	10.5	13.0	5.5	4.5	5.0	2.0	.5	1.0	1.0	.5	1.0
5	16.0	10.0	12.5	5.5	4.0	4.5	.5	.5	.5	1.5	.5	1.0
6	16.0	11.5	13.0	5.0	3.5	4.0	.5	.5	.5	.5	.5	.5
7	13.5	12.0	12.5	5.0	3.0	4.0	2.0	.5	1.5	.5	.5	.5
8	13.0	9.5	11.5	5.0	3.5	4.5	3.5	2.0	2.5	.5	.5	.5
9	10.0	8.0	9.0	9.0	5.0	7.0	3.0	1.5	2.5	.5	.5	.5
10	12.0	9.0	10.0	9.5	7.0	8.5	4.5	3.0	3.5	.5	.5	.5
11	13.5	7.0	10.0	7.5	4.0	6.0	4.0	2.5	3.5	.5	.5	.5
12	12.5	8.5	10.0	6.5	3.0	5.0	4.5	2.0	3.0	.5	.5	.5
13	9.5	6.0	8.0	3.5	2.0	2.5	4.0	3.0	3.5	.5	.5	.5
14	10.5	7.5	8.5	4.5	1.5	2.5	4.5	4.0	4.0	1.0	.5	.5
15	9.5	7.5	8.5	4.0	1.0	2.5	5.0	3.5	4.5	.5	.5	.5
16	9.5	6.0	8.0	6.0	2.5	4.0	3.5	2.5	3.0	.5	.5	.5
17	8.5	4.5	6.5	5.5	4.5	5.0	3.5	2.0	2.5	.5	.5	.5
18	8.5	4.0	6.0	6.0	4.0	5.0	2.0	1.0	1.5	.5	.0	.5
19	6.5	2.5	4.5	5.5	4.0	4.5	2.0	.0	1.5	.5	.5	.5
20	6.5	3.5	5.5	6.5	3.5	5.0	.5	.0	.5	.5	.5	.5
21	10.5	6.0	7.5	6.0	5.0	5.5	1.0	.5	.5	1.0	.5	.5
22	15.5	7.5	11.0	5.0	4.0	4.5	1.0	.5	.5	1.0	.5	1.0
23	16.5	11.5	13.5	6.0	4.0	5.0	.5	.0	.5	2.0	1.0	1.5
24	13.5	8.5	11.0	6.0	5.0	5.5	.0	.0	.0	1.5	.0	.5
25	13.5	7.0	10.0	5.0	4.0	4.5	.5	.0	.0	.5	.0	.5
26	12.0	7.0	9.5	5.0	2.5	3.5	.5	.0	.0	.5	.5	.5
27	10.5	5.0	7.5	4.0	1.0	2.5	.5	.0	.5	1.0	.5	.5
28	8.5	5.0	7.0	4.0	1.0	2.5	.5	.5	.5	1.0	.0	.5
29	8.5	4.5	6.0	3.0	2.0	2.5	1.0	.5	.5	.5	.0	.5
30	8.0	3.0	5.0	3.5	2.0	3.0	1.5	.5	1.0	.5	.5	.5
31	7.5	6.0	6.5	---	---	---	1.0	.5	.5	1.0	.5	.5
MONTH	18.5	2.5	9.5	9.5	1.0	4.4	5.0	.0	1.7	2.0	.0	.6

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.5	.5	1.5	1.5	.5	1.0	9.0	.5	3.5	11.0	9.0	10.0
2	3.0	.5	1.5	4.0	1.0	2.5	10.5	.5	5.0	11.0	9.5	10.0
3	4.0	.5	2.0	6.0	2.5	4.0	12.0	1.0	6.0	12.0	9.0	10.5
4	3.5	.5	1.5	7.5	2.0	4.5	13.0	2.0	6.5	12.0	10.0	11.0
5	3.5	1.5	2.5	8.0	1.0	4.0	10.5	3.0	6.5	19.0	10.0	13.5
6	3.0	2.0	2.5	5.5	2.0	3.5	12.5	4.5	7.5	18.5	9.5	14.0
7	3.0	2.0	2.5	8.0	3.0	5.0	7.5	6.0	6.5	17.5	12.0	14.5
8	3.0	2.0	2.5	6.5	3.5	4.5	8.5	6.5	7.0	20.0	13.0	16.0
9	3.5	1.5	2.5	6.5	2.0	4.5	10.0	5.5	7.5	20.5	13.0	15.5
10	3.5	1.0	3.0	6.0	1.5	3.0	13.5	4.0	8.5	20.0	12.5	15.5
11	1.0	.5	.5	5.5	.5	2.5	9.0	4.5	6.0	21.0	12.0	15.5
12	1.5	.5	1.0	1.0	.0	.5	11.5	4.5	7.5	21.0	10.5	15.0
13	3.5	1.0	2.0	1.5	.0	.5	11.0	4.0	7.5	20.5	8.5	14.0
14	1.5	.5	.5	.5	.0	.0	7.0	4.0	5.0	21.0	11.0	15.0
15	1.0	.0	.5	1.5	.0	.5	4.5	1.5	3.5	18.0	9.5	13.5
16	1.0	.0	.5	6.0	.5	3.0	10.0	.0	5.0	19.0	7.5	13.0
17	.5	.0	.5	2.5	.0	1.0	14.0	3.0	8.0	14.0	8.0	10.5
18	.5	.0	.0	3.0	.0	1.0	14.0	5.5	9.5	15.5	8.5	12.0
19	.5	.0	.0	4.0	1.0	2.5	10.0	2.5	7.0	14.0	9.0	11.5
20	.5	.5	.5	5.5	3.0	4.0	13.5	2.5	7.5	15.0	8.0	11.5
21	.5	.5	.5	7.5	2.5	4.5	14.5	3.5	8.5	20.0	7.5	13.0
22	.5	.5	.5	5.5	2.0	3.5	15.0	4.5	9.5	16.5	8.5	12.5
23	.5	.5	.5	7.5	2.5	5.0	15.0	7.0	10.5	14.5	12.0	13.0
24	.5	.5	.5	9.0	4.0	6.0	11.5	8.5	10.0	13.0	10.5	12.0
25	.5	.5	.5	8.5	3.5	5.5	15.5	6.0	10.5	19.0	9.0	13.5
26	.5	.5	.5	10.5	2.5	5.0	16.5	5.5	10.5	22.5	9.0	15.5
27	1.0	.5	.5	10.0	3.5	5.5	10.5	7.5	9.0	17.0	12.5	14.5
28	1.0	.5	.5	11.0	2.5	5.5	18.5	7.5	12.5	17.0	11.0	13.5
29	---	---	---	12.0	2.5	6.0	17.5	9.0	12.5	17.0	9.0	13.0
30	---	---	---	7.0	4.5	5.5	16.5	6.5	11.0	13.0	10.5	11.5
31	---	---	---	5.5	.5	3.0	---	---	---	17.0	9.5	13.0
MONTH	4.0	.0	1.1	12.0	.0	3.5	18.5	.0	7.8	22.5	7.5	13.1
	JUNE			JULY			AUGUST			SEPTEMBER		
1	17.5	8.0	12.5	18.0	13.5	15.5	23.5	15.0	18.5	20.5	11.5	15.5
2	16.5	10.0	13.0	22.5	15.5	19.0	22.0	14.0	17.5	20.5	14.0	16.5
3	19.5	9.5	14.5	19.0	13.5	16.5	20.5	14.5	17.0	20.0	13.5	16.0
4	18.0	10.5	13.5	19.0	16.0	17.0	20.5	13.0	16.5	20.5	11.5	15.5
5	21.0	8.5	14.5	18.0	15.0	16.5	19.0	13.0	16.0	17.5	12.5	14.5
6	20.5	11.0	15.0	23.0	13.5	18.0	21.0	12.5	16.5	19.0	11.5	14.5
7	15.0	13.0	14.0	18.5	13.5	16.5	20.0	12.5	16.5	19.0	11.5	14.5
8	17.5	13.0	15.0	18.0	13.5	15.0	22.0	14.0	17.0	18.5	12.0	15.0
9	18.0	12.5	14.5	23.5	14.5	18.5	21.0	16.0	18.5	18.0	13.0	15.0
10	21.5	12.0	16.5	21.5	14.0	17.5	25.0	15.5	19.5	17.5	10.5	13.5
11	22.5	12.5	17.0	21.0	15.0	17.0	25.0	15.5	20.0	14.5	9.5	11.5
12	22.0	13.5	17.5	22.0	13.0	17.0	24.5	15.5	19.5	19.5	11.0	15.0
13	20.5	14.5	16.5	16.0	14.0	15.0	20.0	16.0	18.0	18.0	15.5	17.0
14	20.0	13.0	16.5	19.5	13.5	15.5	17.5	15.0	16.0	15.5	11.5	13.0
15	22.0	12.0	16.0	23.0	12.5	17.5	22.5	15.5	18.5	13.0	10.0	11.5
16	16.0	13.0	14.5	23.5	14.0	18.5	21.0	15.5	17.5	15.5	11.0	12.5
17	19.5	14.0	16.0	18.0	15.5	16.5	23.0	15.0	18.0	15.5	11.5	13.0
18	15.5	14.0	14.5	18.5	15.5	16.5	20.5	15.5	17.5	17.0	11.5	13.5
19	16.0	14.0	15.0	24.0	15.0	19.0	23.0	15.5	18.5	12.0	9.5	11.0
20	16.0	13.0	14.5	21.5	14.0	17.5	19.5	14.5	17.0	12.5	11.0	11.5
21	23.0	11.5	16.5	21.5	13.5	17.5	21.0	14.0	17.0	14.0	12.0	13.0
22	24.0	12.5	18.0	22.0	13.0	17.0	18.5	14.0	16.5	15.0	12.0	13.0
23	22.0	14.0	17.0	17.0	15.0	16.0	23.0	16.0	19.0	17.0	9.5	12.5
24	20.0	14.5	16.5	19.0	14.5	16.5	24.5	15.0	19.0	16.5	8.5	12.0
25	21.0	12.0	16.0	22.0	16.0	18.0	24.0	15.0	19.0	13.0	9.5	11.0
26	22.0	12.0	16.5	24.5	15.5	19.5	24.5	16.5	20.0	12.0	9.0	10.5
27	22.0	12.0	16.5	24.0	15.5	19.0	22.0	17.0	19.5	14.0	9.0	11.0
28	21.0	12.0	16.0	21.5	16.0	18.5	19.5	15.0	17.0	12.5	8.5	10.0
29	22.0	12.0	16.5	23.0	15.0	18.0	18.5	14.0	16.0	12.5	8.0	10.0
30	19.0	13.5	16.0	24.0	14.0	19.0	20.0	16.0	18.0	14.5	7.0	10.5
31	---	---	---	18.5	15.5	17.0	20.5	13.5	16.5	---	---	---
MONTH	24.0	8.0	15.5	24.5	12.5	17.3	25.0	12.5	17.8	20.5	7.0	13.1
YEAR	25.0	.0	8.8									

WAUMANDEE CREEK BASIN

05378183 JOOS VALLEY CREEK NEAR FOUNTAIN CITY, WI--CONTINUED

SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED(TONS PER DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.57	.16	.14	.13	.13	2.8	6.7	.61	.99	1.0	.67
2	.22	2.1	.16	.14	.13	.14	1.0	4.6	.53	182	.93	.57
3	.20	.55	.16	.15	.13	.15	.78	3.8	.49	885	.85	.49
4	.17	.38	.16	.15	.12	.16	.68	2.8	.45	11	.81	.42
5	.16	.34	.15	.15	.12	.19	.75	2.0	.41	3.3	.79	.37
6	.15	.32	.14	.14	.12	.19	.37	1.4	.37	1.3	.79	.33
7	.13	.28	.14	.14	.11	.50	.81	1.1	1.7	4.9	.75	.28
8	.32	.26	.14	.14	.11	.80	1.7	.82	634	1.6	.73	.26
9	.39	.24	.14	.14	.11	.56	.93	.61	12	1.3	115	.22
10	.30	.21	.13	.14	.11	.39	.30	3.1	2.5	1.0	1.3	.19
11	.22	.20	.12	.14	.11	.26	3.9	.97	1.4	3.1	1.1	.91
12	.16	.19	.12	.15	.12	.18	.87	.48	.81	1.2	1.0	.24
13	.13	.17	.11	.15	.11	.15	.23	.37	.91	2.2	.94	14
14	.13	.16	.15	.14	.10	.12	.72	.35	.56	1.4	.89	.51
15	.12	.16	.22	.14	.10	.24	4.1	.33	.47	1.3	13	.40
16	.12	.15	.23	.12	.09	.63	5.3	.31	4.8	1.2	1.3	.37
17	.12	.15	.18	.11	.09	.48	2.4	.31	70	1.2	1.0	.35
18	.12	.14	.16	.11	.09	.20	1.4	.30	7.9	1.1	53	.34
19	.21	.17	.14	.11	.10	.20	125	.29	94	1.0	1.1	.34
20	.48	2.7	.15	.12	.12	.20	18	.28	70	.89	.90	.34
21	.32	1.0	.15	.13	.12	.21	4.7	.27	8.2	.79	.80	.32
22	.26	.48	.14	.13	.12	.27	3.0	.27	5.9	.75	.72	.32
23	.23	.40	.11	.13	.11	.37	2.0	1.6	4.6	.78	.65	.30
24	.20	.32	.13	.12	.10	1.4	1.6	1.0	19	.73	.58	.28
25	.17	.27	.13	.12	.11	1.9	1.3	.67	4.0	.70	.52	.27
26	.16	.25	.13	.13	.11	8.3	1.2	.53	2.7	.60	.48	.27
27	.13	.21	.15	.12	.11	4.1	22	.50	2.0	65	.47	.26
28	.13	.19	.15	.12	.11	4.7	3.8	.42	1.4	1.9	.44	.26
29	.12	.17	.16	.12	---	5.7	1.5	.36	1.5	1.2	.42	.25
30	.12	.16	.16	.12	---	3.5	1.3	4.2	2.1	1.1	131	.24
31	.12	---	.14	.14	---	84	---	1.2	---	1.1	.83	---
TOTAL	6.08	12.89	4.61	4.10	3.11	120.32	214.44	41.94	955.31	1181.63	334.09	24.37

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	3.7	.69	.77	.63	.61	18	36	3.4	3.5	4.0	4.5
2	.85	23	.69	.79	.62	.65	7.4	24	2.8	420	3.5	4.0
3	.85	3.9	.69	.84	.60	.73	5.4	18	2.5	1650	3.1	3.5
4	.85	2.5	.68	.83	.58	.79	3.7	14	2.2	33	2.9	3.2
5	.88	2.2	.66	.81	.57	.91	3.8	9.9	1.9	12	2.8	2.9
6	.94	1.9	.63	.78	.55	.92	2.7	7.1	1.7	5.1	2.7	2.7
7	.98	1.7	.63	.77	.54	2.6	7.9	5.5	4.0	14	2.5	2.4
8	1.4	1.5	.63	.74	.50	5.0	13	4.1	917	5.0	2.4	2.3
9	1.5	1.3	.63	.76	.50	4.3	5.1	3.1	60	4.3	224	2.1
10	1.3	1.2	.58	.73	.52	3.7	2.4	16	23	3.9	4.1	1.8
11	1.1	1.0	.54	.75	.53	3.0	15	5.8	11	8.6	3.3	3.0
12	.92	.96	.53	.78	.55	2.1	1.9	2.8	5.2	4.0	3.0	2.0
13	.85	.87	.53	.77	.53	1.4	1.4	2.1	3.6	6.9	2.8	68
14	.84	.79	.88	.72	.45	.98	3.1	2.0	2.9	4.4	3.1	7.2
15	.82	.73	2.1	.72	.44	1.3	14	1.8	2.3	4.0	36	4.3
16	.82	.68	3.7	.59	.42	2.3	19	1.7	8.2	3.8	5.1	3.7
17	.81	.64	1.8	.57	.42	2.3	11	1.7	143	3.9	4.0	3.4
18	.81	.60	1.1	.55	.40	.99	8.5	1.6	13	3.8	138	3.1
19	.90	.91	.84	.57	.45	1.0	301	1.6	167	3.4	7.3	3.0
20	1.6	43	.93	.59	.55	1.0	46	1.5	120	3.1	5.1	2.8
21	1.5	19	.91	.66	.56	1.0	18	1.4	11	2.8	4.2	2.5
22	1.1	5.7	.87	.64	.57	1.0	13	1.4	8.4	2.7	3.5	2.4
23	1.1	4.2	.69	.63	.50	1.0	9.8	6.9	7.3	2.9	2.9	2.1
24	.93	2.9	.81	.58	.47	21	7.5	4.4	36	2.7	2.4	1.9
25	.83	2.2	.77	.60	.50	19	5.7	3.0	6.5	2.7	2.0	1.7
26	.76	1.8	.77	.66	.52	58	5.3	2.2	5.0	2.4	1.9	1.7
27	.64	1.4	.87	.60	.52	32	61	2.0	4.2	133	1.8	1.5
28	.64	1.1	.89	.57	.52	30	16	1.6	3.3	5.9	1.7	1.4
29	.59	.85	.95	.58	---	32	9.1	1.2	3.4	4.8	1.7	1.4
30	.59	.71	.94	.59	---	21	6.6	15	5.1	4.3	289	1.4
31	.59	---	.82	.67	---	238	---	6.5	---	4.4	5.4	---
TOTAL	29.19	132.94	28.75	21.21	14.51	490.58	642.3	205.9	1584.9	2365.3	776.2	147.9

WAUMANDEE CREEK BASIN

87

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. Rainfall estimated to be 0.00 for Dec. 3, Jan. 12, 13, Feb. 21, 22, and Mar. 9, 10 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.58 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.70 in., Sept. 13.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.36	.00	.00	.00	.00	.00	.49	.00	.00	.00	.00
2	.00	.41	.00	.00	.00	.00	.00	.04	.00	1.60	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.12	.00	1.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.01	.00	.00	.00	.00	.00	.20	.00	.80	.30	.00	.00
8	.17	.00	.00	.00	.00	.00	.12	.00	1.40	.10	.10	.00
9	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	1.30	.00
10	.06	.00	.00	.00	.00	.00	.00	.62	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.43	.00	.00	.30	.00	.30
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.10	.40	.00	1.70
14	.00	.00	.11	.00	.00	.00	.05	.00	.00	.00	.10	.00
15	.00	.00	.16	.00	.00	.00	.40	.00	.00	.00	1.20	.00
16	.01	.00	.02	.00	.00	.00	.26	.00	.70	.00	.10	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	1.00	.10	.00	.00
18	.00	.00	.06	.00	.00	.00	.31	.00	.60	.00	1.10	.00
19	.17	.29	.00	.00	.00	.00	1.45	.00	1.30	.10	.00	.20
20	.00	.75	.00	.00	.00	.00	.01	.00	.10	.00	.00	.10
21	.00	.08	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10
22	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.48	.10	.10	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.09	.30	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.10
27	.00	.00	.00	.00	.00	.00	.87	---	.00	1.10	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.13	.00	---	.00	.00	.02	.50	.00	.00	.00
30	.00	.00	.00	.00	---	.17	.00	1.11	.00	.00	1.60	.00
31	.00	---	.00	.00	---	.96	---	.00	---	.20	.00	---
TOTAL	0.42	1.90	0.48	0.00	0.00	1.13	4.10	---	6.90	5.40	5.60	2.50

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 sea level, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 23-25, Dec. 31 to Jan. 1, Jan. 6-9, 15-19, 24-30, Feb. 14-19, 23-26, and Mar. 12-18. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	10	8.4	6.8	7.4	7.5	23	22	17	14	13	18
2	7.9	17	8.3	6.9	7.2	7.6	18	24	15	77	12	14
3	7.8	13	8.3	7.1	7.2	7.7	16	21	13	75	12	13
4	7.7	10	8.3	7.2	7.3	7.9	14	21	12	24	12	13
5	7.6	9.8	8.1	6.9	7.4	7.8	13	19	12	20	12	13
6	7.5	9.4	8.0	6.8	7.4	8.0	13	17	11	19	12	12
7	7.6	9.2	8.1	6.6	7.4	8.6	15	16	16	19	12	12
8	8.0	9.1	8.1	6.4	7.5	9.3	19	15	57	18	12	12
9	8.1	9.1	8.1	6.4	7.6	9.1	16	15	22	17	38	12
10	8.1	9.1	8.1	6.4	7.6	8.9	14	19	15	16	15	12
11	7.8	8.8	8.3	6.4	7.6	8.5	24	18	14	21	13	13
12	7.8	8.8	8.1	6.7	7.7	8.2	17	15	13	15	13	13
13	7.6	8.7	8.1	6.9	7.9	7.8	14	14	13	19	12	36
14	7.6	8.6	8.4	6.8	7.6	7.2	15	14	12	16	12	20
15	7.6	8.4	9.5	6.6	7.4	7.6	22	14	12	14	33	15
16	7.6	8.2	10	6.2	7.2	8.0	26	13	19	14	16	14
17	7.4	8.1	9.2	6.0	7.0	7.8	21	13	42	14	15	14
18	7.4	8.1	8.8	5.8	6.6	7.6	19	13	24	15	50	13
19	7.6	8.3	8.4	6.2	7.0	7.6	67	13	53	14	21	13
20	8.2	19	8.3	6.9	7.6	7.6	37	13	56	13	17	14
21	8.3	15	8.3	7.1	7.6	7.6	25	13	31	13	16	14
22	8.1	11	8.3	7.2	7.6	7.6	22	13	23	13	15	14
23	8.0	11	8.0	7.3	7.6	7.8	21	17	20	13	15	13
24	7.9	10	7.6	6.4	7.4	9.9	20	16	23	13	14	13
25	8.0	9.6	7.0	6.4	7.4	12	18	14	19	14	13	13
26	7.9	9.3	7.3	6.8	7.4	16	17	13	17	13	13	13
27	7.7	8.9	7.4	6.8	7.4	16	31	13	15	23	13	13
28	7.7	8.8	7.4	6.6	7.4	17	23	13	15	16	12	13
29	7.6	8.7	7.4	7.0	---	18	19	12	14	13	12	12
30	7.8	8.7	7.4	6.8	---	17	17	25	18	13	58	12
31	8.0	---	7.2	7.3	---	48	---	23	---	13	20	---
TOTAL	241.8	301.7	252.2	207.7	207.4	337.2	636	501	643	611	553	426
MEAN	7.80	10.1	8.14	6.70	7.41	10.9	21.2	16.2	21.4	19.7	17.8	14.2
MAX	8.3	19	10	7.3	7.9	48	67	25	57	77	58	36
MIN	7.4	8.1	7.0	5.8	6.6	7.2	13	12	11	13	12	12
CFSM	.55	.70	.57	.47	.52	.76	1.48	1.13	1.50	1.38	1.25	.99
IN.	.63	.78	.66	.54	.54	.88	1.65	1.30	1.67	1.59	1.44	1.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	1990	1991	1992	1993	1990	1991	1992	1993	1990	1991	1992	1993
MEAN	7.00	9.53	7.19	6.10	6.61	9.92	14.3	13.8	12.7	10.8	12.2	10.3
MAX	7.80	12.9	8.52	6.91	7.41	10.9	21.2	16.4	21.4	19.7	17.8	14.2
(WY)	1993	1992	1992	1992	1993	1992	1993	1991	1993	1993	1993	1993
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1990 - 1993

ANNUAL TOTAL	3254.7	4918.0	
ANNUAL MEAN	8.89	13.5	
HIGHEST ANNUAL MEAN			10.1
LOWEST ANNUAL MEAN			13.5
HIGHEST DAILY MEAN	140	77	140
LOWEST DAILY MEAN	5.9	5.8	3.9
ANNUAL SEVEN-DAY MINIMUM	6.3	6.4	4.4
INSTANTANEOUS PEAK FLOW		388	(a)919
INSTANTANEOUS PEAK STAGE		7.59	9.02
INSTANTANEOUS LOW FLOW		(b)5.3	(b)1.7
ANNUAL RUNOFF (CFSM)	.62	.94	.71
ANNUAL RUNOFF (INCHES)	8.47	12.79	9.59
10 PERCENT EXCEEDS	10	21	15
50 PERCENT EXCEEDS	8.0	12	7.9
90 PERCENT EXCEEDS	6.9	7.2	5.7

(a) From rating curve extended above 70 ft³/s on basis of step-backwater method

(b) Result of freezeup

WAUMANDEE CREEK BASIN

89

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 September 1992 (discontinued).

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, 1992, and 1993 winter periods.

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, 22.0°C, July 26-27; minimum observed, 0.0°C, Dec. 5-6, 19-20, 23-27, 31, Jan. 1-2, 6-11, 15-20, 24-30, Feb. 14-20, 23-28, and Mar. 12-18.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 1,510 tons, July 3; minimum daily, 0.24 ton, Oct. 17-18.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 3,000 lb, July 3; minimum daily, 1.3 lb, Jan. 18.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	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)
OCT 1992												
*13...	1420	--	7.6	2.0	--	12	336	80	2	1.06	0.026	0.050
*27...	1630	--	7.6	2.4	--	41	358	86	4	0.974	0.014	0.070
NOV												
*18...	1400	--	8.1	1.5	--	21	346	82	3	1.16	0.021	0.060
DEC												
*15...	1400	--	9.6	2.7	--	46	376	82	6	1.12	0.121	0.140
JAN 1993												
*19...	1500	6.2	--	<1.0	--	30	364	84	4	1.04	0.019	0.040
FEB												
*16...	0200	7.2	--	<1.0	--	58	352	74	4	1.28	0.009	0.060
MAR												
*16...	1300	8.0	--	1.0	--	34	342	72	4	1.03	0.035	0.070
*24...	1257	--	9.0	14	--	252	590	114	22	0.915	1.74	1.63
26...	1426	--	17	--	--	654	--	--	--	--	0.855	1.12
*26...	1428	--	17	--	--	748	--	--	--	--	0.869	1.27
26...	1450	--	20	--	--	1050	1330	108	64	1.01	0.993	1.63
27...	0250	--	14	--	--	750	1070	104	62	1.21	0.382	0.890
27...	1610	--	20	--	--	552	882	106	40	1.12	0.589	0.920
28...	1450	--	20	--	--	602	868	102	40	1.19	0.269	0.730
29...	1330	--	17	2.6	--	1220	1510	114	142	1.22	0.148	0.840
29...	1605	--	28	4.6	--	864	1240	122	68	1.02	0.348	1.12
*30...	1402	--	15	1.3	230	150	476	88	14	1.29	0.134	0.250
30...	1545	--	18	--	--	674	--	--	--	--	0.181	0.650
31...	0305	--	44	6.5	--	3470	4030	--	--	1.21	0.650	1.71
31...	0420	--	44	10	--	3380	3310	200	194	1.06	0.797	2.57
31...	1010	--	58	13	--	5190	4690	272	282	1.02	0.786	3.66
31...	1050	--	71	13	--	4290	4030	232	352	1.02	0.818	3.30
31...	1140	--	86	12	--	6080	5940	288	316	1.01	0.848	4.28
APR												
01...	0805	--	21	--	--	3840	--	--	--	--	0.163	2.92
*01...	1026	--	22	1.2	300	308	615	82	22	1.52	0.129	0.370
01...	2005	--	23	--	--	564	--	--	--	--	0.371	0.750
02...	0805	--	16	--	--	342	--	--	--	--	0.077	0.330
02...	2005	--	19	--	--	295	--	--	--	--	0.126	0.370
03...	0805	--	15	--	--	143	478	84	12	1.54	0.058	0.180
03...	2005	--	17	--	--	185	504	76	16	1.38	0.115	0.290
04...	1900	--	14	--	--	209	540	76	17	1.38	0.050	0.230
07...	2250	--	20	3.2	--	512	858	100	44	1.21	0.266	0.630
08...	1050	--	17	2.1	1200	282	632	84	19	1.22	0.167	0.370
*09...	1050	--	16	--	--	263	--	--	--	--	0.079	0.280
11...	0405	--	20	--	--	601	--	--	--	--	0.107	0.560
11...	0540	--	32	--	--	345	702	82	27	1.59	0.060	0.330
11...	1740	--	28	--	--	754	1050	102	47	1.41	0.196	0.800
12...	0540	--	18	--	--	1220	1560	120	79	1.32	0.191	1.24
*13...	1352	--	14	<1.0	<10	63	378	76	6	1.48	<0.100	0.090
15...	2325	--	26	--	--	396	--	--	--	--	0.190	0.570
16...	1620	--	32	--	--	576	--	--	--	--	0.131	0.780
17...	1830	--	22	--	--	245	--	--	--	--	0.140	0.570
19...	0135	--	38	2.8	--	458	778	86	31	1.42	0.029	0.320

* 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 1992 TO SEPTEMBER 1993

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)	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)
APR 1993											
19...	0230	52	5.6	4900	2030	2380	170	144	1.04	0.141	2.01
19...	0415	66	8.0	7600	3400	3430	220	166	0.939	0.193	2.83
19...	1445	79	--	--	2510	--	--	--	--	0.450	2.49
19...	1610	92	9.6	--	3220	3250	212	208	1.08	0.422	2.96
19...	1730	106	9.9	--	3280	3510	226	188	1.03	0.362	3.36
19...	2125	80	--	--	2480	--	--	--	1.19	0.272	2.80
20...	1315	36	--	--	1960	--	--	--	1.60	0.131	1.61
27...	0835	37	7.4	--	3550	3780	258	208	1.22	0.137	3.03
27...	1010	50	9.0	--	3780	4100	270	216	1.10	0.154	3.88
27...	1346	31	1.8	13000	152	432	80	16	1.19	0.151	0.580
MAY											
*11...	1419	17	1.5	1500	55	374	86	6	1.29	0.026	0.110
*25...	1409	15	1.7	2100	50	380	94	6	1.22	0.052	0.100
JUN											
08...	1600	37	--	--	1590	--	--	--	--	0.216	2.28
08...	1625	70	--	--	3270	--	--	--	--	0.306	2.99
08...	1650	139	--	--	5750	--	--	--	--	0.536	5.36
08...	1745	189	--	--	7680	--	--	--	--	1.07	6.40
08...	1910	251	--	--	11400	--	--	--	--	0.956	10.9
08...	2015	151	--	--	7660	--	--	--	--	0.865	9.32
08...	2030	168	--	--	7680	--	--	--	--	0.893	9.23
08...	2330	47	--	--	4280	--	--	--	--	0.382	6.18
*14...	1410	12	1.4	3600	93	--	--	--	1.37	0.058	0.140
JUL											
02...	0110	82	--	--	2340	--	--	--	--	0.092	1.81
02...	0125	123	--	--	3210	--	--	--	--	0.164	2.52
02...	0145	188	--	--	3980	--	--	--	--	0.232	4.26
02...	0155	207	--	--	4650	--	--	--	--	0.219	5.37
*02...	0857	57	8.6	160000	1030	1290	206	160	1.39	0.173	1.90
03...	1445	80	--	--	2080	--	--	--	--	0.065	1.84
03...	1455	122	--	--	2840	--	--	--	--	0.081	2.28
03...	1515	225	--	--	10500	--	--	--	--	0.229	8.89
03...	1600	294	--	--	11800	--	--	--	--	0.278	11.3
03...	1620	369	--	--	14000	--	--	--	--	0.455	12.2
03...	1630	384	--	--	14900	--	--	--	--	0.582	13.6
03...	1745	204	--	--	8950	--	--	--	--	0.563	9.33
03...	1840	170	--	--	7150	--	--	--	--	0.428	7.60
*06...	1413	17	1.7	9200	118	452	106	11	1.55	0.047	0.180
27...	1755	32	3.8	52000	664	928	--	50	--	0.067	0.710
27...	1810	72	--	210000	1890	2150	--	108	--	0.090	1.70
27...	1820	111	11	250000	6030	6340	--	340	--	0.191	3.96
27...	1825	131	20	180000	7110	7710	--	430	--	0.307	4.68
27...	1835	144	27	67000	6660	6890	--	460	--	0.477	5.72
27...	1920	82	--	120000	3290	3550	--	290	--	0.186	3.13
27...	2215	29	--	350000	664	940	--	72	--	0.090	1.10
28...	0900	16	--	>7000	145	474	--	14	--	0.066	0.190
AUG											
09...	0710	41	5.8	8000	1750	2020	--	104	--	0.043	1.36
09...	0725	87	--	250000	3530	3750	--	194	--	0.093	2.78
09...	0735	142	--	180000	5370	5630	--	282	--	0.170	3.96
09...	0745	181	22	270000	6870	7210	--	408	--	0.417	5.00
09...	0755	194	17	280000	6770	6810	--	440	--	0.268	5.28
09...	0840	149	19	710000	4830	4490	--	384	--	0.298	4.94
09...	0945	93	--	510000	2850	3000	--	264	--	0.283	3.18
09...	1130	39	9.5	250000	3290	3240	--	192	--	0.091	2.24
10...	1255	15	1.1	8200	88	424	--	12	--	0.062	0.150
15...	0540	32	--	--	944	1250	--	76	--	0.135	0.920
15...	0630	47	6.8	--	1290	1560	--	86	--	0.163	1.16
15...	0655	60	7.6	--	1510	1880	--	100	--	0.156	1.18
15...	0725	74	8.5	--	1680	1890	--	124	--	0.154	1.78
15...	1005	49	8.6	--	1130	1450	--	106	--	0.294	1.38
18...	1015	34	--	--	1080	1340	--	66	--	0.069	0.970
18...	1030	65	--	--	2390	2670	--	180	--	0.101	2.28
18...	1045	102	13	--	3280	3600	--	236	--	0.138	3.09
18...	1135	180	19	--	4560	4790	--	384	--	0.378	5.34
18...	1155	197	19	--	5030	4960	--	496	--	0.319	5.79
18...	1310	154	14	--	2630	2670	--	260	--	0.307	3.00
18...	1440	90	--	--	1700	1910	--	176	--	0.351	1.58
18...	1825	34	--	--	798	1050	--	90	--	0.172	1.25
*19...	1424	20	--	--	123	466	--	12	--	0.063	0.220
*25...	1020	13	1.5	2600	71	404	92	10	1.16	0.018	0.090
30...	0455	38	--	--	1700	1920	--	104	--	0.066	1.53
30...	0520	92	--	--	3250	3460	--	210	--	0.132	2.79
30...	0535	140	--	--	4230	4600	--	300	--	0.231	3.68
30...	0555	194	--	--	4750	5480	--	380	--	0.209	4.72
30...	0625	232	--	--	4470	4950	--	380	--	0.287	5.32
30...	0645	249	--	--	4310	4730	--	450	--	0.363	5.18
30...	1140	42	--	--	1470	1770	--	210	--	0.186	2.42

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

91

05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN DEMAND, BIO-CHEMICAL, 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)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
SEP 1993								
*12...	1215	13	1.4	47	350	4	0.031	0.090
13...	1045	32	--	1470	1790	98	0.100	1.65
13...	1120	47	9.1	1740	1980	96	0.188	1.81
13...	1145	62	9.5	2350	2640	136	0.204	1.99
13...	1605	74	10	1620	1870	124	0.206	1.99
13...	2025	47	5.6	848	1100	74	0.171	1.19
28...	1050	13	0.9	48	378	6	<0.005	0.070

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)
JUN 1993											
*17...	1132	51	1.2	22	<0.3	<1.0	<1.0	0.37	4.1	<1.0	<1.0
19...	0815	68	1.1	4.9	<0.3	<1.0	<1.0	<0.30	1.7	<1.0	<1.0
JUL											
02...	0130	137	<0.13	0.8	<0.3	<1.0	<1.0	<0.30	<0.20	<1.0	<1.0
*13...	1445	27	<0.10	0.7	<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)	METOLA-CHLOR IN WATER (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)	TRANS PERME-THRIN WATER WHOLE REC (UG/L) (82420)	TERBU-FOS WAT, WH REC (UG/L) (82088)	TRI-FLURA-LIN TOTAL RECOVER (UG/L) (39030)	2,4-D, TOTAL (UG/L) (39730)
JUN 1993											
17...		<0.20	9.50	<1.0	<1.0	<1.00	<0.20	<1.0	<0.20	<1.0	<0.50
19...		<0.20	4.30	<1.0	<1.0	<1.00	<0.20	<1.0	<0.20	<1.0	<0.50
JUL											
02...		<0.20	0.57	<1.0	<1.0	<1.00	<0.20	<1.0	<0.20	<1.0	<0.50
13...		<0.20	0.22	<1.0	<1.0	<1.00	<0.20	<1.0	<0.20	<1.0	<0.50

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 1993			
*19...	1414	73	1830
JUL			
02...	0155	207	4600
03...	1630	384	14800
AUG			
15...	0630	47	1060
15...	0655	60	1530
15...	0725	74	1740

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	16.0	9.5	12.5	6.5	4.0	5.5	3.5	2.0	2.5	.0	.0	.0
2	16.5	10.5	13.0	6.5	4.0	5.5	4.0	2.5	3.0	1.0	.0	.5
3	16.0	10.5	13.0	5.5	4.5	5.0	3.0	2.0	2.5	2.5	1.0	2.0
4	15.0	10.5	12.5	5.5	5.0	5.0	2.5	.5	1.5	2.0	1.0	1.5
5	14.5	10.0	12.0	5.5	4.5	5.0	1.0	.0	.5	2.0	.5	1.0
6	14.5	11.0	12.5	5.0	4.0	4.5	1.5	.0	1.0	.5	.0	.0
7	12.5	11.5	12.0	5.0	3.5	4.0	3.0	1.5	2.0	.5	.0	.0
8	12.0	9.5	11.0	5.0	4.0	4.5	3.5	2.0	3.0	.5	.0	.0
9	9.5	8.0	9.0	8.5	5.0	7.0	3.0	2.0	2.5	1.0	.0	.5
10	11.5	9.0	10.0	9.0	7.0	8.5	4.5	3.0	3.5	1.5	.0	.5
11	12.0	7.0	9.5	7.0	4.5	6.0	4.0	3.0	3.5	1.5	.0	1.0
12	11.5	8.5	10.0	6.0	3.5	5.5	4.0	2.0	3.0	1.0	.5	1.0
13	9.0	6.0	7.5	4.0	2.5	3.5	4.0	3.5	4.0	2.0	.5	1.0
14	10.0	7.5	8.5	4.5	2.0	3.0	4.5	4.0	4.0	2.0	.5	1.0
15	9.0	7.5	8.5	4.0	1.5	3.0	5.0	4.0	4.5	1.0	.0	.5
16	8.5	6.5	7.5	5.5	3.0	4.0	4.0	3.0	3.5	1.5	.0	1.0
17	8.0	5.0	6.5	5.5	4.5	5.0	3.5	2.5	3.0	1.0	.0	.0
18	7.5	4.0	5.5	6.0	4.5	5.0	2.5	1.5	2.0	.5	.0	.0
19	6.0	3.0	4.5	5.5	4.0	5.0	2.5	.0	2.0	.5	.0	.0
20	6.5	4.0	5.5	6.0	4.0	5.0	.5	.0	.0	1.5	.0	.5
21	9.5	6.0	7.5	6.0	5.0	5.5	2.0	.5	1.0	2.5	1.5	2.0
22	14.0	7.0	10.5	5.0	4.5	5.0	2.5	.5	1.5	2.5	1.0	2.0
23	14.5	11.5	13.0	6.0	4.0	5.0	1.0	.0	.5	3.0	2.0	2.5
24	12.0	8.5	10.0	6.0	5.0	5.5	.0	.0	.0	2.0	.0	1.0
25	12.0	7.0	9.5	5.0	4.0	5.0	.5	.0	.0	.5	.0	.0
26	11.0	7.0	9.0	4.5	2.5	4.0	.5	.0	.0	2.0	.0	1.0
27	9.5	5.0	7.0	4.0	1.5	2.5	1.5	.0	1.0	1.5	.0	1.0
28	8.0	5.0	7.0	4.0	1.5	2.5	2.0	.5	1.0	2.0	.0	1.0
29	7.5	4.5	6.0	3.0	2.0	3.0	2.5	1.0	2.0	.5	.0	.0
30	7.0	3.0	5.0	4.0	2.5	3.5	2.5	1.0	2.0	1.5	.0	.5
31	7.0	6.0	6.5	---	---	---	1.0	.0	.0	3.0	1.0	2.0
MONTH	16.5	3.0	9.1	9.0	1.5	4.7	5.0	.0	2.0	3.0	.0	.8
	FEBRUARY			MARCH			APRIL			MAY		
1	3.5	1.0	2.0	4.0	.5	2.0	7.5	.5	3.5	11.0	9.0	9.5
2	3.5	1.0	2.0	5.0	1.5	3.0	9.0	1.0	4.5	10.5	9.0	9.5
3	4.0	.5	2.5	6.0	2.5	4.0	10.5	1.5	5.5	11.0	9.0	10.0
4	3.5	.5	2.0	6.5	2.5	4.5	11.5	2.0	6.0	11.5	9.5	10.5
5	3.5	2.0	3.0	7.0	1.0	4.0	9.0	3.0	6.0	17.0	10.0	12.5
6	3.5	2.5	2.5	5.0	2.0	3.5	11.0	4.0	7.0	17.5	9.0	13.5
7	3.5	2.0	3.0	7.0	3.5	5.0	7.5	5.5	6.5	16.0	11.5	13.5
8	3.0	2.0	2.5	5.5	3.5	4.5	8.0	6.0	7.0	18.5	12.5	15.0
9	3.5	2.0	2.5	6.0	2.5	4.5	9.5	5.5	7.5	18.5	12.5	15.0
10	3.5	2.0	3.0	5.5	2.0	3.5	12.0	4.0	7.5	18.0	12.5	15.0
11	2.0	.5	1.0	5.5	.5	2.5	8.5	4.5	6.0	19.0	12.0	14.5
12	3.5	.5	1.5	2.5	.0	.5	10.5	4.5	7.0	19.0	10.5	14.0
13	4.0	1.5	2.5	2.5	.0	.5	10.0	4.0	7.0	18.5	8.5	13.0
14	2.5	.0	1.0	2.0	.0	.5	7.0	4.0	5.0	19.0	11.0	14.0
15	1.0	.0	.5	3.5	.0	1.5	4.5	2.0	3.5	16.5	9.5	13.0
16	1.5	.0	.5	5.5	.0	3.0	9.0	.5	4.5	17.0	7.5	12.0
17	.0	.0	.0	3.5	.0	1.0	12.5	3.0	7.5	12.5	8.0	10.0
18	.5	.0	.0	4.0	.0	1.5	12.5	5.5	8.5	14.0	8.5	11.0
19	.5	.0	.0	4.0	1.5	2.5	9.5	2.5	6.5	13.0	9.0	11.0
20	1.5	.0	1.0	5.5	3.0	4.0	12.5	2.5	6.5	14.0	8.0	11.0
21	2.0	.5	1.0	7.0	3.0	4.5	13.5	3.5	8.0	18.0	7.5	12.5
22	2.0	.5	1.0	5.5	2.5	4.0	13.5	4.5	8.5	15.0	8.5	12.0
23	1.5	.0	.5	6.5	3.0	4.5	13.5	7.0	10.0	13.5	11.5	12.5
24	.5	.0	.0	7.5	4.5	5.5	10.5	8.5	9.5	12.5	10.5	11.5
25	1.5	.0	.5	7.5	4.0	5.0	14.5	6.0	10.0	17.5	9.0	12.5
26	2.0	.0	.5	8.5	2.5	5.0	15.0	5.5	10.0	20.0	9.0	14.0
27	2.5	.0	1.0	8.0	3.5	5.0	10.0	7.0	9.0	16.0	12.5	14.0
28	3.0	.0	1.5	9.0	2.5	5.0	17.0	7.5	11.5	15.0	11.0	12.5
29	---	---	---	10.5	2.5	6.0	16.0	9.0	12.0	15.5	9.0	12.0
30	---	---	---	6.5	4.5	5.5	14.5	6.5	10.5	12.5	10.5	11.5
31	---	---	---	5.5	1.0	3.0	---	---	---	15.5	9.5	12.0
MONTH	4.0	.0	1.4	10.5	.0	3.5	17.0	.5	7.4	20.0	7.5	12.4

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 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	15.5	8.0	11.5	16.5	13.0	15.0	21.0	14.5	17.0	18.0	11.5	14.5
2	15.0	10.0	12.0	20.5	15.0	17.5	19.5	13.5	16.5	18.5	13.5	15.5
3	17.5	9.5	13.0	18.0	13.5	16.0	18.5	13.5	15.5	18.0	13.0	15.0
4	16.0	10.5	13.0	18.0	15.5	16.5	18.0	12.0	15.0	18.5	11.5	14.5
5	19.0	9.0	13.5	17.0	14.5	16.0	17.0	12.5	14.5	16.0	12.0	13.5
6	18.5	11.0	14.0	21.0	13.0	16.5	18.0	12.0	15.0	17.0	11.0	13.5
7	14.5	12.5	13.0	17.5	13.5	15.5	18.0	12.0	15.0	17.0	11.0	13.5
8	17.0	12.5	14.5	16.5	13.5	14.5	19.0	13.0	15.5	16.5	11.5	13.5
9	16.0	12.0	14.0	21.0	14.0	17.0	19.0	15.0	17.5	16.5	12.5	14.0
10	19.5	11.5	15.5	19.0	13.5	16.0	21.5	14.5	18.0	15.5	10.0	12.5
11	20.5	12.0	16.0	19.0	14.5	16.0	22.0	15.0	18.0	13.0	9.5	11.0
12	20.0	13.0	16.5	20.0	12.5	16.0	21.0	15.0	17.5	17.5	10.5	14.0
13	18.5	14.0	16.0	15.5	13.5	14.5	18.0	15.5	16.5	17.5	15.5	16.5
14	18.5	13.0	15.5	17.5	13.0	14.5	16.0	14.5	15.0	15.5	11.5	13.0
15	19.0	12.0	15.0	20.5	12.0	16.0	20.0	15.0	17.5	12.5	10.0	11.5
16	15.0	12.5	13.5	21.0	13.5	17.0	18.5	15.0	16.5	14.0	10.5	12.0
17	18.0	13.5	15.5	17.0	15.0	16.0	20.0	14.5	16.5	14.0	11.0	12.5
18	15.0	13.5	14.0	17.5	15.0	16.0	19.5	15.0	17.0	15.0	11.0	13.0
19	15.5	14.0	15.0	21.5	14.5	17.5	20.5	15.0	17.5	11.5	9.5	10.5
20	15.5	13.0	14.0	19.5	13.5	16.0	18.0	14.0	16.0	12.0	10.5	11.0
21	20.5	11.0	15.5	19.5	12.5	16.0	19.0	13.5	16.0	13.5	11.5	12.0
22	21.5	12.5	16.5	19.5	12.5	16.0	17.5	13.5	15.5	14.0	12.0	12.5
23	20.0	14.0	16.0	16.0	14.5	15.5	20.5	15.5	17.5	15.0	9.5	12.0
24	18.0	14.0	16.0	17.5	14.0	15.5	21.5	14.5	17.5	14.5	8.5	11.5
25	19.5	12.0	15.5	20.0	15.0	17.0	22.0	14.5	18.0	12.0	9.0	10.5
26	20.0	11.5	15.5	22.0	14.5	18.0	22.0	15.5	18.5	11.0	8.5	10.0
27	20.0	12.0	15.5	22.0	15.0	18.0	20.0	16.5	18.0	12.5	9.0	10.5
28	19.0	12.0	15.5	19.5	15.5	17.5	17.5	14.0	16.0	11.0	8.5	9.5
29	20.0	12.0	15.5	20.0	14.0	17.0	17.0	13.5	15.0	11.5	8.0	9.5
30	17.0	13.0	15.0	21.5	13.5	17.5	18.5	15.0	17.0	13.0	7.0	9.5
31	---	---	---	17.5	15.0	16.0	18.5	13.0	15.5	---	---	---
MONTH	21.5	8.0	14.7	22.0	12.0	16.3	22.0	12.0	16.5	18.5	7.0	12.4

SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED(TONS PER DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	3.6	1.2	.72	.82	.75	27	37	12	4.5	4.5	3.9
2	.48	24	1.2	.72	.82	.74	17	44	2.9	432	4.0	1.8
3	.47	7.0	1.2	.74	.84	.72	7.4	14	2.1	1510	3.9	1.7
4	.45	2.9	1.2	.73	.86	.71	7.7	13	1.8	32	3.7	1.6
5	.44	2.3	1.1	.69	.90	.68	6.2	4.4	1.7	8.8	3.5	1.6
6	.42	2.0	1.1	.67	.92	.67	4.5	3.5	1.5	6.2	3.5	1.5
7	.42	1.7	1.1	.64	.95	1.1	9.0	2.9	17	12	3.3	1.4
8	.54	1.6	1.1	.61	.98	1.2	22	2.5	948	6.8	3.3	1.3
9	.52	1.4	1.1	.60	1.0	1.1	12	2.1	17	5.5	310	1.3
10	.44	1.2	1.1	.60	1.0	1.1	4.4	21	4.1	4.5	5.1	1.3
11	.36	1.1	1.1	.59	1.1	.98	33	3.2	3.6	19	3.0	2.7
12	.30	.97	1.0	.61	1.1	.90	28	2.2	3.3	5.9	3.2	1.7
13	.26	.86	1.0	.61	1.2	.82	3.5	2.0	3.3	16	2.8	116
14	.25	.76	1.1	.60	1.1	.73	4.0	1.9	3.1	5.7	2.8	6.6
15	.25	.66	1.3	.57	1.1	.73	17	1.8	2.9	4.8	76	2.0
16	.25	.58	1.4	.53	1.1	.74	30	1.7	22	4.6	5.0	1.9
17	.24	.52	1.2	.50	1.0	.72	16	1.6	222	4.7	4.4	1.8
18	.24	.47	1.2	.48	.95	.70	11	1.6	27	4.9	292	1.8
19	.25	.57	1.1	.50	.98	.70	407	1.6	348	4.5	9.7	1.8
20	.34	26	1.1	.57	1.0	.70	186	1.5	397	4.0	3.9	1.9
21	.74	15	1.0	.60	1.0	.70	30	1.4	45	4.0	3.6	1.8
22	.90	3.8	1.0	.63	.96	.70	15	1.4	22	3.9	3.2	1.8
23	.89	2.6	.97	.65	.93	.71	11	13	16	3.9	3.1	1.7
24	.87	1.9	.91	.58	.87	5.3	9.0	2.9	34	3.8	2.8	1.7
25	.88	1.5	.83	.60	.84	8.5	6.7	2.0	12	3.9	2.5	1.6
26	.87	1.5	.84	.65	.81	35	5.0	1.7	8.4	3.5	2.3	1.7
27	.85	1.4	.85	.67	.79	24	86	1.6	6.4	115	2.2	1.7
28	.85	1.4	.84	.66	.76	31	12	1.5	5.3	7.1	2.1	1.6
29	.85	1.3	.83	.72	---	34	5.8	1.4	4.8	5.1	2.0	1.6
30	.86	1.3	.81	.72	---	18	4.8	64	9.2	4.7	414	1.5
31	.89	---	.78	.79	---	413	---	43	---	4.6	12	---
TOTAL	16.86	111.89	32.56	19.55	26.68	587.40	1038.0	297.4	2203.4	2255.9	1197.4	172.3

WAUMANDEE CREEK BASIN

05378185 EAGLE CREEK, AT COUNTY HIGHWAY G, NEAR FOUNTAIN CITY, WI--CONTINUED

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	13	3.2	3.0	1.9	2.4	64	117	14	17	12	22
2	2.5	68	3.1	2.9	1.9	2.5	34	67	10	1170	11	14
3	2.4	19	3.1	2.9	1.9	2.5	19	24	8.4	3000	11	12
4	2.3	8.7	3.1	2.8	2.0	2.6	19	28	6.9	118	11	11
5	2.2	7.4	3.1	2.6	2.1	2.5	16	18	6.2	24	10	9.6
6	2.1	6.6	3.0	2.4	2.1	2.6	14	14	5.2	19	10	8.6
7	2.1	6.1	3.1	2.3	2.1	3.5	26	12	14	22	9.8	7.7
8	2.9	5.6	3.1	2.1	2.2	4.5	51	11	1950	20	9.7	6.7
9	3.0	5.3	3.1	2.0	2.2	4.2	29	9.1	88	17	544	6.1
10	2.7	5.0	3.1	2.0	2.3	4.1	16	54	15	14	14	5.6
11	2.5	4.5	3.1	1.9	2.3	3.7	77	15	12	24	10	11
12	2.3	4.2	3.1	1.9	2.4	3.5	65	8.8	11	14	11	7.0
13	2.1	3.9	3.1	1.9	2.5	3.2	9.7	8.1	10	21	10	278
14	2.1	3.6	3.5	1.8	2.4	2.9	13	8.0	9.4	16	10	39
15	2.1	3.3	7.2	1.7	2.4	3.0	48	7.8	8.2	14	165	12
16	2.1	3.0	8.7	1.5	2.3	3.0	83	7.6	40	13	15	11
17	2.0	2.8	7.2	1.4	2.3	2.9	52	7.3	498	14	13	9.8
18	2.0	2.6	6.6	1.3	2.1	2.8	31	7.4	56	15	647	9.1
19	2.0	3.2	6.0	1.4	2.3	2.7	830	7.4	752	14	28	8.4
20	2.2	80	5.7	1.5	2.5	2.7	316	7.1	923	12	15	8.4
21	4.4	41	5.5	1.6	2.5	2.6	76	7.0	94	13	12	7.7
22	3.4	9.9	5.3	1.6	2.5	2.6	56	6.9	44	13	10	7.5
23	3.3	6.6	4.9	1.7	2.5	2.6	43	25	30	13	9.1	6.7
24	3.2	4.5	4.5	1.5	2.4	45	34	11	61	13	7.5	6.2
25	3.2	3.6	4.0	1.5	2.4	46	26	8.1	30	14	6.3	5.7
26	3.0	3.5	4.0	1.6	2.4	91	20	6.9	24	12	6.0	5.5
27	2.9	3.3	3.9	1.6	2.4	60	257	6.6	20	220	5.8	5.2
28	2.9	3.3	3.8	1.6	2.4	61	72	6.1	18	26	5.5	4.8
29	2.9	3.3	3.6	1.7	---	68	29	5.5	16	13	5.4	4.7
30	2.9	3.3	3.5	1.7	---	43	24	166	25	13	1020	4.5
31	3.0	---	3.3	1.9	---	586	---	36	---	12	32	---
TOTAL	81.2	338.1	131.5	59.3	63.7	1069.6	2449.7	723.7	4799.3	4940	2686.1	555.5

WAUMANDEE CREEK BASIN

95

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. Rainfall estimated to be 0.00 for Dec. 3, Jan. 12, 13, 20, Feb. 9, 10, 12, 21, 22, and Mar. 9, 10, 22 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.43 in., Sept. 16, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.99 in., Apr. 19 and July 2.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.66	.00	.00	.00	.00	.00	.63	.00	.00	.00	.00
2	.00	.52	.00	.00	.00	.00	.00	.05	.03	1.99	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.15	.00	1.16	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.05	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
7	.00	.00	.00	.00	.00	.00	.25	.01	.88	.29	.00	.03
8	.31	.00	.00	.00	.00	.00	.13	.00	1.41	.03	.09	.00
9	.00	.01	.00	.00	.00	.00	.00	.00	.00	.02	1.20	.00
10	.05	.00	.00	.00	.00	.00	.00	.76	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.68	.00	.00	.39	.00	.30
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.09	.40	.00	1.73
14	.00	.00	.10	.00	.00	.00	.14	.00	.00	.00	.10	.03
15	.00	.00	.20	.00	.00	.00	.51	.00	.00	.00	1.29	.00
16	.02	.00	.03	.00	.00	.00	.04	.00	.74	.00	.21	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	1.09	.12	.00	.00
18	.00	.00	.08	.00	.00	.00	.38	.00	.69	.04	1.24	.00
19	.23	.42	.00	.00	.00	.00	1.99	.00	1.47	.01	.00	.20
20	.00	.87	.00	.00	.00	.00	.02	.00	.04	.00	.00	.11
21	.00	.08	.00	.00	.00	.00	.00	.00	.01	.00	.00	.07
22	.00	.00	.00	.00	.00	.00	.00	.08	.00	.00	.00	.05
23	.00	.00	.00	.00	.00	.00	.00	.46	.05	.05	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.11	.33	.02	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.08	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.07
27	.00	.00	.00	.00	.00	.00	.99	.19	.00	1.23	.00	.05
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
29	.00	.00	.14	.00	---	.00	.00	.02	.49	.00	.00	.00
30	.00	.00	.00	.00	---	.21	.00	1.30	.00	.00	1.66	.00
31	.00	---	.00	.00	---	1.46	---	.00	---	.18	.00	---
TOTAL	0.61	2.56	0.55	0.00	0.00	1.67	5.13	3.80	7.32	6.02	5.85	2.65

MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN

LOCATION.--Lat 44°03'21", long 91°38'16", in sec.23, T.107 N., R.7 W., Winona County, Hydrologic Unit 07040003, on right bank at Winona pumping station in Winona, 9.5 mi upstream from Trempealeau River, and at mile 725.7 upstream from the Ohio River.

DRAINAGE AREA.--59,200 mi², approximately.

PERIOD OF RECORD.--June 1928 to current year. Gage-height records collected in this vicinity since 1878 are contained in reports of Mississippi River Commission.

GAGE.--Water-stage recorder. Datum of gage is 639.64 ft above sea level. June 10, 1928, to Apr. 15, 1931, non-recording gage at site 800 ft upstream. Prior to Oct. 1, 1929, at datum 0.20 ft higher and Oct. 1, 1929, to Apr. 15, 1931, at datum 0.12 ft lower. Apr. 16, 1931, to Nov. 12, 1934, nonrecording gage at present site and datum. Since Mar. 31, 1937, auxiliary water-stage recorder 2.7 mi upstream at tailwater of navigation dam 5A.

REMARKS.--No estimated daily discharges. Records good. Some regulation by reservoirs, navigation dams, and powerplants at low and medium stages. Flood flow not materially affected by artificial storage.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 18, 1880, reached an elevation of 657.14 ft, discharge, 172,000 ft³/s, from information by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17100	23000	30900	21300	16500	17200	64900	75200	70200	159000	72700	68800
2	17800	23700	29600	19800	16600	16700	70300	76200	71100	158000	72000	66600
3	17800	25900	29100	19100	17300	16100	77100	76500	73100	155000	68600	65100
4	18000	27700	27200	19300	17900	16900	80400	78100	75400	150000	65100	64100
5	18000	28200	23700	19300	18600	18400	78900	81000	76400	146000	64300	61700
6	17900	29900	20400	19600	19600	20600	78600	84500	75600	142000	64500	58100
7	18200	32200	14200	19500	19900	22800	80300	86900	74400	139000	64500	55800
8	19800	33100	14100	19400	19800	21900	83000	86700	72800	134000	65600	55500
9	24300	33700	19600	19400	18500	20500	86600	84500	71900	131000	67100	54100
10	29600	33100	22900	19300	18000	19400	91800	81200	71500	129000	66700	52100
11	33300	32000	26100	19200	17900	19400	98000	79700	71900	128000	68200	49800
12	38400	32100	29700	17900	17900	20200	103000	78300	72500	129000	70500	49100
13	40100	33700	29100	17500	18100	20700	107000	77400	72700	131000	71200	47900
14	41000	35100	29100	17600	18300	21300	109000	77700	73200	131000	69000	50100
15	41100	35300	30200	18000	18200	21700	108000	78800	73400	131000	66800	48100
16	38700	35300	31300	18000	18200	19100	108000	80200	72500	128000	63200	44800
17	36300	35300	30200	18000	17900	19000	105000	80000	72000	125000	60700	44400
18	35600	35300	28900	17400	17200	19200	102000	80100	75200	122000	61300	46100
19	33600	34300	27400	17300	16900	19000	100000	81700	83200	117000	62600	45700
20	31700	33200	24100	16200	16700	19200	99000	83400	98700	113000	64300	43300
21	31500	33900	19500	15800	16900	21500	96100	83900	111000	108000	66200	41000
22	30700	34100	13800	16800	17000	21500	95100	82400	122000	103000	66500	40800
23	28900	34300	12100	18700	17300	19800	94700	79500	133000	98800	66500	41600
24	27700	36300	13400	20000	16600	17200	90800	76400	150000	94700	67600	42600
25	27300	39300	15400	20200	16200	16100	85100	73700	164000	91400	70200	42600
26	27000	39900	15500	19100	16300	15600	80200	70200	168000	87700	71800	42300
27	26800	36400	16800	17000	16400	19700	77400	67500	168000	85200	72300	42200
28	26400	32900	18700	16900	17000	33900	75700	68000	166000	82800	72300	41000
29	25800	33200	20800	16800	---	42900	75400	67900	164000	80500	71300	39500
30	24800	32000	21600	16400	---	51000	75100	67700	162000	77500	70500	39000
31	23600	---	21400	16400	---	58700	---	69400	---	74500	70200	---
TOTAL	868800	984400	706800	567200	493700	707200	2676500	2414700	3005700	3682100	2094300	1483800
MEAN	28030	32810	22800	18300	17630	22810	89220	77890	100200	118800	67560	49460
MAX	41100	39900	31300	21300	19900	58700	109000	86900	168000	159000	72700	68800
MIN	17100	23000	12100	15800	16200	15600	64900	67500	70200	74500	60700	39000
AC-FT	1723000	1953000	1402000	1125000	979300	1403000	5309000	4790000	5962000	7303000	4154000	2943000
CFSM	.47	.55	.39	.31	.30	.39	1.51	1.32	1.69	2.01	1.14	.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1993, BY WATER YEAR (WY)

	MEAN	21890	22060	17090	14760	14900	29740	59560	47450	39020	30930	20640	22090
MAX	85950	50040	40440	30480	35900	58700	86420	152600	111500	100200	118800	67560	69490
(WY)	1987	1972	1992	1983	1984	1983	1965	1986	1993	1993	1993	1993	1986
MIN	6774	7367	6286	6742	7874	9023	12810	11930	8450	7063	5391	6790	6790
(WY)	1934	1934	1934	1940	1977	1934	1931	1931	1934	1934	1934	1934	1933

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1928 - 1993
ANNUAL TOTAL	13148500	19685200	
ANNUAL MEAN	35920	53930	28370
HIGHEST ANNUAL MEAN			56850
LOWEST ANNUAL MEAN			9742
HIGHEST DAILY MEAN	91500	Apr 26	168000
LOWEST DAILY MEAN	12100	Dec 23	12100
ANNUAL SEVEN-DAY MINIMUM	15100	Dec 22	15100
INSTANTANEOUS PEAK FLOW			268000
INSTANTANEOUS PEAK STAGE			(a)20.77
INSTANTANEOUS LOW FLOW		16.63 Jun 26	(b)1940
ANNUAL RUNOFF (AC-FT)	26080000	39050000	20550000
ANNUAL RUNOFF (CFSM)	.61	.91	.48
10 PERCENT EXCEEDS	63800	104000	59100
50 PERCENT EXCEEDS	30200	41000	20000
90 PERCENT EXCEEDS	19400	17300	9780

(a) From floodmark

(b) Result of ice jam

TREMPEALEAU RIVER BASIN

97

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 1992 to current year.

REMARKS.--All samples are equal-width increment (EWI) samples.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 1992							
14...	1100	--	8.0	7.0	11.6	1.5	--
28...	1000	--	8.1	6.5	12.8	2.4	--
NOV							
19...	1015	--	8.1	5.5	13.0	<1.0	--
DEC							
16...	1030	--	8.0	3.0	12.0	4.3	--
JAN 1993							
20...	1030	--	8.0	1.0	--	1.1	--
FEB							
17...	1030	--	8.1	0.5	--	<1.0	--
MAR							
17...	1015	--	7.9	1.0	--	4.0	--
31...	1030	--	7.6	5.5	--	28	86000
APR							
14...	1045	--	8.1	5.5	--	3.1	5400
28...	1015	--	--	9.0	--	--	4200
28...	1018	--	8.1	9.0	--	2.7	--
MAY							
12...	1000	--	8.1	12.0	--	2.2	--
26...	1015	--	8.2	12.0	--	2.6	9100
AUG							
10...	1945	9.7	8.1	17.5	8.0	1.8	21000

DATE	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)
OCT 1992							
14...	8	386	78	2	0.763	<0.005	0.110
28...	16	392	92	5	0.705	0.040	0.180
NOV							
19...	20	388	82	4	0.927	0.060	0.150
DEC							
16...	37	412	72	10	1.01	0.661	0.320
JAN 1993							
20...	34	410	80	6	1.03	0.060	0.130
FEB							
17...	29	418	90	6	1.08	0.078	0.110
MAR							
17...	89	448	90	12	1.12	0.776	0.610
31...	2260	2570	294	236	1.59	3.34	4.96
APR							
14...	139	510	158	18	1.28	0.464	0.390
28...	--	--	--	--	--	--	--
28...	200	580	122	20	1.31	0.352	0.570
MAY							
12...	172	528	96	20	0.981	0.124	0.420
26...	83	454	82	11	0.985	0.133	0.270
AUG							
10...	104	490	--	19	--	0.066	0.300

TREMPEALEAU RIVER BASIN

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.--4.83 mi².

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

REMARKS.--All samples are equal-width increment (EWI) samples.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 1992							
14...	0900	--	7.8	7.0	10.6	1.5	--
28...	0830	--	7.8	6.0	11.6	<1.0	--
NOV							
19...	0830	--	7.8	5.0	13.4	<1.0	--
DEC							
16...	0900	--	7.9	4.0	11.6	1.5	--
JAN 1993							
20...	0900	--	8.0	1.0	--	1.1	--
FEB							
17...	0900	--	8.0	1.0	--	<1.0	--
MAR							
17...	0900	--	8.0	1.0	--	<1.0	--
31...	0900	--	7.7	5.5	--	7.8	7100
APR							
14...	0900	--	8.0	5.0	--	<1.0	200
28...	0915	--	8.0	8.0	--	1.1	--
28...	0918	--	--	8.0	--	--	1200
MAY							
12...	0900	--	8.0	11.0	--	<1.0	1700
26...	0900	--	8.0	11.0	--	1.3	270
AUG							
11...	0943	4.1	8.0	13.0	9.6	<1.0	5500

DATE	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)
OCT 1992							
14...	14	340	76	2	0.285	0.017	0.080
28...	6	330	86	<2	0.295	0.038	0.070
NOV							
19...	7	326	82	2	0.400	0.066	0.060
DEC							
16...	10	324	56	<2	0.450	0.056	0.070
JAN 1993							
20...	4	332	76	<2	0.426	0.043	0.050
FEB							
17...	4	344	82	<2	0.408	0.033	0.040
MAR							
17...	4	334	90	2	0.320	0.028	0.060
31...	978	1130	110	86	0.986	0.393	1.47
APR							
14...	15	352	138	6	0.463	0.071	0.080
28...	25	372	90	4	0.683	0.074	0.100
28...	--	--	--	--	--	--	--
MAY							
12...	12	338	84	<2	0.494	0.055	0.090
26...	11	340	78	6	0.442	0.046	0.060
AUG							
11...	25	364	--	7	--	0.062	0.090

TREMPEALEAU RIVER BASIN

99

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 1992 to current year.

REMARKS.--All samples are equal-width increment (EWI) samples.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 1992							
14...	1010	--	8.0	7.0	11.4	1.6	--
28...	1100	--	8.1	6.0	13.4	<1.0	--
NOV							
19...	1130	--	8.1	5.0	13.2	<1.0	--
DEC							
16...	1145	--	8.0	4.0	12.0	1.6	--
JAN 1993							
20...	1130	--	7.9	1.0	--	1.1	--
FEB							
17...	1130	--	8.2	0.5	--	<1.0	--
MAR							
17...	1130	--	8.1	1.0	--	1.8	--
31...	1130	--	7.8	5.0	--	14	24000
APR							
14...	1130	--	8.2	--	--	3.1	--
14...	1145	--	--	--	--	--	2800
28...	1115	--	--	10.0	--	--	860
28...	1118	--	8.2	10.0	--	1.3	--
MAY							
12...	1130	--	8.3	14.0	--	1.2	2500
26...	1120	--	8.3	12.0	--	1.6	1600
AUG							
11...	0835	8.3	8.1	13.0	9.4	1.0	14000

DATE	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)
OCT 1992							
14...	6	338	74	2	0.534	0.006	0.090
28...	6	314	60	<2	0.516	0.029	0.080
NOV							
19...	4	320	76	2	0.636	0.022	0.080
DEC							
16...	6	336	72	2	0.711	0.086	0.130
JAN 1993							
20...	14	350	82	4	0.707	0.021	0.060
FEB							
17...	10	354	84	2	0.671	0.027	0.060
MAR							
17...	18	352	74	5	0.688	0.246	0.210
31...	1340	1570	172	130	1.00	1.03	2.96
APR							
14...	18	350	68	7	0.824	0.450	0.160
14...	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--
28...	24	376	114	4	0.895	0.053	0.150
MAY							
12...	21	350	82	3	0.730	0.041	0.120
26...	12	346	80	2	0.684	0.045	0.090
AUG							
11...	49	400	--	11	--	0.047	0.160

05379500 TREMPLEAU 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 sea level. 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, Dec. 6-12 and Dec. 20 to Mar. 21. Records good except those for ice-affected periods, which are fair. Gage-height telemeter and data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	532	425	446	380	340	350	1650	1190	1240	1030	714	1020
2	528	536	443	370	350	360	2120	1190	1170	1470	708	882
3	517	671	437	380	350	370	2090	1310	972	1680	687	803
4	504	635	435	400	350	380	1690	1410	796	2950	669	747
5	491	573	429	400	350	390	1250	1440	725	3330	656	719
6	479	514	420	390	350	410	1050	1530	683	3130	656	694
7	474	478	410	380	340	410	967	1530	679	2670	667	680
8	475	461	410	360	340	430	1030	1290	789	2130	670	669
9	486	453	400	360	340	450	1170	1110	1060	1690	768	675
10	485	448	400	350	340	440	1210	1010	1240	1350	1160	660
11	476	444	400	350	340	420	1190	1120	1180	1220	1350	655
12	465	437	410	340	340	380	1290	1220	1030	1250	1100	674
13	457	433	418	340	340	360	1400	1070	822	1280	847	725
14	451	426	419	340	340	340	1440	950	723	1200	743	1150
15	445	420	446	340	340	350	1460	859	687	1120	869	1310
16	442	414	502	340	330	420	1500	801	690	1030	1070	1160
17	440	412	518	330	320	400	1550	749	857	960	985	999
18	439	414	491	330	300	370	1600	739	1150	1030	949	871
19	435	422	458	340	320	370	1860	726	1470	1020	987	809
20	443	530	420	350	330	370	2130	712	1880	928	829	794
21	453	820	410	360	330	370	2330	695	2340	864	761	811
22	461	892	400	370	330	385	2320	676	5110	821	720	834
23	465	769	400	370	330	382	1960	687	4860	794	702	825
24	457	668	390	370	320	411	1570	802	3560	783	690	795
25	444	571	380	360	320	550	1230	847	2660	786	681	774
26	433	529	380	350	330	763	1060	786	2060	802	682	772
27	428	502	390	350	340	1060	1020	736	1660	805	730	775
28	424	478	390	340	340	1180	1220	790	1270	917	744	787
29	421	461	400	340	---	1190	1360	754	1080	803	741	792
30	418	452	400	330	---	1250	1340	768	1050	744	875	790
31	415	---	390	340	---	1490	---	1050	---	719	1110	---
TOTAL	14283	15688	13042	11050	9390	16801	45057	30547	45493	41306	25520	24651
MEAN	461	523	421	356	335	542	1502	985	1516	1332	823	822
MAX	532	892	518	400	350	1490	2330	1530	5110	3330	1350	1310
MIN	415	412	380	330	300	340	967	676	679	719	656	655
CFSM	.72	.81	.65	.55	.52	.84	2.34	1.53	2.36	2.07	1.28	1.28
IN.	.83	.91	.75	.64	.54	.97	2.61	1.77	2.63	2.39	1.48	1.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1993. BY WATER YEAR (WY)

MEAN	365	380	317	273	321	818	678	478	487	406	347	399
MAX	1314	856	953	679	878	2325	2146	1320	1516	1332	1050	1239
(WY)	1955	1992	1983	1973	1981	1936	1965	1973	1993	1993	1975	1992
MIN	169	180	139	117	119	289	301	195	183	163	138	153
(WY)	1951	1950	1959	1959	1959	1968	1964	1934	1964	1964	1964	1948

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1914 - 1993

ANNUAL TOTAL	203448		292828					
ANNUAL MEAN	556		802			440		
HIGHEST ANNUAL MEAN						813		1973
LOWEST ANNUAL MEAN						237		1964
HIGHEST DAILY MEAN	7170	Sep 18	5110	Jun 22	12900		Apr 4	1956
LOWEST DAILY MEAN	297	Aug 25	300	Feb 18	98		Jan 10	1938
ANNUAL SEVEN-DAY MINIMUM	301	Aug 21	323	Feb 16	106		Jan 7	1938
INSTANTANEOUS PEAK FLOW			5880	Jun 22	17400		Apr 4	1956
INSTANTANEOUS PEAK STAGE			11.15	Jun 22	(a)10.35		Apr 4	1956
ANNUAL RUNOFF (CFSM)	.86		1.25		.68			
ANNUAL RUNOFF (INCHES)	11.77		16.94		9.30			
10 PERCENT EXCEEDS	729		1420		722			
50 PERCENT EXCEEDS	450		675		330			
90 PERCENT EXCEEDS	355		346		194			

(a) Datum then in use

TREMPEALEAU RIVER BASIN

101

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 1992 to current year.

REMARKS.--All samples are equal-width increment (EWI) samples.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00500)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
AUG 1993 10...	1820	5.9	8.1	17.0	9.0	1.7	13000	115	566	16	0.070	0.220

BLACK RIVER BASIN

05381000 BLACK RIVER AT NEILLSVILLE, WI

LOCATION.--Lat 44°33'34", long 90°36'52", in sec.15, T.24 N., R.2 W., Clark County, Hydrologic Unit 07040007, on right bank at downstream side of bridge on U.S. Highway 10 in Neillsville, 1.0 mi 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 sea level. 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. 15-18 and Nov. 29 to Apr. 5. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	149	280	220	110	62	3100	1360	3290	346	2920	678
2	173	396	250	210	110	68	2500	1840	2010	436	2600	533
3	156	972	220	200	110	74	2000	3490	1260	444	1390	387
4	143	862	190	190	100	82	1900	5210	829	629	741	290
5	131	757	170	170	100	92	1900	4800	597	443	495	240
6	126	600	160	160	98	110	1980	3450	452	412	412	212
7	116	475	170	140	96	150	2030	2320	396	363	370	185
8	112	397	180	130	94	200	5520	1600	1450	356	369	170
9	185	344	190	120	90	270	6610	1110	6470	425	1450	160
10	213	322	180	110	86	340	4980	870	4930	328	2030	151
11	301	322	170	96	86	330	3610	2740	3540	313	1530	143
12	403	339	180	92	84	300	3340	3080	2130	338	927	151
13	390	372	160	98	84	270	3950	2020	1200	462	569	1250
14	334	345	150	100	82	250	2950	1410	962	417	410	6450
15	280	260	320	100	78	230	2830	965	615	325	378	5240
16	248	240	360	100	72	210	3260	648	565	268	356	3120
17	217	230	300	110	66	190	3170	498	3910	237	300	1580
18	195	220	260	110	60	180	4290	433	7220	279	266	921
19	179	227	230	100	56	170	3680	391	10300	276	247	644
20	180	1020	280	100	54	160	4410	391	24900	214	220	528
21	185	5420	310	110	56	160	3050	367	18600	184	197	655
22	215	4950	340	110	58	160	1980	332	10500	160	180	681
23	221	3480	350	120	60	190	1360	406	5700	146	165	616
24	214	2260	330	120	60	300	1020	726	3260	141	152	489
25	205	1460	290	120	56	1000	864	1120	2030	157	139	394
26	202	1010	260	120	54	1900	766	978	1290	168	130	340
27	188	696	250	110	52	3000	918	806	946	154	140	329
28	176	504	260	110	56	4500	2660	691	683	143	144	323
29	171	370	270	100	---	5400	2550	519	497	210	193	435
30	160	320	260	100	---	6600	1890	3730	413	472	439	539
31	151	---	240	110	---	4600	---	5500	---	1250	779	---
TOTAL	6358	29319	7560	3886	2168	31548	85068	53801	120945	10496	20638	27834
MEAN	205	977	244	125	77.4	1018	2836	1736	4031	339	666	928
MAX	403	5420	360	220	110	6600	6610	5500	24900	1250	2920	6450
MIN	112	149	150	92	52	62	766	332	396	141	130	143
CFSM	.27	1.30	.33	.17	.10	1.36	3.79	2.32	5.38	.45	.89	1.24
IN.	.32	1.46	.38	.19	.11	1.57	4.23	2.67	6.01	.52	1.03	1.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1993, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1905	382	2101	1983	20.7	1934
1906	458	2345	1992	27.1	1977
1907	192	1133	1966	35.9	1934
1908	109	615	1973	10.0	1918
1909	120	1348	1984	5.00	1918
1910	1264	3960	1973	56.7	1940
1911	1953	5025	1951	270	1946
1912	885	3538	1973	77.4	1934
1913	843	4689	1905	43.0	1964
1914	305	1538	1978	14.9	1933
1915	237	1293	1928	10.5	1933
1916	548	4304	1938	5.77	1933

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1905 - 1993
ANNUAL TOTAL	226922	399621	
ANNUAL MEAN	620	1095	604
HIGHEST ANNUAL MEAN			1213
LOWEST ANNUAL MEAN			160
HIGHEST DAILY MEAN	7200	24900	38200
LOWEST DAILY MEAN	44	52	.70
ANNUAL SEVEN-DAY MINIMUM	47	57	1.0
INSTANTANEOUS PEAK FLOW		30400	48800
INSTANTANEOUS PEAK STAGE		19.30	23.80
INSTANTANEOUS LOW FLOW		110	.60
ANNUAL RUNOFF (CFSM)	.83	1.46	.81
ANNUAL RUNOFF (INCHES)	11.27	19.85	10.97
10 PERCENT EXCEEDS	1810	3260	1520
50 PERCENT EXCEEDS	218	323	145
90 PERCENT EXCEEDS	86	100	35

(a) Also occurred Aug. 11, 14-16, 1936

103

LOCATION.--Lat 44°04'22", long 91°17'41", in SW 1/4 sec.1, T.18 N., R.8 W., LaCrosse County, Hydrologic Unit 07040007, on left bank 1,000 ft upstream from bridge on U.S. Highway 53, 4.5 mi southeast of Galesville, and 4.8 mi downstream from Fleming Creek.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 658.43 ft above sea level. Prior to Apr. 2, 1941, nonrecording gage on bridge 1,000 ft downstream at same datum. Apr. 3, 1941, to Oct. 1, 1971, water-stage recorder at site 1.100 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 29 to Dec. 12 and Dec. 19 to Mar. 21. Records good except for those for ice-affected periods, which are poor. Flow partly regulated by Hatfield Dam Powerplant where drainage area is 1,290 mi² and storage capacity is 272,000,000 ft³. Water diverted periodically from basin into Lemonweir River basin for cranberry culture. Gage-height telemeter and data-collection platform at station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1650	970	1300	1100	900	780	15000	5980	5860	3310	1820	2590
2	1380	1070	1100	1000	920	800	18200	5310	11000	4510	3090	2840
3	1440	1400	1000	1000	940	820	15100	4710	8640	5450	3970	2540
4	1480	2750	940	1100	940	820	11100	6030	5280	6950	3670	2280
5	1370	2940	900	1100	940	860	7760	7950	3380	7180	2820	1940
6	1310	2570	880	1000	940	920	5730	10900	2400	6930	2350	1730
7	1250	2180	980	960	940	900	5490	11500	2190	5370	2080	1560
8	1140	2040	960	920	920	900	5080	9000	2240	4210	1890	1450
9	1040	1770	940	840	900	1200	5410	6310	2790	3730	1890	1370
10	1100	1470	1100	780	880	1200	8270	4410	5730	3500	2150	1320
11	1220	1460	1400	700	900	1500	11800	3580	14400	3380	3580	1250
12	1220	1460	1300	700	860	1700	10600	3960	16300	3110	3780	1240
13	1230	1340	1190	800	840	1800	8540	5260	12000	2980	3180	1250
14	1420	1310	1230	940	820	1600	8040	5330	7580	2830	2530	1570
15	1350	1320	1370	980	800	1600	9150	3620	4720	2750	2270	3800
16	1190	1430	1490	900	800	1800	8130	2960	3820	2640	2210	6590
17	1190	1300	2270	800	740	1400	7450	2100	3740	2390	2190	8210
18	1300	987	2940	760	720	1100	9140	2020	5110	2330	2160	6160
19	1070	1130	2600	780	720	1200	10500	1760	11700	2260	2040	3780
20	997	1400	2100	820	740	1300	12200	1760	28300	2250	1920	2770
21	1210	1780	1600	860	740	1200	11200	1450	54500	2050	1780	2320
22	1160	4320	1300	880	780	1170	11700	1590	48100	1980	1650	2250
23	1130	8450	900	880	780	1100	9370	1570	30700	1910	1550	2360
24	1080	11800	1100	880	760	1040	6280	1710	20200	1790	1520	2300
25	1200	9680	1300	900	740	1180	4580	1960	14900	1800	1410	2150
26	1160	6770	1200	900	740	1590	3400	2310	10600	1980	1380	1940
27	1140	4360	1200	900	760	3060	3240	2470	7360	2030	1350	1800
28	1140	2860	1100	900	780	4240	3350	2380	5150	2540	1330	1740
29	1100	1700	1200	880	---	5470	4270	2100	4090	2030	1340	1620
30	1080	1500	1200	860	---	7470	6020	2000	3680	1810	1580	1570
31	978	---	1200	880	---	10700	---	2520	---	1690	1860	---
TOTAL	37725	85517	41290	27700	23240	62420	256100	126510	356460	99670	68340	76290
MEAN	1217	2851	1332	894	830	2014	8537	4081	11880	3215	2205	2543
MAX	1650	11800	2940	1100	940	10700	18200	11500	54500	7180	3970	8210
MIN	978	970	880									

STATISTICS OF MONTHLY MEAN		DATA FOR WATER YEARS 1952 - 1995, SI		WATER YEAR (WY)								
MEAN	1259	1429	1003	743	740	3050	4628	2575	2273	1222	865	1561
MAX	5231	4401	3468	2661	3664	9521	12210	7993	11880	4361	3433	9373
(WY)	1987	1935	1992	1932	1984	1973	1967	1960	1993	1978	1980	1938
MIN	277	337	320	268	263	406	1315	591	427	322	293	306
(WY)	1959	1949	1959	1959	1959	1934	1957	1934	1988	1933	1964	1948

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1932 - 1993	
ANNUAL TOTAL	779811		1261262			
ANNUAL MEAN	2131		3456		1778	
HIGHEST ANNUAL MEAN					3456	1993
LOWEST ANNUAL MEAN					699	1977
HIGHEST DAILY MEAN	21000	Sep 18	54500	Jun 21	62000	Apr 1 1967
LOWEST DAILY MEAN	532	Sep 1	700	Jan 11, 12	180	Dec 20 1932
ANNUAL SEVEN-DAY MINIMUM	551	Aug 27	746	Feb 17	218	Aug 10 1933
INSTANTANEOUS PEAK FLOW			64000	Jun 21	(a)65500	Apr 1 1967
INSTANTANEOUS PEAK STAGE			16.64	Jun 21	16.64	Jun 21 1993
INSTANTANEOUS LOW FLOW					180	Dec 20 1931
ANNUAL RUNOFF (CFSM)	1.02		1.66		.85	
ANNUAL RUNOFF (INCHES)	13.95		22.56		11.62	
10 PERCENT EXCEEDS	4370		8160		3960	
50 PERCENT EXCEEDS	1200		1740		864	
90 PERCENT EXCEEDS	688		880		380	

(a) Gage height, 14.63 ft. at location 1.000 ft downstream

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 1992 TO SEPTEMBER 1993

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)	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						MAY 1993				
07...	1015	--	1230	112	13.5	26...	1415	2260	135	17.0
NOV						JUN				
17...	1228	--	1400	120	3.0	21...	1120	56000	60	17.0
JAN 1993						JUL				
06...	1145	1000	--	132	0.0	13...	1000	2980	126	20.5
FEB						AUG				
19...	1515	720	--	174	0.0	03...	1255	4010	115	22.0
23...	1340	780	--	164	0.0	SEP				
APR						01...	0930	2510	111	18.0
05...	1645	--	7360	83	4.5					
22...	1245	--	12100	89	8.0					

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 1992											
07...	1015	--	1230	112	7.6	13.5	5.1	9.4	747	92	200
FEB 1993											
23...	1340	780	--	164	7.4	0.0	3.0	12.5	750	87	K9
APR											
22...	1245	--	12100	89	6.3	8.0	4.7	10.1	744	87	25
JUL											
13...	1000	--	2980	126	7.1	20.5	4.3	--	741	--	470
SEP											
01...	0930	--	2510	111	7.2	18.0	5.8	7.6	744	82	780

DATE	STREP- TOCOCCEI 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 1992											
07...	280	46	11	4.4	2.8	2.1	41	34	7.0	5.5	0.10
FEB 1993											
23...	K9	59	14	5.9	4.0	1.8	57	46	9.4	7.3	0.10
APR											
22...	49	--	6.7	2.7	2.8	2.9	23	19	6.0	6.7	<0.10
JUL											
13...	260	45	11	4.3	2.6	1.6	38	31	5.6	4.5	<0.10
SEP											
01...	810	42	10	4.2	3.1	1.6	40	33	6.2	5.7	0.10

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

BLACK RIVER BASIN

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05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	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)	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)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT 1992 07...	9.9	82	<0.010	0.600	0.020	0.50	0.140	0.060	0.050	40	20
FEB 1993 23...	13	94	0.020	1.10	0.090	0.30	0.110	0.060	0.060	60	20
APR 22...	5.2	51	<0.010	0.290	0.040	0.60	0.080	0.040	0.030	130	19
JUL 13...	9.1	90	0.010	0.560	0.070	0.80	0.210	0.080	0.080	--	--
SEP 01...	8.5	76	0.030	0.570	0.020	0.40	0.060	0.150	0.120	30	16

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	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)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1992 07...	<3	320	<4	31	<10	2	<1	30	<6	150	8
FEB 1993 23...	<3	640	<4	59	<10	<1	<1	33	<6	7	90
APR 22...	<3	260	<4	9	<10	1	<1	23	<6	111	9
JUL 13...	--	--	--	--	--	--	--	--	--	32	96
SEP 01...	<3	240	<4	20	<10	2	<1	29	<6	--	--

LA CROSSE RIVER BASIN

05382325 LA CROSSE RIVER AT SPARTA, WI

LOCATION.--Lat 43°56'15", long 90°48'38", in SE 1/4 NE 1/4 sec.23, T.17 N., R.4 W., Monroe County, Hydrologic Unit 07040006, on left bank, 800 ft downstream from bridge on South Water Street, in Sparta, 0.35 mi downstream from Beaver Creek.

DRAINAGE AREA.--167 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 760.73 ft above sea level.

REMARKS.--Estimated daily discharges 1992 water year: July 1, 2, and July 29 to Sept. 1; records fair. Estimated daily discharges 1993 water year: Feb. 19, Feb. 23 to Mar. 11, and Sept. 8-14, and ice-affected periods, Dec. 24, 25, Jan. 8, 18-21, and Feb. 16-18; records good. Gage-height telemeter at station. Occasional regulation from two dams upstream from gage.

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	---	---	---	---	---	---	---	---	---	120	120	110
2	---	---	---	---	---	---	---	---	---	130	130	128
3	---	---	---	---	---	---	---	---	---	131	120	141
4	---	---	---	---	---	---	---	---	---	128	120	125
5	---	---	---	---	---	---	---	---	---	126	120	123
6	---	---	---	---	---	---	---	---	---	125	120	150
7	---	---	---	---	---	---	---	---	---	127	120	138
8	---	---	---	---	---	---	---	---	---	130	130	137
9	---	---	---	---	---	---	---	---	---	132	120	151
10	---	---	---	---	---	---	---	---	---	130	110	146
11	---	---	---	---	---	---	---	---	---	126	110	134
12	---	---	---	---	---	---	---	---	---	161	110	128
13	---	---	---	---	---	---	---	---	---	204	110	123
14	---	---	---	---	---	---	---	---	---	200	110	188
15	---	---	---	---	---	---	---	---	---	171	110	229
16	---	---	---	---	---	---	---	---	---	150	100	605
17	---	---	---	---	---	---	---	---	---	142	100	791
18	---	---	---	---	---	---	---	---	---	143	100	438
19	---	---	---	---	---	---	---	---	---	142	100	257
20	---	---	---	---	---	---	---	---	---	142	100	209
21	---	---	---	---	---	---	---	---	---	134	98	190
22	---	---	---	---	---	---	---	---	---	135	96	181
23	---	---	---	---	---	---	---	---	---	146	96	161
24	---	---	---	---	---	---	---	---	---	139	94	174
25	---	---	---	---	---	---	---	---	---	134	100	165
26	---	---	---	---	---	---	---	---	---	132	130	165
27	---	---	---	---	---	---	---	---	---	128	110	173
28	---	---	---	---	---	---	---	---	---	122	100	166
29	---	---	---	---	---	---	---	---	---	120	130	160
30	---	---	---	---	---	---	---	---	---	120	110	159
31	---	---	---	---	---	---	---	---	---	120	110	---
TOTAL	---	---	---	---	---	---	---	---	---	4290	3434	6145
MEAN	---	---	---	---	---	---	---	---	---	138	111	205
MAX	---	---	---	---	---	---	---	---	---	204	130	791
MIN	---	---	---	---	---	---	---	---	---	120	94	110
CFSM	---	---	---	---	---	---	---	---	---	.83	.66	1.23
IN.	---	---	---	---	---	---	---	---	---	.96	.76	1.37

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

MEAN	---	---	---	---	---	---	---	---	---	138	111	205
MAX	---	---	---	---	---	---	---	---	---	138	111	205
(WY)	---	---	---	---	---	---	---	---	---	1992	1992	1992
MIN	---	---	---	---	---	---	---	---	---	138	111	205
(WY)	---	---	---	---	---	---	---	---	---	1992	1992	1992

SUMMARY STATISTICS

FOR 1992 WATER YEAR

HIGHEST DAILY MEAN	791	Sep 17
LOWEST DAILY MEAN	94	Aug 24
ANNUAL SEVEN-DAY MINIMUM	98	Aug 18
INSTANTANEOUS PEAK FLOW	1070	Sep 17
INSTANTANEOUS PEAK STAGE	8.63	Sep 17
10 PERCENT EXCEEDS	189	
50 PERCENT EXCEEDS	130	
90 PERCENT EXCEEDS	100	

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05382325 LA CROSSE RIVER AT SPARTA, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	154	157	123	135	150	371	287	282	235	220	221
2	154	184	157	138	134	160	287	335	256	424	207	196
3	152	186	156	149	134	180	258	391	246	602	204	190
4	151	173	156	142	134	200	249	399	242	567	199	182
5	150	161	152	138	134	190	246	394	239	416	203	175
6	150	155	152	134	133	180	243	312	235	325	209	174
7	149	153	154	122	135	170	243	292	249	302	201	173
8	148	151	152	120	135	170	263	279	366	295	193	180
9	150	152	151	133	136	170	293	270	515	279	215	180
10	152	151	153	135	137	170	271	276	315	257	252	170
11	153	149	151	132	137	160	283	301	231	277	211	170
12	148	148	150	135	136	151	302	289	214	277	196	200
13	146	147	150	139	134	150	278	266	208	254	191	240
14	146	145	154	136	132	141	261	257	210	257	190	300
15	146	145	173	136	129	146	293	253	205	237	216	215
16	149	145	211	134	130	170	372	248	205	220	230	189
17	149	146	196	135	120	162	359	239	407	217	210	180
18	147	144	172	110	120	146	377	247	621	226	200	176
19	147	147	163	130	130	149	587	246	709	220	199	169
20	153	201	153	130	136	147	668	244	901	204	193	176
21	159	311	155	140	136	146	482	235	547	201	188	184
22	156	275	152	139	133	148	311	238	350	199	185	180
23	152	204	148	135	130	147	303	247	287	198	194	175
24	150	179	120	134	130	169	286	271	256	199	190	169
25	146	174	130	126	130	257	276	263	250	245	182	167
26	145	171	140	137	130	270	261	253	238	244	184	166
27	145	165	148	134	140	220	296	244	227	220	187	169
28	145	161	148	133	140	209	368	245	221	437	182	168
29	147	160	149	122	---	223	335	240	214	435	177	170
30	143	158	147	130	---	218	285	280	240	249	239	166
31	143	---	145	138	---	368	---	314	---	220	285	---
TOTAL	4627	5095	4795	4119	3720	5637	9707	8655	9686	8938	6332	5570
MEAN	149	170	155	133	133	182	324	279	323	288	204	186
MAX	159	311	211	149	140	368	668	399	901	602	285	300
MIN	143	144	120	110	120	141	243	235	205	198	177	166
CFSM	.89	1.02	.93	.80	.80	1.09	1.94	1.67	1.93	1.73	1.22	1.11
IN.	1.03	1.13	1.07	.92	.83	1.26	2.16	1.93	2.16	1.99	1.41	1.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

MEAN	149	170	155	133	133	182	324	279	323	213	158	195
MAX	149	170	155	133	133	182	324	279	323	288	204	205
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1992
MIN	149	170	155	133	133	182	324	279	323	138	111	186
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1992	1992	1993

SUMMARY STATISTICS

FOR 1993 WATER YEAR

WATER YEARS 1992 - 1993

ANNUAL TOTAL	76881				
ANNUAL MEAN	211			211	
HIGHEST ANNUAL MEAN				211	1993
LOWEST ANNUAL MEAN				211	1993
HIGHEST DAILY MEAN	901	Jun 20		901	Jun 20 1993
LOWEST DAILY MEAN	110	Jan 18		94	Aug 24 1992
ANNUAL SEVEN-DAY MINIMUM	128	Feb 13		98	Aug 18 1992
INSTANTANEOUS PEAK FLOW	1100	Jun 20		1100	Jun 20 1993
INSTANTANEOUS PEAK STAGE	8.78	Jun 20		8.78	Jun 20 1993
ANNUAL RUNOFF (CFSM)	1.26			1.26	
ANNUAL RUNOFF (INCHES)	17.13			17.14	
10 PERCENT EXCEEDS	302			293	
50 PERCENT EXCEEDS	180			166	
90 PERCENT EXCEEDS	135			126	

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 sea level. Prior to June 1, 1937, and since June 2, 1939, auxiliary water-stage recorder; June 1, 1937 to June 1, 1939, auxiliary nonrecording gage 14.1 mi upstream in tailwater of dam 9, at datum 5.30 ft lower.

REMARKS.--Records good. 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16300	26100	42700	26000	18500	18000	85100	96400	81100	187000	95400	85800
2	17800	27800	38900	25000	18500	18500	93400	97100	82100	184000	92400	85000
3	20700	30600	36000	23000	18500	19500	104000	96300	82900	179000	89500	83700
4	23200	32800	32000	22000	19000	20000	112000	96200	85300	175000	86700	82000
5	24600	34200	28000	22000	20000	20000	114000	96700	89400	173000	84400	80300
6	24300	36500	25500	21000	20500	20500	112000	97600	92200	170000	82700	78400
7	23500	38800	19500	21000	21000	22000	108000	98600	93700	166000	80400	75000
8	23200	41000	18000	21000	22000	24000	106000	100000	94100	161000	78400	69500
9	24600	43600	16500	20500	22000	24500	105000	103000	94200	157000	77400	65000
10	29800	43500	19500	20500	21500	25000	104000	103000	92900	153000	76700	63200
11	35400	41000	22000	20500	21000	25000	107000	102000	91000	149000	76800	60800
12	39500	38400	26000	20500	21000	24500	111000	101000	90000	146000	77900	58900
13	42700	37700	28500	21000	20000	23500	114000	98800	90300	145000	79400	56400
14	43700	37700	31000	20500	20000	23500	118000	97800	95100	145000	80500	56400
15	43700	38000	33000	20500	20000	23000	119000	96000	95800	144000	84500	55500
16	43400	38500	37000	20000	20000	23000	122000	95300	93100	143000	88200	54800
17	42200	39400	42300	20000	20000	22000	125000	94900	92800	143000	90800	55000
18	41600	40100	40200	20000	19500	21500	126000	95600	92500	142000	91400	56300
19	40100	40200	37900	19500	19500	22000	125000	95700	94600	141000	90200	58500
20	37900	41200	27000	18000	19000	23000	124000	95600	100000	139000	87500	60800
21	36300	44100	22500	17000	19000	24000	125000	95200	109000	135000	85700	62200
22	35100	45500	19500	17500	19000	25000	127000	94600	121000	131000	84900	60200
23	33500	45200	16000	18000	19000	24000	126000	95100	139000	127000	85200	55800
24	32700	45700	13500	19000	19000	23500	125000	95600	151000	122000	84900	49100
25	32400	48100	14000	20500	18500	22900	121000	94200	157000	119000	83600	48300
26	31300	52400	14500	22000	17500	21400	116000	91500	164000	115000	82500	48800
27	30400	56400	17000	22000	18000	22600	111000	88400	170000	110000	82400	49500
28	29500	57900	20000	21500	18000	30300	106000	85600	176000	107000	82900	49100
29	27900	53000	23000	20000	---	45100	101000	82400	181000	103000	83600	48000
30	27000	47800	25000	19500	---	54400	97700	80900	186000	99800	84700	45300
31	26700	---	26000	19000	---	69700	---	80700	---	97600	85800	---
TOTAL	981000	1243200	812500	638500	549500	805900	3390200	2941800	3377100	4408400	2617400	1857600
MEAN	31650	41440	26210	20600	19620	26000	113000	94900	112600	142200	84430	61920
MAX	43700	57900	42700	26000	22000	69700	127000	103000	186000	187000	95400	85800
MIN	16300	26100	13500	17000	17500	18000	85100	80700	81100	97600	76700	45300
CFSM	.47	.61	.39	.31	.29	.39	1.67	1.41	1.67	2.11	1.25	.92
IN.	.54	.69	.45	.35	.30	.44	1.87	1.62	1.86	2.43	1.44	1.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1993, BY WATER YEAR (WY)

	MEAN	28010	28290	21580	18630	19070	38430	73500	59880	48880	40010	26980	28490
MAX	114600	64840	59200	35700	48540	103800	164800	119200	112600	142200	84430	72890	
(WY)	1987	1983	1992	1983	1984	1983	1965	1975	1993	1993	1993	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	

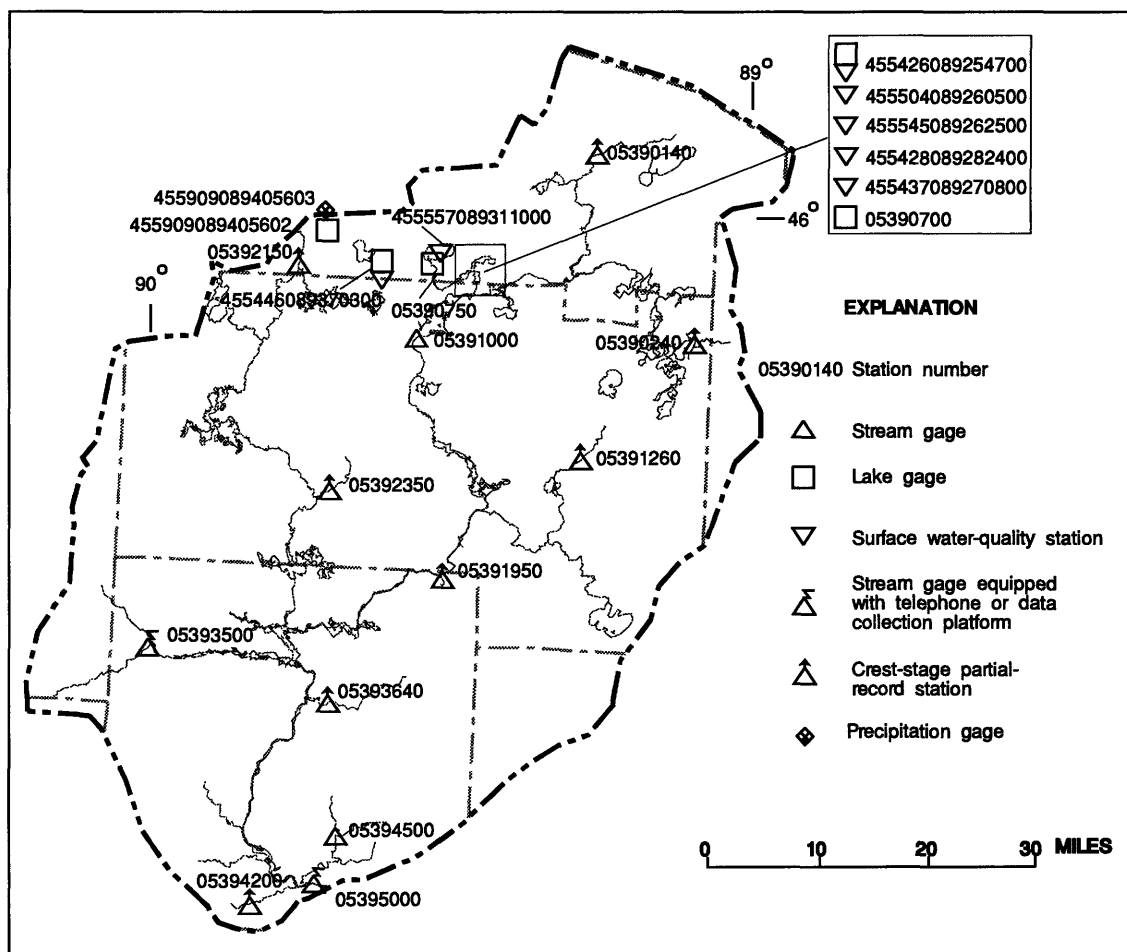
SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1936 - 1993

ANNUAL TOTAL	15618600	23623100	
ANNUAL MEAN	42670	64720	
HIGHEST ANNUAL MEAN			36030
LOWEST ANNUAL MEAN			64720
HIGHEST DAILY MEAN	106000	Mar 15	187000
LOWEST DAILY MEAN	13500	Dec 24	13500
ANNUAL SEVEN-DAY MINIMUM	16400	Dec 22	16400
INSTANTANEOUS PEAK FLOW			189000
INSTANTANEOUS PEAK STAGE			21.97
ANNUAL RUNOFF (CFSM)	.63	.96	25.38
ANNUAL RUNOFF (INCHES)	8.61	13.02	7.25
10 PERCENT EXCEEDS	79900	125000	74800
50 PERCENT EXCEEDS	36600	49500	26000
90 PERCENT EXCEEDS	23300	19500	13000



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

UPPER WISCONSIN RIVER BASIN

WISCONSIN RIVER BASIN

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 1992 to current year.

GAGE.--Staff gage read by John P. Seibel. Elevation of gage is 1,617 ft above sea level, 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, 11.59 ft, June 28; minimum observed, 11.06 ft, Feb. 24.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	11.31	---	---	---
5	---	---	---	---	---	---	---	11.39	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	11.55	11.35	---
10	---	---	---	---	---	---	---	---	---	---	11.35	---
11	---	---	---	---	---	---	---	11.35	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	11.54	11.54	---	---
15	---	---	---	---	---	---	---	---	---	11.53	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	11.43	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	11.31
24	---	---	---	---	11.06	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	11.29	---	---	11.29	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	11.59	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	11.39	---	---	---
31	---	---	---	---	---	---	---	---	---	11.39	---	---

455426089254700 ALMA LAKE NEAR ST. GERMAIN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to September 1990 secchi depth only; February 1992 to current year.

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 24 TO AUGUST 09, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 24		May 05		June 28		July 14		Aug. 09	
Depth of sample (ft)	3.0	17	1.5	18	1.5	18	1.5	18	1.5	18
Lake stage (ft)	11.06		11.39		11.59		11.54		11.35	
Specific conductance ($\mu\text{S}/\text{cm}$)	34	35	29	33	26	31	22	26	26	28
pH (units)	7.6	6.3	5.1	4.8	5.8	6.4	6.3	5.8	6.5	6.0
Water temperature ($^{\circ}\text{C}$)	0.5	4.5	11.0	7.0	20.0	18.0	22.0	20.0	21.0	20.5
Color (Pt-Co. scale)	---	---	10	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.50		---	---	---	---	---	---
Secchi-depth (meters)	---		5.4		4.6		2.8		2.7	
Dissolved oxygen	9.0	1.5	9.2	4.8	9.0	10.1	8.7	10.3	8.7	6.8
Calcium, dissolved (Ca)	---	---	1.7	1.6	---	---	---	---	---	---
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	---	---	20	22	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.10	0.08	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.10	0.08	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.13	0.16	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.27	0.34	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.50	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.50	0.58	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.009	0.025	0.009	0.013	0.012	0.019	0.011	0.010
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 ($\mu\text{g}/\text{L}$)	---	---	1.3	---	3.6	---	3.6	---	4.8	---

2-24-93

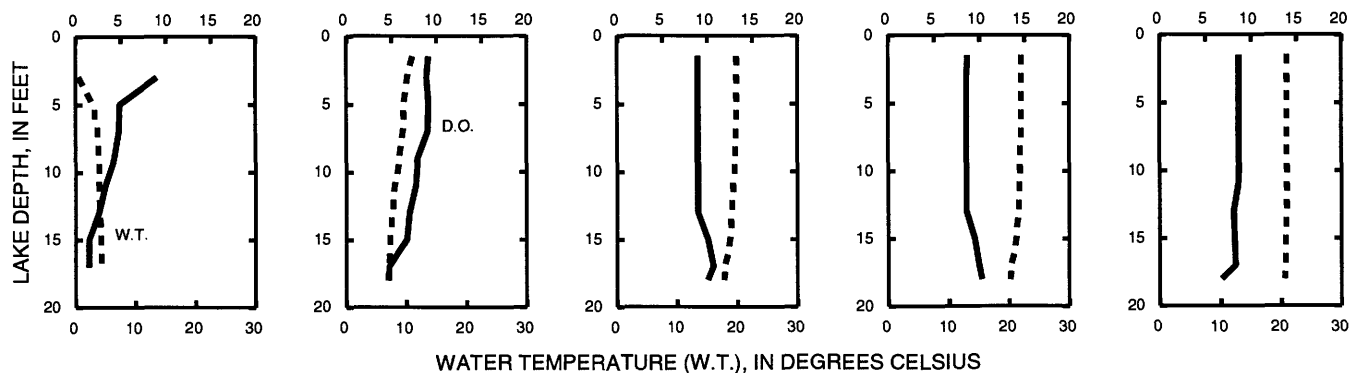
5-5-93

6-28-93

7-14-93

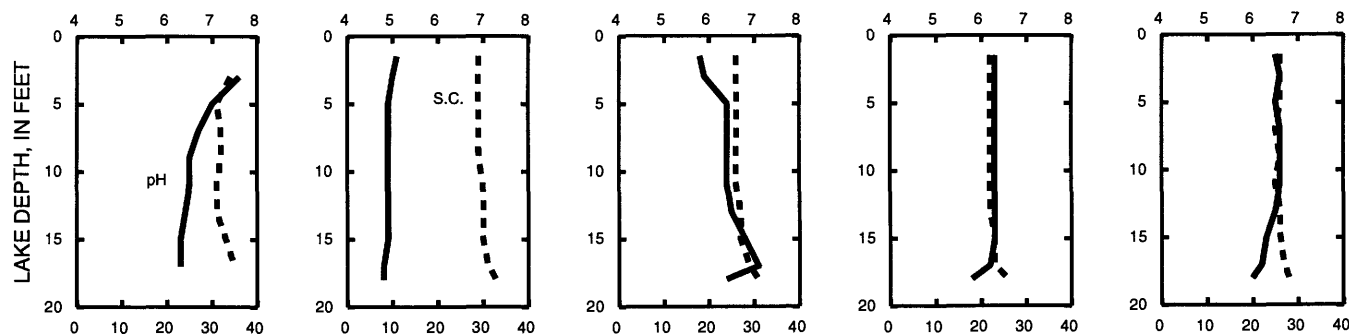
8-9-93

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

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 1992 to current year.

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 24 TO AUGUST 09, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 24		May 05		June 28		July 14		Aug. 09	
Depth of sample (ft)	3.0	31	1.5	35	1.5	32	1.5	28	1.5	30
Lake stage (ft)	11.06		11.39		11.59		11.54		11.35	
Specific conductance (µS/cm)	33	40	30	35	28	37	27	30	28	31
pH (units)	7.3	5.8	6.0	5.9	6.5	5.7	6.5	5.7	6.8	5.8
Water temperature (°C)	1.0	4.5	9.5	5.5	19.5	8.0	21.5	9.5	20.5	9.5
Color (Pt-Co. scale)	---	---	5	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.50	0.50	---	---	---	---	---	---
Secchi-depth (meters)	---		3.6		4.8		3.9		4.3	
Dissolved oxygen	9.7	2.3	10.6	8.1	8.8	3.4	8.7	5.3	8.2	1.6
Calcium, dissolved (Ca)	---	---	2.1	2.1	---	---	---	---	---	---
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	---	---	8	13	---	---	---	---	---	---
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	---	---	20	20	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.03	0.05	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.03	0.05	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.01	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.29	0.29	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.30	0.30	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.33	0.35	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.014	0.012	0.006	0.018	0.009	0.014	0.005	<0.004
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)	---	---	4.2	---	2.2	---	2.3	---	3.5	---

2-24-93

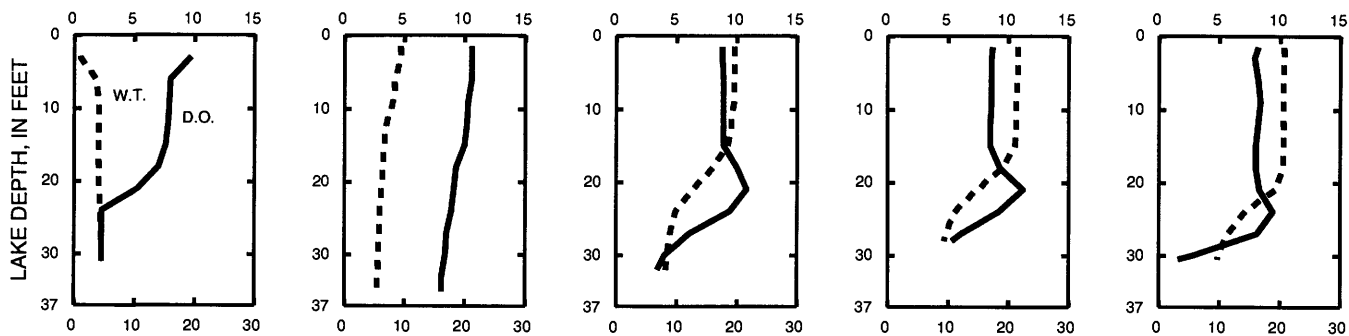
5-5-93

6-28-93

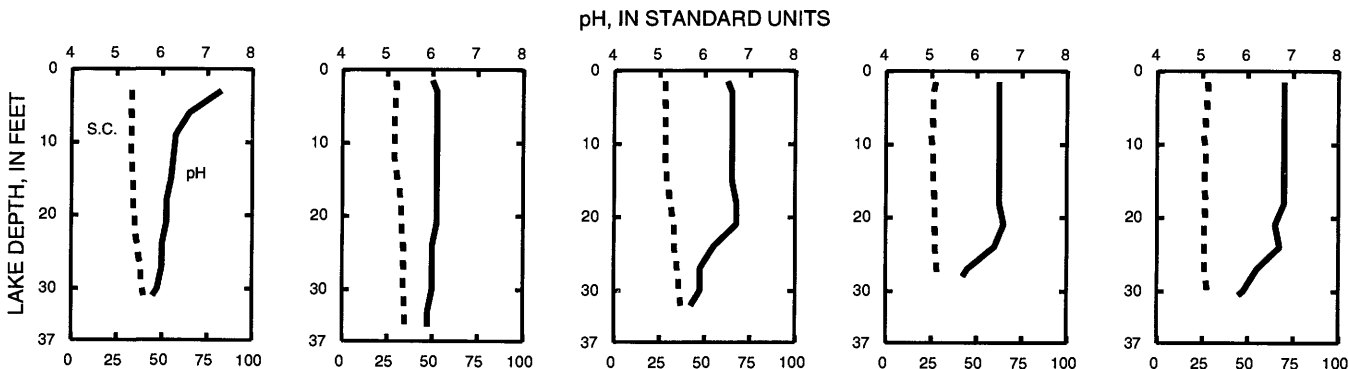
7-14-93

8-9-93

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

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 06 TO AUGUST 10, 1993
(Milligrams per liter unless otherwise indicated)

	May 06	June 29	July 13	Aug. 10
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	13.80	13.70	13.73	13.74
Specific conductance (μ S/cm)	73	78	72	79
pH (units)	7.9	7.1	7.7	8.9
Water temperature ($^{\circ}$ C)	13.0	19.0	22.0	21.5
Secchi-depth (meters)	1.6	1.4	1.0	0.7
Dissolved oxygen	11.8	8.1	9.0	11.7
Phosphorus, total (as P)	0.031	0.028	0.031	0.056
Chlorophyll a, phytoplankton (μ g/L)	18	20	27	98

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 25 TO AUGUST 10, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 25		May 06		June 29		July 13		Aug. 10	
Depth of sample (ft)	3.0	46	1.5	50	1.5	51	1.5	51	1.5	51
Lake stage (ft)	12.54		13.80		13.70		13.73		13.74	
Specific conductance (µS/cm)	95	98	74	95	81	117	71	106	81	123
pH (units)	6.4	6.4	6.5	6.5	6.9	6.6	7.3	6.9	7.0	6.9
Water temperature (°C)	1.0	4.5	11.0	4.5	18.5	5.5	21.5	5.5	21.0	5.5
Color (Pt-Co. scale)	---	---	10	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.00	3.0	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.7		3.6		2.9		4.4	
Dissolved oxygen	11.5	0.4	11.4	0.2	8.9	0.2	9.0	0.2	8.8	0.2
Hardness, as CaCO ₃	---	---	32	36	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	8.4	9.5	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	2.7	3.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.0	2.4	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.6	0.6	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	36	35	---	---	---	---	---	---
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)	---	---	7.2	10	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	46	54	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.01	0.14	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.01	0.14	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.13	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.38	0.57	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.70	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.41	0.84	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.012	0.097	0.010	0.090	0.011	0.110	0.006	0.140
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	50	220	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	250	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	5.7	---	4.2	---	2.7	---	2.2	---

2-25-93

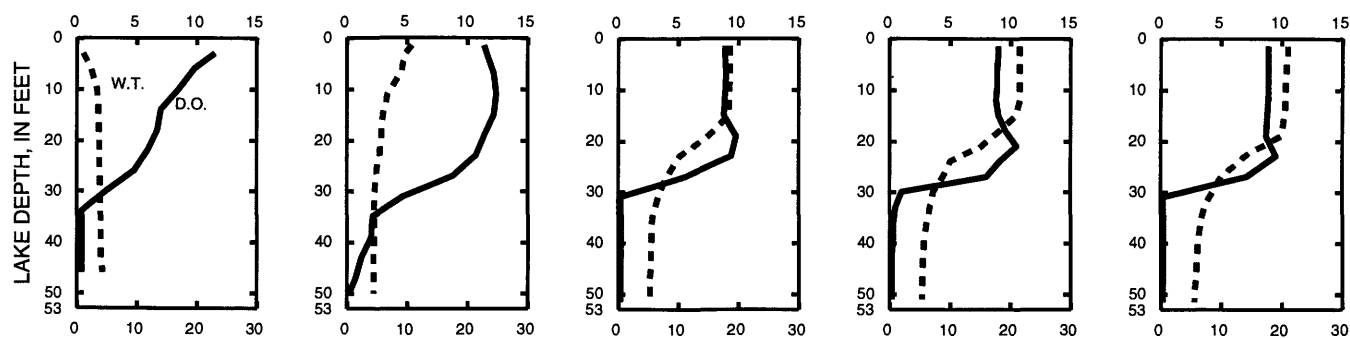
5-6-93

6-29-93

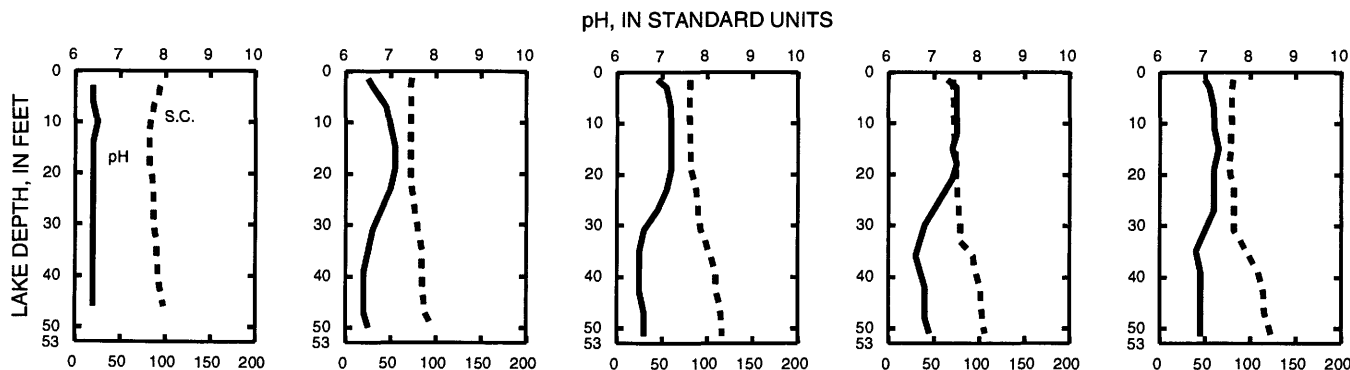
7-13-93

8-10-93

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

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 25 TO AUGUST 10, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 25		May 06		June 29		July 13		Aug. 10	
Depth of sample (ft)	3.0	19	1.5	19	1.5	19	1.5	18	1.5	19
Lake stage (ft)	12.54		13.80		13.70		13.73		13.74	
Specific conductance (μS/cm)	98	105	76	80	77	97	68	73	75	81
pH (units)	7.3	6.9	7.4	7.0	7.4	6.4	7.5	6.5	7.8	6.8
Water temperature (°C)	1.0	5.0	13.0	7.0	19.5	13.0	22.0	17.5	21.5	19.0
Color (Pt-Co. scale)	---	---	25	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.7	2.9	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.8		2.8		2.7		2.0	
Dissolved oxygen	2.8	0.3	11.8	8.2	8.4	0.2	8.9	0.9	9.3	0.2
Hardness, as CaCO ₃	---	---	34	36	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	9.1	9.5	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	2.8	3.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	1.9	1.9	---	---	---	---	---	---
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)	---	---	<0.0	<0.0	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	8.6	9.6	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	54	52	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	---	0.01	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	<0.01	0.01	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.04	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.58	0.46	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.50	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.60	0.51	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.037	0.031	0.015	0.038	0.019	0.077	0.019	0.026
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	0.003	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	200	310	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	58	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	10	---	7.4	---	6.9	---	12	---

2-25-93

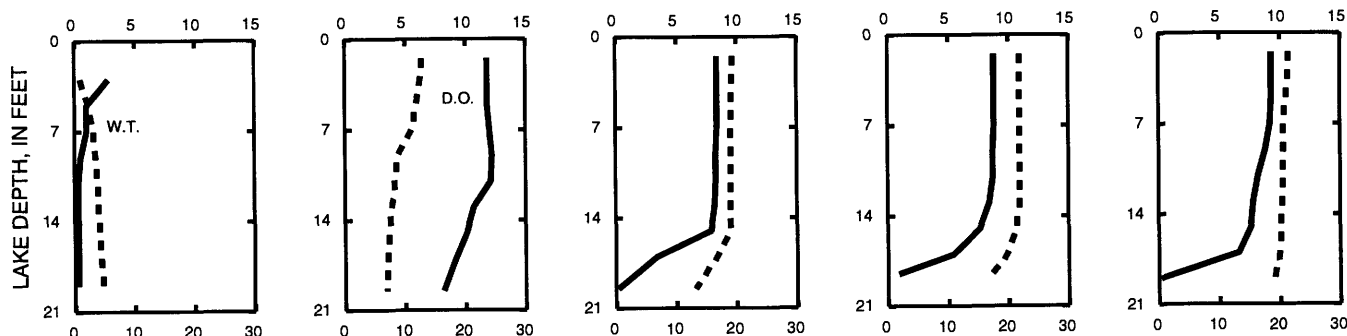
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6-29-93

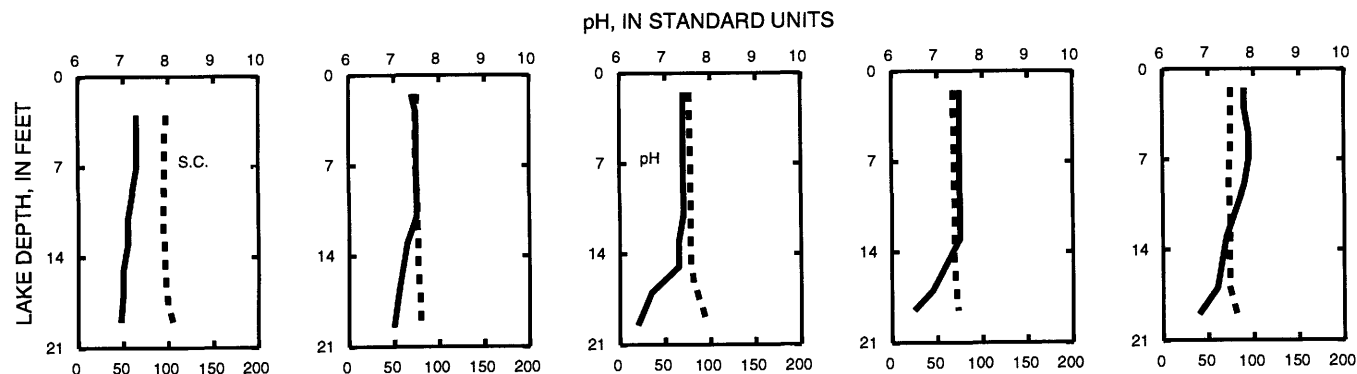
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8-10-93

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

05390700 LITTLE ST. GERMAIN LAKE NEAR EAGLE RIVER, WI

LOCATION (REVISED).--Lat 45°53'55", long 89°27'10", 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 sea level.

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, 13.90 ft, Sept. 14, 1993; minimum observed, 12.00 ft, Jan. 3 and Feb. 3, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 13.90 ft, Sept. 14; minimum observed, 12.50 ft, Mar. 1, 2.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.70	13.72	13.46	12.94	12.74	12.50	12.82	13.58	13.80	13.70	13.72	13.72
2	13.68	13.78	---	---	12.70	12.50	12.84	13.64	13.76	13.72	13.70	13.70
3	13.68	13.80	---	---	---	12.52	12.86	13.70	13.74	13.72	13.70	13.72
4	13.68	13.78	13.40	---	---	---	12.88	13.80	13.72	13.74	13.70	13.70
5	13.68	13.78	---	12.84	12.70	12.54	12.88	13.80	13.72	13.76	13.70	13.70
6	13.68	13.78	---	---	---	---	12.88	13.78	13.72	13.78	13.72	13.70
7	13.70	13.78	---	---	---	---	12.88	13.78	13.78	13.76	13.72	13.68
8	13.72	13.78	13.30	12.76	---	---	12.90	13.80	13.76	13.80	13.72	13.70
9	13.78	13.70	---	---	12.68	12.60	12.92	13.80	13.84	13.78	13.70	13.72
10	13.80	13.68	---	---	---	---	12.96	13.82	13.82	13.76	13.74	13.74
11	13.78	13.66	13.22	12.72	---	---	12.96	13.88	13.84	13.74	13.74	13.72
12	13.76	13.62	---	12.72	12.66	12.62	12.98	13.80	13.80	13.74	13.74	13.74
13	13.74	13.60	---	---	---	---	13.00	13.74	13.76	13.72	13.82	13.76
14	13.70	13.56	---	---	---	---	13.00	13.74	13.72	13.74	13.76	13.90
15	13.72	13.52	13.16	12.72	---	---	13.10	13.74	13.74	13.74	13.72	13.82
16	13.74	13.50	---	12.72	12.64	12.66	13.14	13.72	13.72	13.74	13.72	13.76
17	13.74	13.50	---	---	---	---	13.18	13.72	13.82	13.74	13.74	13.72
18	13.72	13.48	13.18	---	---	---	13.20	13.76	13.80	13.74	13.74	13.70
19	13.72	13.42	---	12.72	12.60	12.68	13.25	13.76	13.82	13.74	13.74	13.70
20	13.72	13.46	---	---	---	---	13.28	13.78	13.88	13.74	13.74	13.72
21	13.74	13.54	---	---	---	---	13.30	13.78	13.86	13.72	13.72	13.74
22	13.72	13.56	13.08	12.74	---	---	13.32	13.74	13.80	13.72	13.72	13.74
23	13.74	13.54	---	---	12.58	12.70	13.32	13.74	13.72	13.70	13.72	13.74
24	13.74	13.54	---	---	---	---	13.34	13.80	13.74	13.70	13.70	13.74
25	13.74	13.54	13.06	---	12.54	---	13.38	13.76	13.80	13.72	13.70	13.74
26	13.74	13.54	---	12.74	12.52	12.74	13.40	13.74	13.76	13.72	13.68	13.72
27	13.72	13.52	---	---	---	---	13.40	13.68	13.74	13.74	13.68	13.76
28	13.72	13.52	---	---	---	---	13.46	13.74	13.72	13.74	13.70	13.74
29	13.72	13.52	12.96	12.76	---	---	13.50	13.74	13.72	13.80	13.70	13.74
30	13.72	13.48	---	---	---	12.80	13.56	13.74	13.70	13.74	13.70	13.72
31	13.72	---	---	---	---	---	---	13.86	---	13.72	13.74	---
MEAN	13.72	13.61	---	---	---	---	13.13	13.76	13.77	13.74	13.72	13.73
MAX	13.80	13.80	---	---	---	---	13.56	13.88	13.88	13.80	13.82	13.90
MIN	13.68	13.42	---	---	---	---	12.82	13.58	13.70	13.70	13.68	13.68

WISCONSIN RIVER BASIN

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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 1992 to current year.

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 25 TO AUGUST 10, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 25		May 10		June 29		July 13		Aug. 10	
Depth of sample (ft)	3.0	29	1.5	30	1.5	28	1.5	30	1.5	32
Lake stage (ft)	8.37		10.58		10.48		10.55		10.62	
Specific conductance (μS/cm)	102	170	87	90	87	92	86	89	89	89
pH (units)	7.3	7.1	7.2	6.7	7.1	6.4	7.6	6.7	7.1	6.9
Water temperature (°C)	0.5	5.5	12.0	6.5	18.5	16.5	20.0	18.5	22.0	19.5
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.5	2.0	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.9	---	2.8	---	3.0	---	2.9	---
Dissolved oxygen	12.7	0.3	11.7	7.0	8.5	3.5	8.9	3.3	8.7	4.2
Hardness, as CaCO ₃	---	---	38	34	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	10	9.1	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	3.1	2.7	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.2	1.9	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.6	0.5	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	35	34	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	4.0	4.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	3.0	2.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	<0.0	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	14	14	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	62	60	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	<0.01	<0.01	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.01	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.28	0.29	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.30	0.30	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.30	0.30	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.017	0.022	0.015	0.016	0.017	0.032	0.017	0.028
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.004	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	90	100	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	110	110	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	11	---	4.7	---	5.7	---	6.2	---

2-25-93

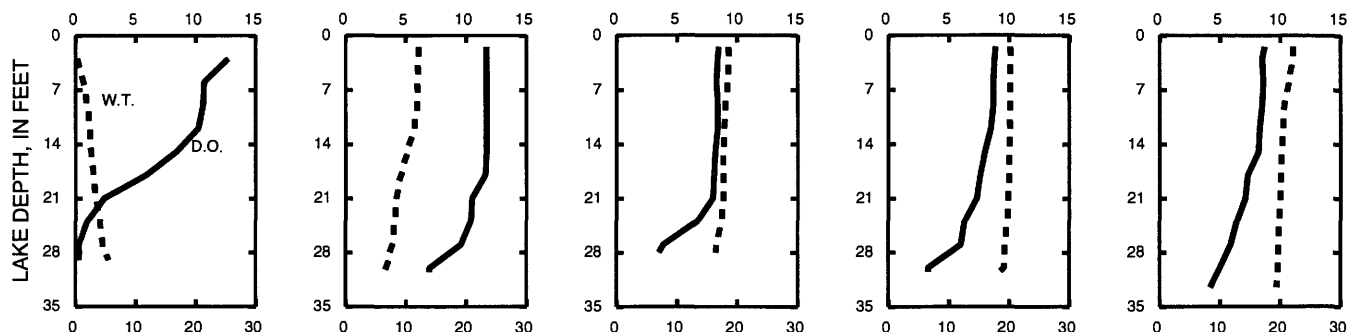
5-10-93

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7-13-93

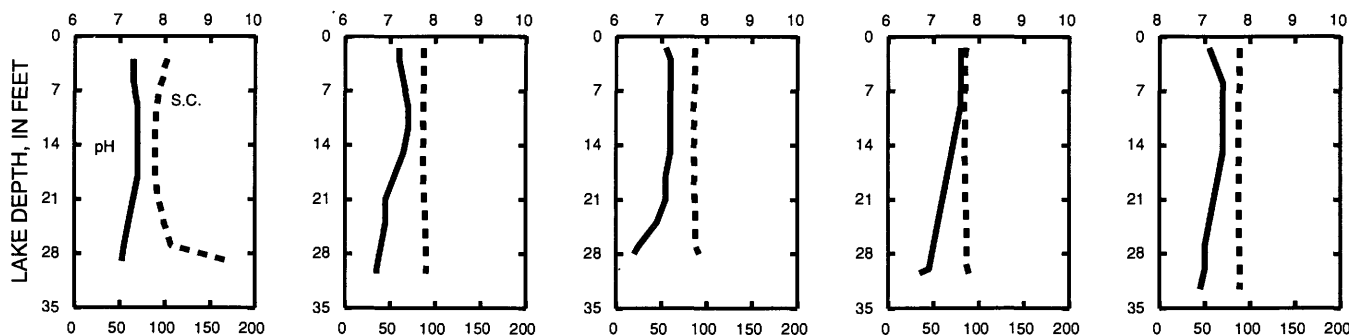
8-10-93

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 1992 to current year. Lake stages for previous years were recorded by Wisconsin Valley Improvement Company.

GAGE.--Nonrecording staff gage. Datum of gage is 1,580 ft, above sea level.

COOPERATION.--Lake stages provided by Wisconsin Valley Improvement Company.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 10.74 ft, June 11, 1993; minimum observed, 8.32 ft, Mar. 1, 2, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 10.74 ft, June 11; minimum observed, 8.32 ft, Mar. 1, 2.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.46	10.46	9.76	8.92	8.78	8.32	8.50	10.34	10.56	10.48	10.56	10.54
2	10.48	10.52	---	---	8.76	8.32	8.54	10.40	10.48	10.52	10.54	10.52
3	10.48	10.58	---	---	---	---	8.56	10.46	10.48	10.56	10.52	10.50
4	10.48	10.60	9.68	---	---	---	8.58	10.58	10.48	10.58	10.50	10.50
5	10.50	10.64	---	8.98	8.64	8.42	8.62	10.58	10.52	10.60	10.48	10.50
6	10.50	10.58	---	---	---	---	8.72	10.58	10.54	10.58	10.54	10.50
7	10.54	10.52	---	---	---	---	8.78	10.58	10.62	10.56	10.54	10.50
8	10.52	10.52	9.52	8.96	---	---	8.88	10.56	10.62	10.56	10.54	10.52
9	10.56	10.38	---	---	8.60	8.44	8.98	10.56	10.68	10.56	10.54	10.54
10	10.60	10.32	---	---	---	---	9.04	10.56	10.68	10.56	10.60	10.56
11	10.62	10.28	9.46	---	8.56	---	9.10	10.64	10.74	10.56	10.60	10.56
12	10.60	10.24	---	8.94	---	8.48	9.20	10.60	10.66	10.58	10.58	10.56
13	10.60	10.22	---	---	---	---	9.30	10.52	10.60	10.60	10.60	10.68
14	10.60	10.14	---	---	---	---	9.30	10.52	10.60	10.56	10.62	10.60
15	10.58	9.98	9.38	8.94	---	---	9.44	10.50	10.54	10.52	10.62	10.54
16	10.56	9.92	---	---	8.50	8.46	9.48	10.50	10.48	10.52	10.62	10.54
17	10.54	10.00	---	---	---	---	9.60	10.50	10.56	10.50	10.60	10.54
18	10.50	9.98	9.34	---	---	---	9.65	10.52	10.56	10.48	10.58	10.50
19	10.50	9.92	---	8.88	8.46	8.46	9.75	10.52	10.58	10.48	10.56	10.54
20	10.50	9.90	---	---	---	---	9.80	10.52	10.72	10.48	10.54	10.56
21	10.46	9.98	---	---	---	---	9.84	10.54	10.64	10.46	10.54	10.56
22	10.48	9.96	9.20	8.88	---	---	9.86	10.54	10.60	10.46	10.52	10.56
23	10.50	9.94	---	---	8.44	8.42	9.90	10.60	10.56	10.48	10.52	10.54
24	10.50	9.92	---	---	---	---	9.94	10.66	10.50	10.50	10.54	10.54
25	10.46	9.90	9.20	---	8.37	---	9.98	10.64	10.58	10.56	10.54	10.50
26	10.48	9.88	---	8.84	8.34	8.42	10.00	10.62	10.54	10.56	10.54	10.48
27	10.50	9.84	---	---	---	---	10.02	10.60	10.50	10.60	10.54	10.50
28	10.48	9.82	---	---	---	---	10.12	10.60	10.52	10.60	10.56	10.50
29	10.48	9.82	---	8.84	---	---	10.20	10.58	10.50	10.62	10.56	10.50
30	10.46	9.78	9.06	---	---	8.46	10.30	10.54	10.46	10.60	10.60	10.52
31	10.48	---	---	---	---	---	---	10.56	---	10.58	10.62	---
MAX	10.62	10.64	---	---	---	---	10.30	10.66	10.74	10.62	10.62	10.68
MIN	10.46	9.78	---	---	---	---	8.50	10.34	10.46	10.46	10.48	10.48

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 sea level (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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	434	494	941	751	871	749	363	259	950	776	581	550
2	445	566	892	753	934	735	229	259	890	639	579	557
3	443	609	894	754	925	725	227	266	865	499	619	546
4	442	564	891	799	919	714	222	288	853	503	643	532
5	446	522	891	847	915	710	218	311	833	537	642	530
6	399	505	890	849	914	708	223	315	815	601	642	509
7	372	495	882	848	910	706	227	530	861	640	629	508
8	377	491	878	846	908	701	231	731	861	644	618	508
9	381	532	881	839	906	699	246	832	914	649	618	504
10	381	612	880	839	899	698	252	871	893	656	614	507
11	380	644	880	837	894	695	253	1040	880	655	622	512
12	368	585	881	835	891	693	254	1160	883	653	631	508
13	369	555	882	831	885	688	254	991	896	650	642	514
14	369	566	878	833	879	686	255	758	917	650	656	429
15	369	567	877	831	867	683	255	673	927	648	654	373
16	381	634	878	830	859	677	264	654	879	649	637	323
17	391	713	921	827	854	675	272	639	930	646	598	348
18	387	739	957	827	850	672	272	641	946	644	583	415
19	478	737	957	825	840	669	270	641	932	627	583	470
20	538	821	953	818	832	662	285	641	1260	607	579	492
21	539	979	956	817	822	652	295	641	1560	627	580	492
22	542	1030	954	815	810	642	291	642	1450	639	579	491
23	544	1090	948	814	806	632	293	643	1450	635	579	490
24	552	1120	949	813	801	621	296	736	1440	632	571	490
25	552	1050	941	816	792	611	297	811	1420	635	568	543
26	551	1000	939	815	782	608	310	821	1240	630	562	575
27	549	1060	938	816	773	605	325	861	1140	576	561	569
28	602	1100	839	813	764	608	289	883	1110	544	556	561
29	633	1100	744	811	---	614	257	888	1030	561	553	557
30	548	1040	745	810	---	601	261	893	901	580	555	558
31	494	---	748	802	---	585	---	929	---	581	552	---
TOTAL	14256	22520	27685	25361	24102	20724	7986	21248	30926	19213	18586	14961
MEAN	460	751	893	818	861	669	266	685	1031	620	600	499
MAX	633	1120	957	849	934	749	363	1160	1560	776	656	575
MIN	368	491	744	751	764	585	218	259	815	499	552	323

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1993, BY WATER YEAR (WY)

	MEAN	665	692	772	833	830	657	414	722	754	684	597	610
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1936 - 1993

ANNUAL TOTAL	233498	247568	
ANNUAL MEAN	638	678	686
HIGHEST ANNUAL MEAN			1062
LOWEST ANNUAL MEAN			359
HIGHEST DAILY MEAN	1120	Nov 24	2820
LOWEST DAILY MEAN	241	Apr 17	35
ANNUAL SEVEN-DAY MINIMUM	262	Apr 16	107
INSTANTANEOUS PEAK FLOW			3570
INSTANTANEOUS PEAK STAGE		4.58	7.59
10 PERCENT EXCEEDS	918		1050
50 PERCENT EXCEEDS	600		660
90 PERCENT EXCEEDS	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 above sea level, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 7.98 ft, June 21, 1993; minimum observed, 7.72 ft, Feb. 28 and June 12, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 7.98 ft, June 21; minimum observed, 7.80 ft, many days during the water year.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.82	---	7.88	---	7.82	---	---	7.88	---	---	---	7.86
2	---	---	7.88	---	---	7.80	---	---	---	---	7.80	7.86
3	---	---	---	---	---	7.80	7.80	---	---	---	---	7.86
4	7.82	7.84	---	---	---	---	7.82	---	7.86	---	---	7.84
5	---	---	---	7.86	---	---	7.82	---	7.84	7.88	---	7.84
6	---	---	---	---	---	---	---	7.86	---	---	---	---
7	7.84	---	---	---	---	---	---	---	---	7.88	7.82	7.80
8	7.84	---	7.88	---	7.82	---	---	7.89	---	---	---	7.82
9	---	7.84	---	---	---	---	---	7.90	---	---	7.84	7.82
10	---	---	---	---	---	7.82	7.82	7.90	---	---	7.82	---
11	---	---	---	---	---	---	---	7.92	7.80	7.84	---	7.84
12	7.86	7.84	7.90	7.86	---	---	---	7.92	---	7.84	---	---
13	---	---	---	---	---	---	---	7.92	---	---	---	---
14	---	---	---	---	7.80	---	---	---	7.88	---	---	7.84
15	7.86	---	---	---	---	---	7.82	7.84	---	---	---	---
16	---	---	---	---	---	7.80	---	---	---	---	7.82	7.88
17	---	---	---	---	---	---	---	7.88	---	---	---	---
18	---	7.84	7.88	7.84	---	---	---	---	---	7.82	---	7.86
19	7.86	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	7.80	---	7.84	---	---	7.80	---	---
21	---	---	---	7.84	---	7.80	7.84	7.88	7.98	---	---	7.86
22	---	---	---	---	---	---	7.84	---	---	---	7.84	---
23	7.86	---	7.86	7.84	---	---	---	---	---	---	---	7.84
24	---	7.86	---	---	---	---	7.84	7.88	7.84	---	---	7.82
25	7.84	---	---	---	7.80	7.80	---	---	---	7.80	7.82	---
26	---	---	---	---	7.80	---	---	---	---	---	7.80	---
27	---	---	---	---	---	---	---	7.90	---	---	7.84	---
28	---	---	7.82	---	---	---	---	---	---	7.82	---	---
29	7.84	7.88	---	7.82	---	7.80	7.88	---	---	---	7.82	---
30	7.84	---	---	---	---	7.80	---	---	7.84	---	---	7.84
31	---	---	---	---	---	---	---	7.92	---	---	7.86	---

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 25 TO AUGUST 10, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 25		May 06		June 30		July 15		Aug. 10	
Depth of sample (ft)	3.0	27	1.5	27	1.5	30	1.5	29	1.5	28
Lake stage (ft)	7.80		7.86		7.85		7.82		7.82	
Specific conductance ($\mu\text{S}/\text{cm}$)	129	239	108	242	114	177	117	136	115	119
pH (units)	6.9	7.6	7.0	7.1	6.2	6.9	7.4	6.7	8.0	6.9
Water temperature ($^{\circ}\text{C}$)	0.5	6.0	10.5	6.0	18.5	14.5	21.5	19.5	22.5	19.5
Color (Pt-Co. scale)	---	---	15	120	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.6	30	---	---	---	---	---	---
Secchi-depth (meters)	---		2.6		3.6		2.4		1.4	
Dissolved oxygen	8.0	0.2	11.3	0.2	6.9	0.1	9.0	0.1	9.6	0.4
Hardness, as CaCO_3	---	---	47	78	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	13	22	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	3.5	5.5	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.4	2.9	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.6	1	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	48	80	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	<5.0	7.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	2.0	3.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	12	18	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	70	110	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	---	0.03	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	<0.01	0.03	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	1.2	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.18	0.52	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.20	1.7	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.20	1.7	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.016	0.220	0.017	0.150	0.015	0.066	0.022	0.039
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	0.011	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	90	5500	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	160	1400	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	5.6	---	4.8	---	6.5	---	17	---

2-25-93

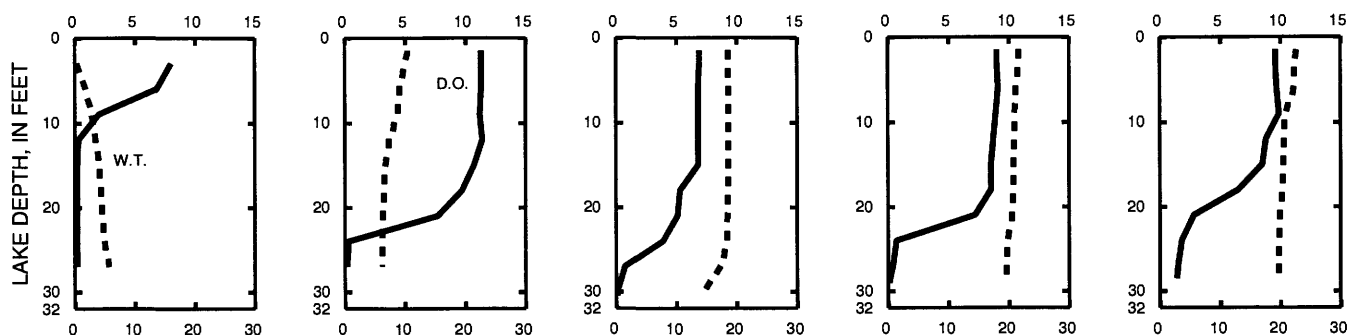
5-6-93

6-30-93

7-15-93

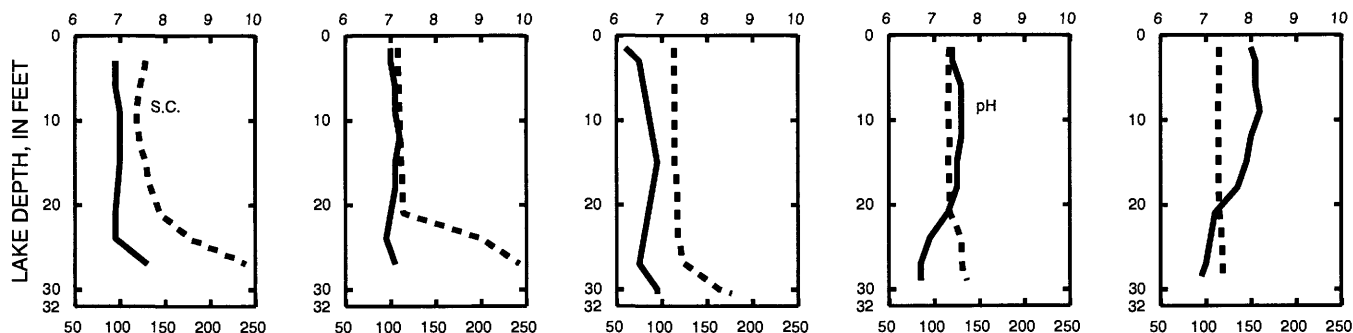
8-10-93

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

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 sea level.

REMARKS.--Records good except for periods of missing record. 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, 30.29 ft, Oct. 7; minimum observed gage height, 30.93 ft, June 21-22, 25.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	30.45	---	---	30.51	---	30.67	30.69	30.82	30.64	30.56
2	---	---	30.46	---	30.61	---	---	30.70	30.68	30.83	30.62	30.55
3	---	---	30.45	---	---	---	---	30.72	30.68	30.83	30.61	30.56
4	---	---	30.46	---	---	---	---	30.77	30.67	30.83	30.61	30.55
5	---	---	30.46	---	---	---	30.48	30.78	30.66	30.83	30.60	30.53
6	---	---	30.47	30.55	---	---	---	30.78	30.67	30.82	30.62	30.51
7	30.29	---	30.47	---	---	---	---	30.77	30.69	30.80	30.61	30.51
8	---	---	30.46	---	---	---	---	30.78	30.72	30.79	30.60	30.52
9	---	---	30.46	---	---	---	---	30.77	30.76	30.79	30.60	30.55
10	---	30.36	30.46	---	---	---	---	30.77	30.77	30.78	30.62	30.55
11	---	---	30.47	---	---	---	---	30.76	30.76	30.78	30.61	30.54
12	---	---	30.46	---	---	---	---	30.76	30.75	30.78	30.61	30.55
13	---	---	30.46	---	---	---	---	30.74	30.74	30.76	30.59	30.60
14	---	---	30.46	---	---	---	30.57	30.73	30.74	30.76	30.58	30.67
15	---	---	30.49	---	---	---	30.58	30.70	30.73	30.75	30.58	30.66
16	---	---	30.52	---	---	---	30.63	30.68	30.72	30.74	30.57	30.65
17	---	---	30.52	---	---	---	30.63	30.67	30.77	30.73	30.56	30.64
18	---	---	30.51	---	---	---	30.64	30.68	30.77	30.73	30.56	30.63
19	---	---	30.53	---	30.53	---	30.64	30.66	30.78	30.72	30.55	30.62
20	---	---	---	---	30.50	---	30.64	30.65	30.90	30.69	30.55	30.62
21	---	---	---	---	30.51	---	30.63	30.64	30.93	30.68	30.54	30.64
22	---	---	---	---	30.50	---	30.63	30.63	30.93	30.66	30.53	30.63
23	---	---	---	---	30.50	---	30.63	30.65	30.92	30.64	30.53	30.62
24	---	30.48	---	---	30.52	---	30.63	30.67	30.92	30.63	30.54	30.61
25	---	30.47	---	---	30.51	---	30.63	30.67	30.93	30.67	30.53	30.60
26	---	30.46	---	---	30.52	---	30.63	30.66	30.90	30.67	30.52	30.59
27	---	30.46	---	---	30.53	---	30.63	30.66	30.87	30.66	30.56	30.59
28	---	30.46	---	---	---	---	30.68	30.66	30.86	30.67	30.57	30.59
29	---	30.45	---	---	---	---	30.67	30.66	30.84	30.67	30.56	30.58
30	---	30.45	---	---	---	---	30.66	30.68	30.83	30.66	30.57	30.58
31	---	---	---	---	---	---	---	30.71	---	30.65	30.57	---
MEAN	---	---	---	---	---	---	---	30.70	30.79	30.74	30.58	30.59
MAX	---	---	---	---	---	---	---	30.78	30.93	30.83	30.64	30.67
MIN	---	---	---	---	---	---	---	30.63	30.66	30.63	30.52	30.51

WISCONSIN RIVER BASIN

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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, 1.55 in., June 20.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	---	.21	.00	.18	.00	.00
2	.00	.75	---	---	---	---	---	.50	.00	.10	.08	.30
3	.00	.02	---	---	---	---	---	.35	.00	.15	.20	.03
4	.00	.04	---	---	---	---	---	.40	.00	.00	.00	.00
5	.00	---	---	---	---	---	---	.01	.00	.00	.46	.00
6	.08	---	---	---	---	---	---	.00	.44	.00	.00	.02
7	.87	---	---	---	---	---	---	.02	.02	.04	.00	.42
8	.14	---	---	---	---	---	---	.01	.80	.02	.00	.07
9	1.02	---	---	---	---	---	---	.02	.29	.08	.30	.56
10	.12	---	---	---	---	---	---	.05	.00	.00	.00	.04
11	.02	---	---	---	---	---	---	.01	.00	.28	.00	.11
12	.00	---	---	---	---	---	---	.00	.00	.00	.00	.00
13	.00	---	---	---	---	---	---	.01	.08	.16	.00	1.03
14	.03	---	---	---	---	---	---	.00	.17	.04	.00	.58
15	.01	---	---	---	---	---	.19	.00	.05	.00	.03	.01
16	.22	---	---	---	---	---	.00	.00	.14	.00	.00	.00
17	.02	---	---	---	---	---	.65	.12	.65	.01	.00	.00
18	.01	---	---	---	---	---	.10	.13	.00	.00	.00	.00
19	.00	---	---	---	---	---	.00	.00	.46	.00	.00	.01
20	.00	---	---	---	---	---	.00	.00	1.55	.00	.01	.40
21	.22	---	---	---	---	---	.05	.00	.02	.01	.00	.00
22	.00	---	---	---	---	---	.03	.02	.03	.00	.00	.01
23	.00	---	---	---	---	---	.00	.54	.00	.00	.19	.01
24	.00	---	---	---	---	---	.15	.05	.48	.00	.00	.00
25	.00	---	---	---	---	---	.01	.00	.00	.60	.00	.00
26	.00	---	---	---	---	---	.00	.05	.00	.00	.00	.10
27	.00	---	---	---	---	---	.33	.20	.00	.04	.72	.10
28	.00	---	---	---	---	---	.10	.00	.00	.28	.00	.05
29	.00	---	---	---	---	---	.01	.00	.07	.03	.00	.09
30	.01	---	---	---	---	---	.00	.92	.10	.00	.47	.00
31	.00	---	---	---	---	---	---	.03	---	.03	.00	---
TOTAL	2.77	---	---	---	---	---	---	3.65	5.35	2.05	2.46	3.94

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 sea level. Prior to Oct. 4, 1982, nonrecording gage 40 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 7, 14, 17, Nov. 26 to Apr. 3, and Apr. 12-17. Records good except those for ice-affected periods, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	36	74	26	20	13	500	224	292	59	17	20
2	27	41	68	25	20	14	350	300	183	65	16	16
3	25	89	60	23	20	15	250	468	126	60	14	15
4	23	95	54	24	20	16	206	668	99	63	15	14
5	21	84	49	23	19	18	179	752	82	60	14	13
6	19	73	45	21	19	19	182	506	70	53	18	12
7	21	62	42	20	20	20	197	339	70	45	18	12
8	25	56	40	18	20	20	348	259	174	67	15	12
9	105	52	39	17	19	19	549	208	341	95	18	13
10	243	99	38	16	19	18	564	170	293	67	32	13
11	216	136	37	15	18	17	452	415	172	55	28	13
12	142	108	35	15	18	16	340	370	111	47	21	14
13	102	88	37	16	18	16	330	214	84	40	19	20
14	82	74	35	17	17	17	300	156	94	37	21	98
15	69	67	40	17	16	17	270	126	78	34	20	89
16	63	55	47	16	15	18	250	101	63	30	19	61
17	57	50	50	16	14	17	230	85	269	26	18	47
18	51	49	43	15	13	16	338	89	531	25	18	40
19	46	47	36	14	13	16	648	89	560	24	17	34
20	51	102	33	14	13	15	586	77	1980	21	15	34
21	46	619	38	15	13	14	399	68	1930	19	14	42
22	45	731	35	16	14	14	296	59	870	17	13	39
23	44	428	32	17	14	14	240	59	464	16	14	36
24	43	264	29	17	14	16	216	126	306	16	14	30
25	40	195	28	17	14	23	221	125	269	17	12	28
26	38	140	27	17	13	34	188	98	193	19	11	25
27	36	120	26	18	13	60	171	80	129	17	12	25
28	34	100	26	19	13	110	392	79	100	19	14	25
29	33	90	26	19	---	220	438	70	79	21	13	24
30	33	80	28	18	---	410	301	90	66	18	16	23
31	32	---	28	19	---	700	---	319	---	16	24	---
TOTAL	1841	4230	1225	560	459	1952	9931	6789	10078	1168	530	887
MEAN	59.4	141	39.5	18.1	16.4	63.0	331	219	336	37.7	17.1	29.6
MAX	243	731	74	26	20	700	648	752	1980	95	32	98
MIN	19	36	26	14	13	13	171	59	63	16	11	12
CFSM	.73	1.73	.48	.22	.20	.77	4.06	2.68	4.12	.46	.21	.36
IN.	.84	1.93	.56	.26	.21	.89	4.53	3.09	4.59	.53	.24	.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1993, BY WATER YEAR (WY)

	MEAN	70.0	74.5	39.4	20.5	18.4	111	322	155	98.5	44.7	29.3	74.0
MAX	306	338	293	71.8	69.8	467	697	408	397	209	149	396	
(WY)	1986	1992	1976	1960	1984	1946	1951	1973	1943	1968	1990	1942	
MIN	4.05	5.31	4.07	3.00	3.61	14.6	55.6	23.0	6.01	4.09	3.13	3.05	
(WY)	1977	1977	1977	1977	1977	1956	1946	1987	1988	1964	1944	1976	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1942 - 1993
ANNUAL TOTAL	31655.8	39650	
ANNUAL MEAN	86.5	109	87.3
HIGHEST ANNUAL MEAN			140
LOWEST ANNUAL MEAN			36.3
HIGHEST DAILY MEAN	768	Apr 20	3290
LOWEST DAILY MEAN	9.2	Aug 29	1.0
ANNUAL SEVEN-DAY MINIMUM	9.8	Aug 23	1.4
INSTANTANEOUS PEAK FLOW			(a)4180
INSTANTANEOUS PEAK STAGE		7.43	10.00
INSTANTANEOUS LOW FLOW		10	1.0
ANNUAL RUNOFF (CFSM)	1.06	1.33	1.07
ANNUAL RUNOFF (INCHES)	14.43	18.08	14.53
10 PERCENT EXCEEDS	245	300	220
50 PERCENT EXCEEDS	36	36	27
90 PERCENT EXCEEDS	16	14	8.0

(a) From rating curve extended above 2,500 ft³/s

WISCONSIN RIVER BASIN

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05394500 PRAIRIE RIVER NEAR MERRILL, WI

LOCATION.--Lat 45°14'09", long 89°38'59", on line between secs.20 and 29, T.32 N., R.7 E., Lincoln County, Hydrologic Unit 07070002, on left bank 40 ft upstream from bridge on County Trunk Highway C, 1.5 mi upstream from Meadow Creek, 4.5 mi northeast of Merrill, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--184 mi².

PERIOD OF RECORD.--January 1914 to September 1931, August 1939 to current year. Monthly discharge for some periods published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1915-17(M), 1919-21(M), 1923-31(M), 1942-43(M), 1945(M), 1948-50(M). WDR WI-77-1: Drainage area. WDR WI-79-1: 1972.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,297.22 ft above sea level. Prior to Oct. 9, 1968, nonrecording gage 40 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Oct. 16, 17, 23-25, 27, 28, Oct. 30 to Nov. 2, Nov. 4, 6, 10, 11, 13, 18-20, 25, 26, Dec. 14, Apr. 10, 22, May 27, 28, June 3, 4, 10, 11, Aug. 5, 6, 9-15, and Sept. 27-30, and ice-affected periods, Nov. 7-9, 14-17, Nov. 27 to Dec. 12, Dec. 19 to Mar. 30, and Apr. 1-3. Records good except those for ice-affected periods, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	123	160	120	100	88	450	491	462	187	166	179
2	152	154	170	120	96	90	350	493	374	192	150	158
3	138	280	150	110	100	92	300	687	271	191	139	156
4	130	304	140	110	100	94	282	1060	208	194	135	146
5	124	258	130	100	100	96	268	1150	183	185	125	130
6	119	210	140	100	100	100	264	924	165	178	122	119
7	119	170	210	98	90	100	268	666	162	165	120	113
8	120	160	190	98	96	110	451	531	410	169	114	110
9	199	150	180	96	96	110	723	449	812	186	120	112
10	437	206	160	96	92	120	705	386	816	182	128	116
11	438	263	150	96	88	100	591	431	616	178	122	115
12	337	255	140	98	94	100	492	413	420	162	114	118
13	258	208	140	100	96	100	461	343	295	150	106	252
14	208	170	133	98	84	100	431	288	315	143	106	1030
15	182	150	161	98	80	98	415	253	311	136	106	1110
16	167	140	284	100	78	98	365	215	260	129	108	858
17	166	140	307	96	78	90	309	193	847	124	118	555
18	162	138	275	96	76	90	441	202	1260	123	143	377
19	154	138	240	96	76	98	699	211	1250	121	135	265
20	152	206	220	98	78	100	784	196	1820	116	118	235
21	151	820	230	100	80	96	623	181	1890	112	112	279
22	158	1060	210	100	84	94	460	168	1390	108	107	266
23	154	835	190	100	84	100	378	171	889	106	106	234
24	147	601	180	98	84	110	349	231	580	105	103	201
25	145	430	170	94	84	130	369	243	519	131	101	177
26	146	307	160	94	86	150	354	211	415	146	101	166
27	137	240	160	96	88	180	346	187	329	139	129	162
28	130	210	150	98	86	240	615	173	261	169	132	154
29	131	200	140	92	---	460	714	163	223	249	124	151
30	125	180	140	96	---	620	619	208	200	245	150	147
31	120	---	130	100	---	714	---	439	---	194	194	---
TOTAL	5471	8706	5540	3092	2474	4868	13876	11957	17953	4915	3854	8191
MEAN	176	290	179	99.7	88.4	157	463	386	598	159	124	273
MAX	438	1060	307	120	100	714	784	1150	1890	249	194	1110
MIN	119	123	130	92	76	88	264	163	162	105	101	110
CFSM	.96	1.58	.97	.54	.48	.85	2.51	2.10	3.25	.86	.68	1.48
IN.	1.11	1.76	1.12	.63	.50	.98	2.81	2.42	3.63	.99	.78	1.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1993, BY WATER YEAR (WY)

	MEAN	165	170	113	92.6	89.1	191	435	260	216	137	174
MAX	527	388	199	169	158	676	899	723	598	401	494	656
(WY)	1942	1920	1992	1960	1930	1973	1916	1960	1993	1978	1926	1941
MIN	70.8	76.7	66.1	60.5	65.6	68.2	106	98.8	70.6	68.3	68.1	65.1
(WY)	1990	1951	1990	1925	1959	1956	1990	1931	1988	1989	1957	1989

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1914 - 1993
ANNUAL TOTAL	75192	90897	
ANNUAL MEAN	205	249	181
HIGHEST ANNUAL MEAN			272
LOWEST ANNUAL MEAN			108
HIGHEST DAILY MEAN	1070	Apr 21	4200
LOWEST DAILY MEAN	77	Aug 16	35
ANNUAL SEVEN-DAY MINIMUM	79	Aug 11	52
INSTANTANEOUS PEAK FLOW			(a)5800
INSTANTANEOUS PEAK STAGE		6.77	(b)9.45
INSTANTANEOUS LOW FLOW			34
ANNUAL RUNOFF (CFSM)	1.12	1.35	.98
ANNUAL RUNOFF (INCHES)	15.20	18.38	13.36
10 PERCENT EXCEEDS	385	524	348
50 PERCENT EXCEEDS	144	158	116
90 PERCENT EXCEEDS	94	96	75

(a) Based on rating curve extended above 2,200 ft³/s
(b) From floodmarks

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 sea level. Prior to June 18, 1903, nonrecording gage at different datum. June 18, 1903, to Sept. 10, 1914, non recording gage at present datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 27 to Jan. 11, Jan. 13-23, 30, 31, Feb. 2, 3, Feb. 5 to Mar. 7, Mar. 9-11, 13-16, 18, 21-24. Records for Oct. 24 to Nov. 19 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2150	1790	2540	2400	2470	2300	4740	3910	5300	3120	1730	2040
2	1870	2380	2500	2300	2400	2400	3790	3740	4430	3280	1910	2210
3	1990	2680	2860	2200	2500	2300	2890	5160	3630	3180	2070	2090
4	1910	2810	2680	2200	2630	2400	2300	8750	3230	2940	2280	2020
5	1990	2570	2710	2600	2900	2300	2510	9530	2880	2680	2000	1940
6	1910	2230	2290	2900	2700	2200	2230	7520	2370	2760	2180	1820
7	1910	2310	2130	2700	2500	2200	2560	5960	2910	2420	1900	2300
8	1820	2090	2870	2600	2400	2390	3860	5180	3540	2580	1940	2090
9	2290	2060	2830	2400	2400	2300	4720	4770	6350	2660	2360	1470
10	3160	2250	2800	2400	2500	2500	5830	4260	6930	2620	2190	1870
11	3430	2510	2750	2600	2500	2400	5940	4970	5010	2460	2040	1970
12	3120	2450	2910	2480	2400	2420	4460	6090	3860	2520	2050	1970
13	2700	2570	2540	2700	2500	2000	4300	4910	3380	2090	1850	2920
14	2530	2240	2530	2700	2400	2000	4020	3890	3370	2170	2050	5760
15	2400	2330	2840	2600	2500	2100	4110	3510	3350	2040	1860	4720
16	2410	2380	3230	2600	2400	2100	4420	3010	3070	1820	2160	3890
17	1890	2080	3390	2600	2400	1990	3510	2770	6790	2090	2240	2530
18	1860	1990	3000	2500	2400	2000	4320	2360	8420	2100	2020	2300
19	2040	1930	3230	2400	2200	2050	5770	2530	9940	1910	1980	2070
20	2070	2640	3120	2600	2100	2310	6330	2370	17300	1990	2000	2230
21	2020	6480	3190	2400	2100	1900	5350	2120	20000	1970	1830	2180
22	2000	7860	2700	2400	2300	2000	4430	1970	15400	1970	1600	2300
23	2220	7020	2920	2600	2400	1900	3730	2260	10900	1930	1860	2160
24	1980	5380	2820	2570	2200	2000	3660	2730	8450	1920	2060	1580
25	2140	4290	1870	2630	2100	2180	3520	3270	7730	2150	1940	1850
26	1940	4000	1900	2530	2200	2440	3090	2920	6780	2140	1860	1970
27	1970	3260	2300	2800	2300	2730	2480	2620	5420	2090	1860	1880
28	1830	3280	2900	2690	2300	3590	4130	2620	5050	2770	1650	1700
29	1930	3210	2600	2400	---	4540	5370	2600	4520	2920	1790	1630
30	1940	2940	2600	2600	---	5210	4960	3200	3660	2520	2500	2000
31	1890	---	2500	2500	---	5360	---	4440	---	1980	2280	---
TOTAL	67310	94010	84050	78600	67100	78510	123330	125940	193970	73790	62040	69460
MEAN	2171	3134	2711	2535	2396	2533	4111	4063	6466	2380	2001	2315
MAX	3430	7860	3390	2900	2900	5360	6330	9530	20000	3280	2500	5760
MIN	1820	1790	1870	2200	2100	1900	2230	1970	2370	1820	1600	1470

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1993, BY WATER YEAR (WY)

	MEAN	2543	2395	2075	1975	1919	2603	4757	3728	3160	2359	2077	2557
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

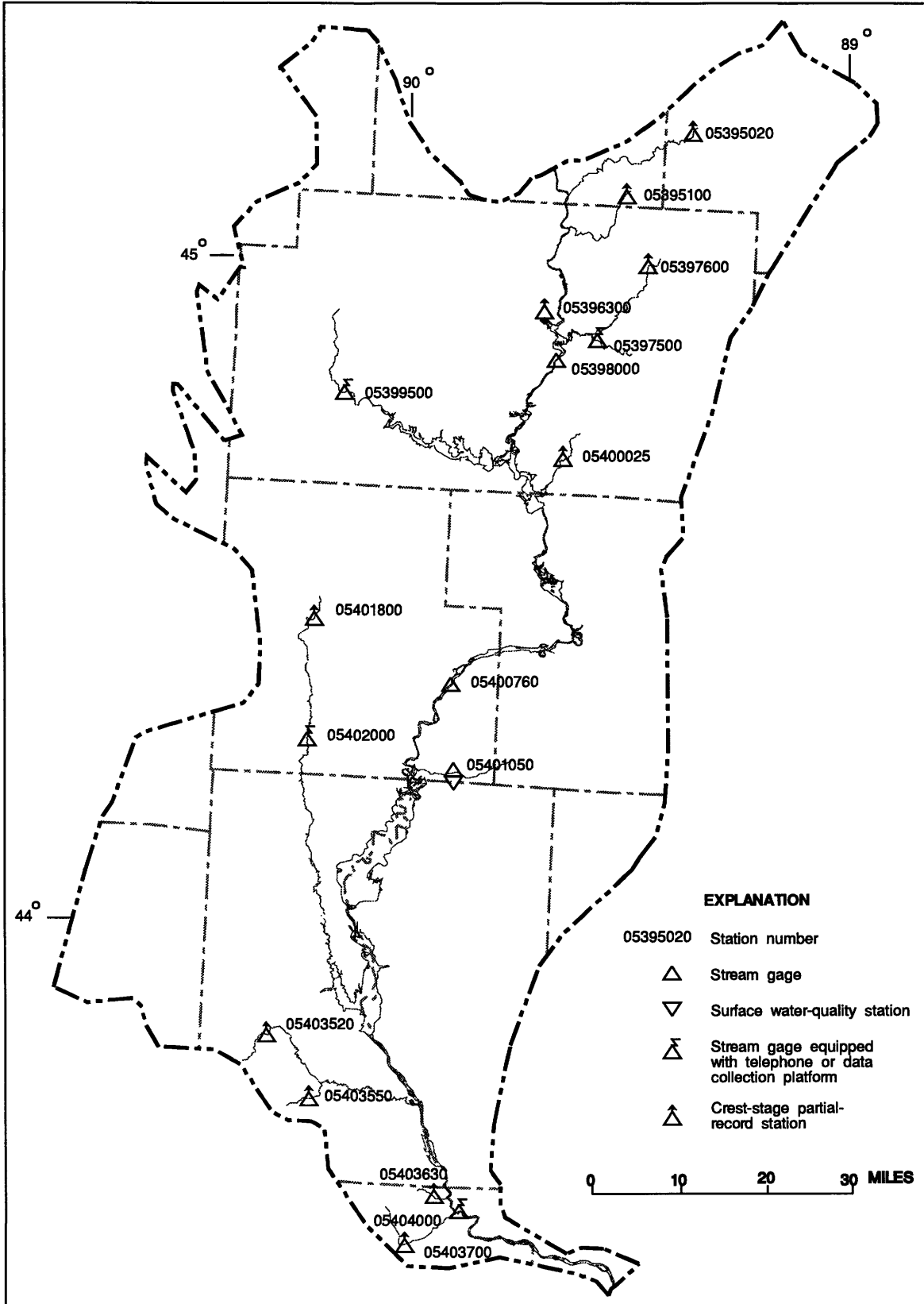
FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1903 - 1993

ANNUAL TOTAL	977360	1118110	
ANNUAL MEAN	2670	3063	
HIGHEST ANNUAL MEAN			2664
LOWEST ANNUAL MEAN			4558
HIGHEST DAILY MEAN	8370	Apr 8	1348
LOWEST DAILY MEAN	1120	Jul 30	36400
ANNUAL SEVEN-DAY MINIMUM	1350	Aug 22	90
INSTANTANEOUS PEAK FLOW			194
INSTANTANEOUS PEAK STAGE			18.26
10 PERCENT EXCEEDS	3980	4990	4780
50 PERCENT EXCEEDS	2500	2500	2100
90 PERCENT EXCEEDS	1500	1920	1230

(a) From rating curve extended above 20,000 ft³/s



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

CENTRAL WISCONSIN RIVER BASIN

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 sea level. Prior to Sept. 17, 1953, nonrecording gage at site 50 ft upstream at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 7, 8, 14-19, and Nov. 27 to Apr. 5. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	306	157	340	160	130	80	1100	702	930	308	207	278
2	262	221	350	140	130	90	680	579	727	306	191	231
3	232	534	330	140	120	110	540	986	510	308	179	210
4	207	562	300	140	130	110	480	1810	391	322	173	187
5	186	490	270	130	130	120	450	1930	327	303	170	172
6	175	403	280	130	120	140	441	1680	288	304	180	161
7	168	310	290	120	120	150	429	1030	270	289	188	149
8	165	280	270	120	120	160	683	782	585	268	182	145
9	226	261	260	120	110	160	997	714	1760	265	180	140
10	477	297	260	110	110	150	966	588	1340	269	179	139
11	612	367	250	100	110	150	862	1870	1030	256	181	139
12	552	381	240	110	100	150	687	3240	632	242	169	139
13	410	345	240	110	110	140	687	1890	437	233	167	159
14	327	280	230	100	110	140	594	806	613	233	150	631
15	279	250	250	110	100	140	545	537	631	226	150	854
16	269	280	310	110	90	150	577	438	501	214	152	1160
17	264	220	330	110	94	160	497	381	779	201	149	806
18	252	200	270	110	86	150	660	359	1860	194	143	468
19	232	190	230	110	82	150	1210	353	2630	193	140	356
20	219	337	180	100	82	140	1370	327	3510	190	137	321
21	226	1780	180	110	82	140	1220	299	3800	172	131	353
22	240	1980	190	120	86	130	779	279	3000	156	126	364
23	244	2080	170	120	88	120	551	289	1550	151	124	341
24	237	1330	160	130	84	110	476	359	850	155	124	304
25	221	752	150	130	78	120	495	386	663	171	123	266
26	207	529	150	120	76	220	503	350	578	224	149	241
27	193	410	160	120	76	390	463	308	471	245	268	224
28	182	500	170	120	74	720	1000	281	406	224	285	211
29	173	440	160	120	---	1300	1130	263	363	207	228	204
30	164	380	160	110	---	2200	1040	365	333	254	236	191
31	158	---	160	120	---	1800	---	1050	---	230	311	---
TOTAL	8065	16546	7290	3700	2828	9990	22112	25231	31765	7313	5472	9544
MEAN	260	552	235	119	101	322	737	814	1059	236	177	318
MAX	612	2080	350	160	130	2200	1370	3240	3800	322	311	1160
MIN	158	157	150	100	74	80	429	263	270	151	123	139
CFSM	.69	1.47	.63	.32	.27	.86	1.97	2.17	2.82	.63	.47	.85
IN.	.80	1.64	.72	.37	.28	.99	2.19	2.50	3.15	.73	.54	.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1993, BY WATER YEAR (WY)

	MEAN	205	238	141	90.8	85.3	358	751	371	305	159	146	213
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 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1914 - 1993
ANNUAL TOTAL	113590	149856	
ANNUAL MEAN	310	411	254
HIGHEST ANNUAL MEAN			440
LOWEST ANNUAL MEAN			131
HIGHEST DAILY MEAN	2080	3800	7180
LOWEST DAILY MEAN	64	(a)74	25
ANNUAL SEVEN-DAY MINIMUM	69	79	26
INSTANTANEOUS PEAK FLOW		3900	(c)8300
INSTANTANEOUS PEAK STAGE		7.15	(d)10.14
INSTANTANEOUS LOW FLOW			(e)8.0
ANNUAL RUNOFF (CFSM)	.83	1.09	.68
ANNUAL RUNOFF (INCHES)	11.27	14.87	9.22
10 PERCENT EXCEEDS	638	889	546
50 PERCENT EXCEEDS	180	237	128
90 PERCENT EXCEEDS	90	110	60

(a) Ice affected

(b) Also occurred Jan. 10-15, 17, 18, 1926, and Oct. 3, 1948

(c) From rating curve extended above 6,000 ft³/s, gage height, 8.4 ft, from graph based on gage readings

(d) Ice jam

(e) Probably result of temporary regulation

WISCONSIN RIVER BASIN

129

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 sea level. 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: Mar. 19, 22-25, and ice-affected periods, Nov. 27, Nov. 29 to Dec. 5, Dec. 9-13, 18-20, 22-23, Dec. 26 to Mar. 3, Mar. 11-18, and Mar. 20-21. Records good except for estimated daily discharges, which are 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3190	2350	4000	2800	2600	2200	13100	7460	10100	4680	2590	3390
2	3030	3080	3700	2600	2600	2400	8970	6720	7880	5030	2600	3040
3	2810	5270	3800	2400	2500	2400	6630	10700	6070	4780	2780	2860
4	2830	5450	3500	2500	2700	2360	4300	17200	5090	4920	3060	2830
5	2540	4800	3000	2600	2900	2780	4470	20300	4560	4290	2630	2690
6	2690	3820	2860	3000	2900	2490	4650	14800	3770	4260	2980	2480
7	2600	3540	2630	2900	2700	2770	4860	10900	4110	3720	2960	2660
8	2640	3310	2840	2900	2500	2670	8710	9020	6900	3870	2500	2980
9	3230	3130	3300	2700	2400	3100	13200	8210	14500	4250	3020	2260
10	6040	3630	3500	2300	2500	2780	12600	7330	14500	3970	3170	2150
11	6000	4090	3600	2700	2600	2800	11100	12800	10100	3660	2840	2520
12	5210	4020	3500	2700	2400	2500	8880	13600	7060	3750	2800	2520
13	4730	4030	3400	2900	2500	2500	9230	10400	5730	3360	2650	3860
14	3940	3470	3420	3000	2500	2200	8250	7010	6220	3230	2600	16100
15	3700	3220	4160	2800	2500	2200	7810	5770	5910	3000	2570	13000
16	3540	3370	5890	2800	2500	2300	8270	5050	5280	2750	2660	8020
17	3210	3020	6440	2800	2500	2000	7460	4760	10200	2730	2660	5410
18	3000	3030	5000	2600	2400	2100	8840	3800	20000	2960	2910	4390
19	2820	2730	4700	2600	2200	1900	13900	4190	21400	2890	2540	3720
20	3150	4300	4200	2500	2000	2300	14000	3820	36600	2620	2540	3500
21	3000	15200	4150	2700	2000	2200	11200	3640	41900	2840	2520	4200
22	3060	19700	3900	2500	2000	2100	8720	3120	30600	2600	2020	3910
23	3180	14400	3500	2900	2200	2200	6720	3470	18400	2540	2110	3710
24	2940	10500	3580	2700	2400	2100	6000	4360	12600	2510	2680	2950
25	2760	7600	3790	2800	2200	2700	5940	5340	11400	2900	2300	2640
26	2300	6530	2600	2700	2000	3570	5320	4620	9830	3230	2860	2670
27	2800	5000	2400	2800	2200	4830	4730	4350	7800	3010	2770	2880
28	2400	5010	3200	2800	2000	7610	9500	3610	7090	3360	3070	2410
29	2560	4800	3400	2600	---	10600	10700	3850	6440	3960	2710	2300
30	2590	4400	3100	2600	---	13800	9200	4910	5560	3750	3280	2600
31	2700	---	3000	2700	---	15600	---	9530	---	3280	3790	---
TOTAL	101190	166800	114060	83900	67400	116060	257260	234640	357600	108700	85170	120650
MEAN	3264	5560	3679	2706	2407	3744	8575	7569	11920	3506	2747	4022
MAX	6040	19700	6440	3000	2900	15600	14000	20300	41900	5030	3790	16100
MIN	2300	2350	2400	2300	2000	1900	4300	3120	3770	2510	2020	2150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1993, BY WATER YEAR (WY)

	3205	3295	2732	2473	2363	4245	7461	4715	3892	2809	2375	3194
MEAN	3205	3295	2732	2473	2363	4245	7461	4715	3892	2809	2375	3194
MAX	10020	7262	5484	3787	4051	13300	14640	13930	11920	7219	4729	9079
(WY)	1986	1986	1992	1973	1984	1973	1967	1960	1993	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 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1945 - 1993
ANNUAL TOTAL	1484050	1813430	
ANNUAL MEAN	4055	4968	3562
HIGHEST ANNUAL MEAN			5953
LOWEST ANNUAL MEAN			1686
HIGHEST DAILY MEAN	19700	Nov 22	44500
LOWEST DAILY MEAN	1270	Jul 30	575
ANNUAL SEVEN-DAY MINIMUM	1540	Aug 10	2110
INSTANTANEOUS PEAK FLOW			44400
INSTANTANEOUS PEAK STAGE			27.48
INSTANTANEOUS LOW FLOW			575
10 PERCENT EXCEEDS	7340	10100	6610
50 PERCENT EXCEEDS	3170	3220	2600
90 PERCENT EXCEEDS	1920	2400	1480

(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 sea level. 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 period, Nov. 26 to Apr. 1. Records for Oct. 1-8 and Dec. 4-9 were furnished by Wisconsin Valley Improvement Company. Records good except those for ice-affected period and Oct. 11-16 and Sept. 17-30, 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	21	52	31	20	13	740	193	674	32	424	165
2	30	64	48	30	20	15	631	487	344	36	197	94
3	26	370	43	29	19	16	474	982	201	41	96	68
4	22	269	39	30	19	18	509	2850	130	61	69	43
5	19	166	37	30	18	20	597	1600	92	57	51	29
6	17	129	34	28	18	24	509	611	68	41	37	22
7	16	102	32	27	17	29	695	334	57	30	58	18
8	15	82	31	26	17	34	3650	224	1020	27	40	16
9	19	71	30	22	17	41	2610	159	2670	125	400	15
10	56	73	30	22	16	45	1050	135	969	92	586	16
11	97	97	32	23	16	43	616	1080	494	48	195	15
12	79	101	32	23	15	37	825	492	239	34	102	17
13	59	86	32	24	15	33	1420	226	140	40	61	2600
14	49	73	35	24	14	29	825	158	107	35	39	3700
15	41	61	50	24	14	26	633	120	78	28	33	1170
16	34	49	310	24	13	24	798	89	67	23	31	495
17	29	42	250	24	12	22	1030	66	1340	20	28	244
18	28	39	150	22	11	20	1850	55	1930	20	23	151
19	24	36	110	21	11	19	1290	49	4090	26	20	106
20	26	944	94	20	11	18	1080	45	9290	20	19	95
21	30	4220	88	21	11	18	540	39	3890	14	16	133
22	39	1650	68	21	12	18	307	32	1070	12	14	144
23	42	630	56	22	12	20	218	66	426	12	12	129
24	38	344	47	22	11	25	182	195	220	11	11	114
25	32	226	40	21	11	100	164	183	196	15	9.4	92
26	30	140	37	22	11	250	139	118	145	17	12	77
27	26	110	33	21	12	1200	190	83	93	13	81	70
28	27	90	30	21	13	2300	1390	83	64	11	50	68
29	26	68	31	20	---	2700	537	58	48	10	44	76
30	21	60	31	20	---	1700	288	1330	39	9.1	120	101
31	20	---	32	19	---	1100	---	2030	---	64	260	---
TOTAL	1052	10413	1964	734	406	9957	25787	14172	30191	1024.1	3138.4	10083
MEAN	33.9	347	63.4	23.7	14.5	321	860	457	1006	33.0	101	336
MAX	97	4220	310	31	20	2700	3650	2850	9290	125	586	3700
MIN	15	21	30	19	11	13	139	32	39	9.1	9.4	15
CFSM	.15	1.55	.28	.11	.06	1.43	3.84	2.04	4.49	.15	.45	1.50
IN.	.17	1.73	.33	.12	.07	1.65	4.28	2.35	5.01	.17	.52	1.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1993, BY WATER YEAR (WY)

	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
MEAN	106	133	49.2	20.1	25.4	423	590	243	217	76.3	71.1	169
MAX	728	695	446	138	372	1202	1551	1016	1203	642	371	1572
(WY)	1942	1992	1966	1973	1984	1976	1951	1973	1980	1978	1978	1938
MIN	2.26	4.34	2.50	.40	.51	8.77	51.7	15.8	5.16	2.71	2.58	1.50
(WY)	1954	1954	1990	1977	1977	1956	1946	1977	1988	1988	1937	1953

05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI--CONTINUED

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1914 - 1993	
ANNUAL TOTAL	73439.8		108921.5		178	
ANNUAL MEAN	201		298		355	
HIGHEST ANNUAL MEAN					47.6	
LOWEST ANNUAL MEAN					26100	
HIGHEST DAILY MEAN	4220	Nov 21	9290	Jun 20	Sep 9 1938	
LOWEST DAILY MEAN	6.0	Aug 29	9.1	Jul 30	(a) Jan 22 1961	
ANNUAL SEVEN-DAY MINIMUM	6.6	Aug 23	11	Feb 18	Jan 22 1961	
INSTANTANEOUS PEAK FLOW			11100	Jun 20	(b) 41000 Sep 9 1938	
INSTANTANEOUS PEAK STAGE			16.78	Jun 20	(c) 24.50 Sep 9 1938	
INSTANTANEOUS LOW FLOW			(d) 8.7	Jul 30	(e) Aug 17 1947	
ANNUAL RUNOFF (CFSM)	.90		1.33		.79	
ANNUAL RUNOFF (INCHES)	12.20		18.09		10.78	
10 PERCENT EXCEEDS	516		825		374	
50 PERCENT EXCEEDS	33		43		24	
90 PERCENT EXCEEDS	12		16		4.3	

(a) Also occurred Jan. 23 to Feb. 5, 1961

(b) Based on rating curve extended above 24,000 ft³/s

(c) From floodmarks

(d) Also occurred July 31, Aug. 25 and 26

(e) 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.

REVISED RECORDS.--WSP 1308: 1915(M).

GAGE.--Water-stage recorders on headwater and tailwater. Elevation of powerplant pond is 1,010 ft and datum of powerplant gages is 0.00 ft above sea level (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 sea level. 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. No diversions were made for water year 1993.

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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3780	2990	6740	3430	4090	3270	20600	11200	15400	5490	3610	4410
2	3390	4070	7010	3690	4810	3420	12200	11400	14400	5930	3570	3560
3	3510	4650	5130	3880	3960	3520	10100	17300	10400	5500	3360	3560
4	2960	6740	4460	3730	3660	3460	6960	27600	7900	5440	3310	3520
5	2940	6230	4320	3550	4310	3380	7420	33500	6270	6460	2720	3270
6	3470	5380	3830	4010	4460	3410	8060	26600	5110	6810	2640	2950
7	3140	4060	4200	3540	4020	4000	8080	18300	5130	4950	3170	2910
8	3070	4190	3350	3070	4480	4300	11000	13100	15500	4230	2870	3240
9	3000	3940	3800	3360	4920	4750	18100	12300	30300	4960	3180	3110
10	5400	3740	3430	3480	4890	4560	20900	11900	30400	4570	3400	3160
11	6770	4400	3950	3440	5000	3690	18900	13800	19300	4530	3340	2980
12	7730	5280	3620	3220	4960	3290	13100	18300	14000	4100	3130	3060
13	4190	4800	4720	3270	3710	3000	13000	14400	10100	4510	3240	3990
14	4780	5090	4470	3650	3560	4510	15400	9240	10400	3760	3020	15600
15	3840	4010	6300	3690	3130	3140	15900	6870	9830	3000	2800	19700
16	4230	3180	9060	3760	3090	4320	14600	6340	9190	3140	3090	13400
17	3550	2760	9440	3630	2880	3390	14000	5050	15300	2790	2800	7080
18	3400	3440	8860	3420	3420	3490	14400	4740	28600	3010	3070	5890
19	3070	3450	7770	3420	3360	2860	18200	4000	36100	3240	3040	4540
20	3210	6970	5880	3270	3520	2900	20800	3780	51100	3790	2940	4520
21	3290	14700	5550	3650	3490	3260	20700	4190	63600	3140	2580	5390
22	3440	29000	5400	3520	2950	3180	13700	4290	53000	3470	3050	5240
23	3260	24200	5070	3040	3190	3120	12100	4030	34300	2960	3010	3990
24	3740	17900	4490	3460	3350	2290	9220	5300	21900	2760	2740	4520
25	3020	12700	4090	3920	3390	3770	8610	5310	16400	4050	3170	3650
26	3230	10200	4020	4230	3400	4210	7440	5450	14700	3620	3110	3200
27	3070	7120	3670	4240	3300	6160	8050	6000	12200	3540	3520	3630
28	3050	5850	3420	3960	3330	7190	16300	5840	9810	3010	2850	3830
29	2890	6340	3790	3400	---	11600	15900	4500	8580	3080	2440	3700
30	2600	6870	4210	3720	---	18000	12500	7280	6160	3600	3980	3100
31	2460	---	4440	3890	---	22600	---	16800	---	3610	5170	---
TOTAL	113480	224250	158490	111540	106630	158040	406240	338710	585380	127050	97920	154700
MEAN	3661	7475	5113	3598	3808	5098	13540	10930	19510	4098	3159	5157
MAX	7730	29000	9440	4240	5000	22600	20900	33500	63600	6810	5170	19700
MIN	2460	2760	3350	3040	2880	2290	6960	3780	5110	2760	2440	2910

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1993, BY WATER YEAR (WY)

	MEAN	4109	4439	3339	3050	3138	6501	11050	7068	6190	3549	3075	4412
MAX	13070	10270	7928	5589	6368	19180	25940	19730	19560	10820	9199	17670	
(WY)	1987	1920	1966	1973	1984	1973	1922	1960	1943	1978	1926	1938	
MIN	1075	1072	1141	1272	1333	1547	2579	1669	1308	1123	1173	1227	
(WY)	1977	1977	1990	1990	1977	1924	1990	1987	1988	1988	1934	1976	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1914 - 1993	
ANNUAL TOTAL	1985020		2582430			
ANNUAL MEAN	5424		7075		4986	
HIGHEST ANNUAL MEAN					8499	
LOWEST ANNUAL MEAN					2107	
HIGHEST DAILY MEAN	29000		63600		63600	
LOWEST DAILY MEAN	1350		2290		165	
ANNUAL SEVEN-DAY MINIMUM	1860		2900		790	
INSTANTANEOUS PEAK FLOW			64600		(a)70400	
10 PERCENT EXCEEDS	10500		15400		9800	
50 PERCENT EXCEEDS	3990		4070		3370	
90 PERCENT EXCEEDS	2230		3030		1750	

(a) From rating curve extended above 58,000 ft³/s

WISCONSIN RIVER BASIN

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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 sea level. Prior to May 13, 1964, and June 2, 1988 to May 2, 1989, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 7, 25, 27-31, Jan. 2-21, 26-28, Feb. 13, 14, 18, 19, and 24-27. Records good except those for ice-affected periods, 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	72	97	71	64	48	99	146	128	124	108	91
2	98	78	95	74	64	49	95	148	120	135	108	89
3	95	85	93	76	64	52	92	172	113	144	104	86
4	93	87	92	76	63	54	92	202	109	149	101	84
5	90	85	86	74	62	55	92	211	104	150	99	83
6	87	81	84	68	61	57	91	202	101	155	98	80
7	87	79	86	66	61	58	91	186	102	166	97	79
8	85	78	85	66	60	61	102	176	115	176	94	79
9	94	78	85	66	59	64	114	171	172	183	103	78
10	98	77	85	64	59	67	113	163	219	183	107	77
11	95	75	84	64	56	65	112	156	182	175	103	77
12	91	74	82	64	55	62	111	150	160	163	98	78
13	88	73	82	62	54	59	115	140	147	153	95	80
14	86	71	83	62	54	64	116	134	143	146	95	93
15	84	70	91	64	52	64	119	129	136	139	101	108
16	84	69	119	64	52	64	125	122	128	132	104	110
17	83	70	136	64	51	61	126	119	140	127	103	106
18	81	69	128	64	52	58	132	117	164	129	99	101
19	80	69	121	64	50	61	161	114	191	131	96	97
20	81	80	109	64	50	60	192	111	232	124	93	100
21	81	108	111	66	50	58	186	109	246	117	90	104
22	81	131	108	70	50	57	169	106	230	112	89	105
23	80	125	102	69	50	56	158	110	203	109	91	103
24	79	118	82	68	50	56	151	114	182	106	90	100
25	78	114	84	62	49	62	146	113	179	126	86	97
26	76	111	82	62	49	73	141	109	166	150	87	95
27	74	105	84	62	48	83	139	107	151	138	85	95
28	74	102	86	62	48	89	164	106	141	128	83	94
29	73	100	88	61	---	97	176	102	133	120	83	93
30	72	98	88	63	---	103	158	110	129	115	88	90
31	71	---	78	63	---	104	---	124	---	109	91	---
TOTAL	2620	2632	2916	2045	1537	2021	3878	4279	4666	4314	2969	2752
MEAN	84.5	87.7	94.1	66.0	54.9	65.2	129	138	156	139	95.8	91.7
MAX	101	131	136	76	64	104	192	211	246	183	108	110
MIN	71	69	78	61	48	48	91	102	101	106	83	77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1993, 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	1993
MEAN	51.5	53.2	49.6	36.4	34.2	68.0	107	91.9	78.4	58.6	45.7	53.0																		
MAX	129	100	107	79.8	90.5	192	170	205	156	139	98.1	100																		
(WY)	1973	1973	1966	1973	1966	1973	1979	1973	1993	1993	1990	1965																		
MIN	21.5	19.5	14.6	12.6	11.2	16.1	47.3	44.7	37.4	23.6	17.4	23.0																		
(WY)	1977	1977	1965	1965	1965	1964	1964	1977	1964	1988	1964	1976																		

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1964 - 1993

ANNUAL TOTAL	25130	36629	60.6	1973
ANNUAL MEAN	68.7	100	113	1964
HIGHEST ANNUAL MEAN			30.2	1964
LOWEST ANNUAL MEAN			427	Mar 31 1979
HIGHEST DAILY MEAN	179	Sep 18	246	Jun 21
LOWEST DAILY MEAN	26	Aug 23	48	Feb 27-Mar 1
ANNUAL SEVEN-DAY MINIMUM	27	Aug 19	49	Feb 24
INSTANTANEOUS PEAK FLOW			249	Jun 21
INSTANTANEOUS PEAK STAGE			6.34	Jun 21
INSTANTANEOUS LOW FLOW			45	Feb 15
10 PERCENT EXCEEDS	108	155	110	
50 PERCENT EXCEEDS	70	93	51	
90 PERCENT EXCEEDS	33	61	23	

(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 September 1993 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	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						MAY 1993				
20...	1240	--	78	327	5.0	11...	1008	151	320	15.0
JAN 1993						JUL				
20...	1105	64	--	315	1.0	16...	1035	138	300	17.0
MAR						SEP				
16...	1415	--	66	260	5.5	07...	1330	79	300	15.0
APR										
13...	1430	--	121	330	10.0					

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 HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 1992											
20...	1240	--	78	327	7.8	5.0	4.6	10.9	732	89	65
JAN 1993											
20...	1105	64	--	315	7.7	1.0	4.8	12.1	743	87	K17
MAR											
16...	1415	--	66	260	7.7	5.5	5.5	11.2	732	93	K6
MAY											
11...	1008	--	151	320	7.8	15.0	7.5	7.5	740	77	--
JUL											
16...	1035	--	138	300	7.9	17.0	5.0	8.2	738	88	290
SEP											
07...	1330	--	79	300	8.0	15.0	5.1	8.6	739	88	170

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 1992											
20...	57	160	38	17	2.4	0.90	149	122	21	9.7	0.10
JAN 1993											
20...	K8	160	37	17	2.4	1.0	150	123	20	9.1	0.10
MAR											
16...	K9	160	37	16	2.3	0.90	146	120	22	8.6	<0.10
MAY											
11...	88	170	40	17	2.4	1.0	152	124	24	9.0	0.10
JUL											
16...	360	170	39	17	2.3	0.90	153	125	22	8.7	0.10
SEP											
07...	K40	170	39	17	2.4	1.2	152	125	17	8.0	0.10

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

WISCONSIN RIVER BASIN

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05401050 TENMILE CREEK NEAR NEKOOSA, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	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)	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)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT 1992											
20...	11	194	0.030	3.70	0.060	0.50	0.040	0.030	0.020	<10	14
JAN 1993											
20...	12	202	0.030	4.00	0.090	0.40	0.030	0.010	0.010	20	15
MAR											
16...	11	186	0.010	3.40	0.110	0.50	0.040	<0.010	<0.010	--	--
MAY											
11...	9.5	207	0.030	3.20	0.050	0.70	0.010	0.020	<0.010	20	17
JUL											
16...	12	220	0.030	3.40	0.050	0.90	0.080	<0.010	<0.010	--	--
SEP											
07...	11	195	0.010	3.40	0.050	0.30	0.030	0.020	0.010	10	14

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	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)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1992											
20...	<3	860	<4	99	<10	<1	<1	40	<6	16	34
JAN 1993											
20...	<3	600	<4	140	<10	<1	<1	41	<6	16	57
MAR											
16...	--	--	--	--	--	--	--	--	--	18	49
MAY											
11...	<3	810	<4	45	<10	1	<1	42	<6	55	36
JUL											
16...	--	--	--	--	--	--	--	--	--	49	51
SEP											
07...	4	400	<4	90	<10	<1	<1	42	<6	18	51

DATE	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)
MAY 1993						
11...	1008	151	<0.05	<0.05	<0.05	<0.05
JUL						
16...	1035	138	<0.05	<0.05	<0.05	<0.05

DATE	DEISO- PROPYL ATRAZIN WATER, DISS, REC, (UG/L) (04038)	METO- LACHLOR WATER, DISSOLV (UG/L) (39415)	METRI- BUZIN WATER, DISSOLV (UG/L) (82630)	PROP- AZINE WATER, DISS, REC, (UG/L) (38535)	PRO- METON, WATER, DISS, REC, (UG/L) (04037)	PRO- METRYN, WATER, DISS, REC, (UG/L) (04036)	SI- MAZINE, WATER, DISS, REC, (UG/L) (04035)
MAY 1993							
11...	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	<0.05
JUL							
16...	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05

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 sea level. Prior to Oct. 28, 1948, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 6 to Nov. 2, Apr. 4-8, 12-13, 22-28 and ice-affected period, Nov. 27 Mar. 30. 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	45	90	42	36	23	2740	451	1940	72	52	499
2	63	90	84	40	37	24	1640	355	1460	90	85	233
3	59	162	78	39	40	25	1070	1150	550	115	139	148
4	55	269	74	37	39	27	800	2180	292	158	105	147
5	50	331	70	34	37	30	700	2360	174	211	95	108
6	45	287	68	32	35	35	700	1560	119	205	79	74
7	42	220	66	30	36	40	800	952	92	175	63	55
8	40	170	64	29	36	50	1000	543	183	171	67	48
9	40	141	62	28	35	70	2260	357	5870	144	67	44
10	45	127	62	27	34	110	1960	262	5260	113	227	41
11	52	121	60	26	33	110	1180	222	2180	106	359	38
12	66	121	60	25	34	100	800	197	1040	104	236	34
13	74	120	60	26	34	90	960	181	477	95	129	36
14	70	112	66	27	32	86	1170	134	313	87	94	172
15	60	104	78	26	31	80	946	104	1050	72	82	1430
16	54	95	150	26	29	74	1090	83	301	62	78	1320
17	48	88	380	26	28	60	1080	69	412	55	68	729
18	44	81	300	26	27	58	1500	62	2570	54	60	360
19	39	80	220	26	27	56	1750	56	3280	51	55	203
20	38	97	180	26	27	54	1750	51	5850	48	49	145
21	38	1530	160	28	26	50	1450	48	6010	53	43	126
22	42	3470	160	31	26	45	800	44	2910	49	41	272
23	46	1990	120	31	25	40	520	48	1380	42	36	187
24	46	1130	94	31	25	36	400	79	715	38	27	154
25	44	686	74	29	24	45	350	143	391	45	23	126
26	42	437	62	30	24	80	320	164	218	56	24	99
27	39	230	54	31	24	560	500	137	152	48	25	84
28	38	130	52	32	23	1000	800	115	113	45	53	72
29	35	110	48	29	---	1400	989	107	93	41	71	74
30	33	100	47	31	---	2000	712	112	83	36	63	78
31	35	---	47	35	---	2840	---	808	---	35	348	---
TOTAL	1493	12674	3190	936	864	9298	32737	13134	45478	2676	2943	7136
MEAN	48.2	422	103	30.2	30.9	300	1091	424	1516	86.3	94.9	238
MAX	74	3470	380	42	40	2840	2740	2360	6010	211	359	1430
MIN	33	45	47	25	23	23	320	44	83	35	23	34
CFSM	.22	1.96	.48	.14	.14	1.40	5.08	1.97	7.05	.40	.44	1.11
IN.	.26	2.19	.55	.16	.15	1.61	5.66	2.27	7.87	.46	.51	1.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1993, BY WATER YEAR (WY)

	MEAN	105	120	66.5	27.9	37.2	402	543	246	168	62.6	47.1	134
MAX	561	508	374	132	373	1353	1319	1183	1516	453	371	1169	
(WY)	1987	1983	1966	1973	1966	1973	1952	1973	1993	1978	1980	1986	
MIN	3.68	4.62	7.35	5.03	4.79	8.13	85.9	28.0	8.56	4.68	4.01	2.23	
(WY)	1949	1977	1951	1945	1945	1956	1946	1977	1988	1988	1988	1948	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1944 - 1993
ANNUAL TOTAL	84409	132559	
ANNUAL MEAN	231	363	163
HIGHEST ANNUAL MEAN			376
LOWEST ANNUAL MEAN			37.4
HIGHEST DAILY MEAN	3770	Mar 8	10300 Jun 21
LOWEST DAILY MEAN	12	Jun 15	23 (a)Feb 28
ANNUAL SEVEN-DAY MINIMUM	12	Jul 31	24 Feb 24
INSTANTANEOUS PEAK FLOW			8180 Jun 9
INSTANTANEOUS PEAK STAGE			15.63 Jun 9
INSTANTANEOUS LOW FLOW			22 (c)Aug 25,26
ANNUAL RUNOFF (CFSM)	1.07	1.69	.94 Aug 11 1985
ANNUAL RUNOFF (INCHES)	14.60	22.94	.76
10 PERCENT EXCEEDS	570	1070	10.30
50 PERCENT EXCEEDS	53	78	363
90 PERCENT EXCEEDS	17	29	8.0

(a) Also occurred Mar. 1, Aug. 25

(b) Also occurred Sept. 25, 26, 1948

(c) Minimum recorded, but may have been less during period of ice affect, Feb. 28-Mar. 1

WISCONSIN RIVER BASIN

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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 sea level (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.--Estimated daily discharges: Nov. 9-12 and ice-affected periods, Dec. 24 to Mar. 2 and Mar. 8-19. Records good, except those for estimated daily discharges, 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 power-plant of Wisconsin Power and Light Co. at Wisconsin Dells. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6960	4030	10400	6800	6000	5400	12100	17600	18300	13400	6950	7530
2	6470	4700	11300	6800	6200	5600	12200	17700	21900	11700	7180	7940
3	6300	6820	12600	6800	6200	5670	12200	22200	19400	11600	7230	7000
4	6410	7510	9930	6600	6400	5270	12200	27100	18100	11300	7120	6570
5	5570	8440	7600	6600	6400	5370	12100	36200	12700	11500	6780	6520
6	5540	8420	7440	6400	6400	5200	12400	39500	9780	13100	6230	6440
7	6410	8460	7030	6400	6400	5300	12200	39900	9660	15700	5170	6090
8	6550	7550	6960	6400	6400	5800	12200	35500	10300	16900	5310	5150
9	6690	7200	6800	6400	6400	5800	13100	26200	17300	14100	5690	5040
10	6600	7200	6790	6400	6400	6200	24900	21000	26200	13100	5940	5040
11	7280	7000	6860	6400	6400	6400	29100	19800	27500	12400	6100	5290
12	7880	6800	6130	6200	6400	6400	28500	22200	27900	12900	6250	4940
13	8010	6670	5080	6400	6400	6400	21200	22100	28100	11400	6790	5250
14	8220	6430	5370	6400	6400	6400	18200	17700	24600	10900	6340	7920
15	8270	6410	6490	6400	6400	6200	22600	15700	22900	10700	6550	17300
16	8360	5870	10800	6200	6200	6200	27000	12600	20100	10500	6850	19700
17	7580	5910	14200	6000	5200	6000	27700	10400	19100	8190	6810	20000
18	6120	5870	14000	5600	4300	5000	23400	9100	25800	7780	6760	15900
19	4700	6050	11600	6000	4600	5200	23000	8110	30700	7740	6580	11000
20	4270	6170	10300	6200	4300	5080	26100	7750	39200	7690	6630	8750
21	4100	8440	10100	6200	4200	4590	28300	7140	49700	7550	6390	7850
22	4190	16700	9410	6200	4500	4910	31900	7560	55100	7430	4840	8650
23	4440	24200	9280	6200	4500	5040	29400	6950	57500	7370	4750	8580
24	4710	25900	8600	6200	4400	5510	25900	7040	58300	7010	5860	7220
25	4760	26300	7600	6200	4700	4680	22300	7360	54700	6990	6400	6240
26	5540	20800	7000	6200	5200	5880	17500	8110	37600	7900	6140	6830
27	5260	17800	6800	6200	4900	6990	12800	8470	18900	8100	5720	5810
28	4710	14900	6600	6200	5200	7980	11800	8640	16900	7510	5820	5130
29	5490	11200	6600	5800	---	9170	15300	8580	17200	7050	5700	5840
30	5720	9910	6600	5200	---	10700	20500	8020	17200	7040	5280	5680
31	4690	---	6600	5800	---	11800	---	8810	---	6980	6040	---
TOTAL	187800	309660	262870	193800	157400	192140	598100	515040	812640	313530	192200	247200
MEAN	6058	10320	8480	6252	5621	6198	19940	16610	27090	10110	6200	8240
MAX	8360	26300	14200	6800	6400	11800	31900	39900	58300	16900	7230	20000
MIN	4100	4030	5080	5200	4200	4590	11800	6950	9660	6980	4750	4940

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1993, BY WATER YEAR (WY)

	MEAN	5873	6337	5143	4745	5006	8364	13030	9625	8702	5342	4231	6032
MAX	19120	13900	10740	7831	9610	25620	25050	26990	27090	13350	8350	25900	
(WY)	1987	1983	1966	1992	1984	1973	1951	1960	1993	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

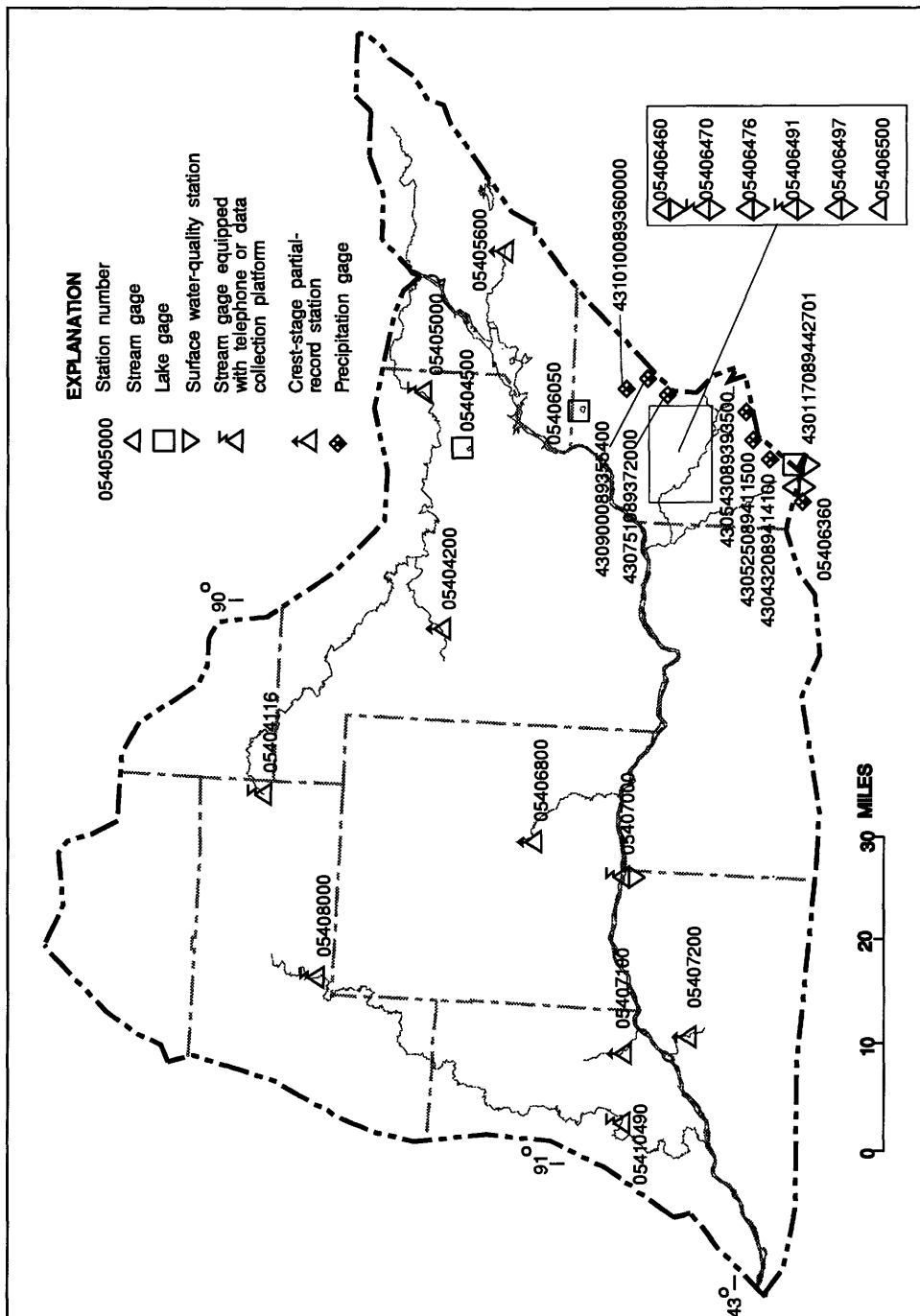
FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1935 - 1993

ANNUAL TOTAL	2901240	3982380	
ANNUAL MEAN	7927	10910	6865
HIGHEST ANNUAL MEAN			12420
LOWEST ANNUAL MEAN			2993
HIGHEST DAILY MEAN	32800	Apr 20	58300 Jun 24
LOWEST DAILY MEAN	2130	Aug 17	4030 Nov 1
ANNUAL SEVEN-DAY MINIMUM	2550	Aug 16	4400 Feb 18
INSTANTANEOUS PEAK FLOW			59100 Jun 24
INSTANTANEOUS PEAK STAGE			18.16 Jun 24
10 PERCENT EXCEEDS	13200	22700	12300
50 PERCENT EXCEEDS	6890	7000	5200
90 PERCENT EXCEEDS	3130	5200	2850

(a) Present datum



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

LOWER WISCONSIN RIVER BASIN

WISCONSIN RIVER BASIN

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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 sea level (levels by Mid-State Associates, Baraboo, WI).

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 20, 21, Jan. 5-9, 17, 18, 24-26, 29, Feb. 12-20, 24-28, and Mar. 12-15. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	23	23	16	17	19	70	40	31	33	27	24
2	17	55	23	17	16	19	60	110	32	34	24	24
3	18	34	22	18	16	19	55	277	35	71	24	24
4	19	23	20	19	16	22	60	153	30	211	23	23
5	22	19	19	16	16	23	54	77	28	101	24	23
6	21	18	19	14	16	25	59	58	27	144	30	22
7	17	17	20	13	16	33	70	57	83	70	25	22
8	19	17	20	13	16	51	140	52	100	48	23	23
9	23	19	20	13	16	39	93	45	54	67	37	23
10	20	18	21	13	16	33	61	42	36	44	28	22
11	18	17	20	14	15	23	71	39	31	62	24	22
12	17	17	19	15	15	18	61	36	29	47	24	24
13	17	16	19	16	15	17	49	34	29	45	23	27
14	17	15	20	16	15	17	49	34	46	50	23	62
15	17	15	37	16	14	17	60	33	30	36	80	32
16	20	15	54	15	13	45	63	31	32	33	34	26
17	18	15	37	15	12	38	85	32	68	36	27	25
18	18	15	28	15	13	20	123	37	167	81	26	26
19	17	16	27	16	16	20	127	32	84	40	28	24
20	22	97	20	17	16	19	135	31	78	31	25	32
21	21	99	21	20	17	20	93	30	48	29	24	31
22	17	48	21	19	17	20	70	29	38	28	24	28
23	16	39	19	18	16	19	61	33	33	32	32	26
24	16	33	16	16	15	26	55	34	32	33	26	24
25	15	30	18	13	17	84	47	33	64	51	24	24
26	15	30	17	15	17	92	41	29	34	31	26	26
27	15	26	19	16	18	76	52	31	30	28	26	26
28	15	24	18	16	18	117	77	37	29	28	24	26
29	14	24	23	12	---	136	46	30	27	26	24	25
30	14	24	26	15	---	108	41	52	50	25	36	25
31	15	---	23	16	---	93	---	41	---	25	29	---
TOTAL	547	858	709	483	440	1308	2128	1629	1435	1620	874	791
MEAN	17.6	28.6	22.9	15.6	15.7	42.2	70.9	52.5	47.8	52.3	28.2	26.4
MAX	23	99	54	20	18	136	140	277	167	211	80	62
MIN	14	15	16	12	12	17	41	29	27	25	23	22
CFSM	.45	.73	.58	.40	.40	1.08	1.81	1.34	1.22	1.34	.72	.67
IN.	.52	.82	.67	.46	.42	1.24	2.02	1.55	1.37	1.54	.83	.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1993, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993
MEAN	10.2	15.7	12.3	11.8	12.7	39.1
MAX	17.6	28.6	22.9	15.6	16.3	50.8
(WY)	1993	1993	1993	1993	1992	1989
MIN	6.79	8.14	4.42	8.95	6.91	25.7
(WY)	1990	1991	1990	1991	1989	1990

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1988 - 1993

ANNUAL TOTAL	9307.0	12822	
ANNUAL MEAN	25.4	35.1	21.4
HIGHEST ANNUAL MEAN			35.1
LOWEST ANNUAL MEAN			13.0
HIGHEST DAILY MEAN	1190	Sep 16	1190
LOWEST DAILY MEAN	6.5	Feb 12	(b)3.3
ANNUAL SEVEN-DAY MINIMUM	7.0	Feb 8	3.5
INSTANTANEOUS PEAK FLOW		424	(c)4010
INSTANTANEOUS PEAK STAGE		10.35	(d)15.60
ANNUAL RUNOFF (CFSM)	.65	.90	.55
ANNUAL RUNOFF (INCHES)	8.85	12.20	7.42
10 PERCENT EXCEEDS	33	70	36
50 PERCENT EXCEEDS	15	25	11
90 PERCENT EXCEEDS	9.1	16	5.5

(a) Also occurred Feb. 17, both the result of freezeup

(b) Result of freezeup

(c) From rating curve extended above 1,100 ft³/s, on basis of contracted-area measurement

(d) 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, 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, above sea level.

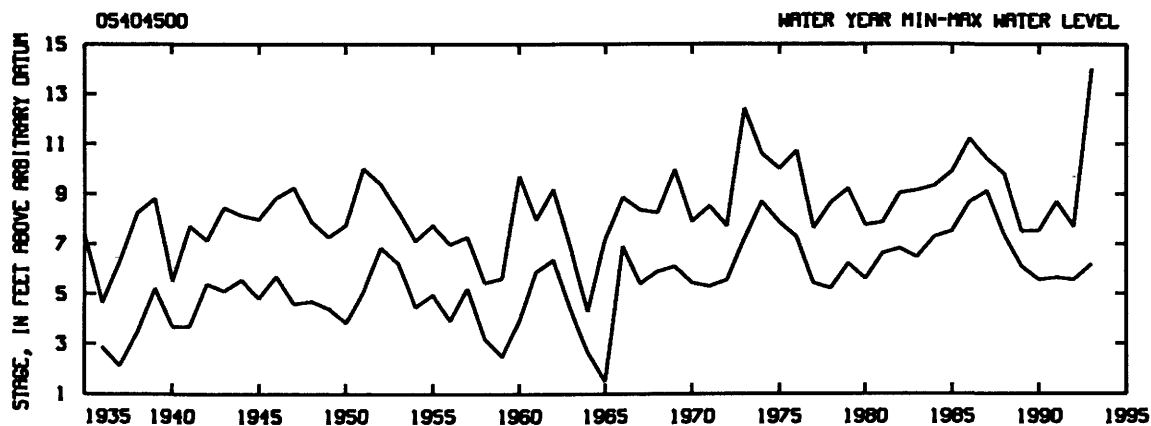
REMARKS.--Lake has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 14.13 ft, July 18, 1993; minimum observed, 1.49 ft Feb. 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 14.13 ft, July 18; minimum observed, 6.17 ft, Nov. 19.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.59	6.22	7.08	7.55	7.67	7.61	8.67	11.46	12.17	12.15	13.34	12.79
2	6.58	6.27	7.08	7.55	7.66	7.61	8.75	11.56	12.17	12.12	13.30	12.75
3	6.56	6.30	7.09	7.56	7.65	7.62	8.79	11.69	12.18	12.12	13.27	12.71
4	6.55	6.29	7.09	7.58	7.65	---	8.82	---	12.20	12.15	13.22	12.68
5	6.53	6.27	7.09	7.58	7.65	---	8.85	---	12.20	12.27	13.19	12.64
6	6.52	6.26	7.09	7.58	7.64	7.60	8.87	---	12.18	12.54	13.18	12.60
7	6.50	6.25	7.09	7.57	7.64	7.60	8.93	---	12.22	12.57	13.15	12.58
8	6.49	6.25	7.09	7.56	7.64	7.59	---	---	12.32	12.59	13.12	12.55
9	6.49	6.25	7.10	7.57	7.64	7.59	---	---	12.32	12.65	13.12	12.51
10	6.48	6.24	7.12	7.58	7.63	7.65	---	---	12.31	12.67	13.11	12.47
11	6.46	6.24	7.12	7.59	7.63	7.66	---	---	12.31	12.72	13.09	12.44
12	6.43	6.23	7.12	7.59	7.63	7.66	---	---	12.29	---	13.06	12.42
13	6.41	6.23	7.13	7.60	7.63	7.66	---	---	12.28	---	13.04	12.44
14	6.39	6.22	7.13	7.61	7.63	7.66	---	---	12.29	---	13.02	12.49
15	6.38	6.21	7.20	7.62	7.63	7.66	---	---	12.27	12.72	13.09	12.47
16	6.37	6.20	7.37	7.63	7.63	7.66	---	---	12.23	12.70	13.11	12.44
17	6.36	6.19	7.42	7.63	7.63	7.66	---	---	12.20	12.78	13.10	12.42
18	6.34	6.19	7.45	7.64	7.63	7.66	---	12.15	12.27	14.03	13.07	12.40
19	6.32	6.19	7.47	7.65	7.62	7.66	---	12.15	12.28	13.85	13.05	12.38
20	6.33	6.32	7.48	7.63	7.62	7.66	10.90	12.13	12.28	13.70	13.02	12.36
21	6.32	6.70	7.49	7.65	7.62	7.66	11.12	12.11	12.27	13.59	12.99	12.35
22	6.31	6.81	7.49	7.68	7.62	7.66	11.24	12.08	12.27	13.52	12.96	12.33
23	6.30	6.88	7.49	7.71	7.62	7.68	11.31	12.12	12.24	13.47	12.97	12.30
24	6.29	6.91	7.50	7.70	7.62	7.69	11.35	12.19	12.23	13.45	12.96	12.28
25	6.29	6.95	7.49	7.70	7.62	7.71	11.38	12.17	12.27	13.49	12.93	12.26
26	6.27	7.03	7.49	7.70	7.62	7.72	11.39	12.16	12.23	13.48	12.95	12.27
27	6.26	7.04	7.49	7.69	7.62	7.75	11.41	12.16	12.21	13.46	12.93	12.25
28	6.24	7.06	7.49	7.69	7.61	7.77	11.46	12.16	12.18	13.45	12.90	12.22
29	6.23	7.06	7.52	7.68	---	7.84	11.46	12.15	12.14	13.41	12.88	12.21
30	6.21	7.07	7.54	7.68	---	7.94	11.46	12.18	12.17	13.39	12.86	12.19
31	6.20	---	7.55	7.67	---	8.34	---	12.19	---	13.37	12.83	---
MEAN	6.39	6.48	7.30	7.63	7.63	---	---	---	12.24	---	13.06	12.44
MAX	6.59	7.07	7.55	7.71	7.67	---	---	---	12.32	---	13.34	12.79
MIN	6.20	6.19	7.08	7.55	7.61	---	---	---	12.14	---	12.83	12.19



WISCONSIN RIVER BASIN

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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 sea level. 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, Dec. 5-7, 12, Dec. 20 to Feb. 1, Feb. 14 to Mar. 1, and Mar. 13-16. 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	346	251	550	420	270	270	4270	986	666	615	504	493
2	312	317	532	400	282	272	4490	1100	682	633	487	524
3	289	447	504	370	287	274	4220	1740	694	692	476	513
4	282	564	487	360	296	291	3890	2510	634	1090	463	464
5	268	585	400	350	303	316	3410	2800	579	1290	448	436
6	259	514	370	330	306	354	2810	2680	532	2320	461	422
7	248	407	400	310	309	435	2190	2500	540	2290	475	412
8	245	346	431	290	302	614	2240	2400	842	2120	492	405
9	267	324	410	260	297	803	2370	2130	1060	2070	526	400
10	279	317	412	250	292	891	2190	1740	1140	2020	536	398
11	289	315	404	250	288	854	2020	1390	1150	1870	544	398
12	295	316	390	250	287	728	2010	1100	1140	1630	589	405
13	284	319	401	250	283	500	1860	886	947	1340	597	432
14	267	308	389	250	280	390	1650	761	801	1130	509	487
15	250	295	458	250	270	360	1810	672	674	975	603	518
16	254	281	1020	250	260	420	2250	609	619	847	747	569
17	258	272	1320	240	240	603	2050	578	621	875	769	612
18	257	267	1170	230	250	667	1860	579	1090	5380	688	569
19	255	268	1020	240	260	625	1880	572	1210	4580	636	494
20	266	445	620	250	260	538	2680	560	1190	3230	542	471
21	270	1550	540	260	260	439	3180	547	1210	1830	490	476
22	284	1910	480	280	250	407	3500	521	1220	1220	467	489
23	304	1670	450	300	240	404	3740	572	1210	883	495	507
24	309	1430	380	290	230	414	3630	683	1130	726	514	503
25	294	1330	340	240	230	623	3180	632	1030	735	509	480
26	276	1230	350	260	240	1180	2550	585	859	791	516	500
27	262	972	350	260	250	1470	1890	582	864	731	480	494
28	257	760	350	250	260	1720	1530	581	870	694	449	493
29	247	633	350	230	---	2160	1240	566	725	642	445	484
30	242	561	360	230	---	2560	1050	571	636	570	463	470
31	239	---	440	240	---	3210	---	634	---	526	478	---
TOTAL	8454	19204	16078	8640	7582	24792	77640	34767	26565	46345	16398	14318
MEAN	273	640	519	279	271	800	2588	1122	885	1495	529	477
MAX	346	1910	1320	420	309	3210	4490	2800	1220	5380	769	612
MIN	239	251	340	230	230	270	1050	521	532	526	445	398
CFSM	.45	1.05	.85	.46	.44	1.31	4.25	1.84	1.45	2.45	.87	.78
IN.	.52	1.17	.98	.53	.46	1.51	4.74	2.12	1.62	2.83	1.00	.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1993, BY WATER YEAR (WY)

	MEAN	276	325	239	241	317	824	707	427	410	310	252	315
	MAX	842	942	519	945	1135	1759	2588	1518	1332	1495	1018	1285
	(WY)	1973	1986	1993	1946	1966	1948	1993	1973	1920	1993	1980	1965
	MIN	117	116	76.2	78.3	89.3	170	253	138	112	112	95.8	100
	(WY)	1959	1959	1959	1959	1959	1964	1946	1958	1958	1965	1958	1958

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1914 - 1993
ANNUAL TOTAL	168978	300783	
ANNUAL MEAN	462	824	387
HIGHEST ANNUAL MEAN			824
LOWEST ANNUAL MEAN			158
HIGHEST DAILY MEAN	4410	5380	7540
LOWEST DAILY MEAN	156	230 (a)	26
ANNUAL SEVEN-DAY MINIMUM	160	243	72
INSTANTANEOUS PEAK FLOW		6340	7900 (b)
INSTANTANEOUS PEAK STAGE		22.78	22.78
ANNUAL RUNOFF (CFSM)	.76	1.35	.63
ANNUAL RUNOFF (INCHES)	10.32	18.37	8.63
10 PERCENT EXCEEDS	1020	2020	771
50 PERCENT EXCEEDS	284	504	231
90 PERCENT EXCEEDS	183	259	135

(a) Also occurred Jan. 29, 30, Feb. 24, 25 (ice affected)

(b) Gage height, 17.50 ft, estimated, site and datum then in use, from rating curve extended above 6,000 ft³/s

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.--Water-stage recorder. Datum of gage is 848.07 ft above sea level. Prior to Oct. 23, 1990, nonrecording gage.

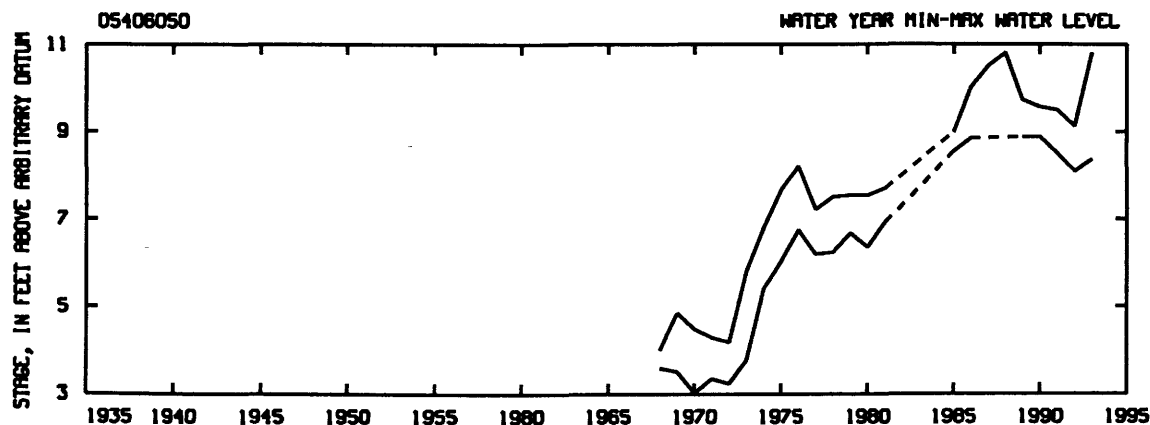
REMARKS.--Lake has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 10.87 ft, Aug. 16-20, 1993; minimum observed, 3.02 ft, Aug. 29, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 10.87 ft, Aug. 16-20; minimum observed, 8.36 ft, Oct. 31 and Nov. 19.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.58	8.37	8.62	8.78	8.85	8.88	9.52	9.97	10.08	10.23	10.75	10.79
2	8.57	8.41	8.62	8.78	8.85	8.87	9.52	9.98	10.08	10.23	10.73	10.78
3	8.56	8.42	8.62	8.78	8.85	8.88	9.52	9.98	10.08	10.24	10.73	10.76
4	8.54	8.42	8.62	8.79	8.85	8.87	9.52	10.00	10.08	10.27	10.71	10.74
5	8.53	8.42	8.62	8.80	8.85	8.87	9.53	10.02	10.08	10.40	10.70	10.72
6	8.52	8.41	8.62	8.81	8.85	8.87	9.52	10.04	10.07	10.58	10.69	10.70
7	8.51	8.40	8.62	8.80	8.85	8.87	9.52	10.05	10.13	10.57	10.69	10.69
8	8.50	8.39	8.62	8.80	8.85	8.90	9.56	10.09	10.24	10.57	10.69	10.67
9	8.50	8.39	8.61	8.80	8.85	8.93	9.57	10.10	10.25	10.65	10.70	10.65
10	8.49	8.39	8.63	8.80	8.85	8.96	9.57	10.10	10.24	10.67	10.71	10.62
11	8.48	8.39	8.63	8.80	8.86	8.98	9.58	10.10	10.24	10.73	10.71	10.61
12	8.46	8.39	8.63	8.80	8.86	8.99	9.59	10.10	10.24	10.74	10.71	10.60
13	8.45	8.40	8.63	8.80	8.86	8.99	9.59	10.09	10.24	10.74	10.71	10.60
14	8.45	8.39	8.63	8.81	8.86	8.99	9.59	10.08	10.26	10.74	10.70	10.63
15	8.45	8.38	8.69	8.81	8.86	8.99	9.69	10.06	10.26	10.74	10.81	10.64
16	8.46	8.38	8.77	8.81	8.86	8.99	9.76	10.04	10.25	10.73	10.87	10.64
17	8.46	8.38	8.77	8.81	8.86	8.99	9.78	10.02	10.25	10.73	10.87	10.64
18	8.44	8.37	8.77	8.81	8.87	8.99	9.80	10.02	10.27	10.74	10.87	10.64
19	8.43	8.36	8.77	8.81	8.87	8.99	9.81	10.02	10.27	10.74	10.87	10.64
20	8.43	8.42	8.77	8.82	8.87	8.99	9.94	10.02	10.28	10.74	10.87	10.64
21	8.43	8.54	8.77	8.82	8.87	8.99	9.96	10.00	10.28	10.74	10.86	10.64
22	8.43	8.55	8.77	8.84	8.87	8.99	9.96	9.99	10.27	10.73	10.85	10.64
23	8.43	8.57	8.77	8.85	8.87	9.06	9.96	10.01	10.27	10.70	10.84	10.63
24	8.43	8.57	8.76	8.85	8.88	9.09	9.96	10.04	10.26	10.70	10.84	10.62
25	8.43	8.59	8.75	8.85	8.89	9.15	9.96	10.04	10.26	10.75	10.84	10.61
26	8.42	8.62	8.75	8.85	8.89	9.19	9.96	10.04	10.26	10.76	10.84	10.60
27	8.40	8.62	8.75	8.85	8.89	9.21	9.95	10.04	10.25	10.76	10.84	10.60
28	8.39	8.62	8.75	8.85	8.89	9.22	9.96	10.04	10.24	10.77	10.82	10.60
29	8.38	8.62	8.76	8.85	---	9.25	9.96	10.04	10.21	10.78	10.81	10.60
30	8.37	8.62	8.77	8.85	---	9.37	9.97	10.05	10.23	10.77	10.81	10.60
31	8.36	---	8.79	8.85	---	9.45	---	10.08	---	10.76	10.81	---
MAX	8.58	8.62	8.79	8.85	8.89	9.45	9.97	10.10	10.28	10.78	10.87	10.79
MIN	8.36	8.36	8.61	8.78	8.85	8.87	9.52	9.97	10.07	10.23	10.69	10.60



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.

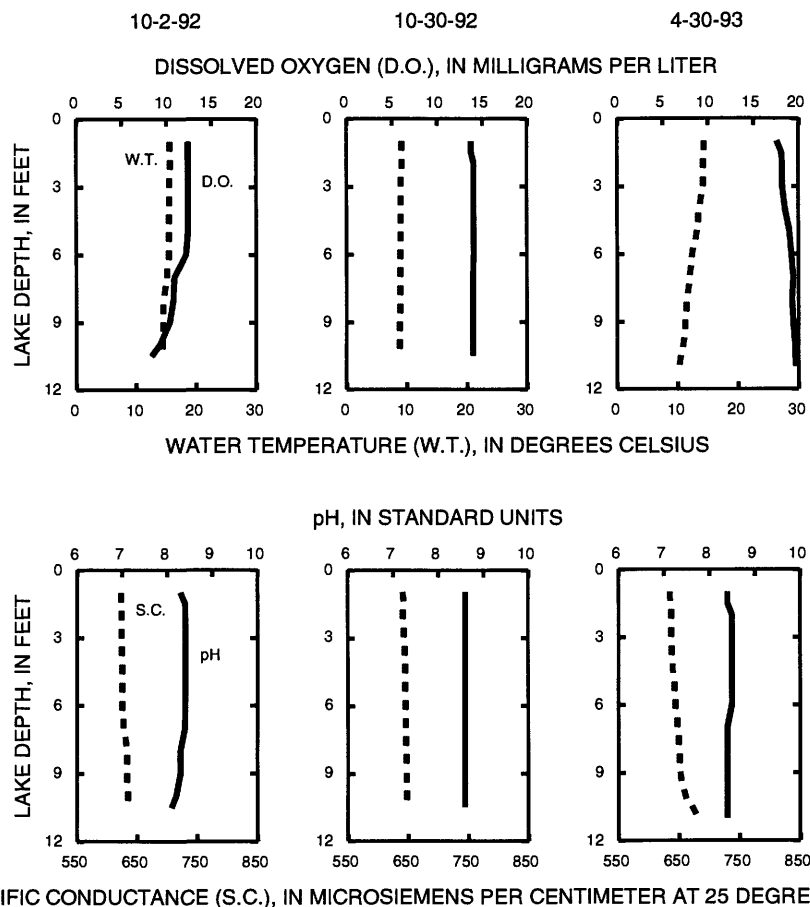
PERIOD OF RECORD.--May to September 1992.

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, OCTOBER 02, 1992 TO MAY 21, 1993
(Milligrams per liter unless otherwise indicated)

	Oct. 02	Oct. 09	Oct. 16	Oct. 23	Oct. 30
Depth of sample (ft)	1.5	1.5	1.5	1.5	1.5
Lake stage (ft)	17.29	17.24	17.28	---	17.28
Specific conductance ($\mu\text{S}/\text{cm}$)	624	---	---	---	643
pH (units)	8.4	---	---	---	8.6
Water temperature ($^{\circ}\text{C}$)	15.5	---	---	---	9.0
Secchi-depth (meters)	1.7	1.3	1.3	1.8	1.4
Dissolved oxygen	12.4	---	---	---	13.8
Phosphorus, total (as P)	0.019	0.024	0.026	0.016	0.010
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	12	20	21	13	11

	Nov. 06	Nov. 13	Apr. 30	May 14	May 21
Depth of sample (ft)	1.5	1.5	1.5	1.5	1.5
Lake stage (ft)	---	17.25	17.15	17.15	17.16
Specific conductance ($\mu\text{S}/\text{cm}$)	---	---	636	---	---
pH (units)	---	---	8.4	---	---
Water temperature ($^{\circ}\text{C}$)	---	---	14.5	---	---
Secchi-depth (meters)	1.6	2.1	1.5	2.3	3.8
Dissolved oxygen	---	---	18.1	---	---
Phosphorus, total (as P)	0.010	0.010	0.011	0.020	0.015
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	11	8.2	8.7	6.0	2.5



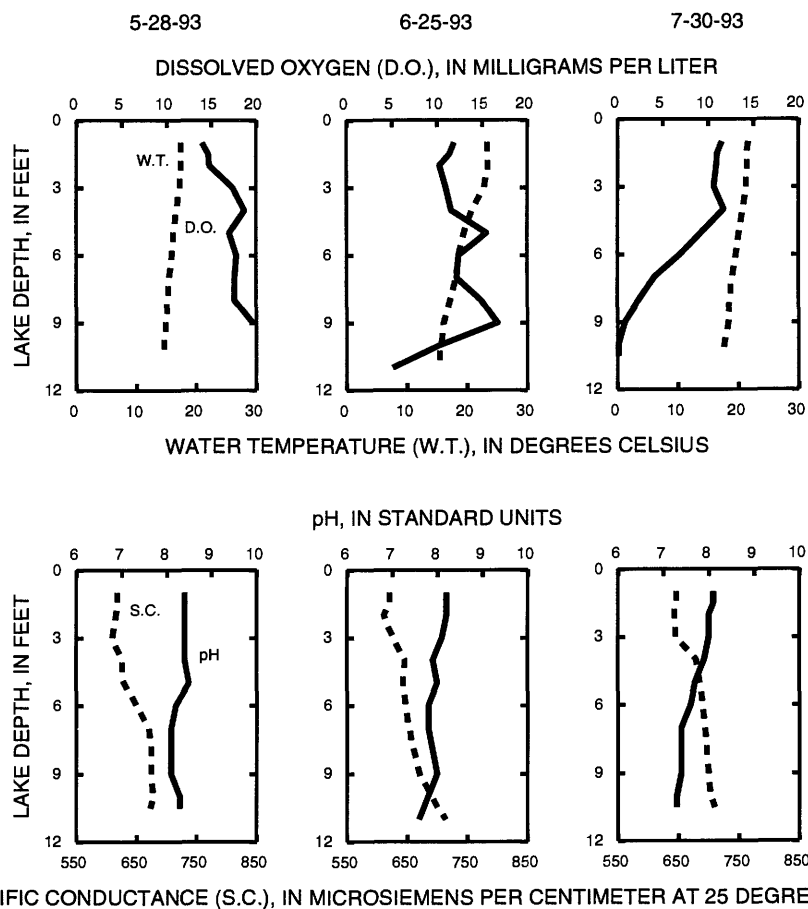
WISCONSIN RIVER BASIN

430117089442701 STEWART LAKE AT MT. HOREB, WI--CONTINUED

WATER-QUALITY DATA, MAY 28 TO JULY 30, 1993
(Milligrams per liter unless otherwise indicated)

	May 28	June 04	June 11	June 18	June 25
Depth of sample (ft)	1.5	1.5	1.5	1.5	1.5
Lake stage (ft)	17.16	17.16	17.19	17.16	17.19
Specific conductance ($\mu\text{S}/\text{cm}$)	615	---	---	---	619
pH (units)	8.4	---	---	---	8.2
Water temperature ($^{\circ}\text{C}$)	17.5	---	---	---	23.5
Secchi-depth (meters)	3.6	2.1	1.9	1.9	2.6
Dissolved oxygen	14.7	---	---	---	11.4
Phosphorus, total (as P)	0.010	0.011	0.008	0.023	0.018
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	3.1	6.0	1.4	8.3	7.1

	July 02	July 09	July 16	July 23	July 30
Depth of sample (ft)	1.5	1.5	1.5	1.5	1.5
Lake stage (ft)	17.19	17.23	17.21	17.22	17.20
Specific conductance ($\mu\text{S}/\text{cm}$)	---	---	---	---	645
pH (units)	---	---	---	---	8.1
Water temperature ($^{\circ}\text{C}$)	---	---	---	---	21.5
Secchi-depth (meters)	2.2	0.2	1.4	2.9	2.1
Dissolved oxygen	---	---	---	---	11.0
Phosphorus, total (as P)	<0.004	0.240	0.030	0.026	0.016
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	12	83	19	10	10

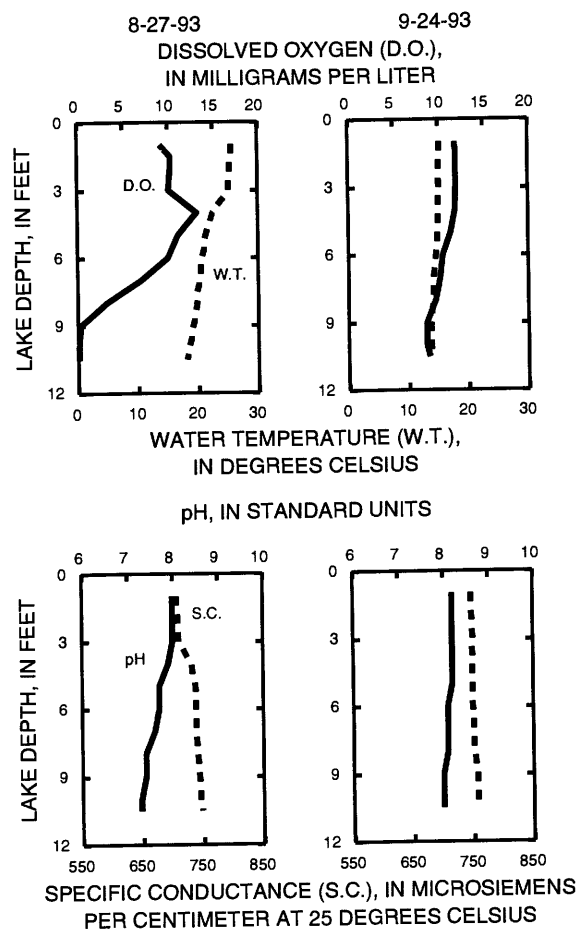


430117089442701 STEWART LAKE AT MT. HOREB, WI--CONTINUED

WATER-QUALITY DATA, AUGUST 06 TO SEPTEMBER 24, 1993
(Milligrams per liter unless otherwise indicated)

	Aug. 06	Aug. 13	Aug. 20	Aug. 27
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	17.16	---	17.17	17.18
Specific conductance ($\mu\text{S}/\text{cm}$)	---	---	---	707
pH (units)	---	---	---	8.0
Water temperature ($^{\circ}\text{C}$)	---	---	---	25.5
Secchi-depth (meters)	1.7	1.4	1.1	1.4
Dissolved oxygen	---	---	---	10.3
Phosphorus, total (as P)	<0.020	0.023	0.036	0.022
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	11	10	13	8.3

	Sep. 03	Sep. 10	Sep. 17	Sep. 24
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	17.18	17.16	17.22	17.22
Specific conductance ($\mu\text{S}/\text{cm}$)	---	---	---	746
pH (units)	---	---	---	8.2
Water temperature ($^{\circ}\text{C}$)	---	---	---	15.0
Secchi-depth (meters)	1.2	1.1	1.1	1.2
Dissolved oxygen	---	---	---	12.0
Phosphorus, total (as P)	0.037	0.039	0.024	0.038
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	35	52	25	43



WISCONSIN RIVER BASIN

05406360 MOEN CREEK, AT STEWART LAKE OUTLET, AT MT. HOREB, WI

LOCATION.--Lat 43°01'19", long 89°44'25", in NW 1/4 SW 1/4 sec.1, T.6 N., R.6 E., Dane County, Hydrologic Unit 07070005, on left bank about 250 ft downstream of the Stewart Lake Dam, about 100 ft east of County Highway JG, about 1 mi north of downtown Mt. Horeb.

DRAINAGE AREA.--0.74 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1992 to October 1993 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 987.16 ft above sea level.

REMARKS.--Estimated daily discharges: Nov. 4-15, 17-21, Dec. 11-13, 21-24, Jan. 22 to Feb. 21, Mar. 12-15, 18-21, 31, and Apr. 1-3. Records are good except for estimated discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, NOVEMBER 1992 TO OCTOBER 1993
DAILY MEAN VALUES

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	1.1	.43	.63	.60	.56	2.0	.91	.84	.82	1.4	1.0	.86
2	.94	.40	.62	.58	.61	1.5	1.5	.95	.84	1.5	1.1	.77
3	.48	.42	.62	.58	.49	1.0	1.3	1.1	.78	1.5	1.2	.95
4	.48	.41	.74	.58	.49	.68	1.1	.83	1.0	1.5	1.4	.96
5	.48	.42	.73	.58	.43	.68	.91	.83	7.9	1.3	1.4	.80
6	.48	.40	.68	.57	.43	.91	.72	.83	4.1	1.1	1.4	1.1
7	.48	.40	.68	.57	.43	.98	1.0	2.8	2.5	.81	1.4	.95
8	.50	.40	.65	.57	.43	2.0	1.3	1.5	2.1	.97	1.4	.89
9	.52	.43	.65	.57	.44	1.2	.91	1.0	6.1	1.3	1.6	1.1
10	.50	.45	.65	.60	.50	1.2	1.0	.74	3.2	1.1	1.4	.85
11	.50	.40	.64	.60	.42	1.6	1.1	.67	2.5	1.1	1.2	.89
12	.50	.40	.67	.59	.40	1.4	.76	.60	1.9	1.1	1.6	.97
13	.49	.40	.81	.59	.40	1.3	.83	.75	2.1	1.2	2.1	1.0
14	.49	.40	.73	.58	.40	1.6	.97	1.7	1.7	1.2	2.0	1.0
15	.49	1.0	.64	.57	.40	2.9	.90	.74	1.4	2.2	.91	.99
16	.49	.86	.62	.56	1.4	2.4	.88	.71	1.4	1.1	.73	1.0
17	.49	.55	.62	.56	.44	1.5	.69	2.0	1.7	1.1	.96	1.1
18	.49	.45	.60	.55	.40	1.3	1.2	1.5	1.7	1.1	.96	.71
19	.70	.43	.55	.54	.40	1.8	1.0	1.5	1.5	.98	.98	.83
20	2.0	.40	.57	.53	.40	1.6	.83	1.3	1.3	.85	.91	.86
21	1.5	.40	.69	.52	.40	1.1	.74	1.1	1.3	.88	.86	.88
22	.90	.40	.62	.83	.46	1.0	.79	1.1	1.2	.98	.97	.64
23	.71	.40	.60	.78	1.0	1.0	1.3	1.1	1.2	1.6	1.0	.77
24	.50	.40	.60	.50	.93	1.1	1.4	1.5	1.2	.88	.94	.91
25	.58	.49	.60	.49	3.2	.76	1.1	1.8	3.6	.86	1.4	.87
26	.58	.55	.60	.50	2.9	.76	.82	1.2	1.9	.96	1.0	.76
27	.45	.58	.62	.52	2.7	1.0	1.1	1.2	1.6	.93	.99	.82
28	.43	.62	.60	.49	6.0	1.2	.76	1.3	2.1	.95	.83	1.0
29	.43	1.1	.60	---	5.1	.90	.60	1.3	1.6	1.3	.83	.90
30	.43	.89	.60	---	3.7	.71	1.7	1.7	1.4	1.8	1.0	.69
31	---	.74	.60	---	6.0	---	1.1	---	1.5	1.0	---	.79
TOTAL	19.11	16.02	19.83	16.10	42.26	39.08	31.22	36.19	65.14	36.55	35.47	27.61
MEAN	.64	.52	.64	.57	1.36	1.30	1.01	1.21	2.10	1.18	1.18	.89
MAX	2.0	1.1	.81	.83	6.0	2.9	1.7	2.8	7.9	2.2	2.1	1.1
MIN	.43	.40	.55	.49	.40	.68	.60	.60	.78	.81	.73	.64
CFSM	.91	.74	.91	.82	1.95	1.86	1.44	1.72	3.00	1.68	1.69	1.27
IN.	1.02	.85	1.05	.86	2.25	2.08	1.66	1.92	3.46	1.94	1.88	1.47

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

	MEAN	MAX	(WY)	MIN	(WY)
1993	.64	2.0	1993	.43	1993
1993	.52	1.1	1993	.49	1993
1993	.64	.81	1993	.55	1993
1993	.57	.83	1993	.49	1993
1993	1.36	6.0	1993	.40	1993
1993	1.30	2.9	1993	.68	1993
1993	1.01	1.7	1993	.60	1993
1993	1.21	2.8	1993	.60	1993
1993	2.10	7.9	1993	.78	1993
1993	1.18	2.2	1993	.81	1993
1993	1.18	2.1	1993	.73	1993
1994	.89	1.1	1994	.64	1994

SUMMARY STATISTICS

FOR 1993 WATER YEAR

WATER YEARS 1993 - 1994

HIGHEST DAILY MEAN
 LOWEST DAILY MEAN
 ANNUAL SEVEN-DAY MINIMUM
 10 PERCENT EXCEEDS
 50 PERCENT EXCEEDS
 90 PERCENT EXCEEDS

7.9 Jul 5
 .40 (a) Dec 2
 .41 Dec 2
 1.7
 .86
 .43

7.9 Jul 5 1993
 .40 (a) Dec 2 1992
 .41 Dec 2 1992
 1.6
 .84
 .45

(a) Also occurred Dec. 6-8, 11-14, 20-24, 1992, and Mar. 12-15, 18-21, 1993

WISCONSIN RIVER BASIN

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05406360 MOEN CREEK, AT STEWART LAKE OUTLET, AT MT. HOREB, WI

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1992 to September 1993 (discontinued).

INSTRUMENTATION.--Automatic water sampler used in March.

REMARKS.--Total-phosphorus analyses by the Wisconsin State Laboratory of Hygiene; suspended-sediment analyses by the U.S. Geological Survey Laboratory in Iowa City, IA.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
OCT 1992					
*09...	1220	--	0.50	0.023	--
**30...	1240	--	0.49	0.025	--
NOV					
**06...	1135	0.48	--	0.020	--
**13...	1135	0.49	--	0.020	--
*20...	1617	2.0	--	0.017	--
*25...	1442	--	0.52	--	15
DEC					
*18...	1535	--	0.43	0.018	--
*30...	1200	--	0.91	0.016	--
JAN 1993					
*22...	1500	0.62	--	0.014	--
FEB					
*05...	1620	0.58	--	0.026	--
MAR					
*02...	1542	--	0.51	0.012	12
*24...	1825	--	0.91	0.030	39
25...	1725	--	7.9	0.050	40
25...	1730	--	7.9	0.060	35
26...	1330	--	1.6	0.120	15
28...	1330	--	12	0.150	29
29...	0730	--	1.2	0.350	23
*29...	1750	--	10	0.360	41
30...	0730	--	0.91	0.290	19
31...	1730	6.0	--	0.300	58
*31...	1731	6.0	--	0.300	55
APR					
*15...	1510	--	2.9	0.040	31
*19...	1900	--	2.2	0.024	--
**30...	1505	--	0.68	0.022	--
MAY					
*05...	1815	--	0.91	0.020	11
**14...	1405	--	1.1	0.022	--
**21...	1340	--	0.76	0.024	--
**28...	1435	--	0.76	0.025	--
JUN					
**04...	1355	--	0.83	0.022	--
*07...	1605	--	4.1	0.017	5
**11...	1335	--	0.76	0.023	--
*15...	1930	--	0.76	0.023	--
**18...	1240	--	1.5	0.024	--
**25...	1330	--	1.6	0.024	--
JUL					
**02...	1245	--	1.2	0.027	--
*05...	2010	--	34	0.350	390
*06...	1150	--	4.1	0.210	69
*06...	1800	--	2.9	0.160	42
*07...	1745	--	1.9	0.110	--
*08...	0650	--	1.9	0.060	--
**09...	1325	--	4.7	0.151	--
**16...	1225	--	1.5	0.029	--
**23...	1330	--	1.2	0.030	--
*26...	1745	--	1.9	0.030	--
**30...	1035	--	1.5	0.027	--
AUG					
**06...	1355	--	1.1	0.025	--
**13...	1030	--	1.1	0.030	--
*16...	1650	--	1.1	0.060	--
**20...	1320	--	0.83	0.033	--
**27...	1230	--	0.91	0.026	--
SEP					
**03...	1540	--	1.3	0.031	--
**10...	1410	--	1.3	0.047	--
**17...	1405	--	0.91	0.025	--
**24...	1450	--	1.0	0.031	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE
 ** GRAB SAMPLE

WISCONSIN RIVER BASIN

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 July 1993 (discontinued).

REVISED RECORDS.--WDR WI-90-1: Drainage area.

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

REMARKS.--No estimated daily discharges. Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	9.1	9.8	11	11	9.7	35	19	17	20	---	---
2	8.5	11	10	9.0	10	9.7	24	21	17	20	---	---
3	8.9	11	9.8	9.7	11	10	21	21	17	18	---	---
4	9.2	11	9.6	17	12	11	20	21	17	18	---	---
5	8.5	9.8	9.3	11	13	11	19	19	16	84	---	---
6	7.1	9.4	9.1	11	12	13	19	17	16	127	---	---
7	7.1	9.1	9.4	10	11	21	20	17	41	63	---	---
8	7.5	9.0	10	9.6	10	31	27	20	27	52	---	---
9	7.6	9.0	10	9.3	10	23	23	18	19	92	---	---
10	7.6	8.8	10	9.1	10	14	20	17	16	54	---	---
11	7.7	8.3	10	9.2	9.9	12	18	17	15	48	---	---
12	7.3	9.1	9.8	9.5	9.6	10	18	17	14	39	---	---
13	7.4	8.7	10	9.5	9.6	10	17	16	14	35	---	---
14	7.1	8.7	10	9.2	9.6	9.7	17	16	23	32	---	---
15	7.4	8.4	13	8.6	9.4	9.7	39	16	19	30	---	---
16	7.5	8.6	17	8.3	9.5	39	34	16	18	28	---	---
17	7.1	8.4	15	8.9	9.2	16	27	16	22	32	---	---
18	7.0	8.4	14	9.1	8.9	13	22	16	28	30	---	---
19	7.2	9.2	13	9.1	9.3	11	29	16	23	28	---	---
20	9.5	18	12	9.1	9.7	11	44	17	21	26	---	---
21	9.4	27	12	11	9.9	11	30	16	20	25	---	---
22	9.3	20	12	12	9.6	11	24	16	19	25	---	---
23	9.2	21	11	12	9.4	17	22	17	18	24	---	---
24	8.9	17	11	12	9.1	40	21	17	19	24	---	---
25	8.5	15	11	10	9.2	70	19	17	22	53	---	---
26	8.3	13	11	10	9.3	61	19	16	19	32	---	---
27	7.9	12	10	10	9.7	46	20	16	18	29	---	---
28	8.2	11	10	9.9	9.7	57	20	16	18	33	---	---
29	7.8	10	11	9.3	---	49	20	16	18	27	---	---
30	8.0	9.7	13	9.4	---	34	20	18	21	26	---	---
31	7.9	---	12	10	---	57	---	18	---	25	---	---
TOTAL	249.2	348.7	344.8	312.8	280.6	747.8	708	536	592	1199	---	---
MEAN	8.04	11.6	11.1	10.1	10.0	24.1	23.6	17.3	19.7	38.7	---	---
MAX	9.5	27	17	17	13	70	44	21	41	127	---	---
MIN	7.0	8.3	9.1	8.3	8.9	9.7	17	16	14	18	---	---
CFSM	.63	.91	.87	.79	.78	1.88	1.84	1.35	1.54	3.02	---	---
IN.	.72	1.01	1.00	.91	.82	2.17	2.06	1.56	1.72	3.48	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

	MEAN	9.95	11.8	10.7	10.0	11.5	17.4	15.8	13.6	13.6	16.3	10.1	10.6
MAX	15.6	22.1	17.5	15.9	17.4	24.1	23.6	18.9	19.7	38.7	15.0	16.6	
(WY)	1986	1986	1986	1986	1986	1993	1993	1986	1993	1993	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1985 - 1993

ANNUAL TOTAL	3514.5												
ANNUAL MEAN	9.60									11.9			
HIGHEST ANNUAL MEAN										17.6			1986
LOWEST ANNUAL MEAN										7.96			1991
HIGHEST DAILY MEAN	27	Nov 21				127	Jul 6			127	Jul 6		1993
LOWEST DAILY MEAN	6.1	Jun 27				7.0	Oct 18			5.0	Sep 11		1991
ANNUAL SEVEN-DAY MINIMUM	6.6	Jun 25				7.2	Oct 13			5.2	Sep 5		1991
INSTANTANEOUS PEAK FLOW						230	Jul 5			230	Jul 5		1993
INSTANTANEOUS PEAK STAGE						13.32	Jul 5			13.32	Jul 5		1993
INSTANTANEOUS LOW FLOW						6.1	Oct 6			4.8	Jul 13		1990
ANNUAL RUNOFF (CFSM)	.75									.93			
ANNUAL RUNOFF (INCHES)	10.21									12.62			
10 PERCENT EXCEEDS	13					30				20			
50 PERCENT EXCEEDS	9.1					13				11			
90 PERCENT EXCEEDS	7.4					8.6				6.0			

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, 22.0°C, July 5; minimum observed, 1.0°C, Mar. 25-26.

DISSOLVED OXYGEN: Maximum observed, 13.6 mg/L, July 3; minimum observed, 4.3 mg/L, July 25.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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					APR 1993				
07...	0811	6.8	590	10.5	13...	0848	18	555	6.5
NOV					MAY				
16...	0907	8.7	580	6.5	02...	0945	9.5	595	7.5
JAN 1993					25...	0741	17	580	10.5
07...	0915	10	575	5.0	JUL				
					15...	0952	30	555	14.5

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	14.5	10.5	12.5	9.0	8.0	8.5	6.5	5.5	6.0	6.0	3.0	4.5
2	15.5	11.5	13.5	9.0	8.0	8.5	6.0	5.5	6.0	6.5	5.0	6.0
3	15.0	11.5	13.5	8.5	7.5	8.0	6.5	5.0	5.5	8.0	6.5	7.5
4	14.5	11.5	13.0	8.0	7.5	7.5	6.5	4.0	5.5	7.0	3.5	4.5
5	14.0	10.5	12.0	8.0	7.0	7.5	5.5	3.5	4.5	7.0	5.0	6.0
6	13.0	10.0	11.5	7.5	7.0	7.0	5.5	4.0	5.0	7.0	5.0	6.0
7	12.5	10.0	11.5	7.5	6.5	7.0	6.0	5.5	5.5	7.0	5.0	6.0
8	12.0	11.0	11.5	8.0	7.0	7.5	6.5	5.0	5.5	7.5	5.0	6.0
9	11.5	10.0	11.0	10.0	8.0	9.0	5.5	4.5	5.0	6.5	5.5	6.0
10	11.0	10.0	10.5	9.5	8.5	9.5	6.5	5.0	5.5	7.5	5.5	6.0
11	12.0	9.0	10.5	8.5	7.5	8.0	7.0	5.0	6.0	7.5	5.5	6.5
12	12.0	9.5	10.5	8.5	6.0	7.5	6.5	4.0	5.5	7.0	6.0	6.5
13	10.0	7.5	9.5	7.0	5.5	6.0	6.5	6.0	6.0	7.5	5.5	6.5
14	10.5	9.0	10.0	6.5	5.5	6.0	7.0	6.0	6.5	8.0	5.5	6.5
15	10.5	9.0	9.5	7.0	5.5	6.0	6.5	5.0	6.0	8.0	4.5	6.5
16	9.5	7.5	8.5	7.5	6.0	7.0	5.0	4.5	5.0	7.0	4.5	6.0
17	8.5	6.5	7.5	7.5	7.0	7.0	5.5	4.0	4.5	7.0	4.5	5.5
18	9.0	7.0	8.0	7.5	6.0	7.0	4.5	4.0	4.5	7.5	4.0	5.5
19	8.0	6.0	7.0	7.5	6.5	7.0	6.0	3.5	5.0	8.0	4.5	5.5
20	9.0	6.5	8.0	8.0	7.0	7.5	5.0	3.0	4.0	7.5	4.5	6.0
21	10.0	8.5	9.0	8.5	7.0	8.0	5.5	4.0	4.5	8.0	6.5	7.5
22	12.5	9.0	11.0	7.0	5.0	6.5	6.5	4.5	5.5	8.0	5.5	6.5
23	14.0	11.5	12.5	6.0	5.0	5.5	5.5	2.5	4.5	7.5	5.5	6.0
24	12.5	10.5	11.5	7.0	6.0	6.5	4.0	2.5	3.0	7.0	4.5	5.5
25	12.0	9.0	11.0	7.0	5.0	6.0	4.0	3.0	3.5	8.0	4.5	6.0
26	12.0	10.0	11.0	6.0	5.0	5.5	5.0	3.0	4.0	8.5	5.0	6.5
27	11.0	8.0	9.5	6.5	4.5	5.0	6.5	3.5	5.0	8.5	5.5	6.5
28	11.0	8.5	9.5	6.5	5.0	5.5	7.0	4.5	6.0	7.5	4.0	6.5
29	10.5	9.0	9.5	7.0	5.5	6.0	7.5	6.5	7.0	7.5	3.5	5.0
30	10.0	7.5	9.0	6.5	6.0	6.0	7.0	5.0	6.5	8.5	4.0	6.0
31	9.5	8.5	9.0	---	---	---	5.0	3.0	4.0	9.0	5.5	7.0
MONTH	15.5	6.0	10.4	10.0	4.5	7.0	7.5	2.5	5.2	9.0	3.0	6.1

05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	9.0	5.5	7.0	11.5	6.0	7.5	4.5	1.5	3.0	12.5	10.0	11.0
2	9.5	5.5	7.0	10.0	6.5	7.5	8.5	3.0	5.5	13.0	10.5	12.0
3	10.0	5.5	7.0	9.0	6.0	7.0	10.0	4.0	6.5	12.5	11.5	12.0
4	10.0	4.5	6.5	8.5	5.5	6.5	10.0	5.0	7.0	14.0	11.5	12.5
5	9.0	5.0	6.0	10.0	5.0	6.5	8.0	5.5	7.0	15.5	11.5	13.0
6	7.5	5.0	6.0	10.0	4.5	6.5	10.5	6.5	8.5	16.0	10.5	13.0
7	7.5	6.5	7.0	7.5	2.5	5.0	9.5	7.0	8.5	14.0	11.5	12.5
8	7.5	6.5	7.0	4.5	1.5	3.0	9.5	7.5	8.5	17.5	12.0	14.5
9	7.5	6.5	7.0	5.5	2.5	3.5	11.0	7.5	9.0	17.5	12.5	14.5
10	7.5	6.0	7.0	6.0	3.0	4.5	12.5	6.5	9.5	17.0	12.5	14.5
11	7.5	6.0	6.0	7.0	4.0	5.5	8.5	7.0	7.5	17.5	12.5	14.5
12	8.0	6.0	6.5	9.0	3.5	5.5	10.0	7.0	8.0	17.5	11.5	14.0
13	8.5	6.0	7.0	8.5	3.5	5.0	11.5	6.5	8.5	16.0	10.5	13.0
14	8.0	5.5	6.5	9.0	3.5	5.0	8.0	7.0	7.5	15.0	11.5	13.0
15	9.0	5.0	6.5	8.5	3.5	6.0	7.0	4.0	5.0	15.5	11.0	12.5
16	8.5	4.5	6.0	6.5	1.5	3.5	5.5	4.0	5.0	15.0	10.0	12.5
17	7.5	3.0	5.0	6.5	1.5	3.5	11.5	4.5	8.0	12.0	10.0	11.0
18	8.0	3.0	5.0	8.0	3.0	5.0	11.5	7.5	9.5	15.0	10.5	12.0
19	9.0	4.5	6.0	6.5	4.0	5.5	9.5	6.5	8.5	14.5	10.0	12.0
20	7.5	5.0	6.5	8.0	6.0	7.0	10.5	4.5	7.0	13.0	10.5	11.5
21	6.5	4.5	5.5	9.0	5.5	7.0	12.5	6.0	9.0	14.5	10.0	12.0
22	7.5	5.0	6.0	7.5	4.5	6.0	12.0	7.0	9.5	14.5	10.0	12.0
23	8.5	3.5	5.5	6.0	3.5	4.5	13.0	8.0	10.5	12.5	11.0	11.5
24	8.0	3.0	5.0	5.0	2.0	3.5	13.5	9.5	11.0	11.5	10.0	11.0
25	8.0	3.5	5.5	3.0	1.0	2.0	14.0	9.0	11.0	13.5	9.5	11.0
26	9.5	4.0	6.0	3.0	1.0	2.0	13.5	8.5	10.5	---	---	---
27	10.0	4.0	6.0	3.5	1.5	2.5	10.5	8.5	9.5	15.0	10.5	12.5
28	10.0	4.5	6.5	7.0	2.0	3.5	14.5	9.5	11.5	15.5	11.5	13.0
29	---	---	---	8.0	2.0	4.5	14.5	10.5	12.0	15.5	11.5	13.0
30	---	---	---	8.0	3.0	5.5	14.0	9.5	11.5	12.5	11.0	11.5
31	---	---	---	6.0	2.0	4.0	---	---	---	15.0	11.0	12.5
MONTH	10.0	3.0	6.2	11.5	1.0	5.0	14.5	1.5	8.4	---	---	---
JUNE				JULY			AUGUST			SEPTEMBER		
1	15.5	10.0	12.5	15.0	13.0	14.0	17.0	14.0	15.0	---	---	---
2	12.5	11.5	12.0	18.0	13.5	15.0	16.5	13.0	14.5	14.0	11.5	12.5
3	15.5	11.5	13.0	18.0	13.5	15.5	15.5	12.5	14.0	14.0	11.5	12.5
4	13.5	11.0	12.0	17.0	13.5	15.0	15.5	12.5	14.0	14.5	10.5	12.5
5	16.0	10.5	13.0	22.0	15.0	17.5	15.0	12.0	13.5	13.5	11.5	12.5
6	16.5	11.5	13.5	21.5	18.5	20.0	16.0	13.0	14.0	14.5	11.5	12.5
7	14.5	12.5	13.5	20.5	17.5	18.5	15.5	12.5	14.0	14.0	11.0	12.0
8	17.5	13.5	15.5	18.5	17.0	18.0	15.5	12.5	14.0	14.0	11.0	12.5
9	16.5	13.0	14.5	21.0	17.0	19.5	15.5	13.0	14.0	14.0	11.5	12.5
10	17.0	12.5	14.5	20.0	17.0	18.5	17.0	13.5	15.0	13.0	10.5	11.5
11	17.0	12.5	14.5	19.0	16.5	17.5	17.0	13.0	15.0	12.0	9.5	11.0
12	17.0	12.5	14.5	18.5	15.0	16.5	16.5	13.5	15.0	15.0	11.0	13.0
13	16.0	12.0	14.0	16.0	14.5	15.0	16.5	13.5	15.0	16.0	13.0	14.5
14	18.0	14.0	16.0	17.0	14.0	15.5	16.0	13.5	14.5	16.5	13.5	15.0
15	17.0	13.0	14.5	17.5	14.0	15.5	19.5	14.0	17.5	13.5	12.0	12.5
16	14.0	12.5	13.5	16.5	13.5	15.0	19.0	16.0	17.5	13.0	11.5	12.0
17	16.5	13.0	14.5	17.0	14.5	15.5	18.5	15.5	16.5	13.5	10.5	12.0
18	16.5	14.5	15.5	17.0	15.5	16.0	15.5	14.5	15.0	12.5	11.0	12.0
19	16.5	14.0	15.0	19.0	15.0	16.5	16.0	14.0	15.0	12.0	10.5	11.0
20	15.5	14.0	14.5	17.0	14.0	15.5	16.0	13.5	14.5	11.5	11.0	11.5
21	18.5	13.5	15.5	16.5	13.5	15.0	16.0	13.0	14.0	12.0	11.0	11.5
22	19.0	13.5	16.0	16.5	13.0	14.5	15.0	12.0	13.5	13.0	11.0	12.0
23	18.5	13.5	16.0	16.0	13.5	14.5	18.5	14.0	16.0	13.0	10.5	11.5
24	17.5	14.5	16.0	16.5	14.0	15.0	18.0	14.5	16.0	13.0	9.5	11.0
25	18.5	14.5	16.5	20.0	15.0	18.5	17.5	14.0	15.5	11.0	10.0	10.5
26	18.5	13.5	15.5	19.5	16.0	17.5	17.0	13.5	15.0	12.0	10.5	11.0
27	18.5	14.0	16.0	17.0	14.5	15.5	16.5	13.5	15.0	11.5	10.0	10.5
28	17.5	14.0	15.5	17.5	15.5	16.5	14.0	12.5	13.0	11.0	9.5	10.5
29	17.0	13.0	14.5	17.0	14.5	15.5	13.5	12.0	12.5	11.0	9.5	10.0
30	15.0	13.5	14.0	17.5	13.5	15.5	16.5	12.5	15.0	11.5	8.5	10.0
31	---	---	---	15.0	13.5	14.5	15.5	12.5	14.0	---	---	---
MONTH	19.0	10.0	14.5	22.0	13.0	16.2	19.5	12.0	14.7	---	---	---

WISCONSIN RIVER BASIN

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05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	8.9	6.8	8.3	---	---	---	---	---	---
2	9.4	6.6	7.7	8.6	7.7	8.2	---	---	---	---	---	---
3	9.8	6.6	7.9	9.8	8.4	9.1	---	---	---	---	---	---
4	10.6	7.0	8.4	10.2	9.0	9.5	---	---	---	---	---	---
5	10.1	7.1	8.4	10.8	9.3	10.0	---	---	---	---	---	---
6	10.2	7.4	8.6	10.7	9.9	10.2	---	---	---	---	---	---
7	10.5	7.5	8.7	11.3	10.2	10.7	---	---	---	---	---	---
8	9.6	7.3	8.1	---	---	---	---	---	---	---	---	---
9	10.5	7.6	8.8	---	---	---	---	---	---	---	---	---
10	10.3	7.8	9.0	---	---	---	---	---	---	---	---	---
11	11.4	8.3	9.6	---	---	---	---	---	---	---	---	---
12	11.2	8.2	9.5	---	---	---	---	---	---	---	---	---
13	11.8	8.6	9.7	---	---	---	---	---	---	---	---	---
14	10.6	8.2	9.1	---	---	---	---	---	---	---	---	---
15	10.9	8.0	8.9	---	---	---	---	---	---	---	---	---
16	10.6	7.6	8.9	---	---	---	---	---	---	---	---	---
17	11.0	8.8	9.7	---	---	---	---	---	---	---	---	---
18	11.2	8.6	9.8	---	---	---	---	---	---	---	---	---
19	11.0	9.2	9.9	---	---	---	---	---	---	---	---	---
20	10.7	8.7	9.5	---	---	---	---	---	---	---	---	---
21	11.4	8.6	9.7	---	---	---	---	---	---	---	---	---
22	10.9	8.1	9.4	---	---	---	---	---	---	---	---	---
23	10.5	7.6	8.7	---	---	---	---	---	---	---	---	---
24	10.6	7.6	8.9	---	---	---	---	---	---	---	---	---
25	10.6	7.7	8.7	---	---	---	---	---	---	---	---	---
26	9.5	7.4	8.3	---	---	---	---	---	---	---	---	---
27	8.9	7.1	7.8	---	---	---	---	---	---	---	---	---
28	9.2	7.1	8.1	---	---	---	---	---	---	---	---	---
29	8.8	7.2	8.1	---	---	---	---	---	---	---	---	---
30	9.3	7.9	8.5	---	---	---	---	---	---	---	---	---
31	9.2	7.9	8.5	---	---	---	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	10.1	8.6	9.2
31	---	---	---	---	---	---	---	---	---	12.3	8.7	10.1

WISCONSIN RIVER BASIN

05406460 BLACK EARTH CREEK AT CROSS PLAINS, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
		JUNE			JULY			AUGUST			SEPTEMBER		
1	12.2	9.0	10.3	12.4	7.6	9.4	11.8	6.5	8.5	---	---	---	
2	10.8	8.7	9.6	13.2	7.4	9.7	12.0	6.8	8.8	10.9	6.5	8.0	
3	11.4	8.4	9.7	13.6	7.3	9.7	12.2	6.8	8.9	11.2	6.6	8.3	
4	10.8	8.4	9.2	11.5	7.0	8.9	12.2	7.2	9.1	11.5	6.6	8.5	
5	11.4	8.3	9.6	8.4	4.7	6.8	11.9	6.9	8.8	10.9	6.6	8.1	
6	11.2	8.0	9.4	6.2	5.0	5.7	12.0	6.8	8.8	11.4	6.7	8.4	
7	9.1	7.1	7.9	7.1	5.7	6.4	11.9	6.9	8.9	11.5	6.8	8.6	
8	9.0	7.2	7.9	7.4	5.9	6.7	11.9	6.7	8.9	11.7	6.5	8.5	
9	9.8	7.3	8.4	7.6	5.1	6.1	11.1	6.6	7.7	10.5	6.4	8.0	
10	10.6	7.6	8.9	8.5	5.9	6.8	11.8	6.5	8.7	11.1	6.6	8.4	
11	10.9	7.7	9.2	8.6	5.9	7.0	12.4	6.6	8.8	11.2	6.6	8.1	
12	11.3	7.9	9.3	10.5	6.5	8.2	12.2	6.7	8.8	11.2	6.2	8.2	
13	10.9	7.8	9.2	9.8	7.0	8.0	12.3	6.7	8.9	7.8	5.0	6.4	
14	10.4	6.4	8.2	10.0	6.9	8.4	12.1	6.5	8.6	6.5	4.7	5.6	
15	11.1	7.5	9.0	11.0	6.9	8.6	7.1	4.7	5.6	8.2	5.9	6.9	
16	10.5	7.8	9.1	11.4	7.1	8.5	9.2	5.1	6.6	9.4	6.5	7.6	
17	10.5	6.4	8.3	9.3	6.9	7.8	10.8	5.5	7.7	10.7	6.7	8.2	
18	10.1	6.4	8.1	10.7	6.9	8.2	9.3	6.2	7.4	10.2	6.7	7.8	
19	10.5	7.4	8.4	12.3	7.0	9.1	11.0	6.6	8.3	10.3	7.1	8.2	
20	10.9	7.4	8.8	12.5	7.2	9.2	11.6	6.7	8.5	8.7	7.1	7.7	
21	12.4	7.8	9.7	11.9	6.9	9.0	12.0	6.8	8.8	9.5	7.2	8.0	
22	12.7	7.8	9.8	11.6	6.8	8.8	10.9	6.6	8.3	10.4	7.0	8.3	
23	12.2	7.3	9.6	11.0	6.7	8.3	11.2	4.6	7.3	11.4	7.0	8.6	
24	11.7	6.6	8.9	11.7	6.5	8.6	11.3	4.7	7.7	11.4	7.3	8.8	
25	12.5	6.6	9.0	6.7	4.3	5.6	11.5	6.2	8.2	9.0	6.8	7.7	
26	13.0	7.4	9.6	9.6	5.4	7.1	11.5	6.2	8.2	10.3	6.7	7.9	
27	13.2	7.4	9.8	10.5	6.0	7.9	11.4	6.2	8.1	10.6	7.0	8.3	
28	13.3	7.4	9.9	10.2	5.7	7.5	11.1	6.3	8.1	10.5	7.4	8.6	
29	12.9	7.6	9.9	10.9	6.1	8.0	9.7	6.5	7.5	11.3	7.5	8.7	
30	11.4	7.2	9.0	11.7	6.3	8.4	8.2	5.5	6.6	11.5	7.4	9.0	
31	---	---	---	9.4	6.7	7.9	10.7	5.5	7.6	---	---	---	
MONTH	13.3	6.4	9.1	13.6	4.3	7.9	12.4	4.6	8.2	---	---	---	

WISCONSIN RIVER BASIN

153

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 Whipperwill 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. Rainfall estimated to be 0.00 for Nov. 27, Dec. 11-14, Jan. 14, 22, 23, Feb. 22, 26, Mar. 12, 20, 22, 24, and Apr. 2, 17 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.09 in., July 5, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 4.09 in., July 5.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.65	.00	.00	.00	.00	.00	.36	.00	.00	.00	.00
2	.00	.20	.00	.00	.00	.00	.00	.38	.25	.00	.00	.00
3	.00	.01	.00	.05	.00	.00	.00	.17	.01	.18	.00	.00
4	.00	.00	.00	.12	.00	.00	.00	.06	.20	.22	.00	.00
5	.00	.00	.00	.02	.00	.00	.00	.00	.00	4.09	.44	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.03	.00
7	.00	.00	.00	.00	.00	.00	.17	.05	1.87	.72	.00	.00
8	.21	.04	.00	.00	.00	.00	.31	.38	.19	.21	.00	.01
9	.05	.07	.00	.00	.00	.00	.00	.13	.00	1.57	.68	.00
10	.00	.04	.00	.00	.00	.00	.00	.06	.00	.37	.00	.00
11	.00	.01	.00	.00	.00	.00	.23	.00	.00	.12	.00	.35
12	.00	.36	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.59	.28	.00	1.16
14	.00	.00	.00	.00	.00	.00	.24	.00	.56	.00	.00	.79
15	.45	.00	1.05	.00	.00	.00	1.25	.00	.00	.00	2.58	.01
16	.14	.00	.02	.00	.00	.04	.02	.00	.04	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.27	1.03	.60	.00	.00
18	.02	.00	.00	.00	.00	.00	.08	.03	.01	.02	.02	.03
19	.00	.36	.01	.00	.00	.00	.86	.06	.22	.00	.03	.00
20	.17	1.91	.00	.18	.00	.00	.22	.00	.00	.00	.00	.05
21	.00	.27	.00	.16	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.60	.00	.00	.00	.00	.00	.29	.00	.00	.00	.10
23	.00	.05	.00	.00	.00	.42	.00	.55	.00	.00	.50	.00
24	.00	.01	.00	.00	.00	.00	.00	.03	.81	.00	.00	.00
25	.00	.09	.00	.00	.00	.00	.00	.01	.02	1.30	.00	.51
26	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04
27	.00	.00	.00	.00	.00	.00	.29	.14	.00	.97	.00	.00
28	.00	.00	.00	.00	.00	.00	.01	.00	.13	.03	.00	.04
29	.00	.00	.43	.00	---	.00	.08	.00	.07	.00	.17	.04
30	.00	.00	.17	.00	---	.03	.00	.85	.50	.00	.52	.00
31	.04	---	.00	.00	---	1.10	---	.00	---	.01	.00	---
TOTAL	1.08	4.68	1.68	0.53	0.00	1.59	3.76	3.82	6.50	10.70	4.97	3.13

WISCONSIN RIVER BASIN

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. Rainfall estimated to be 0.00 for Nov. 27, Dec. 11-13, Jan. 12, 22, Feb. 10, 12, 13, 26, Mar. 12, 20, 22, and Apr. 1, 2, 17 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the period July 6 to Sept. 23. 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, 4.60 in., July 5, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 4.60 in., July 5.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.02	.00	.00	.00	.00	.00	.41	.00	.00	---	---
2	.00	.22	.00	.00	.00	.00	.00	.50	.30	.01	---	---
3	.00	.00	.00	.04	.00	.00	.00	.18	.01	.20	---	---
4	.00	.00	.00	.17	.00	.00	.00	.08	.21	.20	---	---
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.60	---	---
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	---	---
7	.00	.00	.00	.00	.00	.00	.21	.06	2.21	---	---	---
8	.22	.05	.00	.00	.00	.01	.36	.48	.19	---	---	---
9	.05	.06	.00	.00	.00	.00	.00	.12	.00	---	---	---
10	.00	.04	.00	.00	.00	.00	.00	.04	.00	---	---	---
11	.00	.01	.00	.00	.00	.00	.32	.00	.00	---	---	---
12	.00	.36	.00	.00	.00	.00	.00	.00	.00	---	---	---
13	.00	.00	.00	.00	.00	.00	.00	.00	.53	---	---	---
14	.00	.00	.00	.00	.00	.00	.34	.00	.53	---	---	---
15	.49	.00	1.06	.00	.00	.00	1.52	.00	.00	---	---	---
16	.11	.00	.02	.00	.00	.02	.16	.00	.01	---	---	---
17	.01	.00	.00	.00	.00	.00	.00	.24	1.19	---	---	---
18	.02	.00	.00	.00	.00	.00	.09	.06	.01	---	---	---
19	.00	.41	.01	.00	.00	.00	1.03	.13	.21	---	---	---
20	.17	2.01	.00	.09	.00	.00	.46	.01	.00	---	---	---
21	.00	.30	.00	.41	.00	.00	.00	.00	.00	---	---	---
22	.00	.53	.00	.00	.00	.00	.00	.16	.00	---	---	---
23	.00	.08	.00	.00	.00	.64	.00	.49	.00	---	---	---
24	.00	.00	.00	.00	.00	.00	.00	.03	.97	---	---	.00
25	.00	.09	.00	.00	.00	.00	.00	.01	.02	---	---	.63
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.04
27	.00	.00	.00	.00	.00	.00	.32	.17	.00	---	---	.00
28	.00	.00	.00	.00	.00	.00	.01	.00	.07	---	---	.04
29	.00	.00	.46	.00	---	.00	.06	.00	.09	---	---	.03
30	.00	.00	.18	.00	---	.03	.00	.88	.60	---	---	.01
31	.05	---	.00	.00	---	1.39	---	.00	---	---	---	---
TOTAL	1.12	5.18	1.73	0.71	0.00	2.09	4.88	4.05	7.15	---	---	---

WISCONSIN RIVER BASIN

155

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. Rainfall estimated to be 0.00 for Nov. 27, Dec. 11, 14, Jan. 22, 23, Feb. 10, 13, 22, 26, Mar. 10, 12, 20, 22, and Apr. 1, 2, 17 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OR RECORD.--Maximum daily rainfall, 4.41 in., July 5, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 4.41 in., July 5.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.65	.00	.00	.00	.00	.00	.47	.00	.00	.00	.00
2	.00	.20	.00	.00	.00	.00	.00	.39	.29	.00	.00	.00
3	.00	.01	.00	.08	.00	.00	.00	.22	.01	.13	.01	.00
4	.00	.00	.00	.17	.00	.00	.00	.07	.21	.22	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.41	.27	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.03	.00
7	.00	.00	.00	.00	.00	.00	.31	.06	2.58	.92	.00	.00
8	.23	.05	.00	.00	.00	.00	.26	.52	.17	.18	.00	.04
9	.04	.07	.00	.00	.00	.00	.00	.03	.00	1.36	.41	.00
10	.00	.05	.00	.00	.00	.00	.00	.03	.00	.36	.00	.00
11	.00	.01	.00	.00	.00	.00	.26	.00	.00	.13	.00	.16
12	.00	.33	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.01	.00	.67	.35	.00	1.44
14	.00	.00	.00	.00	.00	.00	.37	.00	.49	.00	.00	.83
15	.48	.00	1.03	.00	.00	.00	1.52	.00	.00	.00	2.38	.01
16	.12	.00	.02	.00	.00	.01	.15	.00	.01	.00	.01	.00
17	.00	.00	.00	.00	.00	.00	.00	.26	1.20	1.12	.00	.00
18	.01	.00	.00	.00	.00	.00	.08	.04	.01	.11	.02	.02
19	.01	.32	.01	.00	.00	.00	1.10	.12	.24	.00	.16	.02
20	.24	1.79	.00	.15	.00	.00	.58	.00	.00	.00	.00	.06
21	.00	.29	.00	.32	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.31	.00	.00	.00	.00	.00	.11	.00	.00	.00	.17
23	.00	.06	.00	.00	.00	.72	.00	.48	.00	.00	.75	.00
24	.00	.01	.00	.00	.00	.00	.00	.01	1.04	.01	.00	.00
25	.00	.03	.00	.00	.00	.00	.00	.00	.03	1.38	.00	.66
26	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.02	.05
27	.00	.00	.00	.00	.00	.00	.33	.16	.00	.76	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.04	.03	.00	.01
29	.00	.00	.43	.00	---	.00	.04	.00	.10	.00	.18	.01
30	.00	.00	.14	.00	---	.01	.00	.81	.55	.00	.75	.01
31	.05	---	.00	.00	---	1.36	---	.01	---	.03	.00	---
TOTAL	1.18	4.19	1.63	0.72	0.00	2.10	5.01	3.79	7.64	11.51	4.99	3.49

WISCONSIN RIVER BASIN

05406470 BREWERY CREEK AT CROSS PLAINS, WI

LOCATION.--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 and crest-stage gage. Elevation of gage is 900 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Aug. 24-31, and ice-affected periods, Nov. 27, 28, Dec. 3, Dec. 5 to Mar. 17, and Mar. 24, 25. Records poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.77	.90	.72	.80	.80	.66	4.0	2.2	2.1	4.3	3.7	4.0
2	.72	2.4	.68	.66	.70	.70	2.9	3.7	2.2	4.2	3.6	4.0
3	.67	1.7	.66	.90	.76	1.5	2.8	3.5	2.4	4.1	3.3	3.9
4	.59	1.1	.61	1.3	1.0	2.5	2.8	3.4	2.3	4.2	3.4	3.8
5	.57	.92	.58	.80	1.5	2.0	2.5	2.8	2.3	68	3.6	3.7
6	.55	.84	.60	.66	1.1	3.0	2.4	2.4	2.2	109	4.1	3.7
7	.52	.74	.64	.60	.90	15	2.6	2.3	25	18	4.1	3.6
8	.54	.67	.66	.58	.76	18	5.2	3.5	8.7	12	4.1	3.6
9	.68	.69	.68	.58	.72	8.0	3.2	2.6	4.0	58	5.3	3.6
10	.63	.71	.70	.62	.70	4.0	2.5	2.3	3.1	8.1	5.2	3.7
11	.64	.66	.66	.64	.68	1.5	2.9	2.2	2.7	7.1	4.8	3.8
12	.73	.82	.64	.68	.64	.80	2.5	2.1	2.6	4.2	5.1	4.1
13	.69	1.0	.64	.68	.62	.74	2.2	1.9	2.6	4.5	5.0	8.3
14	.64	.83	.62	.64	.58	.70	2.2	1.8	6.6	5.0	5.2	21
15	.68	.70	.90	.62	.56	.64	13	1.8	3.3	3.9	45	7.5
16	.88	.67	1.5	.60	.54	22	5.9	1.7	3.1	3.4	12	5.3
17	.83	.66	1.0	.60	.52	12	3.2	1.6	6.1	9.8	7.7	4.7
18	.73	.62	.90	.58	.52	10	2.9	1.9	9.2	6.4	6.8	4.4
19	.71	.63	.84	.56	.56	6.5	6.3	1.8	5.3	4.3	7.1	4.4
20	.76	4.0	.80	.56	1.5	1.6	11	1.8	4.9	3.4	6.9	4.4
21	.89	12	.80	1.0	1.1	2.1	4.0	1.7	4.2	3.2	6.2	4.5
22	.82	3.1	.86	1.5	.86	2.0	3.0	1.6	3.7	3.0	6.2	5.0
23	.74	4.3	.70	1.7	.78	10	2.6	1.9	3.4	3.0	11	4.4
24	.70	1.8	.60	1.1	.70	22	2.6	2.2	4.0	3.0	e9.0	4.0
25	.65	1.3	.60	.80	.62	40	2.5	1.9	6.7	24	e6.0	5.3
26	.63	1.3	.62	.70	.60	35	2.4	1.8	4.3	5.0	e5.0	7.6
27	.55	1.1	.68	.68	.64	17	2.4	1.9	3.9	4.8	e4.3	5.1
28	.51	.90	.72	.66	.64	34	2.7	1.9	3.6	16	e3.9	4.6
29	.51	.80	.80	.62	---	16	2.4	1.8	3.5	4.6	e4.0	4.4
30	.51	.74	1.5	.60	---	6.7	2.3	2.8	4.8	3.8	e5.0	4.2
31	.51	---	1.2	.62	---	29	---	2.5	---	3.5	e5.0	---
TOTAL	20.55	48.60	24.11	23.64	21.60	325.64	109.9	69.3	142.8	415.8	211.6	154.6
MEAN	.66	1.62	.78	.76	.77	10.5	3.66	2.24	4.76	13.4	6.83	5.15
MAX	.89	12	1.5	1.7	1.5	40	13	3.7	25	109	45	21
MIN	.51	.62	.58	.56	.52	.64	2.2	1.6	2.1	3.0	3.3	3.6
CFSM	.09	.21	.10	.10	.10	1.36	.48	.29	.62	1.74	.89	.67
IN.	.10	.23	.12	.11	.10	1.57	.53	.33	.69	2.01	1.02	.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
MEAN	1.44	1.82	1.11	1.09	1.99	4.35	2.06	1.37	2.13	4.21	2.22	2.38
MAX	2.87	4.73	2.56	2.10	5.42	10.5	3.66	3.18	4.76	13.4	6.83	5.15
(WY)	1986	1986	1986	1990	1985	1993	1993	1986	1993	1993	1993	1993
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1985 - 1993

ANNUAL TOTAL	298.31	1568.14	
ANNUAL MEAN	.82	4.30	
HIGHEST ANNUAL MEAN			2.18
LOWEST ANNUAL MEAN			4.30
HIGHEST DAILY MEAN	16	Feb 28	109
LOWEST DAILY MEAN	.13	Aug 24	.51
ANNUAL SEVEN-DAY MINIMUM	.18	Aug 19	.55
INSTANTANEOUS PEAK FLOW			420
INSTANTANEOUS PEAK STAGE			15.05
INSTANTANEOUS LOW FLOW			.00
ANNUAL RUNOFF (CFSM)	.11		.56
ANNUAL RUNOFF (INCHES)	1.44		7.58
10 PERCENT EXCEEDS	1.2		7.6
50 PERCENT EXCEEDS	.55		2.2
90 PERCENT EXCEEDS	.29		.62
			.16

(a) Also occurred many days during 1991 water year

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, 1992, and 1993 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, 917 tons, July 5, 1993; minimum daily, 0.0 ton Oct. 1-2, 1991, and Dec. 6, 1992.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 2,450 lb, July 5, 1993; minimum daily, 0.00 lb, July 20, 24-27, 31, Aug. 1-6, 22-29, 31, Sept. 1-2, and 4-10, 1991.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 25.0°C, July 6, 9; minimum observed, 0.0°C, Jan. 8-31, Feb. 1, 3-4, 8-10, 12.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 917 tons, July 5; minimum observed, 0.00 ton, Dec. 6.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 2,450 lb, July 5; minimum daily, 0.29 lb, Nov. 18-19.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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 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)
OCT 1992										
*04...	1700	--	0.59	--	--	--	--	--	--	--
*15...	1545	--	0.59	8.1	--	2.9	--	--	16	450
*15...	1900	--	1.6	8.1	--	9.7	--	--	61	334
*16...	0845	--	0.83	8.0	--	9.3	--	--	15	476
NOV										
*01...	1730	--	1.3	7.8	--	5.7	--	--	56	324
01...	2100	--	1.3	7.9	--	8.1	--	--	53	422
*02...	1205	--	2.6	7.7	--	4.2	--	--	27	440
15...	1625	--	0.71	8.1	--	<1.0	--	--	21	462
15...	1630	--	0.71	--	--	--	--	--	--	--
20...	1115	--	2.1	7.9	--	--	--	--	156	464
20...	1600	--	4.5	7.8	--	--	--	--	174	490
20...	1930	--	7.5	7.7	--	--	--	--	260	584
20...	2145	--	11	7.6	--	--	52	25	296	588
21...	0115	--	17	7.7	--	--	45	21	280	538
21...	1005	--	13	--	--	--	--	--	--	--
*21...	1320	--	9.5	7.8	--	2.7	--	--	51	314
21...	1321	--	9.5	7.8	--	--	46	22	56	334
21...	1545	--	7.6	7.7	28	--	--	--	50	338
*22...	1005	--	2.6	7.8	--	1.6	--	--	36	426
DEC										
06...	1554	0.60	--	--	--	--	--	--	--	--
*13...	1238	0.64	--	8.0	--	<1.0	--	--	31	452
13...	1245	0.64	--	--	--	--	--	--	--	--
15...	2130	0.90	--	8.0	--	48	--	--	214	626
16...	0920	1.5	--	--	--	--	--	--	--	--
*16...	0936	1.5	--	7.8	--	5.8	--	--	61	382
FEB 1993										
04...	1815	1.0	--	7.3	--	--	--	--	62	402
04...	2215	1.0	--	7.3	--	--	--	--	64	454
05...	2230	1.5	--	7.4	--	--	--	--	46	360
06...	0515	1.1	--	7.2	--	--	--	--	68	410
*14...	1540	0.58	--	8.0	--	<1.0	--	--	16	488

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN
05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	COPPER, TOTAL RECOVER -ABLE (UG/L) (01119)	ZINC, TOTAL RECOVER -ABLE (UG/L) (01094)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1992									
04...	--	--	--	--	--	--	--	95	--
15...	116	4	1.46	0.043	0.110	--	--	32	--
15...	98	11	1.14	0.182	0.320	--	--	54	--
16...	168	6	1.68	0.375	0.500	--	--	12	--
NOV									
01...	94	12	1.38	0.313	0.360	--	--	57	--
01...	116	13	1.57	0.857	0.590	--	--	52	99
02...	132	8	2.97	0.363	0.650	--	--	30	100
15...	112	3	2.21	0.064	0.090	--	--	--	--
15...	--	--	--	--	--	--	--	33	--
20...	110	24	1.57	0.985	0.780	--	--	163	97
20...	126	32	2.52	1.29	1.59	--	--	142	96
20...	152	56	3.10	1.96	2.48	--	--	204	98
20...	136	52	2.40	1.28	2.12	16	80	303	98
21...	114	44	2.49	0.612	1.58	11	90	299	98
21...	--	--	--	--	--	--	--	39	--
21...	80	9	2.71	0.109	0.640	--	--	62	98
21...	96	10	2.69	0.104	0.640	4	20	77	97
21...	84	10	2.86	0.080	0.600	--	--	64	95
22...	96	6	3.59	0.098	0.280	--	--	39	97
DEC									
06...	--	--	--	--	--	--	--	3	--
13...	116	4	2.47	0.102	0.110	--	--	--	--
13...	--	--	--	--	--	--	--	51	--
15...	192	48	3.93	3.74	2.15	--	--	206	--
16...	--	--	--	--	--	--	--	64	--
16...	106	8	3.14	0.456	0.500	--	--	--	--
FEB 1993									
04...	144	24	1.36	3.16	1.44	--	--	63	--
04...	216	38	0.937	7.05	2.56	--	--	61	--
05...	150	26	1.03	4.42	2.04	--	--	46	--
06...	190	36	0.626	6.83	3.49	--	--	63	--
14...	110	2	2.49	0.313	0.110	--	--	15	--

WISCONSIN RIVER BASIN

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05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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, 0.7 UM-MF (COLS./ 100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)
MAR 1993								
03...	1800	1.5	--	7.5	170	47	--	48
04...	0015	2.5	--	7.5	250	81	--	68
*05...	1300	2.0	--	7.6	360	120	--	44
06...	1630	3.0	--	7.2	--	--	--	92
06...	1715	3.0	--	7.2	--	--	--	80
07...	0815	15	--	7.3	--	--	--	24
*07...	1409	15	--	7.3	--	--	--	112
07...	1410	15	--	7.2	--	--	--	74
07...	1745	15	--	7.1	--	58	--	140
07...	1945	15	--	7.0	--	81	--	160
08...	0530	18	--	7.0	--	71	--	48
08...	1530	18	--	7.2	--	51	--	176
*08...	1545	18	--	7.1	--	51	--	200
08...	1645	18	--	7.0	--	59	--	228
08...	2400	18	--	7.0	--	60	--	60
*14...	1530	0.70	--	7.8	--	1.1	--	8
16...	1115	22	--	7.4	--	>20	--	230
16...	1200	22	--	7.3	--	>20	--	304
16...	1215	22	--	7.3	--	>20	--	330
16...	1230	22	--	7.3	--	>20	--	708
16...	1345	22	--	7.3	--	>20	--	1080
16...	1430	22	--	7.3	--	>20	--	944
16...	1845	22	--	7.2	--	>20	--	294
*17...	1300	12	--	7.7	--	12	--	50
24...	1345	22	--	7.5	--	29	--	284
24...	1615	22	--	7.5	--	--	--	532
24...	1845	22	--	7.5	--	36	--	644
25...	0015	40	--	7.5	--	18	--	508
25...	0730	40	--	7.5	--	15	--	180
25...	1300	40	--	7.5	--	19	--	572
25...	1415	40	--	7.5	--	--	--	504
25...	1545	40	--	7.5	--	26	--	1050
25...	1720	40	--	7.6	--	32	--	2480
*25...	1721	40	--	7.5	--	--	--	900
25...	2045	40	--	7.5	--	--	--	440
25...	2300	40	--	7.5	--	22	--	264
26...	0045	--	49	--	--	--	--	--
26...	0315	--	34	7.5	--	--	--	40
26...	1415	--	31	7.4	--	16	--	180
26...	1515	--	51	7.4	--	16	--	336
26...	1600	--	63	7.4	--	18	--	476
26...	2140	--	38	7.2	--	--	--	220
26...	2245	--	31	7.3	--	--	--	950
*27...	1310	--	8.2	7.7	--	14	--	36
27...	1600	--	27	--	--	--	--	--
27...	1630	--	30	7.4	--	--	--	478
28...	1330	--	36	7.4	--	--	--	2430
28...	1430	--	80	7.4	--	--	--	3490
28...	1545	--	108	7.4	--	--	--	1880
28...	1930	--	67	7.5	--	--	--	1040
28...	2045	--	47	7.5	--	--	--	1250
*29...	1545	--	42	7.4	--	12	2500	166
31...	1014	--	64	7.5	--	--	--	1730
31...	1059	--	74	--	--	--	--	--
31...	1100	--	74	7.4	--	--	--	814
31...	1345	--	45	7.4	--	--	--	424
31...	1350	--	45	--	--	--	--	--
31...	1400	--	45	7.4	--	--	--	344
*31...	1405	--	44	7.5	--	--	--	--
31...	1407	--	44	--	--	--	--	--
31...	1559	--	40	--	--	--	--	--
31...	1600	--	40	7.5	--	--	--	212
31...	1959	--	25	--	--	--	--	--
31...	2000	--	25	7.5	--	--	--	144

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAR 1993								
03...	676	192	28	1.47	5.73	1.32	21	--
04...	748	218	36	1.49	9.15	2.19	82	--
05...	784	248	34	1.11	12.8	2.84	147	--
06...	488	182	44	0.989	8.54	3.79	206	--
06...	438	166	40	1.00	7.73	3.50	153	--
07...	332	116	16	0.891	5.68	2.30	78	--
07...	384	142	36	0.862	7.27	2.76	190	--
07...	360	140	34	0.840	7.40	2.79	114	--
07...	400	148	44	0.505	6.83	3.35	171	--
07...	462	182	56	0.377	9.43	3.22	180	--
08...	328	148	40	0.711	7.79	2.89	40	--
08...	396	136	52	0.604	5.46	2.78	212	--
08...	422	140	48	0.621	6.07	2.84	--	--
08...	468	150	56	0.459	6.00	3.18	210	--
08...	304	130	32	0.575	5.96	2.86	56	--
14...	418	106	2	2.11	0.481	0.140	104	--
16...	396	106	32	1.15	3.01	1.78	213	--
16...	436	108	40	1.04	3.24	1.86	286	98
16...	486	116	42	1.03	3.50	1.83	322	98
16...	868	156	82	0.923	3.65	2.27	714	--
16...	1260	186	116	0.772	4.07	3.03	1070	--
16...	1170	184	104	0.749	3.88	3.25	1020	93
16...	516	104	38	0.732	3.13	1.85	356	--
17...	268	92	10	1.34	2.52	0.880	--	--
24...	452	114	44	1.21	4.74	2.58	286	--
24...	--	--	--	--	5.76	3.51	496	91
24...	774	162	92	1.19	5.48	3.74	604	88
25...	478	104	64	1.09	3.54	2.24	2420	79
25...	290	84	22	1.14	3.01	1.73	1120	--
25...	608	128	80	1.09	2.91	2.31	230	--
25...	--	--	--	--	3.00	2.60	798	--
25...	1410	202	114	0.869	3.08	3.82	1510	80
25...	3000	320	220	0.691	3.08	6.00	2740	83
25...	--	--	--	--	3.03	3.29	969	--
25...	--	--	--	--	2.72	2.34	0	0
25...	386	86	33	0.633	2.57	1.83	318	--
26...	--	--	--	--	--	--	440	--
26...	--	--	--	--	2.29	1.36	1210	--
26...	348	86	24	0.625	2.32	1.93	--	--
26...	436	98	44	0.499	2.45	2.14	240	--
26...	560	112	64	0.425	2.65	2.36	--	--
26...	--	--	--	--	2.71	1.84	--	--
26...	--	--	--	--	2.61	2.86	--	--
27...	212	86	8	0.855	2.41	1.47	53	--
27...	--	--	--	--	--	--	362	--
27...	--	--	--	--	2.57	2.17	961	--
28...	--	--	--	--	2.97	8.88	1250	--
28...	--	--	--	--	2.53	7.48	--	--
28...	2500	260	178	0.154	2.62	5.40	3200	--
28...	1100	130	102	0.235	1.99	3.16	10400	--
28...	--	--	--	--	1.96	3.58	6070	--
29...	494	88	20	0.287	1.47	1.52	--	--
31...	--	--	--	--	1.02	2.88	634	--
31...	--	--	--	--	--	--	3470	--
31...	920	122	86	0.893	1.08	1.94	--	--
31...	--	--	--	--	1.45	1.81	--	--
31...	--	--	--	--	--	--	427	--
31...	--	--	--	--	1.36	1.63	--	--
31...	--	--	--	--	1.36	1.65	401	--
31...	--	--	--	--	--	--	367	--
31...	--	--	--	--	--	--	276	--
31...	--	--	--	--	1.12	1.31	--	--
31...	--	--	--	--	--	--	204	--
31...	308	76	8	1.22	0.996	1.07	--	--

WISCONSIN RIVER BASIN

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05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	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)
APR 1993								
*18...	1440	2.8	8.2	--	1.0	--	--	9
*18...	1445	2.8	--	--	--	--	--	--
19...	1645	10	7.8	--	10	51000	--	287
*20...	0945	13	7.6	37	5.2	--	--	108
20...	1200	13	--	--	--	24000	--	--
26...	1430	2.3	8.7	9	1.7	<10	--	7
MAY								
12...	1350	2.0	8.7	--	1.6	340	710	13
12...	1355	2.0	--	--	--	--	--	--
*25...	1525	1.9	8.5	--	2.0	820	560	4
JUN								
*07...	1035	2.2	8.0	--	1.2	<10	6800	30
07...	1040	2.2	--	--	--	--	--	--
07...	1100	8.6	7.7	--	8.6	13000	--	1030
07...	1315	50	7.6	--	14	>400000	--	3620
07...	1345	70	7.6	--	--	--	--	1980
07...	1415	81	7.4	--	13	>70000	--	7870
07...	1455	83	7.5	--	--	--	--	3760
*07...	1456	83	--	--	--	--	--	--
07...	1645	64	7.6	--	--	--	--	1210
07...	1830	46	7.6	--	8.4	100000	--	900
07...	2230	20	7.7	--	--	--	--	225
*08...	0630	11	7.8	--	--	31000	--	264
09...	0630	4.4	8.1	--	3.5	--	--	117
14...	0145	6.8	7.9	--	8.4	260000	>65000	356
14...	0415	10	7.7	--	15	>1000000	>180000	480
17...	1030	7.3	7.9	--	8.0	--	--	--
17...	2115	11	7.7	--	22	--	--	--
18...	0015	16	7.6	--	22	--	--	--
18...	0715	9.3	7.8	--	5.5	--	--	--
23...	1145	3.4	8.2	--	1.2	3400	510	43

DATE	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	SOLIDS, VOLA- TION ON IGNI- TION, TOTAL (MG/L) (00505)	RESIDUE VOLA- TION, 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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 1993								
18...	386	94	<2	2.93	0.067	0.180	--	--
18...	--	--	--	--	--	--	32	--
19...	562	130	44	1.46	0.593	1.16	235	--
20...	364	96	22	2.07	0.459	0.920	--	--
20...	--	--	--	--	--	--	--	--
26...	404	118	3	2.26	0.034	0.130	35	--
MAY								
12...	422	158	4	2.02	0.024	0.160	--	--
12...	--	--	--	--	--	--	43	--
25...	400	110	2	2.35	0.088	0.120	35	--
JUN								
07...	468	140	9	2.56	0.102	0.100	--	--
07...	--	--	--	--	--	--	105	--
07...	1150	128	116	0.685	0.347	1.29	--	--
07...	3760	470	450	9.24	1.31	6.65	2960	--
07...	--	--	--	--	0.821	3.70	2010	99
07...	7660	792	880	6.18	1.33	8.81	5680	100
07...	--	--	--	--	0.752	5.86	3770	--
07...	--	--	--	--	0.800	5.94	3810	--
07...	--	--	--	--	0.539	2.73	1360	99
07...	1140	194	150	4.27	0.573	2.34	761	--
07...	--	--	--	--	0.660	1.16	359	--
08...	--	--	--	--	0.321	0.850	113	--
09...	492	140	21	5.03	0.146	0.470	128	--
14...	692	186	64	3.19	0.477	0.990	376	--
14...	824	228	88	4.82	0.628	1.81	417	--
17...	--	--	--	--	0.225	0.660	506	--
17...	--	--	--	--	0.880	3.58	1550	--
18...	--	--	--	--	0.583	2.32	652	--
18...	--	--	--	--	0.203	0.730	137	--
23...	500	142	9	3.43	0.045	0.200	117	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
JUL 1993							
05...	1145	10	7.8	16	--	88	520
05...	1330	79	7.4	--	>900000	13600	--
05...	1430	61	7.5	--	--	5120	--
05...	1645	78	7.3	--	--	2100	--
*05...	1646	78	7.3	--	--	1800	--
05...	1830	120	7.1	13	>500000	3480	3690
05...	1900	311	7.2	13	160000	10600	18100
05...	1930	269	--	--	>100000	--	--
05...	2015	241	7.1	--	--	5240	--
05...	2145	177	7.1	--	--	1300	--
06...	0015	215	7.0	--	--	2320	--
06...	0230	262	6.9	--	--	1720	--
*06...	1005	100	7.2	--	--	460	--
06...	1010	100	7.1	--	--	620	--
06...	1545	41	7.5	4.2	170000	400	798
07...	0230	17	7.5	4.3	87000	236	606
07...	1815	25	--	--	--	1970	--
07...	1830	46	--	--	--	9440	--
07...	2400	31	--	--	--	2500	--
09...	0345	90	7.3	12	>200000	2760	--
09...	0400	100	7.3	--	>100000	1740	--
09...	1145	81	7.3	--	--	790	966
09...	1430	43	7.5	--	--	400	600
09...	2030	19	7.6	--	--	250	510
*10...	1250	6.6	7.6	--	--	78	418
17...	1315	16	7.4	--	--	3920	4030
17...	1430	22	7.6	--	--	1510	1790
17...	2200	12	7.7	--	--	165	418
*19...	1330	4.2	8.0	--	7200	58	510
25...	0415	34	7.5	26	--	3270	3600
25...	0530	45	--	--	--	4150	4400
25...	0710	63	7.5	10	--	1490	1740
25...	1100	43	7.3	9.4	--	850	1150
25...	1445	18	7.5	7.9	--	300	562
27...	2230	15	7.8	7.0	78000	552	818
27...	2345	23	7.7	7.8	110000	1630	1920
28...	0200	46	7.7	8.5	340000	920	1200
*28...	1115	12	7.4	11	530000	158	460
AUG							
*03...	1110	3.2	8.0	1.7	1600	35	478
04...	1330	3.5	--	--	--	--	--
15...	0615	18	7.7	--	500000	422	632
15...	0715	40	7.7	18	--	1870	2090
15...	0900	81	7.6	16	--	996	1130
15...	1000	94	7.6	12	--	1340	1470
15...	1700	56	7.5	9.3	--	292	512
15...	2100	28	7.6	--	--	146	346
16...	0130	17	7.6	--	--	88	326
*16...	0910	13	7.7	2.4	72000	29	390
23...	1600	15	8.0	4.1	87000	68	410
SEP							
01...	1135	4.0	7.9	--	--	10	476
01...	1145	4.0	--	--	--	--	--
*13...	1555	12	7.7	4.7	--	121	488
13...	1600	12	--	--	--	--	--
13...	2215	14	7.9	6.8	--	83	402
14...	0115	21	7.7	10	--	317	616
14...	0330	29	7.8	13	--	328	606
14...	1025	23	7.9	6.4	--	100	370
*14...	1026	23	7.9	5.4	--	97	362
14...	1600	18	7.7	3.5	--	61	352
27...	1700	5.0	7.9	0.8	--	40	494

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

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05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUL 1993							
05...	156	22	3.35	1.02	1.93	200	--
05...	--	--	--	2.87	25.0	12300	--
05...	--	--	--	0.257	6.87	4910	--
05...	--	--	--	0.219	3.84	2360	--
05...	--	--	--	0.235	3.40	2030	--
05...	386	420	0.774	0.265	5.65	3030	--
05...	1130	880	0.278	0.162	15.0	18900	--
05...	--	--	--	--	--	--	--
05...	--	--	--	0.371	9.45	6160	--
05...	--	--	--	0.223	3.92	2270	--
06...	--	--	--	0.148	3.82	2230	--
06...	--	--	--	0.101	3.56	1750	--
06...	--	--	--	0.118	1.89	706	--
06...	--	--	--	0.115	1.95	802	--
06...	106	120	0.961	0.104	1.68	872	--
07...	96	56	1.24	0.099	1.28	400	--
07...	--	--	--	0.131	2.30	1870	--
07...	--	--	--	1.87	14.3	8520	100
07...	--	--	--	0.169	4.00	2150	--
09...	--	--	--	0.244	4.08	2410	--
09...	--	--	--	0.167	2.99	--	--
09...	--	120	--	0.151	1.95	1550	70
09...	--	65	0.715	0.159	1.36	593	--
09...	--	50	--	0.175	1.00	411	--
10...	--	16	--	0.145	0.470	67	--
17...	--	540	--	1.54	7.90	269	--
17...	--	200	--	0.340	2.76	3140	--
17...	--	24	--	0.264	0.740	1760	--
19...	--	9	--	0.103	0.300	257	--
25...	414	380	--	1.22	6.09	2100	--
25...	452	440	--	0.206	5.12	4280	99
25...	200	200	--	0.131	2.76	1680	98
25...	146	150	--	0.094	2.25	1150	99
25...	110	52	--	0.082	1.26	387	--
27...	--	52	--	0.167	0.830	560	100
27...	--	156	--	0.129	2.40	1570	100
28...	--	96	--	0.089	1.59	830	99
28...	--	28	--	0.469	1.27	--	--
AUG							
03...	--	5	--	0.036	0.160	--	--
04...	--	--	--	--	--	26	--
15...	--	52	--	0.170	1.02	--	--
15...	--	200	--	0.528	3.94	1750	--
15...	--	120	--	0.436	2.66	903	99
15...	--	144	--	0.205	2.66	1420	98
15...	--	44	--	0.126	1.47	451	96
15...	--	22	--	0.085	0.960	164	--
16...	--	16	--	0.070	0.800	97	--
16...	--	6	--	0.123	0.350	32	--
23...	--	14	--	0.069	0.270	76	--
SEP							
01...	--	3	--	0.038	0.130	--	--
01...	--	--	--	--	--	64	--
13...	114	15	--	0.137	0.470	--	--
13...	--	--	--	--	--	117	--
13...	108	12	--	0.097	0.520	74	--
14...	--	36	--	0.298	1.18	370	97
14...	--	48	--	0.501	1.58	323	97
14...	--	16	--	0.275	0.940	120	--
14...	--	14	--	0.285	0.970	115	--
14...	--	9	--	0.120	0.530	--	--
27...	--	6	--	0.062	0.140	--	--

WISCONSIN RIVER BASIN

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
JUN 1993											
**07...	1445	83	32	3.6	<1.9	<1.0	<1.0	28	5.8	<1.0	<1.0
**17...	2230	12	<0.32	0.3	<1.2	<1.0	<1.0	17	0.64	<1.0	<1.0
JUL											
**05...	1630	77	0.91	0.3	<0.3	<1.0	<1.0	1.2	0.22	<1.0	<1.0
**09...	0825	106	<0.10	0.3	<0.3	<1.0	<1.0	0.40	<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 WHOLE WATER (UG/L) (39356)	PARA- THION, TOTAL (UG/L) (39540)	PENDI- METH- ALIN TOTAL (UG/L) (79190)	PHORATE TOTAL (UG/L) (39023)	SIMA- ZINE TOTAL (UG/L) (39055)	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)
JUN 1993												
07...		<0.20	<1.0	7.90	<1.0	<2.40	<0.32	7.8	<0.20	<1.0	<1.0	<0.50
17...		<0.20	<1.0	16.0	<1.0	<1.00	<0.20	--	<0.20	<1.0	<1.0	3.9
JUL												
05...		<0.20	<1.0	1.10	<1.0	<1.00	<0.20	0.14	<0.20	<1.0	<1.0	0.62
09...		<0.20	<1.0	<0.20	<1.0	<1.00	<0.20	0.14	<0.20	<1.0	<1.0	<0.50

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					APR 1993				
07...	0844	0.53	705	9.0	13...	0950	2.1	660	3.5
NOV					MAY				
16...	1022	0.65	760	2.0	25...	0955	1.9	680	11.5
JAN 1993					JUL				
07...	1105	0.61	735	0.5	16...	0843	3.2	705	15.5
MAR									
02...	1052	0.64	1040	0.5					

** GRAB SAMPLE

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	17.5	9.5	13.0	6.5	5.5	6.0	2.5	1.5	2.0	.50	.50	.50
2	19.5	11.5	15.0	6.5	5.0	6.0	2.0	2.0	2.0	.50	.50	.50
3	19.0	12.0	15.0	6.0	5.5	5.5	2.0	1.0	1.5	.50	.50	.50
4	17.5	12.0	14.0	5.5	4.5	5.0	1.5	1.0	1.0	.50	.50	.50
5	16.5	10.0	13.0	5.0	4.0	4.5	1.0	1.0	1.0	.50	.50	.50
6	15.5	10.0	12.5	4.5	4.0	4.0	1.0	.50	1.0	.50	.50	.50
7	15.5	9.5	12.5	4.0	3.5	3.5	1.0	.50	.50	.50	.50	.50
8	14.5	11.5	13.0	4.5	3.5	4.0	.50	.50	.50	.50	.00	.00
9	13.0	10.0	11.5	7.5	4.5	5.5	.50	.50	.50	.50	.00	.00
10	11.5	9.0	10.5	8.0	7.5	7.5	.50	.50	.50	.50	.00	.00
11	13.5	8.0	10.5	7.5	5.5	6.5	.50	.50	.50	.50	.00	.00
12	13.0	8.5	10.0	6.5	5.0	6.0	.50	.50	.50	.50	.00	.00
13	10.0	5.5	8.0	5.0	3.5	4.0	.50	.50	.50	.50	.00	.00
14	10.0	8.0	9.0	3.5	2.5	3.0	.50	.50	.50	.50	.00	.00
15	10.0	8.0	8.5	3.5	2.5	3.0	.50	.50	.50	.50	.00	.00
16	8.5	6.5	8.0	4.0	2.5	3.0	2.0	.50	1.5	.50	.00	.00
17	7.5	4.5	6.0	4.0	4.0	4.0	2.0	1.5	2.0	.50	.00	.50
18	8.0	6.0	7.0	4.0	3.0	3.5	1.5	.50	1.0	.50	.00	.00
19	6.5	4.5	5.5	5.0	3.5	4.0	2.0	1.0	1.5	.50	.00	.50
20	7.5	5.5	6.5	6.5	4.5	5.5	1.5	.50	1.0	.50	.00	.50
21	9.5	7.5	8.5	7.0	6.5	7.0	.50	.50	.50	.50	.00	.50
22	13.5	9.0	11.0	6.5	5.0	6.0	.50	.50	.50	.50	.00	.50
23	16.5	13.5	14.5	5.0	4.5	5.0	.50	.50	.50	.50	.00	.50
24	16.5	14.5	15.5	5.5	5.0	5.5	.50	.50	.50	.50	.00	.50
25	15.5	13.0	14.0	5.5	3.5	5.0	.50	.50	.50	.50	.00	.50
26	14.5	13.0	14.0	3.5	3.0	3.0	.50	.50	.50	.50	.00	.50
27	13.0	9.5	11.0	3.0	1.5	2.0	.50	.50	.50	.50	.00	.50
28	10.5	8.0	9.5	2.0	1.5	1.5	.50	.50	.50	.50	.00	.50
29	10.0	8.5	9.0	2.5	1.5	2.0	.50	.50	.50	.50	.00	.50
30	8.5	6.0	7.0	2.5	2.0	2.5	.50	.50	.50	.50	.00	.50
31	7.0	6.0	6.5	---	---	---	.50	.50	.50	.50	.00	.50
MONTH	19.5	4.5	10.6	8.0	1.5	4.4	2.5	.50	.82	.50	.00	.34
FEBRUARY			MARCH			APRIL			MAY			
1	.50	.00	.50	2.0	1.5	1.5	7.0	4.5	5.5	15.0	10.5	13.0
2	.50	.50	.50	2.0	1.0	2.0	11.5	4.5	7.5	15.5	12.0	13.5
3	.50	.00	.50	2.0	1.5	2.0	13.0	5.0	8.0	15.0	12.5	13.5
4	.50	.00	.50	2.0	2.0	2.0	12.5	5.0	8.5	17.0	12.5	14.5
5	.50	.50	.50	2.0	1.0	2.0	9.5	5.5	7.5	19.0	12.0	15.0
6	.50	.50	.50	2.5	2.0	2.0	14.0	6.5	9.5	21.5	11.0	16.0
7	.50	.50	.50	2.5	.50	2.0	12.0	8.0	10.0	17.5	13.5	15.0
8	.50	.00	.50	2.5	2.0	2.5	11.0	9.0	10.0	22.0	13.5	17.5
9	.50	.00	.50	2.5	2.0	2.5	14.0	8.5	11.0	23.0	14.0	18.5
10	.50	.00	.50	2.5	2.5	2.5	16.0	6.5	11.0	22.0	14.0	18.0
11	.50	.50	.50	3.0	2.5	2.5	11.5	7.5	8.5	23.5	15.0	19.0
12	.50	.00	.50	3.0	2.5	2.5	12.0	6.5	9.0	22.5	13.5	17.5
13	.50	.50	.50	3.0	2.5	3.0	14.0	5.0	9.5	20.0	10.0	15.0
14	.50	.50	.50	3.0	2.5	3.0	9.5	7.0	7.5	19.0	11.5	15.5
15	.50	.50	.50	3.0	3.0	3.0	7.0	5.5	6.0	19.0	11.0	15.0
16	1.0	.50	.50	3.0	3.0	3.0	6.5	4.5	5.5	19.0	10.0	14.5
17	1.0	.50	.50	3.5	3.0	3.0	14.5	4.0	8.5	14.5	9.5	11.5
18	1.0	.50	.50	3.5	3.0	3.5	14.5	7.5	11.0	17.0	10.5	13.5
19	1.0	.50	1.0	4.0	3.0	3.5	11.5	7.0	9.5	19.0	9.5	13.5
20	1.0	1.0	1.0	6.0	4.0	4.5	12.0	5.0	8.0	16.5	9.0	13.0
21	1.0	1.0	1.0	6.5	4.5	5.5	14.5	5.5	9.5	19.5	8.5	14.0
22	1.5	1.0	1.0	5.5	4.0	5.0	15.0	6.0	10.5	19.0	8.5	14.0
23	1.5	1.0	1.0	4.5	4.0	4.0	17.0	7.5	12.0	15.5	13.0	14.0
24	1.5	1.0	1.5	4.5	4.0	4.0	17.5	11.0	13.5	14.0	11.5	12.5
25	1.5	1.0	1.5	5.0	3.5	4.5	18.5	9.5	13.5	18.0	10.0	14.0
26	1.5	1.0	1.5	5.5	3.5	4.5	18.5	8.0	13.0	23.5	8.5	15.5
27	1.5	1.5	1.5	5.5	4.5	5.0	12.5	8.0	10.5	20.0	12.0	16.0
28	2.0	1.5	1.5	8.5	4.5	6.5	20.0	10.5	14.5	17.0	11.5	14.0
29	---	---	---	9.5	5.5	7.5	20.0	11.5	15.0	21.5	8.5	14.5
30	---	---	---	11.0	6.0	8.5	19.0	9.0	14.0	16.0	11.0	12.5
31	---	---	---	9.0	5.0	7.5	---	---	---	18.5	10.0	13.5
MONTH	2.0	.00	.77	11.0	.50	3.7	20.0	4.0	9.9	23.5	8.5	14.7

WISCONSIN RIVER BASIN

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	18.5	7.5	13.0	18.0	16.0	17.0	21.0	15.5	18.0	17.0	13.5	15.5
2	13.0	10.5	11.5	21.5	16.5	18.5	19.5	14.5	17.0	17.0	15.0	16.0
3	20.5	11.0	15.0	22.5	18.0	20.0	19.0	14.5	16.5	16.5	15.5	16.0
4	14.5	11.0	12.5	20.5	19.0	20.0	17.5	13.5	15.5	16.5	14.0	15.5
5	22.0	9.0	15.0	22.0	19.0	20.0	16.5	13.0	14.5	16.0	14.0	15.0
6	21.0	10.5	16.0	25.0	20.0	22.5	18.0	14.0	15.5	15.5	13.5	14.5
7	16.5	13.5	14.5	22.5	19.5	21.0	19.0	13.5	16.0	16.5	13.0	14.5
8	20.5	14.0	17.0	21.0	19.0	20.0	18.5	13.5	16.0	17.0	11.5	14.0
9	20.0	14.0	17.0	25.0	20.0	22.0	18.0	14.5	16.0	17.0	12.5	14.0
10	23.0	13.0	17.5	22.5	18.5	20.5	21.5	15.5	18.0	15.0	11.0	13.0
11	23.0	13.0	18.0	20.5	18.0	19.0	21.0	15.5	18.0	13.5	9.5	11.5
12	24.0	13.5	18.5	21.0	16.0	18.5	20.5	15.5	18.0	18.5	12.0	15.0
13	21.5	14.0	17.5	18.5	16.0	17.5	20.5	16.0	18.0	18.0	15.5	16.5
14	22.5	16.0	19.0	20.0	15.5	18.0	19.5	15.5	17.5	18.5	14.0	16.5
15	20.0	13.0	16.0	23.5	16.0	19.0	23.5	16.0	20.0	14.0	12.0	13.0
16	16.5	13.0	14.5	20.0	15.5	17.5	22.0	17.5	19.5	14.0	11.5	12.5
17	19.5	14.5	16.5	21.5	16.5	18.5	22.0	17.0	19.0	15.5	10.5	13.0
18	18.5	16.5	17.5	21.0	18.5	19.5	18.5	16.0	17.0	14.0	12.0	13.0
19	18.5	15.5	17.0	23.0	17.0	19.5	20.0	15.5	17.5	12.5	10.5	11.5
20	18.0	16.0	17.0	20.5	16.0	18.0	19.5	15.0	17.0	12.5	11.0	11.5
21	22.5	15.5	18.5	19.5	14.5	17.0	20.0	14.0	16.5	13.0	12.0	12.0
22	23.0	16.5	20.0	19.5	14.0	16.5	17.5	14.5	16.0	14.5	11.5	13.0
23	23.5	17.0	20.5	18.5	15.5	17.0	22.0	16.0	18.5	14.5	11.0	12.5
24	22.5	19.5	21.0	20.0	16.0	18.0	22.0	16.5	19.0	14.5	9.0	11.5
25	22.5	19.0	20.5	23.5	18.0	21.0	21.5	16.0	18.5	11.0	9.5	10.0
26	21.5	17.0	19.5	22.5	17.5	20.0	22.0	16.5	19.0	12.5	10.5	11.5
27	22.0	17.5	19.5	20.5	16.5	18.0	21.5	17.0	19.0	12.0	9.5	10.5
28	21.0	18.0	19.5	21.5	18.5	20.5	18.5	16.0	17.0	11.5	8.5	10.0
29	20.5	16.5	18.5	21.0	16.0	18.5	16.5	15.0	16.0	11.5	8.5	9.5
30	18.5	16.5	17.0	21.0	15.0	18.0	20.0	16.0	18.0	12.0	6.5	9.0
31	---	---	---	17.5	15.5	16.5	19.0	16.0	17.5	---	---	---
MONTH	24.0	7.5	17.2	25.0	14.0	19.0	23.5	13.0	17.4	18.5	6.5	13.0

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.09	.01	.13	.13	.03	1.0	.23	.35	1.1	.44	.68
2	.08	.21	.01	.11	.11	.04	.66	.59	.39	1.1	.35	.66
3	.11	.11	.01	.15	.12	.11	.61	.36	.47	1.0	.26	.64
4	.14	.07	.01	.22	.16	.63	.58	.36	.49	1.1	.23	.60
5	.13	.06	.01	.13	.20	.67	.47	.30	.55	917	.23	.58
6	.12	.06	.00	.11	.16	1.2	.43	.26	.57	361	.26	.56
7	.10	.05	.01	.10	.12	4.9	.44	.25	113	117	.26	.53
8	.09	.05	.01	.10	.08	4.2	.84	.54	3.1	14	.26	.51
9	.11	.05	.02	.10	.07	.89	.48	.35	1.2	251	1.9	.51
10	.09	.05	.03	.10	.06	.52	.35	.27	.69	1.9	1.9	.50
11	.08	.05	.04	.11	.05	.23	.38	.25	.44	1.2	.30	.50
12	.09	.07	.06	.11	.04	.15	.31	.24	.30	.69	.32	.52
13	.07	.09	.09	.11	.03	.17	.25	.22	.25	.70	.32	1.9
14	.06	.07	.15	.10	.02	.18	.25	.21	5.2	.73	.33	9.5
15	.06	.06	.38	.10	.02	.12	3.7	.20	.83	.55	87	1.1
16	.03	.05	.33	.10	.02	18	1.2	.18	.77	.45	1.5	.66
17	.03	.05	.17	.10	.02	4.1	.29	.17	12	41	.70	.58
18	.02	.04	.15	.09	.02	2.1	.25	.19	7.6	2.8	.70	.55
19	.02	.03	.14	.09	.02	1.2	3.1	.18	1.4	2.4	.82	.55
20	.02	2.1	.14	.09	.07	.24	3.5	.18	1.3	1.7	.90	.56
21	.03	5.3	.14	.16	.05	.26	.37	.17	1.2	1.2	.91	.57
22	.03	.24	.15	.24	.04	.23	.27	.15	1.1	.89	1.0	.63
23	.02	.98	.12	.27	.04	.91	.24	.22	.99	.69	9.0	.56
24	.02	.10	.10	.18	.03	14	.24	.27	1.4	.52	1.7	.51
25	.02	.06	.10	.13	.03	62	.24	.17	4.2	83	1.1	1.9
26	.02	.05	.11	.11	.03	16	.23	.17	1.2	1.1	.92	4.1
27	.02	.04	.12	.11	.03	16	.23	.20	1.1	3.7	.78	.64
28	.02	.03	.12	.11	.03	204	.27	.21	.99	22	.70	.58
29	.02	.02	.13	.10	---	23	.24	.23	1.1	1.0	.71	.55
30	.02	.01	.25	.10	---	4.7	.23	.66	2.1	.67	.88	.53
31	.02	---	.20	.10	---	55	---	.52	---	.51	.87	---
TOTAL	1.75	10.24	3.31	3.86	1.80	435.78	21.65	8.50	166.28	1833.70	117.55	32.76

WISCONSIN RIVER BASIN

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05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.98	1.7	.73	.40	.40	3.2	14	1.6	1.2	4.5	4.7	2.7
2	.93	7.1	.65	.33	.35	3.9	9.2	5.1	1.3	4.3	3.7	3.0
3	.88	2.1	.61	.45	1.2	10	8.3	2.6	1.3	4.2	2.9	3.4
4	.79	1.1	.54	.65	5.5	31	7.8	2.6	1.3	4.3	3.0	3.8
5	.72	.82	.49	.40	17	29	6.3	2.2	1.3	2450	3.2	4.3
6	.65	.71	.49	.33	12	45	5.7	1.9	1.2	1540	3.7	4.9
7	.57	.58	.50	.30	1.3	210	5.8	1.8	451	437	3.7	5.5
8	.55	.50	.49	.29	.96	252	11	4.6	32	82	3.8	6.3
9	.64	.49	.48	.29	.80	73	6.1	2.6	9.6	607	5.0	7.3
10	.55	.47	.48	.31	.69	22	4.4	2.0	7.1	21	5.0	8.1
11	.52	.41	.43	.32	.59	5.2	4.7	1.9	6.1	16	4.6	7.5
12	.55	.48	.40	.34	.49	1.7	3.8	1.8	5.5	8.3	5.0	7.0
13	.48	.56	.38	.34	.42	.99	3.1	1.6	5.4	7.7	5.0	20
14	.42	.44	.35	.32	.36	.60	2.9	1.5	31	7.5	5.3	103
15	.57	.35	4.7	.31	.38	.57	56	1.5	5.4	5.2	448	9.9
16	2.1	.32	4.7	.30	.42	155	12	1.3	3.9	3.9	27	5.2
17	2.1	.31	.64	.30	.46	59	3.3	1.3	27	86	8.0	4.5
18	1.7	.29	.45	.29	.53	30	2.8	1.4	41	12	7.4	4.1
19	1.6	.29	.42	.28	.66	18	32	1.3	5.5	7.1	8.1	4.0
20	1.6	34	.40	.28	2.0	4.0	50	1.3	5.1	5.5	8.2	4.0
21	1.7	67	.40	.50	1.7	4.9	6.2	1.2	4.4	5.1	7.7	5.0
22	1.5	4.9	.43	.75	1.5	4.6	3.7	1.1	3.9	4.7	8.1	10
23	1.3	6.3	.35	.85	1.6	34	2.8	1.3	3.7	4.7	14	3.7
24	1.1	2.5	.30	.55	1.7	120	2.4	1.9	6.0	4.6	12	3.3
25	.99	1.7	.30	.40	1.7	292	2.0	1.2	21	302	7.1	4.2
26	.90	1.6	.31	.35	1.9	186	1.6	1.2	4.6	7.6	5.4	5.9
27	.74	1.3	.34	.34	2.3	121	1.6	1.2	4.1	14	4.3	3.9
28	.64	1.0	.36	.33	2.7	589	1.9	1.2	3.8	116	3.6	3.4
29	.60	.89	.40	.31	---	121	1.7	1.1	4.3	10	3.4	3.2
30	.57	.78	.75	.30	---	42	1.7	3.0	9.3	7.0	3.9	3.0
31	.53	---	.60	.31	---	248	---	2.4	---	5.4	3.6	---
TOTAL	29.47	140.99	22.87	11.82	61.61	2716.66	274.8	58.7	708.3	5794.6	638.4	264.1

WISCONSIN RIVER BASIN

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 sea level, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 14 to Jan. 7, Apr. 29 to May 15, July 5, 6, and July 27-31. Records are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	12	13	13	11	9.6	54	24	20	23	31	29
2	9.3	14	13	11	11	9.9	38	25	20	23	31	26
3	9.2	14	12	13	11	11	33	25	20	22	31	26
4	9.2	13	12	30	13	12	32	25	20	22	30	26
5	9.3	12	12	20	16	13	30	24	19	160	30	26
6	7.9	11	12	13	14	18	28	22	19	250	32	27
7	7.5	12	12	11	11	35	30	22	62	77	31	26
8	7.9	11	12	10	10	51	43	24	42	62	30	25
9	7.8	12	12	9.7	10	39	34	23	29	128	32	24
10	7.9	12	12	9.5	11	22	29	23	25	63	30	24
11	7.8	11	12	9.5	10	16	27	23	22	57	28	24
12	7.2	12	12	9.8	9.9	14	24	22	21	47	28	24
13	7.4	11	12	10	9.6	14	20	22	21	44	27	35
14	7.6	11	14	10	9.4	14	20	22	32	42	26	68
15	8.9	10	15	10	9.2	13	53	22	26	37	92	48
16	8.8	10	21	10	9.2	63	46	22	25	35	49	41
17	7.7	9.5	17	10	8.7	30	34	22	30	45	37	34
18	7.6	8.9	16	10	8.7	24	29	22	38	42	32	31
19	7.6	9.4	14	10	9.1	21	40	22	30	36	31	29
20	9.5	22	13	10	9.1	18	60	22	28	34	29	29
21	9.5	44	13	13	9.4	20	39	21	26	33	29	29
22	9.6	30	13	14	9.4	21	31	22	24	32	27	29
23	9.7	31	12	15	9.4	37	28	23	24	32	38	27
24	9.8	24	12	13	9.2	65	28	23	25	30	34	27
25	9.8	20	12	11	9.5	112	27	21	29	76	28	30
26	9.6	18	12	11	9.5	102	26	20	25	43	26	37
27	9.4	16	12	11	9.5	76	27	20	24	36	24	32
28	9.7	15	12	11	9.5	97	27	19	25	52	24	30
29	9.6	14	13	10	---	74	25	19	26	35	25	28
30	9.9	13	16	10	---	53	25	23	23	33	38	28
31	10	---	15	11	---	91	---	21	---	32	38	---
TOTAL	271.9	462.8	410	369.5	286.3	1195.5	987	690	800	1683	1018	919
MEAN	8.77	15.4	13.2	11.9	10.2	38.6	32.9	22.3	26.7	54.3	32.8	30.6
MAX	10	44	21	30	16	112	60	25	62	250	92	68
MIN	7.2	8.9	12	9.5	8.7	9.6	20	19	19	22	24	24
CFSM	.39	.68	.58	.53	.45	1.70	1.45	.98	1.17	2.39	1.45	1.35
IN.	.45	.76	.67	.61	.47	1.96	1.62	1.13	1.31	2.76	1.67	1.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	MEAN	8.86	11.2	9.56	9.33	9.88	22.3	17.2	13.8	14.7	20.8	15.4	14.2
MAX	12.2	15.4	13.2	11.9	12.9	38.6	32.9	22.3	26.7	54.3	32.8	30.6	30.6
(WY)	1992	1993	1993	1993	1992	1993	1993	1993	1993	1993	1993	1993	1993
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	6.85
(WY)	1991	1991	1991	1991	1991	1992	1990	1990	1992	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1990 - 1993
ANNUAL TOTAL	4071.0	9093.0	
ANNUAL MEAN	11.1	24.9	14.0
HIGHEST ANNUAL MEAN			24.9
LOWEST ANNUAL MEAN			9.29
HIGHEST DAILY MEAN	45	250	250
LOWEST DAILY MEAN	6.2	7.2	4.7
ANNUAL SEVEN-DAY MINIMUM	6.9	7.6	4.7
INSTANTANEOUS PEAK FLOW		(a)250	(a)250
INSTANTANEOUS PEAK STAGE		(b)10.90	(b)10.90
INSTANTANEOUS LOW FLOW			(c)1.5
ANNUAL RUNOFF (CFSM)	.49	1.10	.62
ANNUAL RUNOFF (INCHES)	6.67	14.90	8.36
10 PERCENT EXCEEDS	15	42	26
50 PERCENT EXCEEDS	10	22	10
90 PERCENT EXCEEDS	7.7	9.5	6.6

(a) Mean daily, backwater from debris

(b) Backwater from debris

(c) 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, 22.5°C, July 5; minimum observed, 1.5°C, Mar. 25, 31, and Apr. 1.

DISSOLVED OXYGEN: Maximum observed, 15.2 mg/L, Nov. 5; minimum observed, 4.5 mg/L, Aug. 23.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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					APR 1993				
07...	1015	7.4	600	10.5	13...	1100	20	565	8.0
NOV					MAY				
16...	1135	11	585	6.5	25...	1051	20	590	13.0
JAN 1993					JUL				
07...	1246	11	585	5.5	06...	1334	142	275	21.0
MAR					16...	0934	35	585	14.5
02...	1142	9.5	630	8.0	SEP				
					01...	0947	27	610	11.5

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	15.0	10.5	13.0	8.5	7.0	7.5	6.5	5.0	5.5	5.5	2.5	4.0
2	16.0	11.5	14.0	8.5	7.0	7.5	6.0	5.5	6.0	6.5	4.5	5.5
3	15.5	12.0	14.0	7.5	6.5	7.0	6.0	4.5	5.5	7.0	6.5	6.5
4	15.0	12.0	13.5	7.0	6.5	7.0	6.5	4.0	5.5	6.0	3.0	3.5
5	14.5	11.0	13.0	7.5	6.5	6.5	5.5	3.5	4.0	6.5	4.0	5.0
6	14.0	11.0	12.5	6.5	6.0	6.5	5.5	4.0	5.0	6.5	4.5	5.0
7	13.5	10.5	12.0	7.0	6.0	6.5	6.0	5.0	5.5	---	---	---
8	13.0	11.5	12.0	7.5	6.5	7.0	6.0	5.0	5.5	---	---	---
9	12.5	10.5	11.5	10.0	7.5	9.0	5.5	4.5	4.5	---	---	---
10	12.0	10.0	11.0	10.0	8.5	9.5	6.5	4.5	5.5	---	---	---
11	13.0	9.5	11.0	8.5	7.0	8.0	7.0	4.5	6.0	---	---	---
12	12.5	9.5	11.0	8.0	6.0	7.5	6.0	4.0	5.0	---	---	---
13	11.0	7.5	9.5	7.0	5.0	6.0	6.5	5.5	6.0	---	---	---
14	10.5	9.0	10.0	7.0	5.0	6.0	6.5	5.5	6.0	---	---	---
15	10.5	9.0	9.5	7.5	5.5	6.0	6.0	4.0	5.5	---	---	---
16	9.0	7.0	8.5	8.0	6.0	7.0	4.5	3.5	4.0	---	---	---
17	9.0	6.0	7.5	7.5	7.0	7.5	5.5	3.5	4.5	---	---	---
18	9.5	6.5	8.0	8.0	6.0	7.0	4.5	3.5	4.0	---	---	---
19	8.5	5.5	7.0	8.0	7.0	7.5	6.0	3.5	5.0	---	---	---
20	9.5	6.0	8.0	8.5	7.0	8.0	4.5	2.5	3.5	---	---	---
21	10.5	8.5	9.0	9.0	7.0	8.0	5.5	3.5	4.5	---	---	---
22	13.5	9.0	11.0	7.0	5.5	6.5	6.0	4.0	5.0	---	---	---
23	15.0	12.0	13.0	6.5	5.0	5.5	5.0	2.0	4.0	---	---	---
24	13.5	10.5	12.0	7.0	6.0	6.5	3.5	2.0	3.0	---	---	---
25	13.0	9.5	11.5	7.0	5.0	6.0	4.0	2.5	3.0	---	---	---
26	13.0	10.0	11.5	6.0	4.5	5.5	5.0	2.5	3.5	---	---	---
27	11.0	8.0	9.5	6.0	4.0	5.0	6.5	3.5	5.0	---	---	---
28	11.0	8.0	9.5	6.5	4.5	5.0	7.0	4.5	5.5	---	---	---
29	10.5	8.5	9.5	7.0	5.0	6.0	7.0	5.0	6.5	---	---	---
30	10.0	7.0	8.5	6.5	5.5	6.0	6.5	4.5	5.5	---	---	---
31	9.5	7.5	8.5	---	---	---	4.5	2.5	3.5	---	---	---
MONTH	16.0	5.5	10.6	10.0	4.0	6.8	7.0	2.0	4.9	---	---	---

WISCONSIN RIVER BASIN

05406476 BLACK EARTH CREEK AT MILLS STREET AT CROSS PLAINS, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	4.0	1.5	3.0	12.5	9.5	10.5
2	---	---	---	---	---	---	8.5	2.5	5.0	13.0	10.5	11.5
3	---	---	---	---	---	---	10.0	3.5	6.0	13.0	11.0	12.0
4	---	---	---	---	---	---	10.0	4.0	6.5	14.0	11.5	12.5
5	---	---	---	---	---	---	8.0	4.5	6.0	16.0	11.0	12.5
6	---	---	---	---	---	---	11.0	6.0	8.0	16.5	10.0	13.0
7	---	---	---	---	---	---	9.5	6.5	8.0	14.5	11.5	12.5
8	---	---	---	---	---	---	9.0	7.0	8.0	18.0	12.0	14.5
9	---	---	---	---	---	---	11.0	7.0	9.0	18.0	12.5	15.0
10	---	---	---	---	---	---	13.0	5.5	9.0	17.5	12.5	14.5
11	---	---	---	---	---	---	8.5	6.0	7.0	18.0	12.5	15.0
12	---	---	---	---	---	---	10.0	6.0	7.5	18.0	11.0	14.0
13	---	---	---	---	---	---	11.5	5.5	8.0	16.0	10.0	12.5
14	---	---	---	---	---	---	7.5	6.0	6.5	15.5	11.0	13.0
15	---	---	---	---	---	---	6.0	3.0	4.0	15.5	10.5	12.5
16	---	---	---	---	---	---	5.0	3.0	4.0	15.0	9.5	12.0
17	---	---	---	---	---	---	11.5	3.5	7.5	12.0	9.5	11.0
18	---	---	---	---	---	---	11.5	7.0	9.5	14.5	10.0	12.0
19	---	---	---	7.5	5.0	6.5	9.5	5.5	8.0	14.5	9.5	11.5
20	---	---	---	9.0	7.0	8.0	10.0	3.0	6.0	13.0	9.5	11.5
21	---	---	---	10.0	6.5	8.0	12.0	5.0	8.0	15.0	9.5	12.0
22	---	---	---	8.0	5.5	6.5	12.0	6.0	9.0	15.5	10.0	12.0
23	---	---	---	6.5	3.5	4.5	13.0	7.0	10.0	13.5	11.5	12.0
24	---	---	---	5.0	2.5	3.5	13.5	9.5	11.0	11.5	10.0	11.0
25	---	---	---	4.0	1.5	3.0	14.0	8.5	11.0	13.5	9.0	11.0
26	---	---	---	4.0	2.0	2.5	13.5	7.5	10.0	16.0	8.5	12.0
27	---	---	---	4.5	2.0	3.0	10.5	8.0	9.5	15.0	10.5	12.0
28	---	---	---	9.0	2.5	4.0	15.0	9.0	11.5	12.0	9.5	11.0
29	---	---	---	9.5	2.5	5.0	14.5	10.0	11.5	15.0	9.0	11.5
30	---	---	---	9.0	3.0	6.0	14.0	8.5	11.5	11.5	10.5	11.0
31	---	---	---	6.0	1.5	4.0	---	---	---	14.5	9.5	11.5
MONTH	---	---	---	---	---	---	15.0	1.5	8.0	18.0	8.5	12.3
JUNE			JULY			AUGUST			SEPTEMBER			
1	14.5	8.5	11.0	18.5	14.0	16.0	17.0	14.0	15.0	15.5	12.0	14.0
2	11.0	9.5	10.0	19.5	14.0	16.0	16.5	13.0	15.0	15.5	12.5	14.0
3	14.5	9.5	11.5	18.0	14.5	16.0	16.5	13.0	14.5	15.5	12.5	13.5
4	12.0	9.5	10.5	22.0	15.5	18.5	16.0	12.5	14.0	15.5	11.5	13.5
5	15.5	8.5	12.0	22.5	19.5	21.0	15.0	12.0	13.5	14.0	12.0	13.0
6	15.5	10.0	12.5	22.0	18.0	19.5	16.0	13.0	14.0	15.0	11.5	13.0
7	14.5	12.0	13.0	22.0	18.0	19.5	16.0	12.5	14.0	14.0	11.0	12.5
8	18.0	13.0	15.0	19.5	18.0	18.5	16.0	12.5	14.0	14.5	11.0	12.5
9	16.5	13.0	15.0	22.5	18.0	20.5	16.0	13.0	14.5	14.0	11.5	12.5
10	17.5	12.5	15.0	21.0	17.5	19.0	17.5	13.5	15.5	13.5	10.5	12.0
11	18.0	12.5	15.0	19.5	17.0	18.0	17.5	13.5	15.5	12.5	9.5	11.0
12	18.0	12.5	15.0	19.0	15.5	17.0	17.0	13.5	15.5	15.5	11.5	13.5
13	17.5	12.5	14.0	17.0	15.0	15.5	17.0	14.0	15.5	17.0	13.5	15.0
14	19.0	14.5	16.5	17.0	14.5	16.0	16.5	14.0	15.0	18.0	13.5	15.5
15	17.0	13.0	14.5	18.0	14.0	16.0	21.0	14.0	18.5	13.5	12.0	13.0
16	14.0	12.5	13.5	17.0	13.5	15.0	19.5	16.5	18.0	13.0	11.5	12.5
17	18.0	13.0	14.5	19.0	14.5	16.0	19.0	16.0	17.0	14.0	10.5	12.0
18	17.0	15.0	16.0	17.5	15.5	16.5	16.0	15.0	15.5	13.0	11.5	12.0
19	17.0	14.0	15.5	19.0	15.0	16.5	17.0	14.5	15.5	12.0	10.5	11.5
20	15.5	14.0	15.0	17.5	13.5	15.5	17.0	14.0	15.0	12.0	11.0	11.5
21	19.5	13.5	16.0	16.5	13.5	15.0	17.0	13.5	15.0	12.0	11.5	12.0
22	19.5	14.0	16.5	16.5	13.0	14.5	15.5	13.0	14.5	13.5	11.5	12.5
23	19.5	14.0	16.5	16.0	13.5	14.5	21.0	14.5	17.0	13.5	11.0	12.0
24	21.0	15.0	17.0	16.5	14.0	15.0	18.5	15.0	16.5	13.0	9.5	11.0
25	20.0	15.0	17.5	20.5	15.0	19.0	18.0	14.5	16.0	11.0	10.0	10.5
26	19.5	14.0	16.5	19.5	16.0	17.5	18.0	14.0	15.5	12.0	10.5	11.5
27	19.5	14.5	16.5	17.0	14.5	15.5	18.0	14.5	16.0	11.5	10.0	11.0
28	18.5	15.0	16.5	17.5	15.5	16.5	15.0	13.5	14.5	11.0	9.5	10.5
29	15.5	13.5	14.5	17.0	14.5	15.5	14.5	13.0	13.5	11.5	9.5	10.0
30	16.0	13.5	14.5	17.5	13.5	15.5	18.0	13.5	16.0	11.5	8.5	10.0
31	---	---	---	15.0	13.5	14.5	17.0	14.0	15.5	---	---	---
MONTH	21.0	8.5	14.6	22.5	13.0	16.8	21.0	12.0	15.3	18.0	8.5	12.3

05406476 BLACK EARTH CREEK AT MILLS STREET AT CROSS PLAINS, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	11.2	8.0	9.3	10.0	8.5	9.2	---	---	---	---	---	---
2	11.0	7.6	8.9	10.2	8.7	9.3	---	---	---	---	---	---
3	11.0	7.4	8.8	13.3	9.3	10.4	---	---	---	---	---	---
4	11.1	7.7	9.1	11.6	9.6	10.3	---	---	---	---	---	---
5	11.4	8.0	9.4	15.2	9.6	10.7	---	---	---	---	---	---
6	11.5	8.2	9.6	12.2	10.0	10.7	---	---	---	---	---	---
7	11.8	8.3	9.6	14.9	9.9	11.0	---	---	---	---	---	---
8	10.3	8.0	8.7	---	---	---	---	---	---	---	---	---
9	11.4	8.1	9.4	---	---	---	---	---	---	---	---	---
10	11.2	8.3	9.5	---	---	---	---	---	---	---	---	---
11	12.0	8.7	10.0	---	---	---	---	---	---	---	---	---
12	11.8	8.7	9.9	---	---	---	---	---	---	---	---	---
13	12.1	8.7	10.0	---	---	---	---	---	---	---	---	---
14	10.9	8.2	9.2	---	---	---	---	---	---	---	---	---
15	11.1	7.7	9.0	---	---	---	---	---	---	---	---	---
16	11.2	8.2	9.4	---	---	---	---	---	---	---	---	---
17	11.6	8.8	9.8	---	---	---	---	---	---	---	---	---
18	11.8	8.6	9.8	---	---	---	---	---	---	---	---	---
19	12.5	9.2	10.2	---	---	---	---	---	---	---	---	---
20	10.5	8.7	9.4	---	---	---	---	---	---	---	---	---
21	11.4	8.4	9.5	---	---	---	---	---	---	---	---	---
22	11.2	8.0	9.4	---	---	---	---	---	---	---	---	---
23	10.9	7.5	8.8	---	---	---	---	---	---	---	---	---
24	11.5	7.5	9.0	---	---	---	---	---	---	---	---	---
25	11.8	7.9	9.3	---	---	---	---	---	---	---	---	---
26	11.9	8.0	9.4	---	---	---	---	---	---	---	---	---
27	11.8	8.5	9.8	---	---	---	---	---	---	---	---	---
28	12.6	8.6	9.9	---	---	---	---	---	---	---	---	---
29	11.7	8.3	9.8	---	---	---	---	---	---	---	---	---
30	12.3	9.0	10.3	---	---	---	---	---	---	---	---	---
31	12.2	8.9	10.0	---	---	---	---	---	---	---	---	---
MONTH	12.6	7.4	9.5	---	---	---	---	---	---	---	---	---
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	12.9	7.4	9.4
23	---	---	---	---	---	---	---	---	---	10.5	7.4	8.4
24	---	---	---	---	---	---	---	---	---	11.3	7.4	9.0
25	---	---	---	---	---	---	---	---	---	12.2	8.3	9.8
26	---	---	---	---	---	---	---	---	---	12.2	8.2	10.1
27	---	---	---	---	---	---	---	---	---	11.7	8.1	9.4
28	---	---	---	---	---	---	---	---	---	11.9	8.2	9.8
29	---	---	---	---	---	---	---	---	---	12.2	8.8	10.3
30	---	---	---	---	---	---	---	---	---	9.8	8.8	9.2
31	---	---	---	---	---	---	---	---	---	12.2	8.9	10.2

WISCONSIN RIVER BASIN

05406476 BLACK EARTH CREEK AT MILLS STREET AT CROSS PLAINS, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	12.2	9.3	10.5	14.0	7.4	10.2	---	---	---	11.9	6.0	8.6
2	11.0	9.3	10.0	14.3	7.9	10.1	11.5	6.4	8.9	10.8	6.3	8.4
3	12.2	9.1	10.4	12.1	7.2	9.4	11.8	6.4	9.0	11.2	6.2	8.7
4	11.7	9.1	10.0	8.9	5.9	7.4	11.7	6.4	9.1	11.4	6.4	8.8
5	12.2	8.8	10.4	7.3	5.7	6.5	11.8	6.3	9.0	11.1	6.4	8.6
6	12.0	8.6	10.0	8.6	5.8	6.9	12.2	6.0	8.9	11.3	6.4	8.6
7	9.8	8.0	8.6	8.6	5.8	6.9	12.3	6.1	9.2	11.6	6.6	9.0
8	9.5	7.8	8.5	8.2	5.8	6.9	---	---	---	11.7	6.5	9.0
9	10.2	7.9	8.9	8.3	5.4	6.6	---	---	---	11.0	6.5	8.6
10	10.6	7.7	9.0	8.9	5.1	6.9	---	---	---	11.6	6.8	9.1
11	10.7	7.8	9.1	9.1	5.7	7.1	---	---	---	11.8	6.6	8.8
12	11.1	7.9	9.3	9.5	5.8	7.8	---	---	---	11.6	6.2	8.7
13	10.8	7.9	9.2	9.4	5.7	7.4	---	---	---	8.7	5.5	7.0
14	10.3	6.7	8.2	9.7	5.9	8.1	---	---	---	7.5	5.1	6.2
15	11.1	7.5	9.0	10.7	6.3	8.6	---	---	---	9.3	5.8	7.4
16	10.5	7.8	9.1	11.1	6.5	8.6	---	---	---	9.7	6.1	7.8
17	10.5	6.4	8.3	9.5	6.7	8.1	---	---	---	10.7	6.5	8.5
18	10.1	6.4	8.1	10.6	6.9	8.5	---	---	---	10.2	6.3	8.1
19	10.3	7.5	8.5	11.8	6.9	9.3	---	---	---	10.5	6.8	8.6
20	10.6	7.4	8.8	12.0	7.0	9.4	10.8	5.9	8.4	9.4	6.8	8.0
21	12.0	7.8	9.6	12.5	7.1	9.6	11.3	6.2	8.6	9.4	6.7	8.0
22	12.3	7.8	9.7	12.6	7.1	9.6	10.5	6.2	8.4	10.0	6.9	8.3
23	12.2	7.7	9.7	11.8	6.9	9.1	10.8	4.5	7.5	11.1	6.6	8.7
24	11.9	7.1	9.2	12.1	6.7	9.1	10.9	4.8	7.8	11.2	7.0	9.1
25	12.1	6.7	9.1	8.1	5.1	6.5	10.6	5.5	7.9	9.8	6.7	8.1
26	12.7	7.7	9.8	9.8	5.7	7.7	10.6	5.5	7.9	10.6	6.8	8.4
27	12.9	7.7	9.9	---	---	---	10.6	5.6	8.0	11.0	7.0	8.9
28	13.0	7.8	10.0	---	---	---	10.8	5.7	8.1	10.9	7.1	9.0
29	12.3	8.1	10.0	---	---	---	10.0	6.1	7.8	11.5	7.4	9.2
30	13.0	8.3	10.0	---	---	---	8.8	5.2	6.9	12.0	7.3	9.5
31	---	---	---	---	---	---	10.8	5.3	7.9	---	---	---
MONTH	13.0	6.4	9.4	---	---	---	---	---	---	12.0	5.1	8.5

WISCONSIN RIVER BASIN

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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. Rainfall estimated to be 0.00 for Nov. 27, 28, Dec. 10-14, Jan. 22, 28, Feb. 10, 13, 22, 23, 26-28, Mar. 1, 10-12, 16, 19, 20, 22, and Apr. 1, 2 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the periods Jan. 6-21, Apr. 15-30, and June 3 to July 18.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.26 in., Aug. 15, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.26 in., Aug. 15.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.99	.00	.00	.00	.00	.00	.50	.00	---	.00	.00
2	.00	.41	.00	.00	.00	.00	.00	.48	.38	---	.00	.00
3	.00	.00	.00	.10	.00	.00	.00	.19	---	---	.00	.00
4	.00	.00	.00	.19	.00	.00	.00	.11	---	---	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.22	.00
6	.00	.00	.00	---	.00	.00	.00	.00	---	---	.02	.00
7	.00	.00	.00	---	.00	.00	.19	.09	---	---	.00	.00
8	.15	.04	.00	---	.00	.00	.44	.68	---	---	.00	.02
9	.04	.08	.00	---	.00	.00	.01	.00	---	---	.36	.00
10	.00	.03	.00	---	.00	.00	.00	.13	---	---	.00	.00
11	.00	.01	.00	---	.00	.00	.27	.00	---	---	.00	.25
12	.00	.37	.00	---	.00	.00	.00	.00	---	---	.00	.00
13	.00	.00	.00	---	.00	.00	.00	.00	---	---	.00	1.54
14	.00	.00	.00	---	.00	.00	.46	.00	---	---	.02	.74
15	.48	.00	1.26	---	.00	.00	---	.00	---	---	2.26	.02
16	.02	.00	.03	---	.00	.00	---	.00	---	---	.00	.00
17	.00	.00	.00	---	.00	.00	---	.22	---	---	.00	.01
18	.02	.00	.00	---	.00	.00	---	.07	---	---	.02	.01
19	.00	.37	.02	---	.00	.00	---	.16	---	.00	.03	.02
20	.27	2.02	.00	---	.00	.00	---	.01	---	.00	.00	.05
21	.00	.30	.00	---	.00	.00	---	.00	---	.00	.00	.01
22	.00	.51	.00	.00	.00	.00	---	.13	---	.00	.00	.04
23	.00	.07	.00	.00	.00	.71	---	.45	---	.00	1.51	.00
24	.00	.00	.00	.00	.00	.34	---	.00	---	.00	.00	.00
25	.00	.12	.00	.00	.00	.00	---	.00	---	1.48	.00	.74
26	.00	.00	.00	.00	.00	.00	---	.00	---	.00	.00	.11
27	.00	.00	.00	.00	.00	.01	---	.17	---	.45	.00	.01
28	.00	.00	.00	.00	.00	.00	---	.00	---	.04	.00	.02
29	.00	.00	.41	.00	---	.00	---	.00	---	.00	.23	.01
30	.00	.00	.17	.00	---	.01	---	.89	---	.00	.46	.00
31	.06	---	.00	.00	---	1.39	---	.01	---	.01	.00	---
TOTAL	1.04	5.32	1.89	---	0.00	2.46	---	4.29	---	---	5.13	3.60

WISCONSIN RIVER BASIN

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. Rainfall estimated to be 0.00 for Nov. 27, Dec. 4, 12-14, Jan. 12, 15, 18, 22, 28, Feb. 9, 10, 12, 13, 23, 26-28, Mar. 1, 12, 15, 16, 19, 20, and Apr. 1, 2, 17 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the periods Jan. 6-9 and Mar. 23-27. 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, 3.89 in., July 5, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.89 in., July 5.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.99	.00	.00	.00	.00	.00	.51	.00	.00	.01	.00
2	.00	.37	.00	.00	.00	.00	.00	.46	.35	.04	.00	.00
3	.00	.00	.00	.10	.00	.00	.00	.16	.01	.06	.00	.00
4	.00	.00	.00	.18	.00	.00	.00	.11	.18	.27	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.01	3.89	.22	.00
6	.00	.00	.00	---	.00	.00	.00	.00	.00	.01	.02	.00
7	.00	.00	.00	---	.00	.00	.19	.10	1.56	.37	.00	.00
8	.15	.04	.00	---	.00	.00	.42	.41	.15	.30	.00	.02
9	.03	.07	.00	---	.00	.00	.00	.00	.00	1.63	.27	.00
10	.00	.03	.00	.00	.00	.00	.00	.05	.00	.43	.00	.00
11	.00	.00	.00	.00	.00	.00	.28	.00	.00	.10	.00	.20
12	.00	.36	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.34	.21	.00	1.44
14	.00	.00	.00	.00	.00	.00	.37	.00	.44	.01	.02	.73
15	.47	.00	1.21	.00	.00	.00	1.59	.00	.00	.00	2.27	.01
16	.02	.00	.02	.00	.00	.00	.18	.00	.01	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.19	.99	.35	.00	.00
18	.01	.00	.00	.00	.00	.00	.05	.07	.00	.36	.02	.02
19	.00	.40	.02	.00	.00	.00	.87	.05	.23	.01	.06	.01
20	.26	1.99	.00	.05	.00	.00	.67	.00	.00	.00	.00	.05
21	.00	.30	.00	.71	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.50	.00	.00	.00	.12	.00	.12	.00	.00	.00	.07
23	.00	.03	.00	.00	.00	---	.00	.36	.00	.00	1.06	.00
24	.00	.00	.00	.00	.00	---	.00	.00	.68	.00	.00	.00
25	.00	.11	.00	.00	.00	---	.00	.00	.04	1.41	.00	.69
26	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.03	.10
27	.00	.00	.00	.00	.00	---	.36	.15	.00	.42	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.07	.03	.00	.03
29	.00	.00	.40	.00	---	.00	.04	.00	.14	.00	.20	.00
30	.00	.00	.18	.00	---	.00	.00	.83	.53	.00	.33	.01
31	.05	---	.00	.00	---	1.21	---	.01	---	.01	.00	---
TOTAL	0.99	5.19	1.83	---	0.00	---	5.02	3.58	5.73	9.91	4.51	3.38

WISCONSIN RIVER BASIN

175

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. Rainfall estimated to be 0.00 for Dec. 13, 14, 17, Jan. 10, 22, Feb. 10, 13, 16, 26, 28, Mar. 1, 12, 15, 16, 19, 20, 22, and Apr. 1-3, 17 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.60 in., July 5, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.60 in., July 5.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
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	.65	.00	.00	.00	.00
2	.00	.28	.00	.00	.00	.00	.00	.40	.38	.08	.00	.00
3	.00	.00	.00	.14	.00	.00	.00	.20	.02	.09	.00	.00
4	.00	.00	.00	.17	.00	.00	.00	.11	.19	.18	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.01	3.60	.19	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.02	.00
7	.00	.00	.00	.00	.00	.00	.21	.09	2.04	.86	.00	.00
8	.13	.05	.00	.00	.00	.00	.44	.68	.19	.17	.00	.04
9	.03	.09	.00	.00	.00	.00	.00	.00	.00	1.41	.37	.00
10	.01	.05	.00	.00	.00	.00	.00	.13	.00	.46	.00	.00
11	.00	.00	.00	.00	.00	.00	.31	.00	.00	.11	.00	.22
12	.00	.34	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.56	.33	.00	1.58
14	.00	.00	.00	.00	.00	.00	.42	.00	.51	.00	.02	.78
15	.53	.00	1.36	.00	.00	.00	1.78	.00	.00	.00	2.53	.00
16	.02	.00	.01	.00	.00	.00	.21	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.23	1.17	.41	.00	.01
18	.01	.00	.00	.00	.00	.00	.07	.08	.00	.28	.02	.01
19	.00	.39	.00	.00	.00	.00	.97	.16	.29	.00	.10	.01
20	.28	2.00	.00	.05	.00	.00	.88	.01	.00	.00	.00	.08
21	.00	.28	.00	.73	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.58	.00	.00	.00	.00	.00	.14	.00	.00	.01	.07
23	.00	.05	.00	.00	.00	.76	.00	.46	.00	.00	1.23	.00
24	.00	.00	.00	.00	.00	.35	.00	.00	.92	.00	.00	.00
25	.00	.06	.00	.00	.00	.00	.00	.00	.04	1.55	.00	.72
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.06
27	.00	.00	.00	.00	.00	.00	.35	.17	.00	.46	.00	.00
28	.00	.00	.00	.00	.00	.00	.01	.00	.02	.04	.00	.04
29	.00	.00	.42	.00	---	.00	.03	.00	.13	.00	.21	.00
30	.00	.00	.18	.00	---	.03	.00	.90	.67	.00	.48	.00
31	.06	---	.00	.00	---	1.37	---	.02	---	.01	.00	---
TOTAL	1.07	5.27	1.97	1.09	0.00	2.51	5.68	4.43	7.14	10.05	5.21	3.62

WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI

LOCATION.--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 sea level, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Jan. 18 and Feb. 17, 18, 24, 25. Records are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	4.8	4.2	3.9	4.2	3.8	11	7.3	6.4	6.7	8.1	6.3
2	2.6	6.7	4.1	3.6	4.4	3.8	9.5	11	6.3	6.7	7.8	6.4
3	2.6	5.9	4.1	4.0	4.5	3.9	9.0	11	6.9	6.6	7.5	6.5
4	2.6	4.1	4.0	7.2	5.4	4.4	10	10	6.5	6.3	7.5	6.3
5	2.9	3.7	3.8	4.2	5.5	5.3	8.5	8.2	6.6	39	7.5	6.2
6	2.9	3.6	3.8	3.7	4.9	6.7	8.6	7.7	6.3	50	7.8	6.0
7	3.0	3.5	3.8	3.5	4.1	9.4	8.5	7.5	22	14	7.7	6.2
8	3.5	3.3	3.8	3.2	4.0	12	18	10	14	17	7.5	6.3
9	4.0	3.3	3.8	3.1	4.0	9.8	9.9	7.8	8.2	55	7.6	6.5
10	4.0	3.3	3.9	3.1	4.0	7.2	8.2	7.4	7.1	21	7.6	6.5
11	4.0	3.3	3.7	3.1	4.0	5.8	9.1	7.3	6.7	19	7.4	6.7
12	3.8	3.9	3.6	3.1	4.0	5.3	8.0	7.2	6.5	13	7.3	7.3
13	3.8	4.1	3.6	3.3	4.0	5.1	6.9	7.0	6.3	12	7.3	9.2
14	3.8	3.4	3.6	3.3	4.0	5.0	7.1	7.0	9.3	12	7.1	23
15	3.9	3.1	7.2	3.3	3.9	4.9	37	6.9	6.8	10	36	8.3
16	4.3	3.2	11	3.3	3.8	20	19	6.8	6.5	9.8	11	6.7
17	4.0	3.3	6.0	3.3	3.8	7.3	10	6.8	8.8	12	7.6	6.5
18	3.8	3.3	4.9	3.3	3.9	6.2	9.3	7.0	12	13	7.3	6.4
19	3.8	3.5	4.6	3.3	4.0	5.8	18	6.9	8.0	11	7.3	6.3
20	4.0	14	4.2	3.2	4.0	5.6	32	6.8	7.9	9.6	7.0	6.3
21	4.2	25	4.2	4.3	4.1	6.1	12	6.6	7.1	9.1	6.6	6.4
22	4.2	8.5	4.1	5.2	4.0	6.1	10	6.5	6.7	8.9	6.5	6.3
23	4.0	8.6	4.1	4.7	4.0	12	9.4	6.9	6.4	8.4	16	6.3
24	3.9	5.8	3.8	4.5	3.9	23	9.1	7.2	6.5	8.4	9.4	6.2
25	3.8	5.2	3.7	3.8	3.8	38	8.6	6.7	8.1	30	6.8	7.4
26	3.8	5.5	3.4	3.8	3.8	28	8.1	6.5	6.6	10	6.5	8.3
27	3.7	5.0	3.3	3.8	3.8	20	8.1	6.7	6.3	9.4	6.3	6.8
28	3.6	4.6	3.3	3.8	3.8	33	8.9	6.4	6.3	13	6.3	6.5
29	3.6	4.5	4.4	3.6	---	31	8.2	6.0	6.2	8.8	6.5	6.3
30	3.6	4.2	6.0	3.5	---	19	7.7	7.5	7.9	8.4	8.2	6.3
31	3.6	---	5.1	3.8	---	42	---	7.0	---	8.1	6.7	---
TOTAL	111.9	164.2	137.1	116.8	115.6	395.5	347.7	231.6	237.2	466.2	267.7	216.7
MEAN	3.61	5.47	4.42	3.77	4.13	12.8	11.6	7.47	7.91	15.0	8.64	7.22
MAX	4.3	25	11	7.2	5.5	42	37	11	22	55	36	23
MIN	2.6	3.1	3.3	3.1	3.8	3.8	6.9	6.0	6.2	6.3	6.3	6.0
CFSM	.67	1.02	.82	.70	.77	2.37	2.15	1.39	1.47	2.79	1.60	1.34
IN.	.77	1.13	.95	.81	.80	2.73	2.40	1.60	1.64	3.22	1.85	1.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

	4.34	4.99	3.93	3.56	4.31	7.53	6.28	4.93	4.69	6.00	4.35	4.60
MEAN	4.34	4.99	3.93	3.56	4.31	7.53	6.28	4.93	4.69	6.00	4.35	4.60
MAX	6.02	8.76	5.49	5.01	6.22	12.8	11.6	7.47	7.91	15.0	8.64	7.22
(WY)	1985	1986	1986	1986	1985	1993	1993	1993	1993	1993	1993	1993
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1985 - 1993

ANNUAL TOTAL	1437.3	2808.2	4.96	
ANNUAL MEAN	3.93	7.69	7.69	1993
HIGHEST ANNUAL MEAN			3.18	1990
LOWEST ANNUAL MEAN				
HIGHEST DAILY MEAN	25	Nov 21	81	Jul 25 1985
LOWEST DAILY MEAN	2.4	Aug 24	1.7	(a) Dec 24, 25 1989
ANNUAL SEVEN-DAY MINIMUM	2.6	Aug 19	1.8	Sep 26 1990
INSTANTANEOUS PEAK FLOW			111	Jul 25 1985
INSTANTANEOUS PEAK STAGE			7.57	Jul 5 1993
INSTANTANEOUS LOW FLOW			2.4	Oct 3, 4
ANNUAL RUNOFF (CFSM)	.73	1.43	.92	
ANNUAL RUNOFF (INCHES)	9.92	19.38	12.51	
10 PERCENT EXCEEDS	5.1	12	7.3	
50 PERCENT EXCEEDS	3.6	6.4	4.1	
90 PERCENT EXCEEDS	2.8	3.5	2.4	

(a) Also occurred Aug. 9, 10, Sept. 30, Oct. 1, 2, 1990

(b) Gage height, 5.84 ft

(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 1991 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 and July 25, 1993; minimum observed, 0.0°C, on several days during 1985, 1986, 1990, 1991, and 1993.

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, 96 tons, July 5, 1993; 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, 24.5°C, July 25; minimum observed, 0.0°C, Dec. 24, Jan. 18-20, 29, Feb. 23-27, and Mar. 12, 14, 17, 25.

DISSOLVED OXYGEN: Maximum observed, 13.1 mg/L, July 7; minimum observed, 4.0 mg/L, Sept. 12.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 96 tons, July 5; minimum daily, 0.22 ton, Oct. 1-3.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 449 lb, July 5; minimum daily, 1.2 lb, Oct. 31.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	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)
OCT 1992									
*04...	1635	--	2.8	8.0	3.2	--	--	12	336
*15...	1530	--	3.8	8.1	3.7	--	--	22	348
NOV									
*01...	1820	--	6.0	7.6	13	--	--	239	606
*02...	1154	--	6.8	7.5	8.1	--	--	120	480
*15...	1605	--	3.1	7.8	1.5	--	--	61	386
15...	1610	--	3.1	--	--	--	--	--	--
20...	1315	--	9.5	7.8	--	--	--	780	1160
20...	1615	--	22	7.5	--	--	--	1080	1350
20...	2200	--	30	7.6	--	--	--	620	884
20...	2315	--	38	--	--	44	24	840	1030
21...	0115	--	45	--	--	38	21	660	854
*21...	0833	--	32	7.4	--	--	--	256	492
21...	0835	--	31	--	--	34	18	248	478
21...	0845	--	31	--	--	35	19	212	446
21...	1256	--	19	7.5	5.3	--	--	148	410
21...	1300	--	19	7.6	--	--	--	148	402
21...	1645	--	12	7.6	--	--	--	116	402
*22...	0945	--	7.1	7.7	2.4	--	--	80	406
DEC									
*13...	1215	--	3.6	8.0	<1.0	--	--	58	382
13...	1220	--	3.6	--	--	--	--	--	--
15...	1815	--	8.4	7.9	42	--	--	413	830
15...	2200	--	16	8.0	42	--	--	458	936
16...	0810	--	11	--	--	--	--	--	--
*16...	0910	--	10	7.7	8.7	--	--	118	398
JAN 1993									
*18...	1215	3.3	--	8.1	1.3	--	--	43	372
*18...	1400	3.3	--	--	--	--	--	--	--
FEB									
*14...	1515	--	4.0	8.1	<1.0	--	--	40	352
*14...	1523	--	4.0	--	--	--	--	--	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

[illegible]

WISCONSIN RIVER BASIN

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05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
MAR 1993								
*05...	1130	4.4	8.0	55	15	--	42	376
*07...	1330	7.1	7.7	--	--	--	80	410
*08...	1525	20	7.3	--	32	--	416	640
*14...	1515	4.9	7.9	--	1.4	--	57	376
16...	1345	40	7.9	--	5.3	--	69	356
17...	1345	6.8	--	--	--	--	--	--
24...	1345	17	7.4	--	24	--	232	454
24...	1530	31	7.5	--	--	--	568	--
24...	1730	43	7.5	--	34	--	616	828
24...	2315	33	7.5	--	--	--	404	--
25...	0830	17	7.6	--	11	--	242	398
25...	1145	23	7.7	--	12	--	192	362
25...	1300	31	7.5	--	19	--	572	608
25...	1330	36	7.5	--	--	--	348	--
25...	1445	50	7.6	--	15	--	612	750
25...	1645	60	7.5	--	16	--	1040	1080
*25...	1646	60	7.5	--	--	--	518	--
25...	2345	53	7.4	--	--	--	344	--
26...	0145	33	7.6	--	14	--	240	382
26...	0745	16	7.6	--	--	--	138	--
26...	1400	24	7.5	--	--	--	306	492
26...	1600	38	7.4	--	--	--	486	--
*26...	1601	38	7.5	--	--	--	470	--
26...	1815	46	7.3	--	--	--	252	506
26...	2300	28	7.4	--	--	--	174	--
27...	0200	20	7.5	--	--	--	127	316
*27...	1240	13	7.7	--	--	--	58	314
27...	1245	14	--	--	--	--	--	--
27...	1500	21	7.6	--	--	--	236	--
27...	1600	27	7.5	--	--	--	310	522
27...	1715	32	7.4	--	--	--	360	590
27...	2215	24	7.6	--	--	--	147	--
28...	1300	21	7.7	--	--	--	368	--
28...	1345	38	7.6	--	--	--	1020	--
28...	1400	45	--	--	--	--	--	--
28...	1500	56	7.4	--	--	--	1470	1700
28...	1700	61	7.5	--	--	--	984	1040
28...	2330	53	7.5	--	--	--	239	--
*29...	1515	51	7.4	--	13	800	668	864
29...	1530	52	--	--	--	--	--	--
29...	1900	54	--	--	--	--	--	--
29...	2130	40	--	--	--	--	--	--
29...	2230	31	--	--	--	--	--	--
31...	0500	20	7.6	--	--	--	132	362
31...	0501	20	--	--	--	--	--	--
31...	0630	31	7.5	--	--	--	352	--
31...	0631	31	--	--	--	--	--	--
31...	0815	45	7.5	--	--	--	436	--
31...	0816	45	--	--	--	--	--	--
31...	1045	58	7.5	--	--	--	492	634
31...	1046	58	--	--	--	--	--	--
31...	2101	48	--	--	--	--	--	--
31...	2200	38	7.5	--	--	--	112	284

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAR 1993							
05...	144	12	2.35	1.51	0.480	51	--
07...	128	24	1.40	4.83	1.52	90	--
08...	130	56	0.941	4.02	2.30	--	--
14...	84	8	2.40	0.125	0.130	102	--
16...	106	12	2.08	0.644	0.350	--	--
17...	--	--	--	--	--	75	--
24...	120	36	1.42	4.01	1.80	332	--
24...	--	--	--	7.65	2.92	589	91
24...	162	72	1.21	5.40	2.61	686	--
24...	--	--	--	2.49	1.44	302	92
25...	76	30	1.33	1.72	1.02	--	--
25...	86	26	1.22	2.00	1.25	162	--
25...	128	80	1.09	2.91	2.31	--	--
25...	--	--	--	2.42	1.54	343	--
25...	112	60	0.968	2.30	1.78	583	92
25...	132	104	0.789	1.89	1.89	1060	91
25...	--	--	--	1.99	1.83	832	--
25...	--	--	--	1.78	1.27	267	91
26...	84	24	0.984	1.45	1.00	255	--
26...	--	--	--	1.30	0.830	123	--
26...	92	30	1.02	1.80	1.45	298	--
26...	--	--	--	1.85	1.67	546	--
26...	--	--	--	1.83	1.66	546	--
26...	88	24	0.715	1.67	1.40	403	--
26...	--	--	--	1.47	1.01	179	--
27...	76	22	1.04	1.40	0.920	121	--
27...	84	9	1.31	1.34	1.02	--	--
27...	--	--	--	--	--	93	--
27...	--	--	--	1.74	1.57	241	--
27...	98	32	0.928	1.80	1.66	365	--
27...	104	32	0.805	1.74	1.83	400	--
27...	--	--	--	1.37	0.990	207	--
28...	--	--	--	1.75	1.90	351	--
28...	--	--	--	2.41	3.01	--	--
28...	--	--	--	--	--	1080	--
28...	182	128	0.318	2.12	2.92	1520	--
28...	126	98	0.388	1.96	2.10	804	--
28...	--	--	--	1.34	1.04	218	--
29...	118	64	0.500	1.41	1.49	--	--
29...	--	--	--	--	--	706	--
29...	--	--	--	--	--	900	--
29...	--	--	--	--	--	176	--
29...	--	--	--	--	--	162	--
31...	102	18	1.42	0.487	0.460	--	--
31...	--	--	--	--	--	142	--
31...	--	--	--	0.818	0.920	--	--
31...	--	--	--	--	--	358	--
31...	--	--	--	0.915	1.14	--	--
31...	--	--	--	--	--	420	--
31...	96	36	1.11	1.11	1.29	--	--
31...	--	--	--	--	--	516	--
31...	--	--	--	--	--	110	--
31...	74	4	1.35	0.736	0.710	--	--

WISCONSIN RIVER BASIN

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05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	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)
APR 1993								
01...	0015	18	7.5	--	--	--	--	108
01...	0016	18	--	--	--	--	--	--
08...	0400	20	7.7	--	--	--	--	370
08...	0445	28	7.7	--	--	--	--	692
08...	0530	33	7.6	--	--	--	--	728
08...	0930	24	7.6	--	--	--	--	140
08...	1345	15	7.8	--	--	--	--	73
15...	0745	27	7.8	--	--	--	--	456
15...	0900	41	7.7	--	--	--	--	952
15...	1600	55	7.8	--	--	--	--	174
16...	0145	37	7.8	--	--	--	--	119
16...	0700	20	7.8	--	--	--	--	80
*18...	1425	9.2	7.9	--	<1.0	--	--	33
18...	1430	9.2	--	--	--	--	--	--
19...	1530	22	7.9	--	5.5	18000	--	402
19...	1630	28	7.8	--	7.4	20000	--	434
19...	1845	34	7.8	--	6.4	18000	--	287
20...	0545	41	7.7	--	5.9	8000	--	290
20...	1015	40	7.6	33	3.2	15000	--	112
26...	1400	8.1	8.2	9	1.8	590	--	10
MAY								
12...	1330	7.3	8.3	--	2.5	18000	2100	13
12...	1335	2.3	--	--	--	--	--	--
*25...	1550	6.8	8.1	--	2.1	45000	4700	14
JUN								
*07...	1015	6.3	8.0	--	1.5	<10	2400	40
07...	1100	7.3	--	--	--	--	--	--
07...	1230	17	7.8	--	19	--	--	1080
07...	1330	32	7.7	--	--	--	--	1120
*07...	1420	42	--	--	--	--	--	--
07...	1425	43	7.6	--	19	--	--	1210
07...	1445	45	7.7	--	--	--	--	--
07...	1630	51	7.7	--	7.0	--	--	415
07...	1945	41	7.8	--	--	--	--	285
07...	2130	32	7.7	--	5.5	44000	--	224
08...	0845	15	7.8	--	3.3	59000	--	128
08...	1230	12	--	--	--	>1200000	--	--
08...	1630	10	--	--	--	82000	--	--
17...	2200	17	7.7	--	11	--	--	--
17...	2315	24	7.7	--	12	--	--	--
18...	0530	14	7.5	--	4.7	--	--	--
23...	1130	6.3	8.0	13	1.6	29000	1700	64
23...	1245	6.3	--	--	--	--	--	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

[illegible]

WISCONSIN RIVER BASIN

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05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
JUL 1993							
05...	0845	24	7.6	13	--	700	976
05...	1430	44	7.3	--	--	990	--
05...	1615	55	7.4	--	--	1580	--
*05...	1616	55	7.5	--	--	1420	--
05...	1645	56	--	--	--	--	--
05...	1830	62	7.6	9.4	>900000	980	1210
05...	2100	79	7.4	--	--	590	--
05...	2200	94	7.2	--	--	1040	--
05...	2230	106	7.1	6.8	150000	1040	1310
05...	2300	111	7.1	6.0	120000	1050	1210
06...	0115	96	7.1	5.1	130000	400	648
06...	0930	58	7.4	--	--	165	--
*06...	0931	58	7.4	--	--	140	--
06...	1430	40	7.6	4.4	54000	130	380
06...	1930	23	7.6	3.2	25000	116	398
08...	0330	17	--	--	--	190	--
08...	1530	25	7.7	--	31000	568	--
08...	2000	18	--	--	--	336	--
08...	2100	18	--	--	--	780	--
09...	0115	29	7.6	9.4	57000	4980	--
09...	0300	58	7.3	--	>270000	2320	--
09...	0700	76	7.3	6.3	>100000	480	--
09...	1200	68	7.6	--	--	185	368
09...	1715	51	7.7	--	--	138	370
09...	2200	31	7.7	--	--	108	376
*10...	1230	15	7.5	--	--	87	434
10...	1830	18	--	--	--	--	--
10...	1930	24	7.9	4.7	--	444	740
10...	2015	29	7.8	4.1	--	424	716
10...	2100	35	7.8	5.4	--	544	832
11...	1430	18	8.0	1.9	--	88	432
12...	1200	13	--	--	--	--	--
17...	1445	18	7.9	--	--	252	562
*19...	1315	10	7.8	--	17000	55	428
21...	1345	9.5	6.6	--	--	<2	<10
25...	0415	28	7.7	51	--	2070	2360
25...	0515	43	7.6	11	--	976	1190
25...	0545	50	7.5	13	--	1590	1900
25...	1430	32	7.7	--	--	216	460
25...	2130	15	7.9	3.7	--	88	426
26...	1405	9.8	--	--	--	--	--
27...	2400	18	7.7	6.0	190000	556	820
*28...	1035	12	7.6	2.7	120000	77	440
28...	1045	12	--	--	--	--	--
28...	1130	11	--	--	--	--	--
AUG							
03...	1250	7.6	7.9	2.1	21000	44	394
04...	1320	7.6	--	--	--	--	--
15...	0630	21	7.9	--	--	844	1190
15...	0700	37	7.8	15	--	1000	1260
15...	0830	52	7.6	12	--	1160	1300
15...	1045	56	7.6	10	--	346	548
15...	1800	46	7.8	6.3	--	83	328
15...	2200	27	7.7	--	--	73	336
16...	0315	17	7.8	--	--	61	382
*16...	0940	9.5	7.7	2.4	47000	51	416
23...	1700	17	7.9	5.8	--	314	660
23...	1800	38	7.6	13	--	1260	1450
23...	1830	43	7.7	12	--	992	1190
23...	2215	32	7.7	6.3	--	154	412
23...	2330	24	7.6	5.8	--	137	416

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUL 1993							
05...	182	120	3.06	0.219	1.78	764	--
05...	--	--	--	0.098	1.74	1010	97
05...	--	--	--	0.216	3.56	1800	--
05...	--	--	--	0.227	3.38	1590	--
05...	--	--	--	--	--	2310	99
05...	190	180	1.33	0.160	2.38	--	--
05...	--	--	--	0.135	1.99	744	--
05...	--	--	1.32	0.138	2.78	1190	--
05...	182	180	0.726	0.167	2.90	1110	100
05...	166	170	0.645	0.136	2.69	1040	100
06...	108	90	0.794	0.080	1.72	499	99
06...	--	--	--	0.137	0.750	201	--
06...	--	--	--	0.147	0.720	172	--
06...	92	22	1.48	0.128	0.630	175	--
06...	94	26	1.63	0.084	0.490	160	--
08...	--	--	--	0.057	0.440	--	--
08...	--	--	--	0.090	1.24	573	--
08...	--	--	--	0.076	0.650	365	--
08...	--	--	--	0.083	1.60	735	99
09...	--	--	--	0.096	4.13	4870	--
09...	--	--	--	0.145	3.78	2340	99
09...	--	--	--	0.099	1.55	515	99
09...	--	40	--	0.072	0.870	213	97
09...	--	28	--	0.076	0.620	134	--
09...	--	28	--	0.080	0.650	113	--
10...	--	15	--	0.122	0.300	--	--
10...	--	--	--	--	--	636	--
10...	--	80	--	0.107	1.09	468	100
10...	--	68	--	0.120	0.980	451	99
10...	--	80	--	0.131	1.36	578	99
11...	--	13	--	0.109	0.320	--	--
12...	--	--	--	--	--	121	--
17...	--	52	--	0.105	0.690	351	--
19...	--	12	--	0.099	0.220	--	--
21...	--	<2	--	<0.005	<0.020	--	--
25...	448	388	--	0.825	7.46	1970	--
25...	176	120	--	0.087	1.59	953	98
25...	234	190	--	0.156	2.70	1560	99
25...	118	44	--	0.029	0.700	203	97
25...	112	17	--	0.062	0.350	83	--
26...	--	--	--	--	--	58	--
27...	--	82	--	0.114	0.990	499	100
28...	--	14	--	0.089	0.280	78	96
28...	--	--	--	--	--	78	--
28...	--	--	--	--	--	173	--
AUG							
03...	--	8	--	0.039	0.120	--	--
04...	--	--	--	--	--	43	--
15...	--	136	--	0.521	2.77	907	--
15...	--	140	--	0.215	2.78	1080	--
15...	--	132	--	0.153	2.32	1080	98
15...	--	46	--	0.122	1.37	314	98
15...	--	16	--	0.061	0.690	187	75
15...	--	13	--	0.049	0.570	75	--
16...	--	12	--	0.048	0.400	55	--
16...	--	11	--	0.074	0.220	46	--
23...	--	44	--	0.027	0.420	305	--
23...	--	146	--	0.038	2.24	33100	100
23...	--	124	--	0.060	1.74	941	97
23...	--	30	--	0.007	0.560	218	95
23...	--	24	--	0.011	0.480	165	--

WISCONSIN RIVER BASIN

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05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
SEP 1993												
01...	1250	6.3	7.8	--	24	384	--	6	0.039	0.090	--	--
01...	1255	6.3	--	--	--	--	--	--	--	--	63	--
*13...	1730	12	7.7	6.9	170	502	112	26	0.144	0.710	--	--
13...	1745	12	--	--	--	--	--	--	--	--	170	--
14...	0045	19	8.0	8.6	265	594	142	39	0.243	1.21	276	--
14...	0130	27	7.9	8.4	524	818	150	66	0.105	1.31	567	96
14...	0200	33	7.9	8.7	724	1010	158	78	0.110	1.64	770	98
14...	0700	25	8.0	6.3	150	448	120	24	0.148	0.960	--	--
14...	1040	28	7.9	5.6	124	430	118	18	0.172	1.00	150	--
*14...	1041	28	8.1	5.2	126	422	--	20	--	0.980	136	--
14...	1900	16	7.7	2.6	70	394	--	11	0.092	0.570	--	--
27...	1710	6.8	--	--	--	--	--	--	--	--	80	--
*27...	1800	6.8	7.8	1.0	28	384	--	7	0.050	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)
JUN 1993											
**07...	1445	45	<0.10	0.5	<1.9	<1.0	<1.0	72	<0.20	<1.0	<1.0
**17...	2215	19	5.2	0.8	<0.3	<1.0	<1.0	1.8	<0.20	<1.0	<1.0
JUL											
**05...	1605	54	<0.15	0.9	<0.3	<1.0	<1.0	6.1	<0.20	<1.0	<1.0
**09...	0840	77	<0.10	<0.1	<0.3	<1.0	<1.0	1.3	<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 WHOLE (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)
JUN 1993											
07...		<0.20	<1.0	57.0	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50
17...		<0.20	<1.0	2.10	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50
JUL											
05...		<0.20	<1.0	6.00	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	0.54
09...		<0.20	<1.0	1.30	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50

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					APR 1993				
07...	1153	3.0	535	10.5	10...	1425	3.5	530	4.0
NOV					13...	1358	6.8	540	10.5
16...	1436	3.3	545	2.5	MAY				
21...	0855	31	320	7.0	25...	1149	6.6	555	13.0
JAN 1993					JUL				
07...	1425	3.5	530	4.0	16...	1122	10	575	14.0
MAR					SEP				
02...	1305	3.8	570	7.5	01...	1107	6.2	565	12.5

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE
 ** GRAB SAMPLE

WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	7.5	6.5	7.0	6.0	4.0	5.0	3.0	.5	1.5
2	---	---	---	8.5	6.5	7.5	5.5	4.5	5.0	4.0	2.0	3.0
3	---	---	---	7.5	6.5	7.0	5.5	3.0	4.5	5.5	3.5	4.5
4	---	---	---	7.0	6.0	6.5	5.5	2.5	4.5	3.5	2.0	2.5
5	---	---	---	7.5	6.0	6.5	4.5	2.0	3.0	4.5	2.5	3.5
6	13.5	9.5	11.5	6.5	5.5	6.0	5.0	2.5	4.0	---	---	---
7	13.5	9.0	11.5	7.0	5.5	6.0	5.0	4.0	4.5	---	---	---
8	12.5	10.5	11.5	7.5	6.0	6.5	5.5	3.5	4.5	4.0	1.0	2.5
9	12.0	9.5	10.5	10.5	7.5	9.0	4.5	2.5	3.5	3.0	1.5	2.5
10	11.0	9.0	10.5	10.0	8.0	9.0	5.5	3.5	4.5	4.0	1.5	2.5
11	12.5	8.5	10.0	8.5	6.0	7.5	6.5	3.0	5.0	4.5	2.0	3.5
12	12.5	8.5	10.5	7.5	5.5	7.0	6.0	2.0	4.0	4.5	3.0	4.0
13	11.0	7.0	9.0	6.5	5.0	5.5	6.0	5.0	5.5	4.5	2.0	3.5
14	11.0	9.0	10.0	6.5	4.5	5.5	6.0	5.0	5.5	5.0	2.0	3.0
15	10.5	9.0	9.5	6.5	4.5	5.5	5.5	3.0	5.0	5.0	.5	3.0
16	9.0	7.0	8.5	8.0	5.0	6.5	3.5	2.5	3.0	4.0	.5	3.0
17	9.5	5.5	7.5	7.0	6.0	6.5	4.5	3.0	3.5	3.5	.5	2.0
18	9.0	5.5	7.5	7.5	5.0	6.0	4.5	3.0	3.5	4.0	.0	1.0
19	8.5	4.5	6.0	7.5	6.0	6.5	5.5	2.0	4.5	4.5	.0	1.5
20	9.5	5.5	7.5	8.0	6.5	7.0	4.0	1.5	2.5	4.5	.0	2.5
21	10.5	7.5	8.5	8.0	6.5	7.5	5.0	2.5	3.5	5.5	3.5	4.5
22	14.0	8.0	11.0	6.5	4.5	6.0	5.5	3.0	4.0	5.5	2.5	3.5
23	15.0	11.0	12.5	6.5	4.5	5.5	4.5	.5	3.0	5.0	3.0	4.0
24	13.0	9.5	11.0	7.5	6.0	6.5	2.0	.0	1.0	4.5	2.0	3.0
25	13.0	8.0	10.0	6.5	4.0	6.0	2.5	.5	1.5	5.0	1.5	2.5
26	12.0	7.5	10.0	6.0	4.0	5.0	3.5	.5	2.0	6.0	1.5	3.5
27	11.0	6.0	8.0	6.0	3.0	4.0	5.5	1.5	3.0	5.5	3.0	4.0
28	11.0	6.5	8.5	6.0	3.5	4.5	6.0	2.5	4.0	5.5	1.0	4.0
29	9.5	7.0	8.5	6.5	4.5	5.0	5.5	4.5	5.0	4.0	.0	1.5
30	9.5	5.5	7.5	6.0	5.0	5.5	4.5	3.0	4.0	5.5	.5	2.5
31	9.0	6.5	8.0	---	---	---	3.0	.5	2.0	6.5	2.5	4.5
MONTH	---	---	---	10.5	3.0	6.3	6.5	.0	3.8	---	---	---
FEBRUARY			MARCH			APRIL			MAY			
1	6.0	2.5	4.5	9.0	3.0	5.0	4.0	1.0	2.5	12.5	9.0	10.5
2	6.0	2.5	4.0	8.0	3.5	5.5	8.0	2.0	4.5	13.0	10.0	11.5
3	6.5	2.5	4.0	7.5	4.0	5.5	9.5	2.5	5.0	12.5	10.5	11.5
4	6.0	2.0	3.5	6.5	3.0	4.5	9.5	2.5	5.0	14.0	10.5	12.0
5	6.0	2.0	3.5	8.5	2.5	4.0	7.0	3.0	5.0	15.5	10.5	12.0
6	4.5	2.5	3.5	8.0	1.5	3.5	10.0	4.5	6.5	17.0	9.0	12.5
7	5.5	4.0	4.5	6.0	1.0	3.0	9.0	5.5	7.0	14.0	11.0	12.0
8	5.0	3.5	4.5	3.5	1.0	2.0	8.0	5.5	6.5	18.0	11.5	14.0
9	5.0	3.5	4.0	5.0	1.5	2.5	10.0	6.0	7.5	18.0	11.5	14.5
10	5.5	3.0	4.5	4.5	2.0	3.0	12.5	4.5	8.0	18.0	11.5	14.0
11	4.0	2.5	3.0	5.5	1.5	3.5	7.5	5.5	6.0	18.0	12.0	14.5
12	5.0	2.5	3.5	7.5	.0	3.0	9.5	5.5	7.0	17.5	10.5	13.5
13	6.0	3.0	4.5	6.0	1.0	2.5	11.5	4.5	7.5	16.0	8.5	12.0
14	5.5	2.5	4.0	7.0	.0	2.5	7.0	5.5	6.0	15.0	10.0	12.5
15	6.0	2.0	3.5	6.5	.5	3.5	5.5	3.0	4.0	15.5	9.5	12.0
16	6.0	1.5	3.0	5.0	.5	2.5	5.0	2.5	4.0	15.0	8.5	11.5
17	---	---	---	5.5	.0	2.0	11.5	3.5	7.0	11.0	8.0	10.0
18	---	---	---	7.5	.5	3.0	11.5	6.5	8.5	14.0	9.5	11.0
19	6.0	1.0	3.0	5.5	2.5	4.0	8.5	5.5	7.5	13.5	8.5	10.5
20	5.0	2.5	3.5	7.0	4.5	5.5	10.5	2.5	6.0	12.0	8.5	10.5
21	3.5	1.0	2.0	8.0	3.0	5.0	12.0	4.5	8.0	15.5	8.0	11.5
22	5.5	2.0	3.0	5.5	2.0	3.5	12.0	5.5	8.5	15.0	8.5	11.5
23	5.5	.0	2.5	3.5	1.5	2.5	13.5	7.0	10.0	12.0	11.0	11.5
24	5.0	.0	1.0	3.5	.5	2.0	14.5	9.5	11.0	12.0	10.0	11.0
25	5.0	.0	2.0	2.5	.0	1.0	15.0	8.5	11.0	13.0	9.0	11.0
26	7.0	.0	2.5	3.0	.5	1.5	14.5	7.5	10.5	17.0	8.0	12.0
27	7.0	.0	2.5	3.5	1.5	2.5	10.5	7.5	9.0	15.5	10.5	12.5
28	7.0	.5	3.5	7.0	1.5	3.0	15.0	8.5	11.5	12.5	10.5	12.0
29	---	---	---	8.5	1.5	4.0	15.5	9.5	11.5	16.5	9.0	12.0
30	---	---	---	9.0	2.5	5.0	14.5	8.0	11.0	13.0	11.0	12.0
31	---	---	---	5.0	.5	3.0	---	---	---	15.5	10.5	12.5
MONTH	---	---	---	9.0	.0	3.3	15.5	1.0	7.4	18.0	8.0	12.0

WATER TEMPERATURE. DEGREES CELSIUS. WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE		JULY	AUGUST		SEPTEMBER					
1	16.0	9.5	12.5	14.5	12.0	13.0	17.0	12.5	14.5	14.5	10.5	12.5
2	12.0	10.5	11.0	17.5	12.0	14.0	15.5	12.0	13.5	14.5	11.5	13.0
3	14.5	10.5	12.0	18.5	12.0	14.5	15.5	12.0	13.5	14.5	11.5	12.5
4	12.0	9.5	10.5	16.0	13.0	14.5	15.0	11.0	12.5	---	---	---
5	15.5	8.5	11.5	21.5	13.5	17.5	14.5	11.0	12.5	---	---	---
6	15.5	9.5	12.0	22.5	16.0	20.0	15.0	12.0	13.0	14.0	10.5	11.5
7	14.5	10.5	12.5	17.5	14.0	16.0	15.0	11.0	12.5	13.5	10.0	11.5
8	17.0	13.0	14.5	18.5	15.0	16.0	15.0	11.0	13.0	14.0	10.5	12.0
9	15.5	12.0	13.5	23.5	15.5	20.5	15.0	12.0	13.0	14.5	11.0	12.5
10	16.5	11.0	13.5	19.0	14.0	16.5	16.5	12.0	14.0	13.5	9.5	11.5
11	17.0	11.0	13.5	18.0	14.5	16.5	16.5	11.5	13.5	13.5	9.0	11.0
12	18.0	11.0	14.0	17.5	13.0	15.0	16.0	12.0	14.0	16.5	11.0	13.5
13	16.5	11.5	13.5	15.0	12.0	14.0	16.0	12.0	13.5	16.5	13.0	14.5
14	18.5	13.0	15.5	16.0	12.5	14.5	16.0	12.0	13.5	17.5	13.0	15.5
15	16.5	11.5	13.5	17.0	13.0	14.5	23.0	12.5	18.5	13.0	11.5	12.5
16	13.0	10.5	12.0	16.0	12.5	14.0	19.0	14.0	16.0	13.0	11.0	12.0
17	15.5	11.0	13.0	17.5	13.5	15.0	17.0	13.0	14.5	14.0	10.0	12.0
18	15.5	12.0	14.0	17.5	14.5	15.5	14.0	12.5	13.5	13.0	11.0	12.0
19	14.0	11.0	12.0	18.5	13.5	15.5	15.5	13.0	14.0	12.0	10.0	12.0
20	12.0	10.0	11.5	16.0	12.5	14.0	15.5	12.0	13.5	12.0	10.5	11.0
21	15.5	9.5	12.0	15.5	12.0	13.5	15.5	11.5	13.0	12.0	10.5	11.5
22	15.1	8.5	11.3	15.5	11.5	13.5	14.5	11.5	13.0	13.5	10.5	12.0
23	14.0	8.2	10.8	15.0	12.5	13.5	20.5	13.0	16.0	13.5	10.0	11.5
24	13.1	9.0	10.9	16.0	13.0	14.5	18.5	14.0	16.0	13.5	9.0	11.0
25	---	---	---	24.5	14.0	19.5	17.5	13.0	14.5	11.5	9.5	10.5
26	---	---	---	18.5	14.5	16.0	17.5	13.0	14.5	12.5	11.0	11.5
27	16.5	10.5	13.0	16.5	13.5	14.5	17.5	13.5	15.0	14.0	9.5	11.5
28	16.5	11.5	13.5	17.5	14.0	16.0	14.0	12.5	13.0	10.5	8.5	9.5
29	16.5	11.5	13.5	16.5	13.0	14.5	13.5	12.0	13.0	10.5	8.0	9.0
30	14.5	12.0	13.5	17.0	12.0	14.0	16.5	12.5	14.5	11.5	7.0	9.0
31	---	---	---	14.0	12.0	13.0	15.0	12.0	13.5	---	---	---
MONTH	---	---	---	24.5	11.5	15.3	23.0	11.0	14.0	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

[illegible]

WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	13.0	8.4	10.0
23	---	---	---	---	---	---	---	---	---	11.0	8.0	9.2
24	---	---	---	---	---	---	---	---	---	9.9	8.4	9.2
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	10.6	9.4	10.1
28	---	---	---	---	---	---	---	---	---	11.4	9.3	10.3
29	---	---	---	---	---	---	---	---	---	11.6	10.1	11.0
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	11.0	9.4	10.2	10.6	6.6	8.9	9.8	8.8	9.4
2	11.5	10.3	10.9	11.5	8.3	10.1	11.0	6.7	9.4	10.2	8.9	9.6
3	11.3	10.2	10.6	---	---	---	11.3	6.0	9.4	9.9	8.5	9.2
4	---	---	---	12.3	8.7	10.3	9.7	9.0	9.4	10.0	7.8	8.8
5	---	---	---	11.9	4.6	8.3	9.5	8.3	9.0	9.2	8.0	8.6
6	---	---	---	12.1	6.0	7.4	9.2	7.9	8.5	9.0	7.2	8.2
7	---	---	---	13.1	7.2	9.4	9.8	8.5	9.2	11.0	7.2	9.1
8	---	---	---	9.7	6.9	8.5	9.6	8.5	9.1	11.2	8.7	10.0
9	---	---	---	9.6	5.7	7.2	10.3	8.6	9.4	10.7	7.2	8.8
10	---	---	---	10.5	6.4	8.5	9.7	8.8	9.3	9.2	6.1	7.7
11	10.4	9.4	10.0	9.9	6.5	8.4	9.4	8.6	9.1	9.4	5.6	7.4
12	11.8	10.2	11.0	10.5	7.2	9.0	9.0	7.7	8.5	8.1	4.0	5.8
13	12.9	11.2	12.2	10.8	6.7	8.8	9.7	7.5	8.5	9.3	4.1	7.2
14	---	---	---	11.4	6.7	8.9	10.3	7.9	9.1	8.3	6.3	7.4
15	---	---	---	9.7	8.5	9.1	9.7	4.8	7.0	9.6	8.2	9.0
16	---	---	---	9.7	8.6	9.1	10.6	4.9	8.4	10.4	9.0	9.8
17	---	---	---	9.5	6.8	8.3	11.1	7.9	9.7	11.2	8.6	10.1
18	---	---	---	9.5	6.4	8.0	10.7	8.8	9.6	11.4	8.6	10.0
19	---	---	---	11.0	7.2	9.1	9.7	8.7	9.4	11.4	8.9	10.1
20	---	---	---	12.0	8.1	9.8	9.4	8.5	9.0	11.2	8.8	9.8
21	---	---	---	9.7	9.0	9.4	9.4	7.8	8.7	10.1	8.2	9.3
22	---	---	---	9.8	8.9	9.3	9.9	8.0	9.2	9.9	7.8	8.9
23	---	---	---	9.5	8.4	9.0	9.3	6.4	7.9	10.0	7.6	8.8
24	10.9	9.3	10.4	9.4	8.1	8.8	10.5	6.8	8.3	10.1	7.6	8.8
25	9.8	8.4	9.2	9.0	5.1	6.4	9.1	7.4	8.3	9.7	6.5	8.3
26	10.1	8.9	9.5	9.4	7.0	8.3	9.2	6.7	7.9	9.8	5.6	7.7
27	10.2	8.9	9.6	10.0	8.1	9.3	9.6	6.7	8.4	10.1	5.9	8.3
28	10.0	9.0	9.5	9.6	7.5	8.7	9.7	8.7	9.3	10.2	9.0	9.6
29	10.4	9.1	9.9	10.2	7.9	9.4	9.2	7.9	8.6	10.7	8.9	9.7
30	10.3	9.1	9.8	10.6	6.7	8.6	8.7	5.3	7.8	11.0	8.2	9.6
31	---	---	---	10.3	6.6	8.4	9.6	7.7	8.7	---	---	---
MONTH	---	---	---	---	---	---	11.3	4.8	8.8	11.4	4.0	8.8

WISCONSIN RIVER BASIN

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05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	2.1	.87	.72	.75	.50	2.0	.69	.62	1.2	1.5	1.1
2	.22	2.3	.86	.68	.79	.49	1.8	1.9	.64	1.1	1.2	1.1
3	.22	1.8	.87	.76	.79	.51	1.8	1.9	.73	.95	.97	1.0
4	.23	1.2	.84	1.4	.94	.55	2.4	.78	.71	.83	.81	.99
5	.26	1.0	.80	.80	.95	.70	1.8	.60	.75	96	.78	.96
6	.26	.94	.81	.71	.85	1.2	2.0	.52	.74	37	.82	.90
7	.27	.89	.82	.67	.70	2.2	2.0	.48	26	3.5	.80	.89
8	.31	.81	.82	.62	.67	3.5	13	.61	6.1	16	.77	.89
9	.36	.78	.83	.61	.67	2.4	2.2	.43	2.0	90	.77	.89
10	.36	.74	.86	.61	.66	1.8	1.7	.38	1.7	11	.77	.87
11	.36	.71	.83	.62	.66	1.4	1.7	.35	1.6	6.8	.75	.87
12	.35	.78	.80	.62	.65	1.3	1.3	.33	1.6	3.9	.73	.92
13	.34	.79	.80	.66	.64	1.3	1.0	.33	1.5	4.4	.73	2.7
14	.34	.64	.76	.67	.64	1.2	.93	.34	2.3	5.4	.70	16
15	.35	.55	4.3	.67	.61	1.1	32	.35	1.7	5.7	32	1.6
16	.39	.53	4.6	.67	.59	11	3.9	.36	1.6	6.7	1.5	1.3
17	.37	.50	1.0	.68	.59	1.4	1.0	.37	6.3	10	.90	1.3
18	.37	.46	.86	.67	.60	1.3	.77	.39	9.3	9.5	.84	1.3
19	.37	.46	.81	.68	.60	1.3	13	.41	2.1	6.8	.81	1.3
20	.40	24	.74	.64	.59	1.4	24	.42	2.2	5.1	.75	1.3
21	.43	20	.74	.85	.61	1.7	1.5	.42	2.2	4.1	.69	1.3
22	.43	1.6	.73	1.0	.58	1.8	1.3	.43	2.2	3.4	.65	1.3
23	.43	3.2	.73	.92	.57	4.1	1.2	.47	2.2	2.7	14	1.3
24	.42	1.1	.68	.87	.55	22	1.2	.51	2.1	2.3	1.7	1.3
25	.42	1.0	.66	.73	.53	41	1.1	.50	2.4	43	1.0	1.6
26	.42	1.1	.62	.71	.52	19	1.1	.51	1.8	1.4	.99	1.8
27	.42	.99	.61	.71	.51	10	1.0	.54	1.6	1.7	.98	1.5
28	.42	.94	.61	.70	.50	44	1.0	.54	1.4	6.8	1.0	1.4
29	.42	.91	.80	.66	---	30	.90	.52	1.3	3.1	1.1	1.3
30	.43	.86	1.1	.64	---	17	.79	.68	1.5	2.4	1.3	1.3
31	.68	---	.94	.68	---	29	---	.66	---	1.9	1.1	---
TOTAL	11.27	73.68	32.10	22.63	18.31	256.15	121.39	17.72	88.89	394.68	73.41	52.28

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	13	5.2	4.5	2.0	6.9	19	3.6	3.6	3.9	6.3	3.1
2	1.5	27	4.8	4.0	2.1	7.5	14	26	3.6	3.8	5.5	3.1
3	1.5	4.8	4.6	4.3	4.1	8.6	13	26	4.0	3.7	4.9	3.2
4	1.5	1.8	4.2	7.3	7.3	10	21	5.3	3.7	3.5	4.8	3.1
5	1.8	1.7	3.7	4.0	7.6	14	15	4.5	3.9	449	4.7	3.1
6	1.9	1.7	3.5	3.4	5.7	12	10	4.3	3.7	282	4.8	3.1
7	1.9	1.7	3.4	3.0	2.0	61	9.5	4.3	145	30	4.7	3.2
8	2.4	1.7	3.2	2.6	1.9	84	63	21	37	76	4.5	3.3
9	2.8	1.8	3.0	2.4	1.9	24	9.8	4.7	8.6	424	4.5	3.4
10	2.9	1.8	2.9	2.3	1.9	14	7.3	4.5	7.3	71	4.4	3.4
11	3.0	1.9	2.7	2.2	1.9	8.7	7.3	4.6	6.6	58	4.3	3.6
12	3.0	2.3	2.4	2.1	1.9	6.3	5.7	4.6	6.2	37	4.1	3.9
13	3.0	2.5	2.4	2.1	1.9	4.7	4.4	4.5	5.8	36	4.1	17
14	3.1	2.1	2.6	2.0	1.9	3.8	4.1	4.4	12	38	3.9	120
15	3.3	2.0	26	1.9	2.0	5.4	214	4.3	5.9	35	219	5.2
16	3.5	2.2	35	1.8	2.2	37	37	4.2	5.5	35	25	3.6
17	3.1	2.4	15	1.7	2.4	13	9.0	4.1	26	43	17	3.5
18	2.8	2.5	12	1.6	2.7	9.5	6.5	4.2	35	29	13	3.5
19	2.6	3.0	11	1.6	3.0	8.1	76	4.1	6.3	14	10	3.4
20	2.6	213	9.3	1.6	3.3	6.9	104	3.9	6.0	11	7.7	3.4
21	2.6	209	8.7	2.1	3.7	6.8	9.3	3.8	5.3	10	5.9	3.5
22	2.4	18	8.1	2.5	3.9	6.1	6.9	3.7	4.8	10	4.6	3.4
23	2.2	24	7.6	2.3	4.2	11	5.8	3.8	4.5	9.4	63	3.4
24	2.0	10	6.7	2.2	4.6	191	5.0	3.9	4.4	9.1	8.1	3.4
25	1.9	8.9	6.2	1.9	4.9	307	4.2	3.6	7.7	222	3.6	7.5
26	1.7	8.9	5.5	1.8	5.2	176	3.6	3.6	4.3	16	3.4	9.6
27	1.6	7.6	5.1	1.8	5.7	130	3.6	3.7	4.1	15	3.3	3.7
28	1.4	6.7	4.8	1.8	6.3	291	4.0	3.6	4.0	38	3.2	3.5
29	1.4	6.1	6.0	1.7	---	237	3.8	3.3	3.8	8.8	3.3	3.4
30	1.3	5.4	7.8	1.7	---	83	3.7	4.2	7.1	7.7	4.1	3.4
31	1.2	---	6.3	1.8	---	212	---	4.0	---	6.8	3.3	---
TOTAL	69.5	595.5	229.7	78.0	98.2	1996.3	699.5	188.3	385.7	2035.7	463.0	243.9

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 July 1993 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 820 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Feb. 18, 24-26. Records good except those for ice-affected periods and flows over 500 ft³/s, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	30	33	32	30	27	95	56	49	59	---	---
2	25	39	33	30	29	28	67	72	49	59	---	---
3	25	34	31	31	31	30	61	70	50	58	---	---
4	25	31	31	53	37	32	62	69	49	58	---	---
5	24	29	30	35	41	35	59	61	49	199	---	---
6	24	28	29	32	39	46	57	57	47	553	---	---
7	23	28	29	30	31	75	59	56	137	160	---	---
8	24	27	29	29	29	105	89	67	115	159	---	---
9	24	28	29	29	29	76	69	58	67	397	---	---
10	24	28	30	28	30	50	59	55	59	171	---	---
11	24	27	29	28	29	38	60	54	55	160	---	---
12	23	29	29	29	28	33	57	53	53	118	---	---
13	23	29	29	29	28	32	53	52	52	106	---	---
14	23	27	29	28	28	30	54	51	72	104	---	---
15	24	26	40	28	27	30	149	50	59	91	---	---
16	26	26	62	28	27	119	114	50	55	84	---	---
17	24	26	47	28	26	62	81	50	64	107	---	---
18	23	25	41	27	26	39	70	52	93	101	---	---
19	23	26	38	27	26	36	94	51	68	87	---	---
20	26	55	34	27	26	33	158	51	65	79	---	---
21	26	109	33	32	27	34	94	50	60	75	---	---
22	25	59	33	37	27	36	77	50	57	73	---	---
23	25	64	32	36	27	59	70	52	55	72	---	---
24	25	49	30	34	25	129	67	54	56	71	---	---
25	25	44	30	29	25	226	63	50	67	200	---	---
26	24	42	30	29	25	198	60	48	58	95	---	---
27	25	38	29	28	26	126	61	49	56	81	---	---
28	25	36	29	28	26	150	64	47	56	131	---	---
29	25	35	34	27	---	147	60	47	55	81	---	---
30	25	34	39	27	---	95	57	55	63	74	---	---
31	25	---	38	28	---	183	---	53	---	72	---	---
TOTAL	757	1108	1039	943	805	2339	2240	1690	1890	3935	---	---
MEAN	24.4	36.9	33.5	30.4	28.7	75.5	74.7	54.5	63.0	127	---	---
MAX	26	109	62	53	41	226	158	72	137	553	---	---
MIN	23	25	29	27	25	27	53	47	47	58	---	---
CFSM	.65	.98	.89	.80	.76	2.00	1.98	1.44	1.67	3.36	---	---
IN.	.74	1.09	1.02	.93	.79	2.30	2.20	1.66	1.86	3.87	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	MEAN	25.0	29.3	26.0	25.4	25.9	49.0	43.3	34.8	36.7	50.4	22.8	23.6
MAX	33.5	40.2	33.5	30.4	33.2	75.5	74.7	54.5	63.0	127	24.7	30.7	
(WY)	1992	1992	1993	1993	1992	1993	1993	1993	1993	1993	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1990 - 1993

ANNUAL TOTAL	10862												
ANNUAL MEAN	29.7									27.1			
HIGHEST ANNUAL MEAN										30.6			1992
LOWEST ANNUAL MEAN										24.9			1990
HIGHEST DAILY MEAN	109	Nov 21				553	Jul 6			553	Jul 6		1993
LOWEST DAILY MEAN	22	Jul 6				(a)23	Oct 7			17	Many days, 1990-91		
ANNUAL SEVEN-DAY MINIMUM	22	Aug 16				24	Oct 7			17	Aug 29		1990
INSTANTANEOUS PEAK FLOW						1100	Jul 6			1100	Jul 6		1993
INSTANTANEOUS PEAK STAGE						8.60	Jul 6			8.60	Jul 6		1993
INSTANTANEOUS LOW FLOW						(b)19	Feb 17			(a)9.4	Jan 22		1991
ANNUAL RUNOFF (CFSM)	.79									.72			
ANNUAL RUNOFF (INCHES)	10.69									9.73			
10 PERCENT EXCEEDS	37					95				54			
50 PERCENT EXCEEDS	28					39				26			
90 PERCENT EXCEEDS	24					25				19			

(a) Also occurred Oct. 12-14, 18, 19

(b) 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, Jan. 15-16, 18-19, 1992, and

Mar. 9-10, 12, 14, 16-17, and 25-26, 1993

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. 15; minimum observed, 0.0°C, Mar. 9-10, 12, 14, 16-17, and 25-26.

DISSOLVED OXYGEN: Maximum observed, 13.5 mg/L, Nov. 7; minimum observed, 5.2 mg/L, Aug. 15.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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					MAR 1993				
07...	1138	24	620	11.5	02...	1407	27	610	8.0
NOV					APR				
16...	1311	27	600	6.5	13...	1257	54	585	9.0
21...	1120	116	415	8.0	MAY				
DEC					25...	1252	50	610	12.5
26...	1410	30	575	6.5	JUL				
JAN 1993					16...	1028	85	610	14.5
07...	1531	31	585	3.5					

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

[illegible]

WISCONSIN RIVER BASIN

05406497 BLACK EARTH CREEK AT SOUTH VALLEY ROAD NEAR BLACK EARTH, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	4.0	1.0	2.5	11.5	9.5	10.5
2	---	---	---	---	---	---	8.0	2.5	5.0	12.5	10.5	11.5
3	---	---	---	---	---	---	9.0	3.0	6.0	12.5	11.5	12.0
4	---	---	---	---	---	---	9.5	3.5	6.5	14.0	11.5	12.5
5	---	---	---	---	---	---	7.0	4.5	6.0	14.5	11.0	12.5
6	---	---	---	---	---	---	10.0	5.5	7.5	16.0	10.5	13.5
7	---	---	---	---	---	---	9.5	6.5	8.0	14.0	11.5	12.5
8	---	---	---	5.0	1.0	2.5	8.5	7.0	8.0	18.0	12.0	14.5
9	---	---	---	9.5	.0	3.5	11.0	7.0	8.5	18.0	12.5	15.5
10	---	---	---	5.0	.0	2.0	12.0	6.0	9.0	17.0	12.5	15.0
11	---	---	---	5.0	2.5	3.5	9.0	6.0	7.0	18.0	13.0	15.0
12	---	---	---	5.5	.0	3.0	9.0	5.5	7.5	17.5	12.0	14.5
13	---	---	---	5.0	1.0	3.0	10.0	5.5	8.0	15.5	9.5	12.5
14	---	---	---	5.0	.0	2.5	7.5	5.5	6.5	15.0	10.5	13.0
15	---	---	---	5.5	1.0	3.0	5.5	3.0	4.0	15.0	10.5	13.0
16	---	---	---	5.5	.0	3.0	5.0	3.0	4.0	15.0	9.5	12.0
17	---	---	---	4.0	.0	1.5	10.5	3.5	7.0	11.5	9.0	10.5
18	---	---	---	6.5	.5	3.0	11.0	7.0	9.0	14.5	10.0	12.0
19	---	---	---	5.0	2.5	4.0	9.5	5.5	8.0	13.5	9.0	11.5
20	---	---	---	6.5	4.5	5.0	9.0	3.0	6.0	12.5	9.5	11.0
21	---	---	---	7.0	4.5	5.5	11.5	5.0	8.0	15.0	9.0	12.0
22	---	---	---	5.0	3.0	4.0	11.5	6.0	9.0	14.0	9.5	12.0
23	---	---	---	4.0	2.0	3.0	12.5	7.5	10.0	12.5	11.5	12.0
24	---	---	---	3.5	.5	2.0	13.5	9.5	11.0	12.5	10.5	11.5
25	---	---	---	2.5	.0	1.0	13.5	8.5	11.0	14.0	10.0	12.0
26	---	---	---	3.0	.0	1.5	13.5	7.5	10.5	16.5	9.5	13.0
27	---	---	---	4.0	1.0	2.5	10.0	7.5	9.0	15.0	12.0	13.5
28	---	---	---	8.0	2.0	4.0	14.5	9.0	11.5	14.0	11.0	12.5
29	---	---	---	8.5	1.5	4.5	14.5	10.0	12.0	15.5	9.5	12.5
30	---	---	---	8.5	3.0	6.0	14.0	8.5	11.5	13.5	11.0	11.5
31	---	---	---	7.0	1.0	4.0	---	---	---	14.0	10.0	12.0
MONTH	---	---	---	---	---	---	14.5	1.0	7.9	18.0	9.0	12.6
	JUNE			JULY			AUGUST			SEPTEMBER		
1	13.5	9.0	11.5	15.0	13.0	14.0	17.5	13.5	15.5	16.0	12.5	14.5
2	12.0	10.5	11.0	18.0	13.5	15.5	16.5	13.0	15.0	15.5	13.5	14.5
3	15.0	10.5	12.5	18.5	14.0	16.5	16.5	13.5	15.0	15.5	13.5	14.5
4	13.0	10.5	11.5	17.0	15.0	16.0	15.5	13.0	14.5	15.5	12.0	14.0
5	15.5	9.0	12.5	20.0	15.0	17.0	15.0	12.5	14.0	14.5	13.0	14.0
6	15.5	10.5	13.5	21.0	19.0	20.0	16.0	13.0	14.5	15.0	12.0	13.5
7	14.0	12.0	13.0	19.0	16.5	17.5	16.0	13.0	14.5	14.5	12.0	13.5
8	17.0	13.5	15.0	18.0	16.0	16.5	16.0	12.5	14.5	15.0	12.0	13.5
9	16.5	13.0	15.0	21.5	16.5	19.5	16.0	13.5	14.5	15.0	12.5	13.5
10	17.0	12.5	14.5	19.0	15.5	17.0	18.0	14.0	16.0	13.5	11.5	12.5
11	17.0	12.5	15.0	17.5	15.5	16.5	18.0	14.0	16.0	12.5	10.0	11.5
12	18.0	12.5	15.0	17.5	14.0	15.5	18.0	14.5	16.5	16.0	12.0	14.0
13	16.5	13.0	14.5	15.5	13.5	14.0	17.5	14.5	16.0	16.0	15.0	15.5
14	18.5	14.5	16.5	16.0	13.5	15.0	17.0	14.5	16.0	17.0	14.0	16.0
15	16.5	12.5	14.5	17.5	13.5	15.0	21.5	15.0	18.5	14.0	12.5	13.0
16	14.5	12.5	13.0	15.5	13.0	14.5	20.5	16.5	18.5	13.0	11.5	12.5
17	17.0	13.0	14.5	18.0	13.5	15.0	18.5	16.0	17.5	13.5	11.0	12.5
18	16.0	15.0	15.5	17.0	15.0	16.0	17.0	15.0	15.5	13.5	12.0	12.5
19	15.5	13.5	14.5	18.5	14.5	16.0	17.0	14.5	15.5	12.0	11.0	11.5
20	15.0	14.0	14.5	16.0	13.5	15.0	16.5	14.0	15.5	12.0	11.5	11.5
21	18.5	13.0	15.5	16.0	13.0	14.5	17.0	13.5	15.5	12.5	12.0	12.0
22	19.0	13.5	16.0	16.0	12.5	14.0	15.5	13.5	15.0	13.5	11.5	12.5
23	19.0	13.5	16.0	15.5	13.5	14.5	19.5	15.0	17.0	13.5	11.5	12.5
24	17.5	15.0	16.5	17.0	13.5	15.0	19.0	16.5	18.0	12.5	10.0	11.5
25	18.5	15.5	17.0	21.5	15.0	18.5	18.5	15.0	17.0	12.0	10.5	11.0
26	18.5	13.5	16.0	18.5	15.5	17.0	18.5	15.5	17.0	12.0	10.5	11.5
27	18.5	13.5	16.0	16.5	14.5	15.5	19.0	15.5	17.5	11.5	10.5	11.0
28	17.0	14.0	15.5	19.0	16.0	17.5	17.0	14.5	15.5	11.0	9.5	10.5
29	17.0	13.0	15.0	17.0	14.0	15.5	15.0	13.5	14.5	11.0	9.5	10.0
30	15.0	13.5	14.5	17.5	13.5	15.5	18.0	14.5	16.0	11.0	8.0	10.0
31	---	---	---	15.5	13.5	14.0	17.0	15.0	16.0	---	---	---
MONTH	19.0	9.0	14.5	21.5	12.5	15.9	21.5	12.5	15.9	17.0	8.0	12.7

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 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	11.5	9.3	10.2	---	---	---	---	---	---	---	---	---
2	11.6	9.4	10.4	9.5	9.0	9.1	---	---	---	---	---	---
3	11.7	9.4	10.5	11.9	9.1	10.4	---	---	---	---	---	---
4	11.9	6.8	10.0	11.9	10.0	10.7	---	---	---	---	---	---
5	8.3	6.8	7.5	13.3	10.4	11.3	---	---	---	---	---	---
6	9.2	7.3	8.1	12.7	10.6	11.4	---	---	---	---	---	---
7	10.0	8.0	8.9	13.5	10.8	11.7	---	---	---	---	---	---
8	10.7	8.5	9.5	---	---	---	---	---	---	---	---	---
9	12.1	7.7	9.8	---	---	---	---	---	---	---	---	---
10	8.6	7.7	8.0	---	---	---	---	---	---	---	---	---
11	9.0	7.9	8.3	---	---	---	---	---	---	---	---	---
12	9.4	8.1	8.6	---	---	---	---	---	---	---	---	---
13	9.7	8.3	8.9	---	---	---	---	---	---	---	---	---
14	9.9	8.7	9.3	---	---	---	---	---	---	---	---	---
15	10.8	6.8	9.0	---	---	---	---	---	---	---	---	---
16	10.6	6.8	7.7	---	---	---	---	---	---	---	---	---
17	12.2	8.2	9.7	---	---	---	---	---	---	---	---	---
18	12.5	8.2	9.8	---	---	---	---	---	---	---	---	---
19	12.7	8.7	10.3	---	---	---	---	---	---	---	---	---
20	11.1	8.6	9.6	---	---	---	---	---	---	---	---	---
21	12.7	8.5	9.8	---	---	---	---	---	---	---	---	---
22	12.6	7.4	9.6	---	---	---	---	---	---	---	---	---
23	12.2	7.0	8.8	---	---	---	---	---	---	---	---	---
24	12.7	7.0	9.3	---	---	---	---	---	---	---	---	---
25	13.3	7.8	9.7	---	---	---	---	---	---	---	---	---
26	12.9	7.7	9.5	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	13.2	8.6	10.8
30	---	---	---	---	---	---	---	---	---	9.8	8.6	9.1
31	---	---	---	---	---	---	---	---	---	12.3	8.7	10.2

WISCONSIN RIVER BASIN

05406497 BLACK EARTH CREEK AT SOUTH VALLEY ROAD NEAR BLACK EARTH, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	12.6	9.0	10.5	11.8	8.4	9.7	10.2	7.7	8.8	11.9	8.3	9.7
2	11.5	9.0	10.1	12.2	8.0	9.8	10.7	7.7	9.0	11.1	8.1	9.2
3	12.8	9.1	10.7	12.8	7.6	9.7	11.2	8.1	9.4	11.4	8.1	9.3
4	12.2	9.1	10.4	11.1	7.4	9.1	11.4	8.4	9.7	11.6	8.0	9.5
5	13.1	8.9	10.9	8.1	5.6	7.2	11.4	8.6	9.7	11.5	8.0	9.4
6	13.0	8.7	10.5	7.0	5.6	6.5	11.5	8.2	9.5	11.8	8.3	9.6
7	9.9	7.6	8.7	8.1	7.0	7.7	11.8	8.4	9.7	12.0	8.2	9.6
8	8.5	7.7	8.1	8.2	7.0	7.8	12.0	8.4	9.9	12.0	8.2	9.6
9	10.3	7.9	9.1	8.4	6.2	6.7	10.5	7.7	8.7	11.7	8.1	9.4
10	10.7	8.0	9.3	8.6	6.7	7.7	11.2	7.4	8.9	12.2	8.2	9.8
11	10.7	8.0	9.3	8.3	6.9	7.7	11.4	7.3	8.9	12.3	8.2	9.7
12	11.1	7.9	9.3	9.7	7.8	8.6	11.5	7.4	8.9	12.2	7.6	9.5
13	10.7	7.8	9.1	9.3	8.1	8.7	11.7	7.4	9.1	9.2	7.0	7.9
14	8.3	7.0	7.6	9.9	8.2	8.9	11.7	7.4	9.0	7.7	6.5	7.0
15	10.9	7.6	9.1	10.4	8.4	9.2	7.9	5.2	6.4	9.6	7.7	8.6
16	10.7	8.1	9.4	10.5	8.5	9.2	9.2	5.6	7.4	10.6	8.4	9.2
17	9.8	7.7	8.7	9.5	7.1	8.4	10.3	7.2	8.5	11.3	8.4	9.6
18	8.9	7.2	8.0	8.8	7.5	8.3	9.3	7.7	8.3	10.8	8.3	9.1
19	10.5	8.3	9.1	10.3	8.1	9.0	10.0	7.9	8.7	10.7	8.7	9.5
20	10.7	8.4	9.5	10.8	8.2	9.3	10.4	7.8	8.9	9.7	8.6	9.0
21	12.8	8.6	10.5	10.9	8.6	9.7	10.9	8.0	9.1	10.1	8.5	9.1
22	13.4	8.7	10.7	11.5	8.8	9.9	10.6	8.0	9.0	10.6	8.5	9.3
23	12.3	7.3	9.7	11.1	8.8	9.7	10.1	6.5	8.3	11.4	8.4	9.6
24	10.2	7.0	8.4	11.5	8.7	9.8	10.6	6.6	8.3	11.5	8.7	9.8
25	9.5	6.9	7.9	8.7	6.1	7.1	11.2	7.7	9.1	9.9	8.3	9.0
26	11.2	7.3	9.0	10.4	7.4	8.8	11.3	7.9	9.2	10.0	8.2	8.9
27	11.5	7.4	9.1	10.0	8.0	9.0	11.3	7.8	9.2	11.0	8.5	9.4
28	11.5	7.2	9.2	8.1	6.4	7.3	11.5	7.9	9.4	11.1	8.7	9.7
29	12.2	7.6	9.7	10.1	7.9	8.8	10.9	8.4	9.2	11.4	9.0	9.9
30	10.5	7.9	9.0	10.6	8.2	9.1	9.2	7.7	8.3	11.8	8.9	10.2
31	---	---	---	9.5	8.1	8.8	11.1	7.7	9.2	---	---	---
MONTH	13.4	6.9	9.4	12.8	5.6	8.6	12.0	5.2	8.9	12.3	6.5	9.3

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 sea level.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 24, 27, 28, Jan. 2, 18, Feb. 18 and 24. Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	32	36	33	32	25	119	60	50	55	70	60
2	25	46	35	31	31	26	79	75	49	54	68	58
3	25	41	33	33	32	30	70	77	51	52	66	57
4	25	34	32	61	41	34	70	77	49	51	64	56
5	24	32	31	36	48	41	68	68	49	228	64	57
6	23	29	31	33	46	58	64	63	46	733	66	57
7	22	27	31	32	31	91	66	61	141	165	63	55
8	24	26	31	31	29	122	102	75	137	161	61	55
9	24	27	31	30	28	90	81	65	77	511	66	54
10	23	26	31	29	29	60	67	60	64	194	65	53
11	25	25	31	29	27	40	68	59	57	173	61	53
12	23	30	31	30	27	32	64	58	54	128	59	55
13	23	29	31	30	27	30	59	56	52	113	58	64
14	23	27	30	29	26	27	59	56	77	111	57	129
15	24	25	44	29	25	26	171	55	60	96	224	91
16	28	24	79	28	25	121	154	53	56	88	136	75
17	24	23	57	28	23	83	101	53	65	107	83	67
18	23	23	47	27	24	39	84	55	100	107	73	62
19	22	23	42	27	24	34	106	54	72	91	71	59
20	25	59	36	27	24	28	196	54	68	81	67	58
21	25	128	34	33	25	30	115	52	61	76	64	58
22	24	75	33	40	25	34	89	52	57	73	62	58
23	24	81	32	42	25	65	78	54	54	71	79	56
24	25	60	31	38	25	151	74	56	54	70	80	54
25	25	53	31	30	25	225	68	51	67	201	64	58
26	24	51	31	28	24	239	65	50	56	102	61	73
27	24	44	30	28	24	147	64	50	53	87	59	62
28	23	40	30	28	25	158	68	49	51	137	57	58
29	23	38	35	26	---	173	64	47	50	83	59	55
30	24	37	43	26	---	113	61	55	61	75	75	54
31	24	---	42	29	---	208	---	54	---	72	68	---
TOTAL	747	1215	1122	981	797	2580	2594	1804	1938	4346	2270	1861
MEAN	24.1	40.5	36.2	31.6	28.5	83.2	86.5	58.2	64.6	140	73.2	62.0
MAX	28	128	79	61	48	239	196	77	141	733	224	129
MIN	22	23	30	26	23	25	59	47	46	51	57	53
CFSM	.56	.95	.85	.74	.67	1.94	2.02	1.36	1.51	3.28	1.71	1.45
IN.	.65	1.06	.98	.85	.69	2.24	2.25	1.57	1.68	3.78	1.97	1.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1993, BY WATER YEAR (WY)

	MEAN	29.9	31.4	28.9	28.0	31.2	48.6	41.4	36.5	35.0	34.7	29.8	31.6
MAX	50.4	70.2	48.0	51.6	57.0	85.3	86.5	91.2	68.6	140	73.2	66.0	
(WY)	1987	1986	1988	1974	1985	1961	1993	1973	1974	1993	1993	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1954 - 1993

ANNUAL TOTAL	11875	22255	
ANNUAL MEAN	32.4	61.0	33.9
HIGHEST ANNUAL MEAN			61.0
LOWEST ANNUAL MEAN			19.8
HIGHEST DAILY MEAN	128	733	733
LOWEST DAILY MEAN	22	22	12
ANNUAL SEVEN-DAY MINIMUM	23	23	13
INSTANTANEOUS PEAK FLOW		1320	1750
INSTANTANEOUS PEAK STAGE		6.13	6.58
INSTANTANEOUS LOW FLOW		(b)11	(b)4.8
ANNUAL RUNOFF (CFSM)	.76	1.42	.79
ANNUAL RUNOFF (INCHES)	10.32	19.34	10.78
10 PERCENT EXCEEDS	42	104	50
50 PERCENT EXCEEDS	30	54	28
90 PERCENT EXCEEDS	24	25	19

(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 sea level. 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: Ice-affected period, Dec. 26 to Mar. 20. Records good except those for ice-affected period, which is 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 flows less than 20 ft³/s were diverted out of the basin through Portage Canal to the Fox River throughout the year. Gage-height telemeter and data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11500	7330	13800	10000	7800	7200	26200	20000	10900	21200	10200	7630
2	10100	7490	12700	9600	8400	7000	23800	23000	12500	19600	9860	8040
3	9350	5790	13700	9000	8400	7600	20300	23800	18700	16700	9530	9300
4	8750	6690	13000	10000	9000	8400	19200	23900	22000	15300	9550	9510
5	8460	8080	13200	11000	9000	8000	19100	26400	22200	15900	9840	8310
6	7790	9530	11700	12000	9000	8200	18700	30600	20000	18300	9740	8440
7	7670	10300	8770	12000	10000	8000	18600	35400	15700	20500	9340	7940
8	7680	9850	10000	11000	11000	8400	19000	40600	16100	21100	8640	7850
9	8190	9560	9930	11000	11000	9200	19300	42900	15400	22400	7710	7190
10	8000	9540	9310	11000	11000	10000	18700	41700	15000	24100	8310	6730
11	9130	8900	7950	10000	11000	10000	19900	36100	19000	23300	8680	6660
12	8430	8220	8640	10000	11000	11000	24700	28700	23900	21100	8490	6800
13	8540	8070	9780	11000	11000	12000	29400	24900	27300	19300	8380	6920
14	9710	7980	8900	11000	12000	12000	32400	24800	29200	18800	8390	7040
15	9520	7970	9000	10000	12000	10000	31100	24700	30000	17000	10200	7850
16	9830	7960	11000	10000	11000	10000	27400	22200	29200	15500	11400	11600
17	9690	7960	12200	10000	11000	10000	27600	18900	26800	15400	12000	15400
18	9320	7950	13700	9400	9200	9600	30700	16300	25300	15600	11000	19000
19	9330	7910	16600	8800	6800	10000	32800	14800	24100	18000	10000	20200
20	7450	8090	15900	8400	6000	9000	32600	12700	25500	16300	9630	17600
21	6310	9510	12800	9000	7000	8570	32000	11500	29600	15200	9220	13500
22	6660	10800	11200	9400	6600	7940	32600	10900	34300	14500	8700	10900
23	6060	15000	12600	9600	6000	7420	33800	10100	42100	13500	8810	10100
24	6030	19200	13200	10000	6400	8080	35300	11500	50300	12500	7770	10300
25	6550	22900	10900	9800	6800	8750	36400	10600	56500	12400	7930	10100
26	6490	26400	8000	9400	6800	11700	33500	10600	59000	12500	8330	9260
27	6450	28200	8800	9800	7000	12100	30000	10500	58200	11800	8370	8190
28	7220	26800	9400	10000	7400	13100	25200	10900	49700	12300	8030	8670
29	6610	21800	10000	9800	---	14300	20400	11300	33300	12100	8010	7500
30	6440	17800	12000	9400	---	15900	18200	11500	23500	11300	8100	6800
31	6820	---	11000	8200	---	19900	---	12200	---	10200	7770	---
TOTAL	250080	363580	349680	309600	249600	313360	788900	654000	865300	513700	281930	295330
MEAN	8067	12120	11280	9987	8914	10110	26300	21100	28840	16570	9095	9844
MAX	11500	28200	16600	12000	12000	19900	36400	42900	59000	24100	12000	20200
MIN	6030	5790	7950	8200	6000	7000	18200	10100	10900	10200	7710	6660

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1993, BY WATER YEAR (WY)

	MEAN	7363	7780	6553	5999	6538	10920	16960	11960	10570	7285	5838	7242
MAX	25460	17130	13100	11400	12020	30400	37650	32270	28840	17780	11610	31280	
(WY)	1987	1986	1966	1973	1966	1973	1922	1960	1993	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1914 - 1993

ANNUAL TOTAL	3517010	5235060	
ANNUAL MEAN	9609	14340	8746
HIGHEST ANNUAL MEAN			16030
LOWEST ANNUAL MEAN			4145
HIGHEST DAILY MEAN	33400	Apr 22	59000
LOWEST DAILY MEAN	3110	Aug 21	5790
ANNUAL SEVEN-DAY MINIMUM	3350	Aug 19	6360
INSTANTANEOUS PEAK FLOW			59600
INSTANTANEOUS PEAK STAGE			10.34
10 PERCENT EXCEEDS	15400		27000
50 PERCENT EXCEEDS	8810		10600
90 PERCENT EXCEEDS	4070		7500
			3870
			11.48
			80800
			1900
			1460
			79500
			16030
			4145
			1977
			1938
			1988
			1988
			1988
			1976

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 1992 TO SEPTEMBER 1993

		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 OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI KF AGAR (COLS. PER 100 ML) (31673)	
OCT 1992	28...	1000	7420	247	8.2	3.3	11.9	748	104	24	45	
MAR 1993	30...	1125	15200	226	7.9	17	11.9	748	94	290	110	
MAY	25...	1125	10500	217	8.2	6.6	10.4	741	106	1100	370	
JUN	16...	1055	29500	168	7.1	3.0	7.1	760	78	170	120	
AUG	26...	1125	8340	252	7.8	4.0	7.8	757	96	370	40	
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)	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 1992	28...	99	23	10	10	2.1	109	89	17	15	0.10	1.5
MAR 1993	30...	90	21	9.2	8.1	3.8	96	79	11	13	<0.10	9.0
MAY	25...	100	23	11	5.9	2.2	109	89	9.9	9.9	0.10	1.7
JUN	16...	72	17	7.1	6.8	2.1	68	56	10	9.8	<0.10	2.1
AUG	26...	120	27	13	5.3	2.1	129	106	9.7	8.1	0.10	5.7
DATE		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)	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)	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)
OCT 1992	28...	140	0.010	0.550	0.020	0.80	0.070	0.030	0.010	20	18	<3
MAR 1993	30...	148	0.020	0.940	0.350	1.3	0.240	0.120	0.090	30	23	<3
MAY	25...	134	<0.010	0.370	0.050	0.40	0.040	0.010	<0.010	30	20	4
JUN	16...	112	0.020	0.690	0.080	0.90	0.140	0.110	0.110	--	--	--
AUG	26...	142	0.020	0.550	0.030	1.0	0.100	0.030	0.030	20	21	<3
DATE		IRON, DIS-SOLVED (UG/L AS FE) (01046)	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)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	
OCT 1992	28...	190	<4	6	<10	<1	<1	40	<6	13	52	
MAR 1993	30...	520	<4	29	<10	2	<1	36	<6	75	71	
MAY	25...	200	<4	7	<10	1	<1	40	<6	22	79	
JUN	16...	--	--	--	--	--	--	--	--	40	36	
AUG	26...	120	<4	4	<10	<1	<1	46	<6	28	92	

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 sea level. Prior to Dec. 4, 1939, nonrecording gage on highway bridge at same datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Nov. 28, 29, Dec. 4-12, Dec. 19 to Mar. 6, and Mar. 12-20. Records good except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163	143	186	160	160	170	1540	352	270	257	228	245
2	160	230	186	160	160	180	506	1000	251	269	215	222
3	160	257	180	170	150	190	405	2250	266	338	206	220
4	156	188	160	170	150	200	383	1420	241	669	201	207
5	152	170	170	160	150	220	369	908	231	361	201	201
6	149	160	180	150	150	240	341	632	221	531	282	195
7	150	154	190	140	140	227	357	540	322	333	226	190
8	152	152	170	140	140	325	504	507	484	316	208	191
9	160	152	160	140	140	238	666	438	382	366	296	192
10	159	152	160	140	140	215	457	402	296	326	552	187
11	155	152	160	140	140	159	505	469	255	426	246	181
12	151	150	160	150	140	120	539	388	238	406	223	198
13	149	150	161	150	130	130	406	345	228	316	212	202
14	149	147	163	150	130	140	371	327	261	371	207	402
15	153	144	195	150	120	150	433	318	246	299	392	287
16	152	141	463	150	120	190	624	295	225	272	359	227
17	149	140	303	150	120	270	519	283	325	268	249	212
18	144	140	229	150	120	190	696	304	798	436	228	209
19	142	141	200	150	140	150	1280	286	434	323	233	201
20	148	292	220	160	150	130	1990	275	578	274	218	204
21	162	948	210	170	150	120	1180	264	434	255	207	228
22	157	461	190	170	150	127	697	254	340	242	202	216
23	150	299	170	170	150	123	543	269	302	237	245	208
24	148	247	160	160	140	131	471	302	275	248	251	197
25	145	222	190	140	150	310	417	284	268	389	209	194
26	144	221	190	160	150	764	359	261	248	391	205	198
27	141	198	190	160	150	607	362	246	236	253	208	204
28	140	230	180	160	160	631	635	286	228	243	200	201
29	139	200	190	150	---	897	443	245	220	231	195	198
30	136	189	200	150	---	864	373	276	275	219	279	194
31	136	---	180	160	---	1560	---	352	---	215	412	---
TOTAL	4651	6570	6046	4780	3990	9968	18371	14778	9378	10080	7795	6411
MEAN	150	219	195	154	142	322	612	477	313	325	251	214
MAX	163	948	463	170	160	1560	1990	2250	798	669	552	402
MIN	136	140	160	140	120	120	341	245	220	215	195	181
CFSM	.56	.82	.73	.58	.54	1.21	2.30	1.79	1.18	1.22	.95	.80
IN.	.65	.92	.85	.67	.56	1.39	2.57	2.07	1.31	1.41	1.09	.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1993, BY WATER YEAR (WY)

MEAN	143	153	131	127	157	311	278	194	189	160	141	160
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 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1939 - 1993

ANNUAL TOTAL	71664		102818						
ANNUAL MEAN	196		282			179			
HIGHEST ANNUAL MEAN						282			1993
LOWEST ANNUAL MEAN						97.1			1958
HIGHEST DAILY MEAN	2320	Sep 17	2250	May 3		7730		Feb 9	1966
LOWEST DAILY MEAN	103	Aug 25	120	(a)Feb 15		36		Nov 3	1939
ANNUAL SEVEN-DAY MINIMUM	106	Aug 19	126	Feb 12		49		Jan 3	1968
INSTANTANEOUS PEAK FLOW			2390	May 3		14300		Jul 1	1978
INSTANTANEOUS PEAK STAGE			11.14	May 3		14.92		Jul 1	1978
ANNUAL RUNOFF (CFSM)	.74		1.06			.67			
ANNUAL RUNOFF (INCHES)	10.02		14.38			9.12			
10 PERCENT EXCEEDS	273		470			262			
50 PERCENT EXCEEDS	152		208			130			
90 PERCENT EXCEEDS	117		141			85			

(a) Also occurred Feb. 16-18 and Mar. 12, 21

WISCONSIN RIVER BASIN

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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 sea level. 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, Dec. 21 to Mar. 8 and Mar. 14-16. 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	606	491	661	500	440	430	2250	1140	888	802	699	882
2	595	534	648	500	440	440	2260	1270	848	801	699	807
3	585	603	636	500	440	450	2350	1610	810	753	683	717
4	575	662	623	500	430	460	2310	1860	797	814	662	693
5	562	623	604	470	420	480	1950	2370	768	1130	663	676
6	551	562	546	440	410	500	1400	2780	731	1260	827	658
7	548	533	573	420	400	540	1040	2410	752	1210	797	644
8	546	519	606	420	390	580	1010	2200	1000	1080	758	636
9	554	513	608	420	390	631	1120	2010	1140	959	699	639
10	557	513	590	420	390	686	1230	1740	1090	1010	733	637
11	557	510	587	420	380	640	1290	1510	937	1220	925	628
12	548	506	581	430	380	581	1280	1360	815	1250	838	622
13	535	500	568	430	380	518	1260	1260	756	1220	703	638
14	527	494	558	430	370	440	1170	1100	753	1060	672	712
15	523	489	579	430	360	420	1090	1000	766	979	838	827
16	524	481	678	430	350	470	1210	949	758	912	1300	868
17	527	479	839	430	350	588	1320	903	767	920	1400	737
18	523	478	884	430	350	549	1390	906	973	1030	1040	688
19	513	478	745	430	380	540	1430	905	1190	1040	877	675
20	518	543	677	430	390	525	1530	881	1320	1010	817	681
21	529	864	580	460	400	508	1640	849	1380	865	769	705
22	540	1190	560	470	400	498	1800	824	1310	797	726	713
23	541	1260	540	470	400	496	2390	815	1080	765	817	704
24	528	1040	520	450	390	492	2240	835	900	756	781	677
25	518	829	540	440	410	594	2010	856	834	842	786	660
26	509	773	560	440	410	900	1670	835	804	914	727	665
27	502	743	560	440	410	1160	1290	808	762	981	696	673
28	498	718	560	440	420	1340	1120	788	728	838	689	672
29	493	666	560	420	---	1480	1190	810	709	756	688	664
30	489	668	560	420	---	1610	1240	813	811	723	690	651
31	484	---	540	420	---	1980	---	836	---	699	750	---
TOTAL	16605	19262	18871	13750	11080	21526	46480	39233	27177	29396	24749	20849
MEAN	536	642	609	444	396	694	1549	1266	906	948	798	695
MAX	606	1260	884	500	440	1980	2390	2780	1380	1260	1400	882
MIN	484	478	520	420	350	420	1010	788	709	699	662	622
CFSM	.78	.93	.89	.65	.58	1.01	2.26	1.84	1.32	1.38	1.16	1.01
IN.	.90	1.04	1.02	.74	.60	1.17	2.52	2.12	1.47	1.59	1.34	1.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1993, BY WATER YEAR (WY)

	MEAN	410	429	374	355	418	789	705	517	496	476	418	450
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1933 - 1993

ANNUAL TOTAL	209931	288978	
ANNUAL MEAN	574	792	487
HIGHEST ANNUAL MEAN			792
LOWEST ANNUAL MEAN			273
HIGHEST DAILY MEAN	5100	Sep 18	2780
LOWEST DAILY MEAN	350	Aug 24	350
ANNUAL SEVEN-DAY MINIMUM	357	Aug 20	363
INSTANTANEOUS PEAK FLOW			2960
INSTANTANEOUS PEAK STAGE			12.96
INSTANTANEOUS LOW FLOW			May 5
ANNUAL RUNOFF (CFSM)	.83	1.15	(b)14.81
ANNUAL RUNOFF (INCHES)	11.37	15.65	(b)161
10 PERCENT EXCEEDS	790	1290	750
50 PERCENT EXCEEDS	492	677	390
90 PERCENT EXCEEDS	380	430	256

(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. Pectenwell and Castle Rock are owned and operated by the Wisconsin River Power Co., which furnished the gage heights and capacity tables for those two reservoirs. Month-end contents are computed by the U.S. Geological Survey. The usable capacity of these reservoirs is usually less in summer than in winter because the allowable summer drawdown is limited by the Department of Natural Resources in the interest of riparian property owners. There are occasionally formal or informal changes in capacity and in minimum drawdown levels. Usable capacity figures listed below are for winter regulation.

- 05390100 Lac Vieux Desert on Wisconsin River, lat 46°07'18", long 89°09'07", in SE 1/4 NW 1/4 sec.17, T.42 N., R.11 E., Vilas County, 4.8 mi northwest of Phelps, used as a reservoir since 1908, has a usable capacity of 652,000,000 ft³. Drainage area, 34.4 mi².
- 05390150 Twin Lakes on Twin River, lat 46°01'20", long 89°10'05", in SW 1/4 NE 1/4 sec.19, T.41 N., R.11 E., Vilas County, 3.0 mi southwest of Phelps, used as a reservoir since 1908, has a usable capacity of 313,000,000 ft³. Drainage area, 26 mi².
- 05390200 Buckatabon Lakes on Buckatabon Creek, lat 46°01'18", long 89°18'40", in SE 1/4 NE 1/4 sec.24, T.41 N., R.9 E., Vilas County, 3.3 mi southwest of Conover, used as a reservoir since 1908, has a usable capacity of 130,000,000 ft³. Drainage area, 16.9 mi².
- 05390250 Sevenmile Lake on Sevenmile Creek, lat 45°52'30", long 89°04'07", in SE 1/4 NE 1/4 sec.11, T.39 N., R.11 E., Oneida County, 9.1 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 93,000,000 ft³. Drainage area, 12.1 mi².
- 05390300 Lower Ninemile Lake on Ninemile Creek, lat 45°53'37", long 89°07'15", in NE 1/4 NW 1/4 sec.4, T.39 N., R.11 E., Oneida County, 6.6 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 121,000,000 ft³. Drainage area, 28.8 mi².
- 05390350 Burnt Rollways Reservoir on Eagle River, lat 45°53'40", long 89°08'28", in NE 1/4 NW 1/4 sec.5, T.39 N., R.11 E., Oneida County, 5.3 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 779,000,000 ft³. This reservoir includes 18 lakes controlled by the same dam. Drainage area, 142 mi².
- 05390400 Long Lake on Deerskin River, lat 46°02'37", long 89°02'44", in NW 1/4 SE 1/4 sec.7, T.41 N., R.12 E., Vilas County, 2.5 mi southeast of Phelps, used as a reservoir since 1908, has a usable capacity of 400,000,000 ft³. Drainage area, 22.9 mi².
- 05390600 Deerskin Lake on Little Deerskin River, lat 45°59'07", long 89°09'40", in SE 1/4 sec.31, T.41 N., R.11 E., Vilas County, 6.3 mi northeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 22,000,000 ft³. Drainage area, 2.47 mi².
- 05390650 Sugar Camp Reservoir on Sugar Camp Creek, lat 45°52'19", long 89°23'40", in NE 1/4 sec.17, T.39 N., R.9 E., Oneida County, 7.6 mi southwest of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 471,000,000 ft³. Drainage area, 48.4 mi².
- 05390700 Little St. Germain Lake on Little St. Germain Creek, lat 45°53'55", long 89°27'10", in SE 1/4 sec.35, T.40 N., R.8 E., Vilas County, 9.6 mi west of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 79,000,000 ft³. Drainage area, 19 mi².
- 05390750 Big St. Germain Lake on St. Germain River, lat 45°55'06", long 89°31'55", in SE 1/4 sec.30, T.40 N., R.8 E., Vilas County, 5.0 mi south of Sayner, used as a reservoir since 1908, has a usable capacity of 202,000,000 ft³. Drainage area, 73.1 mi².
- 05390800 Pickerel Lake on St. Germain River, lat 45°52'22", long 89°31'47", in NE 1/4 sec.18, T.39 N., R.8 E., Oneida County, 5.0 mi northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 338,000,000 ft³. Drainage area, 86.2 mi².
- 05390900 Rainbow Lake on Wisconsin River, lat 45°50'02", long 89°32'42", in SW 1/4 sec.30, T.39 N., R.8 E., Oneida County, 800 ft upstream from U.S. Geological Survey river gaging station, 2.7 mi northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 2,181,000,000 ft³. Drainage area, 744 mi².
- 05391100 South Pelican Lake on Pelican River, lat 45°31'37", long 89°12'24", in S 1/2 sec.11, T.35 N., R.10 E., Oneida County, 2.8 mi northwest of town of Pelican Lake, used as a reservoir since 1909, has a usable capacity of 305,000,000 ft³. Drainage area, 19.8 mi².
- 05391300 North Pelican Lake (includes Moen Lakes) on North Branch Pelican River, lat 45°38'05", long 89°14'38", in SE 1/4 sec.4, T.36 N., R.10 E., Oneida County, 0.2 mi below Twin Lakes Creek and 8.0 mi east of Rhinelander city limits, used as a reservoir since 1908, has a usable capacity of 218,000,000 ft³. Drainage area, 95 mi².
- 05392100 Minocqua Lake on Tomahawk River, lat 45°52'35", long 89°43'38", on line between secs.10 and 15, T.39 N., R.6 E., Oneida County, 1.0 mi west of Minocqua, used as a reservoir since 1910, has a usable capacity of 628,000,000 ft³. Drainage area, 72.5 mi².
- 05392200 Squirrel Lake on Squirrel River, lat 45°50'37", long 89°54'13", in NE 1/4 sec.30, T.39 N., R.5 E., Oneida County, 9.4 mi west of Minocqua, used as a reservoir since 1908, has a usable capacity of 182,000,000 ft³. Drainage area, 15.2 mi².
- 05392300 Willow Reservoir on Tomahawk River, lat 45°42'45", long 89°50'38", in NE 1/4 sec.10, T.37 N., R.5 E., Oneida County, 8.8 mi southwest of Hazelhurst, used as a reservoir since 1927, has a usable capacity of 3,302,000,000 ft³. Drainage area, 310 mi².
- 05392500 Lake Nokomis on Tomahawk River, lat 45°32'20", long 89°44'48", in NW 1/4 sec.9, T.35 N., R.6 E., Lincoln County, at U.S. Geological Survey river gaging station, 0.5 mi east of Bradley, used as a reservoir since 1912, has a usable capacity of 1,808,000,000 ft³. Drainage area, 544 mi².
- 05393600 Spirit River Flowage on Spirit River, lat 45°26'18", long 89°44'30", in NE 1/4 sec.16, T.34 N., R.6 E., Lincoln County, 2.0 mi south of Tomahawk, used as a reservoir since 1923, has a usable capacity of 756,000,000 ft³. Drainage area, 158 mi².

WISCONSIN RIVER BASIN

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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.

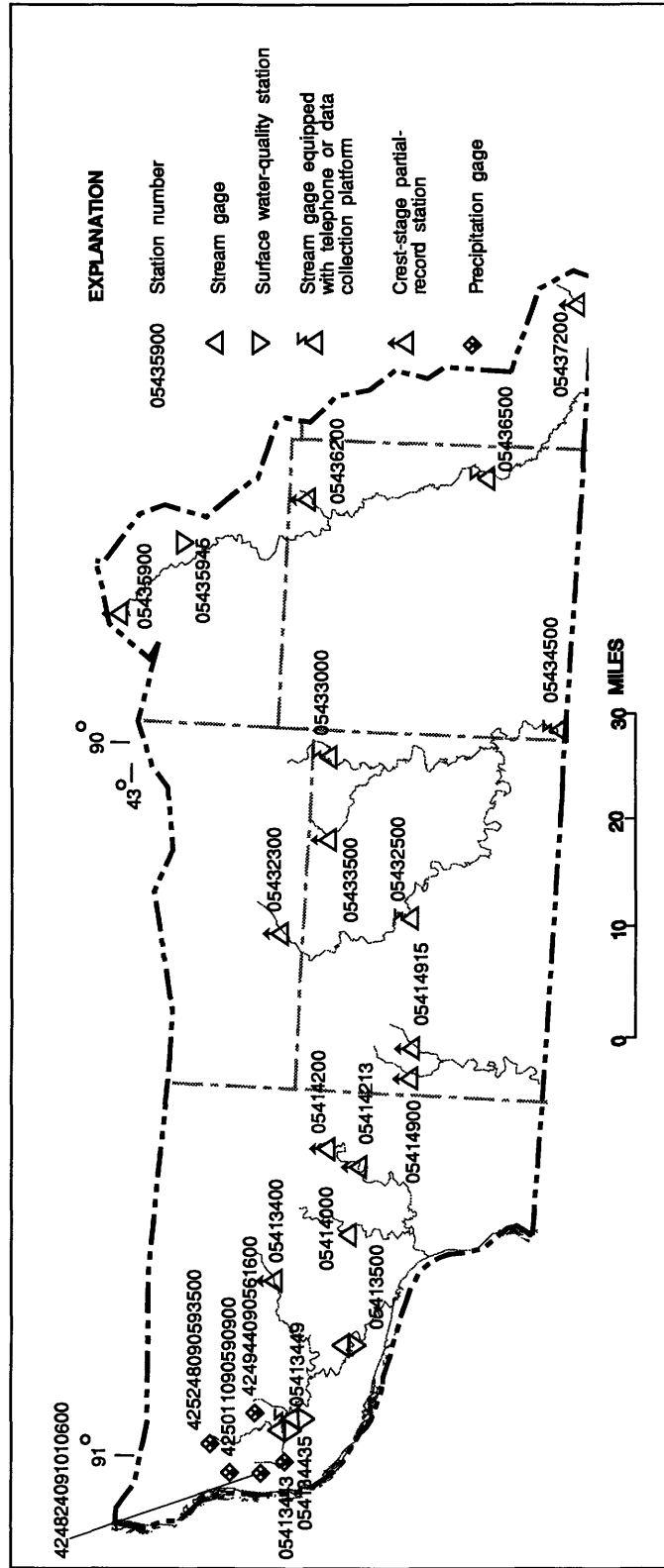
05403200 Castle Rock Flowage on Wisconsin River, lat 43°51'48", long 89°57'38", in sec.13, T.16 N., R.4 E., Adams County, 4.5 mi upstream from Duck Creek, and 2.0 mi south of Germantown, and 7.0 mi northeast of Mauston, used as a reservoir since 1950, has a total capacity of 7,630,000,000 ft³. Drainage area, 7,056 mi².

MONTH-END CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1992 to SEPTEMBER 1993

	LAC VIEUX DESERT	TWIN LAKES	BUCKATABON LAKE	SEVENMILE LAKE	LOWER NINEMILE LAKE	BURNT ROLLWAYS RESERVOIR	LONG LAKE	DEERSKIN LAKE
SEPT. 30.....	284	267	115	62	103	581	174	16
OCT. 31.....	236	248	113	65	102	552	165	14
NOV. 30.....	185	197	94	45	77	517	173	9
DEC. 31.....	111	87	71	10	2	150	136	6
JAN. 31.....	75	0	40	8	0	0	63	5
FEB. 28.....	15	2	22	9	2	0	0	3
MAR. 31.....	15	2	26	16	27	0	9	4
APR. 30.....	175	119	88	57	62	565	189	11
MAY 31.....	264	208	115	64	99	571	227	16
JUNE 30.....	326	261	115	63	100	552	273	15
JULY 31.....	313	264	115	66	101	555	225	15
AUG. 31.....	297	267	114	65	97	555	211	16
SEPT. 30.....	295	280	115	63	98	542	192	17

	SUGAR CAMP RESERVOIR	LITTLE ST. GERMAIN LAKE	BIG ST. GERMAIN LAKE	PICKEREL LAKE	RAINBOW LAKE	SOUTH PELICAN LAKE	NORTH PELICAN LAKE	MINOCQUA LAKE
SEPT. 30.....	386	72	156	269	1,690	292	140	505
OCT. 31.....	390	72	156	268	1,827	246	134	392
NOV. 30.....	413	61	108	249	2,109	261	114	195
DEC. 31.....	398	38	58	221	2,056	231	48	32
JAN. 31.....	350	29	42	203	1,823	188	36	0
FEB. 28.....	6	20	11	172	948	155	36	0
MAR. 31.....	105	32	22	173	555	114	57	28
APR. 30.....	383	65	146	267	1,312	269	137	224
MAY 31.....	424	76	162	274	2,070	292	141	411
JUNE 30.....	416	71	156	261	2,090	297	135	491
JULY 31.....	415	72	163	269	1,665	289	138	485
AUG. 31.....	407	72	163	271	1,097	292	139	493
SEPT. 30.....	410	72	159	264	1,303	274	132	493

	SQUIRREL LAKE	WILLOW RESERVOIR	LAKE NOKOMIS	SPIRIT RIVER FLOWAGE	BIG EAU PLEINE RESERVOIR	LAKE DUBAY	PETENWELL FLOWAGE	CASTLE ROCK FLOWAGE
SEPT. 30.....	169	1,854	1,268	512	3,453	4,132	17,588	5,799
OCT. 31.....	124	2,080	732	566	3,376	4,119	17,527	5,748
NOV. 30.....	63	2,372	1,481	711	4,412	4,515	17,615	5,903
DEC. 31.....	17	2,367	1,279	574	4,334	3,972	17,439	5,620
JAN. 31.....	14	1,907	772	386	3,266	3,756	14,066	5,518
FEB. 28.....	10	1,078	494	225	1,682	2,855	14,146	3,069
MAR. 31.....	29	701	313	230	2,315	4,201	15,848	3,352
APR. 30.....	105	1,730	1,589	655	4,346	4,229	17,932	6,194
MAY 31.....	170	2,600	1,718	638	4,415	4,400	17,791	6,200
JUNE 30.....	167	3,166	1,773	675	4,337	4,051	17,527	5,818
JULY 31.....	169	2,644	1,616	596	4,034	4,172	17,606	5,799
AUG. 31.....	169	1,835	1,198	414	3,910	4,220	17,668	5,850
SEPT. 30.....	159	1,811	1,172	342	4,295	3,954	17,509	5,799



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

PECATONICA-SUGAR RIVER BASIN

GRANT RIVER BASIN

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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. Rainfall estimated to be 0.00 for Nov. 27, Dec. 10, 20, Jan. 14, 19, 22, 23, Feb. 9, 10, 13, and Mar. 10, 19-21 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the period Dec. 28-31.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.06 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.27 in., July 8.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.49	.00	.00	.00	.00	.00	1.05	.01	.00	.00	.00
2	.00	.45	.00	.00	.00	.22	.00	1.21	.58	.03	.00	.01
3	.00	.00	.00	.05	.00	.06	.00	.88	.01	.00	.02	.00
4	.00	.00	.00	.05	.00	.00	.00	.27	.10	.09	.04	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.56	.01	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.66	.00
7	.00	.00	.00	.00	.00	.00	.22	.35	1.93	.00	.00	.00
8	.45	.00	.00	.00	.00	.00	.38	.00	.00	2.27	.02	.14
9	.04	.01	.00	.00	.00	.00	.00	.00	.00	.64	.32	.00
10	.00	.01	.00	.00	.00	.00	.02	.19	.00	.85	.00	.00
11	.00	.00	.00	.00	.00	.00	.23	.15	.00	1.03	.00	.01
12	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.44	.00
13	.00	.00	.00	.00	.00	.00	.04	.00	.74	.18	.00	.62
14	.00	.00	.05	.00	.00	.00	.25	.02	.09	.00	.58	.40
15	.22	.00	.84	.00	.00	.00	.36	.00	.00	.00	.74	.00
16	.01	.00	.00	.00	.00	.02	.02	.00	.25	.00	.17	.00
17	.00	.00	.00	.00	.00	.00	.00	.08	1.64	.74	.00	.04
18	.00	.00	.00	.00	.00	.00	.00	.01	.23	.04	1.22	.00
19	.01	.55	.00	.00	.00	.00	.44	.07	.14	.00	.00	.20
20	.16	1.91	.00	.15	.00	.00	.27	.00	.00	.00	.00	.23
21	.00	.18	.00	.18	.00	.00	.00	.00	.00	.00	.00	.04
22	.00	.30	.00	.00	.00	.24	.00	.22	.00	.00	.13	.01
23	.00	.06	.00	.00	.00	.14	.00	.52	.00	.00	.54	.00
24	.00	.00	.00	.00	.00	.00	.00	.01	.52	.00	.00	.00
25	.00	.01	.00	.00	.00	.00	.00	.00	.00	.35	.00	.36
26	.00	.00	.00	.00	.00	.00	.00	.00	.23	.00	.02	.06
27	.00	.00	.00	.00	.00	.00	.48	.17	.00	.35	.00	.01
28	.00	.00	---	.00	.00	.00	.00	.01	.47	.00	.01	.00
29	.00	.00	---	.00	---	.00	.04	.00	1.35	.00	.81	.00
30	.00	.00	---	.00	---	1.00	.00	.65	.15	.00	.14	.00
31	.12	---	---	.00	---	.57	---	.00	---	.56	.00	---
TOTAL	1.01	4.02	---	0.43	0.00	2.25	2.75	5.86	8.44	8.69	5.87	2.13

GRANT RIVER BASIN

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. Rainfall estimated to be 0.00 for Nov. 27, Dec. 10-13, Jan. 12, 15, 19, 28, Feb. 9, 10, 12, 21, 26, Mar. 10, 19-21, and Apr. 1 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the period Dec. 28-31.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.32 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.94 in., Nov. 20.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.56	.00	.00	.00	.00	.00	1.10	.03	.00	.01	.00
2	.00	.57	.00	.00	.00	.18	.00	1.21	.62	.04	.00	.02
3	.00	.00	.00	.08	.00	.07	.00	.36	.01	.00	.00	.00
4	.00	.00	.00	.06	.00	.00	.00	.29	.16	.11	.00	.01
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.51	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.32	.00
7	.00	.00	.00	.00	.00	.00	.25	.36	1.75	.00	.00	.01
8	.33	.00	.00	.00	.00	.00	.31	.00	.04	1.87	.06	.25
9	.05	.02	.00	.00	.00	.00	.00	.00	.00	.67	.35	.00
10	.00	.01	.00	.00	.00	.00	.01	.51	.00	1.33	.00	.00
11	.00	.00	.00	.00	.00	.00	.22	.07	.00	1.05	.00	.01
12	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00
13	.00	.00	.00	.00	.00	.00	.03	.00	.88	.15	.00	.70
14	.00	.00	.11	.00	.00	.00	.27	.03	.08	.00	1.05	.40
15	.21	.00	.87	.00	.00	.00	.49	.00	.00	.00	.69	.00
16	.00	.00	.03	.00	.00	.01	.12	.00	.27	.00	.17	.00
17	.01	.00	.00	.00	.00	.00	.00	.07	1.26	.77	.00	.04
18	.00	.00	.00	.00	.00	.00	.00	.00	.05	.06	.98	.00
19	.00	.65	.00	.00	.00	.00	.46	.02	.21	.01	.00	.25
20	.18	1.94	.00	.09	.00	.00	.50	.00	.01	.00	.00	.21
21	.00	.19	.00	.46	.00	.00	.00	.00	.00	.00	.00	.06
22	.00	.34	.00	.00	.00	.29	.00	.28	.00	.00	.19	.03
23	.00	.08	.00	.00	.00	.28	.00	.62	.00	.00	.27	.00
24	.00	.00	.00	.00	.00	.00	.00	.01	.50	.00	.00	.00
25	.00	.03	.00	.00	.00	.00	.00	.00	.00	.42	.00	.38
26	.00	.00	.00	.00	.00	.00	.00	.00	.24	.00	.05	.07
27	.00	.00	.00	.00	.00	.00	.48	.27	.00	.27	.00	.01
28	.00	.00	---	.00	.00	.00	.00	.01	1.11	.00	.00	.00
29	.00	.00	---	.00	---	.00	.03	.00	1.13	.00	.94	.00
30	.00	.00	---	.00	---	1.11	.00	.62	.17	.00	.07	.00
31	.15	---	---	.00	---	.70	---	.00	---	.86	.00	---
TOTAL	0.93	4.44	---	0.69	0.00	2.64	3.17	5.84	8.52	9.12	5.25	2.45

GRANT RIVER BASIN

205

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. Rainfall estimated to be 0.00 for Nov. 27, Dec. 10, Jan. 15, 19, Feb. 9, 10, 13, 26, and Mar. 10, 19-21 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the period Dec. 28-31.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.63 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.78 in., Nov. 20.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.61	.00	.00	.00	.00	.00	1.06	.03	.00	.00	.00
2	.00	.39	.00	.00	.00	.19	.00	.87	.56	.22	.00	.03
3	.00	.00	.00	.03	.00	.08	.00	.54	.01	.00	.00	.01
4	.00	.00	.00	.08	.00	.00	.00	.31	.16	.18	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.01	1.67	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.30	.00
7	.00	.00	.00	.00	.00	.00	.20	.32	1.23	.00	.00	.00
8	.38	.00	.00	.00	.00	.00	.33	.00	.03	1.71	.03	.13
9	.04	.01	.00	.00	.00	.00	.00	.00	.00	.55	.42	.00
10	.00	.01	.00	.00	.00	.00	.00	.30	.00	1.46	.00	.00
11	.00	.00	.00	.00	.00	.00	.20	.05	.00	.88	.00	.00
12	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00
13	.00	.00	.00	.00	.00	.00	.02	.00	.72	.30	.00	.61
14	.00	.00	.03	.00	.00	.00	.35	.04	.08	.00	1.25	.44
15	.25	.00	.93	.00	.00	.00	.48	.00	.00	.00	.69	.01
16	.00	.00	.01	.00	.00	.01	.03	.00	.24	.00	.14	.00
17	.00	.00	.00	.00	.00	.00	.00	.06	.97	1.21	.00	.04
18	.01	.00	.00	.00	.00	.00	.00	.00	.03	.07	1.07	.00
19	.00	.59	.00	.00	.00	.00	.63	.02	.18	.01	.00	.23
20	.11	1.78	.00	.13	.00	.00	.24	.00	.00	.00	.00	.22
21	.00	.19	.00	.13	.00	.00	.00	.00	.00	.00	.00	.05
22	.00	.33	.00	.00	.00	.13	.00	.19	.00	.00	.18	.04
23	.00	.02	.00	.00	.00	.19	.00	.61	.00	.00	.48	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.50	.00	.00	.00
25	.00	.02	.00	.00	.00	.00	.00	.00	.00	.52	.00	.35
26	.00	.00	.00	.00	.00	.00	.00	.00	.17	.00	.06	.09
27	.00	.00	.00	.00	.00	.00	.40	.21	.00	.28	.00	.01
28	.00	.00	---	.00	.00	.00	.00	.01	.76	.00	.00	.00
29	.00	.00	---	.00	---	.00	.04	.00	1.00	.00	.82	.00
30	.00	.00	---	.00	---	.67	.00	.48	.17	.00	.03	.00
31	.15	---	---	.00	---	.72	---	.00	---	.83	.00	---
TOTAL	0.94	3.99	---	0.37	0.00	1.99	2.92	5.07	6.85	9.89	5.49	2.26

GRANT RIVER BASIN

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. Rainfall estimated to be 0.00 for Nov. 27, 28, Dec. 10, 11, Jan. 19, 24, Feb. 9, 10, 13, 22, 26, Mar. 10, 19-21, and Apr. 1 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the period Dec. 28-31.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.89 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.88 in., July 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.67	.00	.00	.00	.00	.00	1.12	.04	.00	.01	.01
2	.00	.63	.00	.00	.00	.20	.00	1.25	.68	.09	.00	.01
3	.00	.00	.00	.08	.00	.09	.00	.40	.02	.00	.00	.00
4	.00	.00	.00	.06	.00	.00	.00	.27	.16	.10	.01	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.47	.01	.00
6	.00	.00	.00	.00	.00	.00	.00	.01	.00	.01	.13	.00
7	.00	.00	.00	.00	.00	.00	.25	.38	1.42	.00	.00	.01
8	.25	.00	.00	.00	.00	.00	.29	.00	.07	1.64	.05	.11
9	.06	.01	.00	.00	.00	.00	.00	.00	.00	.68	.37	.00
10	.00	.00	.00	.00	.00	.00	.01	.13	.00	1.88	.00	.00
11	.00	.00	.00	.00	.00	.00	.21	.01	.00	1.05	.00	.01
12	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00
13	.00	.00	.00	.00	.00	.00	.03	.00	.79	.21	.00	.59
14	.00	.00	.07	.00	.00	.00	.34	.09	.13	.00	1.21	.40
15	.24	.00	.80	.00	.00	.00	.51	.00	.00	.00	.74	.01
16	.01	.00	.00	.00	.00	.01	.10	.00	.26	.00	.17	.00
17	.00	.00	.00	.00	.00	.00	.00	.07	.90	.73	.00	.02
18	.00	.00	.00	.00	.00	.00	.00	.01	.03	.10	.86	.01
19	.00	.70	.00	.00	.00	.00	.54	.00	.21	.01	.00	.19
20	.12	1.87	.00	.03	.00	.00	.42	.00	.00	.00	.00	.28
21	.00	.16	.00	.40	.00	.00	.00	.00	.00	.00	.00	.05
22	.00	.25	.00	.00	.00	.31	.00	.29	.00	.00	.19	.06
23	.00	.03	.00	.00	.00	.17	.00	.57	.00	.00	.24	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.42	.00	.00	.01
25	.00	.02	.00	.00	.00	.00	.00	.00	.00	.36	.00	.33
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.07
27	.00	.00	.00	.00	.00	.00	.41	.33	.00	.34	.00	.00
28	.00	.00	---	.00	.00	.00	.00	.03	.71	.00	.00	.00
29	.00	.00	---	.00	---	.00	.02	.00	1.29	.00	.95	.00
30	.00	.00	---	.00	---	1.35	.00	.74	.18	.00	.03	.00
31	.16	---	---	.00	---	.72	---	.00	---	.84	.00	---
TOTAL	0.84	4.40	---	0.57	0.00	2.85	3.13	5.70	7.31	9.51	5.03	2.17

GRANT RIVER BASIN

207

05413443 KUNSTER CREEK ON TEXAS ROAD, NEAR NORTH ANDOVER, WI

LOCATION (CORRECTED).--Lat 42°47'31", long 90°59'53", in NW 1/4 SW 1/4 sec.29, 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. Rainfall estimated to be 0.00 for Jan. 12, 24, Feb. 9, 10, 12, 13, 26, Mar. 10, 19, 21, and Apr. 1 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the period Nov. 15 to Jan. 6.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.66 in., July 10, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.66 in., July 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.51	---	---	.00	.00	.00	1.04	.03	.00	.01	.00
2	.00	.62	---	---	.00	.20	.00	1.61	.62	.16	.00	.01
3	.00	.00	---	---	.00	.08	.00	.32	.02	.00	.00	.00
4	.00	.00	---	---	.00	.00	.00	.40	.14	.18	.01	.00
5	.00	.00	---	---	.00	.00	.00	.00	.00	1.60	.00	.00
6	.00	.00	---	---	.00	.00	.00	.01	.00	.00	.17	.00
7	.00	.00	---	.00	.00	.00	.22	.36	1.29	.00	.00	.01
8	.29	.00	---	.00	.00	.00	.35	.00	.04	1.56	.02	.04
9	.05	.01	---	.00	.00	.00	.00	.00	.00	.63	.37	.00
10	.00	.02	---	.00	.00	.00	.00	.21	.00	1.66	.00	.00
11	.00	.00	---	.00	.00	.00	.19	.01	.00	1.19	.00	.02
12	.00	.05	---	.00	.00	.00	.00	.00	.00	.00	.04	.00
13	.00	.00	---	.00	.00	.00	.01	.00	1.16	.23	.00	.62
14	.00	.00	---	.00	.00	.00	.28	.13	.10	.00	.78	.38
15	.28	---	---	.00	.00	.01	.54	.00	.00	.00	.85	.00
16	.00	---	---	.00	.00	.00	.19	.00	.25	.00	.18	.00
17	.00	---	---	.00	.00	.00	.00	.06	.62	1.41	.00	.02
18	.00	---	---	.00	.00	.00	.00	.02	.03	.15	.89	.01
19	.00	---	---	.00	.00	.00	.55	.00	.20	.01	.00	.17
20	.15	---	---	.17	.00	.00	.58	.00	.00	.00	.00	.22
21	.00	---	---	.26	.00	.00	.00	.00	.00	.00	.00	.02
22	.00	---	---	.00	.00	.22	.00	.34	.00	.00	.17	.03
23	.00	---	---	.00	.00	.25	.00	.56	.00	.00	.48	.00
24	.00	---	---	.00	.00	.00	.00	.01	.60	.00	.00	.00
25	.00	---	---	.00	.00	.00	.00	.00	.00	.42	.00	.37
26	.00	---	---	.00	.00	.00	.00	.00	.00	.00	.03	.06
27	.00	---	---	.00	.00	.00	.38	.44	.00	.41	.00	.00
28	.00	---	---	.00	.00	.00	.00	.03	.49	.00	.00	.00
29	.00	---	---	.00	---	.00	.02	.00	1.20	.00	.97	.00
30	.00	---	---	.00	---	.91	.00	.63	.18	.00	.11	.00
31	.16	---	---	.00	---	.58	---	.00	---	.76	.00	---
TOTAL	0.93	---	---	---	0.00	2.25	3.31	6.18	6.97	10.37	5.08	1.98

GRANT RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Estimated daily discharges 1992 water year: Oct. 1-3, 26, 27, and ice-affected periods, Nov. 4-11, 24-28, Dec. 2-10, 14-27, Jan. 14 to Feb. 15, and Mar. 10-13; estimated daily discharges 1993 water year: Mar. 12-15, Apr. 26-30, July 2-8, Aug. 31, Sept. 1, and 10-18, and ice-affected periods, Nov. 14, 15, 27, 28, Dec. 3-15, and Dec. 20 to Mar. 6. Records good except those of 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	3.1	13	17	3.5	6.4	5.4	4.3	4.8	2.1	3.6	3.2	1.7
2	3.2	7.8	9.0	3.5	12	5.6	4.0	4.5	2.2	4.5	2.5	1.9
3	3.2	4.3	6.6	3.6	18	5.5	3.9	4.0	2.4	4.0	2.2	1.9
4	4.9	3.0	5.2	3.7	8.0	5.5	4.0	3.8	2.5	3.6	2.2	1.8
5	6.8	2.9	5.2	3.7	5.2	5.6	3.8	3.8	2.7	3.4	2.0	1.8
6	5.3	2.9	5.4	3.7	4.7	5.8	3.7	3.7	3.0	3.3	2.0	4.1
7	3.6	2.9	6.0	3.7	4.3	5.9	3.9	3.5	3.1	4.6	3.3	3.7
8	3.3	2.8	7.4	10	4.1	5.8	3.8	3.4	2.8	5.3	3.4	4.9
9	3.2	2.8	6.2	12	3.9	7.5	4.5	3.3	3.0	4.6	2.8	5.7
10	3.0	2.8	5.4	5.9	3.7	5.6	4.5	3.3	3.2	4.0	2.8	4.2
11	3.1	2.8	5.4	5.4	3.6	5.4	4.4	3.4	3.2	3.5	2.2	3.0
12	3.0	2.9	12	11	3.5	5.2	4.0	3.4	3.1	5.8	2.2	2.4
13	2.9	3.1	9.3	9.6	3.4	5.0	3.9	3.2	2.8	8.0	2.2	2.2
14	3.0	3.8	5.6	6.0	3.3	5.0	4.2	3.0	2.8	7.4	2.1	2.7
15	3.1	4.9	5.2	5.4	3.4	4.7	6.1	3.2	2.7	4.8	2.0	3.7
16	2.9	3.9	4.8	4.5	3.4	4.5	8.6	2.9	3.3	3.8	1.9	3.5
17	2.8	3.9	4.5	4.3	3.8	4.5	5.8	3.6	3.1	3.4	1.9	3.1
18	2.7	9.9	4.5	4.1	6.5	4.5	5.4	3.1	3.0	3.0	1.9	4.2
19	2.7	6.2	4.2	4.0	7.3	4.4	8.1	2.6	2.9	3.0	1.9	3.3
20	2.7	4.9	4.0	4.0	44	4.3	15	2.4	3.2	2.9	1.9	3.0
21	2.8	4.4	3.8	4.5	26	4.3	14	2.5	3.1	2.6	1.8	3.6
22	2.8	4.2	3.7	14	36	5.0	8.6	2.7	3.1	3.0	1.7	3.2
23	2.8	5.0	3.7	30	31	5.2	7.5	2.7	3.4	3.3	1.8	2.7
24	3.8	5.2	3.7	15	33	5.0	7.1	2.3	3.9	3.1	1.8	2.4
25	5.8	4.8	3.6	7.0	14	4.5	6.5	2.2	3.8	3.5	2.0	2.3
26	5.2	4.7	3.6	4.5	7.2	4.3	6.2	2.3	3.6	3.4	2.3	2.6
27	4.5	4.7	3.7	4.3	7.1	4.1	5.8	2.3	3.5	2.9	2.2	3.5
28	3.4	5.0	3.8	4.0	6.6	4.0	5.4	2.1	3.5	2.5	2.0	3.3
29	4.2	6.8	3.8	3.8	5.5	4.5	5.3	2.1	3.7	2.4	1.9	2.4
30	3.1	18	3.6	3.8	---	4.6	5.1	2.1	3.6	4.2	1.9	2.4
31	2.8	---	3.5	4.0	---	4.4	---	2.1	---	5.1	1.7	---
TOTAL	109.7	154.3	173.4	206.5	318.9	155.6	177.4	94.3	92.3	122.5	67.7	91.2
MEAN	3.54	5.14	5.59	6.66	11.0	5.02	5.91	3.04	3.08	3.95	2.18	3.04
MAX	6.8	18	17	30	44	7.5	15	4.8	3.9	8.0	3.4	5.7
MIN	2.7	2.8	3.5	3.5	3.3	4.0	3.7	2.1	2.1	2.4	1.7	1.7
CFSM	.37	.54	.58	.69	1.15	.52	.62	.32	.32	.41	.23	.32
IN.	.43	.60	.67	.80	1.24	.60	.69	.37	.36	.48	.26	.35

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	3.54	5.14	5.59	6.66	11.0	5.02	5.91	3.04	3.08	3.95	2.18	3.04
MAX	3.54	5.14	5.59	6.66	11.0	5.02	5.91	3.04	3.08	3.95	2.18	3.04
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992
MIN	3.54	5.14	5.59	6.66	11.0	5.02	5.91	3.04	3.08	3.95	2.18	3.04
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1992 WATER YEAR

ANNUAL TOTAL	1763.8
ANNUAL MEAN	4.82
HIGHEST DAILY MEAN	44 Feb 20
LOWEST DAILY MEAN	1.7 (a)Aug 22
ANNUAL SEVEN-DAY MINIMUM	1.8 Aug 30
INSTANTANEOUS PEAK FLOW	(b)125 Feb 20
INSTANTANEOUS PEAK STAGE	(c)6.39 Jan 22
INSTANTANEOUS LOW FLOW	1.7 (d)Aug 21
ANNUAL RUNOFF (CFSM)	.50
ANNUAL RUNOFF (INCHES)	6.84
10 PERCENT EXCEEDS	7.1
50 PERCENT EXCEEDS	3.7
90 PERCENT EXCEEDS	2.2

(a) Also occurred Aug. 31 and Sept. 1

(b) Gage height, 5.51 ft

(c) Backwater from ice

(d) Also occurred Aug. 22, 31, and Sept. 1

GRANT RIVER BASIN

209

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	3.4	3.8	3.2	3.8	2.8	19	16	7.7	15	18	11
2	2.3	5.6	3.8	3.0	3.1	3.3	13	25	10	12	14	9.9
3	2.4	5.4	3.5	3.2	2.9	5.8	11	56	12	11	13	10
4	2.3	3.6	3.0	3.2	3.2	45	10	33	9.5	10	12	9.6
5	2.2	3.0	2.8	3.1	3.6	25	9.9	24	9.1	31	12	9.2
6	2.2	2.8	3.0	3.0	3.2	40	7.7	18	8.0	27	13	9.1
7	2.2	2.6	3.3	3.0	2.8	50	7.7	21	20	14	12	8.8
8	2.6	2.5	3.1	3.0	2.7	53	15	18	23	14	12	9.2
9	2.7	2.4	3.0	2.9	2.7	30	11	15	12	201	13	9.3
10	2.6	2.4	2.9	2.9	2.9	18	8.3	14	9.9	149	14	9.4
11	2.3	2.4	2.8	3.0	3.1	10	9.9	14	8.7	118	11	9.4
12	2.2	2.4	2.8	3.2	2.7	4.8	8.0	11	8.1	31	11	10
13	2.2	2.4	2.8	3.3	2.7	4.5	7.1	9.4	10	26	11	12
14	2.3	2.4	2.8	3.2	2.7	4.4	8.6	9.4	19	24	15	14
15	2.6	2.2	6.0	3.1	2.7	10	16	9.0	9.4	20	39	11
16	2.8	2.2	12	3.0	2.5	70	17	8.0	9.3	18	18	10
17	2.6	2.2	6.8	3.0	2.4	14	14	7.8	13	40	13	10
18	2.4	2.2	5.5	2.8	2.5	11	12	8.7	37	25	21	9.8
19	2.3	2.5	4.9	2.8	2.6	5.0	16	8.0	13	21	20	9.5
20	2.7	9.3	4.2	3.3	2.6	6.3	31	7.6	13	17	14	11
21	2.7	17	3.7	3.6	2.6	6.2	16	7.3	11	16	12	11
22	2.6	8.0	3.3	4.0	2.6	4.9	13	7.8	9.5	15	12	10
23	2.5	7.2	3.2	3.6	2.5	4.5	11	12	8.7	15	17	9.3
24	2.5	5.7	3.0	3.3	2.5	5.9	10	12	9.4	15	12	8.8
25	2.5	5.2	3.0	3.2	2.5	81	9.2	8.4	11	19	11	9.4
26	2.3	5.2	3.0	3.1	2.5	112	8.0	7.5	8.8	15	10	11
27	2.2	5.0	3.1	3.1	2.5	95	9.0	9.2	8.3	16	10	9.8
28	2.2	4.5	3.3	3.1	2.5	58	10	8.5	19	17	9.8	9.1
29	2.2	4.2	3.3	2.9	---	33	8.6	7.8	14	14	18	8.5
30	2.2	4.1	3.3	2.9	---	99	7.4	12	68	13	14	8.2
31	2.2	---	3.3	3.0	---	85	---	10	---	19	12	---
TOTAL	74.4	130.0	118.3	97.0	77.6	997.4	354.4	435.4	429.4	998	443.8	297.3
MEAN	2.40	4.33	3.82	3.13	2.77	32.2	11.8	14.0	14.3	32.2	14.3	9.91
MAX	2.8	17	12	4.0	3.8	112	31	56	68	201	39	14
MIN	2.2	2.2	2.8	2.8	2.4	2.8	7.1	7.3	7.7	10	9.8	8.2
CFSM	.25	.45	.40	.33	.29	3.35	1.23	1.46	1.49	3.36	1.49	1.03
IN.	.29	.50	.46	.38	.30	3.87	1.37	1.69	1.67	3.87	1.72	1.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

	MEAN	2.97	4.74	4.70	4.90	6.96	18.6	8.86	8.54	8.69	18.1	8.25	6.47
	MAX	3.54	5.14	5.59	6.66	11.0	32.2	11.8	14.0	14.3	32.2	14.3	9.91
	(WY)	1992	1992	1992	1992	1992	1993	1993	1993	1993	1993	1993	1993
	MIN	2.40	4.33	3.82	3.13	2.77	5.02	5.91	3.04	3.08	3.95	2.18	3.04
	(WY)	1993	1993	1993	1993	1993	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1992 - 1993

ANNUAL TOTAL	1649.1	4453.0	
ANNUAL MEAN	4.51	12.2	8.50
HIGHEST ANNUAL MEAN			12.2
LOWEST ANNUAL MEAN			4.82
HIGHEST DAILY MEAN	44	Feb 20	201
LOWEST DAILY MEAN	1.7	Aug 22	2.2 (a) Oct 5
ANNUAL SEVEN-DAY MINIMUM	1.8	Aug 30	2.3
INSTANTANEOUS PEAK FLOW			(c) 834
INSTANTANEOUS PEAK STAGE			8.74
INSTANTANEOUS LOW FLOW			(d) 1.0
ANNUAL RUNOFF (CFSM)	.47		1.27
ANNUAL RUNOFF (INCHES)	6.40		17.27
10 PERCENT EXCEEDS	6.7		20
50 PERCENT EXCEEDS	3.4		8.5
90 PERCENT EXCEEDS	2.2		2.5

(a) Also occurred on Oct. 6, 7, 12, 13, 27-31, and Nov. 15-18

(b) Also occurred Aug. 31 and Sept. 1, 1992

(c) From rating curve extended above 200 ft³/s

(d) Result of freezeup

GRANT RIVER BASIN

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1991 to current year.

DISSOLVED OXYGEN: October 1991 to current year.

SUSPENDED-SOLIDS DISCHARGE: October 1992 to September 1993.

TOTAL-PHOSPHORUS DISCHARGE: October 1992 to September 1993.

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 PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 29.0°C, Aug. 9, 1991; minimum observed, 0.0°C, on many days.

DISSOLVED OXYGEN: Maximum observed, 19.9 mg/L, Oct. 23, 1991; minimum observed, 0.5 mg/L, June 7, 1993.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 27.5°C, June 22-23; minimum observed, 0.0°C, on many days.

DISSOLVED OXYGEN: Maximum observed, 16.2 mg/L, Oct. 22, 30; minimum observed, 0.5 mg/L, June 7.

SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 2,390 tons, Mar. 30; minimum observed, 0.04 ton, Oct. 6-7, 11-15.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 4,950 lbs, Mar. 30; minimum observed, 1.4 lbs, Oct. 12-14, and Nov. 17-18.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L) (00335)	OXYGEN DEMAND, BIO-CHEMICAL 5 DAY (MG/L) (00310)	CALCIUM TOTAL RECOVERABLE (MG/L) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L) (00921)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
OCT 1992										
*04...	1440	--	2.1	8.6	--	2.9	--	--	8	466
*15...	1330	--	2.5	8.3	8	3.0	--	--	6	474
NOV										
*01...	1420	--	3.7	8.1	--	2.4	--	--	18	466
*02...	1145	--	5.7	8.0	--	10	--	--	52	526
*15...	1230	2.2	--	8.2	--	1.0	--	--	24	504
20...	1115	--	7.9	7.9	--	--	--	--	180	604
20...	2000	--	13	7.8	--	--	67	34	252	672
20...	2315	--	19	7.8	--	--	67	32	540	920
*21...	1030	--	18	7.8	--	--	--	--	268	616
21...	1040	--	18	7.8	--	--	62	29	280	646
21...	2315	--	11	7.8	42	1.8	--	--	114	476
*23...	1100	--	7.1	7.9	39	13	--	--	51	508
DEC										
15...	1700	6.0	--	8.1	--	--	--	--	28	506
15...	2315	6.0	--	7.7	--	--	--	--	190	624
16...	0001	--	13	8.2	--	--	--	--	29	470
16...	2315	--	8.8	7.6	--	--	--	--	278	646
*17...	1140	--	6.7	8.1	--	--	--	--	58	478
JAN 1993										
*24...	1145	3.3	--	7.9	--	2.0	--	--	63	544
FEB										
*14...	1230	2.7	--	8.1	--	1.5	--	--	100	576
DATE		SOLIDS, VOLA-TILE ON IGNITION, TOTAL (MG/L) (00505)	RESIDUE VOLA-TILE, SUSPENDED (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)	COPPER, TOTAL RECOVERABLE (UG/L) (01119)	ZINC, TOTAL RECOVERABLE (UG/L) (01094)	SEDI-MENT, SUSPENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1992										
04...	142	3	4.17	0.021	--	--	--	--	--	--
15...	132	3	5.13	0.023	0.120	--	--	--	--	--
NOV										
01...	130	6	5.29	0.166	0.180	--	--	--	--	--
02...	162	15	4.84	1.37	0.810	--	--	--	--	--
15...	134	5	6.46	0.116	0.130	--	--	--	--	--
20...	150	40	4.53	1.22	1.21	--	--	--	--	--
20...	182	60	5.42	2.76	2.83	14	70	245	98	--
20...	212	100	4.66	2.81	3.86	19	100	--	--	--
21...	150	52	4.56	1.35	2.22	--	--	--	--	--
21...	164	48	4.51	1.29	2.03	11	50	284	97	--
21...	128	22	5.00	0.586	1.02	--	--	516	98	--
23...	138	14	6.69	1.50	1.06	--	--	--	--	--
DEC										
15...	144	6	7.19	1.44	0.330	--	--	--	--	--
15...	206	74	1.01	4.26	3.98	--	--	--	--	--
16...	112	5	7.14	0.128	0.170	--	--	--	--	--
16...	168	64	4.64	2.41	2.54	--	--	--	--	--
17...	138	12	6.33	0.752	0.650	--	--	--	--	--
JAN 1993										
24...	144	14	7.87	0.562	0.220	--	--	--	--	--
FEB										
14...	128	14	7.44	0.255	0.260	--	--	--	--	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLES

GRANT RIVER BASIN

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054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
MAR 1993							
04...	1148	45	--	7.5	67	672	870
*04...	1200	45	--	7.5	64	672	850
05...	1600	25	--	7.2	--	3430	3570
05...	1730	25	--	7.3	--	4010	4060
05...	2015	25	--	7.2	--	2610	2720
06...	0015	40	--	7.0	--	344	546
06...	1430	40	--	7.2	47	372	608
07...	0730	--	24	7.3	46	344	526
*07...	1114	--	17	7.5	--	192	418
07...	1115	--	17	7.4	--	1570	1640
07...	1600	--	51	7.2	50	1040	1240
07...	1730	--	74	7.2	62	2500	2580
07...	1800	--	87	7.2	75	3920	3740
07...	1845	--	103	7.3	87	5760	5980
08...	0145	--	64	7.2	57	790	938
*08...	1225	--	27	7.3	42	136	344
08...	1415	--	45	7.1	30	472	664
08...	1530	--	65	7.1	32	1180	1330
08...	1945	--	76	7.0	35	1230	1410
09...	0400	--	32	7.1	28	268	466
*14...	1225	4.4	--	7.9	1.9	46	526
16...	0145	--	32	7.9	10	614	894
16...	0300	--	41	7.7	18	1640	1860
16...	0930	--	77	7.5	21	1920	2150
16...	1145	--	97	7.6	19	2570	2870
16...	1630	--	93	7.5	19	2060	1910
*16...	1631	--	93	7.6	16	1000	1300
16...	2130	--	60	7.5	15	738	838
16...	2330	--	34	7.6	12	166	316
17...	0100	--	22	--	--	1720	--
*17...	1030	--	11	7.8	10	158	408
25...	1300	--	35	7.5	--	810	--
25...	1400	--	55	7.4	--	1620	--
25...	1500	--	91	7.4	--	3450	--
25...	1514	--	99	--	--	172	--
25...	1545	--	123	7.4	--	4700	--
25...	2345	--	163	7.4	--	5040	--
26...	0530	--	79	7.4	--	700	--
26...	1345	--	94	7.4	--	700	--
26...	1530	--	138	7.5	19	1750	1760
26...	1715	--	157	7.6	19	3100	3000
26...	2315	--	127	7.5	18	2280	2730
27...	0300	--	73	7.4	--	388	--
*27...	1030	--	39	7.7	9.9	176	330
27...	1230	--	51	7.7	--	302	--
27...	1430	--	102	7.5	--	938	--
27...	1600	--	145	7.5	--	1570	2640
27...	1645	--	170	7.5	--	1760	2980
28...	0030	--	78	7.5	--	644	--
28...	0330	--	43	7.6	--	299	--
28...	1345	--	40	7.8	--	312	--
28...	1530	--	84	7.7	--	1260	1550
28...	1630	--	100	7.7	--	1540	1940
28...	2345	--	56	7.7	--	390	--
*29...	1145	--	18	7.7	6.4	53	292
30...	1645	--	39	8.0	7.9	354	638
30...	1915	--	88	7.7	--	2100	--
30...	1937	--	117	--	--	2860	--
30...	2000	--	333	7.6	>78	13400	14900
30...	2100	--	631	--	--	--	--
30...	2130	--	513	--	--	--	--
31...	0015	--	330	--	--	--	--
31...	0230	--	164	7.6	23	3990	3400
31...	0845	--	82	7.7	--	1800	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLES

GRANT RIVER BASIN

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAR 1993							
04...	176	90	1.73	6.21	3.16	--	--
04...	166	86	1.76	6.26	3.19	--	--
05...	324	280	0.713	6.78	6.84	--	--
05...	352	320	0.677	6.16	6.90	3860	97
05...	286	240	0.719	6.64	6.22	2550	97
06...	150	64	0.811	6.33	3.75	331	98
06...	142	64	1.14	5.14	3.67	--	--
07...	124	56	0.878	4.22	1.08	--	--
07...	122	44	1.38	5.00	2.71	--	--
07...	174	120	1.26	5.00	3.80	--	--
07...	194	150	0.852	4.40	3.90	--	--
07...	288	240	0.615	4.68	5.31	--	--
07...	384	440	0.456	5.10	6.54	--	--
07...	510	540	0.432	5.26	8.98	--	--
08...	164	110	0.587	4.19	3.36	--	--
08...	106	36	1.12	4.17	2.22	--	--
08...	128	60	0.913	3.44	2.51	--	--
08...	178	130	0.614	3.18	3.30	--	--
08...	166	130	0.583	3.27	3.35	--	--
09...	102	44	0.852	2.90	2.12	--	--
14...	130	6	6.20	0.821	0.270	--	--
16...	148	62	4.04	1.12	1.11	--	--
16...	210	144	2.61	1.83	2.48	--	--
16...	198	148	0.975	2.22	3.16	2070	94
16...	268	194	0.994	1.99	3.06	2520	88
16...	176	162	0.635	2.03	2.85	--	--
16...	132	82	0.626	2.13	2.17	1880	90
16...	110	62	0.650	2.00	1.77	--	--
16...	76	20	0.739	1.96	1.28	--	--
17...	--	--	--	--	2.33	--	--
17...	84	18	1.73	1.98	1.03	--	--
25...	--	--	--	6.86	3.45	--	--
25...	--	--	--	6.31	5.50	--	--
25...	--	--	--	5.19	5.89	--	--
25...	--	--	--	--	2.13	--	--
25...	--	--	--	5.55	7.48	--	--
25...	--	--	--	3.58	5.70	--	--
26...	--	--	--	3.15	2.03	--	--
26...	--	--	--	2.95	2.33	--	--
26...	160	130	0.967	2.94	3.07	--	--
26...	258	300	0.871	2.87	3.97	--	--
26...	202	160	0.818	2.70	3.43	--	--
27...	--	--	--	2.55	1.96	--	--
27...	86	16	1.25	2.58	1.50	--	--
27...	--	--	--	2.82	1.88	--	--
27...	--	--	--	2.65	2.79	--	--
27...	262	127	0.782	2.64	5.38	--	--
27...	298	156	0.707	2.67	4.36	--	--
28...	--	--	--	2.33	2.09	--	--
28...	--	--	--	2.38	1.83	--	--
28...	--	--	--	1.99	1.24	--	--
28...	174	108	1.08	2.17	2.84	--	--
28...	208	120	0.949	2.20	3.17	--	--
28...	--	--	--	2.00	1.56	--	--
29...	78	7	1.82	1.60	0.790	--	--
30...	110	32	2.11	0.995	0.850	--	--
30...	--	--	--	2.92	4.14	--	--
30...	--	--	--	--	4.77	--	--
30...	942	970	0.814	4.42	18.4	--	--
30...	--	--	0.569	2.78	17.0	--	--
30...	--	--	--	2.54	9.80	--	--
31...	--	--	--	1.93	8.60	--	--
31...	336	352	1.24	2.03	5.20	--	--
31...	--	--	--	2.33	3.55	--	--

GRANT RIVER BASIN

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054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
APR 1993								
*18...	1205	--	13	8.3	--	1.6	--	--
*26...	1100	8.0	--	8.7	16	2.9	10	--
MAY								
02...	2200	--	35	8.0	--	>20	--	--
02...	2300	--	72	7.8	--	--	--	--
02...	2330	--	125	7.8	--	72	150000	--
03...	0030	--	166	7.7	--	44	200000	--
03...	0230	--	101	7.7	--	32	150000	--
03...	0630	--	57	7.9	--	--	--	--
03...	0930	--	42	8.0	--	--	--	--
*12...	1105	--	11	8.5	--	4.2	3600	300
*25...	1215	--	8.5	8.4	--	2.4	3400	170
JUN								
07...	1030	--	13	--	--	--	150000	58000
07...	2030	--	35	7.9	--	25	--	--
*08...	1055	--	24	7.9	50	8.6	54000	44000
13...	2345	--	24	8.1	69	13	200000	>110000
17...	2215	--	25	8.0	--	81	>600000	--
18...	0245	--	45	8.0	--	29	>500000	--
18...	0300	--	56	7.9	--	29	>500000	--
*22...	1320	--	9.5	8.2	22	3.2	2400	110
28...	1930	--	42	8.2	--	--	--	--
30...	0015	--	35	8.2	--	8.8	65000	--
30...	0045	--	92	7.7	--	45	100000	--
30...	0100	--	107	7.5	--	80	>500000	--
30...	0145	--	110	--	--	--	>300000	--
30...	0430	--	55	7.7	--	--	--	--
30...	0600	--	104	7.7	--	--	--	--
30...	0630	--	122	7.7	--	19	>300000	--
30...	1130	--	93	7.7	--	--	--	--
*30...	1330	--	67	7.7	--	7.8	95000	--
30...	2045	--	27	7.8	--	--	--	--
JUL								
05...	1315	31	--	7.8	--	--	380000	--
05...	1700	31	--	7.9	--	22	320000	--
05...	1800	31	--	7.4	--	60	800000	--
05...	2230	31	--	7.4	--	19	--	--
06...	0815	27	--	7.4	--	--	--	--
06...	1045	27	--	7.6	--	11	99000	--
09...	0945	--	199	7.4	--	--	--	--
*09...	0946	--	199	7.4	--	--	--	--
09...	1045	--	170	7.4	--	--	--	--
09...	1330	--	110	7.5	--	--	--	--
*09...	1331	--	110	7.6	--	--	--	--
09...	1615	--	75	7.7	--	--	--	--
09...	2100	--	41	7.8	--	--	--	--
*10...	1000	--	25	7.9	--	--	--	--
17...	1030	--	29	8.2	--	--	--	--
17...	1100	--	125	7.9	--	--	--	--
17...	1230	--	94	7.7	--	--	--	--
17...	1630	--	52	7.7	--	--	--	--
18...	0745	--	27	8.1	--	--	--	--
*19...	1020	--	21	8.1	--	--	3700	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLES

GRANT RIVER BASIN

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	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)
APR 1993							
18...	12	416	106	<2	5.63	0.232	0.360
26...	15	434	120	7	5.40	<0.100	0.230
MAY							
02...	436	828	198	60	3.81	0.889	1.93
02...	2390	--	--	--	--	2.60	7.66
02...	6170	6260	706	630	1.88	1.99	11.3
03...	7380	6930	668	680	2.06	1.40	14.4
03...	2840	3030	392	340	2.55	1.33	6.22
03...	732	--	--	--	--	1.10	2.28
03...	408	--	--	--	--	0.975	1.72
12...	39	502	164	9	4.83	0.024	0.390
25...	18	466	122	4	6.18	0.156	0.260
JUN							
07...	--	--	--	--	--	--	--
07...	720	1100	236	125	4.17	1.05	2.45
08...	252	614	160	48	4.34	0.688	0.910
13...	520	904	242	90	4.70	0.553	1.18
17...	1280	1740	392	270	3.51	2.76	6.20
18...	1710	2140	340	240	3.63	1.26	4.25
18...	2080	2550	346	270	3.65	1.00	4.00
22...	114	630	196	19	7.00	0.145	0.420
28...	1030	--	--	--	--	0.202	1.46
30...	988	1330	194	100	4.10	0.129	1.41
30...	7770	7990	834	760	3.76	0.901	8.34
30...	9670	9730	1070	1040	1.82	2.27	15.1
30...	--	--	--	--	--	--	--
30...	2520	--	--	--	--	0.858	5.68
30...	2250	--	--	--	--	0.568	3.75
30...	2880	3080	364	265	3.73	0.537	3.76
30...	1800	--	--	--	--	0.263	3.01
30...	1220	1540	262	160	2.34	0.283	2.55
30...	590	--	--	--	--	0.173	1.69
JUL							
05...	340	808	198	80	--	1.11	1.71
05...	1020	1530	278	150	--	0.795	2.63
05...	4640	4560	588	700	--	2.12	10.1
05...	1560	--	--	--	--	0.726	3.71
06...	540	--	--	--	--	0.258	1.46
06...	1260	1400	222	170	3.67	0.355	1.56
09...	1580	--	--	--	--	0.240	3.30
09...	1460	--	--	--	--	0.266	3.25
09...	1780	1940	--	240	--	0.215	3.34
09...	1160	--	--	--	--	0.191	2.66
09...	1080	--	--	--	--	0.202	2.56
09...	640	1080	--	120	--	0.188	1.96
09...	430	846	--	80	--	0.216	1.49
10...	162	578	--	26	--	0.271	0.610
17...	400	866	--	70	--	0.147	0.720
17...	4970	5310	--	296	--	0.551	5.94
17...	4100	4550	--	380	--	0.446	5.25
17...	880	1220	--	160	--	0.677	2.09
18...	240	688	--	60	--	0.181	0.710
19...	94	574	--	14	--	0.184	0.440

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	RESIDUE TOTAL AT 105 DEG. C, PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
AUG 1993											
*02...	1200	--	14	8.2	3.2	3400	125	614	14	0.116	0.340
09...	1110	--	13	8.3	4.7	8000	129	668	17	0.101	--
09...	1111	--	13	8.2	2.5	7200	99	576	15	0.100	--
15...	0045	--	32	8.1	--	--	540	958	68	0.400	1.12
15...	0845	--	48	7.8	--	--	1090	1400	104	0.766	1.93
15...	0900	--	72	7.8	--	--	2180	2510	184	1.02	3.13
15...	1315	--	38	7.8	--	--	1300	1560	192	0.535	3.10
*17...	1030	--	13	8.1	2.5	6000	87	618	11	0.101	0.340
18...	1330	--	26	8.2	7.1	40000	437	902	44	0.158	0.880
18...	1400	--	35	8.2	14	76000	654	1140	60	0.405	1.52
18...	1545	--	43	8.1	18	440000	950	1360	114	0.378	2.30
18...	1730	--	30	8.1	12	210000	656	1010	88	0.345	1.66
*30...	1335	--	13	8.0	--	--	56	538	8	0.048	0.310
SEP											
*16...	1130	10	--	8.2	1.4	--	25	510	4	0.020	0.140
26...	1330	--	11	8.2	2.5	--	25	514	8	0.310	0.230

* EQUAL-WIDTH INCREMENT (EWI) SAMPLES

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									
14...	1050	2.5	735	9.5	MAY 1993				
DEC					15...	0945	9.2	660	14.5
07...	1100	3.5	735	0.5	JUN				
JAN 1993					29...	1218	10	525	20.0
27...	0900	3.1	735	0.0	AUG				
MAR					16...	1000	19	570	19.5
05...	1127	9.1	365	0.5	SEP				
26...	1302	72	200	2.5	17...	1000	9.7	840	14.0

GRANT RIVER BASIN

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	18.0	10.5	14.0	6.5	6.0	6.5	3.0	.5	1.5	.5	.5	.5
2	19.5	12.5	16.0	7.5	5.5	6.5	2.0	.5	1.5	.5	.5	.5
3	19.5	13.0	16.5	6.0	4.5	5.0	1.0	.5	1.0	.5	.5	.5
4	18.5	13.5	16.0	5.0	3.0	4.0	1.0	.5	.5	.5	.5	.5
5	18.0	13.0	15.0	4.0	3.0	3.5	.5	.5	.5	.5	.5	.5
6	17.0	11.5	14.0	3.5	2.0	2.5	.5	.5	.5	.5	.5	.5
7	16.0	11.5	14.0	4.0	2.0	3.0	.5	.5	.5	.5	.5	.5
8	14.5	12.5	13.5	4.5	2.5	3.5	.5	.5	.5	.5	.5	.5
9	12.5	10.5	11.5	8.5	4.5	6.5	.5	.5	.5	.5	.5	.5
10	12.5	8.5	10.5	10.0	7.0	8.5	.5	.5	.5	.5	.5	.5
11	13.0	8.0	10.5	7.0	4.0	5.5	.5	.5	.5	.5	.5	.5
12	12.5	9.0	10.5	6.5	2.5	5.5	.5	.5	.5	.5	.5	.5
13	11.5	8.0	9.5	2.5	.5	1.5	1.0	.5	1.0	.5	.5	.5
14	11.5	9.0	10.0	1.5	.5	1.0	2.5	1.0	2.0	.5	.5	.5
15	10.5	9.0	10.0	3.0	.5	1.5	3.5	2.0	2.5	.5	.5	.5
16	9.5	5.5	7.5	5.0	1.0	3.0	2.5	1.5	2.0	.5	.5	.5
17	8.0	3.0	5.5	4.0	3.0	3.5	3.0	.5	2.0	.5	.5	.5
18	7.5	4.0	6.0	5.0	1.5	3.5	1.5	.5	1.0	.5	.5	.5
19	5.5	1.5	4.0	4.5	3.0	4.0	2.5	.5	1.5	.5	.5	.5
20	10.5	4.0	7.0	8.0	4.5	6.5	.5	.5	.5	.5	.5	.5
21	10.5	6.5	8.5	8.0	6.0	7.0	.5	.5	.5	.5	.5	.5
22	15.5	8.0	11.5	6.0	3.5	4.5	.5	.5	.5	.5	.5	.5
23	18.5	13.5	15.5	5.5	3.5	4.5	.5	.5	.5	.5	.5	.5
24	15.5	11.0	13.5	5.5	4.5	5.0	.5	.5	.5	.5	.5	.5
25	14.0	8.5	11.5	4.5	.5	3.0	.5	.5	.5	.5	.5	.5
26	13.5	9.5	11.5	2.0	.5	1.0	.5	.5	.5	.5	.5	.5
27	10.5	5.5	8.5	1.0	.5	.5	.5	.5	.5	.5	.5	.5
28	10.5	6.0	8.0	.5	.5	.5	.5	.5	.5	.5	.5	.5
29	8.5	5.5	7.0	2.0	.5	1.0	.5	.5	.5	.5	.5	.5
30	7.5	3.0	5.5	2.5	1.5	2.0	.5	.5	.5	.5	.5	.5
31	7.0	5.0	6.0	---	---	---	.5	.5	.5	.5	.5	.5
MONTH	19.5	1.5	10.6	10.0	.5	3.8	3.5	.5	.9	.5	.5	.5
FEBRUARY			MARCH			APRIL			MAY			
1	.5	.5	.5	.5	.0	.5	5.0	1.5	3.5	14.0	10.5	12.0
2	.5	.0	.5	.5	.0	.5	7.5	2.0	4.5	16.5	12.5	14.0
3	.5	.5	.5	.5	.0	.5	9.5	3.5	6.0	14.5	13.0	13.5
4	.5	.5	.5	.5	.5	.5	10.0	4.5	7.5	15.0	13.0	14.0
5	.5	.5	.5	.5	.5	.5	8.0	5.0	6.5	19.5	12.5	15.5
6	.5	.5	.5	3.5	.5	1.0	10.5	5.5	8.0	19.5	13.0	16.0
7	.5	.5	.5	3.5	.5	1.5	9.5	8.0	8.5	19.5	14.5	16.5
8	.5	.5	.5	3.5	.5	1.5	10.0	8.5	9.0	---	---	---
9	.5	.0	.5	4.5	.5	2.0	11.5	7.5	9.5	---	---	---
10	1.0	.5	.5	4.0	1.0	2.0	14.0	6.0	10.0	---	---	---
11	.5	.0	.0	3.5	.5	1.5	11.5	7.0	8.5	24.0	17.0	20.0
12	.5	.0	.0	---	---	---	11.0	5.5	8.0	23.5	16.5	19.5
13	2.0	.0	.5	---	---	---	10.5	6.0	8.5	20.5	12.0	16.0
14	.0	.0	.0	---	---	---	7.5	5.0	6.0	19.0	13.0	16.0
15	.0	.0	.0	---	---	---	5.0	2.5	4.0	19.0	12.5	15.5
16	.5	.0	.0	---	---	---	7.0	2.0	4.0	19.0	11.0	15.0
17	.0	.0	.0	1.0	.5	.5	12.5	3.0	7.5	14.5	11.0	11.5
18	.5	.0	.0	1.5	.5	.5	---	---	---	17.0	10.0	13.5
19	.5	.0	.0	3.5	.5	2.0	---	---	---	15.0	10.0	12.5
20	.5	.0	.0	5.5	2.0	3.5	---	---	---	14.0	9.5	12.0
21	.5	.0	.0	4.0	1.0	2.0	---	---	---	18.5	9.0	13.5
22	.5	.0	.5	2.0	.5	1.0	---	---	---	16.0	11.5	14.0
23	.5	.0	.5	3.5	.5	2.0	---	---	---	16.0	14.0	15.0
24	.5	.0	.5	8.5	2.5	5.0	14.0	11.0	12.5	15.0	12.5	13.5
25	.5	.0	.5	6.5	.5	3.5	17.5	9.0	13.0	18.5	11.0	14.5
26	.5	.0	.5	3.5	1.0	2.0	---	---	---	22.5	11.5	16.5
27	.5	.0	.0	4.5	1.0	2.5	---	---	---	20.5	15.5	18.0
28	.5	.0	.0	7.5	2.0	4.5	---	---	---	18.0	14.0	16.0
29	---	---	---	10.0	3.0	6.5	---	---	---	18.5	12.0	15.0
30	---	---	---	9.0	4.5	7.0	---	---	---	16.5	13.5	15.0
31	---	---	---	5.5	3.5	4.5	---	---	---	19.5	12.0	15.5
MONTH	2.0	.0	.3	---	---	---	---	---	---	---	---	---

WATER TEMPERATURE. DEGREES CELSIUS. WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	OCTOBER				NOVEMBER				DECEMBER				JANUARY		
1	14.1	7.6	10.3		11.8	9.8	10.9		---	---	---		---	---	---
2	14.1	7.1	9.8		10.7	9.8	10.4		---	---	---		---	---	---
3	14.2	7.0	9.6		13.0	9.8	11.5		---	---	---		---	---	---
4	14.3	7.0	9.8		13.4	11.6	12.4		---	---	---		---	---	---
5	14.8	7.7	10.3		14.3	12.4	13.0		---	---	---		---	---	---
6	15.2	7.8	10.4		14.6	12.6	13.3		---	---	---		---	---	---
7	15.0	7.8	10.3		14.6	12.6	13.3		---	---	---		---	---	---
8	13.0	7.9	9.4		---	---	---		---	---	---		---	---	---
9	14.1	8.4	10.2		---	---	---		---	---	---		---	---	---
10	14.8	9.0	11.1		---	---	---		---	---	---		---	---	---
11	15.4	9.2	11.5		---	---	---		---	---	---		---	---	---
12	15.5	9.5	11.6		---	---	---		---	---	---		---	---	---
13	15.9	9.3	11.8		---	---	---		---	---	---		---	---	---
14	15.3	9.2	11.3		---	---	---		---	---	---		---	---	---
15	14.2	9.5	10.8		---	---	---		---	---	---		---	---	---
16	14.8	9.7	11.8		---	---	---		---	---	---		---	---	---
17	16.0	10.4	12.8		---	---	---		---	---	---		---	---	---
18	15.8	10.3	12.5		---	---	---		---	---	---		---	---	---
19	15.6	11.2	13.0		---	---	---		---	---	---		---	---	---
20	15.4	9.8	12.3		---	---	---		---	---	---		---	---	---
21	16.1	9.8	12.0		---	---	---		---	---	---		---	---	---
22	16.2	7.5	11.2		---	---	---		---	---	---		---	---	---
23	14.8	7.0	9.5		---	---	---		---	---	---		---	---	---
24	14.8	7.0	9.9		---	---	---		---	---	---		---	---	---
25	14.5	8.0	10.4		---	---	---		---	---	---		---	---	---
26	14.7	8.1	10.5		---	---	---		---	---	---		---	---	---
27	15.2	8.9	11.4		---	---	---		---	---	---		---	---	---
28	15.5	9.5	11.5		---	---	---		---	---	---		---	---	---
29	14.2	9.5	11.5		---	---	---		---	---	---		---	---	---
30	16.2	10.5	12.6		---	---	---		---	---	---		---	---	---
31	14.4	10.5	11.8		---	---	---		---	---	---		---	---	---
MONTH	16.2	7.0	11.1		---	---	---		---	---	---		---	---	---

GRANT RIVER BASIN

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	14.4	9.4	11.4
21	---	---	---	---	---	---	---	---	---	14.6	8.5	11.4
22	---	---	---	---	---	---	---	---	---	13.8	7.9	10.4
23	---	---	---	---	---	---	---	---	---	10.7	5.3	8.9
24	---	---	---	---	---	---	---	---	---	11.3	7.9	9.7
25	---	---	---	---	---	---	---	---	---	12.3	8.6	10.4
26	---	---	---	---	---	---	---	---	---	12.2	7.5	9.9
27	---	---	---	---	---	---	---	---	---	10.8	7.6	8.8
28	---	---	---	---	---	---	---	---	---	11.1	7.8	9.7
29	---	---	---	---	---	---	---	---	---	12.4	9.0	10.7
30	---	---	---	---	---	---	---	---	---	10.3	8.4	9.5
31	---	---	---	---	---	---	---	---	---	12.2	9.3	10.6
JUNE				JULY			AUGUST			SEPTEMBER		
1	12.5	9.6	10.8	9.2	7.9	8.7	9.1	7.1	8.1	---	---	---
2	11.6	9.9	10.7	---	---	---	---	---	---	---	---	---
3	12.2	9.2	10.7	---	---	---	---	---	---	10.8	8.2	9.2
4	11.8	9.4	10.7	---	---	---	11.6	7.1	7.7	11.1	7.9	9.4
5	12.8	9.0	11.1	---	---	---	11.9	6.8	7.2	10.6	8.2	9.4
6	12.4	9.3	10.6	---	---	---	9.1	6.4	6.9	11.6	8.3	9.7
7	10.2	.5	9.0	---	---	---	8.1	5.6	6.8	11.8	8.5	9.8
8	9.7	8.1	9.0	---	---	---	9.3	6.4	7.2	12.0	8.5	9.8
9	10.4	7.4	8.8	---	---	---	8.9	6.9	7.6	12.2	8.6	9.9
10	9.2	7.0	8.2	8.9	7.0	8.1	---	---	---	---	---	---
11	9.2	7.0	8.1	8.1	7.5	7.8	---	---	---	---	---	---
12	9.2	7.0	8.1	9.1	8.0	8.6	---	---	---	---	---	---
13	9.0	6.5	7.9	9.3	7.7	8.8	---	---	---	---	---	---
14	7.9	3.1	7.3	9.2	8.2	8.7	---	---	---	---	---	---
15	9.3	7.5	8.5	9.3	7.9	8.6	---	---	---	---	---	---
16	9.2	7.6	8.5	9.3	8.0	8.6	---	---	---	---	---	---
17	8.3	2.4	7.4	8.7	5.8	7.7	---	---	---	---	---	---
18	7.1	5.2	6.6	8.4	7.8	8.1	8.7	6.8	7.8	---	---	---
19	7.9	5.9	7.5	8.7	7.5	8.2	8.6	7.3	7.9	10.6	9.3	9.8
20	8.7	7.4	8.2	9.1	8.0	8.6	9.1	7.6	8.4	10.7	8.7	9.5
21	9.3	7.0	8.4	9.6	8.2	8.9	9.6	7.9	8.7	10.4	8.7	9.3
22	9.2	7.2	8.2	10.0	8.3	9.1	9.4	7.9	8.6	10.5	8.4	9.2
23	9.5	7.2	8.4	9.9	8.0	9.0	8.3	6.8	7.8	11.4	8.5	9.6
24	9.1	7.5	8.3	9.8	7.4	8.6	9.4	7.3	8.2	11.8	8.8	10.0
25	9.4	5.7	8.4	9.3	5.3	7.7	9.4	7.3	8.2	10.3	8.9	9.5
26	10.1	7.3	8.8	10.5	6.9	8.4	9.5	6.7	7.9	10.4	8.8	9.3
27	10.3	7.3	8.8	10.0	6.8	8.1	9.3	7.2	7.9	11.7	9.0	10.0
28	8.8	6.4	7.9	10.0	6.5	8.2	9.8	7.5	8.5	11.5	9.1	10.1
29	8.9	7.6	8.4	10.3	7.3	8.6	8.5	7.0	8.1	12.4	9.4	10.5
30	8.7	4.3	7.7	10.7	6.5	8.6	---	---	---	12.4	8.9	10.5
31	---	---	---	8.6	6.9	7.5	---	---	---	---	---	---
MONTH	12.8	.5	8.7	---	---	---	---	---	---	---	---	---

GRANT RIVER BASIN

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054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED(TONS PER DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.18	.37	.49	.71	.79	11	5.2	.37	12	6.1	1.5
2	.05	.89	.35	.46	.59	1.7	6.0	80	.50	9.6	4.6	1.3
3	.05	.81	.30	.49	.57	5.6	4.6	276	.60	9.1	4.2	1.3
4	.05	.28	.25	.50	.64	192	3.5	14	.46	8.5	3.9	1.2
5	.05	.23	.22	.48	.74	97	2.9	8.5	.44	86	3.7	1.0
6	.04	.21	.23	.47	.67	33	1.9	5.4	.39	80	4.0	.99
7	.04	.19	.24	.47	.61	255	1.6	5.3	34	51	3.6	.92
8	.05	.18	.21	.47	.60	102	7.8	3.8	21	54	3.4	.91
9	.05	.17	.20	.45	.61	40	1.7	2.6	9.1	741	3.9	.87
10	.05	.17	.18	.45	.67	12	1.0	2.1	8.6	430	3.8	.84
11	.04	.16	.17	.47	.74	2.5	1.0	1.7	8.6	340	3.1	.80
12	.04	.16	.16	.50	.66	.93	.71	1.2	9.0	13	2.9	.82
13	.04	.16	.15	.52	.68	.70	.54	.93	13	11	2.9	.93
14	.04	.16	.15	.51	.69	.72	.54	.88	19	9.5	10	1.0
15	.04	.14	.79	.49	.69	8.4	9.2	.79	5.0	7.9	111	.78
16	.05	.14	6.9	.48	.64	292	11	.67	2.6	7.1	7.8	.68
17	.05	.14	1.3	.48	.62	6.0	6.7	.61	12	177	3.2	.67
18	.05	.14	.81	.45	.64	4.2	.40	.64	90	14	28	.66
19	.05	.17	.73	.45	.67	1.9	.55	.55	4.8	5.7	11	.64
20	.06	5.7	.63	.53	.67	2.2	1.1	.50	4.4	4.5	3.9	.72
21	.06	13	.56	.58	.67	2.1	.55	.45	3.4	4.3	3.3	.73
22	.06	1.3	.50	.64	.67	1.5	.46	.45	2.8	4.2	3.0	.67
23	.07	1.0	.48	.58	.64	1.3	.41	.65	2.6	4.2	4.1	.62
24	.07	.75	.45	.53	.64	1.6	.40	.62	3.0	4.3	2.8	.58
25	.08	.65	.45	.53	.64	894	.36	.41	3.7	5.4	2.2	.61
26	.08	.62	.46	.52	.64	563	.32	.36	3.1	4.3	2.0	.69
27	.08	.57	.47	.54	.64	236	.38	.45	3.0	4.7	1.9	.64
28	.08	.49	.50	.55	.64	104	.44	.41	20	5.1	1.7	.59
29	.09	.44	.50	.52	---	51	.39	.38	5.7	4.4	2.9	.55
30	.09	.40	.51	.53	---	2390	.35	.58	473	4.2	2.2	.53
31	.10	---	.51	.57	---	639	---	.49	---	6.1	1.7	---
TOTAL	1.80	29.60	19.73	15.70	18.29	5942.14	77.80	416.62	764.16	2122.1	252.8	24.74

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	3.2	13	6.7	4.2	4.7	134	20.4	10	78	70	17
2	1.9	21	13	6.1	3.5	12	82	354	14	72	25	14
3	2.0	14	11	6.4	3.3	45	69	1270	16	74	23	14
4	2.0	3.9	8.6	6.2	3.7	958	58	214	12	75	21	13
5	1.8	3.1	7.6	5.8	4.2	459	52	133	12	467	21	12
6	1.8	2.8	7.6	5.5	3.8	490	37	87	10	264	22	11
7	1.7	2.5	7.9	5.3	3.3	1130	35	89	197	150	20	10
8	1.9	2.3	7.0	5.2	3.2	756	103	65	152	188	19	10
9	2.0	2.1	6.3	4.9	3.3	310	43	47	42	2980	33	9.7
10	1.9	2.0	5.8	4.7	3.6	79	30	40	25	1880	39	9.4
11	1.6	2.0	5.2	4.7	3.9	34	33	33	16	956	18	9.0
12	1.4	1.9	4.9	4.9	3.4	12	25	23	11	94	17	9.1
13	1.4	1.8	4.6	4.9	3.4	8.7	20	19	23	77	17	10
14	1.4	1.8	4.3	4.7	3.5	7.5	23	19	100	66	54	12
15	1.6	1.5	27	4.4	3.5	37	114	17	28	53	392	8.7
16	1.7	1.5	187	4.1	3.3	891	126	15	33	47	54	7.6
17	1.6	1.4	25	4.0	3.2	92	92	14	142	523	24	7.5
18	1.6	1.4	17	3.6	3.4	63	23	15	635	87	143	7.3
19	1.5	1.9	15	3.5	3.5	28	30	14	51	51	78	7.1
20	1.8	96	12	4.0	3.6	36	54	12	41	40	33	8.0
21	1.8	200	11	4.3	3.6	36	26	12	28	38	28	8.1
22	1.8	36	9.2	4.6	3.6	29	20	12	20	35	27	7.4
23	1.8	39	8.7	4.0	3.5	26	16	18	16	34	61	6.8
24	1.8	31	7.9	3.6	3.6	35	14	17	15	33	26	6.4
25	1.9	26	7.7	3.5	3.6	2440	12	12	16	40	21	6.7
26	1.8	25	7.5	3.4	3.6	1800	10	10	11	31	20	7.6
27	1.8	22	7.5	3.5	3.7	1390	11	13	9.0	32	19	7.0
28	1.8	19	7.8	3.5	3.7	595	12	12	84	34	18	6.4
29	1.8	17	7.6	3.3	---	360	11	11	39	28	70	6.0
30	1.8	15	7.4	3.3	---	4950	9.2	16	1560	26	24	5.7
31	1.9	---	7.1	3.5	---	1820	---	13	---	80	19	---
TOTAL	54.5	598.1	479.2	140.1	99.7	18933.9	1324.2	2646.4	3368.0	8633	1456	274.5

GRANT RIVER BASIN

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 above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Mar. 25, 26, May 3, and ice-affected periods, Nov. 27, 28, Dec. 4-12, Dec. 20 to Mar. 6, and Mar. 12-18. Records good except those for estimated daily discharges, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	18	19	19	22	17	66	60	32	57	77	56
2	13	26	19	18	19	20	46	70	40	55	64	58
3	13	22	18	19	17	50	41	229	45	49	61	56
4	13	17	16	30	19	150	37	104	36	48	59	53
5	13	16	15	21	21	110	34	71	36	151	60	54
6	13	15	21	18	19	130	33	56	32	126	73	54
7	13	14	18	18	17	203	37	67	97	65	61	52
8	14	14	18	17	15	246	61	55	83	65	59	55
9	15	15	18	17	15	128	49	47	49	844	69	54
10	14	15	17	17	18	67	40	45	40	569	65	51
11	13	14	17	18	19	32	47	54	38	372	59	50
12	13	15	16	19	16	20	39	44	35	119	61	53
13	13	14	17	20	15	19	36	39	37	105	58	61
14	13	14	17	19	15	19	42	40	58	91	86	72
15	14	13	33	19	15	28	66	39	36	79	158	57
16	15	14	50	18	14	350	67	36	37	73	80	52
17	14	14	30	18	13	45	57	35	75	156	65	52
18	13	14	25	17	14	35	50	38	141	99	129	50
19	13	14	23	17	15	25	62	36	60	86	92	53
20	15	47	21	20	15	28	118	36	57	75	69	59
21	14	73	19	22	15	31	69	34	49	72	64	56
22	14	33	18	24	15	26	52	35	44	69	67	54
23	14	34	18	21	14	21	47	49	42	68	89	50
24	13	26	17	19	13	29	45	47	44	69	65	47
25	14	24	17	19	13	524	40	36	53	83	59	52
26	13	24	17	18	13	459	37	33	42	66	59	58
27	13	22	18	17	13	358	38	37	44	71	57	52
28	13	21	19	16	14	199	47	35	96	72	56	48
29	13	20	19	15	---	117	38	32	52	63	88	44
30	13	19	20	16	---	285	35	45	234	61	69	44
31	13	---	20	18	---	263	---	38	---	84	60	---
TOTAL	417	641	630	584	443	4034	1476	1622	1764	4062	2238	1607
MEAN	13.5	21.4	20.3	18.8	15.8	130	49.2	52.3	58.8	131	72.2	53.6
MAX	15	73	50	30	22	524	118	229	234	844	158	72
MIN	13	13	15	15	13	17	33	32	32	48	56	44
CFSM	.32	.50	.48	.44	.37	3.07	1.16	1.23	1.39	3.09	1.70	1.26
IN.	.37	.56	.55	.51	.39	3.54	1.29	1.42	1.55	3.56	1.96	1.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1993, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993
MEAN	12.3	15.9	15.2	19.3	23.0	45.8	23.7
MAX	16.8	25.2	24.1	27.8	44.5	130	49.2
(WY)	1992	1992	1992	1992	1988	1993	1993
MIN	8.14	7.96	6.06	6.91	8.35	20.5	9.60
(WY)	1991	1991	1990	1991	1991	1990	1989

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1987 - 1993
ANNUAL TOTAL	7471.8	19518	
ANNUAL MEAN	20.4	53.5	23.3
HIGHEST ANNUAL MEAN			53.5
LOWEST ANNUAL MEAN			11.9
HIGHEST DAILY MEAN	195	844	1030
LOWEST DAILY MEAN	9.7	13	5.0
ANNUAL SEVEN-DAY MINIMUM	9.8	13	5.4
INSTANTANEOUS PEAK FLOW		3640	(b)7000
INSTANTANEOUS PEAK STAGE		8.40	11.20
INSTANTANEOUS LOW FLOW		12	
ANNUAL RUNOFF (CFSM)	.48	1.26	.55
ANNUAL RUNOFF (INCHES)	6.56	17.12	7.48
10 PERCENT EXCEEDS	28	87	42
50 PERCENT EXCEEDS	17	37	15
90 PERCENT EXCEEDS	12	14	7.6

(a) Also occurred many days during October, November, and February

(b) On basis of contracted-opening measurement

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 current year.
 TOTAL-PHOSPHORUS DISCHARGE: October 1991 to current year.

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, 8,700 tons, July 9, 1993; minimum daily observed, 0.08 ton, May 14, 1992.
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 24,700 lb, July 9, 1993; minimum daily observed, 1.9 lb, May 13, 1992.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 24.5°C, June 23; minimum observed, 0.0°C, on many days November through March.
 DISSOLVED OXYGEN: Maximum observed, 14.9 mg/L, May 21; minimum observed, 4.8 mg/L, July 30.
 SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 8,700 tons, July 9; minimum daily observed, 0.16 ton, Oct. 1.
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 24,700 lb, July 9; minimum daily observed, 7.1 lb, Nov. 18.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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					MAY 1993				
14...	0935	13	735	9.5	11...	1202	57	675	18.5
DEC					JUN				
07...	1155	20	740	0.5	29...	1140	48	645	18.0
JAN 1993					AUG				
27...	0940	17	700	0.5	16...	1300	83	680	19.5
MAR					SEP				
05...	1026	78	385	0.5	24...	1100	48	725	11.0
26...	1130	192	230	2.0					

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)
JUN 1993											
07...	1445	226	0.79	1.2	<1.9	<1.0	<1.0	1.6	<0.20	<1.0	<1.0
17...	2215	226	0.25	1.9	<0.3	<1.0	<1.0	1.1	0.26	<1.0	<1.0
30...	0300	629	0.17	3.3	<0.3	<1.0	<1.0	2.8	1.8	<1.0	<1.0
JUL											
05...	1800	320	<0.10	0.7	<0.3	<1.0	<1.0	1.2	0.74	<1.0	<1.0
08...	0045	62	<0.10	0.3	<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)	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)	TRANS PERME- THRIN WATER WHOLE REC (UG/L) (82420)	TERBU- FOS WAT, WH REC (UG/L) (82088)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	2,4-D, TOTAL (UG/L) (39730)
JUN 1993										
07...	<0.20	2.70	<1.0	<1.0	<1.00	<0.20	<1.0	<0.20	<1.0	<0.91
17...	<0.20	5.70	<1.0	<1.0	<1.00	<0.20	<1.0	<0.20	<1.0	<0.50
30...	<0.20	7.20	<1.0	<1.0	<1.00	<0.20	<1.0	<0.20	<1.0	0.87
JUL										
05...	<0.20	2.80	<1.0	<1.0	<1.00	<0.20	<1.0	<0.20	<1.0	0.57
08...	<0.20	0.63	<1.0	<1.0	<1.00	<0.20	<1.0	<0.20	<1.0	<0.50

GRANT RIVER BASIN

05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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 RECOVER- ABLE (MG/L) (00921)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)
OCT 1992									
*04...	1425	--	13	8.2	--	2.5	--	--	5
*15...	1215	--	14	8.1	--	2.3	--	--	9
NOV									
*01...	1445	--	18	8.1	--	1.8	--	--	12
*02...	1215	--	27	8.0	--	7.8	--	--	47
*02...	2400	--	28	8.0	--	7.8	--	--	37
*15...	1250	--	14	8.1	--	<1.0	--	--	12
20...	0915	--	28	7.8	--	--	--	--	100
20...	1245	--	45	7.8	--	--	--	--	152
20...	1645	--	69	7.9	--	--	71	36	292
21...	0015	--	95	7.7	--	--	62	32	372
*21...	0930	--	82	7.6	--	--	--	--	236
21...	0931	--	81	7.7	--	--	56	28	232
21...	1545	--	58	7.5	67	6.0	--	--	154
*23...	1200	--	34	7.9	34	6.9	--	--	45
DEC									
15...	1515	--	34	7.9	--	--	--	--	53
15...	2015	--	54	7.9	--	--	--	--	134
16...	2015	--	37	7.9	--	--	--	--	70
*17...	1210	--	29	8.0	--	--	--	--	30
JAN 1993									
*24...	1215	19	--	7.9	18	4.1	--	--	20
FEB									
*14...	1300	15	--	8.2	--	<1.0	--	--	12

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)	COPPER, TOTAL RECOVER- ABLE (UG/L) (01119)	ZINC, TOTAL RECOVER- ABLE (UG/L) (01094)
OCT 1992								
04...	458	152	5	5.20	0.025	--	--	--
15...	466	124	3	5.84	0.019	0.130	--	--
NOV								
01...	440	118	4	6.05	0.043	0.140	--	--
02...	508	146	12	5.54	1.17	0.630	--	--
02...	472	132	9	5.68	0.280	0.310	--	--
15...	480	130	3	6.79	0.042	0.100	--	--
20...	534	158	32	6.22	1.18	0.990	--	--
20...	572	162	36	5.45	1.64	1.21	--	--
20...	698	160	52	4.84	1.69	1.88	13	60
21...	752	176	76	4.05	2.63	3.17	18	80
21...	590	166	56	3.83	1.94	2.37	--	--
21...	604	154	44	3.69	1.90	2.38	13	70
21...	510	138	32	4.32	1.36	1.80	--	--
23...	484	136	12	6.25	0.838	0.780	--	--
DEC								
15...	506	136	11	6.54	1.09	0.540	--	--
15...	556	144	29	5.63	2.25	1.37	--	--
16...	450	136	17	4.98	1.63	1.15	--	--
17...	460	148	9	6.09	0.925	0.640	--	--
JAN 1993								
24...	476	134	6	7.45	1.01	0.190	--	--
FEB								
14...	466	126	3	7.69	0.208	0.130	--	--

* EQUAL-WIDTH INCREMENT SAMPLE

GRANT RIVER BASIN

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05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	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)
MAR 1993									
03...	1045	50	--	7.9	38	--	56	29	184
03...	1245	50	--	7.7	41	--	--	--	226
03...	1515	50	--	7.6	56	--	--	--	726
03...	1700	50	--	7.6	75	--	49	21	1290
03...	1715	50	--	7.6	81	--	55	22	1630
04...	1245	150	--	7.6	61	--	28	13	380
*04...	1250	150	--	7.5	58	--	--	--	352
04...	1715	150	--	7.3	--	--	--	--	2730
04...	2045	150	--	7.1	--	--	--	--	1580
05...	0045	110	--	7.1	--	--	--	--	470
05...	0615	110	--	7.1	--	--	--	--	108
05...	1530	110	--	7.2	--	--	--	--	448
05...	1645	110	--	7.2	--	--	--	--	1460
05...	1845	110	--	7.2	--	--	--	--	2000
05...	2230	110	--	7.1	--	--	--	--	760
06...	0330	130	--	7.0	--	--	--	--	228
06...	1645	130	--	7.3	--	--	--	--	304
06...	1830	130	--	7.4	--	--	--	--	780
07...	0200	--	148	7.3	--	--	--	--	328
*07...	1044	--	65	7.4	>79	--	--	--	110
07...	1045	--	64	7.5	--	--	--	--	120
07...	1445	--	120	7.4	49	--	--	--	168
07...	1600	--	221	7.3	52	--	--	--	976
07...	1715	--	351	7.3	56	--	--	--	1490
07...	1815	--	414	7.2	67	--	--	--	1870
07...	1915	--	503	7.2	70	--	--	--	2230
08...	0015	--	325	7.1	66	--	--	--	820
08...	1000	--	106	7.4	52	--	--	--	164
08...	1300	--	100	7.2	56	--	--	--	120
08...	1400	--	148	7.2	39	--	--	--	172
08...	1500	--	292	7.2	35	--	--	--	830
08...	1630	--	423	7.2	37	--	--	--	1410
08...	2400	--	237	7.1	37	--	--	--	550
09...	0445	--	118	7.1	31	--	--	--	192
*14...	1300	19	--	8.0	1.8	--	--	--	51
16...	0245	350	--	7.9	11	--	--	--	541
16...	0400	350	--	7.7	15	--	--	--	1240
16...	0545	350	--	7.7	15	--	--	--	1690
16...	0745	350	--	7.6	18	--	--	--	1470
16...	1300	350	--	7.5	19	--	--	--	1930
16...	1650	350	--	7.5	18	--	--	--	1490
*16...	1655	350	--	7.5	19	--	--	--	1200
16...	2000	350	--	7.5	17	--	--	--	828
16...	2315	350	--	7.5	16	--	--	--	370
*17...	1015	45	--	7.8	11	--	--	--	39
25...	1300	524	--	7.5	--	--	--	--	258
25...	1430	524	--	7.4	--	--	--	--	2110
25...	1515	524	--	7.4	--	--	--	--	4010
25...	1615	524	--	7.4	--	--	--	--	4880
25...	1745	524	--	7.4	--	--	--	--	5010
26...	1030	459	--	7.5	--	--	--	--	160
26...	1415	459	--	7.7	13	--	--	--	380
26...	1630	459	--	7.5	15	--	--	--	1130
26...	2400	459	--	7.5	16	--	--	--	540
27...	0400	--	226	7.5	--	--	--	--	233
27...	0955	--	119	7.7	11	--	--	--	108
27...	1330	--	198	7.7	--	--	--	--	222
27...	1430	--	314	7.7	--	--	--	--	524
27...	1600	--	592	7.5	--	--	--	--	1480
27...	1700	--	792	7.5	--	--	--	--	1830
27...	2045	--	621	7.4	--	--	--	--	1330
28...	0115	--	192	7.5	--	--	--	--	432
28...	1430	--	149	7.8	--	--	--	--	240
28...	1615	--	343	7.7	--	--	--	--	858
28...	1900	--	478	7.6	--	--	--	--	858
28...	2230	--	262	7.6	--	--	--	--	476
28...	2400	--	190	7.6	--	--	--	--	256
*29...	1230	--	60	7.8	6.4	190	--	--	44
30...	1930	--	217	7.9	--	--	--	--	376

* EQUAL-WIDTH INCREMENT SAMPLE

GRANT RIVER BASIN

05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	COPPER, TOTAL RECOVER -ABLE (UG/L) (01119)	ZINC, TOTAL RECOVER -ABLE (UG/L) (01094)
MAR 1993								
03...	528	154	34	4.93	4.02	1.29	16	50
03...	550	164	46	4.30	4.67	1.50	--	--
03...	1020	216	100	3.21	5.71	2.57	--	--
03...	1490	278	172	2.35	7.14	3.90	36	160
03...	1890	314	200	2.06	5.91	4.80	43	210
04...	580	152	68	2.04	5.43	2.45	21	60
04...	552	150	60	2.06	5.38	2.46	--	--
04...	2810	332	268	0.823	7.12	5.54	--	--
04...	1720	270	220	0.671	6.94	5.07	--	--
05...	658	182	110	0.884	7.76	3.76	--	--
05...	350	136	52	1.10	7.10	3.29	--	--
05...	716	170	76	1.81	7.73	3.72	--	--
05...	1600	238	170	1.42	7.04	4.67	--	--
05...	2170	280	240	1.06	6.64	5.22	--	--
05...	982	200	124	1.00	6.57	4.06	--	--
06...	460	156	68	1.17	6.78	3.66	--	--
06...	582	158	64	2.09	6.27	3.21	--	--
06...	998	186	110	1.39	5.98	3.71	--	--
07...	550	154	64	1.10	5.95	3.31	--	--
07...	378	140	42	1.77	5.80	2.84	--	--
07...	388	140	44	1.70	5.54	2.88	--	--
07...	454	124	44	1.70	5.16	2.81	--	--
07...	1230	178	112	1.09	4.80	3.80	--	--
07...	1720	218	156	1.00	5.13	4.44	--	--
07...	2010	256	190	0.766	6.00	5.04	--	--
07...	2370	272	230	0.687	5.62	5.30	--	--
08...	1040	182	120	0.626	4.89	3.62	--	--
08...	388	124	48	1.20	4.79	2.76	--	--
08...	352	106	36	1.37	5.10	2.65	--	--
08...	404	112	40	1.27	4.23	2.44	--	--
08...	1040	166	100	1.00	3.82	2.96	--	--
08...	1560	208	160	0.705	3.76	3.62	--	--
08...	726	146	100	0.647	3.48	2.75	--	--
09...	388	116	40	0.956	3.39	2.20	--	--
14...	524	126	6	6.87	0.730	0.310	--	--
16...	876	154	54	4.53	1.21	1.29	--	--
16...	1460	188	122	2.79	1.88	2.34	--	--
16...	1840	206	152	2.18	1.98	2.66	--	--
16...	1660	192	136	1.41	2.11	2.72	--	--
16...	2150	206	156	0.784	2.16	3.04	--	--
16...	1580	174	138	0.584	2.14	2.72	--	--
16...	1250	148	118	0.583	2.20	2.36	--	--
16...	954	120	84	0.616	2.15	2.30	--	--
16...	488	94	56	0.719	2.28	1.64	--	--
17...	270	82	9	1.57	2.11	0.980	--	--
25...	--	--	--	--	4.55	1.97	--	--
25...	--	--	--	--	4.95	4.86	--	--
25...	--	--	--	--	4.92	6.98	--	--
25...	--	--	--	--	4.07	8.04	--	--
25...	--	--	--	--	3.90	8.26	--	--
26...	--	--	--	--	3.05	1.49	--	--
26...	566	100	34	1.30	3.00	1.74	--	--
26...	1260	158	100	1.10	2.94	2.68	--	--
26...	744	126	50	0.913	2.83	2.21	--	--
27...	--	--	--	--	2.78	1.74	--	--
27...	280	86	10	1.46	2.55	1.36	--	--
27...	--	--	--	--	2.49	1.41	--	--
27...	702	108	42	1.42	2.56	2.16	--	--
27...	--	--	--	--	2.49	3.24	--	--
27...	--	--	--	--	2.52	3.56	--	--
27...	1640	190	122	0.597	2.46	3.10	--	--
28...	--	--	--	--	2.32	1.82	--	--
28...	498	102	22	2.20	1.85	1.10	--	--
28...	--	--	--	--	2.14	2.08	--	--
28...	1060	146	80	1.41	2.13	2.31	--	--
28...	--	--	--	--	2.17	1.67	--	--
28...	--	--	--	--	1.79	1.69	--	--
29...	314	86	6	2.42	1.45	0.730	--	--
30...	--	--	--	--	1.12	1.14	--	--

GRANT RIVER BASIN

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05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
MAR 1993								
30...	2100	--	1550	7.6	--	45	--	--
30...	2130	--	1980	7.5	--	54	--	--
30...	2230	--	1410	7.5	--	35	--	--
31...	0015	--	992	7.4	--	--	--	--
31...	0115	--	654	7.6	--	27	--	--
31...	1515	--	204	7.7	--	--	--	--
APR								
*18...	1225	--	49	8.2	--	1.4	--	--
*26...	1130	--	37	8.5	9	2.2	70	--
MAY								
02...	2300	--	102	8.0	--	14	--	--
02...	2345	--	173	8.1	--	11	--	--
03...	0015	229	--	7.9	--	>20	--	--
03...	0045	229	--	7.8	--	>19	190000	--
03...	1215	229	--	7.9	--	15	58000	--
*12...	1125	--	45	8.4	--	3.1	3600	520
*25...	1250	--	36	8.4	--	1.9	3100	150
JUN								
*07...	1230	--	85	8.1	--	13	6300	3100
*08...	1125	--	81	7.9	55	10	120000	58000
08...	1315	--	73	8.1	--	9.6	>75000	--
14...	0130	--	72	8.1	--	9.5	14000	3600
17...	2045	--	81	8.1	--	10	94000	--
17...	2200	--	179	8.0	--	18	7400000	--
17...	2230	--	311	8.1	--	20	>300000	--
17...	2245	--	407	8.0	--	26	>500000	--
18...	0300	--	224	7.7	--	--	>800000	--
*22...	1400	--	45	8.2	--	2.2	3300	100
28...	0930	--	208	7.7	--	--	--	--
28...	1000	--	245	7.8	--	--	--	--
30...	0100	--	224	8.2	--	6.5	1800	--
30...	0145	--	407	7.7	--	17	--	--
30...	0245	--	518	7.6	--	--	--	--
30...	0300	--	629	7.6	--	21	>500000	--
30...	0615	--	366	7.6	--	13	>200000	--
*30...	1415	--	138	7.7	--	6.1	90000	--

DATE	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)
MAR 1993							
30...	9230	8370	672	744	1.21	2.62	7.87
30...	8580	8550	702	736	0.933	2.64	10.9
30...	6410	7540	646	576	0.968	2.39	10.6
31...	3640	--	--	--	--	2.19	5.64
31...	2840	3050	346	276	1.13	2.04	5.07
31...	492	--	--	--	--	1.97	1.76
APR							
18...	13	428	112	<2	6.24	0.083	0.260
26...	11	464	152	4	6.27	0.008	0.130
MAY							
02...	121	568	172	20	5.05	0.434	0.860
02...	330	--	--	--	--	0.428	1.08
03...	996	--	--	--	--	0.763	3.00
03...	2780	2990	404	340	3.37	1.34	6.06
03...	560	912	182	56	3.83	0.715	1.98
12...	30	480	148	7	5.67	0.019	0.290
25...	11	456	122	3	6.98	0.115	0.200
JUN							
07...	252	676	162	36	6.25	0.263	0.580
08...	228	620	180	52	5.95	0.763	1.22
08...	143	592	186	28	5.84	0.609	1.09
14...	208	678	214	44	6.22	0.107	0.540
17...	405	802	158	50	6.27	0.101	0.740
17...	1300	1710	310	200	5.58	0.318	2.39
17...	1760	2140	328	220	5.35	0.351	2.82
17...	2120	2610	368	260	5.29	0.574	3.62
18...	2500	--	--	--	--	0.670	5.47
22...	86	596	190	16	7.75	0.050	0.300
28...	2080	--	--	--	--	--	3.02
28...	2130	--	--	--	--	0.422	3.29
30...	985	1380	220	95	6.24	0.080	1.16
30...	5550	5880	664	545	3.85	0.405	7.20
30...	4080	--	--	--	--	--	6.01
30...	4240	4480	526	440	3.77	0.586	5.85
30...	2210	2450	344	310	2.18	0.338	3.93
30...	955	1320	286	140	2.86	0.230	2.22

* EUQAL-WIDTH INCREMENT (EWI) SAMPLE

GRANT RIVER BASIN

05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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- 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)
JUL 1993								
05...	1630	128	7.7	17	180000	130000	650	1060
05...	1745	257	7.8	17	190000	--	900	1220
05...	1800	320	7.5	21	400000	--	1360	1720
05...	1945	379	7.4	28	750000	--	2120	2350
06...	0315	210	7.6	14	--	--	530	--
*06...	1115	109	7.6	7.0	120000	--	280	638
09...	0030	146	8.0	--	--	--	1570	--
09...	0215	2840	7.5	--	--	--	8780	--
09...	0230	3170	7.5	--	--	--	8900	--
09...	0615	1620	7.5	--	--	--	2840	--
09...	1235	321	7.5	--	--	--	1260	--
*09...	1236	319	7.6	--	--	--	1080	--
09...	1400	259	7.6	--	--	--	1000	1300
09...	1630	192	7.6	--	--	--	700	1030
09...	1945	141	7.8	--	--	--	420	750
*10...	1020	95	7.8	--	--	--	111	544
10...	1645	141	8.0	--	--	--	728	1160
10...	1715	818	8.0	--	--	--	2040	2490
10...	1730	2670	7.5	--	--	--	10400	10600
10...	1745	3490	7.2	--	--	--	9400	9770
10...	1845	2920	7.2	--	--	--	7020	7190
10...	1945	2130	7.1	--	--	--	4800	4910
10...	2130	1150	7.2	--	--	--	3200	3460
10...	2400	545	7.2	--	--	--	2460	2800
11...	0415	233	7.4	--	--	--	1100	1500
11...	0630	282	7.6	--	--	--	880	1230
11...	0745	541	7.6	--	--	--	1070	1450
11...	0845	782	7.5	--	--	--	1530	1780
17...	1130	153	8.5	--	--	--	142	620
17...	1145	394	8.1	--	--	--	284	726
17...	1200	482	8.1	--	--	--	1020	1500
17...	1515	277	7.6	--	--	--	3530	3930
17...	2200	144	7.7	--	--	--	560	926
*19...	1030	88	8.1	--	5800	--	76	582
AUG								
*02...	1230	64	8.2	1.6	3600	--	43	528
14...	1900	148	8.2	--	--	--	204	708
14...	1915	213	8.3	--	--	--	632	1160
15...	0545	108	8.1	--	--	--	328	700
15...	0930	224	8.1	--	--	--	502	868
15...	1000	298	8.0	--	--	--	838	1210
15...	1830	155	7.9	--	--	--	400	710
*17...	1145	67	8.2	1.6	6000	--	53	586
18...	1345	123	8.3	3.8	5500	--	170	666
18...	1400	167	8.3	5.6	6000	--	410	912
18...	1500	208	8.0	14	120000	--	1530	1900
18...	1615	274	8.0	14	340000	--	984	1370
18...	2115	196	7.8	16	290000	--	712	1010
19...	0015	143	7.9	11	120000	--	480	794
*30...	1905	65	8.1	--	--	--	58	516
SEP								
16...	1100	52	8.1	1.4	--	--	21	488
26...	1415	56	8.2	2.7	--	--	22	510

* EQUAL-WIDTH INCREMENT SAMPLE

GRANT RIVER BASIN

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05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUL 1993							
05...	232	120	5.42	0.369	1.78	--	--
05...	238	140	5.18	0.604	2.10	--	--
05...	276	200	4.71	0.593	2.84	--	--
05...	340	340	3.28	0.732	4.60	--	--
06...	--	--	--	0.436	--	--	--
06...	156	80	4.24	0.203	1.08	--	--
09...	--	--	--	0.060	1.49	--	--
09...	--	--	--	0.576	9.41	--	--
09...	--	--	--	0.450	10.3	--	--
09...	--	--	--	0.313	4.74	--	--
09...	--	--	--	0.272	2.69	--	--
09...	--	--	--	0.274	2.60	--	--
09...	--	170	--	0.226	2.32	--	--
09...	--	140	--	0.200	1.86	--	--
09...	--	90	--	0.191	1.30	--	--
10...	--	17	--	0.231	0.460	--	--
10...	--	68	--	0.127	1.03	--	--
10...	--	140	--	0.143	1.78	--	--
10...	--	810	--	0.479	9.29	10500	98
10...	--	800	--	0.464	9.05	--	--
10...	--	700	--	0.359	7.92	7490	100
10...	--	560	--	0.449	7.20	--	--
10...	--	420	--	0.288	4.90	--	--
10...	--	360	--	0.204	4.35	--	--
11...	--	180	--	0.145	2.33	--	--
11...	--	130	--	0.185	1.99	--	--
11...	--	140	--	0.257	2.24	--	--
11...	--	200	--	0.233	2.68	--	--
17...	--	20	--	0.006	0.470	--	--
17...	--	36	--	0.014	0.480	--	--
17...	--	120	--	0.032	1.15	--	--
17...	--	360	--	0.517	5.23	--	--
17...	--	90	--	0.283	1.57	--	--
19...	--	20	--	0.049	0.310	--	--
AUG							
02...	--	6	--	0.019	0.180	--	--
14...	--	25	--	0.030	0.400	--	--
14...	--	62	--	0.012	0.730	--	--
15...	--	52	--	0.132	0.890	--	--
15...	--	62	--	0.179	0.980	--	--
15...	--	90	--	0.348	1.56	--	--
15...	--	64	--	0.459	1.44	--	--
17...	--	9	--	0.030	0.240	--	--
18...	--	22	--	<0.005	0.410	--	--
18...	--	44	--	0.031	0.680	--	--
18...	--	188	--	0.175	3.31	--	--
18...	--	124	--	0.266	2.12	--	--
18...	--	104	--	0.487	2.08	--	--
19...	--	76	--	0.240	1.49	--	--
30...	--	10	--	0.029	0.300	--	--
SEP							
16...	--	4	--	<0.005	0.130	--	--
26...	--	10	--	0.250	0.270	--	--

GRANT RIVER BASIN

05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	15.5	11.5	13.5	6.5	6.0	6.5	2.5	1.5	2.0	.00	.00	.00
2	17.0	13.0	15.0	7.0	6.0	6.5	2.5	1.5	2.0	.50	.00	.00
3	17.5	14.0	15.5	6.0	5.0	5.5	1.5	.50	1.0	.50	.00	.50
4	17.0	14.0	15.5	5.0	4.0	4.5	1.0	.00	.50	.50	.00	.00
5	16.5	13.5	15.0	4.5	3.5	4.0	.50	.00	.00	.50	.00	.00
6	15.5	12.5	14.0	4.0	3.0	3.5	.50	.00	.00	.50	.00	.00
7	15.0	12.5	14.0	4.0	3.0	3.5	.50	.50	.50	.50	.00	.00
8	14.5	13.0	13.5	4.5	3.0	4.0	1.0	.00	.50	.50	.00	.00
9	13.0	11.5	12.0	8.0	4.5	6.5	.50	.00	.50	.50	.00	.00
10	12.0	10.0	11.0	9.5	7.5	8.5	1.0	.50	.50	.50	.00	.00
11	12.0	9.5	11.0	7.5	5.5	6.5	2.0	.50	1.0	.50	.00	.00
12	12.0	10.0	11.0	6.5	4.0	5.5	1.5	.00	1.0	.50	.00	.00
13	11.5	9.5	10.5	4.0	1.5	2.5	2.0	1.0	1.5	.50	.00	.00
14	11.5	10.0	11.0	2.0	1.0	1.5	2.5	2.0	2.0	.50	.00	.00
15	11.0	10.0	10.5	2.0	1.0	1.5	3.5	2.5	3.0	.50	.00	.00
16	10.0	7.5	9.0	3.5	1.5	2.5	3.0	2.0	2.5	.50	.00	.00
17	7.5	5.5	7.0	4.0	3.0	3.5	2.5	1.5	2.0	.00	.00	.00
18	7.5	5.5	6.5	4.0	2.5	3.0	1.5	1.0	1.5	.00	.00	.00
19	6.0	3.5	5.0	4.5	3.0	3.5	2.5	.00	1.5	.50	.00	.00
20	8.5	5.0	6.5	7.5	4.0	6.0	.50	.00	.00	.00	.00	.00
21	9.5	7.0	8.0	8.0	6.0	7.0	.50	.00	.50	.00	.00	.00
22	12.5	8.5	10.5	6.0	4.0	5.0	1.0	.00	.50	.00	.00	.00
23	16.0	12.5	14.0	4.5	3.5	4.0	.50	.00	.50	.50	.00	.00
24	14.5	12.0	13.5	5.0	4.5	4.5	.00	.00	.00	.00	.00	.00
25	12.5	10.0	11.5	5.0	1.5	3.5	.50	.00	.50	.00	.00	.00
26	12.5	10.0	11.0	2.0	.50	1.5	.50	.00	.50	.50	.00	.00
27	10.0	7.5	8.5	1.0	.00	.50	.50	.00	.50	.50	.00	.00
28	9.0	6.5	8.0	1.0	.00	.50	.50	.50	.50	.50	.00	.00
29	8.0	6.0	7.5	1.5	.50	1.0	.50	.00	.50	.00	.00	.00
30	6.5	5.0	6.0	2.5	1.5	2.0	.50	.00	.50	.00	.00	.00
31	6.5	5.5	6.0	---	---	---	.00	.00	.00	.50	.00	.00
MONTH	17.5	3.5	10.7	9.5	.00	3.9	3.5	.00	.90	.50	.00	.02
FEBRUARY			MARCH			APRIL			MAY			
1	.50	.00	.00	.50	.00	.50	5.0	1.5	3.0	14.0	11.5	12.5
2	.50	.00	.00	.50	.00	.50	7.0	2.0	4.5	15.5	12.5	14.0
3	.50	.00	.00	.50	.00	.50	8.5	3.5	6.0	15.0	13.5	14.0
4	.50	.00	.00	.50	.00	.50	9.5	4.5	7.0	14.5	13.5	14.0
5	1.0	.00	.00	1.0	.00	.50	7.5	5.5	6.5	18.0	13.0	15.5
6	.50	.00	.00	3.0	.00	1.5	10.5	5.5	7.5	18.0	14.0	16.0
7	.50	.00	.50	3.5	.50	1.5	9.0	8.0	8.5	18.5	15.0	16.5
8	.50	.00	.50	3.0	.50	1.5	10.0	8.5	9.0	21.5	16.0	18.5
9	.50	.00	.50	4.0	.50	2.0	11.0	8.0	9.5	21.5	17.5	19.5
10	1.0	.50	.50	3.5	1.0	2.0	12.5	6.5	9.5	22.0	17.0	19.5
11	1.0	.00	.50	3.0	.50	2.0	11.0	7.0	8.5	22.0	18.0	20.0
12	1.0	.00	.50	2.5	.00	1.0	9.0	6.0	7.5	21.5	17.5	19.5
13	1.5	.50	1.0	1.5	.00	.50	9.5	6.5	8.0	18.5	13.5	16.5
14	1.0	.00	.50	1.0	.00	.50	8.0	5.5	6.5	17.5	14.0	16.0
15	.50	.00	.00	1.5	.00	.50	5.5	3.0	4.5	17.0	13.5	15.5
16	1.0	.00	.00	1.5	.50	1.0	6.0	2.0	4.0	17.0	12.5	15.0
17	.50	.00	.00	1.0	.00	.50	10.5	3.5	6.5	15.0	11.0	12.5
18	.50	.00	.00	1.5	.50	.50	10.5	7.5	9.0	15.5	10.5	12.5
19	.50	.00	.00	2.5	.50	1.5	10.0	7.5	9.0	13.5	11.0	12.5
20	.50	.00	.00	5.0	2.5	3.5	10.0	3.0	6.5	12.5	10.0	11.5
21	.00	.00	.00	3.5	2.0	2.5	12.0	6.0	9.0	15.5	9.5	12.5
22	.50	.00	.00	2.0	1.0	1.5	13.0	7.0	10.0	14.5	12.0	13.5
23	.50	.00	.00	2.5	.50	1.5	13.5	9.0	11.5	14.5	13.0	13.5
24	.50	.00	.00	6.5	2.5	4.5	13.5	11.5	12.5	14.0	12.0	13.0
25	.50	.00	.00	5.5	.50	3.0	15.5	10.0	12.5	16.0	11.0	13.0
26	.50	.00	.00	3.0	.50	1.5	15.5	11.0	13.0	18.0	12.0	15.0
27	.50	.00	.00	4.5	1.0	2.5	13.5	11.0	11.5	18.0	15.0	17.0
28	.50	.00	.00	7.0	2.0	4.0	16.0	10.5	13.0	17.5	13.5	15.5
29	---	---	---	9.5	3.0	6.0	18.5	13.5	15.5	15.5	11.5	13.5
30	---	---	---	8.5	4.5	7.0	16.0	12.5	14.5	15.0	13.0	13.5
31	---	---	---	5.5	3.0	5.0	---	---	---	17.0	11.5	14.0
MONTH	1.5	.00	.16	9.5	.00	2.0	18.5	1.5	8.8	22.0	9.5	15.0

WATER TEMPERATURE. DEGREES CELSIUS. WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

[illegible]

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	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	14.4	9.1	11.3
21	---	---	---	---	---	---	---	---	---	14.9	8.3	11.4
22	---	---	---	---	---	---	---	---	---	13.7	8.1	10.1
23	---	---	---	---	---	---	---	---	---	10.1	7.2	8.9
24	---	---	---	---	---	---	---	---	---	10.8	7.5	9.2
25	---	---	---	---	---	---	---	---	---	12.9	8.6	10.6
26	---	---	---	---	---	---	---	---	---	12.8	7.9	10.2
27	---	---	---	---	---	---	---	---	---	11.7	7.8	9.2
28	---	---	---	---	---	---	---	---	---	11.4	8.0	9.8
29	---	---	---	---	---	---	---	---	---	13.1	9.1	11.0
30	---	---	---	---	---	---	---	---	---	11.1	9.0	9.9
31	---	---	---	---	---	---	---	---	---	12.9	9.2	10.9
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	JUNE			JULY			AUGUST			SEPTEMBER		
1	13.2	9.3	11.1	9.5	8.6	9.1	10.5	8.2	9.2	10.0	8.3	9.1
2	11.5	9.9	10.7	9.3	7.0	8.3	9.9	7.6	8.8	9.3	8.3	8.7
3	11.5	8.7	10.4	10.1	7.1	8.4	10.4	7.6	8.7	9.9	8.2	8.9
4	11.0	8.7	10.0	9.8	7.3	8.5	10.7	7.9	9.1	---	---	---
5	12.2	8.3	10.6	9.8	6.9	8.3	10.8	8.1	9.3	---	---	---
6	11.4	8.2	9.6	9.7	6.9	8.6	10.3	7.9	9.0	10.4	8.1	9.2
7	9.5	6.3	8.0	9.9	7.9	8.9	12.1	7.9	9.8	10.3	8.1	9.0
8	8.2	6.7	7.6	---	---	---	12.5	7.8	9.9	10.4	7.7	8.9
9	9.1	6.7	8.2	---	---	---	---	---	---	11.3	7.7	9.3
10	9.6	7.4	8.6	---	---	---	---	---	---	12.0	9.1	10.3
11	9.6	7.2	8.4	---	---	---	10.5	7.8	9.0	12.3	9.3	10.6
12	9.7	6.9	8.4	---	---	---	10.2	7.7	8.6	12.2	8.0	10.0
13	9.4	6.9	8.0	---	---	---	10.3	7.6	8.5	9.0	7.4	8.2
14	8.0	5.6	7.2	8.9	8.2	8.6	10.4	7.0	8.4	9.3	7.3	8.4
15	10.1	7.0	8.5	9.3	7.9	8.7	8.1	6.6	7.4			

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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.71	1.9	1.2	.88	.61	29	25	2.4	26	37	7.8
2	.17	2.5	1.9	1.1	.74	.72	17	36	10	24	6.7	8.2
3	.17	.68	1.7	1.2	.65	68	13	513	13	20	6.6	7.9
4	.17	.42	1.5	1.8	.71	404	10	22	4.3	18	6.5	7.5
5	.18	.40	1.4	1.3	.76	157	8.1	13	4.9	400	6.8	7.6
6	.19	.39	1.9	1.1	.67	96	6.8	9.2	5.1	130	32	7.6
7	.20	.39	1.6	1.0	.59	547	6.4	32	225	28	7.3	7.3
8	.24	.39	1.5	.98	.51	446	26	6.9	43	24	7.3	7.7
9	.26	.42	1.5	.97	.49	140	16	5.1	13	8700	28	7.6
10	.26	.43	1.4	.96	.58	32	4.4	4.3	8.8	7150	8.4	7.2
11	.26	.42	1.3	1.0	.60	5.2	14	20	6.9	1340	7.8	7.0
12	.27	.44	1.2	1.0	.49	3.0	3.1	3.2	5.4	47	8.4	7.4
13	.28	.44	1.3	1.1	.45	2.6	2.5	2.6	5.3	37	8.2	21
14	.30	.43	1.3	1.0	.44	2.4	11	2.5	28	30	96	31
15	.34	.43	7.3	1.0	.44	3.4	31	2.3	6.1	24	192	8.1
16	.36	.45	19	.95	.42	1010	32	1.9	6.3	21	16	7.4
17	.34	.48	2.5	.94	.39	8.8	23	1.7	248	481	8.8	7.3
18	.34	.48	1.8	.88	.43	4.3	1.6	1.7	449	27	197	7.0
19	.34	.55	1.7	.87	.47	3.1	27	1.5	20	16	35	7.4
20	.39	27	1.5	1.0	.47	45	117	1.4	17	13	13	8.2
21	.38	42	1.3	1.1	.48	5.7	13	1.2	12	12	12	7.9
22	.38	5.3	1.2	1.2	.49	3.8	1.5	1.2	9.4	11	12	7.6
23	.39	4.3	1.2	1.0	.46	2.6	1.3	16	8.9	11	52	7.1
24	.38	3.1	1.2	.92	.43	4.0	1.2	15	9.4	10	11	6.6
25	.39	2.8	1.1	.90	.44	2020	1.1	1.4	11	12	9.7	15
26	.39	2.7	1.1	.83	.45	786	1.0	1.0	9.1	9.1	9.3	19
27	.39	2.4	1.2	.77	.45	873	1.4	1.3	9.5	9.4	8.9	7.3
28	.39	2.3	1.2	.71	.49	264	14	1.4	175	9.2	8.4	6.7
29	.40	2.1	1.2	.65	---	86	2.9	1.6	18	7.8	50	6.2
30	.41	2.0	1.3	.67	---	3470	3.8	2.5	1290	7.2	9.8	6.2
31	.42	---	1.3	.74	---	985	---	2.5	---	45	8.5	---
TOTAL	9.54	106.85	68.5	30.84	14.87	11479.23	440.1	750.4	2673.8	18699.7	920.4	277.8

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	16	48	41	20	9.1	297	310	34	171	179	86
2	12	62	45	37	17	10	192	89	88	160	62	90
3	12	20	40	38	15	533	158	2720	118	138	62	87
4	12	12	33	58	16	2960	134	161	38	128	61	83
5	11	11	29	40	17	2010	116	111	38	2110	66	84
6	11	10	38	33	15	1910	106	87	34	1090	154	84
7	11	9.5	31	32	14	4210	109	378	692	229	71	80
8	12	9.2	29	29	12	4540	319	86	561	187	73	85
9	12	9.3	27	28	12	1200	216	73	220	24700	131	84
10	11	9.0	24	27	14	378	98	70	143	18300	86	79
11	10	8.6	22	28	14	105	200	257	104	5520	80	77
12	9.7	8.5	20	29	12	53	82	69	76	319	88	82
13	9.4	8.0	19	29	11	40	71	59	65	215	86	96
14	9.4	7.6	19	27	11	33	164	59	168	158	469	148
15	9.8	7.2	139	26	10	45	367	57	62	114	1040	89
16	10	7.2	341	24	9.5	4180	378	51	77	89	144	82
17	9.7	7.4	108	23	8.6	224	282	48	910	1670	87	81
18	9.5	7.1	82	21	9.1	148	70	50	1980	300	1060	78
19	9.4	8.0	75	20	9.6	99	328	46	162	151	266	82
20	10	427	66	23	9.4	101	1040	44	132	120	139	91
21	10	858	58	25	9.3	103	398	41	95	111	125	87
22	10	140	53	26	9.1	79	112	41	73	103	127	84
23	10	144	51	22	8.3	61	43	56	68	98	270	78
24	9.8	102	47	20	7.6	112	37	215	70	95	119	73
25	9.9	89	46	19	7.5	10400	31	39	84	110	105	82
26	9.9	82	44	18	7.3	5910	26	35	66	84	101	89
27	9.6	71	45	17	7.2	4920	26	40	69	86	97	81
28	9.7	64	46	15	7.6	1790	200	37	672	85	92	74
29	9.7	56	45	14	---	1280	26	35	127	72	262	69
30	9.7	51	46	15	---	10200	24	48	4490	66	108	69
31	9.9	---	44	16	---	4380	---	40	---	229	94	---
TOTAL	321.1	2321.6	1760	820	320.1	62023.1	5650	5452	11516	57008	5904	2534

GRANT RIVER BASIN

05413500 GRANT RIVER AT BURTON, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 42°43'13", long 90°49'09", in NW 1/4 sec.23, T.3 N., R.4 W., Grant County, Hydrologic Unit 07060003, on right bank at downstream side of highway bridge at Burton, 5.9 mi northwest of Potosi and 9.5 mi upstream from mouth.

DRAINAGE AREA.--269 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year. Published as "near Burton" October 1934 to September 1947. Records published for both sites March to September 1947. October 1934, monthly discharge published in WSP 1308.

REVISED RECORDS.--WSP 825: 1935-36. WSP 1308: 1935-37(M), 1941(M), 1945-46(M), 1949(M). WSP 1728: 1942(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 606.43 ft above sea level. Oct. 17, 1934, to Sept. 30, 1947, non-recording gage at site 6 mi upstream at datum 33.18 ft higher. Mar. 18, 1947, to July 27, 1949, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 5-10, Dec. 20 to Mar. 7, and Mar. 12-15. Records good except those for ice-affected periods, which are poor. Data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	113	162	180	190	120	778	347	271	620	486	368
2	109	152	160	170	170	140	436	526	280	526	425	364
3	108	163	153	170	150	300	361	707	340	466	408	364
4	107	132	150	300	160	700	324	690	290	415	393	350
5	105	121	120	220	180	600	301	610	289	575	388	343
6	103	116	230	200	180	500	283	506	271	1190	425	338
7	103	112	240	180	150	540	279	501	397	618	398	329
8	107	111	190	170	140	953	344	492	857	546	379	334
9	112	110	170	160	140	860	364	425	508	4030	450	334
10	109	110	160	160	160	564	309	395	415	1370	496	323
11	105	108	141	160	180	307	305	396	368	2630	389	313
12	104	108	135	160	160	190	297	368	339	1150	382	321
13	102	107	133	170	150	160	271	342	326	824	381	329
14	102	104	132	170	140	140	284	335	390	775	364	399
15	104	103	155	160	130	150	405	334	322	662	577	363
16	110	103	378	160	110	1030	517	314	301	607	506	322
17	105	104	278	150	100	977	465	302	326	707	404	315
18	102	103	228	140	110	320	420	314	618	796	492	313
19	101	104	211	150	120	261	420	299	413	626	747	313
20	105	163	170	170	130	190	668	298	397	565	457	335
21	108	539	160	190	130	228	811	288	357	536	416	342
22	104	322	150	210	130	209	573	282	330	512	404	325
23	103	292	150	200	120	193	494	313	314	499	648	316
24	103	239	140	180	110	196	446	377	311	494	529	302
25	101	214	140	160	110	1210	398	301	531	543	429	307
26	101	215	150	150	110	2590	355	280	367	494	407	334
27	100	190	150	150	110	1420	338	287	389	466	391	320
28	100	177	160	150	110	1330	389	285	444	496	376	307
29	100	171	170	130	---	1110	344	270	432	447	445	295
30	99	166	180	150	---	847	320	300	1150	424	458	289
31	99	---	190	170	---	1810	---	312	---	437	398	---
TOTAL	3232	4872	5436	5340	3880	20145	12299	11796	12343	25046	13848	9907
MEAN	104	162	175	172	139	650	410	381	411	808	447	330
MAX	112	539	378	300	190	2590	811	707	1150	4030	747	399
MIN	99	103	120	130	100	120	271	270	271	415	364	289
CFSM	.39	.60	.65	.64	.52	2.42	1.52	1.41	1.53	3.00	1.66	1.23
IN.	.45	.67	.75	.74	.54	2.79	1.70	1.63	1.71	3.46	1.92	1.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1993, BY WATER YEAR (WY)

MEAN	115	127	108	133	200	336	181	164	203	175	148	132
MAX	238	626	350	467	668	1057	505	489	920	808	502	330
(WY)	1962	1962	1973	1974	1948	1959	1973	1973	1947	1993	1943	1993
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

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05413500 GRANT RIVER AT BURTON, WI--CONTINUED

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1935 - 1993	
ANNUAL TOTAL	55395		128144		168	
ANNUAL MEAN	151		351		351	1993
HIGHEST ANNUAL MEAN					59.3	1958
LOWEST ANNUAL MEAN					10700	Jun 13 1947
HIGHEST DAILY MEAN	769	Feb 21	4030	Jul 9	30	(a)Aug 5 1936
LOWEST DAILY MEAN	91	Sep 1	99	Oct 30,31	31	(b)Aug 3 1936
ANNUAL SEVEN-DAY MINIMUM	96	Aug 19	100	Oct 25	(c)25000	Jul 16 1950
INSTANTANEOUS PEAK FLOW			6950	Jul 9	24.82	Jul 16 1950
INSTANTANEOUS PEAK STAGE			21.15	Jul 9	(d)21	Mar 4 1954
INSTANTANEOUS LOW FLOW			(d)75	Feb 17	.63	
ANNUAL RUNOFF (CFSM)	.56		1.31		8.51	
ANNUAL RUNOFF (INCHES)	7.66		17.72		255	
10 PERCENT EXCEEDS	202		608		110	
50 PERCENT EXCEEDS	136		301		58	
90 PERCENT EXCEEDS	103		109			

(a) Also occurred Aug. 8, 9, 1936, Sept. 22, 1937, and Feb. 19, 20, 1959

(b) Also occurred Jan. 4, 1959

(c) From rating curve extended above 18,000 ft³/s on basis of slope-area measurement of peak flow

(d) Result of freezeup

GRANT RIVER BASIN

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 water year.

REMARKS.--Sediment records for periods of no ice cover during considerable discharge (greater than 300 ft³/s) are good 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, 6,100 mg/L, July 9; minimum observed, 17 mg/L, Oct. 29.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 31,400 tons, July 9; minimum daily, 6.3 tons, Oct. 28.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	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						APR 1993				
07...	1235	--	103	660	14.5	05...	1435	312	659	7.0
29...	1130	--	93	630	8.0	07...	1015	268	643	8.0
NOV						MAY				
16...	1255	--	106	697	3.5	26...	0945	271	664	13.0
DEC						JUN				
28...	1403	160	--	749	0.5	01...	1700	261	663	16.0
JAN 1993						17...	1135	314	667	16.0
27...	1100	150	--	660	0.5	JUL				
FEB						09...	1315	5530	200	21.0
22...	1230	130	--	747	0.0	21...	1615	541	683	23.0
MAR						AUG				
26...	1200	--	1850	202	4.0	27...	1130	364	686	21.5
30...	1220	--	730	299	9.0	SEP				
						21...	1335	349	729	15.5

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT 1992				
01...	0815	--	111	109
06...	0935	--	103	72
*07...	1237	--	103	29
07...	1246	--	103	40
09...	0845	--	113	74
12...	0935	--	103	45
15...	0835	--	103	39
19...	0845	--	101	35
23...	0910	--	103	36
27...	0940	--	99	34
29...	0956	--	99	17
*29...	1130	--	93	60
29...	1145	--	99	35
*30...	0835	--	99	38
NOV				
*16...	1255	--	106	26
16...	1308	--	105	24
DEC				
*28...	1400	160	--	121
JAN 1993				
*27...	1105	150	--	102
FEB				
*22...	1230	130	--	83

GRANT RIVER BASIN

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05413500 GRANT RIVER AT BURTON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
MAR 1993				JUN 1993			
08...	0930	977	1500	18...	0735	763	1460
09...	0900	967	1450	21...	0730	360	215
10...	0930	661	422	24...	0845	299	193
16...	1050	683	1400	25...	0720	549	927
20...	0910	192	89	28...	0915	390	920
22...	0820	218	53	30...	0620	744	2980
25...	0830	565	745	*30...	1600	1590	2510
26...	0830	2750	1830	JUL			
26...	1038	1930	1820	01...	0720	636	1110
26...	1128	1710	1780	05...	1305	523	390
*26...	1140	1670	1710	06...	1050	1310	1140
26...	1146	1650	1750	06...	1700	876	823
26...	1310	1400	1580	08...	0925	539	201
26...	1427	1260	1480	09...	0720	2820	6100
27...	0842	1340	1070	09...	1035	4650	4100
27...	1440	968	945	09...	1210	5180	3590
29...	0910	1130	1870	*09...	1245	5410	3350
30...	0815	986	1340	09...	1305	5520	3290
30...	1039	757	1090	*09...	1410	5880	2880
*30...	1151	682	936	09...	1510	6220	3180
*30...	1200	671	864	09...	1850	6890	2040
30...	1210	662	899	10...	0845	1150	1000
31...	1245	1710	3110	10...	1400	998	674
APR				10...	1910	1040	1310
03...	0920	377	156	11...	0910	2300	2140
04...	1045	333	206	11...	1100	2070	2190
05...	0930	304	23	11...	1610	2170	1620
*05...	1431	303	126	11...	1915	2170	928
05...	1434	303	103	12...	0735	1200	739
07...	0950	277	99	12...	0945	1130	666
*07...	1015	268	178	15...	0830	666	259
07...	1025	277	155	18...	0920	805	566
09...	0800	376	96	19...	0925	632	284
09...	1025	369	228	21...	1610	534	249
15...	1110	376	143	*21...	1611	534	258
16...	1000	544	281	22...	0900	510	207
19...	1340	396	133	26...	0905	487	199
20...	1525	624	350	30...	0715	422	146
21...	0830	861	919	AUG			
23...	1615	485	118	03...	0840	405	131
26...	0910	355	167	03...	1120	405	138
MAY				09...	0920	367	102
03...	0830	833	1940	12...	0915	373	247
11...	0930	401	121	15...	1230	520	527
14...	0840	330	89	16...	1015	484	296
17...	0845	299	71	19...	1020	694	927
19...	0915	297	77	23...	1310	698	863
26...	0925	278	93	24...	0950	503	454
*26...	0945	271	75	27...	0730	391	178
26...	0955	278	135	27...	0959	390	172
26...	1120	278	55	*27...	1130	364	242
28...	0930	286	96	27...	1150	384	160
31...	0915	319	188	31...	0905	401	159
JUN				SEP			
*01...	1657	268	85	02...	0935	362	105
01...	1701	268	96	06...	0750	338	169
03...	1050	356	131	09...	0935	332	143
07...	1445	343	177	13...	0955	320	105
08...	1020	887	1140	16...	0845	324	46
10...	0800	421	238	*21...	1326	344	50
14...	0845	396	243	21...	1330	343	58
17...	1015	324	189	27...	0900	323	95
*17...	1033	324	236	30...	0820	288	110
17...	1115	327	242	30...	0910	288	53
*17...	1135	314	260				

GRANT RIVER BASIN

05413500 GRANT RIVER AT BURTON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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, KF AGAR (COLS. PER) (31673)
OCT 1992												
29...	1130	--	93	630	8.5	8.0	3.0	12.1	757	103	160	160
JAN 1993												
27...	1105	150	--	660	8.3	0.5	6.0	13.7	739	98	110	--
APR												
07...	1015	--	268	643	8.3	8.0	17	10.5	745	91	73	230
MAY												
26...	0945	--	271	664	8.4	13.0	6.4	9.7	747	94	75	2600
JUN												
17...	1135	--	314	667	8.2	16.0	33	8.8	750	91	3300	1300
AUG												
27...	1130	--	364	686	8.1	21.5	24	8.5	753	98	5900	1400
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 HCO3 (MG/L AS) (00453)	CAR-BONATE WATER DIS IT FIELD CO3 (MG/L AS) (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 1992												
29...		330	73	35	8.0	2.2	364	16	314	25	19	0.10
JAN 1993												
27...		340	78	36	13	3.0	356	10	308	25	27	0.10
APR												
07...		340	80	33	8.2	3.0	367	1	303	24	20	0.10
MAY												
26...		350	82	35	7.6	2.9	352	18	325	27	19	<0.10
JUN												
17...		350	83	35	7.6	2.2	371	--	304	25	19	0.10
AUG												
27...		360	83	37	7.7	2.6	365	--	299	24	19	0.30
DATE		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)	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)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)
OCT 1992												
29...		7.0	366	0.020	3.40	0.010	0.30	0.120	0.100	0.080	<10	61
JAN 1993												
27...		12	407	0.040	5.60	0.170	0.60	0.160	0.100	0.090	--	--
APR												
07...		12	387	0.040	4.60	0.170	0.60	0.220	0.140	0.120	30	70
MAY												
26...		10	388	0.060	5.10	0.060	0.30	0.150	0.120	0.110	60	71
JUN												
17...		13	397	0.060	5.50	0.080	0.70	0.280	0.140	0.150	--	--
AUG												
27...		14	396	0.030	6.20	0.040	0.70	0.290	0.140	0.140	10	79
DATE		COBALT, DIS-SOLVED (UG/L AS CO) (01035)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	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)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1992												
29...		<3	3	5	43	<10	<1	<1	76	<6	60	40
JAN 1993												
27...		--	--	--	--	--	--	--	--	--	102	43
APR												
07...		<3	28	<4	83	<10	<1	<1	85	<6	178	45
MAY												
26...		<3	67	<4	57	<10	<1	<1	89	<6	75	70
JUN												
17...		--	--	--	--	--	--	--	--	--	260	90
AUG												
27...		<3	<3	<4	13	<10	<1	<1	100	<6	242	76

GRANT RIVER BASIN

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05413500 GRANT RIVER AT BURTON, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	12	24	57	50	26	1500	138	75	1910	181	125
2	29	23	23	54	45	30	348	705	78	1180	154	107
3	27	22	22	54	39	328	168	1600	115	817	148	118
4	24	12	20	94	41	2450	133	526	93	567	139	128
5	22	11	16	69	46	1870	55	412	84	1080	130	142
6	18	10	29	62	46	887	77	302	72	4400	136	151
7	11	9.8	29	55	38	802	95	264	659	740	121	141
8	16	9.4	22	52	35	3670	109	230	2760	319	110	136
9	21	9.2	19	49	35	3650	170	176	380	31400	269	128
10	18	9.0	18	48	39	738	175	144	270	5200	508	115
11	15	8.6	15	48	44	154	160	128	238	17000	289	103
12	13	8.5	14	48	39	81	144	108	221	2150	253	97
13	12	8.2	13	51	36	59	122	90	213	1050	233	89
14	11	7.8	13	50	33	44	118	80	252	719	206	84
15	11	7.5	23	47	31	40	180	74	193	462	995	58
16	11	7.1	228	47	26	6990	356	64	165	371	520	41
17	10	7.1	147	44	23	2890	275	59	196	1200	265	40
18	9.8	7.3	115	41	25	192	195	63	1160	1390	593	40
19	9.5	7.7	102	43	27	97	197	62	270	504	1910	41
20	10	44	79	49	30	45	783	64	243	406	348	45
21	10	588	71	54	29	41	2020	63	206	363	279	50
22	10	194	64	59	29	30	539	64	184	292	238	55
23	10	98	61	56	27	27	199	307	168	276	1080	58
24	9.9	55	54	50	24	33	158	275	222	270	643	60
25	9.6	40	52	45	24	7520	160	126	1180	294	312	67
26	9.4	39	54	42	24	17500	155	60	275	262	236	79
27	8.6	33	51	41	24	6150	136	58	249	229	182	82
28	6.3	30	52	41	24	5570	142	72	478	225	162	83
29	7.8	28	55	35	---	4790	113	69	590	188	191	84
30	10	26	58	40	---	3110	96	135	9080	167	196	57
31	9.6	---	61	45	---	12400	---	147	---	167	164	---
TOTAL	431.5	1372.2	1604	1570	933	82214	9078	6665	20369	75598	11191	2604

PLATTE RIVER BASIN

05414000 PLATTE RIVER NEAR ROCKVILLE, WI

LOCATION.--Lat 42°43'52", long 90°38'25", in SW 1/4 sec.17, T.3 N., R.2 W., Grant County, Hydrologic Unit 07060003, on right bank just downstream from bridge on County Trunk Highway B, 0.8 mi upstream from Blakely Branch, 2.2 mi east of Rockville, 4.5 mi northeast of Potosi, and 15.2 mi upstream from mouth.

DRAINAGE AREA.--142 mi².

PERIOD OF RECORD.--October 1934 to current year. Monthly discharge for October and November 1934 published in WSP 1308.

REVISED RECORDS.--WSP 1438: 1935-36, 1937(M), 1939(M), 1941-43(M), 1946(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 642.50 ft above sea level. Prior to Oct. 1, 1941, nonrecording gage at site 1.3 mi upstream at datum 12.55 ft higher. Oct. 1, 1941, to June 29, 1949, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 5-27 and ice-affected periods, Jan. 5-20, 24-26, 29-31, Feb. 15-20, Feb. 23 to Mar. 4, and Mar. 13-15. Records good except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	69	107	85	110	68	481	221	170	533	289	212
2	64	94	105	115	100	74	273	337	180	486	267	212
3	63	92	100	127	88	220	228	343	210	350	255	209
4	62	76	97	200	98	400	211	402	181	307	244	200
5	60	71	90	120	112	332	196	354	179	1220	240	197
6	60	68	120	100	110	221	181	310	168	1390	305	193
7	60	65	130	92	86	232	183	347	377	739	248	188
8	61	64	110	90	80	488	260	319	524	637	234	189
9	62	65	94	88	79	389	233	282	340	2440	517	189
10	61	65	88	88	90	239	205	264	271	1420	307	183
11	60	63	80	88	102	128	195	273	237	1590	252	177
12	58	63	76	94	82	101	181	246	217	989	240	182
13	58	62	76	98	81	86	171	228	207	798	232	192
14	58	60	74	98	78	74	187	224	250	703	228	229
15	59	59	110	96	70	76	320	219	201	579	435	201
16	63	59	230	90	66	826	421	206	191	515	290	181
17	60	59	170	82	58	355	331	199	202	555	248	177
18	58	58	150	78	60	140	294	207	289	530	312	175
19	57	59	130	78	70	130	324	198	238	456	265	177
20	61	111	110	84	74	98	622	193	236	398	239	186
21	62	408	100	122	78	115	630	187	216	371	225	185
22	60	206	96	127	78	116	461	184	201	351	220	180
23	60	199	94	116	66	130	365	204	191	342	655	174
24	59	156	92	100	64	244	318	228	193	335	318	167
25	58	143	90	82	64	1460	276	189	313	543	269	173
26	58	139	92	90	64	1100	244	177	216	348	251	185
27	57	124	100	102	64	965	233	180	203	326	238	176
28	58	118	120	95	66	1010	258	176	249	343	227	169
29	57	113	131	70	---	814	226	168	214	299	268	163
30	56	110	150	80	---	499	212	199	1520	281	249	158
31	56	---	143	96	---	1090	---	193	---	282	228	---
TOTAL	1850	3098	3455	3071	2238	12220	8720	7457	8384	20456	8795	5579
MEAN	59.7	103	111	99.1	79.9	394	291	241	279	660	284	186
MAX	64	408	230	200	112	1460	630	402	1520	2440	655	229
MIN	56	58	74	70	58	68	171	168	168	281	220	158
CFSM	.42	.73	.78	.70	.56	2.78	2.05	1.69	1.97	4.65	2.00	1.31
IN.	.48	.81	.91	.80	.59	3.20	2.28	1.95	2.20	5.36	2.30	1.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1993, BY WATER YEAR (WY)

	MEAN	69.4	77.1	63.9	78.3	106	184	113	105	131	108	90.2	79.6
MAX	146	372	155	315	379	483	291	328	586	660	348	202	
(WY)	1962	1962	1973	1946	1938	1959	1993	1960	1947	1993	1943	1942	
MIN	25.3	29.2	23.7	22.1	24.3	33.4	42.0	36.1	34.3	24.0	30.3	33.7	
(WY)	1951	1938	1959	1959	1959	1957	1990	1958	1936	1936	1937	1989	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

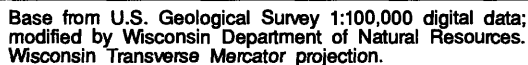
FOR 1993 WATER YEAR

WATER YEARS 1935 - 1993

ANNUAL TOTAL	34512	85323	
ANNUAL MEAN	94.3	234	100
HIGHEST ANNUAL MEAN			234
LOWEST ANNUAL MEAN			40.8
HIGHEST DAILY MEAN	519	Feb 24	2440
LOWEST DAILY MEAN	52	Aug 31	56
ANNUAL SEVEN-DAY MINIMUM	54	Aug 18	57
INSTANTANEOUS PEAK FLOW			3980
INSTANTANEOUS PEAK STAGE			11.17
INSTANTANEOUS LOW FLOW			(b)34
ANNUAL RUNOFF (CFSM)	.66	1.65	.71
ANNUAL RUNOFF (INCHES)	9.04	22.35	9.61
10 PERCENT EXCEEDS	133	427	159
50 PERCENT EXCEEDS	82	181	67
90 PERCENT EXCEEDS	59	63	35

(a) From rating curve extended above 7,000 ft³/s on basis of slope-area measurement of peak flow

(b) Result of freezeup



ROCK-FOX RIVER BASIN

ROCK RIVER BASIN

05423500 SOUTH BRANCH ROCK RIVER AT WAUPUN, WI

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.

DRAINAGE AREA.--63.6 mi².

PERIOD OF RECORD.--October 1948 to September 1969. March 1987 to current year. Monthly discharge for October 1948 published in WSP 1308.

REVISED RECORDS.--WDR WI-88-1: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 863.46 ft above sea level. October 1948 to September 1969, recording gage at site 150 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 5, 20, 24-27, 31, Jan. 1, 8, 17-20, 24, Feb. 8, 16-18, 24-27, and Mar. 13, 14. Records good except those for ice-affected periods, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	55	60	40	17	178	150	80	76	66	25
2	16	47	53	51	35	18	129	154	70	132	63	24
3	14	45	51	50	32	27	134	199	69	126	60	24
4	13	41	49	59	37	45	149	232	63	372	56	22
5	13	35	48	54	45	45	168	204	59	422	54	21
6	13	31	46	47	34	58	159	172	53	829	55	19
7	13	27	43	41	31	93	168	144	78	605	53	19
8	13	26	40	37	29	157	267	132	272	500	50	18
9	13	28	39	33	27	156	275	124	214	548	56	18
10	13	29	40	31	28	107	213	112	148	508	56	16
11	14	27	41	31	22	77	218	103	110	437	51	17
12	13	31	38	31	27	55	262	93	88	366	48	17
13	13	32	41	31	26	48	198	85	73	296	43	25
14	14	29	42	30	25	41	168	78	123	261	41	41
15	16	27	74	30	22	36	372	73	190	221	51	44
16	15	25	166	29	21	49	512	67	187	189	56	44
17	15	25	144	29	18	52	421	64	155	158	56	41
18	14	23	113	29	19	47	324	65	260	162	52	38
19	13	24	104	29	19	42	338	65	227	148	49	34
20	14	49	92	30	18	38	528	63	244	130	45	41
21	16	118	81	40	17	37	531	58	194	114	42	57
22	16	107	71	40	16	46	432	54	153	102	39	49
23	17	108	65	40	16	77	349	68	124	93	40	44
24	15	97	56	38	16	153	287	84	106	88	37	39
25	14	86	52	30	16	305	238	84	98	194	34	36
26	14	78	46	32	16	325	200	77	97	128	31	41
27	13	69	43	31	16	319	180	73	93	101	30	38
28	12	64	42	30	17	312	217	70	85	91	28	37
29	12	60	51	22	---	323	195	63	78	81	27	35
30	11	57	64	27	---	292	174	69	77	76	28	32
31	11	---	76	29	---	272	---	85	---	69	29	---
TOTAL	431	1462	1966	1121	685	3669	7984	3164	3868	7623	1426	956
MEAN	13.9	48.7	63.4	36.2	24.5	118	266	102	129	246	46.0	31.9
MAX	18	118	166	60	45	325	531	232	272	829	66	57
MIN	11	17	38	22	16	17	129	54	53	69	27	16
CFSM	.22	.77	1.00	.57	.38	1.86	4.18	1.60	2.03	3.87	.72	.50
IN.	.25	.86	1.15	.66	.40	2.15	4.67	1.85	2.26	4.46	.83	.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1993, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1949	16.7	86.8	1955	.63	1965
1950	21.0	106	1962	.53	1965
1951	17.4	80.0	1966	.16	1959
1952	10.8	40.7	1992	.094	1959
1953	13.8	105	1952	.079	1959
1954	67.8	176	1993	5.40	1964
1955	73.8	266	1993	7.80	1964
1956	32.0	107	1960	3.54	1958
1957	24.1	129	1993	1.36	1964
1958	26.8	246	1993	.95	1964
1959	13.7	115	1960	.56	1964
1960	13.6	76.2	1960	.55	1963

SUMMARY STATISTICS

	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1949 - 1993
ANNUAL TOTAL	13986.5	34355	
ANNUAL MEAN	38.2	94.1	27.8
HIGHEST ANNUAL MEAN			94.1
LOWEST ANNUAL MEAN			2.47
HIGHEST DAILY MEAN	235	829	1280
LOWEST DAILY MEAN	1.0	11	.00
ANNUAL SEVEN-DAY MINIMUM	1.9	12	.00
INSTANTANEOUS PEAK FLOW		920	(c)1500
INSTANTANEOUS PEAK STAGE		7.53	7.97
INSTANTANEOUS LOW FLOW		10	.00
ANNUAL RUNOFF (CFSM)	.60	1.48	.44
ANNUAL RUNOFF (INCHES)	8.18	20.09	5.95
10 PERCENT EXCEEDS	86	229	66
50 PERCENT EXCEEDS	26	51	9.1
90 PERCENT EXCEEDS	4.9	17	.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 Oct. 30, 31, and Nov. 1

(e) No flow at times in 1949, 1953-54, 1958-59, 1963-64

ROCK RIVER BASIN

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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, JUNE 29 TO AUGUST 12, 1993
(Milligrams per liter unless otherwise indicated)

	June 29	July 14	Aug. 12
Depth of sample (ft)	1.5	1.5	1.5
Lake stage (ft)	9.12	9.53	9.32
Specific conductance (μS/cm)	612	472	597
pH (units)	8.6	7.3	8.3
Water temperature (°C)	22.0	21.5	26.0
Secchi-depth (meters)	0.2	0.4	0.3
Dissolved oxygen	16.7	2.6	12.4
Phosphorus, total (as P)	0.290	0.320	0.340
Chlorophyll a, phytoplankton (μg/L)	300	48	130

432240088363900 SINISSIPPI LAKE, OFF BUTTERNUT ISLAND, NEAR HUSTISFORD, WI

LOCATION.--Lat 43°22'40" long 88°36'39", 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, MAY 05 TO AUGUST 12, 1993
(Milligrams per liter unless otherwise indicated)

	May 05	June 29	July 14	Aug. 12
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	9.12	9.12	9.53	9.32
Specific conductance (μS/cm)	484	577	474	585
pH (units)	7.6	8.6	7.4	8.3
Water temperature (°C)	15.5	22.0	21.5	25.5
Color (Pt-Co. scale)	60	---	---	---
Turbidity (NTU)	11	---	---	---
Secchi-depth (meters)	0.2	0.2	0.4	0.4
Dissolved oxygen	5.8	14.4	3.4	11.5
Hardness, as CaCO ₃	240	---	---	---
Calcium, dissolved (Ca)	51	---	---	---
Magnesium, dissolved (Mg)	27	---	---	---
Sodium, dissolved (Na)	9.8	---	---	---
Potassium, dissolved (K)	4	---	---	---
Alkalinity, as CaCO ₃	200	---	---	---
Sulfate, dissolved (SO ₄)	22	---	---	---
Chloride, dissolved (Cl)	26	---	---	---
Fluoride, dissolved (F)	0.1	---	---	---
Silica, dissolved (SiO ₂)	1.6	---	---	---
Solids, dissolved, at 180°C	292	---	---	---
Nitrogen, nitrate, total (as N)	0.29	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	0.29	---	---	---
Nitrogen, ammonia, dissolved (as N)	0.04	---	---	---
Nitrogen, organic, total (as N)	1.3	---	---	---
Nitrogen, amm. + org., total (as N)	1.3	---	---	---
Nitrogen, total (as N)	1.6	---	---	---
Phosphorus, total (as P)	0.230	0.350	0.330	0.270
Phosphorus, ortho, dissolved (as P)	0.020	---	---	---
Iron, dissolved (Fe) μg/L	<50	---	---	---
Manganese, dissolved (Mn) μg/L	<40	---	---	---
Chlorophyll a, phytoplankton (μg/L)	91	220	86	85

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, 10.06 ft, Apr. 20, 1993; minimum observed, 8.20 ft, Nov. 6, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 10.06 ft, Apr. 20; minimum observed, 8.20 ft, Nov. 6.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	8.60	---	---	---	9.30	---	9.48	---	---	---
2	---	8.60	---	8.40	---	---	9.34	---	9.42	---	9.28	---
3	---	---	8.36	---	---	8.30	9.40	---	---	---	9.24	---
4	---	---	8.36	8.40	---	---	---	9.32	9.40	---	---	9.93
5	---	---	---	8.40	---	---	9.38	9.22	---	---	9.28	---
6	8.60	8.20	---	---	---	---	9.36	---	---	9.70	---	---
7	---	---	---	---	---	---	9.36	---	9.28	---	---	---
8	---	---	8.36	---	---	---	9.34	---	9.46	---	---	---
9	---	8.65	---	---	8.57	8.64	9.34	---	9.48	9.88	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	8.60	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	9.32	9.22	---	9.80	9.32	---
13	8.62	---	---	---	---	---	9.30	9.18	---	---	---	---
14	---	---	---	---	---	---	---	9.22	9.54	9.53	---	---
15	---	---	8.80	---	---	---	9.60	---	9.50	---	---	9.96
16	---	---	8.82	---	---	8.70	9.62	9.20	9.40	9.48	9.32	---
17	---	8.58	8.90	---	---	---	---	9.22	---	---	---	---
18	---	---	---	---	---	---	---	9.30	9.38	---	---	9.50
19	---	---	---	---	---	---	9.70	9.28	---	---	---	---
20	8.65	8.54	---	---	---	---	10.06	9.26	---	9.30	---	9.52
21	---	---	8.60	---	---	---	9.90	9.24	---	9.26	---	---
22	---	---	8.58	---	---	---	9.80	---	---	9.24	---	9.50
23	---	8.74	---	---	---	---	9.74	---	---	9.20	---	---
24	---	8.78	---	---	---	---	---	9.46	---	---	---	---
25	---	---	---	---	---	---	---	9.50	9.58	---	8.96	---
26	---	---	8.52	---	---	---	9.70	---	---	---	---	---
27	8.70	8.80	---	---	---	---	9.62	9.40	---	---	8.80	---
28	---	---	8.46	---	---	---	9.60	9.56	---	---	---	---
29	---	---	---	---	---	---	9.42	---	9.12	9.40	---	---
30	---	---	---	---	---	---	---	---	9.38	---	---	---
31	---	---	8.42	---	---	---	---	---	---	9.30	9.28	---

ROCK RIVER BASIN

432113088361100 SINISSIPPI LAKE, OFF ANTHONY ISLAND, AT HUSTISFORD, WI--CONTINUED

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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 09 TO AUGUST 12, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 09	May 05	June 29	July 14	Aug. 12
Depth of sample (ft)	1.0	1.5	1.5	1.5	1.5
Lake stage (ft)	8.57	9.12	9.12	9.53	9.32
Specific conductance (μS/cm)	870	478	597	473	585
pH (units)	8.4	7.7	8.4	7.6	8.2
Water temperature (°C)	2.5	16.0	22.5	22.5	24.5
Color (Pt-Co. scale)	---	55	---	---	---
Turbidity (NTU)	---	9.0	---	---	---
Secchi-depth (meters)	---	0.2	0.2	0.2	0.3
Dissolved oxygen	24.6	7.2	7.4	5.7	8.3
Hardness, as CaCO ₃	---	240	---	---	---
Calcium, dissolved (Ca)	---	51	---	---	---
Magnesium, dissolved (Mg)	---	27	---	---	---
Sodium, dissolved (Na)	---	9.8	---	---	---
Potassium, dissolved (K)	---	4	---	---	---
Alkalinity, as CaCO ₃	---	200	---	---	---
Sulfate, dissolved (SO ₄)	---	22	---	---	---
Chloride, dissolved (Cl)	---	25	---	---	---
Fluoride, dissolved (F)	---	0.1	---	---	---
Silica, dissolved (SiO ₂)	---	1.5	---	---	---
Solids, dissolved, at 180°C	---	294	---	---	---
Nitrogen, nitrate, total (as N)	---	0.24	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	0.24	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	0.02	---	---	---
Nitrogen, organic, total (as N)	---	1.8	---	---	---
Nitrogen, amm. + org., total (as N)	---	1.8	---	---	---
Nitrogen, total (as N)	---	2.0	---	---	---
Phosphorus, total (as P)	---	0.260	0.400	0.340	0.280
Phosphorus, ortho, dissolved (as P)	---	0.016	---	---	---
Iron, dissolved (Fe) μg/L	---	<50	---	---	---
Manganese, dissolved (Mn) μg/L	---	<40	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	110	170	140	79

2-9-93

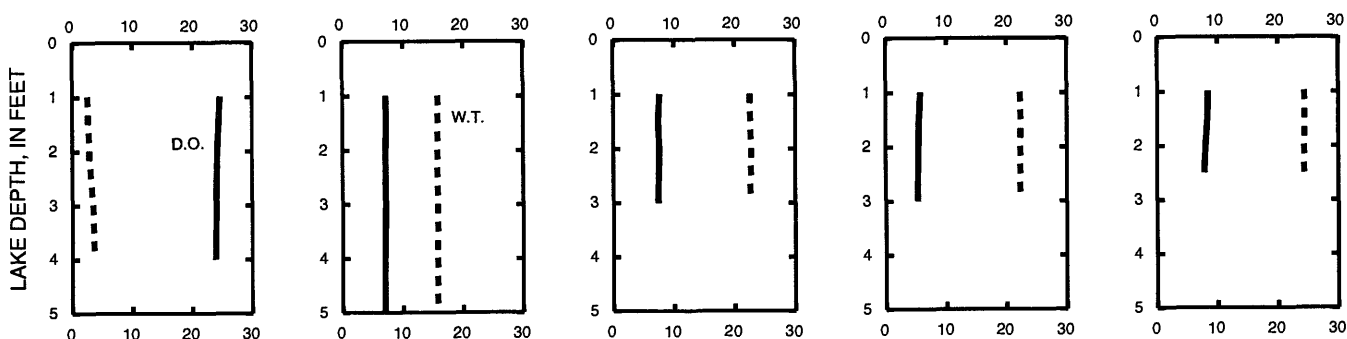
5-5-93

6-29-93

7-14-93

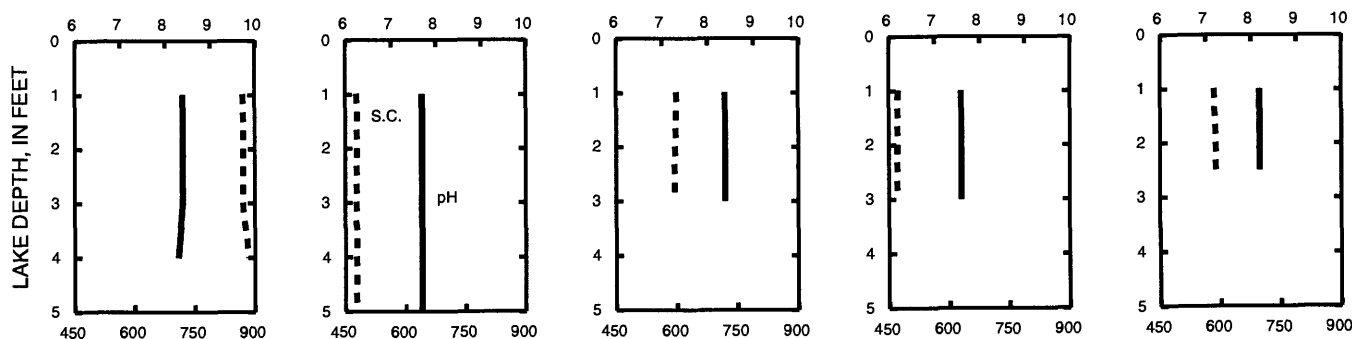
8-12-93

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

431643088243300 DRUID LAKE NEAR HARTFORD, WI

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.

LAKE-STAGE RECORDS

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

GAGE.--Staff read by Bill Noennig at his residence. Elevation of lake is 969 ft above sea level, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.80 ft, Apr. 24, 25, 1993; minimum observed, 10.84 ft, Sept. 10, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 12.80 ft, Apr. 24, 25; minimum observed, 11.00 ft, Sept. 9.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	11.52	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	11.70	---	---	---
4	---	---	---	---	---	---	---	---	---	---	11.24	---
5	11.23	---	---	---	11.10	---	---	---	11.48	---	---	---
6	---	---	---	---	---	---	---	11.84	11.48	11.59	---	11.08
7	---	---	---	---	---	---	---	---	11.43	---	11.18	---
8	---	---	---	---	---	---	---	11.78	---	---	---	---
9	---	---	---	---	---	---	---	11.78	12.10	---	---	11.00
10	---	---	---	---	---	---	---	---	---	12.00	---	---
11	11.20	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	12.00	12.06	---	---
13	---	---	---	---	---	---	---	---	---	---	11.14	---
14	---	---	---	---	---	---	---	---	---	---	---	11.32
15	---	---	---	---	---	---	---	11.20	---	11.80	---	---
16	---	---	---	---	---	---	---	11.20	11.80	11.75	---	11.68
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	11.68	---	---
19	---	---	---	---	---	---	---	11.18	11.72	---	11.28	---
20	---	---	---	---	---	---	---	---	11.72	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	11.54
22	---	---	---	---	---	---	---	11.20	---	---	11.14	---
23	---	---	---	---	---	---	---	11.25	---	---	---	---
24	---	---	---	---	---	---	12.80	---	11.65	11.42	---	---
25	---	---	---	---	---	---	12.80	---	---	---	---	11.42
26	---	---	---	---	---	---	---	11.42	---	---	11.02	---
27	---	---	---	---	---	---	---	---	11.59	---	11.02	---
28	---	---	---	---	---	---	---	---	---	11.56	---	---
29	---	---	---	---	---	---	---	11.44	---	---	---	---
30	---	---	---	---	---	---	---	---	11.55	---	---	11.34
31	---	---	---	---	---	---	---	11.52	---	---	11.20	---

ROCK RIVER BASIN

431643088243300 DRUID LAKE NEAR HARTFORD, WI--CONTINUED

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WATER-QUALITY RECORDS

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

REMARKS.--Lake sampled near center at deep hole. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 26, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 28		June 07		July 16		Aug. 26	
Depth of sample (ft)	1.5	51	1.5	49	1.5	50	1.5	50	1.5	51
Lake stage (ft)	11.10		---		11.43		11.75		11.02	
Specific conductance (µS/cm)	601	674	548	565	589	593	580	605	586	588
pH (units)	8.0	7.4	8.2	8.0	8.2	7.6	8.3	7.5	8.3	7.4
Water temperature (°C)	2.0	3.0	8.0	6.5	17.0	6.5	24.0	7.0	26.5	7.5
Color (Pt-Co. scale)	---	---	40	40	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.7	1.8	---	---	---	---	---	---
Secchi-depth (meters)	---		1.6		1.7		1.1		1.0	
Dissolved oxygen	11.8	0.0	12.0	10.2	10.7	0.0	9.4	0.0	10.3	0.0
Hardness, as CaCO ₃	---	---	280	290	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	62	63	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	31	32	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	9.2	9.3	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	240	240	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	23	23	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	23	23	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	5.9	6.4	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	356	356	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.66	0.67	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.66	0.67	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.10	0.17	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	1.1	0.83	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.2	1.0	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.9	1.7	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.052	0.051	0.025	0.021	0.028	0.340	0.015	0.330
Phosphorus, ortho, dissolved (as P)	---	---	0.003	0.011	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	24	---	18	---	24	---	16	---

2-5-93

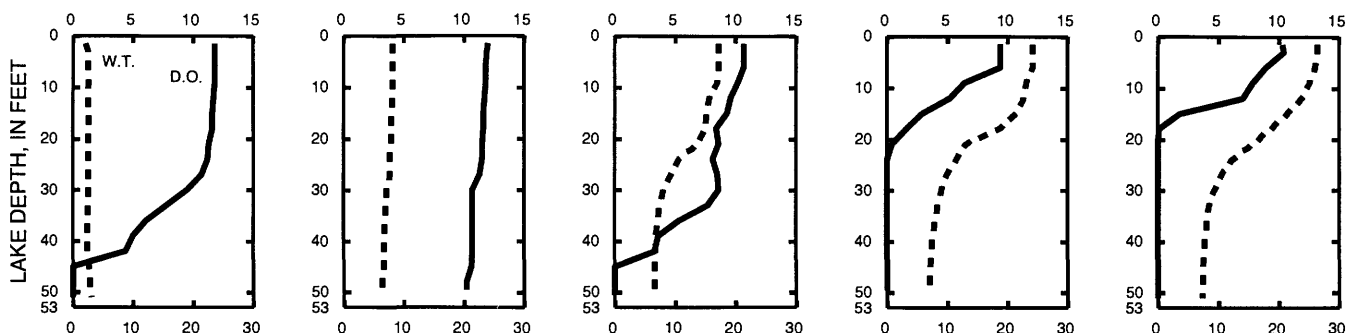
4-28-93

6-7-93

7-16-93

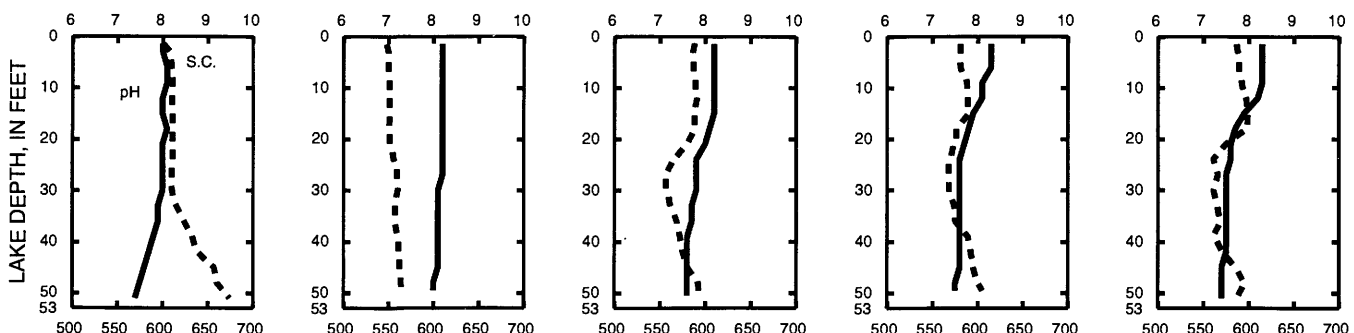
8-26-93

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

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 above sea level, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 11.53 ft, Apr. 28, 1993; minimum observed, 10.50 ft, Sept. 3 and 9, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.53 ft, Apr. 28; minimum observed, 11.14 ft, Aug. 10.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	11.50	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	11.46	11.20	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	11.51	---	---	---
10	---	---	---	---	---	---	---	---	---	---	11.14	---
11	---	---	---	---	---	---	---	---	11.40	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	11.44	11.36	---	---
15	---	---	---	---	---	---	---	---	---	---	11.30	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	11.32	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	11.38	---	11.28	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	11.18	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	11.53	---	---	11.36	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	11.28	---	---	---
31	---	---	---	---	---	---	---	---	---	---	11.30	---

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 28 TO AUGUST 25, 1993
(Milligrams per liter unless otherwise indicated)

	Apr. 28	June 09	July 14	Aug. 25
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	11.53	11.51	11.36	11.18
Specific conductance (μS/cm)	341	343	332	342
pH (units)	8.4	8.5	8.5	8.5
Water temperature (°C)	9.5	18.5	24.5	26.5
Secchi-depth (meters)	2.5	2.7	1.9	2.2
Dissolved oxygen	13.1	10.3	9.1	9.2
Phosphorus, total (as P)	0.025	0.020	0.018	0.012
Chlorophyll a, phytoplankton (μg/L)	11	8.0	9.0	3.7

ROCK RIVER BASIN

430957088183400 LAKE KEESUS, EAST BAY, NEAR MERTON, WI

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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 25, 1993 (Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 28		June 09		July 14		Aug. 25	
Depth of sample (ft)	1.5	39	1.5	43	1.5	41	1.5	41	1.5	40
Lake stage (ft)	---	---	11.53	---	11.51	---	11.36	---	11.18	---
Specific conductance (µS/cm)	351	365	346	365	341	463	333	490	344	537
pH (units)	8.0	7.6	8.4	7.9	8.4	7.3	8.5	7.5	8.3	7.2
Water temperature (°C)	4.0	4.0	9.5	7.5	17.5	7.5	24.5	8.0	26.5	8.0
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.00	1.3	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.3	---	2.8	---	1.9	---	2.4	---
Dissolved oxygen	10.9	4.1	12.9	8.6	10.5	0.0	8.8	0.2	9.1	0.0
Hardness, as CaCO3	---	---	170	180	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	35	36	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	21	22	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	5.6	5.9	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	160	160	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	10	10	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	12	13	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	0.2	1.5	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	204	206	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.16	0.17	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.16	0.17	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.24	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.58	0.66	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.90	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.76	1.1	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.034	0.048	0.018	0.310	0.017	---	0.015	0.350
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	0.019	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	210	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	12	---	8.1	---	9.7	---	3.8	---

2-5-93

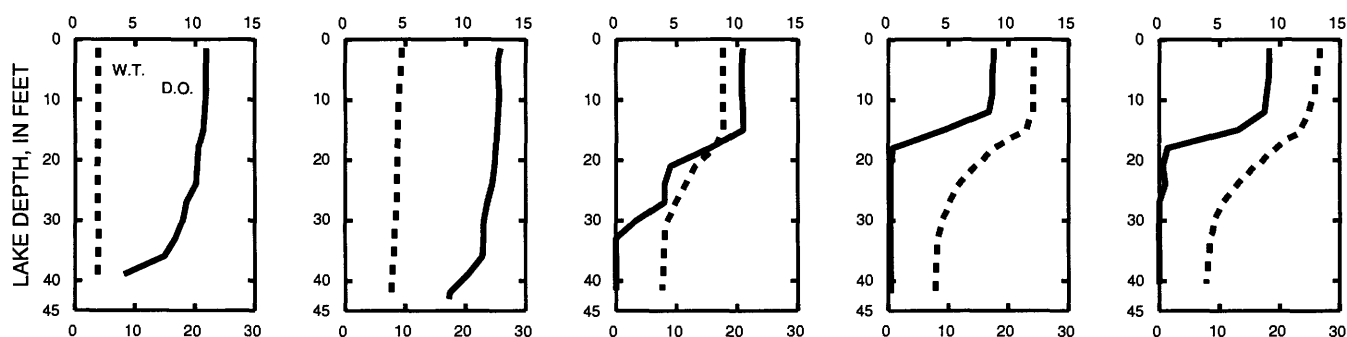
4-28-93

6-9-93

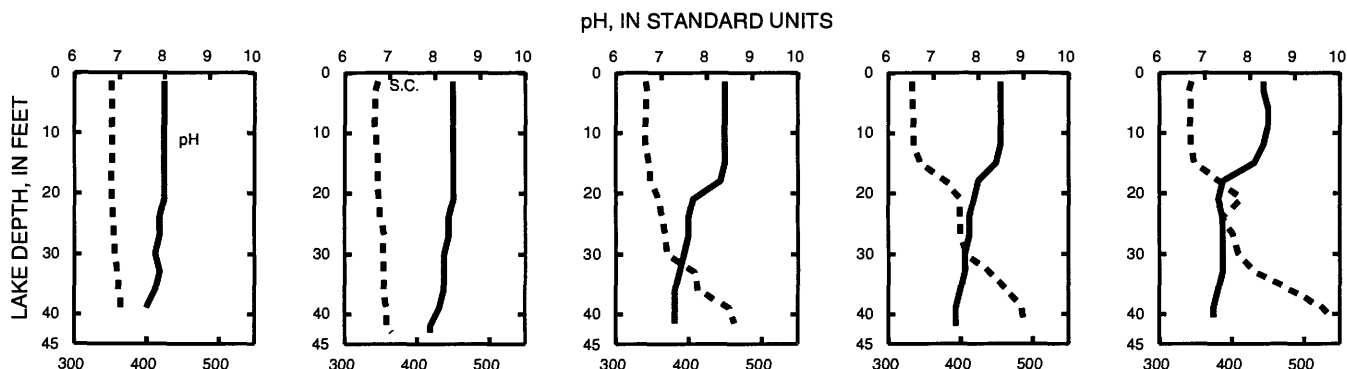
7-14-93

8-25-93

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

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 92 feet. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 25, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 05		May 04		June 10		July 16		Aug. 25	
Depth of sample (ft)	3.0	90	1.5	90	1.5	91	1.5	91	1.5	91
Lake stage (ft)	4.07		4.80		5.00		4.96		4.74	
Specific conductance (μS/cm)	549	544	545	584	533	583	528	580	532	556
pH (units)	7.8	7.9	8.4	8.1	8.4	7.6	8.2	7.5	8.1	7.5
Water temperature (°C)	3.0	2.5	11.5	5.5	17.5	5.5	24.0	6.0	25.5	6.0
Color (Pt-Co. scale)	---	---	20	20	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.5	0.70	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.9		2.3		2.0		1.3	
Dissolved oxygen	12.2	9.9	13.0	10.5	10.4	1.4	8.1	0.0	8.5	0.0
Hardness, as CaCO ₃	---	---	280	280	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	58	57	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	34	34	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	11	11	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	230	230	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	29	31	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	25	26	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	4.5	5.1	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	320	326	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.46	0.53	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.46	0.53	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.06	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.79	0.64	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.80	0.70	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.3	1.2	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.032	0.023	0.023	0.145	0.017	0.070	0.012	0.123
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.009	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	27	---	13	---	9.3	---	6.0	---

2-5-93

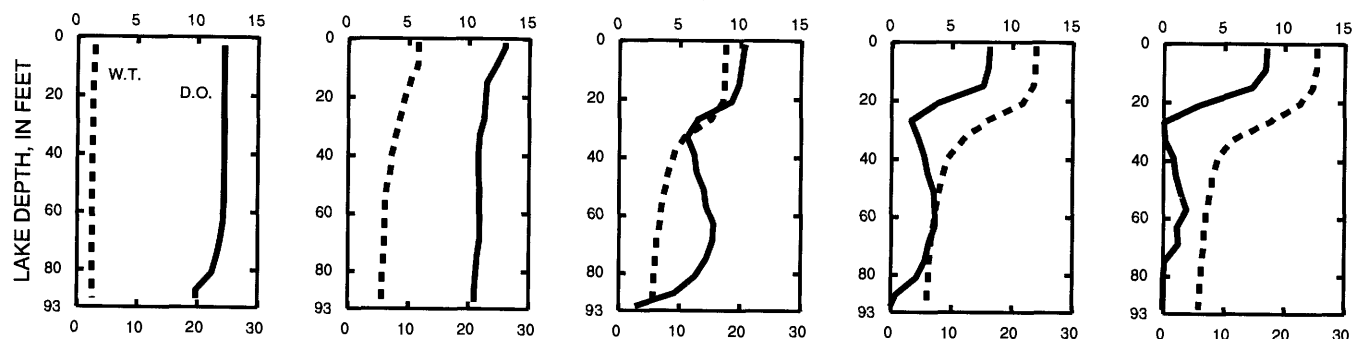
5-4-93

6-10-93

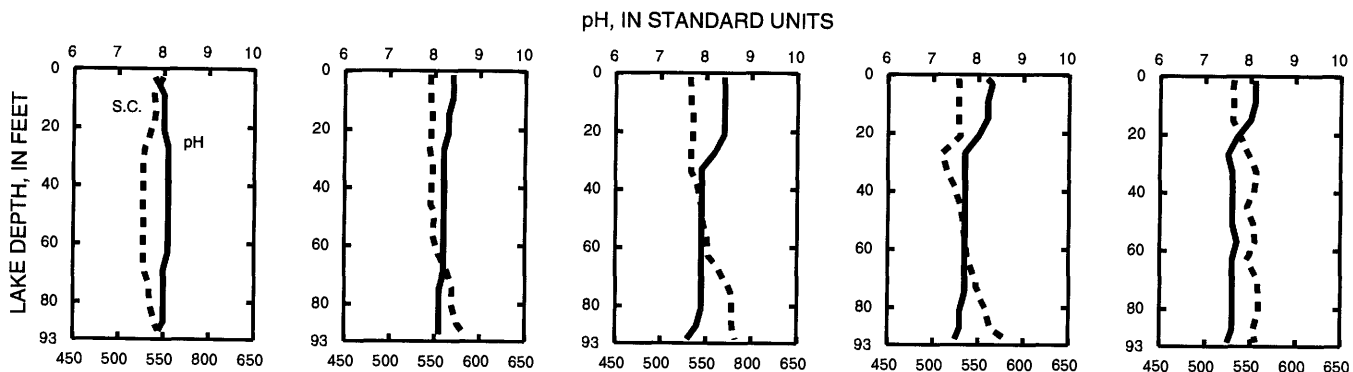
7-16-93

8-25-93

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

249

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, MAY 04 TO AUGUST 25, 1993
(Milligrams per liter unless otherwise indicated)

	May 04	June 10	July 16	Aug. 25
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.80	5.00	4.96	4.74
Specific conductance (μS/cm)	544	547	557	564
pH (units)	8.4	8.3	8.3	8.4
Water temperature (°C)	13.0	19.0	24.0	26.0
Secchi-depth (meters)	1.7	1.1	1.0	1.4
Dissolved oxygen	12.3	8.9	8.1	9.4
Phosphorus, total (as P)	0.045	0.030	0.043	0.026
Chlorophyll a, phytoplankton (μg/L)	39	9.9	20	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, MAY 04 TO AUGUST 25, 1993
(Milligrams per liter unless otherwise indicated)

	May 04	June 10	July 16	Aug. 25
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.80	5.00	4.96	4.74
Specific conductance (μS/cm)	540	523	517	502
pH (units)	8.4	8.5	8.2	8.3
Water temperature (°C)	12.5	19.5	25.0	27.0
Secchi-depth (meters)	1.7	2.0	2.2	1.5
Dissolved oxygen	12.8	10.7	8.3	9.9
Phosphorus, total (as P)	<0.020	0.019	0.016	0.012
Chlorophyll a, phytoplankton (μg/L)	13	6.6	4.8	5.6

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, MAY 04 TO AUGUST 25, 1993
(Milligrams per liter unless otherwise indicated)

	May 04	June 10	July 16	Aug. 25
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.80	5.00	4.96	4.74
Specific conductance (μS/cm)	542	523	510	515
pH (units)	8.4	8.4	8.3	8.3
Water temperature (°C)	11.5	19.0	25.0	26.5
Secchi-depth (meters)	1.9	2.3	1.6	1.2
Dissolved oxygen	13.0	10.2	9.0	9.2
Phosphorus, total (as P)	0.020	0.018	0.013	0.013
Chlorophyll a, phytoplankton (μg/L)	11	6.2	7.2	7.6

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, MAY 04 TO AUGUST 25, 1993
(Milligrams per liter unless otherwise indicated)

	May 04	June 10	July 16	Aug. 25
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.80	5.00	4.96	4.74
Specific conductance (μ S/cm)	545	527	519	519
pH (units)	8.5	8.5	8.4	8.3
Water temperature ($^{\circ}$ C)	12.5	18.0	24.5	26.0
Secchi-depth (meters)	1.6	2.1	1.7	1.4
Dissolved oxygen	13.2	10.5	8.9	9.4
Phosphorus, total (as P)	0.021	0.017	0.016	0.014
Chlorophyll a, phytoplankton (μ g/L)	13	7.6	7.9	4.8

ROCK RIVER BASIN

430551088273500 OCONOMOWOC LAKE NO. 1 (CENTER) AT OCONOMOWOC, WI

251

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.--March 1986 to current year.

REMARKS.--Lake sampled near center at a lake depth of about 65 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 20, 1993 (Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 29		June 17		July 14		Aug. 20	
Depth of sample (ft)	1.5	63	1.5	64	1.5	63	1.5	61	1.5	62
Lake stage (ft)	7.24		8.82		8.08		8.28		7.95	
Specific conductance (µS/cm)	529	560	536	550	532	561	517	566	498	555
pH (units)	8.1	7.7	8.3	8.2	8.2	7.7	8.4	7.8	8.2	7.5
Water temperature (°C)	1.5	3.0	9.5	7.0	20.0	7.0	24.5	7.5	25.0	7.5
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.90	1.3	---	---	---	---	---	---
Secchi-depth (meters)	---		4.1		4.2		1.8		1.7	
Dissolved oxygen	12.9	6.2	11.5	10.7	9.3	2.6	9.2	0.2	9.3	0.0
Hardness, as CaCO ₃	---	---	270	270	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	53	51	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	34	34	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	12	12	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	220	220	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	31	31	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	28	28	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	4.2	4.3	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	338	330	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.37	0.36	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.37	0.36	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.04	0.05	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.56	0.45	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.50	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.97	0.86	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.011	0.013	0.010	0.076	0.013	0.064	0.009	0.020
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)	---	---	3.4	---	3.0	---	5.0	---	5.0	---

2-5-93

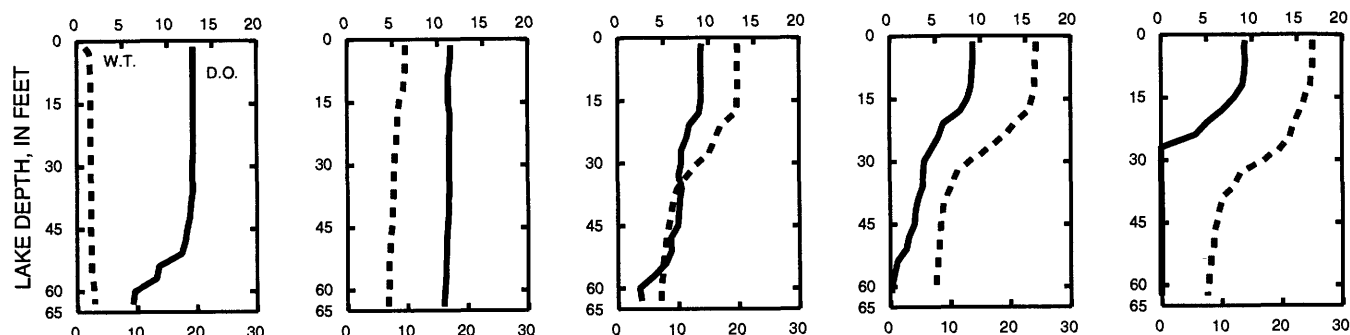
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6-17-93

7-14-93

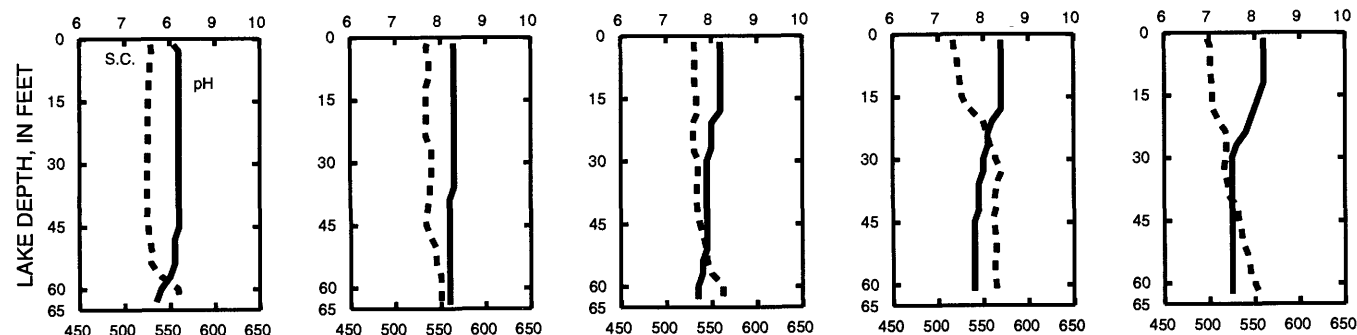
8-20-93

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

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 50 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 05 TO AUGUST 20, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 05		Apr. 29		June 17		July 14		Aug. 20	
Depth of sample (ft)	1.5	48	1.5	48	1.5	48	1.5	47	1.5	48
Lake stage (ft)		7.24		8.82		8.08		8.28		7.95
Specific conductance ($\mu\text{S}/\text{cm}$)	556	586	560	582	555	590	547	600	525	585
pH (units)	8.1	7.6	8.2	8.1	8.3	7.6	8.3	7.8	8.2	7.4
Water temperature ($^{\circ}\text{C}$)	2.0	3.5	11.0	7.0	20.0	7.5	25.0	8.0	25.0	8.0
Secchi-depth (meters)		---		3.3		3.8		2.4		2.5
Dissolved oxygen	11.5	3.8	11.6	10.9	9.3	0.0	9.0	0.2	8.9	0.0
Phosphorus, total (as P)	---	---	0.006	0.004	0.004	0.016	0.005	0.022	0.007	0.030
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	8.7	---	1.9	---	1.8	---	2.3	---

2-5-93

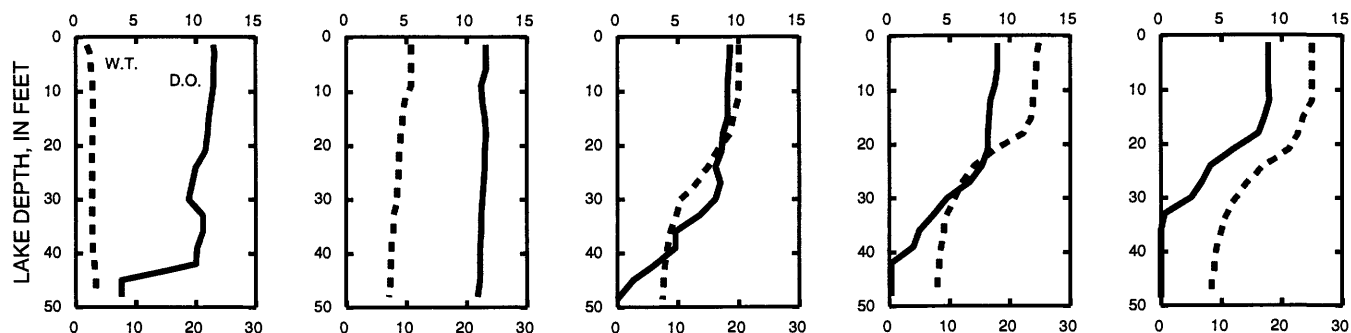
4-29-93

6-17-93

7-14-93

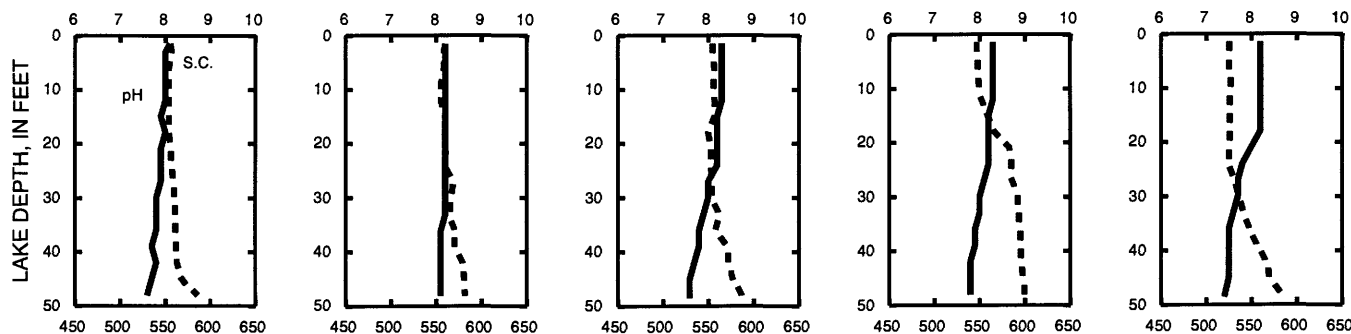
8-20-93

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

253

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, 9.96 ft, July 7, 1993; minimum observed, 7.82 ft, Sept. 12, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 9.96 ft, July 7; minimum observed, 8.48 ft, Aug. 31.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	8.52
2	---	---	---	---	---	---	---	---	9.00	---	---	---
3	---	---	8.70	---	8.82	---	---	---	---	---	---	---
4	---	---	---	---	8.82	8.78	---	---	---	---	---	---
5	---	---	---	---	---	---	---	9.26	---	---	---	---
6	---	---	---	---	---	---	9.22	---	---	---	8.78	---
7	---	---	---	8.88	---	---	---	---	---	9.96	---	---
8	8.89	---	---	---	---	---	---	---	---	---	---	8.60
9	---	8.96	8.74	---	---	---	---	---	9.18	---	---	---
10	---	---	---	---	---	---	---	---	9.12	---	---	---
11	---	---	---	---	8.80	---	---	9.16	---	---	8.68	---
12	---	---	---	---	---	8.90	---	---	---	8.92	---	---
13	---	---	---	8.78	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	8.80	---	---	---	---	---	9.35	---	---	9.10	---	9.10
16	---	---	---	---	---	---	---	---	9.06	---	---	---
17	---	---	8.80	---	8.82	---	---	---	---	---	8.62	---
18	---	8.88	---	---	---	8.94	---	---	---	---	---	---
19	---	---	---	---	---	---	---	9.00	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	8.84	---	---	8.80	---	---	9.40	---	---	8.90	---	---
22	---	---	8.85	---	---	---	---	---	---	---	---	8.94
23	---	---	---	---	---	---	---	---	8.98	---	---	---
24	---	---	---	---	---	9.00	---	---	---	---	8.72	---
25	---	---	---	---	8.80	---	---	9.04	---	---	8.54	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	8.78	---	---	8.78	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	9.48	---	---	8.92	---	9.00
29	---	---	---	---	---	---	9.48	---	---	---	---	---
30	---	---	8.89	---	---	9.10	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	8.48	---

ROCK RIVER BASIN

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 about 52 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 04 TO AUGUST 24, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 29		June 09		July 14		Aug. 24	
Depth of sample (ft)	1.5	50	1.5	50	1.5	50	1.5	48	1.5	47
Lake stage (ft)	8.82		9.48		9.18		9.10		8.72	
Specific conductance ($\mu\text{S}/\text{cm}$)	547	634	530	536	508	566	516	559	517	551
pH (units)	8.1	7.8	8.2	8.0	8.1	7.6	8.2	7.6	8.2	7.4
Water temperature ($^{\circ}\text{C}$)	2.5	3.0	10.5	5.0	18.5	5.5	23.5	6.0	26.5	6.0
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.8	1.3	---	---	---	---	---	---
Secchi-depth (meters)	---	---	3.0		1.3		2.4		3.2	
Dissolved oxygen	11.8	8.0	10.9	9.7	9.0	0.0	8.8	0.2	9.8	0.0
Hardness, as CaCO_3	---	---	270	260	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	51	50	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	34	33	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	12	13	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	210	210	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	31	31	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	28	28	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	3.9	4.4	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	308	300	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.36	0.31	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.36	0.31	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.05	0.08	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.45	0.62	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.70	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.86	1.0	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.009	0.019	0.017	0.134	0.011	0.163	0.011	0.067
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 ($\mu\text{g}/\text{L}$)	---	---	2.9	---	2.5	---	4.5	---	2.3	---

2-4-93

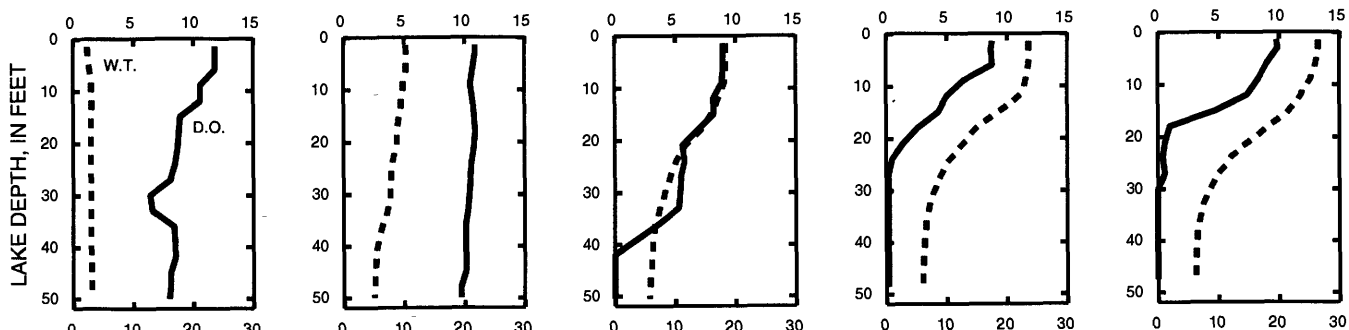
4-29-93

6-9-93

7-14-93

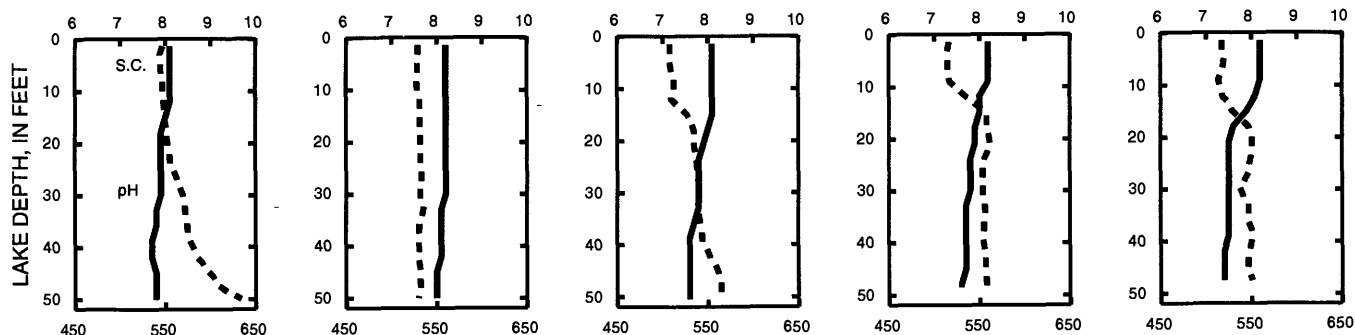
8-24-93

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

255

430436088293300 SILVER LAKE NEAR OCONOMOWOC, WI

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.

DRAINAGE AREA.--

LAKE-STAGE RECORDS

PERIOD OF RECORD.--April to September 1993.

Gage.--Nonrecording gage read by Barbara Barquist.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 12.04 ft, Apr. 24; minimum observed, 11.51 ft, Sept. 11.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	11.99	---	---	---	---
2	---	---	---	---	11.64	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	11.94	11.64	---
4	---	---	---	---	---	---	---	12.02	---	---	---	11.52
5	---	---	---	---	---	---	---	---	11.84	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	11.94	---	11.86	11.59	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	11.96	---	---
11	---	---	---	---	---	---	---	---	---	---	---	11.51
12	---	---	---	---	---	---	11.76	---	11.94	---	11.59	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	11.57	---
15	---	---	---	---	---	---	---	11.89	---	11.87	---	---
16	---	---	---	---	---	---	---	---	11.83	---	---	---
17	---	---	---	---	---	---	---	---	---	11.84	---	---
18	---	---	---	---	---	---	11.99	---	---	---	---	11.54
19	---	---	---	---	---	---	---	---	11.84	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	11.78	11.54	---
22	---	---	---	---	---	---	---	11.84	---	---	---	---
23	---	---	---	---	---	---	---	---	---	11.74	---	---
24	---	---	---	---	---	---	12.04	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	11.54
26	---	---	---	---	---	---	---	---	11.84	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	11.52	---
29	---	---	---	---	---	---	---	11.84	---	---	---	---
30	---	---	---	---	---	---	11.99	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	11.68	---	---

ROCK RIVER BASIN

256

430436088293300 SILVER LAKE NEAR OCONOMOWOC, WI--CONTINUED

WATER-QUALITY RECORDS

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

REMARKS.--Lake sampled near center of lake at a depth of about 40 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 04 TO AUGUST 24, 1993 (Milligrams per liter unless otherwise indicated)

	Feb. 04		May 04		June 17		July 15		Aug. 24	
Depth of sample (ft)	1.5	38	1.5	37	1.5	38	1.5	38	1.5	34
Lake stage (ft)	11.64		12.02		11.83		11.87		---	
Specific conductance (μ S/cm)	538	597	535	548	535	564	540	582	555	616
pH (units)	8.1	7.7	8.3	8.0	8.4	7.6	8.2	7.6	8.3	7.4
Water temperature ($^{\circ}$ C)	4.0	4.0	13.5	9.5	21.0	11.0	24.0	12.5	26.0	13.5
Color (Pt-Co. scale)	---	---	10	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.80	0.80	---	---	---	---	---	---
Secchi-depth (meters)	---		4.6		3.8		3.7		2.0	
Dissolved oxygen	15.0	7.9	10.7	7.6	9.5	0.0	8.4	0.0	8.1	1.7
Hardness, as CaCO ₃	---	---	230	240	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	37	39	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	33	34	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	24	24	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	170	180	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	28	28	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	50	50	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	5.0	7.0	---	---	---	---	---	---
Solids, dissolved, at 180 $^{\circ}$ C	---	---	300	304	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.36	0.23	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.36	0.23	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.13	0.22	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.67	0.58	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.80	0.80	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.2	1.0	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	<0.004	0.007	0.006	0.013	0.007	0.020	0.008	0.019
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.002	---	---	---	---	---	---
Iron, dissolved (Fe) μ g/L	---	---	<50	< 50	---	---	---	---	---	---
Manganese, dissolved (Mn) μ g/L	---	---	<40	< 40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μ g/L)	---	---	2.2	---	3.4	---	3.1	---	3.5	---

2-4-93

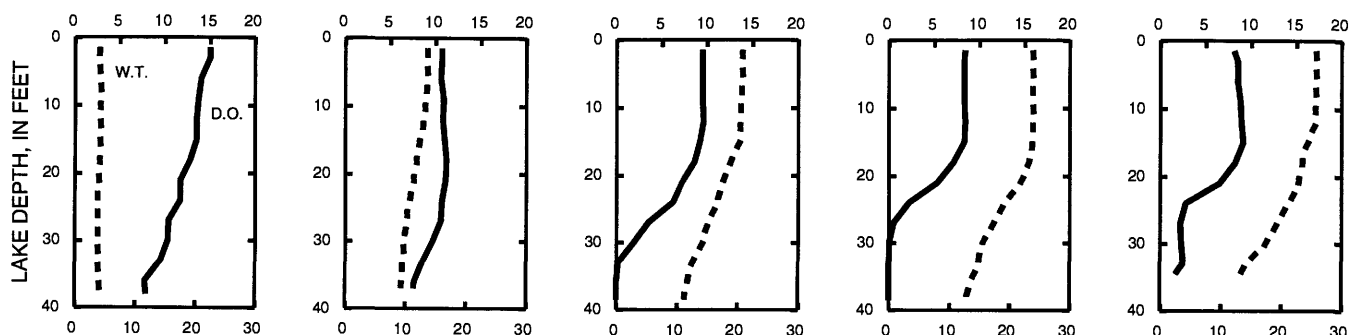
5-4-93

6-17-93

7-15-93

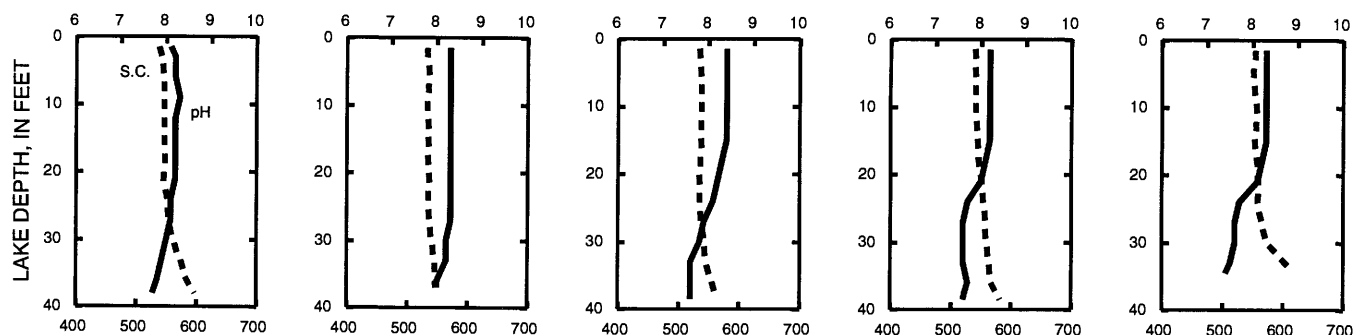
8-24-93

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

257

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 sea level. Prior to Sept. 26, 1933, nonrecording gage at site 700 ft upstream at different datum.

REMARKS.--Estimated daily discharges: May 22-25, and ice-affected period, Dec. 20 to Mar. 18. Records good except those for estimated daily discharges, which are fair. 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	357	260	764	700	400	200	2130	3880	1650	1240	1810	257
2	304	291	758	680	410	210	2020	3790	1650	1200	1770	262
3	248	352	753	660	370	220	2020	3780	1640	1170	1730	245
4	229	435	728	800	360	300	2080	3850	1540	1150	1680	236
5	204	494	579	900	350	400	2100	3800	1480	1150	1630	234
6	181	491	551	860	370	500	2150	3700	1480	1200	1580	232
7	181	458	519	800	390	640	2190	3600	1660	1180	1520	230
8	165	441	480	720	420	800	2360	3500	2360	1130	1460	228
9	149	434	418	680	430	860	2520	3360	2270	1390	1430	226
10	140	426	374	640	450	800	2490	3220	2120	1590	1400	211
11	140	436	405	620	450	840	2520	3080	2020	1520	1330	203
12	135	462	463	600	440	800	2550	2970	1920	1510	1270	201
13	133	489	553	600	400	760	2540	2850	1840	1540	1220	215
14	124	493	615	640	360	740	2550	2750	1890	1590	1190	360
15	132	508	750	620	330	740	2940	2630	1880	1660	1220	693
16	126	511	1110	560	310	800	3420	2540	1880	1700	1250	858
17	144	509	1200	500	280	900	3280	2440	1990	1750	1170	931
18	155	514	1130	480	260	1000	3170	2360	2070	1810	1110	978
19	164	516	1080	460	250	1110	3290	2280	2080	1850	1070	922
20	169	551	740	450	240	1080	4320	2190	2090	1870	1020	817
21	182	692	760	410	230	1060	4230	2110	2010	1880	976	721
22	194	801	740	420	220	1080	3930	2000	1970	1890	936	700
23	199	836	720	480	220	1360	3890	1800	1970	1890	894	739
24	202	827	700	560	210	1820	3970	1700	1730	1900	852	792
25	204	813	700	600	200	1830	3990	1700	1550	2050	742	846
26	194	835	720	560	190	1710	4030	1660	1490	2060	525	1050
27	190	842	720	520	190	1630	3940	1700	1410	1970	323	1100
28	184	821	700	470	200	1630	4000	1650	1340	1960	233	1110
29	187	799	700	480	---	1700	4000	1550	1280	1900	204	1030
30	211	779	720	440	---	1710	3960	1570	1280	1850	217	1100
31	227	---	740	390	---	1870	---	1630	---	1840	232	---
TOTAL	5754	17116	21890	18300	8930	31100	92580	81640	53540	50390	33994	17727
MEAN	186	571	706	590	319	1003	3086	2634	1785	1625	1097	591
MAX	357	842	1200	900	450	1870	4320	3880	2360	2060	1810	1110
MIN	124	260	374	390	190	200	2020	1550	1280	1130	204	201
CFSM	.19	.59	.73	.61	.33	1.04	3.18	2.72	1.84	1.68	1.13	.61
IN.	.22	.66	.84	.70	.34	1.19	3.55	3.13	2.06	1.93	1.31	.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1993, BY WATER YEAR (WY)

	MEAN	341	406	337	288	338	955	1310	696	406	324	231	259
MAX	2981	2034	1148	1055	1627	2448	3875	2634	1785	1625	1540	1552	
(WY)	1987	1986	1986	1946	1938	1985	1979	1993	1993	1993	1960	1986	
MIN	11.6	27.2	22.3	20.4	29.8	114	192	58.2	23.6	19.4	8.42	3.60	
(WY)	1964	1964	1938	1940	1936	1964	1964	1958	1931	1936	1934	1932	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1931 - 1993
ANNUAL TOTAL	216460	432961	
ANNUAL MEAN	591	1186	
HIGHEST ANNUAL MEAN			493
LOWEST ANNUAL MEAN			1186
HIGHEST DAILY MEAN	1790	Mar 25	4320
LOWEST DAILY MEAN	62	Jul 1	124
ANNUAL SEVEN-DAY MINIMUM	65	Jun 30	133
INSTANTANEOUS PEAK FLOW			4620
INSTANTANEOUS PEAK STAGE			6.03
ANNUAL RUNOFF (CFSM)	.61		1.22
ANNUAL RUNOFF (INCHES)	8.31		16.62
10 PERCENT EXCEEDS	1450		2520
50 PERCENT EXCEEDS	434		827
90 PERCENT EXCEEDS	97		211

(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 sea level.

REMARKS.--Estimated daily discharges: May 4-7. Records good. Flow regulated by dam 0.8 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	49	238	151	46	44	493	550	202	482	519	26
2	12	53	238	150	46	44	491	556	196	457	479	16
3	12	62	233	151	46	45	492	563	180	363	446	10
4	11	65	260	157	47	45	492	560	149	277	417	9.8
5	11	65	274	156	47	45	491	550	155	358	330	8.0
6	11	59	265	155	47	46	489	550	150	488	275	8.2
7	11	57	259	153	48	50	487	550	165	520	253	7.4
8	13	52	249	151	48	60	500	545	226	529	234	7.4
9	20	53	236	149	48	90	514	537	282	592	169	10
10	20	56	237	148	49	180	497	557	326	611	144	10
11	22	57	226	146	51	210	478	541	366	646	145	6.1
12	29	72	215	142	50	207	483	530	346	657	149	5.2
13	29	69	203	144	49	205	452	527	340	652	150	17
14	50	61	156	139	49	202	427	523	383	657	146	23
15	88	56	140	105	49	198	487	516	391	651	164	19
16	129	53	159	86	50	197	527	477	395	656	170	16
17	117	57	171	85	49	193	533	479	412	650	185	31
18	119	52	198	74	48	190	544	490	451	632	190	58
19	107	50	220	67	49	187	547	461	465	628	193	57
20	127	59	216	52	48	186	565	471	491	616	205	64
21	136	88	213	48	147	182	586	476	499	599	199	96
22	131	95	212	47	175	182	599	443	493	581	180	105
23	133	114	211	48	131	216	588	432	478	572	153	118
24	133	134	206	47	61	275	589	438	502	574	131	132
25	124	183	202	47	62	345	591	345	539	573	124	149
26	138	219	196	47	54	365	576	229	518	569	103	159
27	128	203	192	47	43	383	564	196	503	578	71	200
28	124	199	188	47	43	400	579	215	503	605	48	216
29	118	198	190	46	---	419	574	193	490	575	44	211
30	78	222	173	47	---	440	571	195	482	529	51	184
31	48	---	152	47	---	468	---	231	---	523	47	---
TOTAL	2240	2812	6528	3079	1680	6299	15806	13926	11078	17400	6114	1979.1
MEAN	72.3	93.7	211	99.3	60.0	203	527	449	369	561	197	66.0
MAX	138	222	274	157	175	468	599	563	539	657	519	216
MIN	11	49	140	46	43	44	427	193	149	277	44	5.2
CFSM	.46	.60	1.34	.63	.38	1.29	3.36	2.86	2.35	3.58	1.26	.42
IN.	.53	.67	1.55	.73	.40	1.49	3.75	3.30	2.62	4.12	1.45	.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	112	144	127	94.4	66.5	172	204	106	87.0
MAX	446	350	289	281	182	240	527	449	369
(WY)	1987	1986	1986	1986	1986	1990	1993	1993	1993
MIN	2.89	6.66	17.1	27.0	20.8	10.9	45.5	4.55	4.86
(WY)	1989	1989	1989	1991	1988	1988	1990	1989	1985

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1985 - 1993

ANNUAL TOTAL	34654.5	88941.1	
ANNUAL MEAN	94.7	244	116
HIGHEST ANNUAL MEAN			244
LOWEST ANNUAL MEAN			39.0
HIGHEST DAILY MEAN	372	657	657
LOWEST DAILY MEAN	4.0	5.2	.64
ANNUAL SEVEN-DAY MINIMUM	5.2	7.8	.77
INSTANTANEOUS PEAK FLOW		758	(a)758
INSTANTANEOUS PEAK STAGE		9.32	9.35
ANNUAL RUNOFF (CFSM)	.60	1.55	.74
ANNUAL RUNOFF (INCHES)	8.21	21.07	10.03
10 PERCENT EXCEEDS	237	552	304
50 PERCENT EXCEEDS	60	184	57
90 PERCENT EXCEEDS	7.4	45	6.2

(a) Gage height, 9.32 ft

ROCK RIVER BASIN

259

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 sea level. Prior to July 28, 1966, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Ice-affected period, Dec. 6 to Mar. 21. Records good except those for ice-affected period, which is 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	296	894	740	360	200	2900	3240	1030	1060	1770	412
2	218	300	904	700	360	200	2870	3100	1010	1020	1690	401
3	212	334	832	700	350	200	2890	3020	1010	1000	1600	400
4	196	421	818	760	350	210	2890	2960	985	939	1500	356
5	176	474	675	800	350	250	2850	2910	948	918	1400	346
6	158	493	600	800	370	300	2790	2820	890	1030	1320	320
7	145	484	600	780	380	350	2700	2730	959	1300	1240	287
8	136	452	580	700	390	450	2670	2600	1220	1630	1150	263
9	127	430	560	660	380	600	2680	2480	1280	2170	1070	223
10	131	409	560	600	360	800	2670	2400	1400	2560	1040	240
11	139	425	540	560	350	900	2690	2310	1460	2890	995	206
12	140	435	540	520	340	1000	2690	2190	1470	3100	934	180
13	135	401	560	480	320	1100	2640	2080	1430	3210	858	178
14	150	399	560	460	310	1100	2600	1910	1430	3270	782	370
15	164	387	620	440	300	1000	2750	1810	1420	3230	757	585
16	185	384	800	430	310	940	2930	1690	1370	3150	774	717
17	171	395	900	430	330	1000	3040	1570	1340	3040	782	791
18	198	365	1000	420	300	1000	3150	1490	1380	2940	777	825
19	190	348	1100	410	290	960	3310	1400	1380	2820	776	818
20	201	351	1000	400	240	900	3710	1320	1380	2710	761	799
21	225	478	1000	390	220	880	3880	1250	1410	2600	719	784
22	229	625	1000	400	210	921	4060	1170	1410	2460	651	749
23	245	763	920	450	220	1050	4130	1120	1380	2330	607	760
24	280	836	880	450	330	1230	4070	1090	1320	2210	592	719
25	263	923	860	460	250	1400	4090	1100	1310	2200	561	709
26	297	983	840	460	210	1650	3970	1090	1250	2170	526	738
27	297	978	820	440	190	1960	3780	1060	1210	2110	497	741
28	304	978	800	430	190	2240	3640	1080	1160	2060	466	737
29	324	959	800	400	---	2410	3530	1040	1100	2000	434	740
30	303	948	800	380	---	2500	3380	1020	1080	1910	410	677
31	293	---	760	370	---	2670	---	1070	---	1820	416	---
TOTAL	6470	16454	24123	16420	8560	32371	95950	58120	37422	67857	27855	16071
MEAN	209	548	778	530	306	1044	3198	1875	1247	2189	899	536
MAX	324	983	1100	800	390	2670	4130	3240	1470	3270	1770	825
MIN	127	296	540	370	190	200	2600	1020	890	918	410	178
CFSM	.27	.72	1.02	.70	.40	1.37	4.20	2.46	1.64	2.87	1.18	.70
IN.	.32	.80	1.18	.80	.42	1.58	4.68	2.84	1.83	3.31	1.36	.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1993, BY WATER YEAR (WY)

	MEAN	270	299	253	240	289	1038	993	486	314	265	178	247
MAX	2565	1958	1065	1278	1576	2473	3206	2337	1247	2189	899	1881	
(WY)	1987	1986	1983	1946	1938	1948	1959	1973	1993	1993	1993	1986	
MIN	16.8	25.9	18.0	15.2	16.2	56.2	193	73.8	34.4	17.9	18.0	8.11	
(WY)	1964	1950	1959	1940	1959	1940	1964	1958	1934	1965	1964	1958	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1931 - 1993
ANNUAL TOTAL	171067	407673	
ANNUAL MEAN	467	1117	407
HIGHEST ANNUAL MEAN			1117
LOWEST ANNUAL MEAN			61.8
HIGHEST DAILY MEAN	1520	Mar 10	6130
LOWEST DAILY MEAN	59	Jul 7	127
ANNUAL SEVEN-DAY MINIMUM	69	Aug 19	136
INSTANTANEOUS PEAK FLOW			4140
INSTANTANEOUS PEAK STAGE			9.36
ANNUAL RUNOFF (CFSM)	.61		1.47
ANNUAL RUNOFF (INCHES)	8.35		19.90
10 PERCENT EXCEEDS	1010	2770	1090
50 PERCENT EXCEEDS	339	800	180
90 PERCENT EXCEEDS	104	239	36

ROCK RIVER BASIN

05426031 ROCK RIVER AT JEFFERSON, WI

LOCATION.--Lat 42°59'46", long 88°48'26", in sec.2, T.6 N., R.14 E., Jefferson County, Hydrologic Unit 07090001, on right bank 30 ft downstream from bridge on State Highway 26, in Jefferson.

DRAINAGE AREA.--1,850 mi².

PERIOD OF RECORD.--April 1978 to current year (no winter record in water year 1993).

GAGE.--Water-stage recorder. Datum of gage 774.97 ft above sea level (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: June 10-25. Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	665	520	1720	---	---	---	5090	6890	2780	2560	3590	748
2	624	628	1670	---	---	---	5190	6630	2800	2510	3490	757
3	536	714	1640	---	---	---	5160	6490	2800	2460	3360	731
4	471	814	1590	---	---	---	5110	6410	2760	2400	3230	689
5	421	916	1560	---	---	---	5030	6360	2720	2380	3110	626
6	385	970	---	---	---	---	4980	6220	2650	2510	3010	578
7	359	964	---	---	---	---	4910	6010	2800	2680	2900	536
8	339	927	---	---	---	---	4960	5780	3790	2930	2770	496
9	334	890	---	---	---	---	5090	5280	4060	3410	2710	492
10	308	859	---	---	---	---	5120	5060	4200	4020	2700	447
11	283	855	---	---	---	---	5100	4840	4100	4430	2580	413
12	279	856	---	---	---	---	5140	4640	3800	4640	2460	410
13	281	902	---	---	---	---	5080	4390	3500	4730	2330	470
14	275	902	---	---	---	---	5020	4170	3600	4810	2250	842
15	286	883	---	---	---	---	5400	3940	3500	4810	2240	1310
16	315	878	---	---	---	---	6160	3730	3400	4770	2220	1700
17	325	872	---	---	---	---	6530	3570	3300	4710	2150	1880
18	325	846	---	---	---	---	6580	3460	3300	4660	2120	1950
19	337	823	---	---	---	---	6600	3330	3500	4590	2080	1950
20	363	864	---	---	---	---	7570	3230	3600	4480	2010	1880
21	383	1170	---	---	---	---	8340	3110	3500	4450	1880	1820
22	393	1480	---	---	---	2260	8590	3000	3300	4290	1760	1720
23	422	1730	---	---	---	2760	8500	2920	3300	4140	1720	1690
24	439	1770	---	---	---	3370	8310	2750	3300	4020	1700	1680
25	443	1810	---	---	---	3700	8160	2720	3200	4070	1650	1730
26	449	1880	---	---	---	3860	7960	2810	3010	4070	1530	2040
27	459	1910	---	---	---	3930	7730	2830	2880	4060	1060	2170
28	456	1890	---	---	---	4030	7530	2780	2780	3980	807	2210
29	464	1860	---	---	---	4140	7300	2720	2560	3890	755	2220
30	454	1790	---	---	---	4230	7050	2740	2550	3750	762	2140
31	458	---	---	---	---	4510	---	2830	---	3640	749	---
TOTAL	12331	34173	---	---	---	---	189290	131640	97340	118850	67683	38325
MEAN	398	1139	---	---	---	---	6310	4246	3245	3834	2183	1277
MAX	665	1910	---	---	---	---	8590	6890	4200	4810	3590	2220
MIN	275	520	---	---	---	---	4910	2720	2550	2380	749	410
CFSM	.22	.62	---	---	---	---	3.41	2.30	1.75	2.07	1.18	.69
IN.	.25	.69	---	---	---	---	3.81	2.65	1.96	2.39	1.36	.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1993, BY WATER YEAR (WY)

	MEAN	1249	1447	1258	733	925	2581	3097	1677	1047	986	683	1006
MAX	5569	3912	2384	1380	1738	4375	7584	4246	3245	3834	2183	3487	
(WY)	1987	1986	1986	1985	1984	1985	1979	1993	1993	1993	1993	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 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1978 - 1993
ANNUAL MEAN			1308
HIGHEST ANNUAL MEAN			2327
LOWEST ANNUAL MEAN			671
HIGHEST DAILY MEAN	3060	Mar 10	10200
LOWEST DAILY MEAN	183	Jul 1	42
ANNUAL SEVEN-DAY MINIMUM	194	Aug 18	60
INSTANTANEOUS PEAK FLOW			10300
INSTANTANEOUS PEAK STAGE			10.84
ANNUAL RUNOFF (CFSM)			.71
ANNUAL RUNOFF (INCHES)			9.61
10 PERCENT EXCEEDS	2670	5190	3020
50 PERCENT EXCEEDS	760	2710	926
90 PERCENT EXCEEDS	235	454	259

430400088254900 UPPER NEMAHBIN LAKE, CENTER, NEAR DELAFIELD, WI

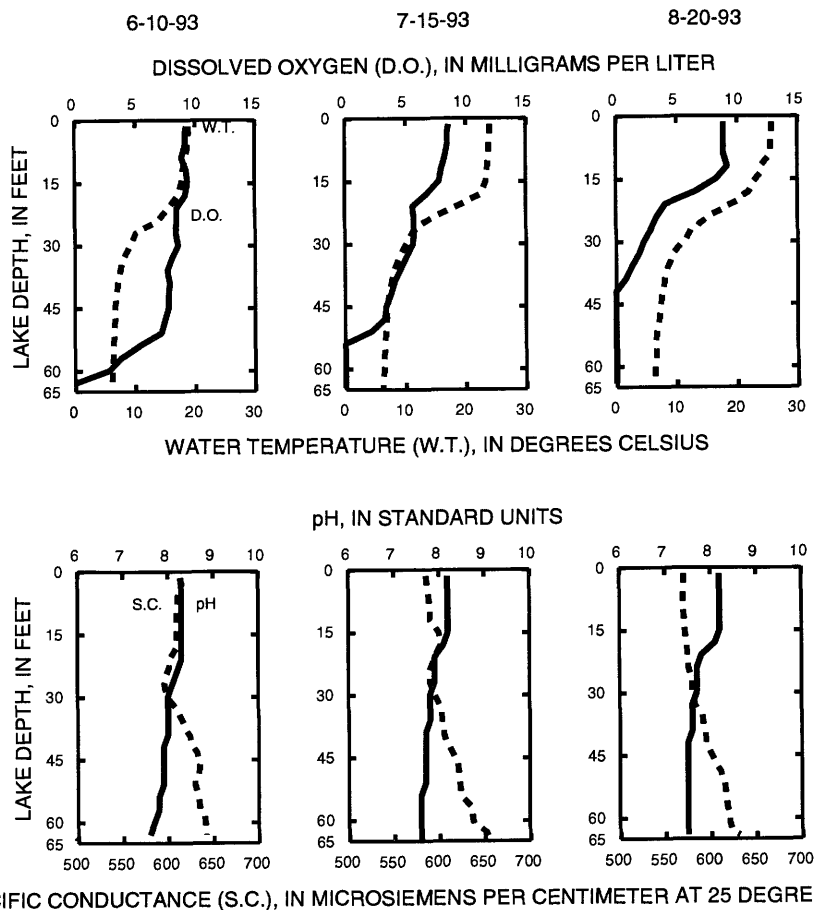
LOCATION.--Lat 43°04'00" long 88°25'49", in NW 1/4 SE 1/4 sec.13, T.7 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, 1.4 mi west of Delafield.

PERIOD OF RECORD.--June to August 1993.

REMARKS.--Lake sampled at deep hole near center of lake. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, JUNE 10 TO AUGUST 20, 1993
(Milligrams per liter unless otherwise indicated)

	June 10		July 15		Aug. 20	
Depth of sample (ft)	1.5	63	1.5	64	1.5	64
Lake stage (ft)		3.57		4.02		3.23
Specific conductance ($\mu\text{S}/\text{cm}$)	614	642	586	654	571	631
pH (units)	8.3	7.6	8.2	7.6	8.2	7.5
Water temperature ($^{\circ}\text{C}$)	19.0	6.0	24.0	6.0	25.5	6.5
Secchi-depth (meters)		2.8		1.9		1.8
Dissolved oxygen	9.3	0.0	8.6	0.0	8.9	0.0
Phosphorus, total (as P)	0.006	0.045	0.008	0.040	0.009	0.070
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	2.8	---	3.3	---	2.8	---



ROCK RIVER BASIN

430339088254800 UPPER NEMAHBIN LAKE, SOUTH SITE, NEAR DELAFIELD, WI

LOCATION.--Lat 43°03'39" long 88°25'48", in NW 1/4 NE 1/4 sec.24, T.7 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, 1.5 mi west of Delafield.

PERIOD OF RECORD.--June to August 1993.

REMARKS.--Lake sampled near Bark River Inlet at a depth of about 10 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, JUNE 10 TO AUGUST 20, 1993
(Milligrams per liter unless otherwise indicated)

	June 10	July 15	Aug. 20
Depth of sample (ft)	1.5	1.5	1.5
Lake stage (ft)	3.57	4.02	3.23
Specific conductance (μS/cm)	619	593	582
pH (units)	8.4	8.4	8.3
Water temperature (°C)	19.5	24.0	25.5
Secchi-depth (meters)	2.8	1.7	1.6
Dissolved oxygen	9.4	8.9	9.0
Phosphorus, total (as P)	0.008	0.011	0.008
Chlorophyll a, phytoplankton (μg/L)	2.6	4.3	2.8

430334088255400 UPPER NEMAHBIN LAKE, OUTLET, NEAR DELAFIELD, WI

LOCATION.--Lat 43°03'34" long 88°25'54", in NW 1/4 NE 1/4 sec.24, T.7 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, at bridge at outlet of Upper Nemahbin Lake, 1.6 mi west of Delafield.

PERIOD OF RECORD.--June to August 1993.

REMARKS.--Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, JUNE 10 TO AUGUST 20, 1993
(Milligrams per liter unless otherwise indicated)

	June 10	July 15	Aug. 20
Lake stage (ft)	3.57	4.02	3.23
Discharge (ft ³ /s)	100	120	52.4
Specific conductance (μS/cm)	632	587	593
pH (units)	8.3	8.3	8.2
Water temperature (°C)	20.5	25.0	25.5
Secchi-depth (meters)	---	---	---
Dissolved oxygen	10.4	9.3	9.7
Phosphorus, total (as P)	<0.020	<0.020	<0.020

425722088295000 PRETTY LAKE, AT DEEP HOLE, NEAR DOUSMAN, WI

LOCATION.--Lat 42°57'22" long 88°29'50", in NE 1/4 NW 1/4 sec.28, T.6 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, 4.1 mi south of Dousman.

PERIOD OF RECORD.--February to August 1993.

REMARKS.--Lake sampled at deep hole at northeast end of lake. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 04 TO AUGUST 24, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 19		June 23		July 21		Aug. 24	
Depth of sample (ft)	1.5	30	1.5	28	1.5	28	1.5	32	1.5	27
Lake stage (ft)	864.78		865.53		866.23		866.11		865.61	
Specific conductance (µS/cm)	379	425	361	360	330	382	320	418	317	442
pH (units)	8.3	7.6	8.4	8.4	8.6	7.4	8.7	7.4	8.6	7.2
Water temperature (°C)	4.5	5.5	8.0	7.5	25.5	14.0	25.0	14.0	26.5	15.0
Color (Pt-Co. scale)	---	---	<5	<5	---	---	---	---	---	---
Turbidity (NTU)	---	---	<0.50	<0.50	---	---	---	---	---	---
Secchi-depth (meters)	---	---	6.3	---	3.1	---	3.2	---	2.2	---
Dissolved oxygen	12.2	1.4	11.9	11.4	10.0	0.0	9.7	0.0	9.0	0.0
Hardness, as CaCO ₃	---	---	170	170	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	28	28	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	25	25	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	8.2	8.2	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	1	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	160	160	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	17	17	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	15	14	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	0.6	0.6	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	196	198	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.07	0.07	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.07	0.07	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.12	0.12	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.38	0.38	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.50	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.57	0.57	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.007	0.012	0.009	0.046	0.013	0.050	0.010	0.037
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)	---	---	1.3	---	3.4	---	3.3	---	3.1	---

2-4-93

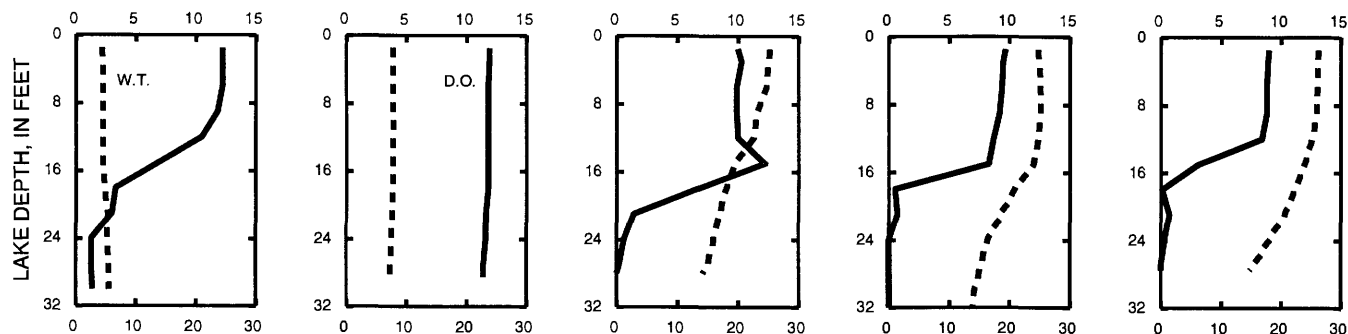
4-19-93

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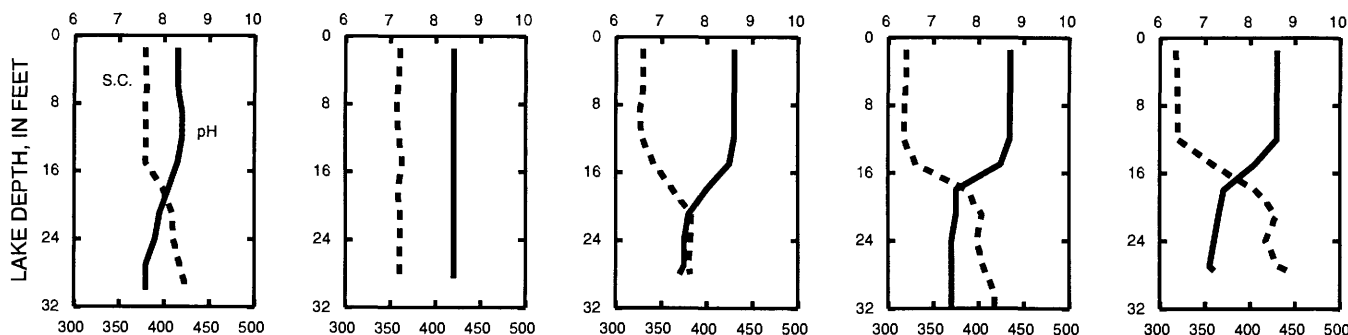
8-24-93

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

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 above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Apr. 24 to May 25, and ice-affected periods, Dec. 5, 20, 21, 24-27, Jan. 1, 2, 18, 27-30, Feb. 13-19, 24-28, and Mar. 12-18. Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	65	113	86	85	68	330	300	136	174	122	109
2	71	86	110	92	85	68	302	290	136	163	123	113
3	70	79	106	99	81	73	292	280	147	148	132	119
4	67	82	102	137	80	96	294	270	147	142	133	110
5	53	83	92	133	80	102	288	280	147	134	140	103
6	27	86	85	128	80	106	268	260	138	144	138	97
7	32	87	87	115	78	113	265	240	158	142	129	92
8	39	87	87	102	78	115	278	230	232	139	114	89
9	40	104	81	102	76	119	279	220	245	146	114	88
10	41	133	82	96	76	122	273	210	229	154	115	82
11	44	115	81	97	76	117	290	200	231	191	94	78
12	53	121	79	102	74	100	283	190	230	185	90	79
13	68	115	80	101	70	92	273	180	224	184	84	83
14	66	116	78	98	68	86	270	170	229	205	127	114
15	68	113	91	95	68	82	321	160	215	215	132	115
16	67	114	135	89	64	100	359	150	206	217	125	117
17	64	116	136	87	64	110	349	140	203	218	118	108
18	68	106	136	84	64	110	339	140	228	212	107	107
19	66	104	135	84	60	115	350	130	227	261	104	103
20	66	116	110	83	61	110	459	120	214	252	105	117
21	66	125	110	95	61	106	426	110	200	219	105	137
22	63	128	106	102	63	105	418	110	190	204	105	135
23	63	134	101	107	66	162	426	130	183	200	105	141
24	61	132	80	111	60	197	420	140	176	190	105	137
25	58	132	80	104	58	211	370	140	173	177	104	119
26	41	133	80	97	58	217	340	133	166	154	109	148
27	11	128	84	94	62	223	320	131	158	154	109	154
28	34	125	88	90	64	225	300	131	151	148	89	195
29	65	119	96	86	---	232	310	128	149	131	85	182
30	60	113	107	84	---	234	320	135	165	139	88	174
31	54	---	112	84	---	307	---	145	---	125	105	---
TOTAL	1723	3297	3050	3064	1960	4223	9812	5593	5633	5467	3455	3545
MEAN	55.6	110	98.4	98.8	70.0	136	327	180	188	176	111	118
MAX	77	134	136	137	85	307	459	300	245	261	140	195
MIN	11	65	78	83	58	68	265	110	136	125	84	78
CFSM	.46	.90	.81	.81	.57	1.12	2.68	1.48	1.54	1.45	.91	.97
IN.	.53	1.01	.93	.93	.60	1.29	2.99	1.71	1.72	1.67	1.05	1.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1993, BY WATER YEAR (WY)

	MEAN	75.7	103	89.2	71.7	79.6	134	159	101	65.9	60.6	58.0	76.8
MAX	214	214	138	105	118	248	327	180	188	176	111	212	
(WY)	1987	1986	1986	1985	1985	1986	1993	1993	1993	1993	1993	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1980 - 1993

ANNUAL TOTAL	30466	50822	
ANNUAL MEAN	83.2	139	90.5
HIGHEST ANNUAL MEAN			139
LOWEST ANNUAL MEAN			52.9
HIGHEST DAILY MEAN	219	459	459
LOWEST DAILY MEAN	11	11	3.6
ANNUAL SEVEN-DAY MINIMUM	19	39	3.8
INSTANTANEOUS PEAK FLOW		476	476
INSTANTANEOUS PEAK STAGE		2.56	2.56
ANNUAL RUNOFF (CFSM)	.68	1.14	.74
ANNUAL RUNOFF (INCHES)	9.29	15.50	10.08
10 PERCENT EXCEEDS	135	263	164
50 PERCENT EXCEEDS	80	115	77
90 PERCENT EXCEEDS	32	66	30

ROCK RIVER BASIN

265

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 sea level (Wisconsin Railroad Commission bench mark).

REMARKS.--No estimated daily gage heights. Records good except Nov. 11-23, Feb. 26 to May 21, May 26 to June 15, and June 23 to July 16, 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, 11.11 ft, July 9, 1993; minimum daily gage height, 8.89 ft, Oct. 2, 3, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 11.11 ft, July 9; minimum daily gage height, 9.06 ft, Oct. 30, 31.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.15	9.11	9.39	9.57	9.71	9.88	10.57	10.96	10.56	10.98	10.87	10.86
2	9.15	9.20	9.38	9.57	9.70	9.89	10.57	10.95	10.56	10.98	10.85	10.85
3	9.14	9.20	9.38	9.59	9.70	9.90	10.57	10.95	10.60	10.98	10.84	10.83
4	9.12	9.20	9.38	9.65	9.69	9.91	10.56	10.96	10.61	10.99	10.81	10.83
5	9.11	9.20	9.37	9.65	9.69	9.92	10.55	10.93	10.63	11.00	10.80	10.81
6	9.10	9.19	9.37	9.65	9.68	9.93	10.55	10.92	10.64	11.03	10.79	10.79
7	9.10	9.18	9.38	9.65	9.67	9.95	10.55	10.91	10.68	11.02	10.77	10.78
8	9.09	9.19	9.38	9.65	9.67	9.96	10.57	10.90	10.75	11.03	10.77	10.78
9	9.11	9.21	9.38	9.65	9.67	9.96	10.58	10.86	10.76	11.06	10.77	10.77
10	9.10	9.21	9.42	9.66	9.67	10.00	10.58	10.83	10.77	11.05	10.77	10.74
11	9.09	9.21	9.42	9.66	9.67	10.01	10.59	10.82	10.78	11.00	10.78	10.73
12	9.08	9.25	9.41	9.67	9.68	10.02	10.58	10.81	10.79	10.96	10.77	10.74
13	9.07	9.26	9.41	9.72	9.68	10.03	10.57	10.78	10.80	10.98	10.77	10.78
14	9.07	9.25	9.41	9.72	9.67	10.04	10.57	10.75	10.82	10.98	10.76	10.86
15	9.08	9.25	9.46	9.72	9.67	10.05	10.64	10.72	10.82	10.96	10.79	10.86
16	9.11	9.25	9.52	9.71	9.67	10.07	10.70	10.68	10.82	10.94	10.81	10.86
17	9.11	9.25	9.52	9.71	9.67	10.08	10.70	10.62	10.82	10.93	10.80	10.86
18	9.09	9.24	9.51	9.71	9.68	10.09	10.70	10.60	10.88	10.95	10.79	10.86
19	9.09	9.26	9.51	9.71	9.69	10.10	10.76	10.58	10.91	10.95	10.78	10.85
20	9.11	9.32	9.50	9.71	9.70	10.11	10.94	10.55	10.96	10.93	10.77	10.86
21	9.10	9.35	9.50	9.74	9.75	10.12	10.95	10.48	10.95	10.91	10.76	10.86
22	9.09	9.35	9.49	9.76	9.79	10.17	10.95	10.47	10.95	10.90	10.75	10.87
23	9.10	9.36	9.49	9.75	9.82	10.30	10.95	10.49	10.94	10.89	10.73	10.86
24	9.10	9.34	9.50	9.75	9.83	10.34	10.98	10.51	10.94	10.88	10.73	10.86
25	9.10	9.35	9.49	9.75	9.84	10.35	10.96	10.51	10.94	10.93	10.72	10.88
26	9.09	9.39	9.49	9.74	9.85	10.37	10.95	10.52	10.94	10.92	10.71	10.97
27	9.09	9.39	9.49	9.73	9.86	10.38	10.95	10.53	10.93	10.91	10.69	10.97
28	9.08	9.39	9.49	9.73	9.87	10.39	10.95	10.52	10.94	10.90	10.69	10.96
29	9.07	9.38	9.52	9.72	---	10.40	10.96	10.52	10.93	10.88	10.77	10.96
30	9.06	9.38	9.56	9.71	---	10.41	10.97	10.54	10.97	10.86	10.83	10.96
31	9.06	---	9.58	9.71	---	10.48	---	10.56	---	10.86	10.87	---
MAX	9.15	9.39	9.58	9.76	9.87	10.48	10.98	10.96	10.97	11.06	10.87	10.97
MIN	9.06	9.11	9.37	9.57	9.67	9.88	10.55	10.47	10.56	10.86	10.69	10.73

ROCK RIVER BASIN

05427235 LAKE KOSHKONONG NEAR NEWVILLE, WI

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 Pottawatom Trail Bridge at Bingham Point Estates, and 4.5 mi northeast of Newville.

DRAINAGE AREA.--2,560 mi², at lake outlet. Area of Lake Koshkonong, 16.3 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 770.00 ft above sea level.

REMARKS.--No estimated daily gage heights. Records good. Lake level regulated by dam at Indianford. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 12.23 ft, Apr. 25, 1993; minimum, 5.40 ft, Dec. 26, 27, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 12.23 ft, Apr. 25; minimum, 5.83 ft, Nov. 1.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.35	5.88	7.54	7.36	6.64	6.04	9.85	11.82	8.35	8.57	9.21	6.82
2	6.30	5.98	7.56	7.33	6.60	6.03	10.02	11.72	8.32	8.49	9.14	6.76
3	6.25	6.07	7.51	7.30	6.57	6.02	10.14	11.62	8.34	8.41	9.05	6.71
4	6.16	6.18	7.47	7.35	6.55	6.03	10.22	11.55	8.32	8.31	8.97	6.64
5	6.09	6.27	7.40	7.42	6.53	6.11	10.27	11.46	8.30	8.24	8.86	6.59
6	6.06	6.34	7.31	7.47	6.52	6.26	10.29	11.36	8.26	8.26	8.79	6.52
7	6.03	6.40	7.24	7.52	6.52	6.47	10.29	11.27	8.30	8.23	8.69	6.46
8	6.02	6.44	7.17	7.52	6.52	6.71	10.30	11.14	8.53	8.24	8.58	6.38
9	6.05	6.50	7.10	7.48	6.52	6.95	10.33	11.04	8.79	8.33	8.49	6.32
10	6.05	6.53	7.05	7.42	6.52	7.15	10.33	10.91	9.01	8.43	8.44	6.29
11	6.04	6.54	6.99	7.34	6.51	7.31	10.35	10.77	9.16	8.69	8.36	6.23
12	6.04	6.62	6.93	7.26	6.49	7.41	10.34	10.62	9.26	8.89	8.27	6.23
13	6.01	6.64	6.89	7.21	6.48	7.47	10.32	10.44	9.29	9.06	8.18	6.28
14	6.00	6.64	6.86	7.13	6.47	7.48	10.30	10.26	9.33	9.24	8.07	6.55
15	6.01	6.64	6.91	7.06	6.45	7.48	10.39	10.12	9.29	9.35	8.03	6.69
16	6.08	6.64	7.10	7.00	6.43	7.50	10.53	9.93	9.21	9.44	8.00	6.81
17	6.05	6.65	7.29	6.93	6.39	7.54	10.70	9.76	9.19	9.50	7.91	6.97
18	6.08	6.63	7.48	6.86	6.36	7.60	10.87	9.63	9.23	9.57	7.85	7.10
19	6.07	6.61	7.63	6.78	6.33	7.67	11.08	9.48	9.23	9.61	7.81	7.20
20	6.11	6.65	7.69	6.71	6.29	7.71	11.30	9.34	9.29	9.60	7.75	7.29
21	6.13	6.78	7.68	6.67	6.29	7.74	11.57	9.21	9.31	9.59	7.69	7.35
22	6.14	6.85	7.69	6.64	6.26	7.77	11.84	9.07	9.29	9.55	7.59	7.37
23	6.13	6.97	7.69	6.64	6.22	7.90	12.03	8.98	9.24	9.50	7.54	7.37
24	6.11	7.09	7.62	6.67	6.17	8.18	12.13	8.91	9.17	9.46	7.48	7.32
25	6.08	7.21	7.54	6.71	6.13	8.51	12.19	8.79	9.15	9.47	7.41	7.33
26	6.07	7.36	7.47	6.76	6.09	8.82	12.17	8.67	9.06	9.45	7.34	7.47
27	6.03	7.42	7.41	6.78	6.06	9.03	12.12	8.57	8.97	9.42	7.24	7.53
28	6.01	7.48	7.36	6.78	6.05	9.20	12.09	8.53	8.88	9.41	7.10	7.58
29	5.97	7.53	7.36	6.75	---	9.33	12.03	8.43	8.75	9.37	6.98	7.64
30	5.91	7.56	7.37	6.72	---	9.43	11.94	8.41	8.66	9.31	6.93	7.62
31	5.89	---	7.37	6.69	---	9.59	---	8.42	---	9.25	6.92	---
MEAN	6.07	6.70	7.34	7.04	6.39	7.56	10.94	10.01	8.92	9.04	8.02	6.91
MAX	6.35	7.56	7.69	7.52	6.64	9.59	12.19	11.82	9.33	9.61	9.21	7.64
MIN	5.89	5.88	6.86	6.64	6.05	6.02	9.85	8.41	8.26	8.23	6.92	6.23

ROCK RIVER BASIN

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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 sea level (Rock County Surveyor bench mark). 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	1170	2610	2400	1520	928	6010	9210	3650	3940	4750	2020
2	1380	873	2670	2360	1440	947	6030	8910	3690	3760	4660	1930
3	1410	904	2570	2290	1430	988	6220	8740	3750	3700	4570	1890
4	1410	1050	2550	2380	1400	1020	6340	8590	3760	3500	4510	1740
5	1010	1220	2310	2440	1390	1050	6390	8370	3610	3430	4320	1760
6	776	1320	2330	2500	1410	1170	6420	8180	3540	3450	4250	1710
7	752	1380	2300	2560	1350	1370	6420	8000	3700	3470	4170	1570
8	735	1400	2240	2570	1420	1650	6390	7770	4020	3550	4030	1390
9	619	1420	2160	2560	1390	1950	6320	7560	4130	3590	3910	993
10	673	1440	2100	2460	1440	2190	6430	7360	4580	3810	3860	939
11	687	1520	2030	2340	1500	2370	6490	7140	4830	4070	3760	931
12	654	1530	1960	2270	1410	2470	6410	6890	4950	4330	3670	855
13	665	1440	1920	2200	1350	2580	6390	6560	4930	4610	3540	883
14	708	1580	1870	2050	1320	2530	6380	6060	4890	4850	3420	1210
15	731	1610	1930	1970	1350	2540	6690	5930	4910	5010	3360	1740
16	639	1630	2110	1870	1330	2520	6690	5710	4820	5120	3330	1960
17	636	1670	2390	1820	1240	2630	6890	5510	4720	5200	3260	2010
18	681	1650	2610	1730	1180	2720	7110	5350	4830	5260	3170	2190
19	662	1700	2770	1650	1180	2800	7670	5110	4850	5260	3100	2380
20	664	1680	2850	1580	1200	2850	8300	4910	4860	5290	3070	2420
21	711	1710	2810	1520	1240	2870	8600	4750	4930	5270	3010	2470
22	931	2070	2840	1470	1150	2970	9110	4520	4940	5260	2850	2620
23	1040	2070	2840	1460	1090	3200	9600	4380	4820	5200	2750	2560
24	1090	2180	2700	1500	1050	3520	9570	4080	4680	5130	2680	2400
25	1020	2430	2530	1570	1050	4000	10000	4140	4590	5120	2670	2510
26	1030	2440	2540	1540	1020	4430	10000	4000	4440	5030	2590	2580
27	969	2550	2440	1630	974	4710	9810	3880	4360	5070	2470	2620
28	922	2610	2410	1610	938	4940	9640	3870	4330	4960	2390	2700
29	989	2610	2410	1560	---	5120	9590	3790	4160	4980	2240	2760
30	938	2670	2410	1420	---	5280	9370	3770	4200	4950	2190	2710
31	918	---	2380	1470	---	5630	---	3820	---	4850	2130	---
TOTAL	27510	51527	74590	60750	35762	85943	227280	186860	132470	141020	104680	58451
MEAN	887	1718	2406	1960	1277	2772	7576	6028	4416	4549	3377	1948
MAX	1460	2670	2850	2570	1520	5630	10000	9210	4950	5290	4750	2760
MIN	619	873	1870	1420	938	928	6010	3770	3540	3430	2130	855
CFSM	.34	.65	.91	.75	.49	1.05	2.88	2.29	1.68	1.73	1.28	.74
IN.	.39	.73	1.06	.86	.51	1.22	3.21	2.64	1.87	1.99	1.48	.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1993, BY WATER YEAR (WY)

	MEAN	1530	1808	1788	1200	1261	3015	4068	2427	1435	1277	954	1209
MAX	7729	5047	3745	2622	2403	6113	9466	6028	4416	4549	3377	3911	
(WY)	1987	1986	1986	1985	1988	1985	1979	1993	1993	1993	1993	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 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1975 - 1993
ANNUAL TOTAL	592015	1186843	
ANNUAL MEAN	1618	3252	1833
HIGHEST ANNUAL MEAN			3252
LOWEST ANNUAL MEAN			509
HIGHEST DAILY MEAN	3730	Mar 18	11700
LOWEST DAILY MEAN	139	Aug 1	39
ANNUAL SEVEN-DAY MINIMUM	205	Aug 18	85
INSTANTANEOUS PEAK FLOW			11900
INSTANTANEOUS PEAK STAGE			(a)16.23
ANNUAL RUNOFF (CFSM)	.62		.70
ANNUAL RUNOFF (INCHES)	8.37		9.47
10 PERCENT EXCEEDS	3270	6390	3900
50 PERCENT EXCEEDS	1450	2570	1300
90 PERCENT EXCEEDS	335	1020	332

(a) Datum then in use

ROCK RIVER BASIN

05427718 YAHARA RIVER AT WINDSOR, WI

LOCATION.--Lat 43°12'32", long 89°21'09", in NW 1/4 NE 1/4 sec.31, T.9 N., R.10 E., Dane County, Hydrologic Unit 07090001, at bridge on road to Lake Windsor Country Club.

DRAINAGE AREA.--73.6 mi².

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 sea level, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 6, 7, 23-25, 31, Jan. 1, 16-19, 26, 29, 30, and Feb. 15-18, 21-28. Records good except those for ice-affected periods and flows over 800 ft³/s, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	16	19	23	16	15	69	28	29	28	33	32
2	14	26	19	19	15	15	44	34	27	26	30	30
3	14	22	18	20	15	16	41	36	30	28	28	30
4	13	19	18	48	19	18	40	38	27	37	27	29
5	13	17	17	25	25	25	40	33	29	252	27	28
6	13	16	16	19	25	43	36	29	26	519	32	28
7	12	15	16	18	19	107	36	28	125	252	30	27
8	13	15	16	17	16	196	59	40	80	112	28	27
9	13	15	16	16	16	126	48	33	43	330	49	28
10	12	15	17	15	16	65	37	30	34	161	44	27
11	12	15	16	15	15	40	38	31	30	192	33	26
12	12	16	16	15	16	30	36	29	28	96	30	28
13	12	17	16	16	15	25	30	26	26	63	29	35
14	12	16	16	15	15	22	29	25	74	57	28	157
15	12	15	34	14	15	23	109	25	38	48	177	81
16	16	16	64	14	15	89	93	24	31	42	99	50
17	14	15	40	14	14	83	51	24	38	50	52	42
18	13	14	30	14	14	41	42	26	77	59	41	37
19	12	14	26	14	14	26	56	25	44	42	38	35
20	14	39	23	15	14	20	119	26	41	35	35	40
21	14	86	21	20	14	20	76	25	34	30	32	39
22	14	46	20	23	14	25	47	25	30	28	31	38
23	14	47	19	22	14	56	39	34	27	27	33	33
24	14	34	18	21	13	167	35	38	27	27	33	30
25	14	29	18	18	13	284	31	30	40	56	30	32
26	13	28	18	17	13	308	29	27	27	38	28	43
27	13	24	18	16	13	196	29	26	24	33	29	34
28	13	22	17	15	14	159	35	26	23	150	29	32
29	13	21	23	15	---	137	31	25	22	64	30	33
30	13	20	30	15	---	76	29	36	37	39	47	31
31	12	---	27	15	---	116	---	39	---	34	37	---
TOTAL	408	710	682	563	437	2569	1434	921	1168	2955	1249	1162
MEAN	13.2	23.7	22.0	18.2	15.6	82.9	47.8	29.7	38.9	95.3	40.3	38.7
MAX	16	86	64	48	25	308	119	40	125	519	177	157
MIN	12	14	16	14	13	15	29	24	22	26	27	26
CFSM	.18	.32	.30	.25	.21	1.13	.65	.40	.53	1.30	.55	.53
IN.	.21	.36	.34	.28	.22	1.30	.72	.47	.59	1.49	.63	.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1993, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	13.7	14.9	13.0	12.8	17.5	45.4	23.0	16.1	18.3	23.0	17.2	19.1						
MAX	23.1	23.7	22.0	23.4	38.2	135	47.8	29.7	38.9	95.3	40.3	50.1						
(WY)	1982	1993	1993	1980	1981	1976	1993	1993	1993	1993	1993	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1976 - 1993

ANNUAL TOTAL	6311.8	14258	
ANNUAL MEAN	17.2	39.1	
HIGHEST ANNUAL MEAN			18.7
LOWEST ANNUAL MEAN			39.1
HIGHEST DAILY MEAN	90	Feb 28	519
LOWEST DAILY MEAN	8.2	Sep 1	12
ANNUAL SEVEN-DAY MINIMUM	9.1	Jun 8	12
INSTANTANEOUS PEAK FLOW			2050
INSTANTANEOUS PEAK STAGE			6.58
INSTANTANEOUS LOW FLOW			(b)5.3
ANNUAL RUNOFF (CFSM)	.23		.53
ANNUAL RUNOFF (INCHES)	3.19		7.21
10 PERCENT EXCEEDS	26		67
50 PERCENT EXCEEDS	14		27
90 PERCENT EXCEEDS	9.9		14

(a) Also occurred Oct. 10-15, 19, 31

(b) Result of freezeup

05427718 YAHARA RIVER AT WINDSOR, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to September 1980, October 1989 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: March 1990 to current year.

TOTAL-PHOSPHORUS DISCHARGE: March 1990 to current year.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: October 1990 to September 1992.

INSTRUMENTATION.--Water-quality sampler since March 1990.

REMARKS.--Records good. Samples are point samples unless otherwise indicated.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 7,070 mg/L, June 29, 1990; minimum observed, 8 mg/L, Dec. 4, 1990.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,280 tons, July 5, 1993; minimum daily, 0.16 ton, Jan. 6-7, 1991.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 5.10 mg/L, June 7, 1993; minimum observed, 0.01 mg/L, Jan. 31, 1991.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 2,550 lb, July 9, 1993; 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, 4,800 mg/L, July 9; minimum observed, 7 mg/L, Oct. 7.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,280 tons, July 5; minimum daily, 0.22 ton, Oct. 13, 14.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 5.10 mg/L, June 7; minimum observed, 0.02 mg/L, Jan. 20.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 2,550 lb, July 9; minimum daily, 1.64 lb, Jan. 20.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
OCT 1992					
*07...	1530	12	0.080	0.030	7
16...	0100	20	0.220	0.110	64
31...	1545	23	--	--	4070
NOV					
01...	1730	19	0.140	0.050	53
02...	0100	31	0.160	0.060	53
02...	1900	25	0.310	0.160	63
03...	1900	20	--	--	30
*04...	1500	18	0.080	0.060	13
16...	1645	23	0.200	0.050	109
20...	0630	20	0.140	0.040	50
20...	1015	26	--	--	42
20...	1300	38	0.300	0.130	--
20...	1415	44	--	--	104
20...	1915	55	0.520	0.280	--
20...	2115	68	--	--	148
20...	2200	76	0.750	0.440	--
20...	2245	82	--	--	229
20...	2330	91	0.600	0.360	--
21...	0030	100	--	--	257
21...	0145	109	0.740	0.430	247
21...	0745	109	0.800	0.490	167
*21...	0831	105	0.760	0.490	159
21...	0832	105	0.780	0.520	155
21...	1200	86	0.720	0.510	128
*21...	1513	74	0.670	0.460	103
21...	1514	74	0.550	0.450	98
21...	2345	54	0.500	0.360	61
22...	1745	42	0.270	0.180	44
22...	2145	54	0.260	0.210	62
23...	0345	55	--	--	65
23...	1530	43	0.340	0.240	--
23...	2130	39	--	--	37
*24...	1620	32	--	--	26
25...	0930	29	0.090	0.050	--
25...	1530	28	--	--	20
27...	0330	25	0.090	0.060	--
27...	0930	24	--	--	22
29...	0330	22	--	--	19
29...	0930	21	0.110	0.080	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05427718 YAHARA RIVER AT WINDSOR, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
DEC 1992					
04...	1405	18	0.080	0.040	22
15...	1600	36	0.120	--	25
15...	2000	56	0.200	--	--
15...	2100	63	--	--	93
15...	2315	76	0.330	--	109
16...	0945	68	0.390	--	--
16...	2145	51	--	--	36
17...	2145	35	0.180	--	26
JAN 1993					
04...	0415	43	0.580	--	56
04...	0530	49	0.670	--	65
04...	0815	61	0.820	--	84
04...	1415	57	--	--	45
04...	2045	41	0.630	--	44
*20...	1203	15	0.020	--	39

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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 1993					
05...	0800	26	0.600	--	64
05...	1315	29	--	--	65
06...	0115	29	0.410	--	--
06...	0715	34	--	--	70
06...	1315	32	0.460	--	58
06...	1745	60	0.880	--	--
06...	1815	67	--	--	465
07...	0100	78	1.20	--	269
07...	1115	68	1.40	--	157
07...	1600	93	1.20	0.850	--
07...	1630	105	--	--	481
07...	1800	147	1.20	0.770	702
07...	1915	178	2.40	--	677
*08...	0823	167	2.20	--	--
08...	0824	167	2.20	--	--
08...	1100	159	1.60	--	175
08...	1515	193	--	--	273
08...	1700	238	1.90	0.990	340
09...	0400	162	1.80	--	142
09...	1100	96	--	--	108
09...	1730	119	--	--	174
10...	0430	84	1.50	--	109
11...	0745	41	0.750	--	103
12...	1337	30	0.570	--	47
15...	1015	29	0.190	--	30
16...	1345	75	0.840	--	399
16...	1500	131	0.900	--	327
16...	1815	227	0.810	0.540	204
17...	1440	78	1.10	--	150
18...	0245	45	0.590	--	29
19...	0430	30	0.530	--	28
23...	1545	72	0.510	--	91
23...	1945	94	0.780	--	112
24...	1230	92	1.00	--	75
24...	1400	142	1.30	--	221
24...	1445	180	1.60	--	350
24...	1545	231	1.80	--	485
24...	1730	293	1.70	--	499
24...	2330	297	1.50	--	456
25...	0930	230	1.60	--	251
25...	1530	288	1.20	--	157
25...	1900	356	1.30	--	269
*26...	0959	290	1.20	--	147
26...	1000	290	1.40	--	169
26...	1600	318	1.30	--	197
27...	1745	168	0.810	--	129
28...	0830	109	0.760	--	97
28...	1630	219	1.10	--	271
29...	0700	142	0.590	--	92
30...	0145	104	0.530	--	95
31...	0215	61	0.270	--	116
31...	0800	81	0.790	--	156
31...	1015	115	0.850	--	317
*31...	1117	130	0.320	--	186
31...	1118	130	0.420	--	249
31...	1815	166	0.520	--	215

* 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 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)
APR 1993					
01...	0430	91	0.580	--	148
02...	1200	42	0.430	--	52
03...	1200	37	0.320	--	49
03...	2345	45	0.330	--	62
04...	1245	36	--	--	46
05...	0045	44	0.290	--	47
07...	1245	36	0.210	--	22
08...	0715	59	0.380	--	100
08...	1130	66	--	--	126
08...	1730	68	0.400	--	129
09...	1645	44	0.220	--	41
11...	1400	41	--	--	31
*13...	1520	29	0.110	--	82
14...	1430	39	1.30	--	2140
15...	0330	33	0.220	--	68
15...	0645	53	0.400	--	235
15...	0845	88	0.590	--	491
15...	0945	115	--	--	456
15...	1045	139	0.730	0.250	469
15...	1645	148	0.970	--	344
15...	2245	157	0.790	0.340	262
16...	0845	97	0.910	--	120
17...	1500	48	0.220	--	33
19...	0300	38	0.180	--	34
19...	0645	50	0.240	--	86
19...	1315	39	0.170	--	36
19...	1600	58	0.560	--	484
19...	1830	85	0.750	--	346
20...	0145	90	0.600	--	215
20...	0800	117	0.280	0.280	269
20...	1515	154	0.610	--	210
21...	0130	109	0.470	--	154
21...	1230	68	0.340	--	63
23...	0500	40	0.180	--	30
25...	1700	31	0.120	--	22
27...	2215	30	--	--	26
28...	0415	36	0.110	--	26
29...	2215	30	--	--	87
MAY					
02...	0345	32	0.110	--	94
03...	1630	45	0.290	--	213
03...	2315	39	--	--	131
06...	0515	30	0.140	--	29
08...	0800	35	--	--	59
08...	0915	42	--	--	59
08...	1000	57	0.180	--	451
09...	0730	35	0.210	--	46
23...	0345	33	0.190	--	47
23...	2030	39	--	--	52
24...	0230	43	0.150	--	63
25...	1405	29	0.060	--	25
30...	1030	32	0.100	--	77
30...	2345	48	0.220	--	62
31...	2345	32	0.180	--	46
JUN					
*04...	1340	26	0.120	--	65
07...	1145	43	0.110	--	85
07...	1215	83	0.460	--	297
07...	1300	130	1.70	--	1310
07...	1330	213	2.50	0.190	2140
07...	1430	314	5.10	0.210	4550
07...	1815	269	1.20	0.250	731
07...	2000	200	0.890	--	360
07...	2345	133	0.790	--	274
08...	0955	82	0.510	--	131
*08...	1000	82	0.460	--	122
09...	1000	45	0.260	--	76
10...	1000	35	0.180	--	45
14...	0100	31	0.400	--	65
14...	0300	56	0.460	--	278
14...	0345	70	0.750	--	791
14...	0513	113	--	--	834
14...	0515	114	1.40	--	--
14...	0915	99	0.740	--	310
14...	1415	78	0.590	--	230
15...	0345	44	0.320	--	74
16...	0945	31	0.170	--	51
17...	1515	36	0.180	--	72

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05427718 YAHARA RIVER AT WINDSOR, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)
JUN 1993					
17...	2030	43	0.330	--	140
17...	2215	67	0.670	--	465
17...	2345	94	0.500	--	862
18...	0100	119	0.960	--	788
18...	0600	91	0.660	--	237
18...	0926	79	--	--	221
*18...	0938	77	--	--	157
19...	0215	48	0.330	--	87
21...	0215	37	0.230	--	73
24...	1945	31	0.220	--	79
24...	2400	37	0.230	--	106
25...	0100	45	--	--	284
25...	0145	52	0.560	--	376
25...	0700	43	0.330	--	126
25...	1900	33	0.320	--	85
30...	0400	30	0.120	--	80
30...	0700	52	0.160	--	350
JUL					
01...	0200	31	0.110	--	80
03...	2045	32	0.120	--	150
03...	2245	45	0.160	--	194
05...	0445	31	0.130	--	80
05...	1115	50	0.160	--	105
05...	1400	80	0.280	--	173
05...	1500	162	0.440	--	1400
05...	1600	286	0.860	--	3240
05...	1730	375	1.00	0.320	2100
*05...	2333	1640	1.40	0.390	2000
06...	0300	781	0.660	0.310	1150
*06...	0305	777	0.750	--	921
06...	0442	591	0.620	--	659
*06...	0448	585	--	--	623
*06...	0449	585	0.810	--	--
06...	0915	400	0.690	--	588
06...	1345	345	--	--	549
06...	1808	323	0.700	0.360	465
*06...	1809	323	0.730	--	479
07...	0145	299	0.760	--	344
07...	1345	256	0.590	--	230
08...	0715	123	0.430	--	200
09...	0015	85	0.620	--	205
09...	0200	182	1.80	--	1590
09...	0315	383	1.80	--	4800
09...	0430	476	1.40	--	3050
09...	1230	359	1.50	--	681
10...	0030	213	1.20	--	378
10...	1730	102	0.640	--	210
10...	2030	155	--	--	1230
10...	2330	234	1.50	--	1100
12...	0100	137	0.770	--	262
12...	2030	74	0.510	--	192
13...	2030	61	0.420	--	178
15...	1430	47	0.350	--	93
17...	0830	38	0.250	--	76
17...	1430	43	0.280	--	80
17...	1630	57	0.310	--	106
17...	1745	71	0.440	--	168
18...	1230	58	0.410	--	96
19...	1230	42	0.270	--	78
21...	1230	30	0.210	--	68
23...	0630	27	0.080	--	73
25...	0430	33	0.350	--	119
25...	0615	51	0.440	--	183
25...	0845	77	0.680	--	287
25...	1445	67	0.500	--	147
26...	1330	37	0.290	--	84
27...	0836	30	0.240	--	81
27...	2230	37	0.320	--	222
27...	2330	81	0.510	--	382
28...	0015	113	1.30	--	1580
28...	0100	166	--	--	1280
28...	0230	213	1.80	--	1010
28...	0645	184	0.590	--	520
28...	1630	122	0.830	--	278
29...	2145	47	0.350	--	100
30...	2145	36	--	--	73

* 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 1992 TO SEPTEMBER 1993

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)
AUG 1993				
01...	2145	32	0.100	76
06...	0700	33	0.040	175
09...	1100	38	0.070	155
09...	1230	65	0.150	238
09...	1530	88	0.220	276
09...	1745	77	0.160	242
10...	0800	45	--	76
11...	1400	33	0.060	126
*13...	1435	29	0.050	151
15...	0700	43	0.170	89
15...	0730	85	--	557
15...	0745	112	0.280	--
15...	0845	204	0.340	764
15...	0945	307	0.410	700
15...	1100	338	0.480	690
15...	1530	283	0.420	221
15...	1945	191	0.450	136
16...	0630	120	0.450	83
16...	2245	66	0.430	76
18...	0445	43	0.160	71
20...	1045	35	0.100	54
23...	2330	36	0.220	52
30...	0415	40	0.460	120
30...	0500	47	--	82
30...	0830	53	0.440	113
30...	1430	49	0.200	64
31...	1430	36	0.170	50
SEP				
13...	0915	40	0.470	353
13...	1600	38	0.280	163
14...	0030	64	0.770	468
14...	0200	108	0.770	410
14...	0315	159	0.850	392
14...	0430	192	0.890	366
14...	0800	167	0.650	203
14...	1400	182	0.640	123
14...	2100	143	0.640	96
15...	0745	88	0.520	66
16...	0730	47	0.260	49
18...	1930	37	0.100	37
20...	1300	39	0.110	43
20...	1645	51	0.120	56
21...	1045	41	0.150	35
22...	1945	38	--	37
25...	2130	39	0.210	62
26...	0800	46	0.160	--
26...	2000	39	0.160	37

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05427718 YAHARA RIVER AT WINDSOR, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.7	1.1	1.6	1.4	1.3	24	5.5	3.8	6.1	6.7	4.2
2	1.2	4.1	1.1	1.2	1.3	1.3	7.0	9.6	3.9	5.3	6.1	4.0
3	.88	2.3	1.1	1.2	1.3	1.3	5.9	9.8	4.8	7.2	5.8	3.8
4	.63	.84	1.1	7.2	2.6	1.5	5.5	9.6	4.6	11	5.5	3.6
5	.46	.59	.99	3.0	4.4	3.8	4.4	4.3	4.7	1280	5.5	3.5
6	.33	.55	.92	2.3	3.4	26	2.9	2.3	3.8	1250	11	3.4
7	.25	.52	.90	2.1	2.3	119	2.2	2.0	461	183	7.6	3.2
8	.23	.50	.89	2.0	1.9	144	16	17	33	62	6.6	3.2
9	.24	.50	.86	1.8	1.8	48	7.5	4.6	8.6	1250	24	3.2
10	.23	.50	.91	1.7	1.8	19	3.6	3.6	4.3	213	11	3.0
11	.23	.48	.86	1.7	1.7	10	3.5	3.5	3.5	283	11	2.9
12	.23	.78	.82	1.7	1.7	4.1	4.7	3.1	3.1	59	11	3.0
13	.22	.96	.80	1.8	1.7	2.8	6.0	2.6	2.9	31	11	17
14	.22	.93	.80	1.7	1.6	2.0	8.7	2.5	68	22	8.7	82
15	.25	.93	4.8	1.6	1.6	1.9	98	2.3	7.2	13	169	15
16	1.2	1.3	11	1.5	1.6	50	33	2.2	4.3	9.5	23	6.6
17	.55	1.0	3.2	1.5	1.4	32	5.8	2.1	19	14	10	4.9
18	.51	.87	2.0	1.5	1.4	3.3	3.8	2.2	60	16	7.5	3.8
19	.49	.86	1.5	1.5	1.4	2.0	30	2.0	10	9.1	6.3	3.4
20	.52	13	1.2	1.5	1.4	1.4	70	2.0	8.5	6.8	5.2	4.7
21	.54	36	1.1	2.1	1.4	1.9	19	1.8	6.6	5.6	4.7	4.0
22	.52	6.7	1.0	2.3	1.3	3.0	5.3	1.7	5.5	5.3	4.4	3.7
23	.51	6.5	.99	2.2	1.3	13	3.1	4.6	4.7	5.3	4.6	3.3
24	.51	2.6	.93	2.1	1.2	158	2.4	4.8	5.0	5.3	4.6	2.9
25	.50	1.6	.91	1.8	1.2	202	1.9	2.2	16	25	4.1	3.7
26	.47	1.6	.89	1.6	1.2	152	1.8	1.8	5.7	9.6	3.9	5.7
27	.45	1.4	.88	1.5	1.1	77	1.9	1.8	4.5	12	4.0	3.5
28	.45	1.2	.83	1.4	1.2	73	3.1	1.8	3.8	221	3.9	3.4
29	.44	1.1	2.0	1.4	---	39	5.5	1.7	3.1	27	4.1	3.6
30	.41	1.1	3.0	1.3	---	21	6.4	6.3	15	8.9	9.5	3.6
31	6.6	---	2.6	1.3	---	64	---	5.7	---	6.7	5.2	---
TOTAL	21.97	93.01	51.98	59.1	47.6	1278.6	392.9	127.0	788.9	5062.7	405.5	215.8

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.21	12.3	10.1	30.0	2.97	16.4	202	16.5	27.0	16.7	21.3	28.2
2	8.43	33.2	9.35	19.9	2.95	16.2	103	31.6	22.3	14.8	14.3	25.9
3	7.63	22.3	8.46	20.1	3.15	16.8	74.1	33.7	22.0	16.7	11.0	24.3
4	6.87	9.57	7.92	177	23.5	19.9	67.7	36.7	17.7	29.1	8.52	22.4
5	6.33	7.32	7.31	66.2	82.2	59.7	59.0	27.8	18.2	1480	6.89	21.1
6	5.86	6.82	6.91	32.8	59.7	169	46.4	21.8	15.6	2260	6.89	19.9
7	5.42	6.52	6.91	23.7	28.3	988	41.7	19.2	1250	864	6.41	18.6
8	5.43	6.36	6.97	19.1	18.5	2070	112	36.3	228	298	6.12	18.0
9	5.49	6.41	6.90	14.5	17.0	1160	66.9	36.9	60.5	2550	34.8	17.8
10	5.36	6.49	7.39	11.2	16.9	457	38.1	33.9	33.8	863	21.3	16.2
11	5.36	6.38	7.12	9.47	16.7	161	33.1	34.9	27.9	1170	11.2	15.3
12	5.29	9.00	6.97	7.79	17.0	91.2	26.2	31.9	24.1	331	8.93	15.5
13	5.14	9.25	6.91	6.91	16.5	55.5	18.7	28.1	21.9	154	7.90	61.1
14	5.07	7.69	7.00	5.27	16.3	32.2	32.0	27.3	287	122	7.58	584
15	5.31	6.73	31.2	4.10	16.2	24.6	451	26.9	57.8	91.0	396	211
16	12.3	9.21	121	3.29	16.2	371	381	25.9	29.3	66.9	237	67.5
17	7.36	8.88	49.7	2.71	15.1	425	78.9	25.4	56.6	91.6	82.7	38.1
18	6.80	8.20	25.8	2.24	15.1	126	44.2	28.0	254	128	33.8	22.8
19	6.49	8.07	17.7	1.84	15.6	66.7	139	26.8	73.5	64.6	25.3	17.9
20	6.97	89.0	12.6	1.64	15.3	33.6	315	27.1	56.7	44.7	19.9	23.4
21	7.17	320	11.3	2.27	15.1	29.8	155	25.8	41.5	33.1	22.0	30.3
22	6.97	85.9	10.5	2.67	15.1	47.7	60.5	25.3	34.0	18.5	26.6	27.6
23	6.85	75.4	9.89	2.69	15.1	174	36.5	31.7	28.7	11.8	35.0	22.3
24	6.79	33.6	9.26	2.76	14.0	1240	27.4	24.6	28.5	11.9	36.4	18.3
25	6.67	15.0	9.15	2.48	14.0	2140	21.0	10.9	76.3	143	29.1	22.3
26	6.28	13.7	8.91	2.42	14.0	2090	18.3	8.75	31.5	65.1	24.5	39.6
27	6.06	12.3	8.80	2.35	14.0	993	17.4	8.56	21.4	49.8	21.8	27.3
28	6.02	12.1	8.29	2.38	15.1	766	20.9	8.44	16.9	736	19.1	22.8
29	5.83	12.2	17.4	2.45	---	452	18.5	8.04	13.1	174	17.8	20.9
30	5.52	11.2	43.8	2.56	---	172	17.2	32.5	26.7	58.8	67.8	17.8
31	13.0	---	49.0	2.72	---	325	---	42.5	---	32.9	35.0	---
TOTAL	209.28	871.10	550.52	487.51	531.57	14789.3	2722.7	803.79	2902.5	11991.0	1302.94	1518.2

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 sea level.

REMARKS.--Estimated daily discharges: Ice-affected period, Mar. 6-8. Records fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	7.1	2.8	2.8	1.7	1.1	23	2.8	2.4	3.2	3.4	4.3
2	1.1	13	2.6	1.9	2.5	1.3	9.8	6.1	3.0	3.2	3.1	3.7
3	1.0	4.1	2.3	2.6	2.3	1.8	8.3	6.7	3.3	3.2	2.9	3.5
4	1.0	2.6	2.2	32	7.1	3.4	10	8.5	2.7	2.9	2.8	3.2
5	.99	1.9	1.9	5.2	20	4.2	9.4	4.1	2.5	181	2.7	3.0
6	1.3	1.6	1.8	2.8	15	10	7.3	3.5	2.2	335	3.0	2.9
7	1.0	1.4	1.8	2.0	4.0	40	7.7	3.3	43	25	2.7	2.8
8	1.7	1.4	1.7	1.6	2.4	76	29	13	24	17	2.7	2.8
9	1.5	1.5	1.6	1.4	1.8	45	13	4.5	5.8	189	4.8	2.8
10	.98	1.5	1.7	1.3	2.1	17	6.2	3.4	3.7	31	3.0	2.7
11	.89	1.3	1.6	1.3	2.0	5.5	9.1	3.1	3.1	26	2.7	3.0
12	.81	2.4	1.6	1.3	1.8	3.1	6.1	2.8	2.8	11	2.6	3.1
13	.87	2.2	1.5	1.3	1.3	2.2	4.2	2.5	2.8	9.3	2.5	22
14	.84	1.6	1.6	1.3	1.2	1.7	4.1	2.4	26	7.4	2.5	105
15	2.1	1.4	17	1.2	1.1	1.8	96	2.4	4.2	4.7	112	25
16	2.1	1.3	30	1.2	1.1	91	41	2.3	3.2	3.9	22	13
17	.79	1.3	11	1.2	.98	44	14	2.1	13	13	7.7	6.5
18	1.0	1.2	5.1	1.1	.81	10	8.0	2.5	29	7.4	4.8	4.7
19	.94	1.8	3.9	1.1	.90	6.8	31	2.2	8.1	4.3	4.4	4.2
20	1.7	34	3.2	1.0	.96	3.3	52	2.2	6.7	3.6	3.7	4.4
21	1.0	57	2.8	5.3	.93	4.3	16	2.0	4.0	3.3	3.4	4.2
22	2.9	24	2.5	9.1	.89	6.4	6.8	2.0	3.3	3.1	3.3	4.4
23	2.6	28	2.2	8.0	.93	30	4.6	3.6	2.9	2.9	12	3.9
24	1.5	9.5	1.8	5.8	.87	91	3.9	3.1	5.8	2.9	6.9	3.6
25	1.0	6.0	1.7	2.9	.90	173	3.4	2.2	15	61	3.6	8.2
26	1.2	5.2	1.5	1.7	.90	105	3.1	2.0	3.4	11	3.5	12
27	.97	4.4	1.5	1.5	.91	54	3.2	2.3	2.8	6.5	3.3	5.0
28	.84	3.6	1.5	1.4	.94	67	3.8	2.0	2.8	23	3.2	4.0
29	.79	3.2	7.2	1.2	---	40	3.3	1.9	2.6	5.1	3.6	3.7
30	.78	3.0	9.8	1.1	---	17	2.9	7.9	11	3.9	26	3.6
31	.80	---	8.4	1.3	---	116	---	3.6	---	3.5	7.3	---
TOTAL	38.09	228.5	137.8	104.9	78.32	1072.9	440.2	113.0	245.1	1007.3	272.1	275.2
MEAN	1.23	7.62	4.45	3.38	2.80	34.6	14.7	3.65	8.17	32.5	8.78	9.17
MAX	2.9	57	30	32	20	173	96	13	43	335	112	105
MIN	.78	1.2	1.5	1.0	.81	1.1	2.9	1.9	2.2	2.9	2.5	2.7
CFSM	.07	.45	.26	.20	.16	2.03	.86	.21	.48	1.90	.51	.54
IN.	.08	.50	.30	.23	.17	2.34	.96	.25	.53	2.19	.59	.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1993, BY WATER YEAR (WY)

	MEAN	2.33	3.18	2.42	2.26	5.06	12.0	5.16	2.73	4.16	5.69	3.11	3.88
MAX	6.42	12.3	6.11	7.52	18.2	34.6	14.7	6.15	17.8	32.5	8.78	13.0	13.0
(WY)	1987	1986	1985	1989	1985	1993	1993	1978	1978	1993	1993	1980	1980
MIN	.86	.67	.34	.36	.46	1.63	.95	.96	.92	.94	1.07	.74	.74
(WY)	1977	1991	1990	1991	1978	1981	1990	1977	1989	1976	1976	1976	1976

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1974 - 1993

ANNUAL TOTAL	1346.33	4013.41	
ANNUAL MEAN	3.68	11.0	
HIGHEST ANNUAL MEAN			4.37
LOWEST ANNUAL MEAN			11.0
HIGHEST DAILY MEAN	91	Feb 28	2.78
LOWEST DAILY MEAN	.50	Aug 20	11.0
ANNUAL SEVEN-DAY MINIMUM	.55	Aug 17	2.78
INSTANTANEOUS PEAK FLOW			349
INSTANTANEOUS PEAK STAGE			Mar 12
INSTANTANEOUS LOW FLOW			Dec 25-27
ANNUAL RUNOFF (CFSM)	.22		1989
ANNUAL RUNOFF (INCHES)	2.93		Dec 21
10 PERCENT EXCEEDS	7.0		1989
50 PERCENT EXCEEDS	1.5		Jul 6
90 PERCENT EXCEEDS	.77		Jul 6

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1977 to current year.

TOTAL-PHOSPHORUS DISCHARGE: January 1992 to current year.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: January to September 1992.

INSTRUMENTATION.--Automatic pumping sampler since December 1977.

REMARKS.--Records good. Samples are point samples unless otherwise indicated.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 15,400 mg/L, Apr. 30, 1984; minimum observed, 4 mg/L, Mar. 12, 1979.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,870 tons, June 10, 1984; minimum daily, 0.01 ton, on many days in 1990 and 1991 water years.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 5.70 mg/L, July 9, 1993; minimum observed, 0.12 mg/L, July 8, 1992.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 2,040 lb, July 6, 1993; minimum daily, 0.30 lb, Aug. 20, 21, 1992.

TOTAL ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 2.40 mg/L, Feb. 29, 1992; minimum observed, 0.03 mg/L, May 22, 1992.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 966 lb, Feb. 28, 1992; minimum daily, 0.13 lb, Sept. 13, 1992.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 2,830 mg/L, Mar. 16; minimum observed, 11 mg/L, Jan. 21 and May 10.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,060 tons, July 6; minimum daily, 0.03 ton, Jan. 19, 20.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 5.70 mg/L, July 9; minimum observed, 0.16 mg/L, June 24.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 2,040 lb, July 6; minimum daily, 0.53 lb, Oct. 5.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
OCT 1992					
*02...	1300	1.1	--	--	83
08...	1530	3.6	0.420	0.110	123
15...	2040	9.6	0.230	0.050	59
NOV					
01...	1725	9.6	0.260	0.180	26
01...	2325	20	0.440	0.280	85
*02...	1312	12	0.770	0.620	--
*02...	1313	12	--	--	26
02...	2325	6.2	--	--	35
20...	0825	10	0.220	0.090	40
20...	1140	22	--	--	93
20...	1345	35	0.510	0.200	--
20...	1440	52	--	--	563
20...	1740	63	0.650	0.220	395
20...	2040	73	--	--	339
20...	2340	95	1.90	0.780	--
21...	0110	101	--	--	611
21...	0240	102	1.90	0.790	--
21...	0710	74	--	--	310
21...	1140	50	--	--	167
21...	1310	45	2.00	1.50	--
21...	1740	37	--	--	137
22...	0540	16	1.00	0.820	89
23...	0853	31	1.50	0.990	--
*23...	0854	31	1.30	1.10	--
*23...	0855	31	--	--	84
24...	0030	14	--	--	52
24...	0630	11	1.10	0.640	--
24...	1230	9.2	--	--	127
25...	0030	7.0	--	--	132
25...	0630	5.7	0.540	0.300	--
25...	2350	5.3	--	--	60
26...	0550	5.3	0.360	0.190	--
26...	1835	5.3	--	--	48
DEC					
*09...	1100	1.6	--	--	96
15...	1250	7.4	0.210	--	49
15...	1700	18	--	--	93
15...	1805	33	0.360	--	--
15...	2105	51	0.320	--	--
15...	2235	53	--	--	171
16...	0135	45	0.420	--	--
16...	0305	43	--	--	86
16...	0605	37	--	--	85
*16...	1028	31	0.990	--	--
*16...	1029	31	--	--	56
16...	1030	31	1.00	--	--
16...	1935	20	0.890	--	--

* 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 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)
DEC 1992						
17...	0135	15	--	--	--	33
17...	1335	9.6	--	--	--	18
17...	1935	8.3	--	0.720	--	--
18...	0135	6.6	--	--	--	17
29...	0615	9.6	--	0.190	--	36
*29...	0816	13	--	0.260	--	--
*29...	0817	13	--	--	--	51
29...	0819	13	--	0.250	--	46
29...	1910	7.4	--	--	--	32
30...	0110	5.7	--	0.360	--	--
30...	1145	7.0	--	--	--	37
30...	2345	18	--	0.820	--	41
31...	1145	7.0	--	1.40	--	28
JAN 1993						
04...	0010	10	--	0.680	--	22
04...	0445	34	--	--	--	102
04...	0615	43	--	1.30	--	--
04...	0915	52	--	--	--	223
04...	1045	52	--	1.60	--	--
04...	1345	41	--	--	--	75
04...	1935	21	--	1.30	--	--
05...	0045	10	--	--	--	33
*21...	1306	3.6	--	--	--	11
21...	1455	5.3	--	--	--	34
22...	0840	8.0	--	--	--	15
23...	0840	7.0	--	--	--	18
24...	1550	7.0	--	--	--	15
FEB						
04...	1910	9.6	--	--	--	29
05...	2135	37	--	--	--	230
06...	0515	21	--	--	--	69
06...	2315	6.6	--	--	--	69
MAR 1993						
*05...	1402	--	4.9	--	--	85
06...	1505	10	--	3.10	--	56
07...	0115	40	--	4.20	--	--
07...	0715	40	--	--	--	32
07...	1315	40	--	3.60	--	--
07...	1615	40	--	--	--	329
07...	1740	40	--	4.50	--	861
08...	1141	76	--	3.20	--	112
*08...	1142	76	--	--	--	105
*08...	1143	76	--	2.70	--	--
08...	1540	76	--	--	--	863
08...	1620	76	--	4.60	--	--
08...	1720	76	--	3.90	1.00	1350
08...	2020	76	--	--	--	376
08...	2135	76	--	3.30	--	--
09...	0035	--	63	--	--	156
09...	0205	--	55	2.70	0.940	--
09...	0505	--	43	--	--	96
09...	0805	--	35	--	--	92
*09...	1400	--	34	2.40	--	--
*09...	1401	--	34	--	--	86
09...	1630	--	39	--	--	110
09...	1800	--	52	2.30	--	--
09...	2100	--	66	3.10	--	215
10...	0135	--	33	--	--	60
10...	0450	--	20	1.90	--	--
10...	1050	--	12	--	--	34
10...	1650	--	14	1.50	--	--
10...	2250	--	13	1.90	--	42
11...	0450	--	5.7	1.70	--	35
16...	1035	--	11	0.540	--	31
16...	1135	--	38	--	--	239
16...	1200	--	61	0.840	--	--
16...	1310	--	141	--	--	1070
16...	1345	175	2.30	--	--	--
16...	1655	273	1.80	0.580	2830	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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 1993					
16...	1905	217	--	--	652
16...	1950	182	1.80	1.60	--
16...	2155	97	--	--	116
17...	0335	59	1.30	--	34
*17...	1351	43	1.40	1.60	--
*17...	1352	43	--	--	86
17...	1353	43	1.30	--	76
17...	1530	53	1.20	--	85
17...	1830	36	1.10	--	--
17...	2125	22	--	--	32
18...	0325	11	1.40	--	--
18...	1525	7.9	1.10	--	29
19...	0325	10	1.70	--	30
*19...	0850	8.7	1.60	--	--
*19...	0851	8.7	--	--	23
19...	0852	8.7	1.50	--	20
*20...	0742	3.3	--	--	27
*20...	0743	3.3	1.10	--	--
21...	2140	9.6	--	--	43
*22...	1331	6.6	--	--	39
*22...	1332	6.6	1.40	--	--
23...	0435	10	--	--	49
23...	1035	17	0.630	--	--
23...	1845	58	--	--	233
23...	2015	62	2.00	--	--
23...	2145	63	--	--	180
24...	0815	44	1.90	--	--
24...	0945	43	--	--	71
24...	1410	75	--	--	300
24...	1505	97	3.10	--	--
24...	2025	179	--	--	741
24...	2155	170	2.30	--	--
24...	2325	152	--	--	349
25...	0355	113	--	--	175
25...	0655	95	--	--	138
25...	0825	88	1.80	--	--
25...	1255	118	2.00	1.30	--
25...	1345	142	--	--	404
25...	1610	237	--	--	1190
25...	1840	317	2.00	1.20	--
25...	2010	329	--	--	1620
25...	2140	300	1.90	1.30	--
25...	2235	263	--	--	1400
26...	0210	132	--	--	325
26...	0340	110	2.00	1.20	--
*26...	1107	66	1.60	--	--
*26...	1108	65	--	--	166
26...	1109	64	1.50	--	146
26...	1500	108	--	--	478
26...	1545	133	1.90	--	--
26...	1715	156	--	--	800
26...	1845	149	2.00	--	--
27...	0045	74	--	--	165
27...	0215	64	1.40	--	--
*27...	1128	33	1.20	--	81
27...	1840	78	--	--	241
27...	2010	76	1.70	--	--
28...	0645	24	--	--	54
28...	1245	27	0.980	--	--
28...	1520	118	--	--	889
28...	1805	178	--	--	1650
28...	1905	149	1.60	--	--
29...	0025	54	1.00	--	--
29...	0155	43	--	--	136
29...	0925	23	--	--	65
29...	1445	34	0.710	--	--
29...	1645	72	--	--	383
29...	1815	73	1.20	--	--
29...	2115	48	--	--	110
30...	0910	12	--	--	22
30...	1510	12	0.570	--	--
31...	0310	14	--	--	12
31...	0405	27	0.840	--	--
31...	0720	51	--	--	465
31...	0900	129	--	--	1560
31...	1000	155	1.80	--	--
31...	1225	217	--	--	1560
*31...	1334	219	2.40	--	856
31...	1825	181	--	--	1240
31...	2035	121	1.80	--	--

* 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 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)
APR 1993					
01...	0315	39	0.970	--	--
01...	0445	33	--	--	169
02...	0340	10	0.490	--	--
02...	0940	8.7	--	--	22
03...	0340	7.4	0.590	--	--
03...	0940	6.2	--	--	17
04...	2240	15	--	--	32
05...	0440	12	1.10	--	--
06...	0440	7.0	--	--	14
06...	1640	7.4	--	--	66
*07...	1012	7.0	0.810	--	17
08...	0240	21	0.360	--	105
08...	0955	40	--	--	302
08...	1125	41	0.970	--	--
*08...	1339	35	0.950	--	84
08...	1340	35	1.10	--	85
08...	1855	27	--	--	51
10...	1255	5.7	0.560	--	--
10...	1855	5.3	--	--	14
11...	0550	11	--	--	37
11...	2350	9.2	0.650	--	--
12...	0550	7.0	--	--	14
15...	0055	11	--	--	237
15...	0345	22	0.290	--	--
15...	0635	78	--	--	1080
15...	0715	104	0.220	0.120	--
15...	0955	154	0.800	0.540	--
15...	1125	166	--	--	861
*15...	1316	153	1.10	0.780	614
15...	1900	109	0.940	0.650	--
15...	2030	97	--	--	328
16...	0230	70	0.790	--	--
16...	1000	38	--	--	93
*16...	1001	38	0.640	--	93
17...	0530	17	--	--	36
17...	1730	12	0.430	--	--
18...	0530	9.2	--	--	19
18...	2330	5.7	0.380	--	--
19...	0530	6.2	--	--	19
19...	1215	8.7	--	--	24
19...	1245	22	0.250	--	--
19...	1645	64	1.20	--	--
19...	1815	73	--	--	479
19...	1945	77	--	--	458
20...	0015	58	1.30	--	--
20...	0315	48	0.990	--	--
20...	0445	55	--	--	248
20...	1045	59	0.720	--	--
20...	1215	65	--	--	196
20...	1815	49	0.870	--	--
20...	1945	41	--	--	180
22...	0300	8.3	--	--	14
22...	1500	6.2	0.370	--	--
22...	2100	5.3	--	--	26
*27...	1112	3.0	0.210	--	16
MAY					
02...	0400	9.6	0.280	--	--
02...	1140	7.9	--	--	17
03...	1830	12	0.230	--	380
04...	0030	16	0.280	--	149
04...	0630	8.7	0.330	--	--
04...	1230	7.0	--	--	123
08...	0430	11	--	--	230
08...	0455	27	--	--	493
10...	1043	3.5	0.480	--	--
*10...	1044	3.5	--	--	11
*24...	0658	3.6	0.280	--	17
30...	0735	11	--	--	175
30...	0830	23	0.240	--	--
30...	1030	11	--	--	80
30...	1455	9.6	0.320	--	--
30...	2055	9.2	--	--	20

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST CUBIC FEET PER SECOND (00061)	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)
JUN 1993					
*01...	1104	2.5	0.490	--	--
07...	1145	11	0.820	--	690
07...	1210	41	--	--	305
07...	1405	66	2.50	--	--
07...	1555	116	--	--	641
07...	1725	128	1.20	0.560	--
07...	1855	105	1.00	0.520	--
07...	2010	81	--	--	159
07...	2140	61	1.00	--	--
*08...	0815	28	0.770	--	198
*09...	0920	5.7	0.600	--	26
14...	0005	11	--	--	45
14...	0025	31	0.670	--	--
14...	0035	53	--	--	523
14...	0205	46	1.30	--	--
*14...	1044	30	1.50	--	340
14...	1930	12	0.690	--	--
15...	0650	4.6	--	--	29
17...	1036	4.1	0.360	--	--
17...	1130	15	--	--	155
17...	1150	26	0.380	--	--
*18...	0747	37	1.90	--	328
18...	1257	25	--	--	172
*20...	0825	7.4	0.530	--	26
24...	2045	15	--	--	124
24...	2100	28	0.160	--	--
*25...	0746	22	1.10	--	106
30...	0155	12	--	--	98
30...	0225	24	0.260	--	--
JUL					
05...	0740	24	--	--	109
05...	1325	27	0.350	--	--
05...	1350	75	--	--	1060
05...	1355	107	0.220	0.140	--
05...	1430	202	0.240	--	--
05...	1600	229	--	--	1370
05...	1855	356	1.10	0.540	--
05...	1925	452	--	--	2670
05...	2105	549	0.610	--	--
05...	2345	719	--	--	1400
06...	0115	731	0.770	0.440	--
06...	0245	713	--	--	1270
06...	0700	573	1.30	--	--
06...	0910	472	--	--	1010
06...	1100	336	1.70	--	--
06...	1150	252	--	--	1030
06...	1335	155	1.20	0.830	--
06...	1920	64	--	--	427
06...	2350	40	0.980	--	--
07...	0550	29	--	--	293
07...	1750	21	0.820	--	--
08...	1750	16	0.880	--	--
08...	2350	14	--	--	122
09...	0140	92	0.460	--	--
09...	0145	144	--	--	2040
09...	0205	261	0.380	0.110	--
09...	0335	263	--	--	2090
09...	0700	372	--	--	1380
*09...	0748	366	1.10	0.540	1270
09...	0749	365	0.950	--	1220
09...	1110	279	1.20	--	--
09...	1200	242	--	--	919
09...	1545	118	5.70	0.740	--
09...	1710	92	--	--	476
10...	0940	25	1.20	--	--
10...	1540	20	--	--	184
10...	1915	56	1.30	--	--
10...	2045	42	--	--	225
11...	0415	37	1.90	--	--
11...	1015	25	--	--	235
13...	1015	6.6	--	--	18
13...	1545	17	0.480	--	--
13...	2145	13	--	--	49
*14...	1122	7.4	1.10	--	46
17...	1345	14	--	--	62
17...	2005	32	4.40	--	1250
18...	0530	8.7	--	--	145
18...	1130	6.6	1.20	--	--

* 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 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)
JUL 1993					
25...	0355	14	--	--	71
25...	0415	35	0.490	--	--
25...	0435	77	--	--	840
25...	0445	102	2.00	--	--
25...	0905	133	--	--	2120
25...	1035	128	3.60	--	--
25...	1635	50	--	--	318
25...	1805	41	1.10	--	--
26...	1840	7.0	--	--	78
27...	0045	5.3	0.990	--	--
27...	2235	13	--	--	38
27...	2310	29	0.660	--	--
28...	0330	51	--	--	878
28...	0500	54	1.70	--	--
28...	0830	29	--	--	515
28...	1805	10	0.910	--	--
29...	0605	5.3	--	--	47
AUG					
09...	1155	15	--	--	122
09...	1215	27	0.270	--	89
09...	1315	15	--	--	119
15...	0615	17	0.250	--	--
15...	0620	31	--	--	156
*16...	1028	21	0.690	--	48
16...	1221	18	--	--	41
16...	2145	11	0.590	--	--
17...	0345	9.2	--	--	23
17...	2145	5.7	0.520	--	12
23...	0700	14	--	--	67
23...	0720	23	1.60	--	110
23...	1600	10	--	--	57
23...	1640	26	1.60	--	186
23...	2240	22	--	--	398
*24...	0738	6.6	2.50	--	67
*25...	1052	3.6	--	--	38
30...	0345	12	1.90	--	53
30...	0425	68	1.50	--	824
30...	0555	55	--	--	184
30...	0855	43	1.70	--	--
30...	1025	39	--	--	214
30...	1535	21	1.50	--	--
31...	0935	7.9	--	--	33
31...	1535	5.3	0.950	--	--
SEP					
*03...	1333	3.5	--	--	21
13...	1005	14	--	--	47
13...	1025	26	0.680	--	--
13...	1410	44	--	--	292
13...	1540	44	0.510	--	--
13...	2010	37	--	--	286
14...	0030	84	--	--	488
14...	0100	148	--	--	1330
14...	0230	137	1.30	--	--
14...	0400	165	1.60	--	579
14...	1000	124	--	--	164
14...	1130	110	1.30	--	--
14...	1730	74	--	--	76
14...	2200	53	1.10	--	--
15...	0100	42	--	--	60
15...	2030	17	0.810	--	--
16...	0230	15	--	--	19
17...	0830	6.6	0.520	--	--
17...	1430	5.3	--	--	13
25...	1630	10	--	--	79
25...	2155	21	0.480	--	--
26...	0355	18	--	--	177
26...	2155	7.0	0.980	--	--
27...	0355	5.7	--	--	19
*29...	1330	3.6	0.260	--	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	.90	.48	.18	.06	.04	11	.12	.10	.25	.26	.34
2	.25	1.7	.48	.10	.10	.05	.73	.33	.12	.25	.22	.25
3	.23	.37	.45	.13	.11	.07	.50	2.3	.13	.25	.20	.20
4	.23	.20	.44	10	1.4	.29	.73	2.8	.11	.24	.18	.17
5	.23	.13	.41	.46	8.5	.82	.62	.32	.10	924	.17	.15
6	.33	.11	.41	.21	4.0	1.7	.68	.21	.08	1060	.18	.14
7	.25	.10	.42	.13	.70	65	.51	.16	41	20	.15	.12
8	.49	.09	.42	.09	.33	114	11	8.0	10	7.6	.14	.12
9	.41	.09	.41	.08	.19	16	1.3	.49	.51	657	.99	.11
10	.20	.09	.37	.07	.22	2.4	.32	.11	.25	23	.28	.10
11	.15	.08	.29	.06	.22	.54	.71	.09	.20	16	.21	.11
12	.11	.16	.22	.06	.17	.25	.24	.08	.17	2.1	.19	.12
13	.10	.15	.18	.06	.10	.15	.15	.07	.17	1.0	.17	16
14	.08	.11	.15	.05	.08	.11	.15	.07	26	.93	.16	105
15	.31	.09	6.5	.05	.07	.11	170	.07	.41	.46	294	3.0
16	.26	.08	6.0	.04	.07	337	14	.07	.24	.31	4.7	.65
17	.07	.08	.70	.04	.06	5.7	1.3	.07	9.0	20	.41	.25
18	.08	.07	.24	.04	.05	.90	.44	.08	23	3.5	.17	.17
19	.08	.14	.18	.03	.05	.48	27	.07	1.2	.35	.15	.15
20	.13	36	.15	.03	.05	.23	32	.07	.49	.27	.13	.16
21	.08	53	.13	.52	.05	.40	3.0	.06	.26	.23	.12	.15
22	.24	11	.11	.53	.04	.71	.38	.06	.21	.20	.11	.16
23	.21	9.0	.10	.40	.04	14	.32	.30	.18	.17	6.1	.14
24	.12	2.7	.08	.26	.04	100	.24	.16	1.6	.16	2.3	.12
25	.08	1.6	.08	.12	.04	447	.19	.09	3.8	165	.38	2.9
26	.09	.79	.07	.07	.04	123	.15	.07	.39	4.4	.26	4.2
27	.07	.63	.07	.06	.04	23	.15	.09	.26	2.5	.20	.27
28	.06	.54	.07	.05	.04	152	.21	.07	.21	34	.16	.18
29	.05	.51	.92	.04	---	19	.16	.06	.16	.68	.18	.15
30	.05	.49	1.5	.04	---	1.6	.13	2.0	3.4	.33	16	.13
31	.05	---	.79	.04	---	346	---	.18	---	.28	.86	---
TOTAL	5.35	121.00	22.82	14.04	16.86	1772.55	278.31	18.72	123.75	2945.46	329.73	135.71

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	11.7	2.33	11.5	1.95	1.08	109	3.10	6.27	5.19	5.05	10.7
2	.59	43.3	2.15	4.94	3.05	1.27	27.3	8.85	5.42	3.92	4.24	7.63
3	.56	7.55	1.83	6.10	3.08	3.76	24.5	8.59	5.76	3.81	3.70	6.82
4	.54	2.93	1.66	231	23.5	22.6	43.1	13.5	4.34	3.40	3.31	5.97
5	.53	1.86	1.41	18.3	85.8	41.9	54.3	5.37	3.84	648	3.01	5.41
6	1.24	1.41	1.30	4.27	49.6	206	36.1	4.20	3.12	2040	3.11	5.02
7	1.03	1.14	1.25	2.10	6.42	1110	33.1	3.71	300	122	2.55	4.59
8	3.10	.96	1.14	1.29	3.45	1610	130	51.5	101	73.7	2.34	4.44
9	2.99	1.06	1.06	1.12	2.32	643	59.1	17.5	18.4	1640	8.64	4.21
10	1.46	1.04	1.08	1.02	2.89	175	19.7	8.56	8.52	244	4.88	3.78
11	1.11	.89	1.00	.97	3.03	45.1	33.8	4.53	5.18	215	4.17	4.30
12	.85	2.16	.92	.96	2.64	15.5	17.9	3.68	3.39	47.3	3.89	4.62
13	.77	2.00	.88	.96	1.78	7.66	8.20	3.21	2.61	26.4	3.66	74.2
14	.62	1.31	.88	.92	1.60	4.15	5.33	3.05	163	34.7	3.53	751
15	2.41	1.04	28.9	.87	1.44	3.38	423	2.96	9.29	10.6	752	128
16	3.07	.91	122	.83	1.37	878	151	2.82	5.90	6.15	97.2	47.2
17	.81	.84	44.1	.80	1.19	309	36.9	2.56	89.8	140	22.9	18.4
18	.92	.76	12.0	.72	.95	71.6	17.3	3.00	266	68.7	12.2	11.9
19	.77	2.12	3.98	.70	1.04	53.2	173	2.49	29.1	10.7	9.34	9.66
20	1.72	173	2.05	.68	1.08	18.7	243	2.51	18.7	6.52	6.57	9.40
21	1.07	574	1.82	12.1	1.01	26.9	54.7	2.17	7.98	5.08	5.07	8.11
22	4.74	151	1.62	30.0	.96	48.4	15.1	2.21	4.86	3.99	4.13	7.91
23	3.87	218	1.43	23.9	.99	233	8.30	6.28	3.10	3.16	88.3	6.37
24	1.67	49.6	1.19	15.7	.91	1200	6.21	4.80	15.5	2.62	77.9	5.34
25	.97	16.7	1.11	4.71	.94	1840	4.88	2.94	83.7	622	8.99	16.5
26	1.11	8.40	.97	2.24	.92	1050	3.90	2.36	10.2	62.5	6.42	44.0
27	.94	4.25	.99	1.82	.93	419	3.77	2.86	3.43	24.8	5.02	20.4
28	.74	3.36	.98	1.49	.95	479	4.94	2.41	2.46	154	4.12	9.67
29	.64	2.89	11.4	1.19	---	210	4.06	2.10	1.84	11.8	4.34	5.59
30	.58	2.58	26.9	.98	---	66.4	3.43	17.2	37.9	6.86	212	4.79
31	.54	---	59.8	1.23	---	1200	---	13.2	---	5.74	41.0	---
TOTAL	42.57	1288.76	340.13	385.41	205.79	11993.60	1754.92	214.22	1220.61	6252.64	1413.58	1245.93

ROCK RIVER BASIN

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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 sea level.

REMARKS.--Estimated daily discharges: July 5. Records are good except those for the estimated daily discharge and 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	17	.03	.05	.71	1.3	2.1	1.2	.11	.17	.00	.00
2	.00	6.7	.07	.00	.30	1.7	1.2	7.8	4.7	.26	.00	.00
3	.00	.55	.05	4.3	.99	3.3	.81	9.7	.80	.68	.00	.00
4	.00	.17	.00	13	1.8	1.7	.87	1.7	1.2	.19	2.4	.00
5	.00	.06	.00	.18	2.2	2.1	.39	.27	.30	61	4.1	.00
6	.00	.00	.00	.00	.64	4.3	1.1	.10	.03	31	3.4	.00
7	.00	.00	.00	.00	.20	6.2	1.1	.55	35	.79	.10	.00
8	4.6	.19	.00	.00	.08	7.5	11	10	7.6	3.2	.01	.02
9	.80	1.1	.00	.00	.09	2.7	.71	.60	.22	39	8.6	.00
10	.09	.63	.04	.00	3.1	1.6	.28	.57	.09	9.3	.20	.00
11	.01	.14	.20	.00	.37	.60	3.2	.24	.00	1.0	.03	2.2
12	.00	3.4	.22	.00	.17	.25	.45	.15	.02	.29	.00	.22
13	.00	.26	.20	.00	.10	.15	.29	.06	.48	4.5	.00	23
14	.00	.04	.22	.00	.22	.10	1.4	.10	17	.40	.00	36
15	4.3	.00	27	.00	.20	.16	51	.04	.19	.02	50	.54
16	.74	.00	3.9	.00	.05	17	5.8	.00	.01	.07	.99	.15
17	.19	.00	.24	.00	.00	1.1	.39	.10	20	6.3	.16	.04
18	.09	.00	.09	.18	.00	.80	.31	1.7	5.6	1.4	.09	.00
19	.01	3.9	.20	.02	.00	.77	23	2.8	3.3	.05	.08	.00
20	1.8	37	.00	.02	.00	1.4	17	.59	.56	.00	.00	1.5
21	.20	16	.00	9.8	.02	1.3	.60	.12	.07	.00	.00	.48
22	.10	16	.00	3.5	.05	1.8	.28	1.1	.02	.00	.00	1.8
23	.09	2.7	.00	2.4	.07	25	.20	6.5	.00	.00	13	.55
24	.01	.31	.03	.49	.10	16	.18	.59	10	.00	.28	.04
25	.00	1.3	.00	.12	.10	20	.15	.12	9.5	34	.04	11
26	.00	1.2	.00	.23	.12	14	.14	.03	.11	.30	2.9	1.2
27	.00	.36	.00	.14	.18	5.7	1.6	1.4	.00	3.3	.10	.15
28	.00	.13	.00	.05	.22	14	2.5	.14	.59	4.6	.01	.06
29	.00	.09	9.5	.06	---	9.0	.96	.04	.02	.09	2.9	.12
30	.00	.07	6.8	.00	---	3.4	.14	11	13	.00	2.3	.19
31	.00	---	.62	.81	---	51	---	.58	---	.00	.06	---
TOTAL	13.11	109.30	49.41	35.35	12.08	215.93	129.15	59.89	130.52	201.91	91.75	79.26
MEAN	.42	3.64	1.59	1.14	.43	6.97	4.30	1.93	4.35	6.51	2.96	2.64
MAX	4.6	37	27	13	3.1	51	51	11	35	61	50	36
MIN	.00	.00	.00	.00	.00	.10	.14	.00	.00	.00	.00	.00
CFSM	.13	1.11	.48	.35	.13	2.12	1.31	.59	1.32	1.98	.90	.80
IN.	.15	1.24	.56	.40	.14	2.44	1.46	.68	1.48	2.28	1.04	.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1993, BY WATER YEAR (WY)

	MEAN	1.10	1.36	.67	.46	1.14	2.45	1.73	1.23	1.92	2.11	1.96	1.87
MAX	3.19	3.64	1.99	1.73	3.09	6.97	4.30	2.71	5.00	6.51	4.24	4.97	
(WY)	1985	1993	1985	1990	1981	1993	1993	1990	1984	1993	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1976 - 1993

ANNUAL TOTAL	595.81	1127.66	
ANNUAL MEAN	1.63	3.09	1.51
HIGHEST ANNUAL MEAN			3.09
LOWEST ANNUAL MEAN			.97
HIGHEST DAILY MEAN	37	Nov 20	61
LOWEST DAILY MEAN	.00	Many days	.00
ANNUAL SEVEN-DAY MINIMUM	.00	May 1	.00
INSTANTANEOUS PEAK FLOW			754
INSTANTANEOUS PEAK STAGE			Jul 5
ANNUAL RUNOFF (CFSM)	.49		4.16
ANNUAL RUNOFF (INCHES)	6.74		.94
10 PERCENT EXCEEDS	4.2		12.75
50 PERCENT EXCEEDS	.10		9.5
90 PERCENT EXCEEDS	.00		.20
			.00

(a) Annual seven-day minimum flows are 0.00 for most years

ROCK RIVER BASIN

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1976 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1991 to current year.

INSTRUMENTATION.--Automatic pumping sampler.

REMARKS.--Records good. Samples are point samples unless otherwise indicated.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 2,800 mg/L, June 24, 1993; minimum observed, 1 mg/L, Aug. 6, 1993.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 65 tons, July 5, 1993; minimum daily, 0.00 ton, on many days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 2,800 mg/L, June 24; minimum observed, 1 mg/L, Aug. 6.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 65 tons, July 5; minimum daily, 0.00 ton, on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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 1992				APR 1993			
08...	1400	33	996	07...	2320	7.2	130
08...	1600	17	279	08...	0300	37	175
08...	1710	5.5	84	08...	0645	7.7	34
15...	1830	6.1	108	08...	1010	40	235
15...	1915	33	219	*08...	1258	5.7	65
15...	2305	5.5	17	08...	1300	5.5	47
NOV				11...	0550	12	123
01...	0545	7.2	56	11...	0605	25	127
01...	0645	20	70	13...	2400	8.2	292
01...	1735	46	77	14...	2400	8.2	142
01...	2150	14	21	15...	0325	41	56
02...	1630	7.2	78	15...	0555	94	252
12...	1010	5.8	32	15...	1650	49	66
19...	1750	5.2	72	16...	1045	5.0	22
19...	1835	16	88	19...	1145	11	522
20...	0035	6.1	18	19...	1225	58	441
20...	1125	50	90	19...	1635	82	178
20...	2045	99	161	20...	0040	6.7	28
21...	0415	45	30	20...	0310	31	59
21...	1005	4.4	15	20...	0320	47	223
22...	1600	20	72	20...	0405	66	97
22...	1625	55	93	20...	0545	27	53
22...	2215	36	48	20...	1740	5.0	19
23...	0150	7.7	20	27...	1910	11	767
25...	1520	6.7	63	28...	0110	12	133
DEC				MAY			
*16...	1005	2.3	12	01...	2230	12	95
*29...	0743	30	35	02...	0245	30	264
JAN 1993				02...	1020	5.2	15
04...	1437	4.0	23	03...	0010	10	171
MAR				03...	1800	87	1140
*05...	1330	2.1	73	03...	1940	38	195
*08...	1104	2.5	20	03...	2135	8.7	81
*09...	1330	1.7	29	08...	0420	67	765
09...	1735	5.5	32	08...	0445	89	1340
*17...	1303	1.1	23	08...	0530	47	380
*22...	1259	3.8	135	08...	1035	5.2	53
23...	0847	29	82	18...	0425	6.7	45
23...	1130	40	127	19...	1800	36	237
23...	1715	23	66	19...	2005	6.4	43
24...	0515	5.8	18	22...	2205	7.7	41
24...	1845	26	104	23...	1620	46	261
25...	0645	7.2	48	23...	2315	4.4	18
25...	1600	52	387	27...	0730	9.6	48
26...	0930	5.0	23	30...	0530	16	242
26...	1340	30	132	30...	0710	49	114
27...	0050	5.2	24	30...	1040	15	32
*27...	1045	2.2	14	30...	2020	7.2	53
28...	1155	20	119	JUN			
28...	1430	54	195	02...	1650	7.7	50
28...	2105	7.2	22	02...	1810	21	47
29...	1155	20	106	02...	2200	8.2	15
30...	1820	5.0	20	07...	1110	56	894
31...	0300	14	1210	07...	1135	86	2000
31...	0340	67	668	07...	1200	159	518
31...	0525	25	148	07...	1225	146	736
31...	0725	100	521	07...	1240	174	378
31...	1135	54	116	07...	1345	105	262
31...	1240	80	119	07...	1625	53	159
31...	2050	34	57	08...	0155	37	95
31...	2305	6.1	44				

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
JUN 1993				JUL 1993			
08...	0650	8.7	55	25...	0305	74	181
13...	2355	31	388	25...	0415	210	339
14...	0020	76	1120	25...	0425	431	452
14...	0550	33	49	25...	0445	165	661
14...	0825	6.1	26	25...	1615	7.2	64
17...	1045	56	261	27...	2235	53	192
17...	1105	89	1150	27...	2300	48	573
17...	1450	9.1	64	28...	0355	5.2	24
17...	1935	69	153	AUG			
18...	0430	4.4	32	04...	2230	3.8	2
19...	0230	14	105	06...	1030	5.0	1
19...	1920	15	242	09...	1055	9.6	2720
19...	2055	5.0	30	09...	1130	99	566
24...	2020	14	133	09...	1245	44	145
24...	2030	73	184	*09...	1246	44	144
24...	2040	112	2800	09...	1650	3.8	28
24...	2215	50	206	15...	0540	12	204
25...	0725	5.2	28	15...	0605	87	133
30...	0100	8.2	47	15...	0625	290	207
30...	0155	71	83	15...	0640	174	385
30...	0835	15	13	15...	0735	169	328
JUL				15...	0830	82	136
03...	1620	8.7	168	15...	0850	154	196
05...	0550	8.7	59	15...	1145	61	89
05...	0630	45	181	16...	0020	5.2	45
05...	1245	4.1	12	23...	0615	15	115
05...	1335	345	363	23...	0645	82	280
05...	1935	96	971	23...	1050	6.7	26
05...	2305	86	418	23...	1555	38	219
06...	0655	42	122	23...	1600	67	173
06...	1720	9.6	70	23...	1620	64	521
08...	1340	10	145	23...	1850	8.2	132
08...	1425	26	275	26...	0755	29	301
08...	1535	12	74	26...	0930	11	76
09...	0120	54	305	29...	0955	7.2	96
09...	0140	300	452	29...	1035	25	203
09...	0200	123	876	30...	0555	8.2	34
09...	0250	94	263	SEP			
09...	0535	114	144	11...	1720	24	234
09...	0657	61	132	11...	1855	9.6	71
*09...	0658	61	149	13...	1405	58	194
09...	1705	7.7	125	13...	1705	114	160
10...	1825	92	278	13...	2200	17	49
10...	1955	59	179	14...	0010	144	151
10...	2245	9.1	63	14...	0850	61	85
13...	1545	22	190	14...	1640	11	57
13...	2130	7.7	37	20...	1315	9.1	112
17...	1300	9.1	68	22...	0030	7.2	94
17...	1330	52	281	*22...	1251	0.59	4
17...	1745	4.7	17	25...	1535	22	275
25...	0255	9.6	86	25...	1645	40	62
25...	2320	11	16	25...	2025	25	29

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2.8	.00	.00	.04	.26	.17	.33	.00	.00	.00	.00
2	.00	.85	.00	.00	.01	.31	.08	2.9	.44	.02	.00	.00
3	.00	.04	.00	.51	.08	.89	.05	9.8	.03	.10	.00	.00
4	.00	.00	.00	1.8	.21	.15	.05	.26	.12	.01	.02	.00
5	.00	.00	.00	.01	.26	.40	.02	.01	.01	65	.01	.00
6	.00	.00	.00	.00	.04	1.7	.09	.00	.00	14	.01	.00
7	.00	.00	.00	.00	.01	2.1	.19	.03	33	.05	.00	.00
8	6.5	.02	.00	.00	.00	2.4	4.0	12	1.6	.93	.00	.00
9	.07	.12	.00	.00	.00	.24	.04	.04	.01	26	7.6	.00
10	.00	.05	.00	.00	.69	.14	.01	.03	.00	4.6	.01	.00
11	.00	.01	.01	.00	.02	.03	.75	.01	.00	.06	.00	.64
12	.00	.22	.01	.00	.01	.01	.03	.00	.00	.01	.00	.01
13	.00	.00	.01	.00	.00	.00	.07	.00	.34	1.4	.00	8.7
14	.00	.00	.01	.00	.01	.00	.31	.00	24	.02	.00	11
15	1.6	.00	5.7	.00	.01	.00	22	.00	.01	.00	23	.02
16	.02	.00	.36	.00	.00	15	.49	.00	.00	.00	.07	.00
17	.00	.00	.01	.00	.00	.13	.02	.01	15	2.2	.00	.00
18	.00	.00	.00	.00	.00	.06	.01	.16	1.0	.06	.00	.00
19	.00	.60	.01	.00	.00	.05	14	.80	.72	.00	.00	.00
20	.28	11	.00	.00	.00	.12	2.7	.04	.03	.00	.00	.23
21	.00	1.8	.00	1.3	.00	.11	.02	.00	.00	.00	.00	.03
22	.00	3.0	.00	.36	.00	.47	.01	.17	.00	.00	.00	.32
23	.00	.16	.00	.23	.00	8.2	.01	2.7	.00	.00	7.2	.04
24	.00	.01	.00	.03	.00	5.0	.01	.03	23	.00	.01	.00
25	.00	.17	.00	.00	.00	11	.00	.00	2.2	37	.00	1.6
26	.00	.08	.00	.01	.00	3.3	.00	.00	.00	.01	1.0	.05
27	.00	.02	.00	.00	.01	.53	1.2	.15	.00	3.4	.00	.00
28	.00	.00	.00	.00	.01	4.5	.71	.01	.09	1.7	.00	.00
29	.00	.00	.86	.00	---	1.8	.06	.00	.00	.00	.99	.00
30	.00	.00	.70	.00	---	.23	.00	2.5	1.9	.00	.45	.00
31	.00	---	.04	.07	---	31	---	.04	---	.00	.00	---
TOTAL	8.47	20.95	7.72	4.32	1.41	90.13	47.10	32.02	103.50	156.57	40.37	22.64

ROCK RIVER BASIN

287

05428000 LAKE MENDOTA AT MADISON, WI

LOCATION.--Lat 43°05'42", long 89°22'12", in SE 1/4 sec.12, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in city boat house at dam at outlet, in Madison.

DRAINAGE AREA.--233 mi². Area of Lake Mendota, 15.2 mi².

PERIOD OF RECORD.--December 1902 to May 1903, January 1916 to current year (incomplete).

REVISED RECORDS.--WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above sea level, 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.--Estimated daily gage heights: July 11 and Sept. 27-30. Records good except estimated daily gage heights, 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, 12.20 ft, July 14-15, 1993; minimum observed, 8.02 ft, Feb. 24 to Mar. 10, 1920, current datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 12.20 ft, July 14-15; minimum, 9.17 ft, Nov. 9-10.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.94	9.31	9.79	9.70	9.34	9.22	11.37	11.20	10.03	10.43	11.79	11.24
2	9.91	9.39	9.80	9.69	9.32	9.22	11.35	11.21	10.02	10.43	11.75	11.19
3	9.87	9.40	9.78	9.69	9.31	9.23	11.32	11.20	10.02	10.42	11.70	11.16
4	9.82	9.38	9.79	9.70	9.29	9.25	11.29	11.19	10.01	10.42	11.64	11.11
5	9.78	9.34	9.78	9.71	9.27	9.26	11.25	11.16	10.01	10.57	11.59	11.05
6	9.74	9.30	9.77	9.70	9.27	9.28	11.21	11.12	9.98	11.11	11.56	11.00
7	9.69	9.25	9.77	9.68	9.26	9.33	11.17	11.07	10.05	11.39	11.50	10.96
8	9.68	9.22	9.76	9.67	9.25	9.43	11.18	11.04	10.24	11.52	11.45	10.91
9	9.66	9.20	9.76	9.65	9.24	9.55	11.17	11.02	10.33	11.80	11.41	10.85
10	9.62	9.21	9.81	9.63	9.25	9.70	11.14	10.99	10.34	11.96	11.43	10.80
11	9.59	9.22	9.81	9.61	9.26	9.77	11.13	10.95	10.34	12.09	11.41	10.71
12	9.56	9.26	9.78	9.60	9.26	9.80	11.09	10.90	10.32	12.17	11.36	10.69
13	9.52	9.25	9.75	9.64	9.25	9.82	11.04	10.83	10.30	12.19	11.33	10.70
14	9.47	9.23	9.74	9.62	9.25	9.83	11.00	10.79	10.39	12.20	11.28	10.89
15	9.45	9.22	9.78	9.60	9.24	9.85	11.11	10.73	10.39	12.18	11.44	10.96
16	9.46	9.22	9.87	9.58	9.23	9.88	11.26	10.66	10.36	12.11	11.60	10.96
17	9.40	9.22	9.88	9.56	9.22	9.95	11.27	10.60	10.36	12.09	11.61	10.96
18	9.37	9.21	9.86	9.54	9.21	10.02	11.27	10.57	10.44	12.09	11.60	10.93
19	9.32	9.21	9.88	9.52	9.21	10.06	11.30	10.52	10.46	12.07	11.58	10.89
20	9.33	9.31	9.86	9.50	9.20	10.09	11.45	10.47	10.49	12.02	11.56	10.87
21	9.32	9.51	9.85	9.52	9.24	10.11	11.47	10.41	10.49	11.97	11.51	10.85
22	9.32	9.59	9.83	9.51	9.26	10.15	11.48	10.35	10.47	11.91	11.46	10.83
23	9.32	9.68	9.81	9.51	9.26	10.26	11.46	10.32	10.44	11.84	11.46	10.80
24	9.33	9.71	9.77	9.49	9.26	10.34	11.44	10.33	10.43	11.80	11.48	10.76
25	9.32	9.74	9.74	9.47	9.25	10.49	11.42	10.27	10.50	11.89	11.43	10.75
26	9.32	9.79	9.72	9.45	9.24	10.68	11.38	10.22	10.49	11.90	11.40	10.77
27	9.31	9.79	9.70	9.44	9.23	10.84	11.34	10.17	10.46	11.85	11.37	10.72
28	9.31	9.79	9.68	9.42	9.22	10.94	11.33	10.14	10.44	11.92	11.32	10.68
29	9.30	9.79	9.70	9.40	---	11.02	11.29	10.08	10.41	11.90	11.29	10.63
30	9.28	9.79	9.72	9.37	---	11.07	11.26	10.07	10.43	11.86	11.30	10.60
31	9.27	---	9.71	9.36	---	11.22	---	10.08	---	11.82	11.29	---
MEAN	9.50	9.42	9.78	9.57	9.25	9.99	11.27	10.67	10.31	11.67	11.48	10.87
MAX	9.94	9.79	9.88	9.71	9.34	11.22	11.48	11.21	10.50	12.20	11.79	11.24
MIN	9.27	9.20	9.68	9.36	9.20	9.22	11.00	10.07	9.98	10.42	11.28	10.60

ROCK RIVER BASIN

05429000 LAKE MONONA AT MADISON, WI

LOCATION.--Lat 43°03'48", long 89°23'49", in SW 1/4 sec.23, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in Brittingham Park, in Madison.

DRAINAGE AREA.--279 mi². 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 sea level, 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, 7.15 ft, July 27; minimum, 4.09 ft, Mar. 5.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.21	4.32	4.48	4.63	4.53	4.17	5.76	6.09	5.73	5.77	6.92	6.34
2	5.19	4.37	4.44	4.62	4.52	4.16	5.84	6.15	5.67	5.75	6.86	6.31
3	5.19	4.35	4.41	4.62	4.51	4.12	5.89	6.15	5.65	5.75	6.81	6.27
4	5.17	4.39	4.36	4.70	4.51	4.10	5.92	6.16	5.61	5.74	6.75	6.24
5	5.13	4.43	4.32	4.73	4.51	4.09	5.94	6.17	5.59	5.87	6.70	6.22
6	5.10	4.46	4.31	4.73	4.52	4.11	5.95	6.14	5.58	6.33	6.66	6.18
7	5.08	4.50	4.29	4.72	4.52	4.14	5.96	6.12	5.73	6.42	6.62	6.16
8	5.08	4.55	4.27	4.70	4.51	4.19	6.03	6.13	5.98	6.46	6.58	6.14
9	5.06	4.61	4.26	4.68	4.50	4.24	6.05	6.12	6.01	6.78	6.58	6.09
10	5.03	4.60	4.27	4.66	4.48	4.30	6.07	6.09	5.97	6.92	6.60	6.05
11	4.96	4.56	4.25	4.65	4.46	4.30	6.10	6.05	5.92	7.00	6.56	6.03
12	4.89	4.51	4.27	4.64	4.43	4.29	6.10	6.01	5.89	6.98	6.54	6.03
13	4.85	4.44	4.30	4.69	4.41	4.27	6.09	5.96	5.83	6.95	6.50	6.10
14	4.84	4.40	4.32	4.67	4.38	4.25	6.10	5.91	5.90	6.93	6.48	6.34
15	4.84	4.36	4.41	4.66	4.35	4.24	6.29	5.87	5.86	6.94	6.67	6.38
16	4.83	4.33	4.56	4.64	4.32	4.25	6.41	5.83	5.83	6.94	6.78	6.36
17	4.81	4.29	4.60	4.62	4.30	4.28	6.39	5.80	5.86	6.95	6.75	6.34
18	4.78	4.25	4.62	4.61	4.28	4.30	6.33	5.80	5.97	7.00	6.72	6.31
19	4.76	4.25	4.63	4.60	4.26	4.30	6.34	5.77	5.96	6.98	6.68	6.29
20	4.72	4.34	4.60	4.58	4.24	4.30	6.48	5.75	5.92	6.96	6.64	6.26
21	4.66	4.54	4.59	4.61	4.26	4.29	6.49	5.72	5.89	6.95	6.58	6.24
22	4.61	4.58	4.59	4.63	4.27	4.32	6.44	5.71	5.87	6.92	6.52	6.22
23	4.56	4.61	4.58	4.64	4.26	4.45	6.39	5.73	5.84	6.89	6.53	6.18
24	4.52	4.61	4.58	4.63	4.25	4.58	6.31	5.73	5.82	6.86	6.53	6.15
25	4.48	4.62	4.58	4.62	4.23	4.76	6.26	5.71	5.86	7.05	6.52	6.15
26	4.43	4.62	4.57	4.61	4.21	4.91	6.19	5.69	5.81	7.10	6.51	6.20
27	4.39	4.60	4.56	4.59	4.19	5.04	6.14	5.70	5.78	7.11	6.46	6.16
28	4.34	4.57	4.55	4.58	4.18	5.12	6.15	5.69	5.77	7.12	6.43	6.13
29	4.30	4.54	4.59	4.57	---	5.19	6.13	5.68	5.74	7.07	6.42	6.09
30	4.27	4.51	4.62	4.56	---	5.27	6.11	5.74	5.80	7.02	6.40	6.07
31	4.24	---	4.64	4.54	---	5.49	---	5.77	---	6.98	6.37	---
MEAN	4.78	4.47	4.47	4.64	4.37	4.45	6.15	5.90	5.82	6.73	6.60	6.20
MAX	5.21	4.62	4.64	4.73	4.53	5.49	6.49	6.17	6.01	7.12	6.92	6.38
MIN	4.24	4.25	4.25	4.54	4.18	4.09	5.76	5.68	5.58	5.74	6.37	6.03

ROCK RIVER BASIN

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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.--No estimated daily discharge. Records are good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	4.4	.34	.15	.51	.70	.53	1.1	.34	.44	.41	.50
2	.38	1.2	.26	.18	.41	.80	.64	1.9	1.6	.40	.48	.47
3	.36	.40	.24	1.6	.65	1.1	.43	1.0	.56	.60	.53	.44
4	.26	.32	.23	2.1	.60	.70	.31	.55	.41	.44	.47	.48
5	.36	.23	.21	.22	.65	.74	.23	.33	.33	13	.83	.42
6	.37	.29	.22	.22	.23	.99	.29	.42	.32	.67	.83	.38
7	.34	.28	.24	.24	.20	.91	.72	.47	7.3	.43	.41	.44
8	1.3	.35	.24	.13	.24	.76	1.9	1.2	2.6	1.4	.39	.42
9	.57	.67	.21	.11	.35	.45	.53	.36	.46	6.8	2.6	.41
10	.36	.32	.25	.11	1.1	.58	.26	.33	.37	2.1	.55	.43
11	.36	.29	.42	.15	.20	.39	.99	.37	.37	.86	.49	.81
12	.38	1.0	.30	.21	.19	.29	.37	.33	.35	.43	.55	.45
13	.40	.31	.41	.24	.27	.13	.27	.31	.43	.74	.59	5.7
14	.30	.26	.43	.28	.22	.28	1.2	.30	3.3	.48	.44	4.7
15	2.0	.25	4.9	.29	.21	.66	7.9	.40	.40	.44	7.5	.41
16	.48	.26	.72	.19	.13	1.7	1.2	.27	.37	.44	.48	.43
17	.30	.31	.25	.14	.20	.21	.30	.48	3.7	2.4	.42	.41
18	.25	.31	.32	.15	.18	.30	.27	.77	.72	1.0	.43	.37
19	.38	1.6	.33	.15	.19	.35	4.0	.64	1.2	.46	.45	.36
20	.86	7.1	.20	.31	.18	.53	2.9	.38	.48	.43	.44	.56
21	.30	1.8	.29	2.2	.13	.51	.36	.33	.42	.43	.41	.50
22	.32	2.6	.37	1.1	.15	.75	.27	1.0	.42	.42	.43	.41
23	.34	.39	.17	1.0	.21	4.3	.26	1.5	.39	.43	1.4	.35
24	.30	.24	.14	.34	.30	2.2	.24	.40	2.7	.42	.47	.40
25	.28	.58	.12	.22	.16	1.6	.22	.38	1.0	6.8	.44	3.5
26	.30	.75	.08	.37	.19	.71	.21	.33	.39	.50	.49	.50
27	.44	.43	.07	.30	.24	.42	.73	.73	.39	1.2	.48	.71
28	.25	.25	.13	.26	.26	.58	.57	.33	.60	1.0	.48	.50
29	.21	.29	1.8	.17	---	.49	.57	.27	.43	.49	1.4	.36
30	.26	.29	1.6	.19	---	.42	.28	3.5	2.5	.51	.48	.35
31	.26	---	.25	.68	---	7.0	---	.38	---	.42	.52	---
TOTAL	13.62	27.77	15.74	14.00	8.55	31.55	28.95	21.06	34.85	46.58	26.29	26.17
MEAN	.44	.93	.51	.45	.31	1.02	.96	.68	1.16	1.50	.85	.87
MAX	2.0	7.1	4.9	2.2	1.1	7.0	7.9	3.5	7.3	13	7.5	5.7
MIN	.21	.23	.07	.11	.13	.13	.21	.27	.32	.40	.39	.35
CFSM	2.44	5.14	2.82	2.51	1.70	5.65	5.36	3.77	6.45	8.35	4.71	4.85
IN.	2.81	5.74	3.25	2.89	1.77	6.52	5.98	4.35	7.20	9.63	5.43	5.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1993, BY WATER YEAR (WY)

	MEAN	.76	.88	.45	.41	.38	.68	.77	.50	.73	1.15	.80	.89
MAX	1.08	.93	.51	.45	.45	1.02	.96	.68	1.16	1.50	.85	.94	
(WY)	1992	1993	1993	1993	1992	1993	1993	1993	1993	1993	1993	1992	
MIN	.44	.84	.39	.37	.31	.35	.57	.30	.39	.96	.78	.86	
(WY)	1993	1992	1992	1992	1993	1992	1992	1992	1992	1991	1991	1991	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1991 - 1993	
ANNUAL TOTAL	213.57		295.13			
ANNUAL MEAN	.58		.81			
HIGHEST ANNUAL MEAN					.71	
LOWEST ANNUAL MEAN					.81	
HIGHEST DAILY MEAN	7.1 Aug 25		13 Jul 5		13 Jul 5 1993	
LOWEST DAILY MEAN	.07 Dec 27		.07 Dec 27		.07 Dec 27 1992	
ANNUAL SEVEN-DAY MINIMUM	.15 Dec 22		.15 Dec 22		.15 Dec 22 1992	
INSTANTANEOUS PEAK FLOW			78 (a)Jun 7		78 Many days	
INSTANTANEOUS PEAK STAGE			3.35 (a)Jun 7		3.35 Many days	
INSTANTANEOUS LOW FLOW			.04 (b)Dec 26		.04 Many days	
ANNUAL RUNOFF (CFSM)	3.24		4.49		3.97	
ANNUAL RUNOFF (INCHES)	44.14		60.99		53.92	
10 PERCENT EXCEEDS	1.1		1.6		1.4	
50 PERCENT EXCEEDS	.34		.41		.39	
90 PERCENT EXCEEDS	.20		.21		.21	

(a) Also occurred July 7, 9, 25, and Aug. 25

(b) Also occurred Dec. 27, 28

ROCK RIVER BASIN

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 1992 TO SEPTEMBER 1993

BEGIN- NING DATE	BEGIN- NING TIME	ENDING DATE	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)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)
10-15-92	1756	10-16-92	0041	0.134	31	8.3	--	7.1
11-01-92	2225	11-02-92	0432	0.062	16	3.2	--	--
11-12-92	0600	11-12-92	1444	0.057	--	11	--	--
11-19-92	1515	11-20-92	1455	0.378	48	5.4	--	14
11-20-92	1455	11-20-92	2346	0.352	25	3.6	--	8.4
11-22-92	1412	11-22-92	2300	0.208	18	2.4	--	5.8
12-15-92	0259	12-16-92	0141	0.429	59	6.9	--	15
12-29-92	0126	12-29-92	0833	0.107	45	11	--	11
12-30-92	0454	12-30-92	1113	0.060	43	--	--	15
01-23-93	1121	01-23-93	2014	0.059	69	23	--	24
03-02-93	1146	03-02-93	1646	0.023	140	33	--	48
03-03-93	1116	03-03-93	2138	0.071	69	19	--	36
03-05-93	1219	03-05-93	1810	0.036	64	14	--	21
03-06-93	1126	03-06-93	1804	0.057	58	12	--	17
03-07-93	1209	03-07-93	1938	0.050	70	>20	--	17
03-08-93	1127	03-08-93	1817	0.036	70	16	--	18
03-16-93	0039	03-16-93	1809	0.135	76	11	--	22
03-22-93	0948	03-22-93	1445	0.029	130	11	--	43
03-22-93	2305	03-23-93	2231	0.365	53	5.5	--	21
03-31-93	0237	03-31-93	2049	0.587	59	6.7	--	25
04-19-93	1035	04-20-93	1424	0.566	30	4.0	--	14
05-01-93	1913	05-02-93	0605	0.210	47	6.6	--	16
05-30-93	0315	05-30-93	2148	0.288	--	4.1	1500	8.6
06-02-93	1049	06-03-93	0215	0.132	41	6.0	6300	12
06-07-93	1107	06-07-93	1355	0.455	48	5.0	3300	18
06-24-93	1908	06-25-93	0336	0.224	26	4.9	3900	10
06-30-93	0043	06-30-93	0509	0.167	26	4.0	2300	6.6

05429268 NINE SPRINGS CREEK STORM SEWER TRIBUTARY AT MADISON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

BEGIN- NING DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, TOTAL RECOVER- ABLE (MG/L) (00921)	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- 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)
10-15-92	4.7	3.0	1.0	4.0	62	144	0.382	0.258	0.200
11-01-92	7.6	--	3.0	4.0	18	72	0.446	0.069	0.100
11-12-92	11	--	3.0	3.0	156	252	0.429	0.217	0.340
11-19-92	7.6	6.0	3.0	7.0	136	212	0.483	0.214	0.290
11-20-92	5.8	4.0	2.0	4.0	74	130	0.340	0.113	0.160
11-22-92	4.7	3.0	1.0	5.0	45	92	0.207	0.078	0.130
12-15-92	8.0	7.0	2.0	90	125	332	0.227	0.162	0.250
12-29-92	8.1	4.0	2.0	130	48	334	0.566	0.433	0.210
12-30-92	10	6.0	3.0	<1.0	72	306	0.502	0.275	0.360
01-23-93	22	7.0	5.0	480	42	930	0.737	0.456	0.210
03-02-93	35	16	10	920	152	1770	1.96	0.977	0.470
03-03-93	27	13	8.0	540	108	1120	1.14	0.794	0.390
03-05-93	17	9.0	6.0	190	68	482	0.674	0.440	0.460
03-06-93	13	7.0	5.0	110	49	340	0.402	0.501	0.470
03-07-93	16	7.0	6.0	91	24	278	0.364	0.662	0.550
03-08-93	18	8.0	7.0	98	48	338	0.303	0.448	0.480
03-16-93	14	10	5.0	130	115	426	0.867	0.737	0.360
03-22-93	18	19	4.0	770	284	1670	0.588	0.461	0.510
03-22-93	9.5	10	3.0	95	120	368	0.820	0.491	0.270
03-31-93	8.9	13	3.0	21	244	352	0.543	0.306	0.340
04-19-93	7.4	7.0	2.0	13	104	196	0.541	0.168	0.170
05-01-93	6.8	8.0	2.0	8.0	122	188	0.656	0.500	0.290
05-30-93	6.2	4.0	2.0	9.0	48	110	0.538	0.365	0.150
06-02-93	8.5	5.0	3.0	8.0	63	138	0.546	0.338	0.160
06-07-93	4.1	10	1.0	4.0	288	298	0.187	0.174	0.590
06-24-93	6.0	4.0	2.0	14	100	164	0.366	0.189	0.170
06-30-93	4.4	3.0	1.0	3.0	63	110	0.624	0.223	0.140

BEGIN- NING DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	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)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
10-15-92	0.101	8	3	11	<3	120	--	--
11-01-92	0.062	7	<3	4	<3	90	--	--
11-12-92	0.053	24	9	36	13	320	--	--
11-19-92	0.052	14	<3	20	<3	190	--	--
11-20-92	0.039	8	<3	12	<3	130	--	--
11-22-92	0.029	8	<3	9	<3	90	--	--
12-15-92	0.036	32	3	31	<3	200	--	2.4
12-29-92	0.102	20	7	16	<3	180	--	6.9
12-30-92	--	22	8	22	<3	170	--	6.2
01-23-93	0.098	28	14	13	<3	150	--	--
03-02-93	0.139	48	19	43	<1	310	--	--
03-03-93	0.138	31	16	22	2	180	--	--
03-05-93	0.216	19	15	12	<1	120	--	--
03-06-93	0.260	15	12	7	2	80	--	--
03-07-93	0.380	14	12	4	<1	70	--	--
03-08-93	0.300	13	11	8	<1	80	--	--
03-16-93	0.131	28	11	22	1	160	--	--
03-22-93	0.104	61	6	77	1	390	--	--
03-22-93	0.067	23	5	34	1	200	--	--
03-31-93	0.044	32	6	38	1	240	--	--
04-19-93	0.020	12	2	18	<1	120	--	--
05-01-93	0.045	16	5	23	<1	160	4.6	--
05-30-93	0.031	10	5	9	<1	110	5.0	--
06-02-93	0.039	13	6	15	<1	170	6.4	--
06-07-93	0.034	19	3	28	<1	160	3.5	--
06-24-93	0.053	10	9	9	1	100	4.7	--
06-30-93	0.049	8	4	5	1	100	4.2	--

ROCK RIVER BASIN

05429268 NINE SPRINGS CREEK STORM SEWER TRIBUTARY AT MADISON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

BEGIN- NING DATE	BEGIN- NING TIME	ENDING DATE	ENDING TIME	RUNOFF VOLUME, MILLIONS OF CUBIC FEET (99905)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)
05-01-93	1913	05-02-93	0605	0.210	4.6	<0.10	0.1
05-30-93	0315	05-30-93	2148	0.288	5.0	0.45	0.2
06-02-93	1049	06-03-93	0215	0.132	6.4	0.54	0.2
06-07-93	1107	06-07-93	1355	0.455	3.5	<0.55	0.2
06-24-93	1908	06-25-93	0336	0.224	4.7	<0.10	0.3
06-30-93	0043	06-30-93	0509	0.167	4.2	<0.15	0.2

BEGIN- NING DATE	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)	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)
05-01-93	<1.0	0.05	<1.0	<0.30	<0.36	<0.10	<0.22	<1.0	<1.0
05-30-93	<1.0	0.05	<1.0	<0.30	<0.12	<0.10	<0.22	<1.0	<1.0
06-02-93	<1.0	0.05	<1.0	<0.30	<0.12	<0.10	<0.22	<1.0	<1.0
06-07-93	<1.0	0.05	<1.0	<0.55	<0.91	<0.13	<0.22	<1.0	<1.0
06-24-93	<1.0	0.05	<1.0	<0.30	--	<0.10	<0.22	<1.0	<1.0
06-30-93	<1.0	0.05	<1.0	<0.30	--	<0.10	<0.22	<1.0	<1.0

BEGIN- NING DATE	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)
05-01-93	<0.010	<0.20	<0.04	<1.00	<0.02	<1.4	<1.0	<0.72
05-30-93	<0.010	<0.20	<0.04	<1.00	<0.02	<1.0	<1.0	1.3
06-02-93	<0.010	<0.20	<0.04	<1.00	<0.02	<1.0	<1.0	<0.46
06-07-93	<0.010	<0.20	<0.04	<1.00	<0.02	<1.7	<1.0	1.6
06-24-93	<0.010	<0.20	<0.04	<1.00	<0.02	<1.0	<1.0	<0.33
06-30-93	<0.010	<0.20	<0.04	<1.00	<0.02	<1.0	<1.0	1.6

ROCK RIVER BASIN

293

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. Rainfall estimated to be 0.00 for Nov. 25, 27, Dec. 11, 19, Jan. 5, 22, Feb. 9, 10, 13, Mar. 12, 16, 20, 22, and Apr. 2 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.27 in., July 5, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.27 in., July 5.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.07	.00	.00	.00	.00	.00	.38	.00	.00	.00	.00
2	.00	.15	.00	.00	.00	.00	.00	.40	.38	.00	.00	.00
3	.00	.01	.00	.25	.00	.00	.00	.17	.02	.11	.00	.00
4	.00	.00	.00	.18	.00	.00	.00	.07	.03	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.27	.17	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.04	.00
7	.00	.00	.00	.00	.00	.00	.19	.05	1.72	.00	.00	.00
8	.35	.04	.00	.00	.00	.00	.42	.25	.55	.36	.00	.01
9	.06	.11	.00	.00	.00	.00	.00	.01	.01	1.54	.82	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.52	.00	.00
11	.00	.02	.00	.00	.00	.00	.24	.00	.00	.10	.00	.17
12	.00	.18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.43	.08	.00	2.05
14	.00	.00	.01	.00	.00	.00	.33	.00	.58	.00	.02	.73
15	.52	.00	1.27	.00	.00	.00	1.56	.00	.00	.00	1.93	.00
16	.01	.00	.01	.00	.00	.00	.06	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.01	.18	1.11	.80	.00	.00
18	.00	.00	.00	.00	.00	.00	.02	.10	.04	.08	.00	.00
19	.00	.44	.00	.00	.00	.00	1.02	.05	.25	.00	.00	.00
20	.19	1.76	.00	.20	.00	.00	.48	.00	.00	.00	.00	.08
21	.00	.25	.00	.33	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.53	.00	.00	.00	.00	.00	.26	.00	.00	.00	.02
23	.00	.00	.00	.00	.00	.69	.00	.30	.00	.00	.34	.00
24	.00	.00	.00	.00	.00	.00	.00	.01	.85	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.05	1.91	.00	.92
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.25	.15	.00	.30	.00	.00
28	.00	.00	.00	.00	.00	.00	.03	.00	.05	.10	.00	.01
29	.00	.00	.36	.00	---	.00	.10	.00	.02	.00	.33	.01
30	.00	.00	.22	.00	---	.00	.00	.96	.63	.00	.00	.01
31	.04	---	.00	.00	---	1.55	---	.01	---	.00	.02	---
TOTAL	1.17	4.56	1.87	0.96	0.00	2.24	4.71	3.35	6.72	9.18	3.67	4.01

05429500 YAHARA RIVER NEAR MCFARLAND, WI

LOCATION.--Lat 43°00'32", long 89°18'18", in SW 1/4 sec.3, T.6 N., R.10 E., Dane County, Hydrologic Unit 07090001, on left bank just upstream from bridge on U.S. Highway 51, at dam at outlet of Lake Waubesa and 1.0 mi southwest of McFarland.

DRAINAGE AREA.--327 mi².

PERIOD OF RECORD.--September 1930 to current year.

REVISED RECORDS.--WSP 805, WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above sea level (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. Flow regulated by dams at outlets of Lake Mendota and Lake Waubesa. The Madison Metropolitan Sewerage District diverted an average of 68 ft³/s of effluent into the Badfish Creek basin during 1993 water year. The data were provided by the Madison Metropolitan Sewerage District. Prior to 1958 the effluent was discharged into the Yahara River above McFarland. Gage-height telemeter at station for Lake Waubesa stage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292	151	213	235	227	150	468	560	407	326	555	426
2	288	167	211	233	226	97	481	579	379	319	545	417
3	288	121	203	235	223	58	490	580	318	313	531	413
4	283	100	199	254	222	61	496	580	244	305	513	404
5	275	102	192	262	223	62	496	578	239	317	493	396
6	268	106	184	261	225	63	497	574	238	396	481	390
7	265	79	175	259	224	71	495	565	248	427	469	383
8	264	39	169	256	222	85	504	566	369	444	460	380
9	268	50	166	251	221	93	514	559	464	521	461	375
10	264	170	174	248	219	100	513	555	447	561	470	371
11	260	222	170	246	218	99	515	548	427	587	468	364
12	252	217	165	246	214	95	516	536	405	585	464	360
13	243	209	165	256	209	90	511	517	388	575	459	380
14	236	197	166	252	204	87	510	501	409	567	451	454
15	235	186	183	249	198	84	557	489	401	559	480	470
16	245	175	215	247	193	86	605	474	385	551	508	466
17	235	169	227	242	185	97	618	463	377	554	510	461
18	231	163	232	240	182	95	620	458	399	567	506	456
19	225	157	235	236	175	94	623	449	409	568	504	450
20	224	171	235	234	169	93	666	441	404	559	497	447
21	218	214	229	240	174	93	677	431	392	548	483	448
22	209	226	227	242	177	101	666	422	378	539	468	443
23	203	241	227	244	175	130	650	422	363	527	462	438
24	197	243	230	246	171	184	633	424	352	520	461	431
25	189	244	226	245	166	238	619	417	362	587	458	433
26	182	251	221	243	161	276	601	409	352	602	453	453
27	175	243	217	240	157	303	583	403	343	593	450	452
28	168	234	214	239	154	312	579	398	334	598	444	445
29	162	226	221	236	---	339	576	391	324	589	441	438
30	153	220	228	233	---	366	569	404	329	574	439	426
31	145	---	236	230	---	407	---	415	---	564	432	---
TOTAL	7142	5293	6355	7580	5514	4509	16848	15108	10886	15842	14816	12670
MEAN	230	176	205	245	197	145	562	487	363	511	478	422
MAX	292	251	236	262	227	407	677	580	464	602	555	470
MIN	145	39	165	230	154	58	468	391	238	305	432	360
CFSM	.70	.54	.63	.75	.60	.44	1.72	1.49	1.11	1.56	1.46	1.29
IN.	.81	.60	.72	.86	.63	.51	1.92	1.72	1.24	1.80	1.69	1.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1993, BY WATER YEAR (WY)

CHARACTERISTICS OF KONGHEI RIVER DATA FOR WINTER YEARS 1960-1966, 21 JANUARY 1970												
MEAN	118	150	148	140	156	247	262	178	139	138	112	110
MAX	401	355	375	376	363	599	719	520	396	511	478	422
(WY)	1981	1986	1986	1986	1938	1937	1959	1933	1933	1993	1993	1993
MIN	4.09	27.4	36.5	34.0	31.6	67.4	25.5	42.1	15.6	16.0	15.9	13.8
(WY)	1965	1940	1940	1977	1991	1934	1966	1958	1936	1965	1988	1964

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1930 - 1993
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HYDROLOGIC STATISTICS	FOR 1972 CALENDAR YEAR	FOR 1973 CALENDAR YEAR	FOR 1974 CALENDAR YEAR	FOR 1975 CALENDAR YEAR	FOR 1976 CALENDAR YEAR	FOR 1977 CALENDAR YEAR
ANNUAL TOTAL	53965.4	122563				
ANNUAL MEAN	147	336			158	
HIGHEST ANNUAL MEAN					336	1993
LOWEST ANNUAL MEAN					63.8	1964
HIGHEST DAILY MEAN	310 Sep 22	677 Apr 21			853 Apr 11	1959
LOWEST DAILY MEAN	2.9 Jul 3	39 Nov 8			1.2 Jun 27	1979
ANNUAL SEVEN-DAY MINIMUM	3.6 Jul 1	70 Mar 3			2.0 Jun 22	1979
INSTANTANEOUS PEAK FLOW		(a)681 Apr 21			(c)867 Apr 10	1959
INSTANTANEOUS PEAK STAGE		(b)6.72 Jul 25			(d)6.33 Jul 23,24	1950
ANNUAL RUNOFF (CFSM)	.45	1.03			.48	
ANNUAL RUNOFF (INCHES)	6.14	13.94			6.57	
10 PERCENT EXCEEDS	235	560			320	
50 PERCENT EXCEEDS	161	305			130	
90 PERCENT EXCEEDS	40	159			38	

(a) Gage height. 5.93 ft

(b) Backwater from aquatic vegetation

(c) Gage height, 5.82 ft, datum then in use

(d) Datum then in use, backwater from aquatic vegetation

ROCK RIVER BASIN

295

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 above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 25, 26, Feb. 17-19, and 24-27. Records good except those for ice-affected periods, which are fair. Approximately 50 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	101	103	98	96	87	371	129	117	159	125	120
2	85	166	99	90	94	88	200	226	117	151	125	119
3	84	126	98	93	99	99	176	200	150	144	124	119
4	79	109	97	365	116	142	159	190	127	134	118	111
5	81	105	91	148	137	145	146	165	120	140	113	106
6	85	100	90	117	128	210	138	152	107	252	121	102
7	84	92	92	105	98	255	136	145	172	191	116	109
8	88	89	94	99	96	250	181	156	471	179	111	112
9	91	95	92	92	95	185	181	143	290	343	119	109
10	83	94	94	89	105	141	150	135	200	254	129	111
11	79	91	92	90	109	110	141	133	173	224	120	100
12	78	101	89	92	95	97	139	127	156	199	117	107
13	79	105	87	92	90	91	133	119	141	173	117	142
14	79	95	91	90	88	85	139	116	197	176	112	269
15	85	88	140	90	90	87	337	111	162	160	158	198
16	107	90	272	89	88	208	385	102	145	147	156	151
17	94	90	173	86	84	153	229	103	172	151	139	137
18	89	88	137	86	82	102	184	109	267	169	131	129
19	89	90	120	89	84	98	195	105	204	153	127	123
20	98	138	108	88	84	91	440	107	212	143	126	129
21	96	266	104	102	86	97	270	104	177	137	117	138
22	92	159	104	125	86	114	200	101	161	129	112	124
23	91	177	100	124	85	448	174	108	149	126	121	122
24	87	138	93	130	74	596	158	118	144	125	122	118
25	81	126	88	101	74	553	145	107	163	242	115	146
26	85	124	84	95	76	325	139	103	140	188	116	296
27	86	108	82	94	78	201	134	105	132	154	115	179
28	87	102	85	92	81	169	140	104	135	149	110	154
29	85	97	109	89	---	170	135	98	135	140	125	143
30	83	101	138	87	---	152	131	138	196	133	132	134
31	81	---	143	89	---	333	---	133	---	128	133	---
TOTAL	2677	3451	3389	3316	2598	5882	5786	3992	5232	5293	3822	4157
MEAN	86.4	115	109	107	92.8	190	193	129	174	171	123	139
MAX	107	266	272	365	137	596	440	226	471	343	158	296
MIN	78	88	82	86	74	85	131	98	107	125	110	100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1993, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	92.2	101	95.4	88.1	98.1	127	121	101	105	101	89.7	95.6					
MAX	139	162	129	122	157	190	193	129	174	171	123	139					
(WY)	1987	1986	1983	1988	1985	1993	1993	1993	1993	1993	1993	1993					
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1977 - 1993

ANNUAL TOTAL	35342	49595	
ANNUAL MEAN	96.6	136	
HIGHEST ANNUAL MEAN			102
LOWEST ANNUAL MEAN			136
HIGHEST DAILY MEAN	272	596	80.4
LOWEST DAILY MEAN	63	(a)74	782
ANNUAL SEVEN-DAY MINIMUM	67	79	35
INSTANTANEOUS PEAK FLOW		734	48
INSTANTANEOUS PEAK STAGE		7.61	870
10 PERCENT EXCEEDS	123	199	8.11
50 PERCENT EXCEEDS	90	118	
90 PERCENT EXCEEDS	75	86	

(a) Result of freezeup

ROCK RIVER BASIN

05430175 YAHARA RIVER NEAR FULTON, WI

LOCATION.--Lat 42°49'50", long 89°10'09", in NE 1/4 NE 1/4 sec.10, T.4 N., R.11 E., Rock County, Hydrologic Unit 07090001, on right bank, 700 ft 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 sea level.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 24-27, Jan. 1, 8, 14, 16-19, 30, Feb. 17-19, 22, 23, and 25-27. 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	429	314	449	410	445	374	1390	994	720	539	941	649
2	427	468	366	370	422	302	793	1100	718	552	928	659
3	414	433	411	432	354	336	825	1110	752	540	885	657
4	364	425	410	876	434	430	825	1120	718	509	818	650
5	410	429	370	608	452	322	797	1080	552	536	815	621
6	410	296	397	520	384	441	788	1060	362	658	788	591
7	418	321	324	504	419	587	784	1030	425	600	767	576
8	399	409	405	460	368	574	855	1010	1070	583	751	589
9	418	276	358	409	409	409	880	990	1130	815	767	553
10	420	382	402	442	346	473	879	968	950	988	767	545
11	386	309	322	452	430	414	864	966	857	963	711	512
12	402	305	395	472	409	316	855	945	783	1020	692	552
13	416	325	333	489	309	378	835	848	663	948	714	579
14	416	407	395	470	399	337	828	844	861	931	711	792
15	433	305	434	453	393	281	1250	836	854	931	761	860
16	443	274	595	430	385	341	1490	829	815	949	810	780
17	368	406	548	410	290	475	1140	768	722	953	819	760
18	418	387	507	310	370	334	1030	738	1060	1030	809	747
19	417	307	482	430	340	395	1120	798	856	947	797	741
20	424	459	437	338	328	275	1680	801	838	920	787	735
21	419	600	398	468	398	311	1480	705	813	874	771	708
22	364	482	460	494	230	401	1210	656	733	874	669	696
23	374	554	448	496	390	823	1210	712	660	881	710	692
24	398	518	370	502	257	1460	1170	724	602	865	735	687
25	316	500	430	467	390	1360	1030	718	652	1010	784	719
26	390	481	370	458	300	768	1060	709	619	1120	628	1040
27	391	345	420	441	350	706	1090	706	584	1120	742	942
28	377	424	451	374	268	648	1070	700	482	1090	700	845
29	362	445	379	309	---	638	1040	676	534	1050	693	709
30	311	450	460	430	---	618	1020	724	673	980	644	691
31	375	---	469	445	---	1030	---	743	---	950	650	---
TOTAL	12309	12036	12995	14169	10269	16557	31288	26608	22058	26726	23564	20877
MEAN	397	401	419	457	367	534	1043	858	735	862	760	696
MAX	443	600	595	876	452	1460	1680	1120	1130	1120	941	1040
MIN	311	274	322	309	230	275	784	656	362	509	628	512
CFSM	.77	.78	.81	.88	.71	1.03	2.02	1.66	1.42	1.67	1.47	1.35
IN.	.89	.87	.94	1.02	.74	1.19	2.25	1.91	1.59	1.92	1.70	1.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1993, BY WATER YEAR (WY)

	MEAN	334	399	406	348	355	456	461	358	309	302	273	330
MAX	596	711	558	542	585	756	1043	858	735	862	760	696	
(WY)	1987	1986	1983	1986	1986	1985	1993	1993	1993	1993	1993	1993	
MIN	171	181	167	192	168	229	204	155	136	121	117	109	
(WY)	1991	1990	1990	1978	1991	1978	1978	1981	1988	1988	1988	1988	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1977 - 1993
ANNUAL TOTAL	115076	229456	
ANNUAL MEAN	314	629	363
HIGHEST ANNUAL MEAN			629
LOWEST ANNUAL MEAN			262
HIGHEST DAILY MEAN	643	Sep 17	2160
LOWEST DAILY MEAN	116	Jul 11	60
ANNUAL SEVEN-DAY MINIMUM	132	Jul 6	104
INSTANTANEOUS PEAK FLOW			3040
INSTANTANEOUS PEAK STAGE			8.36
ANNUAL RUNOFF (CFSM)	.61	1.22	.70
ANNUAL RUNOFF (INCHES)	8.28	16.51	9.53
10 PERCENT EXCEEDS	443	1010	592
50 PERCENT EXCEEDS	324	576	328
90 PERCENT EXCEEDS	146	343	144

(a) Result of freezup

297

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.

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 sea level. 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. 4-6, 21, 23-29, Jan. 2, 17-22, and Feb. 18-28. 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.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1850	1600	3030	2800	2090	1380	7600	10100	4210	5380	5640	2580
2	1810	1730	3060	2800	2020	1410	7460	10000	4140	4700	5510	2420
3	1750	1470	2890	2760	1960	1430	7310	9920	4310	4420	5370	2260
4	1750	1550	2800	3380	1930	1730	7480	9880	4280	4180	5160	2190
5	1590	1620	2600	3400	1960	1910	7570	9700	4160	4030	5090	2140
6	1340	1730	2600	3140	2020	1860	7580	9480	3770	4200	4940	2090
7	1330	1680	2650	3100	1880	2060	7590	9280	3960	4180	4800	1980
8	1160	1710	2570	3090	1910	2300	7680	9040	4780	4090	4640	2150
9	1080	1840	2520	3030	1890	2420	7650	8840	5230	4160	4500	1960
10	1120	1740	2460	2970	1900	2550	7630	8580	5370	4560	4440	1720
11	1220	1800	2370	2840	1960	2730	7760	8400	5560	4840	4330	1410
12	1100	1880	2240	2770	1970	2800	7720	8140	5690	5180	4080	1480
13	1090	1850	2240	2730	1850	2840	7650	7910	5600	5470	4110	1620
14	1190	1830	2160	2590	1770	2870	7670	7380	5720	5730	3940	2010
15	1250	1970	2330	2500	1820	2780	8210	7100	5730	5920	3850	2300
16	1210	1910	2620	2390	1820	2930	8730	6850	5680	6080	3900	2380
17	1240	1910	2870	2200	1720	3060	8650	6580	5550	6190	3780	2620
18	1200	2030	3030	2200	1700	3070	8590	6330	5920	6330	3690	2740
19	1180	1950	3180	2100	1700	3120	9060	6100	6170	6270	3640	2870
20	1230	2150	3240	2100	1600	3200	10200	5870	6140	6280	3560	3070
21	1240	2300	3200	2000	1600	3110	10400	5610	5950	6280	3490	3030
22	1290	2520	3200	2100	1600	3340	10300	5290	5790	6220	3330	3050
23	1510	2680	3200	2160	1500	4880	10500	5160	5710	6150	3170	3140
24	1280	2630	3100	2270	1500	5250	10600	4900	5490	6080	3140	3210
25	1490	2800	3100	2160	1500	5260	10600	4770	5460	6060	3130	3380
26	1540	2930	3100	2130	1500	5440	10600	4660	5260	6040	2940	3810
27	1510	2830	3100	2140	1400	5460	10600	4560	5080	6070	2870	3800
28	1490	2940	3000	2140	1400	5590	10500	4400	4950	6020	2760	3700
29	1310	2990	3000	2030	---	5740	10500	4330	4750	5910	2780	3650
30	1480	3030	2940	1940	---	5890	10300	4350	5470	5940	2550	3550
31	1320	---	2940	2020	---	6440	---	4380	---	5770	2640	---
TOTAL	42150	63600	87340	77980	49470	104850	264690	217890	155880	168730	121770	78310
MEAN	1360	2120	2817	2515	1767	3382	8823	7029	5196	5443	3928	2610
MAX	1850	3030	3240	3400	2090	6440	10600	10100	6170			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1993. BY WATER YEAR (WY)

MEAN	1364	1548	1462	1304	1510	3346	4164	2520	1689	1352	1068	1185
MAX	8219	5883	4395	3558	5647	8958	10010	7911	5196	5443	5376	5088
(WY)	1987	1986	1986	1960	1938	1918	1979	1973	1993	1993	1924	1938
MIN	254	397	383	275	327	610	1002	389	314	247	183	212
(WY)	1940	1964	1940	1959	1959	1940	1931	1958	1934	1934	1934	1939

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1914 - 1993
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ANNUAL TOTAL	726699		1432660				
ANNUAL MEAN	1986		3925		1879		
HIGHEST ANNUAL MEAN					3925		1993
LOWEST ANNUAL MEAN					557		1964
HIGHEST DAILY MEAN	4060	Mar 18	10600	Apr 24	13000	Mar 23,24	1929
LOWEST DAILY MEAN	365	Aug 18	1080	Oct 9	42	Aug 25,26	1934
ANNUAL SEVEN-DAY MINIMUM	395	Aug 18	1140	Oct 8	115	Aug 24	1934
INSTANTANEOUS PEAK FLOW			10700	Apr 23	(a)13000	Mar 23	1929
INSTANTANEOUS PEAK STAGE			11.41	Apr 23	(b)13.05	Feb 5	1916
ANNUAL RUNOFF (CFSM)	.59		1.18		.56		
ANNUAL RUNOFF (INCHES)	8.09		15.96		7.64		
10 PERCENT EXCEEDS	3610		7610		4040		
50 PERCENT EXCEEDS	1850		3070		1280		
90 PERCENT EXCEEDS	573		1510		460		

(a) Gage height, 11.81 ft. present datum

(b) Present datum, backwater from ice

ROCK RIVER BASIN

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.--8.96 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 960 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 23-29, Jan. 1-3, 15-21, 28-31, Feb. 16-28, and Mar. 17, 18. Records good except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	1.9	5.6	10	3.0	.93	58	13	2.0	25	2.1	.61
2	.53	26	5.0	4.5	2.6	1.0	29	11	2.1	15	1.5	.39
3	.47	20	3.8	9.0	2.9	2.0	26	11	2.4	10	1.2	.37
4	.42	16	3.6	63	5.5	9.8	24	13	3.2	7.5	1.0	.28
5	.35	12	2.8	21	13	17	20	12	13	6.0	.89	.23
6	.34	8.3	2.4	9.9	12	34	17	8.0	6.9	15	.89	.20
7	.35	6.3	2.3	6.4	5.9	36	17	6.4	23	7.9	.78	.18
8	.39	5.2	2.1	5.1	3.7	28	44	5.5	68	21	.73	.19
9	.39	5.2	2.0	4.0	3.0	17	66	4.5	71	26	.76	.18
10	.39	5.4	2.1	3.4	2.7	11	28	4.0	28	26	.92	.16
11	.36	6.1	1.9	3.2	2.5	6.2	21	3.5	17	65	.68	.13
12	.34	30	1.5	3.0	2.3	4.4	16	3.3	12	24	.57	.17
13	.31	32	1.5	3.1	2.3	3.5	13	2.9	8.6	13	.55	.27
14	.30	19	1.6	2.5	2.0	2.9	11	2.8	28	17	.43	1.2
15	.31	13	20	1.7	1.6	2.5	120	2.5	16	9.7	.48	1.2
16	.43	9.7	67	1.2	1.4	44	101	2.0	10	6.7	.61	.70
17	.49	8.2	30	1.0	1.1	28	41	1.8	21	5.2	.47	.56
18	.48	6.6	16	.90	.90	9.0	25	1.9	71	10	.37	.41
19	.36	5.9	11	.86	.80	5.5	79	1.8	124	9.6	.36	.33
20	.38	17	7.3	.80	.76	3.9	213	1.7	92	5.6	.36	.31
21	.45	41	5.4	5.0	.90	4.6	48	1.6	38	4.1	.27	.44
22	.45	27	4.4	15	1.0	6.3	28	1.5	21	3.6	.27	.41
23	.46	35	3.5	15	.96	157	20	2.2	14	3.2	.24	.39
24	.44	22	2.8	17	.90	97	14	2.3	10	2.8	.22	.28
25	.49	17	1.6	11	.86	46	10	2.0	8.3	11	.21	3.3
26	.49	24	1.1	5.5	.82	31	7.7	1.6	6.2	5.6	.19	14
27	.39	15	1.0	4.3	.80	26	6.7	1.6	5.3	3.4	.18	4.4
28	.36	11	1.0	3.5	.86	21	6.1	1.6	5.7	2.8	.21	2.6
29	.35	8.5	5.0	2.7	---	20	12	1.1	4.9	2.1	.51	1.8
30	.34	6.8	29	2.0	---	18	13	1.7	54	1.7	.94	1.4
31	.34	---	29	2.3	---	61	---	2.8	---	1.6	1.2	---
TOTAL	12.50	461.1	273.3	237.86	77.06	754.53	1134.5	132.6	786.6	367.1	20.09	37.09
MEAN	.40	15.4	8.82	7.67	2.75	24.3	37.8	4.28	26.2	11.8	.65	1.24
MAX	.55	41	67	63	13	157	213	13	124	65	2.1	14
MIN	.30	1.9	1.0	.80	.76	.93	6.1	1.1	2.0	1.6	.18	.13
CFSM	.05	1.72	.98	.86	.31	2.72	4.22	.48	2.93	1.32	.07	.14
IN.	.05	1.91	1.13	.99	.32	3.13	4.71	.55	3.27	1.52	.08	.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1993, BY WATER YEAR (WY)

	MEAN	2.35	6.32	5.46	2.67	5.52	11.2	9.60	4.45	4.65	3.29	.84	2.84
MAX	8.56	24.1	12.7	7.67	15.0	24.3	37.8	13.2	26.2	11.8	2.78	13.7	
(WY)	1987	1986	1992	1993	1984	1993	1993	1990	1993	1993	1989	1986	
MIN	.12	.28	.32	.15	.50	3.78	1.03	.33	.11	.063	.063	.10	
(WY)	1989	1990	1990	1991	1989	1988	1989	1989	1988	1991	1991	1988	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1984 - 1993

ANNUAL TOTAL	1956.69	4294.33	
ANNUAL MEAN	5.35	11.8	
HIGHEST ANNUAL MEAN			4.92
LOWEST ANNUAL MEAN			11.8
HIGHEST DAILY MEAN	117	Jul 14	213
LOWEST DAILY MEAN	.06	Sep 1	.13
ANNUAL SEVEN-DAY MINIMUM	.11	Aug 31	.17
INSTANTANEOUS PEAK FLOW			448
INSTANTANEOUS PEAK STAGE			9.13
ANNUAL RUNOFF (CFSM)	.60		1.31
ANNUAL RUNOFF (INCHES)	8.12		17.83
10 PERCENT EXCEEDS	14		28
50 PERCENT EXCEEDS	1.6		3.5
90 PERCENT EXCEEDS	.19		.37
			9.13
			.55
			7.46
			12
			1.1
			.11

(a) Also occurred Jan. 30 to Feb. 2, July 20, and Sept. 11, 1991

(b) Also occurred Aug. 1, 1987

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to September 1985, February to September 1993.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water years 1984-85, February to September 1993.
 DISSOLVED AMMONIA NITROGEN DISCHARGE: February to September 1993.
 TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Water years 1984-85, February to September 1993.
 DISSOLVED NITRITE PLUS NITRATE DISCHARGE: February to September 1993.
 TOTAL PHOSPHORUS DISCHARGE: Water years 1984-85, February to September 1993.
 DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: February to September 1993.

INSTRUMENTATION.--Automatic pumping sampler since October 1983.

REMARKS.--Records good. Samples for dissolved ammonia nitrogen, dissolved nitrite plus nitrate, and dissolved ortho-phosphorus were filtered through a 0.45 μ m filter. In water years 1984-85, total nitrite plus nitrate loads were computed using concentrations from unfiltered samples.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 5,750 mg/L, June 17, 1993; minimum observed, 1 mg/L, Mar. 12, 1984.
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 285 tons, Apr. 19, 1993; minimum daily, 0.0 ton, Sept. 4-12, 1993.
 TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 9.4 mg/L, Nov. 9, 1984; minimum observed, 0.30 mg/L on several days during 1985.
 TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 2,510 lb, Feb. 13, 1984; minimum daily, 0.15 lb, Aug. 20, 1985.
 TOTAL NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 17 mg/L, June 18, 1984; minimum observed, 0.01 mg/L, on several days during 1984.
 TOTAL NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 3,150 lb, Feb. 13, 1984; minimum daily, 0.01 lb, on many days during 1984.
 TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.60 mg/L, June 30, 1993; minimum observed, <0.01 mg/L, June 5 and Aug. 7, 1985.
 TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 773 lb, Feb. 13, 1984; minimum daily, 0.01 lb, on several days during 1985.

EXTREMES FOR FEBRUARY TO SEPTEMBER 1993.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 5,750 mg/L, June 17; minimum observed, 3 mg/L, Feb. 1.
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 285 tons, Apr. 19; minimum daily, 0.0 ton, Sept. 4-12.
 DISSOLVED AMMONIA NITROGEN CONCENTRATIONS: Maximum observed, 3.60 mg/L, Mar. 4; minimum observed, 0.02 mg/L, June 5.
 DISSOLVED AMMONIA NITROGEN DISCHARGE: Maximum daily, 674 lb, Mar. 23; minimum daily, 0.02 lb, Aug. 25-28 and Sept. 9-12.
 TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 6.3 mg/L, Mar. 4; minimum observed, 0.50 mg/L, Aug. 5 and Sept. 25, 27.
 TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 2,140 lb, Mar. 23; minimum daily, 0.30 lb, Aug. 27.
 DISSOLVED NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 11.0 mg/L, June 8; minimum observed, 0.24 mg/L, Sept. 2.
 DISSOLVED NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 3,870 lb, June 9; minimum daily, 0.32 lb, Sept. 7, 11.
 TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.60 mg/L, June 30; minimum observed, 0.05 mg/L, Mar. 1.
 TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 597 lb, Mar. 23; minimum daily, 0.08 lb, Sept. 11.
 DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.73 mg/L, Mar. 5; minimum observed, 0.02 mg/L, Mar. 1.
 DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 351 lb, Mar. 23, minimum daily, 0.05 lb, Sept. 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)
FEB 1993								
*01...	1505	2.8	3.90	0.270	0.80	0.100	0.060	3
*15...	1100	1.6	--	--	--	0.270	--	7
MAR								
*01...	1300	0.90	5.80	0.210	0.60	0.050	0.020	4
03...	2215	4.9	--	--	--	--	--	37
04...	0215	5.2	3.20	3.60	6.3	0.760	0.480	--
04...	1400	9.5	--	--	--	--	--	32
04...	1600	16	2.90	1.90	5.1	0.950	0.570	--
04...	2000	18	--	--	--	--	--	47
04...	2400	14	2.90	1.80	4.5	0.820	0.570	--
05...	0400	12	--	--	--	--	--	17
05...	1200	10	--	--	--	--	--	15
05...	1445	15	2.70	1.40	3.9	0.740	0.500	--
*05...	1446	15	2.60	1.40	3.6	0.710	0.510	38
05...	1730	27	--	--	--	--	--	78
05...	2130	25	2.10	2.40	5.3	1.10	0.730	--
06...	0930	13	2.70	0.950	3.3	0.650	0.420	19
06...	1445	30	--	--	--	--	--	69
06...	1615	65	1.40	1.00	3.0	1.00	0.610	203
07...	0815	30	--	--	--	--	--	23

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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 1993									
07...	1215	--	25	1.90	0.820	3.4	0.750	0.450	--
07...	2015	--	45	1.30	0.840	3.5	0.900	0.540	46
08...	0415	--	33	--	--	--	--	--	22
08...	0815	--	25	1.70	0.580	2.7	0.640	0.390	--
*09...	0920	--	16	2.10	0.400	1.9	0.420	0.300	13
16...	0515	44	--	2.00	2.30	4.3	0.770	0.540	49
16...	0800	44	--	--	--	--	--	--	47
16...	1115	44	--	--	--	--	--	--	61
16...	1515	44	--	1.30	1.00	3.0	0.670	0.410	--
16...	1915	44	--	--	--	--	--	--	55
16...	2315	44	--	--	--	--	--	--	28
17...	0315	28	--	2.10	0.720	2.2	0.450	0.320	--
17...	0715	28	--	--	--	--	--	--	8
*17...	0920	28	--	2.60	0.620	1.7	0.340	0.260	16
17...	1115	28	--	--	--	--	--	--	20
17...	1515	28	--	2.30	0.490	1.8	0.360	0.240	--
*18...	0935	9.0	--	3.30	0.310	1.3	0.260	0.200	4
23...	0145	--	25	2.10	1.90	4.3	0.550	0.320	42
23...	0415	--	93	--	--	--	--	--	155
23...	0500	--	125	1.40	1.10	3.6	0.810	0.450	--
*23...	0900	--	126	--	--	--	--	--	90
23...	0920	--	124	1.40	0.670	2.1	0.490	0.340	91
23...	1230	--	169	--	--	--	--	--	151
*23...	1315	--	198	--	--	--	--	--	256
23...	1316	--	199	--	--	--	--	--	238
*23...	1320	--	201	1.20	0.720	2.8	0.790	0.410	--
23...	1321	--	202	1.20	0.720	3.0	0.800	0.400	--
23...	1330	--	206	--	--	--	--	--	268
23...	1530	--	266	--	--	--	--	--	315
23...	1730	--	272	1.20	0.750	2.2	0.750	0.440	--
23...	2130	--	189	--	--	--	--	--	111
24...	0130	--	137	--	--	--	--	--	73
*24...	0905	--	84	--	--	--	--	--	57
24...	0930	--	83	1.80	0.740	2.0	0.530	0.420	--
24...	1815	--	93	--	--	--	--	--	50
24...	1830	--	94	1.60	0.770	2.3	0.530	0.430	--
25...	0230	--	66	--	--	--	--	--	25
25...	1030	--	38	--	--	--	--	--	18
25...	1430	--	37	2.40	0.940	2.2	0.460	0.360	--
*26...	0920	--	29	3.10	0.400	1.5	0.310	0.250	13
*29...	0915	--	19	4.60	0.180	1.0	0.190	0.160	4
31...	1230	--	47	3.60	0.650	2.3	0.330	0.220	54
31...	1530	--	92	--	--	--	--	--	163
31...	1930	--	117	--	--	--	--	--	158
31...	2330	--	124	4.00	0.330	1.6	0.310	0.230	--
APR									
01...	0330	--	83	--	--	--	--	--	81
*01...	1000	--	55	6.20	0.250	1.2	0.210	0.180	24
01...	1130	--	51	--	--	--	--	--	58
01...	1930	--	41	--	--	--	0.230	--	12
*05...	0900	--	19	--	--	--	0.130	--	6
08...	1245	--	54	4.30	0.330	2.3	0.490	0.260	88
08...	1645	--	61	--	--	--	--	--	77
08...	2045	--	55	--	--	--	--	--	34
08...	2130	--	74	--	--	--	--	--	218
08...	2215	--	107	4.20	0.180	3.3	0.980	0.290	538
09...	0215	--	102	--	--	--	--	--	181
*09...	0950	--	67	5.00	0.110	1.1	0.270	0.160	--
09...	1015	--	66	--	--	--	--	--	32
09...	2215	--	38	--	--	--	--	--	32
10...	0215	--	35	--	--	--	0.190	--	--
*12...	0855	--	16	--	--	--	0.160	--	--
15...	0330	--	34	4.40	0.200	2.9	0.600	0.230	273
15...	0515	--	109	--	--	--	--	--	525
*15...	0910	--	122	3.10	0.230	1.8	0.490	0.210	207
15...	0915	--	122	3.20	0.230	2.0	0.550	0.200	--
15...	1515	--	125	--	--	--	--	--	100
15...	1845	--	194	3.40	0.100	1.2	0.310	0.200	--
15...	2045	--	196	--	--	--	--	--	232
16...	0045	--	134	--	--	--	--	--	131
16...	0445	--	133	4.00	0.090	1.2	0.340	0.180	--
16...	0845	--	120	--	--	--	--	--	41
*16...	0930	--	114	4.80	0.090	1.2	0.310	0.180	36
17...	0045	--	57	6.00	0.060	0.90	0.180	0.130	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

301

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)
APR 1993								
17...	0245	54	--	--	--	--	--	22
17...	0645	45	--	--	--	--	--	12
*17...	0935	41	6.60	0.070	0.80	0.150	0.120	17
17...	1045	41	--	--	--	--	--	13
17...	2045	32	--	--	--	--	--	45
*19...	0900	19	--	--	--	--	--	12
19...	1845	42	4.50	0.130	1.9	0.460	0.220	153
19...	2000	100	--	--	--	--	--	360
19...	2015	138	2.60	0.130	2.4	0.880	0.320	--
19...	2100	298	--	--	--	--	--	2260
19...	2145	387	1.00	0.140	3.1	1.00	0.190	2240
19...	2345	445	0.950	0.100	1.0	0.300	0.160	1430
20...	0145	389	--	--	--	--	--	842
20...	0345	341	1.50	0.110	1.1	0.440	0.180	631
20...	0545	333	--	--	--	--	--	469
20...	0945	222	--	--	--	--	--	302
20...	1400	150	2.30	0.140	1.1	0.380	0.180	211
*20...	1401	150	2.60	0.180	2.1	0.550	0.180	208
21...	0215	69	--	--	--	--	--	104
21...	1015	47	4.90	0.070	0.90	0.250	0.130	--
21...	1415	41	--	--	--	--	--	65
*30...	0840	13	--	--	--	0.210	--	--
MAY								
*31...	0915	3.1	--	--	--	0.210	--	38
JUN								
*03...	1100	2.4	4.00	0.170	0.80	0.130	0.080	--
04...	2245	9.9	4.20	0.040	1.1	0.170	0.050	63
05...	0145	16	5.60	0.170	1.1	0.330	0.210	48
05...	0445	16	5.70	0.110	1.0	0.270	0.200	24
*05...	0915	14	7.10	0.070	0.70	0.210	0.140	15
05...	1045	14	--	--	--	--	--	13
05...	1945	10	7.30	0.020	0.60	0.100	0.070	15
06...	0445	7.9	--	--	--	--	--	9
06...	1345	6.7	7.10	0.040	0.50	0.080	0.050	12
07...	1315	10	6.20	0.080	1.0	0.210	0.050	61
07...	1515	33	--	--	--	--	--	306
07...	1615	47	7.00	0.180	1.9	0.750	0.420	227
07...	1915	59	8.60	0.150	2.0	0.570	0.310	101
08...	0115	43	9.90	0.080	1.2	0.320	0.170	32
08...	0415	60	--	--	--	--	--	82
08...	0715	75	10.0	0.150	2.0	0.550	0.290	79
08...	1015	76	--	--	--	--	--	47
08...	1315	70	--	--	--	--	--	54
08...	1615	73	--	--	--	--	--	61
08...	1915	69	11.0	0.100	1.0	0.250	0.180	52
08...	2215	74	--	--	--	--	--	95
09...	0115	94	11.0	0.160	1.1	0.410	0.300	116
09...	0415	97	10.0	0.130	1.0	0.350	0.270	73
09...	0715	89	--	--	--	--	--	49
*09...	0850	83	9.90	0.030	0.90	0.280	0.210	46
09...	1015	79	--	--	--	--	--	43
09...	1615	57	10.0	0.060	0.90	0.230	0.170	31
09...	2215	43	--	--	--	--	--	23
*11...	1050	17	10.0	0.080	0.60	0.120	0.090	--
14...	0815	43	7.70	0.050	1.8	0.470	0.190	146
14...	1115	38	8.90	0.060	1.2	0.320	0.180	90
*15...	0830	18	2.30	0.140	1.3	0.350	0.160	46
17...	2100	29	5.60	0.090	0.80	0.200	0.130	1260
17...	2245	137	4.00	0.330	2.2	0.810	0.330	5750
18...	0145	114	5.10	0.130	1.0	0.410	0.270	1080
*18...	0855	67	7.00	0.080	0.90	0.270	0.210	82
18...	1945	42	6.60	0.080	0.80	0.190	0.130	50
19...	0315	155	4.70	0.170	0.90	0.480	0.310	--
*19...	0910	117	--	--	--	--	--	111
*19...	0915	116	6.00	0.080	0.90	0.330	0.250	--
19...	1215	103	--	--	--	--	--	89
19...	1815	82	6.40	0.090	1.4	0.340	0.200	62
19...	2100	143	--	--	--	--	--	929
19...	2400	165	4.60	0.120	1.0	0.350	0.250	445
20...	0300	131	--	--	--	--	--	208
*20...	0915	93	5.80	0.110	1.0	0.310	0.230	88
20...	1500	75	--	--	--	--	--	62
21...	0600	44	7.30	0.070	0.90	0.190	0.150	49
*21...	0925	41	7.80	0.070	0.80	0.180	0.150	28
*22...	0835	22	--	--	--	--	--	20
*23...	0825	15	2.20	0.180	0.90	0.270	0.180	23

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)
JUN 1993								
30...	0515	28	3.70	0.090	2.8	0.780	0.110	388
30...	0630	86	--	--	--	--	--	636
30...	0700	116	3.30	0.180	4.6	1.60	0.310	591
30...	1000	97	--	--	--	--	--	236
30...	1600	54	5.70	0.180	1.4	0.400	0.200	55
30...	2200	41	--	--	--	--	--	38
JUL								
01...	0400	32	--	--	--	--	--	28
*01...	0850	27	7.40	0.050	1.0	0.100	0.090	24
06...	0845	17	6.50	0.260	1.9	0.390	0.220	49
06...	1145	15	--	--	--	--	--	26
*07...	1500	7.7	8.00	0.060	0.70	0.150	0.090	46
08...	1615	27	--	--	--	0.300	--	338
08...	1645	43	--	--	--	--	--	385
08...	1945	56	--	--	--	0.310	--	314
09...	0145	37	--	--	--	--	--	80
09...	0445	34	--	--	--	0.300	--	67
09...	1045	28	--	--	--	--	--	45
09...	2245	15	--	--	--	0.150	--	29
10...	1915	24	4.90	0.740	3.8	0.920	0.250	422
10...	2030	58	--	--	--	--	--	542
10...	2100	90	--	--	--	--	--	682
10...	2400	107	2.90	0.220	1.1	0.390	0.290	411
11...	0600	73	--	--	--	--	--	282
11...	1200	64	4.00	0.070	0.90	0.250	0.180	95
11...	2100	45	--	--	--	--	--	57
12...	0300	33	--	--	--	--	--	45
*12...	0940	25	--	--	--	--	--	34
12...	1200	23	--	--	--	0.180	--	33
*13...	0900	12	--	--	--	--	--	30
14...	0015	23	--	--	--	0.850	--	107
14...	0315	23	--	--	--	0.300	--	44
14...	0615	20	--	--	--	--	--	34
*14...	0845	17	--	--	--	0.230	--	34
25...	0700	7.3	4.90	0.760	2.4	0.460	0.220	49
25...	0745	14	--	--	--	--	--	46
25...	0915	22	3.50	0.180	2.3	0.710	0.340	94
25...	1215	20	--	--	--	--	--	35
25...	1515	15	--	--	--	--	--	27
25...	1815	11	4.60	0.230	1.6	0.350	0.210	22
26...	0015	8.1	--	--	--	--	--	18
*26...	0855	5.8	--	--	--	--	--	50
AUG								
*05...	1000	0.87	3.60	0.030	0.50	0.090	0.050	30
SEP								
*02...	1115	0.39	0.240	0.040	0.70	0.170	0.080	6
14...	0915	1.1	--	--	--	0.420	--	32
14...	1215	1.1	--	--	--	--	--	20
14...	1515	1.5	--	--	--	0.300	--	22
14...	2115	1.9	--	--	--	0.340	--	28
15...	0015	1.8	--	--	--	--	--	26
15...	0315	1.8	--	--	--	0.290	--	25
15...	0615	1.5	--	--	--	--	--	18
*15...	0855	1.3	--	--	--	0.200	--	13
15...	0915	1.3	--	--	--	0.250	--	13
15...	1815	0.98	--	--	--	0.160	--	11
*16...	0820	0.70	--	--	--	0.120	--	17
25...	1715	1.1	0.330	0.040	0.50	0.120	0.070	25
25...	1845	3.6	--	--	--	--	--	90
25...	1945	7.3	1.20	0.180	1.0	0.360	0.250	101
25...	2130	14	--	--	--	--	--	139
26...	0030	23	1.60	0.090	0.90	0.370	0.290	115
26...	0330	22	--	--	--	--	--	82
26...	0630	18	2.10	0.060	1.0	0.380	0.310	59
*26...	0720	16	--	--	--	--	--	47
26...	0930	14	--	--	--	--	--	36
26...	1530	9.9	2.40	0.050	1.8	0.300	0.190	24
27...	0330	5.6	2.50	0.060	0.50	0.150	0.130	29
*27...	0910	4.4	2.60	0.060	4.9	0.190	0.110	35

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	.03	.01	7.9	1.3	.16	1.7	.13	.02
2	---	---	---	---	.02	.01	.83	1.1	.14	.78	.08	.01
3	---	---	---	---	.07	.10	.62	1.1	.13	.44	.06	.01
4	---	---	---	---	.19	.89	.47	1.3	.27	.27	.08	.00
5	---	---	---	---	.80	1.9	.32	1.1	.76	.19	.07	.00
6	---	---	---	---	.70	9.4	.26	.71	.20	2.2	.07	.00
7	---	---	---	---	.20	3.4	.24	.55	6.8	.87	.06	.00
8	---	---	---	---	.14	1.5	17	.46	12	13	.05	.00
9	---	---	---	---	.11	.64	16	.36	10	3.9	.06	.00
10	---	---	---	---	.09	.37	2.3	.31	1.5	25	.07	.00
11	---	---	---	---	.07	.20	1.5	.27	.69	34	.05	.00
12	---	---	---	---	.06	.13	1.1	.24	.40	2.5	.04	.00
13	---	---	---	---	.05	.10	.83	.20	.25	1.2	.04	.01
14	---	---	---	---	.04	.08	.65	.19	6.0	1.9	.03	.08
15	---	---	---	---	.03	.07	65	.16	2.1	.91	.03	.06
16	---	---	---	---	.02	5.7	15	.13	.87	.65	.04	.03
17	---	---	---	---	.02	1.1	2.6	.11	141	.53	.03	.02
18	---	---	---	---	.01	.12	1.9	.12	86	1.3	.02	.02
19	---	---	---	---	.01	.06	285	.10	118	1.2	.02	.01
20	---	---	---	---	.01	.04	282	.10	35	.56	.02	.01
21	---	---	---	---	.01	.05	11	.09	3.7	.48	.02	.01
22	---	---	---	---	.01	.10	4.3	.08	1.2	.43	.02	.01
23	---	---	---	---	.01	74	2.6	.14	.82	.39	.01	.01
24	---	---	---	---	.01	15	1.6	.15	.57	.36	.01	.01
25	---	---	---	---	.01	2.5	.97	.12	.45	1.3	.01	1.0
26	---	---	---	---	.01	1.1	.64	.07	.31	.56	.01	2.1
27	---	---	---	---	.01	.61	.48	.07	.25	.25	.01	.38
28	---	---	---	---	.01	.35	.37	.07	.26	.19	.01	.21
29	---	---	---	---	---	.23	1.7	.05	.20	.15	.02	.12
30	---	---	---	---	---	.17	1.9	.16	31	.12	.04	.09
31	---	---	---	---	---	19	---	.29	---	.09	.06	---
TOTAL	---	---	---	---	2.75	138.93	727.08	11.20	461.03	97.42	1.27	4.22

NITROGEN, AMMONIA, DISSOLVED, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	4.4	1.0	84.8	6.5	1.7	8.1	.73	.14
2	---	---	---	---	3.7	1.2	33.7	3.3	1.9	3.5	.43	.08
3	---	---	---	---	3.8	9.8	27.0	3.6	1.8	2.2	.29	.07
4	---	---	---	---	8.2	106	22.0	4.4	.84	1.4	.19	.05
5	---	---	---	---	26.0	156	15.6	4.1	5.0	1.1	.15	.04
6	---	---	---	---	23.0	193	11.9	2.8	1.2	15.4	.14	.03
7	---	---	---	---	9.0	163	10.2	2.3	15.6	3.4	.12	.03
8	---	---	---	---	5.1	95.1	50.4	2.0	44.3	9.0	.11	.03
9	---	---	---	---	4.2	39.2	44.5	1.7	29.8	11.5	.11	.02
10	---	---	---	---	3.7	21.7	15.7	1.6	10.5	46.8	.14	.02
11	---	---	---	---	3.4	10.7	10.6	1.5	6.8	38.5	.10	.02
12	---	---	---	---	3.0	6.8	7.8	1.4	3.4	8.0	.08	.02
13	---	---	---	---	3.1	4.8	5.8	1.3	1.7	5.0	.08	.05
14	---	---	---	---	2.6	3.7	4.5	1.3	9.5	7.0	.06	.30
15	---	---	---	---	2.1	3.2	95.5	1.2	10.8	2.6	.06	.30
16	---	---	---	---	1.8	315	45.8	.98	4.9	1.8	.08	.16
17	---	---	---	---	1.4	86.1	14.5	.93	20.3	1.4	.06	.06
18	---	---	---	---	1.1	15.6	8.1	1.0	40.5	3.7	.05	.04
19	---	---	---	---	1.0	8.4	46.6	.97	73.9	3.5	.05	.04
20	---	---	---	---	.94	5.4	141	.98	52.4	1.5	.05	.03
21	---	---	---	---	1.1	5.7	20.9	.94	15.9	1.1	.03	.05
22	---	---	---	---	1.2	9.5	10.0	.94	13.6	.97	.03	.04
23	---	---	---	---	1.2	674	6.9	1.1	12.5	.85	.03	.04
24	---	---	---	---	1.1	398	4.6	1.2	7.9	.76	.03	.03
25	---	---	---	---	1.0	206	3.2	1.3	5.4	13.7	.02	2.1
26	---	---	---	---	.96	71.9	2.3	1.1	3.3	6.2	.02	4.7
27	---	---	---	---	.93	41.6	2.0	1.1	2.4	3.1	.02	1.4
28	---	---	---	---	.99	26.4	1.7	1.2	2.1	2.1	.02	.89
29	---	---	---	---	---	19.8	6.0	.88	1.5	1.3	.11	.64
30	---	---	---	---	---	15.9	6.5	1.0	46.7	.84	.23	.56
31	---	---	---	---	---	138	---	1.4	---	.66	.30	---
TOTAL	---	---	---	---	120.02	2852.5	760.1	56.02	448.14	206.98	3.92	11.98

ROCK RIVER BASIN

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (POUNDS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	12.9	3.0	412	67.0	8.5	139	8.7	1.7
2	---	---	---	---	11.1	3.4	175	36.4	9.1	66.9	5.7	1.4
3	---	---	---	---	18.0	21.2	151	38.1	10.1	39.9	4.1	1.3
4	---	---	---	---	47.0	258	132	45.4	14.8	25.4	3.0	.95
5	---	---	---	---	170	377	101	41.2	56.1	18.1	2.4	.75
6	---	---	---	---	150	595	83.4	27.4	19.3	139	2.3	.62
7	---	---	---	---	52.0	641	77.0	22.2	197	35.5	2.0	.52
8	---	---	---	---	15.1	438	580	19.2	513	118	1.8	.54
9	---	---	---	---	12.3	185	534	15.9	361	150	1.9	.46
10	---	---	---	---	10.8	104	124	14.1	116	243	2.2	.41
11	---	---	---	---	10.0	51.6	74.7	12.7	55.7	332	1.6	.32
12	---	---	---	---	8.9	33.3	54.9	12.1	34.9	99.6	1.3	.39
13	---	---	---	---	8.9	23.6	40.9	10.4	24.1	62.0	1.2	.59
14	---	---	---	---	7.7	18.1	32.3	10.4	188	90.0	.97	2.8
15	---	---	---	---	6.2	15.1	1020	9.2	107	30.6	1.0	2.8
16	---	---	---	---	5.2	755	619	7.4	46.6	20.7	1.3	2.0
17	---	---	---	---	4.1	279	178	6.9	149	16.0	.97	1.1
18	---	---	---	---	3.3	64.9	87.5	7.3	361	44.0	.76	.78
19	---	---	---	---	2.9	36.5	756	6.8	688	42.0	.72	.63
20	---	---	---	---	2.7	24.4	1410	6.7	488	16.3	.71	.57
21	---	---	---	---	3.2	26.9	264	6.2	176	11.9	.52	.78
22	---	---	---	---	3.5	41.0	128	6.1	98.5	10.1	.51	.71
23	---	---	---	---	3.3	2140	86.5	8.9	65.6	8.7	.44	.67
24	---	---	---	---	3.1	1120	57.9	9.2	44.3	7.7	.39	.46
25	---	---	---	---	2.9	536	39.6	8.1	33.7	113	.37	15.7
26	---	---	---	---	2.7	259	28.7	6.4	23.0	45.2	.33	84.0
27	---	---	---	---	2.7	180	23.7	6.4	18.0	24.7	.30	12.3
28	---	---	---	---	2.8	130	20.6	6.4	17.8	18.0	.34	7.0
29	---	---	---	---	---	109	38.0	4.7	13.9	12.0	1.4	4.9
30	---	---	---	---	---	92.4	68.0	6.5	723	8.6	2.0	4.1
31	---	---	---	---	---	585	---	12.0	---	7.4	2.8	---
TOTAL	---	---	---	---	583.3	9146.4	7397.7	497.7	4661.0	1995.3	54.03	151.25

NITROGEN, NITRITE PLUS NITRATE, DISSOLVED, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	62.9	29.1	1740	540	43.7	978	44.8	1.5
2	---	---	---	---	54.2	33.1	981	290	46.0	596	31.8	.55
3	---	---	---	---	72.0	51.3	919	298	52.6	422	25.0	.51
4	---	---	---	---	112	162	865	351	79.3	318	20.0	.41
5	---	---	---	---	195	229	714	314	472	256	17.3	.37
6	---	---	---	---	185	324	635	206	269	497	17.1	.34
7	---	---	---	---	120	318	633	164	1010	334	15.0	.32
8	---	---	---	---	83.6	264	1130	140	3850	390	13.9	.38
9	---	---	---	---	70.2	189	1710	114	3870	520	14.3	.36
10	---	---	---	---	62.9	142	786	99.6	1540	709	17.3	.36
11	---	---	---	---	59.7	86.3	595	88.4	910	1280	12.7	.32
12	---	---	---	---	54.6	68.4	490	82.9	624	567	10.5	.44
13	---	---	---	---	56.5	59.2	411	70.4	463	200	10.0	.74
14	---	---	---	---	50.0	55.3	364	69.3	1100	290	7.9	8.0
15	---	---	---	---	41.4	51.0	2260	60.9	251	274	8.5	8.0
16	---	---	---	---	35.9	429	2550	48.2	211	195	10.9	3.6
17	---	---	---	---	28.6	360	1430	43.8	540	157	8.3	1.6
18	---	---	---	---	23.8	156	926	46.2	2320	250	6.5	1.2
19	---	---	---	---	21.5	103	1020	42.2	3690	240	6.3	1.1
20	---	---	---	---	20.7	76.7	2170	40.9	2810	183	6.3	1.1
21	---	---	---	---	24.9	94.6	1160	37.5	1420	140	4.7	1.7
22	---	---	---	---	28.1	127	736	36.0	459	125	4.7	1.7
23	---	---	---	---	27.4	1110	526	45.0	175	113	4.1	1.8
24	---	---	---	---	26.1	862	372	50.0	137	104	3.6	1.4
25	---	---	---	---	25.3	550	268	46.1	129	266	3.5	22.9
26	---	---	---	---	24.5	524	205	35.7	108	138	3.1	154
27	---	---	---	---	24.3	497	179	35.4	104	82.4	2.9	61.3
28	---	---	---	---	26.5	473	164	35.0	128	65.3	3.4	36.0
29	---	---	---	---	---	502	500	25.5	122	47.6	6.7	24.5
30	---	---	---	---	---	475	550	28.0	1350	37.0	7.1	20.1
31	---	---	---	---	---	1310	---	70.0	---	35.0	8.0	---
TOTAL	---	---	---	---	1617.6	9711.0	26989	3554.0	28283.6	9809.3	356.2	356.60

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	1.61	.26	76.6	13.8	1.91	16.6	3.30	1.00
2	---	---	---	---	1.39	.28	32.1	11.8	1.72	7.25	2.40	.35
3	---	---	---	---	2.90	3.67	25.0	11.9	1.64	4.66	1.90	.32
4	---	---	---	---	8.50	43.6	19.9	13.8	2.32	3.19	.55	.23
5	---	---	---	---	36.0	76.9	13.9	12.1	14.1	2.47	.44	.18
6	---	---	---	---	31.0	165	11.0	7.79	3.11	27.4	.43	.15
7	---	---	---	---	9.50	161	9.87	6.10	59.5	7.52	.38	.13
8	---	---	---	---	5.78	101	147	5.10	139	30.4	.36	.13
9	---	---	---	---	4.86	40.7	139	4.08	112	34.5	.37	.11
10	---	---	---	---	4.23	22.6	28.2	3.50	26.8	58.4	.46	.10
11	---	---	---	---	3.89	11.0	19.0	3.05	11.3	100	.34	.08
12	---	---	---	---	3.45	7.02	13.8	2.81	6.98	24.5	.29	.10
13	---	---	---	---	3.47	4.90	9.46	2.34	4.83	15.0	.27	.22
14	---	---	---	---	2.98	3.70	6.79	2.26	48.9	27.2	.22	2.22
15	---	---	---	---	2.35	3.02	262	1.95	28.4	11.0	.24	1.52
16	---	---	---	---	1.81	151	158	1.52	11.0	7.05	.31	.47
17	---	---	---	---	1.26	56.3	34.1	1.35	49.8	5.11	.24	.34
18	---	---	---	---	.91	13.0	16.9	1.40	117	16.0	.19	.23
19	---	---	---	---	.72	7.30	238	1.26	242	15.0	.19	.18
20	---	---	---	---	.61	4.88	473	1.20	149	8.80	.19	.16
21	---	---	---	---	.64	5.38	72.1	1.08	40.2	2.98	.14	.21
22	---	---	---	---	.63	7.71	33.2	1.01	26.0	2.39	.14	.18
23	---	---	---	---	.54	597	21.0	1.30	19.5	1.94	.13	.17
24	---	---	---	---	.45	293	13.2	1.30	13.3	1.61	.11	.11
25	---	---	---	---	.38	115	8.45	1.10	10.1	28.9	.11	5.91
26	---	---	---	---	.32	53.4	5.73	.94	6.89	9.77	.10	24.7
27	---	---	---	---	.28	36.0	4.45	.91	5.40	5.24	.09	4.20
28	---	---	---	---	.26	25.3	3.62	.89	5.35	3.75	.11	2.26
29	---	---	---	---	---	20.6	12.0	.63	4.16	2.46	.90	1.33
30	---	---	---	---	---	16.3	13.0	1.91	225	1.72	1.60	.95
31	---	---	---	---	---	98.3	---	3.25	---	2.50	1.90	---
TOTAL	---	---	---	---	130.72	2145.12	1920.37	123.43	1387.21	485.31	18.40	48.24

PHOSPHORUS ORTHO WATER, DISSOLVED, LBS/DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	.96	.10	60.3	6.68	.75	13.5	.80	.26
2	---	---	---	---	.77	.11	23.9	5.77	.98	6.17	.50	.17
3	---	---	---	---	1.40	1.17	18.8	5.91	.96	3.77	.38	.16
4	---	---	---	---	5.80	27.7	15.1	6.91	.90	2.45	.31	.12
5	---	---	---	---	26.0	52.0	10.6	6.14	9.43	3.00	.24	.10
6	---	---	---	---	23.0	102	8.19	4.01	1.98	10.0	.24	.08
7	---	---	---	---	6.50	96.0	7.09	3.18	31.6	4.49	.22	.07
8	---	---	---	---	4.04	63.3	56.4	2.70	84.1	16.0	.21	.08
9	---	---	---	---	2.98	28.3	66.2	2.19	83.6	20.0	.22	.07
10	---	---	---	---	2.38	15.3	20.6	1.90	19.9	29.5	.27	.06
11	---	---	---	---	2.02	7.04	12.8	1.67	8.46	71.6	.20	.05
12	---	---	---	---	1.64	4.22	8.77	1.56	5.10	14.1	.17	.07
13	---	---	---	---	1.52	2.79	6.20	1.32	3.43	8.00	.17	.14
14	---	---	---	---	1.20	1.99	4.65	1.29	24.8	12.0	.13	1.16
15	---	---	---	---	.88	1.57	130	1.13	13.6	7.26	.15	.85
16	---	---	---	---	.67	99.0	92.8	.89	6.07	4.66	.19	.28
17	---	---	---	---	.47	39.9	26.2	.80	23.7	3.40	.15	.20
18	---	---	---	---	.34	9.65	12.7	.84	79.3	5.80	.12	.14
19	---	---	---	---	.27	5.08	75.1	.76	163	5.50	.12	.11
20	---	---	---	---	.23	3.06	201	.74	110	2.70	.12	.10
21	---	---	---	---	.24	3.04	34.9	.67	32.1	2.04	.09	.14
22	---	---	---	---	.24	4.05	17.9	.64	19.1	1.65	.09	.12
23	---	---	---	---	.21	351	11.8	.80	13.1	1.35	.08	.11
24	---	---	---	---	.17	223	7.70	.85	8.86	1.12	.08	.08
25	---	---	---	---	.15	91.3	5.12	.73	6.74	15.3	.08	4.33
26	---	---	---	---	.13	43.0	3.61	.62	4.59	5.84	.07	18.7
27	---	---	---	---	.11	29.5	2.91	.61	3.60	3.10	.06	2.77
28	---	---	---	---	.10	21.1	2.46	.60	3.57	2.20	.08	1.32
29	---	---	---	---	---	16.9	7.50	.44	2.78	1.43	.12	.78
30	---	---	---	---	---	12.0	8.20	.60	65.2	1.00	.26	.56
31	---	---	---	---	---	69.2	---	1.10	---	.55	.38	---
TOTAL	---	---	---	---	84.42	1424.37	959.50	64.05	831.30	279.48	6.30	33.18

ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI

LOCATION.--Lat 42°39'03", long 88°33'03", in NW 1/4 NE 1/4 sec.12, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on left bank 20 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 sea level (Wisconsin Department of Transportation bench mark). Prior to Dec. 4, 1992, at site 180 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 22, Dec. 4-8, May 30 to June 3, and ice-affected period, Dec. 24-28, Jan. 15-20, Feb. 15 to Mar. 2, and Mar. 12-15. Records good except those for estimated daily discharges, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	2.0	3.2	2.9	2.0	1.6	19	4.1	2.0	7.3	1.5	.90
2	.40	21	3.1	3.3	1.5	1.4	11	4.7	2.2	4.8	1.1	.82
3	.38	15	2.8	11	2.3	5.8	11	9.3	2.7	3.6	1.0	.73
4	.35	11	2.4	26	4.5	15	9.0	11	5.3	3.0	.91	.58
5	.33	9.0	2.0	6.0	7.0	12	6.8	8.1	5.7	4.2	.93	.52
6	.32	6.0	1.6	3.9	4.2	15	5.8	5.1	2.5	11	1.1	.47
7	.32	5.0	1.4	3.4	2.2	8.9	5.1	4.2	29	3.5	.88	.56
8	.31	4.3	1.2	2.8	1.6	7.4	21	3.6	35	8.3	.67	.69
9	.40	6.0	1.5	2.4	1.7	4.3	15	3.0	19	8.4	2.5	.68
10	.35	5.0	1.6	2.2	2.1	3.8	6.5	2.8	5.8	11	.97	.57
11	.31	7.0	1.6	2.3	1.5	2.5	6.4	2.6	3.7	13	.77	.95
12	.30	26	1.5	2.6	1.6	1.8	4.5	2.5	2.9	4.4	.74	.73
13	.29	27	1.5	2.7	1.3	1.3	3.5	2.1	2.4	4.1	.67	11
14	.29	15	1.8	2.2	1.1	.90	3.2	2.1	11	6.1	.61	11
15	.45	10	27	1.9	1.0	.80	72	1.8	3.1	3.5	1.1	2.8
16	.70	8.0	25	1.7	.90	20	34	1.6	2.4	3.3	.68	1.4
17	.54	6.4	7.7	1.6	.80	6.0	11	2.0	8.5	3.6	.65	1.0
18	.45	5.4	4.7	1.5	.70	2.1	7.1	1.9	11	12	.63	.81
19	.37	5.0	3.7	1.4	.66	1.8	45	1.7	25	4.7	.69	1.1
20	.64	15	2.7	1.5	.60	1.9	76	1.6	17	3.1	.59	3.1
21	.50	34	2.3	14	1.7	2.4	13	1.5	7.1	2.6	.52	1.7
22	.44	23	2.0	11	3.0	6.6	7.4	2.3	4.0	2.5	.47	1.3
23	.42	31	1.8	9.4	2.5	84	5.6	3.2	2.9	2.5	.64	1.2
24	.38	5.3	1.5	8.3	1.3	21	4.5	2.1	5.9	2.3	.62	.99
25	.36	7.0	1.3	4.4	1.0	10	3.3	1.3	4.4	18	.64	26
26	.34	8.7	1.1	2.9	.90	8.1	2.7	1.4	3.5	3.4	.40	19
27	.32	4.3	1.0	2.2	.70	7.2	2.5	2.7	2.6	2.3	.34	4.4
28	.30	3.9	.90	2.0	.60	6.8	2.4	1.4	7.2	2.0	.23	2.9
29	.29	3.7	10	1.6	---	6.7	11	1.1	2.7	1.5	.63	2.4
30	.28	3.4	22	1.8	---	5.8	5.7	1.5	25	1.3	2.9	2.1
31	.28	---	8.3	2.1	---	41	---	4.0	---	2.0	4.0	---
TOTAL	11.85	333.4	150.20	143.0	50.96	313.90	431.0	98.3	261.5	163.3	35.75	102.40
MEAN	.38	11.1	4.85	4.61	1.82	10.1	14.4	3.17	8.72	5.27	1.15	3.41
MAX	.70	34	27	26	7.0	84	76	11	35	18	6.3	26
MIN	.28	2.0	.90	1.4	.60	.80	2.4	1.1	2.0	1.3	.23	.47
CFSM	.09	2.56	1.12	1.06	.42	2.33	3.31	.73	2.01	1.21	.27	.79
IN.	.10	2.86	1.29	1.23	.44	2.69	3.69	.84	2.24	1.40	.31	.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1993, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	2.64	4.93	3.35	1.88	3.41	6.15	5.29	3.05	2.56	2.55
MAX	7.23	13.3	6.55	4.61	8.81	10.7	14.4	7.11	8.72	5.39
(WY)	1986	1986	1985	1993	1985	1986	1993	1990	1992	1990
MIN	.38	.58	.49	.77	.33	3.18	1.28	.79	.54	.44
(WY)	1993	1990	1990	1984	1989	1987	1989	1989	1988	1988

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1984 - 1993

ANNUAL TOTAL	1212.29	2095.56	
ANNUAL MEAN	3.31	5.74	3.35
HIGHEST ANNUAL MEAN			5.74
LOWEST ANNUAL MEAN			1.70
HIGHEST DAILY MEAN	54	84	110
LOWEST DAILY MEAN	.28	.23	.11
ANNUAL SEVEN-DAY MINIMUM	.31	.31	.13
INSTANTANEOUS PEAK FLOW		210	210
INSTANTANEOUS PEAK STAGE		10.00	10.00
INSTANTANEOUS LOW FLOW		.22	.11
ANNUAL RUNOFF (CFSM)	.76	1.32	.77
ANNUAL RUNOFF (INCHES)	10.39	17.96	10.50
10 PERCENT EXCEEDS	6.7	13	7.4
50 PERCENT EXCEEDS	1.5	2.5	1.4
90 PERCENT EXCEEDS	.50	.55	.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.

DISSOLVED AMMONIA NITROGEN DISCHARGE: February to September 1993.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Water years 1984-85 and February to September 1993.

DISSOLVED NITRITE PLUS NITRATE DISCHARGE: February to September 1993.

TOTAL-PHOSPHORUS DISCHARGE: October 1983 to current year.

DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: February to September 1993.

INSTRUMENTATION.--Automatic pumping sampler since October 1983.

REMARKS.--Records good. Samples for dissolved ammonia nitrogen, dissolved nitrite plus nitrate, and dissolved ortho-phosphorus were filtered through a 0.45 μ m filter. In water years 1984-85, total nitrite plus nitrate loads were computed using concentrations from unfiltered samples.

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, 127 tons, Apr. 19, 1993; minimum daily, 0.01 ton, on many days.

TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 16 mg/L, Nov. 19, 1983; minimum observed, 0.10 mg/L, Oct. 12, 1984.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 1,170 lb, Apr. 20, 1993; minimum daily, 0.56 lb, Oct. 11, 1984.

TOTAL NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 6.10 mg/L, Oct. 19, 1984; minimum observed, <0.10 mg/L, Oct. 12 and July 23, 1985.

TOTAL NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 1,489 lb, May 28, 1984; minimum daily, 0.17 lb, July 23, 1985.

TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 8.20 mg/L, Aug. 7, 1984; minimum observed, 0.01 mg/L, Jan. 16 and Mar. 14, 1990.

TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 314 lb, Apr. 20, 1993; minimum daily, 0.03 lb, Sept. 23-24, 1987.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 1,660 mg/L, Apr. 19; minimum observed, 7 mg/L, Dec. 17 and Feb. 1.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 127 tons, Apr. 19; minimum daily, 0.01 ton, Mar. 14 and Aug. 26-28.

DISSOLVED AMMONIA NITROGEN CONCENTRATIONS: Maximum observed, 0.95 mg/L, Mar. 23; minimum observed, 0.08 mg/L, Apr. 20, July 7, Aug. 5, 30, 31, and Sept. 26.

DISSOLVED AMMONIA NITROGEN DISCHARGE: Maximum daily, 298 lb, Mar. 23; minimum daily, 0.13 lb, Aug. 28.

TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 9.1 mg/L, Apr. 19; minimum observed, 0.40 mg/L, Sept. 27.

TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 1,170 lb, Apr. 20; minimum daily, 0.68 lb, Aug. 28.

DISSOLVED NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 7.3 mg/L, June 9; minimum observed, 0.37 mg/L, Sept. 13.

DISSOLVED NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 1,080 lb, June 8; minimum daily, 4.8 lb, Aug. 28.

TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 2.3 mg/L, June 7; minimum observed, 0.05 mg/L, Mar. 1.

TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 314 lb, Apr. 20; minimum daily, 0.07 lb, Aug. 28.

DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.81 mg/L, Mar. 4; minimum observed, 0.03 mg/L, Mar. 1.

DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 126 lb, Mar. 23; minimum daily, 0.04 lb, Aug. 28.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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- 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 1992						DEC 1992				
*07...	1500	0.32	--	0.060	56	15...	2015	76	0.470	204
*12...	0935	0.30	--	0.090	71	16...	0315	45	--	37
NOV						16...	0415	38	0.270	--
*16...	0920	8.0	--	0.070	79	16...	0515	33	--	26
25...	1900	--	9.8	0.280	104	16...	0715	26	0.230	--
25...	2000	--	15	--	80	16...	0815	24	--	19
25...	2100	--	19	--	40	16...	1015	21	--	13
25...	2200	--	19	0.160	--	16...	1115	19	0.200	--
25...	2300	--	19	--	25	*16...	1425	16	0.200	13
26...	0100	--	16	0.190	--	16...	1900	13	--	12
26...	0400	--	13	--	18	16...	2100	12	0.160	--
*27...	1325	--	4.1	0.070	44	16...	2300	11	--	10
DEC						17...	0100	10	0.140	--
15...	1030	--	15	--	227	17...	0500	9.0	--	15
*15...	1200	--	17	0.900	--	17...	0700	8.4	0.120	--
15...	1201	--	17	0.910	--	17...	1300	7.4	--	18
*15...	1203	--	17	--	179	17...	1900	6.4	--	7
15...	1204	--	17	--	178	17...	2100	6.1	0.080	--
15...	1415	--	18	--	78	*18...	0950	4.6	0.060	9
15...	1615	--	22	--	75	*30...	0915	13	0.310	28
15...	1715	--	27	--	82	*30...	1120	11	0.670	19
15...	1815	--	45	0.830	--	*30...	1505	34	0.400	161
15...	1915	--	64	--	304	*31...	0900	7.7	0.190	27

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
JAN 1993					JAN 1993				
*04...	0900	43	0.440	32	21...	1600	19	--	47
*04...	1140	27	0.400	21	21...	1800	19	0.800	--
*04...	1510	17	0.340	25	21...	2200	17	--	25
*05...	0845	6.3	0.150	12	22...	0400	12	0.820	--
*06...	0825	4.0	0.120	15	22...	0600	10	--	19
*07...	1200	3.5	0.080	14	*22...	0900	9.2	0.660	12
21...	0400	11	0.270	55	22...	1445	11	--	19
21...	0800	12	0.430	--	22...	1645	12	0.530	--
21...	1000	11	--	18	22...	1845	11	--	24
21...	1400	18	--	19	*23...	0910	6.0	0.330	11

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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 P) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
FEB 1993									
*01...	1445	--	2.0	7.10	0.150	0.70	0.110	0.080	7
*15...	1115	1.0	--	--	--	--	0.060	--	62
MAR									
*01...	1120	1.6	--	2.80	0.290	0.70	0.050	0.030	20
03...	1545	--	9.2	--	--	--	--	--	91
03...	1745	--	13	1.50	0.740	2.3	1.00	0.530	--
03...	1945	--	14	--	--	--	--	--	59
04...	0345	--	7.2	2.10	0.850	2.0	0.870	0.590	--
04...	1215	--	6.9	--	--	--	--	--	40
04...	1330	--	12	--	--	--	--	--	63
04...	1400	--	19	2.00	0.770	2.7	1.40	0.810	--
05...	1515	--	16	1.80	0.440	1.5	0.510	0.320	--
*05...	1516	--	16	1.70	0.430	1.7	0.570	0.310	82
05...	1700	--	24	--	--	--	--	--	89
05...	1900	--	24	1.30	0.300	1.8	0.500	0.270	--
06...	1345	--	8.6	2.00	0.270	0.90	0.230	0.230	46
06...	1530	--	21	--	--	--	--	--	98
06...	1700	--	39	--	--	--	--	--	119
06...	1900	--	39	1.10	0.460	1.5	0.490	0.250	--
06...	2045	--	25	--	--	--	--	--	51
07...	0045	--	12	--	--	--	--	--	50
07...	0445	--	8.1	2.30	0.260	1.3	0.270	0.140	--
07...	0645	--	7.1	--	--	--	--	--	16
07...	1530	--	6.9	--	--	--	--	--	15
07...	2130	--	13	--	--	--	--	--	36
07...	2330	--	13	1.70	0.260	1.4	0.290	0.140	--
*08...	0850	--	6.5	2.40	0.200	1.0	0.190	0.100	9
*09...	0845	--	3.7	2.70	0.140	0.70	0.110	0.060	9
16...	0315	--	6.7	--	--	--	--	--	35
16...	0515	--	11	1.60	0.420	1.6	0.350	0.180	--
16...	0715	--	15	--	--	--	--	--	45
16...	1315	--	33	--	--	--	--	--	63
16...	1515	--	34	1.50	0.640	2.0	0.360	0.210	--
16...	1715	--	33	--	--	--	--	--	55
16...	2115	--	15	--	--	--	--	--	29
17...	0115	--	8.3	2.60	0.590	1.6	0.230	0.150	--
*17...	0845	--	9.2	3.60	0.390	1.1	0.170	0.120	13
22...	1600	--	7.6	--	--	--	--	--	89
22...	1800	--	10	1.30	0.370	1.3	0.850	0.190	--
22...	2300	--	20	--	--	--	--	--	174
23...	0130	--	50	--	--	--	--	--	214
23...	0215	--	62	1.10	0.490	1.9	0.590	0.270	--
23...	0300	--	79	--	--	--	--	--	373
23...	0430	--	113	1.10	0.420	2.0	0.530	0.200	316
*23...	0840	--	93	--	--	--	--	--	75
23...	1215	--	82	--	--	--	--	--	104
*23...	1216	--	83	--	--	--	--	--	109
23...	1220	--	83	1.60	0.560	1.8	0.480	0.310	--
*23...	1221	--	84	1.80	0.680	1.9	0.440	0.340	--
23...	1330	--	100	--	--	--	--	--	253
23...	1730	--	106	1.70	0.840	2.8	0.570	0.310	182
23...	2030	--	60	--	--	--	--	--	91
23...	2215	--	43	2.10	0.950	2.3	0.440	0.320	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

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054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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 1993								
24...	0215	25	--	--	--	--	--	50
24...	0815	16	2.90	0.660	1.4	0.240	0.230	--
*24...	0845	15	--	--	--	--	--	23
24...	1015	15	--	--	--	--	--	23
24...	1615	25	--	--	--	--	--	41
24...	2215	20	--	--	--	--	--	34
*25...	0820	8.9	--	--	--	--	--	14
25...	1015	8.4	--	--	--	--	--	9
25...	1215	8.3	3.60	0.440	1.2	0.170	0.140	--
*26...	0845	7.2	--	--	--	--	--	9
*26...	0945	7.1	3.80	0.290	0.90	0.120	0.100	--
*29...	0855	6.1	4.60	0.170	0.80	0.090	0.070	19
31...	0745	15	3.00	0.250	1.3	0.230	0.080	252
31...	1100	28	--	--	--	--	--	117
31...	1315	49	--	--	--	--	--	207
31...	1430	62	--	--	--	--	--	195
31...	1530	76	2.20	0.370	1.6	0.350	0.190	--
31...	1930	79	--	--	--	--	--	123
31...	2330	59	--	--	--	--	--	106
APR								
01...	0100	41	3.80	0.400	1.3	0.230	0.220	--
01...	0500	21	--	--	--	--	--	17
*01...	0930	16	5.00	0.680	1.3	0.230	0.250	--
01...	1300	15	--	--	--	--	--	11
01...	1700	15	--	--	--	0.160	--	13
02...	1730	15	--	--	--	--	--	19
02...	1930	14	--	--	--	0.220	--	--
02...	2130	13	--	--	--	--	--	13
03...	1600	14	--	--	--	0.160	--	22
03...	1800	17	--	--	--	--	--	20
03...	2000	17	--	--	--	0.160	--	--
03...	2400	13	--	--	--	0.140	--	9
*05...	0845	6.4	--	--	--	0.110	--	30
08...	0915	17	2.40	0.220	1.1	0.260	0.070	271
08...	1115	33	--	--	--	--	--	148
08...	1215	43	1.50	0.200	1.2	0.390	0.160	105
08...	1415	40	--	--	--	--	--	112
08...	1615	31	--	--	--	--	--	88
08...	2015	20	3.30	0.380	1.4	0.220	0.160	20
08...	2330	32	2.50	0.260	1.3	0.260	0.140	50
09...	0330	24	--	--	--	--	--	29
09...	0730	17	3.80	0.310	1.2	0.190	0.140	--
15...	0145	15	2.10	0.250	0.90	0.120	0.070	233
15...	0245	35	--	--	--	--	--	242
15...	0315	55	0.870	0.140	0.50	0.140	0.110	--
15...	0345	73	--	--	--	--	--	388
15...	0430	87	0.840	0.180	0.90	0.260	0.140	356
15...	0830	83	--	--	--	--	--	44
*15...	0831	83	--	--	--	--	--	46
15...	1230	77	2.40	0.260	1.1	0.290	0.200	92
15...	1430	63	2.90	0.260	1.1	0.300	0.220	--
15...	1630	62	--	--	--	--	--	64
15...	1800	94	--	--	--	--	--	211
15...	2000	99	2.30	0.200	1.1	0.310	0.200	--
15...	2200	76	--	--	--	--	--	129
16...	0200	53	--	--	--	--	--	55
16...	0400	49	3.40	0.190	0.90	0.240	0.160	--
16...	1200	32	--	--	--	--	--	20
16...	1800	20	4.40	0.170	0.80	0.180	0.150	--
17...	0200	14	--	--	--	--	--	18
17...	0400	13	4.80	0.200	0.80	0.120	0.100	--
*17...	0910	11	--	--	--	--	--	19
19...	1530	21	1.80	0.170	1.8	0.510	0.070	311
19...	1815	53	--	--	--	--	--	235
19...	1900	85	--	--	--	--	--	446
19...	1930	104	0.910	0.200	2.4	0.770	0.140	--
19...	2030	141	--	--	--	--	--	993
19...	2100	167	--	--	--	--	--	1340
19...	2130	190	1.20	0.200	9.1	0.720	0.220	1660
19...	2330	195	1.30	0.110	6.7	2.00	0.160	1390
20...	0100	156	--	--	--	--	--	829
20...	0300	138	1.70	0.080	2.6	0.790	0.140	422
20...	0500	151	1.60	0.080	3.6	1.00	0.170	572
20...	0700	119	--	--	--	--	--	322
20...	1030	69	--	--	--	--	--	89

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)
APR 1993									
20...	1445	--	40	2.80	0.140	0.90	0.260	0.140	58
*20...	1446	--	40	2.70	0.140	1.1	0.270	0.150	62
20...	2030	--	24	--	--	--	--	--	38
21...	0230	--	17	--	--	--	--	--	18
21...	0430	--	16	3.60	0.150	0.90	0.160	0.090	--
*21...	0840	--	13	--	--	--	--	--	17
21...	1230	--	12	--	--	--	--	--	12
29...	0830	--	20	--	--	--	0.470	--	--
29...	0900	--	29	--	--	--	0.560	--	--
29...	1300	--	18	--	--	--	0.410	--	--
*30...	0824	--	6.0	--	--	--	0.170	--	27
30...	0830	--	6.0	--	--	--	--	--	225
30...	0900	--	6.0	--	--	--	--	--	230
30...	1300	--	5.5	--	--	--	--	--	29
MAY									
03...	1645	--	20	--	--	--	0.640	--	681
03...	2045	--	15	--	--	--	0.300	--	42
04...	1745	--	20	--	--	--	0.800	--	290
04...	2145	--	16	--	--	--	0.540	--	306
22...	2245	--	11	--	--	--	1.40	--	322
*31...	0855	4.0	--	--	--	--	0.160	--	23
JUN									
*03...	1245	2.7	--	2.60	0.310	1.3	0.160	0.070	21
04...	2030	--	18	1.30	0.240	0.70	0.200	0.140	305
04...	2100	--	26	1.00	0.280	0.80	0.260	0.180	377
04...	2400	--	20	1.50	0.160	0.70	0.220	0.170	47
05...	0230	--	11	2.40	0.120	0.60	0.320	0.180	38
*05...	0900	--	5.2	3.70	0.140	0.60	0.110	0.080	21
07...	1330	--	39	1.20	0.460	5.8	2.30	0.220	1380
07...	1345	--	74	--	--	--	--	--	929
07...	1415	--	93	3.50	0.120	1.2	0.200	0.030	683
07...	1615	--	101	3.30	0.340	2.1	0.680	0.290	262
07...	1745	--	78	--	--	--	--	--	208
07...	1900	--	57	4.40	0.210	1.8	0.500	0.190	162
08...	0130	--	17	6.90	0.150	1.1	0.270	0.120	52
08...	0230	--	39	--	--	--	--	--	282
08...	0300	--	62	4.20	0.450	2.2	0.690	0.300	206
08...	0500	--	74	5.60	0.280	1.7	0.490	0.230	110
08...	0945	--	40	6.40	0.170	0.90	0.230	0.160	63
08...	1245	--	27	--	--	--	--	--	40
08...	1845	--	18	6.80	0.150	0.90	0.170	0.120	22
08...	2145	--	24	--	--	--	--	--	71
08...	2245	--	36	4.60	0.220	0.90	0.280	0.200	--
*09...	0830	--	20	6.70	0.130	0.90	0.180	0.120	44
09...	1045	--	17	7.30	0.170	0.90	0.160	0.110	30
09...	1945	--	9.2	--	--	--	--	--	21
*11...	1020	--	3.8	6.90	0.150	0.60	0.090	0.060	--
14...	0245	--	17	2.20	0.310	2.6	0.670	0.100	355
14...	0300	--	28	--	--	--	--	--	695
14...	0415	--	39	1.50	0.240	1.6	0.500	0.180	190
14...	0600	--	24	--	--	--	--	--	45
14...	0800	--	14	3.50	0.530	1.5	0.390	0.260	35
*15...	0815	--	3.4	5.60	0.160	0.70	0.210	0.060	35
17...	2030	--	9.5	2.50	0.600	1.2	0.250	0.200	229
17...	2145	--	59	1.30	0.450	0.90	0.280	0.190	666
17...	2400	--	40	3.20	0.730	1.6	0.480	0.400	201
*18...	0815	--	9.4	5.40	0.160	0.80	0.160	0.110	32
18...	1215	--	7.4	6.20	0.170	0.70	0.130	0.100	24
18...	2330	--	26	2.50	0.360	0.80	0.260	0.210	314
19...	0230	--	30	3.10	0.470	1.3	0.320	0.280	114
*19...	0840	--	19	4.70	0.190	0.80	0.190	0.150	34
19...	1130	--	15	--	--	--	--	--	22
19...	1730	--	9.5	6.50	0.140	0.70	0.130	0.100	26
19...	1945	--	39	--	--	--	--	--	666
19...	2045	--	57	2.20	0.140	0.70	0.140	0.140	482
19...	2245	--	55	--	--	--	--	--	342
20...	0345	--	26	--	--	--	--	--	98
*20...	0845	--	14	6.00	0.180	0.70	0.150	0.110	33
20...	1545	--	9.9	7.20	0.120	0.70	0.140	0.090	21
20...	1845	--	15	--	--	--	--	--	236
21...	0045	--	9.9	--	--	--	--	--	28
21...	0645	--	8.1	6.80	0.140	0.90	0.200	0.090	25
*21...	0905	--	7.6	6.50	0.160	0.90	0.090	0.100	45
21...	1215	--	7.1	--	--	--	--	--	25
21...	1245	--	6.9	6.60	0.130	0.70	0.130	0.080	--

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)
JUN 1993								
*28...	0825	19	--	--	--	--	--	119
30...	0700	12	1.80	0.220	4.3	0.560	0.230	410
30...	0745	40	--	--	--	--	--	335
30...	0815	58	--	--	--	--	--	339
30...	0830	95	2.90	0.180	1.3	0.500	0.210	369
30...	1030	69	--	--	--	--	--	145
30...	1315	35	4.20	0.130	1.2	0.320	0.140	63
30...	1845	15	--	--	--	--	--	28
JUL								
01...	0045	10	--	--	--	--	--	32
*01...	0820	7.6	6.20	0.270	0.70	0.140	0.090	38
05...	2300	24	2.20	0.260	1.6	0.910	0.080	722
05...	2315	32	--	--	--	--	--	445
05...	2345	44	1.60	0.250	2.4	0.670	0.130	343
06...	0215	29	--	--	--	--	--	201
06...	0400	18	2.80	0.220	1.3	0.450	0.280	72
06...	0700	11	--	--	--	--	--	37
*07...	1345	3.5	6.10	0.080	0.50	0.120	0.070	22
08...	1500	17	--	--	--	0.720	--	323
08...	1545	28	--	--	--	0.660	--	288
08...	2145	11	--	--	--	0.320	--	64
09...	0330	13	--	--	--	0.320	--	117
*09...	0820	11	--	--	--	--	--	35
*11...	0800	12	--	--	--	--	--	43
11...	1200	9.4	--	--	--	0.180	--	29
*12...	0820	4.5	--	--	--	--	--	33
*13...	0915	3.5	--	--	--	0.170	--	--
13...	2315	12	--	--	--	0.340	--	111
14...	0215	11	--	--	--	0.200	--	49
*14...	0820	5.8	--	--	--	--	--	33
18...	0445	9.4	--	--	--	0.120	--	58
18...	0515	16	--	--	--	--	--	267
18...	0615	27	--	--	--	0.520	--	153
18...	0915	25	--	--	--	--	--	390
18...	1200	14	--	--	--	0.330	--	35
18...	1500	9.5	--	--	--	--	--	21
*19...	0820	4.9	--	--	--	--	--	27
25...	0045	11	--	--	--	--	--	591
25...	0345	7.7	1.60	0.320	2.2	0.340	0.120	58
25...	0600	27	--	--	--	--	--	1030
25...	0645	57	0.890	0.320	0.90	0.270	0.190	275
25...	1115	26	1.60	0.220	1.3	0.400	0.220	45
25...	1715	9.0	--	--	--	--	--	35
*26...	0820	3.6	3.80	0.150	0.80	0.190	0.090	73
AUG								
*05...	0930	0.84	3.00	0.080	0.50	0.250	0.160	53
09...	1415	13	--	--	--	0.570	--	232
09...	1715	5.5	--	--	--	0.310	--	50
15...	1530	2.8	--	--	--	0.280	--	44
*16...	0835	0.62	--	--	--	0.250	--	31
29...	0845	4.8	1.90	0.140	1.0	0.370	0.270	285
29...	1030	18	--	--	--	--	--	204
29...	1130	25	0.760	0.250	0.80	0.220	0.170	153
29...	1415	15	--	--	--	--	--	34
29...	1645	6.4	0.500	0.120	0.70	0.190	0.130	37
30...	0745	6.9	--	--	--	0.240	--	38
*30...	0830	7.7	0.680	0.080	0.70	0.170	0.110	34
30...	1045	4.5	--	--	--	--	--	27
31...	0700	8.8	0.550	0.080	0.70	0.150	0.110	40
*31...	0815	6.7	0.640	0.080	0.70	0.150	0.100	32
SEP								
*01...	0840	0.84	--	--	--	0.210	--	33
*02...	0930	0.73	1.90	0.190	0.50	0.610	0.590	77
11...	1945	3.2	--	--	--	1.70	--	122
13...	0900	9.0	1.60	0.230	1.1	0.200	0.220	1430
13...	1000	24	0.990	0.260	0.90	0.230	0.140	383
13...	1600	24	0.370	0.180	0.80	0.260	0.140	71
14...	0820	4.5	0.940	0.100	1.0	0.150	0.170	21
*14...	1015	15	--	--	--	0.280	--	96
14...	1315	15	--	--	--	0.210	--	147
14...	1615	13	--	--	--	0.150	--	37
14...	2215	7.6	--	--	--	0.160	--	30
15...	0115	4.9	--	--	--	--	--	44
15...	0415	3.7	--	--	--	0.150	--	43
*15...	0825	2.8	--	--	--	0.120	--	29

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

[illegible]

ROCK RIVER BASIN

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054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

NITROGEN, AMMONIA, DISSOLVED, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	1.7	3.5	55.2	2.3	3.4	9.9	1.2	.63
2	---	---	---	---	1.2	3.3	31.8	2.7	3.7	6.6	.78	.81
3	---	---	---	---	3.6	22.7	29.7	7.6	4.4	4.7	.60	.70
4	---	---	---	---	11.3	67.9	14.0	9.8	6.7	3.6	.46	.52
5	---	---	---	---	9.9	24.7	8.3	7.2	4.2	5.4	.40	.44
6	---	---	---	---	3.7	29.7	6.3	4.2	1.6	13.3	.44	.37
7	---	---	---	---	1.7	12.0	4.8	3.4	36.9	1.7	.31	.41
8	---	---	---	---	1.3	8.8	30.7	2.8	45.4	9.8	.21	.48
9	---	---	---	---	1.4	3.5	25.3	2.3	21.6	10.1	2.1	.44
10	---	---	---	---	1.8	2.7	9.8	2.1	5.1	11.5	.55	.35
11	---	---	---	---	1.3	1.7	8.4	1.9	3.0	13.7	.44	1.0
12	---	---	---	---	1.4	1.2	5.2	1.8	2.2	3.2	.42	.76
13	---	---	---	---	1.2	.81	3.5	1.5	1.8	2.8	.38	13.4
14	---	---	---	---	1.1	.53	2.9	1.5	20.8	5.8	.35	11.6
15	---	---	---	---	.99	.72	87.8	1.2	3.0	2.7	.61	1.8
16	---	---	---	---	.92	63.1	35.6	1.0	2.0	2.2	.38	.70
17	---	---	---	---	.85	14.6	11.7	1.3	22.4	2.2	.37	.44
18	---	---	---	---	.76	3.8	6.9	1.2	20.6	17.9	.36	.30
19	---	---	---	---	.75	2.9	42.9	1.0	31.9	3.8	.39	.36
20	---	---	---	---	.70	2.7	43.1	.94	14.2	2.4	.33	1.5
21	---	---	---	---	2.1	3.1	10.9	.90	5.4	1.8	.29	.58
22	---	---	---	---	3.7	12.8	7.0	1.8	2.7	1.7	.27	.43
23	---	---	---	---	3.2	298	5.7	2.8	1.8	1.5	.36	.38
24	---	---	---	---	1.7	77.9	5.1	1.6	6.2	1.4	.35	.29
25	---	---	---	---	1.4	25.7	4.0	.90	3.6	25.5	.36	17.2
26	---	---	---	---	1.3	13.0	3.6	.83	2.5	2.8	.23	9.8
27	---	---	---	---	1.2	9.2	3.7	4.7	1.6	1.7	.19	3.3
28	---	---	---	---	.91	7.2	3.8	2.3	7.9	1.4	.13	1.6
29	---	---	---	---	---	6.2	16.1	1.9	1.9	1.0	6.4	1.2
30	---	---	---	---	---	5.1	3.3	2.5	22.6	.78	1.1	1.0
31	---	---	---	---	---	82.6	---	6.7	---	1.6	1.8	---
TOTAL	---	---	---	---	63.08	811.66	527.1	84.67	311.1	174.48	22.56	72.79

NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (POUNDS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	7.7	8.6	132	13.1	15.0	29.1	8.4	2.8
2	---	---	---	---	5.9	7.6	73.4	14.2	16.0	17.0	5.2	2.2
3	---	---	---	---	12.5	66.1	76.0	38.4	17.8	12.0	3.9	1.9
4	---	---	---	---	41.2	249	45.9	50.8	22.1	9.3	2.9	1.4
5	---	---	---	---	43.5	115	30.1	30.4	19.4	28.3	2.6	1.2
6	---	---	---	---	14.3	107	25.1	17.6	7.6	94.8	3.2	1.0
7	---	---	---	---	5.9	65.3	21.3	14.3	296	10.6	2.5	1.2
8	---	---	---	---	4.4	52.6	151	12.0	254	63.2	1.9	1.4
9	---	---	---	---	4.6	17.9	107	10.1	96.7	59.2	12.0	1.3
10	---	---	---	---	5.9	14.1	40.1	9.3	23.8	106	3.3	1.1
11	---	---	---	---	4.3	9.3	35.7	8.4	12.0	117	2.6	2.9
12	---	---	---	---	4.6	6.5	22.9	8.0	7.7	20.8	2.5	2.4
13	---	---	---	---	3.9	4.6	16.0	6.6	5.5	17.4	2.3	58.3
14	---	---	---	---	3.4	3.2	13.7	6.7	91.6	33.4	2.0	72.4
15	---	---	---	---	3.0	3.7	422	5.7	12.0	14.2	3.5	9.5
16	---	---	---	---	2.7	207	172	4.9	6.2	11.7	2.2	3.9
17	---	---	---	---	2.5	41.2	49.1	6.0	47.6	11.1	2.1	2.7
18	---	---	---	---	2.2	11.3	30.6	5.7	62.1	59.4	2.0	2.0
19	---	---	---	---	2.1	9.1	1400	5.0	120	13.3	2.2	2.7
20	---	---	---	---	2.0	8.9	1170	4.6	68.4	8.4	1.8	12.4
21	---	---	---	---	5.6	10.5	65.1	4.5	31.7	6.7	1.6	4.9
22	---	---	---	---	10.1	47.2	36.0	9.0	14.7	6.2	1.5	3.6
23	---	---	---	---	8.6	1030	25.7	12.2	9.6	6.0	2.0	3.2
24	---	---	---	---	4.5	180	19.9	6.8	36.1	5.5	1.9	2.4
25	---	---	---	---	3.5	69.8	13.7	4.1	19.0	115	1.9	84.4
26	---	---	---	---	3.2	40.7	10.6	4.1	12.5	15.3	1.2	75.9
27	---	---	---	---	2.9	33.4	9.5	23.9	7.8	9.0	1.0	13.2
28	---	---	---	---	2.2	30.2	8.7	11.7	62.7	7.3	.68	6.9
29	---	---	---	---	---	28.8	48.4	9.1	14.0	5.2	27.9	5.8
30	---	---	---	---	---	24.0	19.1	12.0	193	4.0	10.0	5.2
31	---	---	---	---	---	342	---	30.9	---	9.5	15.0	---
TOTAL	---	---	---	---	217.2	2844.6	4290.6	400.1	1602.6	925.9	133.78	390.2

ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

NITROGEN, NITRITE PLUS NITRATE, DISSOLVED, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	75.9	21.5	460	66.4	27.5	230	16.2	5.8
2	---	---	---	---	57.2	17.8	254	85.7	30.5	138	13.6	8.2
3	---	---	---	---	41.0	53.9	183	127	38.2	91.0	13.7	7.9
4	---	---	---	---	25.7	144	179	125	44.3	65.8	13.5	6.6
5	---	---	---	---	37.4	108	159	100	90.4	64.6	15.0	6.1
6	---	---	---	---	28.4	117	153	69.2	51.2	166	18.4	5.8
7	---	---	---	---	18.0	115	150	58.6	575	104	14.0	7.3
8	---	---	---	---	13.7	87.4	285	50.8	1080	143	10.6	9.4
9	---	---	---	---	14.3	60.6	280	44.4	580	179	28.8	9.6
10	---	---	---	---	18.7	55.9	136	42.5	219	167	13.0	8.5
11	---	---	---	---	13.8	37.9	141	39.8	138	214	10.5	10.2
12	---	---	---	---	14.8	27.3	104	39.6	103	102	10.3	8.8
13	---	---	---	---	12.9	20.0	84.3	33.8	84.9	96.8	9.7	36.4
14	---	---	---	---	11.3	14.0	81.2	35.6	167	117	9.0	38.6
15	---	---	---	---	10.2	11.1	753	31.3	92.5	81.8	16.2	23.9
16	---	---	---	---	9.4	173	662	28.2	72.9	86.7	10.5	16.1
17	---	---	---	---	8.6	106	272	35.7	124	105	10.3	12.8
18	---	---	---	---	7.7	40.8	184	35.4	270	239	10.2	10.9
19	---	---	---	---	7.5	36.1	354	32.3	486	126	11.4	16.5
20	---	---	---	---	7.0	39.0	780	30.9	473	85.4	9.9	24.0
21	---	---	---	---	20.5	50.4	238	31.1	250	72.4	9.0	17.9
22	---	---	---	---	37.2	67.3	147	38.0	142	72.2	8.4	17.1
23	---	---	---	---	31.9	667	115	48.7	106	73.8	11.7	18.4
24	---	---	---	---	17.1	315	97.6	35.3	112	72.5	11.5	17.4
25	---	---	---	---	13.5	191	73.6	24.2	70.4	149	12.2	120
26	---	---	---	---	12.5	167	62.8	26.8	63.4	65.5	7.9	185
27	---	---	---	---	11.4	158	61.7	32.0	51.2	46.5	6.8	60.4
28	---	---	---	---	8.8	159	61.7	18.2	84.6	41.3	4.8	41.1
29	---	---	---	---	---	166	121	14.7	57.1	31.8	26.7	36.4
30	---	---	---	---	---	148	81.3	20.2	480	26.6	12.4	34.1
31	---	---	---	---	---	604	---	54.4	---	28.8	15.6	---
TOTAL	---	---	---	---	586.4	3979.0	6714.2	1455.8	6164.1	3282.5	391.8	821.2

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	1.10	1.29	2.26	1.18	1.48	20.7	3.15	1.73	5.95	.74	1.26
2	.11	32.0	1.30	2.02	.86	1.62	9.07	3.03	1.90	3.34	.70	1.81
3	.11	19.0	1.19	42.3	2.78	22.6	8.65	14.1	2.32	2.32	.84	.76
4	.10	13.0	1.04	65.2	8.49	95.9	17.0	25.9	6.17	1.78	.97	.56
5	.10	9.50	.89	5.17	9.28	35.6	4.29	12.0	5.60	8.50	1.22	.46
6	.10	5.40	.72	2.40	3.03	28.8	2.55	5.45	1.41	27.8	1.46	.38
7	.10	4.10	.65	1.51	1.14	11.8	1.70	4.41	77.4	2.67	1.06	.42
8	.11	3.30	.57	1.17	.79	8.14	31.7	3.66	64.7	18.5	.77	.48
9	.15	5.40	.73	.97	.76	2.76	16.3	3.07	29.6	11.8	4.71	.44
10	.14	4.10	.80	.87	.91	1.94	4.56	2.81	3.77	18.8	.56	.34
11	.14	6.60	.79	.87	.62	1.14	4.03	2.52	1.85	21.0	.35	2.94
12	.14	43.0	.77	.93	.61	.71	2.26	2.40	1.33	4.19	.30	.76
13	.14	45.0	.80	.94	.49	.45	1.35	1.96	1.08	4.31	.24	14.4
14	.14	19.0	.97	.73	.39	.27	.99	1.97	24.1	6.63	.19	11.6
15	.21	11.0	80.4	.62	.33	.44	108	1.66	3.54	2.96	1.12	1.96
16	.33	8.00	34.6	.54	.29	35.4	40.2	1.43	1.90	2.35	.90	.75
17	.25	5.80	4.54	.49	.25	5.77	6.98	1.74	13.3	2.14	.77	.46
18	.21	4.60	1.60	.44	.22	1.14	4.17	1.65	14.7	22.5	.66	.30
19	.17	4.00	1.16	.40	.20	.97	235	1.44	26.0	5.24	.63	.35
20	.29	20.0	.85	.42	.18	1.46	314	1.32	13.6	2.92	.47	1.96
21	.23	64.0	.70	45.0	.51	2.30	11.0	1.27	5.58	2.12	.37	1.12
22	.20	36.0	.61	36.8	.89	19.2	5.92	7.09	2.61	1.82	.30	.72
23	.19	55.0	.52	18.2	.73	232	4.19	6.70	1.75	1.60	.36	.54
24	.17	2.84	.44	10.3	.37	37.2	3.22	1.87	5.73	1.35	.30	.34
25	.16	5.85	.37	2.59	.28	11.8	2.20	.99	2.80	31.1	.28	29.6
26	.15	7.16	.31	1.59	.25	5.64	1.69	.85	2.10	3.68	.16	21.3
27	.14	1.83	.28	1.24	.22	4.19	1.50	7.31	1.47	2.02	.12	1.87
28	.13	1.51	.25	1.13	.16	3.57	1.36	2.42	6.95	1.59	.07	1.09
29	.12	1.45	8.38	.89	---	3.23	24.0	1.52	1.48	1.08	7.34	.77
30	.12	1.38	43.2	1.03	---	2.62	5.54	1.62	50.4	.80	2.41	.58
31	.12	---	9.56	1.24	---	63.7	---	3.52	---	1.29	3.56	---
TOTAL	4.89	440.92	200.28	250.26	36.21	643.84	894.12	130.83	376.87	224.15	33.93	100.32

WTR YR 1993 TOTAL 3336.62

ROCK RIVER BASIN

315

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

PHOSPHORUS ORTHO WATER, DISSOLVED, LBS/DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	.83	.80	21.0	1.96	1.03	3.68	.46	1.35
2	---	---	---	---	.61	1.10	6.57	2.00	.98	2.19	.44	1.54
3	---	---	---	---	1.48	12.8	5.45	8.21	1.03	1.55	.53	.38
4	---	---	---	---	4.49	58.7	3.47	11.7	4.14	1.21	.62	.28
5	---	---	---	---	4.77	20.3	2.08	5.82	3.71	2.00	.77	.23
6	---	---	---	---	1.52	16.8	1.42	2.71	1.01	12.3	.87	.19
7	---	---	---	---	.59	6.13	.99	2.19	25.6	1.59	.60	.21
8	---	---	---	---	.42	4.07	15.6	1.81	35.6	9.02	.41	.24
9	---	---	---	---	.42	1.49	11.0	1.51	19.4	7.13	2.22	.22
10	---	---	---	---	.52	1.08	3.26	1.38	2.55	11.0	.38	.17
11	---	---	---	---	.37	.64	2.54	1.23	1.23	16.1	.24	.97
12	---	---	---	---	.37	.41	1.33	1.17	.86	3.20	.20	.41
13	---	---	---	---	.31	.26	.80	.95	.69	2.32	.15	8.91
14	---	---	---	---	.26	.16	.59	.95	10.4	3.37	.12	8.54
15	---	---	---	---	.22	.24	70.0	.80	1.13	1.48	.77	1.09
16	---	---	---	---	.19	20.3	28.8	.69	.70	1.17	.55	.44
17	---	---	---	---	.17	3.95	5.69	.83	9.64	1.07	.46	.27
18	---	---	---	---	.14	.80	3.15	.78	11.4	13.1	.39	.18
19	---	---	---	---	.13	.68	38.8	.68	22.3	2.67	.38	.21
20	---	---	---	---	.12	1.06	61.8	.62	10.2	1.46	.28	1.22
21	---	---	---	---	.33	1.75	6.23	.60	3.30	1.06	.22	.76
22	---	---	---	---	.57	6.24	3.45	1.93	1.67	.91	.18	.48
23	---	---	---	---	.46	126	2.51	3.18	1.17	.80	.21	.35
24	---	---	---	---	.24	30.1	1.98	1.38	3.60	.67	.18	.21
25	---	---	---	---	.18	9.57	1.39	.72	1.87	17.8	.17	23.9
26	---	---	---	---	.16	4.70	1.10	.60	1.43	1.77	.09	16.2
27	---	---	---	---	.14	3.40	1.00	2.96	1.02	.97	.07	1.49
28	---	---	---	---	.10	2.84	.94	1.31	4.77	.77	.04	.85
29	---	---	---	---	---	2.51	9.33	.90	1.04	.53	5.38	.62
30	---	---	---	---	---	1.99	3.13	1.05	22.1	.39	1.30	.48
31	---	---	---	---	---	39.4	---	2.40	---	.68	2.51	---
TOTAL	---	---	---	---	20.11	380.27	315.40	65.02	205.57	123.96	21.19	72.39

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 March sampling. The phosphorus concentrations for July 12 may be in error due to a sample mixup.

WATER-QUALITY DATA, OCTOBER 21, 1992 TO MAY 18, 1993
(Milligrams per liter unless otherwise indicated)

	Oct. 21		Mar. 05		Apr. 26		May 18	
Depth of sample (ft)	1.5	29	1.5	27	1.5	29	1.5	29
Lake stage (ft)	4.74		4.83		5.21		4.88	
Specific conductance (μS/cm)	598	604	599	624	574	585	559	557
pH (units)	8.3	8.3	8.6	8.3	8.3	8.3	8.5	8.6
Water temperature (°C)	12.0	11.5	1.0	2.5	8.5	8.0	15.0	14.5
Color (Pt-Co. scale)	---	---	---	---	10	15	---	---
Turbidity (NTU)	---	---	---	---	2.3	2.4	---	---
Secchi-depth (meters)	6.2		2.8		2.1		5.0	
Dissolved oxygen	9.2	9.2	15.2	13.6	11.7	11.7	10.6	11.1
Hardness, as CaCO ₃	---	---	---	---	250	250	---	---
Calcium, dissolved (Ca)	---	---	---	---	47	47	---	---
Magnesium, dissolved (Mg)	---	---	---	---	32	32	---	---
Sodium, dissolved (Na)	---	---	---	---	26	25	---	---
Potassium, dissolved (K)	---	---	---	---	3	3	---	---
Alkalinity, as CaCO ₃	---	---	---	---	180	180	---	---
Sulfate, dissolved (SO ₄)	---	---	---	---	35	35	---	---
Chloride, dissolved (Cl)	---	---	---	---	58	58	---	---
Fluoride, dissolved (F)	---	---	---	---	0.2	0.2	---	---
Silica, dissolved (SiO ₂)	---	---	---	---	1.3	1.2	---	---
Solids, dissolved, at 180°C	---	---	---	---	316	323	---	---
Nitrogen, organic, total (as N)	---	---	---	---	0.70	0.70	---	---
Nitrogen, amm. + org., total (as N)	---	---	---	---	0.70	0.70	---	---
Nitrogen, total (as N)	---	---	---	---	0.70	0.70	---	---
Phosphorus, total (as P)	0.026	0.025	0.039	0.042	0.056	0.054	0.065	0.045
Phosphorus, ortho, dissolved (as P)	0.011	0.010	0.009	0.013	0.024	0.024	0.012	0.011
Aluminum, total (μg/L)	30	20	30	20	90	100	30	50
Alum., diss. (μg/L), 0.45 μm filter	<10	20	40	20	<10	<10	<10	<10
Iron, dissolved (Fe) μg/L	---	---	---	---	4	6	---	---
Manganese, dissolved (Mn) μg/L	---	---	---	---	3	2	---	---
Chlorophyll a, phytoplankton (μg/L)	2.1	---	1.5	---	1.0	---	0.5	---

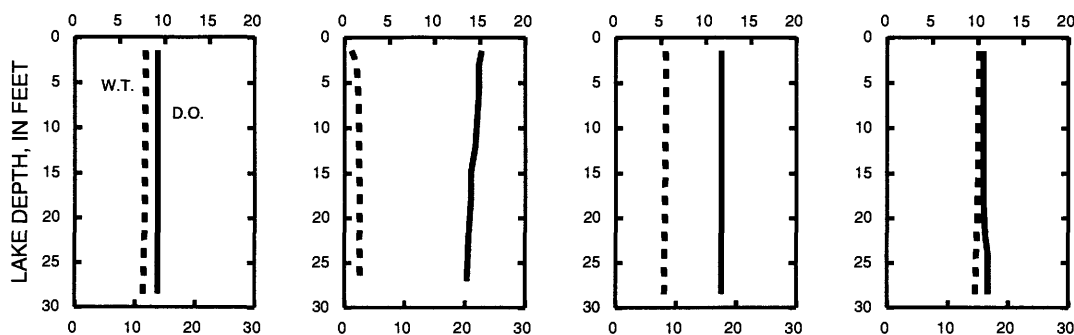
10-21-92

3-5-93

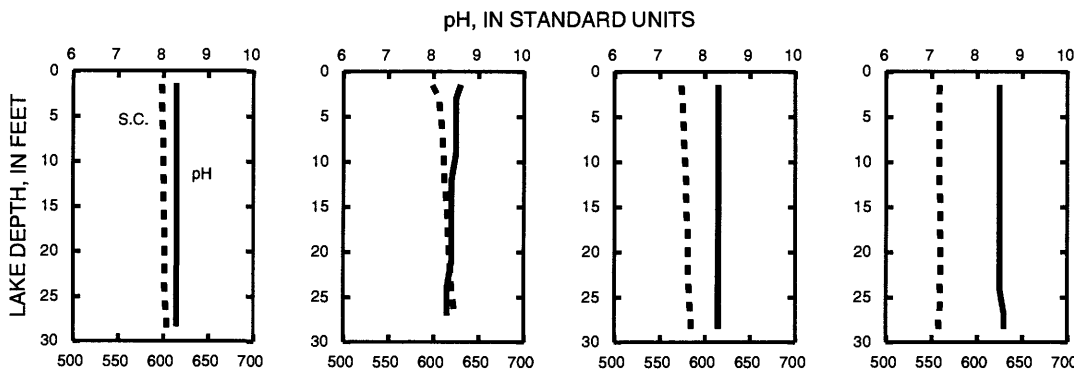
4-26-93

5-18-93

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



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

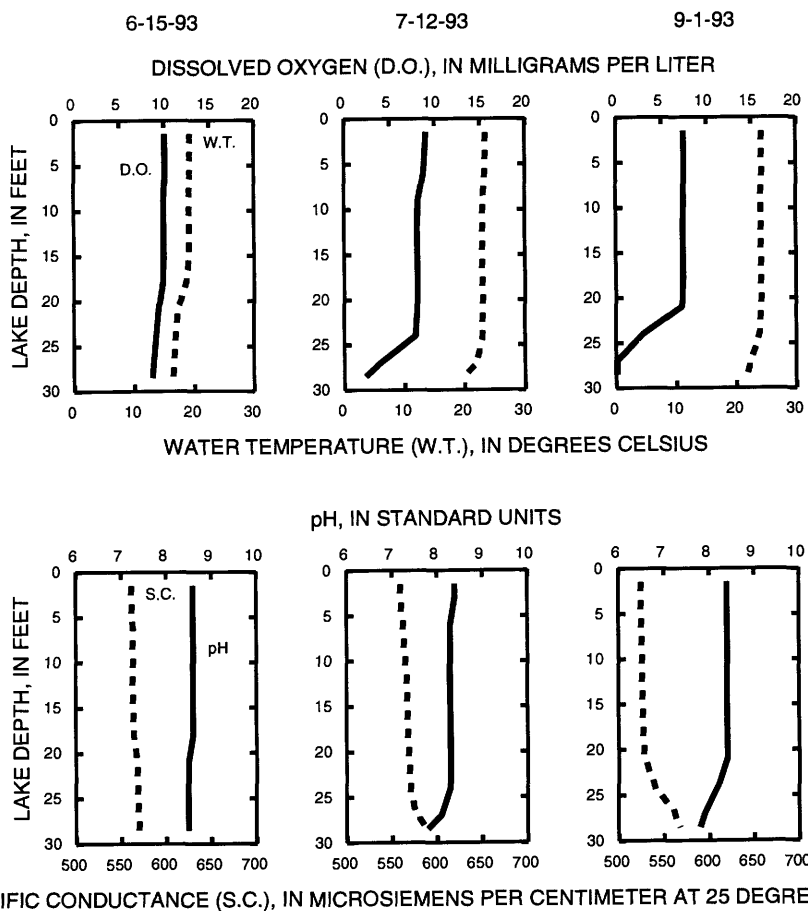


SPECIFIC CONDUCTANCE (S.C.), IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

423526088380101 DELAVAN LAKE, AT SW END, NEAR DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, JUNE 15 TO SEPTEMBER 01, 1993
(Milligrams per liter unless otherwise indicated)

	June 15		July 12		Sep. 01		
Depth of sample (ft)	1.5	29	1.5	29	1.5	21	29
Lake stage (ft)	5.39		5.30		5.13		
Specific conductance ($\mu\text{S}/\text{cm}$)	562	570	560	590	525	529	568
pH (units)	8.6	8.5	8.4	7.8	8.4	8.4	7.8
Water temperature ($^{\circ}\text{C}$)	19.5	16.5	23.5	20.0	24.5	24.0	22.0
Secchi-depth (meters)	4.1		3.0		2.5		
Dissolved oxygen	10.1	8.7	9.1	2.4	7.5	7.3	0.1
Phosphorus, total (as P)	0.038	0.044	0.120	0.041	0.022	0.020	0.072
Phosphorus, ortho, dissolved (as P)	0.016	0.025	0.091	0.009	<0.001	0.001	0.044
Aluminum, total ($\mu\text{g}/\text{L}$)	20	20	10	20	30	---	30
Alum., diss. ($\mu\text{g}/\text{L}$), 0.45 μm filter	<10	<10	20	20	30	---	30
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	0.6	---	4.1	---	5.6	---	---



ROCK RIVER BASIN

423556088365001 DELAVAN LAKE AT CENTER NEAR DELAVAN LAKE, WI

LOCATION.--Lat 42°35'56", long 88°36'50", sec.28, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 2.6 mi southeast of Delavan.

DRAINAGE AREA.--41.2 mi².

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

REMARKS.--Lake ice-covered during March sampling. The phosphorus concentrations for July 12 may be in error due to a sample mixup.

WATER-QUALITY DATA, OCTOBER 21, 1992 TO MAY 18, 1993
(Milligrams per liter unless otherwise indicated)

	Oct. 21		Mar. 05		Apr. 26		May 18	
Depth of sample (ft)	1.5	52	1.5	53	1.5	53	1.5	53
Lake stage (ft)	4.74		4.83		5.21		4.88	
Specific conductance (μS/cm)	601	608	614	855	576	591	558	566
pH (units)	8.3	8.2	8.6	7.7	8.3	8.3	8.5	8.0
Water temperature (°C)	12.0	11.5	2.0	3.5	8.0	7.0	15.0	9.5
Color (Pt-Co. scale)	---	---	---	---	15	10	---	---
Turbidity (NTU)	---	---	---	---	2.3	2.5	---	---
Secchi-depth (meters)	5.6		2.5		1.8		4.1	
Dissolved oxygen	9.2	8.6	15.6	1.8	11.8	11.7	10.4	6.7
Hardness, as CaCO ₃	---	---	---	---	240	250	---	---
Calcium, dissolved (Ca)	---	---	---	---	46	47	---	---
Magnesium, dissolved (Mg)	---	---	---	---	31	32	---	---
Sodium, dissolved (Na)	---	---	---	---	25	26	---	---
Potassium, dissolved (K)	---	---	---	---	3	3	---	---
Alkalinity, as CaCO ₃	---	---	---	---	180	180	---	---
Sulfate, dissolved (SO ₄)	---	---	---	---	33	35	---	---
Chloride, dissolved (Cl)	---	---	---	---	57	58	---	---
Fluoride, dissolved (F)	---	---	---	---	0.1	0.2	---	---
Silica, dissolved (SiO ₂)	---	---	---	---	1.3	1.2	---	---
Solids, dissolved, at 180°C	---	---	---	---	332	334	---	---
Nitrogen, organic, total (as N)	---	---	---	---	0.70	0.80	---	---
Nitrogen, amm. + org., total (as N)	---	---	---	---	0.70	0.80	---	---
Nitrogen, total (as N)	---	---	---	---	0.70	0.80	---	---
Phosphorus, total (as P)	0.026	0.029	0.031	0.153	0.055	0.054	0.046	0.096
Phosphorus, ortho, dissolved (as P)	0.011	0.013	0.004	0.125	0.026	0.020	0.012	0.071
Aluminum, total (μg/L)	<10	<10	20	20	130	150	40	60
Alum., diss. (μg/L), 0.45 μm filter	10	10	20	20	<10	<10	<10	<10
Iron, dissolved (Fe) μg/L	---	---	---	---	13	8	---	---
Manganese, dissolved (Mn) μg/L	---	---	---	---	2	3	---	---
Chlorophyll a, phytoplankton (μg/L)	2.3	---	1.4	---	1.0	---	0.4	---

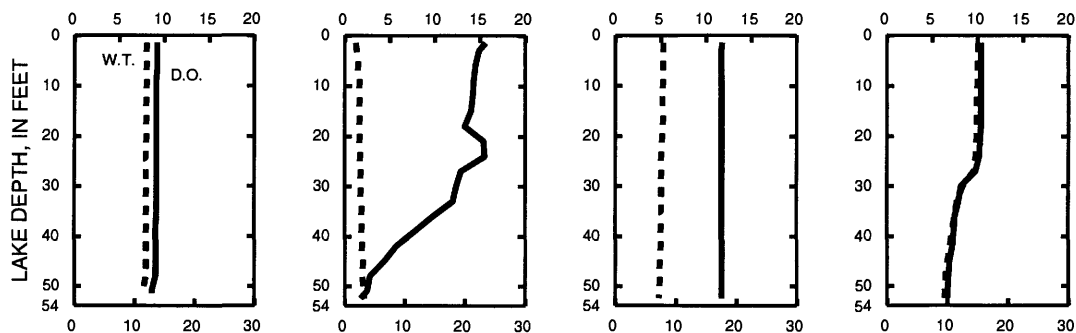
10-21-92

3-5-93

4-26-93

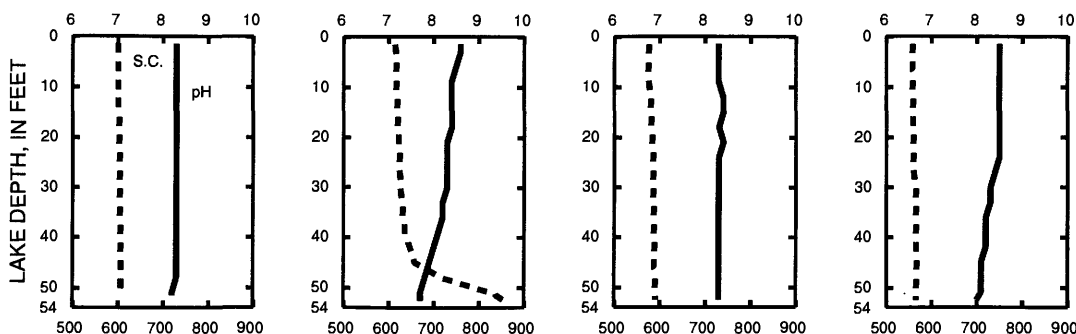
5-18-93

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, JUNE 15 TO SEPTEMBER 01, 1993
(Milligrams per liter unless otherwise indicated)

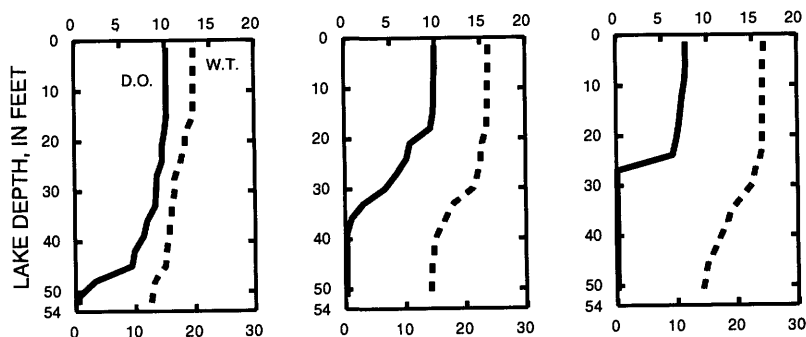
	June 15			July 12				Sep. 01			
Depth of sample (ft)	1.5	45	53	1.5	33	45	52	1.5	24	42	51
Lake stage (ft)		5.39			5.30				5.13		
Specific conductance ($\mu\text{S}/\text{cm}$)	552	572	586	557	596	613	616	521	532	624	661
pH (units)	8.7	8.3	7.8	8.5	7.9	7.7	7.6	8.4	8.3	7.6	7.4
Water temperature ($^{\circ}\text{C}$)	20.0	15.0	12.5	24.0	18.0	14.5	14.0	24.5	24.0	16.5	14.5
Secchi-depth (meters)		4.4			2.1				2.7		
Dissolved oxygen	10.2	6.3	0.4	10.0	2.0	0.2	0.2	7.7	6.2	0.1	0.1
Phosphorus, total (as P)		0.035	0.064	0.188		0.121	0.266	0.303	0.045		
Phosphorus, ortho, dissolved (as P)		0.012	0.052	0.165		0.099	0.218	0.247	0.006		
Aluminum, total ($\mu\text{g}/\text{L}$)		20	---	20		20	---	---	10		
Alum., diss. ($\mu\text{g}/\text{L}$), 0.45 μm filter		<10	---	<10		20	---	---	<10		
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)		0.5	---	---		9.6	---	---	---		

6-15-93

7-12-93

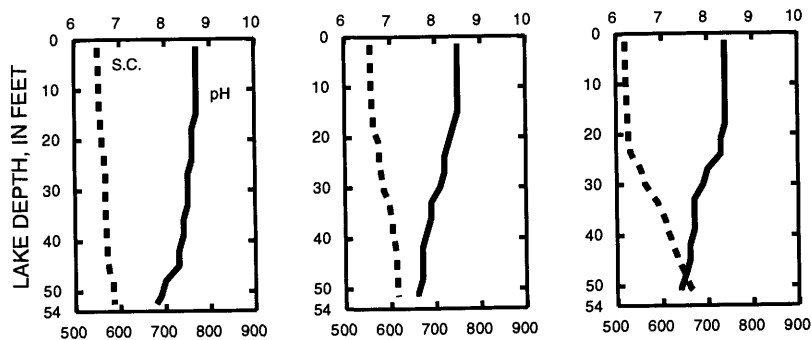
9-1-93

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

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 March sampling.

WATER-QUALITY DATA, OCTOBER 21, 1992 TO MAY 18, 1993
(Milligrams per liter unless otherwise indicated)

	Oct. 21		Mar. 05		Apr. 26		May 18	
Depth of sample (ft)	1.5	29	1.5	30	1.5	29	1.5	29
Lake stage (ft)		4.74		4.83		5.21		4.88
Specific conductance (µS/cm)	604	607	620	633	578	589	558	566
pH (units)	8.3	8.3	8.3	8.3	8.3	8.4	8.5	8.2
Water temperature (°C)	11.5	10.5	2.0	2.5	7.5	7.0	15.0	12.5
Color (Pt-Co. scale)	---	---	---	---	10	20	---	---
Turbidity (NTU)	---	---	---	---	2.5	2.9	---	---
Secchi-depth (meters)		6.2		5.5		1.8		5.5
Dissolved oxygen	9.6	9.2	14.3	12.4	11.8	11.8	10.0	7.5
Hardness, as CaCO ₃	---	---	---	---	250	240	---	---
Calcium, dissolved (Ca)	---	---	---	---	47	45	---	---
Magnesium, dissolved (Mg)	---	---	---	---	33	31	---	---
Sodium, dissolved (Na)	---	---	---	---	26	25	---	---
Potassium, dissolved (K)	---	---	---	---	3	3	---	---
Alkalinity, as CaCO ₃	---	---	---	---	180	180	---	---
Sulfate, dissolved (SO ₄)	---	---	---	---	35	34	---	---
Chloride, dissolved (Cl)	---	---	---	---	58	58	---	---
Fluoride, dissolved (F)	---	---	---	---	0.2	0.2	---	---
Silica, dissolved (SiO ₂)	---	---	---	---	1.2	1.2	---	---
Solids, dissolved, at 180°C	---	---	---	---	331	328	---	---
Nitrogen, organic, total (as N)	---	---	---	---	0.70	0.60	---	---
Nitrogen, amm. + org., total (as N)	---	---	---	---	0.70	0.60	---	---
Nitrogen, total (as N)	---	---	---	---	0.70	0.60	---	---
Phosphorus, total (as P)	0.025	0.020	0.037	0.042	0.057	0.054	0.038	0.059
Phosphorus, ortho, dissolved (as P)	0.010	0.007	0.016	0.020	0.021	0.020	0.015	0.038
Aluminum, total (µg/L)	20	<10	30	30	100	110	20	30
Alum., diss. (µg/L), 0.45 µm filter	<10	<10	30	30	<10	20	<10	<10
Iron, dissolved (Fe) µg/L	---	---	---	---	130	6	---	---
Manganese, dissolved (Mn) µg/L	---	---	---	---	3	2	---	---
Chlorophyll a, phytoplankton (µg/L)	2.8	---	1.1	---	1.1	---	0.4	---

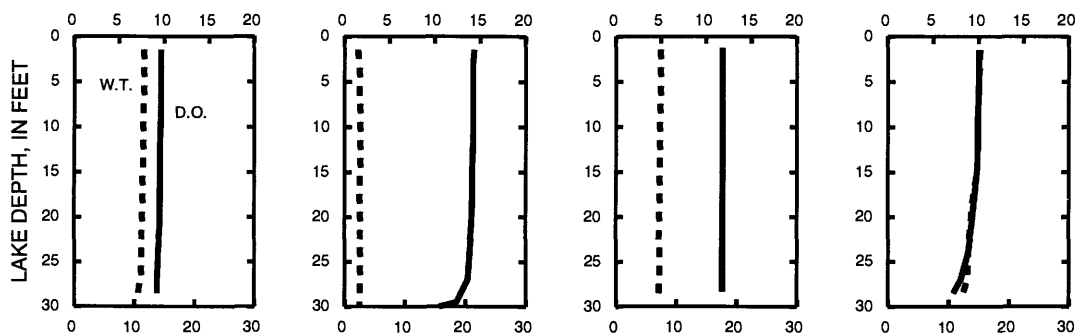
10-21-92

3-5-93

4-26-93

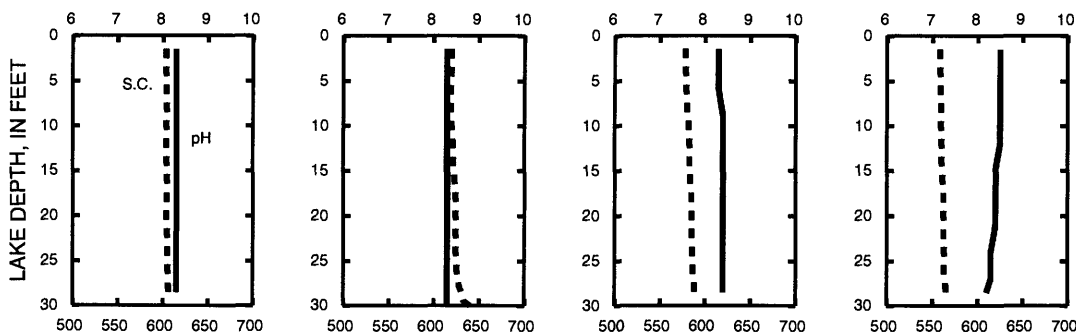
5-18-93

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



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

pH, IN STANDARD UNITS

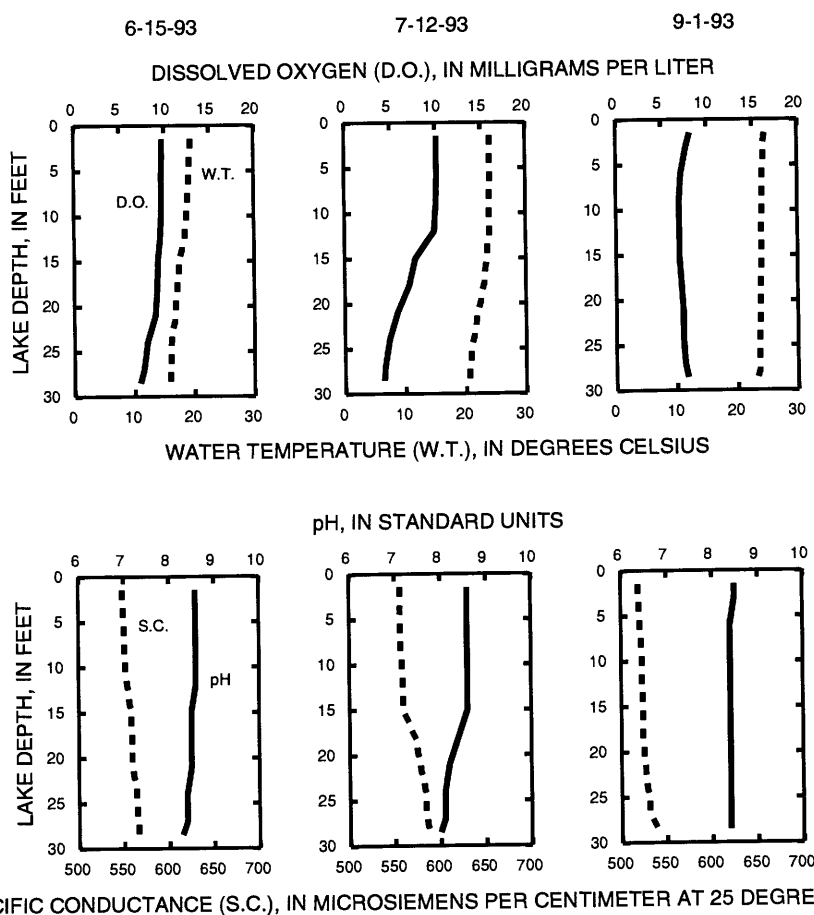


SPECIFIC CONDUCTANCE (S.C.), IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

423659088354401 DELAVAN LAKE, AT NORTH END, NEAR LAKE LAWN, WI--CONTINUED

WATER-QUALITY DATA, JUNE 15 TO SEPTEMBER 01, 1993
(Milligrams per liter unless otherwise indicated)

	June 15		July 12		Sep. 01	
Depth of sample (ft)	1.5	29	1.5	29	1.5	29
Lake stage (ft)		5.39		5.30		5.13
Specific conductance ($\mu\text{S}/\text{cm}$)	549	567	556	587	519	540
pH (units)	8.6	8.3	8.6	8.0	8.5	8.4
Water temperature ($^{\circ}\text{C}$)	19.5	16.0	24.0	20.5	24.5	23.5
Secchi-depth (meters)		5.6		2.3		2.0
Dissolved oxygen	9.8	7.3	10.2	4.3	8.2	7.9
Phosphorus, total (as P)	0.039	0.066	0.060	0.079	0.034	0.074
Phosphorus, ortho, dissolved (as P)	0.018	0.046	0.012	0.059	0.002	0.033
Aluminum, total ($\mu\text{g}/\text{L}$)	10	20	20	20	60	50
Alum., diss. ($\mu\text{g}/\text{L}$), 0.45 μm filter	<10	<10	20	10	20	20
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	0.5	---	14	---	6.0	---



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 070900001, 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 sea level. Prior to Sept. 5, 1989, staff gage at bridge on North Shore Drive at same datum.

REMARKS.--Estimated daily gage heights: Dec. 15-28, Jan. 18-22, and May 17 to June 3. Records good except estimated daily gage heights, which are fair. Lake was ice covered from Dec. 24 to Apr. 10. Lake levels controlled by Town of Delavan.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 6.01 ft, Apr. 20, 1993; minimum daily, -4.44 ft Nov. 6, 1989 (lake drawn down for lake rehabilitation program).

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 6.01 ft, Apr. 20; minimum observed, 4.70 ft, Oct. 13, 14.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.75	4.79	5.11	5.15	4.96	4.85	5.71	4.95	5.07	5.37	5.06	5.13
2	4.74	4.89	5.07	5.12	4.95	4.81	5.69	4.87	5.07	5.32	5.05	5.11
3	4.74	4.93	5.08	5.12	4.96	4.78	5.64	4.83	5.07	5.26	5.05	5.11
4	4.74	4.97	5.09	5.21	4.97	4.79	5.59	4.86	5.08	5.24	5.04	5.10
5	4.73	4.99	5.10	5.29	4.99	4.83	5.53	4.89	5.14	5.26	5.03	5.08
6	4.73	5.00	5.11	5.25	5.03	4.90	5.47	4.91	5.16	5.32	5.03	5.07
7	4.73	5.02	5.12	5.20	5.05	5.01	5.41	4.91	5.20	5.31	5.03	5.06
8	4.72	5.02	5.13	5.14	5.06	5.09	5.39	4.92	5.33	5.30	5.03	5.06
9	4.73	5.05	5.13	5.08	5.07	5.13	5.41	4.93	5.39	5.27	5.05	5.04
10	4.72	5.08	5.18	5.03	5.09	5.15	5.36	4.93	5.37	5.23	5.07	5.02
11	4.73	5.10	5.19	4.97	5.06	5.16	5.28	4.93	5.32	5.28	5.08	5.02
12	4.72	5.20	5.16	4.95	5.05	5.14	5.21	4.94	5.32	5.30	5.08	5.02
13	4.71	5.27	5.11	4.97	5.04	5.12	5.14	4.92	5.32	5.25	5.08	5.07
14	4.71	5.29	5.08	4.95	5.04	5.09	5.14	4.92	5.38	5.19	5.08	5.17
15	4.72	5.30	5.07	4.94	5.03	5.05	5.30	4.91	5.39	5.17	5.09	5.19
16	4.74	5.30	5.21	4.94	5.04	5.06	5.50	4.89	5.38	5.15	5.10	5.18
17	4.73	5.31	5.24	4.96	5.02	5.13	5.45	4.88	5.39	5.15	5.09	5.18
18	4.74	5.32	5.24	4.98	5.02	5.14	5.38	4.88	5.44	5.18	5.09	5.18
19	4.73	5.33	5.22	4.99	5.02	5.12	5.37	4.87	5.48	5.21	5.08	5.17
20	4.74	5.38	5.18	5.00	5.01	5.11	5.86	4.87	5.50	5.21	5.08	5.17
21	4.74	5.42	5.14	5.04	5.05	5.09	5.93	4.87	5.46	5.20	5.06	5.19
22	4.74	5.43	5.10	5.07	5.09	5.09	5.73	4.89	5.40	5.19	5.05	5.19
23	4.76	5.43	5.09	5.10	5.10	5.34	5.53	4.92	5.32	5.18	5.04	5.20
24	4.77	5.40	5.08	5.09	5.06	5.71	5.37	5.00	5.26	5.17	5.03	5.20
25	4.77	5.37	5.08	5.09	5.01	5.76	5.32	4.96	5.21	5.23	5.02	5.23
26	4.77	5.36	5.08	5.06	4.97	5.74	5.21	4.95	5.16	5.25	5.02	5.35
27	4.77	5.33	5.08	5.04	4.93	5.69	5.16	4.98	5.18	5.25	5.02	5.37
28	4.77	5.28	5.09	5.01	4.89	5.63	5.16	4.99	5.21	5.23	5.00	5.38
29	4.77	5.23	5.10	4.97	---	5.57	5.13	4.98	5.22	5.14	5.05	5.35
30	4.76	5.17	5.10	4.97	---	5.52	5.05	5.00	5.35	5.05	5.11	5.28
31	4.75	---	5.15	4.96	---	5.54	---	5.04	---	5.04	5.14	---
MEAN	4.74	5.20	5.13	5.05	5.02	5.20	5.41	4.92	5.29	5.22	5.06	5.16
MAX	4.77	5.43	5.24	5.29	5.10	5.76	5.93	5.04	5.50	5.37	5.14	5.38
MIN	4.71	4.79	5.07	4.94	4.89	4.78	5.05	4.83	5.07	5.04	5.00	5.02
CAL YR 1992	MEAN 5.11	MAX 5.47	MIN 4.71									
WTR YR 1993	MEAN 5.12	MAX 5.93	MIN 4.71									

ROCK RIVER BASIN

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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 914.50 ft above sea level (Public Service Commission bench mark).

REMARKS.--Estimated daily discharges: Oct. 6-7 and Apr. 17-20. Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	.22	69	50	21	44	107	117	11	143	.58	13
2	.30	.29	23	49	15	41	101	107	12	134	.57	12
3	.24	.26	.45	50	11	25	98	54	13	106	2.3	10
4	.27	.24	.44	78	11	20	94	26	14	19	.48	7.9
5	.26	.24	.42	87	13	19	88	27	15	20	.51	8.4
6	.22	.26	.41	86	11	20	83	29	16	36	.50	8.0
7	.22	.27	.41	83	11	20	84	22	55	47	.52	5.7
8	.22	.29	.41	82	11	31	112	16	154	77	.52	5.9
9	.26	.33	.42	80	11	39	157	13	166	123	.60	1.4
10	.24	.37	.38	77	29	40	132	16	166	121	.57	.67
11	.22	.31	31	58	44	40	125	10	71	107	.59	.66
12	.19	15	54	45	31	39	107	15	24	71	4.9	.72
13	.19	11	53	45	21	38	51	5.2	17	129	3.7	6.7
14	.23	16	21	44	20	38	19	14	52	73	5.0	22
15	.23	15	29	14	20	37	149	18	32	43	8.8	16
16	.23	18	74	.48	20	39	274	17	31	29	8.7	12
17	.21	5.7	87	.44	17	36	220	13	27	20	6.5	9.3
18	.20	6.0	84	.45	11	38	210	7.2	143	24	7.2	10
19	.21	9.9	82	.47	11	38	200	7.0	251	26	7.2	7.8
20	.22	58	47	.47	11	38	340	6.8	320	24	7.9	4.9
21	.21	94	60	29	11	38	345	7.1	212	18	6.9	7.1
22	.22	91	49	53	11	38	320	7.3	161	14	5.9	12
23	.22	84	18	52	27	86	250	7.3	147	13	6.5	8.3
24	.21	80	.37	52	49	179	122	6.1	138	12	9.7	4.2
25	.21	80	.36	50	49	160	102	8.0	131	16	5.0	10
26	.27	78	.34	50	47	125	81	8.3	57	23	4.9	44
27	.25	77	.35	49	46	116	51	8.5	1.0	16	7.4	23
28	.24	76	.36	48	44	106	48	9.0	1.0	49	4.5	19
29	.24	73	53	30	---	99	126	9.5	1.1	84	13	66
30	.21	71	81	21	---	96	142	10	98	48	18	51
31	.20	---	62	21	---	95	---	11	---	.63	18	---
TOTAL	7.16	961.68	982.12	1385.31	634	1818	4338	632.3	2537.1	1665.63	167.44	407.65
MEAN	.23	32.1	31.7	44.7	22.6	58.6	145	20.4	84.6	53.7	5.40	13.6
MAX	.32	94	87	87	49	179	345	117	320	143	18	66
MIN	.19	.22	.34	.44	11	19	19	5.2	1.0	.63	.48	.66
AC-FT	14	1910	1950	2750	1260	3610	8600	1250	5030	3300	332	809
CFSM	.01	.81	.80	1.12	.57	1.47	3.63	.51	2.12	1.35	.14	.34
IN.	.01	.90	.92	1.29	.59	1.70	4.05	.59	2.37	1.56	.16	.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1993, BY WATER YEAR (WY)

MEAN	31.8	26.7	23.4	18.7	22.5	32.6	38.8	12.2	15.9	13.4	3.22	21.8
MAX	127	93.1	51.1	44.7	42.4	71.2	145	37.3	84.6	53.7	9.50	110
(WY)	1990	1986	1986	1993	1984	1986	1993	1987	1993	1993	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 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1984 - 1993
ANNUAL TOTAL	6376.26	15536.39	
ANNUAL MEAN	17.4	42.6	21.7
HIGHEST ANNUAL MEAN			42.6
LOWEST ANNUAL MEAN			11.0
HIGHEST DAILY MEAN	170	345	345
LOWEST DAILY MEAN	.07	.19	.00
ANNUAL SEVEN-DAY MINIMUM	.14	.21	.00
INSTANTANEOUS PEAK FLOW		372	(c)372
INSTANTANEOUS PEAK STAGE		7.99	8.22
ANNUAL RUNOFF (AC-FT)	12650	30820	15730
ANNUAL RUNOFF (CFSM)	.44	1.07	.55
ANNUAL RUNOFF (INCHES)	5.96	14.52	7.41
10 PERCENT EXCEEDS	52	114	60
50 PERCENT EXCEEDS	10	19	7.3
90 PERCENT EXCEEDS	.14	.29	.00

(a) Also occurred many days during the 1990 and 1991 water years (lake drawn down for lake rehabilitation program)

(b) Also occurred in 1991 water year

(c) Gage height, 7.99 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.

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. 6-7 and Apr. 17-20, 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, 0.37 mg/L, Mar. 9; minimum observed, 0.01 mg/L, Sept. 15, 17, 19, 26.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 213 lb, Apr. 20; minimum daily, 0.03 lb, on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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 1992					MAR 1993				
07...	0915	0.22	--	0.030	11...	0900	--	40	0.190
12...	1120	--	0.20	0.030	12...	0830	--	38	0.200
NOV					17...	1040	--	39	0.130
16...	1340	--	15	0.020	17...	1515	--	38	0.130
27...	0925	--	77	0.030	18...	0840	--	38	0.140
DEC					18...	1450	--	38	0.130
16...	1525	--	79	0.050	19...	0835	--	38	0.170
17...	0905	--	87	0.030	19...	1530	--	38	0.130
18...	1020	--	84	0.030	23...	1005	--	79	0.180
18...	1520	--	84	0.060	23...	1525	--	116	0.120
19...	0935	--	83	0.020	24...	0940	--	132	0.120
20...	0930	--	1.2	0.040	24...	1520	--	220	0.150
30...	0945	--	79	0.060	25...	1420	--	132	0.220
30...	1430	--	79	0.140	26...	0945	--	125	0.180
31...	0920	--	53	0.030	26...	1510	--	125	0.250
31...	1450	--	51	0.030	27...	0905	--	117	0.250
JAN 1993					27...	1420	--	117	0.230
01...	0900	--	50	0.020	28...	0915	--	106	0.240
01...	1430	--	50	0.030	28...	1440	--	106	0.210
02...	0900	--	49	0.030	29...	1055	--	98	0.210
03...	0900	--	49	0.030	30...	0815	--	96	0.150
04...	0920	--	87	0.190	APR				
04...	1535	--	87	0.060	01...	1030	--	108	0.120
05...	0905	--	87	0.030	01...	1350	--	108	0.080
05...	1455	--	87	0.040	02...	1310	--	101	0.160
06...	0845	--	86	0.060	02...	1505	--	101	0.140
06...	1510	--	86	0.060	03...	0755	--	100	0.140
07...	0910	--	83	0.080	03...	1505	--	98	0.150
07...	1500	--	83	0.080	04...	0800	--	93	0.120
22...	0925	--	53	0.070	05...	0950	--	87	0.160
22...	1450	--	54	0.030	09...	1025	--	162	0.150
23...	0940	--	52	0.050	09...	1330	--	98	0.080
23...	1330	--	51	0.190	10...	0830	--	109	0.060
24...	0855	--	51	0.080	10...	1210	--	96	0.100
24...	1330	--	51	0.110	11...	0835	--	131	0.060
25...	0900	--	50	0.030	11...	1655	--	117	0.070
26...	0815	--	50	0.190	12...	0945	--	105	0.100
FEB					13...	0810	--	105	0.050
15...	1130	--	20	0.030	15...	1005	--	177	0.090
MAR					15...	1505	--	180	0.070
01...	0945	--	44	0.050	16...	1015	--	284	0.050
08...	1110	--	38	0.060	16...	1455	--	284	0.170
08...	1505	--	39	0.060	17...	1015	220	--	0.070
09...	1000	--	39	0.370	17...	1425	220	--	0.080
09...	1510	--	40	0.130	18...	0845	210	--	0.060
10...	0945	--	40	0.190	19...	1035	200	--	0.060
10...	1515	--	40	0.200	20...	1520	340	--	0.130

ROCK RIVER BASIN

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05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	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)
APR 1993				JUL 1993			
21...	1030	351	0.130	02...	0840	134	0.080
21...	1450	372	0.080	03...	0830	129	0.080
22...	0900	323	0.070	04...	0810	19	0.080
22...	1500	316	0.080	05...	0810	20	0.100
23...	0845	231	0.080	06...	0915	22	0.110
24...	0750	136	0.140	06...	1510	45	0.090
30...	0905	138	0.080	07...	1030	48	0.070
30...	1450	144	0.100	08...	0830	44	0.070
MAY				JUL 1993			
01...	1010	75	0.060	08...	1520	127	0.090
02...	0830	120	0.080	09...	0920	125	0.090
02...	1455	123	0.050	09...	1515	122	0.080
03...	0915	125	0.040	10...	0915	118	0.080
04...	0815	26	0.040	10...	1245	118	0.070
31...	0940	11	0.150	11...	0900	123	0.050
JUN				JUL 1993			
01...	0945	11	0.130	11...	1405	125	0.090
02...	0900	11	0.120	12...	1020	22	0.080
03...	1530	13	0.130	12...	1320	53	0.080
04...	1025	14	0.120	13...	0930	129	0.040
05...	0950	15	0.080	13...	1425	131	0.080
05...	1430	15	0.070	14...	0905	45	0.070
06...	0905	16	0.070	15...	0905	48	0.110
06...	1430	16	0.090	19...	0925	27	0.100
07...	0935	17	0.080	19...	1520	22	0.100
07...	1510	23	0.100	20...	0945	26	0.120
08...	0945	160	0.060	21...	0910	23	0.100
08...	1435	166	0.060	21...	1515	16	0.090
09...	0940	165	0.090	22...	0850	20	0.090
09...	1525	160	0.070	26...	1000	21	0.080
10...	1000	167	0.040	26...	1355	15	0.070
10...	1535	165	0.070	27...	0755	20	0.080
11...	0955	24	0.050	28...	0750	18	0.090
11...	1420	27	0.110	29...	1400	83	0.050
12...	0915	25	0.110	AUG			
13...	0920	16	0.180	05...	1330	0.50	0.030
14...	0935	30	0.160	30...	0945	7.4	0.070
14...	1515	29	0.130	30...	1510	19	0.070
15...	0915	32	0.190	31...	0905	18	0.060
15...	1500	33	0.060	31...	1310	20	0.070
16...	0825	31	0.070	SEP			
16...	1525	31	0.070	01...	0855	15	0.070
17...	0800	14	0.090	01...	1535	8.1	0.050
18...	0955	198	0.080	02...	0755	13	0.060
18...	1510	182	0.060	03...	1430	9.2	0.040
19...	1010	192	0.060	04...	0755	8.1	0.060
19...	1415	305	0.070	14...	0900	23	0.050
20...	1005	328	0.040	14...	1505	19	0.030
20...	1425	321	0.060	15...	1005	17	0.020
21...	1020	171	0.060	15...	1520	15	0.010
21...	1320	172	0.080	16...	0855	12	0.020
22...	0855	163	0.040	17...	0830	13	0.010
22...	1500	46	0.060	18...	0910	12	0.030
23...	0900	151	0.070	19...	0915	14	0.010
23...	1350	149	0.050	26...	1030	69	0.010
24...	0810	138	0.080	27...	1000	24	0.020
25...	0900	134	0.080	27...	1440	17	0.040
JUL				JUL 1993			
01...	0925	143	0.110	28...	0850	18	0.030
01...	1420	144	0.060	28...	1515	17	0.020
				29...	1050	93	0.030
				29...	1500	93	0.020
				30...	0910	32	0.030

ROCK RIVER BASIN

05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI--CONTINUED

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.03	11.2	6.96	5.18	11.9	61.6	42.9	7.52	66.0	.13	4.34
2	.05	.04	3.73	8.00	3.63	11.5	74.5	36.9	7.60	56.5	.12	3.54
3	.04	.03	.07	8.03	2.47	7.24	75.4	12.0	8.85	45.8	.43	2.51
4	.04	.03	.07	33.2	2.57	5.91	66.1	5.56	8.27	8.75	.08	2.47
5	.04	.03	.07	18.3	2.77	5.83	74.4	5.66	6.48	10.6	.08	2.67
6	.04	.03	.07	27.7	2.42	6.28	70.5	5.91	6.79	18.3	.08	2.51
7	.04	.03	.07	34.6	2.30	6.23	70.1	4.32	25.7	18.4	.08	1.73
8	.04	.03	.07	31.7	2.24	12.7	91.9	3.11	54.8	34.8	.08	1.76
9	.04	.04	.07	27.4	2.20	42.5	96.8	2.43	66.0	56.4	.10	.40
10	.04	.04	.06	23.2	5.43	39.9	55.3	2.79	49.0	46.8	.09	.19
11	.04	.04	8.33	15.4	8.09	41.2	46.1	1.71	25.2	39.4	.10	.19
12	.03	1.75	14.6	10.5	5.55	40.8	48.7	2.51	15.6	26.5	2.05	.20
13	.03	1.18	14.2	9.21	3.53	37.6	15.4	.87	15.9	42.7	1.96	1.83
14	.04	1.80	5.63	7.96	3.41	33.8	7.25	2.53	43.9	29.9	2.62	4.60
15	.04	1.68	7.75	2.37	3.32	30.7	58.1	3.51	19.9	24.5	4.48	1.49
16	.04	1.96	18.9	.08	3.41	30.0	139	3.58	11.9	16.7	4.34	1.03
17	.03	.63	14.8	.07	2.90	25.9	97.0	3.05	12.7	11.5	3.18	.66
18	.03	.70	17.6	.07	2.01	28.4	69.9	1.85	51.8	13.3	3.45	1.32
19	.03	1.20	11.4	.08	2.12	30.1	72.7	1.97	87.9	14.4	3.37	.43
20	.03	7.25	9.86	.08	2.22	24.8	213	2.10	107	14.8	3.64	.26
21	.03	12.2	12.5	6.19	2.30	23.0	193	2.39	72.6	9.61	3.12	.38
22	.03	12.2	9.79	13.5	2.38	21.6	131	2.69	46.2	6.92	2.60	.67
23	.03	11.8	3.45	28.5	5.92	62.2	122	2.92	48.8	6.07	2.80	.45
24	.03	11.7	.07	24.8	11.2	138	85.6	2.69	57.7	5.65	4.11	.22
25	.03	12.1	.07	14.0	11.4	172	68.4	3.82	56.6	7.24	2.07	.55
26	.04	12.2	.06	42.2	11.5	146	50.8	4.35	24.4	9.59	1.99	2.62
27	.03	12.5	.06	30.3	11.5	151	29.3	4.88	.16	7.21	2.94	3.27
28	.03	12.3	.06	19.3	11.6	128	24.4	5.64	.16	20.1	1.77	2.70
29	.03	11.9	15.2	8.59	---	106	58.7	6.54	.18	24.5	5.15	8.65
30	.03	11.4	35.4	5.50	---	77.6	66.1	7.75	53.6	12.3	6.79	7.39
31	.03	---	12.4	5.34	---	67.9	---	8.64	---	.15	6.49	---
TOTAL	1.10	138.82	227.61	463.13	135.57	1566.59	2333.05	197.57	993.21	705.39	70.29	61.03

WTR YR 1993 TOTAL 6893.36

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(a) From rating curve extended above 6,500 ft³/s on basis of slope-area measurement of peak flow
(b) Site and datum then in use
(c) Result of freezeup

ROCK RIVER BASIN

05432500 PECATONICA RIVER AT DARLINGTON, WI

LOCATION.--Lat 42°40'40", long 90°07'07", in NE 1/4 sec.3, T.2 N., R.3 E., Lafayette County, Hydrologic Unit 07090003, on right bank in Darlington, 0.3 mi downstream from Vinegar Branch, and 3.6 mi upstream from Otter Creek.

DRAINAGE AREA.--273 mi².

PERIOD OF RECORD.--September 1939 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 802.42 ft above sea level. Prior to Dec. 19, 1939, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 5-11, Dec. 20 to Jan. 3, Jan. 6-11, 14-31, Feb. 12 to Mar. 5, and Mar. 13-15. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	111	223	290	230	130	1690	398	367	3240	682	476
2	108	195	219	240	217	140	946	625	352	2040	639	451
3	106	214	206	270	181	220	518	761	421	1460	593	445
4	104	163	196	536	221	480	461	1050	392	993	562	426
5	103	140	130	400	293	500	426	1030	374	1760	539	413
6	101	129	170	220	301	507	390	761	344	9240	652	403
7	100	122	180	200	200	435	377	731	435	3780	619	388
8	104	118	170	190	174	741	479	882	1060	2160	536	385
9	108	120	150	190	164	819	562	692	822	2220	569	382
10	108	123	170	180	195	586	450	602	556	2920	694	373
11	104	119	180	180	237	336	404	583	477	2380	543	356
12	102	120	160	183	160	223	384	539	433	2360	500	358
13	101	124	169	186	150	170	350	496	410	1770	487	378
14	99	116	161	170	130	130	356	471	534	1550	469	611
15	103	110	206	160	120	140	576	464	503	1400	753	504
16	113	108	537	160	130	743	940	433	412	1140	1110	418
17	114	109	495	150	120	1210	756	411	561	1070	658	389
18	105	108	361	140	120	658	610	425	1120	1330	533	374
19	102	107	319	140	120	352	591	413	1010	1270	517	367
20	105	193	230	150	130	225	899	394	843	995	495	375
21	112	783	220	300	130	225	946	384	699	862	463	396
22	110	626	210	400	120	271	728	369	586	802	444	387
23	105	508	200	270	120	799	625	407	527	764	744	372
24	103	397	190	200	120	1240	570	457	508	748	1170	348
25	102	329	190	180	120	1850	519	404	924	1210	695	366
26	102	329	190	170	120	2810	463	359	722	1970	539	558
27	100	288	200	170	120	2300	428	354	679	1150	507	464
28	99	257	210	160	120	1880	466	357	724	896	476	413
29	99	242	230	160	---	2030	460	338	678	827	545	382
30	97	231	330	160	---	1820	422	369	2910	705	625	360
31	96	---	380	180	---	1270	---	455	---	657	562	---
TOTAL	3226	6639	7182	6685	4563	25240	17792	16414	20383	55669	18920	12318
MEAN	104	221	232	216	163	814	593	529	679	1796	610	411
MAX	114	783	537	536	301	2810	1690	1050	2910	9240	1170	611
MIN	96	107	130	140	120	130	350	338	344	657	444	348
CFSM	.38	.81	.85	.79	.60	2.98	2.17	1.94	2.49	6.58	2.24	1.50
IN.	.44	.90	.98	.91	.62	3.44	2.42	2.24	2.78	7.59	2.58	1.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1993, BY WATER YEAR (WY)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
MEAN	126	140	122	157	213	390	243	194	228	201	148	141
MAX	302	674	338	546	738	951	731	780	773	1796	610	487
(WY)	1985	1962	1983	1960	1953	1959	1959	1960	1969	1993	1993	1942
MIN	39.9	43.8	34.6	31.6	38.3	60.9	69.8	51.1	42.2	32.7	42.1	38.3
(WY)	1965	1965	1959	1959	1959	1957	1957	1958	1965	1965	1958	1958

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1939 - 1993
ANNUAL TOTAL	69339	195031	
ANNUAL MEAN	189	534	192
HIGHEST ANNUAL MEAN			534
LOWEST ANNUAL MEAN			66.5
HIGHEST DAILY MEAN	842	Feb 24	11200
LOWEST DAILY MEAN	89	Sep 1	24
ANNUAL SEVEN-DAY MINIMUM	93	Aug 19	25
INSTANTANEOUS PEAK FLOW			(b)22000
INSTANTANEOUS PEAK STAGE			20.71
INSTANTANEOUS LOW FLOW			(c)17
ANNUAL RUNOFF (CFSM)	.69	1.96	.70
ANNUAL RUNOFF (INCHES)	9.45	26.58	9.55
10 PERCENT EXCEEDS	311	1050	331
50 PERCENT EXCEEDS	164	385	120
90 PERCENT EXCEEDS	103	114	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) Result of freezeup

ROCK RIVER BASIN

329

05433000 EAST BRANCH PECATONICA RIVER NEAR BLANCHARDVILLE, WI

LOCATION.--Lat 42°47'10" long 89°51'40", in SE 1/4 sec. 26, T.4 N., R.5 E., Lafayette County, Hydrologic Unit 07090003, on left bank at downstream side of bridge on State Highway 78, 1.8 mi south of Blanchardville and 4.5 mi upstream from Sawmill Creek.

DRAINAGE AREA.--221 mi².

PERIOD OF RECORD.--September 1939 to September 1986, October 1987 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 796.8 ft above sea level. Prior to Dec. 20, 1939, nonrecording gage at bridge 50 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 5-11, Dec. 20 to Jan. 3, Jan. 6 to Feb. 3, Feb. 15 to Mar. 3, and Mar. 13-15. Records fair except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	108	141	210	120	120	1670	289	245	738	372	252
2	102	151	139	190	120	140	629	423	237	441	352	246
3	102	159	134	220	130	150	397	560	311	384	335	245
4	101	122	131	380	170	231	348	1080	258	333	322	239
5	99	114	110	235	235	309	320	837	250	666	312	235
6	99	110	130	140	277	328	286	588	229	3910	322	233
7	99	107	120	140	143	298	292	516	390	2970	318	229
8	101	106	120	140	125	467	486	639	916	1260	302	227
9	104	107	110	140	122	502	497	513	520	1190	297	226
10	104	109	120	140	137	359	340	414	356	2140	314	224
11	103	107	120	140	185	180	312	403	305	1340	294	220
12	102	109	120	140	126	135	303	370	277	1080	284	222
13	100	114	118	140	122	120	264	336	261	857	282	242
14	100	108	119	130	119	110	263	323	350	807	276	535
15	101	105	147	130	110	120	586	317	291	678	335	382
16	108	104	443	130	110	449	1030	293	250	566	386	266
17	107	104	290	130	110	1320	726	279	486	583	290	247
18	103	103	199	120	110	445	529	295	990	803	274	238
19	103	104	181	120	110	206	505	282	662	621	273	234
20	105	162	140	120	120	151	907	266	508	489	269	236
21	108	707	150	250	120	147	793	258	398	438	259	250
22	106	354	140	450	120	177	599	249	338	412	254	241
23	106	362	130	270	120	747	513	280	305	396	356	234
24	105	222	130	160	110	1190	462	322	301	392	434	225
25	103	183	130	130	120	1600	410	268	548	682	283	240
26	103	194	130	130	110	2150	355	242	331	980	263	359
27	103	170	140	120	110	1270	324	235	283	531	259	285
28	102	154	150	120	110	997	365	236	270	534	252	255
29	102	149	160	110	---	1270	340	224	260	452	262	240
30	101	145	210	110	---	930	319	261	953	391	292	231
31	100	---	240	110	---	1010	---	318	---	368	284	---
TOTAL	3185	4953	4842	5195	3721	17628	15170	11916	12079	27432	9407	7738
MEAN	103	165	156	168	133	569	506	384	403	885	303	258
MAX	108	707	443	450	277	2150	1670	1080	990	3910	434	535
MIN	99	103	110	110	110	110	263	224	229	333	252	220
CFSM	.46	.75	.71	.76	.60	2.57	2.29	1.74	1.82	4.00	1.37	1.17
IN.	.54	.83	.82	.87	.63	2.97	2.55	2.01	2.03	4.62	1.58	1.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1993, BY WATER YEAR (WY)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
MEAN	108	116	108	124	164	270	195	159	162	147	116	117
MAX	252	311	278	354	597	574	547	584	403	885	303	331
(WY)	1985	1962	1983	1960	1948	1950	1959	1973	1993	1993	1993	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

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1939 - 1993

ANNUAL TOTAL	53408	123266	148
ANNUAL MEAN	146	338	70.4
HIGHEST ANNUAL MEAN			1993
LOWEST ANNUAL MEAN			1958
HIGHEST DAILY MEAN	707	Nov 21	3910 Jul 6
LOWEST DAILY MEAN	90	Sep 5	99 Oct 5-7
ANNUAL SEVEN-DAY MINIMUM	93	Aug 30	100 Oct 2
INSTANTANEOUS PEAK FLOW			5650 Jul 6
INSTANTANEOUS PEAK STAGE			16.54 Jul 6
INSTANTANEOUS LOW FLOW			99 Oct 5-7
ANNUAL RUNOFF (CFSM)	.66	1.53	.67
ANNUAL RUNOFF (INCHES)	8.99	20.75	9.13
10 PERCENT EXCEEDS	199	664	233
50 PERCENT EXCEEDS	130	247	106
90 PERCENT EXCEEDS	100	107	64

(a) Also occurred on Sept. 1, 22, 23, 29, Oct. 2, 6, 1958, and Dec. 19, 20, 1964

(b) Gage height, 15.74 ft

(c) Result of freezeup

ROCK RIVER BASIN

05434500 PECATONICA RIVER AT MARTINTOWN, WI

LOCATION.--Lat 42°30'34", long 89°47'58", in SE 1/4 sec.32, T.1 N., R.6 E., Green County, Hydrologic Unit 07090003, on right bank about 400 ft downstream from highway bridge in Martintown, 0.3 mi upstream from Wisconsin-Illinois State line and 8.8 mi downstream from Skinner Creek.

DRAINAGE AREA.--1,034 mi².

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1308: 1949-50(M). WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 757.83 ft above sea level. 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: July 8-13 and ice-affected periods, Dec. 6-14, Dec. 21 to Mar. 9, and Mar. 14, 15. Records good except those for estimated daily discharges, 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	471	425	862	1100	1000	560	4700	1530	1290	5100	2360	1800
2	451	530	827	940	1000	600	4440	1540	1220	6400	2120	1630
3	437	660	797	900	800	900	4260	1690	1190	6910	1980	1490
4	433	726	767	1600	700	1200	3730	1890	1250	6600	1870	1400
5	432	649	716	1700	900	1400	2910	2050	1260	5980	1770	1340
6	418	567	580	1300	1000	1600	2130	2210	1190	5970	1700	1290
7	415	525	620	1100	900	1700	1650	2380	1230	7040	1680	1250
8	405	501	640	900	700	1800	1550	2380	1990	9000	1680	1220
9	417	495	620	800	640	1800	1670	2280	2300	9400	1660	1210
10	433	500	600	740	620	1850	1740	2190	2320	8800	1670	1190
11	437	502	620	700	660	1710	1690	2070	2190	8200	1680	1160
12	430	486	620	660	700	1280	1530	1890	1880	7800	1660	1140
13	421	508	600	640	620	914	1400	1730	1560	7400	1580	1160
14	416	509	600	620	580	740	1320	1590	1720	7110	1500	1530
15	416	490	678	600	560	640	1580	1490	1710	6290	1590	1880
16	449	461	1140	600	540	758	2020	1430	1600	5440	1820	2040
17	449	452	1500	580	540	1500	2250	1370	1530	4720	1940	1990
18	457	450	1520	580	540	1780	2480	1320	2250	4230	2020	1730
19	445	447	1300	580	540	1880	2600	1310	2500	3850	1920	1500
20	425	522	1120	580	540	1480	2780	1300	2850	3650	1730	1390
21	435	1150	900	1100	540	982	2760	1250	3090	3490	1580	1370
22	445	1630	820	1300	540	877	2810	1220	3030	3230	1470	1360
23	457	1790	760	1500	540	2410	2820	1220	2730	2920	1460	1350
24	446	1730	720	1400	540	3920	2660	1280	2320	2630	1600	1300
25	422	1520	720	1200	540	5210	2380	1330	2270	2450	1760	1320
26	424	1310	760	1000	540	6150	2080	1270	2200	2330	1860	1710
27	425	1180	800	840	540	6670	1830	1200	2480	2390	1780	1820
28	422	1070	840	720	540	6770	1660	1170	2560	2810	1590	1810
29	416	961	900	660	---	6360	1610	1150	2470	3120	1550	1690
30	426	898	1100	620	---	5560	1600	1150	4060	2960	1830	1530
31	404	---	1200	700	---	4960	---	1230	---	2660	1910	---
TOTAL	13379	23644	26247	28260	18400	75961	70640	49110	62240	160880	54320	44600
MEAN	432	788	847	912	657	2450	2355	1584	2075	5190	1752	1487
MAX	471	1790	1520	1700	1000	6770	4700	2380	4060	9400	2360	2040
MIN	404	425	580	580	540	560	1320	1150	1190	2330	1460	1140
CFSM	.42	.76	.82	.88	.64	2.37	2.28	1.53	2.01	5.02	1.69	1.44
IN.	.48	.85	.94	1.02	.66	2.73	2.54	1.77	2.24	5.79	1.95	1.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

	MEAN	514	577	507	586	795	1442	965	779	787	771	565	567
MAX	1226	2429	1492	2049	2512	3155	2943	3200	2075	5190	1752	1920	1920
(WY)	1987	1962	1983	1960	1953	1950	1960	1973	1993	1993	1993	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1940 - 1993

ANNUAL TOTAL	249717	627681	
ANNUAL MEAN	682	1720	738
HIGHEST ANNUAL MEAN			1720
LOWEST ANNUAL MEAN			292
HIGHEST DAILY MEAN	1790	Nov 23	14600
LOWEST DAILY MEAN	358	Sep 2	132
ANNUAL SEVEN-DAY MINIMUM	374	Aug 20	140
INSTANTANEOUS PEAK FLOW			9600
INSTANTANEOUS PEAK STAGE			20.36
INSTANTANEOUS LOW FLOW			397
ANNUAL RUNOFF (CFSM)	.66	1.66	.71
ANNUAL RUNOFF (INCHES)	8.98	22.58	9.69
10 PERCENT EXCEEDS	1030	3100	1340
50 PERCENT EXCEEDS	620	1320	499
90 PERCENT EXCEEDS	420	480	250

(a) Result of regulation

ROCK RIVER BASIN

331

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 sea level. Prior to Oct. 17, 1938, nonrecording gage 20 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 5-12, Dec. 20 to Jan. 4, Jan. 8 to Feb. 5, Feb. 16 to Mar. 1, and Mar. 14-16. 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	246	422	540	370	260	2070	694	594	2210	609	650
2	252	326	410	430	430	283	2240	850	543	1960	588	574
3	242	438	392	370	410	324	1710	989	535	1430	564	499
4	234	473	380	840	410	664	1200	1010	576	959	537	463
5	250	393	340	1080	470	858	920	952	577	802	519	444
6	218	343	300	1290	586	954	788	886	520	1060	519	429
7	241	314	330	1010	585	1050	716	793	530	1160	509	418
8	232	298	360	500	451	1110	711	687	1080	1860	502	412
9	236	298	340	350	365	1060	773	679	1860	2580	507	407
10	240	301	320	330	345	984	855	711	2020	2220	508	398
11	240	303	330	310	370	839	909	683	1490	2080	517	388
12	237	309	310	320	423	597	825	622	906	2010	501	381
13	227	327	322	320	357	426	707	589	662	1760	480	417
14	226	335	323	300	327	340	641	542	714	1540	463	645
15	247	313	362	280	312	300	921	517	686	1260	507	850
16	251	295	683	260	280	330	1530	495	674	1030	595	1060
17	268	286	889	240	250	518	1970	473	630	939	649	1180
18	265	280	968	240	240	688	1690	478	1310	955	677	957
19	253	277	849	240	250	960	1290	478	1630	941	603	676
20	251	311	560	240	260	709	1730	481	2080	928	531	549
21	253	585	440	280	260	431	1920	476	1740	871	491	541
22	259	802	410	400	260	397	1830	456	1230	778	469	536
23	257	1120	370	540	260	932	1340	471	897	692	462	530
24	250	1160	340	760	410	2400	1020	498	709	644	494	505
25	241	1020	380	740	420	4170	895	510	676	651	525	513
26	238	841	380	450	320	3900	800	478	733	708	505	956
27	247	661	370	370	270	3050	719	447	865	879	458	1040
28	254	563	360	350	260	2370	666	453	869	1210	436	1060
29	230	490	350	320	---	1700	682	439	682	1080	503	891
30	227	446	430	270	---	1300	705	472	2400	800	672	693
31	225	---	600	280	---	1430	---	564	---	687	677	---
TOTAL	7551	14154	13620	14250	9951	35334	34773	18873	30418	38684	16577	19062
MEAN	244	472	439	460	355	1140	1159	609	1014	1248	535	635
MAX	268	1160	968	1290	586	4170	2240	1010	2400	2580	677	1180
MIN	218	246	300	240	240	260	641	439	520	644	436	381
CFSM	.47	.90	.84	.88	.68	2.18	2.22	1.16	1.94	2.39	1.02	1.21
IN.	.54	1.01	.97	1.01	.71	2.51	2.47	1.34	2.16	2.75	1.18	1.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1993, BY WATER YEAR (WY)

	MEAN	279	303	267	290	418	677	457	358	342	290	252	296
MAX	788	836	597	1168	1690	1698	1159	1368	1014	1248	694	1579	
(WY)	1928	1962	1929	1916	1938	1929	1993	1973	1993	1993	1924	1938	
MIN	126	127	120	89.4	127	181	198	140	113	117	105	106	
(WY)	1965	1965	1956	1956	1959	1934	1938	1934	1934	1958	1934	1958	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1914 - 1993
ANNUAL TOTAL	119119	253247	
ANNUAL MEAN	325	694	352
HIGHEST ANNUAL MEAN			694
LOWEST ANNUAL MEAN			172
HIGHEST DAILY MEAN	1160	Nov 24	4170
LOWEST DAILY MEAN	163	Aug 24	218
ANNUAL SEVEN-DAY MINIMUM	170	Aug 20	234
INSTANTANEOUS PEAK FLOW			4310
INSTANTANEOUS PEAK STAGE			8.01
INSTANTANEOUS LOW FLOW			(c)154
ANNUAL RUNOFF (CFSM)	.62	1.33	.67
ANNUAL RUNOFF (INCHES)	8.47	18.01	9.15
10 PERCENT EXCEEDS	493	1290	579
50 PERCENT EXCEEDS	291	518	251
90 PERCENT EXCEEDS	194	260	148

(a) From rating curve extended above 7,500 ft³/s

(b) From floodmarks

(c) Result of freezeup

ROCK RIVER BASIN

05437500 ROCK RIVER AT ROCKTON, IL

LOCATION.--Lat 42°26'55", Long 89°04'11", in SW 1/4 NE 1/4 sec.24, T.46 N., R.1 E., Winnebago County, Hydrologic Unit 07090005, on right bank 750 ft downstream from State Highway 75 in Rockton, 1.0 mi downstream from Pecatonica River, and at mile 156.1.

DRAINAGE AREA.--6,363 mi².

PERIOD OF RECORD.--June 1903 to July 1906, October 1906 to March 1909, July 1914 to September 1919, October 1939 to current year. Published as "below mouth of Pecatonica River at Rockton" 1903-9; as "at Rockford" 1914-19. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORD.--WSP 325: 1903-9. WSP 895: 1904(M). WSP 1508: 1915, 1916-17(M). WDR IL-75-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 707.94 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1906, nonrecording gage at site 800 ft upstream at datum about 1 ft higher. Oct. 1, 1906, to Mar. 31, 1909, nonrecording gage at site 800 ft upstream at datum about 2 ft higher. July 30, 1914, to Apr. 30, 1919, nonrecording gage at site at Rockford about 21 mi downstream, at different datum. Oct. 1, 1939, to Aug. 10, 1973, at site 800 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Nov. 23, Dec. 27-30, Jan. 2, 15-20, Feb. 26-28, Mar. 1-3, 24-25, and Aug. 2-10. Water-discharge records good except those for estimated daily discharges, which are poor. Low flow regulated by powerplant above station. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1937 reached a stage of 14.6 ft (backwater from ice), from painted floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3870	2990	7030	7670	6990	3000	21700	18000	8630	21200	13300	7450
2	3680	3950	6740	7000	7220	3000	21900	17900	8550	19700	12500	7330
3	3620	3860	6600	7800	7100	3500	20800	17900	8670	18000	12000	7020
4	3490	3870	6270	9070	6810	6880	19800	18100	8880	16500	11500	6740
5	3270	4190	5690	9530	6740	8250	18700	18100	9020	15600	11000	6380
6	2990	4110	5640	8920	6860	8390	17700	17500	8690	15400	11000	6090
7	2850	4140	5620	8880	6390	8520	17000	17000	8760	15500	11000	5780
8	2670	3880	5360	8870	6000	8410	16700	16500	10700	15500	10500	5680
9	2650	4010	5410	8760	5510	8210	16500	16000	12400	15900	10000	5560
10	2430	3860	5270	8240	5020	7980	15900	15600	12700	16400	9700	5090
11	2610	3950	5280	7380	4820	7780	15300	15200	13300	17500	9270	4560
12	2760	4230	5050	6680	4870	7600	14900	14800	14000	18800	8960	4600
13	2450	4380	5010	6370	4760	7130	14400	14500	14200	19700	8780	4780
14	2650	4510	4890	5900	4560	6400	14000	14000	14200	20500	8620	5750
15	2750	4440	5260	5500	4430	5450	14700	13300	14000	20500	8460	6780
16	2840	4330	7060	5200	4280	5090	16700	12900	13700	20200	8560	7180
17	2540	4270	8310	4900	3950	5200	17500	12200	13500	19800	8550	7560
18	2770	4220	8710	4600	2890	5170	17600	11700	13800	19500	8470	7790
19	2760	4170	8960	4400	3520	5600	18000	11100	14800	19500	8390	7950
20	2710	4300	8840	4300	3680	6080	19300	10600	15600	18500	8450	8140
21	2780	5230	8480	4770	3720	6240	22800	10300	15800	17500	8280	7920
22	2830	6380	8000	5740	3790	6380	22500	9920	15900	16500	8000	7550
23	3040	7000	7540	6740	3650	8070	22100	9730	15700	15600	7630	7330
24	2990	7750	6860	7610	3510	10000	21900	9620	15100	15300	7460	7260
25	2880	8090	6140	7730	3440	15000	21100	9310	14600	14900	7250	7400
26	3110	8550	5820	7500	3300	19200	20300	9180	14000	14500	7070	9080
27	3180	8460	5400	7500	3150	20100	19600	9030	13900	14100	7060	9520
28	2920	8230	5100	7180	3050	20300	19100	8800	14000	13900	6950	9600
29	2980	7890	6100	6620	---	20000	18800	8590	14100	13600	7060	9620
30	2770	7470	7100	6490	---	19900	18500	8600	19000	13500	7040	9400
31	2920	---	8310	6560	---	20200	---	8780	---	13400	7410	---
TOTAL	90760	156710	201850	214410	134010	293030	555800	404760	390200	527000	280220	212890
MEAN	2928	5224	6511	6916	4786	9453	18530	13060	13010	17000	9039	7096
MAX	3870	8550	8960	9530	7220	20300	22800	18100	19000	21200	13300	9620
MIN	2430	2990	4890	4300	2890	3000	14000	8590	8550	13400	6950	4560
CFSM	.46	.82	1.02	1.09	.75	1.49	2.91	2.05	2.04	2.67	1.42	1.12
IN.	.53	.92	1.18	1.25	.78	1.71	3.25	2.37	2.28	3.08	1.64	1.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1940	2972	13340	1987	857	1965
1941	3413	11320	1986	1100	1940
1942	3209	9049	1983	1004	1959
1943	3193	9432	1960	800	1940
1944	3631	7984	1974	1000	1940
1945	7325	13920	1974	1692	1954
1946	7398	18530	1993	2476	1958
1947	5079	17770	1973	1103	1958
1948	3969	13010	1993	1248	1977
1949	3416	17000	1993	1056	1965
1950	2677	9039	1993	793	1958
1951	2812	7753	1972	780	1958

SUMMARY STATISTICS

	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1940 - 1993
ANNUAL TOTAL	1652190	3461640	
ANNUAL MEAN	4514	9484	4091
HIGHEST ANNUAL MEAN			9484
LOWEST ANNUAL MEAN			1568
HIGHEST DAILY MEAN	8960	Dec 19	29700
LOWEST DAILY MEAN	1270	Aug 24	501
ANNUAL SEVEN-DAY MINIMUM	1320	Aug 18	622
INSTANTANEOUS PEAK FLOW		22900	30000
INSTANTANEOUS PEAK STAGE		12.84	15.54
INSTANTANEOUS LOW FLOW		1920	
ANNUAL RUNOFF (CFSM)	.71	1.49	.64
ANNUAL RUNOFF (INCHES)	9.66	20.24	8.74
10 PERCENT EXCEEDS	7860	18000	8300
50 PERCENT EXCEEDS	4270	7980	3000
90 PERCENT EXCEEDS	1720	3500	1250

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REMARKS.--Estimated daily discharges: Aug. 26 to Sept. 13, 1993. Records fair except those for estimated period and June 17 to Aug. 12 and Sept. 14-30, 1993, which are poor. Gage-height telemeter at station.

[illegible]

ROCK RIVER BASIN

05438283 PISCASAW CREEK NEAR WALWORTH, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.8	3.1	3.9	2.6	1.7	12	5.2	3.9	11	6.6	4.7
2	1.7	3.2	3.0	3.4	2.4	1.7	6.6	5.1	3.9	6.7	6.0	4.4
3	1.7	2.5	2.8	5.0	2.5	2.8	6.1	5.4	3.8	6.1	4.9	4.2
4	1.6	2.3	2.8	58	4.0	17	6.2	5.7	4.1	6.2	4.6	4.0
5	1.6	2.2	2.8	6.4	13	23	5.4	5.1	5.2	7.2	4.3	3.9
6	1.6	2.0	2.8	4.1	7.9	25	5.0	4.8	4.4	13	4.1	3.8
7	1.6	2.0	2.7	3.5	3.2	12	4.8	4.7	6.3	6.5	4.2	3.7
8	1.7	2.0	2.6	3.2	2.7	7.9	15	4.6	26	7.1	4.8	3.7
9	1.8	2.0	2.6	3.0	2.6	4.7	19	4.5	19	6.7	4.5	3.7
10	1.7	2.0	2.6	2.9	2.4	3.8	6.8	4.4	5.6	10	3.7	3.7
11	1.7	2.2	2.5	2.8	2.4	2.9	5.7	4.3	4.8	8.9	3.6	3.6
12	1.7	4.1	2.5	2.8	2.3	2.6	5.0	4.3	4.2	5.6	4.1	3.6
13	1.6	3.9	2.5	2.8	2.3	2.5	4.6	4.3	3.9	4.7	3.8	4.0
14	1.7	3.1	2.6	2.8	2.1	2.3	4.5	4.1	6.7	3.6	3.7	4.8
15	1.7	2.7	4.6	2.6	2.1	2.2	36	4.0	5.3	3.3	3.9	5.4
16	1.7	2.6	21	2.6	2.0	12	27	3.9	5.5	4.1	3.9	5.8
17	1.6	2.6	6.4	2.6	1.9	4.3	9.0	4.1	11	3.6	3.8	5.5
18	1.6	2.4	4.5	2.6	1.9	2.7	6.9	4.1	32	6.5	3.7	5.0
19	1.6	2.3	3.9	2.5	1.9	2.4	38	4.1	48	6.9	3.7	4.7
20	1.7	3.1	3.5	2.5	1.9	2.2	81	4.1	21	6.4	3.7	4.8
21	1.6	6.7	3.3	3.6	1.9	2.2	11	4.1	5.9	6.0	3.6	4.5
22	1.6	4.6	3.1	7.6	1.8	2.6	7.9	4.2	7.0	5.9	3.7	4.5
23	1.5	7.5	3.0	15	1.7	148	7.2	4.5	8.7	5.3	3.7	4.6
24	1.5	4.5	2.9	15	1.7	33	6.8	4.4	11	5.2	3.7	4.9
25	1.5	3.9	2.9	4.3	1.7	11	5.8	4.1	16	6.0	4.0	4.1
26	1.5	6.1	2.8	3.1	1.7	6.2	5.4	3.9	21	4.4	3.9	4.1
27	1.5	4.1	2.7	2.8	1.7	4.9	5.2	4.1	17	4.4	3.7	4.6
28	1.5	3.5	2.7	2.6	1.7	4.5	5.2	3.9	12	3.5	3.7	5.3
29	1.4	3.4	3.4	2.4	---	4.5	6.8	3.9	8.5	4.6	6.0	5.8
30	1.4	3.3	20	2.4	---	4.3	6.3	4.3	118	6.3	5.6	5.1
31	1.4	---	12	2.5	---	16	---	4.2	---	7.1	5.2	---
TOTAL	49.7	98.6	140.6	181.3	78.0	372.9	372.2	136.4	449.7	192.8	132.4	134.5
MEAN	1.60	3.29	4.54	5.85	2.79	12.0	12.4	4.40	15.0	6.22	4.27	4.48
MAX	1.8	7.5	21	58	13	148	81	5.7	118	13	6.6	5.8
MIN	1.4	1.8	2.5	2.4	1.7	1.7	4.5	3.9	3.8	3.3	3.6	3.6
CFSM	.17	.34	.47	.61	.29	1.26	1.30	.46	1.56	.65	.45	.47
IN.	.19	.38	.55	.70	.30	1.45	1.45	.53	1.75	.75	.51	.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

	1992	1993	1992	1993	1992	1993	1992	1993	1992	1993	1992	1993
MEAN	1.60	3.29	4.54	5.85	2.79	12.0	12.4	4.40	15.0	6.22	4.27	3.46
MAX	1.60	3.29	4.54	5.85	2.79	12.0	12.4	4.40	15.0	6.22	4.27	4.48
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
MIN	1.60	3.29	4.54	5.85	2.79	12.0	12.4	4.40	15.0	6.22	4.27	2.43
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1992

SUMMARY STATISTICS

FOR 1993 WATER YEAR

WATER YEARS 1992 - 1993

ANNUAL TOTAL	2339.1		
ANNUAL MEAN	6.41	6.41	1993
HIGHEST ANNUAL MEAN		6.41	1993
LOWEST ANNUAL MEAN		6.41	1993
HIGHEST DAILY MEAN	148	Mar 23	1993
LOWEST DAILY MEAN	1.4	Oct 29-31	1992
ANNUAL SEVEN-DAY MINIMUM	1.5	Oct 25	1992
INSTANTANEOUS PEAK FLOW	322	Jun 30	1993
INSTANTANEOUS PEAK STAGE	10.05	Jun 30	1993
INSTANTANEOUS LOW FLOW	1.4	(a)Oct 28	1992
ANNUAL RUNOFF (CFSM)	.67		
ANNUAL RUNOFF (INCHES)	9.08		
10 PERCENT EXCEEDS	11		
50 PERCENT EXCEEDS	4.0		
90 PERCENT EXCEEDS	1.7		

(a) Also occurred Oct. 29 to Nov. 1

ILLINOIS RIVER BASIN

423335088060300 HOOKER LAKE AT SALEM, WI

335

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 1992 to current year.

GAGE-HEIGHT READINGS.--Additional gage-height readings were obtained as follows: June 6, 10.99 ft; and June 19, 11.59 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 02 TO AUGUST 23, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 02		Apr. 22		June 21		July 13		Aug. 23	
Depth of sample (ft)	1.5	24	1.5	23	1.5	23	1.5	24	1.5	23
Lake stage (ft)	11.18		11.81		---		11.24		10.62	
Specific conductance ($\mu\text{S}/\text{cm}$)	636	732	584	583	564	605	537	630	526	700
pH (units)	7.4	7.3	8.1	8.0	8.2	7.4	8.4	7.1	8.2	6.9
Water temperature ($^{\circ}\text{C}$)	3.0	4.0	7.5	6.5	23.5	14.5	25.5	14.5	26.0	15.0
Color (Pt-Co. scale)	---	---	30	30	---	---	---	---	---	---
Turbidity (NTU)	---	---	16	16	---	---	---	---	---	---
Secchi-depth (meters)	---		0.4		1.2		1.2		0.9	
Dissolved oxygen	12.2	2.0	11.5	10.4	8.4	0.0	9.6	0.0	8.5	0.0
Hardness, as CaCO_3	---	---	240	240	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	51	51	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	27	27	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	29	28	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	180	180	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	32	32	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	61	61	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	3.9	4.0	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	336	340	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	1.1	1.1	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	1.1	1.1	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.05	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.99	0.75	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.0	0.80	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	2.1	1.9	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.066	0.061	0.039	0.088	0.026	0.060	0.018	0.262
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 ($\mu\text{g}/\text{L}$)	---	---	36	---	7.8	---	15	---	8.7	---

2-2-93

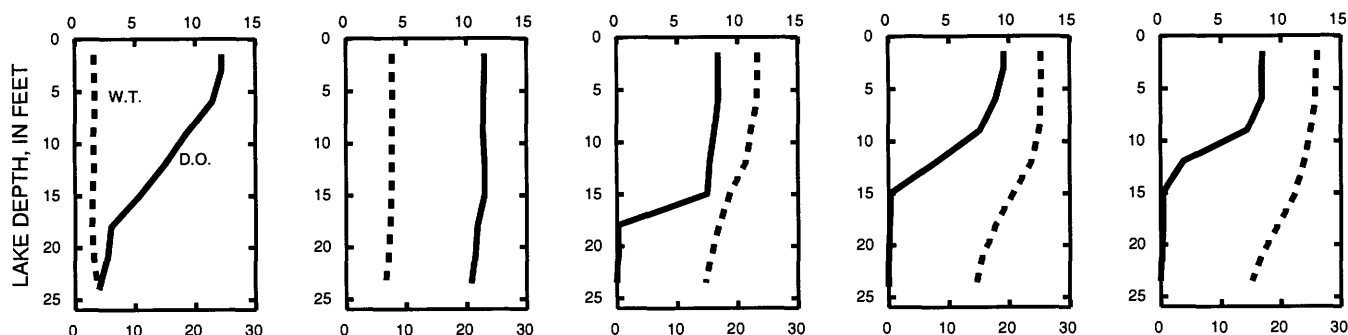
4-22-93

6-21-93

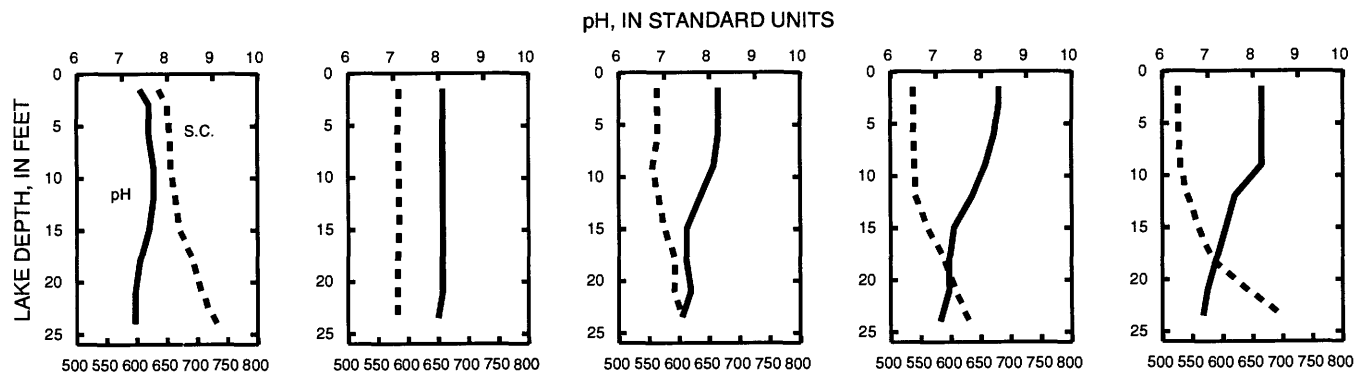
7-13-93

8-23-93

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

05527800 DES PLAINES RIVER AT RUSSELL, IL

LOCATION.--Lat 42°29'22", long 87°55'32", in SE 1/4 sec.3, T.46 N., R.11 E., Lake County, Hydrologic Unit 07120004, on right bank at upstream side of Russell Road bridge, 0.3 mi west of Russell, 7.2 mi upstream from Mill Creek, and at mile 109.3.

DRAINAGE AREA.--123 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1961-63, and annual maximum, water years 1962-66. June 1967 to current year.

REVISED RECORDS.--WDR IL-75-1: Drainage area. WDR IL-76-1: 1960-68(M), 1973(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 662.00 ft above sea level. Oct. 17, 1961, to June 29, 1967, crest-stage gage at left downstream side of bridge at datum 4.29 ft higher.

REMARKS.--Estimated daily discharges: Nov. 10-12, 20-26, 30, Dec. 25 to Jan. 1, Jan. 10 to Mar. 4, and Aug. 19-24. Water-discharge records good except those for estimated daily discharges, which are poor. Recording rain gage and gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft³/s, Mar. 21, 1979, gage height, 9.69 ft; maximum gage height, 10.75 ft, Mar. 6, 1976, and Sept. 27, 1986; no flow at times during several years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	15	338	285	135	34	764	304	43	435	25	27
2	15	57	322	352	125	40	977	291	44	481	18	23
3	11	128	298	367	120	56	995	272	38	484	14	16
4	11	173	272	436	120	130	912	251	34	461	11	13
5	9.5	205	240	530	125	208	779	228	37	421	9.3	7.9
6	8.2	224	201	591	135	276	641	203	41	385	8.4	6.6
7	8.5	233	158	592	143	345	524	182	50	343	7.8	4.8
8	9.3	233	117	531	148	391	492	161	95	298	8.3	4.5
9	11	229	93	471	145	407	581	142	212	271	7.6	6.1
10	12	210	85	350	130	397	639	123	290	252	8.7	7.0
11	12	200	73	295	113	373	605	104	341	287	6.8	7.6
12	14	195	69	250	95	340	533	86	376	291	5.3	2.9
13	14	212	69	205	84	288	466	69	386	260	4.9	2.9
14	12	228	73	175	73	233	404	60	382	232	4.9	4.5
15	11	241	89	150	93	170	437	50	356	199	7.1	10
16	13	249	171	125	54	154	613	42	322	156	11	16
17	16	249	227	100	48	192	765	35	288	112	11	16
18	17	241	262	87	43	222	776	32	247	102	9.7	7.1
19	17	229	289	80	40	242	778	31	309	176	e7.3	4.9
20	17	215	302	75	38	243	1420	28	381	197	e6.0	4.5
21	16	200	308	92	40	228	1710	27	452	199	e5.3	4.7
22	16	200	296	125	40	205	1500	25	503	197	e4.6	4.8
23	16	210	277	190	41	341	1110	26	519	192	e4.1	4.9
24	16	235	256	265	40	573	801	29	504	185	e3.7	4.6
25	15	275	185	350	38	757	555	28	460	168	3.4	6.0
26	14	325	140	370	37	804	438	27	401	137	4.2	45
27	14	348	100	330	36	737	377	25	350	94	4.9	87
28	15	357	80	285	35	619	338	24	293	62	4.6	96
29	13	358	76	245	---	520	312	22	231	47	4.7	79
30	13	350	90	200	---	460	308	21	292	47	6.2	44
31	13	---	140	150	---	448	---	32	---	36	17	---
TOTAL	417.5	6824	5696	8649	2314	10433	21550	2980	8277	7207	254.8	568.3
MEAN	13.5	227	184	279	82.6	337	718	96.1	276	232	8.22	18.9
MAX	18	358	338	592	148	804	1710	304	519	484	25	96
MIN	8.2	15	69	75	35	34	308	21	34	36	3.4	2.9
CFSM	.11	1.85	1.49	2.27	.67	2.74	5.84	.78	2.24	1.89	.07	.15
IN.	.13	2.06	1.72	2.62	.70	3.16	6.52	.90	2.50	2.18	.08	.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1993, BY WATER YEAR (WY)

	MEAN	47.5	71.7	102	63.8	93.7	231	232	107	74.0	62.0	47.3	62.7
MAX	364	390	382	279	327	673	718	300	276	363	417	410	
(WY)	1987	1986	1983	1993	1974	1979	1993	1974	1993	1978	1978	1972	
MIN	1.02	2.75	3.06	1.46	2.35	14.9	33.4	6.15	1.90	.78	.87	.86	
(WY)	1989	1972	1977	1977	1977	1968	1977	1977	1988	1988	1988	1988	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1967 - 1993
ANNUAL TOTAL	27268.3	75170.6	
ANNUAL MEAN	74.5	206	99.8
HIGHEST ANNUAL MEAN			206
LOWEST ANNUAL MEAN			9.24
HIGHEST DAILY MEAN	358	Nov 29	2100
LOWEST DAILY MEAN	5.2	Jun 16	.00
ANNUAL SEVEN-DAY MINIMUM	6.1	Jun 14	.00
INSTANTANEOUS PEAK FLOW			2120
INSTANTANEOUS PEAK STAGE			10.75
INSTANTANEOUS LOW FLOW			.00
ANNUAL RUNOFF (CFSM)	.61	1.67	.81
ANNUAL RUNOFF (INCHES)	8.25	22.73	11.02
10 PERCENT EXCEEDS	213	482	274
50 PERCENT EXCEEDS	33	140	32
90 PERCENT EXCEEDS	9.1	7.9	3.0

ILLINOIS RIVER BASIN

337

05543800 FOX RIVER, AT WATERTOWN ROAD, NEAR WAUKESHA, WI

LOCATION.--Lat 43°03'12", long 88°11'41", in NW 1/4 SE 1/4 sec.24, T.7 N., R.19 E., Waukesha County, Hydrologic Unit 07120006, on left bank at upstream side of Watertown Road bridge, 3.5 mi northeast of Waukesha.

DRAINAGE AREA.--77.4 mi².

PERIOD OF RECORD.--December 1992 to September 1993.

GAGE.--Water-stage recorder. Elevation of gage is 820 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 1 to Feb. 16, Feb. 18, and Feb. 22 to Apr. 2. Records good except for estimated daily discharges, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	100	90	66	37	380	211	89	84	45	171
2	---	---	90	82	64	42	410	201	78	71	43	140
3	---	---	76	78	64	56	370	198	84	66	40	107
4	---	---	68	160	68	76	320	194	81	103	39	67
5	---	---	56	170	70	82	282	186	87	96	37	51
6	---	---	66	160	72	96	257	175	77	136	38	43
7	---	---	64	130	68	120	241	162	106	132	38	40
8	---	---	62	110	62	140	276	147	260	137	37	52
9	---	---	58	88	58	140	381	130	295	300	38	51
10	---	---	56	70	56	130	391	112	292	343	45	47
11	---	---	58	60	56	110	381	98	276	452	39	45
12	---	---	56	56	50	90	385	87	248	471	35	45
13	---	---	56	56	54	80	332	77	209	442	32	61
14	---	---	58	54	50	66	293	70	203	424	31	162
15	---	---	90	52	40	62	389	64	193	367	62	192
16	---	---	160	50	36	76	613	58	161	294	92	161
17	---	---	180	48	36	92	637	56	136	239	60	131
18	---	---	160	46	35	96	515	58	164	208	48	98
19	---	---	150	45	32	94	437	61	180	180	46	75
20	---	---	130	54	32	80	878	60	281	148	46	78
21	---	---	110	90	31	72	1130	57	276	118	46	107
22	---	---	96	110	33	80	859	54	266	91	38	106
23	---	---	80	110	35	150	560	60	242	75	36	104
24	---	---	60	120	35	280	383	75	206	70	34	95
25	---	---	54	110	34	320	304	74	176	78	40	91
26	---	---	50	100	33	310	261	65	144	83	36	204
27	---	---	50	90	34	290	233	61	102	75	31	218
28	---	---	52	80	34	280	215	60	77	68	29	199
29	---	---	68	70	---	280	214	53	65	58	30	179
30	---	---	98	64	---	270	225	59	79	53	74	159
31	---	---	110	62	---	300	---	88	---	48	202	---
TOTAL	---	---	2622	2665	1338	4397	12552	3111	5133	5510	1487	3279
MEAN	---	---	84.6	86.0	47.8	142	418	100	171	178	48.0	109
MAX	---	---	180	170	72	320	1130	211	295	471	202	218
MIN	---	---	50	45	31	37	214	53	65	48	29	40

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

MEAN	---	---	84.6	86.0	47.8	142	418	100	171	178	48.0	109
MAX	---	---	84.6	86.0	47.8	142	418	100	171	178	48.0	109
(WY)	---	---	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
MIN	---	---	84.6	86.0	47.8	142	418	100	171	178	48.0	109
(WY)	---	---	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993

SUMMARY STATISTICS

FOR 1993 WATER YEAR

HIGHEST DAILY MEAN	1130	Apr 21
LOWEST DAILY MEAN	29	Aug 28
ANNUAL SEVEN-DAY MINIMUM	33	Feb 19
INSTANTANEOUS PEAK FLOW	1170	Apr 21
INSTANTANEOUS PEAK STAGE	11.55	Apr 21
INSTANTANEOUS LOW FLOW	26	Aug 28
10 PERCENT EXCEEDS	297	
50 PERCENT EXCEEDS	83	
90 PERCENT EXCEEDS	39	

ILLINOIS RIVER BASIN

05543830 FOX RIVER AT WAUKESHA, WI

LOCATION.--Lat 43°00'17", long 88°14'37", in SW 1/4 sec.3, T.6 N., R.18 E., Waukesha County, Hydrologic Unit 07120006, on left bank 20 ft downstream from Prairie Street bridge in Waukesha, 1.0 mi downstream from dam and 3.2 mi downstream from Pewaukee River.

DRAINAGE AREA.--126 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 793.04 ft above sea level (levels by City of Waukesha).

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 25, 26, Jan. 1, 17-19, Feb. 17-19, 24-27, and Mar. 13-18. Records good except those for ice-affected periods, which are fair. There is occasional regulation from mill dam 1.0 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	75	148	130	100	56	597	313	161	144	67	253
2	83	195	133	122	98	63	569	301	154	122	63	199
3	74	259	98	115	96	83	505	292	137	146	57	158
4	68	231	102	243	101	115	449	270	120	158	43	119
5	69	201	81	261	107	124	396	283	125	172	51	107
6	66	176	99	226	108	140	355	270	105	219	53	94
7	61	151	96	196	100	179	317	250	183	215	50	90
8	63	130	92	164	93	206	382	228	393	237	45	94
9	65	121	85	127	86	213	518	212	451	497	56	79
10	68	125	84	108	86	194	535	197	418	577	59	65
11	65	108	87	103	84	168	528	182	386	659	52	61
12	56	145	83	101	75	131	527	170	345	647	44	56
13	53	164	83	99	80	110	471	156	284	596	41	113
14	54	162	88	99	75	92	418	149	301	562	40	206
15	88	146	137	94	68	88	590	140	279	500	112	241
16	120	131	236	87	65	110	875	128	234	407	125	202
17	112	121	270	82	56	130	913	123	218	326	94	166
18	86	108	237	78	52	140	738	121	257	291	75	132
19	73	106	224	76	52	140	694	110	344	252	72	107
20	75	133	187	79	55	118	1280	95	483	219	68	118
21	78	195	176	134	58	108	1490	90	471	189	67	144
22	76	229	164	174	57	118	1230	91	414	163	58	144
23	71	236	138	172	58	234	831	107	352	146	53	148
24	66	229	82	180	54	378	578	119	291	139	48	159
25	59	221	80	164	52	453	464	120	241	151	51	198
26	58	215	78	143	50	456	376	101	207	152	50	309
27	58	210	79	128	50	428	330	106	169	144	44	332
28	54	193	78	115	53	419	316	103	143	125	38	291
29	53	175	105	91	---	413	330	98	128	97	41	253
30	53	162	145	94	---	405	336	126	147	81	133	225
31	51	---	171	93	---	463	---	151	---	70	287	---
TOTAL	2159	5053	3946	4078	2069	6475	17938	5202	7941	8403	2137	4863
MEAN	69.6	168	127	132	73.9	209	598	168	265	271	68.9	162
MAX	120	259	270	261	108	463	1490	313	483	659	287	332
MIN	51	75	78	76	50	56	316	90	105	70	38	56
CFSM	.55	1.34	1.01	1.04	.59	1.66	4.75	1.33	2.10	2.15	.55	1.29
IN.	.64	1.49	1.17	1.20	.61	1.91	5.30	1.54	2.34	2.48	.63	1.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1993, BY WATER YEAR (WY)

	MEAN	75.4	84.6	86.8	64.1	83.6	201	218	121	82.4	70.3	55.9	78.5
MAX	346	303	207	188	213	451	598	371	265	271	146	385	
(WY)	1987	1986	1992	1973	1984	1974	1993	1990	1993	1993	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	1968	1963	1977	1964	1963	1963	1963	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1963 - 1993

ANNUAL TOTAL	38235	70264	
ANNUAL MEAN	104	193	104
HIGHEST ANNUAL MEAN			193
LOWEST ANNUAL MEAN			31.6
HIGHEST DAILY MEAN	323	1490	2160
LOWEST DAILY MEAN	27	38	3.2
ANNUAL SEVEN-DAY MINIMUM	30	46	3.3
INSTANTANEOUS PEAK FLOW		1520	2260
INSTANTANEOUS PEAK STAGE		6.92	7.42
ANNUAL RUNOFF (CFSM)	.83	1.53	.82
ANNUAL RUNOFF (INCHES)	11.29	20.74	11.19
10 PERCENT EXCEEDS	195	418	228
50 PERCENT EXCEEDS	83	130	62
90 PERCENT EXCEEDS	36	57	16

(a) Also occurred Jan. 1, 1964

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 10, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 19		June 22		July 21		Aug. 10	
Depth of sample (ft)	1.5	5.0	1.5	5.0	1.5	7.0	1.5	6.5	1.5	7.5
Lake stage (ft)	9.62		9.66		10.57		10.52		10.54	
Specific conductance (µS/cm)	553	569	411	412	475	717	516	718	512	710
pH (units)	7.9	7.8	8.4	8.4	8.0	7.3	8.1	7.3	8.1	7.3
Water temperature (°C)	4.5	5.0	9.5	9.5	23.0	11.5	24.5	13.0	22.5	12.0
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.6	1.5	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.7		2.2		2.1		1.4	
Dissolved oxygen	19.0	18.9	12.3	12.2	11.0	9.8	10.5	9.3	10.2	7.8
Hardness, as CaCO ₃	---	---	220	210	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	47	46	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	24	24	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	4.6	4.6	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	1	1	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	190	190	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	14	14	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	11	11	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	6.4	6.4	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	232	232	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	1.2	1.2	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	1.2	1.2	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.03	0.02	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.37	0.38	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.6	1.6	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.013	0.011	0.009	0.013	0.011	<0.020	0.011	<0.020
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)	---	---	6.9	---	4.9	---	6.3	---	8.0	---

2-4-93

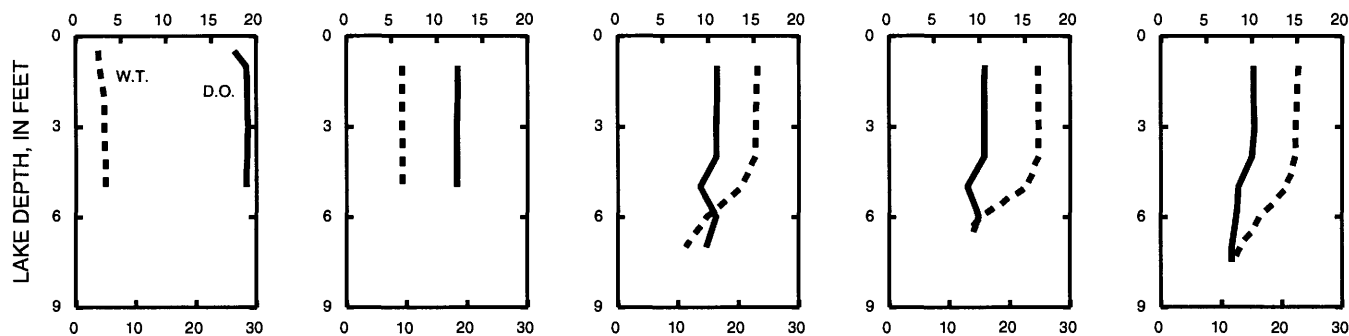
4-19-93

6-22-93

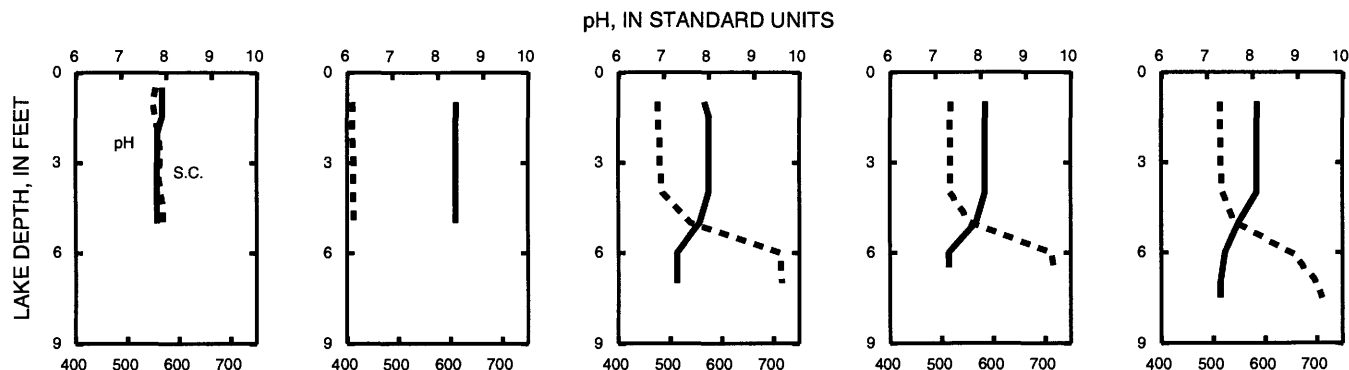
7-21-93

8-10-93

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

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 sea level (Southeastern Wisconsin Regional Planning Commission bench mark). Prior to Oct. 19, 1981, at datum 0.85 ft higher.

REMARKS.--No estimated daily discharges. Records good. Discharge affected by manipulation of gates at dams 800 ft and 11.4 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	32	63	62	30	46	170	118	72	83	20	117
2	20	94	63	63	18	58	186	117	73	88	27	107
3	21	104	62	63	22	63	180	124	89	95	42	76
4	20	98	44	73	26	63	142	127	93	90	43	42
5	21	91	21	80	30	63	123	126	101	103	41	37
6	23	55	25	106	33	65	117	126	99	105	41	34
7	23	27	27	106	36	69	111	108	114	98	36	34
8	23	33	51	85	52	81	114	88	165	100	32	24
9	25	61	59	61	50	84	121	87	196	97	34	19
10	25	84	58	62	47	84	119	86	200	95	40	18
11	24	100	49	62	46	82	116	82	161	100	43	17
12	26	102	47	62	45	79	115	74	93	102	74	17
13	27	99	45	63	44	76	113	70	69	106	79	48
14	28	83	29	62	44	72	108	68	72	129	68	119
15	30	75	51	61	43	64	122	68	99	127	65	135
16	59	66	84	38	42	71	138	38	103	126	64	127
17	66	61	108	32	41	76	150	21	106	115	63	119
18	63	33	108	33	39	74	156	49	99	80	63	112
19	36	25	102	35	39	72	197	61	97	33	68	103
20	26	60	73	36	38	70	248	58	131	21	69	99
21	28	79	62	44	40	67	264	65	203	55	65	38
22	31	79	62	57	41	66	261	66	217	67	47	15
23	35	103	62	62	42	82	243	62	159	64	41	21
24	35	105	61	64	42	122	226	88	100	63	41	25
25	35	99	60	90	44	154	207	92	69	63	45	36
26	36	97	47	96	46	166	100	88	62	62	41	106
27	36	73	45	87	46	161	62	86	62	61	37	122
28	35	65	43	71	46	156	67	83	62	63	18	122
29	33	66	45	62	---	152	107	69	61	62	14	111
30	32	65	55	61	---	148	122	64	74	32	22	102
31	30	---	62	60	---	149	---	66	---	19	90	---
TOTAL	969	2214	1773	1999	1112	2835	4505	2525	3301	2504	1473	2102
MEAN	31.3	73.8	57.2	64.5	39.7	91.5	150	81.5	110	80.8	47.5	70.1
MAX	66	105	108	106	52	166	264	127	217	129	90	135
MIN	17	25	21	32	18	46	62	21	61	19	14	15
CFSM	.42	1.00	.77	.87	.54	1.23	2.03	1.10	1.48	1.09	.64	.95
IN.	.49	1.11	.89	1.00	.56	1.42	2.26	1.27	1.66	1.26	.74	1.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1993, BY WATER YEAR (WY)

	MEAN	49.7	58.3	57.7	47.3	52.8	81.3	82.3	64.4	51.8	45.5	43.7	51.4
MAX	98.7	110	83.7	77.8	83.7	151	150	155	138	80.8	83.5	88.7	88.7
(WY)	1987	1986	1983	1974	1974	1974	1993	1975	1975	1993	1979	1986	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	23.5
(WY)	1990	1977	1990	1977	1977	1981	1977	1977	1988	1988	1991	1976	1976

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1973 - 1993

ANNUAL TOTAL	18178	27312	
ANNUAL MEAN	49.7	74.8	57.0
HIGHEST ANNUAL MEAN			90.3
LOWEST ANNUAL MEAN			30.8
HIGHEST DAILY MEAN	149	Mar 10	275
LOWEST DAILY MEAN	14	Jun 16	1.8
ANNUAL SEVEN-DAY MINIMUM	19	Aug 19	6.8
INSTANTANEOUS PEAK FLOW			268
INSTANTANEOUS PEAK STAGE			3.44
ANNUAL RUNOFF (CFSM)	.67	1.01	(a)300
ANNUAL RUNOFF (INCHES)	9.13	13.71	3.55
10 PERCENT EXCEEDS	85	126	104
50 PERCENT EXCEEDS	44	64	48
90 PERCENT EXCEEDS	23	27	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.

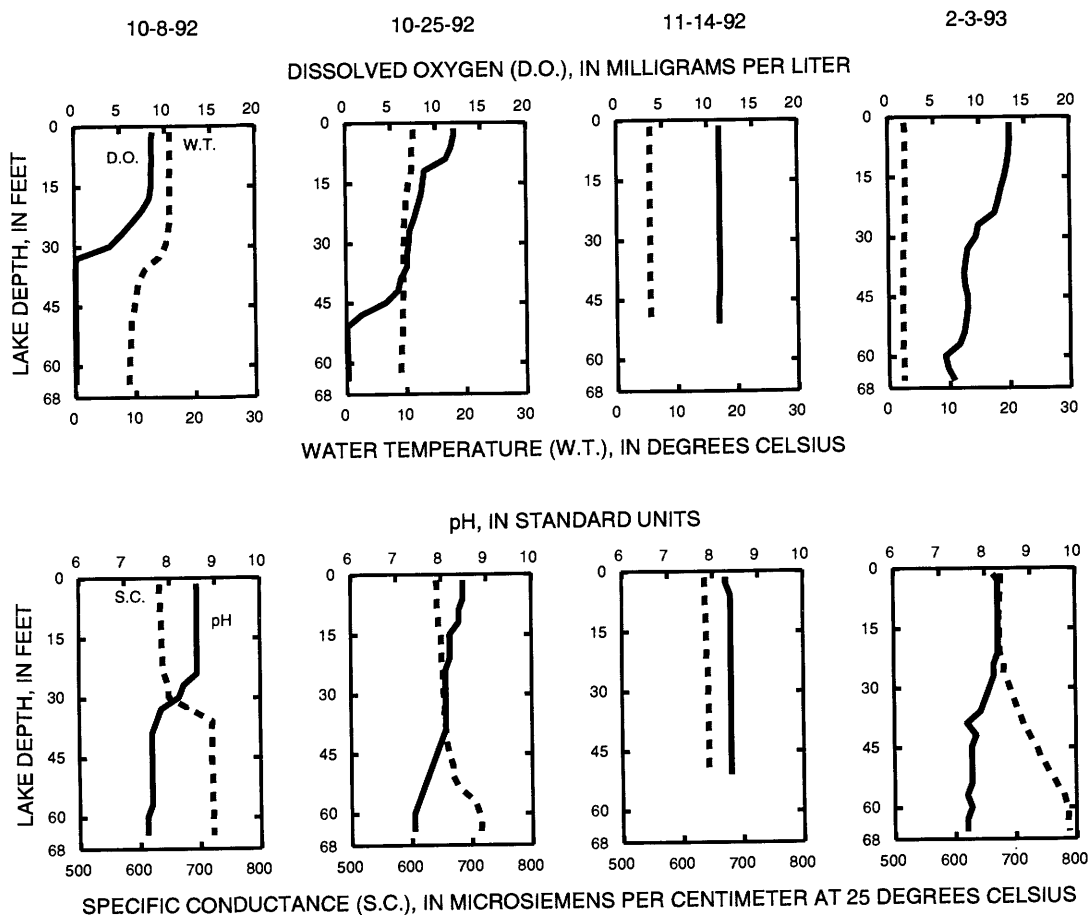
PERIOD OF RECORD.--October 1986 to current year.

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 and 1993; 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, OCTOBER 08, 1992 TO FEBRUARY 03, 1993
(Milligrams per liter unless otherwise indicated)

	Oct. 08			Oct. 25		Nov. 14		Feb. 03	
Depth of sample (ft)	1.5	33	64	1.5	64	1.5	50	1.5	66
Lake stage (ft)	98.27			97.15		97.28		96.60	
Specific conductance (μS/cm)	634	683	722	643	717	638	642	677	788
pH (units)	8.6	7.8	7.5	8.5	7.4	8.3	8.4	8.2	7.6
Water temperature (°C)	16.0	14.0	9.0	11.5	9.0	5.5	5.5	2.5	2.5
Secchi-depth (meters)	2.6			2.0		1.5		---	
Dissolved oxygen	8.7	0.2	0.1	12.1	0.2	11.4	11.3	13.4	7.2
Phosphorus, total (as P)	0.026	0.067	0.310	0.051	0.350	0.034	0.030	---	---
Phosphorus, ortho, dissolved (as P)	0.002	0.043	0.260	0.005	0.330	0.005	0.006	---	---
Arsenic, dissolved (as As) (μg/L)	---	---	<10	---	<10	---	<10	---	---
Chlorophyll a, phytoplankton (μg/L)	8.1	---	---	27	---	22	---	---	---



WATER-QUALITY DATA, APRIL 26 TO AUGUST 18, 1993
(Milligrams per liter unless otherwise indicated)

	Apr. 26		June 15		July 22		Aug. 18	
Depth of sample (ft)	1.5	66	1.5	65	1.5	66	1.5	66
Lake stage (ft)	98.92		99.16		98.89		98.86	
Specific conductance ($\mu\text{S}/\text{cm}$)	628	645	615	662	589	655	605	662
pH (units)	8.3	8.0	8.5	7.5	8.5	7.4	8.4	7.4
Water temperature ($^{\circ}\text{C}$)	10.0	6.0	21.0	7.0	25.0	7.5	26.0	7.5
Color (Pt-Co. scale)	15	15	---	---	---	---	---	---
Turbidity (NTU)	6.9	3.3	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.0	---	1.4	---	2.2	---
Dissolved oxygen	11.7	10.1	10.1	0.0	9.1	0.0	8.9	0.0
Hardness, as CaCO_3	240	240	---	---	---	---	---	---
Calcium, dissolved (Ca)	51	50	---	---	---	---	---	---
Magnesium, dissolved (Mg)	28	29	---	---	---	---	---	---
Sodium, dissolved (Na)	37	39	---	---	---	---	---	---
Potassium, dissolved (K)	2	2	---	---	---	---	---	---
Alkalinity, as CaCO_3	190	190	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	33	34	---	---	---	---	---	---
Chloride, dissolved (Cl)	71	75	---	---	---	---	---	---
Fluoride, dissolved (F)	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	2.3	2.7	---	---	---	---	---	---
Solids, dissolved, at 180°C	352	356	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	0.50	0.47	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	0.50	0.47	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	0.01	0.11	---	---	---	---	---	---
Nitrogen, organic, total (as N)	0.59	0.49	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	0.60	0.60	---	---	---	---	---	---
Nitrogen, total (as N)	1.1	1.1	---	---	---	---	---	---
Phosphorus, total (as P)	0.035	0.026	0.015	0.160	0.027	0.240	0.016	0.270
Phosphorus, ortho, dissolved (as P)	<0.002	0.004	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	18	---	7.3	---	11	---	8.2	---

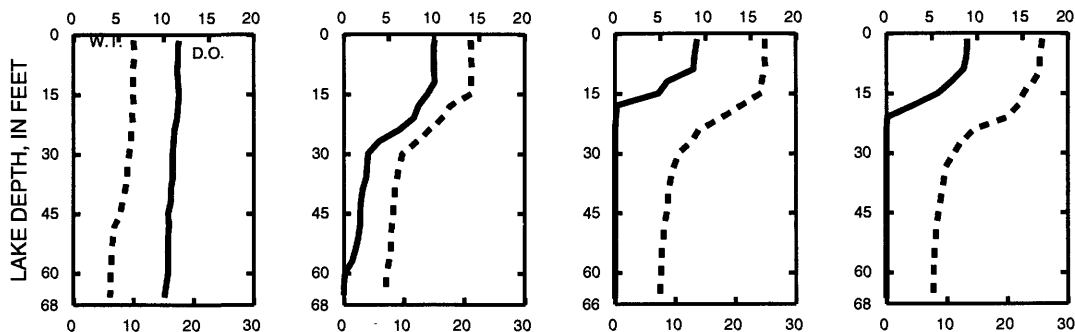
4-26-93

6-15-93

7-22-93

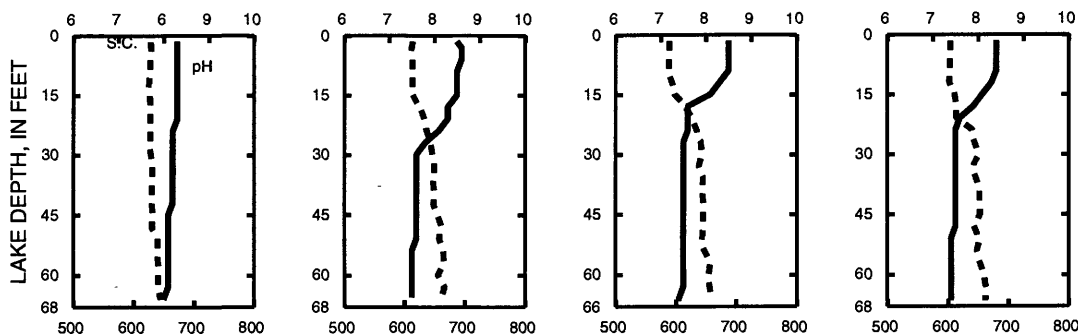
8-18-93

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

343

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 deep hole. 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 03 TO AUGUST 19, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 03		Apr. 26		June 15		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)	11.84		12.16		11.99		11.77		11.64	
Specific conductance (μS/cm)	573	704	480	483	456	517	466	554	448	611
pH (units)	7.8	7.3	8.2	8.1	8.7	7.6	8.6	7.1	8.4	6.9
Water temperature (°C)	2.5	3.0	10.0	9.5	21.0	16.5	24.5	17.5	25.5	19.0
Secchi-depth (meters)	---		0.5		0.4		0.7		0.6	
Dissolved oxygen	12.8	4.5	11.1	10.4	12.7	0.3	10.3	0.0	8.7	0.0
Phosphorus, total (as P)	---	---	0.114	0.115	0.077	0.080	0.048	0.470	0.044	0.310
Chlorophyll a, phytoplankton(μg/L)	---	---	40	---	120	---	56	---	60	---

2-3-93

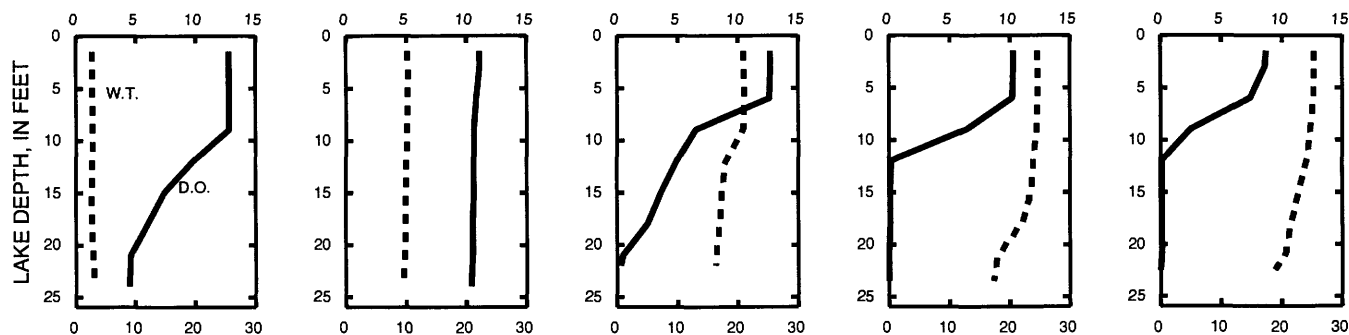
4-26-93

6-15-93

7-22-93

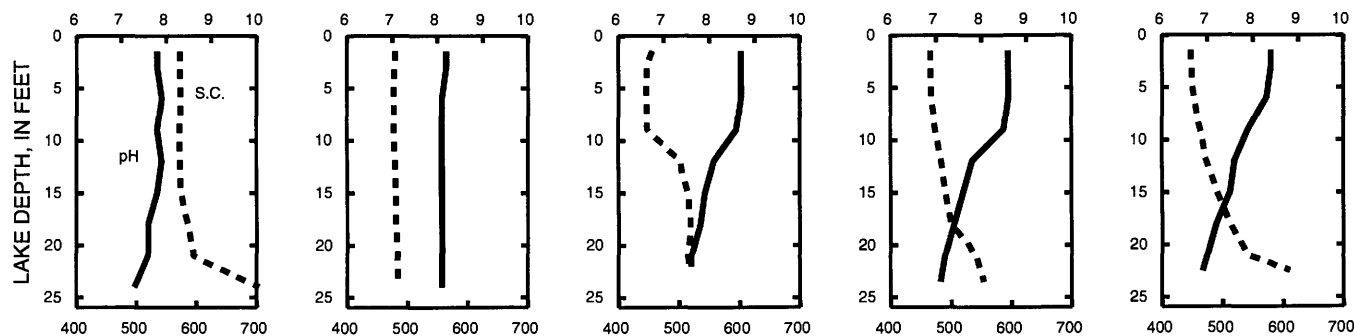
8-19-93

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

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 03 TO AUGUST 19, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 03		Apr. 26	June 15		July 22		Aug. 19	
	0.5	2.5	0.5	0.5	2.5	0.5	1.5	0.5	2.0
Depth of sample (ft)	0.5	2.5	0.5	0.5	2.5	0.5	1.5	0.5	2.0
Lake stage (ft)	11.84		12.16	11.99		11.77		11.64	
Specific conductance (μS/cm)	576	657	432	427	427	493	492	495	495
pH (units)	7.8	7.7	8.5	8.8	8.8	8.7	8.7	8.2	8.2
Water temperature (°C)	3.0	5.0	12.0	20.0	20.0	23.0	23.0	24.5	24.5
Color (Pt-Co. scale)	---	---	20	---	---	---	---	---	---
Turbidity (NTU)	---	---	12	---	---	---	---	---	---
Secchi-depth (meters)	---	---	0.4	0.4		0.3		0.3	
Dissolved oxygen	11.8	11.8	11.7	8.4	8.3	9.0	8.9	7.1	7.1
Hardness, as CaCO ₃	---	---	190	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	40	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	21	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	18	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	150	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	29	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	36	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	254	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.19	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.19	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	1.4	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.4	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.6	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.069	0.050	0.078	0.084	0.080	0.105	0.100
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	0.003	0.002	0.002	0.002	0.003	0.003
Iron, dissolved (Fe) μg/L	---	---	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	35	22	---	32	---	46	---

345

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.

GAGE.--Nonrecording gage. Staff read by the City of Muskego, Department of Public Works. Datum of gage is 760 ft above sea level. Between December 1987 and September 1989, data were collected using a water-stage recorder located on the right bank and at the same datum. Prior to December 18, 1987, nonrecording gage on right bank and at the same datum.

REMARKS.--Records good. Lake levels regulated by concrete dam with one 5-foot lift gate.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 12.60 ft, Oct. 7, 1991; minimum instantaneous, 9.81 ft, Sept. 20, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage-height, 12.30 ft, Apr. 19; minimum observed, 11.46 ft, Oct. 5.

[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 03 TO AUGUST 11, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 03		Apr. 21		June 14		July 12		Aug. 11	
Depth of sample (ft)	1.5	50	1.5	50	1.5	45	1.5	48	1.5	49
Lake stage (ft)	7.64		8.42		8.34		8.42		8.10	
Specific conductance (µS/cm)	606	654	479	478	457	502	461	502	485	552
pH (units)	7.3	7.1	8.3	8.3	8.6	7.2	8.6	7.2	8.5	7.0
Water temperature (°C)	3.5	4.0	6.5	6.0	23.5	14.5	25.5	15.5	23.5	15.0
Color (Pt-Co. scale)	---	---	30	30	---	---	---	---	---	---
Turbidity (NTU)	---	---	5.0	6.5	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.0	---	0.5	---	0.4	---	0.4	---
Dissolved oxygen	9.9	0.0	11.2	10.7	14.0	0.0	11.1	0.0	9.9	0.0
Hardness, as CaCO ₃	---	---	200	200	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	43	44	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	23	23	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	20	20	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	150	150	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	33	35	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	39	38	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	<0.2	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	294	286	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.32	0.31	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.32	0.31	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.13	0.12	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.97	0.98	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.1	1.1	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.4	1.4	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.068	0.066	0.119	0.186	0.076	0.370	0.042	0.620
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)	---	---	31	---	130	---	59	---	49	---

2-3-93

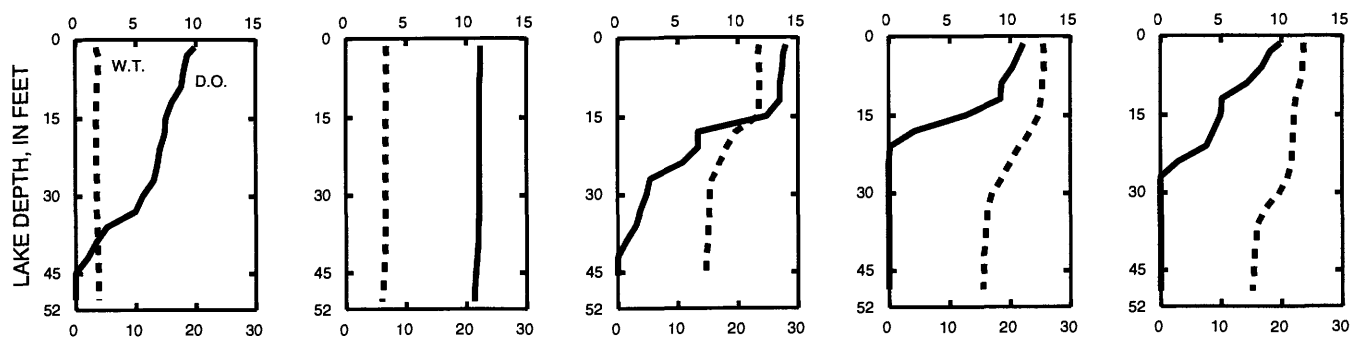
4-21-93

6-14-93

7-12-93

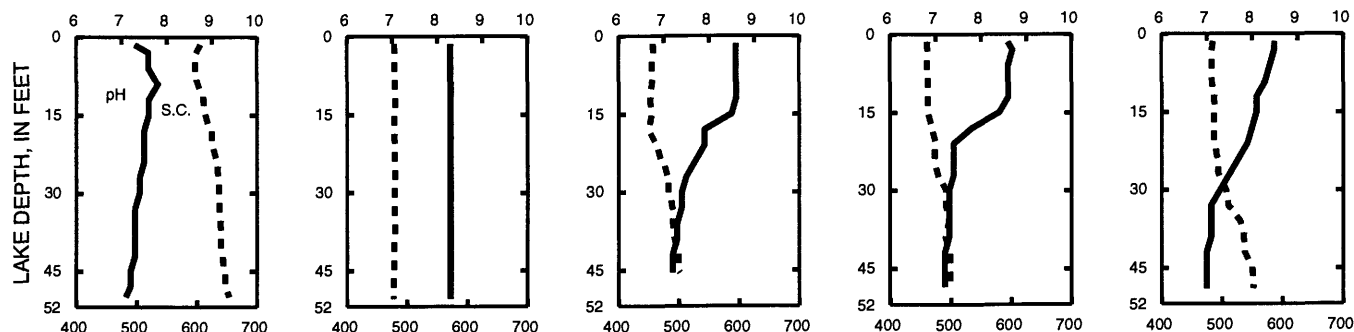
8-11-93

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

347

424848088083100 WIND LAKE OUTLET AT WIND LAKE, WI

LOCATION.--Lat 42°48'48" long 88°08'31", in NE 1/4 NW 1/4 sec.16, T.4 N., R.20 E., Racine County, Hydrologic Unit 07120006, at Wind Lake.

DRAINAGE AREA.--39.6 mi².

PERIOD OF RECORD.--March 1985 to current year.

REVISED RECORDS.--WDR WI-91-1: 1988(m).

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 760.30 ft above sea level. Prior to Oct. 2, 1987, nonrecording gage at same site and datum.

REMARKS.--Lake ice-covered Dec. 3, 8-22, and Dec. 31 to Apr. 1. Records good. Lake level regulated by dam with two 10-foot gates at outlet. Previously published as Wind Lake at Wind Lake, Wis.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 8.61 ft, Sept. 1, 1989; minimum recorded, 6.27 ft, Jan. 7 and 10, 1991, but may have been lower during period Jan. 7-10, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.59 ft, Sept. 26; minimum recorded, 7.12 ft, Dec. 5.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.51	7.68	7.44	7.96	7.74	7.55	7.86	7.83	8.17	8.19	8.18	8.26
2	7.51	7.88	7.34	7.92	7.69	7.53	7.85	8.03	8.17	8.22	8.17	8.27
3	7.50	7.97	7.23	7.89	7.64	7.52	7.75	8.22	8.22	8.26	8.15	8.28
4	7.49	8.09	7.18	7.93	7.59	7.51	7.66	8.34	8.25	8.25	8.13	8.26
5	7.48	8.20	7.15	7.94	7.57	7.52	7.54	8.24	8.33	8.25	8.11	8.26
6	7.47	8.30	7.16	7.88	7.56	7.53	7.41	8.11	8.34	8.30	8.10	8.26
7	7.46	8.38	7.16	7.81	7.55	7.59	7.30	8.03	8.35	8.30	8.08	8.25
8	7.45	8.44	7.16	7.73	7.54	7.66	7.34	7.99	8.18	8.32	8.07	8.24
9	7.44	8.48	7.15	7.64	7.53	7.73	7.59	7.98	8.00	8.36	8.08	8.21
10	7.44	8.40	7.16	7.56	7.52	7.83	7.72	8.01	7.86	8.37	8.10	8.21
11	7.44	8.25	7.16	7.48	7.52	7.91	7.81	8.05	8.03	8.42	8.10	8.21
12	7.42	8.18	7.18	7.40	7.52	7.96	7.88	8.08	8.20	8.42	8.09	8.21
13	7.41	8.12	7.19	7.37	7.54	8.02	7.88	8.12	8.33	8.39	8.08	8.22
14	7.41	8.02	7.22	7.29	7.55	8.05	7.85	8.11	8.34	8.42	8.07	8.22
15	7.44	7.89	7.28	7.20	7.55	8.08	8.03	8.11	7.90	8.40	8.09	8.22
16	7.47	7.76	7.44	7.19	7.55	8.11	8.34	8.11	7.58	8.37	8.11	8.22
17	7.46	7.64	7.55	7.19	7.55	8.14	8.41	8.10	7.65	8.34	8.11	8.23
18	7.45	7.55	7.62	7.19	7.54	8.11	8.46	8.11	7.83	8.32	8.10	8.24
19	7.44	7.46	7.69	7.19	7.52	7.97	8.46	8.11	8.03	8.31	8.20	8.25
20	7.45	7.48	7.74	7.18	7.51	7.80	8.42	8.10	8.23	8.27	8.25	8.29
21	7.46	7.55	7.77	7.24	7.54	7.64	8.42	8.10	8.35	8.23	8.24	8.33
22	7.47	7.62	7.80	7.31	7.60	7.51	8.41	8.09	8.30	8.19	8.22	8.34
23	7.48	7.76	7.83	7.39	7.61	7.52	8.38	8.10	8.21	8.17	8.21	8.35
24	7.50	7.80	7.84	7.47	7.60	7.63	8.37	8.10	8.17	8.17	8.20	8.35
25	7.51	7.81	7.86	7.53	7.60	7.68	8.32	8.10	8.17	8.22	8.20	8.40
26	7.53	7.84	7.87	7.59	7.59	7.68	8.36	8.10	8.18	8.23	8.19	8.56
27	7.54	7.81	7.87	7.64	7.57	7.66	8.33	8.11	8.25	8.23	8.18	8.34
28	7.55	7.74	7.87	7.70	7.56	7.61	8.05	8.12	8.30	8.22	8.16	7.96
29	7.57	7.66	7.91	7.72	---	7.55	7.79	8.11	8.28	8.21	8.19	7.73
30	7.59	7.57	7.94	7.73	---	7.50	7.65	8.13	8.27	8.20	8.23	7.63
31	7.60	---	7.97	7.74	---	7.53	---	8.18	---	8.18	8.27	---
MEAN	7.482	7.911	7.507	7.548	7.570	7.730	7.988	8.097	8.149	8.282	8.150	8.227
MAX	7.600	8.480	7.970	7.960	7.740	8.140	8.460	8.340	8.350	8.420	8.270	8.560
MIN	7.410	7.460	7.150	7.180	7.510	7.500	7.300	7.830	7.580	8.170	8.070	7.630

425044088100300 DENOON LAKE AT WIND LAKE. WI

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.

LAKE-STAGE RECORDS

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

GAGE.--Nonrecording gage. Staff read by Ken Werra. Elevation of lake is 780 ft above sea level, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 9.19 ft, Apr. 22, 1993; minimum observed, 6.71 ft, Aug. 30, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 9.19 ft. Apr. 22; minimum observed, 7.07 ft, Oct. 19.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

[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 deep hole. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 03 TO AUGUST 11, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 03		Apr. 27		June 14		July 12		Aug. 11	
Depth of sample (ft)	1.5	51	1.5	51	1.5	48	1.5	51	1.5	48
Lake stage (ft)	---		8.39		7.89		7.50		7.12	
Specific conductance ($\mu\text{S}/\text{cm}$)	481	502	459	469	450	486	440	485	450	493
pH (units)	7.9	7.4	8.2	8.0	8.4	7.3	8.4	7.4	8.5	7.3
Water temperature ($^{\circ}\text{C}$)	2.5	3.0	9.0	7.5	22.5	8.0	26.0	8.0	24.5	8.5
Color (Pt-Co. scale)	---		15		---		---		---	
Turbidity (NTU)	---		3.8		---		---		---	
Secchi-depth (meters)	---		1.6		1.4		1.5		1.8	
Dissolved oxygen	13.1	2.7	10.9	9.7	10.3	0.0	9.0	0.0	9.2	0.0
Hardness, as CaCO_3	---		210		---		---		---	
Calcium, dissolved (Ca)	---		42		---		---		---	
Magnesium, dissolved (Mg)	---		26		---		---		---	
Sodium, dissolved (Na)	---		14		---		---		---	
Potassium, dissolved (K)	---		3		---		---		---	
Alkalinity, as CaCO_3	---		160		---		---		---	
Sulfate, dissolved (SO_4)	---		34		---		---		---	
Chloride, dissolved (Cl)	---		31		---		---		---	
Fluoride, dissolved (F)	---		0.2		---		---		---	
Silica, dissolved (SiO_2)	---		1.0		---		---		---	
Solids, dissolved, at 180°C	---		294		---		---		---	
Nitrogen, nitrate, total (as N)	---		0.35		---		---		---	
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---		0.35		---		---		---	
Nitrogen, ammonia, dissolved (as N)	---		0.07		---		---		---	
Nitrogen, organic, total (as N)	---		0.73		---		---		---	
Nitrogen, amm. + org., total (as N)	---		0.80		---		---		---	
Nitrogen, total (as N)	---		1.2		---		---		---	
Phosphorus, total (as P)	---		0.033		0.019	0.161	0.021	0.230	0.018	0.260
Phosphorus, ortho, dissolved (as P)	---		0.003		0.006		---		---	
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---		<50		---		---		---	
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---		<40		---		---		---	
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---		8.0		13	---	8.7	---	5.8	---

2-3-93

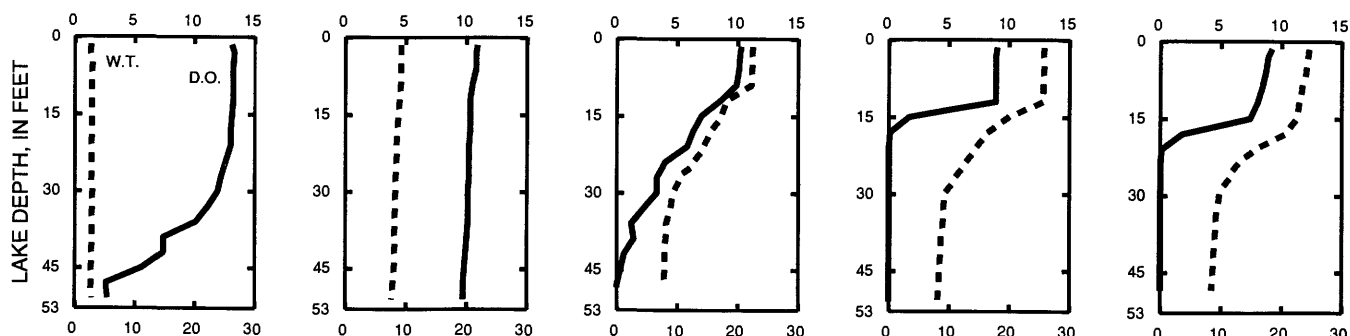
4-27-93

6-14-93

7-12-93

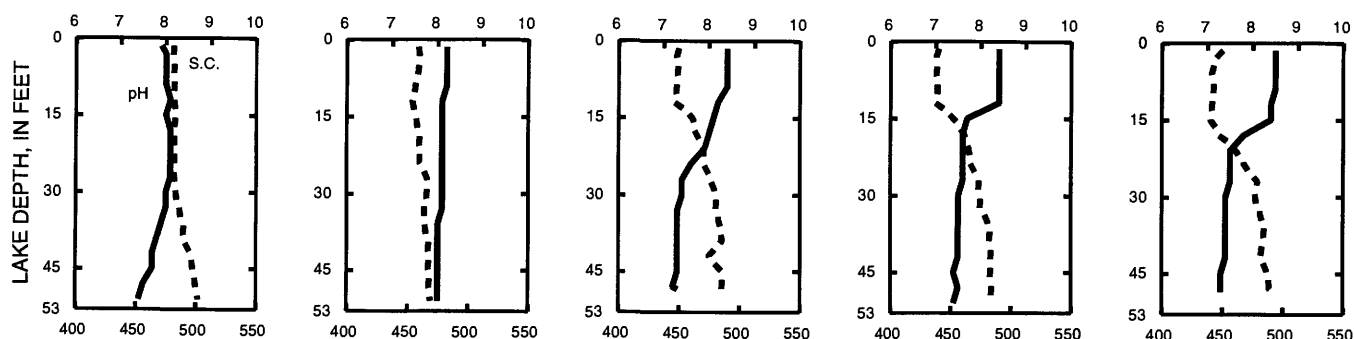
8-11-93

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 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.

LAKE-STAGE RECORDS

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 6.70 ft, June 14, 1993; minimum observed, less than 3.92 ft, Sept. 6, 1988.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.66	---	---	---	---	---	---	6.08	---	5.84	---	---
2	---	---	5.54	---	5.41	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	5.40	5.28	5.10	6.04	---	---	---	---
5	---	5.87	---	---	---	---	---	---	---	---	---	5.64
6	5.60	---	---	---	---	---	---	---	5.90	---	---	---
7	---	---	5.48	---	---	---	---	---	---	---	5.52	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	5.54	---	---	---	---	5.90	---	---	5.58
10	---	---	---	---	---	---	---	---	---	---	---	---
11	5.58	---	---	---	---	---	---	---	---	---	---	---
12	---	---	5.40	---	---	---	---	---	6.04	5.93	---	---
13	---	5.98	---	---	5.38	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	6.70	---	5.48	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	5.94	---	5.50	---	---	---	---	---	---	---	5.64
17	5.60	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	5.48	---	5.90	---	---	---	---
19	---	---	5.58	---	---	---	---	---	---	---	---	5.62
20	---	---	---	---	---	---	---	---	6.00	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	6.00	---	---	---	---
23	---	5.68	---	---	---	---	---	---	---	---	---	---
24	5.60	---	---	---	---	---	6.33	---	---	---	5.56	---
25	---	---	---	---	---	---	---	---	---	5.84	---	---
26	---	---	---	5.48	---	---	---	---	---	---	5.56	---
27	5.58	---	---	---	---	---	6.24	---	---	---	---	---
28	---	5.64	---	---	---	---	---	---	---	---	---	5.86
29	---	---	---	---	---	---	---	5.84	5.88	---	---	---
30	---	---	---	---	---	5.90	---	---	---	---	---	---
31	5.58	---	---	5.44	---	---	---	---	---	---	---	---

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 about 28 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 02 TO AUGUST 11, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 02		Apr. 27		June 14		July 12		Aug. 11	
Depth of sample (ft)	1.5	25	1.5	27	1.5	26	1.5	24	1.5	25
Lake stage (ft)	5.41		6.24		6.70		5.93		5.51	
Specific conductance ($\mu\text{S}/\text{cm}$)	489	568	407	400	444	442	444	452	455	483
pH (units)	7.5	7.0	8.0	7.7	8.1	7.0	8.2	7.2	8.2	7.0
Water temperature ($^{\circ}\text{C}$)	3.5	4.0	11.0	7.0	22.5	9.0	27.0	11.0	24.0	11.5
Color (Pt-Co. scale)	---	---	50	50	---	---	---	---	---	---
Turbidity (NTU)	---	---	3.0	3.0	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.2	---	1.9	---	1.0	---	1.4	---
Dissolved oxygen	10.4	1.8	10.2	8.0	9.0	0.1	9.1	0.0	8.2	0.0
Hardness, as CaCO_3	---	---	200	200	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	43	43	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	22	22	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	9.2	8.9	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	160	160	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	26	26	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	19	19	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	2.3	2.9	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	260	260	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.14	0.15	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.14	0.15	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.13	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.98	0.97	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.0	1.1	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.1	1.3	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.035	0.033	0.027	0.332	0.027	0.240	0.019	0.370
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 ($\mu\text{g}/\text{L}$)	---	---	15	---	10	---	18	---	9.3	---

2-2-93

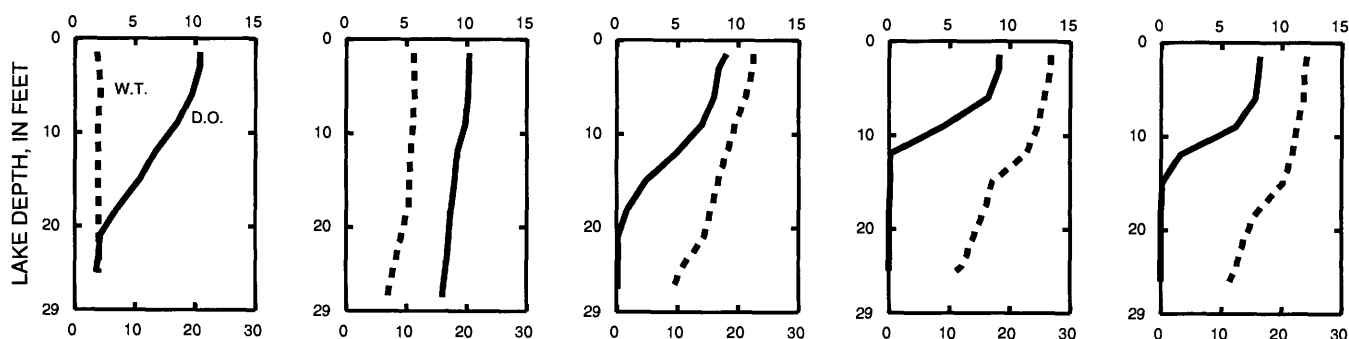
4-27-93

6-14-93

7-12-93

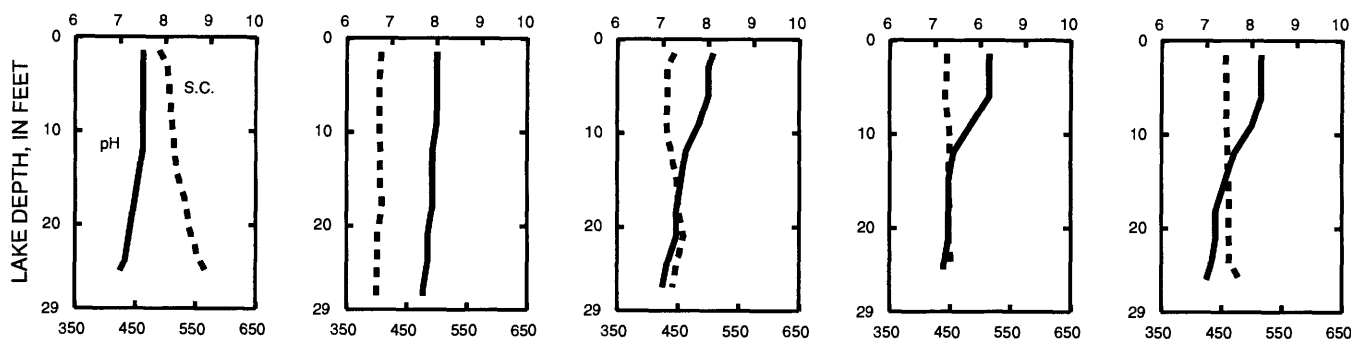
8-11-93

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

424857088101500 WAUBEESEE LAKE AT WIND LAKE, WI

352

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 August 1989, February 1991 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 03 TO AUGUST 18, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 03		Apr. 27		June 23		July 22		Aug. 18	
Depth of sample (ft)	1.5	72	1.5	71	1.5	72	1.5	71	1.5	71
Lake stage (ft)		4.87		5.29		5.21		4.91		4.92
Specific conductance (μS/cm)	469	483	443	469	430	471	425	476	428	466
pH (units)	7.7	7.4	8.1	7.9	8.2	7.5	8.4	7.4	8.2	7.5
Water temperature (°C)	3.0	2.5	10.5	6.0	23.5	6.0	25.5	6.0	26.5	6.0
Color (Pt-Co. scale)	---	---	30	30	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.90	1.5	---	---	---	---	---	---
Secchi-depth (meters)	---	---	3.6	---	4.6	---	2.2	---	2.6	---
Dissolved oxygen	11.3	2.1	10.7	9.2	10.1	0.0	8.8	0.0	8.7	0.0
Hardness, as CaCO ₃	---	---	220	220	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	45	45	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	25	26	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	11	12	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	160	160	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	34	36	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	24	25	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	1.2	1.4	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	288	288	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.18	0.22	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.18	0.22	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.04	0.05	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.76	0.75	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.80	0.80	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.98	1.0	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.013	0.015	0.008	0.156	0.013	0.180	0.011	0.070
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.004	---	---	---	---	---	---
Iron, dissolved (Fe) μg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) μg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (μg/L)	---	---	1.1	---	1.7	---	3.8	---	3.8	---

2-3-93

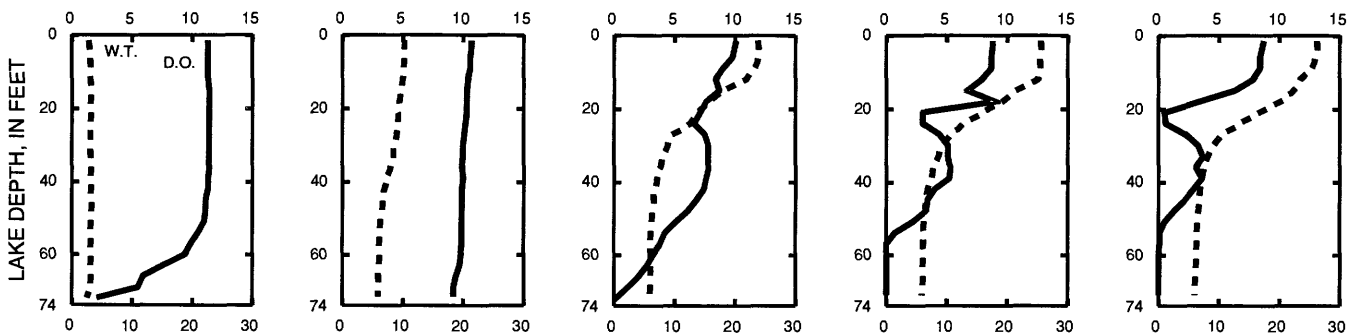
4-27-93

6-23-93

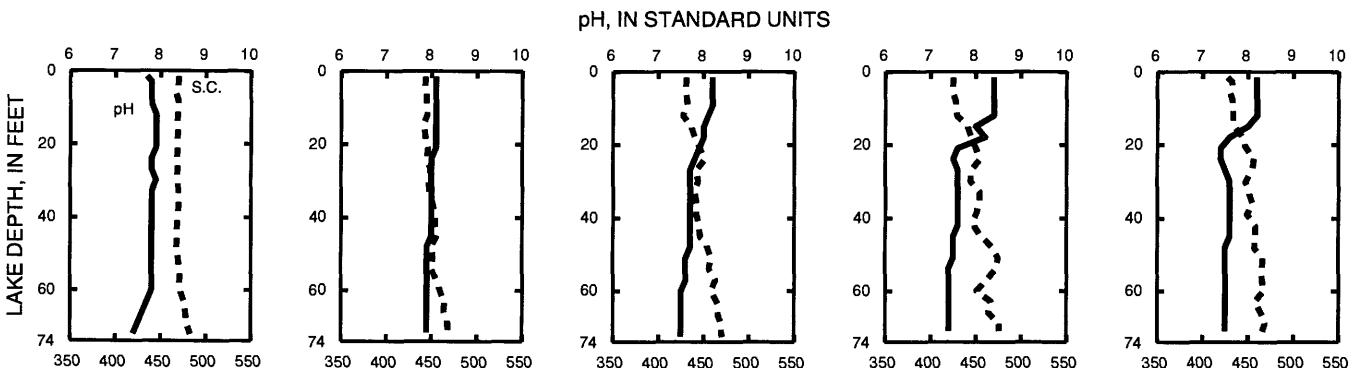
7-22-93

8-18-93

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

424207088072400 EAGLE LAKE NEAR KANSASVILLE, WI

353

LOCATION.--Lat 42°42'07", long 88°07'24", in SE 1/4 SW 1/4 sec.22, T.3 N., R.20 E., Racine County, Hydrologic Unit 07120006, 1.5 mi northwest of Kansasville.

DRAINAGE AREA.--6.99 mi².

PERIOD OF RECORD.--February to August 1993.

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 02 TO AUGUST 23, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 02		Apr. 22		June 23		July 13		Aug. 23	
Depth of sample (ft)	1.5	12	1.5	14	1.5	11	1.5	11	1.5	10
Lake stage (ft)	---	---	---	---	---	---	---	---	---	---
Specific conductance (µS/cm)	500	596	398	385	334	343	376	374	422	420
pH (units)	7.7	7.4	8.0	7.9	9.0	8.9	8.2	8.2	8.1	8.1
Water temperature (°C)	2.0	4.0	7.5	7.5	24.0	22.0	26.0	25.5	25.5	25.0
Color (Pt-Co, scale)	---	---	40	50	---	---	---	---	---	---
Turbidity (NTU)	---	---	18	26	---	---	---	---	---	---
Secchi-depth (meters)	---	---	0.4	---	3.3	---	2.1	---	0.7	---
Dissolved oxygen	12.5	5.6	10.3	10.0	10.2	9.4	8.2	7.9	8.4	3.8
Hardness, as CaCO ₃	---	---	180	180	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	39	39	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	21	21	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	10	10	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	140	130	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	31	29	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	26	25	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.2	0.2	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	1.4	1.6	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	244	242	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.75	0.83	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.75	0.83	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.07	0.07	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.93	0.83	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.0	0.90	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.7	1.7	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.052	0.066	0.021	0.017	0.037	0.042	0.082	0.075
Phosphorus, ortho, dissolved (as P)	---	---	0.013	0.017	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	50	50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	7.3	---	1.9	---	8.2	---	37	---

2-2-93

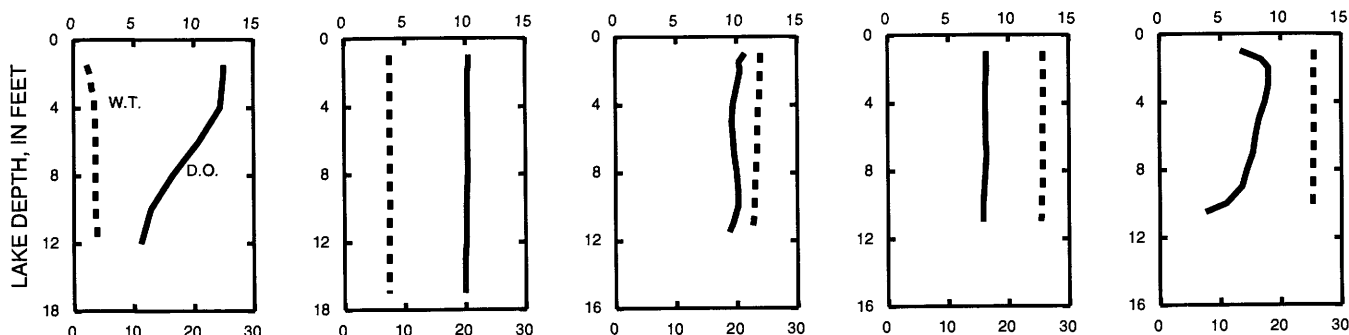
4-22-93

6-23-93

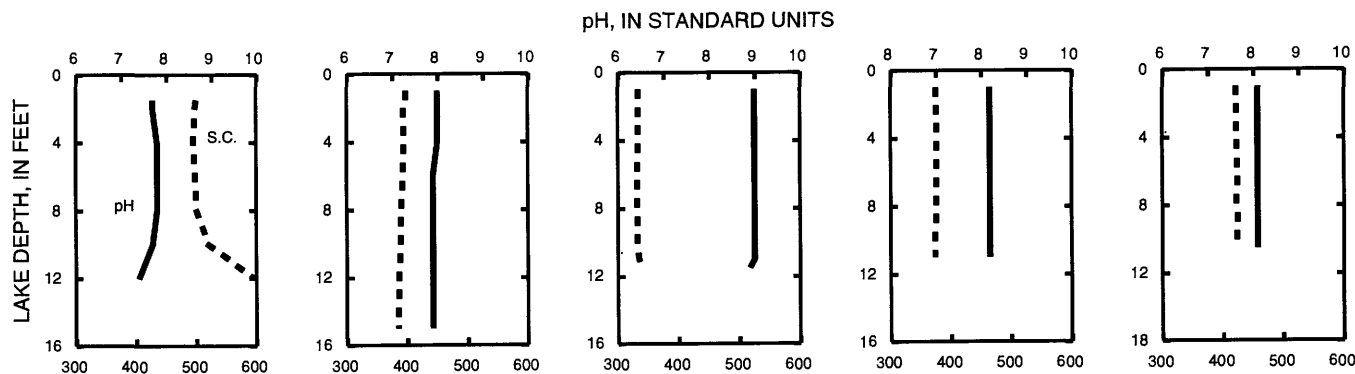
7-13-93

8-23-93

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

354

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 1992 to current year.

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 03 TO AUGUST 10, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 03		Apr. 21		June 22		July 21		Aug. 10	
Depth of sample (ft)	1.5	23	1.5	24	1.5	22	1.5	22	1.5	22
Lake stage (ft)	10.80		11.87		12.03		11.88		11.64	
Specific conductance (μS/cm)	336	357	310	313	328	337	322	366	328	333
pH (units)	8.0	7.8	8.4	8.3	8.3	7.6	8.3	7.4	8.3	8.0
Water temperature (°C)	4.5	5.0	7.0	7.0	23.5	18.0	25.5	20.5	24.0	23.0
Color (Pt-Co. scale)	---	---	5	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.70	0.70	---	---	---	---	---	---
Secchi-depth (meters)	---		5.0		3.0		2.0		2.9	
Dissolved oxygen	12.1	7.3	10.9	10.5	9.3	3.5	8.7	0.0	8.7	6.2
Hardness, as CaCO ₃	---	---	150	150	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	32	32	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	18	18	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	5.6	5.7	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	1	1	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	130	130	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	16	16	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	11	11	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	0.5	0.4	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	184	182	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.13	0.19	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.13	0.19	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.27	0.28	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.53	0.42	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.80	0.70	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.93	0.89	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.008	0.007	0.006	0.009	0.009	<0.020	0.006	<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)	---	---	3.6	---	3.4	---	4.4	---	4.2	---

2-3-93

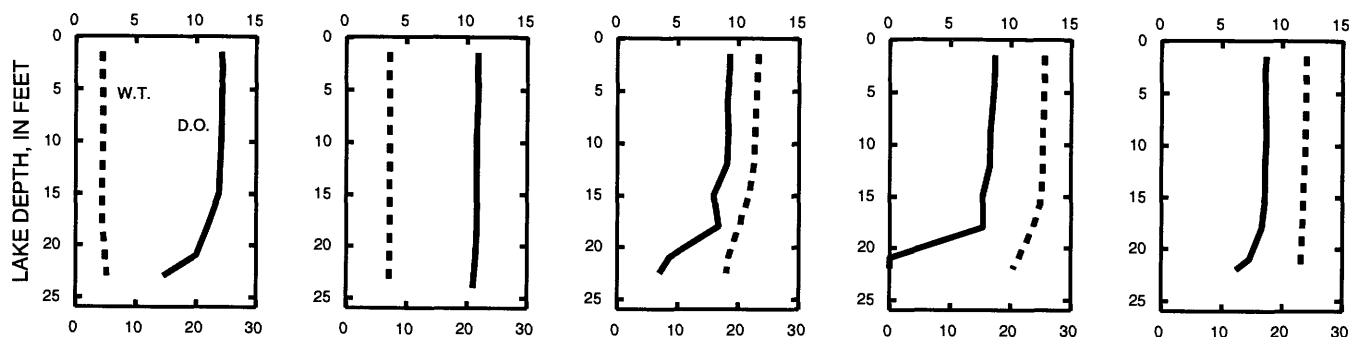
4-21-93

6-22-93

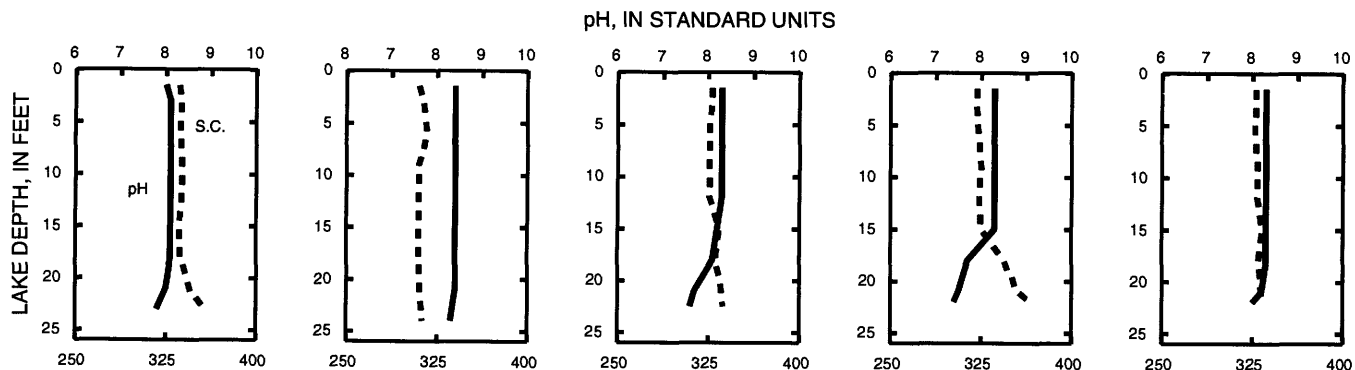
7-21-93

8-10-93

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

355

LOCATION.--Lat 42°49'05", long 88°20'40", in NW 1/4 SW 1/4 sec.11, T.4 N., R.18 E., Walworth County, Hydrologic Unit 07120006, 3.3 mi south of Mukwonago.

PERIOD OF RECORD.--May to August 1993.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 8.40 ft. June 8; minimum observed, 7.68 ft, Aug. 10.

[illegible]

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February to August 1993.

REMARKS.--Lake sampled 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 10, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 04		Apr. 21		June 21		July 21		Aug. 10	
Depth of sample (ft)	1.5	24	1.5	25	1.5	23	1.5	23	1.5	22
Lake stage (ft)	---	---	---	---	8.33	---	7.79	---	7.68	---
Specific conductance ($\mu\text{S}/\text{cm}$)	463	561	440	450	490	510	509	540	509	571
pH (units)	8.3	7.5	8.3	8.3	7.9	7.5	8.4	7.1	8.4	6.9
Water temperature ($^{\circ}\text{C}$)	4.5	5.5	7.5	7.0	22.5	15.0	26.0	16.0	24.5	17.5
Color (Pt-Co. scale)	---	---	10	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.3	1.3	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.0	---	1.1	---	0.8	---	0.6	---
Dissolved oxygen	14.6	2.4	10.8	10.6	7.7	0.0	9.2	0.0	10.1	0.0
Hardness, as CaCO_3	---	---	190	190	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	40	41	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	22	22	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	18	18	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO_3	---	---	160	160	---	---	---	---	---	---
Sulfate, dissolved (SO_4)	---	---	<10	<10	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	40	40	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO_2)	---	---	0.8	0.8	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	264	262	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.01	0.01	---	---	---	---	---	---
Nitrogen, $\text{NO}_2 + \text{NO}_3$, diss. (as N)	---	---	0.01	0.01	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.02	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.58	0.58	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.60	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.61	0.61	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.025	0.022	0.034	0.089	0.032	0.270	0.033	0.110
Phosphorus, ortho, dissolved (as P)	---	---	0.009	0.009	---	---	---	---	---	---
Iron, dissolved (Fe) $\mu\text{g}/\text{L}$	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) $\mu\text{g}/\text{L}$	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton ($\mu\text{g}/\text{L}$)	---	---	15	---	16	---	22	---	18	---

2-4-93

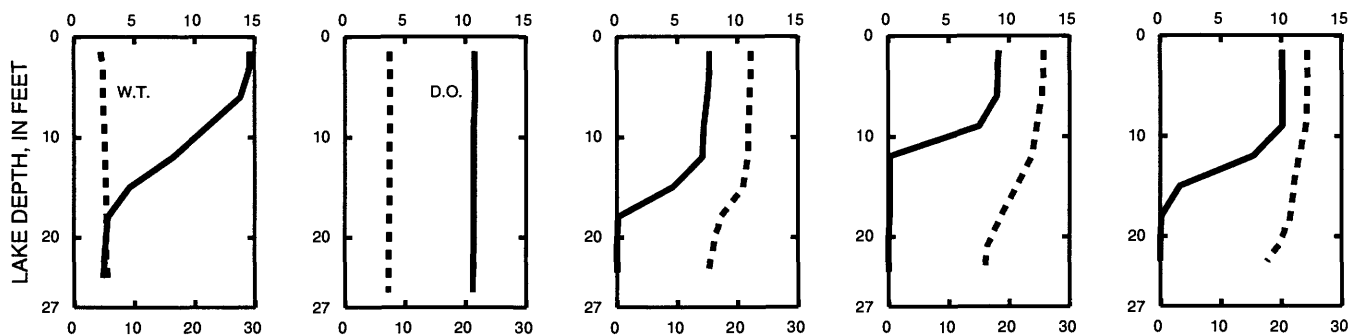
4-21-93

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7-21-93

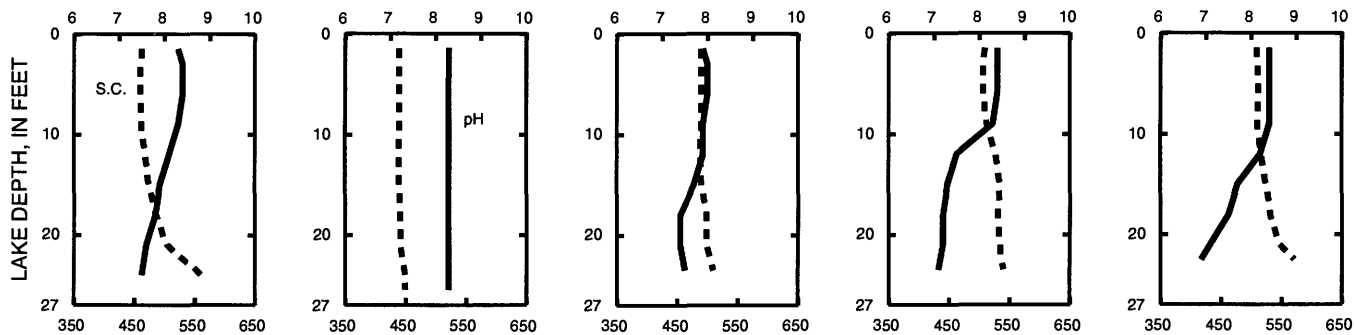
8-10-93

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

357

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. WDR WI-92-1: 1991.

GAGE.--Water-stage recorder. Datum of gage is 735.22 ft above sea level. Prior to Sept. 1, 1965, nonrecording gage at bridge 100 ft upstream at same datum, and concrete dam, until Sept. 15, 1992.

REMARKS.--Estimated daily discharges: Ice-affected periods, Dec. 5-13, Dec. 21 to Feb. 5, Feb. 12-14, Feb. 17 to Mar. 6, and Mar. 15. Records are good, except for estimated periods and Nov. 29 to Mar. 20, and May 20 to Sept. 30, which are fair. Gage-height telemeter and data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	355	271	1430	1500	1100	380	3210	3250	774	1620	611	629
2	346	684	1330	1400	1000	390	3480	2980	802	1560	554	650
3	314	1190	1270	1400	960	420	3480	2780	683	1560	544	624
4	292	1270	1130	1500	1000	560	3430	2590	818	1500	503	725
5	281	1220	960	1600	1200	1000	3350	2500	851	1410	490	743
6	285	1090	900	1700	1230	1300	3240	2460	1030	1310	481	664
7	285	949	860	1600	942	1340	3150	2330	1070	1260	468	662
8	289	845	800	1400	756	1540	3100	2090	1560	1130	459	634
9	310	769	720	1100	732	1640	3200	1780	2160	1170	479	640
10	277	756	700	1000	702	1600	3320	1540	2340	1240	485	535
11	264	877	680	1100	657	1480	3280	1420	2260	1450	476	466
12	262	902	640	1200	620	1330	3170	1290	1950	1510	452	497
13	259	1350	600	1100	600	1170	3030	1190	1630	1600	434	503
14	238	1440	535	1000	580	1190	2910	1030	1620	1570	430	515
15	227	1310	564	980	501	1200	2930	850	1830	1520	452	605
16	243	1140	1140	940	456	939	3320	762	1920	1470	458	730
17	274	941	1540	900	450	1120	3620	745	1640	1410	488	735
18	264	761	1570	840	450	1260	3660	700	1370	1490	505	716
19	305	492	1460	800	470	1250	3630	762	1600	1740	521	711
20	349	306	1340	780	460	1120	3920	684	1980	1790	529	720
21	323	710	1200	880	410	1020	4640	633	2210	1650	525	713
22	335	1090	1100	1200	400	995	4990	682	2250	1410	529	721
23	344	1370	1000	1300	400	1440	4750	733	2150	1310	518	645
24	323	1690	940	1400	390	2470	4420	794	2030	1100	442	629
25	346	1760	900	1400	390	3170	4160	756	1880	1080	393	571
26	316	1710	900	1300	380	3330	3980	762	1660	1100	401	806
27	321	1690	880	1300	380	3220	3810	728	1410	1140	412	1020
28	302	1650	880	1200	380	3060	3630	763	1260	1030	384	1160
29	266	1580	940	1100	---	2960	3510	673	1260	871	407	1160
30	257	1500	980	1000	---	2910	3420	568	1460	777	509	1110
31	256	---	1300	1000	---	2930	---	653	---	786	561	---
TOTAL	9108	33313	31189	36920	17996	49734	107740	41478	47458	41564	14900	21239
MEAN	294	1110	1006	1191	643	1604	3591	1338	1582	1341	481	708
MAX	355	1760	1570	1700	1230	3330	4990	3250	2340	1790	611	1160
MIN	227	271	535	780	380	380	2910	568	683	777	384	466
CFSM	.34	1.28	1.16	1.37	.74	1.85	4.14	1.54	1.82	1.54	.55	.82
IN.	.39	1.43	1.34	1.58	.77	2.13	4.62	1.78	2.03	1.78	.64	.91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

	MEAN	387	482	460	422	504	1152	1103	689	499	385	321	345
MAX	1931	1536	1755	1818	1354	2434	3591	2078	1582	1382	902	1763	
(WY)	1987	1986	1983	1960	1974	1979	1993	1973	1993	1969	1952	1972	
MIN	79.5	113	91.4	87.7	105	252	256	108	124	69.2	57.2	62.7	
(WY)	1957	1950	1964	1940	1940	1968	1958	1958	1988	1958	1958	1946	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1940 - 1993
ANNUAL TOTAL	224168	452639	
ANNUAL MEAN	612	1240	562
HIGHEST ANNUAL MEAN			1240
LOWEST ANNUAL MEAN			174
HIGHEST DAILY MEAN	1760	Nov 25	7100
LOWEST DAILY MEAN	99	Jul 23	35
ANNUAL SEVEN-DAY MINIMUM	161	Aug 18	41
INSTANTANEOUS PEAK FLOW		5060	7520
INSTANTANEOUS PEAK STAGE		7.67	(a)9.25
INSTANTANEOUS LOW FLOW		210	.00
ANNUAL RUNOFF (CFSM)	.71	1.43	.65
ANNUAL RUNOFF (INCHES)	9.61	19.40	8.80
10 PERCENT EXCEEDS	1230	2930	1280
50 PERCENT EXCEEDS	440	1000	356
90 PERCENT EXCEEDS	224	380	120

(a) From graph based on gage readings

(b) Also occurred Aug. 10, 1990

ILLINOIS RIVER BASIN

358

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 02 TO AUGUST 23, 1993
(Milligrams per liter unless otherwise indicated)

	Feb. 02		Apr. 22		June 21		July 13		Aug. 23	
Depth of sample (ft)	1.5	33	1.5	33	1.5	33	1.5	33	1.5	33
Lake stage (ft)	10.10		10.70		10.55		10.68		10.13	
Specific conductance (μS/cm)	499	515	465	465	471	492	470	499	472	519
pH (units)	6.2	7.2	8.2	8.2	8.2	7.6	8.2	7.5	8.2	7.2
Water temperature (°C)	2.5	4.5	8.0	7.0	23.5	16.0	24.5	16.5	25.0	16.5
Color (Pt-Co. scale)	---	---	5	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.90	0.70	---	---	---	---	---	---
Secchi-depth (meters)	---	---	6.4	---	3.7	---	2.5	---	3.0	---
Dissolved oxygen	12.4	4.9	11.0	10.4	9.2	0.2	8.4	0.0	8.1	0.0
Hardness, as CaCO ₃	---	---	220	220	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	37	37	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	30	31	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	13	13	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO ₃	---	---	170	170	---	---	---	---	---	---
Sulfate, dissolved (SO ₄)	---	---	35	35	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	29	29	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO ₂)	---	---	5.8	5.7	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	268	266	---	---	---	---	---	---
Nitrogen, nitrate, total (as N)	---	---	0.09	0.09	---	---	---	---	---	---
Nitrogen, NO ₂ + NO ₃ , diss. (as N)	---	---	0.09	0.09	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.04	0.03	---	---	---	---	---	---
Nitrogen, organic, total (as N)	---	---	0.46	0.47	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.50	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.59	0.59	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.005	0.007	0.010	0.017	0.009	0.021	0.021	0.042
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)	---	---	1.2	---	4.0	---	4.6	---	3.7	---

2-2-93

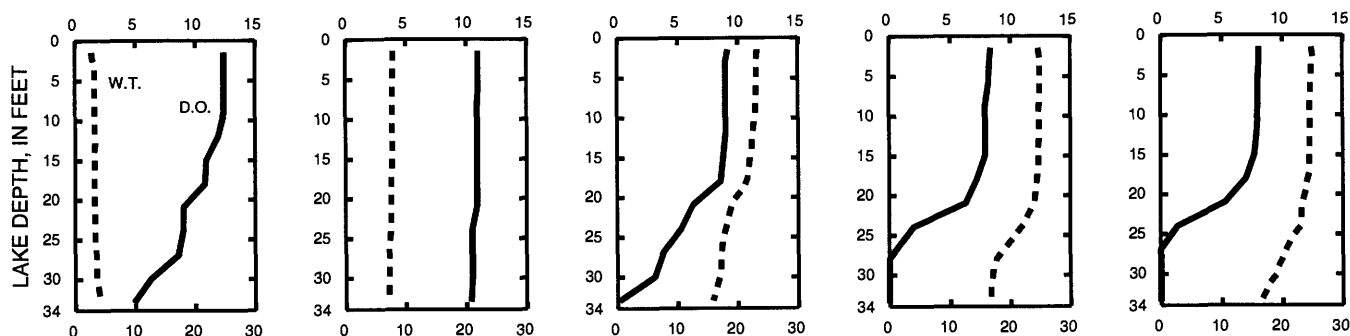
4-22-93

6-21-93

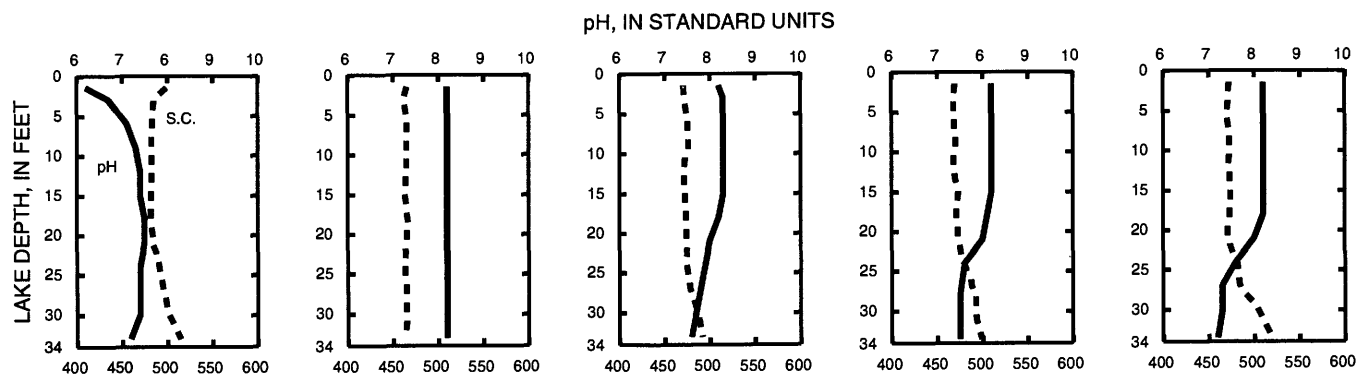
7-13-93

8-23-93

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

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.

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 1993 maximum			Date	Gage height (ft)	Dis- charge (ft ³ /s)	
			Date						
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 .	1961-93	05-24-93	14.48	200	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# 1967-93	05-01-93	F12.29	82	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 .	1958-93	03-27-93	F10.37	47	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 .	1959-93	03-28-93	14.52	2,700	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 .	1970-93	06-20-93 04-16-92	12.04 12.15	430 E460	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 .	1970-93	06-20-93	11.68	115	08-17-72	12.65	270	
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 .	1970-93	06-20-93	12.74	186	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# 1967-93	06-20-93	13.09	190	09-22-59	15.78	400	

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 1993 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									
*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 .	1961-93	06-20-93	13.34	730	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 .	1970-93	06-20-93	14.58	825	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 .	1970-93	06-20-93	12.83	240	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# 1962-93	06-20-93	11.89	6,900	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 .	1962-93	06-20-93	14.77	532	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# 1958-93	06-17-93	7.44	1,850	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 .	1958-93	06-20-93	D14.39	730	06-05-80	21.68	2,880	
*05366500 Eau Claire River near Fall Creek, WI	Lat 44°48'35", long 91°16'50", in NW 1/4 sec.19, T.27 N., R.7 W., Eau Claire County, 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# 1958-93	06-20-93	19.38	24,500	06-20-93	19.38	24,500	
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 .	1958-93	06-19-93	12.73	260	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 .	1960-93	06-17-93	13.31	200	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 .	1958-93	06-17-93 03-27-93	11.42 G11.64	185	03-30-67	12.39	1,550	

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS									
Station number and name	Location and drainage area	Period of record	Water year 1993 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									
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 .	1959-93	08-30-93	F12.50	F220	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 .	1962-93	1993	B	<160	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 .	1960-93	06-19-93	12.46	154	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 .	1974-93	06-20-93 09-16-92 06-22-91	15.08 14.74 11.29	4,000 E2,950 E630	09-10-75	15.39	5,180	
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 .	1960-93	06-20-93	F12.02	165	09-21-90	13.33	305	
*05380900 Poplar River near Owen, WI	Lat 44°53'10", long 90°34'17", in NW 1/4 sec.25, T.28 N., R.2 W., Clark County, 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# 1967-93	06-20-93 03-06-92 03-23-91 06-13-90 03-27-89 03-10-88 10-12-86 03-30-86 08-13-85 07-11-84	19.45 17.78 16.38 18.56 18.88 16.88 18.61 16.80 13.69 14.64	10,800 E7,600 E5,400 E9,100 E9,600 E6,150 E9,200 E6,100 E2,480 E3,400	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 .	1961-93	06-20-93	20.33	7,000	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 .	1960-93	06-20-93	11.03	395	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 .	1961-93	06-17-93	17.47	3,770	07-02-78	20.60	6,600	

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS			Water year 1993 maximum			Period of record maximum		
Station number and name	Location and drainage area	Period of record	Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
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# 1967-93	05-02-93	10.64	270	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 .	1970-93	06-20-93	11.60	80	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 .	1970-93	05-03-93	D12.40	F70	05-29-91	13.00	122
05391260 Gudogast 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 .	1970-93	06-20-93	11.86	63	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 .	1970-93	06-20-93	10.54	15	04-30-84	11.32	32
*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 .	1958-93	05-03-93	F9.60	40	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# 1967-93	06-20-93	9.75	83	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 .	1970-93	06-20-93 E06-17-79	F13.02 EF13.75	152 E272	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 .	1961-93	09-13-93 E11-01-91	12.86 E13.29	315 E400	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 .	1970-93	06-20-93	13.23	445	06-13-90	>16.00	>1,000

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS									
Station number and name	Location and drainage area	Period of record	Water year 1993 maximum			Period of record maximum			
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)	
WISCONSIN RIVER BASIN--CONTINUED									
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 .	1959-93	06-17-93	13.41	171	06-13-90	17.57	390	
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 .	1982-93	05-11-93	5.51	116	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 .	1959-93	06-17-93	F14.00	F1,300	09-27-59	15.18	2,120	
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 .	1973-93	06-09-93	15.30	910	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 .	1959-93	06-09-93	13.46	715	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 .	1961-93	04-20-93	13.74	250	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 .	1958-93	04-20-93	14.89	650	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# 1978-93	05-03-93	3.90	116	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# 1983-93	05-03-93 09-14-92 04-09-91 06-29-90 03-28-89 09-21-88 04-22-87 05-15-86 07-25-85 06-23-84 06-27-83	6.50 9.80 5.29 5.12 5.91 4.96 5.35 5.62 6.71 6.34 6.47	270 E1,200 E130 E117 E190 E107 E135 E159 E300 E240 E260	09-14-92	9.80	E1,200	
*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# 1967-93	07-18-93	14.92	2,400	06-29-90	16.74	7,200	

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	1993 maximum	Dis-charge	Date	Gage height	Dis-charge
			Date	(ft)	(ft ³ /s)		(ft)	(ft ³ /s)
WISCONSIN RIVER BASIN--CONTINUED								
*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 .	1961-93	07-05-93	14.02	540	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 .	1960-93	04-20-93	13.00	150	08-26-72	17.40	870
*05407100 Richland Creek near Plugtown, WI	Lat 43°11'12", long 90°44'23", in NW 1/4 sec.9, T.8 N., R.3 W., Crawford County, Hydrologic Unit 07070005, at bridge on U.S. High- way 61, 2.0 mi south of Plugtown. Drainage area is 19.2 mi ² .	1958-93	06-07-93	15.44	640	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 .	1959-93	03-29-93	12.59	590	07-27-64	18.21	2,460
*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# 1967-93	07-09-93	14.71	1,250	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 .	1958-93	07-09-93	14.48	475	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# 1991-93	07-09-93	14.61	3,360	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 .	1960-93	07-09-93	17.32	F7,000	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# 1984-93	07-05-93	13.30	1,550	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 .	1960-93	07-09-93	F12.21	205	08-14-72	13.12	340

MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

Station number and name	Location and drainage area	Period of record	Water year 1993 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
ROCK RIVER BASIN--CONTINUED								
*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 .	1960-93	07-05-93	14.94	344	07-05-93	14.94	344
*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 .	1958-93	04-20-93	F10.18	80	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# 1982-93	07-05-93	14.83	400	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 .	1982-93	06-30-93	7.25	680	06-29-90	7.62	830
*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 .	1962-93	06-30-93 1992 1991 1990 03-25-89 01-18-88 1987 03-08-86 02-24-85 02-12-84 1983 07-22-82 1981 1980 08-10-79 1978 1977 03-12-76 1975	15.30 B B B 11.90 12.40 B 12.80 12.53 12.55 B 13.81 B B 10.60 B B 13.43 B	4,100 E<810 E<800 E<780 E1,070 E1,400 E<740 E1,750 E1,480 E1,490 E<1,700 E2,550 E<1,700 E<1,700 E445 E<1,700 E<1,700 E2,200 E<2,400	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 .	1959-93	07-05-93	22.63	3,100	07-05-93	22.63	3,100
*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# 1966-93	07-06-93	10.52	4,700	06-29-90	11.40	8,500
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 .	1961-93	07-05-93	>17.42	F800	07-05-93	>17.42	F800
*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 .	1961-93	03-23-93 11-30-91	13.53 EF12.00	285 E50	03-31-65	15.06	370

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 1993 Date	maximum Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
ROCK RIVER BASIN--CONTINUED								
*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 .	1958-93	06-30-93 03-02-91	17.92 12.63	F2,300 E255	06-30-93	17.92	F2,300
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 .	1962-93	04-19-93	13.12	235	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 .	1958-93	04-19-93	12.71	120	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 .	1962-93	06-30-93	12.81	350	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
 D Backwater from beaver dam
 E Revised
 F Estimated
 G Backwater from ice

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 1993

Stream	Tributary to	Location	Drainage Area (mi ²)	Measured Previously (Water Years)	Date	Discharge (ft ³ /s)
CHIPPEWA RIVER BASIN						
North Creek	Trout River	Lat 46°04'43", long 89°40'02", in SW 1/4 NE 1/4 sec.31, T.42 N., R.7 E., Vilas County, Hydrologic Unit 0705002, at inlet to Trout Lake, 2.6 mi southwest of Boulder Junction.	3.58	1992	11-12-92	3.57
					12-01-92	3.02
					01-12-93	2.92
					03-02-93	2.39
					03-24-93	2.36
					04-16-93	4.17
					06-09-93	5.74
					07-21-93	3.82
					08-19-93	3.70
					09-15-93	4.94
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.	--	1991-92	11-12-92	8.02
					12-11-92	4.75
					01-12-93	4.58
					03-02-93	2.37
					03-24-93	2.37
					04-16-93	1.10
					06-09-93	9.44
					07-21-93	1.27
					08-19-93	3.67
					09-15-93	5.77
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	1991-92	04-19-93	22.2
BLACK RIVER BASIN						
Black River	Mississippi River	Lat 44°17'37", long 90°50'47", in SE 1/4 SE 1/4 sec.15, T.21 N., R.4 W., Jackson County, Hydrologic Unit 07040007, on right bank 500 ft downstream from bridge on State Highway 54, at Black River Falls, 1,000 ft downstream from Town Creek.	1,590	1985-92	11-05-92 04-28-93 06-21-93 06-22-93 06-22-93 08-17-93	2,390 6,850 41,000 23,400 18,000 756
WISCONSIN RIVER BASIN						
Wisconsin River	Mississippi River	Lat 45°16'17", long 89°47'02", in NW 1/4 SE 1/4 sec.30, T.33 N., R.6 E., Lincoln County, Hydrologic Unit 0707001, at Grandfather Dam, 13.5 mi southeast of Spirit Falls.	2,270	--	09-23-93	1,670

SPECIFIC CONDUCTANCE AND WATER TEMPERATURE AT GAGING STATIONS

Measurements of water temperature and specific conductance are made at routine visits to complete-record gaging stations. These measurements, made over a range of streamflow conditions, can be used to estimate changes in the dissolved-mineral content of the stream water with time.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
ST. CROIX RIVER BASIN									
05333500 ST. CROIX RIVER NEAR DANBURY, WI (LAT 46 04 28N LONG 092 14 50W)									
OCT 1992					APR 1993				
01...	1300	1010	145	15.0	07...	0930	1850	100	5.0
NOV					MAY				
24...	1230	1460	135	2.5	24...	1345	2040	100	13.0
JAN 1993					JUL				
11...	1220	895	165	0.0	22...	1300	1120	120	23.5
MAR									
01...	1450	993	171	1.0					
05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI (LAT 45 24 25N LONG 092 38 49W)									
OCT 1992					APR 1993				
30...	1005	2900	190	5.5	29...	1015	6710	150	13.5
NOV					JUN				
23...	0955	6320	200	2.0	30...	0920	10900	130	18.5
DEC									
28...	1055	3180	205	0.5					
CHIPPEWA RIVER BASIN									
05356000 CHIPPEWA RIVER AT BISHOPS BRIDGE NEAR WINTER, WI (LAT 45 50 57N LONG 091 04 44W)									
OCT 1992					MAY 1993				
12...	1230	756	90	11.0	27...	1040	493	70	14.0
21...	0915	1760	72	6.5	JUN				
DEC					08...	0845	1170	65	14.5
01...	1315	1890	70	1.5	JUL				
JAN 1993					14...	0850	1540	61	21.5
07...	0850	909	82	1.0	AUG				
13...	1300	901	117	1.5	05...	1245	300	100	21.0
MAR					SEP				
03...	1220	893	110	4.5	07...	1720	487	86	19.5
APR									
06...	1410	264	90	5.5					
21...	1010	270	53	5.0					
05356500 CHIPPEWA RIVER NEAR BRUCE, WI (LAT 45 27 08N LONG 091 15 39W)									
OCT 1992					APR 1993				
19...	1455	2400	70	5.5	14...	0910	2790	80	5.5
28...	1230	1300	92	6.0	JUN				
NOV					14...	0950	3150	37	18.0
30...	1135	1400	85	0.0	AUG				
MAR 1993					05...	1315	522	105	20.0
09...	0840	1400	130	0.5					
05360500 FLAMBEAU RIVER NEAR BRUCE, WI (LAT 45 22 21N LONG 091 12 34W)									
OCT 1992					APR 1993				
19...	1410	1600	78	7.5	14...	1110	3960	95	3.0
20...	1700	1770	87	8.5	21...	0800	1730	73	4.0
28...	1305	794	92	5.0	JUN				
NOV					14...	1335	2750	93	18.5
30...	1000	1340	100	1.0	JUL				
JAN 1993					13...	1700	2940	78	21.5
06...	1550	1100	113	1.0	AUG				
14...	1230	1050	130	0.0	05...	1405	513	110	23.0
MAR					26...	1000	515	130	24.0
09...	1000	793	162	0.5	SEP				
					08...	0655	825	118	20.0

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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									
05362000 JUMP RIVER AT SHELDON, WI (LAT 45 18 29N LONG 090 57 23W)									
OCT 1992					MAR 1993				
01...	1535	141	132	16.5	02...	1224	70	235	0.5
NOV 18...	1415	257	116	1.0	25...	0935	160	208	1.0
DEC 21...	1408	240	145	0.5	MAY 28...	1000	434	95	13.5
FEB 1993 01...	1400	116	310	0.5	JUN 21...	1525	15700	50	17.0
					JUL 22...	1105	109	128	23.5
05365500 CHIPPEWA RIVER AT CHIPPEWA FALLS, WI (LAT 44 55 37N LONG 091 24 33W)									
OCT 1992					MAY 1993				
20...	1430	9600	114	9.0	25...	1540	4980	135	16.5
20...	1505	9770	115	9.0	JUN 22...	1017	56700	70	18.0
NOV 30...	1320	6500	110	2.0	25...	1000	25700	80	19.0
JAN 1993 06...	1320	4970	131	1.0	JUL 13...	1320	9440	88	21.5
22...	1250	3230	140	0.5	AUG 16...	1115	9290	115	22.5
MAR 09...	1140	7480	170	2.5	SEP 07...	1430	4970	129	20.5
APR 16...	0920	13300	120	3.0					
20...	1615	10100	99	5.5					
05365707 NORTH FORK EAU CLAIRE RIVER NEAR THORP, WI (LAT 44 58 25N LONG 090 50 57W)									
OCT 1992					MAR 1993				
01...	1150	39	196	13.0	02...	1118	4.7	297	0.5
NOV 18...	1125	12	183	2.0	25...	1325	75	229	1.5
DEC 21...	1240	10	225	0.5	MAY 28...	1220	43	130	13.5
FEB 1993 01...	1235	4.9	327	0.5	JUL 22...	1510	5.2	180	25.0
05368000 HAY RIVER AT WHEELER, WI (LAT 45 02 52N LONG 091 54 39W)									
OCT 1992					APR 1993				
22...	1610	262	422	9.0	16...	1420	606	300	6.5
DEC 04...	1140	243	390	0.5	JUN 17...	1300	828	270	16.5
JAN 1993 21...	1320	240	350	1.5	AUG 19...	1535	384	380	20.5
MAR 09...	1415	250	390	4.5					
11...	1320	244	370	3.5					
29...	1215	1540	190	3.5					
05369000 RED CEDAR RIVER AT MENOMONIE, WI (LAT 44 53 02N LONG 091 55 57W)									
OCT 1992					APR 1993				
20...	1040	1150	215	7.5	16...	1420	2650	210	5.5
21...	1630	1130	220	8.0	20...	1215	1110	165	7.0
DEC 01...	1540	1110	230	2.0	JUN 23...	1550	6430	180	20.5
02...	1035	1330	223	2.0	JUL 13...	1110	2570	188	21.5
JAN 1993 06...	0950	1390	244	1.0	AUG 05...	1540	1390	218	22.0
22...	0830	1880	200	0.5	SEP 07...	1220	1110	229	20.0
MAR 09...	1335	670	292	2.0					
05370000 EAU GALLE RIVER AT SPRING VALLEY, WI (LAT 44 51 10N LONG 092 14 17W)									
OCT 1992					APR 1993				
20...	1220	20	342	7.5	20...	1415	32	234	6.0
JAN 1993 06...	1115	18	400	1.0	JUL 13...	1215	38	281	20.5
					SEP 07...	1320	23	318	19.5

SPECIFIC CONDUCTANCE AND WATER TEMPERATURE AT GAGING STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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 1992					APR 1993				
06...	1545	474	296	14.5	22...	1600	2320	208	11.5
NOV					MAY				
16...	1700	417	315	3.0	26...	1010	793	285	14.5
JAN 1993					JUN				
05...	1250	404	330	0.0	21...	0945	2260	220	17.0
FEB					23...	1030	4940	128	21.0
19...	1050	308	352	0.0	AUG				
MAR					02...	1800	700	285	21.0
31...	1608	1580	238	4.0					
BLACK RIVER BASIN									
05381000 BLACK RIVER AT NEILLSVILLE, WI (LAT 44 33 34N LONG 090 36 52W)									
NOV 1992					APR 1993				
06...	1415	590	158	2.0	29...	1330	2630	122	12.5
DEC					JUN				
21...	1445	315	180	0.0	20...	1730	22600	78	15.0
MAR 1993					AUG				
03...	1525	74	258	1.5	17...	1335	298	128	26.5
LA CROSSE RIVER BASIN									
05382325 LA CROSSE RIVER AT SPARTA, WI (LAT 43 56 15N LONG 090 48 37W)									
OCT 1992					APR 1993				
16...	1140	150	160	8.5	21...	1133	524	130	7.0
NOV					22...	1045	313	140	8.0
06...	0952	159	155	4.0	JUN				
DEC					11...	1205	232	135	18.0
09...	0950	155	170	2.5	30...	1120	237	165	17.0
JAN 1993					AUG				
28...	1130	133	175	2.0	04...	1140	200	160	17.0
MAR									
11...	1225	166	190	4.0					
31...	1135	418	145	6.5					
WISCONSIN RIVER BASIN									
05393500 SPIRIT RIVER AT SPIRIT FALLS, WI (LAT 45 26 58N LONG 089 58 47W)									
DEC 1992					JUN 1993				
22...	1315	35	76	0.0	15...	1340	73	74	18.0
MAR 1993					AUG				
18...	1430	16	170	0.0	10...	1455	37	121	22.5
APR									
19...	1645	769	60	4.0					
05394500 PRAIRIE RIVER NEAR MERRILL, WI (LAT 45 14 09N LONG 089 38 59W)									
NOV 1992					JUN 1993				
19...	1555	132	150	2.5	18...	1335	1280	58	15.0
MAR 1993					21...	1325	1890	52	17.5
02...	1200	89	190	1.5	AUG				
APR					05...	1500	129	164	18.5
30...	1500	569	66	13.0					
MAY									
06...	1410	910	62	17.5					
05395000 WISCONSIN RIVER AT MERRILL, WI (LAT 45 10 41N LONG 089 40 52W)									
JUL 1993									
21...	0938	1900	111	22.5					

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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									
05397500 EAU CLAIRE RIVER AT KELLY, WI (LAT 44 55 06N LONG 089 33 00W)									
NOV 1992					JUN 1993				
18...	1435	196	289	2.0	16...	1715	474	132	17.0
DEC 30...	1420	165	218	0.0	21...	1905	3860	64	19.0
MAR 1993					AUG 12...	1645	167	227	26.0
02...	1735	93	287	1.5					
MAY 05...	1335	1880	79	14.5					
05398000 WISCONSIN RIVER AT ROTHSCILD, WI (LAT 44 53 09N LONG 089 38 05W)									
OCT 1992					JUL 1993				
21...	1300	3290	125	5.5	14...	1215	3740	112	22.0
JAN 1993					22...	1450	2720	138	25.0
07...	1330	2900	133	0.5	AUG 05...	1440	2540	170	21.0
APR 21...	1340	11000	81	5.0	SEP 08...	1045	2310	136	18.0
05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI (LAT 44 49 19N LONG 090 04 46W)									
DEC 1992					APR 1993				
21...	1155	90	208	0.0	22...	1230	299	150	9.0
MAR 1993					JUN 16...	1345	42	158	17.5
01...	1440	13	360	0.0					
05400760 WISCONSIN RIVER AT WISCONSIN RAPIDS, WI (LAT 44 23 41N LONG 089 49 31W)									
APR 1993									
28...	1730	15000	143	15.5					
05402000 YELLOW RIVER AT BABCOCK, WI (LAT 44 18 05N LONG 090 07 15W)									
MAR 1993					AUG 1993				
04...	1605	28	182	1.5	17...	1905	64	117	24.5
05404000 WISCONSIN RIVER NEAR WISCONSIN DELLS, WI (LAT 43 36 22N LONG 089 45 25W)									
OCT 1992					JUN 1993				
22...	1230	4110	210	8.5	22...	1245	55300	125	20.0
JAN 1993					JUL 13...	0745	12200	112	23.5
08...	1230	6400	248	0.5	AUG 03...	1426	7040	120	23.0
APR 13...	1342	20500	170	4.5	SEP 07...	0915	5920	178	20.0
20...	0845	26000	133	4.0					
MAY 06...	1205	39300	120	15.0					
05404116 SOUTH BRANCH BARABOO RIVER AT HILLSBORO, WI (LAT 43 39 10N LONG 090 20 09W)									
NOV 1992					MAY 1993				
03...	1125	32	420	4.5	03...	1200	280	240	12.0
DEC 03...	1209	23	460	1.0	JUN 01...	1300	31	435	15.0
31...	1030	24	420	0.0	JUL 01...	1015	33	420	16.0
JAN 1993					AUG 05...	1045	23	460	15.0
26...	1320	16	480	0.5	24...	1148	27	462	21.5
MAR 09...	1045	35	380	1.0					
APR 05...	1326	45	305	3.5					
28...	1053	75	340	11.0					
05405000 BARABOO RIVER NEAR BARABOO, WI (LAT 43 28 51N LONG 089 38 09W)									
OCT 1992					APR 1993				
13...	1345	281	390	10.5	30...	1345	1010	300	13.0
DEC 08...	1417	398	370	0.5	MAY 10...	1310	1760	270	19.0
JAN 1993					20...	1355	554	350	13.5
29...	1020	224	455	0.0	JUN 28...	1410	875	310	20.5
MAR 04...	1407	285	405	1.0	AUG 03...	1123	468	415	20.0

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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									
05408000 KICKAPOO RIVER AT LA FARGE, WI (LAT 43 34 27N LONG 090 38 35W)									
OCT 1992					APR 1993				
26...	1245	142	460	10.5	05...	1145	382	415	5.5
DEC					20...	1210	2080	220	6.0
14...	1158	164	470	3.0	21...	1015	1320	280	6.5
JAN 1993					22...	1400	723	350	9.0
26...	1135	155	480	0.0	JUN				
MAR					24...	1240	263	455	19.5
09...	1300	238	405	3.0	AUG				
					05...	1320	195	460	16.5
05410490 KICKAPOO RIVER AT STEUBEN, WI (LAT 43 10 58N LONG 090 51 30W)									
OCT 1992					APR 1993				
06...	1015	537	515	13.5	05...	1020	2180	368	5.5
NOV					JUN				
16...	0950	488	535	3.0	01...	1045	880	502	14.5
DEC					JUL				
28...	1030	554	563	1.0	21...	1025	852	464	20.0
FEB 1993					SEP				
22...	0910	400	341	0.0	21...	0930	728	516	13.0
26...	1245	412	529	0.5					
PLATTE RIVER BASIN									
05414000 PLATTE RIVER NEAR ROCKVILLE, WI (LAT 42 43 52N LONG 090 38 25W)									
OCT 1992					APR 1993				
07...	1445	59	630	14.5	07...	1032	179	636	8.5
NOV					JUN				
16...	1500	60	658	5.0	02...	1205	183	648	13.0
DEC					JUL				
28...	1618	109	703	1.0	22...	1230	348	674	18.5
FEB 1993					SEP				
23...	0950	63	644	0.0	22...	0915	186	687	14.0
MAR									
30...	0943	358	328	7.0					
31...	1510	1680	340	5.5					
ROCK RIVER BASIN									
05423500 SOUTH BRANCH ROCK RIVER AT WAUPUN, WI (LAT 43 38 30N LONG 088 44 15W)									
OCT 1992					MAR 1993				
29...	1358	12	1020	9.0	01...	1212	18	1010	0.5
DEC					JUN				
04...	1020	49	890	1.5	03...	1350	68	805	16.0
31...	1205	76	410	0.5	AUG				
FEB 1993					06...	1220	55	805	18.5
02...	1120	35	795	1.5	31...	1445	28	870	22.5
05425912 BEAVERDAM RIVER AT BEAVER DAM, WI (LAT 43 26 57N LONG 088 50 21W)									
OCT 1992					JUN 1993				
29...	0902	121	520	9.0	03...	1235	195	447	15.5
DEC					AUG				
04...	0915	233	520	2.0	31...	1017	58	420	23.0
31...	1027	150	503	2.0	SEP				
FEB 1993					09...	1055	14	440	19.0
02...	0915	46	613	4.0					
MAR									
01...	1055	44	674	2.5					
05426000 CRAWFISH RIVER AT MILFORD, WI (LAT 43 06 00N LONG 088 50 58W)									
OCT 1992					FEB 1993				
02...	1225	214	520	17.5	19...	1230	268	820	0.5
JAN 1993									
14...	1310	463	580	0.0					

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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									
05426250 BARK RIVER NEAR ROME, WI (LAT 42 57 39N LONG 088 40 09W)									
OCT 1992					APR 1993				
14...	1500	62	700	11.5	20...	1925	463	465	6.0
NOV					MAY				
25...	1500	132	680	4.0	25...	1320	132	660	16.0
JAN 1993					JUL				
07...	1425	127	600	0.0	22...	1520	201	615	22.5
FEB					SEP				
17...	1330	68	817	0.5	16...	1250	119	610	14.0
MAR									
31...	0953	297	475	6.0					
05427570 ROCK RIVER AT INDIANFORD, WI (LAT 42 48 15N LONG 089 05 25W)									
OCT 1992					MAR 1993				
05...	1512	855	600	16.5	29...	1440	5160	465	6.0
DEC					MAY				
18...	1300	2630	756	1.0	21...	1600	4740	596	17.0
JAN 1993					JUL				
28...	0845	1570	847	2.5	16...	1405	5140	291	23.5
05429500 YAHARA RIVER NEAR MC FARLAND, WI (LAT 43 00 32N LONG 089 18 18W)									
OCT 1992					APR 1993				
06...	0908	266	506	15.5	19...	1016	612	507	6.0
23...	1015	205	475	11.5	19...	1140	615	476	5.5
27...	1117	175	546	12.0	MAY				
NOV					11...	1130	547	517	18.0
19...	1133	154	555	4.5	JUN				
DEC					04...	1400	238	490	15.5
22...	0803	227	501	1.0	JUL				
JAN 1993					08...	0900	435	490	22.0
04...	1045	253	493	2.0	12...	1205	585	455	24.0
05...	1100	262	501	2.0	26...	1140	605	471	24.0
27...	1035	240	559	2.5	AUG				
FEB					13...	1105	459	476	25.0
23...	1310	174	583	4.0	SEP				
MAR					07...	1005	380	517	21.5
29...	1022	324	449	5.0					
05430150 BADFISH CREEK NEAR COOKSVILLE, WI (LAT 42 50 00N LONG 089 11 48W)									
OCT 1992					APR 1993				
06...	1407	81	1310	16.0	09...	1437	169	1140	11.5
DEC					JUL				
04...	1028	96	1540	6.0	23...	1115	129	1220	18.0
JAN 1993					SEP				
08...	0958	102	1160	2.5	09...	0913	114	1210	15.5
MAR									
01...	0915	90	1440	4.5					
05430175 YAHARA RIVER NEAR FULTON, WI (LAT 42 49 50N LONG 089 10 09W)									
OCT 1992					JUN 1993				
06...	1227	414	1100	15.0	04...	1111	706	795	15.0
DEC					JUL				
04...	0910	424	1060	4.5	09...	1245	847	530	22.5
JAN 1993					23...	0955	842	762	21.0
08...	0820	487	986	1.5	SEP				
MAR					09...	1148	560	952	18.0
01...	1118	401	1130	4.0					
APR									
05...	0930	801	876	5.5					
05430500 ROCK RIVER AT AFTON, WI (LAT 42 36 33N LONG 089 04 14W)									
OCT 1992					APR 1993				
05...	1005	1610	645	16.0	05...	1247	7750	444	4.0
DEC					22...	1320	10600	519	8.0
01...	0958	3080	740	1.5	JUL				
MAR 1993					20...	0930	6630	512	23.0
02...	1352	1440	847	4.5	SEP				
					13...	0847	1440	645	18.0

SPECIFIC CONDUCTANCE AND WATER TEMPERATURE AT GAGING STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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

05431486 TURTLE CREEK AT CARVERS ROCK ROAD NR CLINTON, WI (LAT 42 35 50N LONG 088 49 45W)

OCT 1992					APR 1993				
07...	0900	63	800	11.5	09...	1155	541	583	9.0
NOV					JUN				
27...	1047	297	760	2.0	03...	1300	150	962	11.0
JAN 1993					JUL				
05...	1137	455	419	1.0	19...	1403	239	714	23.0
MAR					SEP				
02...	1005	140	788	0.5	14...	0818	228	655	18.0

05432500 PECATONICA RIVER AT DARLINGTON, WI (LAT 42 40 40N LONG 090 07 07W)

OCT 1992					APR 1993				
13...	0922	103	719	10.0	18...	0910	448	641	9.0
NOV					JUN				
18...	1211	110	738	4.0	04...	0900	411	683	14.5
JAN 1993					JUL				
11...	0928	182	762	0.5	27...	0930	1150	639	22.5
FEB					SEP				
25...	0924	129	765	0.5	23...	0845	386	728	14.5
MAR									
29...	1110	1930	262	7.0					

05433000 EAST BR PECATONICA R NR BLANCHARDVILLE, WI (LAT 42 47 10N LONG 089 51 40W)

OCT 1992					APR 1993				
13...	1334	100	601	10.5	08...	1250	503	489	9.0
NOV					JUN				
17...	1400	107	602	4.5	04...	1230	255	581	13.5
JAN 1993					JUL				
11...	1340	145	632	0.0	27...	1320	505	601	20.5
FEB					SEP				
25...	1300	112	634	0.0	23...	1230	234	616	14.0
MAR									
24...	1150	1160	185	2.0					
29...	1320	1600	202	6.0					

05434500 PECATONICA RIVER AT MARTINTOWN, WI (LAT 42 30 34N LONG 089 47 58W)

OCT 1992					APR 1993				
09...	1214	401	662	12.5	16...	0832	2130	568	6.5
NOV					JUN				
17...	1120	449	692	3.5	03...	1115	1200	655	13.5
JAN 1993					JUL				
19...	1440	571	706	0.0	26...	1435	2350	653	24.0
FEB					SEP				
24...	1320	524	543	0.0	24...	1210	1350	690	14.5
MAR									
24...	1525	4030	195	2.0					
29...	1625	5820	234	9.0					

05436500 SUGAR RIVER NEAR BRODHEAD, WI (LAT 42 36 42N LONG 089 23 53W)

OCT 1992					APR 1993				
09...	0830	225	618	12.0	06...	1122	781	553	7.0
NOV					JUN				
17...	0812	283	651	3.5	03...	1445	550	600	15.0
JAN 1993					JUL				
19...	1030	268	671	0.0	26...	0930	694	615	22.5
MAR					SEP				
01...	1215	279	651	2.5	24...	0818	513	632	13.0
24...	1120	2180	230	2.0					
25...	1230	4290	178	2.0					

05438283 PISCASAW CREEK NEAR WALWORTH, WI (LAT 42 31 18N LONG 088 39 39W)

OCT 1992					APR 1993				
07...	1030	1.6	980	11.0	09...	0924	21	423	7.0
23...	1210	1.5	1080	13.0	20...	1100	60	252	4.0
NOV					JUN				
21...	0905	7.3	655	9.0	03...	1040	3.9	1130	9.5
JAN 1993					JUL				
05...	0938	6.3	738	4.0	19...	1108	7.5	857	15.0
MAR					SEP				
02...	1142	1.8	866	8.0	14...	1020	4.6	886	14.0
24...	1052	24	241	2.0					

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
ILLINOIS RIVER BASIN									
05543830 FOX RIVER AT WAUKESHA, WI (LAT 43 00 17N LONG 088 14 37W)									
NOV 1992					APR 1993				
05...	0834	201	848	4.0	28...	0917	316	787	12.0
DEC					JUN				
16...	0845	222	998	3.5	07...	0800	88	1040	18.0
JAN 1993					JUL				
25...	1000	154	1190	0.5	19...	0915	255	798	22.5
MAR					SEP				
08...	0825	208	814	2.5	07...	0830	87	912	18.0
05544200 MUKWONAGO RIVER AT MUKWONAGO, WI (LAT 42 51 24N LONG 088 19 40W)									
OCT 1992					APR 1993				
14...	1317	28	555	12.0	20...	1750	257	465	7.5
NOV					MAY				
25...	1302	93	560	4.5	25...	1100	92	507	15.5
JAN 1993					JUL				
07...	1320	107	477	1.0	22...	1316	68	527	24.5
FEB					SEP				
17...	1115	43	643	2.5	16...	0945	129	532	16.0
MAR									
25...	1458	168	433	2.0					
05546500 FOX RIVER AT WILMOT, WI (LAT 42 30 40N LONG 088 10 45W)									
OCT 1992					MAR 1993				
13...	1215	252	915	11.5	25...	1138	3190	444	1.0
22...	1350	344	975	9.5	APR				
NOV					20...	1517	3960	565	7.0
17...	1140	986	890	3.0	22...	1120	5040	486	7.0
24...	1330	1690	770	5.0	JUL				
DEC					21...	1355	1630	664	24.0
11...	1237	681	911	0.5	SEP				
JAN 1993					15...	0806	610	724	17.0
06...	1325	1680	575	0.0					
FEB									
16...	1147	545	934	0.5					

Water-quality data in this section are for samples collected at gaging stations and other sites on streams for reconnaissance or other purposes on a non-continuous basis.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

CHIPPEWA RIVER BASIN

05356000 - CHIPPEWA RIVER AT BISHOPS BRIDGE NEAR WINTER, WI (LAT 45 50 57N LONG 091 04 44W)

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)
OCT 1992										
12...	1230	756	90	--	11.0	--	--	--	--	--
21...	0915	1760	72	8.0	6.5	4.9	<0.010	<0.050	0.070	<0.010
DEC 01...	1315	1890	70	--	1.5	--	--	--	--	--
JAN 1993										
07...	0850	909	82	7.4	1.0	11	0.030	0.150	0.070	0.010
13...	1300	901	117	--	1.5	--	--	--	--	--
MAR 03...	1220	893	110	--	4.5	--	--	--	--	--
APR 06...	1410	264	90	--	5.5	--	--	--	--	--
21...	1010	270	53	7.2	5.0	8.2	<0.010	0.055	0.060	<0.010
MAY 27...	1040	493	70	--	14.0	--	--	--	--	--
JUN 08...	0845	1170	65	--	14.5	--	--	--	--	--
JUL 14...	0850	1540	61	7.7	21.5	6.9	<0.010	0.082	0.050	<0.010
AUG 05...	1245	300	100	--	21.0	--	--	--	--	--
SEP 07...	1720	487	86	7.4	19.5	6.1	<0.010	<0.050	0.030	<0.010

454657091300600 - BIG SISSABAGAMA TRIBUTARY NEAR STONE LAKE, WI (LAT 45 46 57N LONG 091 30 06W)

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)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
MAY 1993							
04...	1120	2.0	55	7.9	10.0	10.1	0.090
JUN 29...	1035	--	69	7.6	20.0	8.9	0.021
JUL 16...	1010	--	74	8.1	21.5	7.8	0.019
AUG 12...	1005	--	74	8.4	24.5	8.7	0.020

05360500 - FLAMBEAU RIVER NEAR BRUCE, WI (LAT 54 22 21N LONG 091 12 34W)

DATE	TIME	DIS-CHARGE, INST. 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)	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)
OCT 1992											
19...	1410	--	1600	78	--	7.5	--	--	--	--	--
20...	1700	--	1770	87	7.9	8.5	9.5	<0.010	0.100	0.090	0.010
28...	1305	--	794	92	--	5.0	--	--	--	--	--
NOV 30...	1000	--	1340	100	--	1.0	--	--	--	--	--
JAN 1993											
06...	1550	1100	--	113	7.3	1.0	11	0.030	0.200	0.070	0.010
14...	1230	--	1050	130	--	0.0	--	--	--	--	--
MAR 09...	1000	--	793	162	--	0.5	--	--	--	--	--
APR 14...	1110	--	3960	95	--	3.0	--	--	--	--	--
21...	0800	--	1730	73	6.7	4.0	8.3	<0.010	0.130	0.050	<0.010
JUN 14...	1335	--	2750	93	--	18.5	--	--	--	--	--
JUL 13...	1700	--	2940	78	8.2	21.5	6.2	<0.010	0.082	0.070	0.010
AUG 05...	1405	--	513	110	--	23.0	--	--	--	--	--
26...	1000	--	515	130	--	24.0	--	--	--	--	--
SEP 08...	0655	--	825	118	7.0	20.0	6.4	<0.010	<0.050	0.060	0.010

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

CHIPPEWA RIVER BASIN--CONTINUED

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)
05365500 - CHIPPEWA RIVER AT CHIPPEWA FALLS, WI (LAT 44 55 37N LONG 091 24 33W)										
OCT 1992										
20...	1430	9600	114	7.7	9.0	9.6	0.020	0.410	0.110	0.040
20...	1505	9770	115	--	9.0	--	--	--	--	--
NOV										
30...	1320	6500	110	--	2.0	--	--	--	--	--
JAN 1993										
06...	1320	4970	131	7.2	1.0	12	0.020	0.890	0.450	0.090
22...	1250	3230	140	--	0.5	--	--	--	--	--
MAR										
09...	1140	7480	170	--	2.5	--	--	--	--	--
APR										
16...	0920	13300	120	--	3.0	--	--	--	--	--
20...	1615	10100	99	7.9	5.5	8.7	0.010	0.550	0.290	0.070
MAY										
25...	1540	4980	135	--	16.5	--	--	--	--	--
JUN										
22...	1017	56700	70	--	18.0	--	--	--	--	--
25...	1000	25700	80	--	19.0	--	--	--	--	--
JUL										
13...	1320	9440	88	7.3	21.5	7.6	0.010	0.380	0.240	0.040
AUG										
16...	1115	9290	115	--	22.5	--	--	--	--	--
SEP										
07...	1430	4970	129	7.9	20.5	9.2	0.020	0.640	0.380	0.070

05369000 - RED CEDAR RIVER AT MENOMONIE, WI (LAT 44 53 02N LONG 091 55 57W)

OCT 1992										
20...	1040	1150	215	8.8	7.5	9.6	0.010	0.420	0.020	<0.010
21...	1630	1130	220	--	8.0	--	--	--	--	--
DEC										
01...	1540	1110	230	--	2.0	--	--	--	--	--
02...	1035	1330	223	--	2.0	--	--	--	--	--
JAN 1993										
06...	0950	1390	244	7.2	1.0	16	0.030	2.00	0.070	0.040
22...	0830	1880	200	--	0.5	--	--	--	--	--
MAR										
09...	1335	670	292	--	2.0	--	--	--	--	--
APR										
16...	1420	2650	210	--	5.5	--	--	--	--	--
20...	1215	1110	165	7.4	7.0	11	0.010	1.00	0.030	0.040
JUN										
23...	1550	6430	180	--	20.5	--	--	--	--	--
JUL										
13...	1110	2570	188	7.3	21.5	10	0.010	0.730	0.060	0.050
AUG										
05...	1540	1390	218	--	22.0	--	--	--	--	--
SEP										
07...	1220	1110	229	7.8	20.0	13	0.010	0.540	0.030	0.040

05370000 - EAU GALLE RIVER AT SPRING VALLEY, WI (LAT 44 51 10N LONG 092 14 17W)

OCT 1992										
20...	1220	20	342	8.5	7.5	6.3	0.020	0.630	0.070	<0.010
JAN 1993										
06...	1115	18	400	7.7	1.0	11	0.030	1.80	0.100	0.010
APR										
20...	1415	32	234	7.9	6.0	7.1	0.010	0.720	0.050	0.030
JUL										
13...	1215	38	281	8.1	20.5	2.6	0.030	0.490	0.050	0.010
SEP										
07...	1320	23	318	8.2	19.5	8.0	0.020	0.250	0.060	<0.010

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

WAUMANDEE CREEK BASIN

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L) (00310)	COLIFORM, FECAL, UM-MF (COLS./100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	RESIDUE VOLATILE, SUS-PENDED (MG/L) (00535)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOSPHORUS TOTAL (MG/L AS P) (00665)
053781805 - EAGLE CR 3 @ SCHAFFNR VLY RD NR FOUNTAIN CTY, WI (LAT 44 13 55N LONG 091 40 52W)												
AUG 1993	10...	1235	3.6	8.2	20.0	8.8	2.2	27000	63	404	13	0.091 0.160
05378181 - EAGLE CR 2 @ SCHAFFNR VLY RD NR FOUNTAIN CTY, WI (LAT 44 13 11N LONG 091 40 45W)												
AUG 1993	10...	1125	6.9	8.1	16.0	9.8	1.3	8600	43	390	9	0.047 0.120
05378182 - JOOS VLY CR 4 @ JOOS VLY RD NR FOUNTAIN CITY, WI (LAT 44 13 51N LONG 44 13 51W)												
AUG 1993	10...	1600	3.4	8.2	21.0	9.8	<1.0	2200	17	354	7	0.028 0.080
	10...	1630	3.4	8.3	21.0	9.8	1.4	3200	57	398	11	0.049 0.140
053781825 - JOOS VLY CR 3 @ JOOS VLY RD NR FOUNTAIN CITY, WI (LAT 44 13 03N LONG 091 39 38W)												
AUG 1993	10...	1430	4.9	8.3	23.0	9.2	1.6	3900	56	402	10	0.047 0.140

WISCONSIN RIVER BASIN

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)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)
05398000 - WISCONSIN RIVER AT ROTHSCILD, WI (LAT 44 53 09N LONG 089 38 05W)											
OCT 1992	21...	1300	--	3290	125	8.0	5.5	10	<0.010	0.350	0.080 0.020
JAN 1993	07...	1330	2900	--	133	7.2	0.5	13	0.030	0.540	0.110 0.030
APR	21...	1340	--	11000	81	8.4	5.0	6.7	0.010	0.400	0.060 0.020
JUL	14...	1215	--	3740	112	8.0	22.0	7.4	<0.010	0.270	0.060 0.020
	22...	1450	--	2720	138	--	25.0	--	--	--	--
AUG	05...	1440	--	2540	170	--	21.0	--	--	--	--
SEP	08...	1045	--	2310	136	7.7	18.0	4.8	<0.010	0.072	0.030 0.010
05404000 - WISCONSIN RIVER NEAR WISCONSIN DELLS, WI (LAT 43 36 22N LONG 089 45 25W)											
OCT 1992	22...	1230	--	4110	210	7.7	8.5	2.6	0.020	0.460	0.110 0.020
JAN 1993	08...	1230	6400	--	248	7.5	0.5	9.4	0.020	0.940	0.150 0.040
APR	13...	1342	--	20500	170	--	4.5	--	--	--	--
	20...	0845	--	26000	133	8.2	4.0	7.5	0.010	0.600	0.110 0.030
MAY	06...	1205	--	39300	120	--	15.0	--	--	--	--
JUN	22...	1245	--	55300	125	--	20.0	--	--	--	--
JUL	13...	0745	--	12200	112	8.0	23.5	4.7	0.020	0.450	0.080 0.050
AUG	03...	1426	--	7040	120	--	23.0	--	--	--	--
SEP	07...	0915	--	5920	178	7.6	20.0	1.1	0.010	0.250	0.030 <0.010

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

WISCONSIN RIVER BASIN--CONTINUED

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	RESIDUE VOLATILE, SUS-PENDED (MG/L) (00535)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOSPHORUS TOTAL (MG/L AS P) (00665)
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05406320 - DUNLAP CREEK AT SR78 NEAR MAZOMANIE, WI (LAT 43 12 22N LONG 089 45 23W)

AUG 1993	19...	1503	7.6	8.1	18.0	8.6	0.8	710	22	374	5	0.062	0.090
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05406528 - WENDT CREEK AT CT HIGHWAY F NEAR BLACK EARTH, WI (LAT 43 09 52N LONG 089 44 24W)

AUG 1993	19...	1620	8.6	8.0	19.0	7.8	1.6	9000	64	462	11	0.091	0.200
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05406338 - MOEN CREEK TRIBUTARY SITE L AT MOUNT HOREB, WI (LAT 43 00 48N LONG 089 44 09W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAR 1993					
24...	1636	E0.40	0.200	23	--
26...	1440	E0.30	1.09	1590	--
29...	1425	E0.80	1.29	535	51
31...	1310	E0.40	0.470	131	--
JUN					
13...	2330	E0.20	1.16	1330	--
17...	1020	E0.10	0.610	566	--
17...	1030	E3.0	6.98	9730	--
JUL					
05...	1310	E0.10	1.07	1420	--
05...	1840	E13	8.24	9520	78
09...	0110	E0.50	3.43	3000	--
09...	0115	E9.0	3.88	7290	--
17...	1240	E1.0	2.92	3040	--
25...	0315	E0.20	0.560	259	--
25...	0325	E4.0	2.47	3280	--
AUG					
15...	0520	E1.0	4.80	4470	--
23...	1550	E0.30	1.19	8940	--

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
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05406340 - MOEN CREEK SITE M AT MOUNT HOREB, WI (LAT 43 00 59N LONG 089 44 21W)

MAR 1993				
24...	1745	E0.05	0.220	88
25...	1838	1.7	0.340	140
26...	1547	E2.5	0.300	114
29...	1620	3.7	0.430	54
31...	1550	E5.0	0.350	139
APR				
15...	1622	E0.35	0.300	123
19...	1748	E0.30	0.120	39
JUL				
06...	1620	--	0.120	77

05406343 - MOEN CREEK TRIBUTARY SITE N AT MOUNT HOREB, WI (LAT 43 00 58N LONG 089 44 15W)

MAR 1993				
29...	1635	E0.50	0.380	11
31...	1542	E1.5	0.240	63

E ESTIMATED

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

WISCONSIN RIVER BASIN--CONTINUED

05406344 - MOEN CREEK TRIBUTARY SITE K AT MOUNT HOREB, WI (LAT 43 01 03N LONG 089 44 08W)

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAR 1993					
24...	1600	E0.20	0.340	33	--
26...	1400	E0.15	0.520	109	--
29...	1416	E0.15	0.600	33	--
31...	1300	E0.15	0.130	154	--
APR					
19...	1600	E0.20	0.100	237	--
JUN					
13...	2320	E0.10	1.71	1040	--
13...	2330	E0.20	1.91	1400	--
24...	1020	E0.10	1.74	1820	--
24...	1030	E0.50	1.58	1540	95
JUL					
05...	1310	E0.20	0.650	532	--
05...	1315	E1.0	0.670	557	--
09...	0115	E0.20	1.82	1700	--
09...	0120	E0.50	1.62	1350	--
17...	1235	E0.20	0.430	288	--
17...	1238	E1.0	0.470	419	--
25...	0316	E0.10	1.42	953	--
25...	0319	E1.0	0.420	313	--
AUG					
09...	1100	E0.10	0.230	99	--
15...	0515	E0.10	2.53	1870	--
SEP					
13...	2350	E0.30	1.15	775	--

05406345 - MOEN CREEK TRIBUTARY SITE P AT MOUNT HOREB, WI (LAT 43 01 03N LONG 089 44 18W)

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 1993				
24...	1800	E0.10	0.280	12
25...	1847	E0.01	0.320	11
26...	1555	E0.15	0.380	16
29...	1642	E0.05	0.300	48
JUL				
09...	0115	E1.0	3.34	6800
09...	0125	E2.0	1.76	2690
17...	1240	E0.20	2.12	4870
17...	1245	E0.60	0.560	1110
25...	0320	E0.30	0.710	1210
25...	0325	E1.0	0.790	1570
SEP				
13...	2355	E0.50	2.20	4420

05406346 - MOEN CREEK SITE O @ PUMP STATION @ MT. HOREB, WI (LAT 43 01 06N LONG 089 44 23W)

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
NOV 1992			
20...	1655	E0.50	0.110

E ESTIMATED

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

WISCONSIN RIVER BASIN--CONTINUED

05406347 - MOEN CREEK TRIBUTARY SITE J AT MOUNT HOREB, WI (LAT 43 01 08N LONG 089 44 08W)

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAR 1993					
24...	1615	E0.20	0.320	7	--
26...	1410	E0.20	0.460	12	--
29...	1408	E0.10	0.680	21	--
31...	1250	E0.10	0.660	24	--
APR					
19...	1610	E0.10	0.030	12	--
JUL					
05...	1310	E0.50	2.03	7780	94
05...	1315	E4.0	5.32	1610	--
09...	0115	E0.50	2.32	2880	--
09...	0120	E3.0	1.40	1510	--
25...	0320	E0.40	1.65	1510	--

05406348 - MOEN CREEK TRIBUTARY SITE H AT MOUNT HOREB, WI (LAT 43 01 06N 089 44 20W)

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)
MAR 1993				
24...	1805	E0.40	0.350	126
25...	1854	E1.0	0.290	128
26...	1600	E0.35	0.320	65
29...	1649	E0.30	0.170	47
31...	1558	E0.30	0.120	64
APR				
15...	1639	E0.30	0.480	--
19...	1740	E0.15	0.050	--
MAY				
05...	1911	E0.10	0.030	--
JUL				
09...	1800	E0.70	0.040	--

E ESTIMATED

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

WISCONSIN RIVER BASIN--CONTINUED

05406349 - MOEN CREEK SITE I AT MOUNT HOREB, WI (LAT 43 01 07 LONG 089 44 25W)

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 1992					
20...	1645	E1.5	0.190	--	--
DEC					
30...	1237	E0.50	0.031	--	--
JAN 1993					
22...	1530	E0.40	0.025	--	--
MAR					
24...	1730	E0.90	0.120	112	--
25...	1815	4.3	0.680	670	--
26...	1530	E3.5	0.210	193	--
29...	1600	6.8	0.520	278	97
31...	1528	E7.8	0.370	194	--
APR					
15...	1555	E3.0	0.090	64	--
19...	1730	E2.0	0.080	58	--
MAY					
05...	1900	0.67	0.060	68	--
14...	1340	E0.60	0.037	--	--
21...	1305	E0.60	0.035	--	--
28...	1325	E0.50	0.026	--	--
JUN					
04...	1330	E0.50	0.028	--	--
07...	1500	E1.0	0.200	160	--
11...	1315	E0.50	0.041	--	--
18...	1210	E1.0	0.054	--	--
24...	1100	E2.0	2.80	3060	--
25...	1230	E0.80	0.058	--	--
JUL					
02...	1220	E0.50	0.059	--	--
05...	1330	E2.1	2.84	3190	--
05...	1900	E6.5	2.71	2590	92
05...	2140	E8.0	0.520	357	--
06...	1438	1.7	0.130	98	--
09...	0130	E2.6	6.82	8100	--
09...	0140	E6.1	3.56	4130	--
09...	1300	E0.90	0.098	--	--
16...	1155	E1.0	0.075	--	--
17...	1240	E2.3	3.94	5280	--
23...	1300	E1.0	0.053	--	--
25...	0320	E2.5	1.18	982	--
25...	0350	E6.3	1.80	1570	--
30...	0930	E1.1	0.063	--	--
AUG					
06...	1320	E0.80	0.042	--	--
13...	1005	E0.80	0.059	--	--
15...	0545	E2.8	1.21	1040	--
16...	1755	E0.60	0.139	--	--
20...	1245	E0.60	0.047	--	--
25...	1507	0.54	0.133	--	--
27...	1130	E0.60	0.086	--	--
SEP					
03...	1440	E0.80	0.049	--	--
10...	1340	E0.80	0.044	--	--
14...	0010	E2.8	2.06	1910	--
17...	1212	0.51	0.060	--	--
17...	1325	0.51	0.067	--	--
24...	1340	E0.70	0.051	--	--

05406351 - MOEN CREEK TRIBUTARY SITE F AT MOUNT HOREB, WI (LAT 43 01 06N LONG 089 44 26W)

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 1992				
20...	1635	<0.01	0.099	--
MAR 1993				
25...	1820	E0.20	0.270	16
26...	1610	E0.20	0.310	12
29...	1606	E0.20	0.470	88
31...	1533	E0.25	0.140	20
APR				
15...	1605	<0.10	0.070	8
JUL				
05...	2150	E0.03	0.420	10
21...	1820	E0.01	4.23	--

E ESTIMATED

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

WISCONSIN RIVER BASIN--CONTINUED

05406352 - MOEN CREEK TRIBUTARY SITE E AT MOUNT HOREB, WI (LAT 43 01 02N LONG 089 44 28W)

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAR 1993					
26...	1450	0.15	0.460	445	--
29...	1440	0.35	0.560	348	12
31...	1410	E0.35	0.160	310	--

05406353 - MOEN CREEK TRIBUTARY SITE D AT MOUNT HOREB, WI (LAT 43 01 04N LONG 089 44 29W)

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)
MAR 1993				
26...	1445	E0.05	0.480	62
29...	1437	E0.03	0.560	28
31...	1405	E0.10	0.210	--
JUL				
09...	0110	E0.50	0.690	586
09...	0115	E1.0	0.470	526
17...	1233	E0.50	0.210	177
17...	1235	E1.0	0.280	202
25...	0310	E0.50	0.700	226
25...	0315	E1.0	0.250	242
AUG				
09...	1100	E0.50	0.230	179
15...	0515	E0.50	0.810	802
15...	0520	E1.0	0.580	557
23...	0535	E0.50	1.26	159
23...	1545	E1.0	0.440	226
SEP				
13...	2350	E0.50	0.790	645
13...	2355	E1.0	0.560	750

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
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05406354 - MOEN CREEK TRIBUTARY SITE G AT MOUNT HOREB, WI (LAT 43 01 07N LONG 089 44 26W)

MAR 1993					
29...	1545	E0.01	2.00	1320	--
31...	1523	E0.05	5.92	26400	32
APR					
15...	1550	E0.01	6.46	--	--
JUN					
13...	2320	E0.10	85.0	212000	--
17...	1020	E0.20	31.8	272000	--
17...	1030	E0.80	25.0	83400	--
JUL					
05...	1310	E0.20	17.0	42000	--
05...	1315	E0.50	16.9	69400	50
05...	2133	E0.02	47.3	131000	--
09...	0115	E0.50	86.0	421000	--
17...	1235	E0.40	39.8	186000	--
17...	1240	E1.0	19.4	161000	--
25...	0314	E0.50	5.32	21700	--
25...	0320	E1.0	5.40	28400	--
AUG					
15...	0520	E0.50	2.36	48400	--
23...	0540	E0.20	6.04	22000	--
23...	1550	E0.50	3.90	36900	--
SEP					
13...	2354	E0.30	16.1	74600	--
13...	2359	E0.80	9.10	16600	--

E ESTIMATED

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

WISCONSIN RIVER BASIN--CONTINUED

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
05406355 - MOEN CREEK TRIB SITE B @ CTH JG AT MT. HOREB, WI (LAT 43 01 03N LONG 089 44 44W)					
NOV 1992					
20...	1600	E0.10	0.121	--	--
DEC					
30...	1250	E0.10	0.160	--	--
MAR 1993					
24...	1700	E0.20	0.210	36	--
25...	1740	3.1	0.330	100	--
26...	1500	E3.0	0.660	155	--
29...	1500	4.6	1.46	1120	65
31...	1442	E2.0	0.390	619	--
APR					
15...	1520	E0.40	0.120	51	--
19...	1800	E0.10	0.050	--	--
JUN					
07...	1445	E0.15	0.110	40	--
13...	2320	E1.0	--	4750	--
13...	2330	E3.0	2.23	--	--
17...	1020	E1.2	2.59	--	--
17...	1030	E2.0	--	1450	--
JUL					
05...	2120	E0.60	0.140	1210	--
09...	0110	E5.0	1.52	1410	--
09...	0115	E10	1.84	1110	--
17...	1235	E2.0	0.890	--	--
17...	1240	E4.0	--	1930	--
25...	0315	E2.0	1.04	864	--
25...	0330	E3.5	1.22	1040	--
SEP					
13...	2355	E2.0	1.72	1350	--
14...	0005	E4.0	4.52	4000	--

05406356 - UNNAMED STREAM SITE C @ CTH JG @ MOUNT HOREB, WI (LAT 43 01 07N LONG 089 44 42W)

MAR 1993					
24...	1710	E1.0	0.470	61	--
25...	1547	2.2	0.410	23	--
26...	1505	E2.0	0.580	53	--
29...	1505	1.1	0.460	239	84
31...	1446	E0.30	0.370	153	--
JUL					
05...	2200	E0.15	0.350	301	--

GRANT RIVER BASIN

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
05413269 - HACKETT BRANCH AT SR81 NEAR HURRICANE, WI (LAT 42 48 47N LONG 090 50 17W)												
AUG 1993												
17...	1035	16	8.2	16.5	9.0	2.7	5400	68	540	10	0.039	0.220
05413407 - PIGEON CREEK AT CT HIGHWAY N NEAR LANCASTER, WI (LAT 42 48 31 LONG 090 45 46W)												
AUG 1993												
17...	1824	19	8.4	23.0	8.8	1.7	1800	28	584	5	0.026	0.470
05413415 - PIGEON CREEK AT PIGEON RIVER ROAD NR BEETOWN, WI (LAT 42 47 10N LONG 090 48 58W)												
AUG 1993												
17...	1713	31	8.4	23.0	9.1	1.2	2000	23	528	4	0.023	0.360

E ESTIMATED

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

GRANT RIVER BASIN--CONTINUED

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L) (00310)	COLIFORM, FECAL, UM-MF (COLS./100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	RESIDUE VOLATILE, SUS-PENDED (MG/L) (00535)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOSPHORUS TOTAL (MG/L AS P) (00665)
054134415 - RATTLESNAKE CR @ MUSKELLUNGE RD NR N ANDOVER, WI (LAT 42 47 29N LONG 090 57 19W)												
AUG 1993 17...	1350	42	8.2	19.0	10.3	1.6	5900	41	543	6	0.034	0.190
05413443 - KUENSTER CREEK @ TEXAS ROAD NR NORTH ANDOVER, WI (LAT 42 47 31N LONG 090 59 53W)												
AUG 1993 17...	1535	9.5	8.1	--	--	1.8	5000	60	568	8	0.080	0.210
05413447 - MUSKELLUNGE CREEK @ MUSKELLUNGE RD NR BEETOWN, WI (LAT 42 47 38N LONG 090 56 09W)												
AUG 1993 17...	1207	9.6	8.2	19.0	9.2	2.1	6500	54	572	8	0.061	0.270

ROCK RIVER BASIN

05424060 - ROCK RIVER NEAR HORICON, WI (LAT 43 24 58N LONG 088 38 40W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOSPHORUS TOTAL (MG/L AS P) (00665)
JUN 1993 29...	1000	--	0.320
JUL 14...	1045	1420	0.380
AUG 12...	1110	412	0.340

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
05428000 - LAKE MENDOTA AT MADISON, WI (LAT 43 05 42N LONG 089 22 12W)									
OCT 1992 23...	1050	423	8.6	13.5	<0.10	<0.010	<0.050	0.170	0.070
JAN 1993 05...	1130	443	8.3	1.0	0.80	0.020	0.160	0.460	0.090
APR 19...	1200	455	8.3	5.5	1.5	0.020	0.450	0.380	0.110
JUL 12...	1130	421	8.8	24.0	1.3	0.030	0.120	0.030	0.030
SEP 01...	1145	408	8.9	24.0	2.7	<0.010	<0.050	0.020	0.020

05429000 - LAKE MONONA AT MADISON, WI (LAT 43 03 48N LONG 089 23 49W)

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
05429000 - LAKE MONONA AT MADISON, WI (LAT 43 03 48N LONG 089 23 49W)									
OCT 1992 23...	0945	460	7.6	12.5	0.40	0.010	<0.050	0.240	0.040
JAN 1993 05...	1030	477	8.0	1.0	0.50	0.020	0.150	0.460	0.070
APR 19...	1115	493	7.5	7.0	0.70	0.020	0.320	0.080	<0.010
JUL 12...	1015	448	8.1	23.0	1.9	<0.010	<0.050	0.050	0.020
SEP 01...	1025	419	7.9	24.0	2.9	<0.010	<0.050	0.030	<0.010

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

ROCK RIVER BASIN--CONTINUED

05429500 - YAHARA RIVER NEAR MC FARLAND, WI (LAT 43 00 32N LONG 089 18 18W)

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)
OCT 1992										
06...	0908	266	506	--	15.5	--	--	--	--	--
23...	1015	205	475	8.4	11.5	2.8	<0.010	0.076	0.220	0.010
27...	1117	175	546	--	12.0	--	--	--	--	--
NOV										
19...	1133	154	555	--	4.5	--	--	--	--	--
DEC										
22...	0803	227	501	--	1.0	--	--	--	--	--
JAN 1993										
04...	1045	253	493	--	2.0	--	--	--	--	--
05...	1100	262	501	8.3	2.0	0.30	0.030	0.460	0.260	0.030
27...	1035	240	559	--	2.5	--	--	--	--	--
FEB										
23...	1310	174	583	--	4.0	--	--	--	--	--
MAR										
29...	1022	324	449	--	5.0	--	--	--	--	--
APR										
19...	1016	612	507	--	6.0	--	--	--	--	--
19...	1140	615	476	8.5	5.5	2.5	0.020	0.470	0.150	<0.010
MAY										
11...	1130	547	517	--	18.0	--	--	--	--	--
JUN										
04...	1400	238	490	--	15.5	--	--	--	--	--
JUL										
08...	0900	435	490	--	22.0	--	--	--	--	--
12...	1030	585	453	8.6	24.5	5.6	<0.010	<0.050	0.030	0.030
12...	1205	585	455	--	24.0	--	--	--	--	--
26...	1140	605	471	--	24.0	--	--	--	--	--
AUG										
13...	1105	459	476	--	25.0	--	--	--	--	--
SEP										
01...	1050	429	440	8.6	24.5	6.1	<0.010	<0.050	0.060	<0.010
07...	1005	380	517	--	21.5	--	--	--	--	--

05430123 - SPRING CREEK AT SR59 NEAR COOKSVILLE, WI (LAT 42 50 03N LONG 089 15 01W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
AUG 1993												
19...	1000	6.5	8.0	14.5	9.0	1.0	1200	10	486	3	0.020	0.030

054310158 - JACKSON CREEK TRIB #2 AT MARSH RD NR ELKHORN, WI (LAT 42 38 51N LONG 088 33 25W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	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- PENDE (MG/L) (80154)
MAR 1993								
08...	0930	3.8	1.70	0.370	1.5	0.300	0.180	26
23...	1645	77	0.920	0.540	2.5	0.530	0.210	212
APR								
15...	1145	17	2.80	0.130	1.0	0.270	0.150	77
SEP								
27...	1130	1.0	4.00	0.030	0.30	0.050	0.040	16

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

ROCK RIVER BASIN--CONTINUED

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
054310161 - JACKSON CREEK AT MOUND RD SITE #1 NR ELKHORN, WI (LAT 42 38 12N LONG 088 33 48W)							
JUL 1993							
15...	1650	23.5	2.2	--	2	0.156	0.123
15...	1655	--	--	0.60	--	--	--
29...	1105	22.0	1.0	--	<2	0.180	0.145
29...	1110	--	--	0.50	--	--	--
054310162 - JACKSON CREEK AT MOUND RD SITE #2 NR ELKHORN, WI (LAT 42 38 04N LONG 088 34 09W)							
JUL 1993							
15...	1615	25.5	1.1	--	3	0.164	0.121
15...	1620	--	--	0.50	--	--	--
29...	1135	22.5	1.6	--	2	0.400	0.270
29...	1140	--	--	0.50	--	--	--
054310163 - DELAVAN LAKE INLET NUMBER ONE NEAR ELKHORN, WI (LAT 42 37 36N LONG 088 34 23W)							
DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	TUR- BID- ITY (NTU) (00076)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	
MAY 1993							
05...	1700	0.50	2.6	2	0.120	0.067	
13...	1200	0.50	4.2	6	0.540	0.370	
18...	1150	0.50	3.2	7	0.600	0.460	
26...	1615	0.50	2.1	<2	0.680	0.550	
JUN							
02...	1120	0.50	1.7	<2	0.500	0.320	
10...	1110	0.50	4.6	<2	0.190	<0.002	
17...	1130	0.50	<0.50	<2	0.160	0.115	
24...	1215	0.50	0.60	<2	0.120	0.125	
JUL							
01...	1150	0.50	2.2	<2	0.144	0.116	
08...	1050	0.50	1.5	3	0.520	0.460	
15...	1145	0.50	1.2	2	0.220	0.178	
19...	0850	0.50	1.8	5	0.600	0.440	
21...	0900	0.50	1.5	4	0.460	0.310	
29...	1205	0.50	1.6	2	0.480	0.360	
DATE	TIME	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	DATE	TIME	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)		
MAY 1993			JUL 1993				
05...	1705	0.30	08...	1055	0.50		
13...	1205	0.30	15...	1150	0.50		
18...	1155	0.30	19...	0900	0.50		
26...	1620	0.30	19...	1250	0.50		
JUN			19...	1630	0.50		
02...	1125	0.40	19...	2055	0.50		
10...	1115	0.60	20...	0805	0.50		
17...	1135	0.50	20...	1215	0.60		
24...	1220	0.80	20...	1605	0.50		
JUL			21...	0905	0.50		
01...	1155	0.50	29...	1215	0.40		

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

ROCK RIVER BASIN--CONTINUED

054310163 - DELAVAN LAKE INLET NUMBER ONE NEAR ELKHORN, WI (LAT 42 37 36N LONG 088 34 23W)--CONTINUED

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)
MAY 1993						
05...	1700	0.50	701	8.4	20.5	19.3
13...	1200	0.50	678	8.4	15.0	12.2
18...	1150	0.50	708	9.0	13.5	9.3
26...	1615	0.50	701	8.8	22.5	14.4
JUN						
02...	1120	0.50	670	9.6	15.0	14.6
10...	1110	0.50	603	8.3	21.0	12.6
24...	1215	0.50	497	8.8	24.5	15.2
JUL						
01...	1150	0.50	526	8.2	18.0	11.9
08...	1050	0.50	629	8.3	24.5	12.3
15...	1145	0.50	544	8.3	23.0	13.4
19...	0850	0.50	671	7.3	22.0	0.5
19...	1245	0.50	655	8.0	25.5	9.9
19...	1625	0.50	627	8.7	28.0	15.1
19...	2049	0.50	629	8.2	25.0	5.9
19...	2050	1.00	630	8.2	25.0	5.2
20...	0103	0.50	654	7.8	23.0	0.5
20...	0104	1.00	658	7.7	23.0	0.5
20...	0449	0.50	663	7.8	21.5	0.5
20...	0450	1.00	663	7.6	21.5	0.5
20...	0800	0.50	697	7.3	21.5	0.7
20...	1210	0.50	688	8.3	25.5	13.1
20...	1600	0.50	655	8.7	28.5	--
20...	2053	0.50	633	8.4	25.5	10.2
20...	2054	1.00	643	8.3	25.5	8.4
21...	0047	0.50	673	7.9	23.5	0.8
21...	0048	1.00	673	7.8	23.5	0.6
21...	0437	0.50	681	7.8	22.0	0.7
21...	0438	1.00	684	7.7	22.0	0.5
21...	0900	0.50	696	7.9	21.5	3.0
21...	0901	1.00	698	7.8	21.5	2.7
29...	1205	0.50	699	7.7	23.0	7.9

054310166 - DELAVAN LAKE INLET NUMBER TWO NEAR DELAVAN, WI (LAT 42 37 43N LONG 088 34 41W)

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	TUR- BID- ITY (NTU) (00076)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	PHOS- PHORUS TOTAL (MG/L) AS P (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P (00671)
MAY 1993						
*05...	1630	--	2.7	<2	0.170	0.106
12...	1400	0.50	2.2	2	0.310	0.220
*13...	1240	--	3.2	4	0.650	0.430
*18...	1240	--	2.4	2	0.870	0.730
*26...	1515	--	1.8	<2	0.710	0.520
JUN						
02...	1140	0.50	2.0	<2	0.710	0.550
10...	1130	0.50	4.6	<2	0.180	<0.002
17...	1150	0.50	0.70	6	0.180	0.129
24...	1250	0.50	4.0	9	0.490	0.340
JUL						
01...	1205	0.50	11	6	0.164	0.109
08...	1125	0.50	1.7	3	0.490	0.360
15...	1205	0.50	1.5	4	0.370	0.240
19...	0920	0.50	2.9	5	0.560	0.370
*21...	0845	--	1.9	6	0.500	0.330
29...	1230	0.50	3.6	4	0.640	0.400
SEP						
01...	1510	0.50	--	--	0.610	0.420

* SINGLE VERTICAL SAMPLE

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

ROCK RIVER BASIN--CONTINUED

054310166 - DELAVAN LAKE INLET NUMBER TWO NEAR DELAVAN, WI (LAT 42 37 43N LONG 088 34 41W)--CONTINUED

DATE	TIME	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	DATE	TIME	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)
MAY 1993			JUL 1993		
05...	1625	0.90	15...	1210	1.10
13...	1245	0.90	19...	0925	1.20
26...	1520	0.80	19...	1310	1.10
JUN			19...	1655	1.15
02...	1145	1.20	19...	2035	1.20
10...	1135	0.90	20...	0826	1.20
17...	1155	0.60	20...	1235	1.10
24...	1255	0.50	20...	1625	1.10
JUL			20...	2045	1.10
01...	1210	0.60	21...	0840	0.80
08...	1130	1.00	29...	1235	1.00

DATE	TIME	SAM- FLING 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)
MAY 1993						
05...	1620	1.00	677	8.2	20.0	15.6
05...	1621	2.00	676	8.2	20.0	15.5
12...	1400	0.50	661	8.5	23.5	12.8
13...	1230	1.00	600	8.8	17.0	9.2
13...	1231	2.00	600	8.8	17.0	9.1
13...	1232	3.00	598	8.8	17.0	9.1
18...	1230	1.00	735	8.5	14.5	5.6
18...	1231	2.00	735	8.5	14.5	5.6
18...	1232	3.00	737	8.5	14.5	5.5
26...	1500	1.00	713	8.8	19.5	14.2
26...	1501	2.00	713	8.8	19.0	15.3
JUN						
02...	1130	0.50	710	9.0	15.0	10.8
02...	1131	1.00	710	9.0	15.0	10.6
02...	1132	1.50	709	9.0	15.0	10.4
02...	1133	2.00	705	9.0	15.0	10.4
02...	1140	0.50	710	9.0	15.0	10.8
10...	1120	0.50	616	7.7	20.0	6.5
10...	1121	1.00	619	7.7	20.0	6.6
10...	1122	2.00	620	7.7	20.0	6.5
10...	1130	0.50	616	7.7	20.0	6.5
24...	1240	0.50	565	7.4	24.5	4.5
24...	1241	1.00	561	7.3	24.5	2.6
24...	1250	0.50	565	7.4	24.5	4.5
JUL						
01...	1155	0.50	436	7.4	17.5	2.9
01...	1156	1.00	438	7.4	17.5	2.9
01...	1157	1.50	440	7.4	17.5	2.9
01...	1158	2.00	441	7.4	17.5	2.8
01...	1205	0.50	436	7.4	17.5	2.9
08...	1115	0.50	655	7.7	24.0	5.7
08...	1116	1.00	657	7.6	24.0	5.3
08...	1125	0.50	655	7.7	24.0	5.7
08...	1157	1.50	657	7.6	24.0	5.2
08...	1158	2.00	660	7.5	24.0	4.2
15...	1155	0.50	603	7.5	22.5	3.5
15...	1156	1.00	603	7.4	22.5	3.3
15...	1157	1.50	602	7.4	22.5	2.9
15...	1158	2.00	601	7.4	22.5	2.4
15...	1205	0.50	603	7.5	22.5	3.5
19...	0915	0.50	691	7.3	23.5	0.6
19...	0916	1.00	690	7.3	23.5	0.6
19...	0917	1.50	675	7.2	23.5	0.1
19...	0918	2.00	651	7.2	23.0	0
19...	0920	0.50	691	7.3	23.5	0.6
19...	1305	0.50	685	7.5	26.0	4.1
19...	1306	1.00	685	7.5	26.0	3.9
19...	1307	1.50	684	7.4	25.5	3.1
19...	1308	2.00	683	7.3	25.5	1.1
19...	1645	0.50	684	7.8	27.5	8.2
19...	1646	1.00	682	7.7	27.5	7.9
19...	1647	1.50	684	7.7	27.0	6.9
19...	1648	2.00	692	7.5	26.0	3.6
19...	2025	0.50	650	8.2	26.0	8.9
19...	2026	1.00	646	8.3	26.0	8.9
19...	2027	1.50	658	8.2	26.0	7.2
19...	2028	2.00	690	7.9	25.5	4.3
19...	2029	2.50	692	7.8	25.0	3.1

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

ROCK RIVER BASIN--CONTINUED

054310166 - DELAVAN LAKE INLET NUMBER TWO NEAR DELAVAN, WI (LAT 42 37 43N LONG 088 34 41W)--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET) (000003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (000095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
JUL 1993						
19...	2030	3.00	706	7.6	24.5	0.8
19...	2031	3.50	707	7.5	24.0	0.5
20...	0044	0.50	695	7.8	24.0	1.4
20...	0045	1.00	697	7.7	24.0	1.4
20...	0046	1.50	699	7.6	24.0	1.3
20...	0047	2.00	699	7.6	24.0	1.2
20...	0048	2.50	701	7.6	24.0	1.1
20...	0049	3.00	703	7.6	24.0	1.0
20...	0050	3.50	709	7.6	24.0	0.8
20...	0433	0.50	703	7.7	23.5	0.6
20...	0434	1.00	705	7.6	23.5	0.5
20...	0435	1.50	707	7.6	23.5	0.5
20...	0436	2.00	706	7.6	23.5	0.4
20...	0437	2.50	707	7.5	23.5	0.4
20...	0438	3.00	708	7.5	23.0	0.4
20...	0439	3.50	706	7.5	23.0	0.4
20...	0820	0.50	748	7.4	22.5	0.9
20...	0821	1.00	744	7.4	23.0	0.8
20...	0822	1.50	743	7.4	23.0	0.8
20...	0823	2.00	743	7.4	23.0	0.7
20...	0824	2.50	743	7.3	23.0	0.6
20...	1230	0.50	744	7.6	25.5	6.0
20...	1231	1.00	747	7.5	25.5	5.3
20...	1232	1.50	744	7.4	24.0	2.0
20...	1233	2.00	742	7.4	23.5	0.7
20...	1615	0.50	732	7.9	27.0	9.5
20...	1616	1.00	732	7.5	26.5	6.5
20...	1617	1.50	734	7.4	26.0	4.5
20...	1618	2.00	738	7.3	25.0	1.2
20...	2033	0.50	684	8.1	26.0	10.7
20...	2034	1.00	686	8.1	26.0	9.8
20...	2035	1.50	695	7.8	25.0	7.3
20...	2036	2.00	701	7.7	25.0	1.8
20...	2037	2.50	699	7.4	24.0	0.6
20...	2038	3.00	700	7.4	23.0	0.4
20...	2039	3.50	698	7.3	22.5	0.4
21...	0032	0.50	690	7.8	24.0	3.5
21...	0033	1.00	690	7.8	24.0	3.5
21...	0034	1.50	690	7.8	24.0	3.4
21...	0035	2.00	688	7.7	24.0	2.1
21...	0036	2.50	689	7.7	23.5	2.0
21...	0424	0.50	686	7.7	22.5	1.1
21...	0425	1.00	685	7.7	22.5	1.0
21...	0426	1.50	684	7.6	22.5	0.9
21...	0427	2.00	685	7.6	22.5	0.8
21...	0835	0.50	686	7.7	22.5	2.0
21...	0836	1.00	687	7.6	22.5	1.8
21...	0837	1.50	686	7.6	22.5	1.7
21...	0838	2.00	686	7.6	22.5	1.7
29...	1220	0.50	693	7.3	23.0	1.6
29...	1221	1.00	693	7.3	23.0	1.5
29...	1222	1.50	693	7.3	23.0	1.5
29...	1223	2.00	690	7.2	23.0	0.6
29...	1230	0.50	693	7.3	23.0	1.6

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

ROCK RIVER BASIN--CONTINUED

054310168 - DELAVAN LAKE INLET NUMBER THREE NEAR DELAVAN, WI (LAT 42 37 30N LONG 088 34 53W)

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	TUR- BID- ITY (NTU) (00076)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	PHOS- PHORUS TOTAL (MG/L) AS P (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P (00671)
MAY 1993						
*05...	1600	--	3.1	3	0.220	0.153
*12...	1340	--	5.3	2	0.710	0.480
*13...	1315	--	2.8	4	0.490	0.320
*18...	1320	--	1.9	3	0.710	0.550
*26...	1445	--	1.8	<2	0.750	0.590
JUN						
02...	1200	0.50	1.7	4	0.720	0.560
10...	1205	0.50	3.9	<2	0.200	<0.002
17...	1215	0.50	1.3	4	0.550	0.440
24...	1300	0.50	2.2	<2	0.360	0.310
JUL						
01...	1230	0.50	14	10	0.280	0.191
08...	1145	0.50	2.2	3	0.780	0.600
15...	1230	0.50	1.5	4	0.390	0.270
19...	0955	0.50	1.9	4	0.510	0.380
*21...	0830	--	4.2	8	0.530	0.360
29...	1255	0.50	4.2	5	0.670	0.460

* SINGLE VERTICAL SAMPLE

DATE	TIME	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	DATE	TIME	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)
MAY 1993					
05...	1605	1.40	JUL 1993		
12...	1345	1.50	15...	1235	1.60
13...	1320	1.60	19...	1007	1.50
26...	1450	1.20	19...	1340	1.00
JUN			19...	1715	1.70
02...	1205	1.60	19...	2016	1.50
10...	1210	1.80	20...	0855	1.60
17...	1220	0.90	20...	1300	1.50
24...	1305	1.20	20...	1645	0.40
JUL			20...	2027	1.20
01...	1235	0.40	21...	0830	1.10
08...	1150	1.20	29...	1300	1.10

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

ROCK RIVER BASIN--CONTINUED

054310168 - DELAVAN LAKE INLET NUMBER THREE NEAR DELAVAN, WI (LAT 42 37 30N LONG 088 34 53W)--CONTINUED

DATE	TIME	SAM- PLING DEPTH (FEET) (000003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (000095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
MAY 1993						
05...	1548	1.00	650	8.0	19.0	12.7
05...	1549	2.00	654	7.9	18.5	11.4
05...	1550	3.00	655	7.9	18.0	11.0
05...	1551	4.00	655	7.9	17.5	10.9
12...	1320	1.00	595	8.9	23.5	13.7
12...	1321	2.00	595	8.9	23.5	13.6
12...	1322	3.00	590	8.9	23.0	13.8
12...	1323	4.00	578	8.9	22.5	16.0
13...	1305	1.00	583	8.7	17.0	9.8
13...	1306	2.00	583	8.8	17.0	9.8
13...	1307	3.00	588	8.7	16.5	9.8
13...	1308	4.00	594	8.7	16.0	9.8
18...	1310	1.00	646	9.0	15.5	9.4
18...	1311	2.00	646	9.0	15.5	9.4
18...	1312	3.00	647	9.0	15.5	9.4
18...	1313	4.00	649	9.0	15.5	9.4
26...	1434	1.00	656	8.9	20.0	14.2
26...	1435	2.00	655	8.9	19.0	15.2
26...	1436	3.00	654	8.9	18.0	17.3
JUN						
02...	1150	0.50	675	9.2	15.0	12.1
02...	1151	1.00	671	9.2	15.0	12.7
02...	1152	1.50	674	9.2	15.0	12.6
02...	1153	2.00	674	9.2	15.5	12.6
02...	1154	2.50	678	9.2	15.0	12.4
02...	1155	3.00	680	9.2	15.5	12.4
02...	1200	0.50	675	9.2	15.0	12.1
10...	1155	0.50	583	7.7	22.0	7.5
10...	1156	1.00	586	7.7	22.0	7.3
10...	1157	1.50	592	7.7	21.5	6.6
10...	1158	2.00	595	7.7	21.0	5.8
10...	1159	2.50	600	7.7	20.5	5.6
10...	1200	3.00	600	7.7	20.5	5.8
10...	1201	3.50	602	7.7	20.5	5.6
24...	1250	0.50	522	8.2	25.0	8.5
24...	1251	1.00	522	8.2	25.0	8.4
24...	1252	1.50	523	8.2	25.0	8.2
24...	1253	2.00	524	8.2	25.0	7.8
24...	1254	3.00	547	7.8	24.0	5.7
24...	1255	3.50	544	7.5	23.5	2.6
24...	1300	0.50	522	8.2	25.0	8.5
JUL						
01...	1220	0.50	478	7.4	18.0	2.7
01...	1221	1.00	484	7.4	18.0	2.8
01...	1222	1.50	480	7.4	18.0	2.7
01...	1223	2.00	480	7.4	18.0	2.7
01...	1224	3.00	477	7.4	18.0	2.6
01...	1225	4.00	468	7.4	17.5	1.8
01...	1230	0.50	478	7.4	18.0	2.7
08...	1135	0.50	606	7.6	25.0	4.4
08...	1136	1.00	606	7.6	24.5	4.3
08...	1137	1.50	600	7.6	25.0	3.9
08...	1138	2.00	602	7.6	24.5	3.9
08...	1139	2.50	602	7.6	24.5	3.2
08...	1140	3.00	607	7.6	24.0	2.7
08...	1145	0.50	606	7.6	25.0	4.4
15...	1220	0.50	556	7.7	24.0	6.4
15...	1221	1.00	556	7.7	24.0	6.4
15...	1222	1.50	556	7.7	24.0	6.3
15...	1223	2.00	557	7.7	24.0	6.3
15...	1224	2.50	560	7.7	24.0	6.3
15...	1225	3.00	558	7.7	24.0	6.2
15...	1230	0.50	556	7.7	24.0	6.4
19...	0955	0.50	607	7.6	24.0	3.7
19...	1001	1.00	605	7.5	24.0	3.1
19...	1002	1.50	608	7.5	24.0	2.3
19...	1003	2.00	611	7.4	24.0	1.8
19...	1004	2.50	618	7.4	24.0	1.6
19...	1005	3.00	622	7.4	23.5	1.7
19...	1335	0.50	612	7.7	26.5	5.5
19...	1336	1.00	612	7.7	26.0	6.0
19...	1337	1.50	614	7.7	26.0	6.0
19...	1338	2.00	621	7.7	25.0	6.7

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

ROCK RIVER BASIN--CONTINUED

054310168 - DELAVAN LAKE INLET NUMBER THREE NEAR DELAVAN, WI (LAT 42 37 30N LONG 088 34 53W)--CONTINUED

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)
JUL 1993						
19...	1705	0.50	612	8.0	28.0	8.6
19...	1706	1.00	612	8.0	28.0	9.1
19...	1707	1.50	615	7.9	27.0	9.9
19...	1708	2.00	621	7.7	26.5	6.7
19...	1709	2.50	618	7.6	25.5	6.0
19...	1710	3.00	615	7.6	25.5	5.4
19...	2006	0.50	591	7.9	26.5	8.3
19...	2007	1.00	590	7.9	26.5	8.3
19...	2008	1.50	590	7.9	26.5	8.1
19...	2009	2.00	591	7.9	26.5	7.7
19...	2010	2.50	594	7.8	26.5	7.1
19...	2011	3.00	594	7.8	26.0	6.8
19...	2012	3.50	596	7.8	25.5	5.8
19...	2013	4.00	596	7.7	25.5	5.2
19...	2014	4.50	598	7.7	25.0	4.8
20...	0027	0.50	593	8.0	25.5	6.5
20...	0028	1.00	594	7.9	25.5	6.4
20...	0029	1.50	593	7.9	25.5	6.5
20...	0030	2.00	593	7.9	25.5	6.7
20...	0031	2.50	592	7.9	25.5	6.7
20...	0032	3.00	591	7.9	25.5	6.2
20...	0033	3.50	592	7.9	25.5	5.0
20...	0034	4.00	595	7.8	25.0	3.4
20...	0035	4.50	599	7.7	25.0	2.8
20...	0417	0.50	602	7.8	24.5	4.2
20...	0418	1.00	600	7.7	24.5	3.8
20...	0419	1.50	601	7.7	24.5	3.9
20...	0420	2.00	601	7.7	24.5	3.2
20...	0421	2.50	603	7.7	24.5	3.8
20...	0422	3.00	604	7.7	24.5	3.2
20...	0423	3.50	605	7.6	24.5	2.9
20...	0424	4.00	604	7.6	24.5	3.0
20...	0425	4.50	603	7.6	24.5	3.4
20...	0845	0.50	630	7.5	24.0	2.9
20...	0846	1.00	630	7.5	24.0	2.9
20...	0847	1.50	631	7.5	24.0	2.8
20...	0848	2.00	630	7.5	24.0	2.7
20...	0849	2.50	632	7.5	24.0	2.6
20...	0850	3.00	632	7.5	24.0	2.5
20...	0851	3.50	634	7.5	24.0	2.2
20...	1250	0.50	633	7.7	25.5	6.1
20...	1251	1.00	632	7.7	25.5	5.7
20...	1252	1.50	632	7.7	25.5	5.6
20...	1253	2.00	635	7.6	25.5	5.1
20...	1254	2.50	637	7.6	25.5	4.8
20...	1255	3.00	642	7.5	25.0	3.3
20...	1256	3.50	645	7.5	25.0	3.2
20...	1635	0.50	639	7.8	27.0	7.3
20...	1636	1.00	637	7.7	27.0	7.0
20...	1637	1.50	638	7.7	27.0	6.7
20...	1638	2.00	639	7.7	27.0	6.6
20...	1639	2.50	639	7.7	27.0	6.5
20...	1640	3.00	645	7.6	26.5	4.9
20...	1641	3.50	647	7.5	25.5	4.6
20...	2016	0.50	606	8.0	26.5	8.2
20...	2017	1.00	607	8.0	26.5	8.0
20...	2018	1.50	607	8.0	26.5	8.0
20...	2019	2.00	608	7.9	26.5	7.8
20...	2020	2.50	609	7.9	26.5	7.3
20...	2021	3.00	610	7.9	26.5	6.6
20...	2022	3.50	611	7.8	25.5	5.1
20...	2023	4.00	622	7.7	25.5	4.4
20...	2024	4.50	622	7.6	25.5	3.7
20...	2025	5.00	624	7.6	25.0	2.2
21...	0017	0.50	613	8.0	25.5	7.2
21...	0018	1.00	613	8.0	25.5	7.1
21...	0019	1.50	613	7.9	25.5	7.0
21...	0020	2.00	612	7.9	25.5	7.0
21...	0021	2.50	612	7.9	25.5	6.9
21...	0022	3.00	614	7.9	25.5	6.3
21...	0023	3.50	614	7.9	25.5	6.0
21...	0024	4.00	621	7.8	25.5	4.3
21...	0025	4.50	624	7.7	25.0	2.5

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

ROCK RIVER BASIN--CONTINUED

054310168 - DELAVAN LAKE INLET NUMBER THREE NEAR DELAVAN, WI (LAT 42 37 30N LONG 088 34 53W)--CONTINUED

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)
JUL 1993						
21...	0026	5.00	627	7.6	25.0	1.1
21...	0408	0.50	620	7.8	24.5	4.5
21...	0409	1.00	621	7.8	25.0	4.4
21...	0410	1.50	617	7.8	25.0	4.6
21...	0411	2.00	617	7.8	25.0	4.6
21...	0412	2.50	617	7.8	25.0	4.5
21...	0413	3.00	617	7.8	25.0	4.5
21...	0414	3.50	617	7.8	25.0	4.4
21...	0415	4.00	619	7.8	25.0	3.6
21...	0416	4.50	628	7.7	25.0	3.5
21...	0417	5.00	630	7.7	24.5	3.0
21...	0817	0.50	621	8.0	24.0	3.8
21...	0818	1.00	621	7.9	24.0	3.6
21...	0819	1.50	620	7.8	24.0	3.6
21...	0820	2.00	620	7.8	24.0	3.7
21...	0821	2.50	619	7.8	24.0	3.8
21...	0822	3.00	614	7.8	24.0	3.8
21...	0823	3.50	615	7.8	24.0	3.8
21...	0824	4.00	614	7.8	24.0	3.7
21...	0825	4.50	614	7.8	24.0	3.7
21...	0826	5.00	615	7.8	24.0	3.8
29...	1245	0.50	706	7.6	24.5	4.1
29...	1246	1.00	707	7.6	24.5	4.0
29...	1247	1.50	708	7.6	24.5	4.1
29...	1248	2.00	689	7.6	24.0	4.1
29...	1249	2.50	688	7.6	24.0	3.3
29...	1255	0.50	706	7.6	24.5	4.1

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
05436165 - STOREY CREEK AT BELL BROOK ROAD NEAR STOREY, WI (LAT 42 52 31N LONG 089 27 41W)												
AUG 1993	1242	5.9	8.0	15.0	9.2	1.1	350	22	454	6	0.027	0.080
05436203 - GILL CREEK AT TOWN ROAD NEAR DAYTON, WI (LAT 42 48 48N LONG 089 27 55W)												
AUG 1993	1132	3.0	8.2	17.0	10.2	4.1	36000	81	498	18	0.062	0.280

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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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

Sea level: In this report “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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