

# Water Resources Data Wisconsin Water Year 1994

Volume 2. Upper Mississippi River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WI-94-2  
Prepared in cooperation with the State of Wisconsin  
and with other agencies

# CALENDAR FOR WATER YEAR 1994

## 1993

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

## 1994

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

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11
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17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25
24	25	26	27	28	29	30	29	30	31					26	27	28	29	30		

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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3	4	5	6	7	8	9	7	8	9	10	11	12	13	4	5	6	7	8	9	10
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31																				



# Water Resources Data Wisconsin Water Year 1994

## 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-94-2  
Prepared in cooperation with the State of Wisconsin  
and with other agencies

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City of Middleton  
City of Beaver Dam  
City of Thorp  
Madison Metropolitan Sewerage District  
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Stockbridge/Munsee Indian Tribe  
Dane County Lakes and Watershed Commission  
City of Sparta  
City of Brookfield  
Whitewater-Rice Lake Management District  
Elkhart Lake Improvement Association  
Fontana/Walworth Water Pollution Control Commission

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

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Fox River at Watertown Road near Waukesha (d).....	05543800	310
Fox River at Waukesha (d).....	05543830	311
<u>Mukwonago River:</u>		
Eagle Spring Lake at Eagleville (c).....	425103088261500	312
Mukwonago River at Mukwonago (d).....	05544200	313
Tichigan Lake near Waterford (c).....	424854088123300	314
<u>Muskego Canal:</u>		
Little Muskego Lake at Muskego (c).....	425425088083500	315
Big Muskego Lake, Bass Bay, near Muskego (c).....	425344088070100	316
Big Muskego Lake, South Site, near Muskego (c).....	425212088072800	317
Big Muskego Lake, Research Base, near Muskego (c).....	425235088075300	318
Muskego Lake Outlet near Wind Lake (g).....	425109088075000	319
<u>Wind Lake Drainage Canal:</u>		
Wind Lake at Wind Lake (c).....	424915088083900	320
Wind Lake Outlet at Wind Lake (g).....	424848088083100	321
Denoon Lake at Wind Lake (c).....	425044088100300	322
Long (Kee Nong Go-Mong) Lake at Wind Lake (c,g).....	424937088103400	323
Waubeesee Lake at Wind Lake (c).....	424857088101500	325
<u>Eagle Creek:</u>		
Eagle Lake near Kansasville (c).....	424207088072400	326
Eagle Lake near Kansasville (g).....	05544500	327
Green Lake near Lauderdale (c).....	424652088341500	329
Middle Lake at Lauderdale (c).....	424621088335500	334
Mill Lake at Lauderdale (c).....	424555088335700	339
Lauderdale Lakes at Lauderdale (g,pr).....	424554088332700	344
Lauderdale Lakes Outlet (head of Honey Creek) at Lauderdale (c,d,s).....	05544800	348
<u>Honey Creek:</u>		
Booth Lake near East Troy (c).....	424800088254800	352
Potter Lake near Mukwonago (c).....	424905088204000	353
Fox River near New Munster (d).....	05545750	354
<u>Nippersink Creek:</u>		
North Branch Nippersink Creek:		
East Branch Nippersink Creek:		
Powers Lake at Powers Lake (c).....	423246088175800	355

## 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
<b>ST. CROIX RIVER BASIN</b>			
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
<b>CHIPPEWA RIVER BASIN</b>			
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
Fine 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
<b>BUFFALO RIVER BASIN</b>			
Buffalo River near Tell, WI	05372000	406	1933-51
<b>TREMPEALEAU RIVER BASIN</b>			
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
<b>BLACK RIVER BASIN</b>			
Black River at Medford, WI	05380806	48.1	1984-87
Poplar River near Owen, WI	05380900*	155	1964-66
<b>LA CROSSE RIVER BASIN</b>			
Little LaCrosse River near Leon, WI	05382500	76.9	1934-61, 1979-81
LaCrosse River near West Salem, WI	05383000	396	1914-70
<b>COON CREEK BASIN</b>			
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
<b>BAD AXE RIVER BASIN</b>			
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
Hulbert Creek near Wisconsin Dells, WI	05403630*	11.2	1971-77
Dell Creek near Lake Delton, WI	05403700*	44.9	1957-65, 1971-80
Narrows Creek at Loganville, WI	05404200*	40.1	1964-66
Wisconsin River at Prairie du Sac, WI	05406000	9,180	1946-54
Black Earth Creek at Cross Plains, WI	05406460	12.8	1985-86, 1990-93
Black Earth Creek at South Valley Road near Black Earth, WI	05406497	40.6	1990-93
Trout Creek at Confluence with Arneson Creek near Barneveld, WI	05406573	8.37	1976-78
Trout Creek at Twin Parks Dam 8 nr Barneveld, WI	05406574	9.02	1976-79
Trout Creek at County Highway T nr Barneveld, WI	05406575	12.1	1976-78
Trout Creek near Ridgeway, WI	05406577	13.5	1976-79
Knight Hollow Creek near Arena, WI	05406590	7.57	1976-78
Otter Creek near Highland, WI	05406640	16.8	1968-69, 1970-75
Kickapoo River at Ontario, WI	05407500	151	1939, 1973-77
Knapp Creek near Bloomingdale, WI	05408500	8.44	1955-69
West Fork Kickapoo River near Readstown, WI	05409000	106	1939
Kickapoo River at Soldiers Grove, WI	05409500	530	1939
North Fork Nederlo Creek near Gays Mills, WI	05409830	2.21	1968-79
Nederlo Creek near Gays Mills, WI	05409890	9.46	1968-80
Kickapoo River at Gays Mills, WI	05410000	617	1914-34, 1964-77
GRANT RIVER BASIN			
Pigeon Creek near Lancaster, WI	05413400*	6.93	1964-66
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



## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--CONTINUED

XI

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
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)
<b>ST. CROIX RIVER BASIN</b>				
Round Lake near Gordon, WI	461342091561002	---	T	1981-85
St. Croix River at St. Croix Falls, WI	05340500	6,240	T, SC SED	1975-81 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
<b>CHIPPEWA RIVER BASIN</b>				
Duncan Creek Tributary near Tilden, WI	05364850	4.17	TC, SED DO	1987-89 1987-88 <sup>1</sup>
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 SED	1975-81 <sup>2</sup> 1974-79
Eau Galle River near Woodville, WI	05369900	39.4	T, SC	1978-83 <sup>2</sup>
Eau Galle River at Low-Water Bridge at Spring Valley, WI	05369945	47.9	T SC	1982-83, 1987-93 1983
Eau Galle River at Spring Valley, WI	05370000	64.1	T, SC	1978-90
<b>TREMPEALEAU RIVER BASIN</b>				
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
<b>BLACK RIVER BASIN</b>				
Black River near Galesville, WI	05382000	2,080	SED	1976-79
<b>WISCONSIN RIVER BASIN</b>				
Lake Clara near Tomahawk, WI	453100089343002	0.46	T	1982-86
Little Rock Lake near Woodruff, WI	455946089415704	---	T	1984-87
Buena Vista Creek near Kellner, WI	05400853	53.1	T	1965-67
Tenmile Creek Ditch 5 near Bancroft, WI	05401020	9.73	T	1965-72
Dell Creek near Lake Delton, WI	05403700	44.9	T, SED	1958-65
Black Earth Creek at Cross Plains, WI	05406460	12.8	C, SED <sup>3</sup>	1985-86
Brewery Creek at Cross Plains, WI	05406470	10.5	SED <sup>3</sup>	1985-86
Garfoot Creek near Cross Plains, WI	05406491	5.39	SED <sup>3</sup>	1985-86
Black Earth Creek at Black Earth, WI	05406500	45.6	T DO SED	1954-65, 1985-86 1986 <sup>1</sup> 1956-65, 1985-86
Trout Creek Confluence Arneson Creek near Barneveld, WI	05406573	8.37	C T, SED	1985-86 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 Muscodia, WI	05407000	10,400	T, SC SED	1975-80 <sup>1</sup> , 1981 1975-79
Kickapoo River at Ontario, WI	05407500	150	T SED	1974-77 1973-77
Kickapoo River near Rockton, WI	05407920	260	T, SED	1972-77
Kickapoo River at LaFarge, WI	05408000	266	T, SC SED	1971-77 1972-77
North Fk Nederlo Creek at mouth nr Gays Mills, WI	05409842	2.31	T	1970 <sup>1</sup> , 1974-78
South Fk Nederlo Creek near Gays Mills, WI	05409860	4.11	T	1970 <sup>1</sup> , 1974-78
Nederlo Creek at Utica Town Hall nr Gays Mills, WI	05409870	6.70	T	1968-78
<b>GRANT RIVER BASIN</b>				
Rattlesnake Creek near Beetown, WI	05413451	45.2	T DO	1990-91 1990-91 <sup>1</sup>

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 DO	1987-90 1987-90 <sup>1</sup>
Sinsinawa River near Hazel Green, WI	05414800	24.9	T DO	1987-90 1987-90 <sup>1</sup>
Pats Creek near Belmont, WI	05414894	5.42	T,SC,C DO	1981-82 1982 <sup>1</sup>
Madden Branch Tributary near Belmont, WI	05414915	2.83	T,SC,C DO	1981-82 1981 <sup>1</sup>
Madden Branch near Meekers Grove, WI	05414920	15.06	T,SC,C DO PH	1981-82 1981-82 <sup>1</sup> 1982 <sup>1</sup>
APPLE RIVER BASIN				
Apple River near Shullsburg, WI	05418731	9.34	T,SC,C DO	1981-82 1981 <sup>1</sup>
ROCK RIVER BASIN				
Crawfish River at Milford, WI	05426000	762	SED	1980-82
Rock River at Indianford, WI	05427570	2,630	T SC,DO,PH	1975-78 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 DO	1987-91 1987-91 <sup>1</sup>
Yellowstone River near Blanchardville, WI	05433500	28.5	T SED	1954-60 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
Sugar River near Brodhead, WI	05436500	523	SED	1956-60 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

<sup>1</sup> Seasonal record, non-freezing periods.<sup>2</sup> Numerous periods of missing record.<sup>3</sup> Station currently in operation for constituent(s) not listed here.

## WATER RESOURCES DATA - WISCONSIN, 1994

### 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 1994 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 1994 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 146 gaging stations and peak stage and discharge from 66 crest-stage stations; stage for 33 lakes and contents for 24 reservoirs; water-quality data from 61 streams and from 61 lakes; precipitation from 27 sites; and water-level records from 60 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-94-2." 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.  
U.S. Environmental Protection Agency, Region 5, Water Division, Barry DeGraff, director.  
U.S. Environmental Protection Agency, National Program Office, Chris Grundler, director.  
Wisconsin Department of Transportation, S. W. Woods, chief bridge engineer.  
The University of Wisconsin-Extension, Geological and Natural History Survey, James 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, David Boede, City Engineer.  
City of Barron, Bard Kittleson, Mayor.  
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.  
City of Sparta, Milo Seubert, Mayor.  
City of Brookfield, Kathryn C. Bloomberg, Mayor.  
Elkhart Lake Improvement Association, Lee Verhulst, President.  
Fontana/Walworth Water Pollution Control Commission, Dean M. Donner, Superintendent.  
Lauderdale Lakes Lake Management District, Gerald Petersen, President.

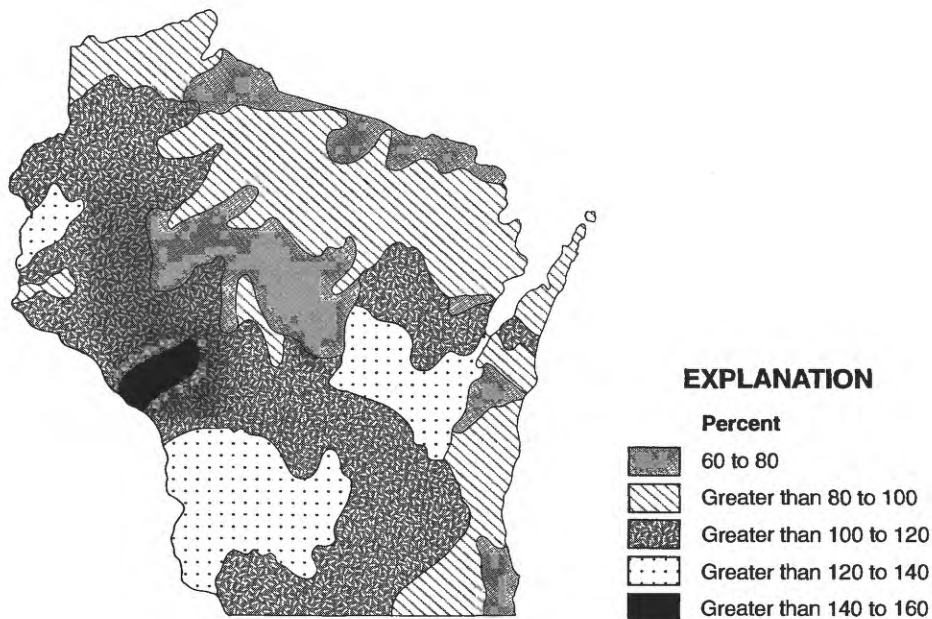
The following organizations aided in collecting streamflow records: Wisconsin Valley Improvement Co., Wisconsin Public Service Corp., Northern States Power Co., Dairyland Power Cooperative, Wisconsin Power and Light Co., Wisconsin Electric Power Co., Scott Paper Co., Milwaukee County Park Commission,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

#### SUMMARY OF HYDROLOGIC CONDITIONS

##### Streamflow

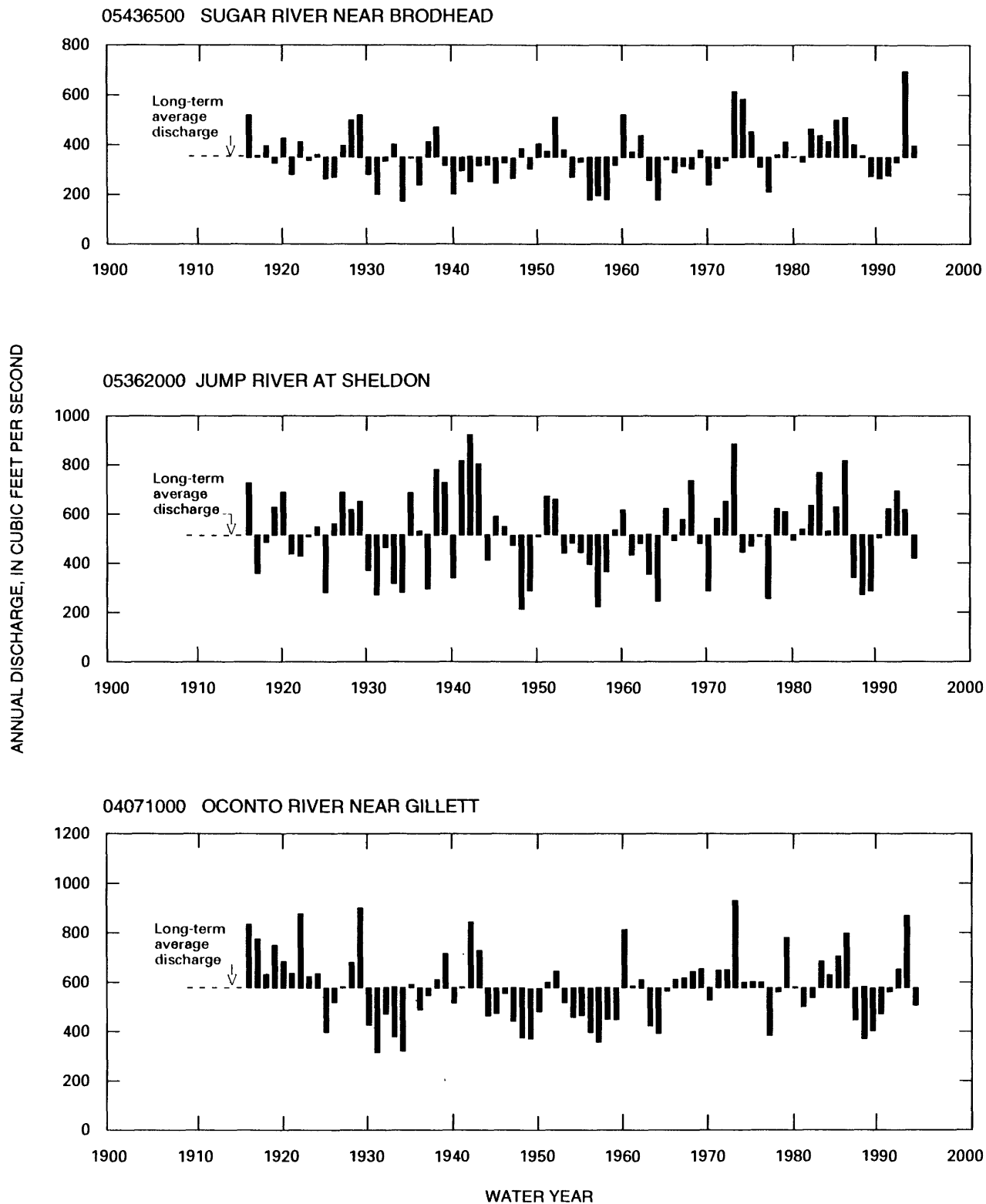
The statewide average precipitation of 30.66 inches for the 1994 water year was 96 percent of the normal annual precipitation of 31.79 inches for water years 1961-90. Average precipitation values ranged from 81 percent of normal in southeastern Wisconsin to 103 percent of normal in west-central Wisconsin (Pamela Naber Knox, UW-Extension, Geological and Natural History Survey, written commun., 1994).

Runoff was variable for rivers throughout the State ranging from 60 percent in southeast Wisconsin to 142 percent in west-central Wisconsin. Runoff was lowest (60 percent of the average annual runoff from 1972-94) for Pike River near Racine. Runoff was the highest (142 percent of the average annual runoff from 1915-19, 1935-94) for Trempealeau River at Dodge. Departure of runoff in the 1994 water year as a percent of long-term average runoff in the State are shown in Figure 1.

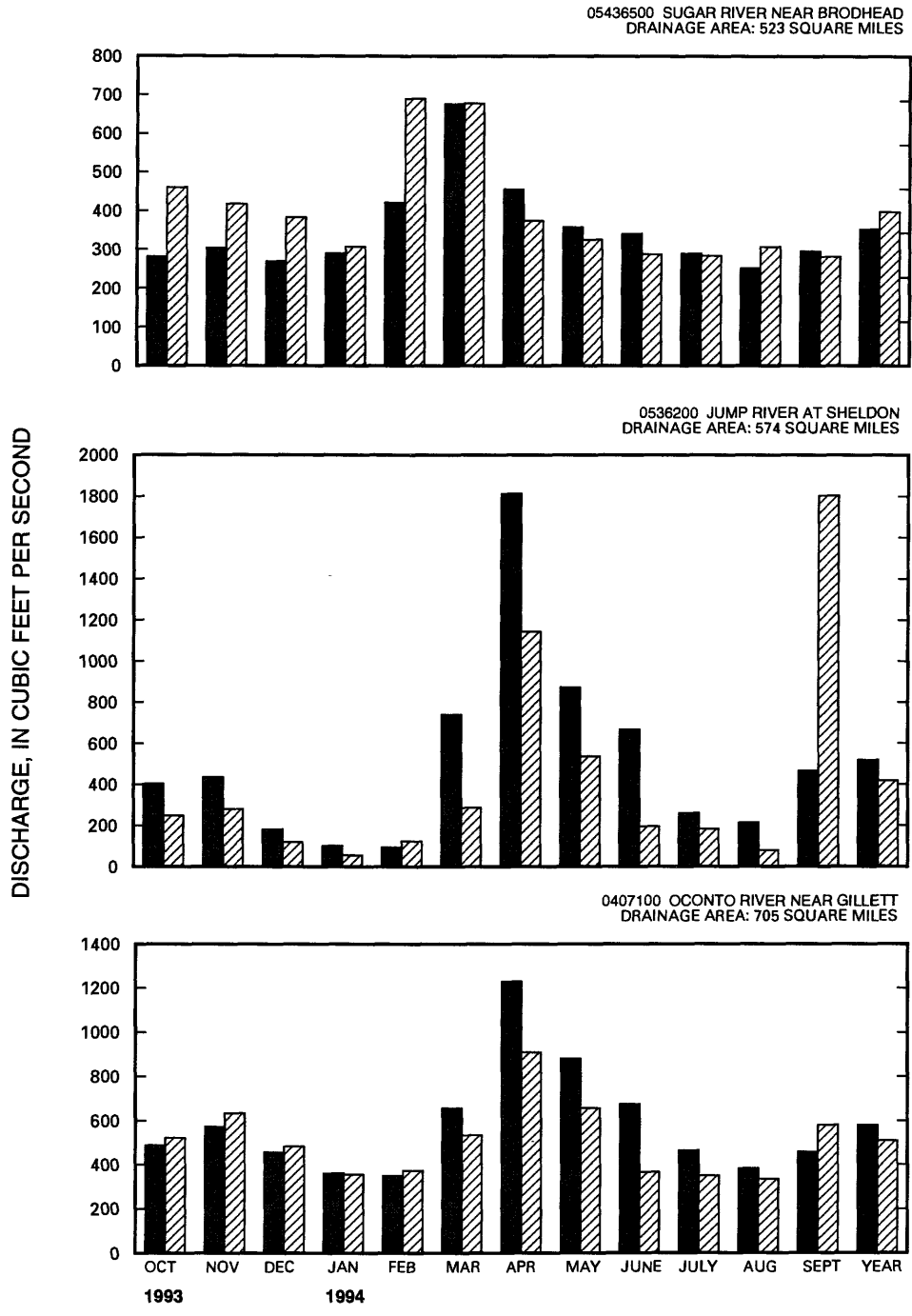


**Figure 1.** 1994 runoff as percent of long-term average runoff.

Annual discharges for the individual water years (1916-94) at the Oconto River near Gillett, Jump River at Sheldon, and Sugar River near Brodhead are shown in Figure 2. The comparison of monthly and annual discharges for the 1994 water year to discharge for a 79-year base period at the same three gaging stations are shown on Figure 3.



**Figure 2.** Comparison of annual discharge at representative gaging stations to their long-term average discharge for water years 1916-1994.



**EXPLANATION**

- Long-term average monthly and long-term average annual discharge for 1916 -1994
- ▨ Monthly and annual discharge for 1994 water year

**Figure 3.** Comparison of discharge at representative gaging stations during 1993 water year with discharge for 1916-1994.

The annual precipitation in the State was slightly below normal for the 1994 water year, and low flows occurred at 13 gaging stations where the annual minimum 7-consecutive day average flows (Q7) had recurrence intervals of 2 or more years. Seven of the stations were located in southeastern Wisconsin where precipitation values were about 81 percent of normal. The Q7 values and recurrence intervals for gaging stations that equalled or exceeded 2 years are listed in the following table:

Station number	Station name	Date	Q7 (ft <sup>3</sup> /s)	Recurrence interval (years)
04024430	Nemadji River near South Superior	Feb. 4-10	52	2
04085427	Manitowoc River at Manitowoc	Sept. 19-25	25	2
04087030	Menomonee River at Menomonee Falls	June 16-22	2.7	4
04087120	Menomonee River at Wauwatosa	Jan. 15-21	12	2
04087159	Kinnickinnic River at South 11th Street at Milwaukee	Feb. 6-12	3.6	15
04087220	Root River near Franklin	Jan. 16-22	3.4	3
04087240	Root River at Racine	Sept. 18-24	4.3	4
05332500	Namekagon River near Trego	Aug. 15-21	295	2
05356500	Chippewa River near Bruce	Sept. 6-12	450	2
05365500	Chippewa River at Chippewa Falls	Aug. 15-21	1,180	3
05395000	Wisconsin River at Merrill	July 1-7	1,370	2
05544200	Mukwonago River at Mukwonago	Sept. 13-19	15	4
05545750	Fox River near New Munster	Sept. 24-30	121	2

Spring runoff from snowmelt and localized rainfall in February, scattered showers in April, May, and July, along with a major storm in September caused floods with discharges that equalled or exceeded those with a recurrence interval of 5 years (Krug and others, 1991) at a number of crest-stage gage and gaging stations.

A widespread storm occurred on Sept. 12-16 in northwestern and north-central Wisconsin that totaled up to 13 inches of precipitation. Heavy rain in Sawyer, Rusk, and Washburn Counties in north-central Wisconsin produced rainfall amounts that exceeded the 100-year return frequency. Flood damages to homes and roads in Price County alone amounted to more than \$1 million. Several dams in the Phillips and Ladysmith areas were required to be sandbagged due to flooding (Midwestern Climate Center, September 1994). A 70-ft portion of the north embankment of a dam on the Flambeau River at Ladysmith was breached on Sept. 15. Damages caused by flooding on the Chippewa and Flambeau Rivers in Rusk County will also likely exceed \$1 million (Ladysmith News, Sept. 22, 1994).

Peak discharges which had recurrence intervals that equalled or exceeded 5 years are summarized in the following table:

Station number	Station name	Date	Peak discharge (ft <sup>3</sup> /s)	Recurrence interval (years)
04026200	Sand River tributary near Red Cliff	Apr. 24	195	5
04069700	North Branch Oconto River near Waubeno	Sept. 16	250	10
04074850	Lily River near Lily	Sept. 15	173	20
04079700	Spaulding Creek near Big Falls	Apr. 25	66	5
04087030	Menomonee River at Menomonee Falls	July 4	996	12
04087100	Honey Creek at Milwaukee	July 14	615	11
05332500	Namekagon River near Trego	Sept. 17, 18	3,060	80
05333500	St. Croix River near Danbury	Sept. 16	6,900	7
05356000	Chippewa River at Bishops Bridge near Winter	Sept. 15	6,070	14
05356500	Chippewa River near Bruce	Sept. 17	29,000	>100
05357360	Bear River near Powell	Sept. 23	620	5
05359600	Price Creek near Phillips	Sept. 15	552	>100
05360500	Flambeau River near Bruce	Sept. 16	23,200	70
05361400	Hay Creek near Prentice	Sept. 16	1,650	>100
05361420	Douglas Creek near Prentice	Sept. 15	1,620	>100
05362000	Jump River at Sheldon	Sept. 16	14,300	8
05364000	Yellow River at Cadott	Apr. 26	7,750	6
05365500	Chippewa River at Chippewa Falls	Sept. 17	52,300	5
05370900	Spring Creek near Durand	July 7	450	11
05382200	French Creek near Ettrick	Sept. 14	1,440	30
05391950	Squaw Creek near Harrison	Sept. 15	45	10
05393500	Spirit River at Spirit Falls	Sept. 15	3,990	>100
05393640	Little Pine Creek near Irma	Sept. 15	194	9
05395000	Wisconsin River at Merrill	Sept. 16	19,700	6
05400025	Johnson Creek near Knowlton	Apr. 24	1,850	8
05427948	Pheasant Branch at Middleton	Feb. 20	615	10
05430150	Badfish Creek near Cooksville	Feb. 20	1,210	>10
05430175	Yahara River near Fulton	Feb. 20	2,730	>10
05431486	Turtle Creek near Clinton	Feb. 20	4,600	9
05432300	Rock Branch near Mineral Point	May 24	1,570	>100
05548150	North Branch Nippersink Creek near Genoa City	Feb. 19	350	30

#### References cited:

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.

Ladysmith News, Repairs begin on Ladysmith dam: Ladysmith, Wis., Sept. 22, 1994.

\_\_\_\_\_, Flooding hits Flambeau, Chippewa: Ladysmith, Wis., Sept. 22, 1994.

Midwestern Climate Center, 1994, Weather and Climate Impacts in the Midwest-Major Climate Conditions for September, 1994-Regional Impacts-Wisconsin: Champaign, Ill., v. 4, no. 10, p. 3, 4.



### Water Quality

Suspended-sediment and total phosphorus yields for streams in southern Wisconsin for water year 1994 ranged from 58 to 83 percent of long-term annual average. The suspended-sediment yield at the Grant River at Burton in southwestern Wisconsin was 219 tons/mi<sup>2</sup> (tons per square mile), or 83 percent of the average annual yield for 1978-94. The suspended-sediment yield for Jackson Creek Tributary near Elkhorn in southeastern Wisconsin for water year 1994 was 50 tons/mi<sup>2</sup>, which was 68 percent of the average annual yield for the period 1984-94. The total phosphorus yield for Jackson Creek Tributary was 291 lbs/mi<sup>2</sup> (pounds per square mile), or 58 percent of the 1984-94 annual average. At Silver Creek near Ripon suspended sediment yield was 14.8 tons/mi<sup>2</sup>, or 58 percent of the 1988-94 annual average, and total phosphorus yield was 283 lbs/mi<sup>2</sup>, or 76 percent of the 1988-94 annual average.

### 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 1993; WINTER consists of measurements from January through March 1994; SPRING consists of measurements from April through June 1994; and SUMMER consists of measurements from July through September 1994. Mean seasonal water levels were compared to the long-term mean seasonal water levels. The 1994 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 1994 water year were normal to above normal for most of the wells in the State. The only counties having below normal ground-water levels at the beginning of the water year were Taylor and Door Counties. Several counties in the northeast and southeast part of the State reported below normal levels during the remainder of the water year. The large extent of the normal and above-normal ground-water levels can be attributed to near normal rainfall during the 1994 water year and above normal rainfall during the previous water year.

### SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 53 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 284 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 about two-thirds 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 Programs 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 1994 water year that began October 1, 1993, and ended September 30, 1994. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data; stage and content data for lakes and reservoirs; precipitation data; surface and ground water; and ground-water-level data. Figure 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.

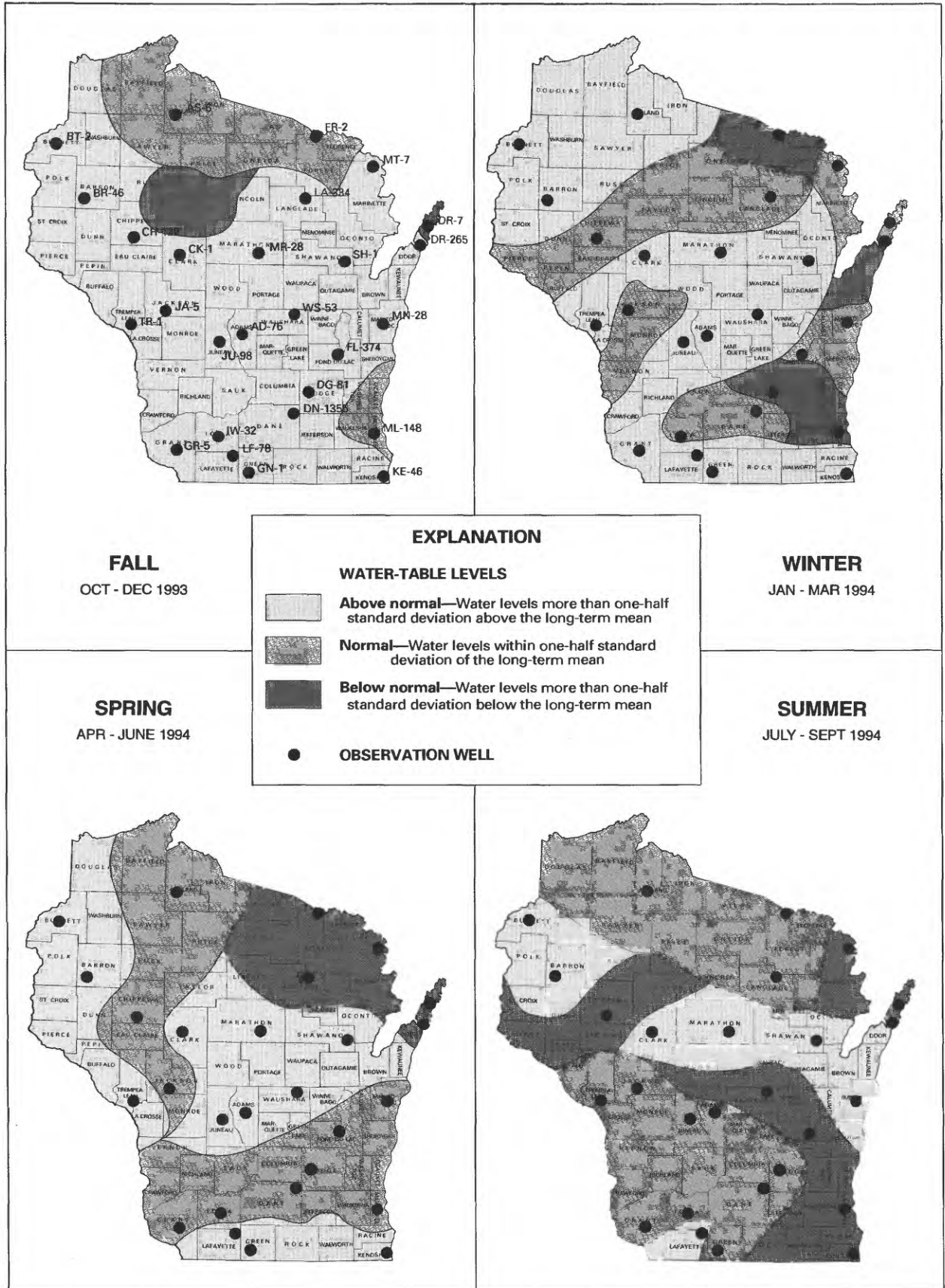


Figure 4. Relation of seasonal water-table levels to long-term means.

### Downstream Order and Station Number

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

The station-identification number is assigned according to downstream order. No station-number distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight- to ten-digit number for each station, such as 04087000, 054310157, or 0407809265, which appears just to the left of the station name, includes the two-digit Part number "04" or "05" plus the six- to eight-digit downstream-order number ("087000", "4310157", or "07809265"). The Part number designates the major river basin; for example, records in 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 10 percent of the time for the designated period.

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

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



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

#### Identifying Estimated Daily Discharge

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

#### Accuracy of the Records

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

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

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

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

#### Other Records Available

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

#### Records of Surface-Water Quality

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

#### Classification and Arrangement of Records

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

#### On-site Measurements and Sample Collection

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

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

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

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

#### Transport of suspended and dissolved materials

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

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

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

#### Laboratory Measurements

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

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

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

#### Dissolved Trace-Element Concentrations

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

#### Collecting and Analyzing Agencies

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

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

## Data Presentation

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

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

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

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

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

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

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

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

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

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

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

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

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

## Remark Codes

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E, e	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)

Records of Ground-Water Levels

Water-level data for 60 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 60 wells are presented in Volume 1 of this report, water-level data are currently being collected for a total of 189 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.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes one sampling, or only a few samples taken at infrequent intervals, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are necessary to identify the nature of the changes.

## Data collection and computation

The records of ground-water quality in this report were obtained mostly as part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey TWRI publications referred to in the "On-site Measurements and Sample Collection" and the "Laboratory Measurements" sections in this data report. In addition, the TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

## Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County, and are identified by well number. The prime identification number for wells sampled is the 15-digit and number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

## 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 ( $\text{ft}^3/\text{s}$ ) 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 ( $\text{CaCO}_3$ ). 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 ( $\mu\text{g}/\text{g}$ ) indicates the concentration of a chemical constituent as the mass (micrograms) of that constituent per unit mass (gram) of sediment.

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

Micrograms per liter ( $\mu\text{g}/\text{L}$ ) 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 ( $\text{mg}/\text{L}$ ) 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 ( $1 \times 10^{-12}$ ) of a curie (Ci). A curie is the amount of radioactivity that yields  $3.7 \times 10^{10}$  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  $\mu\text{m}$  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  $\mu\text{m}$  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.

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.

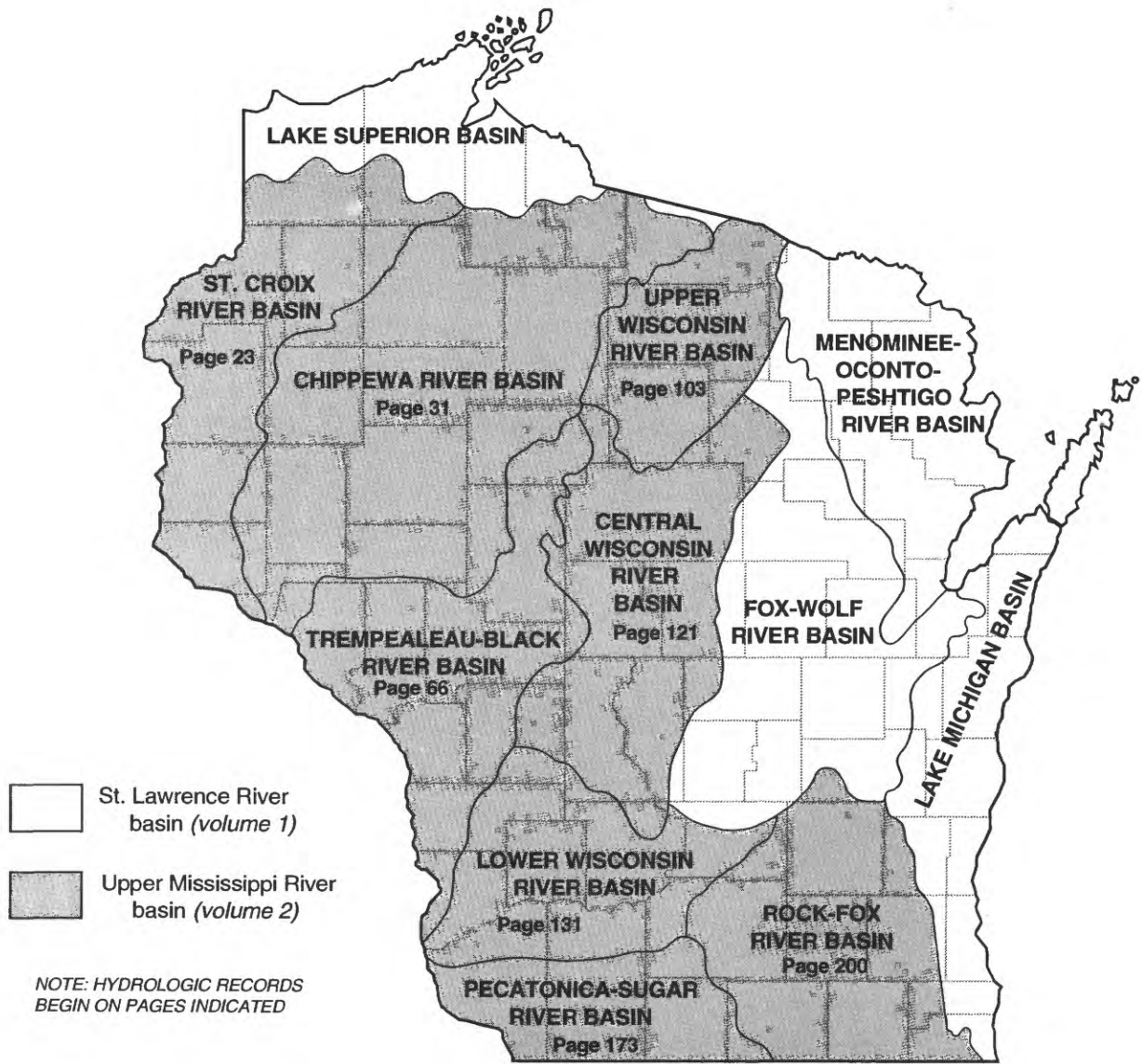
The reports listed below are for sale by the U.S. Geological Survey, Branch of Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money 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."

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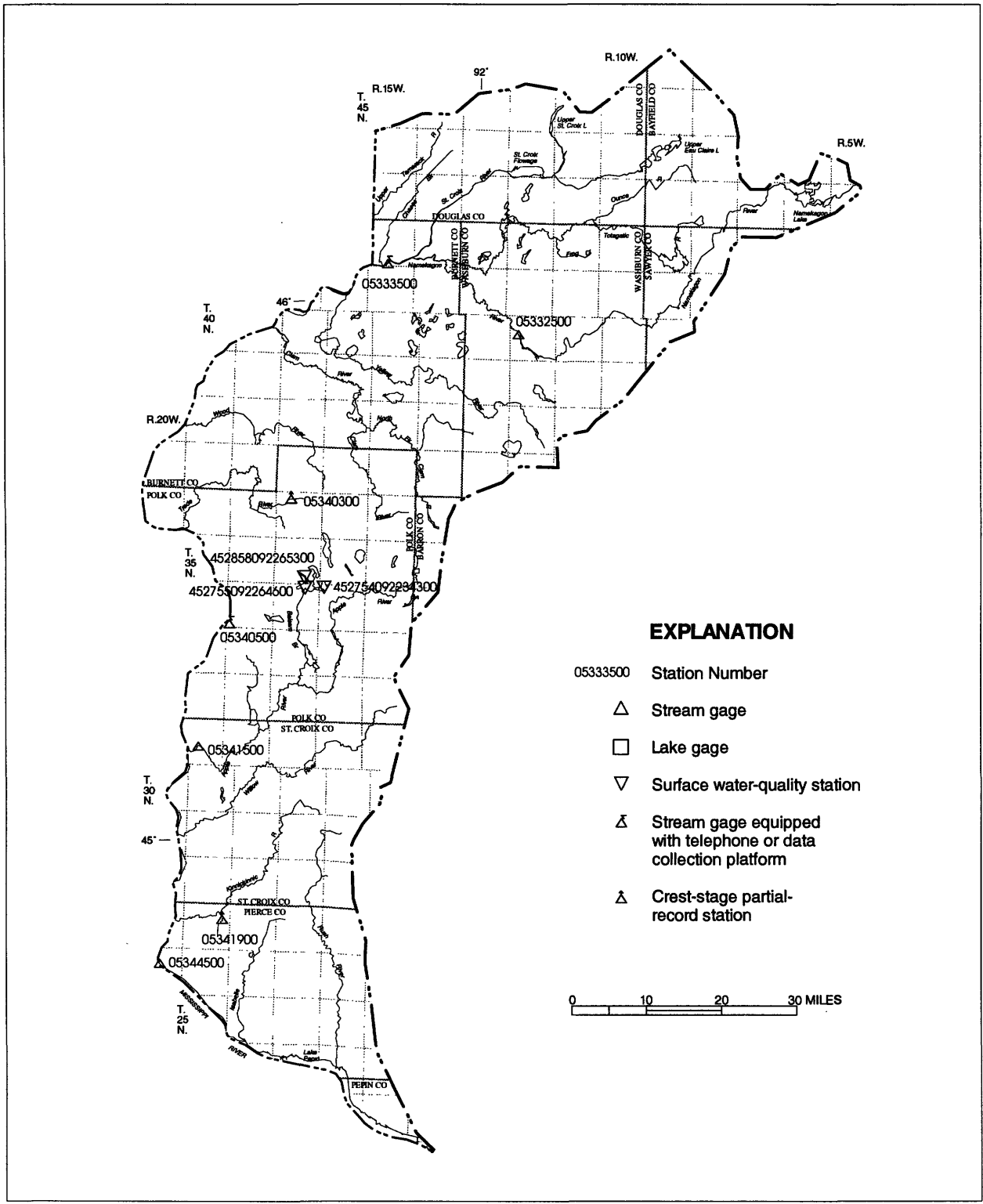
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**Figure 5.** Major surface-water drainage basins and index of hydrologic records.



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

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 02 TO AUGUST 17, 1994  
(Milligrams per liter unless otherwise indicated)

	May 02	June 14	July 12	Aug. 17
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	7.91	7.53	7.69	7.45
Specific conductance (µS/cm)	213	204	192	202
pH (units)	8.4	7.8	8.4	8.4
Water temperature (°C)	9.5	21.5	24.5	21.5
Secchi-depth (meters)	1.5	2.4	1.5	1.1
Dissolved oxygen	10.3	8.1	10.3	9.8
Phosphorus, total (as P)	0.023	0.015	0.023	0.028
Chlorophyll a, phytoplankton (µg/L)	6.3	4.9	11	8.4

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 02 TO AUGUST 17, 1994  
(Milligrams per liter unless otherwise indicated)

	May 02	June 14	July 12	Aug. 17
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	7.91	7.53	7.69	7.45
Specific conductance (µS/cm)	167	171	163	171
pH (units)	8.7	8.0	8.1	8.8
Water temperature (°C)	11.0	22.0	23.5	21.5
Secchi-depth (meters)	4.9	2.7	2.1	1.0
Dissolved oxygen	10.4	8.4	7.9	10.5
Phosphorus, total (as P)	0.007	0.013	0.025	0.028
Chlorophyll a, phytoplankton (µg/L)	0.4	4.8	6.1	15

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 mi<sup>2</sup>.

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 07 TO AUGUST 17, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 07		May 02		June 14		July 12		Aug. 17	
Depth of sample (ft)	1.5	30	1.5	29	1.5	30	1.5	30	1.5	30
Lake stage (ft)	7.77		7.91		7.53		7.69		7.45	
Specific conductance (µS/cm)	179	212	180	180	176	188	168	193	176	228
pH (units)	8.9	8.2	8.4	8.0	8.0	7.8	8.3	7.8	8.5	7.9
Water temperature (°C)	1.0	4.5	9.5	8.0	21.0	14.0	23.0	15.5	22.0	16.5
Color (Pt-Co. scale)	---	---	5	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.60	<0.50	---	---	---	---	---	---
Secchi-depth (meters)	---	---	6.7	---	2.4	---	2.4	---	1.3	---
Dissolved oxygen	13.2	1.9	10.3	9.7	9.2	0.4	8.8	0.1	10.1	0.2
Hardness, as CaCO <sub>3</sub>	---	---	81	81	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	21	21	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	7.0	7.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	5.0	5.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	1	1	---	---	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	76	76	---	---	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	5.0	5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	9.5	9.5	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	11	11	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	110	112	---	---	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	0.11	0.11	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.06	0.06	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.51	0.51	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.015	0.025	0.018	0.030	0.019	0.130	0.032	0.040
Phosphorus, ortho, dissolved (as P)	---	---	0.010	0.008	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	44	44	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	0.3	---	6.1	---	7.8	---	18	---

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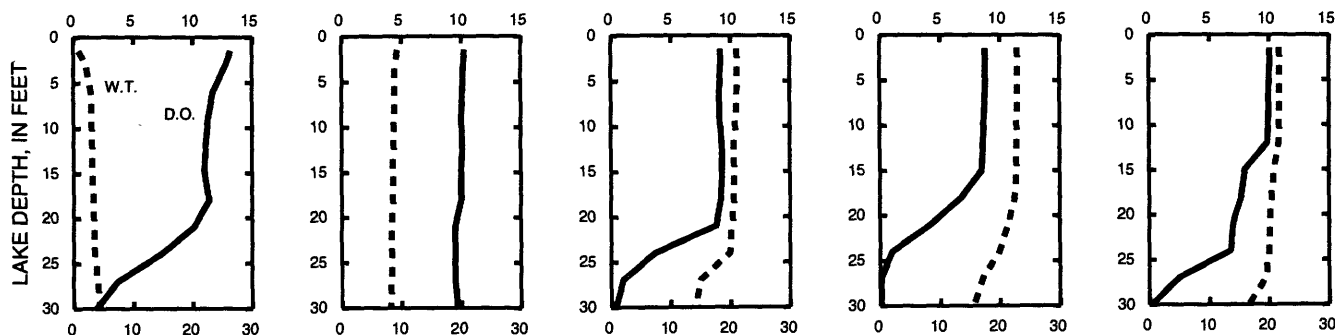
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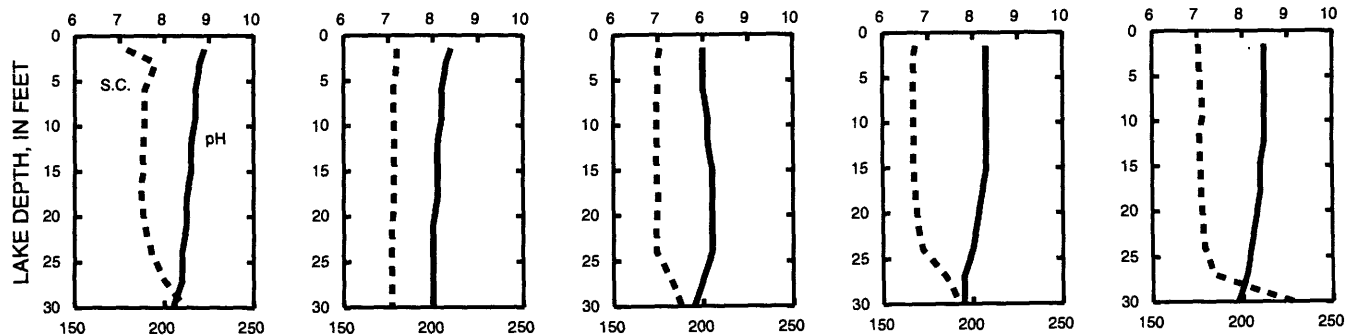
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DISSOLVED OXYGEN (D.O.), IN MILLIGRAMS PER LITER



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

pH, IN STANDARD UNITS



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

## 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 mi<sup>2</sup>.

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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	345	427	429	389	286	451	507	1100	273	401	325	333
2	304	300	560	342	281	382	385	1170	367	329	356	303
3	304	305	503	301	272	394	333	1150	397	283	375	331
4	310	321	467	306	286	401	393	913	322	264	363	384
5	279	327	322	285	288	505	404	939	268	329	353	353
6	358	329	480	286	295	402	421	927	315	344	351	378
7	400	365	414	328	285	363	442	864	353	367	340	338
8	396	381	349	299	302	393	439	731	353	393	339	298
9	387	362	362	262	275	465	440	604	384	381	320	308
10	425	368	341	272	274	383	495	669	315	470	336	292
11	404	372	349	305	262	415	364	687	249	352	350	283
12	406	372	307	365	264	402	427	670	271	371	355	279
13	382	434	388	296	269	386	364	563	288	368	338	315
14	396	469	385	263	264	461	290	675	281	349	349	350
15	375	472	510	289	288	673	357	687	306	285	353	398
16	376	389	334	287	313	557	615	616	304	384	334	411
17	384	547	340	268	292	401	713	575	368	302	323	404
18	380	467	448	278	294	376	731	452	379	288	321	405
19	381	541	481	281	369	376	708	436	344	360	349	373
20	352	639	476	303	368	395	704	461	366	422	345	340
21	365	588	419	309	407	456	644	566	370	407	311	377
22	300	566	433	295	416	572	458	567	421	512	315	479
23	415	546	355	312	409	571	542	568	424	543	313	481
24	489	432	257	320	433	597	388	549	371	519	296	510
25	367	436	270	299	505	709	662	295	313	486	280	434
26	322	450	272	288	281	656	775	239	568	471	340	353
27	300	344	275	265	276	646	971	266	509	427	342	359
28	281	391	300	263	560	637	1230	342	438	366	344	399
29	290	501	300	283	---	580	1320	427	454	357	335	369
30	295	398	304	273	---	616	1170	418	407	359	327	392
31	404	---	314	310	---	612	---	470	---	358	339	---
TOTAL	11172	12839	11744	9222	9114	15233	17692	19596	10778	11847	10417	11029
MEAN	360	428	379	297	325	491	590	632	359	382	336	368
MAX	489	639	560	389	560	709	1320	1170	568	543	375	510
MIN	279	300	257	262	262	363	290	239	249	264	280	279
CFSM	.62	.74	.65	.51	.56	.85	1.02	1.09	.62	.66	.58	.63
IN.	.72	.82	.75	.59	.59	.98	1.14	1.26	.69	.76	.67	.71

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 1994, BY WATER YEAR (WY)

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
MEAN	276	271	240	225	230	375	534	412	376	274	228	285
MAX	623	536	479	416	411	730	1335	1000	1030	576	506	808
(WY)	1904	1907	1902	1902	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	1934	1930	1934	1934	1934	1933

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1901 - 1994	
ANNUAL TOTAL	163687		150683			
ANNUAL MEAN	448		413		310	
HIGHEST ANNUAL MEAN					535	
LOWEST ANNUAL MEAN					144	
HIGHEST DAILY MEAN	1290		1320		2510	
LOWEST DAILY MEAN	223		239		7.0	
ANNUAL SEVEN-DAY MINIMUM	275		271		49	
ANNUAL RUNOFF (CFSM)	.77		.71		.54	
ANNUAL RUNOFF (INCHES)	10.52		9.68		7.27	
10 PERCENT EXCEEDS	681		592		504	
50 PERCENT EXCEEDS	389		369		244	
90 PERCENT EXCEEDS	294		283		143	

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



## MISSISSIPPI RIVER MAIN STEM

05344500 MISSISSIPPI RIVER AT PRESCOTT, WI

LOCATION.--Lat 44°44'45", long 92°48'00", in sec.9, T.26 N., R.20 W., Pierce County, Hydrologic Unit 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 mi<sup>2</sup>, 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.--Estimated daily discharges: Mar. 16-23. 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 1993 TO SEPTEMBER 1994

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25100	17700	14600	14800	11600	17000	39700	69200	26600	29900	20400	16200
2	24400	16700	14500	15300	11700	16300	39400	71000	26000	29500	19900	15800
3	23200	16900	16400	16600	11700	15600	39000	71900	24900	28900	19000	16200
4	22700	16800	17500	15900	11500	14600	39100	72700	24000	28200	19300	15100
5	21400	17100	19000	15300	12000	15600	39400	72500	23700	28300	18300	15200
6	21400	17200	19500	14700	11300	15400	39200	71400	24000	29000	18700	15500
7	20300	17700	19800	14800	11400	16500	38500	69700	23500	27700	18600	15200
8	20500	17700	19400	14100	11700	18300	37600	67400	24100	27600	16200	16000
9	19800	17500	17900	14700	10600	21600	37500	65100	24400	29000	16900	15500
10	20000	16800	18200	14000	10800	24300	36800	61900	25000	30000	16600	14900
11	19300	16600	18300	13600	11100	27200	35800	59700	25500	31000	17300	14300
12	18900	17100	17700	14100	11200	29100	35300	56400	25300	31200	17600	13700
13	19400	17300	16900	14400	11100	31100	35700	52900	25400	30600	22900	14000
14	19200	17900	16300	13200	11200	32900	35800	50700	24500	29700	25400	13700
15	17800	19600	17100	13300	11300	34900	36400	48200	25000	27800	26800	16600
16	18800	21500	17800	13300	11000	36000	37900	45700	24500	26600	27200	20000
17	18400	21700	18400	12700	11100	36500	41100	44100	23800	25900	26900	21500
18	18800	23200	19100	13000	10900	37000	46200	42600	24200	25200	26100	23600
19	18300	22200	19600	14300	11700	37500	50800	41100	23800	24700	25000	25400
20	18200	23700	19800	12800	12300	38000	54300	39400	23300	25600	23800	25700
21	18500	24000	20000	11200	13200	38000	55700	37300	24300	27400	21200	25300
22	18500	22900	19900	11600	15100	38500	54700	36100	26200	29800	20200	25300
23	18200	22600	18300	12300	14100	39000	52600	34400	28000	31000	19000	24600
24	18500	21700	17300	12300	14500	40200	51700	32900	29600	31100	17700	24200
25	18600	21200	15400	12900	17200	40400	51100	31300	29500	30300	16600	23200
26	18100	18900	14000	12600	17300	41200	51300	30600	29900	28700	16000	23100
27	18100	18100	14200	12400	16800	41400	52800	29900	29700	27700	14700	23500
28	18100	16100	12800	12100	17500	41400	55000	29300	29900	26100	16000	24600
29	18200	14600	13800	12000	---	41400	61500	28900	30100	24200	16600	23600
30	17500	15300	13900	12000	---	41100	66000	28400	29700	22500	16900	22100
31	18000	---	14300	11700	---	40200	---	27600	---	21200	17600	---
TOTAL	606200	568300	531700	418000	352900	958200	1347900	1520300	778400	866400	615400	583600
MEAN	19550	18940	17150	13480	12600	30910	44930	49040	25950	27950	19850	19450
MAX	25100	24000	20000	16600	17500	41400	66000	72700	30100	31200	27200	25700
MIN	17500	14600	12800	11200	10600	14600	35300	27600	23300	21200	14700	13700
AC-FT	1202000	1127000	1055000	829100	700000	1901000	2674000	3016000	1544000	1719000	1221000	1158000
CFSM	.44	.42	.38	.30	.28	.69	1.00	1.09	.58	.62	.44	.43
IN.	.50	.47	.44	.35	.29	.80	1.12	1.26	.65	.72	.51	.48

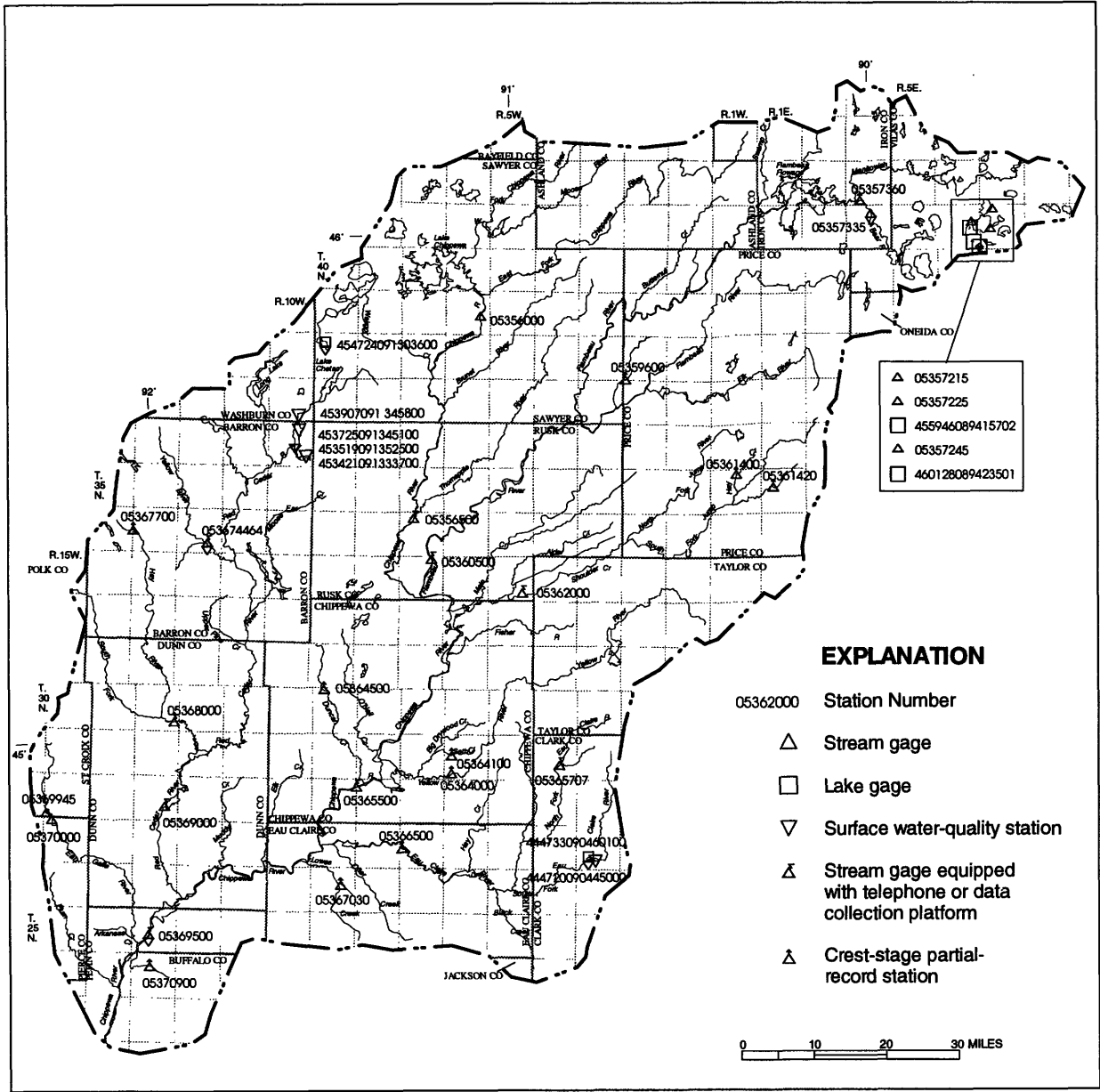
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1994, BY WATER YEAR (WY)

	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	13150	12790	9642	8068	7961	16900	39930	31590	25620	20060	13020	12830																																																							
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 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1928 - 1994
ANNUAL TOTAL	13358030	9147300	
ANNUAL MEAN	36600	25060	(a)17670
HIGHEST ANNUAL MEAN			38540
LOWEST ANNUAL MEAN			4367
HIGHEST DAILY MEAN	130000	72700	226000
LOWEST DAILY MEAN	7420	10600	1380
ANNUAL SEVEN-DAY MINIMUM	7850	11000	2190
INSTANTANEOUS PEAK FLOW		72900	228000
INSTANTANEOUS PEAK STAGE		33.62	43.11
ANNUAL RUNOFF (AC-FT)	26500000	18140000	12800000
ANNUAL RUNOFF (CFSM)	.82	.56	.39
ANNUAL RUNOFF (INCHES)	11.09	7.60	5.36
10 PERCENT EXCEEDS	73100	41100	38700
50 PERCENT EXCEEDS	25700	21200	11400
90 PERCENT EXCEEDS	9060	13200	5000

(a) Median of annual mean discharges is 17430 ft<sup>3</sup>/s.



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

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 mi<sup>2</sup>.

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, 5.98 ft, Sept. 16; minimum observed, 5.38 ft, Nov. 24.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.62	5.49	---	---	---	---	5.49	---	5.63	5.57	5.64	5.53
2	5.59	5.48	---	---	---	---	5.49	5.84	5.62	5.56	5.63	5.52
3	5.59	5.48	---	---	---	---	5.49	5.84	5.60	5.54	5.72	5.52
4	5.56	5.47	5.53	---	---	---	5.49	5.81	5.58	5.53	5.70	5.52
5	5.55	5.55	5.53	---	---	---	5.49	5.79	5.63	5.69	5.69	5.51
6	5.53	5.52	5.52	---	---	---	5.51	5.77	5.63	5.70	5.69	5.51
7	5.50	---	5.52	---	---	---	5.52	5.76	5.61	5.69	5.67	5.50
8	5.57	---	5.52	---	---	5.43	5.50	5.73	5.59	5.70	5.64	5.49
9	5.57	5.52	5.52	---	---	---	5.49	5.73	5.58	5.69	5.63	5.48
10	5.56	5.51	5.52	---	---	---	5.51	5.72	5.57	5.68	5.61	5.48
11	5.59	5.50	5.51	---	---	---	5.55	5.70	5.56	5.67	5.61	5.48
12	5.60	5.52	5.49	---	---	---	5.56	5.70	5.54	5.66	5.59	5.51
13	5.59	5.57	5.49	---	---	---	5.57	5.69	5.56	5.65	5.59	5.69
14	5.59	5.58	5.50	---	---	---	5.58	5.74	5.56	5.63	5.58	5.71
15	5.57	5.58	5.50	---	---	---	5.59	5.73	5.55	5.62	5.56	5.94
16	5.59	5.58	5.50	---	---	---	5.64	5.71	5.57	5.59	5.55	5.98
17	5.58	5.57	5.50	---	---	---	5.64	5.70	5.56	5.59	5.54	5.97
18	5.58	5.57	5.51	---	---	5.39	5.62	5.69	5.59	5.60	5.53	5.94
19	5.60	5.55	5.50	---	---	5.40	5.63	5.69	5.59	5.62	5.56	5.93
20	5.59	5.56	5.51	---	---	5.39	5.64	5.68	5.59	5.71	5.54	5.90
21	5.63	5.55	5.51	---	---	5.42	5.63	5.66	5.59	5.74	5.54	5.88
22	5.62	5.46	---	---	---	5.44	5.62	5.67	5.58	5.72	5.54	5.89
23	5.61	5.39	---	---	---	5.43	5.60	5.66	5.58	5.72	5.54	5.87
24	5.60	5.38	---	---	---	5.47	5.62	5.66	5.57	5.69	5.53	5.85
25	5.59	---	---	---	---	5.48	5.64	5.66	5.58	5.68	5.52	5.85
26	5.58	---	---	---	---	5.49	5.78	5.64	5.57	5.66	5.57	5.84
27	5.56	---	---	---	---	5.49	5.84	5.62	5.57	5.65	5.56	5.80
28	5.54	---	---	---	---	5.49	5.82	5.62	5.59	5.64	5.54	5.79
29	5.53	---	---	---	---	5.49	5.89	5.61	5.59	5.63	5.53	5.76
30	5.52	---	---	---	---	5.49	5.89	5.59	5.58	5.62	5.55	5.79
31	5.51	---	---	---	---	5.49	---	5.64	---	5.64	5.55	---
MEAN	5.57	---	---	---	---	---	5.61	---	5.58	5.65	5.59	5.71
MAX	5.63	---	---	---	---	---	5.89	---	5.63	5.74	5.72	5.98
MIN	5.50	---	---	---	---	---	5.49	---	5.54	5.53	5.52	5.48

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 371.

WATER-QUALITY DATA, MARCH 08 TO AUGUST 15, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 08		May 03		June 13		July 15		Aug. 15	
Depth of sample (ft)	1.5	48	1.5	42	1.5	45	1.5	49	1.5	48
Lake stage (ft)		5.43		5.84		5.56		5.62		5.56
Specific conductance (µS/cm)	75	183	60	61	70	85	68	101	70	150
pH (units)	9.6	7.7	8.2	7.7	7.8	7.3	7.8	7.1	8.0	7.3
Water temperature (°C)	1.0	4.5	9.0	7.5	20.5	12.0	23.0	12.0	20.5	12.0
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.1	1.6	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.1	---	3.5	---	2.4	---	1.7	---
Dissolved oxygen	11.3	0.1	11.8	9.2	9.1	0.1	8.6	0.1	8.4	0.1
Hardness, as CaCO3	---	---	27	27	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	7.4	7.5	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	2.0	2.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.0	2.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.6	0.5	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	28	29	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	4.0	4.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	1.0	1.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.0	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	5.8	6.1	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	48	52	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.02	0.03	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.01	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.62	0.43	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.021	0.025	0.012	0.118	0.019	0.200	0.023	0.285
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	0.003	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	90	110	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	12	---	3.6	---	5.1	---	10	---

3-8-94

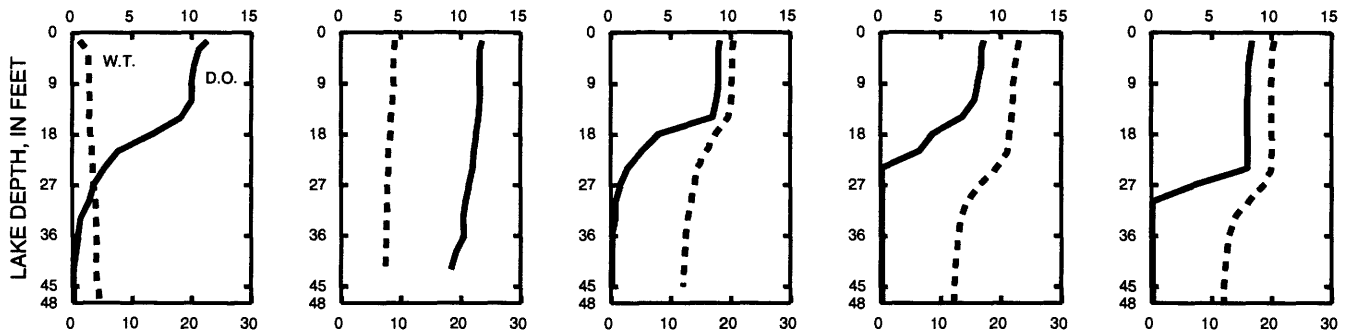
5-3-94

6-13-94

7-15-94

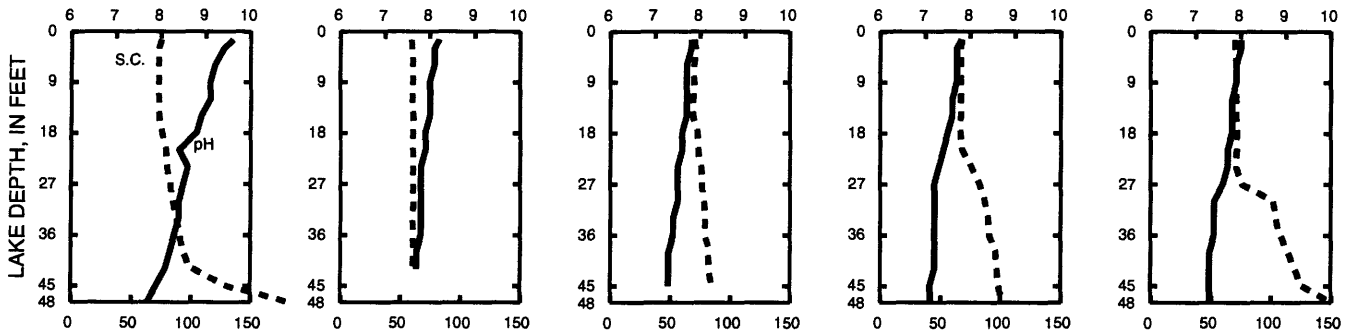
8-15-94

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

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 mi<sup>2</sup>.

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: Nov. 3-23 and ice-affected period, Nov. 24 to Feb. 17. Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	13	13	12	9.0	8.4	12	15	14	3.0	9.8	11
2	3.6	12	13	12	9.0	8.5	11	15	13	2.0	9.5	11
3	3.7	11	14	12	9.2	8.4	11	14	12	1.7	9.7	12
4	4.8	11	14	12	9.4	9.1	11	14	12	1.7	10	12
5	4.2	11	14	12	9.4	10	11	15	12	7.2	9.4	12
6	4.0	11	14	12	9.2	11	11	15	13	15	9.2	11
7	4.9	10	14	13	9.0	10	11	14	13	14	9.3	11
8	5.9	10	13	13	8.6	9.5	10	13	12	14	11	10
9	6.9	10	13	13	8.4	9.4	10	13	12	15	10	9.9
10	6.8	9.8	13	13	8.2	9.6	11	13	11	15	10	9.5
11	6.6	9.6	14	13	8.2	9.4	11	13	11	14	10	8.7
12	7.4	9.8	14	13	8.6	9.5	12	12	11	13	9.8	8.3
13	7.2	10	14	12	8.8	9.5	12	12	14	12	9.6	11
14	7.3	11	14	12	9.2	9.9	12	12	13	12	9.0	12
15	8.4	12	14	12	9.2	10	12	13	13	12	8.8	16
16	9.0	11	15	11	9.2	9.7	13	13	15	13	8.7	18
17	8.7	11	15	11	9.0	9.4	13	12	16	15	8.8	17
18	8.7	10	15	10	8.6	9.2	13	12	18	14	9.2	16
19	9.0	10	15	9.6	9.2	9.1	12	11	17	14	9.4	15
20	9.2	10	14	9.4	9.5	9.4	12	10	16	15	9.9	14
21	13	10	14	9.2	9.3	9.5	12	10	15	15	9.5	14
22	13	10	14	9.4	9.0	9.5	12	11	13	14	9.3	17
23	12	10	13	9.6	9.0	9.7	11	9.9	12	12	8.7	21
24	12	10	13	9.6	9.1	11	11	9.7	12	12	7.6	24
25	11	11	13	9.8	8.9	11	12	11	11	11	7.6	23
26	10	11	13	9.8	8.8	11	15	11	10	11	7.6	23
27	10	12	13	10	9.1	11	17	11	9.6	10	8.0	21
28	11	13	13	10	8.7	11	16	10	9.9	11	8.2	20
29	12	13	13	10	---	11	16	10	7.7	10	8.5	20
30	12	13	13	9.8	---	11	16	11	4.3	9.7	11	17
31	13	---	12	9.4	---	11	---	14	---	9.5	12	---
TOTAL	259.2	326.2	423	343.6	250.8	305.7	369	379.6	372.5	347.8	289.1	445.4
MEAN	8.36	10.9	13.6	11.1	8.96	9.86	12.3	12.2	12.4	11.2	9.33	14.8
MAX	13	13	15	13	9.5	11	17	15	18	15	12	24
MIN	3.6	9.6	12	9.2	8.2	8.4	10	9.7	4.3	1.7	7.6	8.3

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1994, BY WATER YEAR (WY)

	1991	1992	1993	1994	1991	1992	1993	1994	1991	1992	1993	1994
MEAN	12.9	14.4	12.6	10.1	8.89	10.0	15.9	13.7	12.0	11.8	8.06	11.3
MAX	22.7	20.2	13.6	11.1	8.96	10.9	18.3	14.9	14.9	15.0	9.33	14.8
(WY)	1992	1992	1994	1994	1994	1992	1992	1993	1993	1991	1994	1994
MIN	7.75	10.9	10.6	9.26	8.80	9.33	12.3	12.2	8.88	9.27	6.92	7.73
(WY)	1993	1994	1993	1993	1992	1993	1994	1994	1992	1993	1992	1993

## SUMMARY STATISTICS

## FOR 1993 CALENDAR YEAR

## FOR 1994 WATER YEAR

## WATER YEARS 1991 - 1994

ANNUAL TOTAL	4025.5	4111.9		
ANNUAL MEAN	11.0	11.3		
HIGHEST ANNUAL MEAN			11.8	
LOWEST ANNUAL MEAN			13.3	1992
HIGHEST DAILY MEAN	34	Jun 20	10.8	1993
LOWEST DAILY MEAN	3.6	Oct 2	56	Oct 5 1991
ANNUAL SEVEN-DAY MINIMUM	4.2	Oct 1	1.1	Aug 2 1992
INSTANTANEOUS PEAK FLOW			79	Oct 5 1991
INSTANTANEOUS PEAK STAGE			2.36	Oct 5 1991
INSTANTANEOUS LOW FLOW			1.3	Jul 4 1992
10 PERCENT EXCEEDS	16		17	
50 PERCENT EXCEEDS	9.8		11	
90 PERCENT EXCEEDS	7.3		8.6	7.2

CHIPPEWA RIVER BASIN

37

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 mi<sup>2</sup>.

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: Aug. 23 to Sept. 9 and ice-affected period, Nov. 26 to Mar. 4. Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.0	3.4	3.4	3.3	2.9	1.2	1.6	1.5	2.1	2.4	1.8
2	2.8	2.9	3.4	3.4	3.3	3.1	1.2	1.6	1.5	2.5	2.1	1.8
3	2.8	4.2	3.3	3.3	3.3	3.3	1.1	1.6	1.5	2.5	2.1	1.9
4	3.1	15	3.3	3.2	3.3	3.5	1.1	1.7	1.3	2.7	1.9	1.8
5	2.9	17	3.3	3.1	3.2	4.0	1.0	2.1	1.1	2.9	1.9	1.8
6	2.8	15	3.2	3.0	3.2	3.7	1.0	1.9	1.2	2.8	2.0	1.8
7	2.7	12	3.1	2.9	3.2	3.4	1.0	1.6	1.3	2.8	1.8	1.8
8	3.3	10	3.0	2.9	3.2	3.2	1.1	1.2	1.7	3.1	1.6	1.8
9	3.4	9.0	3.0	2.9	3.2	3.1	1.2	1.5	2.2	3.4	1.6	1.8
10	3.1	7.6	3.0	2.9	3.3	3.1	1.3	1.7	2.2	3.5	2.5	1.8
11	3.0	7.0	3.0	2.9	3.3	3.0	1.4	1.8	1.7	3.6	1.7	1.9
12	2.9	6.3	2.9	2.9	3.3	3.0	1.5	1.7	1.4	3.6	1.3	2.2
13	2.8	7.1	2.9	2.9	3.4	3.1	1.6	1.7	1.3	3.3	1.2	3.9
14	2.8	6.4	3.0	2.9	3.5	3.3	1.6	1.8	1.2	3.2	1.1	3.7
15	2.8	5.7	3.0	2.8	3.7	3.2	2.0	2.2	1.1	3.2	1.0	6.7
16	2.8	5.3	3.0	2.8	3.8	3.0	2.1	1.9	1.0	3.3	.97	8.1
17	2.8	5.0	3.1	2.7	3.9	3.0	1.8	1.3	1.5	3.4	.81	5.5
18	2.8	4.7	3.3	2.7	4.0	3.0	1.7	1.1	1.5	3.3	.67	4.5
19	2.9	4.5	3.3	2.6	4.1	3.0	1.6	1.1	1.5	3.2	.54	3.9
20	2.9	4.3	3.2	2.6	4.3	3.2	1.3	1.3	4.6	3.1	1.7	3.8
21	3.7	4.2	3.1	2.6	4.3	3.4	1.2	1.3	2.8	3.2	2.4	4.1
22	3.3	4.0	3.1	2.6	4.2	3.7	1.2	1.4	2.0	3.2	2.1	5.2
23	3.1	3.9	3.0	2.7	3.6	3.4	1.2	1.4	1.8	3.2	1.8	5.5
24	3.1	3.8	2.9	2.8	3.0	3.4	1.3	1.3	1.8	3.0	1.7	4.6
25	3.0	3.7	2.8	2.8	2.9	3.2	1.4	1.4	1.8	3.6	1.6	4.6
26	3.0	3.5	2.8	2.9	2.8	1.8	2.4	1.4	1.7	3.2	1.6	5.1
27	3.0	3.3	2.7	3.0	2.9	1.2	2.2	1.4	1.7	3.0	1.5	4.6
28	3.2	3.2	2.7	3.1	2.9	1.1	1.6	1.3	1.8	3.2	1.6	4.3
29	3.2	3.3	2.8	3.1	---	1.1	1.6	1.2	1.8	3.1	1.6	3.9
30	3.1	3.4	2.9	3.2	---	1.0	1.7	1.7	1.9	2.6	1.6	3.6
31	3.0	---	3.1	3.3	---	1.0	---	1.8	---	2.5	1.7	---
TOTAL	93.1	188.3	94.6	90.9	96.4	88.4	43.6	48.0	51.4	95.3	50.09	107.8
MEAN	3.00	6.28	3.05	2.93	3.44	2.85	1.45	1.55	1.71	3.07	1.62	3.59
MAX	3.7	17	3.4	3.4	4.3	4.0	2.4	2.2	4.6	3.6	2.5	8.1
MIN	2.7	2.9	2.7	2.6	2.8	1.0	1.0	1.1	1.0	2.1	.54	1.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1994, BY WATER YEAR (WY)

	1991	1992	1993	1994	1991	1992	1993	1994	1991	1992	1993	1994
MEAN	3.40	5.05	3.04	2.78	2.98	3.40	2.99	3.27	3.70	2.90	3.39	4.76
MAX	3.91	6.28	3.35	2.93	3.44	4.34	4.30	5.75	6.73	3.07	4.58	6.85
(WY)	1992	1994	1992	1994	1994	1992	1993	1991	1991	1994	1993	1992
MIN	3.00	3.91	2.71	2.63	2.69	2.85	1.45	1.55	1.47	2.67	1.62	3.59
(WY)	1994	1993	1993	1993	1993	1994	1994	1994	1992	1993	1994	1994

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1991 - 1994

ANNUAL TOTAL	1385.3	1047.89	
ANNUAL MEAN	3.80	2.87	3.30
HIGHEST ANNUAL MEAN			3.60
LOWEST ANNUAL MEAN			2.87
HIGHEST DAILY MEAN	17	Nov 5	36
LOWEST DAILY MEAN	1.5	Jul 22	.54
ANNUAL SEVEN-DAY MINIMUM	1.7	Jul 18	.90
INSTANTANEOUS PEAK FLOW		(a)17	39
INSTANTANEOUS PEAK STAGE		(b)9.96	(b)9.96
INSTANTANEOUS LOW FLOW		.49	.33
10 PERCENT EXCEEDS	5.3	4.0	5.2
50 PERCENT EXCEEDS	3.3	2.9	3.0
90 PERCENT EXCEEDS	2.5	1.3	1.4

(a) Gage height, 8.95 ft

(b) Ice jam



## 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 mi<sup>2</sup>. Area of lake, 0.07 mi<sup>2</sup>.

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, 26.88 ft, Sept. 26; minimum observed gage height, 26.36 ft, Sept. 12

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.80	26.73	26.78	26.74	---	26.67	26.69	26.82	26.69	26.60	26.64	26.48
2	26.78	26.72	26.78	26.73	---	26.67	26.69	26.81	26.67	26.58	26.64	26.47
3	26.77	26.72	26.78	26.72	---	26.67	26.68	26.81	26.65	26.56	26.64	26.45
4	26.79	26.72	26.78	26.72	---	26.67	26.68	26.80	26.64	26.55	26.64	26.44
5	26.77	26.76	26.78	26.73	---	26.66	26.69	26.82	26.64	26.58	26.62	26.43
6	26.77	26.77	26.78	26.74	---	26.66	26.68	26.81	26.66	26.61	26.59	26.42
7	26.77	26.76	26.77	26.74	---	26.65	26.68	26.81	26.66	26.62	26.57	26.40
8	26.77	26.76	26.77	26.75	---	26.64	26.68	26.79	26.63	26.63	26.64	26.40
9	26.79	26.75	26.77	26.75	---	26.64	26.68	26.79	26.62	26.65	26.63	26.39
10	26.79	26.75	26.77	26.75	---	26.64	26.68	26.78	26.61	26.64	26.62	26.37
11	26.78	26.74	26.76	26.75	---	26.63	26.68	26.77	26.62	26.63	26.61	26.37
12	26.77	26.74	26.75	26.75	---	26.63	26.68	26.76	26.63	26.61	26.60	26.36
13	26.76	26.77	26.76	26.74	---	26.63	26.69	26.75	26.67	26.59	26.58	26.47
14	26.75	26.78	26.76	---	---	26.63	26.69	26.75	26.68	26.58	26.55	26.56
15	26.75	26.79	26.76	---	---	26.62	26.72	26.77	26.68	26.57	26.54	26.71
16	26.75	26.79	26.76	---	26.68	26.62	26.75	26.76	26.67	26.59	26.53	26.81
17	26.75	26.79	26.76	---	26.68	26.61	26.76	26.75	26.69	26.66	26.52	26.81
18	26.75	26.79	26.76	---	26.68	26.61	26.75	26.74	26.73	26.66	26.51	26.80
19	26.75	26.78	26.76	---	26.69	26.61	26.75	26.72	26.72	26.68	26.51	26.79
20	26.75	26.78	26.76	---	26.70	26.61	26.73	26.71	26.71	26.72	26.53	26.78
21	26.79	26.78	26.76	---	26.69	26.61	26.73	26.70	26.69	26.72	26.53	26.78
22	26.79	26.78	26.76	---	26.69	26.62	26.72	26.69	26.67	26.72	26.52	26.83
23	26.78	26.77	26.75	---	26.69	26.62	26.71	26.66	26.66	26.71	26.50	26.85
24	26.78	26.76	26.74	---	26.69	26.66	26.72	26.65	26.66	26.69	26.49	26.86
25	26.77	26.76	26.74	---	26.68	26.66	26.73	26.64	26.64	26.68	26.48	26.86
26	26.76	26.77	26.72	---	26.68	26.66	26.78	26.63	26.62	26.68	26.48	26.88
27	26.76	26.78	26.72	---	26.68	26.67	26.82	26.61	26.60	26.68	26.48	26.87
28	26.75	26.78	26.72	---	26.68	26.67	26.81	26.60	26.63	26.67	26.48	26.87
29	26.74	26.78	26.73	---	---	26.69	26.82	26.60	26.63	26.66	26.47	26.86
30	26.74	26.78	26.73	---	---	26.69	26.83	26.63	26.62	26.65	26.47	26.86
31	26.74	---	26.72	---	---	26.69	---	26.71	---	26.64	26.49	---
MEAN	26.77	26.76	26.76	---	---	26.65	26.72	26.73	26.66	26.64	26.55	26.64
MAX	26.80	26.79	26.78	---	---	26.69	26.83	26.82	26.73	26.72	26.64	26.88
MIN	26.74	26.72	26.72	---	---	26.61	26.68	26.60	26.60	26.55	26.47	26.36

CHIPPEWA RIVER BASIN

05357245 TROUT RIVER AT TROUT LAKE NEAR BOULDER JUNCTION, WI

LOCATION.--Lat 46°02'08", long 89°42'20", in NE 1/4 NE 1/4 sec.14, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07050002, on right bank 20 ft upstream from U.S. Highway 51 bridge, approximately 500 ft downstream from outlet of Trout Lake, 6.0 mi southwest of Boulder Junction.

DRAINAGE AREA.--46.2 mi<sup>2</sup>.

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: Dec. 24-30, Jan. 2-5, 8, 9, 13-21, Jan. 29 to Feb. 10, Feb. 21, 22, 25-27, Mar. 11, 30, and Apr. 6. Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	32	37	40	37	35	34	41	37	30	33	24
2	31	32	37	40	36	34	35	40	36	29	33	24
3	30	32	37	39	36	34	34	40	35	28	34	23
4	31	33	37	40	35	34	34	40	35	27	33	22
5	30	36	37	40	36	34	34	41	34	29	31	21
6	30	37	38	39	35	34	34	40	36	31	30	21
7	30	36	38	40	35	34	34	40	36	32	29	20
8	31	37	38	40	36	33	33	39	35	32	32	20
9	31	37	37	40	35	33	33	39	34	34	31	19
10	31	36	38	40	35	33	33	38	33	33	30	19
11	30	37	37	38	35	33	32	39	34	32	30	19
12	29	37	37	40	36	32	33	38	34	31	29	19
13	28	39	37	39	36	32	34	38	37	30	28	27
14	28	39	37	40	35	32	33	37	38	29	26	30
15	28	40	37	39	35	32	34	39	36	28	25	42
16	29	39	37	38	35	31	36	39	35	31	24	52
17	29	39	38	40	35	31	37	38	36	36	24	51
18	29	39	38	39	35	31	36	38	40	35	24	50
19	30	38	38	39	36	31	36	38	39	37	24	49
20	31	37	39	38	36	31	35	38	37	38	24	48
21	33	37	39	38	36	31	35	37	36	39	24	49
22	33	37	39	37	36	31	35	37	35	39	24	54
23	34	37	39	37	36	31	33	36	34	38	23	55
24	34	36	40	36	36	33	34	35	34	37	22	54
25	34	36	40	37	35	34	35	35	32	35	22	55
26	34	38	39	35	36	34	39	35	32	35	22	56
27	33	38	39	37	35	34	41	34	31	34	23	54
28	33	38	39	37	35	35	41	33	32	33	23	53
29	33	37	40	37	---	35	42	32	33	33	22	52
30	33	37	39	37	---	35	42	33	31	32	24	51
31	33	---	39	37	---	35	---	38	---	33	25	---
TOTAL	965	1103	1181	1193	995	1022	1061	1165	1047	1020	828	1133
MEAN	31.1	36.8	38.1	38.5	35.5	33.0	35.4	37.6	34.9	32.9	26.7	37.8
MAX	34	40	40	40	37	35	42	41	40	39	34	56
MIN	28	32	37	35	35	31	32	32	31	27	22	19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1994, BY WATER YEAR (WY)

	1991	1992	1993	1994	1991	1992	1993	1994	1991	1992	1993	1994
MEAN	32.2	41.1	46.0	42.1	38.2	37.4	44.2	52.0	45.9	44.7	30.6	33.7
MAX	34.4	47.7	58.1	45.5	40.4	44.9	53.4	60.0	57.1	54.2	35.8	37.8
(WY)	1993	1992	1992	1992	1992	1992	1992	1991	1991	1991	1991	1994
MIN	31.1	36.8	38.1	38.5	35.5	33.0	35.4	37.6	34.9	32.9	26.4	31.0
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1992	1991

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1991 - 1994
ANNUAL TOTAL	14830	12713	
ANNUAL MEAN	40.6	34.8	39.8
HIGHEST ANNUAL MEAN			43.2
LOWEST ANNUAL MEAN			34.8
HIGHEST DAILY MEAN	68	56	68
LOWEST DAILY MEAN	27	19	19
ANNUAL SEVEN-DAY MINIMUM	29	20	20
INSTANTANEOUS PEAK FLOW		58	77
INSTANTANEOUS PEAK STAGE		1.78	1.90
INSTANTANEOUS LOW FLOW		18	13
10 PERCENT EXCEEDS	53	40	56
50 PERCENT EXCEEDS	38	35	38
90 PERCENT EXCEEDS	31	28	30

## 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 mi<sup>2</sup>.

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, 5.81 ft, Sept. 26-30; minimum observed gage height, 5.24 ft, Sept. 11.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.69	5.66	5.70	---	---	5.46	5.43	5.52	5.48	---	5.67	5.39
2	5.67	5.65	5.71	---	---	5.45	5.42	5.51	5.47	---	5.66	5.36
3	5.66	5.65	5.71	---	---	5.44	5.42	5.51	5.45	---	5.67	5.35
4	5.67	5.66	5.70	---	---	5.43	5.41	5.50	5.44	---	5.67	5.33
5	5.66	5.71	5.69	---	---	5.43	5.42	5.51	5.45	---	5.64	5.32
6	5.65	5.71	5.69	5.61	---	5.43	5.41	5.51	5.48	---	5.61	5.31
7	5.65	5.70	5.69	---	---	5.41	5.40	5.51	5.47	---	5.59	5.29
8	5.67	5.70	5.69	---	---	5.42	5.40	5.51	5.45	---	5.62	5.27
9	5.69	5.70	5.69	---	---	5.41	5.40	5.50	5.44	---	5.59	5.27
10	5.68	5.69	5.68	---	---	5.40	5.40	5.49	5.44	---	5.58	5.26
11	5.67	5.70	5.67	---	---	5.40	5.40	5.49	5.46	5.64	5.56	5.24
12	5.65	5.70	5.67	---	---	5.40	5.40	5.49	5.47	5.63	5.55	5.25
13	5.65	5.74	5.67	---	---	5.40	5.40	5.48	5.52	5.61	5.54	5.33
14	5.64	5.75	5.67	---	---	5.40	5.41	5.48	5.52	5.61	5.52	5.38
15	5.64	5.76	5.67	---	5.49	5.39	5.43	5.50	---	5.60	5.50	5.56
16	5.64	5.76	5.66	---	---	5.37	5.47	5.50	---	5.62	5.49	5.70
17	5.64	5.75	5.66	---	---	5.36	5.46	5.49	---	5.68	5.48	5.70
18	5.64	5.75	5.66	---	---	5.35	5.46	---	---	5.67	5.48	5.69
19	5.64	5.75	5.65	---	---	5.35	5.45	---	---	5.69	5.48	5.68
20	5.65	5.75	5.65	---	5.50	5.35	5.45	---	---	5.72	5.48	5.67
21	5.69	5.74	5.65	---	5.48	5.36	5.44	5.46	---	5.73	5.46	5.69
22	5.68	5.74	5.65	---	5.48	5.36	5.43	5.45	5.58	5.75	5.45	5.76
23	5.68	5.74	5.64	---	5.48	5.36	5.42	5.44	5.58	5.73	5.44	5.77
24	5.68	5.71	5.65	---	5.48	5.40	5.42	5.42	5.58	5.72	5.42	5.77
25	5.67	5.70	5.64	---	5.48	5.41	5.43	5.43	5.56	5.71	5.41	5.78
26	5.67	5.71	---	---	5.48	5.41	5.48	5.42	5.55	5.71	5.40	5.81
27	5.67	5.72	---	---	5.48	5.41	5.51	5.40	5.54	5.70	5.40	5.81
28	5.66	5.72	---	---	5.47	5.42	5.51	5.39	5.57	5.69	5.40	5.81
29	5.67	5.71	---	---	---	5.43	5.51	5.39	---	5.68	5.37	5.81
30	5.67	5.71	---	---	---	5.43	5.52	5.43	---	5.67	5.39	5.81
31	5.66	---	---	---	---	5.43	---	5.50	---	5.67	5.40	---
MEAN	5.66	5.71	---	---	---	5.40	5.44	---	---	---	5.51	5.54
MAX	5.69	5.76	---	---	---	5.46	5.52	---	---	---	5.67	5.81
MIN	5.64	5.65	---	---	---	5.35	5.40	---	---	---	5.37	5.24

CHIPPEWA RIVER BASIN

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 mi<sup>2</sup>.

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: Jan. 6 to Feb. 6 and Mar. 24 to Apr. 1. Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	28	41	37	36	38	56	94	66	51	59	61
2	40	27	44	37	35	40	53	91	60	47	58	59
3	38	26	44	37	36	41	46	86	53	44	57	59
4	38	25	44	37	36	42	46	82	49	42	57	59
5	37	26	43	37	36	46	47	106	49	44	57	59
6	35	26	44	36	36	47	49	108	58	49	57	57
7	34	25	42	37	36	44	49	99	56	49	57	54
8	36	24	42	38	35	41	51	93	52	58	79	51
9	42	23	42	36	35	39	51	84	49	67	80	47
10	41	22	43	36	35	39	52	78	46	70	80	43
11	39	21	42	37	35	38	54	74	46	70	78	39
12	37	20	42	37	36	39	56	71	48	67	75	39
13	35	22	43	36	36	40	64	69	50	61	73	52
14	34	25	45	35	37	42	65	67	52	57	68	66
15	33	28	48	34	38	44	74	79	51	50	64	101
16	32	26	48	34	42	42	83	87	50	46	61	147
17	31	23	47	33	46	40	89	83	51	45	59	170
18	31	23	48	33	51	40	83	72	69	44	72	161
19	33	23	48	32	82	41	79	68	76	46	71	157
20	33	25	48	32	100	43	73	74	72	68	74	149
21	39	25	48	32	81	47	66	63	67	72	67	150
22	42	25	46	34	54	48	63	59	63	79	62	412
23	43	25	45	35	39	44	60	59	66	75	59	570
24	43	26	43	35	37	52	60	59	67	68	58	462
25	43	27	42	34	36	56	64	61	63	64	56	342
26	41	29	40	35	36	54	86	62	58	64	56	270
27	40	33	39	36	37	48	105	61	54	65	56	258
28	38	35	37	37	37	46	99	58	56	63	56	252
29	35	38	37	37	---	50	98	59	58	62	55	213
30	33	40	37	37	---	52	98	61	55	60	57	197
31	31	---	36	36	---	50	---	68	---	60	62	---
TOTAL	1150	791	1338	1099	1216	1373	2019	2335	1710	1807	1980	4756
MEAN	37.1	26.4	43.2	35.5	43.4	44.3	67.3	75.3	57.0	58.3	63.9	159
MAX	43	40	48	38	100	56	105	108	76	79	80	570
MIN	31	20	36	32	35	38	46	58	46	42	55	39
CFSM	.46	.32	.53	.44	.53	.54	.83	.93	.70	.72	.79	1.95
IN.	.53	.36	.61	.50	.56	.63	.92	1.07	.78	.83	.91	2.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1994, BY WATER YEAR (WY)

	1992	1993	1994	1992	1993	1994	1992	1993	1994	1992	1993	1994
MEAN	53.2	82.3	72.0	66.7	69.6	95.4	123	114	80.2	71.8	49.3	77.1
MAX	64.8	151	117	105	110	187	201	137	129	83.3	63.9	159
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1993	1993	1994	1994
MIN	37.1	26.4	43.2	35.5	43.4	44.3	67.3	75.3	54.4	58.3	28.9	24.5
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1992	1994	1992	1992

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1992 - 1994

ANNUAL TOTAL	25028	21574	
ANNUAL MEAN	68.6	59.1	79.5
HIGHEST ANNUAL MEAN			104
LOWEST ANNUAL MEAN			59.1
HIGHEST DAILY MEAN	244	Jun 22	570
LOWEST DAILY MEAN	20	Nov 12	20
ANNUAL SEVEN-DAY MINIMUM	22	Nov 7	22
INSTANTANEOUS PEAK FLOW			589
INSTANTANEOUS PEAK STAGE			3.47
INSTANTANEOUS LOW FLOW			20
ANNUAL RUNOFF (CFSM)	.84	.73	15
ANNUAL RUNOFF (INCHES)	11.45	9.87	.98
10 PERCENT EXCEEDS	114	82	149
50 PERCENT EXCEEDS	56	48	61
90 PERCENT EXCEEDS	34	33	35

(a) 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 September 1994 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: May 1991 to September 1994 (discontinued).

TOTAL-PHOSPHORUS DISCHARGE: May 1991 to September 1994 (discontinued).

INSTRUMENTATION.--None. Samples collected using equal-width increment (EWI) method.

REMARKS.--Records fair except for periods Jan. 6 to Feb. 6 and Mar. 24 to Apr. 1, which are poor.

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

EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 19 mg/L, June 22, 1993; minimum observed, 0 mg/L, Nov. 25, 1991 and Dec. 23, 1993.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 11 tons, June 23, 1993; minimum daily, 0.02 ton, Dec. 29, 1993 to Jan. 15, 1994.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.05 mg/L, June 3, 1991; minimum observed, &lt;0.01 mg/L, on many days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 62 lb, Sept. 23, 1994; minimum daily, 0.43 lb, Aug. 28-29, 1992.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 11 mg/L, Apr. 26; minimum observed, 0.0 mg/L, Dec. 23.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 9.4 tons, Sept. 23; minimum daily, 0.02 ton, Dec. 29 to Jan. 15.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.04 mg/L, Oct. 21; minimum observed, &lt;0.01 mg/L, on several days.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 62 lb, Sept. 23; minimum daily, 1.7 lb, Jan. 19-21.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 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)
OCT 1993							
04...	1245	38	87	7.5	<0.010	<0.050	0.020
11...	1715	39	83	7.5	<0.010	<0.050	0.020
14...	1016	34	85	5.0	<0.010	<0.050	0.030
21...	1418	39	88	5.5	<0.010	<0.050	<0.010
26...	1020	42	87	6.5	--	--	--
NOV							
17...	1010	23	80	0.0	0.030	<0.050	0.020
30...	1050	40	--	0.0	<0.010	<0.050	0.020
30...	1345	40	90	0.0	<0.010	<0.050	0.020
DEC							
07...	1133	42	102	--	<0.010	0.052	0.020
14...	1338	45	105	--	<0.010	<0.050	0.060
23...	1040	45	85	-1.0	<0.010	<0.050	0.030
JAN 1994							
05...	1405	37	--	0.0	<0.010	<0.050	0.070
FEB							
15...	1115	38	--	0.0	0.030	<0.050	0.070
MAR							
07...	1135	42	113	0.0	<0.010	0.055	0.040
21...	1345	46	94	1.0	0.020	0.083	0.040
APR							
06...	1120	49	57	2.0	0.030	0.083	0.080
18...	1415	81	75	12.0	0.010	<0.050	0.040
26...	1330	91	57	9.5	<0.010	<0.050	0.050
27...	1450	105	72	8.0	<0.010	<0.050	0.040
MAY							
02...	1140	88	79	7.5	<0.010	<0.050	0.020
11...	1325	71	85	13.0	--	--	--
18...	1010	71	80	16.0	0.020	<0.050	0.030
26...	1400	61	98	18.0	<0.010	<0.050	0.160
JUN							
02...	1153	60	81	18.0	<0.010	<0.050	0.050
13...	1036	50	88	20.5	<0.010	<0.050	0.060
21...	1225	66	84	25.0	<0.010	<0.050	0.030
JUL							
05...	1405	45	--	21.0	<0.010	<0.050	0.090
19...	1415	47	--	21.5	<0.010	<0.050	0.050
26...	1125	65	86	20.0	<0.010	<0.050	0.100
AUG							
04...	1050	57	93	21.0	<0.010	<0.050	0.080
15...	1342	63	86	19.5	--	--	--
24...	0945	57	87	20.0	<0.010	<0.050	0.030
31...	1105	61	90	16.5	<0.010	<0.050	0.050
SEP							
08...	1230	51	88	17.5	<0.010	<0.050	0.030
16...	1130	147	64	20.0	<0.010	0.051	0.070
26...	0935	263	69	14.5	<0.010	<0.050	0.140
28...	0950	261	72	11.5	<0.010	<0.050	0.110
29...	1015	209	72	10.5	<0.010	<0.050	0.080

## CHIPPEWA RIVER BASIN

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05357335 BEAR RIVER NEAR MANITOWISH WATERS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDEd (MG/L) (80154)
OCT 1993						
04...	0.30	--	<0.010	<0.010	<0.010	1
11...	0.30	--	0.020	0.010	<0.010	7
14...	0.20	--	0.010	<0.010	<0.010	10
21...	0.40	--	0.040	<0.010	<0.010	6
26...	0.30	--	0.010	0.040	--	6
NOV						
17...	0.40	--	0.030	<0.010	<0.010	1
30...	0.30	--	<0.010	0.020	<0.010	1
30...	<0.20	--	<0.010	0.010	<0.010	2
DEC						
07...	0.20	--	0.020	<0.010	0.010	1
14...	0.20	--	0.020	0.020	0.010	0
23...	0.20	--	<0.010	<0.010	<0.010	0
JAN 1994						
05...	0.20	--	<0.010	0.020	<0.010	0
FEB						
15...	0.30	--	0.010	0.020	0.020	1
MAR						
07...	0.30	--	<0.010	0.010	<0.010	5
21...	<0.20	--	0.020	0.020	0.010	2
APR						
06...	0.30	--	<0.010	<0.010	<0.010	4
18...	0.50	--	0.020	<0.010	<0.010	6
26...	0.60	--	0.020	0.010	<0.010	11
27...	0.30	--	<0.010	<0.010	<0.010	0
MAY						
02...	0.40	--	<0.010	<0.010	<0.010	8
11...	0.30	--	0.010	<0.010	--	6
18...	0.40	--	0.020	<0.010	<0.010	4
26...	0.40	--	<0.010	0.010	<0.010	3
JUN						
02...	0.40	--	0.030	0.020	<0.010	3
13...	0.50	--	<0.010	<0.010	<0.010	2
21...	0.60	--	<0.010	0.020	<0.010	5
JUL						
05...	0.40	--	0.010	0.010	<0.010	3
19...	0.40	0.50	0.030	0.020	<0.010	5
26...	0.50	--	0.030	0.030	0.010	4
AUG						
04...	0.50	--	0.020	0.010	<0.010	6
15...	0.40	--	0.020	0.020	--	10
24...	0.40	--	0.020	<0.010	<0.010	3
31...	0.40	--	0.010	<0.010	<0.010	5
SEP						
08...	0.40	--	0.010	<0.010	<0.010	3
16...	0.50	--	0.020	<0.010	<0.010	5
26...	0.60	0.60	0.020	0.020	0.010	7
28...	0.60	0.50	0.020	0.010	<0.010	5
29...	0.50	--	0.030	0.020	<0.010	5

## CHIPPEWA RIVER BASIN

05357335 BEAR RIVER NEAR MANITOWISH WATERS, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.26	.17	.02	.04	.27	.45	1.0	.46	.52	.81	.81
2	.18	.22	.16	.02	.04	.30	.45	1.8	.40	.47	.83	.74
3	.16	.19	.14	.02	.05	.34	.42	1.7	.35	.43	.85	.69
4	.15	.17	.12	.02	.05	.39	.44	1.6	.32	.40	.90	.64
5	.17	.16	.11	.02	.05	.47	.49	2.1	.32	.41	.95	.61
6	.21	.14	.09	.02	.05	.52	.54	2.1	.37	.46	.99	.55
7	.25	.12	.08	.02	.05	.52	.57	1.8	.35	.47	1.0	.48
8	.33	.11	.07	.02	.05	.46	.61	1.7	.32	.57	1.5	.43
9	.49	.10	.07	.02	.06	.41	.63	1.5	.30	.66	1.6	.42
10	.60	.08	.06	.02	.06	.37	.66	1.4	.27	.71	1.7	.40
11	.71	.07	.06	.02	.06	.34	.71	1.2	.27	.73	1.7	.39
12	.77	.06	.05	.02	.06	.32	.77	1.1	.28	.70	1.7	.41
13	.83	.06	.05	.02	.06	.30	.91	1.1	.29	.65	1.7	.59
14	.86	.06	.05	.02	.07	.29	.96	.96	.33	.62	1.7	.79
15	.80	.06	.05	.02	.07	.29	1.1	1.1	.36	.56	1.6	1.3
16	.74	.05	.05	.03	.09	.25	1.3	1.1	.39	.53	1.4	2.0
17	.69	.04	.05	.03	.10	.23	1.5	1.0	.44	.53	1.2	2.4
18	.64	.04	.05	.03	.13	.21	1.4	.81	.66	.52	1.2	2.3
19	.64	.04	.04	.03	.23	.19	1.4	.75	.82	.56	1.0	2.3
20	.60	.05	.04	.03	.30	.19	1.4	.79	.86	.80	.93	2.3
21	.66	.05	.04	.03	.27	.19	1.4	.65	.87	.84	.73	2.3
22	.72	.05	.04	.03	.19	.21	1.4	.59	.82	.89	.58	6.6
23	.72	.05	.04	.03	.16	.20	1.5	.57	.83	.83	.48	9.4
24	.71	.05	.03	.03	.16	.25	1.6	.55	.82	.73	.42	7.8
25	.71	.05	.03	.03	.17	.29	1.8	.54	.75	.67	.44	5.9
26	.67	.06	.03	.04	.19	.30	2.0	.54	.67	.67	.48	4.7
27	.59	.06	.03	.04	.21	.28	.22	.51	.62	.70	.54	3.9
28	.51	.07	.03	.04	.24	.29	.15	.47	.62	.71	.60	3.4
29	.43	.07	.02	.04	---	.33	.28	.46	.62	.73	.64	2.9
30	.36	.13	.02	.04	---	.37	.55	.46	.58	.75	.74	2.7
31	.31	---	.02	.04	---	.38	---	.50	---	.78	.87	---
TOTAL	16.43	2.72	1.89	0.84	3.26	9.75	27.61	32.45	15.36	19.60	31.78	70.15
WTR YR 1994	TOTAL 231.84											

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.1	2.5	2.0	1.9	2.1	3.8	5.1	9.1	2.8	7.3	3.3
2	2.1	2.1	2.9	2.0	1.9	2.1	3.4	4.9	9.4	2.5	6.8	3.2
3	2.1	2.1	3.2	2.0	1.9	2.2	2.8	4.6	7.8	2.4	6.4	3.2
4	2.1	2.1	3.5	2.0	1.9	2.3	2.7	4.4	6.5	2.3	6.2	3.2
5	2.2	2.3	3.8	2.0	1.9	2.5	2.6	5.7	5.9	2.4	6.2	3.2
6	2.3	2.4	4.3	1.9	1.9	2.5	2.7	5.8	6.3	2.8	6.2	3.1
7	2.4	2.4	4.5	2.0	1.9	2.4	2.8	5.4	5.4	3.1	6.2	2.9
8	2.8	2.5	4.5	2.1	1.9	2.3	3.1	5.0	4.6	4.0	8.5	2.8
9	3.6	2.5	4.6	1.9	1.9	2.3	3.3	4.5	3.9	4.9	8.7	2.8
10	4.0	2.5	4.6	1.9	1.9	2.4	3.5	4.2	3.3	5.6	8.6	2.7
11	4.1	2.6	4.6	2.0	1.9	2.5	3.9	4.0	3.0	6.0	8.5	2.7
12	3.3	2.6	4.6	2.0	1.9	2.7	4.3	4.2	2.8	6.2	8.1	2.9
13	2.4	3.0	4.7	1.9	1.9	2.9	5.2	4.6	2.7	6.1	7.9	4.3
14	1.9	3.5	4.8	1.9	2.0	3.2	5.6	4.9	2.8	6.2	7.3	6.0
15	2.2	4.1	4.8	1.8	2.0	3.5	6.7	6.4	2.8	5.9	6.9	10
16	2.6	4.0	4.5	1.8	2.3	3.5	8.0	7.8	2.7	5.9	6.6	16
17	3.1	3.7	4.1	1.8	2.5	3.6	9.1	8.2	2.7	6.3	6.4	18
18	3.7	3.4	3.8	1.8	2.7	3.7	8.9	7.6	3.7	6.6	7.7	17
19	4.8	3.2	3.5	1.7	4.4	4.0	8.5	6.7	4.1	7.4	7.6	17
20	5.8	3.1	3.2	1.7	5.4	4.4	7.8	6.7	3.9	11	8.0	16
21	7.9	2.8	3.0	1.7	4.4	5.0	7.1	5.3	3.6	12	7.3	16
22	7.1	2.6	2.7	1.8	2.9	5.0	6.8	4.5	3.4	13	6.7	44
23	5.4	2.4	2.5	1.9	2.1	4.4	6.5	4.2	3.6	12	6.4	62
24	4.0	2.3	2.3	1.9	2.0	4.9	6.4	3.8	3.6	11	6.1	50
25	3.0	2.2	2.2	1.8	1.9	5.1	7.0	3.6	3.4	10	5.5	37
26	2.3	2.2	2.1	1.9	1.9	4.7	8.6	3.5	3.1	10	4.9	29
27	2.3	2.3	2.1	1.9	2.0	4.0	6.5	3.8	2.9	10	4.4	28
28	2.3	2.3	2.0	2.0	2.0	3.7	5.3	4.2	3.0	9.3	4.1	29
29	2.2	2.2	2.0	2.0	---	3.8	5.3	5.1	3.1	8.7	3.6	33
30	2.2	2.2	2.0	2.0	---	3.8	5.3	6.1	3.0	8.1	3.4	32
31	2.1	---	2.0	1.9	---	3.5	---	8.1	---	7.7	3.4	---
TOTAL	100.6	79.7	105.9	59.0	65.2	105.0	163.5	162.9	126.1	212.2	201.9	500.3
WTR YR 1994	TOTAL 1882.3											





## CHIPPEWA RIVER BASIN

05362000 JUMP RIVER AT SHELDON, WI

LOCATION.--Lat 45°18'29", long 90°57'23", in sec.26, T.33 N., R.5 W., Rusk County, Hydrologic Unit 07050004, on right bank just downstream from highway bridge in Sheldon, 1,500 ft upstream from Shoulder Creek and 11 mi upstream from mouth.

DRAINAGE AREA.--576 mi<sup>2</sup>.

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. 8-11 and Nov. 24 to Apr. 1. Records good except those for ice-affected periods, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	205	160	58	56	110	490	2000	418	207	100	74
2	175	215	170	56	56	100	638	1580	318	167	105	70
3	221	201	170	56	58	100	631	1250	257	142	128	67
4	233	194	160	54	58	100	620	1010	215	123	131	65
5	204	205	160	54	58	130	541	904	196	116	134	63
6	202	217	160	56	58	160	489	846	196	178	121	65
7	206	197	160	54	58	190	449	735	226	271	110	63
8	222	190	140	54	58	200	413	651	215	278	96	62
9	263	170	150	52	60	190	408	542	183	274	90	60
10	297	160	140	52	60	170	413	456	161	263	80	59
11	291	170	140	52	62	150	423	398	143	231	77	55
12	284	170	130	52	64	130	448	370	126	192	72	56
13	266	208	150	50	64	120	560	342	136	165	70	81
14	239	505	140	50	66	130	778	320	181	148	66	858
15	227	656	150	50	66	160	857	369	234	139	62	4940
16	224	577	150	50	68	210	1360	482	203	123	55	12700
17	243	498	160	52	80	220	1690	451	193	117	52	11500
18	269	442	140	50	96	210	1530	378	280	107	49	5780
19	262	418	120	50	170	180	1270	324	255	107	49	2930
20	254	361	110	52	300	160	1050	286	222	141	59	1670
21	257	369	100	52	320	180	847	252	186	175	61	1090
22	305	339	88	54	330	350	709	231	154	277	67	1410
23	323	305	76	58	280	660	609	216	130	355	74	1970
24	306	280	68	58	240	780	573	202	117	318	73	1960
25	317	210	60	60	210	700	1370	188	113	240	70	1520
26	276	200	56	62	180	600	2930	180	125	190	73	1220
27	244	180	56	64	150	540	3980	206	121	162	62	1080
28	229	170	58	66	130	500	3370	200	140	139	56	981
29	222	160	58	62	---	480	2550	192	167	125	54	882
30	214	160	58	58	---	470	2300	475	220	112	63	752
31	196	---	58	56	---	480	---	592	---	104	74	---
TOTAL	7652	8332	3696	1704	3456	8860	34296	16628	5831	5686	2433	54083
MEAN	247	278	119	55.0	123	286	1143	536	194	183	78.5	1803
MAX	323	656	170	66	330	780	3980	2000	418	355	134	12700
MIN	175	160	56	50	56	100	408	180	113	104	49	55
CFSM	.43	.48	.21	.10	.21	.50	1.98	.93	.34	.32	.14	3.13
IN.	.49	.54	.24	.11	.22	.57	2.21	1.07	.38	.37	.16	3.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1994, BY WATER YEAR (WY)

	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944					
MEAN	403	435	181	101	93.9	739	1813	872	667	260	214	465																							
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	1946	1946	1987	1934	1936	1933	1976																							

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1915 - 1994
ANNUAL TOTAL	208954	152657	
ANNUAL MEAN	572	418	519
HIGHEST ANNUAL MEAN			923
LOWEST ANNUAL MEAN			214
HIGHEST DAILY MEAN	15800	Jun 21	40800
LOWEST DAILY MEAN	56	Dec 26, 27	49
ANNUAL SEVEN-DAY MINIMUM	58	Dec 25	50
INSTANTANEOUS PEAK FLOW		14300	Sep 16
INSTANTANEOUS PEAK STAGE		12.61	Sep 16
INSTANTANEOUS LOW FLOW		47	Aug 18, 19
ANNUAL RUNOFF (CFSM)	.99	.73	.90
ANNUAL RUNOFF (INCHES)	13.49	9.86	12.24
10 PERCENT EXCEEDS	1580	779	1300
50 PERCENT EXCEEDS	175	180	150
90 PERCENT EXCEEDS	81	58	45

(a) Also occurred July 11, 1936

(b) From rating curve extended above 13,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow

(c) From floodmark

CHIPPEWA RIVER BASIN

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 mi<sup>2</sup>.

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.--Estimated daily discharges: Ice-affected periods, Jan. 16-22, Feb. 3-10, and 14-16. Records good except those for ice-affected periods, which are fair. 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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3840	3110	2450	2510	3160	5470	2850	13800	3030	3660	5630	1900
2	2580	3810	3910	3240	2480	4740	1560	13700	4650	1530	3450	3390
3	2780	2860	4970	3190	2400	4660	2420	11100	3150	1520	3770	1390
4	3860	2080	3540	3430	2700	5170	3010	7730	1570	1520	3680	1320
5	2230	2130	3300	3490	2400	5160	3340	8990	2940	2740	4230	1850
6	3970	2780	5190	3060	2400	3970	2980	8600	3910	4480	2750	2340
7	3860	2550	3540	2950	2900	5950	2650	4780	3300	4750	3380	2210
8	4120	2610	3290	2150	3500	7270	4270	5400	3080	5450	3740	2480
9	2380	2330	3870	1820	2500	6580	3220	5930	2490	2380	3700	2000
10	3340	2790	4060	3920	2500	5420	2330	5060	3130	3630	2680	943
11	3760	2410	3550	1900	2620	4160	6120	3930	1540	4270	2930	945
12	4270	3340	2660	3300	1720	3630	5890	3660	1530	3390	2910	957
13	3980	3120	4350	2760	1570	2700	8420	3920	4270	2290	1540	4750
14	3540	4200	4920	3120	3300	2740	7960	3470	3540	2250	1540	7050
15	3730	5290	4810	2530	3700	3560	7910	1960	2390	3410	1530	14300
16	1200	5540	3940	3200	4200	3560	9250	2920	4040	1530	1380	42200
17	2710	5290	4580	3000	4190	3240	9990	6570	3690	1520	1050	51600
18	3230	5010	4370	2600	3710	3280	9970	3800	1520	3530	958	48200
19	3020	5480	3990	3000	3310	2350	9950	3800	1540	3280	969	37300
20	3850	4300	4470	3500	4930	2590	9420	2970	4540	2420	957	23700
21	2560	3280	3950	2200	5610	2400	7920	1570	3160	5110	1440	14800
22	3820	3990	4230	2600	6390	1530	6460	1540	2970	7220	2500	10700
23	2490	3450	4070	2440	5270	2970	6190	4200	2220	4890	2230	13800
24	3720	3980	2960	3990	4540	3670	6240	2660	1510	5410	2060	12600
25	3740	2700	1700	2330	4700	3800	8020	2270	2120	6380	1110	12700
26	2970	3310	2300	3390	2250	4380	15700	1900	1510	4490	2400	11500
27	2800	1760	3030	3380	2420	4160	27900	1700	3210	4360	1480	8030
28	3610	1520	3470	3190	4670	2220	26100	1970	2970	4650	1350	9710
29	2590	3080	2050	1740	---	1600	23100	1550	3690	4230	1970	9680
30	3120	4300	3130	2700	---	1310	18300	2540	2590	2630	3710	8460
31	1800	---	3110	3720	---	2970	---	3960	---	2460	1740	---
TOTAL	99470	102400	113760	90350	96040	117210	259440	147950	85800	111380	74764	362805
MEAN	3209	3413	3670	2915	3430	3781	8648	4773	2860	3593	2412	12090
MAX	4270	5540	5190	3990	6390	7270	27900	13800	4650	7220	5630	51600
MIN	1200	1520	1700	1740	1570	1310	1560	1540	1510	1520	957	943

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1888 - 1994, BY WATER YEAR (WY)

	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	4181	4175	2991	2570	2578	5310	11570	8624	6970	4311	3338	4503																																																																																															
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 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1888 - 1994
ANNUAL TOTAL	2093655	1661369	
ANNUAL MEAN	5736	4552	5089
HIGHEST ANNUAL MEAN			8868
LOWEST ANNUAL MEAN			2453
HIGHEST DAILY MEAN	57300	51600	95500
LOWEST DAILY MEAN	748	943	40
ANNUAL SEVEN-DAY MINIMUM	1530	1180	308
INSTANTANEOUS PEAK FLOW		52300	102000
INSTANTANEOUS PEAK STAGE		18.39	24.80
10 PERCENT EXCEEDS	9930	7800	10600
50 PERCENT EXCEEDS	3850	3310	3310
90 PERCENT EXCEEDS	1920	1570	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 18 TO AUGUST 22, 1994  
(Milligrams per liter unless otherwise indicated)

	Apr. 18	June 14	July 15	Aug. 22
	-----	-----	-----	-----
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	2.06	1.65	1.62	1.56
Specific conductance ( $\mu$ S/cm)	97	124	112	136
pH (units)	7.1	8.8	6.9	9.6
Water temperature ( $^{\circ}$ C)	10.5	24.0	23.0	23.0
Secchi-depth (meters)	0.7	0.6	0.8	0.4
Dissolved oxygen	10.0	10.4	6.2	17.0
Phosphorus, total (as P)	0.117	0.120	0.147	0.204
Chlorophyll a, phytoplankton ( $\mu$ g/L)	5.5	51	25	130

## CHIPPEWA RIVER BASIN

49

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 mi<sup>2</sup>.

## 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, 2.58 ft, Apr. 13; minimum observed, 1.46 ft, Aug. 8.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1.76	---	---	---	---	---	1.98	1.58	---	---	---
2	---	---	---	---	---	---	---	---	---	---	1.56	---
3	1.78	---	---	---	---	---	1.88	---	1.60	---	---	1.54
4	---	1.78	---	---	---	---	---	1.88	---	1.48	---	---
5	---	---	---	---	---	---	---	---	---	---	1.52	---
6	1.70	---	---	---	---	---	1.92	1.88	1.76	---	---	1.58
7	---	---	---	---	---	---	---	---	---	---	---	---
8	1.88	1.86	---	---	---	---	---	---	1.68	2.10	1.46	---
9	---	---	---	---	---	---	---	1.84	---	---	---	1.54
10	---	---	---	---	---	---	1.88	---	---	---	---	---
11	1.92	1.84	---	---	---	---	---	---	1.62	1.78	1.60	---
12	---	---	---	---	---	---	---	1.82	---	---	---	1.54
13	---	---	---	---	---	---	2.58	---	---	---	---	---
14	1.78	2.28	---	---	---	---	---	---	1.65	---	1.60	---
15	---	---	---	---	1.64	---	2.08	1.78	---	1.62	---	1.56
16	---	1.98	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	1.60	---	1.54	---
18	---	---	---	---	---	---	2.06	1.74	---	1.64	---	1.68
19	1.90	---	---	---	---	---	---	---	1.56	---	---	---
20	---	---	---	---	---	---	---	---	---	---	1.52	---
21	---	---	---	---	---	---	1.92	1.68	1.54	1.66	---	1.62
22	1.94	1.78	---	---	---	---	---	---	---	---	1.56	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	1.88	---	---	---	---	---	---	1.64	1.48	1.64	---	1.68
25	---	1.76	---	---	---	---	2.08	---	---	---	1.54	---
26	---	---	---	---	---	---	---	1.60	1.52	---	---	---
27	1.80	---	---	---	---	---	1.88	---	---	1.62	---	1.68
28	---	---	---	---	---	---	---	---	1.52	---	1.48	---
29	1.76	---	---	---	---	---	---	1.58	---	---	---	---
30	---	---	---	---	---	---	---	---	1.56	1.58	---	---
31	---	---	---	---	---	1.88	---	---	---	---	1.62	---

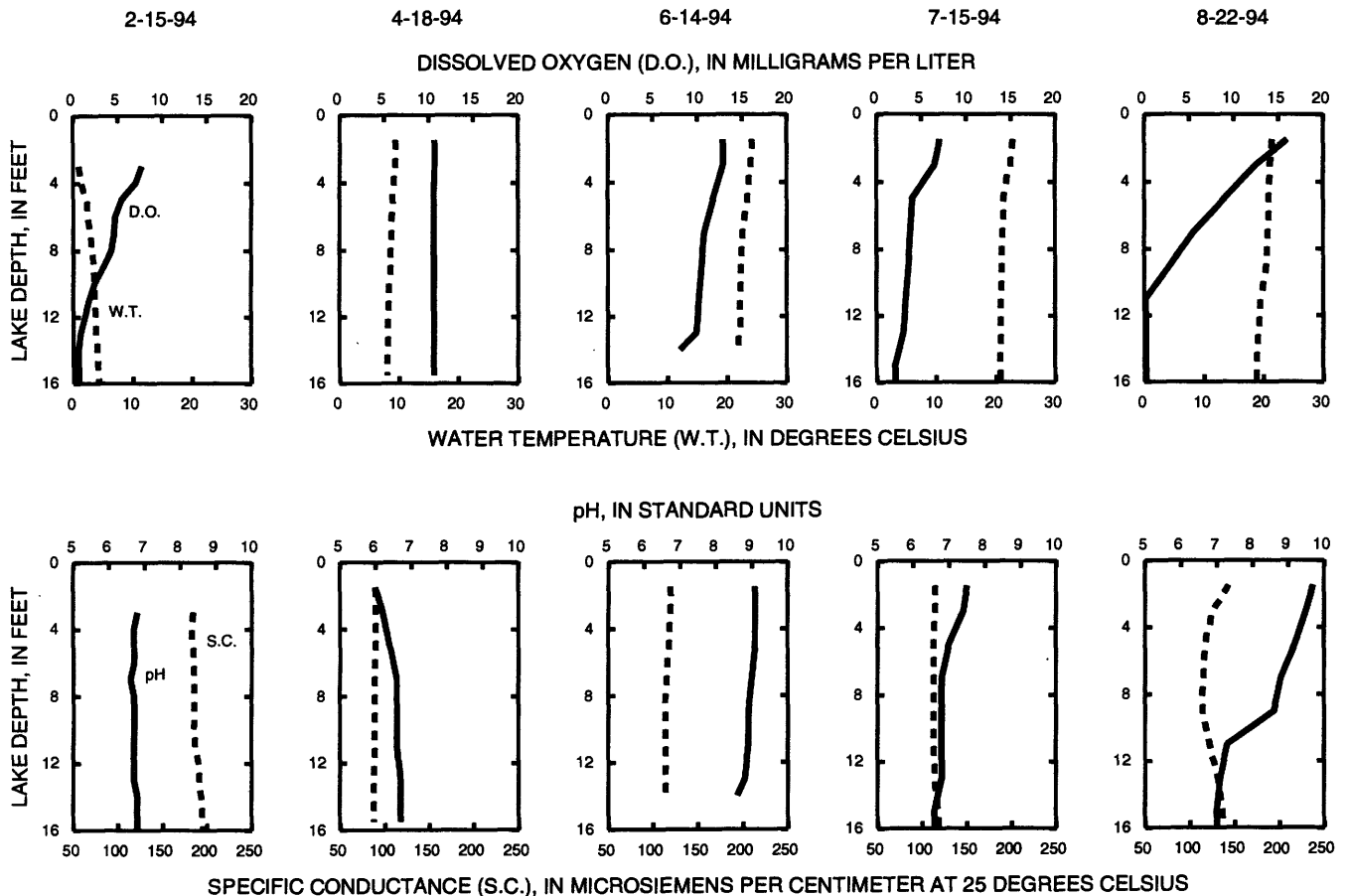
WATER-QUALITY RECORDS

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 15 TO AUGUST 22, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 15		Apr. 18		June 14		July 15		Aug. 22	
Depth of sample (ft)	3.0	16	1.5	15	1.5	14	1.5	16	1.5	16
Lake stage (ft)	1.64		2.06		1.65		1.62		1.56	
Specific conductance (µS/cm)	185	196	90	88	120	114	115	118	144	137
pH (units)	6.8	6.8	6.0	6.7	9.1	8.6	7.5	6.6	9.7	7.0
Water temperature (°C)	1.0	4.5	9.5	8.0	24.0	21.5	23.0	20.5	21.5	19.0
Color (Pt-Co. scale)	---	---	55	55	---	---	---	---	---	---
Turbidity (NTU)	---	---	16	15	---	---	---	---	---	---
Secchi-depth (meters)	---	---	0.5		0.6		0.8		0.4	
Dissolved oxygen	7.7	0.6	10.7	10.6	12.9	8.1	7.1	2.1	16.0	0.2
Hardness, as CaCO3	---	---	37	36	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	8.6	8.3	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	3.7	3.7	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	3.8	3.6	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	5	5	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	27	27	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	9.0	9.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	9.1	8.9	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.0	0.0	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	5.7	5.7	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	88	86	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.51	0.52	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.14	0.14	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.90	1.1	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.4	1.6	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.143	0.141	0.116	0.124	0.144	0.156	0.248	0.668
Phosphorus, ortho, dissolved (as P)	---	---	0.029	0.029	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	310	310	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	7.4	---	110	---	42	---	290	---



CHIPPEWA RIVER BASIN

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 mi<sup>2</sup>.

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 period, Nov. 25 to Mar. 22. Records good except those for ice-affected period, which is poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	14	12	3.8	2.9	12	48	148	4.1	3.7	1.5	3.2
2	29	15	13	3.5	3.0	11	55	91	3.5	2.8	1.3	3.2
3	34	18	14	3.3	3.1	10	46	69	3.2	2.2	1.4	2.9
4	23	20	14	3.0	3.1	11	43	53	2.8	1.9	1.6	2.3
5	17	31	14	2.8	3.1	32	42	53	4.3	2.6	1.6	2.0
6	65	35	13	2.6	3.1	90	39	47	7.9	6.9	1.4	1.8
7	43	28	12	2.4	2.8	72	34	38	7.4	8.1	1.2	1.7
8	40	22	12	2.3	2.7	54	35	31	5.6	16	1.1	1.5
9	53	22	13	2.1	2.6	40	42	27	4.3	19	.96	1.3
10	33	24	11	2.2	2.6	28	43	23	3.5	13	1.0	1.3
11	26	24	9.2	2.1	3.0	20	42	21	3.0	7.5	1.2	1.2
12	24	24	9.4	2.0	3.5	22	56	18	3.0	5.3	1.2	1.5
13	19	130	10	2.0	3.7	35	151	16	4.0	3.8	1.2	4.1
14	17	140	11	1.9	4.2	56	118	15	4.4	3.5	1.1	4.3
15	16	92	12	1.8	4.6	86	161	34	3.9	3.4	.90	7.9
16	37	62	13	1.8	5.0	66	215	30	3.1	3.0	.87	33
17	38	46	12	2.0	5.2	50	130	21	2.5	2.9	.63	21
18	30	39	10	1.8	5.8	40	88	16	2.4	2.4	.59	12
19	27	33	9.0	1.7	6.8	33	71	14	2.3	3.2	.41	7.5
20	22	33	8.0	1.6	7.2	41	55	14	2.2	4.3	.40	5.2
21	50	25	7.0	1.7	5.8	80	43	11	2.2	4.0	.40	4.4
22	44	22	6.2	2.0	4.5	160	35	8.8	1.9	7.7	.40	7.6
23	34	21	5.4	2.5	3.6	187	31	8.7	1.6	6.0	.40	18
24	29	19	4.7	2.5	2.9	165	34	8.5	1.6	4.3	.29	14
25	25	18	4.3	2.5	2.2	114	925	7.3	1.7	3.6	.32	8.9
26	23	16	3.8	2.7	2.0	94	1160	8.5	4.3	2.8	.59	7.2
27	20	15	3.6	2.8	1.6	88	674	9.6	5.0	2.4	.70	7.2
28	19	13	3.3	3.0	1.4	75	308	6.9	4.0	2.2	1.8	7.3
29	17	12	3.4	2.9	---	60	253	5.8	4.3	1.9	2.7	7.8
30	17	12	3.6	2.8	---	51	233	5.8	4.7	1.6	3.3	6.6
31	18	---	3.8	2.7	---	45	---	5.4	---	1.5	3.9	---
TOTAL	928	1025	280.7	74.8	382.8	1928	5210	865.3	108.7	153.5	36.36	207.9
MEAN	29.9	34.2	9.05	2.41	13.7	62.2	174	27.9	3.62	4.95	1.17	6.93
MAX	65	140	14	3.8	7.2	187	1160	148	7.9	19	3.9	33
MIN	16	12	3.3	1.6	2.6	10	31	5.4	1.6	1.5	.29	1.2
CFSM	.59	.67	.18	.05	.27	1.22	3.41	.55	.07	.10	.02	.14
IN.	.68	.75	.20	.05	.28	1.41	3.80	.63	.08	.11	.03	.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1994, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1986	1987	1988	1989	1990	1991	1992	1993	1994	
MEAN	28.0	57.3	18.9	3.84	4.81	134	102	64.3	79.6	23.8	37.8	65.5							
MAX	123	262	79.7	6.66	13.7	181	220	184	338	49.4	143	420							
(WY)	1987	1992	1992	1992	1994	1989	1993	1993	1993	1986	1986	1986							
MIN	2.17	3.57	.56	.28	.45	62.2	25.9	5.29	1.33	.31	.37	.81							
(WY)	1990	1990	1990	1990	1990	1994	1987	1987	1988	1988	1988	1988							

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1986 - 1994	
ANNUAL TOTAL	33513.9		11201.06			
ANNUAL MEAN	91.8		30.7		48.1	
HIGHEST ANNUAL MEAN					93.0	
LOWEST ANNUAL MEAN					28.5	
HIGHEST DAILY MEAN	3000	Jun 20	1160	Apr 26	3670	Sep 22 1986
LOWEST DAILY MEAN	(a)3.3	Dec 28	.29	Aug 24	.03	Jul 31 1988
ANNUAL SEVEN-DAY MINIMUM	3.7	Dec 25	.37	Aug 19	.07	Jul 28 1988
INSTANTANEOUS PEAK FLOW			1660	Apr 26	(b)9050	Sep 22 1986
INSTANTANEOUS PEAK STAGE			6.25	Apr 26	10.13	Sep 22 1986
INSTANTANEOUS LOW FLOW			.26	Aug 24,25	.02	Jul 30 1988
ANNUAL RUNOFF (CFSM)	1.80		.60		.94	
ANNUAL RUNOFF (INCHES)	24.45		8.17		12.81	
10 PERCENT EXCEEDS	256		57		118	
50 PERCENT EXCEEDS	21		8.7		9.4	
90 PERCENT EXCEEDS	4.6		1.6		1.4	

(a) Ice affected

(b) From rating curve extended above 2,500 ft<sup>3</sup>/s on basis of step-backwater measurement of peak flow

CHIPPEWA RIVER BASIN

453907091345800 BALSAM LAKE NEAR BIRCHWOOD, WI

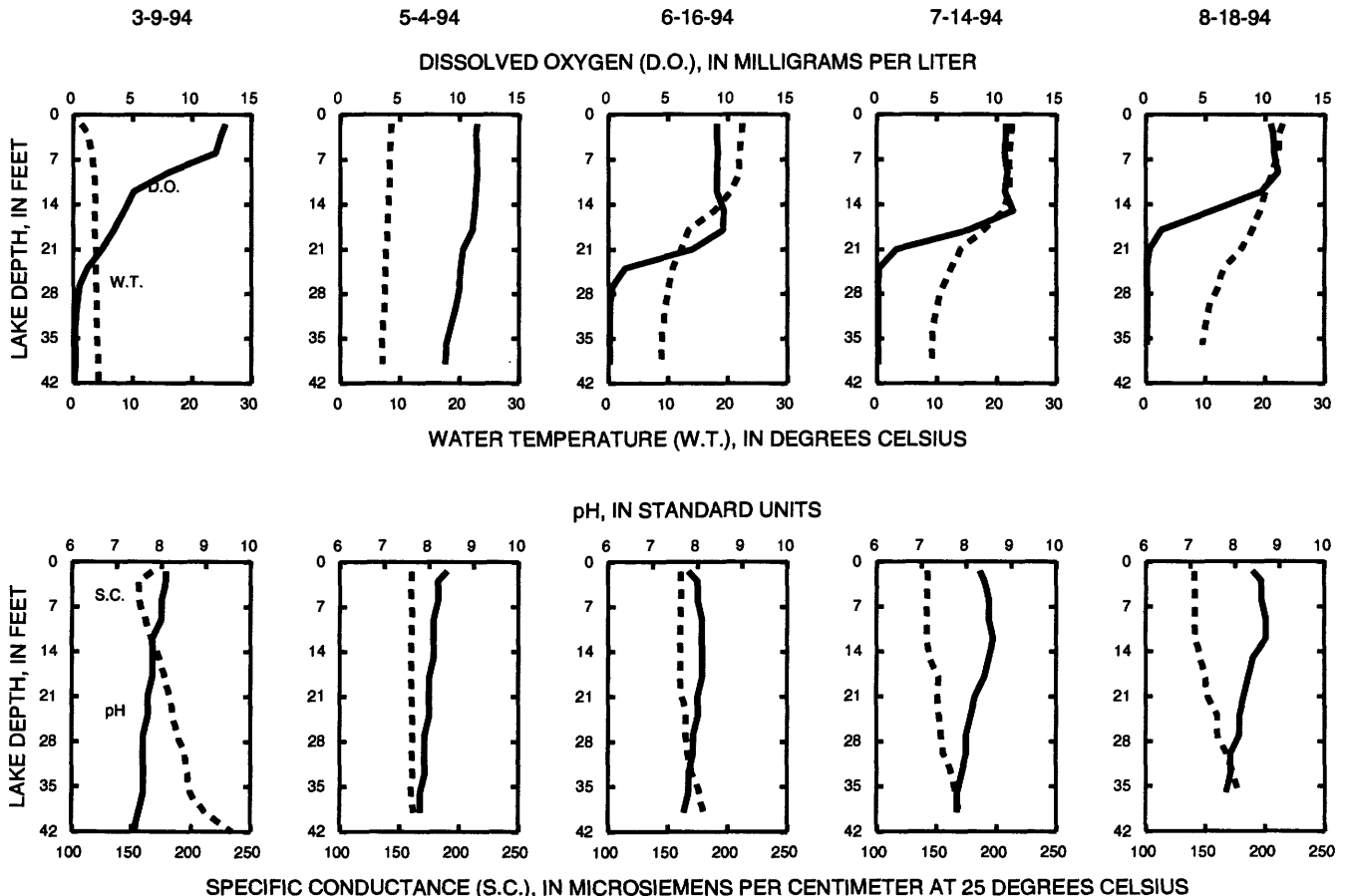
LOCATION.--Lat 45°39'07", long 91°34'58", in NE 1/4 NE 1/4 sec.34, T.37 N., R.10 W., Washburn County, Hydrologic Unit 07050007, 1.2 mi southwest of Birchwood.

PERIOD OF RECORD.--March 1993 to August 1994 (discontinued).

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 09 TO AUGUST 18, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 09		May 04		June 16		July 14		Aug. 18	
Depth of sample (ft)	1.5	42	1.5	39	1.5	39	1.5	39	1.5	39
Lake stage (ft)	10.72		10.66		10.40		10.50		10.50	
Specific conductance (µS/cm)	167	234	160	162	161	180	143	169	141	179
pH (units)	8.1	7.4	8.4	7.8	7.8	7.7	8.3	7.8	8.4	7.7
Water temperature (°C)	1.5	4.5	8.5	7.0	22.5	9.0	22.5	9.0	23.0	9.5
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.1	1.3	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.4		3.6		2.4		2.2	
Dissolved oxygen	12.8	0.1	11.5	8.8	9.1	0.1	10.8	0.1	10.5	0.1
Hardness, as CaCO3	---	---	81	81	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	21	21	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	7.0	7.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	3.0	3.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.8	0.8	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	81	82	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	4.0	4.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	2.4	2.4	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.0	0.0	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	15	15	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	108	108	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.08	0.12	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.04	0.10	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.48	0.52	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.023	0.030	0.012	0.320	0.016	0.330	0.017	0.448
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	140	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	11	---	3.2	---	9.3	---	11	---



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 1993 to August 1994 (discontinued).

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 09 TO AUGUST 18, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 09		May 04		June 16		July 14		Aug. 18	
Depth of sample (ft)	1.5	42	1.5	45	1.5	45	1.5	48	1.5	45
Lake stage (ft)	10.72		10.66		10.40		10.50		10.50	
Specific conductance (µS/cm)	140	186	136	134	140	163	127	168	128	190
pH (units)	8.4	7.5	8.1	7.8	7.6	7.4	8.0	7.5	8.4	7.5
Water temperature (°C)	1.5	4.5	8.5	8.5	21.5	11.5	22.0	12.0	23.0	12.0
Color (Pt-Co. scale)	---	---	20	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.9	2.0	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.1		3.6		2.2		1.6	
Dissolved oxygen	11.5	0.3	11.2	10.7	8.6	0.1	8.8	0.1	10.4	0.1
Hardness, as CaCO3	---	---	67	70	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	17	18	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	6.0	6.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	3.0	3.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.5	0.8	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	67	67	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	4.0	4.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	2.0	2.1	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.0	0.0	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	12	12	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	90	90	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.01	0.06	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.02	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.50	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.51	0.56	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.024	0.026	0.011	0.250	0.017	0.350	0.019	0.770
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	81	80	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	12	---	3.3	---	7.3	---	17	---

3-9-94

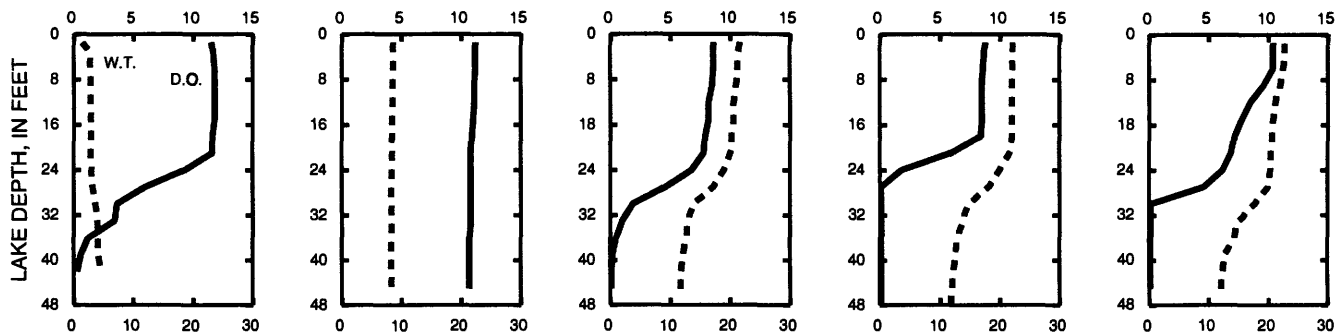
5-4-94

6-16-94

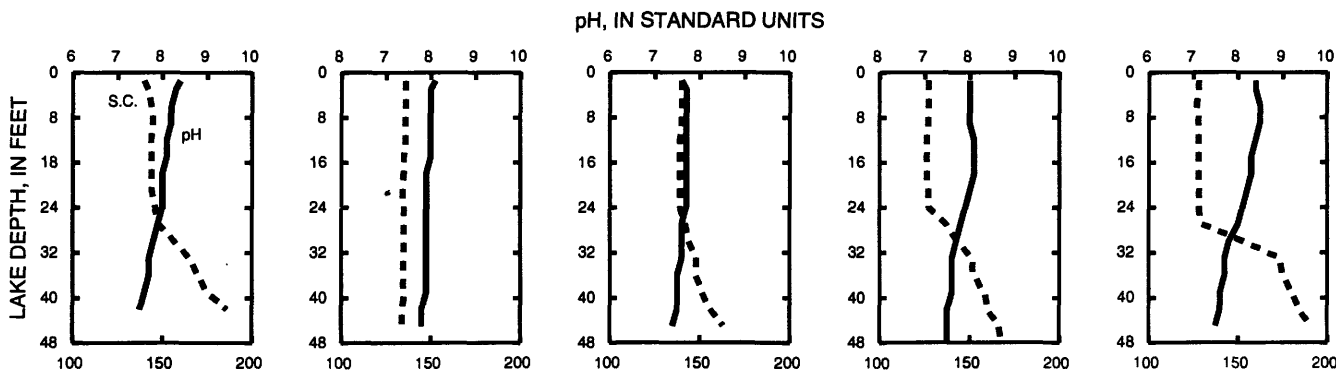
7-14-94

8-18-94

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

453421091333700 HEMLOCK LAKE NEAR MIKANA, WI

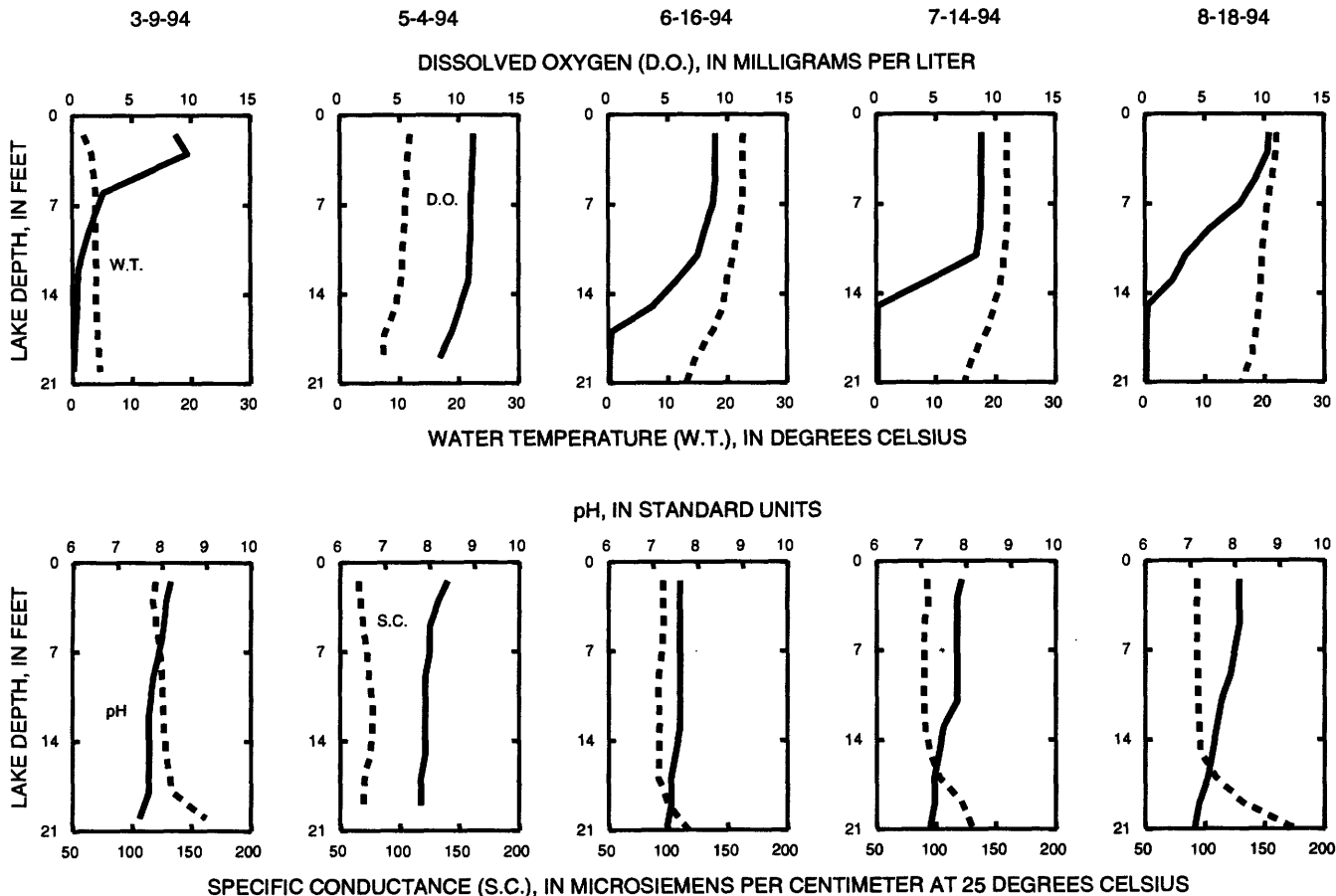
LOCATION.--Lat 45°34'21", long 91°33'37", in SE 1/4 SE 1/4 sec.26, T.36 N., R.10 W., Barron County, Hydrologic Unit 07050007, 2.5 mi southeast of Mikana.

PERIOD OF RECORD.--March 1993 to August 1994 (discontinued).

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 09 TO AUGUST 18, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 09		May 04		June 16		July 14		Aug. 18	
Depth of sample (ft)	1.5	20	1.5	19	1.5	19	1.5	21	1.5	21
Lake stage (ft)	10.72		10.66		10.40		10.50		10.50	
Specific conductance (µS/cm)	120	162	65	69	96	100	92	131	93	176
pH (units)	8.2	7.5	8.4	7.8	7.6	7.4	7.9	7.2	8.1	7.1
Water temperature (°C)	2.0	4.5	11.5	7.0	22.5	14.5	22.0	15.0	22.0	16.0
Color (Pt-Co. scale)	---	---	50	50	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.5	2.6	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	2.1	3.1	---	1.1	---	---	0.9
Dissolved oxygen	8.7	0.1	11.2	8.4	9.0	0.1	8.8	0.1	10.4	0.1
Hardness, as CaCO <sub>3</sub>	---	---	30	33	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	7.0	8.2	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	3.0	3.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.0	2.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.6	0.8	---	---	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	26	31	---	---	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	7.0	6.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	0.9	0.9	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	0.0	---	---	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	8.1	9.9	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	54	60	---	---	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	<0.01	0.01	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	<0.00	0.02	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.40	0.41	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.027	0.036	0.022	0.145	0.037	0.230	0.036	0.251
Phosphorus, ortho, dissolved (as P)	---	---	0.003	0.005	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	150	170	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	6.4	---	5.7	---	25	---	38	---



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

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 1993 to August 1994 (discontinued).

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 09 TO AUGUST 18, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 09		May 04		June 16		July 14		Aug. 18	
Depth of sample (ft)	1.5	24	1.5	27	1.5	27	1.5	27	1.5	27
Lake stage (ft)	10.72		10.66		10.40		10.50		10.50	
Specific conductance (µS/cm)	120	140	131	134	140	144	126	136	126	127
pH (units)	8.9	8.1	8.5	8.0	7.6	7.5	7.8	7.8	8.2	7.9
Water temperature (°C)	2.0	3.0	8.5	8.5	21.0	15.5	22.0	18.0	22.0	20.0
Color (Pt-Co. scale)	---	---	20	20	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.8	1.9	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.8		3.6		2.0		1.5	
Dissolved oxygen	10.3	9.2	10.8	10.6	8.5	3.6	8.9	0.2	10.3	5.6
Hardness, as CaCO3	---	---	67	67	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	17	17	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	6.0	6.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	3.0	3.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.7	0.7	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	63	66	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	4.0	5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	1.9	2.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.0	0.0	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	12	12	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	86	92	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	<0.01	0.01	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.03	0.02	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.50	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.40	0.51	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.022	0.030	0.011	0.029	0.017	0.030	0.024	0.032
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	57	64	---	---	---	---	---	---
Chlorophyll a, phytoplankton(µg/L)	---	---	10	---	3.4	---	9.6	---	23	---

3-9-94

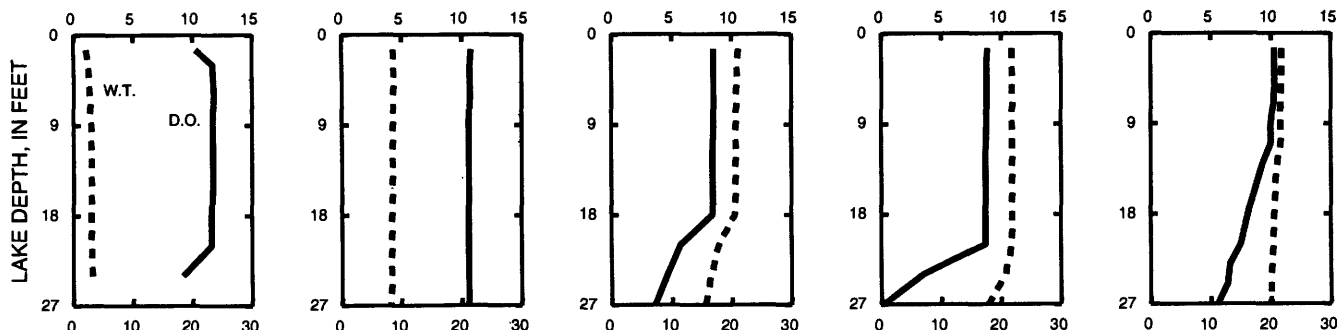
5-4-94

6-16-94

7-14-94

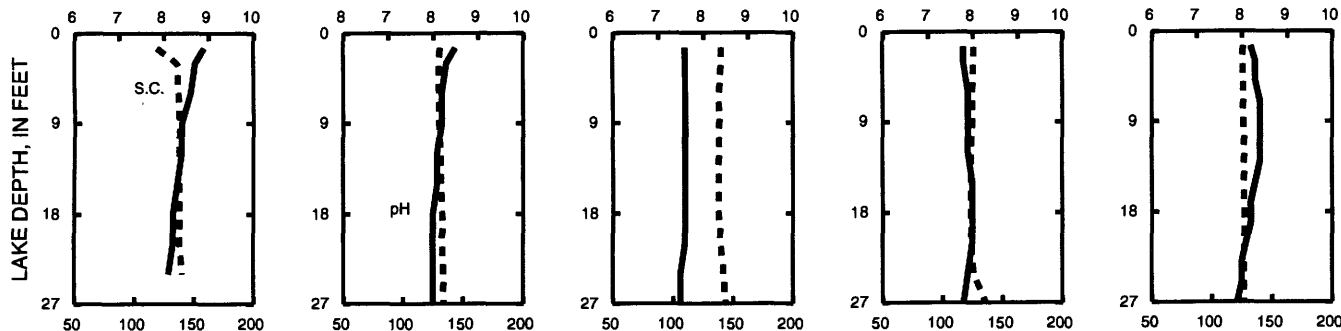
8-18-94

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

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 mi<sup>2</sup>.

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: Ice-affected periods, Dec. 23-26, 28, 30, Jan. 2-3, 5, 7-9, 11, 14-23, 26-27, 31, and Feb. 1-11, 25-27. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	70	74	68	74	82	108	249	71	66	63	64
2	74	74	86	68	72	92	117	239	66	64	64	61
3	74	73	87	70	72	75	116	199	59	63	86	64
4	69	76	86	73	72	90	111	168	61	46	112	65
5	55	90	85	72	72	100	105	158	73	91	82	65
6	94	89	73	72	72	128	99	146	92	123	65	67
7	76	80	67	72	72	158	95	134	80	106	64	65
8	83	78	73	74	72	150	97	122	62	83	64	64
9	90	78	82	74	72	129	106	121	62	69	64	65
10	83	77	81	73	72	117	106	109	62	82	64	63
11	80	77	78	74	72	105	104	97	62	84	64	62
12	78	78	77	74	72	98	107	94	62	79	66	62
13	76	105	59	76	71	112	120	84	71	73	67	67
14	75	130	87	76	70	129	125	88	75	71	64	93
15	69	115	91	76	69	168	132	91	70	70	64	165
16	71	100	87	76	71	166	149	86	67	71	63	211
17	83	92	85	76	72	141	151	82	73	72	62	272
18	101	89	85	76	75	121	141	82	97	71	55	266
19	86	88	84	76	99	108	130	80	111	63	53	202
20	81	83	83	76	163	105	115	77	90	115	55	123
21	79	88	81	76	175	122	106	76	85	143	56	93
22	83	86	71	76	147	163	103	75	79	115	56	102
23	82	80	70	76	134	188	97	74	76	95	55	106
24	79	81	68	77	117	174	94	73	77	93	58	99
25	68	80	68	77	110	141	120	72	76	64	62	90
26	76	79	68	76	98	129	375	72	77	79	103	87
27	75	77	67	74	90	122	745	71	73	80	82	79
28	75	80	66	74	84	116	458	70	68	73	73	70
29	74	82	67	73	---	111	307	74	71	67	66	81
30	71	76	66	74	---	105	234	76	69	65	68	81
31	71	---	68	74	---	103	---	74	---	64	73	---
TOTAL	2407	2551	2370	2299	2511	3848	4973	3313	2217	2500	2093	3054
MEAN	77.6	85.0	76.5	74.2	89.7	124	166	107	73.9	80.6	67.5	102
MAX	101	130	91	77	175	188	745	249	111	143	112	272
MIN	55	70	59	68	69	75	94	70	59	46	53	61
CFSM	.51	.56	.50	.48	.59	.81	1.08	.70	.48	.53	.44	.67
IN.	.59	.62	.58	.56	.61	.94	1.21	.81	.54	.61	.51	.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1994, BY WATER YEAR (WY)

	1991	1992	1993	1994
MEAN	77.1	114	84.4	75.6
MAX	79.3	170	101	82.7
(WY)	1993	1992	1992	1994
MIN	74.4	85.0	75.4	70.1
(WY)	1992	1994	1993	1993

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1991 - 1994
ANNUAL TOTAL	39012	34136	
ANNUAL MEAN	107	93.5	104
HIGHEST ANNUAL MEAN			111
LOWEST ANNUAL MEAN			93.5
HIGHEST DAILY MEAN	977	745	977
LOWEST DAILY MEAN	23	46	23
ANNUAL SEVEN-DAY MINIMUM	62	55	55
INSTANTANEOUS PEAK FLOW		851	1160
INSTANTANEOUS PEAK STAGE		5.22	5.89
INSTANTANEOUS LOW FLOW		14	7.3
ANNUAL RUNOFF (CFSM)	.70	.61	.68
ANNUAL RUNOFF (INCHES)	9.49	8.30	9.22
10 PERCENT EXCEEDS	157	130	149
50 PERCENT EXCEEDS	81	77	81
90 PERCENT EXCEEDS	68	64	66

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, 25.0°C, June 21; minimum, 0.0°C, many days Nov. 26 through Mar. 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993					MAR 1994				
14...	1410	73	222	8.5	28...	1015	116	142	3.0
DEC 06...	0930	64	205	0.5	MAY 20...	0840	76	190	19.0
JAN 1994 07...	1420	68	260	0.0	JUL 18...	1215	69	210	22.0
FEB 25...	1120	113	195	0.0	SEP 15...	1250	157	230	22.0

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.0	10.0	10.5	4.0	3.0	3.5	1.0	.5	.5	.5	.0	.0
2	10.0	8.5	9.5	4.5	3.5	4.0	1.0	.5	1.0	.5	.0	.0
3	11.0	9.0	9.5	4.5	3.5	4.0	1.0	.5	.5	.5	.0	.0
4	11.5	10.0	10.5	5.0	4.0	4.5	1.0	.5	1.0	.0	.0	.0
5	11.5	9.5	10.5	4.0	2.5	3.0	1.0	.5	1.0	.0	.0	.0
6	12.0	10.5	11.5	2.5	1.5	2.0	2.0	.5	.5	.5	.0	.0
7	12.5	11.5	12.5	2.5	1.5	1.5	1.0	.5	.5	.0	.0	.0
8	11.5	9.5	11.0	2.5	2.0	2.0	1.0	.5	.5	.0	.0	.0
9	10.0	8.5	9.0	3.0	2.0	2.5	1.5	.5	1.0	.0	.0	.0
10	9.0	8.0	8.5	3.0	2.0	2.5	1.0	.0	.5	.0	.0	.0
11	9.0	7.5	8.5	3.0	2.5	3.0	.5	.0	.5	.0	.0	.0
12	9.0	8.0	8.0	3.5	2.5	3.0	1.0	.0	.5	.5	.0	.0
13	8.0	7.0	7.5	3.5	3.0	3.5	1.5	.5	1.0	.0	.0	.0
14	9.0	7.0	8.0	3.0	3.0	3.0	1.0	.5	1.0	.0	.0	.0
15	9.0	8.0	8.5	3.5	3.0	3.0	1.0	.5	1.0	.0	.0	.0
16	9.0	8.5	9.0	3.5	3.0	3.0	1.0	.5	1.0	.0	.0	.0
17	9.0	8.5	8.5	3.5	2.5	3.0	1.0	.5	1.0	.0	.0	.0
18	9.5	9.0	9.5	3.5	2.5	3.0	1.5	1.0	1.0	.0	.0	.0
19	10.5	9.5	10.0	3.5	1.5	2.5	1.0	1.0	1.0	.0	.0	.0
20	10.5	9.0	10.0	1.5	1.0	1.0	1.0	.5	1.0	.0	.0	.0
21	9.5	7.5	8.5	2.0	1.0	1.5	1.0	.5	.5	.0	.0	.0
22	8.5	7.0	7.5	1.5	1.0	1.5	1.0	.5	.5	.5	.0	.0
23	8.5	7.5	8.0	1.5	1.0	1.5	.5	.0	.5	.5	.0	.0
24	9.5	8.0	9.0	1.5	1.0	1.5	.5	.0	.0	.5	.0	.0
25	10.0	9.0	9.0	1.5	.5	1.0	.0	.0	.0	.0	.0	.0
26	9.0	8.0	9.0	1.0	.0	.5	.0	.0	.0	.0	.0	.0
27	8.0	7.5	8.0	1.0	.0	.5	.0	.0	.0	.5	.0	.0
28	7.5	6.0	7.0	1.0	.0	.5	.0	.0	.0	.5	.0	.0
29	6.0	4.0	5.0	1.0	.0	.5	.0	.0	.0	.5	.0	.0
30	4.0	3.0	3.5	1.0	.0	.5	.5	.0	.0	.0	.0	.0
31	3.5	2.5	3.0	---	---	---	.5	.0	.0	.0	.0	.0
MONTH	12.5	2.5	8.6	5.0	.0	2.2	2.0	.0	.6	.5	.0	.0







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 mi<sup>2</sup>.

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: Apr. 14-19 and ice-affected periods, Nov. 29, 30, and Dec. 24 to Mar. 11. Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplants, Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota on Chippewa and Flambeau Rivers. Gage-height telemeter and data-collection platform at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--A stage of 18.4 ft, from flood marks (levels by U.S. Army Corps of Engineers) occurred Sept. 12, 1884, and has not been exceeded since.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5870	4600	6070	5200	6000	8600	5480	22900	6030	5150	4870	4200
2	5910	5790	5450	4800	5200	9400	5290	20400	5360	5560	6940	3530
3	5300	5770	6400	5600	4600	9000	4390	19100	6520	3750	5450	5200
4	5400	5370	6440	5600	4800	9200	4880	15400	4950	3520	5600	3800
5	6230	4690	6240	6000	4900	9800	5540	13100	4210	4310	5860	3630
6	5260	4800	6110	6000	4600	9800	6150	14100	5960	7140	5730	3640
7	6320	5240	7150	5400	4500	9400	5550	11900	7200	9760	5210	4200
8	6900	4760	5920	5200	4900	12000	5270	9240	6010	10400	5360	3930
9	7290	5470	5820	4100	5600	14000	6260	9980	5380	10100	5590	3960
10	5490	4920	6180	4000	6000	15000	5580	9970	4970	7570	6190	4120
11	6220	5220	6280	5200	4900	13000	5540	8790	4900	8150	5200	3050
12	6590	4990	5660	4300	4300	9960	8300	7750	3930	7370	5110	3010
13	6840	6260	5180	5600	3800	6640	8570	7190	4220	6750	4780	3040
14	6790	6400	7060	5200	3900	6120	12000	7100	6390	4880	3660	6970
15	5910	8200	7500	5000	5000	6130	11000	6630	5790	5070	3430	10400
16	6310	8270	7650	4900	6200	6550	12000	5600	4880	5610	3520	21000
17	4170	8600	6510	5000	6800	7320	13000	7230	6090	4020	3290	36300
18	5400	8300	7700	5600	6800	6680	14000	8000	5330	4050	3110	46100
19	6140	7820	6830	5200	6600	6270	14000	6750	4020	5730	2940	51900
20	5830	7890	7050	5400	7200	5240	13200	6510	4380	5350	3110	43200
21	6420	7310	7540	5800	9800	6020	11600	5090	6480	5290	2910	26400
22	5780	5670	6370	4900	11000	5540	8990	4660	5100	8010	2880	18200
23	6350	7080	6450	4900	11000	5610	8350	4200	5390	9010	3850	17100
24	5880	5710	4700	5000	9200	7080	8290	6160	4510	7390	3950	18100
25	6030	6080	3600	6400	8400	7360	10100	5190	3590	7610	4070	16300
26	7160	5270	3200	4900	7200	7770	15500	4670	5070	8620	3570	16100
27	5660	5510	3700	5800	5000	7160	26900	4530	4300	6460	4200	13200
28	5070	4310	4900	5800	5200	7090	34600	4160	6320	6950	3610	12800
29	6340	4000	5200	5400	---	5470	35400	4060	5760	6700	3410	12800
30	4920	5200	4100	3900	---	5050	29200	3900	6450	6270	4440	12200
31	5070	---	5400	5000	---	4840	---	5840	---	4550	5390	---
TOTAL	184850	179500	184360	161100	173400	249100	354930	270100	159490	201100	137230	428380
MEAN	5963	5983	5947	5197	6193	8035	11830	8713	5316	6487	4427	14280
MAX	7290	8600	7700	6400	11000	15000	35400	22900	7200	10400	6940	51900
MIN	4170	4000	3200	3900	3800	4840	4390	3900	3590	3520	2880	3010

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1994, BY WATER YEAR (WY)												
MEAN	6446	6800	5399	4792	5002	9689	15660	10500	9483	6280	4990	7134
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 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1928 - 1994	
	ANNUAL TOTAL	3466400		2683540		
ANNUAL MEAN	9497		7352		7672	
HIGHEST ANNUAL MEAN					11550	
LOWEST ANNUAL MEAN					3992	
HIGHEST DAILY MEAN	84600	Jun 23	51900	Sep 19	117000	Apr 2 1967
LOWEST DAILY MEAN	(a)3200	Dec 26	2880	Aug 22	1100	Nov 24 1950
ANNUAL SEVEN-DAY MINIMUM	4070	Sep 7	3110	Aug 16	1580	Oct 28 1948
INSTANTANEOUS PEAK FLOW			53000	Sep 19	123000	Apr 2 1967
INSTANTANEOUS PEAK STAGE			12.40	Sep 19	16.93	Apr 2 1967
INSTANTANEOUS LOW FLOW			2580	Aug 22	1020	Nov 24 1950
10 PERCENT EXCEEDS	16800		11900		14300	
50 PERCENT EXCEEDS	6600		5800		5580	
90 PERCENT EXCEEDS	4500		4010		2960	

(a) Ice affected



## CHIPPEWA RIVER BASIN

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 September 1994 (discontinued).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993						APR 1994						
14...	1025	--	6920	150	11.5	19...	1245	13300	116	10.0		
DEC 06...	1655	--	6120	175	2.0	MAY 16...	1730	4990	220	19.0		
FEB 1994						JUN 29...	0930	6420	133	21.5		
23...	1000	11000	--	177	1.0	JUL 20...	1420	5220	250	26.0		
MAR 14...	1410	--	6110	220	3.5	AUG 09...	0810	6110	140	19.0		
24...	1045	--	6050	185	5.0							
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, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 1993												
14...	1025	--	6920	150	7.8	11.5	1.2	10.4	740	98	K1600	43
FEB 1994												
23...	1000	11000	--	177	8.5	1.0	2.8	12.1	735	88	520	690
APR 19...	1245	--	13300	116	7.5	10.0	1.0	12.0	778	104	300	42
JUN 29...	0930	--	6420	133	8.1	21.5	2.0	8.0	770	90	420	1000
AUG 09...	0810	--	6110	140	8.1	19.0	1.5	8.4	783	88	190	82
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)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
OCT 1993												
14...	68	17	6.2	4.2	1.2	73	60	5.5	5.8	0.20	7.9	97
FEB 1994												
23...	59	15	5.3	4.4	3.7	--	52	6.6	6.9	<0.10	10	103
APR 19...	48	12	4.4	3.7	1.8	50	40	5.3	4.9	<0.10	7.5	84
JUN 29...	53	13	4.9	3.7	1.5	63	52	6.0	5.4	0.10	8.1	96
AUG 09...	60	15	5.4	4.1	1.0	72	59	5.0	4.9	0.10	8.8	101

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

## CHIPPEWA RIVER BASIN

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05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC 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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 1993 14...	<0.010	0.430	0.030	0.50	0.040	0.020	0.020	<10	11	<3	190
FEB 1994 23...	0.020	0.780	0.330	1.0	0.200	0.120	0.110	30	18	6	380
APR 19...	<0.010	0.370	0.030	0.50	0.060	0.020	0.010	10	10	<3	290
JUN 29...	0.010	0.420	<0.010	0.80	0.100	0.020	0.020	--	--	--	--
AUG 09...	<0.010	0.350	0.030	0.60	0.080	0.030	0.040	<10	10	<3	89

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1993 14...	<4	9	<10	<1	<1	36	<6	--	--	12	29
FEB 1994 23...	<4	45	<10	<1	<1	31	<6	--	--	11	86
APR 19...	<4	9	<10	1	<1	27	<6	--	--	25	51
JUN 29...	--	--	--	--	--	--	--	0.03	0.08	23	73
AUG 09...	<4	3	<10	<1	<1	32	<6	0.02	0.07	14	52

## CHIPPEWA RIVER BASIN

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, approximately 550 ft upstream from French Creek and at Spring Valley.

DRAINAGE AREA.--47.9 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1981 to September 1983, May 1986 to current year.

REVISED RECORDS.--WDR WI-93-2: 1992.

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. 19-29, Jan. 15-25, and Feb. 2, 3, 5-9, 19, 20. Records good for discharges less than 900 ft<sup>3</sup>/s, fair for estimated periods, and poor for discharges greater than 900 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	14	14	13	13	16	16	39	19	15	15	15
2	15	14	13	13	12	15	16	26	17	15	15	15
3	15	14	13	13	12	16	17	21	16	15	16	15
4	15	14	13	13	12	41	17	19	16	15	16	15
5	15	14	13	12	12	83	16	19	47	18	15	15
6	16	15	13	13	12	57	16	18	55	66	15	15
7	15	15	13	13	11	36	16	18	22	31	15	15
8	15	15	13	13	11	23	16	18	18	23	15	16
9	17	14	13	13	11	20	18	17	18	18	15	17
10	17	14	13	13	11	19	19	17	17	15	50	16
11	16	14	12	13	11	17	17	17	17	14	42	16
12	15	14	12	13	11	17	17	17	16	14	20	18
13	14	32	13	13	11	18	49	17	17	13	16	19
14	14	35	18	13	11	23	29	17	16	13	15	25
15	14	19	41	13	11	30	53	17	16	13	15	50
16	14	16	28	13	10	23	77	17	16	14	15	175
17	14	15	21	13	10	20	30	16	16	13	15	30
18	14	15	17	13	9.8	19	21	16	16	13	15	19
19	14	15	16	12	70	19	18	16	16	13	15	16
20	14	14	15	12	60	19	17	16	16	13	15	15
21	14	14	14	12	46	19	16	16	16	15	14	15
22	15	14	13	12	27	28	16	17	15	21	14	24
23	15	14	13	12	22	27	16	17	15	18	15	22
24	14	14	12	12	18	23	16	17	15	16	16	57
25	14	14	12	12	16	19	554	17	16	15	15	25
26	14	14	12	12	15	19	746	17	16	15	16	25
27	14	13	12	12	16	21	181	17	16	15	14	20
28	14	13	13	12	16	20	45	17	16	15	14	18
29	14	13	13	12	---	18	95	18	16	15	14	17
30	14	13	13	12	---	16	142	27	15	15	15	16
31	14	---	13	12	---	16	---	37	---	15	15	---
TOTAL	454	468	464	389	507.8	757	2322	595	563	539	532	776
MEAN	14.6	15.6	15.0	12.5	18.1	24.4	77.4	19.2	18.8	17.4	17.2	25.9
MAX	17	35	41	13	70	83	746	39	55	66	50	175
MIN	14	13	12	12	9.8	15	16	16	15	13	14	15
CFSM	.31	.33	.31	.26	.38	.51	1.62	.40	.39	.36	.36	.54
IN.	.35	.36	.36	.30	.39	.59	1.80	.46	.44	.42	.41	.60

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1994, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	16.5	24.1	13.7	9.50	10.1	86.5	50.7	31.4	38.7	19.6	20.2	27.0	
MAX	47.5	65.5	25.7	13.3	18.1	152	104	67.0	157	35.8	72.2	129	
(WY)	1987	1992	1983	1987	1994	1990	1983	1991	1990	1992	1993	1986	
MIN	7.73	7.68	6.61	6.45	6.73	20.5	11.6	10.3	8.87	8.54	8.28	9.34	
(WY)	1990	1990	1990	1990	1990	1987	1987	1987	1988	1988	1988	1982	

## SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1982 - 1994
ANNUAL TOTAL	12873.6	8366.8	
ANNUAL MEAN	35.3	22.9	28.5
HIGHEST ANNUAL MEAN			40.9
LOWEST ANNUAL MEAN			14.8
HIGHEST DAILY MEAN	1470	Aug 9	746
LOWEST DAILY MEAN	7.1	Feb 3	9.8
ANNUAL SEVEN-DAY MINIMUM	7.8	Feb 2	11
INSTANTANEOUS PEAK FLOW			1110
INSTANTANEOUS PEAK STAGE			6.24
INSTANTANEOUS LOW FLOW			8.3
ANNUAL RUNOFF (CFSM)	.74	.48	4.7
ANNUAL RUNOFF (INCHES)	10.00	6.50	8.09
10 PERCENT EXCEEDS	40	27	34
50 PERCENT EXCEEDS	16	15	12
90 PERCENT EXCEEDS	8.6	12	7.7

(a) Also occurred Feb. 1, 1990

(b) From rating curve extended above 172 ft<sup>3</sup>/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

CHIPPEWA RIVER BASIN

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI

LOCATION.--Lat 44°51'10", long 92°14'17", in SE 1/4 NE 1/4 sec.6, T.27 N., R.15 W., Pierce County, Hydrologic Unit 07050005, on right bank 770 ft downstream from flood control dam, 1,500 ft upstream from Mines Creek, at Spring Valley.

DRAINAGE AREA.--64.1 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR WI-67-1: 1966. WDR WI-81-1: Drainage area. WDR WI-92-1: 1975-79(M), 1977, 1978.

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.--No estimated daily discharges. Records good. Low flow slightly regulated and high flow completely regulated by flood-control dam 770 ft upstream. Data-collection platform at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Maximum stage since at least 1894, that of Sept. 18, 1942, 19.98 ft, with datum at 909.45 ft above sea level, from floodmarks, discharge, 33,000 ft<sup>3</sup>/s estimated by U.S. Army Corps of Engineers on basis of slope-area measurement by Geological Survey of peak discharge of 39,000 ft<sup>3</sup>/s at Elmwood, drainage area, 91.9 mi<sup>2</sup>.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	22	22	21	19	20	20	85	39	20	16	24
2	23	22	22	20	19	20	19	51	29	20	16	24
3	23	23	22	20	19	20	19	40	23	19	17	28
4	23	26	22	20	19	39	20	34	21	19	17	27
5	24	27	23	21	18	119	20	31	35	28	17	27
6	25	27	23	21	18	101	19	28	85	51	16	26
7	24	27	23	21	18	57	19	33	46	66	15	26
8	24	24	23	20	18	40	20	32	33	38	15	26
9	24	24	23	20	18	32	22	27	27	33	15	23
10	26	24	22	20	18	27	25	26	23	26	28	16
11	25	24	22	20	18	24	24	26	21	23	55	15
12	23	24	22	20	18	23	24	24	21	21	29	16
13	23	40	23	20	18	22	44	24	23	20	20	18
14	48	67	25	20	17	26	45	25	22	21	17	28
15	27	43	52	19	17	34	42	26	22	20	15	47
16	7.1	33	53	19	17	33	127	24	22	21	15	146
17	14	29	42	20	17	29	66	22	22	20	15	58
18	19	27	34	19	18	26	39	21	29	19	18	30
19	21	26	31	19	494	24	30	20	25	19	25	24
20	23	24	30	19	188	23	26	20	22	20	23	22
21	24	24	28	19	66	27	24	21	21	21	22	23
22	24	24	26	20	40	34	23	24	19	24	21	31
23	24	23	24	19	32	35	22	22	19	26	23	38
24	24	23	23	19	27	31	23	21	19	22	28	76
25	23	25	23	19	25	27	264	21	19	19	24	51
26	22	25	22	19	22	25	529	21	20	18	27	38
27	22	24	21	20	21	25	327	21	19	17	24	34
28	22	23	21	21	21	25	97	20	22	16	24	28
29	22	23	20	21	---	23	76	21	21	16	24	25
30	22	22	21	20	---	21	194	34	19	16	27	23
31	22	---	20	19	---	20	---	78	---	16	25	---
TOTAL	722.1	819	808	615	1260	1032	2249	923	788	735	673	1018
MEAN	23.3	27.3	26.1	19.8	45.0	33.3	75.0	29.8	26.3	23.7	21.7	33.9
MAX	48	67	53	21	494	119	529	85	85	66	55	146
MIN	7.1	22	20	19	17	20	19	20	19	16	15	15

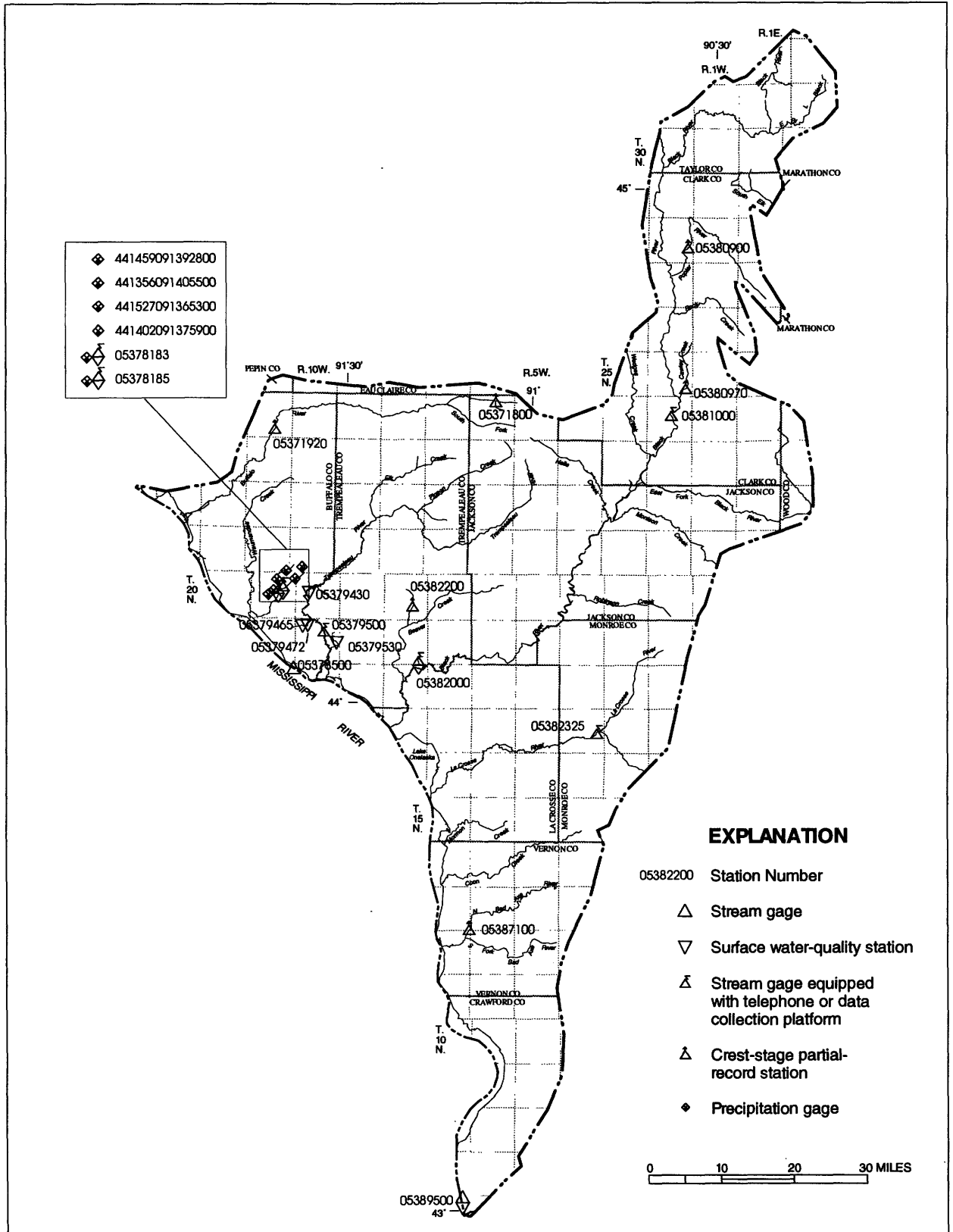
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1994, BY WATER YEAR (WY)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	26.2	27.0	18.6	14.9	20.6	73.9	65.7	37.1	41.6	26.9	27.4	32.0														
MAX	81.3	86.2	39.7	19.8	71.6	164	128	94.9	148	94.1	88.8	153														
(WY)	1971	1971	1978	1994	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	9.81														
(WY)	1970	1969	1969	1969	1969	1970	1987	1977	1969	1988	1969	1969														

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1969 - 1994	
ANNUAL TOTAL	16379.1		11642.1			
ANNUAL MEAN	44.9		31.9		34.4	
HIGHEST ANNUAL MEAN					55.8	
LOWEST ANNUAL MEAN					21.2	
HIGHEST DAILY MEAN	1000		529		2190	
LOWEST DAILY MEAN	7.1		7.1		(a).00	
ANNUAL SEVEN-DAY MINIMUM	16		16		.91	
INSTANTANEOUS PEAK FLOW			866		(b)3030	
INSTANTANEOUS PEAK STAGE			16.42		(b)19.90	
INSTANTANEOUS LOW FLOW			4.3		(a).00	
10 PERCENT EXCEEDS	61		41		48	
50 PERCENT EXCEEDS	25		23		18	
90 PERCENT EXCEEDS	17		18		12	

(a) Flow shut off at flood-control dam upstream due to request by Wisconsin Department of Natural Resources for eradication of rough fish to improve sport fishing  
 (b) Peak discharge and stage prior to construction of flood-control reservoir occurred Apr. 15, 1954, and was 7,000 ft<sup>3</sup>/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 Dec. 1-4, 6, 9, 12, Feb. 14, 16-19, Mar. 1-3, 19, 26, and Apr. 5-7 because recorded precipitation interpreted as collector snowmelt.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.22 in., Aug. 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.07	.14
4	.00	.00	.00	.00	.00	.00	.13	.14	.00	.07	.01	.15
5	.06	.06	.00	.00	.00	.16	.00	.01	.80	.56	.00	.02
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.65	.00	.00
7	.00	.02	.00	.00	.00	.00	.00	.01	.20	1.40	.00	.00
8	.14	.00	.00	.00	.00	.00	.09	.00	.00	.09	.01	.01
9	.00	.14	.00	.00	.00	.00	.00	.00	.00	.05	.12	.00
10	.00	.01	.00	.00	.00	.00	.00	.12	.04	.00	3.22	.00
11	.00	.00	.00	.00	.00	.00	.00	.33	.00	.02	.00	.00
12	.00	.24	.00	.00	.00	.00	.77	.00	.39	.00	.00	.14
13	.00	.05	.12	.00	.00	.00	.03	.00	.01	.11	.00	.79
14	.00	.01	.02	.00	.00	.00	.00	.35	.00	.02	.00	1.70
15	.24	.07	.00	.00	.00	.00	.92	.01	.00	.00	.00	.15
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	.00	.01
17	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00	.00	.01
18	.00	.00	.04	.00	.00	.00	.00	.00	.07	.00	1.39	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.01	.02	.35	.00
20	.27	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.01
21	.00	.00	.00	.00	.00	.01	.00	.00	.00	.09	.00	.36
22	.00	.00	.00	.00	.00	.00	.00	.09	.00	.00	.00	.50
23	.00	.00	.00	.00	.00	.00	.00	.41	.45	.00	.01	.50
24	.00	.00	.00	.00	.00	.00	.82	.02	.00	.32	.01	.01
25	.00	.00	.00	.00	.00	.00	1.45	.35	.16	.00	.26	.27
26	.00	.00	.00	.00	.00	.00	.90	.00	.17	.00	.01	.08
27	.00	.00	.00	.00	.00	.01	.01	.00	.01	.08	.00	.02
28	.00	.00	.00	.00	.00	.00	.29	.00	.11	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.15	.02	.19	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.38	.00	.00	1.30	.01
31	.00	---	.00	.00	---	.00	---	.01	---	.09	.00	---
TOTAL	0.71	0.60	0.25	0.00	0.00	0.20	5.56	2.25	2.61	3.66	7.76	4.92

## 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 Nov. 25, Dec. 1-6, 9, Jan. 23, Feb. 14-17, 28, Mar. 1-3, 19, 26, and Apr. 5, 6 because recorded precipitation interpreted as collector snow-melt. Rainfall data missing for Oct. 8, 15, and 20.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.94 in., Aug. 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.26	.23
4	.00	.02	.00	.00	.00	.00	.21	.12	.00	.12	.01	.14
5	.05	.04	.00	.00	.00	.18	.00	.01	.60	.54	.00	.01
6	.00	.00	.00	.00	.00	.01	.00	.00	.00	.85	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.01	.19	1.25	.00	.00
8	---	.00	.00	.00	.00	.00	.10	.00	.00	.04	.00	.40
9	.00	.26	.00	.00	.00	.00	.00	.00	.00	.03	.14	.00
10	.00	.00	.00	.00	.00	.00	.00	.06	.04	.00	2.94	.00
11	.00	.00	.00	.00	.00	.00	.00	.32	.00	.02	.00	.00
12	.00	.26	.00	.00	.00	.00	.67	.00	.36	.00	.00	.13
13	.00	.04	.16	.00	.00	.00	.02	.00	.00	.15	.00	.66
14	.00	.04	.02	.00	.00	.00	.05	.34	.00	.02	.00	1.32
15	---	.04	.00	.00	.00	.00	.78	.01	.00	.00	.00	.22
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11	.00	.02
17	.00	.00	.20	.00	.00	.00	.00	.00	.00	.00	.01	.00
18	.00	.01	.00	.00	.00	.00	.00	.00	.32	.00	.88	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.01	.03	.27	.00
20	---	.00	.00	.00	.00	.04	.00	.00	.03	.00	.00	.03
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	.00	.37
22	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.67
23	.00	.00	.00	.00	.00	.01	.00	.36	.54	.00	.02	.48
24	.00	.00	.00	.00	.00	.00	.54	.03	.00	.09	.00	.01
25	.00	.00	.00	.00	.00	.00	1.22	.25	.05	.00	.25	.27
26	.00	.00	.00	.00	.00	.00	.80	.00	.23	.00	.01	.06
27	.00	.00	.00	.00	.00	.02	.00	.00	.00	.14	.00	.00
28	.00	.00	.00	.00	.00	.00	.30	.00	.08	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.08	.03	.30	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.57	.00	.00	1.23	.01
31	.00	---	.00	.00	---	.00	---	.00	---	.04	.00	---
TOTAL	---	0.71	0.38	0.00	0.00	0.26	4.77	2.21	2.75	3.50	6.03	5.12

WAUMANDEE CREEK BASIN

441527091365300 JOOS VALLEY CREEK RAIN GAGE J3-1003, HANSEN FARM, NEAR ARCADIA, WI

LOCATION.--Lat 44°15'27", long 91°36'53", in NE 1/4 NW 1/4 sec.32, T.21 N., R.10 W., Buffalo County, Hydrologic Unit 07040003, on Hannon Road, 0.1 mi north of the junction with Pausy Pass, near Arcadia.

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

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

REMARKS.--Gage established on July 12, 1990. Rainfall estimated to be 0.00 for Dec. 1-3, 9, 31, Feb. 14-17, 19, 28, Mar. 1, 2, 26, and Apr. 7 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, 3.36 in., Aug. 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.97	.19
4	.00	.01	.00	.00	.00	.00	.10	.16	.00	.06	.01	.04
5	.05	.03	.00	.00	.00	.17	.00	.00	.86	.41	.00	.01
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.61	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.01	.15	1.71	.14	.00
8	.17	.00	.00	.00	.00	.00	.05	.00	.00	.13	.02	.03
9	.00	.17	.00	.00	.00	.00	.01	.00	.00	.03	.15	.00
10	.00	.01	.00	.00	.00	.00	.00	.14	.03	.00	3.36	.00
11	.00	.00	.00	.00	.00	.00	.00	.27	.00	.00	.00	.00
12	.00	.28	.00	.00	.00	.00	.66	.00	.34	.00	.00	.15
13	.00	.05	.13	.00	.00	.00	.02	.00	.01	.14	.01	.60
14	.00	.01	.01	.00	.00	.00	.03	.36	.00	.01	.00	2.16
15	.30	.07	.00	.00	.00	.00	.89	.01	.00	.00	.00	.32
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.12	.00	.01
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.01	.00	.00	.00	.00	.00	.11	.00	1.70	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.01	.02	.63	.00
20	.36	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.43
22	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.73
23	.00	.00	.00	.00	.00	.01	.00	.32	.57	.00	.00	.32
24	.00	.00	.00	.00	.00	.00	1.11	.04	.00	.23	.00	.00
25	.00	.00	.00	.00	.00	.00	1.33	.27	.35	.00	.29	.48
26	.00	.00	.00	.00	.00	.00	.81	.00	.05	.00	.00	.03
27	.00	.00	.00	.00	.00	.00	.00	.00	.01	.19	.00	.00
28	.00	.00	.00	.00	.00	.01	.13	.00	.03	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.16	.01	.06	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.37	.00	.00	1.22	.01
31	.00	---	.00	.00	---	.00	---	.00	.00	.07	.00	---
TOTAL	0.88	0.63	0.15	0.00	0.00	0.21	5.30	2.01	2.59	3.78	8.50	5.52



## 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 Nov. 25, Dec. 1-5, 9, 22, Feb. 14, 16, 17, 19, 24, 28, Mar. 1-3, 19, 26, and Apr. 5-7 because recorded precipitation interpreted as collector snowmelt. 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, 3.58 in., Aug. 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.51	.29
4	.00	.00	.00	.00	.00	.00	.21	.12	.00	.10	.02	.20
5	.08	.07	.00	.00	.00	.18	.00	.00	.69	.42	.00	.02
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.53	.00	.00
7	.00	.01	.00	.00	.00	.00	.00	.01	.21	1.28	.01	.00
8	.29	.00	.00	.00	.00	.00	.07	.00	.00	.12	.00	.19
9	.00	.21	.00	.00	.00	.00	.00	.00	.00	.04	.17	.00
10	.00	.01	.00	.00	.00	.00	.00	.08	.06	.00	3.58	.00
11	.00	.00	.00	.00	.00	.00	.00	.31	.00	.02	.00	.00
12	.00	.36	.00	.00	.00	.00	.86	.00	.41	.00	.00	.11
13	.00	.04	.16	.00	.00	.00	.02	.00	.02	.16	.00	.71
14	.00	.05	.01	.00	.00	.00	.05	.40	.00	.01	.00	1.65
15	.32	.06	.01	.00	.00	.00	.84	.01	.00	.00	.00	.31
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.01
17	.00	.00	.20	.00	.00	.00	.00	.00	.00	.00	.01	.00
18	.00	.00	.03	.00	.00	.00	.00	.00	.07	.00	.95	.00
19	.00	.01	.00	.00	.00	.00	.00	.00	.00	.03	.33	.00
20	.32	.00	.00	.00	.00	.01	.00	.00	.01	.00	.00	.03
21	.01	.00	.00	.00	.00	.01	.00	.00	.00	.04	.00	.53
22	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.85
23	.00	.00	.00	.00	.00	.00	.00	.39	.60	.00	.02	.43
24	.00	.00	.00	.00	.00	.00	.67	.02	.00	.26	.00	.03
25	.00	.00	.00	.00	.00	.00	1.78	.27	.25	.00	.28	.39
26	.00	.00	.00	.00	.00	.00	.64	.00	.21	.01	.00	.08
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.24	.00	.01
28	.00	.00	.00	.00	.00	.00	.46	.00	.12	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.02	.01	.23	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.53	.00	.00	1.34	.01
31	.00	---	.00	.00	---	.00	---	.00	---	.05	.00	---
TOTAL	1.02	0.82	0.41	0.00	0.00	0.20	5.62	2.25	2.88	3.44	7.22	5.90

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 mi<sup>2</sup>.

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, Dec. 23-29, Jan. 6-8, 14-20, Jan. 27 to Feb. 2, Feb. 5-9, and 22-28. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	4.6	4.6	4.7	4.2	5.0	4.8	5.8	3.9	3.7	3.4	4.4
2	4.9	4.6	5.1	4.5	4.2	5.0	4.9	5.4	3.8	3.6	3.4	4.1
3	4.8	4.9	4.8	4.6	4.3	6.1	4.8	5.2	3.6	3.5	4.1	4.6
4	4.8	5.0	5.0	4.6	4.3	21	5.4	5.1	3.7	3.6	3.7	4.5
5	4.8	5.1	5.0	4.4	4.2	15	5.5	5.2	5.1	4.4	3.8	4.5
6	5.0	4.9	4.9	4.3	4.2	8.8	5.4	5.0	4.4	4.8	4.0	4.1
7	4.9	4.7	4.4	4.1	4.2	6.4	5.4	4.9	4.4	7.0	4.0	4.0
8	5.2	4.9	4.5	4.0	4.2	5.8	5.6	4.7	4.3	7.0	3.5	4.3
9	5.1	4.9	4.8	4.1	4.4	5.7	5.4	4.5	4.0	4.7	3.5	3.8
10	4.9	5.1	4.7	4.3	4.6	5.5	5.2	4.6	4.0	4.1	23	3.6
11	4.9	5.0	4.3	4.3	4.8	5.6	4.9	5.8	4.0	4.1	6.0	3.5
12	5.0	5.2	4.6	4.4	4.9	6.1	6.9	4.8	3.9	4.0	5.0	3.5
13	5.0	5.8	5.0	4.2	5.0	5.9	6.4	4.5	4.6	3.9	4.6	3.7
14	4.9	5.3	5.7	4.0	5.2	6.8	5.7	5.1	3.8	4.0	4.5	24
15	5.4	5.3	5.4	3.9	5.1	6.1	9.2	5.0	3.7	3.8	4.2	6.4
16	5.4	5.0	5.0	3.8	5.0	5.7	5.9	4.5	3.6	4.0	4.1	5.9
17	5.2	4.9	5.1	3.7	5.2	5.7	5.2	4.3	3.6	3.9	3.8	5.1
18	5.1	4.9	5.1	3.6	7.3	5.7	5.0	4.2	3.7	3.6	8.6	4.4
19	5.0	5.0	5.2	3.5	5.9	5.8	4.5	4.1	3.9	3.4	5.7	4.4
20	5.3	4.9	5.0	3.6	7.2	6.5	4.4	4.0	3.9	3.4	4.8	4.4
21	5.6	5.0	5.0	3.8	6.0	6.4	4.2	4.1	3.7	3.6	4.5	4.8
22	5.1	4.9	5.1	4.0	5.0	6.2	4.1	4.2	3.3	3.6	4.2	7.1
23	5.0	4.8	4.3	4.3	4.9	6.0	4.0	4.5	4.2	3.4	4.1	8.0
24	5.0	4.8	4.2	4.3	4.9	5.6	4.9	4.4	3.7	3.5	4.3	6.3
25	5.0	5.1	4.0	4.3	4.8	5.3	9.0	4.5	3.5	3.4	4.3	6.4
26	5.0	4.9	3.8	4.3	4.8	5.6	23	4.4	4.2	3.4	4.5	6.5
27	5.0	5.0	3.7	4.2	4.9	5.5	7.4	4.1	3.7	3.8	4.3	6.0
28	4.9	5.0	3.6	4.2	5.0	5.4	7.2	3.9	3.7	3.6	4.2	5.6
29	4.9	4.6	3.7	4.2	---	5.2	7.2	4.0	4.0	3.4	4.0	5.3
30	4.7	4.5	3.9	4.2	---	4.9	6.1	4.5	3.8	3.2	7.7	5.3
31	4.6	---	4.7	4.2	---	4.8	---	4.5	---	3.1	4.8	---
TOTAL	155.4	148.6	144.2	128.6	191.8	205.1	187.6	143.8	117.7	122.5	158.6	168.5
MEAN	5.01	4.95	4.65	4.15	6.85	6.62	6.25	4.64	3.92	3.95	5.12	5.62
MAX	5.6	5.8	5.7	4.7	5.9	21	23	5.8	5.1	7.0	23	24
MIN	4.6	4.5	3.6	3.5	4.2	4.8	4.0	3.9	3.3	3.1	3.4	3.5
CFSM	.85	.84	.79	.70	1.16	1.12	1.06	.79	.67	.67	.87	.95
IN.	.98	.94	.91	.81	1.21	1.30	1.18	.91	.74	.77	1.00	1.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1994, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994
MEAN	3.52	4.51	3.59	3.07	3.77
MAX	5.01	6.24	4.65	4.15	6.85
(WY)	1994	1992	1994	1994	1994
MIN	2.40	2.09	1.92	1.89	2.05
(WY)	1991	1991	1991	1991	1991

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1990 - 1994
ANNUAL TOTAL	2195.2	1872.4	
ANNUAL MEAN	6.01	5.13	4.50
HIGHEST ANNUAL MEAN			5.81
LOWEST ANNUAL MEAN			3.03
HIGHEST DAILY MEAN	31	Jul 3	59
LOWEST DAILY MEAN	2.5	Jan 18	3.1
ANNUAL SEVEN-DAY MINIMUM	2.7	Jan 16	3.4
INSTANTANEOUS PEAK FLOW			128
INSTANTANEOUS PEAK STAGE			5.88
INSTANTANEOUS LOW FLOW			(b)2.0
ANNUAL RUNOFF (CFSM)	1.02		.87
ANNUAL RUNOFF (INCHES)	13.86		11.83
10 PERCENT EXCEEDS	9.6		6.0
50 PERCENT EXCEEDS	5.1		4.7
90 PERCENT EXCEEDS	3.2		3.7

(a) From rating curve extended above 10 ft<sup>3</sup>/s on basis of step-backwater method  
(b) 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 September 1992.

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, 29.0°C, June 14, 18; minimum observed, 0.5°C, many days during winter period.  
 SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 741 tons, Feb. 19; minimum daily, 0.08 ton, Oct. 27-28.  
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,510 lb, Feb. 19; minimum daily, 0.57 lb, Jan. 19.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)
OCT 1993							
*12...	1020	4.9	8.2	1.5	1100	20	342
*27...	1104	5.0	8.0	1.4	290	6	334
NOV							
*07...	1303	4.6	8.3	1.2	100	10	318
DEC							
*16...	1200	4.9	8.1	<1.0	110	61	--
FEB 1994							
18...	2340	17	--	--	--	730	958
19...	0215	38	--	--	--	3670	3980
19...	0415	66	--	--	--	6950	7070
19...	1005	100	--	--	--	4490	4600
19...	1105	118	--	--	--	5020	5400
19...	1425	93	--	--	--	2170	2350
**19...	1500	82	--	--	--	--	--
19...	1649	52	--	--	--	1110	1280
*19...	1652	51	--	--	--	1420	1770
19...	1750	37	--	--	--	920	1070
19...	2235	13	--	--	--	290	478
*21...	1318	6.0	--	--	--	36	352
MAR							
04...	1315	17	7.9	--	--	850	1140
04...	1355	28	7.5	--	--	1650	1870
04...	1455	39	7.5	--	--	2900	3110
04...	1540	53	7.4	--	--	3800	4110
04...	1555	70	7.4	--	--	5170	5450
04...	1840	49	7.2	--	--	1720	1960
04...	1955	32	7.2	--	--	900	1120
04...	2135	19	7.3	--	--	520	718
05...	1650	16	7.8	--	--	340	616
05...	2025	38	7.7	--	--	1110	1330
05...	2325	23	7.6	--	18000	556	802
06...	0215	12	7.7	--	15000	228	472
06...	0415	9.2	--	--	2200	--	--
*06...	1435	7.7	8.1	--	3500	68	362
*15...	1418	6.0	8.3	1.3	<10	36	344
*30...	1143	4.9	8.4	1.7	<10	14	320
APR							
*11...	1208	4.9	8.5	1.1	<10	14	324
*13...	1107	6.4	8.2	1.8	150	45	356
15...	0300	16	--	--	--	1480	1700
*15...	1144	7.3	--	--	--	192	470
25...	0415	16	8.0	15	390000	1330	1590
*25...	1138	8.0	8.0	5.7	320000	265	576
26...	0050	18	8.1	--	--	1140	1400
26...	0105	29	8.0	17	180000	2970	3190
26...	0135	43	7.8	32	800000	7450	7600
26...	0200	55	7.4	26	680000	14300	13800
26...	0715	39	7.6	12	540000	8060	8000
26...	0910	25	7.7	--	--	4210	5260
*26...	1137	15	7.9	--	490000	3410	3560
26...	1215	13	7.9	--	--	2770	2900

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE  
 \*\* SINGLE VERTICAL SAMPLE

WAUMANDEE CREEK BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	RESIDUE VOLA- TILE, SUS- PENDEDED (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- PENDEDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1993						
12...	4	--	<0.005	0.070	--	--
27...	2	--	<0.005	0.030	--	--
NOV						
07...	6	--	<0.005	0.030	--	--
DEC						
16...	--	1.06	0.034	0.090	--	--
FEB 1994						
18...	70	--	0.633	1.11	--	--
19...	240	--	0.933	3.99	--	--
19...	370	--	1.10	6.30	--	--
19...	240	--	2.36	5.34	--	--
19...	290	--	2.43	5.52	--	--
19...	130	--	2.22	3.59	--	--
19...	--	--	--	--	2500	77
19...	80	--	2.14	2.55	--	--
19...	80	--	2.11	2.75	--	--
19...	70	--	2.11	2.31	--	--
19...	32	--	1.62	1.41	--	--
21...	4	--	0.121	0.100	--	--
MAR						
04...	40	--	0.510	1.05	--	--
04...	110	--	1.68	2.34	--	--
04...	200	--	1.73	3.87	--	--
04...	210	--	1.70	4.37	--	--
04...	260	--	1.42	4.98	--	--
04...	90	--	2.37	3.15	--	--
04...	60	--	2.28	2.59	--	--
04...	30	--	2.04	2.19	--	--
05...	10	--	1.06	1.59	--	--
05...	88	--	1.20	6.69	--	--
05...	56	--	1.61	2.28	--	--
06...	36	--	1.45	1.68	--	--
06...	--	--	--	--	--	--
06...	10	--	0.543	0.490	--	--
15...	4	--	0.033	0.080	--	--
30...	2	--	<0.005	0.030	--	--
APR						
11...	3	--	<0.005	0.030	--	--
13...	10	--	0.020	0.080	--	--
15...	140	--	0.371	1.76	--	--
15...	28	--	0.072	0.300	--	--
25...	140	--	0.250	1.92	--	--
25...	40	--	0.369	0.920	--	--
26...	112	--	0.190	1.51	--	--
26...	230	--	0.371	3.06	--	--
26...	700	--	0.541	10.1	--	--
26...	1050	--	0.660	14.1	--	--
26...	620	--	0.575	8.58	--	--
26...	370	--	0.527	7.85	--	--
26...	320	--	0.430	5.30	3620	91
26...	290	--	0.401	4.95	--	--

## WAUMANDEE CREEK BASIN

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	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-PENDEDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)			
MAY 1994										
*03...	1436	5.1	8.5	1.3	260	37	342			
*17...	1157	4.4	8.4	1.8	320	24	316			
JUN										
*01...	1149	4.0	8.3	1.8	780	26	344			
05...	1427	5.7	8.3	1.8	10000	60	376			
*05...	1429	5.7	8.2	1.7	12000	70	382			
*14...	1403	4.1	8.4	1.6	7700	92	386			
*28...	1539	3.5	8.3	1.1	440	81	398			
JUL										
*07...	1122	4.1	8.3	--	1800	24	--			
07...	2110	17	7.9	--	--	784	--			
07...	2150	27	7.7	--	--	1980	--			
08...	0105	15	7.9	--	--	716	--			
*08...	1153	5.6	8.0	--	--	108	--			
*13...	1217	3.9	8.4	--	2200	29	--			
*25...	1133	3.4	8.4	--	420	9	--			
DATE		RESIDUE VOLATILE, SUS-PENDEDED (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-PENDEDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)			
MAY 1994										
03...		7	--	0.011	0.070	--	--			
17...		4	--	0.014	0.040	--	--			
JUN										
01...		5	--	0.034	0.070	--	--			
05...		10	--	0.170	0.130	80	89			
05...		12	--	0.141	0.130	--	--			
14...		12	--	0.034	0.080	--	--			
28...		11	--	0.026	0.120	--	--			
JUL										
07...		--	--	0.027	0.090	--	--			
07...		--	--	0.130	1.05	--	--			
07...		--	--	0.227	2.62	2010	97			
08...		--	--	0.321	1.39	700	99			
08...		--	--	0.233	0.660	--	--			
13...		--	--	0.017	0.080	--	--			
25...		--	--	0.016	0.040	--	--			
DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	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-PENDEDED (MG/L) (00530)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDEDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
AUG 1994										
10...	0755	16	8.0	--	170000	304	0.127	0.611	--	--
10...	0940	39	7.7	--	190000	2560	0.279	2.94	--	--
10...	1055	68	7.7	--	180000	4160	0.315	3.76	4050	98
10...	1150	84	7.6	--	120000	3910	0.292	2.94	3880	97
10...	1305	63	7.6	--	400000	2440	0.450	3.78	2380	98
10...	1545	30	7.6	--	>400000	768	0.259	1.96	--	--
10...	1715	18	7.6	--	>400000	512	0.335	1.96	--	--
18...	0735	17	7.9	--	--	628	0.202	1.23	--	--
18...	0745	30	7.9	--	--	1510	0.144	1.41	1510	95
18...	0800	44	7.8	--	--	2620	0.123	1.92	2530	97
18...	0900	27	7.4	--	--	2200	0.479	5.34	2150	100
18...	1000	15	7.4	--	--	1410	0.485	4.39	--	--
*19...	1142	4.8	8.2	--	--	23	0.045	0.114	--	--
30...	1055	16	8.1	--	210000	390	0.091	0.627	353	97
*30...	1115	17	--	--	--	--	--	203	93	93
*30...	1516	9.7	8.0	--	150000	204	0.090	0.610	--	--
30...	1519	9.6	8.0	--	--	180	0.072	0.604	190	99
*31...	1002	5.0	8.2	--	40000	23	0.037	0.134	--	--

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WAUMANDEE CREEK BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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, UM-MF (COLS./100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
SEP 1994										
*13...	1732	3.4	8.4	1.5	--	15	0.010	0.065	--	--
14...	0055	15	8.0	12	--	476	0.183	1.12	--	--
14...	0150	38	7.7	17	--	2300	0.260	3.37	--	--
14...	0340	67	7.7	20	--	3040	0.257	3.82	3030	97
14...	0410	84	7.7	15	--	4880	0.241	4.38	3930	97
14...	0450	61	7.6	31	--	3520	0.521	5.30	3110	99
14...	0520	43	7.6	30	--	2740	0.562	4.66	--	--
*14...	1141	16	7.7	13	--	732	0.256	2.25	--	--
14...	1142	16	7.8	16	--	676	0.271	2.27	--	--
14...	1150	16	--	--	--	650	--	2.22	--	--
*19...	1233	4.4	8.4	--	3100	20	0.022	0.075	--	--
23...	1635	19	--	--	--	522	0.069	0.624	--	--

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.0	9.0	11.5	8.0	2.5	5.0	4.5	2.5	3.5	1.5	.5	1.0
2	12.0	6.5	9.0	8.0	5.0	6.0	4.5	3.5	4.5	1.5	1.5	1.5
3	16.0	8.5	11.5	9.0	4.5	6.5	5.5	3.0	4.5	2.5	1.5	2.0
4	14.5	9.0	11.0	11.0	7.0	8.5	6.0	4.5	5.0	2.5	1.0	2.0
5	14.0	6.5	10.0	8.5	4.0	6.0	5.5	4.5	5.0	1.0	.5	.5
6	18.5	10.0	13.5	5.0	2.0	3.5	5.0	2.0	3.5	1.0	.5	.5
7	19.5	13.0	15.5	5.0	1.5	3.5	4.0	1.5	3.0	.5	.5	.5
8	14.0	8.5	11.5	6.5	4.0	5.0	4.5	3.0	3.5	1.0	.5	.5
9	12.0	6.5	8.5	7.5	3.0	5.0	5.5	2.5	4.0	1.0	.5	.5
10	12.0	5.5	8.0	8.0	4.5	6.0	5.0	1.0	3.5	1.0	.5	1.0
11	13.0	6.0	9.0	6.5	4.5	6.0	2.0	.5	1.0	1.0	.5	1.0
12	12.5	6.5	9.0	6.0	4.0	5.0	4.0	1.0	2.5	2.0	1.0	1.5
13	12.0	5.0	8.0	8.0	6.0	7.0	5.5	3.5	4.5	1.5	.5	1.0
14	14.0	7.0	10.0	7.0	6.0	6.5	6.0	4.5	5.0	.5	.5	.5
15	10.5	8.0	9.0	9.0	4.5	6.5	6.0	4.0	5.0	.5	.5	.5
16	11.5	10.5	10.5	6.0	4.0	5.0	5.0	3.5	4.0	.5	.5	.5
17	14.0	9.0	11.0	8.0	4.5	5.5	5.0	3.5	4.5	.5	.5	.5
18	13.5	9.0	11.0	6.5	3.0	5.0	5.5	4.5	5.0	.5	.5	.5
19	14.0	7.5	10.5	6.0	2.0	4.5	4.5	3.5	4.0	.5	.5	.5
20	11.0	8.0	9.0	5.0	2.0	3.5	4.0	1.5	3.0	.5	.5	.5
21	10.0	5.5	8.0	7.5	4.0	5.0	3.0	.5	1.5	1.0	.5	.5
22	12.0	5.0	8.0	5.5	3.5	4.5	3.0	.5	1.5	1.0	.5	.5
23	13.5	6.5	9.5	5.5	4.5	5.0	1.0	.5	.5	1.0	.5	1.0
24	14.0	8.5	11.0	5.0	3.5	4.5	.5	.5	.5	1.5	1.0	1.0
25	13.5	8.0	10.5	4.0	2.0	3.0	.5	.5	.5	1.0	.5	1.0
26	10.0	7.5	8.5	3.5	.5	2.0	.5	.5	.5	1.0	.5	.5
27	9.0	7.0	7.5	2.5	.5	1.0	.5	.5	.5	1.0	.5	.5
28	9.5	5.5	7.5	2.5	.5	1.5	.5	.5	.5	2.0	.5	1.0
29	6.0	4.0	5.0	2.5	.5	1.0	.5	.5	.5	2.5	.5	1.5
30	7.0	4.0	5.5	2.5	.5	1.5	.5	.5	.5	.5	.5	.5
31	8.0	2.5	4.5	---	---	---	1.0	.5	.5	.5	.5	.5
MONTH	19.5	2.5	9.4	11.0	.5	4.6	6.0	.5	2.8	2.5	.5	.8

## WAUMANDEE CREEK BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	.5	.5	.5	5.5	.5	2.5	15.0	4.0	9.0	15.5	4.5	9.5
2	.5	.5	.5	6.5	.5	3.0	8.0	4.5	6.0	15.0	6.0	10.5
3	.5	.5	.5	8.0	2.5	5.0	12.0	2.0	6.5	16.5	7.0	11.5
4	.5	.5	.5	7.0	1.0	3.5	6.5	2.5	5.0	14.0	9.0	11.0
5	1.0	.5	.5	6.5	1.0	3.5	10.5	.5	5.0	16.5	7.0	11.0
6	1.0	.5	.5	5.5	1.5	3.5	12.0	1.5	6.0	18.0	6.5	11.5
7	.5	.5	.5	6.0	.5	3.0	13.0	3.0	7.5	20.0	9.5	14.0
8	.5	.5	.5	4.5	.5	1.5	8.0	5.5	6.5	18.5	8.0	13.0
9	1.0	.5	.5	7.0	.5	3.0	12.0	4.5	7.5	17.0	8.5	13.0
10	1.0	.5	.5	5.5	2.0	3.5	15.0	4.0	9.0	18.5	7.5	13.0
11	1.0	.5	1.0	8.0	.5	4.0	12.5	5.0	8.5	21.0	13.0	16.0
12	1.0	.5	1.0	10.5	4.0	6.5	7.5	5.0	6.0	20.5	9.5	14.5
13	1.0	.5	1.0	7.0	3.5	4.5	11.0	6.0	7.5	21.5	9.5	15.0
14	2.5	.5	1.5	8.5	3.5	5.5	15.5	5.0	10.0	15.0	12.5	13.0
15	4.0	1.0	2.0	9.5	3.0	5.5	11.0	6.5	8.5	21.0	10.5	15.0
16	5.0	.5	2.5	9.5	1.0	4.5	15.5	5.0	9.5	22.0	10.5	15.5
17	6.0	2.0	3.5	5.5	2.0	4.0	17.5	6.0	11.0	21.5	10.0	15.5
18	6.0	2.5	4.0	7.0	3.5	5.0	20.0	7.5	13.0	23.0	11.0	16.5
19	2.5	1.0	1.5	7.5	2.0	5.0	16.0	7.5	11.5	24.0	11.0	17.0
20	6.0	1.0	3.0	10.5	4.0	7.5	10.0	5.5	8.0	24.5	12.0	18.0
21	6.0	.5	2.5	13.0	5.5	8.5	17.5	6.5	11.0	24.5	12.5	18.0
22	1.5	.5	.5	14.5	4.5	9.0	18.0	5.5	11.5	26.0	14.0	19.5
23	.5	.5	.5	10.5	5.5	7.5	18.0	7.5	12.5	19.0	13.5	16.5
24	1.0	.5	.5	7.0	3.5	5.0	18.0	12.0	15.0	22.0	13.0	17.0
25	.5	.5	.5	11.0	1.5	6.0	15.5	12.5	14.0	18.5	13.0	15.5
26	1.0	.5	.5	7.5	4.0	5.5	18.5	10.5	14.5	19.5	10.0	14.5
27	1.0	.5	.5	7.5	3.5	5.5	10.5	7.5	9.0	21.5	9.0	15.0
28	3.0	.5	1.5	7.0	4.0	5.5	7.5	5.0	6.0	23.0	11.0	16.5
29	---	---	---	8.0	2.5	5.0	10.0	4.5	7.0	23.0	14.0	17.5
30	---	---	---	11.0	1.5	5.5	9.5	6.0	7.5	26.0	14.0	19.0
31	---	---	---	13.5	2.5	7.5	---	---	---	24.0	13.0	18.5
MONTH	6.0	.5	1.2	14.5	.5	5.0	20.0	.5	9.0	26.0	4.5	14.9
	JUNE			JULY			AUGUST			SEPTEMBER		
1	22.5	12.0	17.0	26.5	17.0	21.0	25.5	16.0	20.0	17.0	11.0	14.0
2	23.0	11.5	17.0	25.5	15.0	19.5	25.0	16.0	20.0	15.0	12.0	13.5
3	24.0	11.0	17.0	24.0	13.5	18.5	22.0	16.5	19.0	18.0	12.5	15.0
4	25.0	12.0	18.0	19.0	17.0	18.0	20.0	15.5	17.5	15.0	13.5	14.0
5	18.5	14.5	16.0	26.5	16.0	20.5	22.5	12.0	16.5	19.0	13.0	15.0
6	26.0	14.0	19.5	24.5	18.0	20.5	22.0	13.0	17.0	20.0	12.5	15.5
7	18.5	13.5	15.5	24.0	16.5	19.5	21.5	14.0	17.5	21.0	11.5	16.0
8	23.0	10.0	16.0	19.0	16.0	17.0	19.0	15.5	17.5	22.0	14.5	17.5
9	23.0	11.0	16.5	20.0	15.0	17.5	16.0	12.0	14.0	21.5	13.5	17.0
10	24.5	13.5	17.5	25.0	13.0	18.5	14.5	13.5	14.0	22.0	15.0	18.0
11	23.0	12.0	17.5	23.5	16.0	19.5	19.0	13.5	15.5	22.0	14.5	18.0
12	26.0	12.5	18.5	22.5	15.5	19.0	18.0	14.0	16.0	17.5	15.0	16.0
13	26.5	16.0	20.5	17.5	14.5	16.0	21.0	15.0	17.5	22.0	16.0	18.5
14	29.0	17.0	22.5	17.0	14.0	15.0	21.5	12.0	16.5	23.0	18.0	20.0
15	26.0	20.0	22.5	25.5	13.0	18.5	22.5	12.5	17.0	23.0	17.5	19.0
16	28.5	18.5	23.0	19.0	15.5	17.0	23.5	13.0	18.0	18.0	15.0	16.5
17	28.5	18.5	23.0	25.0	14.5	19.5	20.0	15.0	17.5	20.0	13.5	16.5
18	29.0	18.5	22.5	24.0	15.5	19.5	21.5	15.0	18.0	21.0	12.5	16.0
19	27.5	18.0	22.0	25.0	16.5	20.0	20.5	14.5	17.5	20.5	12.5	16.0
20	25.5	18.0	21.0	25.0	17.0	20.5	18.5	14.5	16.5	17.5	13.0	15.5
21	27.5	17.0	21.5	22.0	16.5	19.0	21.5	13.5	17.0	20.0	14.0	16.5
22	26.5	15.5	20.5	24.5	16.5	19.5	21.5	13.0	17.0	16.5	14.5	15.5
23	20.0	15.5	17.5	26.0	16.0	20.5	22.5	14.0	18.0	17.0	14.0	15.0
24	25.0	14.0	19.0	24.0	15.0	19.5	24.5	15.5	19.5	17.5	13.5	15.5
25	26.5	15.0	20.0	24.0	15.0	19.0	24.0	16.0	19.5	18.0	13.0	15.0
26	22.5	16.0	19.0	20.0	15.0	17.5	21.5	16.0	18.5	13.5	11.5	12.0
27	22.0	14.5	18.0	21.5	14.0	17.5	22.5	16.0	19.5	13.0	11.0	12.0
28	24.5	15.0	19.0	23.5	13.5	18.0	22.0	16.0	19.0	15.0	10.0	12.0
29	23.0	16.5	19.5	23.5	14.5	18.5	21.5	13.5	17.0	16.5	9.0	12.0
30	26.0	15.5	20.0	23.5	15.0	19.0	17.5	15.0	15.5	14.0	11.0	12.5
31	---	---	---	23.0	16.0	19.0	18.5	13.5	15.5	---	---	---
MONTH	29.0	10.0	19.2	26.5	13.0	18.8	25.5	12.0	17.4	23.0	9.0	15.5

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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.09	.15	.13	.13	.37	.22	1.1	.35	.48	.10	.29
2	.26	.10	.16	.13	.13	.34	.22	.83	.31	.38	.10	.26
3	.26	.11	.15	.13	.13	1.0	.22	.65	.29	.30	.47	.29
4	.26	.12	.15	.13	.13	159	.33	.60	.29	.25	.26	.27
5	.26	.13	.15	.12	.13	27	.35	.59	1.1	.59	.22	.26
6	.27	.13	.15	.12	.13	3.7	.32	.55	.54	.96	.20	.23
7	.26	.13	.13	.12	.13	1.0	.31	.52	.39	13	.17	.22
8	.28	.12	.13	.11	.13	.89	.30	.49	.36	6.6	.13	.23
9	.27	.11	.14	.12	.14	.82	.28	.46	.32	.76	.11	.19
10	.26	.10	.13	.12	.14	.77	.25	.46	.31	.57	133	.18
11	.26	.09	.12	.12	.15	.74	.22	1.5	.30	.49	1.0	.17
12	.27	.11	.13	.13	.16	.77	1.9	.78	.31	.40	.36	.16
13	.27	.30	.32	.12	.16	.71	1.0	.50	1.7	.34	.26	.21
14	.26	.21	1.3	.12	.17	1.2	.64	1.0	1.0	.31	.24	150
15	.34	.21	1.0	.11	.16	.78	16	.86	.99	.27	.21	1.4
16	.36	.20	.81	.11	.16	.58	.91	.48	.94	.25	.20	1.2
17	.32	.19	.64	.11	.17	.49	.71	.35	.94	.23	.17	.54
18	.30	.19	.48	.11	3.6	.43	.65	.33	.94	.19	22	.35
19	.29	.19	.37	.10	741	.41	.56	.32	.97	.16	1.1	.27
20	.34	.18	.27	.11	2.0	.68	.51	.31	.96	.15	.52	.26
21	.30	.18	.21	.11	.79	.63	.47	.32	.89	.14	.30	.42
22	.18	.18	.16	.12	.55	.49	.43	.33	.79	.13	.28	2.0
23	.15	.17	.12	.13	.51	.40	.41	.55	1.4	.11	.27	4.8
24	.13	.17	.11	.13	.48	.35	.67	.56	.99	.10	.28	.95
25	.11	.18	.11	.13	.44	.31	14	.53	.87	.09	.27	1.2
26	.09	.17	.10	.13	.42	.31	662	.49	1.4	.09	.28	1.1
27	.08	.17	.10	.13	.40	.29	3.3	.42	1.0	.10	.26	.66
28	.08	.16	.10	.13	.39	.27	3.6	.38	.90	.10	.26	.52
29	.09	.15	.10	.13	---	.25	3.1	.36	.79	.09	.24	.41
30	.09	.14	.11	.13	---	.23	1.4	.96	.62	.09	5.3	.34
31	.09	---	.13	.13	---	.22	---	.72	---	.09	.38	---
TOTAL	7.05	4.68	8.23	3.77	753.03	205.43	715.28	18.30	22.96	27.81	168.94	169.38
WTR YR 1994	TOTAL 2104.86											

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	.75	.75	.76	.68	1.0	.77	5.0	1.5	1.6	.74	3.0
2	1.9	.75	.83	.73	.68	.91	.80	3.2	1.3	1.4	.74	2.7
3	1.8	.80	.78	.74	.70	4.3	.78	2.1	1.1	1.2	2.3	2.8
4	1.8	.81	.81	.74	.70	344	1.3	1.9	1.1	1.1	1.9	2.6
5	1.8	.83	.81	.71	.68	239	1.4	1.9	3.5	2.6	1.7	2.5
6	1.9	.79	.80	.70	.68	37	1.3	1.9	2.2	4.1	1.6	2.1
7	1.8	.77	.72	.66	.68	9.1	1.2	1.8	1.7	36	1.4	2.0
8	2.0	.79	.73	.65	.68	6.0	1.1	1.8	1.4	31	1.1	2.0
9	1.9	.80	.77	.66	.71	4.3	1.0	1.7	1.1	3.9	1.0	1.7
10	1.9	.83	.76	.70	.74	3.1	.92	1.8	.95	2.9	298	1.5
11	1.9	.81	.69	.70	.78	2.3	.81	4.4	.81	2.5	6.7	1.4
12	1.9	1.3	.74	.71	.80	1.8	10	1.8	.73	2.0	2.9	1.3
13	1.9	4.8	1.4	.67	.81	1.3	4.0	1.3	3.1	1.7	2.4	1.6
14	1.9	2.3	4.2	.65	.85	4.3	1.8	3.0	1.6	1.6	2.2	424
15	3.2	1.6	3.2	.63	.83	2.8	35	2.0	1.5	1.5	1.9	10
16	2.8	1.1	2.4	.62	.81	2.0	2.5	1.1	1.4	1.4	1.7	9.2
17	2.5	.83	2.1	.60	.83	1.5	1.9	.95	1.3	1.3	1.5	4.7
18	2.3	.80	1.8	.58	12	1.2	1.6	.91	1.3	1.2	71	2.7
19	2.1	.81	1.5	.57	1510	1.1	1.3	.88	1.3	1.0	6.3	1.9
20	3.1	.79	1.2	.58	18	2.4	1.1	.86	1.2	.98	3.6	1.8
21	3.6	.81	1.1	.62	4.1	2.4	.96	.88	1.1	.97	2.6	2.7
22	2.3	.79	.90	.65	2.4	2.0	.82	.91	.92	.92	2.3	8.0
23	1.8	.78	.70	.70	2.1	1.6	.72	1.5	3.2	.83	2.1	13
24	1.5	.78	.68	.70	1.9	1.4	1.8	1.2	2.5	.80	2.2	5.4
25	1.2	.82	.65	.70	1.6	1.2	46	1.1	2.3	.74	2.0	6.0
26	.99	.80	.62	.70	1.4	1.2	1200	.99	3.8	.73	2.0	5.7
27	.82	.81	.60	.68	1.3	1.1	27	.85	2.7	.82	1.8	4.0
28	.79	.81	.58	.68	1.2	1.0	16	.76	2.4	.79	1.7	3.2
29	.79	.75	.60	.68	---	.90	15	.71	2.3	.73	1.6	2.7
30	.77	.72	.63	.68	---	.81	7.8	2.8	1.9	.70	18	2.3
31	.75	---	.76	.68	---	.77	---	2.5	---	.68	3.6	---
TOTAL	57.61	30.93	34.81	20.83	1568.64	683.79	1386.68	54.50	53.21	109.69	450.58	534.5
WTR YR 1994	TOTAL 4985.77											



## WAUMANDEE CREEK BASIN

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 data missing for July 16, 21, 24, and Aug. 3.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.20 in., Aug. 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.23
4	.00	.00	.00	.00	.00	.00	.50	.10	.00	.00	.00	.14
5	.10	.00	.00	.00	.00	.20	.00	.00	.60	.40	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.70	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.20	1.10	.00	.00
8	.20	.00	.00	.00	.00	.00	.10	.00	.00	.10	.00	.08
9	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.20	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	3.20	.00
11	.00	.00	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00
12	.00	.20	.00	.00	.00	.00	.60	.00	.40	.00	.00	.07
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.20	.00	.77
14	.00	.10	.10	.00	.00	.00	.00	.40	.00	.00	.00	1.32
15	.30	.00	.00	.00	.00	.00	.70	.00	.00	.00	.00	.24
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.02
17	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.30	.00	.30	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.28	.00
20	.30	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.04
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.38
22	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.74
23	.00	.00	.00	.00	.00	.00	.00	.40	.50	.00	.13	.30
24	.00	.00	.00	.00	.00	.00	.30	.00	.00	---	.00	.02
25	.00	.20	.00	.00	.00	.00	.90	.20	.10	.00	.24	.32
26	.00	.00	.00	.00	.00	.00	1.20	.00	.30	.00	.00	.06
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.01
28	.00	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.30	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.50	.00	.00	1.06	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.90	0.60	0.20	0.00	0.00	0.20	4.60	2.00	2.90	---	---	4.84

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 mi<sup>2</sup>.

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. 23-29, Jan. 7, 13-19, 27-31, and Feb. 7, 9-10, 23-27. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	11	10	9.6	10	10	15	9.9	8.9	7.6	9.5
2	12	11	12	10	9.9	10	9.9	14	9.6	8.5	7.4	9.3
3	12	11	12	10	10	11	9.7	13	9.3	8.3	8.8	10
4	12	11	12	10	9.6	42	11	13	9.3	8.6	8.2	9.9
5	12	12	12	9.9	9.6	31	11	13	12	11	7.5	10
6	12	11	12	10	9.6	19	11	12	10	13	7.4	9.5
7	12	11	11	9.8	9.6	13	11	12	10	17	7.4	9.3
8	12	11	11	10	9.6	11	11	12	10	18	7.4	9.5
9	12	11	11	10	9.2	11	11	11	9.5	12	7.2	8.8
10	12	12	11	10	9.6	11	10	11	9.5	10	63	8.6
11	12	12	11	9.9	9.6	10	9.9	13	9.3	9.8	14	8.5
12	12	12	11	9.9	9.6	11	15	12	9.2	9.5	12	8.5
13	11	14	11	9.8	9.6	11	13	11	11	9.3	11	9.3
14	11	12	12	9.4	9.7	12	12	12	9.5	9.3	9.7	59
15	12	12	12	9.0	9.7	12	22	12	9.1	9.3	9.3	15
16	13	12	11	9.0	9.5	11	14	11	9.0	9.1	9.0	13
17	12	12	12	9.0	10	10	13	11	8.8	9.3	8.8	12
18	12	11	12	9.0	16	10	12	11	8.9	8.8	22	11
19	12	11	12	9.0	124	11	11	11	9.2	8.8	13	10
20	12	11	12	9.2	14	12	11	11	9.0	8.7	11	10
21	13	11	11	9.6	12	12	11	10	8.7	8.3	10	11
22	12	11	11	9.7	11	12	11	11	8.4	8.2	9.4	16
23	12	11	10	9.9	10	12	11	11	9.9	8.0	9.3	19
24	12	11	9.6	9.8	10	11	12	11	9.5	7.7	9.4	15
25	12	11	9.4	9.6	10	11	25	11	9.1	8.0	9.1	14
26	12	11	9.4	9.7	10	11	59	11	9.9	7.6	9.6	14
27	11	11	9.4	9.6	10	11	20	10	9.1	7.8	9.1	12
28	11	11	9.4	9.6	10	11	19	10	9.0	7.9	8.9	12
29	12	11	9.4	9.6	---	10	20	10	9.5	7.8	8.6	11
30	11	11	9.6	9.6	---	10	17	11	9.3	7.6	20	11
31	11	---	10	9.6	---	10	---	11	---	7.6	11	---
TOTAL	368	341	339.2	299.2	401.0	400	443.5	358	284.5	293.7	366.1	385.7
MEAN	11.9	11.4	10.9	9.65	14.3	12.9	14.8	11.5	9.48	9.47	11.8	12.9
MAX	13	14	12	10	124	42	59	15	12	18	63	59
MIN	11	11	9.4	9.0	9.2	10	9.7	10	8.4	7.6	7.2	8.5
CFSM	.83	.79	.77	.67	1.00	.90	1.03	.81	.66	.66	.83	.90
IN.	.96	.89	.88	.78	1.04	1.04	1.15	.93	.74	.76	.95	1.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1994, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994
MEAN	8.21	9.99	8.12	6.99	8.52
MAX	11.9	12.9	10.9	9.65	14.3
(WY)	1994	1992	1994	1994	1994
MIN	6.44	5.58	4.90	4.70	5.09
(WY)	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1990 - 1994

ANNUAL TOTAL	5170.5	4279.9		
ANNUAL MEAN	14.2	11.7	10.5	
HIGHEST ANNUAL MEAN			13.5	1993
LOWEST ANNUAL MEAN			7.75	1991
HIGHEST DAILY MEAN	77	Jul 2	124	Feb 19
LOWEST DAILY MEAN	5.8	Jan 18	7.2	Aug 9
ANNUAL SEVEN-DAY MINIMUM	6.4	Jan 13	7.7	Jul 27
INSTANTANEOUS PEAK FLOW			229	Aug 10
INSTANTANEOUS PEAK STAGE			5.86	Aug 10
INSTANTANEOUS LOW FLOW			7.2	(b)Aug 2
ANNUAL RUNOFF (CFSM)	.99	.82	(a)919	9.02
ANNUAL RUNOFF (INCHES)	13.45	11.13	(c)1.7	9.98
10 PERCENT EXCEEDS	21	13		15
50 PERCENT EXCEEDS	12	11		8.7
90 PERCENT EXCEEDS	7.3	8.9		6.0

(a) From rating curve extended above 70 ft<sup>3</sup>/s on basis of step-backwater method

(b) Also occurred Aug. 3, 6-9

(c) Result of freezeup

## WAUMANDEE CREEK BASIN

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 September 1992.

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, 1993, and 1994 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, 26.0°C, June 14, 16, 18; minimum observed, 0.0°C, on many days during winter period.  
 SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 1,900 tons, Apr. 26; minimum daily, 0.35 ton, June 22.  
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 2,940 lb, Apr. 26; minimum daily, 2.0 lb, June 22, 28, and July 3, 4.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)
OCT 1993							
*12...	0715	12	8.1	1.1	1700	69	394
*27...	1133	11	8.0	<1.0	840	30	358
NOV							
*07...	1233	11	8.2	2.0	150	26	338
DEC							
*16...	1145	12	7.9	<1.0	80	31	358
FEB 1994							
18...	2215	40	--	--	--	2850	3100
19...	0130	99	--	--	--	5740	5850
19...	0430	134	--	--	--	7830	8520
19...	0940	181	--	--	--	5110	5720
19...	1140	215	--	--	--	5080	5670
19...	1430	181	--	--	--	4830	5690
*19...	1609	133	--	--	--	2390	2720
19...	1613	132	--	--	--	2700	3030
19...	1750	90	--	--	--	2960	3260
19...	2130	39	--	--	--	2820	3070
*21...	1414	12	--	--	--	92	416
MAR							
04...	1355	38	7.8	--	--	2580	2820
04...	1450	69	7.4	--	--	3920	4140
04...	1535	101	7.4	--	--	5650	5510
04...	1605	121	7.4	--	--	6020	6010
04...	1620	132	7.4	--	--	6530	6400
04...	1835	102	7.3	--	--	3540	3620
04...	2005	74	7.4	--	--	2510	2670
04...	2150	49	8.0	--	--	924	1140
05...	1730	39	8.0	--	--	1420	1730
05...	1815	51	7.9	--	--	2000	2050
05...	1905	66	7.8	--	--	2440	2410
05...	2005	79	7.7	--	--	2910	3190
05...	2335	54	7.6	--	--	1450	1700
*15...	1212	11	8.2	1.5	<10	56	366
*30...	1237	10	8.2	1.5	30	27	348
APR							
*11...	1258	9.9	8.3	<1.0	10	30	354
*13...	1137	13	8.0	1.6	210	113	430
15...	0355	38	--	--	--	2620	2850
*15...	1222	18	--	--	--	308	616
25...	0425	38	8.0	11	--	1730	2010
*25...	1233	23	8.0	3.3	97000	390	682
26...	0120	39	8.1	--	--	1910	2320
26...	0140	53	7.6	--	--	3500	3550
26...	0205	71	7.9	--	--	6590	6680
26...	0225	85	7.7	16	520000	16900	17400
26...	0315	115	7.9	13	300000	12000	12500
26...	0455	131	7.6	5.4	490000	23200	22700
26...	0510	151	7.8	16	640000	27000	27300
*26...	1352	35	7.9	5.8	150000	2350	2600

\* 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 1993 TO SEPTEMBER 1994

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 (70331)
OCT 1993							
12...	--	10	--	0.018	0.090	--	--
27...	74	4	1.11	0.026	0.060	--	--
NOV							
07...	--	8	--	0.008	0.050	--	--
DEC							
16...	80	4	--	0.027	0.050	--	--
FEB 1994							
18...	--	140	--	1.76	2.80	--	--
19...	--	248	--	1.47	4.67	--	--
19...	--	308	--	1.41	6.18	--	--
19...	--	240	--	1.97	5.04	--	--
19...	--	250	--	2.11	5.39	--	--
19...	--	190	--	2.04	4.86	--	--
19...	--	132	--	1.98	3.23	2660	81
19...	--	130	--	1.95	3.66	--	--
19...	--	150	--	1.84	3.37	--	--
19...	--	160	--	1.67	3.07	--	--
21...	--	4	--	0.129	0.140	--	--
MAR							
04...	--	108	--	0.936	2.41	--	--
04...	--	204	--	3.23	4.32	--	--
04...	--	280	--	2.26	5.48	--	--
04...	--	296	--	2.02	5.58	--	--
04...	--	292	--	1.74	5.60	--	--
04...	--	184	--	2.22	3.97	--	--
04...	--	128	--	1.84	3.29	--	--
04...	--	68	--	1.14	2.27	--	--
05...	--	68	--	1.15	2.35	--	--
05...	--	112	--	1.36	2.92	--	--
05...	--	148	--	1.50	3.30	--	--
05...	--	176	--	1.66	5.19	--	--
05...	--	108	--	1.43	2.53	--	--
15...	--	5	--	0.046	0.120	--	--
30...	--	3	--	0.008	0.040	--	--
APR							
11...	--	4	--	<0.005	0.050	--	--
13...	--	11	--	0.047	0.160	--	--
15...	--	180	--	0.264	2.44	--	--
15...	--	26	--	0.122	0.480	--	--
25...	--	125	--	0.179	1.70	--	--
25...	--	30	--	0.171	0.560	--	--
26...	--	86	--	0.141	1.74	--	--
26...	--	180	--	0.265	2.58	--	--
26...	--	440	--	0.268	5.80	--	--
26...	--	1190	--	0.632	11.1	--	--
26...	--	790	--	0.335	9.22	--	--
26...	--	1470	--	0.469	15.9	--	--
26...	--	1600	--	0.579	19.8	--	--
26...	--	200	--	0.265	2.96	2250	96

## WAUMANDEE CREEK BASIN

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	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-PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)			
MAY 1994										
*03...	1417	13	8.3	1.4	310	98	418			
*17...	1323	11	8.4	1.3	250	32	338			
JUN										
*01...	1217	9.9	8.2	3.4	3700	93	412			
05...	1331	13	8.0	--	67000	298	606			
*05...	1333	13	8.0	3.2	74000	296	608			
*14...	1043	9.6	8.2	1.9	16000	111	444			
*28...	1517	9.0	8.5	<1.0	2400	13	302			
JUL										
*07...	1321	11	8.1	--	7500	138	--			
07...	2145	40	7.9	--	--	1760	--			
07...	2220	55	7.8	--	--	2750	--			
*08...	1322	13	7.9	--	--	228	--			
*13...	1244	9.3	8.1	--	4500	85	--			
*25...	1217	8.1	8.4	--	4500	41	--			
DATE		SOLIDS, VOLA-TILE ON IGNITION, 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)		
MAY 1994										
03...	--	--	9	--	0.020	0.110	--	--		
17...	--	--	4	--	0.019	0.060	--	--		
JUN										
01...	--	--	10	--	0.068	0.120	--	--		
05...	--	--	26	--	0.247	0.370	--	--		
05...	--	--	26	--	0.242	0.370	300	91		
14...	--	--	18	--	0.073	0.160	--	--		
28...	--	--	4	--	0.006	0.040	--	--		
JUL										
07...	--	--	--	--	0.059	0.200	--	--		
07...	--	--	--	--	0.200	1.93	2050	81		
07...	--	--	--	--	0.261	2.62	2830	78		
08...	--	--	--	--	0.147	0.490	--	--		
13...	--	--	--	--	0.043	0.140	--	--		
25...	--	--	--	--	0.042	0.080	--	--		
DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	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-PENDE (MG/L) (00530)	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)
AUG 1994										
10...	0825	41	7.8	--	350000	1350	0.153	1.28	--	--
10...	0930	83	7.7	--	350000	2190	0.274	2.06	--	--
10...	1030	151	7.6	--	>300000	3340	0.262	2.67	--	--
10...	1120	211	7.7	--	33000	4220	0.279	3.02	4640	80
10...	1200	227	7.6	--	180000	3160	0.281	2.97	3740	74
10...	1320	193	7.7	--	400000	2690	0.339	3.02	3200	69
10...	1450	124	7.6	--	>300000	1690	0.245	2.38	--	--
10...	1820	41	7.6	--	170000	1060	0.195	1.55	--	--
11...	1121	14	7.9	--	--	152	0.096	0.280	157	97
11...	1125	14	8.1	--	44000	246	0.096	0.340	307	85
18...	0705	40	7.9	--	--	2800	0.174	1.07	--	--
18...	0800	55	7.7	--	--	3160	0.225	2.57	--	--
18...	0820	71	7.8	--	--	3230	0.158	2.01	3260	87
18...	0835	86	7.8	--	--	3690	0.153	2.84	3590	84
18...	0950	61	7.5	--	--	2590	0.270	3.32	2470	87
18...	1120	35	7.6	--	--	1590	0.223	2.55	--	--
*19...	1303	10	8.1	--	--	66	0.045	0.151	--	--
30...	1115	48	8.1	--	230000	1700	0.148	1.78	1920	88
*30...	1631	23	7.9	--	120000	436	0.097	0.828	443	98
30...	1633	22	7.9	--	--	576	0.095	0.853	591	88
*31...	0857	11	8.0	--	31000	79	0.062	0.182	--	--

\* 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 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	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-PENDE (MG/L) (00530)	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)
SEP 1994										
14...	0120	41	7.9	9.4	--	1730	0.092	1.71	--	--
14...	0150	69	7.8	13	--	2530	0.149	2.24	--	--
14...	0220	104	7.7	12	--	4520	0.146	3.46	--	--
14...	0315	149	--	--	--	--	0.216	4.42	4310	89
14...	0345	164	7.7	17	--	3180	0.200	4.09	3800	82
14...	0530	129	7.5	21	--	2760	0.304	3.92	2840	87
14...	0635	74	7.5	17	--	1990	0.267	3.18	--	--
*14...	0852	102	7.6	10	--	1390	0.199	2.22	--	--
14...	0853	102	7.8	12	--	1950	0.177	2.65	--	--
*14...	1057	79	7.6	13	--	1760	0.200	2.46	--	--
14...	1058	79	7.7	13	--	1400	0.184	2.62	--	--
14...	1210	51	--	--	--	1200	--	2.26	--	--
*19...	1429	11	8.2	--	3100	66	0.031	0.127	--	--
23...	1730	39	--	--	--	1630	0.091	1.45	--	--
23...	1810	52	--	--	--	2130	0.105	2.15	--	--
*26...	1319	13	8.0	--	3200	57	0.059	0.126	--	--

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-PYRIFOS TOTAL RECOVER (UG/L) (38932)	CIS-PERME-THRIN WATER WHOLE REC (UG/L) (82418)	CYAN-AZINE TOTAL (UG/L) (81757)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (UG/L) (82052)	DIMETH-OATE WATER WHOLE TOTAL (UG/L) (39009)	EPTC WATER WHOLE REC (UG/L) (81894)
MAY 1994											
*12...	0930	12	<0.10	<0.1	<0.3	<1.0	<1.0	<0.30	<0.20	<1.0	<1.0
JUN											
*05...	1317	13	<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)	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)
MAY 1994										
12...	<0.20	<1.0	<0.20	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50
JUN										
05...	<0.20	<1.0	<0.20	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

## WAUMANDEE CREEK BASIN

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

## WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.5	9.0	11.0	7.0	2.5	4.5	4.5	2.5	3.5	2.0	1.5	1.5
2	10.5	6.5	8.5	7.5	5.0	6.0	4.5	4.0	4.5	2.0	1.5	1.5
3	14.0	8.5	10.5	8.0	4.5	6.5	5.0	3.0	4.0	2.5	1.5	2.0
4	12.5	9.0	10.5	10.0	7.0	8.0	5.5	4.5	5.0	2.0	.5	1.5
5	12.5	6.5	9.5	8.5	4.0	6.0	5.5	4.5	5.0	1.0	.0	.5
6	16.0	10.0	12.5	4.5	2.5	3.5	5.0	2.0	4.0	2.0	.0	1.0
7	17.0	12.5	14.5	5.0	1.5	3.5	4.0	2.0	3.0	.5	.0	.0
8	13.5	8.5	11.0	6.0	4.0	5.0	4.0	3.0	3.5	.5	.0	.0
9	10.5	6.5	8.0	6.5	3.0	5.0	5.0	2.5	4.0	.5	.0	.0
10	10.5	5.5	8.0	7.0	5.0	6.0	4.5	1.0	3.5	2.0	.5	1.0
11	11.5	6.0	8.5	6.5	4.5	5.5	2.0	.5	1.5	1.5	.5	1.0
12	10.5	6.5	8.5	6.0	4.0	5.0	4.0	1.5	2.5	2.5	1.0	1.5
13	10.5	5.0	7.5	7.5	5.5	7.0	5.0	3.5	4.5	1.0	.0	.5
14	12.5	7.0	9.0	6.5	6.0	6.5	5.5	4.5	5.0	.0	.0	.0
15	9.5	8.0	9.0	7.5	4.5	6.0	5.5	4.0	4.5	.0	.0	.0
16	10.5	9.5	10.0	5.5	4.0	5.0	5.0	3.0	4.0	.0	.0	.0
17	12.5	9.0	10.5	6.5	4.5	5.5	5.0	4.0	4.5	.0	.0	.0
18	12.5	9.0	10.0	6.0	3.5	4.5	5.0	4.5	4.5	.0	.0	.0
19	12.0	7.5	9.5	6.0	2.0	5.0	4.5	4.0	4.0	.0	.0	.0
20	10.0	7.5	8.5	5.0	2.0	3.5	4.0	2.0	3.5	.5	.0	.0
21	9.5	6.0	7.5	6.5	4.0	5.0	2.5	1.0	1.5	1.5	.0	1.0
22	10.0	5.0	7.5	5.5	3.5	4.5	3.0	1.0	2.0	2.0	.5	1.0
23	12.0	6.5	9.0	5.5	4.5	5.0	1.5	.5	1.0	2.5	1.5	2.0
24	12.5	8.0	10.0	5.0	4.0	4.5	1.0	.0	.5	2.5	1.0	1.5
25	12.0	8.0	10.0	4.0	2.5	3.5	.5	.0	.0	1.5	1.0	1.5
26	9.5	7.5	8.5	4.0	.5	2.5	.5	.0	.0	1.5	1.0	1.0
27	8.0	7.0	7.5	2.5	.5	1.5	.5	.0	.0	1.5	.0	1.0
28	8.5	6.0	7.5	2.5	.5	1.5	.5	.0	.0	2.0	1.0	1.5
29	6.0	4.5	5.0	2.5	.5	1.5	.5	.0	.5	2.5	.0	2.0
30	6.5	4.5	5.0	2.5	.5	1.5	1.5	.0	.5	.5	.0	.0
31	6.5	3.0	4.5	---	---	---	2.0	1.5	1.5	.0	.0	.0
MONTH	17.0	3.0	8.9	10.0	.5	4.6	5.5	.0	2.8	2.5	.0	.8
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	.5	.0	.5	5.0	.0	2.0	13.0	4.0	8.0	14.0	4.5	8.5
2	1.5	.0	.5	5.5	.5	2.5	7.5	4.0	6.0	14.0	6.0	10.0
3	.5	.0	.5	7.5	2.5	4.5	11.0	2.0	6.0	15.0	6.5	10.5
4	1.0	.0	.5	6.0	1.0	3.5	6.5	2.5	5.0	12.5	9.0	10.5
5	2.0	.5	1.0	5.5	1.0	3.0	9.0	1.0	4.5	14.5	7.0	10.5
6	1.5	.0	.5	5.0	2.0	3.0	10.0	1.5	5.5	16.0	6.0	10.5
7	.0	.0	.0	6.0	1.0	3.5	11.0	3.0	6.5	18.0	9.0	13.0
8	.5	.0	.5	4.0	.5	2.0	7.5	5.5	6.0	17.0	8.0	12.0
9	1.5	.0	.5	5.5	.5	2.5	10.0	4.5	6.5	16.0	8.0	12.0
10	1.0	.0	.5	5.0	2.0	3.0	13.0	4.0	8.0	16.5	7.5	12.0
11	2.5	.5	1.5	7.0	.5	3.5	11.5	4.5	7.5	19.5	12.0	15.0
12	2.5	1.0	1.5	9.5	4.0	6.0	7.5	5.0	6.0	18.0	9.0	13.5
13	2.5	.5	1.0	6.0	3.0	4.5	9.5	5.5	7.0	19.5	9.0	14.0
14	3.0	.5	1.5	8.0	3.0	5.0	14.0	4.5	9.0	14.0	11.5	12.5
15	4.0	1.5	2.5	8.5	3.0	5.0	10.5	6.5	8.0	19.0	10.0	14.0
16	4.5	.5	2.5	8.0	1.5	4.5	14.0	5.0	9.0	20.0	10.0	14.5
17	5.5	2.0	3.5	5.0	2.0	3.5	15.5	5.5	10.0	19.5	9.5	14.0
18	5.0	1.0	3.0	6.5	3.5	4.5	17.5	7.0	11.5	20.5	10.5	15.0
19	1.5	.5	1.0	6.5	2.5	4.5	14.5	7.5	10.5	21.5	10.5	15.5
20	5.0	1.5	2.5	9.5	4.0	6.5	9.0	5.0	7.5	22.0	11.5	16.5
21	4.5	1.0	2.5	11.0	5.0	7.5	15.5	6.0	10.0	22.0	12.0	16.5
22	2.0	.5	1.0	12.5	4.0	8.0	16.0	5.5	10.5	23.5	13.5	18.0
23	1.5	.0	.5	9.0	5.0	7.0	16.0	7.0	11.5	17.0	12.5	15.0
24	3.5	.0	1.0	6.0	3.5	5.0	16.5	11.5	14.0	20.0	12.5	16.0
25	1.5	.0	.5	9.5	1.5	5.5	14.5	12.0	13.0	17.0	12.0	14.5
26	2.0	.0	.5	6.5	4.0	5.5	17.0	11.0	14.0	17.5	10.0	13.5
27	1.5	.0	.5	6.5	3.5	5.0	11.0	7.5	9.0	19.5	8.5	14.0
28	3.5	.5	2.0	6.5	3.5	5.0	7.5	5.0	6.0	20.5	10.5	15.5
29	---	---	---	7.0	2.5	4.5	9.0	4.5	6.5	21.0	13.0	16.5
30	---	---	---	9.5	1.5	5.5	9.0	5.5	7.0	23.5	13.0	17.5
31	---	---	---	12.0	2.5	6.5	---	---	---	22.0	12.5	17.0
MONTH	5.5	.0	1.2	12.5	.0	4.6	17.5	1.0	8.3	23.5	4.5	13.8

WAUMANDEE CREEK BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	20.0	11.5	15.5	24.0	16.0	19.5	22.5	15.0	18.5	15.5	11.0	13.5
2	20.5	11.0	15.5	22.5	14.0	18.0	22.0	14.5	18.0	14.0	11.5	13.0
3	21.5	10.5	15.5	21.0	12.5	17.0	20.0	15.5	17.5	17.0	12.5	14.0
4	22.5	11.0	16.5	17.5	16.0	16.5	18.0	14.5	16.5	14.5	13.0	13.5
5	17.0	13.5	15.0	24.0	15.0	19.0	19.0	11.0	15.0	17.0	13.0	14.5
6	23.0	13.0	17.5	22.0	17.0	19.0	20.0	12.0	16.0	18.0	12.0	14.5
7	17.5	13.0	14.5	22.0	15.5	18.5	19.5	13.0	16.0	18.5	11.0	14.5
8	20.5	10.0	15.0	19.0	15.0	16.5	17.5	14.5	16.0	19.5	13.5	16.0
9	20.5	10.5	15.0	18.5	14.5	16.0	14.5	11.5	13.5	19.5	13.0	16.0
10	21.5	12.5	16.0	22.0	12.5	17.0	14.5	13.0	13.5	20.0	14.0	16.5
11	21.0	11.5	16.0	21.0	15.0	18.0	17.5	13.0	15.0	20.0	14.0	16.5
12	23.0	12.0	17.0	20.0	14.5	17.5	17.0	13.5	15.0	16.5	14.0	15.0
13	23.5	15.0	19.0	16.5	14.0	15.0	19.0	14.5	16.5	20.5	15.0	17.0
14	26.0	16.0	20.5	15.5	13.5	14.5	19.0	11.5	15.0	21.5	17.5	19.0
15	24.0	18.5	21.0	22.5	12.5	17.0	20.0	12.0	15.5	21.5	17.0	18.5
16	26.0	17.5	21.5	17.5	15.0	16.0	21.0	12.5	16.5	17.0	14.5	16.0
17	25.5	17.0	21.0	22.5	13.5	17.5	18.5	14.0	16.5	18.5	13.0	15.5
18	26.0	17.0	20.5	21.5	14.0	17.5	19.5	15.0	17.0	19.0	12.0	15.0
19	24.5	16.5	20.0	22.0	15.0	18.5	19.0	14.0	16.5	18.5	12.0	15.0
20	22.5	17.0	19.5	22.0	16.0	19.0	17.5	14.0	15.5	16.5	12.5	14.5
21	24.5	15.5	20.0	19.5	15.5	17.5	19.0	12.5	15.5	18.5	13.5	15.5
22	23.5	14.5	19.0	21.5	15.0	18.0	20.0	12.5	16.0	16.0	14.5	15.0
23	18.5	15.0	16.5	23.0	15.0	18.5	20.5	13.5	16.5	16.0	13.5	14.5
24	23.0	13.5	17.5	21.5	14.0	17.5	22.0	15.0	18.0	16.5	13.5	15.0
25	23.5	14.0	18.5	21.5	14.0	17.5	22.0	15.0	18.0	17.0	13.0	14.5
26	20.5	15.0	17.5	18.5	14.0	16.0	19.5	15.0	17.5	13.5	11.5	12.0
27	20.0	13.5	16.5	19.0	13.0	16.0	21.0	15.5	18.0	12.5	11.0	11.5
28	22.0	14.5	17.5	20.5	12.5	16.5	20.0	15.0	17.5	14.0	10.0	11.5
29	20.5	15.5	18.0	21.0	13.5	17.0	19.5	12.5	16.0	15.0	9.0	11.5
30	23.0	14.5	18.5	21.5	14.0	17.5	16.0	14.0	15.0	13.5	10.5	12.0
31	---	---	---	21.0	15.0	17.5	17.5	13.0	15.0	---	---	---
MONTH	26.0	10.0	17.7	24.0	12.5	17.3	22.5	11.0	16.2	21.5	9.0	14.7

SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED(TONS PER DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.83	.98	.80	.63	1.3	.74	7.1	2.5	.78	.83	2.0
2	1.1	.82	1.0	.80	.64	1.2	.72	5.1	2.3	.66	.80	1.9
3	1.1	.81	1.0	.79	.65	2.5	.71	3.7	2.2	.56	2.4	2.0
4	1.2	.81	1.0	.79	.61	374	1.3	3.1	2.2	.51	1.5	1.8
5	1.3	.83	1.0	.75	.61	127	1.5	2.6	6.4	3.2	.99	1.8
6	1.4	.81	1.0	.76	.61	16	1.3	2.1	3.2	6.5	.93	1.7
7	1.5	.77	.98	.73	.60	3.4	1.2	1.8	2.9	47	.89	1.6
8	1.7	.77	.98	.74	.60	2.4	1.1	1.5	2.6	34	.86	1.5
9	1.8	.79	.97	.73	.57	2.1	1.0	1.2	2.2	4.4	.80	1.4
10	1.9	.84	.99	.74	.60	1.8	.89	1.0	2.0	2.7	383	1.3
11	2.0	.82	.95	.72	.59	1.6	.81	3.1	1.7	2.5	6.5	1.2
12	2.2	.96	.96	.72	.59	1.5	11	1.7	1.6	2.3	3.6	1.2
13	2.1	1.9	.98	.71	.59	1.3	5.0	1.3	4.1	2.1	2.5	1.8
14	2.1	1.2	1.1	.67	.59	3.3	2.9	2.2	2.8	2.0	1.8	343
15	2.8	1.2	1.0	.64	.58	2.1	65	2.0	2.1	1.9	1.5	10
16	3.0	1.1	.98	.64	.57	1.5	4.8	1.2	1.6	1.8	1.2	6.2
17	2.6	1.1	1.0	.63	.60	1.4	3.3	.97	1.3	1.7	1.0	3.4
18	2.3	1.1	1.0	.63	42	1.3	3.0	.93	1.0	1.5	96	2.4
19	2.1	1.1	1.0	.63	1480	1.2	2.7	.92	.80	1.4	11	1.9
20	2.5	1.0	1.0	.64	6.7	2.4	2.5	.91	.61	1.3	3.4	1.8
21	3.4	1.0	.96	.67	2.9	2.9	2.4	.90	.47	1.2	1.7	2.7
22	2.3	1.0	.97	.66	2.6	2.4	2.3	.92	.35	1.1	1.5	12
23	2.0	1.0	.81	.68	2.1	2.1	2.2	1.8	2.1	1.0	1.4	31
24	1.6	1.0	.77	.66	1.9	1.8	3.1	3.2	1.0	.91	1.4	4.9
25	1.4	1.0	.75	.65	1.8	1.5	55	3.1	.62	.89	1.2	3.5
26	1.1	1.0	.75	.65	1.6	1.3	1900	2.9	1.5	.84	1.2	2.8
27	.95	1.0	.74	.64	1.5	1.2	23	2.7	.65	.86	1.1	1.8
28	.92	.99	.74	.64	1.4	1.0	19	2.5	.36	.87	1.0	1.7
29	.92	.97	.73	.63	---	.87	23	2.4	.75	.85	.92	1.6
30	.89	.96	.75	.63	---	.76	10	2.9	.93	.84	38	1.5
31	.85	---	.78	.63	---	.75	---	3.2	---	.83	2.5	---
TOTAL	54.03	29.48	28.62	21.40	1554.73	565.88	2151.47	70.95	54.84	129.00	573.42	453.4

WTR YR 1994 TOTAL 5687.22



## WAUMANDEE CREEK BASIN

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

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	3.3	3.2	2.7	2.4	5.8	2.2	13	6.5	2.6	3.3	8.8
2	4.0	3.2	3.4	2.7	2.4	5.6	2.1	10	5.9	2.3	3.2	8.1
3	4.1	3.2	3.4	2.7	2.5	8.4	2.1	8.1	5.5	2.0	8.0	8.3
4	4.3	3.2	3.4	2.7	2.3	774	4.1	7.4	5.2	2.0	5.1	7.6
5	4.4	3.2	3.3	2.6	2.3	429	5.8	6.7	16	7.4	4.0	7.3
6	4.7	3.1	3.3	2.6	2.3	53	5.0	5.8	8.8	13	3.7	6.5
7	4.8	3.0	3.2	2.5	2.3	9.5	4.5	5.2	8.5	94	3.6	5.9
8	5.1	3.0	3.2	2.6	2.3	7.5	4.1	4.6	7.9	97	3.4	5.7
9	5.3	3.0	3.2	2.6	2.2	7.0	3.6	4.2	7.1	17	3.2	5.0
10	5.3	3.2	3.2	2.6	2.3	6.7	3.1	3.7	6.8	9.7	783	4.5
11	5.5	3.1	3.1	2.5	2.3	6.2	2.7	8.1	6.4	8.6	28	4.2
12	5.6	3.7	3.1	2.5	2.3	6.4	18	5.3	6.2	7.8	14	4.0
13	5.5	7.2	3.2	2.5	2.3	6.0	13	4.4	12	7.1	8.6	5.3
14	5.6	4.0	3.5	2.4	2.3	10	8.6	5.9	8.1	6.7	6.2	821
15	6.9	4.0	3.3	2.3	2.3	7.7	132	6.0	6.7	6.4	5.6	23
16	7.4	3.8	3.2	2.3	2.3	6.4	28	4.4	5.6	6.0	5.2	15
17	6.8	3.7	3.3	2.3	2.4	5.8	22	3.6	4.7	5.8	4.9	9.5
18	6.2	3.6	3.4	2.3	90	5.3	18	3.5	4.1	5.3	186	7.7
19	6.0	3.6	3.4	2.3	2850	5.0	14	3.4	3.6	5.0	16	7.1
20	6.6	3.5	3.3	2.3	21	7.1	12	3.4	3.0	4.7	11	6.6
21	8.2	3.5	3.2	2.4	8.8	7.6	10	3.4	2.5	4.3	7.8	9.9
22	6.3	3.5	3.2	2.4	8.3	6.5	8.6	3.5	2.0	4.1	7.1	33
23	5.8	3.5	2.7	2.5	7.1	5.7	7.3	5.0	3.9	3.8	6.7	67
24	5.2	3.4	2.6	2.4	6.9	4.9	8.7	6.9	3.1	3.5	6.5	15
25	4.7	3.4	2.5	2.4	6.6	4.1	118	6.5	2.3	3.5	6.0	12
26	4.2	3.5	2.5	2.4	6.4	3.8	2940	6.1	3.5	3.3	6.1	11
27	3.7	3.4	2.5	2.4	6.2	3.4	65	5.3	2.5	3.4	5.6	8.0
28	3.7	3.3	2.5	2.4	6.1	3.0	47	5.0	2.0	3.4	5.2	7.1
29	3.6	3.2	2.5	2.4	---	2.5	48	4.7	2.6	3.4	4.8	6.4
30	3.5	3.2	2.5	2.4	---	2.3	17	5.9	2.9	3.3	113	5.9
31	3.3	---	2.7	2.4	---	2.2	---	8.2	---	3.3	10	---
TOTAL	160.2	105.5	95.0	76.5	3056.9	1418.4	3574.5	177.2	165.9	349.7	1284.8	1146.4
WTR YR 1994	TOTAL 11611.0											

WAUMANDEE CREEK BASIN

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 Nov. 30, Dec. 1, Jan. 5, 6, 27, 28, 29, Feb. 12, 25, 26, and Mar. 26 because recorded precipitation interpreted as collector snowmelt. Rainfall missing for Aug. 3.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.49 in., Aug. 10, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.49 in., Aug. 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.22
4	.00	.01	.00	.00	.00	.00	.51	.05	.00	.14	.00	.18
5	.07	.03	.00	.00	.00	.17	.00	.00	.61	.53	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.13	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.02	.31	.98	.00	.00
8	.21	.00	.00	.00	.00	.00	.06	.00	.00	.10	.00	.02
9	.00	.24	.00	.00	.00	.00	.00	.00	.00	.02	.15	.00
10	.00	.00	.00	.00	.00	.00	.00	.02	.07	.00	3.49	.00
11	.00	.00	.00	.00	.00	.00	.00	.32	.00	.01	.00	.00
12	.00	.30	.00	.00	.00	.00	.66	.00	.39	.00	.00	.08
13	.00	.02	.09	.00	.00	.00	.00	.00	.01	.16	.00	.84
14	.00	.08	.00	.00	.00	.00	.00	.40	.00	.01	.00	1.36
15	.26	.04	.00	.00	.00	.00	.87	.00	.00	.00	.00	.25
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.02
17	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.43	.00	.31	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.36	.00
20	.37	.00	.00	.00	.00	.01	.00	.00	.13	.00	.00	.03
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.12	.00	.38
22	.00	.00	.00	.00	.00	.00	.00	.07	.00	.00	.00	.72
23	.00	.00	.00	.00	.00	.00	.00	.38	.55	.00	.07	.29
24	.00	.00	.00	.00	.00	.00	.21	.03	.00	.03	.00	.01
25	.00	.01	.00	.00	.00	.00	.97	.24	.05	.00	.24	.28
26	.00	.00	.00	.00	.00	.00	1.06	.00	.21	.00	.00	.03
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00
28	.00	.00	.00	.00	.00	.00	.45	.00	.02	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.02	.02	.22	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.39	.00	.00	1.04	.00
31	.00	---	.00	.00	---	.00	---	.01	---	.00	.00	---
TOTAL	0.91	0.73	0.19	0.00	0.00	0.18	4.81	1.95	3.00	3.40	---	4.82

## 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 mi<sup>2</sup>, 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 ft<sup>3</sup>/s, from information by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38300	27300	18300	23500	22300	31100	52300	102000	39200	38900	30200	23700
2	37900	25200	19500	25500	22100	31200	52200	105000	39000	39300	28100	24200
3	36800	22100	21200	29000	20700	31400	52500	106000	37500	38900	27200	23500
4	36600	25100	22900	28600	20800	29800	52000	105000	35400	37800	26500	22100
5	36000	25100	25300	28300	20900	29200	52100	104000	34800	37800	25800	19700
6	34000	25400	28700	28000	21000	31100	51900	102000	35100	38100	25200	19100
7	30300	24900	30900	26000	21000	35100	51600	100000	35900	41100	24100	19100
8	31700	24600	30500	25500	20700	37700	50800	98300	35900	44700	22800	18400
9	32400	24700	30400	25000	20500	37400	50400	95300	35800	43700	22900	17400
10	32100	25300	29800	24500	20300	34700	50700	90300	35700	41900	23800	16800
11	31600	25700	28700	22700	20200	35000	50600	87600	35600	41600	29800	16900
12	30500	26400	26200	22800	20300	37800	50000	85200	35500	42000	30900	15800
13	29800	26400	24200	23000	20300	39300	50000	80500	35000	42700	31500	17200
14	29600	27200	25300	23200	20300	38300	50800	76300	33500	42500	31800	21400
15	29800	28300	27400	23000	20300	38800	52600	72700	32500	41300	30900	26700
16	30100	29000	28700	22500	20300	40500	54300	71500	33800	39400	29900	34100
17	30100	30300	29100	22000	20300	41700	60000	69000	37500	38800	29800	43500
18	30100	33000	29400	21100	20500	44400	60500	65800	35500	36600	30700	45400
19	28900	33900	30900	21000	22000	47000	62600	63900	34900	33800	31300	50700
20	27600	34400	31900	21000	25500	47500	66000	62900	32600	33500	31100	63800
21	27600	34500	31400	20900	30500	48100	68500	61600	32600	34700	30200	70500
22	27500	34500	30800	20100	36400	48700	70300	56300	33800	34800	28400	73800
23	27300	34100	29700	19200	45800	48700	70900	52300	34400	35800	26000	70400
24	27900	33100	23500	18500	44800	49100	70900	50300	36300	38100	24900	62700
25	27900	32600	19300	20300	44500	50300	72600	48400	37800	40600	24200	55700
26	27700	32000	16300	20100	40000	52100	73300	47100	37300	41000	23400	52800
27	28000	30400	15100	22700	37500	53700	74700	44700	36700	40400	22600	50200
28	27100	28300	16200	22300	32900	59000	78400	41600	36500	40000	21500	48300
29	27100	26800	18000	22300	---	54800	85600	39100	37600	37900	20500	45000
30	27600	24200	19700	22400	---	54300	95700	39000	38900	35700	20100	41500
31	28400	---	20100	22600	---	53400	---	39200	---	33900	21800	---
TOTAL	948300	852800	779400	717600	732700	1311200	1834800	2262900	1072600	1207300	827900	1110400
MEAN	30590	28430	25140	23150	26170	42300	61160	73000	35750	38950	26710	37010
MAX	38300	34500	31900	29000	45800	59000	95700	106000	39200	44700	31800	73800
MIN	27100	22100	15100	18500	20200	29200	50000	39000	32500	33500	20100	15800
AC-FT	1881000	1692000	1546000	1423000	1453000	2601000	3639000	4488000	2128000	2395000	1642000	2202000
CFSM	.52	.48	.42	.39	.44	.71	1.03	1.23	.60	.66	.45	.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1994, BY WATER YEAR (WY)												
MEAN	22020	22160	17220	14880	15070	29930	59590	47840	38970	31040	20740	22320
MAX	85950	50040	40440	30480	35900	86420	152600	111500	100200	118800	67560	69490
(WY)	1987	1972	1992	1983	1984	1983	1965	1986	1993	1993	1993	1986
MIN	6774	7367	6286	6742	7874	9023	12810	11930	8450	7063	5391	6790
(WY)	1934	1934	1934	1940	1977	1934	1931	1931	1934	1934	1934	1933

SUMMARY STATISTICS		FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1928 - 1994	
ANNUAL TOTAL		19705700		13657900			
ANNUAL MEAN		53990		37420		28510	
HIGHEST ANNUAL MEAN						56850	1986
LOWEST ANNUAL MEAN						9742	1934
HIGHEST DAILY MEAN		168000	Jun 26, 27	106000	May 3	264000	Apr 20 1965
LOWEST DAILY MEAN		15100	Dec 27	15100	Dec 27	2250	Dec 29 1933
ANNUAL SEVEN-DAY MINIMUM		16600	Feb 25	17400	Sep 7	3210	Dec 27 1933
INSTANTANEOUS PEAK FLOW				107000	May 3	268000	Apr 19 1965
INSTANTANEOUS PEAK STAGE				12.14	May 3	(a)20.77	Apr 19 1965
INSTANTANEOUS LOW FLOW						(b)1940	Dec 12 1980
ANNUAL RUNOFF (AC-FT)		39090000		27090000		20650000	
ANNUAL RUNOFF (CFSM)		.91		.63		.48	
10 PERCENT EXCEEDS		104000		62600		59200	
50 PERCENT EXCEEDS		41000		32500		20200	
90 PERCENT EXCEEDS		17800		20700		9800	

(a) From floodmark

(b) Result of ice jam

## TREMPEALEAU RIVER BASIN

89

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 mi<sup>2</sup>.

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

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)	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)
OCT 1993												
12...	1533	6.2	9.0	10.7	8.2	1.2	890	27	404	9	0.043	0.140
MAY 1994												
11...	1530	6.4	17.0	10.4	8.3	3.1	5600	110	480	17	0.118	0.310
JUN												
14...	1730	4.8	22.5	8.1	8.2	4.2	2900	207	576	37	0.080	0.450
JUL												
12...	1820	4.4	17.0	9.3	8.2	1.7	3600	164	--	--	0.071	0.390
AUG												
16...	1710	5.1	16.5	9.2	8.2	1.4	4700	96	--	--	0.054	0.243
SEP												
13...	1515	4.8	17.0	8.8	8.2	2.0	5500	38	--	--	0.041	0.170

## 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 mi<sup>2</sup>.

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

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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- 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)
OCT 1993												
13...	0720	3.3	5.5	10.0	8.0	1.0	1000	17	342	8	0.026	0.090
MAY 1994												
11...	1245	3.3	16.0	11.5	8.3	1.5	1200	25	342	3	0.034	0.100
JUN												
15...	0740	2.8	16.5	8.9	7.9	1.9	8300	40	370	11	0.092	0.120
JUL												
12...	1435	2.9	18.0	8.0	8.0	1.6	1400	49	--	--	0.086	0.190
AUG												
16...	1555	2.9	19.0	8.4	8.1	1.1	1900	22	--	--	0.059	0.103
SEP												
13...	1355	2.5	18.5	9.2	8.0	3.7	1900	28	--	--	0.050	0.126

TREMPEALEAU RIVER BASIN

91

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 mi<sup>2</sup>.

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

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	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-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)
OCT 1993												
12...	1830	7.2	9.5	10.5	8.1	1.3	1600	8	338	4	0.019	0.100
MAY 1994												
11...	1345	7.1	18.0	11.7	8.5	1.8	6700	23	346	4	0.022	0.140
JUN												
15...	0910	5.3	17.0	9.7	8.1	2.5	9900	45	374	12	0.069	0.160
JUL												
12...	1645	5.8	18.5	8.6	8.2	1.2	6600	41	--	--	0.056	0.200
AUG												
16...	1450	5.8	19.0	9.0	8.2	1.2	3800	24	--	--	0.046	0.136
SEP												
13...	1240	5.8	17.0	9.6	8.2	2.3	5400	15	--	--	0.050	0.122



## TREMPEALEAU RIVER BASIN

93

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 mi<sup>2</sup>.

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

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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- 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)
OCT 1993												
12...	1753	6.3	9.5	10.3	8.1	1.0	800	30	500	6	0.039	0.090
MAY 1994												
11...	1110	8.1	14.0	9.4	8.1	4.5	48000	224	654	22	0.147	0.430
JUN												
14...	1910	5.5	23.0	7.6	8.2	3.1	2000	149	592	21	0.071	0.230
JUL												
12...	1255	5.1	16.0	9.3	8.1	2.2	4200	164	--	--	0.072	0.290
AUG												
16...	1230	5.1	15.5	8.9	8.1	1.2	2300	75	--	--	0.061	0.128
SEP												
13...	1125	5.7	15.0	9.0	8.1	2.5	1900	46	--	--	0.051	0.127



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 mi<sup>2</sup>.

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. 7, 8, 12-14, and Nov. 20 to Mar. 9. Records good except those for ice-affected periods, which are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	489	256	290	66	76	180	662	1740	129	102	267	107
2	391	242	290	70	74	160	671	1350	119	110	120	94
3	322	234	290	70	72	150	691	996	112	108	95	87
4	274	233	280	70	74	160	657	784	108	101	186	86
5	242	249	290	68	74	370	657	679	306	148	222	86
6	858	294	290	68	74	1000	649	612	409	1400	187	90
7	754	330	290	66	72	1100	606	544	239	1390	164	78
8	603	310	270	64	70	980	555	489	213	3020	142	72
9	606	315	280	66	68	880	546	432	205	1590	123	66
10	608	315	280	70	70	762	544	390	178	699	177	62
11	514	316	280	74	74	549	539	468	150	460	205	64
12	436	310	250	72	78	452	697	399	134	319	132	63
13	370	640	230	74	82	415	1560	333	140	236	107	61
14	322	1200	240	70	86	448	1550	302	132	198	95	122
15	310	1340	250	66	92	646	4060	352	125	195	85	187
16	628	1070	300	64	96	805	4480	343	122	160	78	202
17	638	808	330	62	100	794	3100	333	117	140	71	221
18	641	645	350	62	120	673	2180	320	105	124	80	534
19	546	540	370	64	380	524	1530	279	100	113	77	560
20	453	430	360	64	1400	504	1070	245	94	136	72	460
21	572	360	310	66	980	756	804	216	88	132	68	342
22	697	310	270	70	700	1150	649	195	82	122	60	288
23	704	270	240	76	520	1460	548	178	76	145	156	316
24	608	230	200	84	410	1530	484	168	73	192	167	272
25	501	200	170	82	320	1300	4210	159	69	211	133	318
26	431	180	140	80	270	1230	7350	157	88	191	109	367
27	383	170	110	84	220	1110	5270	153	79	161	94	350
28	354	210	96	86	190	1070	3250	150	105	137	87	362
29	324	280	78	86	---	903	2350	148	100	121	94	393
30	294	280	70	84	---	766	1990	140	95	106	121	342
31	269	---	68	80	---	679	---	132	---	114	124	---
TOTAL	15142	12567	7562	2228	6842	23506	53909	13186	4092	12381	3898	6652
MEAN	488	419	244	71.9	244	758	1797	425	136	399	126	222
MAX	858	1340	370	86	1400	1530	7350	1740	409	3020	267	560
MIN	242	170	68	62	68	150	484	132	69	101	60	61
CFSM	.65	.56	.33	.10	.33	1.01	2.40	.57	.18	.53	.17	.30
IN.	.75	.62	.38	.11	.34	1.17	2.68	.65	.20	.61	.19	.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1994, BY WATER YEAR (WY)

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940		
MEAN	383	457	192	108	121	1258	1951	880	834	307	236	544																										
MAX	2101	2345	1133	615	1348	3960	5025	3538	4689	1538	1293	4304																										
(WY)	1983	1992	1966	1973	1984	1973	1951	1973	1905	1978	1928	1938																										
MIN	20.7	27.1	35.9	10.0	5.00	56.7	270	77.4	43.0	14.9	10.5	5.77																										
(WY)	1934	1977	1934	1918	1918	1940	1946	1934	1964	1933	1933	1933																										

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1905 - 1994
ANNUAL TOTAL	391655	161965	
ANNUAL MEAN	1073	444	603
HIGHEST ANNUAL MEAN			1213
LOWEST ANNUAL MEAN			160
HIGHEST DAILY MEAN	24900	7350	38200
LOWEST DAILY MEAN	52	60	.70
ANNUAL SEVEN-DAY MINIMUM	57	(a)64	1.0
INSTANTANEOUS PEAK FLOW		8050	48800
INSTANTANEOUS PEAK STAGE		11.06	23.80
INSTANTANEOUS LOW FLOW		58	.60
ANNUAL RUNOFF (CFSM)	1.43	.59	.80
ANNUAL RUNOFF (INCHES)	19.45	8.04	10.93
10 PERCENT EXCEEDS	3110	934	1510
50 PERCENT EXCEEDS	340	240	148
90 PERCENT EXCEEDS	100	72	36

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



## 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 September 1994 (discontinued). National Stream-Quality Accounting  
Network data collection began in March 1979.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993						MAR 1994				
05...	1615	--	1380	140	12.0	23...	1240	3260	120	6.0
13...	1332	--	1630	138	9.5	APR				
DEC						20...	1100	6860	88	10.0
01...	1030	--	1200	150	0.5	29...	1235	12500	95	10.0
JAN 1994						JUN				
11...	1355	--	722	162	0.0	08...	1140	1180	115	18.0
FEB						28...	1100	1160	114	21.5
23...	1320	3600	--	188	0.5	AUG				
						08...	1315	817	135	20.5

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 1993											
13...	1332	--	1630	138	7.0	9.5	1.8	10.4	745	93	100
FEB 1994											
23...	1320	3600	--	188	7.5	0.5	2.5	13.2	740	94	600
APR											
20...	1100	--	6860	88	7.8	10.0	1.5	9.9	781	86	31
JUN											
28...	1100	--	1160	114	7.9	21.5	4.7	9.2	766	104	880
AUG											
08...	1315	--	817	135	6.8	20.5	1.4	9.8	780	106	200

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 1993											
13...	70	58	14	5.5	3.5	3.6	53	44	6.9	7.3	0.20
FEB 1994											
23...	K2600	42	10	4.2	4.8	8.4	48	40	7.0	10	<0.10
APR											
20...	67	29	6.9	2.9	2.8	3.7	24	20	5.9	6.2	<0.10
JUN											
28...	730	42	10	4.1	3.1	2.2	41	34	7.8	5.5	0.10
AUG											
08...	100	51	12	5.2	3.4	2.1	52	42	7.8	5.9	0.10

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

BLACK RIVER BASIN

05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993 13...	9.0	94	<0.010	0.570	0.040	0.30	0.070	0.070	0.060	50	21
FEB 1994 23...	8.2	108	0.020	1.10	0.750	2.1	0.410	0.260	0.250	70	24
APR 20...	5.7	74	0.020	0.470	0.060	0.90	0.130	0.050	0.040	70	20
JUN 28...	7.0	74	<0.010	0.280	<0.010	1.0	0.180	0.060	0.060	--	--
AUG 08...	7.1	84	<0.010	0.430	0.020	0.60	0.140	0.060	0.040	20	15

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- PENDE D (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1993 13...	<3	410	<4	25	10	1	<1	36	<6	19	90
FEB 1994 23...	<3	460	<4	63	<10	2	<1	29	<6	19	90
APR 20...	<3	270	<4	15	<10	2	<1	22	<6	35	88
JUN 28...	--	--	--	--	--	--	--	--	--	35	97
AUG 08...	<3	470	<4	27	<10	2	<1	33	<6	17	94

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 mi<sup>2</sup>.

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: Ice-affected periods, Dec. 24-31, Jan. 5-21, Jan. 30 to Feb. 7, and Feb. 9, 11, 12, and 24-28. Records fair. Gage-height telemeter at station. Occasional regulation from two dams upstream from gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	156	148	142	130	168	164	220	166	182	169	169
2	161	156	153	138	130	167	162	210	163	171	166	166
3	158	156	158	136	130	166	160	205	162	165	166	167
4	159	156	156	135	130	201	162	203	161	214	169	170
5	158	156	155	120	130	309	180	201	164	268	167	174
6	163	156	156	120	130	434	173	196	166	225	165	171
7	164	154	154	120	130	206	171	195	166	262	164	166
8	168	154	150	120	128	191	170	195	167	300	163	170
9	183	154	150	120	130	180	169	192	164	310	163	165
10	173	158	150	130	129	177	166	189	161	245	224	165
11	167	156	147	140	130	170	162	210	161	208	258	165
12	165	156	144	140	130	171	175	204	160	193	208	164
13	165	163	147	140	134	177	204	192	167	189	189	172
14	163	173	152	140	134	175	191	191	165	198	182	696
15	173	146	151	130	135	182	236	201	162	206	175	518
16	199	158	148	130	134	175	229	193	159	191	170	249
17	185	157	152	130	135	171	198	187	158	188	166	200
18	171	154	156	130	141	170	180	184	163	183	178	183
19	166	154	154	130	550	171	172	180	166	182	187	170
20	164	151	152	130	413	173	163	179	163	186	179	168
21	174	150	149	140	190	188	160	178	160	179	174	172
22	174	152	144	141	180	191	159	177	160	175	169	194
23	170	150	141	140	167	190	157	176	166	175	166	200
24	165	150	130	139	170	184	160	178	172	173	165	199
25	166	154	120	137	160	176	597	177	170	174	164	217
26	162	159	110	137	160	171	595	174	204	174	163	292
27	159	156	120	136	160	171	347	171	207	172	164	254
28	159	153	120	138	170	169	234	169	211	171	170	217
29	158	151	120	138	---	168	233	169	207	170	170	193
30	157	148	120	140	---	165	225	169	198	168	174	184
31	156	---	130	130	---	166	---	169	---	167	181	---
TOTAL	5170	4647	4437	4137	4690	5873	6454	5834	5119	6164	5468	6490
MEAN	167	155	143	133	167	189	215	188	171	199	176	216
MAX	199	173	158	142	550	434	597	220	211	310	258	696
MIN	156	146	110	120	128	165	157	169	158	165	163	164
CFSM	1.00	.93	.86	.80	1.00	1.13	1.29	1.13	1.02	1.19	1.06	1.30
IN.	1.15	1.04	.99	.92	1.04	1.31	1.44	1.30	1.14	1.37	1.22	1.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1994, BY WATER YEAR (WY)

	1992	1993	1994	1993	1994	1993	1994	1993	1994	1992	1993	1994
MEAN	158	162	149	133	150	186	269	234	247	209	164	202
MAX	167	170	155	133	167	189	324	279	323	288	204	216
(WY)	1994	1993	1993	1994	1994	1994	1993	1993	1993	1993	1993	1994
MIN	149	155	143	133	133	182	215	188	171	138	111	186
(WY)	1993	1994	1994	1993	1993	1993	1994	1994	1994	1992	1992	1993

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1992 - 1994	
ANNUAL TOTAL	76618		64483			
ANNUAL MEAN	210		177		194	
HIGHEST ANNUAL MEAN					211	
LOWEST ANNUAL MEAN					177	
HIGHEST DAILY MEAN	901	Jun 20	696	Sep 14	901	Jun 20 1993
LOWEST DAILY MEAN	(a)110	(b)Jan 18	(a)110	Dec 26	94	Aug 24 1992
ANNUAL SEVEN-DAY MINIMUM	(a)120	Dec 24	(a)120	Dec 24	98	Aug 18 1992
INSTANTANEOUS PEAK FLOW			915		1100	
INSTANTANEOUS PEAK STAGE			7.84		8.78	
ANNUAL RUNOFF (CFSM)	1.26		1.06		1.16	
ANNUAL RUNOFF (INCHES)	17.07		14.36		15.76	
10 PERCENT EXCEEDS	301		206		267	
50 PERCENT EXCEEDS	176		166		166	
90 PERCENT EXCEEDS	134		135		130	

(a) Ice affected  
(b) Also occurred Dec. 26



## MISSISSIPPI RIVER MAIN STEM

05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--CONTINUED

## WATER-QUALITY RECORDS

LOCATION.--Samples collected from right bank dock 0.3 mi downstream from discharge station. Prior to April 1981, at bridge on U.S. Highway 18, 1.2 mi upstream from gage.

PERIOD OF RECORD.--July 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to current year.

WATER TEMPERATURE: July 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: July 1975 to current year.

REMARKS.--Records of specific conductance are obtained from suspended-sediment samples at times of analysis.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,350 mg/L, Mar. 19, 1986; minimum daily mean, 1 mg/L, Dec. 23-25, 1976, Dec. 20, 28, 1977, Feb. 13-17, 23, Mar. 5-9, 1986, Dec. 2, 6, 8-11, 1987, Dec. 26, 1988 to Jan. 4, 1989, Jan. 9-11, Feb. 20, 21, 1989, Jan. 5, 6, 1990, and Jan. 14-16, 1992.

SEDIMENT LOADS: Maximum daily, 363,000 tons, Mar. 19, 1986; minimum daily, 31 tons, Dec. 25, 1976.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 118 mg/L, Feb. 20; minimum daily mean, 3 mg/L, Jan. 17-19.

SEDIMENT LOADS: Maximum daily, 11,200 tons, Feb. 20; minimum daily, 219 tons, Jan. 19.

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	500	483	---	527	454	---	---	488	---	450	---
2	---	---	---	---	---	---	---	402	---	---	---	---
3	---	---	---	534	---	---	---	---	---	512	---	472
4	494	---	490	---	530	451	451	---	488	---	---	---
5	---	513	---	---	---	---	---	---	---	---	---	452
6	---	---	487	536	554	---	---	407	490	---	448	---
7	492	---	---	---	---	442	462	---	---	---	---	---
8	---	493	---	---	---	---	---	---	---	495	456	---
9	---	---	482	---	---	---	---	408	---	---	430	457
10	496	---	---	530	---	---	---	---	484	---	---	---
11	---	509	---	---	528	412	451	---	---	492	---	---
12	---	---	467	---	---	---	---	396	---	---	---	461
13	---	---	---	---	---	---	---	---	490	---	---	---
14	---	---	---	522	520	442	454	---	---	---	444	---
15	496	502	---	---	---	---	---	---	---	428	---	469
16	---	---	---	---	---	---	---	423	---	---	434	---
17	---	---	482	---	---	---	---	---	---	---	---	---
18	---	499	---	542	530	426	432	---	490	440	---	462
19	510	---	---	---	---	---	---	476	---	---	438	---
20	486	---	510	---	398	---	---	---	484	429	---	454
21	---	---	---	---	---	459	390	---	---	---	---	---
22	510	486	---	530	448	---	418	---	---	---	455	432
23	---	---	---	---	---	---	---	478	476	454	---	---
24	---	---	516	---	---	442	---	---	502	---	---	---
25	494	---	---	544	---	---	384	---	---	450	462	326
26	---	469	---	---	446	---	---	---	506	---	---	---
27	---	---	---	---	---	438	---	---	---	---	---	363
28	---	---	550	---	---	---	---	---	---	---	476	---
29	499	---	---	---	---	---	414	490	---	447	---	---
30	---	---	518	536	---	---	---	---	518	---	---	408
31	---	---	---	---	---	434	---	---	---	---	474	---

MISSISSIPPI RIVER MAIN STEM

05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY INSTANTANEOUS VALUES

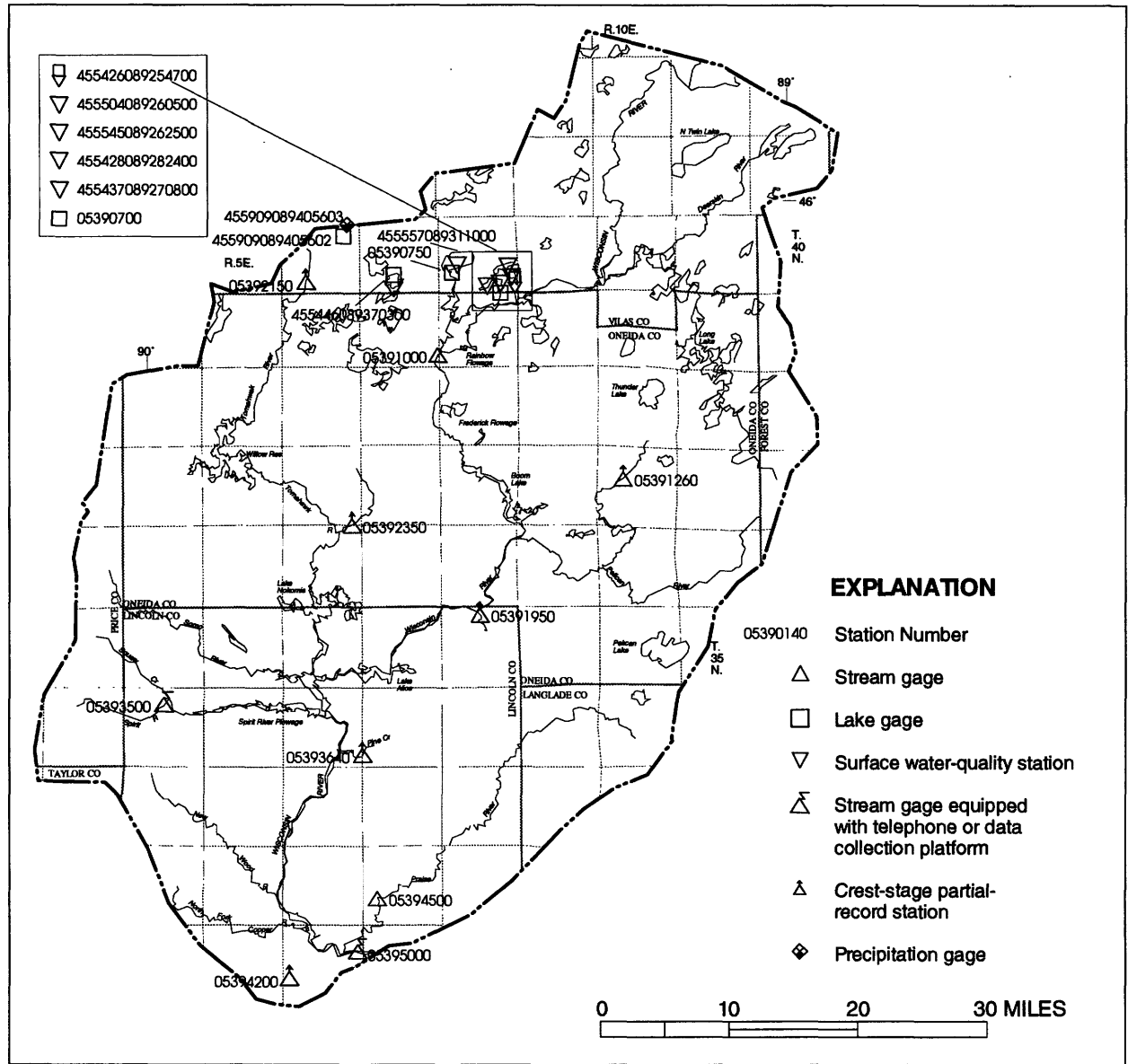
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	10	6.5	---	.0	.0	---	---	17	---	22	---
2	---	---	---	---	---	---	---	6	---	---	---	---
3	---	---	---	.0	---	---	---	---	---	19	---	17
4	15	---	7	---	.0	2	8	---	18	---	---	---
5	---	11.5	---	---	---	---	---	---	---	---	---	16.5
6	---	---	8	.0	.0	---	---	8	18	---	21	---
7	15	---	---	---	---	1	8	---	---	---	---	---
8	---	14	---	---	---	---	---	---	---	19	21	---
9	---	---	6	---	---	---	---	10	---	---	23.5	18
10	16	---	---	.0	---	---	---	---	18	---	---	---
11	---	8	---	---	.0	3	9	---	---	19	---	---
12	---	---	7	---	---	---	---	12	---	---	---	18
13	---	---	---	---	---	---	---	---	18	---	---	---
14	---	---	---	.0	.0	2	9	---	---	---	19	---
15	16	8	---	---	---	---	---	---	---	19	---	18
16	---	---	---	---	---	---	---	13	---	---	16	---
17	---	---	4	---	---	---	---	---	---	---	---	---
18	---	8	---	---	.0	3	11	---	20	20	---	17.5
19	14.5	---	---	---	---	---	---	14	---	---	19	---
20	13	---	4	---	.0	---	---	---	19	19	---	19
21	---	---	---	---	---	1	11	---	---	---	---	---
22	11	7	---	---	.0	---	11	---	---	---	19	19
23	---	---	---	---	---	---	---	14	21.5	18	---	---
24	---	---	4	---	---	2	---	---	19	---	---	---
25	11	---	---	.0	---	---	17	---	---	19	16.5	16
26	---	6	---	---	.0	---	---	---	19.0	---	---	---
27	---	---	---	---	---	2	---	---	---	---	---	15.0
28	---	---	.0	---	---	---	---	---	---	---	18	---
29	11	---	---	---	---	---	8.5	17	---	18	---	---
30	---	---	.0	.0	---	---	---	---	20	---	---	14
31	---	---	---	---	---	10	---	---	---	---	18	---

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/DAY)	MEAN CONCEN-TRATION (MG/L)	LOAD (TONS/DAY)
1	24	2880	40	3840	23	1960	10	702	6	437	11	1600
2	27	3260	40	3770	19	1470	10	783	5	358	9	1260
3	27	3140	35	3160	16	1120	10	823	5	358	7	926
4	26	2980	27	2270	14	1000	8	680	4	281	6	778
5	24	2780	22	1880	15	1210	6	526	4	281	7	888
6	23	2580	21	1890	16	1490	5	445	4	281	13	1720
7	22	2440	21	1830	13	1360	5	445	4	281	36	5640
8	24	2590	21	1860	11	1130	4	351	4	281	34	5880
9	26	2800	26	2260	9	912	4	340	4	281	30	5640
10	28	2950	32	2800	7	697	4	329	4	281	26	4840
11	28	2930	38	3330	5	472	4	324	4	281	22	4130
12	28	2900	39	3520	4	356	5	391	5	351	19	3260
13	28	2910	40	3710	4	335	5	385	7	491	15	2500
14	28	2850	40	3920	4	329	6	454	8	562	13	2080
15	28	2850	39	3890	4	329	4	302	9	632	15	2260
16	29	3010	30	2940	4	335	4	302	10	702	19	2790
17	31	3150	22	2190	4	340	3	227	11	772	24	3510
18	32	3300	17	1770	4	367	3	223	19	1330	29	4120
19	33	3370	17	1760	5	486	3	219	75	5670	26	3850
20	32	3230	16	1790	5	499	4	270	118	11200	23	3530
21	37	3660	16	1880	5	499	5	324	56	6050	20	3310
22	43	4180	16	2000	6	599	7	435	40	5180	21	3420
23	44	4300	18	2190	6	551	6	381	38	5750	22	3560
24	45	4420	19	2310	6	510	6	381	37	5890	23	3690
25	46	4540	21	2360	6	429	5	324	37	5990	21	3400
26	40	3950	23	2440	7	435	5	337	33	5260	19	3170
27	33	3230	23	2280	7	406	6	421	23	3600	18	3090
28	30	2870	23	2290	7	397	6	445	16	2510	18	3240
29	29	2710	24	2250	9	510	7	529	---	---	19	3370
30	32	3030	24	2190	10	580	7	529	---	---	19	3440
31	37	3470	---	---	10	621	6	445	---	---	19	3390
TOTAL	---	99260	---	76570	---	21734	---	13072	---	65341	---	98282







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



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 27 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 24		Apr. 27		June 15		July 20		Aug. 16	
Depth of sample (ft)	3.0	17	1.5	18	1.5	17	1.5	17	1.5	16
Lake stage (ft)	11.17		11.15		11.01		11.01		10.71	
Specific conductance (µS/cm)	19	20	11	10	12	11	24	24	25	25
pH (units)	7.4	6.7	6.3	6.2	5.6	5.1	6.8	6.1	6.1	6.0
Water temperature (°C)	3.5	4.0	9.0	8.0	22.0	19.5	23.0	22.0	20.5	19.5
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.60	0.60	---	---	---	---	---	---
Secchi-depth (meters)	---	---	4.4	---	4.0	---	4.1	---	4.4	---
Dissolved oxygen	4.7	4.3	10.0	8.5	8.7	5.0	8.3	6.6	8.6	8.0
Calcium, dissolved (Ca)	---	---	1.8	1.7	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	< 1.0	< 1.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	< 1.0	< 1.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.4	0.5	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	6	6	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	5.0	3.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	0.2	0.2	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	<0.0	0.0	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	<0.2	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	12	12	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.05	0.05	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.15	0.16	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.55	0.45	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.009	0.011	0.010	0.010	0.013	0.020	0.012	0.015
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	2.5	---	2.6	---	3.5	---	1.4	---

2-24-94

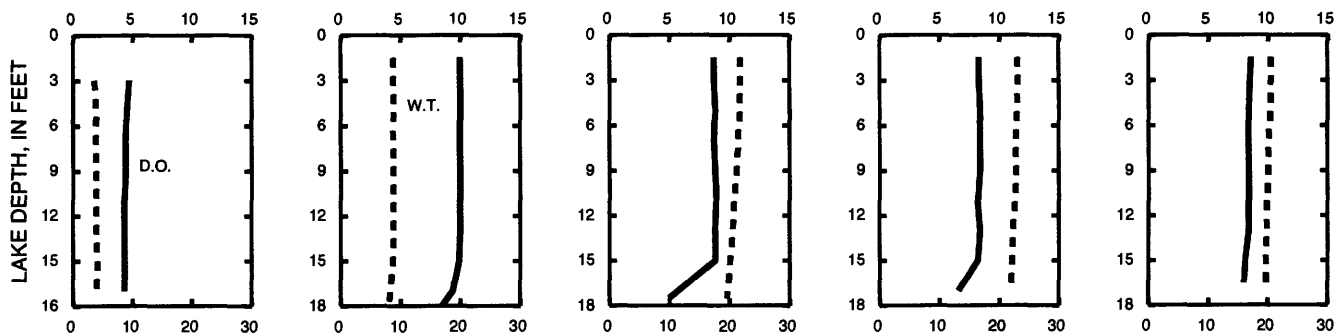
4-27-94

6-15-94

7-20-94

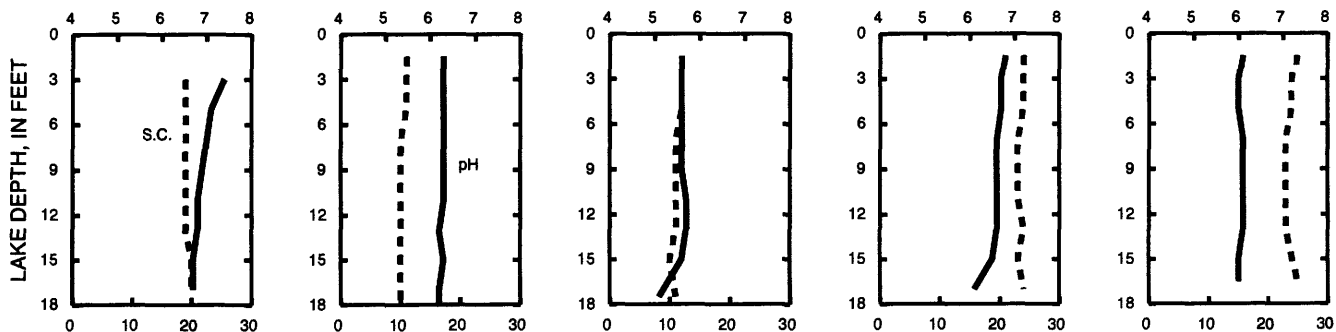
8-16-94

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

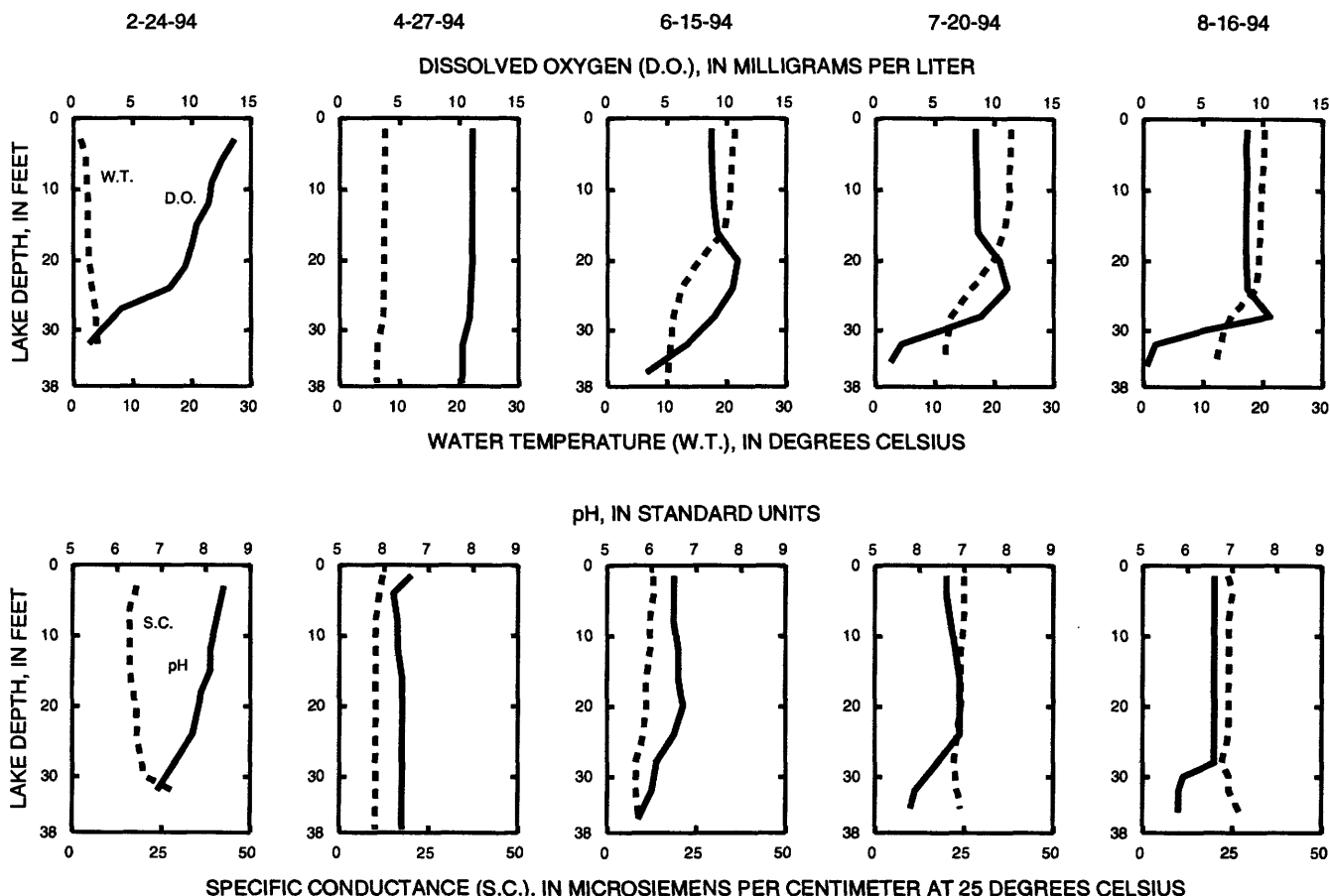
LOCATION.--Lat 45°55'04", long 89°26'05", in SE 1/4 SE 1/4 sec.25, T.40 N., R.8 E., Vilas County, Hydrologic Unit 07070001, 2.9 mi northeast of St. Germain.

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. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 24 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 24		Apr. 27		June 15		July 20		Aug. 16	
Depth of sample (ft)	3.0	32	1.5	37	1.5	36	1.5	34	1.5	35
Lake stage (ft)	11.17		11.15		11.01		11.01		10.71	
Specific conductance (µS/cm)	18	28	12	10	13	9	25	24	24	27
pH (units)	8.4	6.9	6.6	6.4	6.5	5.7	6.6	5.8	6.6	5.8
Water temperature (°C)	1.5	4.0	7.5	6.0	21.5	10.0	23.0	11.5	20.5	12.0
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.60	0.70	---	---	---	---	---	---
Secchi-depth (meters)	---	---	3.4	---	5.6	---	5.9	---	4.8	---
Dissolved oxygen	13.6	1.3	11.1	10.2	8.7	3.3	8.4	1.3	8.7	0.3
Calcium, dissolved (Ca)	---	---	2.0	2.0	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	<1.0	<1.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	<1.0	<1.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.4	0.4	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	10	7	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	3.0	3.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	<0.1	0.1	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.0	0.0	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	<0.2	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	14	14	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.02	0.02	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	<0.00	0.02	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.30	0.30	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.32	0.32	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.008	0.012	0.004	0.044	0.010	0.030	0.009	0.051
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)	---	---	3.7	---	1.5	---	1.9	---	0.7	---



## WISCONSIN RIVER BASIN

107

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 03 TO AUGUST 17, 1994  
(Milligrams per liter unless otherwise indicated)

	May 03	June 16	July 19	Aug. 17
	-----	-----	-----	-----
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	13.12	13.48	13.77	13.58
Specific conductance ( $\mu$ S/cm)	70	69	77	80
pH (units)	8.1	8.1	8.7	8.7
Water temperature ( $^{\circ}$ C)	9.0	23.5	22.5	21.5
Secchi-depth (meters)	1.6	1.3	0.8	0.9
Dissolved oxygen	12.2	8.6	10.5	11.0
Phosphorus, total (as P)	0.033	0.032	0.056	0.058
Chlorophyll a, phytoplankton ( $\mu$ g/L)	11	19	59	28

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 23 TO AUGUST 17, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 23		May 03		June 16		July 19		Aug. 17	
Depth of sample (ft)	3.0	46	1.5	52	1.5	52	1.5	53	1.5	52
Lake stage (ft)	12.34		13.12		13.48		13.77		13.58	
Specific conductance (µS/cm)	85	96	68	65	68	72	76	102	78	114
pH (units)	7.1	6.8	6.8	7.1	7.8	6.8	7.5	7.1	7.6	7.1
Water temperature (°C)	1.0	3.0	7.0	5.5	22.5	7.5	22.0	8.0	21.0	8.0
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.00	0.90	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.2		3.5		3.4		3.2	
Dissolved oxygen	12.0	0.6	11.2	9.7	8.7	0.2	8.8	0.2	9.1	0.2
Hardness, as CaCO3	---	---	32	32	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	8.3	8.3	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	2.8	2.8	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.2	2.2	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.4	0.6	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	33	35	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	3.0	3.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	2.0	2.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.0	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	8.7	8.8	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	54	60	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.04	0.04	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.03	0.04	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.30	0.30	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.34	0.34	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.016	0.015	0.007	0.030	0.010	0.190	0.012	0.556
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	60	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	10	---	2.2	---	3.4	---	0.7	---

2-23-94

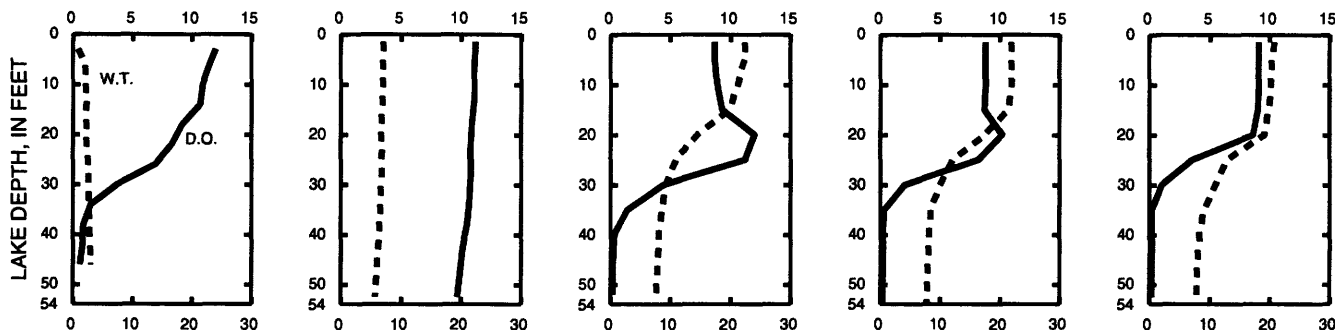
5-3-94

6-16-94

7-19-94

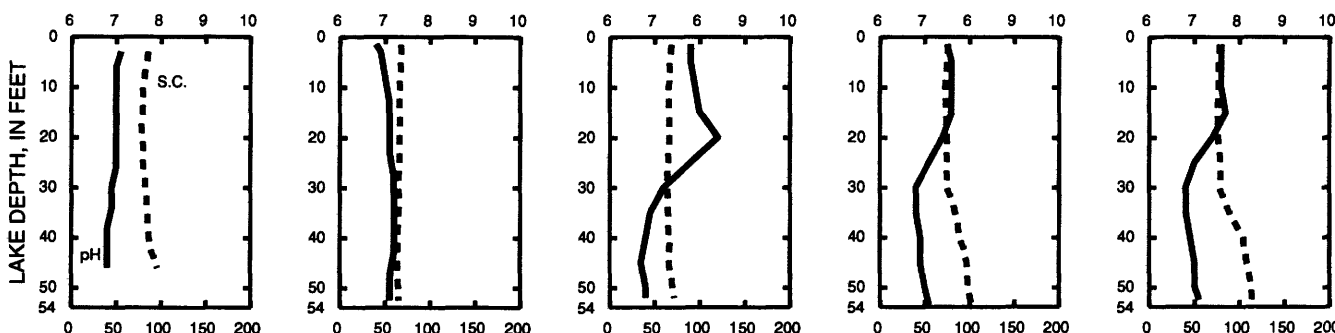
8-17-94

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

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 23 TO AUGUST 17, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 23		May 03		June 16		July 19		Aug. 17	
Depth of sample (ft)	3.0	21	1.5	19	1.5	18	1.5	20	1.5	19
Lake stage (ft)	12.34		13.12		13.48		13.77		13.58	
Specific conductance (µS/cm)	100	137	75	71	67	69	72	122	73	74
pH (units)	7.6	7.2	7.7	7.7	8.2	7.0	8.0	6.9	7.8	6.8
Water temperature (°C)	1.5	4.5	8.5	8.5	23.5	15.5	22.5	16.5	21.5	18.5
Color (Pt-Co. scale)	---	---	20	20	---	---	---	---	---	---
Turbidity (NTU)	---	---	2.1	2.0	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.6		2.2		2.1		1.8	
Dissolved oxygen	2.8	0.2	11.7	11.6	8.3	4.7	9.3	0.2	9.1	3.3
Hardness, as CaCO3	---	---	37	36	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	9.6	9.5	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	3.1	3.0	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.0	2.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.6	0.6	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	37	37	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	3.0	3.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	1.5	1.6	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.0	0.0	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	9.2	9.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	54	56	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	<0.01	<0.01	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.01	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.40	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.40	0.40	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.025	0.025	0.018	0.023	0.025	0.129	0.027	0.029
Phosphorus, ortho, dissolved (as P)	---	---	0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	200	190	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	9.6	---	9.5	---	13	---	5.6	---

2-23-94

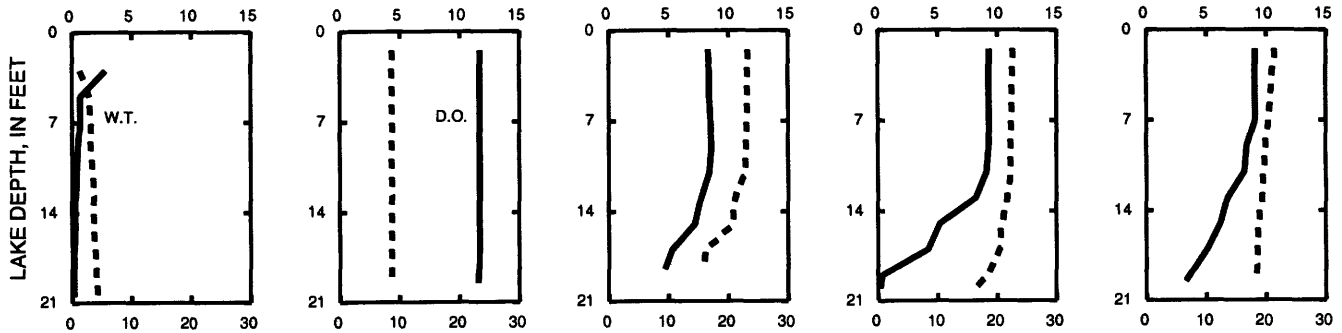
5-3-94

6-16-94

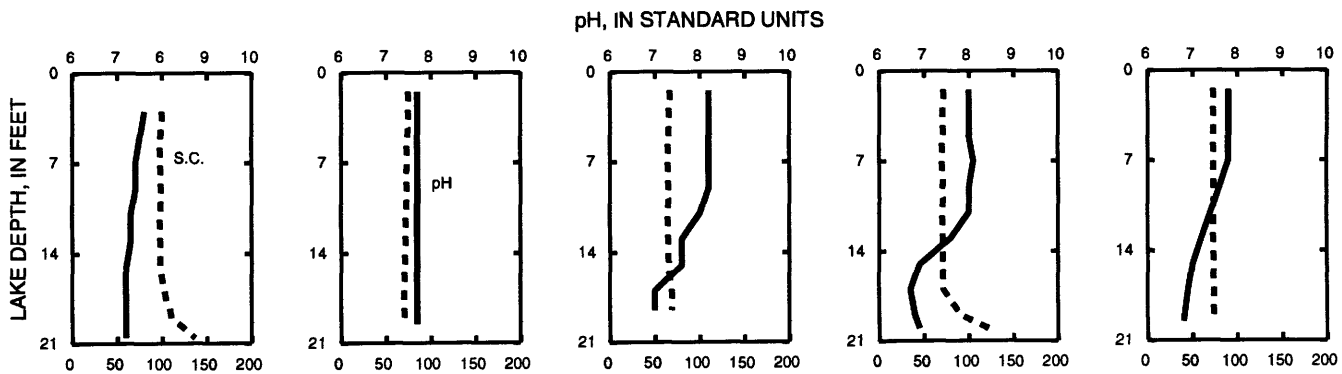
7-19-94

8-17-94

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 mi<sup>2</sup>.

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, 13.84 ft, Sept. 15; minimum observed, 12.08 ft, Jan. 22.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.72	13.38	13.08	12.58	12.42	12.28	12.60	13.14	13.32	13.48	13.70	13.60
2	13.74	13.32	---	---	---	---	12.62	13.16	13.36	13.46	13.68	13.58
3	13.72	---	---	---	12.42	---	12.62	13.14	13.36	13.46	13.66	13.58
4	13.76	---	13.04	12.50	12.40	12.26	12.62	13.14	13.34	13.44	13.66	13.56
5	13.76	13.24	---	---	---	---	12.64	13.20	13.34	13.48	13.66	13.56
6	13.72	---	---	---	---	---	12.64	13.22	13.36	13.60	13.64	13.58
7	13.72	---	13.00	12.40	---	---	12.66	13.20	13.38	13.60	13.64	13.58
8	13.74	---	---	---	12.38	12.22	12.66	13.20	13.38	13.60	13.68	13.56
9	13.80	13.36	---	---	---	12.26	12.70	13.22	13.38	13.72	13.68	13.54
10	13.76	---	12.92	---	---	12.28	12.70	13.20	13.36	13.72	13.66	13.52
11	13.74	---	---	12.32	12.40	12.28	12.70	13.20	13.38	13.72	13.64	13.52
12	13.72	13.32	---	---	---	12.30	12.72	13.22	13.40	13.74	13.62	13.52
13	13.70	---	---	---	---	12.30	12.78	13.22	13.48	13.74	13.60	13.58
14	13.70	---	12.86	12.28	---	12.32	12.76	13.22	13.50	13.74	13.60	13.70
15	13.70	---	---	---	12.36	12.34	12.82	13.28	13.50	13.72	13.60	13.84
16	13.78	13.40	---	---	---	12.36	12.90	13.28	13.48	13.72	13.58	13.82
17	13.76	---	12.80	---	---	12.36	12.92	13.28	13.48	13.76	13.58	13.78
18	13.76	---	---	12.20	12.30	12.38	12.92	13.26	13.56	13.74	13.60	13.74
19	13.76	13.32	---	---	---	12.38	12.90	13.26	13.54	13.76	13.60	13.74
20	13.72	---	---	---	---	12.38	12.92	13.26	13.54	13.82	13.62	13.74
21	13.72	---	12.74	12.10	---	12.40	12.92	13.26	13.54	13.76	13.60	13.76
22	13.70	---	---	12.08	12.32	12.40	12.94	13.26	13.52	13.74	13.60	13.80
23	13.68	13.26	---	---	12.34	12.42	12.96	13.26	13.52	13.72	13.58	13.80
24	13.62	---	12.68	---	---	12.48	12.96	13.26	13.52	13.70	13.58	13.78
25	13.60	---	---	12.30	12.30	12.48	13.00	13.26	13.52	13.70	13.58	13.74
26	13.56	13.20	---	---	---	12.48	13.02	13.18	13.52	13.70	13.58	13.76
27	13.54	---	---	---	---	12.50	13.10	13.26	13.50	13.70	13.58	13.70
28	13.48	---	12.62	12.40	---	12.50	13.12	13.26	13.48	13.70	13.58	13.72
29	13.46	---	---	---	---	12.58	13.14	13.24	13.52	13.68	13.58	13.72
30	13.40	13.10	---	---	---	12.58	13.14	13.30	13.50	13.68	13.60	13.72
31	13.38	---	12.58	---	---	12.60	---	13.34	---	13.68	13.62	---
MEAN	13.67	---	---	---	---	---	12.84	13.23	13.45	13.67	13.62	13.67
MAX	13.80	---	---	---	---	---	13.14	13.34	13.56	13.82	13.70	13.84
MIN	13.38	---	---	---	---	---	12.60	13.14	13.32	13.44	13.58	13.52

WISCONSIN RIVER BASIN

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 mi<sup>2</sup>.

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 23 TO AUGUST 17, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 23		Apr. 28		June 16		July 20		Aug. 17	
Depth of sample (ft)	3.0	29	1.5	29	1.5	31	1.5	31	1.5	31
Lake stage (ft)	8.48		9.56		10.55		10.61		10.50	
Specific conductance (µS/cm)	93	112	76	76	76	82	86	108	90	87
pH (units)	8.1	7.3	7.4	7.6	7.3	6.8	7.6	6.8	8.1	7.1
Water temperature (°C)	0.5	4.5	6.5	6.5	21.0	14.0	22.0	17.0	22.0	19.0
Color (Pt-Co. scale)	---	---	10	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.2	1.3	---	---	---	---	---	---
Secchi-depth (meters)	---		2.6		3.2		2.0		1.6	
Dissolved oxygen	12.1	0.8	12.0	12.0	8.8	0.9	8.9	0.1	9.6	6.5
Hardness, as CaCO <sub>3</sub>	---	---	41	38	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	11	10	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	3.2	3.2	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.2	2.2	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.6	0.6	---	---	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	37	37	---	---	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	4.0	5.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	2.3	2.3	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.0	0.1	---	---	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	12	12	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	62	62	---	---	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	<0.01	<0.01	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	<0.00	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.30	0.30	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.30	0.30	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.030	0.018	0.005	0.023	0.016	0.038	0.037	0.038
Phosphorus, ortho, dissolved (as P)	---	---	0.007	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	99	94	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	9.5	---	2.3	---	7.3	---	14	---

2-23-94

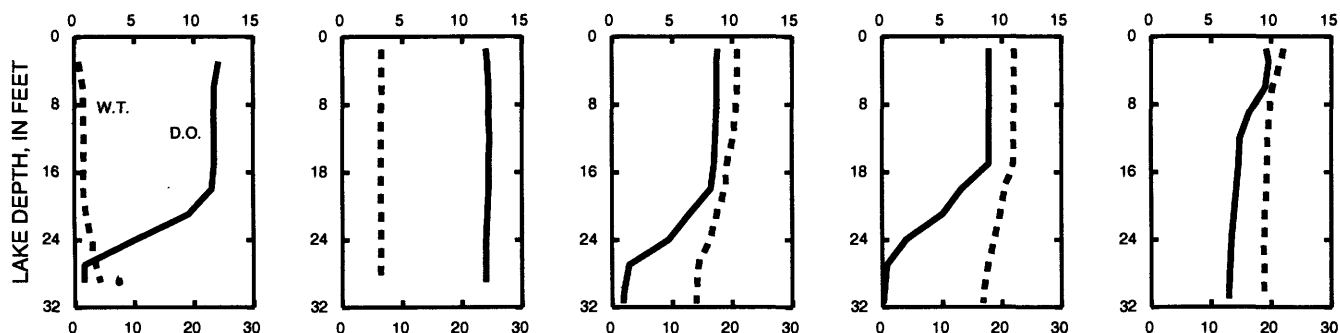
4-28-94

6-16-94

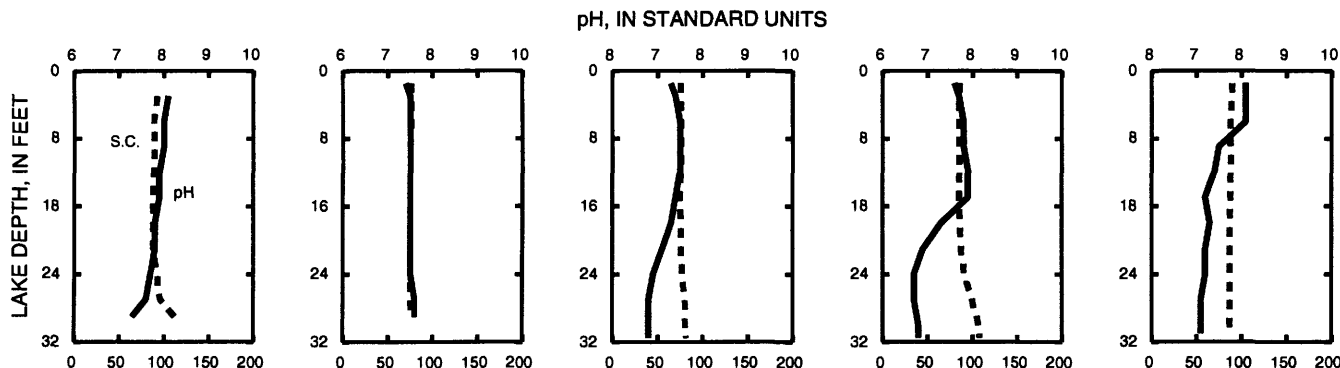
7-20-94

8-17-94

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

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 mi<sup>2</sup>.

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, 10.78 ft, July 9, Sept. 15, 16, 1994; minimum observed, 8.32 ft, Mar. 1, 2, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 10.78 ft, July 9, Sept. 15, 16; minimum observed, 8.38 ft, Mar. 13, 14.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.52	10.04	9.36	8.84	8.60	8.50	8.52	9.72	10.62	10.52	10.54	10.54
2	10.52	10.02	---	---	---	---	8.50	9.78	10.58	10.52	10.58	10.52
3	10.50	10.02	9.22	---	---	---	8.50	9.82	10.54	10.52	10.58	10.50
4	10.50	10.02	---	8.78	8.58	8.48	8.50	9.84	10.50	10.52	10.64	10.50
5	10.52	10.06	---	---	---	---	8.50	9.92	10.52	10.58	10.58	10.50
6	10.60	---	---	---	---	---	8.50	9.98	10.54	10.68	10.54	10.52
7	10.56	---	9.20	8.82	---	---	8.48	10.02	10.58	10.62	10.50	10.52
8	10.54	---	---	---	8.58	8.42	8.48	10.08	10.52	10.60	10.60	10.52
9	10.58	9.72	---	---	---	8.40	8.48	10.12	10.50	10.78	10.56	10.52
10	10.52	---	9.16	---	---	8.40	8.48	10.18	10.46	10.74	10.54	10.52
11	10.52	---	---	8.80	8.54	8.40	8.46	10.20	10.50	10.74	10.52	10.50
12	10.56	9.66	---	---	---	8.40	8.46	10.26	10.52	10.72	10.52	10.50
13	10.56	---	---	---	---	8.38	8.48	10.32	10.62	10.70	10.50	10.58
14	10.56	---	9.10	8.78	---	8.38	8.50	10.38	10.62	10.58	10.48	10.66
15	10.58	9.58	---	---	8.52	8.40	8.54	10.44	10.58	10.50	10.50	10.78
16	10.60	---	---	---	---	8.40	8.58	10.50	10.56	10.54	10.50	10.78
17	10.60	---	9.06	---	---	8.40	8.64	10.50	10.54	10.56	10.50	10.72
18	10.50	---	---	8.78	8.50	8.40	8.72	10.52	10.60	10.54	10.52	10.68
19	10.50	9.52	---	---	---	8.40	8.74	10.56	10.54	10.56	10.52	10.62
20	10.42	---	---	---	---	8.40	9.06	10.58	10.46	10.60	10.56	10.56
21	10.38	---	8.98	8.68	---	8.40	9.10	10.60	10.44	10.58	10.54	10.58
22	10.28	---	---	---	8.50	8.42	9.16	10.60	10.44	10.60	10.52	10.62
23	10.22	9.40	---	---	8.48	8.42	9.20	10.60	10.42	10.56	10.52	10.66
24	10.20	---	8.90	---	---	8.44	9.22	10.60	10.42	10.52	10.52	10.60
25	10.18	---	---	8.60	8.50	8.46	9.30	10.58	10.44	10.50	10.52	10.58
26	10.20	9.38	---	---	---	8.48	9.38	10.58	10.44	10.48	10.52	10.64
27	10.20	---	---	---	---	8.48	9.50	10.56	10.42	10.50	10.52	10.62
28	10.10	---	8.86	8.54	---	8.50	9.50	10.56	10.48	10.46	10.54	10.60
29	10.02	---	---	---	---	8.52	9.50	10.56	10.52	10.50	10.52	10.58
30	9.94	9.36	---	---	---	8.52	9.68	10.60	10.52	10.50	10.56	10.54
31	9.88	---	8.84	---	---	8.52	---	10.66	---	10.52	10.56	---
MEAN	10.40	---	---	---	---	---	8.82	10.33	10.51	10.58	10.54	10.59
MAX	10.60	---	---	---	---	---	9.68	10.66	10.62	10.78	10.64	10.78
MIN	9.88	---	---	---	---	---	8.46	9.72	10.42	10.46	10.48	10.50



## 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, 8.00 ft, Sept. 16, 1994; minimum observed, 7.72 ft, Feb. 28 and June 12, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 8.00 ft, Sept. 16; minimum observed, 7.74 ft, Sept. 21, 26.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	7.84	---	7.86	---	---	---	---	---	7.82	---
2	---	---	---	---	---	7.78	---	---	---	---	---	---
3	---	---	---	7.84	---	---	7.84	---	7.80	7.78	7.82	7.78
4	---	7.84	---	---	---	---	---	7.82	---	---	---	---
5	7.84	---	---	---	---	---	---	---	---	---	---	---
6	---	---	7.84	---	7.86	7.78	---	---	---	---	7.84	---
7	---	---	---	---	---	---	7.82	---	7.80	---	---	---
8	---	---	---	7.84	---	---	---	---	---	7.78	---	---
9	---	---	7.84	---	7.86	---	---	---	---	---	7.86	---
10	---	7.86	---	---	---	7.78	---	7.78	---	---	7.84	7.76
11	7.84	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	7.86	---	7.82	---	---	---
13	7.82	---	7.86	---	7.84	7.80	---	---	---	---	7.78	---
14	---	7.86	---	7.86	7.84	7.82	---	---	---	7.81	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	7.86	---	7.84	---	---	7.80	7.82	---	7.78	8.00
17	---	---	---	---	---	---	7.86	---	7.80	---	7.76	---
18	---	---	---	---	7.82	---	---	---	---	---	---	---
19	---	---	---	7.86	---	7.84	---	---	---	---	---	---
20	7.82	---	---	---	7.82	---	---	7.80	---	7.86	---	---
21	---	7.84	---	---	---	---	7.84	---	---	---	---	7.74
22	---	---	7.86	---	---	---	---	---	---	---	---	---
23	7.84	---	---	---	---	7.88	7.82	---	7.82	---	7.78	---
24	---	---	---	---	7.80	---	7.84	7.82	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	7.80	---
26	---	---	---	7.86	---	---	---	7.80	---	7.82	---	7.74
27	---	7.84	---	---	---	7.86	---	---	---	7.82	---	---
28	---	---	7.86	---	7.78	---	7.83	---	---	---	---	---
29	7.84	---	---	---	---	---	---	---	7.78	---	7.84	---
30	---	7.84	---	---	---	---	7.84	---	---	---	---	7.76
31	7.84	---	---	---	---	7.84	---	7.80	---	---	---	---

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 24 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 24		Apr. 28		June 17		July 14		Aug. 16	
Depth of sample (ft)	3.0	26	1.5	29	1.5	28	1.5	29	1.5	30
Lake stage (ft)	7.80		7.83		7.80		7.81		7.78	
Specific conductance (µS/cm)	111	183	106	105	113	128	123	208	113	114
pH (units)	7.4	7.5	7.8	7.8	7.8	6.8	8.1	7.1	8.5	7.4
Water temperature (°C)	2.0	5.5	8.0	8.0	24.0	18.5	21.5	17.5	20.0	18.5
Color (Pt-Co. scale)	---	---	5	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.6	2.2	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.8		2.6		1.0		1.0	
Dissolved oxygen	10.7	0.2	11.4	11.0	8.7	0.7	9.9	0.2	10.6	4.0
Hardness, as CaCO3	---	---	54	55	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	15	15	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	4.1	4.2	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	2.6	2.7	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	0.9	0.8	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	54	54	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	3.0	4.0	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	2.0	2.0	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	7.6	7.7	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	74	72	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	<0.01	<0.01	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.01	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.30	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.30	0.40	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.018	0.034	0.015	0.059	0.056	0.100	0.077	0.123
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	86	92	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	12	---	4.3	---	45	---	32	---

2-24-94

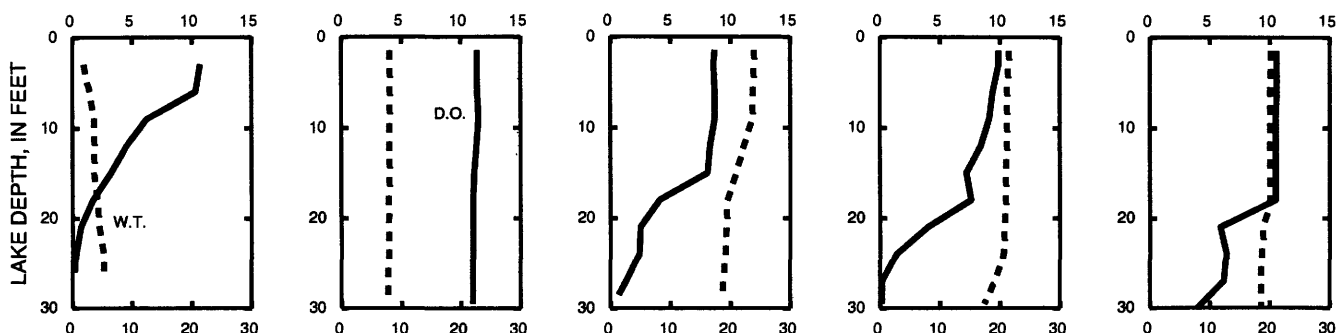
4-28-94

6-17-94

7-14-94

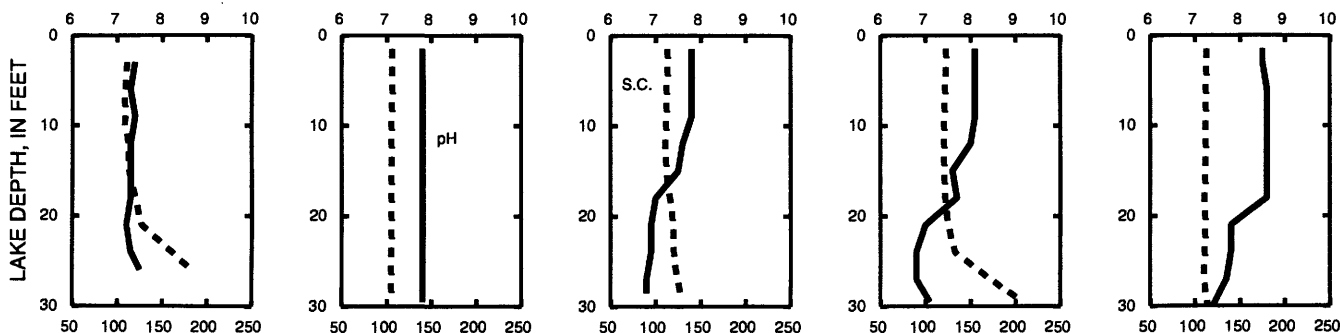
8-16-94

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 mi<sup>2</sup>. Area of lake, 0.17 mi<sup>2</sup>.

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, 30.68 ft, Apr. 27, 29-30, and May 1; minimum observed gage height, 30.23 ft, Sept. 12.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.57	30.52	30.58	30.59	30.57	30.55	30.58	30.68	30.55	---	---	---
2	30.56	30.52	30.58	30.59	30.58	30.57	30.56	30.67	30.52	---	30.57	---
3	30.55	30.51	30.58	30.58	30.57	30.57	30.56	30.67	30.49	---	---	---
4	30.56	30.52	30.58	30.59	30.57	30.56	30.57	30.66	30.49	---	---	---
5	30.55	30.57	30.58	30.58	30.57	30.56	30.57	30.67	30.48	---	---	---
6	30.55	30.56	30.58	30.59	30.57	30.56	30.56	30.66	30.49	---	---	---
7	30.54	30.55	30.58	30.60	30.56	30.55	30.56	30.65	30.49	---	---	---
8	30.55	30.55	30.58	30.61	30.55	30.55	30.55	30.66	30.46	---	---	---
9	30.57	30.55	30.58	30.61	30.57	30.54	30.55	30.65	30.45	---	---	---
10	30.56	30.54	30.58	30.61	30.56	30.54	30.55	30.62	30.44	---	---	---
11	30.56	30.55	30.58	30.61	30.57	30.54	30.54	30.64	30.45	---	---	---
12	30.54	30.55	30.58	30.61	30.58	30.53	30.54	30.61	30.48	---	---	e30.23
13	30.53	30.59	30.59	30.60	30.58	30.53	30.54	30.62	30.51	---	---	e30.35
14	30.53	30.59	30.59	30.59	30.58	30.53	30.55	30.62	30.55	---	---	e30.44
15	30.52	30.59	30.59	30.59	30.58	30.53	30.57	30.61	30.52	---	---	e30.54
16	30.53	30.59	30.59	30.59	30.58	30.52	30.60	30.60	30.50	---	---	e30.59
17	30.52	30.59	30.58	30.59	30.58	30.51	30.59	30.59	30.49	---	---	e30.59
18	30.52	30.58	30.58	30.58	30.58	30.51	30.59	30.58	---	---	---	e30.58
19	30.53	30.58	30.59	30.58	30.59	30.52	30.60	30.57	---	---	---	e30.55
20	30.53	30.57	30.59	30.58	30.59	30.52	30.57	30.56	---	---	---	30.54
21	30.57	30.57	30.59	30.59	30.58	30.52	30.56	30.56	---	---	---	30.53
22	30.56	30.56	30.59	30.59	30.57	30.51	30.55	30.54	30.50	---	---	30.56
23	30.56	30.55	30.58	30.59	30.57	30.51	30.57	30.52	---	---	30.38	30.58
24	30.56	30.56	30.58	30.59	30.57	30.55	30.57	30.52	---	---	---	30.58
25	30.55	30.55	30.58	30.59	30.56	30.56	30.57	30.52	---	---	---	30.60
26	30.54	30.57	30.58	30.59	30.56	30.55	30.63	30.51	---	---	---	30.63
27	30.54	30.58	30.58	30.59	30.55	30.56	30.68	30.49	---	---	---	30.62
28	30.53	30.58	30.57	30.59	30.55	30.56	30.66	30.47	---	---	---	30.62
29	30.53	30.58	30.58	30.59	---	30.58	30.68	30.48	30.50	---	---	30.61
30	30.52	30.57	30.58	30.58	---	30.58	30.68	30.51	---	---	---	30.61
31	30.52	---	30.58	30.58	---	30.58	---	30.59	---	---	---	---
MEAN	30.54	30.56	30.58	30.59	30.57	30.54	30.58	30.59	---	---	---	---
MAX	30.57	30.59	30.59	30.61	30.59	30.58	30.68	30.68	---	---	---	---
MIN	30.52	30.51	30.57	30.58	30.55	30.51	30.54	30.47	---	---	---	---

e Estimated

WISCONSIN RIVER BASIN

117

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 until Nov. 4, 1993. Tipping-bucket rain gage installed June 16, 1994.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.98 in., Aug. 10, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.48 in., July 16.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

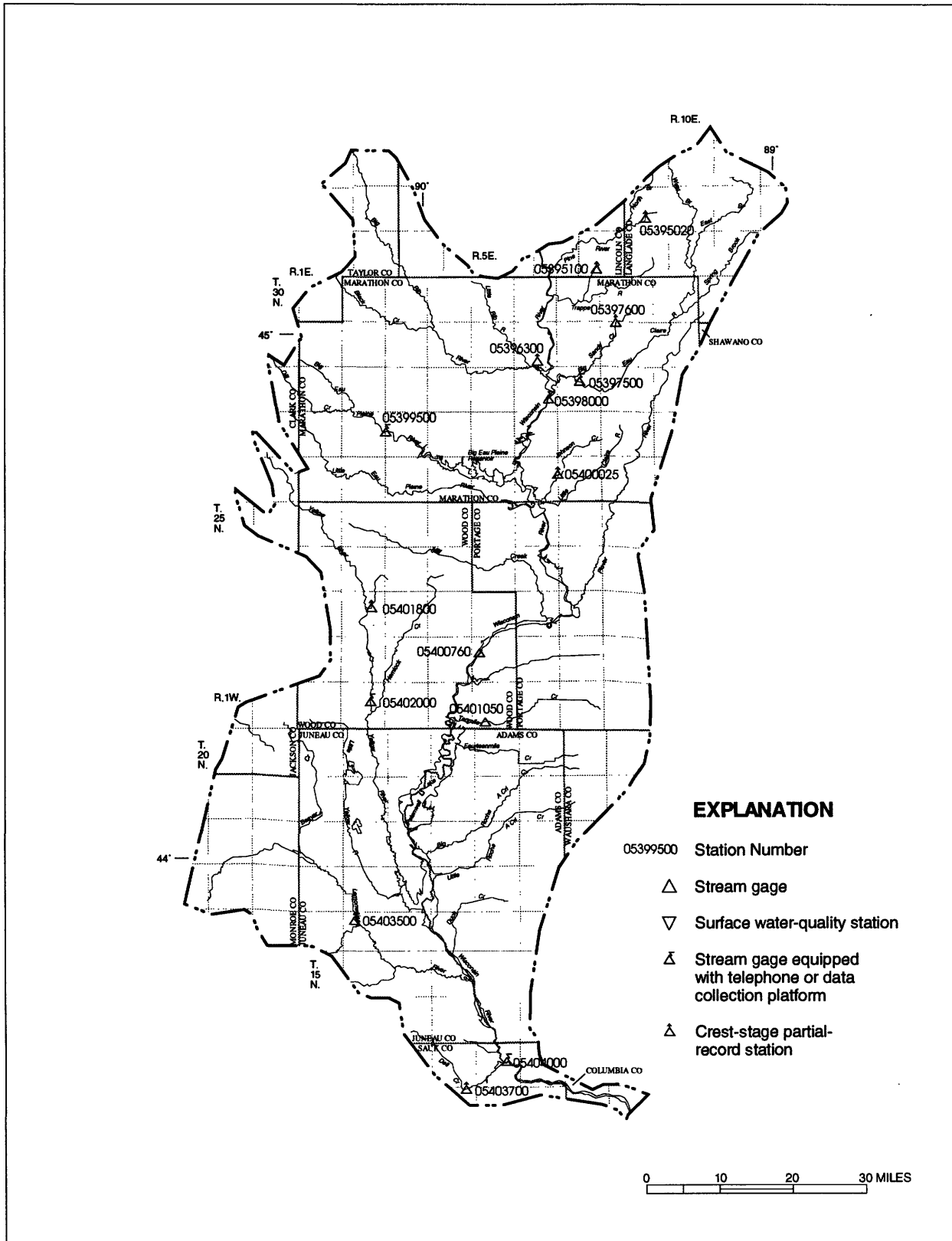
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.00	---	---	---	---	---	---	---	.02	.00	.00
2	.01	.01	---	---	---	---	---	---	---	.00	.00	.00
3	.16	.00	---	---	---	---	---	---	---	.00	.33	.00
4	.08	.09	---	---	---	---	---	---	---	.31	.00	.00
5	.00	---	---	---	---	---	---	---	---	.28	.00	.06
6	.01	---	---	---	---	---	---	---	---	.36	.00	.00
7	.06	---	---	---	---	---	---	---	---	.06	.51	.00
8	.63	---	---	---	---	---	---	---	---	.71	.78	.00
9	.00	---	---	---	---	---	---	---	---	.03	.00	.00
10	.00	---	---	---	---	---	---	---	---	.00	.00	.00
11	.00	---	---	---	---	---	---	---	---	.00	.00	.00
12	.01	---	---	---	---	---	---	---	---	.00	.00	.35
13	.00	---	---	---	---	---	---	---	---	.00	.02	2.40
14	.00	---	---	---	---	---	---	---	---	.02	.00	.75
15	.11	---	---	---	---	---	---	---	---	.00	.00	1.33
16	.00	---	---	---	---	---	---	---	.00	2.48	.00	.01
17	.00	---	---	---	---	---	---	---	.98	.00	.00	.09
18	.05	---	---	---	---	---	---	---	.00	.02	.18	.00
19	.10	---	---	---	---	---	---	---	.00	.86	.48	.00
20	.34	---	---	---	---	---	---	---	.00	.36	.02	.08
21	.17	---	---	---	---	---	---	---	.00	.32	.00	.36
22	.06	---	---	---	---	---	---	---	.00	.01	.00	.75
23	.00	---	---	---	---	---	---	---	.16	.00	.00	.03
24	.01	---	---	---	---	---	---	---	.00	.11	.00	.00
25	.00	---	---	---	---	---	---	---	.00	.18	.07	.83
26	.01	---	---	---	---	---	---	---	.00	.15	.00	.12
27	.04	---	---	---	---	---	---	---	.07	.00	.42	.12
28	.02	---	---	---	---	---	---	---	.85	.00	.00	.05
29	.00	---	---	---	---	---	---	---	.00	.00	.00	.01
30	.07	---	---	---	---	---	---	---	.10	.00	.64	.14
31	.06	---	---	---	---	---	---	---	---	.24	.07	---
TOTAL	2.04	---	---	---	---	---	---	---	---	6.52	3.52	7.48





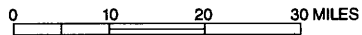






**EXPLANATION**

- 05399500 Station Number
- △ Stream gage
- ▽ Surface water-quality station
- △ Stream gage equipped with telephone or data collection platform
- △ Crest-stage partial-record station



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

**CENTRAL WISCONSIN RIVER BASIN**







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

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1914 - 1994	
ANNUAL TOTAL	103845.5		48977.3			
ANNUAL MEAN	285		134		177	
HIGHEST ANNUAL MEAN					355	
LOWEST ANNUAL MEAN					47.6	
HIGHEST DAILY MEAN	9290	Jun 20	3980	Apr 25	26100	Sep 9 1938
LOWEST DAILY MEAN	9.1	Jul 30	4.4	Sep 20	.00	(a)Jan 22 1961
ANNUAL SEVEN-DAY MINIMUM	11	Feb 18	6.2	Aug 27	.00	Jan 22 1961
INSTANTANEOUS PEAK FLOW			4790	Apr 25	(b)41000	Sep 9 1938
INSTANTANEOUS PEAK STAGE			12.13	Apr 25	(c)24.50	Sep 9 1938
INSTANTANEOUS LOW FLOW			4.0	Sep 20,21	.00	(d)Aug 17 1947
ANNUAL RUNOFF (CFSM)	1.27		.60		.79	
ANNUAL RUNOFF (INCHES)	17.25		8.13		10.74	
10 PERCENT EXCEEDS	713		297		373	
50 PERCENT EXCEEDS	50		42		24	
90 PERCENT EXCEEDS	16		9.7		4.4	

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

(b) Based on rating curve extended above 24,000 ft<sup>3</sup>/s

(c) From floodmarks

(d) 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 mi<sup>2</sup>.

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 1994.

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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2340	3520	3240	2710	2530	3200	4580	9750	3290	2210	3070	2450
2	3000	3320	3210	2750	2790	3130	3880	8030	3160	2100	3940	2080
3	3540	3040	3200	3430	2960	3550	4260	7580	3210	1880	3030	2090
4	3460	3040	3240	3290	2560	2870	4890	6280	2450	2130	2830	2270
5	2900	3620	4090	3270	2510	3080	4580	6210	2590	2440	2140	2590
6	2980	3670	3950	3410	2520	3960	4360	5020	2600	4430	2310	2280
7	2870	3660	3960	3170	2660	3220	3630	4080	2520	3800	2280	2260
8	4120	4020	3500	3210	2590	4730	3390	3790	2860	2930	2520	2260
9	4620	3660	3290	3160	2900	5200	2910	3930	2590	4120	2380	2260
10	4580	3460	3280	2900	2790	5080	3450	3590	2500	4690	2240	2100
11	3780	3180	3280	2840	2780	4350	4070	3780	2360	3790	2350	1960
12	3430	3240	3280	3060	2600	4060	4100	3580	2130	4000	2400	2190
13	4160	3890	3290	2990	2320	3950	4800	3800	2920	3000	2090	2380
14	3200	4730	3290	2850	2810	4130	5720	2260	2960	3140	2510	4980
15	3160	6780	3480	2810	3170	4220	9820	3040	3040	2500	2070	8720
16	3320	6320	3390	2970	2840	3980	15000	3340	2790	2260	1980	15800
17	4950	4970	3800	2850	2940	5020	14500	2860	2650	2190	2260	17300
18	5290	4020	3670	2820	3260	4520	9690	3390	2560	2010	2510	16300
19	4870	3720	3640	2650	3440	4410	10500	3350	2690	3200	2360	9520
20	4000	3630	4810	2580	4550	3850	6260	2910	2140	3240	3060	6620
21	3770	4090	3700	2660	5370	4780	5450	2580	2050	3540	3030	5040
22	4330	4200	3040	3070	5670	5270	4960	2580	1870	3640	2230	6040
23	4530	3980	3150	2520	5380	5190	4440	3190	2470	3320	2410	6980
24	4440	3820	3080	2570	5090	5750	4860	3050	2170	3180	2500	7320
25	4170	3080	2840	2860	4880	5280	16600	2820	2280	3080	1850	7020
26	3970	3400	2360	2840	4560	5140	21900	2720	1800	2220	2110	7200
27	3310	4030	1840	2980	4660	5150	24200	2570	1580	2400	2180	7430
28	3270	3240	2610	2990	4880	5140	18300	2710	1920	2670	2220	6840
29	3800	2910	3160	2910	---	5130	15400	3040	2700	2240	2100	6000
30	3440	3270	2580	2620	---	4950	11100	3350	2280	2330	2220	5780
31	3140	---	2620	2730	---	4670	---	3620	---	2250	2860	---
TOTAL	116740	115510	101870	90470	98010	136960	251600	122800	75130	90930	76040	174060
MEAN	3766	3850	3286	2918	3500	4418	8387	3961	2504	2933	2453	5802
MAX	5290	6780	4810	3430	5670	5750	24200	9750	3290	4690	3940	17300
MIN	2340	2910	1840	2520	2320	2870	2910	2260	1580	1880	1850	1960

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1994, BY WATER YEAR (WY)

MEAN	4104	4431	3338	3049	3143	6472	11020	7025	6139	3541	3067	4431
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	1173	1173	1227
(WY)	1977	1977	1990	1990	1977	1924	1990	1987	1988	1988	1934	1976

## SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1914 - 1994	
ANNUAL TOTAL	2420330		1450120			
ANNUAL MEAN	6631		3973		4971	
HIGHEST ANNUAL MEAN					8499	
LOWEST ANNUAL MEAN					2107	
HIGHEST DAILY MEAN	63600		24200		63600	
LOWEST DAILY MEAN	1840		1580		165	
ANNUAL SEVEN-DAY MINIMUM	2570		2010		790	
INSTANTANEOUS PEAK FLOW			24700		(a)70400	
10 PERCENT EXCEEDS	14900		5690		9720	
50 PERCENT EXCEEDS	3780		3240		3360	
90 PERCENT EXCEEDS	3010		2260		1760	

(a) From rating curve extended above 58,000 ft<sup>3</sup>/s

WISCONSIN RIVER BASIN

127

05401050 TENMILE CREEK NEAR NEKOOSA, WI

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 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1962-63. October 1963 to September 1979, October 1987 to September 1994 (discontinued).

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, Nov. 27-29, Dec. 11-13, Dec. 17 to Mar. 1, Mar. 7-12, and 16-19. 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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	81	66	50	41	50	71	112	65	53	72	69
2	87	80	68	49	41	55	71	110	63	51	70	67
3	87	80	69	48	41	57	70	108	61	50	69	66
4	86	79	70	48	42	59	72	105	60	57	69	64
5	84	79	70	48	43	67	77	102	59	63	67	64
6	86	78	71	48	43	79	79	98	61	76	66	63
7	89	77	70	49	42	80	79	96	60	104	64	60
8	89	76	69	49	40	76	81	94	59	142	63	59
9	88	76	69	50	39	78	84	94	57	145	61	57
10	88	77	69	50	40	78	85	92	56	132	62	56
11	88	77	62	50	41	76	83	95	56	120	62	55
12	87	78	64	49	41	72	84	94	56	112	61	54
13	85	79	66	48	41	72	89	91	57	104	60	54
14	84	79	68	47	42	72	90	88	55	108	58	60
15	86	78	68	46	41	72	95	89	54	117	56	60
16	96	77	67	44	42	68	99	85	52	112	55	62
17	105	76	66	43	41	66	97	83	51	105	55	61
18	104	75	66	43	42	66	95	81	50	100	63	60
19	101	74	64	43	44	66	92	79	58	98	66	58
20	98	73	64	42	58	68	89	78	61	99	73	57
21	97	73	62	42	60	71	87	78	57	95	78	56
22	95	73	58	44	58	74	85	76	55	92	74	56
23	92	72	56	45	54	75	84	75	55	91	71	56
24	91	70	54	43	50	74	83	73	54	88	68	56
25	90	69	52	42	52	72	104	73	52	85	66	56
26	90	70	50	42	50	72	131	73	54	83	63	56
27	88	66	48	43	50	72	128	72	55	80	64	57
28	87	62	48	44	50	71	119	70	53	77	72	58
29	85	64	49	43	---	71	117	69	53	75	69	57
30	83	66	50	42	---	70	114	68	54	74	68	57
31	82	---	50	41	---	70	---	67	---	72	69	---
TOTAL	2788	2234	1923	1415	1269	2169	2734	2668	1693	2860	2034	1771
MEAN	89.9	74.5	62.0	45.6	45.3	70.0	91.1	86.1	56.4	92.3	65.6	59.0
MAX	105	81	71	50	60	80	131	112	65	145	78	69
MIN	82	62	48	41	39	50	70	67	50	50	55	54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1994, BY WATER YEAR (WY)

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
MEAN	53.2	54.1	50.1	36.8	34.7	68.1	106	91.7	77.5	60.1	46.6	53.2		
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 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1964 - 1994
ANNUAL TOTAL	35406	25558	
ANNUAL MEAN	97.0	70.0	61.1
HIGHEST ANNUAL MEAN			113
LOWEST ANNUAL MEAN			30.2
HIGHEST DAILY MEAN	246	145	427
LOWEST DAILY MEAN	48	(a)39	10
ANNUAL SEVEN-DAY MINIMUM	49	(a)41	10
INSTANTANEOUS PEAK FLOW		151	456
INSTANTANEOUS PEAK STAGE		5.72	6.62
INSTANTANEOUS LOW FLOW			9.5
10 PERCENT EXCEEDS	155	95	108
50 PERCENT EXCEEDS	89	69	53
90 PERCENT EXCEEDS	58	47	23

(a) Ice affected

(b) Also occurred Feb. 14, 15, Feb. 22 to Mar. 2, 1964, and Feb. 2-4, 11, 12, 1965









WISCONSIN RIVER BASIN

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 mi<sup>2</sup>.

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 period, Dec. 21 to Mar. 7. Records good except those for ice-affected period, which is fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	22	23	16	18	20	24	47	15	16	15	19
2	24	24	29	16	18	22	23	33	15	15	14	19
3	23	23	26	16	18	24	22	30	15	15	14	20
4	23	24	25	16	18	35	22	27	15	59	15	19
5	22	24	25	16	18	80	24	27	15	44	14	20
6	26	22	27	16	18	100	23	25	16	20	14	19
7	24	22	23	16	18	70	22	25	16	160	14	18
8	26	23	23	16	18	43	21	24	17	113	14	18
9	39	23	24	16	18	29	22	23	15	33	14	70
10	27	23	24	16	18	26	21	22	16	24	64	118
11	26	23	21	16	18	25	20	29	17	24	32	22
12	26	23	22	16	18	39	35	23	15	36	21	20
13	24	32	23	16	18	38	39	21	22	22	20	20
14	24	25	24	16	18	53	27	21	17	38	19	106
15	30	26	23	16	18	60	51	23	16	25	18	33
16	44	23	23	16	19	34	33	20	14	20	18	82
17	28	23	24	16	20	28	25	19	14	20	17	29
18	26	23	27	15	25	26	24	18	14	19	43	24
19	25	24	25	15	250	27	22	18	15	19	25	23
20	25	22	24	16	50	47	21	17	20	37	23	22
21	32	24	21	16	33	68	21	17	16	17	20	21
22	26	23	19	16	20	49	20	17	14	2.4	19	31
23	25	23	18	17	15	45	20	18	19	1.4	18	38
24	25	22	18	18	18	39	20	21	21	1.2	18	37
25	24	27	17	18	19	29	308	19	17	1.2	17	63
26	24	31	16	18	19	29	112	19	24	1.2	18	73
27	23	24	15	18	19	30	50	17	17	1.2	18	41
28	24	23	15	18	19	27	40	16	17	1.4	17	29
29	24	23	15	18	---	24	44	17	24	6.9	17	27
30	23	22	15	18	---	23	38	17	19	12	37	26
31	23	---	15	18	---	23	---	16	---	14	21	---
TOTAL	810	716	669	511	796	1212	1194	686	507	818.9	648	1107
MEAN	26.1	23.9	21.6	16.5	28.4	39.1	39.8	22.1	16.9	26.4	20.9	36.9
MAX	44	32	29	18	250	100	308	47	24	160	64	118
MIN	22	22	15	15	15	20	20	16	14	1.2	14	18
CFSM	.67	.61	.55	.42	.73	1.00	1.02	.57	.43	.68	.53	.94
IN.	.77	.68	.64	.49	.76	1.15	1.14	.65	.48	.78	.62	1.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1994, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994
MEAN	12.8	17.0	13.8	12.6	15.3	39.1	35.0
MAX	26.1	28.6	22.9	16.5	28.4	50.8	70.9
(WY)	1994	1993	1993	1994	1994	1989	1993
MIN	6.79	8.14	4.42	8.95	6.91	25.7	8.47
(WY)	1990	1991	1990	1991	1989	1991	1990

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1988 - 1994

ANNUAL TOTAL	12903	9674.9	
ANNUAL MEAN	35.4	26.5	
HIGHEST ANNUAL MEAN			22.2
LOWEST ANNUAL MEAN			35.1
HIGHEST DAILY MEAN	277	May 3	1190
LOWEST DAILY MEAN	12	(a)Jan 29	1.2
ANNUAL SEVEN-DAY MINIMUM	14	Jan 6	1.4
INSTANTANEOUS PEAK FLOW			1050
INSTANTANEOUS PEAK STAGE			12.26
ANNUAL RUNOFF (CFSM)	.90	.68	(c)4010
ANNUAL RUNOFF (INCHES)	12.28	9.20	(d)15.60
10 PERCENT EXCEEDS	67	39	.57
50 PERCENT EXCEEDS	25	22	7.72
90 PERCENT EXCEEDS	16	15	37
			13
			5.8

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

(b) Result of closing dam gates to fill lake 0.35 mi upstream

(c) From rating curve extended above 1,100 ft<sup>3</sup>/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 mi<sup>2</sup>. 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.

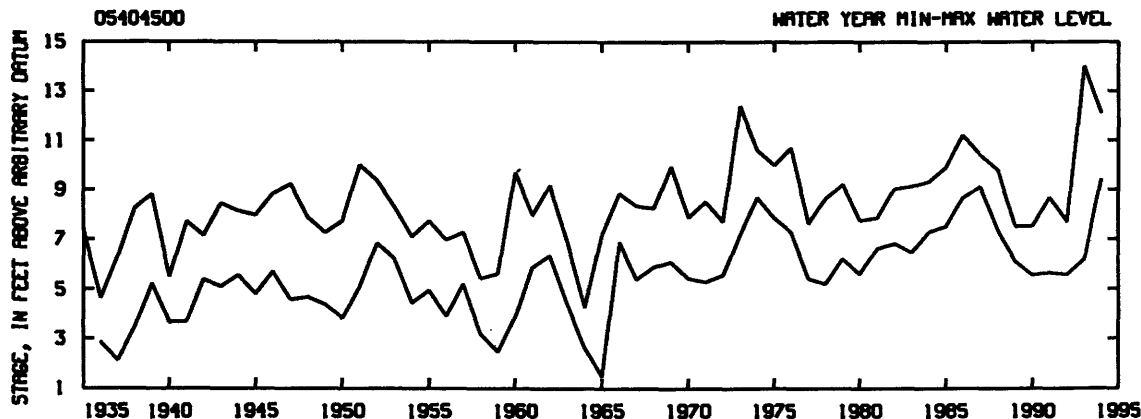
REMARKS.--Records good. Lake has no surface outlet. Nov. 29, 1993 to Mar. 28, 1994, water was pumped from lake at a rate of 3 ft<sup>3</sup>/s and diverted into unnamed trib that is tributary to the Baraboo River.

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, 12.22 ft, Oct. 1; minimum observed, 9.12 ft, Sept. 8.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.15	11.55	11.19	10.34	---	9.61	9.69	9.99	9.74	9.98	9.77	9.29
2	12.11	11.53	11.16	10.32	---	9.61	9.69	9.99	9.71	9.96	9.75	9.26
3	12.09	11.51	11.14	10.32	---	9.61	9.69	10.00	9.68	9.93	9.72	9.25
4	12.06	11.49	11.11	10.33	---	9.60	9.69	10.00	9.66	10.03	9.70	9.23
5	12.03	11.47	11.08	---	---	9.58	9.70	9.99	9.64	10.09	9.67	9.21
6	12.03	11.45	11.06	---	---	9.56	9.70	9.99	9.62	10.09	9.63	9.19
7	12.01	11.43	11.04	---	---	9.56	9.70	9.99	9.61	10.09	9.60	9.17
8	12.00	11.41	11.01	---	---	9.55	9.70	10.00	9.59	10.11	9.57	9.15
9	12.00	11.39	10.98	---	---	9.55	9.69	9.98	9.57	10.10	9.54	9.15
10	11.97	11.37	10.95	---	---	9.55	9.69	9.98	9.55	10.08	9.57	9.21
11	11.95	11.35	10.92	---	---	9.55	9.68	9.99	9.53	10.06	9.60	9.20
12	11.92	11.34	10.89	---	---	9.54	9.70	9.99	9.50	10.05	9.59	9.18
13	11.89	11.36	10.86	---	---	9.49	9.75	9.98	9.51	10.03	9.57	9.16
14	11.87	11.35	10.83	---	---	9.48	9.76	9.97	9.53	10.02	9.54	9.25
15	11.86	11.35	---	---	---	9.46	9.80	9.96	9.52	10.01	9.52	9.27
16	11.88	11.34	---	---	---	9.45	9.80	9.95	9.50	10.00	9.50	9.30
17	11.86	11.32	---	---	---	9.45	9.81	9.93	9.47	9.98	9.48	9.27
18	11.84	11.31	---	---	9.48	9.44	9.81	9.92	9.46	9.96	9.50	9.25
19	11.83	11.29	---	---	9.48	9.41	9.80	9.90	9.53	9.95	9.52	9.23
20	11.81	11.27	---	---	9.58	9.40	9.80	9.89	9.51	9.97	9.52	9.21
21	11.80	11.26	---	---	9.59	9.45	9.80	9.88	9.49	9.96	9.49	9.19
22	11.78	11.24	---	---	9.59	9.51	9.80	9.86	9.46	9.97	9.48	9.19
23	11.76	11.23	10.58	---	9.61	9.57	9.80	9.86	9.47	9.95	9.47	9.21
24	11.74	11.21	10.56	---	9.61	9.61	9.79	9.87	9.50	9.93	9.44	9.21
25	11.72	11.22	10.52	---	9.61	9.63	9.87	9.86	9.51	9.92	9.43	9.21
26	11.70	11.27	10.50	---	9.61	9.64	9.94	9.86	9.92	9.88	9.43	9.25
27	11.68	11.26	10.47	---	9.61	9.66	9.94	9.84	9.93	9.85	9.42	9.24
28	11.65	11.25	10.44	---	9.61	9.67	9.93	9.82	9.95	9.83	9.38	9.22
29	11.62	11.23	10.41	---	---	9.67	9.94	9.80	10.00	9.81	9.35	9.20
30	11.60	11.22	10.39	---	---	9.68	9.96	9.79	10.00	9.79	9.33	9.18
31	11.57	---	10.36	---	---	9.69	---	9.76	---	9.77	9.31	---
MEAN	11.86	11.34	---	---	---	9.56	9.78	9.92	9.62	9.97	9.53	9.22
MAX	12.15	11.55	---	---	---	9.69	9.96	10.00	10.00	10.11	9.77	9.30
MIN	11.57	11.21	---	---	---	9.40	9.68	9.76	9.46	9.77	9.31	9.15







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 mi<sup>2</sup>. 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-92-1: Drainage area. WDR WI-87-1: All published values for the 1987 water year are invalid. Two valid values for water years 1987 and 1988 are available: May 7, 1987, water surface 10.52 ft, and 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.

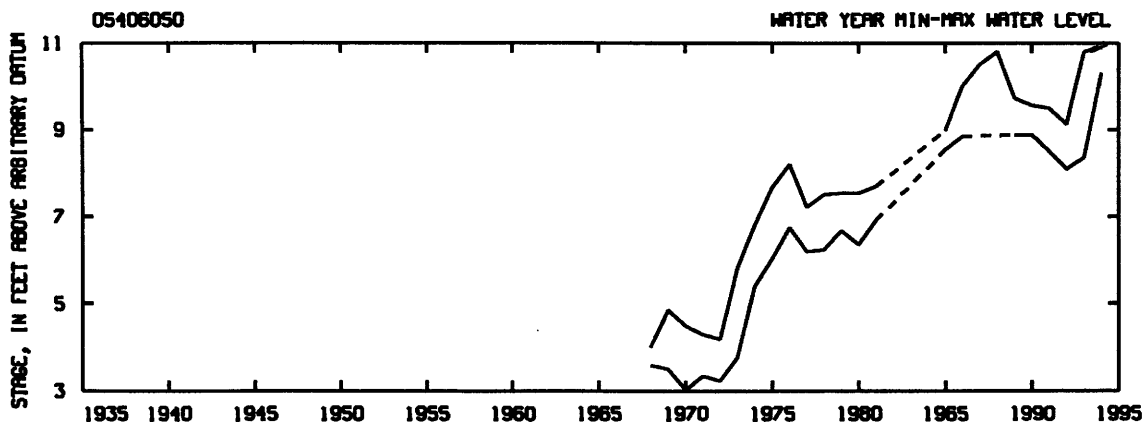
REMARKS.--Lake has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 11.00 ft, Apr. 4, 1994; minimum observed, 3.02 ft, Aug. 29, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.00 ft, Apr. 4; minimum observed, 10.36 ft, June 22.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.59	10.42	---	---	---	---	10.99	10.82	10.60	10.67	10.66	10.54
2	10.58	10.41	---	---	---	---	10.99	10.82	10.58	10.65	10.64	10.53
3	10.56	10.40	---	---	---	---	10.99	10.81	10.55	10.62	10.64	10.54
4	10.55	10.40	---	10.40	---	---	11.00	10.80	10.54	10.68	10.65	10.53
5	10.54	10.40	---	---	---	---	10.99	10.80	10.53	10.71	10.62	10.52
6	10.53	10.39	---	---	---	---	10.97	10.78	10.53	10.71	10.60	10.51
7	10.53	10.38	---	---	---	---	10.94	10.79	10.53	10.73	10.58	10.50
8	10.53	10.38	---	---	---	---	10.91	10.79	10.52	10.78	10.57	10.50
9	10.53	10.37	---	---	---	10.89	10.91	10.77	10.50	10.78	10.55	10.50
10	10.53	---	---	---	---	---	10.88	10.77	10.48	10.76	10.59	10.52
11	10.53	---	---	---	---	---	10.87	10.78	10.47	10.75	10.67	10.51
12	10.53	---	---	---	---	---	10.89	10.78	10.45	10.74	10.66	10.50
13	10.53	---	---	---	---	---	10.91	10.77	10.46	10.73	10.66	10.50
14	10.52	---	---	---	---	---	10.91	10.76	10.46	10.73	10.65	10.52
15	10.52	---	---	---	---	---	10.93	10.77	10.45	10.71	10.63	10.53
16	10.52	---	---	---	---	---	10.92	10.75	10.43	10.71	10.61	10.56
17	10.52	---	---	---	---	---	10.89	10.74	10.41	10.70	10.60	10.54
18	10.52	---	---	---	---	---	10.88	10.72	10.40	10.69	10.64	10.53
19	10.52	---	---	---	---	---	10.87	10.71	10.38	10.68	10.66	10.51
20	10.52	---	---	---	---	---	10.85	10.70	10.39	10.76	10.68	10.50
21	10.52	---	---	---	---	---	10.84	10.69	10.38	10.76	10.66	10.50
22	10.52	---	---	---	---	---	10.83	10.68	10.36	10.77	10.65	10.50
23	10.51	---	---	---	---	---	10.82	10.69	10.43	10.76	10.64	10.53
24	10.50	---	---	---	---	---	10.81	10.72	10.56	10.74	10.63	10.54
25	10.50	---	---	---	---	10.86	10.83	10.72	10.55	10.73	10.62	10.57
26	10.49	---	---	---	---	10.87	10.85	10.71	10.67	10.71	10.63	10.60
27	10.48	---	---	---	---	10.88	10.83	10.68	10.66	10.69	10.62	10.60
28	10.47	---	---	---	---	10.88	10.80	10.67	10.67	10.68	10.60	10.58
29	10.45	---	---	---	---	10.88	10.79	10.65	10.70	10.66	10.58	10.56
30	10.44	---	---	---	---	10.88	10.80	10.64	10.69	10.65	10.57	10.56
31	10.42	---	---	---	---	10.91	---	10.63	---	10.64	10.56	---
MEAN	10.52	---	---	---	---	---	10.89	10.74	10.51	10.71	10.62	10.53
MAX	10.59	---	---	---	---	---	11.00	10.82	10.70	10.78	10.68	10.60
MIN	10.42	---	---	---	---	---	10.79	10.63	10.36	10.62	10.55	10.50



## 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 mi<sup>2</sup>.

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, 20.5°C, June 14; minimum observed, 1.0°C, Feb. 20.

DISSOLVED OXYGEN: Maximum observed, 16.1 mg/L, June 19; minimum observed, 4.8 mg/L, Aug. 4.

## WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.0	10.0	10.5	8.0	5.5	6.5	7.5	6.0	6.5	5.0	4.5	5.0			
2	11.0	9.0	10.0	7.5	6.5	7.0	8.0	6.5	7.0	4.5	4.0	4.5			
3	12.0	9.0	10.5	9.0	6.5	7.5	7.0	5.5	6.5	5.5	4.0	4.5			
4	12.0	9.5	10.5	9.0	8.0	8.5	7.5	6.5	7.0	5.0	3.5	4.5			
5	11.5	8.5	9.5	8.5	6.5	8.0	7.0	6.0	6.5	4.0	2.5	3.5			
6	13.0	9.5	11.0	7.0	6.0	6.5	6.0	4.5	5.5	4.5	3.0	4.0			
7	14.0	11.0	12.0	7.0	5.0	6.0	5.5	4.5	5.0	---	---	---			
8	12.5	10.5	11.5	8.5	6.5	7.5	6.0	5.0	5.5	---	---	---			
9	10.5	8.5	9.5	8.5	6.0	7.0	---	---	---	---	---	---			
10	10.5	7.5	9.0	9.0	7.0	7.5	---	---	---	---	---	---			
11	10.5	8.0	9.0	9.0	7.0	7.5	---	---	---	---	---	---			
12	10.5	8.5	9.5	8.0	6.5	7.0	---	---	---	---	---	---			
13	10.5	7.5	8.5	9.5	7.5	8.5	---	---	---	---	---	---			
14	10.5	8.5	9.5	8.5	7.5	8.0	6.5	6.0	6.0	---	---	---			
15	10.5	9.0	10.0	7.5	7.0	7.5	7.0	5.5	6.0	---	---	---			
16	11.0	10.0	10.5	7.5	7.0	7.0	6.5	5.5	6.0	---	---	---			
17	10.5	8.5	10.0	9.0	7.0	7.5	6.0	6.0	6.0	---	---	---			
18	10.5	8.0	9.0	8.0	6.0	7.0	6.0	5.5	6.0	---	---	---			
19	11.0	9.0	10.0	8.5	5.5	7.5	6.0	5.5	5.5	---	---	---			
20	10.0	8.5	9.5	7.0	5.5	6.0	5.5	4.5	5.0	---	---	---			
21	9.5	7.5	8.5	8.5	6.5	7.0	5.0	4.0	4.5	---	---	---			
22	10.0	7.0	8.0	8.5	6.5	7.5	5.0	4.0	4.5	---	---	---			
23	10.5	7.5	8.5	9.0	7.0	8.0	5.0	3.5	4.5	---	---	---			
24	11.0	8.5	9.5	8.0	7.0	7.0	4.5	3.0	3.5	---	---	---			
25	10.5	8.0	9.0	7.0	6.5	7.0	4.0	2.5	3.0	---	---	---			
26	9.0	8.0	9.0	7.0	4.5	6.0	4.0	3.0	3.5	---	---	---			
27	8.0	7.5	8.0	5.5	4.0	5.0	4.0	3.0	3.5	---	---	---			
28	9.0	7.0	8.0	6.5	4.5	5.5	4.5	2.5	3.5	---	---	---			
29	7.0	6.5	6.5	6.5	5.5	6.0	4.0	2.5	3.5	---	---	---			
30	7.5	6.5	7.0	6.0	5.5	6.0	4.0	2.5	3.5	---	---	---			
31	7.5	6.0	6.5	---	---	---	5.5	4.0	5.0	---	---	---			
MONTH	14.0	6.0	9.3	9.5	4.0	7.0	---	---	---	---	---	---			

WISCONSIN RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	8.0	5.0	6.0	12.5	6.5	9.5	12.5	7.0	9.5
2	---	---	---	9.0	5.5	6.5	12.5	7.5	9.5	13.5	7.5	10.0
3	---	---	---	9.5	5.5	7.0	12.0	6.5	9.0	13.5	8.0	10.5
4	---	---	---	9.5	5.5	7.0	11.0	7.0	8.5	13.5	8.5	10.5
5	---	---	---	8.0	3.0	5.0	10.0	6.5	8.0	12.0	8.5	10.0
6	---	---	---	6.0	3.5	4.5	10.5	6.0	7.5	13.5	7.5	10.5
7	---	---	---	7.5	3.5	5.0	12.0	6.0	8.5	14.0	9.0	11.0
8	---	---	---	7.5	3.0	5.0	8.5	7.0	8.0	14.0	8.5	11.0
9	---	---	---	8.5	4.0	6.0	13.0	7.5	9.5	15.5	9.0	11.5
10	---	---	---	7.0	4.5	5.5	13.5	8.0	10.0	14.5	8.5	11.0
11	---	---	---	8.5	4.5	6.5	10.5	7.5	9.0	14.5	10.5	12.0
12	6.5	5.0	5.5	8.5	5.5	7.0	8.5	8.0	8.0	14.5	9.0	11.5
13	8.5	5.5	6.0	7.0	5.0	6.0	10.5	8.0	9.0	16.0	9.5	12.0
14	9.0	5.0	6.5	9.0	5.5	7.0	14.0	7.5	10.5	12.0	10.0	11.0
15	9.5	5.5	7.0	8.0	5.5	6.5	10.5	8.0	9.5	16.5	10.5	12.5
16	9.0	5.0	6.5	8.5	5.0	6.5	13.0	7.5	9.5	16.0	9.5	12.0
17	10.0	6.5	7.5	7.5	5.0	6.0	13.5	8.0	10.5	15.5	9.0	12.0
18	9.5	6.5	7.5	7.5	6.0	6.5	15.5	8.5	11.5	15.5	9.0	12.0
19	7.0	1.5	4.5	10.5	5.5	7.5	14.5	8.5	11.0	16.0	9.0	12.0
20	3.0	1.0	2.0	11.0	6.5	8.5	11.5	7.5	9.5	16.5	9.5	12.5
21	5.5	2.0	3.5	10.5	7.0	8.5	13.5	8.0	10.5	17.0	10.0	13.0
22	4.5	3.0	4.0	12.0	6.5	8.5	14.0	7.5	10.5	17.0	10.5	13.0
23	5.0	3.0	4.0	11.5	7.0	9.0	14.0	8.0	10.5	17.0	10.5	13.0
24	7.0	4.0	5.0	9.0	6.5	7.5	15.5	9.5	12.0	15.5	11.0	12.5
25	6.0	3.5	4.5	11.0	6.0	8.0	14.0	11.0	12.0	15.0	10.5	12.0
26	7.0	3.5	4.5	8.5	7.0	7.5	16.5	10.5	13.0	15.0	9.5	12.0
27	7.0	3.5	4.5	11.0	7.0	8.5	11.0	9.0	10.0	15.5	9.0	11.5
28	7.0	4.5	5.5	8.5	6.5	7.5	9.0	8.0	8.0	16.5	9.5	12.5
29	---	---	---	8.5	6.0	7.0	---	---	---	16.0	10.5	12.5
30	---	---	---	11.0	5.5	8.0	9.0	7.0	7.5	18.0	10.5	13.5
31	---	---	---	11.5	6.0	8.5	---	---	---	17.5	11.5	14.0
MONTH	---	---	---	12.0	3.0	6.9	---	---	---	18.0	7.0	11.8
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.5	10.5	13.0	18.5	12.5	15.0	15.0	14.0	14.5	14.0	10.0	12.0
2	16.5	10.5	13.0	16.5	12.0	14.0	15.0	13.5	14.5	12.0	11.0	11.5
3	17.0	10.0	12.5	16.0	11.0	13.0	15.0	13.5	14.0	13.0	11.0	12.0
4	17.5	10.5	13.0	16.5	13.0	15.0	14.5	14.0	14.0	12.0	11.0	11.5
5	15.5	11.0	13.0	19.5	13.0	16.0	14.5	13.0	13.5	12.5	11.0	11.5
6	19.0	11.5	14.5	18.5	14.5	16.0	14.0	12.5	13.0	15.0	10.5	12.0
7	14.0	11.5	13.0	17.5	13.5	15.5	14.0	12.5	13.0	15.0	10.0	12.0
8	17.0	10.5	13.0	17.5	14.5	16.0	13.5	13.0	13.5	14.0	11.0	12.0
9	17.0	10.0	13.0	15.5	13.5	14.5	13.5	12.0	12.5	14.0	11.0	12.5
10	15.0	11.0	12.5	17.0	11.5	14.0	12.5	12.5	12.5	16.5	11.5	14.0
11	16.5	10.0	13.0	18.0	12.0	14.5	13.0	12.5	13.0	16.0	12.0	14.0
12	17.5	10.0	13.5	17.0	13.0	15.0	13.5	13.0	13.0	16.0	12.0	13.5
13	17.5	12.0	14.0	14.0	12.5	13.0	14.5	13.5	14.0	17.5	13.0	15.0
14	20.5	12.0	15.5	13.5	12.0	12.5	14.0	13.5	14.0	18.0	13.5	15.5
15	19.5	13.0	15.5	17.0	12.0	14.0	14.5	13.0	14.0	18.5	14.5	16.5
16	20.0	12.0	15.5	14.5	12.0	13.5	15.0	13.5	14.0	17.5	14.5	16.0
17	19.5	12.0	15.0	17.5	12.0	14.5	15.0	13.5	14.0	16.5	13.5	14.5
18	19.0	12.0	15.0	17.0	12.0	14.5	14.5	14.0	14.0	16.0	12.0	14.0
19	18.5	12.5	15.0	17.0	13.0	15.0	14.0	13.5	14.0	16.0	12.0	13.5
20	18.0	12.5	15.0	18.5	14.5	16.0	14.0	13.0	13.5	15.5	12.0	13.5
21	19.0	12.0	15.0	17.0	14.5	15.5	14.0	13.0	13.5	16.0	12.0	14.0
22	18.5	11.0	14.0	17.5	14.0	15.5	14.0	12.5	13.5	13.0	11.5	12.0
23	14.0	12.5	13.0	16.5	13.5	15.0	---	---	---	13.5	11.5	12.5
24	17.0	13.0	14.5	16.5	14.0	15.0	---	---	---	14.5	13.0	13.5
25	18.0	13.0	15.0	16.0	14.0	15.0	---	---	---	15.5	13.0	14.0
26	18.0	14.0	15.5	15.0	13.5	14.5	---	---	---	13.5	12.0	13.0
27	17.5	13.0	15.5	15.0	13.5	14.0	---	---	---	12.5	11.5	12.0
28	17.0	13.5	15.0	15.5	13.5	14.5	---	---	---	13.5	11.0	12.0
29	17.0	13.0	15.0	15.0	13.5	14.0	---	---	---	14.5	10.5	12.0
30	17.0	12.5	14.5	15.0	13.5	14.0	12.5	11.0	12.0	14.5	11.0	12.5
31	---	---	---	15.5	13.5	14.5	13.0	11.0	12.0	---	---	---
MONTH	20.5	10.0	14.1	19.5	11.0	14.6	---	---	---	18.5	10.0	13.1

## WISCONSIN RIVER BASIN

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

## OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	FEBRUARY			MARCH			APRIL			MAY			
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
1										14.6	8.9	11.1	
2										14.3	8.7	10.8	
3										14.4	8.4	10.9	
4										15.1	8.2	10.6	
5										14.4	8.3	10.5	
6										15.3	8.2	11.2	
7										14.6	8.2	10.4	
8										14.3	7.9	10.6	
9										13.3	7.8	10.0	
10										11.8	6.4	9.4	
11										11.3	7.0	8.8	
12										11.7	7.3	9.4	
13										11.8	6.8	9.3	
14										10.3	7.6	8.6	
15										10.7	7.3	8.8	
16										11.1	7.1	9.1	
17										11.2	7.1	9.2	
18										11.1	7.2	8.8	
19										11.0	6.8	8.8	
20										10.7	6.4	8.5	
21										11.1	6.4	8.7	
22										11.9	7.1	9.0	
23										11.9	6.6	8.8	
24										11.6	6.8	8.8	
25										12.1	7.3	8.8	
26										12.9	7.7	9.8	
27										12.3	8.1	10.0	
28										12.6	7.4	9.9	
29										13.0	7.3	9.7	
30										13.3	7.5	10.1	
31										12.8	7.5	9.7	
MONTH										15.3	6.4	9.6	
		JUNE			JULY			AUGUST			SEPTEMBER		
1	12.3	7.6	9.5	15.1	6.3	10.0	10.8	5.3	7.9	---	---	---	
2	13.1	7.8	10.1	15.6	6.3	10.2	10.6	5.7	8.0	---	---	---	
3	13.3	7.9	10.1	15.1	6.9	10.3	10.4	5.2	7.2	---	---	---	
4	13.1	7.4	10.0	13.3	5.3	8.3	9.6	4.8	7.1	---	---	---	
5	12.2	6.9	9.2	15.4	6.2	10.1	9.6	5.9	7.7	---	---	---	
6	13.1	6.8	9.5	15.4	5.7	9.5	9.5	6.2	7.8	---	---	---	
7	11.8	6.9	9.1	14.4	5.0	9.2	9.7	6.3	8.0	---	---	---	
8	14.0	7.9	10.5	12.3	5.0	7.9	9.7	6.2	7.9	---	---	---	
9	13.8	7.6	10.4	13.2	5.9	9.0	10.1	6.8	8.2	---	---	---	
10	13.3	7.7	9.8	14.6	6.2	9.8	9.0	6.8	7.7	---	---	---	
11	14.4	7.5	10.3	15.4	6.0	10.0	9.3	6.9	7.8	---	---	---	
12	14.8	7.1	10.4	15.1	5.9	9.4	9.4	7.2	8.1	---	---	---	
13	14.5	6.7	9.8	13.7	6.1	9.1	10.3	7.1	8.6	---	---	---	
14	14.8	6.6	10.1	12.3	6.2	8.5	10.6	7.1	8.7	---	---	---	
15	14.8	6.6	10.1	14.8	6.4	9.9	10.4	7.4	8.8	---	---	---	
16	15.3	6.8	10.4	13.8	6.1	9.4	10.6	6.5	8.4	---	---	---	
17	15.5	6.8	10.5	14.6	6.1	9.6	---	---	---	---	---	---	
18	15.8	6.4	10.4	14.7	5.8	9.8	---	---	---	---	---	---	
19	16.1	6.4	10.6	14.3	5.9	8.8	---	---	---	---	---	---	
20	15.6	6.4	10.2	13.9	5.4	8.5	---	---	---	---	---	---	
21	15.7	6.7	10.6	12.5	5.5	8.6	---	---	---	---	---	---	
22	15.8	6.9	10.7	13.1	5.9	8.8	---	---	---	7.3	5.7	6.3	
23	9.5	6.6	7.6	14.0	5.8	9.3	---	---	---	8.0	5.7	6.5	
24	13.7	6.6	9.5	13.8	5.6	9.1	---	---	---	8.4	5.8	6.7	
25	14.5	6.3	9.7	13.4	5.3	9.1	---	---	---	8.9	5.8	6.9	
26	13.2	5.6	8.7	12.0	5.9	8.7	---	---	---	7.1	5.3	6.2	
27	14.0	6.3	9.5	12.8	6.4	9.1	---	---	---	8.3	6.1	7.1	
28	13.6	6.1	9.3	12.3	6.3	9.1	---	---	---	9.5	6.7	7.9	
29	13.2	6.2	9.2	11.9	6.2	8.9	---	---	---	10.4	7.1	8.4	
30	14.4	6.4	10.0	11.5	6.0	8.7	---	---	---	10.5	7.4	8.5	
31	---	---	---	11.2	5.9	8.3	---	---	---	---	---	---	
MONTH	16.1	5.6	9.9	15.6	5.0	9.2	---	---	---	---	---	---	

## WISCONSIN RIVER BASIN

139

431010089360000 BREWERY CREEK RAIN GAGE #1 NEAR CROSS PLAINS, WI

LOCATION.--Lat 43°10'10", long 89°36'00", in NE 1/4 SE 1/4 sec.13, T.8 N., R.7 E., Dane County, Hydrologic Unit 07070005, on Whipporwill Road, 0.5 mi south of intersection with County Trunk K.

PERIOD OF RECORD.--October 1989 to current year (non-frozen precipitation).

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

REMARKS.--Gage established Oct. 27, 1989. Rainfall estimated to be 0.00 for Nov. 28, Dec. 1, Jan. 11, Feb. 8, 24, 28, and Mar. 1 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the period Nov. 8-12.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.36 in., July 4.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.21	.68	.15
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.36	.05	.01
5	.00	.02	.00	.00	.00	.00	.00	.00	.08	.00	.00	.01
6	.04	.00	.06	.00	.00	.00	.00	.00	.00	.12	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.30	.20	.37	.00	.00
8	.29	---	.00	.00	.00	.00	.03	.00	.03	.12	.09	.00
9	.20	---	.00	.00	.00	.00	.00	.00	.00	.01	.00	.25
10	.00	---	.00	.00	.00	.00	.00	.00	.00	.00	1.46	.03
11	.00	---	.00	.00	.00	.00	.00	.28	.00	.00	.01	.00
12	.00	---	.00	.00	.00	.00	.53	.00	.00	.00	.06	.00
13	.00	.01	.00	.00	.00	.00	.05	.00	.34	.00	.02	.00
14	.01	.16	.02	.00	.00	.00	.08	.40	.01	.33	.00	.60
15	.02	.03	.00	.00	.00	.00	.15	.05	.00	.00	.00	.48
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.10
17	.00	.00	.13	.00	.00	.00	.00	.00	.00	.03	.00	.00
18	.01	.00	.00	.00	.00	.00	.00	.00	.04	.00	.38	.00
19	.00	.02	.00	.00	.28	.00	.00	.00	.05	.00	.36	.00
20	.24	.00	.00	.00	.37	.08	.00	.00	.08	.81	.01	.00
21	.01	.00	.00	.00	.00	.09	.00	.00	.00	.17	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.47
23	.00	.00	.00	.00	.00	.01	.00	.36	2.28	.00	.00	.41
24	.00	.00	.00	.00	.00	.00	.00	.00	.08	.13	.00	.35
25	.00	.38	.00	.00	.00	.00	.37	.02	.17	.01	.00	.13
26	.00	.29	.00	.00	.00	.08	.09	.04	.79	.00	.03	.29
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.01	.00	.45	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.01	.00	.05	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.20	.00	.00	.00	.18	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.04	.02	---
TOTAL	0.83	---	0.21	0.00	0.65	0.26	1.52	1.54	4.65	5.73	3.35	3.29

## 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. 28, Dec. 1, Jan. 23, Feb. 24, 28, Mar. 1, and Apr. 4, 5 because recorded precipitation interpreted as collector snowmelt. 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, 3.33 in., July 4.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	.00	.00	.00	.00	.31	.00	.00	.01	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.23	1.15	.17
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.33	.05	.01
5	.00	.02	.00	.00	.00	.00	.00	.00	.20	.00	.00	.01
6	.04	.00	.07	.00	.00	.00	.00	.00	.00	.06	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.34	.18	.50	.00	.00
8	.31	.00	.00	.00	.00	.00	.00	.00	.02	.15	.11	.01
9	.24	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.27
10	.01	.01	.00	.00	.00	.00	.00	.00	.00	.00	1.67	.17
11	.00	.00	.00	.00	.00	.00	.00	.23	.00	.00	.01	.00
12	.00	.32	.00	.00	.00	.00	.70	.00	.00	.02	.10	.00
13	.00	.00	.00	.00	.00	.00	.06	.00	.35	.00	.02	.00
14	.02	.23	.02	.00	.00	.00	.10	.45	.05	.38	.00	.75
15	.02	.03	.00	.00	.00	.00	.19	.03	.00	.00	.00	.53
16	.02	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.08
17	.00	.00	.13	.00	.00	.00	.00	.00	.00	.03	.00	.00
18	.01	.00	.00	.00	.00	.00	.03	.00	.04	.00	.25	.00
19	.01	.02	.00	.00	.34	.00	.00	.00	.09	.00	.25	.00
20	.28	.00	.00	.00	.39	.08	.00	.00	.07	.81	.00	.00
21	.01	.00	.00	.00	.00	.11	.00	.00	.00	.01	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.47
23	.00	.00	.00	.00	.00	.00	.00	.38	2.48	.00	.00	.53
24	.00	.00	.00	.00	.00	.00	.00	.00	.08	.19	.00	.30
25	.00	.44	.00	.00	.00	.00	.60	.12	.14	.00	.02	.13
26	.00	.36	.00	.00	.00	.10	.07	.05	.76	.00	.03	.30
27	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.06	.00	.31	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.03	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.34	.00	.00	.00	.27	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.03	.01	---
TOTAL	0.98	1.43	0.22	0.00	0.73	0.30	2.15	1.91	4.80	5.82	3.95	3.74

WISCONSIN RIVER BASIN

430751089372000 BREWERY CREEK RAIN GAGE #3 NEAR CROSS PLAINS, WI

LOCATION.--Lat 43°07'51", long 89°37'20", in NE 1/4 NE 1/4 sec.35, T.8 N., R.7 E., Dane County, Hydrologic Unit 07070005, on County Trunk P, 1.9 mi north of intersection with U.S. Highway 14.

PERIOD OF RECORD.--October 1989 to current year (non-frozen precipitation).

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

REMARKS.--Gage established Oct. 28, 1989. Rainfall estimated to be 0.00 for Dec. 1, Jan. 16, 23, Feb. 6, 11, and Apr. 4, 5 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the period Feb. 14 to Mar. 3.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.67 in., July 4.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	.00	.00	---	.00	.29	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.01
3	.00	.00	.00	.00	.00	---	.00	.00	.00	.53	1.12	.14
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.67	.05	.01
5	.00	.02	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00
6	.04	.00	.06	.00	.00	.00	.00	.00	.00	.20	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.34	.14	.72	.00	.00
8	.30	.00	.00	.00	.00	.00	.00	.00	.01	.12	.00	.01
9	.23	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.37
10	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	1.97	.90
11	.00	.00	.00	.00	.00	.00	.00	.22	.00	.00	.00	.00
12	.00	.27	.00	.00	.00	.00	.54	.00	.00	.04	.13	.00
13	.00	.01	.00	.00	.00	.00	.05	.00	.32	.01	.01	.00
14	.04	.24	.02	.00	---	.00	.12	.39	.11	.43	.00	1.26
15	.02	.02	.00	.00	---	.00	.14	.03	.00	.00	.00	.44
16	.02	.01	.00	.00	---	.00	.00	.00	.00	.05	.00	.09
17	.00	.00	.13	.00	---	.00	.00	.00	.00	.06	.00	.00
18	.01	.01	.00	.00	---	.00	.13	.00	.04	.00	.22	.00
19	.00	.00	.00	.00	---	.00	.00	.00	.11	.00	.24	.00
20	.27	.00	.00	.00	---	.09	.00	.00	.07	.69	.00	.00
21	.00	.00	.00	.00	---	.10	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	---	.00	.00	.00	.00	.02	.00	.46
23	.00	.00	.00	.00	---	.00	.00	.34	2.34	.00	.00	.40
24	.00	.00	.00	.00	---	.01	.00	.00	.08	.13	.00	.27
25	.00	.37	.00	.00	---	.00	.43	.31	.21	.00	.00	.17
26	.00	.34	.00	.00	---	.09	.08	.01	.63	.00	.03	.32
27	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	---	.00	.03	.00	.40	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.01	.00	.05	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.35	.00	.00	.00	.37	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.04	.03	---
TOTAL	0.94	1.31	0.21	0.00	---	---	1.88	1.93	4.65	5.73	4.17	4.85



## 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 mi<sup>2</sup>, of which 2.80 mi<sup>2</sup> 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: May 9 to June 8, and ice-affected periods, Dec. 24-30 and Jan. 6 to Feb. 27. Records fair except those for estimated daily discharges, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	3.7	3.9	3.5	2.7	4.1	3.2	4.4	2.8	3.7	2.2	2.7
2	4.1	3.7	4.6	3.5	2.7	4.1	3.3	3.8	2.8	3.5	2.3	2.7
3	4.0	3.7	4.1	3.6	2.8	4.2	3.3	3.6	2.8	3.5	3.4	2.7
4	4.1	3.7	4.1	3.6	2.9	6.1	3.4	3.5	2.9	61	5.0	2.8
5	4.1	3.8	4.2	3.6	2.9	31	3.4	3.5	3.2	7.5	3.1	2.8
6	4.1	3.7	4.4	3.5	2.9	23	3.2	3.4	3.0	3.8	2.9	2.8
7	4.2	3.7	4.0	3.5	2.8	7.5	3.2	3.6	3.2	6.8	2.9	2.6
8	4.2	3.8	4.0	3.4	2.7	3.9	3.3	3.5	3.1	6.7	2.8	2.7
9	6.4	3.8	4.0	3.4	2.7	3.4	3.1	3.4	3.0	4.5	2.4	2.8
10	4.3	3.8	4.0	3.4	2.6	3.2	2.8	3.4	3.0	4.0	4.3	5.2
11	4.1	3.9	3.6	3.4	2.6	3.0	2.8	3.7	3.0	3.8	9.3	3.3
12	4.1	4.0	3.5	3.4	2.7	3.4	4.2	3.5	2.5	3.9	3.6	3.1
13	4.0	5.1	3.6	3.4	2.8	3.2	3.7	3.3	2.7	3.0	3.3	3.1
14	4.0	4.1	3.8	3.4	2.9	3.7	3.2	3.4	2.7	2.7	3.0	7.1
15	4.0	4.9	3.8	3.3	3.0	3.9	3.9	3.6	2.6	2.4	2.8	4.0
16	4.0	4.1	3.8	3.2	3.1	3.5	3.2	3.4	2.6	2.2	2.9	5.2
17	3.9	4.0	4.0	3.1	3.2	3.5	3.4	3.3	2.6	2.2	2.7	3.3
18	3.8	3.9	4.0	2.9	3.4	3.6	3.5	3.2	2.7	2.2	2.8	3.0
19	3.8	4.1	3.8	2.9	20	3.7	3.5	3.2	2.8	2.2	2.9	2.8
20	3.9	3.9	3.8	2.9	32	4.3	3.4	3.1	3.1	4.3	3.1	2.8
21	4.8	4.0	3.8	2.9	7.0	5.0	3.4	3.1	2.9	3.0	2.7	2.7
22	4.0	3.9	3.7	3.0	5.0	4.1	3.4	3.1	3.0	2.8	2.7	2.9
23	4.0	3.8	3.7	3.0	4.6	4.0	3.4	3.3	7.7	2.7	2.6	4.2
24	4.0	3.8	3.7	3.1	4.4	3.7	3.3	3.2	8.8	2.5	2.6	3.5
25	4.0	5.2	3.6	3.1	4.2	3.3	4.1	3.0	3.7	2.5	2.5	4.1
26	3.9	7.6	3.6	3.1	4.2	3.3	3.8	3.1	6.9	2.4	2.5	4.1
27	3.8	4.7	3.6	3.2	4.1	3.6	3.4	3.0	3.9	2.2	2.6	3.7
28	3.9	4.1	3.5	3.0	4.1	3.3	3.3	3.0	4.2	2.2	2.6	3.1
29	3.9	4.1	3.5	2.9	---	3.2	3.3	2.9	3.9	2.1	2.6	2.8
30	3.8	3.8	3.4	2.8	---	3.1	3.8	2.9	3.7	2.1	2.7	2.8
31	3.8	---	3.4	2.7	---	3.1	---	2.8	---	2.1	2.8	---
TOTAL	127.2	124.4	118.5	99.7	141.0	166.0	102.2	103.2	105.8	160.5	96.6	101.4
MEAN	4.10	4.15	3.82	3.22	5.04	5.35	3.41	3.33	3.53	5.18	3.12	3.38
MAX	6.4	7.6	4.6	3.6	32	31	4.2	4.4	8.8	61	9.3	7.1
MIN	3.8	3.7	3.4	2.7	2.6	3.0	2.8	2.8	2.5	2.1	2.2	2.6
CFSM	.53	.54	.50	.42	.65	.70	.44	.43	.46	.67	.40	.44
IN.	.61	.60	.57	.48	.68	.80	.49	.50	.51	.78	.47	.49

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1994, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994		
MEAN	1.82	2.15	1.50	1.40	2.42	4.49	2.25	1.65	2.33	4.34	2.35	2.52
MAX	4.10	4.73	3.82	3.22	5.42	10.5	3.66	3.33	4.76	13.4	6.83	5.15
(WY)	1994	1986	1994	1994	1985	1993	1993	1994	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 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1985 - 1994	
ANNUAL TOTAL	1844.98		1446.5			
ANNUAL MEAN	5.05		3.96			
HIGHEST ANNUAL MEAN					2.44	
LOWEST ANNUAL MEAN					4.30	1993
HIGHEST DAILY MEAN					.58	1991
LOWEST DAILY MEAN	109	Jul 6	61	Jul 4	142	Jul 25 1985
ANNUAL SEVEN-DAY MINIMUM	(a).52	Feb 17, 18	2.1	Jul 29-31	.00	(b)Jul 18 1991
INSTANTANEOUS PEAK FLOW	(a).56	Feb 13	2.2	Jul 27	.00	Jul 31 1991
INSTANTANEOUS PEAK STAGE			109	Jul 4	420	Jul 6 1993
INSTANTANEOUS LOW FLOW			11.80	Jul 4	15.05	Jul 6 1993
ANNUAL RUNOFF (CFSM)	.66		.51		.00	(b)Aug 9 1990
ANNUAL RUNOFF (INCHES)	8.91		6.99		.32	
10 PERCENT EXCEEDS	7.6		4.3		4.30	
50 PERCENT EXCEEDS	3.8		3.4		4.1	
90 PERCENT EXCEEDS	.69		2.7		1.5	
					.18	

(a) Ice affected

(b) 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, 1993, and 1994 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, 29.0°C, Apr. 18 and June 16, 17; minimum observed, 0.0°C, Dec. 24-30, Jan. 5-10, 13-17, 19, 27-31, and Feb. 1-10.
- SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 203 tons, July 4; minimum observed, 0.07 ton, Sept. 6-7.
- TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 913 lb, July 4; minimum daily, 0.72 lb, May 17.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993					MAR 1994				
07...	1238	4.2	710	15.5	14...	1225	3.4	--	5.5
NOV 08...	1504	3.8	690	8.0	APR 20...	1114	3.4	660	9.5
DEC 16...	1253	3.8	685	5.5	JUN 01...	1200	2.8	670	15.5
FEB 1994					24...	0808	8.9	660	15.5
01...	1140	4.9	670	0.5	JUL 21...	1553	3.0	705	18.0
MAR 02...	1530	4.1	700	8.0	SEP 09...	1147	2.6	695	14.0

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	ALA-CHLOR TOTAL RECOVER (77825) (UG/L)	ATRA-ZINE WATER UNFLTRD REC (39630) (UG/L)	CARBO-FURAN WATER TOT REC (82615) (UG/L)	CHLOR-PYRIFOS TOTAL RECOVER (38932) (UG/L)	CIS-PERME-THRIN WATER WHOLE REC (82418) (UG/L)	CYAN-AZINE TOTAL (81757) (UG/L)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (82052) (UG/L)	DIMETH-OATE WATER WHOLE TOTAL (39009) (UG/L)	EPTC WATER WHOLE REC (81894) (UG/L)	
MAY 1994	*17...	1000	3.3	<0.10	<0.1	<0.3	<1.0	<1.0	<0.30	<0.20	<1.0	<1.0

DATE	FONOFOS (DY-FONATE) WATER WHOLE TOT REC (UG/L)	METHO-MYL TOTAL (UG/L)	METOLA-CHLOR IN WHOLE WATER (UG/L)	PARA-THION, TOTAL (UG/L)	PENDI-METH-ALIN TOTAL (UG/L)	PHORATE TOTAL (UG/L)	TERBU-FOS WAT, WH REC (UG/L)	TRANS PERME-THRIN WATER WHOLE REC (UG/L)	TRI-FLURA-LIN TOTAL RECOVER (UG/L)	2,4-D, TOTAL (UG/L)	
MAY 1994	17...	<0.20	<1.0	<0.20	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

## 05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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, BIO-CHEMICAL, 5 DAY (MG/L) (00310)	COLIFORM, FECAL, UM-MF (COLS./100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	RESIDUE VOLATILE, SUSPENDED (MG/L) (00535)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	SEDIMENT, SUSPENDED (MG/L) (80154)
OCT 1993												
*03...	1020	--	4.1	--	--	--	--	--	--	--	--	80
*11...	1510	--	4.1	8.0	1.4	490	55	508	9	0.063	0.150	--
*11...	1515	--	4.1	--	--	--	--	--	--	--	--	78
*24...	1700	--	4.0	8.0	1.2	270	54	482	14	0.058	0.130	--
*24...	1715	--	4.0	--	--	--	--	--	--	--	--	79
NOV												
*03...	1020	--	3.7	7.9	1.2	390	82	510	16	0.064	0.160	--
*23...	1045	--	3.8	8.3	1.4	220	98	518	14	0.090	0.180	90
DEC												
*09...	1415	--	4.0	7.9	1.5	530	96	534	12	0.065	0.160	90
JAN 1994												
*05...	1110	--	3.5	8.0	1.3	60	73	496	8	0.074	0.110	--
FEB												
*10...	1100	2.6	--	7.9	<1.0	10	50	462	6	0.055	0.090	78
19...	0945	20	--	7.7	18	--	2860	3430	212	1.35	3.54	1630
19...	1115	20	--	7.6	33	--	5000	5360	430	1.64	7.21	3390
19...	1245	20	--	7.3	>80	--	4630	6390	420	9.35	10.8	7320
19...	1445	20	--	7.3	61	--	4930	6420	390	5.19	11.7	10900
19...	1630	20	--	7.3	41	--	1990	2160	184	3.71	5.78	4770
20...	0630	32	--	7.4	19	--	592	722	58	1.59	2.30	1220
20...	1335	32	--	7.5	14	--	622	886	60	0.801	1.80	196
*20...	1336	32	--	7.6	12	--	175	380	22	0.802	1.10	--
20...	1338	32	--	--	--	--	--	--	--	--	--	335
20...	2000	32	--	7.6	8.8	--	642	908	52	0.485	1.66	388
MAR												
05...	1315	--	18	7.5	--	--	604	906	68	2.49	3.00	658
05...	1430	--	38	7.4	--	--	1240	1570	104	2.29	3.99	1250
05...	1500	--	53	7.4	--	--	1720	1910	144	2.47	5.02	1540
05...	1530	--	67	7.3	--	--	1890	2070	152	2.65	4.95	1940
05...	1615	--	85	7.3	--	--	1640	1810	132	2.55	4.50	1710
05...	1945	--	67	7.3	--	--	656	858	64	1.73	3.10	713
05...	2315	--	36	7.4	--	--	284	490	32	1.36	2.01	339
06...	0415	--	13	7.7	--	1600	130	378	17	0.998	1.45	177
06...	1330	--	27	7.5	--	--	960	1180	70	1.41	2.93	990
06...	1415	--	37	7.5	--	--	360	546	28	0.875	1.46	357
*06...	1435	--	41	7.4	--	7800	732	908	58	1.35	2.41	--
*06...	1440	--	42	--	--	--	--	--	--	--	--	714
06...	1530	--	48	7.6	--	--	212	422	20	0.713	1.10	--
*14...	1225	--	3.4	8.0	1.8	160	72	480	8	0.095	0.140	84
APR												
*11...	1630	--	2.8	8.4	1.5	20	21	428	4	<0.005	0.060	49
*25...	1100	--	4.8	8.0	2.0	1200	65	444	12	0.113	0.150	--
*25...	1110	--	4.8	--	--	--	--	--	--	--	--	81
MAY												
*17...	0950	3.3	--	8.2	1.3	100	4	422	2	0.018	0.040	--
*17...	1000	3.3	--	--	--	--	--	--	--	--	--	55
*31...	1445	2.8	--	8.6	2.6	210	25	432	6	0.051	0.090	25
JUN												
*13...	1600	--	2.7	8.4	2.3	1100	27	454	6	0.082	0.100	--
*15...	0910	--	2.6	--	--	--	--	--	--	--	--	109
23...	1715	--	7.9	7.9	4.8	--	54	312	9	0.106	0.190	--
23...	1945	--	14	7.8	8.4	--	93	494	18	0.509	1.30	--
23...	2100	--	23	7.7	6.4	--	228	594	36	0.307	0.910	265
*24...	1030	--	7.2	7.8	4.4	--	26	502	8	0.460	0.640	26
*24...	1150	--	6.4	7.6	2.8	--	23	520	5	0.367	0.480	--
25...	1030	--	3.7	8.2	3.0	8600	19	464	3	0.154	0.110	19
26...	0045	--	6.6	8.0	2.9	8600	72	426	10	0.155	0.170	71
26...	0630	--	13	7.9	4.3	110000	180	602	24	0.273	0.730	265
26...	1815	--	5.0	8.1	1.9	62000	23	442	3	0.090	0.270	28
*27...	1005	--	4.0	8.0	1.5	6200	31	462	5	0.105	0.150	--
*29...	0805	--	3.9	--	--	--	--	--	--	--	--	41

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	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-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)	SEDI-MENT, SUS-PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUL 1994												
04...	0015	17	8.2	--	--	148	460	18	0.093	0.250	168	--
04...	0200	25	7.7	--	250000	1700	2070	180	0.252	3.49	1660	--
04...	0230	64	7.7	--	210000	2080	2440	190	0.157	2.82	2220	--
04...	0245	83	7.4	--	690000	3640	3870	380	0.727	6.97	3620	99
04...	0300	97	7.4	--	540000	3840	4110	400	0.835	7.66	3880	99
04...	1130	80	7.4	--	--	380	640	80	0.132	1.49	598	99
04...	1315	63	7.4	--	--	260	546	60	0.122	1.38	330	--
04...	1915	26	7.6	--	--	170	482	40	0.160	0.920	232	--
*05...	1305	6.4	8.0	1.9	55000	28	426	4	0.144	0.320	29	--
*11...	1055	4.0	8.1	--	2900	29	472	6	0.028	0.140	67	--
*26...	1240	2.3	7.6	--	--	69	--	--	0.011	0.180	30	--
AUG												
*08...	1410	2.8	8.1	--	--	32	--	--	0.039	0.171	32	--
10...	2300	14	7.6	--	--	152	--	--	0.328	0.760	218	96
11...	0345	19	7.5	--	--	78	--	--	0.257	0.654	89	97
11...	0815	11	7.7	--	--	28	--	--	0.155	0.460	29	97
*23...	1150	2.7	--	--	--	--	--	--	--	--	31	--
*23...	1155	2.7	8.1	--	--	15	--	--	0.015	0.076	--	--
SEP												
*06...	1450	2.8	8.3	1.1	190	9	--	--	0.020	0.086	--	--
14...	1230	12	7.6	19	--	384	--	--	0.632	1.98	421	--
*20...	1515	2.9	8.1	--	--	37	--	--	0.083	0.137	--	--

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	13.0	9.5	11.0	7.0	2.5	4.5	5.5	2.5	4.0	4.0	2.5	3.5
2	11.5	7.5	9.0	6.0	4.5	5.0	6.0	3.0	4.5	3.0	1.5	2.5
3	13.5	7.5	10.0	8.0	4.0	6.0	5.5	2.5	4.0	4.0	1.0	2.5
4	13.5	8.5	10.5	8.5	6.5	7.5	5.5	4.0	4.5	3.5	1.0	2.5
5	12.5	6.5	9.0	7.5	4.0	6.0	5.0	4.5	4.5	1.5	.00	.50
6	15.0	9.0	11.5	5.0	2.5	3.5	5.5	2.5	4.5	3.0	.00	1.5
7	17.0	11.0	13.5	5.0	1.5	3.0	4.5	2.0	3.0	3.0	.00	1.0
8	14.0	9.5	12.0	7.5	3.0	5.0	5.0	3.0	4.0	.50	.00	.00
9	10.5	7.0	8.5	7.0	3.0	5.0	6.0	3.0	4.5	.50	.00	.00
10	10.5	5.5	7.5	7.5	4.5	5.5	5.5	1.0	4.0	3.0	.00	1.5
11	11.0	5.0	7.5	8.0	4.0	5.5	4.0	.50	2.0	4.0	1.5	3.0
12	11.0	6.5	8.0	6.5	3.0	5.0	5.0	1.5	3.0	4.0	1.5	2.5
13	10.5	4.5	7.0	9.0	6.5	7.5	5.5	3.5	4.5	2.5	.00	1.5
14	10.5	6.0	8.0	7.0	5.5	6.5	5.5	4.0	4.5	.50	.00	.50
15	10.0	7.5	8.5	6.5	4.5	5.5	6.0	3.5	4.5	.50	.00	.50
16	11.5	9.5	10.0	5.5	4.5	5.0	5.5	4.0	5.0	.50	.00	.50
17	10.5	7.5	9.5	7.5	4.0	5.5	5.0	4.5	5.0	.50	.00	.50
18	11.0	6.0	8.5	6.5	3.0	4.5	5.5	4.5	5.0	.50	.50	.50
19	11.5	8.5	9.5	7.0	2.5	5.0	5.0	4.0	4.5	.50	.00	.50
20	9.5	7.5	8.5	5.0	2.0	3.5	4.5	3.0	4.0	.50	.50	.50
21	9.5	6.0	7.5	7.0	3.5	5.0	4.0	2.5	3.0	.50	.50	.50
22	10.0	4.5	7.0	6.5	3.5	5.0	3.5	1.5	2.5	1.0	.50	.50
23	11.5	5.5	8.0	8.0	5.0	6.0	3.5	.50	2.5	4.5	.50	2.5
24	12.0	7.0	9.0	5.5	4.0	4.5	2.0	.00	.50	4.0	2.0	3.0
25	12.0	6.5	9.0	5.0	4.0	4.0	1.0	.00	.50	3.0	1.0	2.5
26	9.0	7.5	8.5	5.0	1.5	3.0	.50	.00	.00	3.0	1.0	1.5
27	7.5	5.5	7.0	4.0	1.0	2.0	1.0	.00	.50	e.00	e.00	e.00
28	9.0	5.5	6.5	4.5	.50	2.5	.50	.00	.00	e.00	e.00	e.00
29	5.5	4.0	4.5	5.0	2.0	3.0	2.0	.00	.50	e.00	e.00	e.00
30	6.5	4.0	5.0	3.5	2.0	2.5	.50	.00	.00	e.00	e.00	e.00
31	6.0	3.0	4.5	---	---	---	4.0	.50	3.0	e.00	e.00	e.00
MONTH	17.0	3.0	8.5	9.0	.50	4.7	6.0	.00	3.1	4.5	.00	1.2

e Estimated



WISCONSIN RIVER BASIN

05406470 BREWERY CREEK AT CROSS PLAINS, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.85	.82	.95	.80	.58	.87	.51	1.2	.21	.39	.13	.11
2	.86	.82	1.1	.81	.58	.85	.52	.73	.23	.37	.12	.10
3	.87	.83	1.0	.83	.60	.87	.51	.68	.25	.35	.35	.09
4	.88	.83	.99	.82	.62	1.9	.52	.65	.29	203	.98	.08
5	.87	.85	1.0	.82	.62	71	.51	.64	.35	1.2	.24	.08
6	.88	.84	1.1	.80	.62	32	.47	.61	.36	.32	.23	.07
7	.89	.84	.97	.80	.59	3.6	.46	.78	.43	3.2	.24	.07
8	.90	.87	.96	.77	.57	1.2	.46	.61	.46	1.6	.24	.09
9	2.9	.86	.96	.77	.57	.83	.43	.58	.50	.64	.20	.10
10	.91	.88	.98	.77	.55	.77	.38	.57	.54	.64	1.1	1.5
11	.87	.90	.87	.77	.53	.72	.37	.61	.60	.68	1.5	.42
12	.86	1.1	.84	.76	.54	.79	1.1	.57	.55	.66	.18	.27
13	.83	1.8	.87	.76	.55	.75	.83	.53	.67	.49	.18	.19
14	.84	.95	.90	.76	.56	.85	.47	.53	.73	.41	.17	4.0
15	.85	1.6	.92	.74	.56	.86	.92	.56	.74	.35	.17	.65
16	.84	.97	.92	.71	.57	.75	.51	.52	.62	.31	.17	.87
17	.84	.96	.96	.69	.58	.74	.56	.49	.54	.30	.17	.48
18	.81	.92	.96	.64	1.2	.77	.59	.45	.47	.27	.19	.41
19	.81	.97	.91	.64	167	.76	.62	.43	.42	.26	.20	.38
20	.84	.95	.91	.64	68	.88	.62	.39	.38	.57	.22	.37
21	1.6	.95	.90	.64	2.5	1.5	.65	.37	.31	.32	.21	.35
22	.84	.95	.88	.66	1.2	.80	.67	.35	.27	.28	.21	.36
23	.84	.93	.86	.66	1.1	.77	.69	.35	2.9	.26	.22	.54
24	.84	.93	.87	.68	1.0	.69	.70	.32	1.5	.23	.20	.42
25	.85	1.9	.84	.68	.97	.61	1.0	.29	.20	.21	.18	.51
26	.83	4.1	.84	.67	.95	.60	.81	.28	2.1	.19	.16	.51
27	.83	1.1	.84	.69	.91	.64	.71	.26	.23	.17	.15	.41
28	.85	1.0	.81	.65	.89	.58	.68	.24	.35	.16	.14	.33
29	.85	.99	.81	.63	---	.54	.68	.22	.42	.14	.13	.29
30	.84	.93	.79	.60	---	.52	.87	.21	.40	.14	.12	.28
31	.83	---	.79	.58	---	.51	---	.19	---	.13	.12	---
TOTAL	29.20	33.34	28.30	22.24	255.51	129.52	18.82	15.21	18.02	218.24	8.82	14.33

WTR YR 1994 TOTAL 791.55

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.1	3.4	2.2	1.3	4.6	1.4	3.8	1.4	2.3	2.1	1.2
2	3.0	3.1	4.0	2.2	1.3	4.5	1.4	2.0	1.4	2.0	2.2	1.2
3	3.0	3.2	3.5	2.2	1.3	4.5	1.3	1.8	1.4	1.8	3.2	1.2
4	3.0	3.2	3.5	2.2	1.4	12	1.3	1.6	1.5	913	7.1	1.3
5	3.1	3.3	3.5	2.1	1.4	488	1.3	1.5	1.6	17	2.9	1.3
6	3.1	3.2	3.7	2.1	1.4	143	1.2	1.4	1.5	3.8	2.7	1.3
7	3.2	3.2	3.3	2.0	1.3	13	1.2	2.3	1.6	17	2.7	1.2
8	3.3	3.3	3.2	2.0	1.3	3.0	1.2	1.3	1.6	17	2.6	1.3
9	5.1	3.3	3.2	2.0	1.2	2.5	1.1	1.2	1.6	3.8	2.3	1.3
10	3.5	3.4	3.2	1.9	1.2	2.3	.95	1.1	1.6	3.2	9.3	7.7
11	3.3	3.5	2.9	1.9	1.2	2.2	3.4	1.1	1.6	2.9	24	3.0
12	3.3	3.6	2.7	1.9	1.3	2.5	2.5	1.0	1.3	3.0	3.5	1.5
13	3.1	4.5	2.8	1.9	1.3	2.3	1.4	.90	1.5	2.4	3.0	1.5
14	3.1	3.6	2.9	1.9	1.4	2.7	1.2	.88	1.5	2.1	2.5	35
15	3.1	4.3	2.9	1.8	1.5	3.3	2.8	.87	1.4	1.9	2.2	4.4
16	3.0	3.7	2.9	1.8	1.5	2.3	1.4	.78	1.4	1.8	2.0	7.7
17	3.0	3.6	3.0	1.7	1.6	2.3	1.6	.72	1.4	1.9	1.8	3.0
18	2.9	3.5	2.9	1.6	2.7	2.3	1.8	.74	1.4	1.8	1.7	2.5
19	2.9	3.7	2.8	1.6	479	2.3	1.9	.78	1.5	1.9	1.6	2.2
20	2.9	3.6	2.7	1.5	325	3.6	2.0	.80	1.6	4.8	1.6	2.1
21	3.5	3.6	2.7	1.5	18	5.1	2.1	.85	1.5	2.7	1.3	2.0
22	2.8	3.6	2.6	1.6	7.3	2.3	2.3	.90	1.5	2.5	1.2	2.1
23	2.8	3.5	2.5	1.6	6.5	2.2	2.4	1.0	31	2.5	1.1	4.9
24	2.8	3.5	2.5	1.6	6.0	2.0	2.5	1.0	32	2.4	1.1	3.4
25	2.8	4.7	2.4	1.6	5.5	1.7	3.3	1.0	2.0	2.4	1.1	4.7
26	2.8	10	2.4	1.6	5.3	1.7	2.9	1.1	15	2.3	1.1	2.9
27	2.9	4.2	2.4	1.6	5.0	1.8	2.4	1.2	3.1	2.2	1.1	2.7
28	3.0	3.7	2.3	1.5	4.8	1.6	2.2	1.2	4.5	2.1	1.1	2.2
29	3.0	3.5	2.3	1.4	---	1.5	2.1	1.2	2.7	2.0	1.1	2.0
30	3.0	3.3	2.2	1.4	---	1.4	2.7	1.3	2.4	2.0	1.2	2.0
31	3.1	---	2.1	1.3	---	1.4	---	1.3	---	2.0	1.2	---
TOTAL	96.4	113.5	89.4	55.2	888.0	725.9	57.25	38.62	125.5	1030.5	93.6	110.8

WTR YR 1994 TOTAL 3424.67



WISCONSIN RIVER BASIN

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, 21.0°C, June 14, 16; minimum observed, 0.5°C, Feb. 20.

DISSOLVED OXYGEN: Maximum observed, 16.3 mg/L, May 6; minimum observed, 4.4 mg/L, June 20.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993					APR 1994				
07...	1110	25	625	12.5	20...	1005	21	600	9.0
NOV					JUN				
08...	1409	24	625	8.5	01...	1055	17	610	14.0
DEC					JUL				
16...	1201	23	610	7.0	21...	1500	19	635	16.5
FEB 1994					SEP				
01...	1059	20	680	3.5	09...	1304	17	585	13.0
MAR									
02...	1425	25	660	8.5					

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.5	10.0	11.0	8.0	5.0	6.5	7.0	5.0	6.0	5.5	5.0	5.0
2	11.0	9.0	10.0	7.5	6.5	7.0	7.5	5.5	6.5	5.0	4.0	4.5
3	12.5	9.0	10.5	8.5	6.0	7.5	7.0	5.0	6.0	5.5	4.0	4.5
4	12.5	9.5	11.0	9.0	8.0	8.5	7.0	6.0	6.5	5.5	3.5	4.5
5	12.0	8.5	10.0	8.5	6.0	7.5	6.5	6.5	6.5	4.0	2.5	3.0
6	13.5	10.0	11.5	6.5	5.0	5.5	6.5	5.0	6.0	4.5	3.0	4.0
7	15.0	11.0	13.0	6.5	4.5	5.5	6.0	5.0	5.5	4.5	2.5	3.0
8	13.0	10.5	12.0	8.0	6.0	7.0	6.5	5.5	6.0	3.5	2.0	2.5
9	10.5	8.5	9.5	8.0	5.5	6.5	7.5	5.5	6.5	4.5	2.0	3.0
10	10.5	7.5	8.5	8.5	6.5	7.0	7.5	4.0	6.0	5.0	3.0	4.0
11	10.5	7.5	9.0	8.5	6.5	7.0	6.0	3.5	4.5	5.5	3.5	4.5
12	10.5	8.0	9.0	7.5	5.5	6.5	6.0	4.5	5.0	5.5	3.5	4.5
13	10.0	7.0	8.5	9.5	7.5	8.5	7.0	5.5	6.0	4.5	2.0	3.5
14	10.5	8.0	9.0	8.0	7.0	7.5	7.0	6.5	6.5	3.0	1.0	2.0
15	10.5	8.5	9.5	7.5	6.5	7.0	7.5	6.0	6.5	3.0	1.0	2.0
16	11.0	10.0	10.5	7.0	6.0	6.5	7.0	6.5	6.5	3.5	2.0	3.0
17	10.0	8.5	9.5	8.5	6.5	7.0	6.5	6.5	6.5	3.5	1.5	2.5
18	10.5	7.5	9.0	7.5	5.5	6.5	6.5	6.5	6.5	3.0	1.5	2.0
19	11.0	9.0	9.5	8.0	5.0	7.0	6.5	6.0	6.0	4.0	2.0	3.0
20	9.5	8.5	9.0	6.5	4.5	5.5	6.0	5.0	6.0	4.5	2.0	3.0
21	9.5	7.5	8.5	8.0	6.0	6.5	5.5	4.5	5.0	5.0	2.5	4.0
22	10.0	6.5	8.0	8.0	6.0	7.0	5.5	4.5	5.0	5.5	4.0	4.5
23	11.0	7.0	8.5	8.5	6.5	7.5	5.5	3.5	4.5	6.5	4.5	5.0
24	11.5	8.5	9.5	7.5	6.5	6.5	4.5	3.0	3.5	6.5	4.0	5.0
25	11.0	8.0	9.5	6.5	5.5	6.0	3.5	2.5	3.0	5.0	4.0	4.5
26	9.5	8.5	9.0	6.5	4.0	5.0	4.0	3.0	3.5	5.5	4.0	4.5
27	8.5	7.0	8.0	5.0	3.5	4.0	4.0	3.0	3.5	5.5	2.5	4.5
28	9.5	7.0	8.0	5.5	3.5	4.5	4.0	2.5	3.0	6.0	5.0	5.5
29	7.0	6.0	6.5	6.0	4.5	5.0	3.5	2.5	3.0	6.0	3.5	5.0
30	7.5	6.0	6.5	5.5	4.5	5.0	4.0	2.5	3.0	5.5	2.5	4.0
31	7.5	5.5	6.5	---	---	---	5.5	4.0	5.0	4.5	2.5	3.0
MONTH	15.0	5.5	9.3	9.5	3.5	6.5	7.5	2.5	5.3	6.5	1.0	3.8



## WISCONSIN RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994												
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.0	2.5	3.5	7.5	4.5	6.0	12.5	6.5	9.0	12.5	6.5	9.5
2	5.0	3.0	4.0	9.0	5.0	6.5	12.0	7.0	9.0	14.0	7.5	10.0
3	5.0	3.0	3.5	9.5	5.0	6.5	11.5	6.0	8.5	14.0	8.0	11.0
4	5.5	3.0	4.0	9.5	4.5	6.5	10.5	6.5	8.5	14.5	8.5	11.0
5	6.0	3.5	4.5	7.5	1.5	4.0	9.5	6.5	7.5	12.5	8.5	10.0
6	6.5	3.5	4.5	6.0	2.5	4.0	9.5	5.5	7.0	14.0	7.5	10.5
7	4.5	3.0	3.5	7.5	3.0	4.5	11.0	5.5	8.0	15.0	9.5	11.5
8	4.0	3.0	3.5	7.5	2.5	4.5	8.0	7.0	7.5	14.5	8.5	11.5
9	5.5	2.5	3.5	8.5	3.5	5.5	12.0	7.0	9.0	16.0	9.5	12.0
10	5.5	2.5	4.0	7.0	4.0	5.5	12.0	7.5	9.5	15.0	8.5	11.5
11	7.0	3.0	5.0	8.5	4.0	6.0	10.0	7.5	8.5	15.0	10.5	12.5
12	5.5	4.0	5.0	8.5	5.5	6.5	8.0	7.5	7.5	15.0	9.0	12.0
13	7.0	4.5	5.5	7.0	5.0	6.0	9.5	7.5	8.5	16.5	9.5	12.5
14	8.0	4.0	5.5	9.0	5.0	6.5	13.0	7.5	10.0	13.0	10.0	11.5
15	8.0	5.0	6.0	8.5	5.0	6.5	10.5	8.0	9.5	17.0	10.5	13.0
16	7.5	4.0	5.5	8.5	4.5	6.0	12.0	7.0	9.0	16.5	9.5	12.5
17	9.0	6.0	7.0	7.5	4.5	6.0	13.0	7.5	10.0	16.0	9.0	12.0
18	8.5	5.5	6.5	7.5	5.5	6.5	14.5	8.5	11.0	16.5	9.0	12.5
19	5.5	1.0	2.5	10.5	5.0	7.5	13.5	9.0	11.0	17.0	9.0	12.5
20	2.5	.5	1.5	11.5	6.5	8.5	11.5	7.5	9.5	17.5	10.0	13.0
21	5.5	1.5	3.5	11.0	6.5	8.5	14.0	7.5	10.0	18.0	10.0	13.5
22	4.0	2.5	3.0	12.5	6.0	9.0	14.5	7.0	10.5	17.5	10.5	14.0
23	4.0	2.5	3.5	12.0	7.0	9.0	14.5	7.5	10.5	18.0	11.0	14.0
24	6.0	3.0	4.5	9.0	6.5	7.5	16.5	9.5	12.5	16.0	11.5	13.5
25	4.5	2.5	3.5	11.0	5.5	8.0	14.0	11.0	12.0	15.5	11.0	12.5
26	6.0	2.5	3.5	8.5	6.5	7.5	17.5	11.0	13.5	15.5	10.0	12.0
27	6.0	3.0	4.0	11.0	7.0	8.5	11.0	8.5	10.0	16.0	8.5	12.0
28	7.0	4.0	5.0	8.0	6.0	7.0	8.5	7.5	7.5	17.5	9.5	13.0
29	---	---	---	8.5	5.5	7.0	12.5	7.0	9.5	16.5	10.5	13.0
30	---	---	---	11.0	5.0	7.5	9.0	6.5	7.5	19.0	11.0	14.5
31	---	---	---	11.5	5.5	8.0	---	---	---	18.5	12.0	14.5
MONTH	9.0	.5	4.2	12.5	1.5	6.7	17.5	5.5	9.4	19.0	6.5	12.2
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.0	10.5	13.5	19.0	13.5	16.0	17.0	14.5	16.0	14.0	10.0	11.5
2	17.0	10.5	13.0	17.0	13.0	14.5	17.5	13.5	15.5	12.0	11.0	11.5
3	17.5	10.0	13.5	16.0	11.5	13.5	19.0	13.5	15.0	13.5	11.0	12.0
4	18.0	10.5	14.0	20.0	15.5	18.0	17.0	14.5	15.5	12.0	11.0	11.5
5	17.5	11.0	13.5	20.5	14.5	17.0	16.0	12.5	14.0	13.0	11.5	12.0
6	19.5	12.0	15.5	19.0	15.0	16.5	16.0	12.0	14.0	15.0	10.5	12.5
7	15.0	12.5	13.5	19.0	14.0	16.5	16.5	12.0	14.5	15.5	10.0	12.5
8	17.5	11.0	13.5	18.0	15.0	17.0	16.5	14.0	15.0	14.5	11.0	12.5
9	18.0	10.0	13.5	16.0	14.0	15.0	14.5	12.5	13.5	16.0	11.0	13.0
10	15.5	11.0	13.0	17.5	12.5	15.0	13.5	12.5	13.0	17.0	12.5	14.5
11	17.0	10.5	13.5	18.5	13.0	15.5	14.0	13.0	13.5	16.5	12.5	14.0
12	18.5	11.0	14.5	18.0	14.5	16.0	14.0	13.0	13.5	16.0	12.0	14.0
13	18.0	13.0	15.0	15.5	13.5	14.0	16.5	13.5	14.5	18.0	13.5	15.0
14	21.0	12.5	16.5	15.0	13.0	13.5	16.0	12.5	14.5	18.5	14.0	16.5
15	20.5	14.0	17.0	17.5	12.5	15.0	16.0	12.0	14.0	19.0	15.0	16.5
16	21.0	13.0	16.5	15.5	13.0	14.0	16.5	12.0	14.0	17.5	14.5	16.5
17	20.5	13.0	16.5	18.0	13.0	15.0	17.0	12.5	14.5	17.0	13.5	15.0
18	20.0	13.0	16.0	17.5	13.0	15.5	16.0	14.0	15.0	16.5	12.0	14.0
19	19.5	13.5	16.5	17.5	14.0	16.0	15.5	13.5	14.0	16.5	12.0	14.0
20	19.0	14.0	16.0	19.0	15.0	17.0	15.5	13.0	14.0	16.0	12.0	13.5
21	20.0	13.5	16.5	17.0	14.5	16.0	16.0	12.5	14.0	16.5	12.5	14.0
22	19.0	12.5	15.5	17.5	14.0	16.0	15.5	12.0	14.0	15.0	12.0	13.0
23	15.5	13.0	14.0	19.0	14.0	16.5	---	---	---	14.0	12.0	13.0
24	17.5	14.0	15.5	18.5	14.0	16.5	---	---	---	14.5	13.0	13.5
25	18.5	13.0	16.0	18.0	14.0	16.0	---	---	---	16.0	13.5	14.0
26	18.5	14.5	16.0	15.5	13.5	14.5	---	---	---	14.0	12.0	13.0
27	18.0	13.5	16.0	16.5	13.0	14.5	---	---	---	12.5	11.5	12.0
28	17.5	14.0	16.0	17.0	13.0	15.0	---	---	---	14.0	11.0	12.0
29	17.5	14.0	15.5	16.5	13.0	15.0	---	---	---	14.5	10.0	12.0
30	17.5	13.0	15.5	17.0	13.5	15.0	13.0	11.0	12.0	14.5	11.0	12.5
31	---	---	---	17.5	13.5	15.5	13.0	11.0	12.0	---	---	---
MONTH	21.0	10.0	15.0	20.5	11.5	15.5	---	---	---	19.0	10.0	13.4



## WISCONSIN RIVER BASIN

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. 28, 29, Dec. 1, 31, Jan. 1, 11, 23, 24, 28, Feb. 9, 11, 13, 24, 26, 28, Mar. 1, 2, and Apr. 4, 5 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.48 in., Aug. 10, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.48 in., Aug. 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.00	.00	.00	.00	.00	.00	.66	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.02	1.10	.11
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.73	.08	.02
5	.00	.02	.00	.00	.00	.00	.00	.00	.18	.00	.00	.01
6	.07	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.01	.01	.00	.00	.00	.00	.35	.10	.52	.00	.00
8	.22	.00	.00	.00	.00	.00	.00	.00	.00	.23	.00	.00
9	.19	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.82
10	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.48	.24
11	.00	.00	.00	.00	.00	.00	.00	.18	.11	.00	.00	.00
12	.00	.33	.00	.00	.00	.00	.57	.00	.00	.00	.09	.00
13	.00	.01	.01	.00	.00	.00	.04	.00	.45	.01	.10	.00
14	.04	.24	.01	.00	.00	.00	.09	.37	.32	.51	.01	.96
15	.01	.04	.00	.00	.00	.00	.17	.01	.00	.00	.00	.49
16	.02	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.09
17	.00	.00	.14	.00	.00	.00	.00	.00	.00	1.03	.00	.00
18	.01	.01	.00	.00	.00	.00	.12	.00	.29	.00	.58	.00
19	.00	.01	.00	.00	.37	.00	.00	.00	.32	.00	.25	.00
20	.26	.00	.00	.00	.44	.08	.00	.00	.08	.70	.00	.00
21	.01	.00	.00	.00	.00	.11	.00	.00	.00	.01	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.58
23	.00	.00	.00	.00	.00	.00	.00	.38	2.34	.02	.00	.45
24	.00	.00	.00	.00	.00	.00	.00	.00	.10	.24	.00	.30
25	.00	.46	.00	.00	.00	.00	.41	.07	.42	.00	.04	.73
26	.00	.29	.00	.00	.00	.12	.08	.00	.60	.00	.03	.26
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.06	.00	.23	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.02	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.12	.00	.00	.00	.34	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.02	---
TOTAL	0.86	1.42	0.22	0.00	0.81	0.31	1.66	2.02	5.56	5.13	5.12	5.06

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 Dec. 1, Jan. 10, 23, 28, Feb. 13, 14, 24, 26, 28, Mar. 1, 2, and Apr. 4, 5 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for Dec. 31 and Jan. 1. 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, 2.59 in., Aug. 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	---	.00	.00	.00	.55	.00	.00	.00	.01
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.10	.96	.10
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.83	.08	.01
5	.00	.02	.00	.00	.00	.00	.00	.00	.13	.00	.00	.00
6	.09	.00	.05	.00	.00	.00	.00	.00	.00	.01	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.35	.09	.38	.00	.00
8	.21	.00	.00	.00	.00	.00	.00	.00	.00	.20	.00	.00
9	.17	.00	.00	.00	.00	.00	.00	.01	.00	.02	.00	.62
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	2.59	.23
11	.00	.00	.00	.00	.00	.00	.00	.31	.09	.00	.00	.00
12	.00	.32	.00	.00	.00	.00	.55	.00	.00	.00	.11	.00
13	.00	.01	.00	.00	.00	.00	.05	.00	.43	.01	.11	.00
14	.04	.22	.01	.00	.00	.00	.06	.35	.34	.45	.00	1.24
15	.01	.04	.01	.00	.00	.00	.17	.03	.00	.00	.00	.49
16	.02	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.12
17	.00	.00	.16	.00	.00	.00	.00	.00	.00	.33	.00	.00
18	.01	.01	.00	.00	.00	.00	.14	.00	.10	.00	.55	.00
19	.01	.01	.00	.00	.33	.00	.00	.00	.29	.00	.24	.00
20	.23	.00	.00	.00	.42	.10	.00	.00	.07	.72	.00	.00
21	.00	.00	.00	.00	.00	.10	.00	.00	.00	.02	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.55
23	.00	.00	.00	.00	.00	.01	.00	.38	2.34	.02	.00	.42
24	.00	.00	.00	.00	.00	.00	.00	.00	.08	.12	.00	.26
25	.00	.46	.00	.00	.00	.00	.36	.17	.40	.01	.05	.31
26	.00	.27	.00	.00	.00	.09	.10	.01	.60	.00	.03	.25
27	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.06	.00	.24	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.01	.00	.01	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.18	.00	.00	.00	.29	.00
31	.00	---	---	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.80	1.36	---	---	0.75	0.31	1.68	2.16	5.21	4.33	5.01	4.61

WISCONSIN RIVER BASIN

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. 1, 31, Jan. 23, 24, Feb. 2, 11, 24, 28, Mar. 2, 3, and Apr. 4, 5 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the periods June 18-20 and July 6-17.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.60 in., July 5, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.63 in., June 23.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	.00	.00	.00	.00	.60	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.11	.88	.09
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.55	.08	.01
5	.00	.01	.00	.00	.00	.00	.00	.00	.13	.00	.00	.00
6	.08	.00	.06	.00	.00	.00	.00	.00	.00	---	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.30	.07	---	.00	.00
8	.26	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
9	.19	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.68
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	2.49	.07
11	.00	.00	.00	.00	.00	.00	.00	.26	.08	---	.00	.01
12	.00	.31	.00	.00	.00	.00	.55	.00	.00	---	.15	.00
13	.00	.01	.00	.00	.00	.00	.07	.00	.36	---	.05	.04
14	.04	.23	.01	.00	.00	.00	.22	.40	.00	---	.00	1.37
15	.01	.04	.01	.00	.00	.00	.08	.04	.00	---	.00	.51
16	.02	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.03
17	.00	.00	.14	.00	.00	.00	.00	.00	.00	---	.00	.00
18	.01	.01	.00	.00	.00	.00	.10	.00	---	.01	.47	.00
19	.00	.01	.00	.00	.38	.00	.00	.00	---	.53	.26	.00
20	.26	.00	.00	.00	.43	.10	.00	.00	---	.20	.01	.00
21	.01	.00	.00	.00	.00	.11	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.56
23	.00	.00	.00	.00	.00	.00	.00	.41	2.63	.01	.00	.41
24	.00	.00	.00	.00	.00	.00	.00	.01	.03	.16	.00	.24
25	.00	.45	.00	.00	.00	.00	.36	.15	1.12	.00	.03	.35
26	.00	.31	.00	.00	.00	.11	.11	.00	.04	.00	.03	.22
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.06	.00	.25	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.06	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.17	.00	.00	.00	.38	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.01	---
TOTAL	0.89	1.38	0.22	0.00	0.81	0.32	1.72	2.17	---	---	4.84	4.59

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 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1986, October 1989 to May 1994, August to September 1994.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 860 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Aug. 1 and ice-affected periods, Jan. 14-20, Jan. 31 to Feb. 1, and Feb. 8-11. Records are fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	5.6	5.8	4.9	5.3	5.6	5.6	6.5	---	---	4.5	4.9
2	6.5	5.6	6.1	4.9	5.3	5.6	5.6	6.5	---	---	4.5	4.6
3	6.5	5.6	5.8	4.9	5.3	5.6	5.6	6.3	---	---	5.0	4.6
4	6.3	5.9	5.8	4.9	5.3	7.0	5.6	6.2	---	---	5.5	4.7
5	6.1	5.6	5.8	4.9	5.3	16	5.6	6.1	---	---	5.0	4.7
6	6.3	5.3	5.8	5.2	5.2	17	5.6	5.7	---	---	5.1	4.7
7	6.4	5.3	6.0	5.0	4.9	10	5.5	5.3	---	---	4.9	4.6
8	7.0	5.3	6.0	4.9	4.8	7.3	5.6	5.4	---	---	4.6	4.5
9	8.1	5.3	5.9	4.9	4.7	6.3	5.6	5.4	---	---	4.5	4.6
10	7.6	5.3	5.8	4.9	4.7	6.1	5.6	5.3	---	---	7.7	5.5
11	7.3	5.3	5.8	4.9	4.9	6.1	5.4	5.5	---	---	13	4.8
12	6.8	5.4	5.7	4.9	5.1	6.5	6.0	5.6	---	---	6.1	4.6
13	6.8	6.1	5.6	4.9	5.1	6.4	6.5	5.3	---	---	5.8	4.5
14	6.8	5.7	5.6	4.8	5.1	6.7	6.0	5.1	---	---	5.4	8.9
15	6.8	5.6	5.6	4.7	5.1	6.7	6.4	5.4	---	---	5.0	6.4
16	6.8	5.4	5.5	4.6	4.7	6.4	6.2	5.3	---	---	4.8	7.9
17	6.8	5.4	5.5	4.5	4.7	6.3	6.0	5.3	---	---	4.7	6.0
18	6.8	5.6	5.8	4.5	5.1	6.3	5.6	5.3	---	---	5.5	5.6
19	6.6	5.6	5.7	4.5	29	6.2	5.6	5.3	---	---	5.6	5.4
20	6.4	5.4	5.6	4.6	42	6.6	5.6	5.1	---	---	5.8	5.2
21	7.2	5.3	5.6	4.6	9.1	7.9	5.6	5.1	---	---	5.4	4.6
22	6.6	5.3	5.5	4.6	6.9	7.1	5.6	4.8	---	---	5.2	4.0
23	6.4	5.3	5.3	5.0	6.5	7.1	5.6	4.7	---	---	5.2	5.8
24	6.3	5.3	5.3	5.1	6.3	6.7	5.6	4.8	---	---	5.2	5.0
25	6.1	6.0	5.3	5.1	6.0	6.3	5.8	4.7	---	---	5.2	5.6
26	6.1	7.6	5.1	5.3	5.6	6.1	6.0	4.4	---	---	5.3	6.3
27	6.0	6.3	5.1	5.5	5.4	5.8	5.9	4.4	---	---	5.3	5.4
28	5.8	5.9	4.9	5.4	5.6	5.8	5.8	4.2	---	---	5.5	4.8
29	5.7	5.8	4.9	5.4	---	5.8	5.8	4.3	---	---	5.3	4.5
30	5.5	5.8	4.9	5.3	---	5.8	5.8	4.3	---	---	5.4	4.5
31	5.5	---	4.9	5.3	---	5.6	---	4.3	---	---	5.4	---
TOTAL	202.5	168.9	172.0	152.9	213.0	220.7	172.7	161.9	---	---	171.4	157.2
MEAN	6.53	5.63	5.55	4.93	7.61	7.12	5.76	5.22	---	---	5.53	5.24
MAX	8.1	7.6	6.1	5.5	42	17	6.5	6.5	---	---	13	8.9
MIN	5.5	5.3	4.9	4.5	4.7	5.6	5.4	4.2	---	---	4.5	4.0
CFSM	1.21	1.04	1.03	.92	1.41	1.32	1.07	.97	---	---	1.03	.97
IN.	1.40	1.17	1.19	1.06	1.47	1.52	1.19	1.12	---	---	1.18	1.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1994, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994		
MEAN	4.65	5.08	4.16	3.76	4.78	7.47	6.21	4.97	4.69	6.00	4.52	4.69
MAX	6.53	8.76	5.55	5.01	7.61	12.8	11.6	7.47	7.91	15.0	8.64	7.22
(WY)	1994	1986	1994	1986	1994	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 1993 CALENDAR YEAR	FOR 1994 WATER YEAR (OCT-MAY, AUG-SEPT)	WATER YEARS 1985 - 1994
ANNUAL TOTAL	2938.4		
ANNUAL MEAN	8.05		4.96
HIGHEST ANNUAL MEAN			7.69
LOWEST ANNUAL MEAN			3.18
HIGHEST DAILY MEAN	55	Jul 9	81
LOWEST DAILY MEAN	3.1	Jan 9-12	1.7 (a) Dec 24, 25 1989
ANNUAL SEVEN-DAY MINIMUM	3.2	Jan 8	1.8
INSTANTANEOUS PEAK FLOW		(b)63 Feb 20	(c)128 Jul 25 1985
INSTANTANEOUS PEAK STAGE		(b)5.43 Feb 20	7.57 Jul 5 1993
INSTANTANEOUS LOW FLOW			1.6 (d)Dec 21 1989
ANNUAL RUNOFF (CFSM)	1.49		.92
ANNUAL RUNOFF (INCHES)	20.28		12.51
10 PERCENT EXCEEDS	12		7.2
50 PERCENT EXCEEDS	6.5		4.4
90 PERCENT EXCEEDS	4.0		2.5

(a) Also occurred Aug. 9, 10, Sept. 30, Oct. 1, 2, 1990

(b) Maximum for the water year

(c) Gage height, 5.84 ft

(d) Also occurred Oct. 27, 1990

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, 1993, and 1994.  
 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, 20.0°C, May 30; minimum observed, 0.0°C, Jan. 8-9, 14-20, 31, Feb. 1, 9-10, 27.  
 DISSOLVED OXYGEN: Maximum observed, 12.3 mg/L, Aug. 9; minimum observed, 4.2 mg/L, Aug. 18.  
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 48 tons, Feb. 19; minimum daily, 0.15 ton, Dec. 9-14, 16.  
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 374 lb, Feb. 20; minimum daily, 1.2 lb, Apr. 10-11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993					MAR 1994				
07...	1030	6.3	555	12.0	14...	1310	--	--	7.0
NOV					APR				
08...	1306	5.5	545	8.0	20...	0845	5.6	535	7.0
DEC					JUN				
16...	1103	5.7	540	6.5	01...	1000	4.7	545	11.5
FEB 1994					AUG				
01...	1254	5.3	560	2.0	04...	1440	5.1	550	16.0
MAR					SEP				
02...	1323	5.6	520	2.5	09...	1415	5.0	545	13.0
06...	1500	--	--	2.0					

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA-CHLOR TOTAL RECOVER (77825) (UG/L)	ATRA-ZINE WATER UNFLTRD REC (39630) (UG/L)	CARBO-FURAN WATER WHOLE TOT.REC (82615) (UG/L)	CHLOR-PYRIFOS TOTAL RECOVER (38932) (UG/L)	CIS-PERME-THRIN WATER WHOLE REC (82418) (UG/L)	CYAN-AZINE TOTAL (81757) (UG/L)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (82052) (UG/L)	DIMETH-OATE WATER WHOLE TOTAL (39009) (UG/L)	EPTC WATER WHOLE REC (81894) (UG/L)	
MAY 1994	*17...	1245	5.3	<0.10	<0.1	<0.3	<1.0	<1.0	<0.30	<0.20	<1.0	<1.0
DATE	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L)	METHO-MYL TOTAL (UG/L)	METOLA-CHLOR IN WHOLE WATER (UG/L)	PARA-THION, TOTAL (UG/L)	PENDI-METH-ALIN TOTAL (UG/L)	PHORATE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	TERBU-FOS WAT, WH REC (UG/L)	TRANS PERME-THRIN WATER WHOLE REC (UG/L)	TRI-FLURA-LIN TOTAL RECOVER (UG/L)	2,4-D, TOTAL (UG/L)	
MAY 1994	17...	<0.20	<1.0	<0.20	<1.0	<1.00	<0.20	6.1	<0.20	<1.0	<1.0	<0.50

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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, UM-MF (COLS./100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT 1993							
*11...	1430	--	7.3	7.8	3.3	25000	380
*24...	1645	--	6.0	7.9	1.6	8600	16
NOV							
*03...	1050	--	5.6	8.1	2.5	22000	23
*23...	1120	--	5.3	8.4	1.6	2800	11
DEC							
*09...	1350	--	5.8	8.0	1.2	200	10
JAN 1994							
*05...	1020	--	4.9	8.1	1.2	490	56
FEB							
*10...	1130	4.7	--	8.2	5.3	9000	100
19...	1230	--	20	7.8	18	--	534
19...	1345	--	29	7.7	18	--	710
19...	1515	--	41	7.6	22	--	984
19...	1715	--	53	7.7	21	--	1200
19...	2030	--	58	7.7	22	--	576
20...	1100	--	49	7.6	15	--	248
*20...	1301	--	38	--	--	--	--
*20...	1304	--	38	7.9	14	2800	156
20...	1305	--	38	7.7	13	--	150
20...	1830	--	24	7.6	8.5	--	136
26...	1430	--	5.6	--	--	--	--
27...	1415	--	5.3	--	--	--	--
MAR							
05...	1500	--	19	7.4	--	--	344
05...	1545	--	25	7.5	--	--	520
05...	1630	--	30	7.5	--	--	520
05...	2115	--	23	7.6	--	4700	182
06...	1330	--	18	7.8	--	2500	96
06...	1500	--	24	7.7	--	1600	164
*06...	1501	--	24	--	--	2200	--
*06...	1510	--	24	--	--	--	--
06...	1630	--	29	7.1	--	--	317
06...	2045	--	22	6.6	--	--	160
14...	1310	--	5.9	8.4	2.0	1200	9
14...	1315	--	5.8	--	--	--	--
APR							
*11...	1620	--	5.3	8.4	1.7	1700	8
*25...	1000	--	5.6	8.0	2.4	47000	29
*25...	1010	--	5.6	--	--	--	--
MAY							
*17...	1245	--	5.3	8.1	1.6	8300	14
*31...	1430	--	4.2	8.2	3.2	35000	116
*31...	1435	--	4.2	--	--	--	--
JUN							
*13...	1455	--	--	8.2	3.1	28000	111
*20...	1417	--	--	8.0	2.6	16000	67
*24...	1300	--	--	7.8	2.6	--	92
*27...	1020	--	--	8.0	1.9	7900	75
JUL							
*05...	1245	--	--	7.9	1.9	18000	66
*11...	0935	--	--	8.0	--	6900	45
*26...	1135	--	--	7.6	--	--	204
AUG							
*08...	1525	--	4.7	8.2	--	--	82
*08...	1530	--	4.7	--	--	--	--
10...	2130	--	15	7.5	--	--	470
10...	2330	--	21	7.5	--	--	440
11...	0045	--	28	7.6	--	--	612
11...	0215	--	36	7.5	--	--	536
11...	0430	--	23	7.4	--	--	252
11...	0615	--	14	7.6	--	--	200
*11...	0829	--	11	7.5	--	--	122
11...	0830	--	11	7.5	--	--	112
*23...	0950	--	5.2	8.1	--	--	34

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE



WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	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)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN 062 MM (70331)
OCT 1993						
11...	718	68	0.072	0.450	--	--
24...	352	9	0.028	0.080	--	--
NOV						
03...	360	11	0.011	0.110	--	--
23...	346	4	0.036	0.090	--	--
DEC						
09...	342	3	0.012	0.040	--	--
JAN 1994						
05...	386	8	0.046	0.060	--	--
FEB						
10...	420	19	0.019	0.060	22	--
19...	758	64	0.658	1.45	501	--
19...	954	72	0.862	1.63	818	--
19...	1230	98	0.862	2.07	997	--
19...	1410	122	1.22	2.24	1180	--
19...	790	60	1.50	>2.00	591	--
20...	428	34	1.33	1.26	179	--
20...	--	--	--	--	168	--
20...	342	20	0.812	1.10	--	--
20...	348	20	0.868	1.09	159	--
20...	354	14	0.657	1.02	123	--
26...	--	--	--	--	36	--
27...	--	--	--	--	37	--
MAR						
05...	574	46	2.11	1.64	362	--
05...	734	58	2.06	2.13	522	--
05...	732	56	2.10	2.14	540	--
05...	388	22	0.935	1.20	180	--
06...	334	12	0.861	1.06	114	--
06...	382	20	0.815	1.23	169	--
06...	--	--	--	--	--	--
06...	--	--	--	--	160	--
06...	506	32	0.772	1.30	--	--
06...	360	17	0.473	0.880	--	--
14...	364	2	0.018	0.070	--	--
14...	--	--	--	--	16	--
APR						
11...	340	2	0.015	0.040	15	--
25...	352	8	0.118	0.110	--	--
25...	--	--	--	--	31	--
MAY						
17...	346	4	0.052	0.060	28	--
31...	448	21	0.072	0.140	--	--
31...	--	--	--	--	40	--
JUN						
13...	440	22	0.073	0.150	--	--
20...	398	13	0.070	0.190	--	--
24...	488	18	0.183	0.330	--	--
27...	410	12	0.061	0.160	--	--
JUL						
05...	436	11	0.077	0.220	--	--
11...	384	10	0.046	0.090	--	--
26...	--	--	0.058	0.320	--	--
AUG						
08...	--	--	0.012	0.165	--	--
08...	--	--	--	--	41	--
10...	--	--	0.209	1.44	283	--
10...	--	--	0.168	1.30	468	--
11...	--	--	0.129	1.36	623	93
11...	--	--	0.112	1.27	571	93
11...	--	--	0.079	0.805	260	93
11...	--	--	0.081	0.708	212	--
11...	--	--	0.089	0.491	--	--
11...	--	--	0.088	0.498	127	--
23...	--	--	0.039	0.109	41	--

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)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
SEP 1994									
*06...	1440	4.7	8.3	1.4	5400	23	0.023	0.083	--
14...	0915	15	7.6	--	--	640	0.064	1.50	701
16...	1013	7.8	7.7	--	--	52	0.059	0.365	--
*16...	1017	7.8	7.7	--	--	48	0.075	0.335	42
*20...	1450	5.2	8.1	--	--	19	0.029	0.085	--

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.0	9.5	10.5	7.5	4.5	6.0	7.0	4.5	5.5	6.0	4.0	5.0
2	10.5	7.5	9.0	7.0	5.5	6.5	7.0	5.0	6.0	4.5	3.0	4.0
3	12.5	7.5	10.0	8.5	5.5	7.0	7.0	4.5	5.5	5.5	3.0	4.0
4	12.0	8.5	10.0	9.0	7.5	8.0	6.5	5.5	6.5	5.0	2.5	4.0
5	11.5	7.5	9.0	8.0	5.5	7.0	6.5	6.0	6.5	3.0	1.0	2.0
6	13.5	9.0	11.0	6.0	4.5	5.0	6.5	4.5	6.0	5.0	1.5	4.0
7	15.0	10.5	12.0	7.0	3.5	5.0	6.0	4.5	5.0	4.5	.5	2.0
8	12.5	9.5	11.0	8.0	5.0	6.0	6.5	5.0	5.5	3.0	.0	1.0
9	10.0	7.5	8.5	8.0	4.5	6.0	7.5	5.0	6.5	3.5	.0	1.5
10	10.5	6.5	8.0	8.0	5.5	6.5	7.0	3.5	5.5	5.0	2.0	3.5
11	10.5	6.5	8.0	8.5	5.5	7.0	5.5	3.0	4.0	5.0	3.0	4.0
12	10.5	7.0	8.5	7.5	4.5	6.0	6.5	4.0	5.0	5.5	3.0	4.0
13	10.0	5.5	7.5	9.5	7.5	8.0	7.0	5.5	6.0	3.5	.5	2.5
14	11.0	6.5	8.5	7.5	6.5	7.5	7.0	6.0	6.5	1.5	.0	.5
15	10.0	8.0	9.0	7.0	6.0	7.0	7.5	5.5	6.0	.5	.0	.0
16	11.0	9.0	10.0	7.0	5.5	6.5	7.0	5.5	6.5	2.5	.0	.5
17	10.0	7.5	9.0	8.0	5.5	6.5	6.5	6.0	6.5	2.5	.0	1.0
18	10.5	6.5	8.5	7.5	4.5	6.0	6.5	6.0	6.5	.5	.0	.0
19	10.5	8.0	9.0	7.5	4.0	6.5	6.5	6.0	6.0	2.0	.0	.5
20	9.5	7.5	8.5	7.0	4.0	5.0	6.0	5.0	5.5	3.0	.0	1.0
21	9.5	6.5	8.0	8.0	5.5	6.5	5.5	4.0	5.0	4.0	.5	2.5
22	10.0	6.0	7.5	8.0	5.0	6.5	5.5	4.0	4.5	5.5	2.5	4.0
23	11.0	6.5	8.5	8.5	6.0	7.0	5.0	3.0	4.0	6.5	4.0	5.0
24	11.5	7.5	9.0	6.5	5.5	6.0	4.0	2.0	3.0	6.0	3.0	4.0
25	11.5	7.0	9.0	6.5	5.5	6.0	3.0	1.5	2.5	4.0	2.5	3.5
26	9.5	8.0	8.5	6.5	3.5	5.0	3.0	1.5	2.0	4.5	2.5	3.5
27	8.0	6.5	7.5	5.5	3.5	4.0	3.0	1.5	2.0	5.5	.5	3.5
28	9.5	6.5	7.5	6.0	3.0	4.0	3.5	1.0	2.0	5.5	4.0	4.5
29	6.5	5.0	6.0	6.0	4.0	4.5	3.5	1.5	2.5	5.0	2.0	3.5
30	7.0	5.5	6.0	5.5	4.0	4.5	4.0	1.0	2.0	5.0	.5	2.5
31	7.0	5.0	6.0	---	---	---	6.0	4.0	5.0	3.5	.0	1.0
MONTH	15.0	5.0	8.7	9.5	3.0	6.1	7.5	1.0	4.9	6.5	.0	2.7
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3.5	.0	1.5	7.0	3.0	5.0	13.5	5.0	8.5	12.0	5.5	8.0
2	4.0	1.0	2.5	8.5	4.0	5.5	12.5	5.5	8.0	13.0	5.5	9.0
3	4.0	.5	2.0	9.5	3.5	6.0	11.5	4.5	7.5	14.5	6.0	9.5
4	4.5	1.0	2.5	9.5	3.0	6.0	11.5	5.0	7.5	13.5	7.0	9.5
5	5.0	2.0	3.0	6.5	1.5	3.5	9.0	4.5	6.5	11.5	7.0	8.5
6	5.5	1.5	3.0	5.0	2.0	3.5	9.5	4.0	6.0	13.5	5.0	9.0
7	2.5	.5	1.5	7.5	2.5	4.0	12.0	3.5	7.0	13.5	8.0	10.0
8	2.5	.5	1.5	7.0	2.0	4.0	7.5	5.5	6.5	14.5	6.5	10.0
9	4.5	.0	2.0	8.0	3.0	4.5	13.0	6.0	8.5	15.5	8.0	11.0
10	4.5	.0	2.0	6.5	3.0	4.5	13.5	6.0	8.5	14.5	7.0	10.5
11	6.0	1.0	3.5	8.5	3.0	5.0	10.0	5.5	7.5	15.0	9.5	11.5
12	4.0	3.0	3.5	9.0	4.0	6.0	7.0	6.5	6.5	15.5	7.5	11.0
13	6.0	2.5	4.0	6.5	4.0	5.0	9.5	6.5	7.5	17.0	8.5	12.0
14	7.0	2.5	4.5	9.0	4.5	6.0	14.5	6.0	9.5	12.0	9.0	10.5
15	7.5	3.0	5.0	8.0	3.5	5.5	9.0	6.5	8.5	17.0	10.0	12.5
16	7.0	2.0	4.0	9.0	3.0	5.0	12.0	5.5	8.5	16.5	8.5	11.5
17	8.5	5.0	6.0	7.0	3.5	5.0	14.0	6.0	9.5	16.0	7.5	11.0
18	8.5	4.5	6.0	7.0	4.5	5.5	16.5	6.5	11.0	16.5	7.5	11.0
19	5.0	1.0	3.0	10.5	3.5	6.5	14.5	7.5	10.0	17.0	7.5	11.5
20	2.5	.5	1.5	11.0	5.5	7.5	11.5	4.5	8.5	17.5	8.0	12.0
21	5.5	2.0	3.5	10.0	5.0	6.5	14.5	6.5	9.5	18.5	9.0	13.0
22	3.5	1.5	3.0	12.0	5.0	7.5	15.0	5.5	9.5	18.5	9.5	13.5
23	3.5	1.0	2.0	11.5	5.5	8.0	15.0	6.0	10.0	18.5	9.5	13.0
24	6.0	2.0	3.5	8.5	5.0	6.5	16.5	8.5	12.0	16.0	11.0	13.0
25	4.0	1.0	2.5	10.5	4.5	7.0	---	---	---	15.0	10.0	12.0
26	6.0	.5	2.5	8.0	5.5	6.5	---	---	---	15.0	9.5	11.5
27	5.5	.0	2.5	10.5	5.5	7.5	---	---	---	16.5	7.5	11.0
28	6.5	3.0	4.5	7.5	5.0	6.0	---	---	---	18.0	8.0	12.5
29	---	---	---	8.0	4.0	5.5	---	---	---	17.5	9.5	13.0
30	---	---	---	10.5	3.5	6.5	7.5	5.0	6.0	20.0	10.0	14.5
31	---	---	---	11.5	4.0	7.0	---	---	---	18.5	11.5	14.5
MONTH	8.5	.0	3.1	12.0	1.5	5.7	---	---	---	20.0	5.0	11.3



WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	FEBRUARY			MARCH			APRIL			MAY		
		MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
1										12.0	10.1	10.9	
2										11.9	10.0	10.9	
3										11.9	9.6	10.7	
4										11.7	9.6	10.5	
5										11.7	9.8	10.6	
6										12.1	9.7	10.8	
7										11.7	9.4	10.3	
8										11.7	9.1	10.4	
9										11.4	8.9	10.0	
10										11.4	8.9	10.1	
11										10.9	8.6	9.5	
12										11.1	8.7	9.9	
13										11.0	8.1	9.7	
14										10.6	8.6	9.4	
15										10.2	8.2	9.1	
16										11.0	8.1	9.5	
17										10.7	8.6	9.6	
18										10.5	8.4	9.7	
19										10.9	8.3	9.7	
20										10.8	7.9	9.5	
21										10.5	8.1	9.3	
22										10.7	7.7	9.3	
23										9.9	8.3	9.0	
24										10.0	8.2	9.3	
25										10.3	8.9	9.5	
26										---	---	---	
27										---	---	---	
28										---	---	---	
29										---	---	---	
30										---	---	---	
31										---	---	---	
		JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	---	---	---	10.5	9.5	10.1	
2	---	---	---	---	---	---	---	---	---	10.2	9.8	10.0	
3	---	---	---	---	---	---	---	---	---	10.2	9.3	9.8	
4	---	---	---	---	---	---	---	---	---	10.0	9.4	9.7	
5	---	---	---	---	---	---	---	---	---	9.8	9.3	9.5	
6	---	---	---	---	---	---	11.1	9.1	10.3	9.9	8.8	9.5	
7	---	---	---	---	---	---	10.4	8.9	9.8	10.0	8.3	9.4	
8	---	---	---	---	---	---	11.1	9.8	10.3	9.7	8.8	9.2	
9	---	---	---	---	---	---	12.3	11.1	11.7	9.8	8.6	9.2	
10	---	---	---	---	---	---	11.7	9.7	11.2	9.0	8.3	8.8	
11	---	---	---	---	---	---	10.8	9.3	10.1	9.3	8.2	8.8	
12	---	---	---	---	---	---	11.1	10.7	11.0	9.4	8.2	8.8	
13	---	---	---	---	---	---	11.1	10.2	10.7	8.9	7.4	8.5	
14	---	---	---	---	---	---	12.1	10.5	11.4	8.6	6.4	7.5	
15	---	---	---	---	---	---	11.9	9.6	11.1	8.8	7.4	8.4	
16	---	---	---	---	---	---	10.8	9.3	10.2	9.6	7.0	8.3	
17	---	---	---	---	---	---	10.2	9.0	9.8	10.1	9.6	9.8	
18	---	---	---	---	---	---	9.7	4.2	8.7	10.6	8.4	10.0	
19	---	---	---	---	---	---	10.2	9.2	9.7	10.5	9.3	10.0	
20	---	---	---	---	---	---	10.1	9.4	9.7	---	---	---	
21	---	---	---	---	---	---	10.4	9.3	9.9	---	---	---	
22	---	---	---	---	---	---	10.5	9.4	9.9	9.4	8.6	9.1	
23	---	---	---	---	---	---	10.2	8.9	9.6	8.6	7.8	8.3	
24	---	---	---	---	---	---	9.5	8.5	9.1	8.8	8.0	8.5	
25	---	---	---	---	---	---	9.7	8.5	9.2	8.4	7.3	8.2	
26	---	---	---	---	---	---	9.4	7.8	8.9	8.5	7.8	8.2	
27	---	---	---	---	---	---	9.2	8.2	8.8	9.0	8.3	8.7	
28	---	---	---	---	---	---	9.6	8.1	8.9	9.2	8.6	8.9	
29	---	---	---	---	---	---	10.6	9.4	9.9	9.6	8.4	9.0	
30	---	---	---	---	---	---	10.3	9.6	10.0	8.8	8.1	8.5	
31	---	---	---	---	---	---	10.2	9.6	9.9	---	---	---	

## WISCONSIN RIVER BASIN

05406491 GARFOOT CREEK NEAR CROSS PLAINS, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	.34	.19	.17	.28	.49	.23	.67	---	---	1.4	.52
2	.65	.33	.19	.17	.29	.46	.23	.67	---	---	1.2	.49
3	.63	.32	.18	.17	.29	.45	.23	.51	---	---	1.2	.48
4	.60	.34	.17	.18	.30	1.0	.23	.49	---	---	1.1	.49
5	.57	.31	.17	.18	.30	9.3	.23	.48	---	---	.89	.49
6	.58	.29	.16	.19	.30	6.2	.23	.45	---	---	.79	.49
7	.58	.29	.16	.19	.29	2.2	.23	.42	---	---	.65	.47
8	1.3	.28	.16	.19	.28	1.0	.23	.42	---	---	.53	.47
9	1.7	.28	.15	.19	.28	.56	.23	.42	---	---	.48	.48
10	1.6	.27	.15	.19	.28	.47	.23	.41	---	---	3.5	.75
11	.62	.27	.15	.19	.30	.40	.22	.42	---	---	9.3	.49
12	.57	.27	.15	.20	.31	.67	.25	.43	---	---	.76	.47
13	.56	.30	.15	.20	.31	.31	.67	.40	---	---	.72	.46
14	.55	.27	.15	.20	.32	.72	.29	.38	---	---	.66	5.4
15	.54	.26	.16	.20	.32	.72	.32	.41	---	---	.61	1.2
16	.53	.25	.15	.20	.29	.27	.32	.40	---	---	.57	1.5
17	.53	.24	.16	.20	.30	.26	.33	.40	---	---	.55	.68
18	.52	.25	.17	.20	.32	.26	.33	.41	---	---	.65	.63
19	.50	.24	.16	.20	48	.26	.34	.41	---	---	.65	.60
20	.47	.23	.16	.21	26	.28	.36	.41	---	---	.67	.58
21	1.3	.22	.17	.21	1.0	1.1	.38	.42	---	---	.61	.51
22	.47	.22	.17	.22	.68	.83	.40	.41	---	---	.58	.44
23	.45	.22	.16	.23	.63	.83	.42	.41	---	---	.57	.88
24	.43	.21	.17	.24	.61	.28	.45	.43	---	---	.57	.54
25	.41	.91	.17	.25	.56	.26	.49	.43	---	---	.57	.79
26	.41	1.5	.16	.26	.52	.25	.51	.42	---	---	.58	1.1
27	.39	1.0	.17	.28	.51	.24	.49	.42	---	---	.57	.59
28	.37	.21	.16	.28	.51	.24	.48	.42	---	---	.60	.52
29	.36	.20	.16	.27	---	.24	.48	.44	---	---	.57	.48
30	.34	.19	.16	.28	---	.24	.48	.45	---	---	.57	.48
31	.34	---	.17	.28	---	.23	---	.46	---	---	.58	---
TOTAL	19.54	10.51	5.06	6.62	84.38	31.02	10.31	13.72	---	---	33.25	23.47

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	3.1	1.9	1.5	1.7	2.1	1.5	3.4	---	---	5.7	2.4
2	3.6	3.2	1.9	1.5	1.7	2.0	1.4	3.4	---	---	5.4	2.3
3	3.6	3.3	1.7	1.5	1.7	1.9	1.4	3.0	---	---	5.8	2.2
4	3.5	3.5	1.6	1.6	1.7	4.3	1.4	2.9	---	---	6.0	2.2
5	3.4	3.2	1.5	1.6	1.7	92	1.4	2.7	---	---	5.2	2.1
6	3.6	3.1	1.5	1.7	1.7	69	1.3	2.5	---	---	5.1	2.1
7	3.7	3.0	1.5	1.6	1.6	14	1.3	2.3	---	---	4.7	2.0
8	4.0	3.0	1.4	1.6	1.6	4.7	1.3	2.3	---	---	4.1	2.0
9	6.4	3.0	1.3	1.6	1.5	3.2	1.3	2.2	---	---	3.9	2.0
10	5.4	2.9	1.3	1.6	1.5	2.9	1.2	2.1	---	---	29	5.4
11	4.3	2.9	1.3	1.6	1.6	2.7	1.2	2.1	---	---	51	2.1
12	4.0	2.9	1.3	1.6	1.6	2.7	1.4	2.1	---	---	4.8	2.0
13	3.9	3.3	1.3	1.6	1.7	2.6	3.4	1.9	---	---	4.5	2.0
14	3.8	3.0	1.3	1.6	1.7	3.7	1.6	1.8	---	---	4.0	23
15	3.7	2.9	1.3	1.5	1.7	3.7	1.8	1.9	---	---	3.7	3.6
16	3.6	2.8	1.3	1.5	1.5	2.3	1.9	1.8	---	---	3.4	19
17	3.5	2.8	1.4	1.5	1.5	2.2	2.0	1.7	---	---	3.2	7.7
18	3.4	2.8	1.4	1.5	1.7	2.2	2.0	1.8	---	---	5.4	5.2
19	3.3	2.8	1.4	1.5	278	2.1	2.1	1.9	---	---	5.6	3.6
20	3.1	2.7	1.4	1.5	374	2.2	2.3	2.0	---	---	6.2	2.5
21	4.6	2.6	1.4	1.5	5.6	6.5	2.5	2.1	---	---	5.1	2.1
22	3.0	2.6	1.4	1.5	3.5	4.5	2.7	2.1	---	---	3.2	1.8
23	2.9	2.6	1.4	1.6	3.2	4.5	2.9	2.2	---	---	3.1	6.2
24	2.7	2.5	1.4	1.7	3.0	2.1	3.1	2.4	---	---	3.0	2.3
25	2.7	2.7	1.5	1.7	2.7	1.9	3.4	2.5	---	---	2.9	5.6
26	2.8	5.4	1.4	1.7	2.4	1.8	3.5	2.5	---	---	2.9	7.8
27	2.8	3.2	1.4	1.8	2.2	1.7	3.3	2.6	---	---	2.9	2.5
28	2.8	2.2	1.4	1.8	2.2	1.7	3.2	2.7	---	---	3.0	2.2
29	2.9	2.1	1.4	1.7	---	1.6	3.1	2.9	---	---	2.8	2.1
30	2.9	2.0	1.4	1.7	---	1.6	3.0	3.0	---	---	2.8	2.1
31	3.0	---	1.5	1.7	---	1.5	---	3.2	---	---	2.7	---
TOTAL	110.5	88.1	44.6	49.6	706.2	251.9	63.9	74.0	---	---	201.1	130.1

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 mi<sup>2</sup>, of which 2.8 mi<sup>2</sup> probably is noncontributing.

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, many days during the 1990, 1991, 1992, 1993, and 1994 water years.

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, 22.0°C, June 15; minimum observed, 0.0°C, Dec. 28, 30, Jan. 7-9, Jan. 14-21, 31, and Feb. 1, 3, 10.

DISSOLVED OXYGEN: Maximum observed, 16.3 mg/L, May 6; minimum observed, 5.0 mg/L, Aug. 30.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.0	10.0	11.0	---	---	---	---	---	---	5.0	4.0	4.5
2	10.5	8.5	9.5	---	---	---	---	---	---	4.0	3.0	3.5
3	12.0	8.5	10.5	---	---	---	---	---	---	4.0	2.5	3.0
4	12.5	10.5	11.5	---	---	---	---	---	---	4.0	2.5	3.5
5	11.0	8.0	10.0	---	---	---	---	---	---	2.5	.5	1.5
6	13.5	10.0	12.0	---	---	---	---	---	---	3.5	1.0	2.5
7	15.0	12.0	13.5	---	---	---	---	---	---	3.5	.0	1.5
8	14.5	11.5	13.0	---	---	---	---	---	---	.5	.0	.0
9	11.5	8.5	9.5	---	---	---	---	---	---	1.5	.0	.5
10	9.5	7.0	8.5	---	---	---	7.0	4.0	6.0	3.5	1.5	2.5
11	10.0	7.0	9.0	---	---	---	4.5	2.5	3.5	4.0	2.5	3.5
12	10.0	8.0	9.0	---	---	---	5.5	3.5	4.5	4.0	2.5	3.5
13	9.5	6.5	8.0	---	---	---	6.5	5.0	6.0	3.5	.5	2.0
14	10.5	8.0	9.0	---	---	---	6.5	6.0	6.5	.5	.0	.0
15	10.5	9.0	10.0	---	---	---	6.5	5.5	6.5	.0	.0	.0
16	11.5	10.5	11.0	---	---	---	6.5	6.0	6.5	.0	.0	.0
17	---	---	---	---	---	---	6.5	6.0	6.5	.0	.0	.0
18	---	---	---	---	---	---	6.5	6.0	6.5	.0	.0	.0
19	---	---	---	---	---	---	6.0	6.0	6.0	.0	.0	.0
20	---	---	---	---	---	---	6.0	4.5	5.5	.0	.0	.0
21	---	---	---	---	---	---	4.5	4.0	4.5	2.5	.0	1.0
22	---	---	---	---	---	---	4.5	3.5	4.0	4.0	2.0	3.0
23	---	---	---	---	---	---	4.5	3.0	4.0	5.0	3.5	4.5
24	---	---	---	---	---	---	3.0	1.5	2.0	4.5	3.0	4.0
25	---	---	---	---	---	---	2.5	.5	1.5	4.0	2.5	3.5
26	---	---	---	---	---	---	1.5	.5	1.0	3.5	2.0	2.5
27	---	---	---	---	---	---	2.0	1.0	1.5	4.0	1.0	2.5
28	---	---	---	---	---	---	2.0	.0	1.0	4.5	3.5	4.0
29	---	---	---	---	---	---	2.0	.5	1.5	4.0	2.0	3.5
30	---	---	---	---	---	---	2.5	.0	1.0	3.5	1.0	2.0
31	---	---	---	---	---	---	4.5	2.5	4.0	1.0	.0	.5
MONTH	---	---	---	---	---	---	---	---	---	5.0	.0	2.0



05406497 BLACK EARTH CREEK AT SOUTH VALLEY ROAD NEAR BLACK EARTH, WI--CONTINUED

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1										---	---	---
2										---	---	---
3										---	---	---
4										---	---	---
5										---	---	---
6										16.3	8.2	11.8
7										14.6	8.0	10.5
8										14.5	7.9	10.7
9										14.0	7.7	10.2
10										13.4	7.6	10.1
11										12.1	7.4	9.1
12										12.7	7.4	9.6
13										12.4	7.0	9.4
14										10.4	6.9	8.4
15										11.5	7.0	8.9
16										11.4	7.0	8.9
17										11.6	7.1	9.1
18										11.2	7.0	8.9
19										10.9	6.7	8.6
20										10.4	6.4	8.2
21										10.0	6.3	8.0
22										9.7	6.3	7.8
23										12.2	6.2	8.5
24										11.8	6.4	9.1
25										12.0	7.9	9.5
26										12.6	8.1	10.1
27										13.3	8.7	10.7
28										13.5	8.3	10.7
29										13.4	8.2	10.3
30										13.7	7.9	10.5
31										13.7	7.6	10.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	12.7	7.5	9.8	13.0	6.7	9.3	13.0	6.3	9.2	13.0	8.6	10.3
2	13.7	8.0	10.5	13.4	6.6	9.4	14.2	6.7	9.7	---	---	---
3	14.2	8.2	10.8	13.1	7.2	9.7	12.7	5.7	8.3	---	---	---
4	14.7	8.2	11.0	7.8	5.2	5.9	12.0	5.4	8.4	---	---	---
5	13.9	8.2	10.6	10.5	6.0	8.0	13.9	6.9	9.7	---	---	---
6	15.2	7.4	11.0	12.0	6.7	8.7	14.3	7.2	10.1	---	---	---
7	12.2	8.1	9.9	11.1	6.9	8.7	15.2	7.3	10.3	---	---	---
8	14.0	8.2	10.7	9.8	6.5	7.9	14.3	6.9	9.8	---	---	---
9	14.0	7.9	10.6	10.9	7.3	8.7	12.6	7.3	9.6	---	---	---
10	13.1	7.7	10.0	12.4	7.5	9.5	9.2	6.8	7.6	---	---	---
11	13.6	7.7	10.1	12.8	7.2	9.5	8.0	6.6	7.2	---	---	---
12	13.8	7.3	10.1	12.9	6.9	9.1	9.2	7.2	8.1	---	---	---
13	13.8	6.8	9.5	12.1	7.1	9.0	11.1	7.3	8.6	---	---	---
14	13.8	6.7	9.8	10.6	7.7	8.8	12.0	7.2	9.2	---	---	---
15	13.4	6.2	9.4	13.3	7.5	10.0	12.5	7.6	9.5	---	---	---
16	13.5	6.4	9.5	12.3	7.2	9.3	12.1	7.2	9.2	---	---	---
17	13.6	6.5	9.5	12.6	7.4	9.6	12.0	7.0	8.9	---	---	---
18	13.5	6.4	9.5	13.7	7.2	9.9	11.0	6.9	8.4	10.4	6.5	7.7
19	13.6	6.3	9.5	13.7	7.0	9.1	10.6	7.0	8.2	10.2	6.5	7.9
20	13.3	6.4	9.2	12.3	6.4	8.6	11.4	6.8	8.7	10.2	6.2	7.8
21	13.3	6.6	9.5	11.6	6.7	8.8	12.4	7.4	9.4	---	---	---
22	13.9	6.6	9.8	12.4	7.0	9.1	12.9	7.6	9.6	---	---	---
23	9.0	6.7	7.7	13.2	6.7	9.3	---	---	---	---	---	---
24	11.7	6.9	8.8	13.2	6.6	9.3	---	---	---	---	---	---
25	12.3	7.0	9.3	13.3	6.5	9.2	---	---	---	---	---	---
26	10.4	6.1	7.9	12.3	6.8	9.4	---	---	---	---	---	---
27	11.9	6.8	8.9	13.3	7.6	9.9	---	---	---	---	---	---
28	11.2	6.6	8.6	14.3	7.4	10.2	---	---	---	---	---	---
29	11.5	6.6	8.6	14.3	7.1	10.0	---	---	---	---	---	---
30	12.2	6.8	9.2	14.4	7.0	10.0	11.0	5.0	8.9	---	---	---
31	---	---	---	14.0	6.8	9.7	11.8	8.0	9.3	---	---	---
MONTH	15.2	6.1	9.6	14.4	5.2	9.1	---	---	---	---	---	---





WISCONSIN RIVER BASIN

167

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 mi<sup>2</sup>.

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. 24 to Mar. 14. 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 ft<sup>3</sup>/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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7770	6700	7470	5600	6400	12000	8040	29900	6570	6030	5560	5230
2	7460	7540	6780	6600	6400	12000	8130	29900	7700	5990	5400	4720
3	7220	7800	6850	7000	6800	11000	8250	25900	6730	6360	5580	5150
4	7090	7340	6920	6800	7000	9800	7650	22200	5520	6350	5870	5290
5	6980	7230	6910	6800	7400	9800	7570	16500	5770	7140	7800	5520
6	7080	7060	7530	7200	8400	9800	7990	14000	5730	8570	6960	5540
7	6940	7360	7850	7600	8200	10000	7090	12900	6120	7980	6190	5590
8	6770	8320	7310	7400	8200	12000	6560	11800	6110	9700	5380	6050
9	6890	8690	7210	7400	8400	11000	6060	10800	5390	11700	4440	6090
10	6980	7970	7230	6600	8000	11000	5660	11200	4850	11600	4700	5910
11	6760	8120	7120	7200	8000	12000	5660	10900	5410	11300	6320	6100
12	7560	8350	7370	8400	8400	12000	5740	10000	5040	9550	6790	5510
13	8900	8540	7450	8000	8800	12000	6020	9570	4770	11100	6270	5430
14	8280	8050	7360	8400	8600	13000	6210	8780	5670	10700	6150	6760
15	8300	8320	7740	8200	8600	10800	6400	8280	5910	10800	5940	7920
16	8660	8240	7620	7000	8600	10900	6240	8140	5770	10400	5560	8410
17	8320	8820	7140	6600	8800	10800	6150	7420	6410	9560	5360	11800
18	7420	10100	7220	7000	9000	10500	7250	7090	6300	8120	5530	15000
19	8070	10300	7700	7400	8800	9920	7640	7710	5800	7890	5690	16800
20	9010	10300	7780	7800	9200	9720	9990	6580	6870	7860	5920	18100
21	9540	10400	7810	7600	12000	10200	11000	6480	5520	7170	5810	17400
22	9690	9150	8660	7800	12000	10500	10900	6770	5450	6710	6310	13400
23	10300	8700	8890	7400	12000	10500	10900	7440	5680	6670	6470	11600
24	9110	7740	8000	7400	11000	10800	10400	7320	6260	8100	5770	11000
25	8970	8050	6200	7600	11000	10900	11000	7400	6040	8800	5310	10600
26	9180	8200	5000	7800	12000	11800	9950	7160	5250	8430	5240	11500
27	9030	8390	5000	7000	12000	11100	11200	7610	7040	7660	5320	12500
28	9140	8430	5400	7000	12000	10300	18800	6590	5950	7150	5310	13100
29	8310	8310	6000	6000	---	9730	23800	6820	6640	6220	5210	13100
30	8110	7840	5400	6400	---	9630	26600	6800	7420	5380	5130	13100
31	6900	---	5800	6600	---	8880	---	6340	---	5320	4840	---
TOTAL	250740	250360	218720	223600	256000	334380	284850	346300	179690	256310	178130	284220
MEAN	8088	8345	7055	7213	9143	10790	9495	11170	5990	8268	5746	9474
MAX	10300	10400	8890	8400	12000	13000	26600	29900	7700	11700	7800	18100
MIN	6760	6700	5000	5600	6400	8880	5660	6340	4770	5320	4440	4720

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1994, BY WATER YEAR (WY)												
MEAN	7372	7787	6559	6014	6569	10920	16870	11950	10510	7297	5837	7270
MAX (WY)	25460	17130	13100	11400	12020	30400	37650	32270	28840	17780	11610	31280
MIN (WY)	1987	1986	1966	1973	1966	1973	1922	1960	1993	1978	1924	1938
MIN (WY)	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 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1914 - 1994	
ANNUAL TOTAL		4991540		3063300			
ANNUAL MEAN		13680		8393		8742	
HIGHEST ANNUAL MEAN						16030	1973
LOWEST ANNUAL MEAN						4145	1977
HIGHEST DAILY MEAN		59000	Jun 26	29900	May 1,2	79500	Sep 16 1938
LOWEST DAILY MEAN		(a)5000	Dec 26-27	4440	Aug 9	1460	Jul 3 1988
ANNUAL SEVEN-DAY MINIMUM		(a)5540	Dec 25	5080	Aug 29	1900	Aug 13 1988
INSTANTANEOUS PEAK FLOW				31200	May 1	80800	Sep 16 1938
INSTANTANEOUS PEAK STAGE				6.93	May 1	11.48	Sep 16 1938
10 PERCENT EXCEEDS		26600		11600		15400	
50 PERCENT EXCEEDS		10000		7620		6890	
90 PERCENT EXCEEDS		7070		5550		3890	

(a) Ice affected

WISCONSIN RIVER BASIN

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 September 1994 (discontinued). National Stream-Quality Accounting Network data collection began in October 1974.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	
OCT 1993	21...	1130	9580	255	7.9	9.5	2.1	10.7	756	94	140	96
MAR 1994	21...	1200	10400	256	8.1	5.0	1.0	12.7	740	102	K2	24
MAY	04...	0900	10400	198	8.2	11.5	4.7	11.3	750	105	65	50
JUL	19...	1130	7310	228	8.2	24.5	7.0	8.6	740	106	240	67
AUG	15...	1140	5980	256	8.2	20.0	6.0	9.4	757	104	200	20

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 (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 1993	21...	110	26	12	8.5	2.1	119	98	13	12	0.20	2.8
MAR 1994	21...	110	24	11	9.2	2.9	116	96	13	13	<0.10	9.9
MAY	04...	68	16	6.9	8.0	2.8	79	65	12	12	<0.10	1.2
JUL	19...	100	22	11	6.8	2.5	106	87	11	10	<0.10	7.5
AUG	15...	110	26	12	8.2	2.4	127	104	12	11	0.10	2.6

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 1993	21...	146	0.010	0.570	0.030	0.40	0.050	0.040	0.020	10	19	<3
MAR 1994	21...	159	0.030	1.20	0.160	0.70	0.110	0.070	0.050	20	24	<3
MAY	04...	106	<0.010	0.220	0.020	1.1	0.090	0.020	0.010	20	14	<3
JUL	19...	143	0.020	0.440	0.020	0.80	0.110	0.020	0.010	--	--	--
AUG	15...	157	0.010	0.330	0.020	0.80	0.100	0.030	<0.010	10	18	<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 1993	21...	260	<4	9	<10	<1	<1	43	<6	21	48
MAR 1994	21...	450	<4	12	<10	<1	<1	39	<6	20	55
MAY	04...	210	<4	4	<10	<1	<1	30	<6	59	32
JUL	19...	--	--	--	--	--	--	--	--	26	78
AUG	15...	9	<4	2	<10	<1	<1	42	<6	23	83

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





## 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 Dubai is owned by the Consolidated Water Power Co. Petenwell and Castle Rock are owned and operated by the Wisconsin River Power Co., which furnished the gage heights and capacity tables for those two reservoirs. Month-end contents are computed by the U.S. Geological Survey. The usable capacity of these reservoirs is usually less in summer than in winter because the allowable summer drawdown is limited by the Department of Natural Resources in the interest of riparian property owners. There are occasionally formal or informal changes in capacity and in minimum drawdown levels. Usable capacity figures listed below are for winter regulation.

- 05390100 Lac Vieux Desert on Wisconsin River, lat 46°07'18", long 89°09'07", in SE 1/4 NW 1/4 sec.17, T.42 N., R.11 E., Vilas County, 4.8 mi northwest of Phelps, used as a reservoir since 1908, has a usable capacity of 652,000,000 ft<sup>3</sup>. Drainage area, 34.4 mi<sup>2</sup>.
- 05390150 Twin Lakes on Twin River, lat 46°01'20", long 89°10'05", in SW 1/4 NE 1/4 sec.19, T.41 N., R.11 E., Vilas County, 5.0 mi southwest of Phelps, used as a reservoir since 1908, has a usable capacity of 313,000,000 ft<sup>3</sup>. Drainage area, 26 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 16.9 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 12.1 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 28.8 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. This reservoir includes 18 lakes controlled by the same dam. Drainage area, 142 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 22.9 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 2.47 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 48.4 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 19 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 73.1 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 86.2 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 744 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 19.8 mi<sup>2</sup>.
- 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 Rhinelanders city limits, used as a reservoir since 1908, has a usable capacity of 218,000,000 ft<sup>3</sup>. Drainage area, 95 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 72.5 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 15.2 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 310 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 544 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 158 mi<sup>2</sup>.

## WISCONSIN RIVER BASIN

## RESERVOIRS IN WISCONSIN RIVER BASIN--CONTINUED

- 05399600 Big Eau Pleine Reservoir on Big Eau Pleine River, lat 44°43'52", long 89°45'35", in SW 1/4 sec.14, T.26 N., R.6 E., Marathon County, 3.0 mi northeast of Dancy, used as a reservoir since 1937, has a capacity of 4,457,000,000 ft<sup>3</sup>. Drainage area, 363 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 4,900 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 5,970 mi<sup>2</sup>.
- 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 ft<sup>3</sup>. Drainage area, 7,056 mi<sup>2</sup>.

## MONTH-END CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1993 to SEPTEMBER 1994

	LAC VIEUX DESERT	TWIN LAKES	BUCKATABON LAKE	SEVENMILE LAKE	LOWER NINEMILE LAKE	BURNT ROLLWAYS RESERVOIR	LONG LAKE	DEERSKIN LAKE
SEPT. 30.....	295	280	115	63	98	542	192	17
OCT. 31.....	220	255	96	40	73	466	151	15
NOV. 30.....	135	164	70	23	16	276	119	10
DEC. 31.....	54	56	47	6	6	21	62	8
JAN. 31.....	31	2	34	0	30	0	13	8
FEB. 28.....	38	11	28	0	43	0	18	7
MAR. 31.....	65	25	56	17	71	0	16	10
APR. 30.....	147	92	97	38	101	242	105	15
MAY 31.....	145	120	116	48	101	517	114	15
JUNE 30.....	143	145	115	67	92	539	88	25
JULY 31.....	167	172	115	69	102	546	90	16
AUG. 31.....	185	167	115	59	100	571	75	13
SEPT. 30.....	240	242	115	57	96	536	126	19

	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.....	410	72	159	264	1,303	274	132	493
OCT. 31.....	271	57	121	249	1,490	231	120	395
NOV. 30.....	275	45	80	228	1,902	164	70	229
DEC. 31.....	297	23	45	201	1,848	103	30	40
JAN. 31.....	243	16	28	177	1,425	66	0	0
FEB. 28.....	243	10	23	168	876	48	0	5
MAR. 31.....	155	24	24	165	533	79	0	98
APR. 30.....	286	47	103	223	688	185	142	234
MAY 31.....	358	55	167	272	1,067	216	141	304
JUNE 30.....	393	62	159	254	1,562	231	138	420
JULY 31.....	408	70	160	265	1,702	261	137	491
AUG. 31.....	390	67	161	272	1,166	246	137	496
SEPT. 30.....	406	72	160	268	2,066	316	133	499

	SQUIRREL LAKE	WILLOW RESERVOIR	LAKE NOKOMIS	SPIRIT RIVER FLOWAGE	BIG EAU PLEINE RESERVOIR	LAKE DUBAY	PETENWELL FLOWAGE	CASTLE ROCK FLOWAGE
SEPT. 30.....	159	1,811	1,172	342	4,295	3,954	17,509	5,799
OCT. 31.....	137	1,888	1,270	331	4,130	4,002	17,632	5,748
NOV. 30.....	66	2,204	1,237	399	3,969	4,026	17,386	5,594
DEC. 31.....	16	1,991	874	351	3,685	3,876	17,316	5,499
JAN. 31.....	22	1,362	643	243	2,622	3,467	15,402	5,400
FEB. 28.....	22	838	432	191	2,342	2,781	14,434	3,016
MAR. 31.....	55	565	395	142	2,137	3,311	14,306	3,510
APR. 30.....	110	1,295	1,006	701	4,172	4,386	17,439	6,296
MAY 31.....	146	1,799	1,345	638	4,112	4,188	17,756	5,863
JUNE 30.....	166	2,169	1,394	584	3,548	4,156	17,756	5,903
JULY 31.....	168	2,186	1,216	443	3,481	3,990	17,492	5,863
AUG. 31.....	171	1,830	1,110	314	2,697	4,163	17,764	5,929
SEPT. 30.....	172	3,138	1,690	729	2,377	4,063	17,448	6,015





## GRANT RIVER BASIN

425248090593500 RATTLESNAKE CREEK RAIN GAGE #1, ON HOLLY ROAD, NEAR BLOOMINGTON, WI

LOCATION.--Lat 42°52'48", long 90°59'35", in NE 1/4 SW 1/4 sec.29, T.5 N., R.5 W., Grant County, Hydrologic Unit 07060003, on Holly Road, 0.6 mi north of intersection with Maine Road, near Bloomington.

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

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

REMARKS.--Gage established on Oct. 16, 1990. Rainfall estimated to be 0.00 for Dec. 31, Jan. 11, 21, 22, and Feb. 11, 13, 14, 24-26, 28 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 4.06 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.06 in., June 23.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.29
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.22	.68	.33
4	.00	.00	.00	.00	.00	.00	.17	.00	.00	1.12	.02	.03
5	.00	.00	.07	.00	.00	.00	.01	.08	.00	.00	.00	.08
6	.32	.00	.06	.00	.00	.03	.00	.01	.00	.34	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.25	.62	.59	.00	.00
8	.21	.00	.00	.00	.00	.00	.02	.00	.03	.49	.00	.09
9	.19	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.01
10	.00	.00	.00	.00	.00	.00	.00	.00	.40	.00	1.05	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
12	.00	.32	.00	.00	.00	.00	.47	.00	.04	.02	.09	.00
13	.00	.00	.03	.00	.00	.00	.03	.00	.64	.27	.01	.00
14	.03	.07	.11	.00	.00	.02	.02	.17	.01	.59	.00	.00
15	.43	.02	.00	.00	.00	.00	.25	.00	.00	.00	.00	.22
16	.00	.00	.01	.00	.00	.00	.00	.00	.00	.13	.00	.00
17	.00	.00	.17	.00	.00	.00	.00	.00	.00	.38	.00	.00
18	.02	.00	.01	.00	.00	.00	.01	.00	.00	.01	.25	.00
19	.02	.00	.00	.00	.16	.01	.00	.00	1.00	.98	.74	.00
20	.19	.00	.00	.00	.18	.10	.09	.00	1.01	.14	.00	.00
21	.00	.00	.00	.00	.00	.02	.00	.00	.00	.10	.00	.02
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.41
23	.00	.00	.00	.00	.00	.00	.00	.00	1.18	3.06	.28	.37
24	.00	.00	.00	.00	.00	.00	.02	.04	.00	.01	.00	.65
25	.00	.39	.00	.00	.00	.00	2.24	.50	.00	.00	.30	1.27
26	.00	.00	.00	.00	.00	.04	.08	.01	.00	.00	.00	.01
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00
28	.00	.02	.00	.00	.00	.00	.10	.00	.00	.00	.01	.00
29	.00	.00	.00	.00	.00	.00	.00	.02	.01	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.37	.00	.00	.00	.21	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	1.41	0.82	0.46	0.00	0.34	0.22	3.88	2.26	6.83	5.82	3.36	3.78

## GRANT RIVER BASIN

175

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 Dec. 31, Jan. 3, 11, 22-24, 30, and Feb. 6, 12, 14, 24-26, 28 because recorded precipitation interpreted as collector snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.62 in., June 23, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.62 in., June 23.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	.00	.01	.00	.00	.01	.00	.12	.00	.01
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.30
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	1.16	.43
4	.00	.00	.00	.00	.00	.00	.15	.00	.00	1.66	.02	.08
5	.00	.00	.07	.00	.00	.00	.04	.12	.00	.00	.00	.05
6	.33	.00	.05	.00	.00	.01	.00	.00	.00	.01	.00	.01
7	.00	.00	.00	.00	.00	.00	.00	.29	.75	.80	.00	.00
8	.42	.00	.00	.00	.00	.00	.05	.00	.00	.50	.00	.25
9	.16	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00
10	.01	.00	.00	.00	.00	.00	.00	.00	.36	.01	.97	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.01	.00
12	.00	.39	.00	.00	.00	.00	.50	.00	.06	.05	.12	.00
13	.00	.00	.05	.00	.00	.00	.03	.00	.60	.32	.00	.00
14	.03	.10	.15	.00	.00	.02	.05	.19	.06	.98	.00	.00
15	.32	.03	.00	.00	.00	.00	.31	.00	.00	.00	.00	.17
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.22	.00	.01
17	.00	.00	.20	.00	.00	.00	.00	.00	.00	.21	.01	.00
18	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.48	.00
19	.03	.00	.00	.00	.23	.02	.00	.00	.55	.62	.42	.00
20	.23	.00	.00	.00	.19	.13	.06	.00	1.07	.62	.01	.01
21	.00	.00	.00	.00	.00	.02	.00	.00	.00	.28	.00	.04
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.53
23	.00	.00	.00	.00	.00	.01	.00	1.23	3.62	.06	.00	.26
24	.00	.02	.00	.00	.00	.00	.16	.06	.00	.01	.00	.85
25	.00	.48	.00	.00	.00	.00	1.61	.58	.00	.00	.34	.77
26	.00	.00	.00	.00	.00	.05	.14	.00	.00	.00	.01	.01
27	.00	.00	.00	.00	.00	.01	.00	.00	.00	.05	.00	.00
28	.00	.00	.00	.00	.00	.00	.16	.00	.00	.00	.02	.00
29	.00	.00	.00	.00	---	.00	.00	.03	.00	.00	.01	.00
30	.00	.00	.00	.00	---	.00	.49	.00	.01	.00	.05	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	1.57	1.02	0.52	0.00	0.43	0.27	3.75	2.51	7.09	6.60	3.63	3.78

## GRANT RIVER BASIN

424944090561600 RATTLESNAKE CREEK RAIN GAGE #3, ON HUDSON ROAD, NEAR NORTH ANDOVER, WI

LOCATION.--Lat 42°49'44", long 90°56'16", in SW 1/4 SW 1/4 sec.11, T.4 N., R.5 W., Grant County, Hydrologic Unit 07060003, on Hudson Road, 0.6 mi east of intersection with Wisconsin Highway 133, near North Andover.

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

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

REMARKS.--Gage established on Oct. 16, 1990. Rainfall estimated to be 0.00 for Jan. 3, 11, 12 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the periods Nov. 27 to Jan. 1 and Jan. 23 to Mar. 11.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 3.65 in., June 23, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.65 in., June 23.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	.00	.00	.00	.07	.05	.01
2	.00	.00	---	.00	---	---	.00	.00	.00	.00	.00	.26
3	.00	.00	---	.00	---	---	.00	.00	.00	.02	.46	.39
4	.00	.00	---	.00	---	---	.11	.00	.00	1.40	.03	.07
5	.00	.00	---	.00	---	---	.00	.07	.00	.00	.00	.11
6	.31	.00	---	.00	---	---	.00	.00	.00	.00	.00	.00
7	.00	.00	---	.00	---	---	.00	.21	.50	.72	.00	.00
8	.30	.00	---	.00	---	---	.03	.00	.00	.46	.00	.23
9	.14	.00	---	.00	---	---	.00	.00	.00	.00	.00	.01
10	.00	.00	---	.00	---	---	.00	.00	.28	.00	.77	.00
11	.00	.00	---	.00	---	---	.00	.00	.01	.00	.01	.00
12	.00	.29	---	.00	---	.00	.48	.00	.01	.12	.06	.00
13	.00	.00	---	.00	---	.00	.03	.00	.49	.23	.01	.00
14	.01	.12	---	.00	---	.01	.19	.07	.01	1.17	.00	.00
15	.13	.02	---	.00	---	.00	.39	.00	.00	.00	.00	.18
16	.01	.00	---	.00	---	.00	.00	.00	.00	.19	.00	.00
17	.00	.00	---	.00	---	.00	.00	.00	.00	.19	.00	.00
18	.00	.00	---	.00	---	.00	.00	.00	.00	.00	.26	.00
19	.02	.00	---	.00	---	.00	.00	.00	.30	.45	.32	.00
20	.14	.00	---	.00	---	.10	.04	.00	1.21	.79	.00	.01
21	.01	.00	---	.00	---	.01	.00	.00	.00	.19	.00	.00
22	.00	.00	---	.00	---	.00	.00	.00	.00	.01	.00	.46
23	.00	.00	---	---	---	.00	.00	.93	3.65	.04	.00	.24
24	.00	.00	---	---	---	.00	.08	.04	.00	.00	.00	.84
25	.00	.29	---	---	---	.00	.66	.61	.00	.00	.37	.42
26	.00	.00	---	---	---	.03	.27	.00	.00	.00	.01	.01
27	.00	---	---	---	---	.00	.00	.00	.00	.05	.00	.00
28	.00	---	---	---	---	.00	.10	.00	.00	.00	.02	.00
29	.00	---	---	---	---	.00	.00	.03	.00	.00	.02	.00
30	.00	---	---	---	---	.00	.38	.00	.00	.00	.04	.00
31	.00	---	---	---	---	.00	---	.00	---	.00	.00	---
TOTAL	1.07	---	---	---	---	---	2.76	1.96	6.46	6.10	2.43	3.24

## GRANT RIVER BASIN

177

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 Dec. 31, Jan. 1, 11, 22, 23, 30, Feb. 11, 13, 14, 22, 24-26, 28, and Mar. 2 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the period June 21-23.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.89 in., June 14, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.77 in., July 4.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.46	.01
2	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.25
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	1.03	.38
4	.00	.00	.00	.00	.00	.00	.11	.00	.00	1.77	.02	.07
5	.00	.00	.06	.00	.00	.00	.03	.09	.00	.00	.00	.08
6	.38	.00	.03	.00	.00	.00	.00	.00	.00	.02	.00	.01
7	.00	.00	.00	.00	.00	.00	.00	.23	.30	1.06	.00	.00
8	.39	.00	.00	.00	.00	.00	.04	.00	.00	.44	.00	.32
9	.15	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.31	.00	.86	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.37	.00	.00	.00	.00	.56	.00	.04	.29	.12	.00
13	.00	.00	.04	.00	.00	.00	.04	.00	.56	.35	.00	.00
14	.01	.13	.11	.00	.00	.01	.03	.18	.02	1.16	.00	.00
15	.20	.03	.01	.00	.00	.00	.27	.00	.00	.00	.00	.16
16	.01	.00	.00	.00	.00	.00	.00	.00	.00	.16	.00	.00
17	.00	.00	.17	.00	.00	.00	.00	.00	.00	.02	.00	.00
18	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.41	.00
19	.03	.00	.00	.00	.20	.01	.00	.00	.57	.69	.51	.00
20	.09	.00	.00	.00	.17	.13	.04	.00	.65	.65	.00	.01
21	.00	.00	.00	.00	.00	.02	.00	.00	---	.06	.00	.02
22	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00	.45
23	.00	.00	.00	.00	.00	.00	.00	.90	---	.02	.01	.18
24	.00	.02	.00	.00	.00	.00	.16	.07	.00	.00	.00	.97
25	.00	.42	.00	.00	.00	.00	.99	.37	.00	.00	.50	.79
26	.00	.00	.00	.00	.00	.05	.08	.00	.00	.00	.00	.02
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	.00	.01
28	.00	.00	.00	.00	.00	.00	.16	.00	.00	.00	.03	.00
29	.00	.00	.00	.00	---	.00	.00	.03	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.44	.02	.00	.00	.03	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	1.26	0.97	0.43	0.00	0.37	0.24	2.95	1.89	---	6.98	3.98	3.73

## GRANT RIVER BASIN

05413443 KUENSTER 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 current year (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 Dec. 31, Jan. 1, 10, 12, 13, 20, 23, and Feb. 6, 11, 14, 24, 26, 28 because recorded precipitation interpreted as collector snowmelt. Rainfall data missing for the periods June 21 to July 6 and Aug. 10-21.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.66 in., July 10, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.50 in., July 14.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.48	.01
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.24
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.43	.41
4	.00	.00	.00	.00	.00	.00	.09	.00	.00	---	.20	.06
5	.00	.00	.06	.00	.00	.00	.06	.09	.00	---	.00	.04
6	.27	.00	.04	.00	.00	.00	.00	.01	.00	---	.00	.01
7	.00	.00	.00	.00	.00	.00	.00	.24	.24	1.00	.00	.00
8	.39	.00	.00	.00	.00	.00	.04	.00	.00	.47	.00	.18
9	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.43	.00	---	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	---	.00
12	.00	.42	.00	.00	.00	.00	.52	.00	.26	.24	---	.00
13	.01	.00	.03	.00	.00	.00	.03	.00	.29	.32	---	.00
14	.00	.12	.10	.00	.00	.01	.36	.09	.01	1.50	---	.00
15	.14	.03	.00	.00	.00	.00	.07	.00	.00	.00	---	.19
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11	---	.00
17	.00	.00	.18	.00	.00	.00	.00	.00	.00	.01	---	.00
18	.01	.00	.01	.00	.00	.00	.00	.00	.00	.00	---	.00
19	.03	.00	.00	.00	.29	.00	.00	.00	.52	.36	---	.00
20	.14	.00	.00	.00	.21	.13	.03	.00	1.09	.94	---	.01
21	.00	.00	.00	.00	.00	.02	.00	.00	---	.02	---	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.01	.41
23	.00	.00	.00	.00	.00	.00	.00	.74	---	.01	.00	.17
24	.00	.00	.00	.00	.00	.00	.08	.06	---	.00	.00	1.07
25	.00	.37	.00	.00	.00	.00	1.39	.27	---	.00	.41	.51
26	.00	.00	.00	.00	.00	.05	.13	.00	---	.00	.02	.02
27	.00	.00	.00	.00	.00	.00	.00	.00	---	.01	.00	.00
28	.00	.00	.00	.00	.00	.00	.10	.00	---	.00	.01	.00
29	.00	.00	.00	.00	---	.00	.00	.07	---	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.48	.00	---	.00	.04	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	1.13	0.94	0.42	0.00	0.50	0.21	3.38	1.57	---	---	---	3.33

GRANT RIVER BASIN

179

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 mi<sup>2</sup>.

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: Oct. 10-30, Dec. 3-7, and ice-affected periods, Nov. 30, Dec. 11-13, and Dec. 21 to Mar. 3. Records good except those for estimated daily discharges, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	6.6	5.8	5.6	4.3	4.8	4.8	5.8	2.9	4.5	4.2	3.4
2	8.2	6.4	5.8	5.6	4.3	5.0	4.8	4.6	3.0	4.3	5.3	3.5
3	7.9	6.6	6.0	5.4	4.3	7.0	4.6	4.2	2.9	4.2	6.1	5.0
4	8.2	6.8	6.0	5.4	4.3	64	4.6	4.2	3.0	19	7.4	4.5
5	8.2	6.7	6.4	5.2	4.3	39	4.9	4.2	3.1	12	4.6	4.2
6	9.3	6.6	6.6	5.0	4.3	17	4.6	4.2	3.1	5.1	4.2	3.8
7	9.4	6.6	6.2	5.0	4.2	11	4.4	4.5	3.5	5.0	4.2	3.5
8	9.0	6.4	6.1	5.0	4.1	8.5	4.4	4.3	3.6	14	4.2	3.6
9	11	6.4	6.1	5.2	4.1	6.9	4.4	3.9	3.2	7.7	3.7	4.0
10	8.8	6.2	6.1	5.4	4.0	6.1	4.3	3.6	3.4	5.3	6.0	3.4
11	8.4	6.3	6.0	5.6	4.0	5.9	4.0	3.5	3.9	4.6	5.5	2.9
12	8.2	6.6	6.0	5.4	4.0	6.3	5.7	3.5	3.8	4.5	4.4	2.9
13	8.0	8.4	6.2	5.0	4.1	6.1	6.3	3.4	4.9	5.5	4.4	2.9
14	8.0	7.0	6.4	4.8	4.2	6.2	5.2	3.5	4.5	32	4.0	2.9
15	8.2	6.7	6.4	4.4	4.2	6.7	6.8	3.8	4.1	9.4	3.8	3.0
16	9.0	6.7	6.4	4.4	4.3	6.4	5.0	3.2	4.0	7.3	3.6	3.1
17	7.8	6.7	6.6	4.3	4.3	6.0	4.4	3.1	3.9	6.9	3.6	2.9
18	7.6	6.8	6.7	4.2	7.0	6.1	4.3	3.1	4.3	6.0	6.0	2.9
19	7.6	7.0	6.7	4.2	130	6.0	4.0	3.0	4.5	5.5	5.2	2.9
20	7.6	6.8	6.6	4.2	30	6.0	3.6	3.1	9.0	24	5.0	2.9
21	7.6	6.4	6.4	4.2	10	7.3	3.7	3.0	5.5	8.0	4.2	2.9
22	7.0	6.4	5.8	4.4	6.0	6.5	3.7	3.0	4.3	6.8	3.9	3.4
23	7.2	6.4	5.8	4.6	5.6	6.1	3.6	4.3	26	5.8	3.9	3.6
24	7.2	6.1	5.6	4.7	5.4	5.9	3.9	5.1	32	5.2	3.9	5.1
25	7.2	6.7	5.4	4.8	5.2	5.3	4.5	4.1	8.4	4.8	3.6	9.6
26	7.2	7.2	5.4	4.8	4.8	5.4	17	4.2	6.6	4.7	4.9	7.3
27	7.0	8.0	5.4	4.8	4.6	5.6	4.9	3.5	5.7	4.6	4.1	4.8
28	7.6	6.4	5.0	4.7	4.7	5.5	4.4	3.3	5.1	4.5	3.6	4.1
29	7.0	6.2	5.0	4.5	---	5.2	4.7	3.2	4.7	4.3	3.3	3.7
30	6.8	6.0	5.0	4.4	---	4.9	5.3	3.3	4.5	4.3	3.6	3.6
31	6.7	---	5.2	4.3	---	4.8	---	3.2	---	4.3	3.8	---
TOTAL	247.4	200.1	185.1	149.5	284.6	293.5	150.8	116.9	181.4	244.1	138.2	116.3
MEAN	7.98	6.67	5.97	4.82	10.2	9.47	5.03	3.77	6.05	7.87	4.46	3.88
MAX	11	8.4	6.7	5.6	130	64	17	5.8	32	32	7.4	9.6
MIN	6.7	6.0	5.0	4.2	4.0	4.8	3.6	3.0	2.9	4.2	3.3	2.9
CFSM	.83	.70	.62	.50	1.06	.99	.52	.39	.63	.82	.46	.40
IN.	.96	.78	.72	.58	1.10	1.14	.58	.45	.70	.95	.54	.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1994, BY WATER YEAR (WY)

	1992	1993	1994	1992	1993	1994	1992	1993	1994	1992	1993	1994
MEAN	4.64	5.38	5.13	4.87	8.01	15.6	7.58	6.95	7.81	14.7	6.99	5.61
MAX	7.98	6.67	5.97	6.66	11.0	32.2	11.8	14.0	14.3	32.2	14.3	9.91
(WY)	1994	1994	1994	1992	1992	1993	1993	1993	1993	1993	1993	1993
MIN	2.40	4.33	3.82	3.13	2.77	5.02	5.03	3.04	3.08	3.95	2.18	3.04
(WY)	1993	1993	1993	1993	1993	1992	1994	1992	1992	1992	1992	1992

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1992 - 1994
ANNUAL TOTAL	4762.9	2307.9	
ANNUAL MEAN	13.0	6.32	7.78
HIGHEST ANNUAL MEAN			12.2
LOWEST ANNUAL MEAN			4.82
HIGHEST DAILY MEAN	201	Jul 9	201 Jul 9 1993
LOWEST DAILY MEAN	(a)2.4	Feb 17	1.7 (c)Aug 22 1992
ANNUAL SEVEN-DAY MINIMUM	(a)2.5	Feb 22	1.8 Aug 30 1992
INSTANTANEOUS PEAK FLOW		(d) Feb 19	(e)834 Jul 10 1993
INSTANTANEOUS PEAK STAGE		(f) Feb 19	8.74 Jul 10 1993
INSTANTANEOUS LOW FLOW		2.8 (g)Jun 6,7	(h)1.0 Jan 28 1993
ANNUAL RUNOFF (CFSM)	1.36	.66	.81
ANNUAL RUNOFF (INCHES)	18.48	8.95	11.02
10 PERCENT EXCEEDS	20	8.0	13
50 PERCENT EXCEEDS	8.7	5.0	4.6
90 PERCENT EXCEEDS	3.0	3.5	2.7

- (a) Ice affected
- (b) Also occurred June 3 and Sept. 11-14, 17-21
- (c) Also occurred Aug. 31 and Sept. 1, 1992
- (d) Unknown (ice affected)
- (e) From rating curve extended above 200 ft<sup>3</sup>/s
- (f) Gage height unknown
- (g) Also occurred Sept. 13-15, 18-20
- (h) 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 current year.  
 TOTAL-PHOSPHORUS DISCHARGE: October 1992 to current year.

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, 31.5°C, July 17-18, 1994; 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.  
 SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 2,390 tons, Mar. 30, 1993; minimum observed, 0.04 ton, Oct. 6-7, 11-15, and Apr. 11, 1994.  
 TOTAL-PHORPHORUS DISCHARGE: Maximum daily, 4,950 lbs, Mar. 30, 1993; minimum observed, 0.66 lbs, Apr. 11, 1994.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 31.5°C, July 17-18; minimum observed, 0.0°C, Nov. 7.  
 DISSOLVED OXYGEN: Maximum observed, 19.0 mg/L, June 12; minimum observed, 2.0 mg/L, June 20.  
 SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 1,580 tons, Feb. 19; minimum observed, 0.04 ton, Apr. 11.  
 TOTAL-PHORPHORUS DISCHARGE: Maximum daily, 3,780 lbs, Feb. 19; minimum observed, 0.66 lbs, Apr. 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993					MAR 1994				
14...	1305	8.2	700	11.5	15...	1120	--	--	5.0
DEC 03...	1130	6.0	750	2.0	APR 22...	1130	3.5	680	11.0
JAN 1994					MAY 18...	1315	3.2	710	19.5
26...	0955	4.8	300	0.0	JUL 13...	1120	6.0	705	19.0
FEB 17...	1230	4.3	710	0.5	AUG 22...	1240	4.0	725	18.5
MAR 02...	1319	5.0	705	0.5					

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)
OCT 1993							
*10...	1245	8.8	--	--	8.4	<1.0	800
10...	1250	8.8	--	--	8.5	3.0	<10
*24...	1315	7.2	--	--	8.4	1.4	130
NOV *02...	1315	--	6.4	--	8.2	1.5	210
*23...	1520	--	6.4	--	9.3	<1.0	70
DEC *03...	1115	6.0	--	--	8.2	<1.0	90

DATE	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, 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 1993						
10...	6	478	2	7.30	0.016	0.120
10...	8	20	3	--	<0.005	0.020
24...	6	472	7	--	0.019	0.070
NOV 02...	10	464	6	--	<0.005	0.060
23...	14	432	2	--	0.016	0.060
DEC 03...	17	466	7	--	0.025	0.060

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

GRANT RIVER BASIN

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)
JAN 1994							
*04...	1115	5.4	--	--	8.0	1.1	40
*26...	1000	4.8	--	--	8.0	1.5	40
FEB							
*15...	1100	4.2	--	--	8.2	1.4	10
20...	1015	30	--	--	7.6	25	--
*20...	1044	30	--	--	7.6	20	--
20...	1045	30	--	--	7.6	21	--
20...	2130	30	--	--	7.6	16	--
MAR							
04...	1345	--	31	--	7.6	--	--
04...	1430	--	64	--	7.6	--	--
04...	1500	--	113	--	7.3	--	--
04...	1515	--	142	--	7.4	--	--
04...	1600	--	166	--	7.4	--	--
04...	2115	--	127	--	7.4	--	--
04...	2330	--	74	--	7.3	--	--
05...	0400	--	30	--	7.6	--	--
05...	1430	--	60	--	7.6	--	--
06...	0100	--	32	--	7.7	--	8800
*06...	1140	--	12	--	7.8	--	6400
*15...	1120	--	6.4	5.0	8.3	3.2	60
APR							
*11...	1410	--	4.0	--	8.6	1.7	10
*28...	1340	--	4.6	--	8.3	<1.0	6900
MAY							
*18...	1345	--	3.1	--	8.4	2.7	550
*31...	1100	--	3.3	--	8.3	4.0	5000
JUN							
*13...	1135	--	4.9	--	8.4	4.2	2600
20...	0400	--	13	--	8.0	10	25000
20...	0530	--	23	--	7.9	11	43000
20...	0900	--	12	--	7.7	41	>250000

DATE	RESIDUE TOTAL AT 105 DEG C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG C, (MG/L) (00500)	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)
JAN 1994						
04...	16	486	3	--	0.068	0.070
26...	50	512	11	--	0.085	0.100
FEB						
15...	26	478	6	--	0.054	0.090
20...	314	568	40	--	1.80	2.12
20...	756	1080	56	--	1.92	1.80
20...	300	982	46	--	1.67	1.65
20...	710	1070	62	--	1.52	1.80
MAR						
04...	1170	1570	64	--	1.64	1.57
04...	4760	4810	236	--	1.50	4.16
04...	7580	7600	400	--	4.14	7.98
04...	8000	8120	490	--	4.68	8.31
04...	6490	8040	400	--	4.54	7.74
04...	5150	5850	270	--	1.82	5.40
04...	1430	1760	100	--	1.86	2.69
05...	332	588	40	--	1.82	1.94
05...	1340	1660	96	--	1.38	2.36
06...	496	724	64	--	1.42	1.54
06...	86	398	14	--	1.30	0.810
15...	42	482	5	--	0.226	0.200
APR						
11...	4	422	2	--	0.007	0.030
28...	33	478	5	--	0.145	0.190
MAY						
18...	19	490	4	--	0.118	0.170
31...	105	578	13	--	0.160	0.240
JUN						
13...	81	506	11	--	0.071	0.220
20...	318	686	38	--	0.125	0.610
20...	656	1010	70	--	0.259	1.20
20...	672	1090	136	--	3.44	4.20

\* 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 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER 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)	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)
JUN 1994										
23...	1130	13	8.1	6.1	--	157	592	20	0.092	0.510
23...	1615	32	7.8	20	--	678	1000	94	0.620	2.30
23...	1730	41	7.8	17	--	1040	1370	112	0.398	2.30
23...	1800	50	7.8	20	--	1240	1560	132	0.482	2.52
23...	1845	61	7.7	23	--	1730	1940	176	0.527	2.90
23...	2000	74	7.6	24	--	1890	2170	200	0.712	2.20
24...	0215	56	7.6	13	--	948	1170	100	0.434	1.70
24...	0815	41	7.8	9.8	--	544	800	64	0.279	1.30
24...	1230	27	7.8	7.6	--	272	546	44	0.266	1.10
*24...	1235	27	7.8	9.0	--	260	528	36	0.301	1.06
*28...	1045	5.3	8.4	1.8	3500	28	512	8	0.029	0.200
JUL										
04...	1400	19	8.2	7.8	--	392	828	44	0.051	0.670
04...	1445	42	8.0	21	270000	1520	1900	140	0.254	2.12
04...	1500	63	8.0	26	330000	2580	2930	250	0.247	2.87
04...	1600	77	7.7	32	1100000	3220	3430	350	0.930	5.86
04...	1715	54	7.7	18	310000	2120	2460	240	0.862	3.09
04...	1815	38	7.6	18	--	1940	2210	250	0.353	3.78
04...	1915	25	7.7	13	--	1280	1600	170	0.284	3.10
*05...	1023	5.3	8.0	6.8	130000	163	502	22	0.257	0.770
*12...	1250	4.4	8.4	2.5	--	22	520	4	0.036	0.210
14...	0230	21	8.2	8.7	--	560	978	52	0.070	0.450
14...	0315	79	8.0	26	--	3390	3650	250	0.232	0.430
14...	0330	127	7.8	28	--	7370	7370	580	1.16	0.250
14...	0345	140	7.7	23	--	7290	7060	620	0.814	0.300
14...	0415	111	7.6	25	--	4600	4640	410	0.653	0.240
14...	0530	88	7.8	25	--	2470	2660	240	0.623	0.760
14...	0630	61	7.8	16	--	1660	1850	168	0.432	1.48
14...	0715	44	7.8	12	--	1140	1350	128	0.272	1.17
14...	1030	29	7.8	13	--	628	894	92	0.414	1.32
*20...	0100	18	8.2	7.0	--	522	--	--	0.065	0.790
20...	0145	42	8.1	14	--	1390	--	--	0.124	2.06
20...	0200	64	8.0	20	--	2380	--	--	0.516	3.00
20...	0445	47	7.8	19	--	1420	--	--	0.236	2.56
20...	0530	33	7.8	--	--	796	--	--	0.266	2.18
20...	1025	25	7.9	--	--	372	--	48	0.196	1.47
*20...	1026	26	7.9	11	--	346	--	--	0.226	1.48
*25...	1245	4.6	8.2	<1.0	--	15	--	--	0.013	0.110
AUG										
*08...	1207	4.2	8.3	2.0	--	16	--	--	0.022	0.098
*22...	1300	4.0	8.4	<1.0	--	22	--	--	0.027	0.148
SEP										
*06...	1030	4.0	8.3	1.4	--	13	--	--	0.033	0.135
*20...	1015	2.9	8.2	1.7	--	15	--	--	0.047	0.123

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLES

GRANT RIVER BASIN

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	13.5	10.5	11.5	5.0	1.0	3.0	4.0	.5	2.0	1.5	1.5	1.5
2	11.5	8.0	10.0	6.5	3.5	5.0	5.0	2.5	4.0	1.5	1.5	1.5
3	14.0	7.0	10.5	7.5	3.5	5.5	---	---	---	1.5	1.5	1.5
4	14.0	10.0	12.0	9.5	7.0	8.0	---	---	---	1.5	1.5	1.5
5	13.0	7.0	10.0	8.5	3.5	6.0	---	---	---	1.5	1.5	1.5
6	16.5	10.0	13.0	3.5	1.0	2.5	---	---	---	1.5	1.5	1.5
7	19.0	13.5	16.0	4.0	.0	1.5	---	---	---	1.5	1.5	1.5
8	17.5	13.0	15.5	6.0	2.0	4.0	---	---	---	1.5	1.5	1.5
9	13.0	8.0	10.0	6.0	2.0	4.0	5.5	2.0	3.5	1.5	1.5	1.5
10	---	---	---	7.0	3.5	5.0	5.0	1.0	3.5	1.5	1.5	1.5
11	---	---	---	7.5	4.0	5.5	1.0	.5	1.0	1.5	1.5	1.5
12	---	---	---	6.0	2.5	4.0	2.5	.5	1.0	1.5	1.5	1.5
13	---	---	---	8.0	6.0	7.5	4.5	2.5	3.5	1.5	1.5	1.5
14	---	---	---	7.0	6.5	6.5	5.0	4.0	4.5	1.5	1.5	1.5
15	---	---	---	6.5	4.0	5.5	6.0	3.5	4.5	1.5	1.5	1.5
16	---	---	---	5.0	3.5	4.0	5.5	4.0	4.5	1.5	1.5	1.5
17	---	---	---	7.0	4.5	5.5	5.5	5.0	5.0	1.5	1.0	1.0
18	---	---	---	5.0	2.0	4.0	5.5	4.5	5.0	1.5	1.0	1.0
19	---	---	---	6.0	1.0	4.5	4.5	4.0	4.5	1.0	1.0	1.0
20	---	---	---	3.5	.0	2.0	4.5	1.5	3.0	1.0	1.0	1.0
21	---	---	---	6.0	2.5	4.0	2.0	1.0	1.5	1.0	1.0	1.0
22	---	---	---	5.5	3.0	4.5	2.5	1.0	2.0	1.0	1.0	1.0
23	---	---	---	7.0	4.0	5.5	1.5	1.0	1.0	1.0	1.0	1.0
24	---	---	---	5.5	4.0	4.5	1.5	1.0	1.0	1.0	1.0	1.0
25	---	---	---	4.5	3.5	4.0	1.5	1.0	1.0	1.0	1.0	1.0
26	---	---	---	4.0	.5	2.0	1.5	1.5	1.5	1.0	1.0	1.0
27	---	---	---	1.0	.5	.5	1.5	1.5	1.5	1.0	1.0	1.0
28	---	---	---	2.5	.5	1.5	1.5	1.5	1.5	1.0	1.0	1.0
29	---	---	---	2.0	.5	1.0	1.5	1.5	1.5	1.0	1.0	1.0
30	---	---	---	.5	.5	.5	1.5	1.5	1.5	1.0	1.0	1.0
31	---	---	---	---	---	---	1.5	1.5	1.5	1.0	1.0	1.0
MONTH	---	---	---	9.5	.0	4.0	---	---	---	1.5	1.0	1.3
	FEBRUARY			MARCH			APRIL			MAY		
1	1.0	1.0	1.0	1.0	.5	.5	14.5	5.0	9.5	14.5	4.5	9.5
2	1.0	1.0	1.0	1.0	.5	.5	12.0	6.5	9.0	16.5	7.5	12.0
3	1.0	1.0	1.0	1.0	.5	.5	12.0	4.0	8.0	17.0	8.5	13.0
4	1.0	1.0	1.0	3.5	.5	1.5	12.0	6.0	9.0	14.0	9.5	12.0
5	1.0	1.0	1.0	4.5	.5	2.5	8.0	4.5	6.5	11.5	9.5	10.5
6	1.0	1.0	1.0	5.0	2.0	3.5	10.0	2.5	6.0	16.0	7.0	11.0
7	1.0	1.0	1.0	6.5	2.0	4.0	11.5	2.5	7.0	17.5	11.0	13.5
8	1.0	1.0	1.0	4.0	.5	2.0	8.0	5.5	6.5	17.0	10.0	14.0
9	1.0	1.0	1.0	5.0	.5	2.5	13.0	5.0	9.0	19.0	11.0	15.0
10	1.0	1.0	1.0	4.5	1.0	2.5	15.0	7.0	11.0	19.0	10.5	14.5
11	1.0	1.0	1.0	6.0	.5	3.0	10.5	7.0	9.0	19.0	13.5	16.0
12	1.0	1.0	1.0	7.5	2.5	5.0	7.5	6.5	7.0	21.0	11.0	16.0
13	1.0	1.0	1.0	6.5	3.0	5.0	10.5	6.5	8.0	22.0	12.5	17.0
14	1.0	1.0	1.0	8.0	3.0	5.0	16.0	6.0	11.0	18.0	14.5	15.5
15	1.0	1.0	1.0	8.5	3.0	5.5	13.5	7.0	10.5	20.5	13.0	16.5
16	1.0	1.0	1.0	8.0	1.5	4.5	14.5	5.0	9.5	22.0	11.5	16.5
17	1.0	1.0	1.0	6.0	2.0	4.0	16.5	7.0	11.5	21.5	12.5	17.0
18	1.0	1.0	1.0	6.5	3.5	4.5	20.0	10.5	15.0	22.5	12.5	17.5
19	1.0	1.0	1.0	8.0	2.5	5.5	17.5	11.5	14.0	23.0	12.5	18.0
20	1.0	1.0	1.0	12.0	5.0	8.5	11.5	8.0	10.0	24.5	14.0	19.0
21	1.5	1.0	1.0	12.5	7.0	9.5	16.5	8.0	12.0	25.0	15.0	20.0
22	1.5	1.0	1.0	14.0	5.5	9.5	17.5	8.0	12.5	25.0	16.5	21.0
23	1.0	.5	1.0	14.5	7.0	11.0	18.0	9.0	13.5	25.5	18.0	20.5
24	1.0	.5	.5	10.0	4.5	6.5	21.0	13.0	17.0	22.5	17.0	19.5
25	1.0	.5	.5	10.0	2.5	6.5	20.5	16.5	18.5	22.0	16.5	18.5
26	1.0	.5	.5	7.5	5.5	6.5	20.5	13.5	17.0	21.5	14.0	17.5
27	1.0	.5	.5	11.5	5.0	8.0	13.5	9.5	10.5	22.5	12.5	17.5
28	1.0	.5	.5	8.0	5.0	6.5	9.5	6.0	7.0	24.5	14.5	19.5
29	---	---	---	7.0	2.5	5.0	13.5	4.5	9.0	21.5	17.0	19.5
30	---	---	---	10.0	2.5	6.0	10.0	6.0	7.0	27.0	17.0	22.0
31	---	---	---	11.5	3.0	7.0	---	---	---	26.5	20.0	23.0
MONTH	1.5	.5	.9	14.5	.5	4.9	21.0	2.5	10.4	27.0	4.5	16.5

## GRANT RIVER BASIN

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

## WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	24.5	17.0	20.5	27.5	20.5	24.0	25.5	20.5	23.0	19.0	13.5	16.5
2	23.5	17.0	20.0	24.5	19.5	22.0	26.5	19.5	23.0	17.0	15.5	16.0
3	25.5	15.5	20.5	22.5	17.5	20.5	25.5	20.5	22.5	20.0	14.5	17.0
4	26.5	17.0	21.5	23.0	20.0	21.0	24.0	19.5	22.0	17.5	14.5	15.5
5	24.0	19.0	21.5	28.0	20.0	23.5	23.0	15.5	19.5	19.0	14.5	16.0
6	28.5	19.5	24.0	28.5	22.0	25.0	22.5	16.0	19.0	21.0	14.0	17.5
7	24.5	20.5	22.5	28.0	21.5	24.5	24.0	16.0	20.0	21.5	13.5	17.5
8	24.0	17.0	20.5	23.0	18.5	20.5	25.5	19.5	22.0	22.0	16.0	18.5
9	25.0	15.0	20.0	21.5	17.0	19.0	20.5	16.5	18.5	23.0	16.5	19.5
10	25.5	19.0	21.5	24.5	15.5	20.0	18.5	15.5	16.5	24.5	17.5	21.0
11	25.0	17.5	21.5	27.0	18.5	22.5	17.5	14.5	16.0	24.0	17.5	21.0
12	27.0	18.0	22.5	24.5	21.0	22.5	18.0	16.0	17.0	24.0	17.5	20.5
13	27.5	21.0	24.0	23.5	19.0	21.0	22.0	16.5	19.0	25.5	19.0	22.5
14	30.5	22.5	26.0	20.5	16.5	17.5	21.5	15.0	18.5	26.5	20.5	23.5
15	30.0	23.5	26.5	24.0	15.0	19.5	22.5	14.5	18.5	26.5	21.0	23.5
16	31.0	23.5	27.0	21.0	18.0	19.5	23.5	15.5	19.5	23.0	19.0	21.0
17	31.5	23.0	27.5	25.5	18.0	21.5	22.5	17.0	20.0	22.5	17.0	19.5
18	31.5	24.0	27.0	26.5	18.5	22.5	24.5	17.5	21.0	22.0	15.5	18.5
19	30.5	23.0	26.0	23.0	20.0	21.0	23.5	18.5	21.0	22.0	15.0	18.5
20	26.5	21.5	24.0	23.0	18.5	21.0	21.5	17.0	19.0	20.0	15.5	18.0
21	29.5	21.5	25.0	23.0	18.0	20.5	22.5	15.5	19.0	22.0	17.0	19.5
22	28.5	20.5	24.5	24.0	18.0	20.5	22.0	15.5	19.0	20.0	16.5	18.0
23	25.0	17.0	20.0	26.0	17.5	22.0	23.5	16.0	20.0	16.5	14.0	15.0
24	23.0	16.0	19.0	25.5	18.0	22.0	26.0	18.5	22.0	16.5	14.0	15.0
25	25.0	17.5	21.5	24.5	18.0	21.5	23.0	18.5	20.5	16.0	15.0	15.5
26	25.0	19.0	22.0	21.5	17.0	19.5	25.5	17.5	21.5	15.0	12.0	13.0
27	25.0	18.5	22.0	22.5	17.0	19.5	25.0	19.0	22.0	13.5	11.5	12.5
28	23.5	19.5	22.0	23.5	16.5	20.0	23.0	19.0	21.0	16.0	10.0	13.0
29	24.0	18.5	21.0	24.0	17.5	20.5	21.5	15.0	18.5	17.0	10.0	13.5
30	27.0	18.5	22.5	24.5	17.5	21.0	18.5	16.0	17.5	18.5	13.0	15.5
31	---	---	---	25.5	19.0	22.0	18.5	15.5	17.0	---	---	---
MONTH	31.5	15.0	22.8	28.5	15.0	21.2	26.5	14.5	19.8	26.5	10.0	17.7



## GRANT RIVER BASIN

054134435 KUENSTER CREEK AT MUSKELLUNGE ROAD NEAR NORTH ANDOVER, WI--CONTINUED

SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED(TONS PER DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	.17	.24	.24	.46	.77	.12	.48	.81	.34	.18	.14
2	.13	.17	.25	.24	.45	.85	.11	.37	.82	.33	.66	.14
3	.12	.18	.26	.23	.43	1.3	.10	.33	.77	.32	1.0	.55
4	.13	.19	.26	.23	.42	778	.09	.32	.79	78	1.9	.39
5	.13	.19	.28	.24	.41	94	.09	.31	.79	18	.20	.15
6	.14	.19	.29	.24	.40	9.6	.08	.30	.77	2.4	.18	.14
7	.14	.19	.27	.25	.37	3.1	.07	.31	.85	1.5	.18	.13
8	.14	.19	.27	.26	.35	1.7	.06	.29	.86	15	.18	.13
9	2.5	.19	.27	.29	.34	1.2	.06	.26	.76	2.2	.16	.15
10	.14	.19	.27	.31	.33	1.0	.05	.23	.80	.62	.99	.12
11	.13	.19	.26	.34	.32	.89	.04	.22	.90	.38	.74	.11
12	.13	.20	.26	.35	.31	.87	.41	.21	.84	.30	.21	.11
13	.12	1.1	.27	.34	.31	.78	.56	.20	1.1	.55	.21	.11
14	.12	.64	.28	.34	.30	.73	.08	.20	.91	182	.20	.11
15	.13	.22	.28	.33	.30	.72	.70	.21	.76	8.5	.19	.12
16	.14	.22	.28	.35	.32	.63	.10	.17	.69	4.2	.18	.12
17	.12	.22	.29	.35	.34	.54	.10	.17	.62	2.6	.19	.11
18	.12	.23	.29	.36	.77	.51	.11	.16	.62	1.5	.99	.11
19	.12	.24	.29	.38	1580	.46	.12	.17	.61	.88	.62	.12
20	.12	.24	.29	.40	66	.42	.12	.20	7.4	54	.28	.12
21	.12	.22	.28	.42	2.3	.87	.14	.23	1.1	1.8	.24	.12
22	.11	.23	.25	.46	.64	.39	.15	.26	.68	.98	.23	.14
23	.12	.23	.25	.51	.63	.34	.17	.43	78	.55	.23	.14
24	.12	.22	.24	.55	.65	.30	.21	.61	49	.33	.21	.58
25	.12	.25	.23	.59	.66	.24	.28	.53	1.8	.21	.19	4.5
26	.13	.70	.23	.61	.65	.23	12	.62	.99	.19	.51	1.9
27	.13	.95	.23	.60	.66	.22	.38	.59	.61	.19	.20	.19
28	.15	.25	.22	.57	.71	.20	.38	.62	.40	.18	.17	.16
29	.15	.25	.22	.53	---	.17	.41	.71	.36	.18	.15	.14
30	.15	.25	.22	.50	---	.15	.45	.83	.34	.18	.16	.14
31	.16	---	.22	.47	---	.13	---	.89	---	.18	.16	---
TOTAL	6.41	8.90	8.04	11.88	1659.83	901.31	17.74	11.43	155.75	378.59	11.89	11.19
WTR YR 1994	TOTAL 3182.96											

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	2.2	1.9	2.1	2.2	2.5	1.6	5.8	3.7	4.2	2.4	2.5
2	5.3	2.1	1.9	2.1	2.2	2.7	1.5	4.7	3.9	3.8	6.5	2.6
3	5.1	2.1	1.9	2.0	2.2	3.8	1.3	4.2	3.7	3.5	8.9	3.7
4	5.3	2.2	2.0	2.0	2.2	1860	1.2	4.2	3.8	291	14	5.7
5	5.3	2.2	2.1	2.0	2.2	383	1.2	4.1	3.8	105	2.5	3.0
6	7.7	2.1	2.2	2.0	2.2	83	1.1	4.1	3.8	21	2.3	2.8
7	7.9	2.1	2.0	2.0	2.1	25	.95	4.3	4.3	16	2.2	2.6
8	6.4	2.1	2.0	2.0	2.1	16	.89	4.2	4.4	57	2.2	2.6
9	13	2.1	2.0	2.1	2.1	12	.83	3.8	3.9	17	2.0	2.9
10	5.7	2.0	2.1	2.3	2.0	9.7	.76	3.4	4.2	9.3	8.6	2.4
11	5.2	2.0	2.0	2.4	2.0	8.6	.66	3.4	4.7	6.5	7.0	2.1
12	4.9	2.1	2.0	2.3	2.0	8.5	5.4	3.4	4.5	5.2	2.6	2.0
13	4.6	5.6	2.1	2.2	2.0	7.7	6.8	3.2	6.4	6.0	2.7	2.0
14	4.5	3.2	2.2	2.1	2.1	7.2	1.1	3.3	5.0	134	2.5	2.0
15	4.4	2.2	2.2	2.0	2.0	7.2	8.2	3.6	4.3	17	2.5	2.1
16	4.6	2.2	2.2	2.0	2.1	6.4	1.4	2.9	4.0	12	2.4	2.1
17	3.9	2.2	2.3	2.0	2.1	5.6	1.3	2.9	3.7	10	2.5	2.0
18	3.6	2.2	2.3	2.0	3.5	5.3	1.5	2.9	3.8	7.7	8.6	1.9
19	3.5	2.3	2.4	2.0	3780	4.9	1.5	2.8	3.8	6.3	3.8	1.9
20	3.4	2.2	2.3	2.1	270	4.6	1.5	3.0	57	226	3.7	1.9
21	3.2	2.1	2.3	2.1	20	9.6	1.8	3.0	11	10	3.2	1.9
22	2.9	2.1	2.1	2.2	6.1	4.3	1.9	3.1	6.1	7.1	3.1	2.3
23	2.8	2.1	2.1	2.4	2.9	3.8	2.1	4.5	267	5.0	3.1	2.4
24	2.7	2.0	2.0	2.5	2.8	3.4	2.6	7.0	226	3.7	3.1	6.0
25	2.7	2.2	1.9	2.6	2.7	2.8	3.4	4.6	20	2.9	2.9	25
26	2.6	3.5	2.0	2.6	2.5	2.7	71	4.8	12	2.8	5.4	13
27	2.5	4.8	2.0	2.6	2.4	2.6	4.4	4.1	7.9	2.7	3.2	3.2
28	2.7	2.1	1.8	2.5	2.5	2.4	4.4	3.9	5.6	2.6	2.8	2.8
29	2.4	2.0	1.8	2.4	---	2.1	4.8	4.0	4.9	2.5	2.5	2.4
30	2.3	1.9	1.8	2.3	---	1.8	5.4	4.2	4.4	2.5	2.7	2.4
31	2.3	---	1.9	2.3	---	1.7	---	4.1	---	2.4	2.9	---
TOTAL	138.9	72.2	63.8	68.2	4131.2	2500.9	142.49	121.5	701.6	1002.7	124.8	112.2
WTR YR 1994	TOTAL 9180.49											

GRANT RIVER BASIN

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05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI

LOCATION.--Lat 42°46'49", long 90°56'32", in SE 1/4 NE 1/4 sec.34, T.4 N., R.5 W., Grant County, Hydrologic Unit 07060003, on right bank 100 ft upstream of Atkinson Road, 2.7 mi southeast of North Andover.

DRAINAGE AREA.--42.4 mi<sup>2</sup>.

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: Ice-affected period, Dec. 23 to Mar. 3. Records good except those for ice-affected period, which is poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	36	32	28	22	24	22	29	17	36	19	19
2	43	37	35	28	22	25	22	25	17	33	20	19
3	44	38	33	27	22	27	23	24	17	32	22	25
4	44	39	36	26	22	291	24	22	17	70	24	22
5	41	38	36	25	22	164	25	22	17	38	19	21
6	48	35	38	25	22	63	23	22	17	26	19	21
7	45	35	34	25	22	39	23	24	19	27	19	21
8	44	36	34	25	22	31	23	23	18	50	19	22
9	52	35	35	27	22	29	24	20	17	30	18	22
10	42	36	34	28	21	28	22	19	18	26	26	21
11	41	37	30	28	21	26	21	19	20	24	24	19
12	41	37	31	27	22	28	26	18	18	24	21	19
13	40	44	32	25	22	28	28	19	22	25	21	19
14	42	37	34	24	22	29	25	19	19	82	20	19
15	44	37	34	22	23	30	30	20	18	28	19	20
16	47	36	32	22	24	28	25	18	17	24	18	20
17	42	36	34	22	25	27	22	18	17	24	18	19
18	41	35	35	22	28	27	22	17	16	22	25	18
19	41	36	33	22	600	26	22	18	16	21	24	18
20	41	33	33	22	250	27	21	18	37	74	27	18
21	42	35	31	22	45	30	21	18	21	27	22	18
22	37	34	30	23	34	28	21	17	18	27	21	21
23	39	34	29	23	30	28	22	26	115	23	21	21
24	39	34	28	23	27	25	23	26	74	22	21	26
25	39	38	27	23	26	24	23	23	23	21	21	44
26	39	38	27	23	25	24	29	24	19	20	24	31
27	38	34	27	23	24	25	28	19	27	20	22	23
28	40	34	25	23	24	24	26	18	37	20	22	22
29	37	33	25	23	---	23	25	18	36	19	21	20
30	35	31	25	23	---	22	26	18	36	20	21	20
31	35	---	26	22	---	22	---	17	---	19	21	---
TOTAL	1290	1078	975	751	1491	1272	717	638	780	954	659	648
MEAN	41.6	35.9	31.5	24.2	53.2	41.0	23.9	20.6	26.0	30.8	21.3	21.6
MAX	52	44	38	28	600	291	30	29	115	82	27	44
MIN	35	31	25	22	21	22	21	17	16	19	18	18
CFSM	.98	.85	.74	.57	1.26	.97	.56	.49	.61	.73	.50	.51
IN.	1.13	.95	.86	.66	1.31	1.12	.63	.56	.68	.84	.58	.57

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1994, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	16.5	18.8	17.6	20.0	27.3	45.1	23.8	20.6
MAX	41.6	35.9	31.5	27.8	53.2	130	49.2	52.3
(WY)	1994	1994	1994	1992	1994	1993	1993	1991
MIN	8.14	7.96	6.06	6.91	8.35	20.5	9.60	10.7
(WY)	1991	1991	1990	1991	1991	1990	1990	1989

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1987 - 1994
ANNUAL TOTAL	21173	11253	
ANNUAL MEAN	58.0	30.8	24.4
HIGHEST ANNUAL MEAN			53.5
LOWEST ANNUAL MEAN			11.9
HIGHEST DAILY MEAN	844	Jul 9	(a)600 Feb 19
LOWEST DAILY MEAN	(a)13	(b)Feb 17	16 Jun 18,19
ANNUAL SEVEN-DAY MINIMUM	(a)14	Feb 22	17 May 31
INSTANTANEOUS PEAK FLOW			(c)1150 Mar 4
INSTANTANEOUS PEAK STAGE			(e)8.29 Feb 19
INSTANTANEOUS LOW FLOW			15 Jun 19
ANNUAL RUNOFF (CFSM)	1.37	.73	.58
ANNUAL RUNOFF (INCHES)	18.58	9.87	7.82
10 PERCENT EXCEEDS	87	39	41
50 PERCENT EXCEEDS	40	25	16
90 PERCENT EXCEEDS	18	19	7.8

- (a) Ice affected
- (b) Also occurred Feb. 24-27
- (c) Gage height, 5.78 ft; discharge may have been higher on Feb. 19 event during ice period
- (d) On basis of contracted-opening measurement
- (e) Backwater from ice

GRANT RIVER BASIN

05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 1987 to current year.  
 DISSOLVED OXYGEN: July 1987 to current year.  
 SUSPENDED-SOLIDS DISCHARGE: October 1991 to 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, 29.0°C, July 16-18; minimum observed, 0.0°C, Feb. 24, 26.  
 DISSOLVED OXYGEN: Maximum observed, 17.3 mg/L, May 6; minimum observed, 4.8 mg/L, July 8.  
 SUSPENDED-SOLIDS DISCHARGE: Maximum daily, 4,160 tons, Feb. 19; minimum daily observed, 0.32 ton, Aug. 7-8.  
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 13,200 lb, Feb. 19; minimum daily observed, 2.4 lb, Apr. 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993					APR 1994				
14...	1217	43	710	10.0	22...	0951	21	675	10.0
DEC 03...	1245	33	750	3.0	MAY 18...	1008	18	710	15.5
JAN 1994	1215	23	280	0.5	JUL 13...	1020	25	720	19.0
FEB 17...	1050	25	685	0.5	AUG 22...	1017	21	735	17.0
MAR 02...	0908	27	700	0.5					
15...	1205	--	--	5.5					

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	ALA-CHLOR TOTAL RECOVER (UG/L) (77825)	ATRA-ZINE WATER UNFLTRD REC (UG/L) (39630)	CARBO-FURAN WATER WHOLE TOT.REC (UG/L) (82615)	CHLOR-PYRIFOS TOTAL RECOVER (UG/L) (38932)	CIS-PERME-THRIN WATER WHOLE REC (UG/L) (82418)	CYAN-AZINE TOTAL (UG/L) (81757)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (UG/L) (82052)	DIMETH-OATE WATER WHOLE TOTAL (UG/L) (39009)	EPTC WATER WHOLE REC (UG/L) (81894)
MAY 1994											
*18...	0920	17	<0.10	<0.1	<0.3	<1.0	<1.0	<0.30	<0.20	<1.0	<1.0

DATE	TIME	FONO-FOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L) (82614)	METHO-MYL TOTAL (UG/L) (39051)	METOLA-CHLOR IN WHOLE WATER (UG/L) (39356)	PARA-THION, TOTAL (UG/L) (39540)	PENDI-METH-ALIN TOTAL (UG/L) (79190)	PHORATE TOTAL (UG/L) (39023)	TERBU-FOS WAT, WH REC (UG/L) (82088)	TRANS PERME-THRIN WATER WHOLE REC (UG/L) (82420)	TRI-FLURA-LIN TOTAL RECOVER (UG/L) (39030)	2,4-D, TOTAL (UG/L) (39730)
MAY 1994											
18...		<0.20	<1.0	<0.20	<1.0	<1.00	<0.20	<0.20	<1.0	<1.0	<0.50

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

## GRANT RIVER BASIN

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05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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, BIO-CHEMICAL, 5 DAY (MG/L) (00310)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	RESIDUE VOLATILE, TILE, SUSPENDED (MG/L) (00535)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOSPHORUS TOTAL (MG/L AS P) (00665)
OCT 1993												
*10...	1310	--	42	8.2	1.1	4100	7	478	2	8.20	0.027	0.120
*24...	1330	--	39	8.2	1.4	510	18	482	9	--	0.024	0.090
NOV												
*03...	1352	--	38	8.3	1.3	310	9	474	8	--	0.007	0.070
*23...	1545	--	33	8.6	<1.0	30	9	474	2	--	0.020	0.080
DEC												
*03...	1240	--	32	8.3	<1.0	230	11	40	4	--	0.018	0.080
JAN 1994												
*04...	1145	26	--	8.1	1.4	60	16	478	4	--	0.065	0.080
*26...	1140	23	--	8.0	1.0	60	14	462	5	--	0.046	0.090
FEB												
*15...	1210	23	--	8.1	1.2	620	16	458	4	--	0.027	0.080
19...	0100	600	--	7.9	25	--	364	756	60	--	2.77	1.37
19...	0215	600	--	7.8	31	--	800	1160	110	--	2.61	2.00
19...	0445	600	--	7.8	54	--	2490	2770	276	--	3.54	4.34
19...	0615	600	--	7.5	52	--	3420	3630	336	--	3.19	5.06
19...	0730	600	--	7.5	55	--	4190	4580	390	--	2.99	6.53
19...	0800	600	--	7.4	45	--	3410	3710	310	--	2.75	5.10
19...	0815	600	--	7.5	44	--	3960	4230	360	--	2.72	5.57
19...	0930	600	--	7.5	28	--	3790	4020	330	--	2.35	4.89
19...	1145	600	--	7.5	--	--	3870	4230	340	--	2.06	5.39
*20...	0959	250	--	7.6	20	9100	464	718	54	--	1.75	1.68
20...	1000	250	--	7.6	--	--	3230	3730	290	--	1.50	4.59
20...	1800	250	--	7.5	13	--	172	450	24	--	1.40	1.22
21...	0110	45	--	7.6	12	--	283	596	28	--	1.51	1.04
21...	0425	45	--	7.7	9.3	--	115	452	14	--	1.40	0.790
MAR												
04...	1445	--	136	6.8	--	--	1260	1670	104	--	1.56	1.80
04...	1530	--	328	6.8	--	--	2480	2820	202	--	2.69	3.50
04...	1600	--	691	6.7	--	--	3380	3790	280	--	3.92	4.48
04...	1630	--	881	7.1	--	--	3690	3890	284	--	3.03	4.73
04...	1700	--	1060	7.7	--	--	3480	3640	284	--	3.14	4.81
04...	1945	--	875	7.2	--	--	2550	2650	216	--	2.84	4.12
04...	2130	--	549	7.2	--	--	1480	1680	148	--	2.24	3.12
04...	2300	--	334	7.2	--	--	1030	1260	108	--	2.07	2.62
05...	0300	--	121	7.4	--	--	516	706	68	--	1.88	2.03
05...	1400	--	114	7.8	--	--	334	614	38	--	1.46	1.38
05...	1430	--	165	7.8	--	--	450	740	44	--	1.44	1.49
05...	1500	--	237	7.8	--	--	676	944	62	--	1.34	1.68
05...	1530	--	309	7.7	--	--	830	1090	74	--	1.49	2.09
05...	1615	--	369	7.7	--	--	914	1180	82	--	1.58	2.32
05...	1945	--	287	7.6	--	--	1010	1240	104	--	1.51	2.92
05...	2115	--	215	7.6	--	--	808	1020	84	--	1.51	2.20
05...	2300	--	155	7.6	--	--	652	896	72	--	1.35	1.97
*06...	1215	--	44	7.7	--	3900	92	396	20	--	1.21	0.800
*15...	1205	--	30	8.3	2.0	40	15	454	4	--	0.140	0.120
APR												
*11...	1420	--	21	8.4	1.6	<10	6	422	4	--	0.005	0.020
*28...	0950	--	28	8.2	<1.0	12000	68	554	10	--	0.151	0.270
MAY												
*18...	0915	--	17	8.2	2.3	2000	14	464	4	--	0.094	0.130
*31...	1130	--	18	8.3	3.1	3000	42	494	10	--	0.085	0.200
JUN												
*13...	1213	--	24	8.2	4.5	32000	63	522	11	--	0.069	0.280
20...	0415	--	57	8.2	7.2	11000	490	916	48	--	0.097	0.700
23...	1230	--	57	8.1	8.5	--	362	790	42	--	0.225	0.870
23...	1515	--	109	7.9	17	--	808	1190	104	--	0.516	2.20
23...	1715	--	143	7.8	20	--	864	1190	104	--	0.732	2.40
23...	1745	--	186	7.7	21	--	978	1290	112	--	0.691	2.50
23...	1800	--	228	7.8	22	--	1200	1510	124	--	0.649	2.50
23...	1830	--	300	7.4	21	--	2010	2390	200	--	0.643	3.30
23...	2245	--	269	7.7	18	--	1090	1340	136	--	0.657	2.80
24...	0330	--	134	7.6	15	--	620	860	92	--	0.584	2.00
*24...	1245	--	50	7.8	6.2	--	228	524	40	--	0.239	0.970
24...	1300	--	50	7.9	7.3	--	228	536	36	--	0.209	0.980
27...	1515	--	41	8.4	1.8	2500	59	530	11	--	0.016	0.250
*28...	1200	--	37	8.3	1.8	4900	51	540	10	--	0.021	0.230

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE



GRANT RIVER BASIN

05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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, 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 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)
JUL 1994										
04...	1515	160	7.9	24	740000	1580	1990	160	0.677	2.82
04...	1945	102	7.9	18	370000	970	1300	140	0.512	2.34
*05...	1044	36	7.8	7.6	98000	151	496	24	0.335	1.16
*12...	1302	24	8.3	1.2	6000	21	524	4	0.025	0.230
14...	0345	179	8.2	11	--	1340	1700	104	0.097	1.47
14...	0400	254	8.0	30	780000	2730	3120	250	0.584	0.460
14...	0415	320	7.9	28	1100000	3790	4150	350	0.446	0.550
14...	0545	228	7.8	22	1100000	2630	2890	252	0.785	0.460
14...	0700	160	7.9	19	--	1310	1570	144	0.521	1.48
*14...	1045	70	7.9	12	1100000	612	890	84	0.322	0.500
14...	1055	70	7.9	12	920000	644	902	92	0.306	0.990
20...	0215	125	8.2	7.2	19000	580	--	--	0.079	0.940
20...	0245	177	8.1	23	1200000	1600	--	--	0.460	3.45
20...	0630	114	7.9	17	950000	924	--	--	0.390	2.41
*20...	1050	79	7.8	19	1100000	416	--	--	0.505	2.32
20...	1051	79	7.9	19	810000	408	--	--	0.504	2.36
*25...	1315	21	8.1	<1.0	4600	10	--	--	0.008	0.130
AUG										
*08...	1250	19	8.3	2.0	--	6	--	--	0.015	0.104
*22...	1330	21	8.3	1.2	1300	26	--	--	0.035	0.195
SEP										
*06...	1000	21	8.2	1.2	1200	21	--	--	0.035	0.170
*20...	0920	18	8.1	1.5	1200	13	--	--	0.030	0.147

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	13.0	11.0	12.0	5.0	2.5	4.0	4.0	1.5	2.5	1.0	.50	.50
2	12.0	9.5	10.0	6.5	4.5	5.5	4.5	3.5	4.0	1.0	.50	.50
3	12.5	8.0	10.0	7.5	5.0	6.0	4.0	2.5	3.5	1.0	.50	.50
4	13.0	11.0	12.0	9.5	7.5	8.5	4.5	4.0	4.5	1.0	.50	1.0
5	11.0	8.5	10.0	9.0	5.0	7.0	5.0	4.5	4.5	.50	.50	.50
6	14.5	10.5	12.5	5.0	2.5	3.5	5.0	2.5	4.0	1.0	.50	.50
7	17.0	13.5	15.0	4.0	1.0	2.5	3.0	1.5	2.5	.50	.50	.50
8	16.5	13.5	15.5	5.5	3.5	4.5	3.5	3.0	3.0	.50	.50	.50
9	13.5	8.5	10.0	5.5	3.5	4.5	5.0	3.0	4.0	.50	.50	.50
10	9.0	6.5	8.0	6.5	4.5	5.5	5.0	2.0	4.0	.50	.50	.50
11	9.5	6.0	8.0	7.0	5.5	6.0	2.0	.50	1.0	.50	.50	.50
12	9.5	7.5	8.5	6.5	4.0	5.0	2.5	.50	1.5	1.0	.50	.50
13	8.5	6.0	7.5	8.5	6.5	7.5	4.5	2.5	4.0	.50	.50	.50
14	11.0	8.0	9.5	8.0	7.0	7.0	5.0	4.5	5.0	.50	.50	.50
15	11.0	10.5	10.5	7.0	5.0	6.0	5.5	4.0	5.0	.50	.50	.50
16	12.5	11.0	12.0	5.0	4.5	5.0	5.5	4.5	5.0	.50	.50	.50
17	12.0	10.0	11.0	6.0	5.0	5.5	5.5	5.0	5.5	.50	.50	.50
18	10.5	8.0	9.5	5.5	3.5	4.5	5.5	5.0	5.0	.50	.50	.50
19	12.0	10.0	11.0	6.0	3.5	5.5	5.0	4.5	4.5	.50	.50	.50
20	11.0	9.5	10.5	3.5	2.0	3.0	4.5	2.5	3.5	.50	.50	.50
21	9.5	7.0	8.0	5.5	3.5	4.5	2.5	1.5	2.0	.50	.50	.50
22	8.5	5.5	7.0	5.5	4.0	5.0	2.5	1.5	2.0	.50	.50	.50
23	10.0	7.0	8.5	6.5	5.0	6.0	1.5	.50	.50	.50	.50	.50
24	11.5	9.0	10.0	6.5	4.5	5.5	.50	.50	.50	.50	.50	.50
25	11.5	9.0	10.5	5.0	4.5	4.5	.50	.50	.50	.50	.50	.50
26	11.0	8.5	9.5	4.5	1.5	2.5	.50	.50	.50	.50	.50	.50
27	8.5	7.0	7.5	1.5	.50	1.0	.50	.50	.50	.50	.50	.50
28	8.5	6.5	7.5	2.5	1.5	2.0	.50	.50	.50	.50	.50	.50
29	7.0	4.5	5.0	2.0	1.0	1.5	.50	.50	.50	.50	.50	.50
30	5.0	4.0	4.5	1.5	.50	1.0	.50	.50	.50	.50	.50	.50
31	4.5	3.0	4.0	---	---	---	1.0	.50	.50	.50	.50	.50
MONTH	17.0	3.0	9.5	9.5	.50	4.7	5.5	.50	2.7	1.0	.50	.52

## GRANT RIVER BASIN

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05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

## WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	.50	.50	.50	1.0	.50	.50	11.5	6.5	9.0	12.0	5.5	8.5
2	.50	.50	.50	1.5	.50	1.0	11.0	8.0	9.5	14.0	9.0	11.5
3	.50	.50	.50	4.0	.50	2.0	10.0	6.0	8.0	15.5	10.0	12.5
4	.50	.50	.50	5.5	.50	2.5	10.5	7.0	8.5	13.5	11.0	12.0
5	.50	.50	.50	5.0	.50	2.5	9.0	5.5	7.0	12.0	10.0	11.0
6	.50	.50	.50	5.0	2.0	3.5	8.0	4.0	6.0	13.5	8.0	11.0
7	.50	.50	.50	5.5	3.0	4.0	9.5	4.0	6.5	16.0	12.0	13.5
8	.50	.50	.50	3.5	1.0	2.5	8.0	7.0	7.0	16.0	11.5	14.0
9	.50	.50	.50	4.0	1.0	2.5	11.0	5.5	8.0	17.5	12.5	15.0
10	.50	.50	.50	4.0	2.0	3.0	13.0	8.0	10.0	17.5	12.5	15.0
11	.50	.50	.50	4.5	1.0	3.0	11.0	8.5	9.5	18.5	14.5	16.0
12	.50	.50	.50	6.5	3.5	5.0	9.0	7.0	7.5	19.5	13.0	16.0
13	.50	.50	.50	6.0	4.0	5.0	9.5	7.0	8.0	20.5	14.0	17.0
14	.50	.50	.50	6.5	3.5	5.0	13.0	7.0	10.0	18.0	15.0	16.0
15	.50	.50	.50	7.5	4.5	5.5	12.5	9.0	11.5	19.5	14.5	16.5
16	.50	.50	.50	6.0	3.0	4.5	12.5	7.0	9.5	20.0	14.0	17.0
17	.50	.50	.50	5.5	3.5	4.5	14.0	9.0	11.5	20.0	14.5	17.5
18	1.0	.50	.50	6.0	4.0	5.0	17.5	11.5	14.0	20.0	14.5	17.0
19	1.0	.50	.50	6.5	3.5	5.0	16.5	13.0	14.5	20.5	13.5	17.0
20	2.0	.50	1.5	9.5	5.5	7.5	13.5	10.0	11.0	21.5	15.0	18.0
21	2.5	.50	1.5	11.0	8.0	9.5	14.5	9.0	11.5	22.0	15.5	19.0
22	2.0	.50	1.0	11.5	6.5	9.0	15.0	9.5	12.0	22.5	16.5	19.5
23	.50	.50	.50	12.5	8.5	10.5	16.0	10.0	13.0	22.5	18.0	19.5
24	.50	.00	.50	10.5	6.0	8.0	18.5	13.5	15.5	20.5	17.0	18.5
25	.50	.50	.50	8.0	4.5	6.5	19.5	16.5	18.0	19.5	17.0	18.0
26	.50	.00	.50	7.0	6.5	7.0	19.0	15.0	17.0	19.0	14.5	16.5
27	.50	.50	.50	9.5	5.5	7.5	16.0	10.7	12.3	19.5	13.5	16.0
28	1.0	.50	.50	8.0	6.0	7.0	10.5	7.0	8.5	21.0	14.5	18.0
29	---	---	---	6.0	4.0	5.0	11.8	5.8	8.6	19.5	16.5	18.5
30	---	---	---	8.0	3.5	5.5	10.5	6.5	8.5	23.5	17.0	20.0
31	---	---	---	9.5	4.5	7.0	---	---	---	24.0	19.5	21.5
MONTH	2.5	.00	.59	12.5	.50	5.0	19.5	4.0	10.4	24.0	5.5	16.0
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	21.5	17.0	19.5	25.5	20.5	23.0	24.5	21.0	22.5	17.0	14.0	15.5
2	21.0	16.5	18.5	23.0	20.5	21.5	25.0	21.0	23.0	16.0	15.5	16.0
3	22.0	15.0	18.5	21.0	18.5	20.0	24.0	21.0	22.5	18.0	15.0	16.5
4	23.0	16.0	19.5	22.5	20.0	21.0	23.0	20.0	21.5	17.0	15.0	15.5
5	21.5	17.5	19.5	26.0	20.5	23.0	21.0	17.0	19.0	17.5	14.5	16.0
6	25.5	18.5	21.5	26.5	23.0	24.5	20.5	16.5	18.5	19.0	15.0	17.0
7	23.0	19.5	21.5	26.5	22.0	24.0	21.0	16.5	19.0	19.5	15.0	17.0
8	21.5	17.5	19.5	24.0	19.0	21.0	23.5	19.0	21.0	20.0	16.5	18.0
9	22.0	15.0	18.5	20.0	17.5	18.5	20.5	17.5	18.5	21.0	17.0	19.0
10	22.0	17.0	19.5	22.0	17.0	19.5	18.0	15.0	16.5	22.0	18.0	19.5
11	22.5	17.0	19.5	24.5	19.0	21.5	16.5	14.5	15.5	22.0	18.0	20.0
12	23.5	17.0	20.0	23.0	21.0	22.0	17.0	16.0	16.5	21.5	18.0	19.5
13	25.0	19.5	22.0	22.0	19.5	20.5	20.0	16.5	18.0	23.0	19.0	21.0
14	27.5	21.5	24.5	20.0	17.0	17.5	20.0	16.0	18.0	24.5	20.5	22.5
15	28.0	23.0	25.5	21.5	15.5	18.5	20.5	15.5	18.0	24.5	21.0	23.0
16	29.0	23.0	26.0	20.0	18.5	19.0	21.0	16.5	18.5	23.0	20.5	21.5
17	29.0	23.0	26.0	23.5	18.0	20.5	21.0	17.5	19.0	21.0	18.5	19.5
18	29.0	23.5	26.0	24.0	19.5	21.5	22.0	18.5	20.0	21.0	17.0	18.5
19	28.0	22.5	25.0	22.0	20.0	21.0	21.5	19.0	20.0	21.0	17.0	19.0
20	24.5	22.0	23.5	22.0	18.5	20.0	19.5	17.5	19.0	20.0	17.0	18.5
21	27.0	22.0	24.0	22.0	18.5	20.5	20.0	16.5	18.0	21.0	18.0	19.5
22	26.0	21.0	23.5	22.0	18.5	20.0	21.0	16.5	18.5	20.0	18.0	19.0
23	24.0	17.0	20.0	23.5	18.5	21.0	22.0	17.0	19.5	18.0	15.0	16.0
24	22.0	16.5	19.0	23.5	19.5	21.5	24.0	19.0	21.5	16.5	15.0	15.5
25	22.5	18.0	20.5	23.0	19.0	21.0	22.0	19.5	20.5	16.5	16.0	16.0
26	23.0	19.0	21.0	21.0	18.0	19.5	23.0	18.5	20.5	16.0	13.0	14.0
27	23.0	19.0	21.0	21.5	18.0	19.5	23.5	20.0	21.5	13.5	12.5	13.0
28	22.5	19.5	21.0	22.0	17.5	19.5	22.5	19.0	21.0	15.0	11.5	13.0
29	22.5	19.0	20.5	22.5	18.5	20.5	19.5	16.5	18.0	15.5	12.0	13.5
30	24.0	19.0	21.5	23.0	19.0	21.0	18.0	16.5	17.0	17.0	13.5	15.0
31	---	---	---	24.0	19.5	21.5	17.5	16.0	16.5	---	---	---
MONTH	29.0	15.0	21.5	26.5	15.5	20.8	25.0	14.5	19.3	24.5	11.5	17.6

## GRANT RIVER BASIN

05413449 RATTLESNAKE CREEK NEAR NORTH ANDOVER, WI--CONTINUED

## OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1										13.0	9.7	11.5
2										13.3	9.4	11.1
3										14.5	9.1	11.3
4										14.7	9.0	11.2
5										14.1	9.1	11.4
6										17.3	9.2	12.7
7										16.7	8.7	11.8
8										16.9	8.3	11.8
9										16.5	7.9	11.3
10										15.5	7.8	10.8
11										14.3	7.3	10.0
12										13.5	7.5	10.0
13										12.5	7.0	9.3
14										9.6	6.9	8.2
15										11.2	7.0	9.0
16										10.7	6.4	8.4
17										10.2	6.1	8.1
18										11.2	6.0	8.6
19										11.2	7.2	8.9
20										11.3	7.1	8.8
21										11.4	6.9	8.8
22										11.3	6.8	8.7
23										11.2	5.9	8.0
24										9.3	6.0	7.5
25										9.9	6.5	7.9
26										10.0	7.4	8.5
27										11.3	7.5	9.2
28										11.5	7.4	9.3
29										10.6	7.4	8.7
30										11.2	6.7	8.9
31										10.9	6.7	8.4
MONTH										17.3	5.9	9.6
	JUNE			JULY			AUGUST			SEPTEMBER		
1	10.9	7.1	8.6	12.2	7.0	9.0	12.9	6.3	9.1	12.2	8.5	9.8
2	11.5	7.4	9.2	12.6	6.9	9.0	14.5	6.6	9.5	11.2	8.4	9.5
3	11.6	7.6	9.4	13.2	7.5	9.7	12.5	6.4	8.5	11.5	8.1	9.4
4	11.3	7.3	9.1	8.6	5.4	7.4	11.8	6.7	8.5	10.2	8.0	8.9
5	10.7	7.2	8.6	8.2	6.3	7.2	13.4	7.0	9.6	12.4	8.6	9.9
6	11.0	6.9	8.8	10.0	6.5	7.8	14.0	7.5	10.0	12.5	8.5	9.9
7	9.7	6.7	7.9	10.4	6.9	8.3	14.0	7.2	9.8	13.0	8.5	10.1
8	11.0	7.4	8.9	8.0	4.8	7.0	14.1	6.8	9.7	12.7	7.9	9.9
9	11.3	7.5	9.2	10.0	7.6	8.7	14.3	7.0	9.8	13.1	7.7	9.8
10	10.8	7.4	8.6	11.4	7.9	9.5	9.4	7.5	8.3	13.3	7.9	9.7
11	10.8	7.1	8.7	11.5	7.5	9.3	11.5	7.9	9.3	13.5	7.8	9.9
12	11.1	6.8	8.6	10.4	7.3	8.8	11.2	7.9	9.0	13.8	7.6	9.9
13	10.3	6.4	7.9	10.7	7.8	9.0	12.3	7.7	9.5	12.3	7.1	9.0
14	10.7	6.0	7.9	9.6	7.1	8.2	12.7	7.6	9.6	12.2	6.8	8.6
15	10.3	5.8	7.6	10.3	8.1	9.2	12.7	7.6	9.6	11.8	6.5	8.3
16	10.5	6.0	7.8	11.7	7.3	9.6	12.6	7.5	9.4	11.4	6.5	8.4
17	10.2	6.0	7.8	9.7	7.6	8.6	12.3	7.2	9.0	12.3	7.3	9.2
18	10.2	5.8	7.3	10.6	7.7	9.0	9.4	5.9	7.5	12.8	7.7	9.5
19	10.2	6.1	7.6	10.1	7.5	8.6	11.0	5.9	7.7	12.8	7.7	9.5
20	7.0	4.9	6.0	7.8	5.8	6.7	10.3	6.2	8.1	13.6	7.6	9.9
21	9.2	5.5	7.2	9.5	6.8	8.1	11.9	7.1	8.9	13.6	7.7	9.8
22	9.6	6.6	7.9	10.7	7.5	8.6	12.3	7.3	9.2	11.2	7.6	8.8
23	7.5	6.2	6.8	11.4	7.4	9.0	12.5	7.2	9.3	10.6	8.1	9.2
24	8.0	6.8	7.4	12.4	7.4	9.3	12.2	6.6	8.8	11.5	8.0	9.6
25	8.8	7.0	7.8	13.0	7.6	9.7	11.3	6.5	7.9	8.5	6.9	7.9
26	9.1	7.0	8.0	13.4	7.6	9.8	11.4	6.5	8.4	9.5	7.8	8.7
27	9.6	7.3	8.2	13.8	7.7	10.0	11.1	6.5	8.1	11.3	9.0	9.9
28	9.6	7.1	8.2	14.9	7.5	10.4	11.2	6.3	8.1	11.9	9.2	10.2
29	10.2	7.3	8.4	15.1	7.1	10.2	11.6	7.3	9.0	12.1	8.9	10.2
30	11.3	7.2	8.9	14.7	6.8	9.9	10.8	7.5	8.5	12.0	8.3	9.8
31	---	---	---	14.1	6.6	9.4	11.9	8.0	9.4	---	---	---
MONTH	11.6	4.9	8.1	15.1	4.8	8.9	14.5	5.9	8.9	13.8	6.5	9.4

## 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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.0	.91	1.2	.87	1.6	.50	4.1	2.0	4.9	.40	1.2
2	1.6	.96	1.0	1.2	.87	1.4	.49	3.3	2.1	4.5	.41	1.2
3	1.5	.92	.99	1.2	.88	1.3	.49	2.9	2.1	4.4	.89	1.5
4	1.4	.95	1.1	1.1	.88	1880	.49	2.5	2.2	152	1.3	1.3
5	1.2	.92	1.1	1.1	.89	332	.50	2.3	2.3	24	.35	1.2
6	1.3	.85	1.2	1.1	.89	40	.45	2.1	2.4	3.6	.33	1.2
7	1.1	.84	1.0	1.1	.90	5.4	.42	2.2	2.7	3.7	.32	1.1
8	.98	.88	1.1	1.1	.91	1.8	.41	1.9	2.7	30	.32	1.2
9	1.1	.86	1.1	1.1	.91	1.2	.41	1.5	2.6	1.9	.33	1.1
10	.81	.87	1.1	1.2	.88	1.1	.37	1.3	2.8	1.5	1.8	1.0
11	.83	.90	.98	1.2	.88	1.1	.35	1.2	3.1	1.4	1.3	.92
12	.89	.90	1.0	1.1	.93	1.1	.49	1.1	3.0	1.4	.51	.87
13	.92	1.1	1.1	1.0	.94	1.2	.59	1.0	3.8	1.4	.57	.83
14	1.0	.90	1.2	.98	.94	1.2	.61	.96	3.3	320	.60	.82
15	1.2	.91	1.2	.89	.99	1.2	.86	.93	3.1	1.7	.62	.82
16	1.3	.87	1.1	.88	1.0	1.1	.81	.78	2.9	1.3	.68	.81
17	1.3	.87	1.2	.88	1.1	1.0	.83	.71	2.8	1.3	.76	.74
18	1.3	.85	1.2	.87	1.6	1.0	.98	.67	2.7	1.2	1.5	.68
19	1.4	.87	1.2	.87	4160	.93	1.1	.73	2.7	1.2	1.3	.66
20	1.5	.80	1.2	.86	342	.93	1.2	.82	24	136	2.1	.64
21	1.7	.85	1.1	.86	14	1.0	1.4	.88	3.4	.74	1.4	.67
22	1.6	.82	1.1	.89	7.3	.90	1.7	.92	2.9	.72	1.4	.81
23	1.8	.83	1.1	.89	5.4	.86	2.0	1.5	426	.63	1.4	.87
24	1.9	.84	1.1	.88	4.1	.76	2.4	1.6	97	.61	1.4	1.1
25	1.8	.97	1.0	.87	3.4	.69	2.8	1.6	3.7	.56	1.4	17
26	1.6	.98	1.0	.87	2.8	.67	4.1	1.8	3.1	.53	1.6	1.8
27	1.5	.89	1.1	.88	2.2	.67	4.6	1.6	4.2	.50	1.4	1.2
28	1.5	.92	1.0	.88	1.9	.62	4.7	1.6	5.2	.47	1.4	1.1
29	1.3	.90	1.0	.89	---	.57	4.3	1.8	5.0	.45	1.3	1.1
30	1.1	.85	1.0	.89	---	.54	4.1	1.9	5.0	.44	1.3	1.2
31	1.1	---	1.1	.86	---	.52	---	2.0	---	.41	1.3	---
TOTAL	41.43	26.87	33.58	30.59	4560.36	2284.36	44.45	50.20	630.8	703.46	31.69	46.64

WTR YR 1994 TOTAL 8484.43

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	14	14	12	10	26	4.6	37	19	45	12	19
2	44	14	15	12	10	23	4.4	31	19	41	13	18
3	42	14	14	12	10	21	4.2	29	19	40	25	31
4	40	15	15	11	10	5860	4.1	26	20	679	29	20
5	36	14	16	11	10	1950	4.0	25	21	232	11	20
6	39	13	16	11	10	138	3.5	24	22	33	11	20
7	35	13	15	11	10	41	3.2	25	24	34	11	19
8	32	14	15	11	9.9	20	3.0	23	24	116	11	20
9	36	14	15	12	9.8	19	2.9	19	24	38	11	19
10	28	14	15	12	9.3	18	2.5	17	25	32	34	18
11	26	15	13	13	9.3	17	2.4	17	28	30	29	17
12	26	15	13	12	9.7	18	3.3	16	27	30	14	16
13	24	18	14	11	9.6	18	4.0	16	34	31	15	16
14	25	15	15	11	9.6	19	4.2	15	29	312	15	16
15	26	15	15	10	9.9	19	5.9	15	27	35	14	16
16	27	15	14	10	10	17	5.7	13	26	30	15	17
17	24	15	15	10	11	15	5.9	13	25	30	15	16
18	22	15	15	10	15	15	7.1	12	24	27	31	15
19	22	15	14	10	13200	13	7.9	13	24	26	29	15
20	22	14	14	10	2310	13	8.9	14	97	787	36	14
21	22	15	13	10	196	13	10	14	31	19	22	15
22	19	14	13	11	124	11	13	14	27	19	22	17
23	19	15	13	11	92	11	15	21	1570	16	22	18
24	19	15	12	11	70	9.1	18	22	630	16	22	21
25	19	17	12	11	57	8.0	21	20	31	15	21	91
26	18	17	12	11	46	7.6	32	22	26	14	25	47
27	17	15	12	11	37	7.3	36	18	36	13	22	20
28	17	15	11	11	31	6.5	37	18	47	13	22	19
29	16	14	11	11	---	5.8	36	19	45	13	21	18
30	15	13	11	11	---	5.3	35	19	45	13	21	18
31	14	---	11	10	---	4.9	---	19	---	12	20	---
TOTAL	822	441	423	341	16346.1	8369.5	344.7	606	3046	2791	621	646

WTR YR 1994 TOTAL 34797.3 MEAN 95 MAX 13200 MIN 2.4



## GRANT RIVER BASIN

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05413500 GRANT RIVER AT BURTON, WI--CONTINUED

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1935 - 1994	
ANNUAL TOTAL	136961		78927		169	
ANNUAL MEAN	375		216		351	1993
HIGHEST ANNUAL MEAN					59.3	1958
LOWEST ANNUAL MEAN						
HIGHEST DAILY MEAN	4030	Jul 9	(a)3500	Feb 20	10700	Jun 13 1947
LOWEST DAILY MEAN	(a)100	Feb 17	121	Sep 20	30	(b)Aug 5 1936
ANNUAL SEVEN-DAY MINIMUM	(a)113	Feb 23	125	Sep 15	31	(c)Aug 3 1936
INSTANTANEOUS PEAK FLOW					(d)25000	Jul 16 1950
INSTANTANEOUS PEAK STAGE			(e)24.57	Feb 20	24.82	Jul 16 1950
INSTANTANEOUS LOW FLOW			120	Sep 20,21	(f)21	Mar 4 1954
ANNUAL RUNOFF (CFSM)	1.39		.80		.63	
ANNUAL RUNOFF (INCHES)	18.94		10.91		8.55	
10 PERCENT EXCEEDS	608		271		256	
50 PERCENT EXCEEDS	300		186		112	
90 PERCENT EXCEEDS	160		139		58	

(a) Ice affected

(b) Also occurred Aug. 8, 9, 1936, Sept. 22, 1937, and Feb. 19, 20, 1959

(c) Also occurred Jan. 4, 1959

(d) From rating curve extended above 18,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow

(e) Ice jam

(f) 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 ft<sup>3</sup>/s) are good. 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 annual load values are fair. 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, 1,680 mg/L, June 24; minimum observed, 8 mg/L, Mar. 31.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 18,900 tons, Feb. 20; minimum daily, 7.2 tons, Dec. 3.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993					APR 1994				
22...	1100	265	665	7.0	11...	1615	174	592	11.0
NOV					MAY				
02...	1400	243	690	6.0	05...	1130	186	623	12.0
DEC					23...	1430	144	638	24.0
02...	1045	232	648	2.5	JUN				
13...	1340	216	686	3.0	22...	1115	138	613	23.5
JAN 1994					JUL				
26...	1450	168	745	0.0	08...	1430	361	579	23.0
FEB					AUG				
21...	1610	537	470	1.5	02...	1100	157	619	21.0
MAR					29...	1255	134	656	20.5
11...	1030	230	630	2.0	SEP				
					26...	1100	221	639	15.0

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	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 1993				JAN 1994				
04...	0920	287	48	*26...	1505	170	--	30
07...	0840	297	87	FEB				
10...	1130	292	47	21...	1426	720	--	551
11...	0725	282	107	*21...	1550	720	--	586
18...	1135	271	24	21...	1558	720	--	540
21...	1025	278	77	MAR				
22...	1000	265	62	*11...	1030	--	230	88
*22...	1100	265	72	*11...	1031	--	231	88
22...	1110	265	65	11...	1045	--	231	50
25...	0945	263	39	14...	0845	--	234	110
28...	0840	258	31	18...	1305	--	223	34
NOV				21...	0855	--	233	42
01...	0925	250	24	25...	0900	--	209	20
02...	1338	251	17	28...	0850	--	205	11
04...	0810	254	23	31...	0815	--	192	8
09...	1325	241	15	APR				
11...	0820	240	31	04...	0905	--	185	12
15...	1030	247	14	07...	0920	--	182	13
18...	0945	234	17	11...	0900	--	174	15
22...	0845	236	116	*11...	1615	--	174	30
DEC				11...	1625	--	174	14
02...	1018	232	16	*14...	1010	--	193	72
*02...	1045	232	97	*18...	0845	--	177	41
02...	1053	232	11	21...	0845	--	174	57
*13...	1440	223	21	25...	0835	--	172	53
13...	1450	223	15	28...	0830	--	200	300

GRANT RIVER BASIN

05413500 GRANT RIVER AT BURTON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)
MAY 1994				JUL 1994			
02...	0915	202	129	14...	1010	413	714
05...	0845	186	96	18...	0835	191	172
*05...	1130	186	89	20...	1228	593	1360
05...	1247	186	43	*20...	1235	598	1350
09...	0940	179	87	20...	1341	640	1320
12...	0900	166	85	21...	0730	283	328
17...	0835	155	117	25...	0930	187	109
19...	0905	150	115	28...	1110	168	113
23...	0900	145	120	AUG			
*23...	1410	145	64	01...	0750	157	43
23...	1418	145	59	*02...	1055	157	114
27...	0800	153	164	02...	1126	151	52
30...	0920	147	160	04...	0820	199	182
JUN				08...	0850	148	113
02...	0845	136	211	11...	0915	226	106
06...	0805	136	187	15...	1025	147	89
10...	0930	131	201	19...	1000	152	69
13...	1320	154	136	21...	1025	159	53
16...	0750	128	188	24...	0755	142	87
20...	0830	257	710	25...	0850	138	108
22...	0955	138	142	*29...	1255	134	27
*22...	1040	138	149	29...	1310	134	31
*22...	1047	138	135	30...	0810	134	95
*22...	1115	138	149	SEP			
24...	0700	989	1680	02...	0740	132	98
27...	0830	203	220	05...	1035	140	73
30...	0810	177	151	08...	1110	133	74
JUL				12...	0955	127	76
04...	1040	179	161	15...	0925	125	71
07...	0820	172	127	19...	0930	122	81
08...	1413	364	472	22...	1315	133	37
*08...	1420	364	527	26...	0850	234	210
11...	0905	186	219	*26...	1100	221	170
				26...	1105	220	170

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	15	9.8	10	12	185	4.7	95	72	71	19	35
2	38	12	8.3	11	12	172	5.2	70	77	69	24	35
3	37	14	7.2	10	12	160	5.7	60	74	68	44	36
4	39	15	7.6	10	12	745	6.2	53	71	226	168	32
5	45	14	8.1	9.9	12	5090	6.6	48	69	326	84	28
6	57	13	8.8	10	12	2030	6.4	47	69	85	64	28
7	66	11	8.9	10	12	326	6.3	46	70	70	53	27
8	54	11	9.3	10	12	184	6.5	45	74	310	46	27
9	49	10	9.9	11	12	116	6.9	42	71	223	43	28
10	44	14	11	12	11	79	6.9	40	71	138	48	27
11	74	19	11	12	11	45	6.9	39	68	112	59	27
12	64	16	11	12	12	41	12	39	57	113	45	26
13	51	15	11	11	12	56	25	40	59	108	43	26
14	41	12	9.4	11	12	65	35	43	62	550	39	25
15	34	9.7	9.6	10	13	55	34	47	62	196	35	24
16	29	9.6	9.4	10	13	38	28	48	65	118	33	26
17	23	10	9.6	10	13	28	22	49	65	103	30	26
18	19	10	10	11	13	22	20	48	65	89	33	26
19	27	11	10	11	8260	21	22	47	67	84	39	25
20	39	10	10	11	18900	23	23	47	324	1040	105	20
21	54	10	10	11	1330	26	26	47	89	270	29	16
22	45	10	10	12	413	21	26	47	54	147	25	14
23	39	10	9.7	12	359	17	25	52	396	102	29	16
24	33	10	9.2	13	311	14	25	127	2530	76	35	18
25	28	10	8.9	13	278	11	26	90	296	56	37	93
26	25	11	9.0	14	249	9.0	790	88	177	53	31	95
27	23	10	9.2	14	222	7.6	272	68	120	52	21	34
28	22	10	8.8	13	198	6.1	159	64	99	50	15	31
29	20	10	8.9	13	---	5.3	129	63	83	39	13	30
30	18	9.6	9.1	13	---	4.6	101	64	73	29	32	29
31	17	---	9.7	12	---	4.3	---	68	---	23	36	---
TOTAL	1194	351.9	292.4	352.9	30738	9606.9	1868.3	1771	5529	4996	1357	930

1994 WTR YR TOTAL 58987.4



## GRANT RIVER BASIN

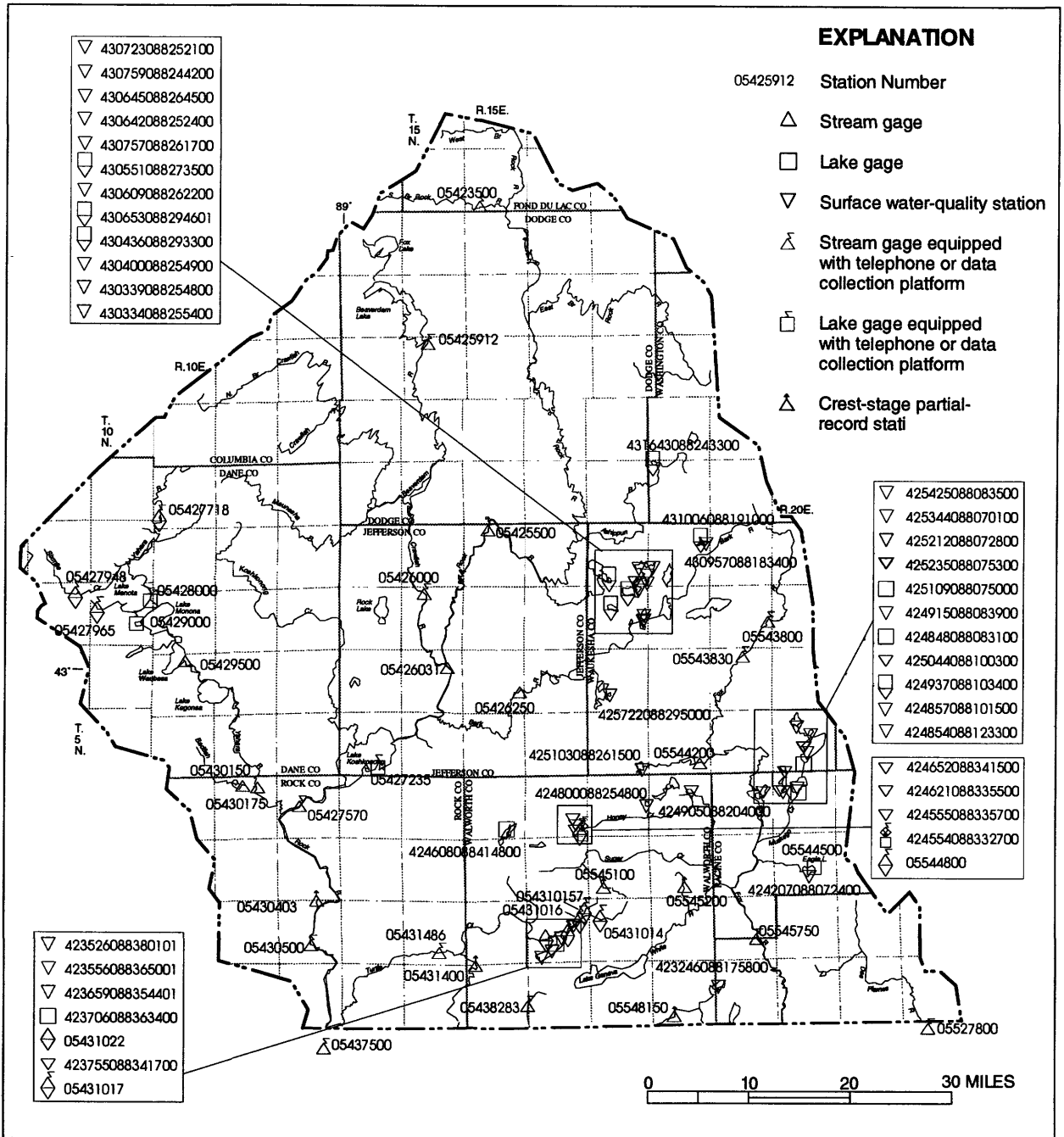
05413500 GRANT RIVER AT BURTON, WI--CONTINUED

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI KF AGAR (COLS. PER 100 ML) (31673)
OCT 1993											
22...	1100	265	665	8.1	7.0	1.7	11.4	760	94	200	810
DEC 02...	1045	232	648	8.2	2.5	1.5	13.5	754	100	120	2200
MAR 1994											
11...	1030	230	630	8.4	2.0	8.1	14.1	763	102	70	670
MAY 05...	1130	186	623	8.4	12.0	8.6	11.3	752	106	1100	93
JUN 22...	1115	138	613	7.9	23.5	1.2	7.3	743	88	K6300	780
AUG 02...	1100	157	619	8.3	21.0	4.4	9.0	739	104	590	78
DATE	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
OCT 1993											
22...	360	84	37	7.0	2.6	367	--	301	23	19	0.20
DEC 02...	350	82	36	6.9	1.7	372	--	305	24	19	0.10
MAR 1994											
11...	340	82	34	7.1	2.5	327	17	296	24	18	<0.10
MAY 05...	330	74	35	7.1	1.9	343	6	291	24	18	0.10
JUN 22...	310	73	32	7.2	6.9	309	--	253	24	19	0.10
AUG 02...	260	50	32	38	2.8	333	2	277	30	69	0.20
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 1993											
22...	12	375	0.030	6.30	0.020	<0.20	0.100	0.070	0.090	<10	70
DEC 02...	13	399	0.010	6.50	0.020	<0.20	0.060	0.050	0.050	--	--
MAR 1994											
11...	14	382	0.020	5.90	0.090	0.50	0.170	0.110	0.100	--	--
MAY 05...	5.7	361	0.030	4.30	0.030	0.50	0.100	0.060	0.050	20	67
JUN 22...	13	354	0.090	3.90	0.060	1.3	0.500	0.280	0.250	10	83
AUG 02...	3.3	391	0.020	3.70	0.030	0.50	0.110	0.040	0.040	<10	36
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. X FINER THAN .062 MM (70331)
OCT 1993											
22...	<3	4	<4	34	<10	<1	<1	83	<6	72	44
DEC 02...	--	--	--	--	--	--	--	--	--	97	39
MAR 1994											
11...	--	--	--	--	--	--	--	--	--	88	77
MAY 05...	<3	7	<4	89	20	<1	<1	75	<6	89	67
JUN 22...	<3	8	<4	17	<10	2	<1	76	<6	149	97
AUG 02...	<3	14	<4	9	<10	1	<1	260	<6	114	78

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





- ▽ 430723088252100
- ▽ 430759088244200
- ▽ 430645088264500
- ▽ 430642088252400
- ▽ 430757088261700
- ▽ 430551088273500
- ▽ 430609088262200
- ▽ 430653088294601
- ▽ 430436088293300
- ▽ 430400088254900
- ▽ 430339088254800
- ▽ 430334088255400

**EXPLANATION**

- 05425912 Station Number
- △ Stream gage
- Lake gage
- ▽ Surface water-quality station
- △ Stream gage equipped with telephone or data collection platform
- Lake gage equipped with telephone or data collection platform
- △ Crest-stage partial-record stati

- ▽ 425425088083500
- ▽ 425344088070100
- ▽ 425212088072800
- ▽ 425235088075300
- 425109088075000
- ▽ 424915088083900
- 424848088083100
- ▽ 425044088100300
- ▽ 424937088103400
- ▽ 424857088101500
- ▽ 424854088123300

- ▽ 424652088341500
- ▽ 424621088335500
- ▽ 424555088335700
- 424554088332700
- ◇ 05544800

- ▽ 423526088380101
- ▽ 423556088365001
- ▽ 423659088354401
- 423706088363400
- ◇ 05431022
- ▽ 423755088341700
- ◇ 05431017

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

**ROCK-FOX RIVER BASIN**





431643088243300 DRUID LAKE NEAR HARTFORD, 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 March sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MARCH 02 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 02		Apr. 20		June 30		July 19		Aug. 16	
Depth of sample (ft)	3.0	50	1.5	48	1.5	50	1.5	52	1.5	51
Lake stage (ft)	---	---	---	---	11.04	---	11.51	---	11.00	---
Specific conductance (µS/cm)	549	700	612	625	601	663	565	663	579	674
pH (units)	8.2	7.5	8.7	8.4	8.3	7.6	8.3	7.5	8.4	7.4
Water temperature (°C)	3.0	3.0	9.0	7.5	25.0	8.5	25.5	8.5	22.5	8.5
Color (Pt-Co. scale)	---	---	40	50	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.4	2.2	---	---	---	---	---	---
Secchi-depth (meters)	---	---	0.8	---	1.4	---	2.4	---	2.4	---
Dissolved oxygen	11.2	0.6	17.8	14.5	10.4	0.0	9.8	0.8	9.4	0.8
Hardness, as CaCO <sub>3</sub>	---	---	330	330	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	72	72	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	37	37	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	9.6	9.6	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	300	300	---	---	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	22	22	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	24	24	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	<0.2	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	402	408	---	---	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	0.63	0.70	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.06	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.2	1.1	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.8	1.8	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.067	0.071	0.024	0.380	0.025	0.480	0.016	0.615
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)	---	---	89	---	15	---	21	---	7.8	---

3-2-94

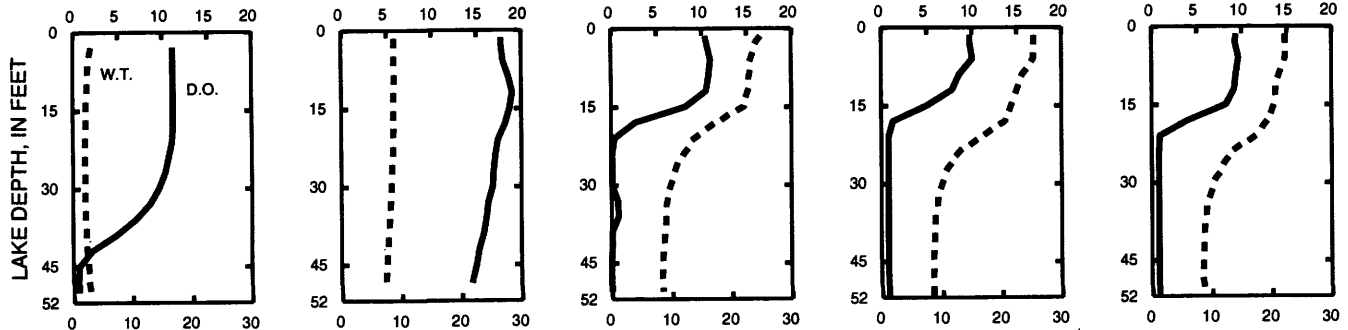
4-20-94

6-30-94

7-19-94

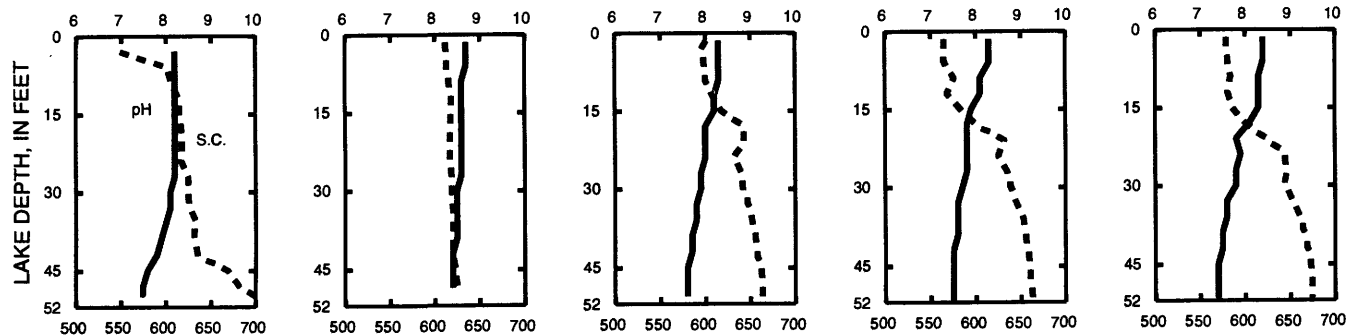
8-16-94

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, 11.44 ft, July 14; minimum observed, 10.80 ft, June 22.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	10.96	---	---	11.10
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	11.08	---	---
6	---	---	---	---	---	---	---	---	---	---	11.08	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	11.32	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	10.90	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	11.10	---
13	---	---	---	---	---	---	---	---	---	11.34	---	---
14	---	---	---	---	---	---	---	---	---	11.44	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	11.07	---
18	---	---	---	---	---	---	---	---	10.88	---	11.08	---
19	---	---	---	---	---	---	---	---	---	11.31	---	---
20	---	---	---	---	---	---	11.13	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	11.34	---	---
22	---	---	---	---	---	---	---	11.00	10.80	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	10.94	---	11.18	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	10.98	---	---	---
29	---	---	---	---	---	---	---	---	---	11.20	---	---
30	---	---	---	---	---	---	---	---	10.93	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

## WATER-QUALITY RECORDS

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

REMARKS.--Lake sampled in north bay at a lake depth of about 30 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 20 TO AUGUST 17, 1994  
(Milligrams per liter unless otherwise indicated)

	Apr. 20	June 30	July 19	Aug. 17
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	11.13	10.93	11.31	11.07
Specific conductance ( $\mu$ S/cm)	399	402	376	376
pH (units)	8.2	8.4	8.4	8.3
Water temperature ( $^{\circ}$ C)	9.5	23.5	25.0	22.0
Secchi-depth (meters)	2.8	4.0	3.1	3.2
Dissolved oxygen	11.7	7.7	8.8	8.9
Phosphorus, total (as P)	0.031	0.016	0.018	0.019
Chlorophyll a, phytoplankton ( $\mu$ g/L)	9.9	6.8	4.1	2.8

ROCK RIVER BASIN

430957088183400 LAKE KEESUS, EAST BAY, NEAR MERTON, WI

LOCATION.--Lat 43°09'57" long 88°18'34", in SW 1/4 SE 1/4 sec.12, T.8 N., R.18 E., Waukesha County, Hydrologic Unit 07090001, 1.2 mi north of Merton.

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

REMARKS.--Lake sampled in east bay at a lake depth of about 46 ft. Lake ice-covered during March sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MARCH 02 TO AUGUST 17, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 02		Apr. 20		June 30		July 19		Aug. 17	
Depth of sample (ft)	3.0	43	1.5	42	1.5	42	1.5	42	1.5	42
Lake stage (ft)	---	---	11.13	---	10.93	---	11.31	---	11.07	---
Specific conductance (µS/cm)	366	445	399	397	401	457	375	453	374	476
pH (units)	8.1	7.3	8.2	8.1	8.2	7.3	8.2	7.3	8.2	7.0
Water temperature (°C)	3.5	3.5	10.0	8.5	23.5	9.5	25.0	9.5	22.0	9.5
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.2	1.1	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	2.6	---	4.0	---	3.0	---	3.2
Dissolved oxygen	12.5	8.8	11.3	10.5	8.5	0.1	8.7	0.4	8.8	0.3
Hardness, as CaCO3	---	---	200	190	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	41	40	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	23	23	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	6.9	7.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	180	180	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	12	12	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	15	15	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	<0.2	0.3	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	238	236	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.09	0.08	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.03	0.08	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.70	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.69	0.78	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.025	0.025	0.016	0.650	0.018	0.680	0.015	0.736
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)	---	---	7.9	---	5.1	---	3.4	---	2.9	---

3-2-94

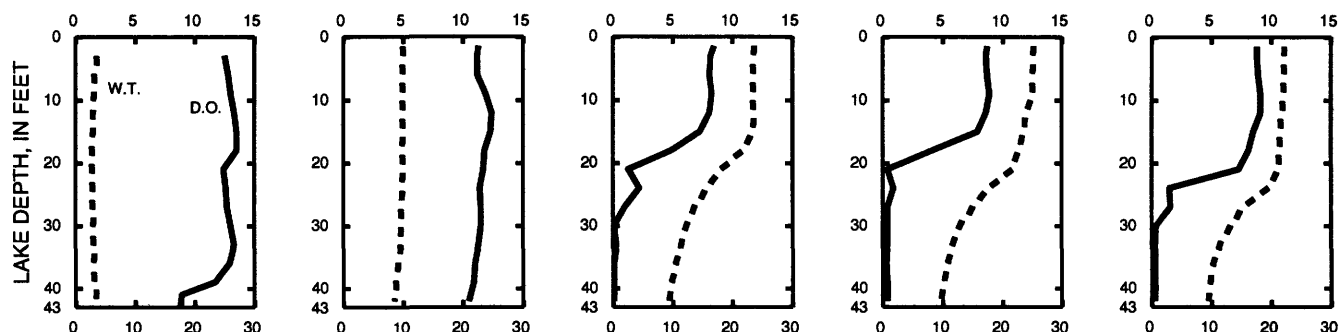
4-20-94

6-30-94

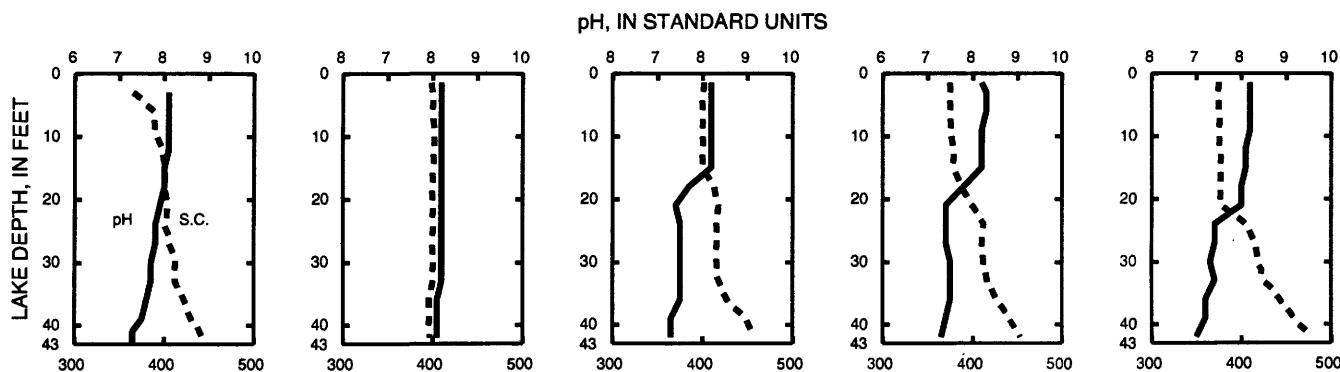
7-19-94

8-17-94

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



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 mi<sup>2</sup>.

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 18 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 18		May 02		June 14		July 13		Aug. 16	
Depth of sample (ft)	3.0	89	1.5	91	1.5	91	1.5	90	1.5	91
Lake stage (ft)	4.07		4.59		4.79		5.00		4.69	
Specific conductance (µS/cm)	535	595	548	549	532	551	502	560	494	575
pH (units)	8.5	7.9	8.4	8.2	8.2	7.7	8.3	7.6	8.3	7.5
Water temperature (°C)	2.5	3.0	10.0	6.5	21.0	7.0	23.5	7.0	21.0	7.0
Color (Pt-Co. scale)	---	---	20	30	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.90	1.00	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	3.1	---	1.8	---	1.1	---	1.8
Dissolved oxygen	12.4	7.5	10.6	9.0	9.4	0.2	8.6	0.5	8.7	0.4
Hardness, as CaCO <sub>3</sub>	---	---	280	280	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	57	57	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	33	33	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	11	11	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	240	240	---	---	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	25	25	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	26	26	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	3.8	5.6	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	322	320	---	---	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	0.42	0.38	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.05	0.18	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.70	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.0	1.1	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.026	0.024	0.016	0.040	0.017	0.060	0.010	0.110
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)	---	---	4.6	---	8.5	---	6.7	---	5.5	---

2-18-94

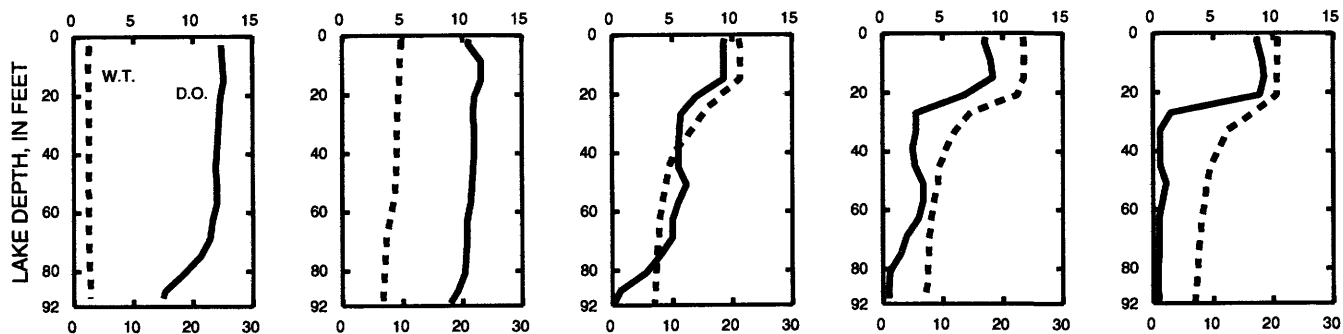
5-2-94

6-14-94

7-13-94

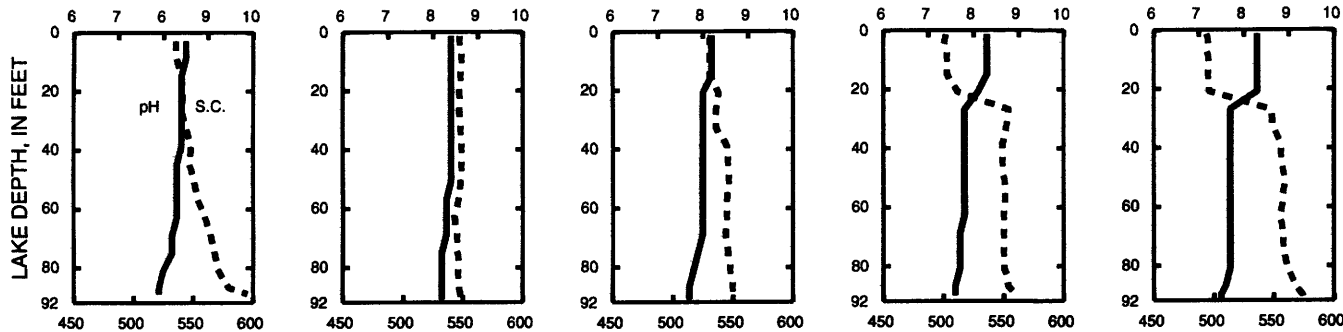
8-16-94

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

207

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 02 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	May 02	June 14	July 13	Aug. 16
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.59	4.79	5.00	4.69
Specific conductance (µS/cm)	552	544	572	503
pH (units)	8.4	8.3	8.3	8.7
Water temperature (°C)	10.0	22.5	23.5	21.5
Secchi-depth (meters)	2.4	1.4	1.6	1.3
Dissolved oxygen	10.8	9.1	7.8	12.5
Phosphorus, total (as P)	0.023	0.021	0.026	0.022
Chlorophyll a, phytoplankton (µg/L)	3.8	4.9	7.9	10

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 02 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	May 02	June 14	July 13	Aug. 16
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.59	4.79	5.00	4.69
Specific conductance (µS/cm)	543	499	481	461
pH (units)	8.4	8.3	8.4	8.6
Water temperature (°C)	10.0	24.5	24.0	21.5
Secchi-depth (meters)	1.8	1.9	1.2	2.0
Dissolved oxygen	11.0	9.0	10.4	10.4
Phosphorus, total (as P)	0.019	0.019	0.016	0.015
Chlorophyll a, phytoplankton (µg/L)	9.2	3.8	6.3	4.5

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 02 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	May 02	June 14	July 13	Aug. 16
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.59	4.79	5.00	4.69
Specific conductance (µS/cm)	552	523	484	461
pH (units)	8.4	8.3	8.4	8.6
Water temperature (°C)	10.0	23.0	23.5	21.5
Secchi-depth (meters)	2.3	1.4	1.3	1.8
Dissolved oxygen	10.8	9.5	9.5	10.2
Phosphorus, total (as P)	0.019	0.019	0.017	0.017
Chlorophyll a, phytoplankton (µg/L)	3.3	8.4	7.1	5.5

## 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 02 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	May 02	June 14	July 13	Aug. 16
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	4.59	4.79	5.00	4.69
Specific conductance ( $\mu$ S/cm)	553	534	500	481
pH (units)	8.4	8.3	8.3	8.5
Water temperature ( $^{\circ}$ C)	10.0	22.5	23.0	21.0
Secchi-depth (meters)	2.8	1.6	0.8	1.2
Dissolved oxygen	10.7	7.6	8.3	9.6
Phosphorus, total (as P)	0.018	0.015	0.018	0.014
Chlorophyll a, phytoplankton ( $\mu$ g/L)	3.2	5.4	6.8	4.9



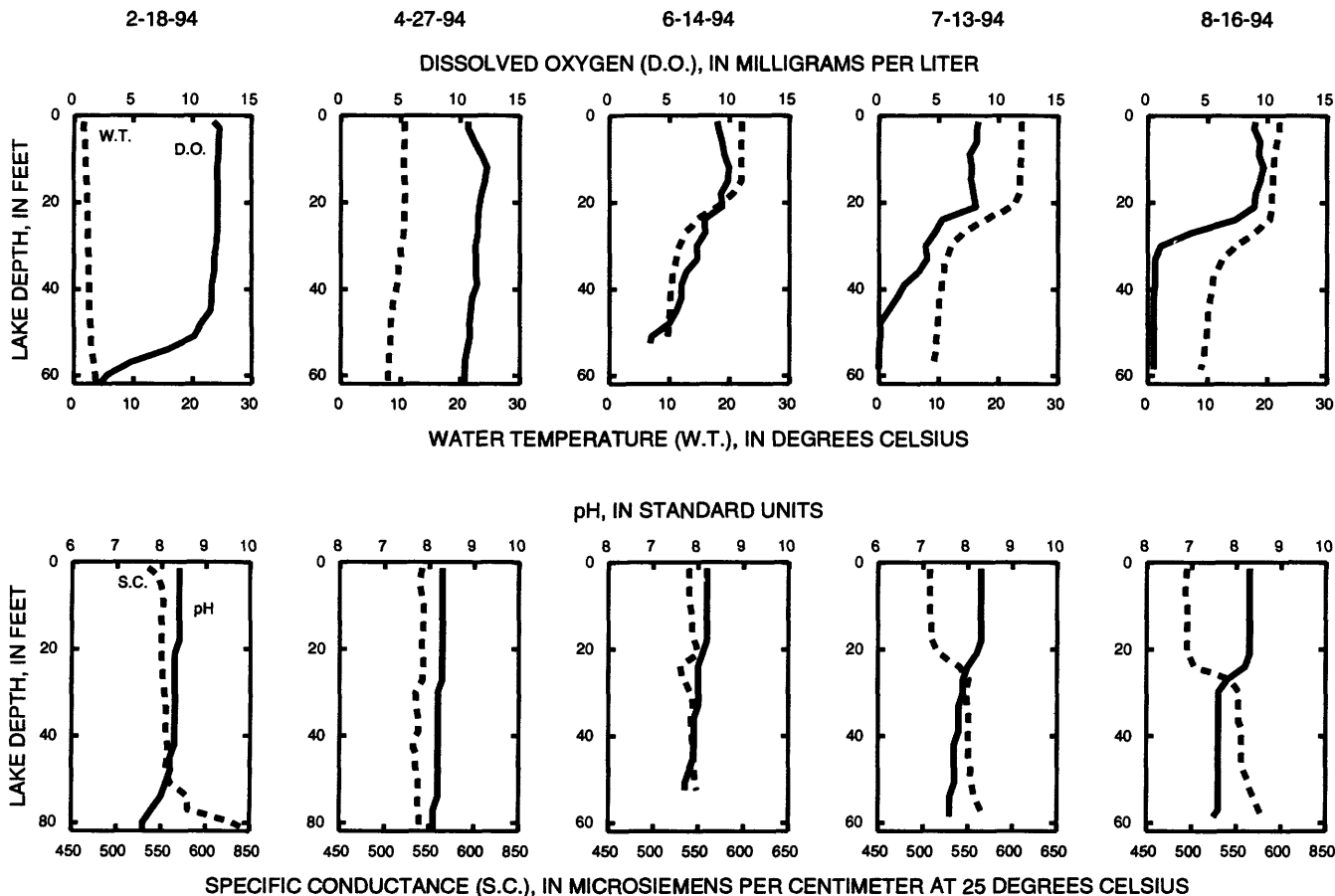
WATER-QUALITY RECORDS

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 18 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 18		Apr. 27		June 14		July 13		Aug. 16	
Depth of sample (ft)	1.5	62	1.5	61	1.5	52	1.5	58	1.5	58
Lake stage (ft)	6.98		7.98		8.14		8.00		7.99	
Specific conductance (µS/cm)	535	650	541	541	540	548	508	569	495	584
pH (units)	8.4	7.6	8.3	8.1	8.2	7.7	8.3	7.6	8.3	7.5
Water temperature (°C)	1.5	4.0	10.5	8.0	22.0	9.5	24.0	9.0	22.0	9.0
Color (Pt-Co. scale)	---	---	15	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.80	<0.50	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.6		2.8		2.6		2.2	
Dissolved oxygen	11.8	2.2	10.7	10.4	9.0	3.4	8.3	0.0	9.0	0.5
Hardness, as CaCO <sub>3</sub>	---	---	270	270	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	53	54	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	33	33	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	13	13	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	3	---	---	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	230	190	---	---	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	28	27	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	29	29	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	5.2	5.3	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	308	312	---	---	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	0.39	0.41	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.02	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.60	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.89	1.0	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.011	0.013	0.011	<0.020	0.008	0.040	0.008	0.038
Phosphorus, ortho, dissolved (as P)	---	---	0.004	0.004	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	6.0	---	3.6	---	2.8	---	2.6	---



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 18 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 18		Apr. 27		June 14		July 13		Aug. 16	
Depth of sample (ft)	3.0	48	1.5	48	1.5	48	1.5	47	1.5	49
Lake stage (ft)	6.98		7.98		8.14		8.00		7.99	
Specific conductance (µS/cm)	565	645	573	574	563	587	537	600	524	621
pH (units)	8.5	7.6	8.2	8.0	8.2	7.6	8.3	7.5	8.4	7.4
Water temperature (°C)	2.5	4.0	12.0	8.5	22.5	9.5	24.0	9.5	22.0	9.5
Secchi-depth (meters)	---		5.0		1.8		3.1		3.0	
Dissolved oxygen	12.5	2.3	10.2	10.4	8.9	0.8	8.9	0.0	8.5	0.1
Phosphorus, total (as P)	---		0.006	0.006	0.006	0.035	0.040	<0.020	0.006	0.051
Chlorophyll a, phytoplankton (µg/L)	---		0.9	---	2.6	---	2.6	---	2.4	---

2-18-94

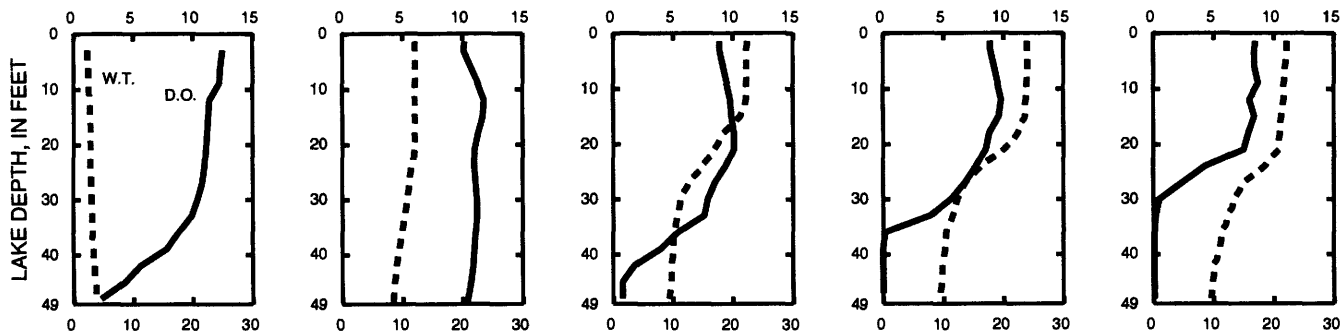
4-27-94

6-14-94

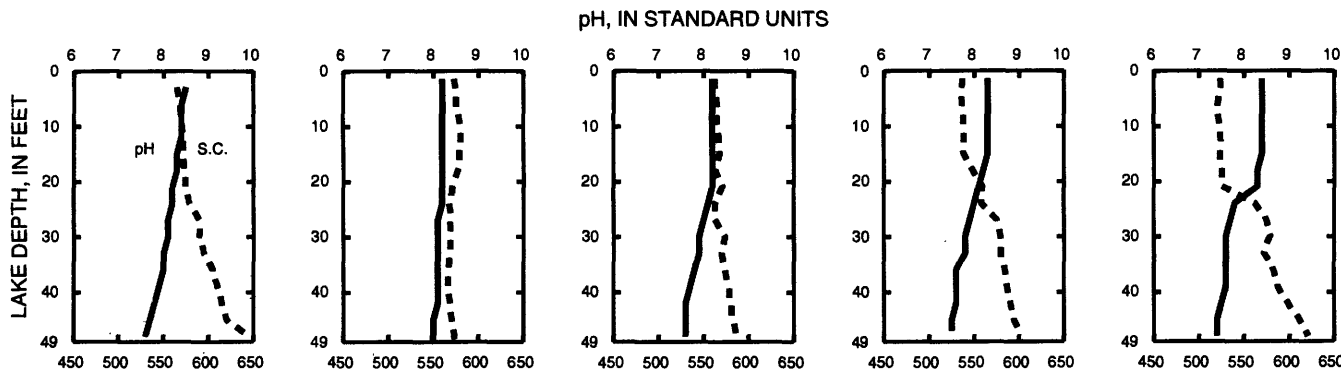
7-13-94

8-16-94

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



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 18 TO AUGUST 11, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 18		Apr. 26		June 16		July 19		Aug. 11	
Depth of sample (ft)	3.0	50	1.5	48	1.5	48	1.5	48	1.5	47
Lake stage (ft)	8.76		8.86		8.72		9.07		8.57	
Specific conductance (µS/cm)	543	591	548	583	490	582	499	593	488	591
pH (units)	8.4	7.7	8.3	7.6	8.4	7.5	8.2	7.4	8.1	7.4
Water temperature (°C)	2.0	3.0	15.0	5.5	26.5	6.5	25.5	6.5	20.5	6.5
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.2	1.00	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	1.8	3.5	---	3.7	---	---	4.2
Dissolved oxygen	11.4	3.4	10.5	3.5	9.6	0.7	9.1	0.8	8.1	0.7
Hardness, as CaCO3	---	---	270	270	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	54	54	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	33	34	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	14	18	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	230	230	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	26	27	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	30	36	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	4.0	6.0	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	316	328	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.34	0.36	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.13	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.60	0.70	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.94	1.1	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.014	0.017	0.012	0.050	0.012	0.112	0.011	0.076
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)	---	---	7.2	---	1.8	---	1.8	---	3.4	---

2-18-94

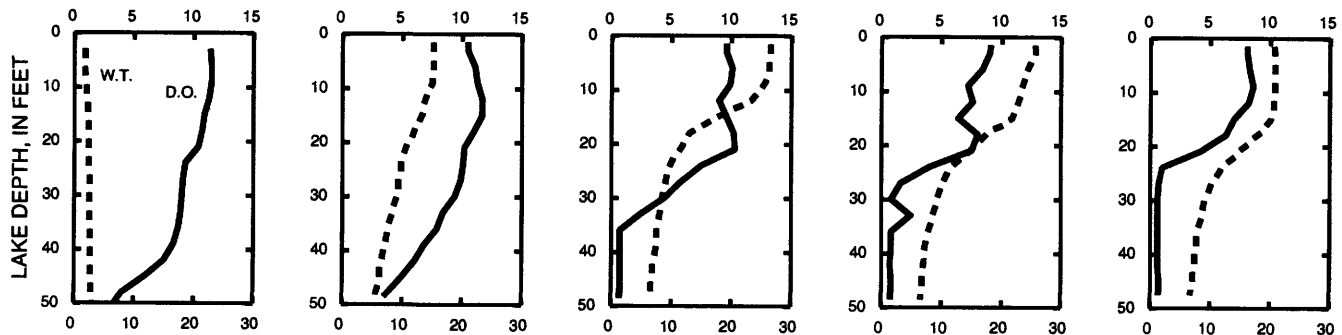
4-26-94

6-16-94

7-19-94

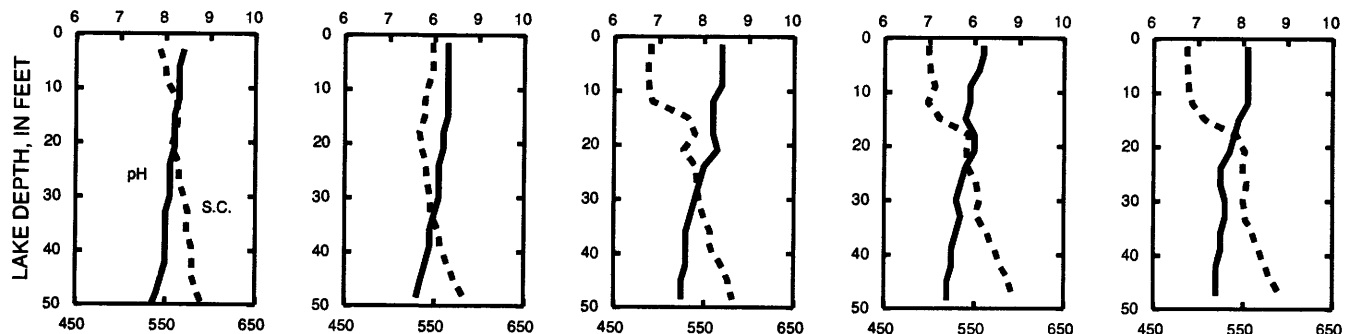
8-11-94

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



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

pH, IN STANDARD UNITS



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





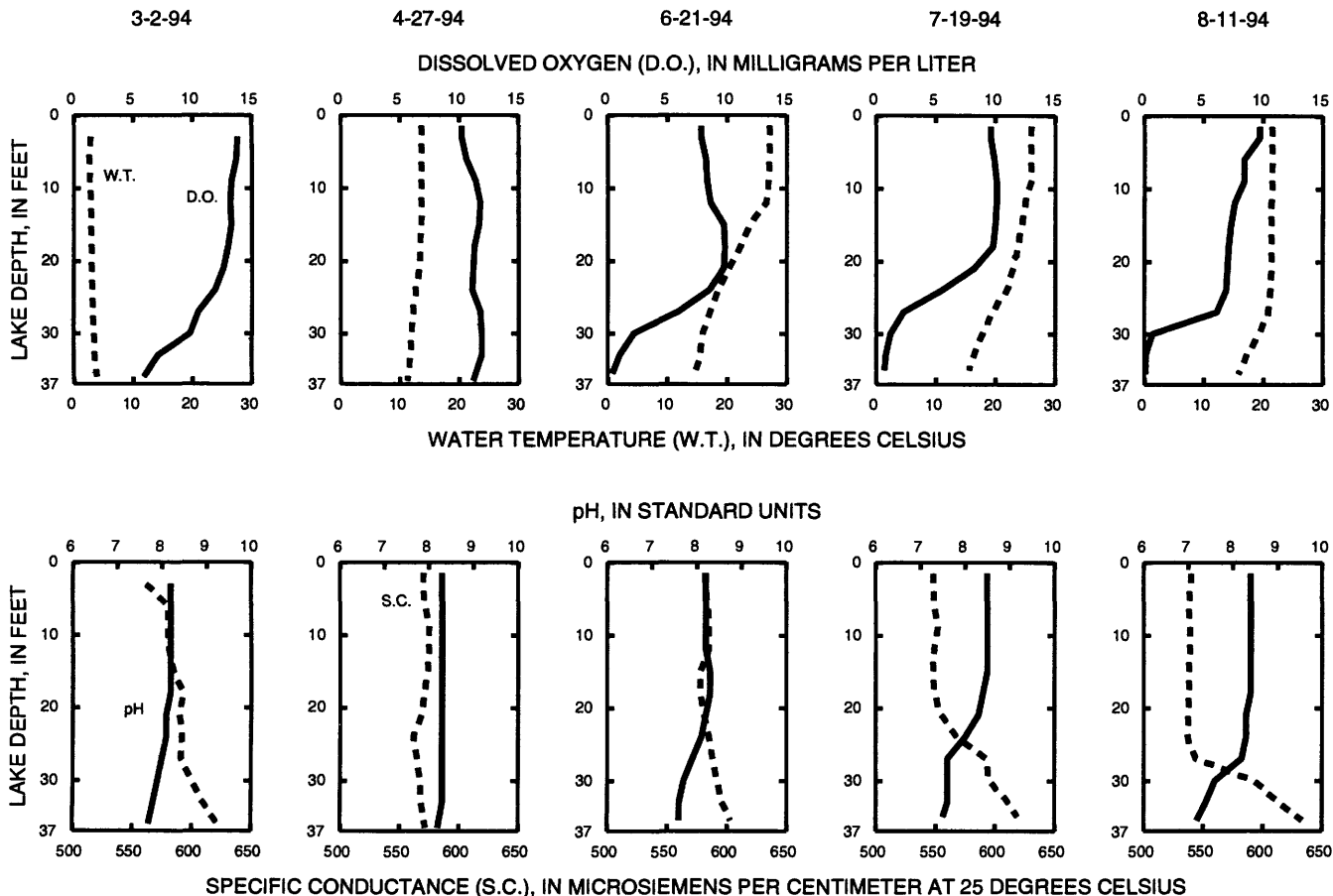
WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, MARCH 02 TO AUGUST 11, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 02		Apr. 27		June 21		July 19		Aug. 11	
Depth of sample (ft)	3.0	36	1.5	36	1.5	35	1.5	35	1.5	35
Lake stage (ft)	11.27		11.14		10.73		10.93		10.80	
Specific conductance (µS/cm)	562	621	571	572	582	603	548	619	540	633
pH (units)	8.2	7.7	8.3	8.2	8.2	7.6	8.5	7.5	8.4	7.2
Water temperature (°C)	3.0	4.0	13.5	11.5	27.0	14.5	26.0	15.5	21.5	16.0
Color (Pt-Co. scale)	---	---	5	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	<0.50	1.00	---	---	---	---	---	---
Secchi-depth (meters)	---	---	6.2		3.9		2.8		3.1	
Dissolved oxygen	13.8	5.9	10.2	11.2	7.8	0.4	9.6	0.7	9.7	0.1
Hardness, as CaCO3	---	---	240	240	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	40	40	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	33	34	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	26	26	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	190	220	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	30	29	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	56	56	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	6.2	5.5	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	314	312	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.33	0.41	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.15	0.15	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.70	0.70	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.0	1.1	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.007	0.004	0.005	<0.020	0.010	0.029	0.007	0.035
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)	---	---	0.8	---	1.0	---	3.9	---	4.5	---



ROCK RIVER BASIN

05425500 ROCK RIVER AT WATERTOWN, WI

LOCATION.--Lat 43°11'17", long 88°43'34", in SW 1/4 sec.4, T.8 N., R.15 E., Jefferson County, Hydrologic Unit 07090001, on left bank, 700 ft downstream from Milwaukee Street bridge, 1.1 mi downstream from Silver Creek, at Watertown.

DRAINAGE AREA.--969 mi<sup>2</sup>.

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: Ice-affected period, Dec. 24 to Mar. 8. Records good except those for ice-affected period, which is poor. Flow partly regulated by powerplant at Watertown. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994 DAILY MEAN VALUES

Table with columns: DAY, OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP. It lists daily discharge values from day 1 to 31, followed by summary statistics like TOTAL, MEAN, MAX, MIN, CFSM, and IN.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1994, BY WATER YEAR (WY)

Table with columns: MEAN, MAX, (WY), MIN, (WY). It shows monthly mean data for water years from 1931 to 1994.

SUMMARY STATISTICS

Table with columns: FOR 1993 CALENDAR YEAR, FOR 1994 WATER YEAR, WATER YEARS 1931 - 1994. It provides summary statistics for annual total, mean, highest/lowest annual means, daily means, and runoff percentages.

- (a) Ice affected
(b) Also occurred Sept. 9, 1944
(c) Gage height, 4.22 ft
(d) Gage height, 6.19 ft
(e) Backwater from ice

ROCK RIVER BASIN

217

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 mi<sup>2</sup>.

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.--No estimated daily discharge. Records good. Flow regulated by dam 0.8 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	33	46	24	69	314	204	13	8.1	8.1	12	9.3
2	202	30	49	25	86	326	218	12	6.1	7.2	9.6	9.0
3	192	32	50	26	44	342	196	11	5.9	5.5	19	9.2
4	191	32	52	26	86	362	108	13	5.4	12	16	7.3
5	176	47	54	26	42	348	71	18	9.2	9.8	13	8.4
6	164	40	81	72	42	351	42	14	7.4	10	11	11
7	164	30	96	55	43	395	21	16	6.5	16	11	9.8
8	165	33	97	54	43	434	16	17	6.0	15	13	8.6
9	171	33	105	53	52	427	27	22	5.7	14	11	8.2
10	149	35	112	52	40	423	25	13	5.4	10	12	8.0
11	114	34	106	55	40	417	23	25	6.0	11	12	8.1
12	96	29	98	50	40	412	27	14	5.1	12	13	7.8
13	89	37	96	49	64	407	25	10	6.7	10	17	7.8
14	64	41	96	49	72	403	12	12	5.0	13	19	9.2
15	48	44	95	49	40	397	25	24	6.0	13	16	8.4
16	52	38	90	77	70	388	44	13	6.6	12	15	12
17	54	46	89	86	71	378	21	8.4	6.1	13	15	9.4
18	48	35	90	43	54	364	18	8.2	6.1	13	16	7.0
19	48	61	87	43	46	352	31	7.9	14	11	15	6.6
20	45	42	89	44	71	342	20	7.4	14	17	17	6.3
21	52	37	87	43	123	266	16	7.4	14	15	16	5.3
22	35	38	72	42	205	153	16	7.6	11	17	15	5.3
23	35	40	52	41	294	128	15	7.1	14	16	13	5.9
24	38	41	39	41	323	130	17	7.7	17	15	14	7.1
25	37	34	39	41	318	152	20	10	13	15	13	8.3
26	49	48	39	42	310	184	21	11	20	14	13	15
27	45	40	39	43	299	212	16	6.7	13	12	12	9.5
28	41	46	39	46	287	225	5.8	6.9	20	11	15	10
29	50	46	33	69	---	224	13	5.4	16	11	10	6.4
30	43	46	27	50	---	217	12	4.8	7.5	10	9.5	7.5
31	40	---	24	49	---	213	---	11	---	10	12	---
TOTAL	2902	1168	2168	1465	3274	9686	1325.8	364.5	286.8	378.6	425.1	251.7
MEAN	93.6	38.9	69.9	47.3	117	312	44.2	11.8	9.56	12.2	13.7	8.39
MAX	205	61	112	86	323	434	218	25	20	17	19	15
MIN	35	29	24	24	40	128	5.8	4.8	5.0	5.5	9.5	5.3
CFSM	.60	.25	.45	.30	.74	1.99	.28	.07	.06	.08	.09	.05
IN.	.69	.28	.51	.35	.78	2.30	.31	.09	.07	.09	.10	.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1994, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994		
MEAN	110	132	121	89.1	72.1	186	188	96.3	79.2	94.9	68.1	74.3
MAX	446	350	289	281	182	312	527	449	369	561	249	282
(WY)	1987	1986	1986	1986	1986	1994	1993	1993	1993	1993	1986	1986
MIN	2.89	6.66	17.1	27.0	20.8	10.9	44.2	4.55	4.86	2.86	3.05	5.13
(WY)	1989	1989	1989	1991	1988	1988	1994	1989	1985	1988	1988	1988

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1985 - 1994
ANNUAL TOTAL	83599.1	23695.5	
ANNUAL MEAN	229	64.9	110
HIGHEST ANNUAL MEAN			244
LOWEST ANNUAL MEAN			39.0
HIGHEST DAILY MEAN	657	Jul 12, 14	657
LOWEST DAILY MEAN	5.2	Sep 12	.64
ANNUAL SEVEN-DAY MINIMUM	7.8	Sep 6	.77
INSTANTANEOUS PEAK FLOW		450	Mar 7
INSTANTANEOUS PEAK STAGE		8.11	Mar 7
ANNUAL RUNOFF (CFSM)	1.46	.41	.70
ANNUAL RUNOFF (INCHES)	19.81	5.61	9.54
10 PERCENT EXCEEDS	552	203	300
50 PERCENT EXCEEDS	150	29	50
90 PERCENT EXCEEDS	37	7.5	6.4

(a) Gage height, 9.32 ft

## ROCK RIVER BASIN

05426000 CRAWFISH RIVER AT MILFORD, WI

LOCATION.--Lat 43°06'00", long 88°50'58", in 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 mi<sup>2</sup>.

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. 23 to Mar. 4. 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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	682	303	408	140	200	1900	946	296	129	539	233	152
2	689	285	412	140	200	1900	910	308	110	507	228	142
3	631	279	426	140	210	1900	828	316	103	446	202	138
4	637	285	417	150	220	1900	721	324	93	402	218	130
5	603	324	382	160	220	1940	764	335	77	454	221	127
6	543	301	403	170	220	2040	697	324	120	490	217	143
7	537	238	350	170	210	2150	605	312	120	586	222	126
8	557	280	357	170	210	2250	511	266	122	715	234	122
9	559	287	365	170	200	2350	486	277	109	888	214	125
10	478	285	420	180	200	2500	472	258	101	1030	186	125
11	461	266	335	200	220	2560	428	232	86	1060	207	119
12	478	262	341	220	220	2570	401	247	88	1080	210	110
13	462	233	348	220	240	2540	403	208	89	1040	254	97
14	438	307	378	210	240	2470	413	207	73	1010	287	118
15	438	319	406	200	240	2400	401	228	71	959	279	103
16	431	299	382	200	250	2320	489	212	92	899	251	120
17	421	350	368	190	250	2160	496	197	93	841	230	150
18	379	311	378	190	270	2030	457	192	95	770	215	139
19	369	352	361	180	300	1960	461	178	105	678	227	139
20	354	340	362	180	450	1880	434	165	123	652	288	128
21	354	296	360	190	700	1820	403	153	153	628	302	112
22	354	339	303	210	1100	1710	370	149	146	616	286	105
23	352	335	290	220	1400	1670	300	139	150	578	252	118
24	360	343	230	220	1700	1600	287	133	243	535	242	131
25	347	293	200	220	1900	1520	310	140	302	489	231	135
26	357	307	170	210	2000	1400	230	168	442	436	220	174
27	355	323	150	210	2000	1340	281	143	504	396	170	172
28	308	355	140	210	2000	1260	300	131	543	352	177	200
29	348	375	140	200	---	1190	286	117	590	311	175	220
30	356	394	140	200	---	1110	295	125	572	282	151	228
31	340	---	150	190	---	988	---	139	---	244	169	---
TOTAL	13978	9266	9872	5860	17570	59328	14385	6619	5644	19913	6998	4148
MEAN	451	309	318	189	627	1914	479	214	188	642	226	138
MAX	689	394	426	220	2000	2570	946	335	590	1080	302	228
MIN	308	233	140	140	200	988	230	117	71	244	151	97
CFSM	.59	.41	.42	.25	.82	2.51	.63	.28	.25	.84	.30	.18
IN.	.68	.45	.48	.29	.86	2.90	.70	.32	.28	.97	.34	.20

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1994, BY WATER YEAR (WY)

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	273	299	254	239	294	1052	985	481	312	271	179	245																																																				
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 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1931 - 1994
ANNUAL TOTAL	393742	173581	
ANNUAL MEAN	1079	476	408
HIGHEST ANNUAL MEAN			1117
LOWEST ANNUAL MEAN			61.8
HIGHEST DAILY MEAN	4130	2570	6130
LOWEST DAILY MEAN	(a)140	71	1.30
ANNUAL SEVEN-DAY MINIMUM	(a)156	85	1.5
INSTANTANEOUS PEAK FLOW		2580	6140
INSTANTANEOUS PEAK STAGE		6.85	11.15
ANNUAL RUNOFF (CFSM)	1.42	.62	.54
ANNUAL RUNOFF (INCHES)	19.22	8.47	7.28
10 PERCENT EXCEEDS	2770	1100	1090
50 PERCENT EXCEEDS	717	293	180
90 PERCENT EXCEEDS	286	129	36

(a) Ice affected

ROCK RIVER BASIN

219

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 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1978 to September 1994 (discontinued). No winter record in water years 1993 and 1994.

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.--No estimated daily discharges. Record good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2120	734	1170	---	---	---	2590	843	298	858	421	279
2	2080	717	1270	---	---	---	2490	886	281	754	385	280
3	2030	737	1290	---	---	---	2370	933	252	676	377	282
4	1990	727	1260	---	---	---	2290	964	253	672	413	264
5	1870	700	1150	---	---	---	2210	961	251	895	391	257
6	1770	639	1050	---	---	---	2200	925	245	988	390	252
7	1710	629	966	---	---	---	2190	861	251	1140	407	264
8	1660	647	914	---	---	---	2080	794	227	1620	424	273
9	1620	688	909	---	---	---	2020	753	233	1840	405	284
10	1540	716	916	---	---	---	1840	728	232	1950	401	288
11	1500	729	811	---	---	---	1700	731	249	1980	425	265
12	1450	722	835	---	---	---	1660	623	249	1990	425	258
13	1310	787	868	---	---	---	1670	557	267	1950	519	262
14	1070	839	888	---	---	---	1680	534	283	1990	550	241
15	996	842	923	---	---	---	1650	548	275	2060	565	252
16	924	830	918	---	---	---	1640	513	236	1990	548	251
17	906	846	917	---	---	4310	1660	465	219	1890	475	232
18	895	828	949	---	---	4180	1590	434	207	1800	458	234
19	866	818	969	---	---	4020	1550	398	268	1710	521	218
20	819	753	965	---	---	3820	1490	359	289	1670	614	222
21	895	807	970	---	---	3690	1360	345	267	1660	625	223
22	890	937	813	---	---	3560	1090	313	264	1590	588	222
23	844	898	---	---	---	3430	931	305	287	1410	538	220
24	883	892	---	---	---	3280	855	306	429	1200	512	214
25	911	855	---	---	---	3140	850	312	500	1050	454	217
26	883	974	---	---	---	3020	803	319	790	934	423	251
27	877	1060	---	---	---	2950	687	301	923	812	435	282
28	855	1110	---	---	---	2860	762	325	918	730	394	296
29	842	1150	---	---	---	2780	804	341	984	649	375	305
30	796	1140	---	---	---	2710	799	332	906	546	347	343
31	779	---	---	---	---	2660	---	339	---	487	279	---
TOTAL	38581	24751	21721	---	---	50410	47511	17348	11333	41491	14084	7731
MEAN	1245	825	987	---	---	3361	1584	560	378	1338	454	258
MAX	2120	1150	1290	---	---	4310	2590	964	984	2060	625	343
MIN	779	629	811	---	---	2660	687	301	207	487	279	214
CFSM	.67	.45	.53	---	---	1.82	.86	.30	.20	.72	.25	.14
IN.	.78	.50	.44	---	---	1.01	.96	.35	.23	.83	.28	.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1994, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	1249	1408	1249	733	925	2630	3008	1612	1008	1007	669	962					
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 1993 CALENDAR YEAR  
(MAR. 22-DEC. 22, 1993)

FOR 1994 WATER YEAR  
(OCT. 1-DEC. 22, 1993,  
MAR. 17-SEPT. 30, 1994)

WATER YEARS 1978 - 1994

ANNUAL MEAN										1376		
HIGHEST ANNUAL MEAN										2836		1993
LOWEST ANNUAL MEAN										671		1989
HIGHEST DAILY MEAN	8590	Apr 22				4310	Mar 17		10200		Apr 1	1979
LOWEST DAILY MEAN	410	Sep 12				207	Jun 18		42		Aug 18	1988
ANNUAL SEVEN-DAY MINIMUM									60		Aug 16	1988
INSTANTANEOUS PEAK FLOW						4370	Mar 17		10300		Apr 1	1979
INSTANTANEOUS PEAK STAGE									10.84		Apr 2	1979
ANNUAL RUNOFF (CFSM)									.74			
ANNUAL RUNOFF (INCHES)									10.11			
10 PERCENT EXCEEDS	5150					2010			3000			
50 PERCENT EXCEEDS	2510					811			902			
90 PERCENT EXCEEDS	756					257			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.

DRAINAGE AREA.--50.2 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1993 to current year.

REMARKS.--Lake sampled at deep hole near center of lake at a depth of about 62 ft. Lake ice-covered during February sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, FEBRUARY 18 TO AUGUST 24, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 18		Apr. 26		June 21		July 25		Aug. 24	
Depth of sample (ft)	1.5	62	1.5	61	1.5	61	1.5	61	1.5	60
Lake stage (ft)	---		---		2.47		3.10		2.76	
Specific conductance (µS/cm)	614	675	640	634	652	658	584	658	575	667
pH (units)	8.4	8.0	8.3	8.2	8.1	7.7	8.1	7.6	8.3	7.5
Water temperature (°C)	2.5	3.0	12.0	6.5	26.5	7.0	25.5	7.0	23.0	7.5
Color (Pt-Co. scale)	---		15	10	---		---		---	
Turbidity (NTU)	---		0.90	0.90	---		---		---	
Secchi-depth (meters)	---		3.0		5.0		2.0		2.2	
Dissolved oxygen	12.8	5.9	11.3	10.9	8.1	0.8	8.4	0.9	9.2	0.8
Hardness, as CaCO <sub>3</sub>	---		300	300	---		---		---	
Calcium, dissolved (Ca)	---		60	60	---		---		---	
Magnesium, dissolved (Mg)	---		37	37	---		---		---	
Sodium, dissolved (Na)	---		22	22	---		---		---	
Potassium, dissolved (K)	---		2	2	---		---		---	
Alkalinity, as CaCO <sub>3</sub>	---		250	250	---		---		---	
Sulfate, dissolved (SO <sub>4</sub> )	---		26	27	---		---		---	
Chloride, dissolved (Cl)	---		47	47	---		---		---	
Fluoride, dissolved (F)	---		0.1	0.1	---		---		---	
Silica, dissolved (SiO <sub>2</sub> )	---		3.0	3.8	---		---		---	
Solids, dissolved, at 180°C	---		362	362	---		---		---	
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---		0.90	0.77	---		---		---	
Nitrogen, ammonia, dissolved (as N)	---		0.08	0.15	---		---		---	
Nitrogen, amm. + org., total (as N)	---		0.60	0.60	---		---		---	
Nitrogen, total (as N)	---		1.5	1.4	---		---		---	
Phosphorus, total (as P)	---		0.009	0.012	0.007	0.030	0.010	0.040	0.009	0.047
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)	---		4.9	---	1.0	---	2.5	---	2.7	---

2-18-94

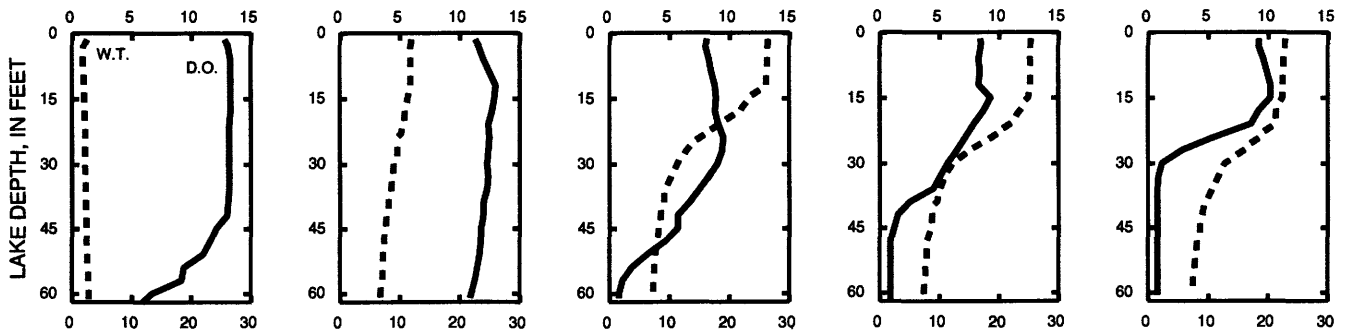
4-26-94

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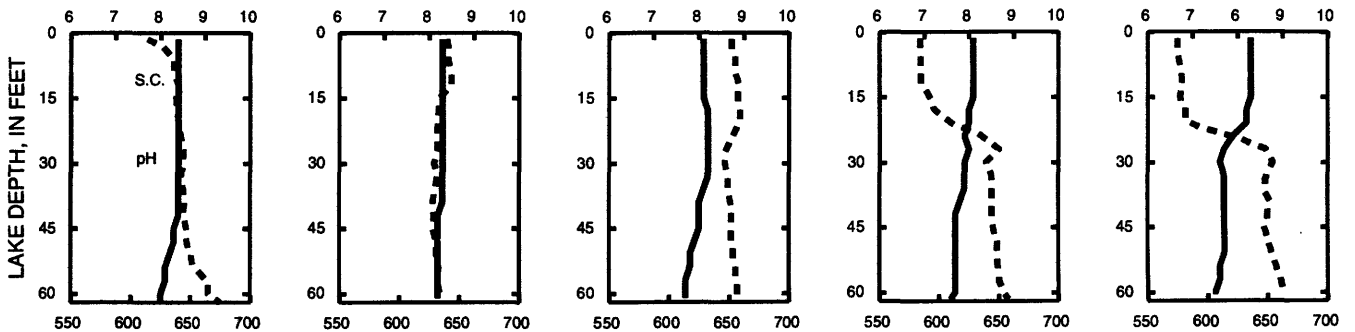
8-24-94

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

221

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, 1.4 mi southwest of Delafield.

DRAINAGE AREA.--50.2 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1993 to current year.

REMARKS.--Lake sampled near south end at a lake depth of about 18 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 26 TO AUGUST 24, 1994  
(Milligrams per liter unless otherwise indicated)

	Apr. 26	June 21	July 25	Aug. 24
Depth of sample (ft)	1.5	1.5	1.5	1.5
Lake stage (ft)	---	2.47	3.10	2.76
Specific conductance (μS/cm)	640	654	588	578
pH (units)	8.4	8.2	8.3	8.4
Water temperature (°C)	11.0	26.5	25.5	23.0
Secchi-depth (meters)	2.9	2.0	2.0	2.2
Dissolved oxygen	11.7	7.6	8.7	9.2
Phosphorus, total (as P)	0.009	0.010	0.011	0.011
Chlorophyll a, phytoplankton (μg/L)	5.5	2.3	3.0	2.7

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, 1.5 mi southwest of Delafield.

DRAINAGE AREA.--50.2 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1993 to current year.

REMARKS.--Lake sampled at lake outlet. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, APRIL 26 TO AUGUST 24, 1994  
(Milligrams per liter unless otherwise indicated)

	Apr. 26	June 21	July 25	Aug. 24
Lake stage (ft)	---	2.47	3.10	2.76
Specific conductance (μS/cm)	621	652	590	572
pH (units)	8.4	8.2	8.1	8.2
Water temperature (°C)	12.5	26.5	25.5	23.0
Secchi-depth (meters)	---	---	---	---
Dissolved oxygen	11.5	8.5	8.5	9.4
Phosphorus, total (as P)	0.011	0.012	0.011	0.010



425722088295000 PRETTY LAKE, AT DEEP HOLE, NEAR DOUSMAN, WI

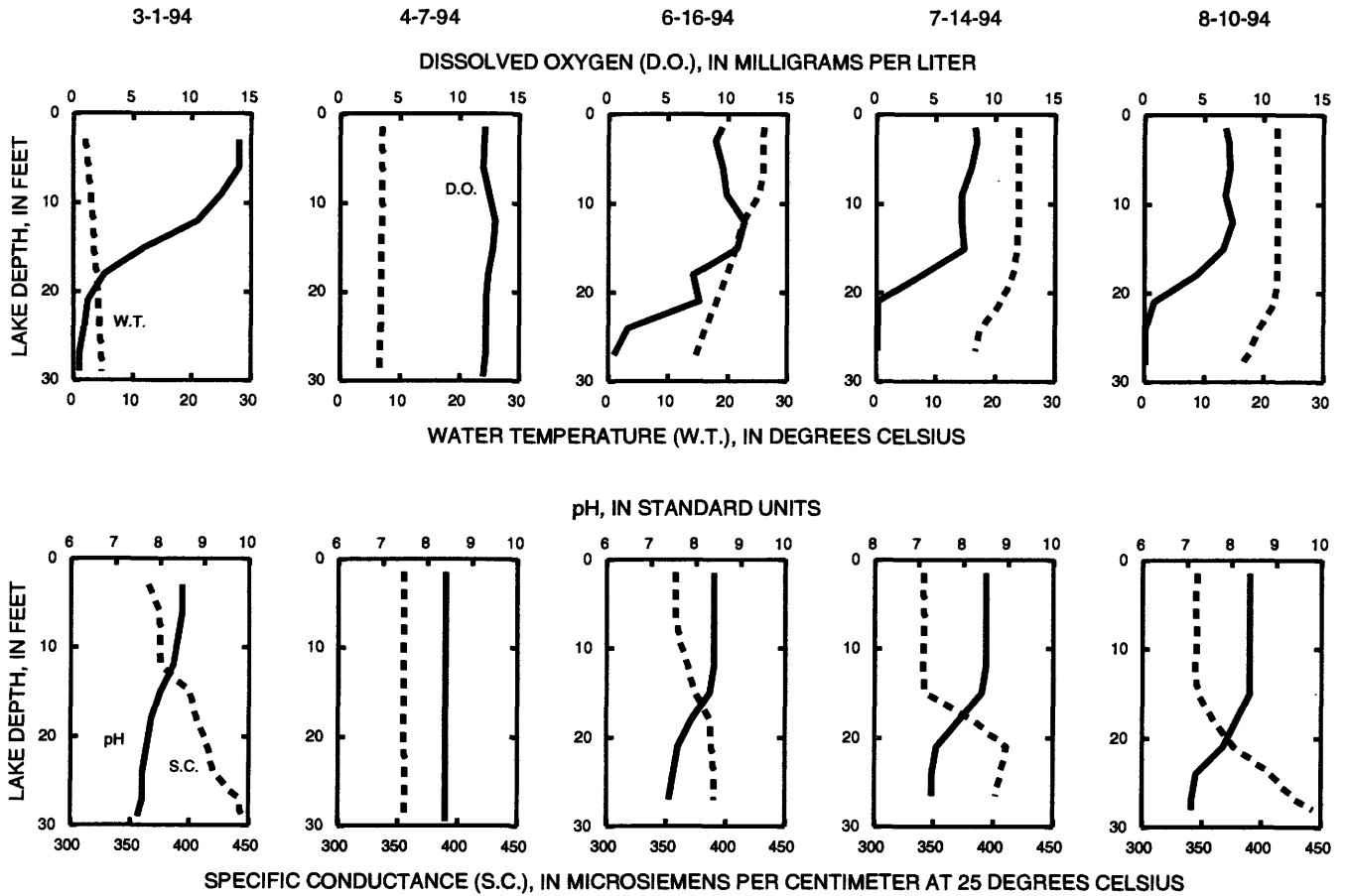
LOCATION.--Lat 42°57'22" long 88°29'50", in NE 1/4 NW 1/4 sec.28, T.6 N., R.17 E., Waukesha County, Hydrologic Unit 07090001, 4.1 mi south of Dousman.

PERIOD OF RECORD.--February 1993 to current year.

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

WATER-QUALITY DATA, MARCH 01 TO AUGUST 10, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 01		Apr. 07		June 16		July 14		Aug. 10	
Depth of sample (ft)	3.0	29	1.5	29	1.5	27	1.5	26	1.5	28
Lake stage (ft)	---	---	864.90	---	865.22	---	865.72	---	865.44	---
Specific conductance (µS/cm)	365	444	355	356	358	390	342	402	346	443
pH (units)	8.5	7.5	8.4	8.4	8.4	7.4	8.5	7.3	8.4	7.1
Water temperature (°C)	2.0	5.0	7.0	6.5	26.0	14.5	24.0	16.5	22.0	16.5
Color (Pt-Co. scale)	---	---	10	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.50	0.60	---	---	---	---	---	---
Secchi-depth (meters)	---	---	6.0	---	3.1	---	3.5	---	3.2	---
Dissolved oxygen	14.0	0.5	12.1	12.0	9.5	0.5	8.3	0.1	6.8	0.1
Hardness, as CaCO3	---	---	170	170	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	29	29	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	24	24	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	8.6	8.7	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	150	150	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	16	16	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	15	15	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	0.3	0.3	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	196	196	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.07	0.08	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.07	0.07	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.70	0.50	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.77	0.58	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.009	0.008	0.013	0.020	0.017	0.030	0.013	<0.020
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton(µg/L)	---	---	1.5	---	2.6	---	4.0	---	3.9	---



ROCK RIVER BASIN

223

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 mi<sup>2</sup>.

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: Ice-affected periods, Dec. 12 and Dec. 23 to Mar. 3. Records good except those for ice-affected periods, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	76	86	48	48	140	67	85	15	57	60	47
2	140	76	109	49	48	140	88	72	22	54	54	52
3	136	76	107	50	48	140	101	55	23	52	61	56
4	132	76	103	50	48	150	160	59	16	55	85	47
5	128	75	100	50	48	159	204	61	15	64	56	48
6	126	75	96	50	48	184	171	76	22	60	63	61
7	123	75	90	50	48	209	147	100	18	65	108	56
8	118	75	90	50	48	232	128	96	22	78	111	73
9	116	75	90	50	48	236	98	89	21	87	109	64
10	111	75	87	50	48	221	97	84	24	87	106	28
11	107	75	79	50	48	204	101	86	25	89	111	27
12	92	75	76	50	49	195	95	87	23	90	99	30
13	68	80	75	50	50	186	92	87	21	87	102	39
14	73	80	76	48	52	180	84	87	21	106	110	38
15	76	80	76	47	54	172	90	82	20	116	106	30
16	79	80	76	47	56	171	86	65	18	116	100	35
17	80	80	76	46	58	170	95	40	16	116	88	31
18	81	82	76	46	64	162	108	35	15	112	71	19
19	82	77	76	46	120	159	120	39	14	107	85	29
20	82	71	77	46	210	161	111	43	13	105	85	30
21	82	71	78	46	200	171	107	44	12	118	82	29
22	80	71	73	47	180	183	91	44	16	116	81	28
23	83	71	58	47	170	192	85	53	15	113	82	28
24	83	71	54	48	160	184	83	64	21	110	80	27
25	85	71	52	49	150	186	85	60	22	99	79	32
26	81	73	50	50	140	186	89	56	36	87	74	40
27	77	77	50	50	130	178	89	53	46	83	73	30
28	78	80	49	50	130	170	89	53	61	75	71	32
29	77	80	48	50	---	161	85	55	60	64	67	33
30	76	80	48	50	---	159	84	54	58	63	49	35
31	76	---	47	48	---	111	---	35	---	61	49	---
TOTAL	2980	2279	2328	1508	2501	5452	3130	1999	731	2692	2557	1154
MEAN	96.1	76.0	75.1	48.6	89.3	176	104	64.5	24.4	86.8	82.5	38.5
MAX	152	82	109	50	210	236	204	100	61	118	111	73
MIN	68	71	47	46	48	111	67	35	12	52	49	19
CFSM	.79	.62	.62	.40	.73	1.44	.86	.53	.20	.71	.68	.32
IN.	.91	.69	.71	.46	.76	1.66	.95	.61	.22	.82	.78	.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1994, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	77.1	101	88.2	70.0	80.3	137	156	98.3	63.2	62.4	59.8	74.1			
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 1993 CALENDAR YEAR FOR 1994 WATER YEAR WATER YEARS 1980 - 1994

ANNUAL TOTAL	50339	29311	
ANNUAL MEAN	138	80.3	89.7
HIGHEST ANNUAL MEAN			139
LOWEST ANNUAL MEAN			52.9
HIGHEST DAILY MEAN	459	Apr 20	459
LOWEST DAILY MEAN	(a)47	Dec 31	12
ANNUAL SEVEN-DAY MINIMUM	(a)49	Dec 25	14
INSTANTANEOUS PEAK FLOW			(b)249
INSTANTANEOUS PEAK STAGE			(c)2.44
ANNUAL RUNOFF (CFSM)	1.13		.66
ANNUAL RUNOFF (INCHES)	15.35		8.94
10 PERCENT EXCEEDS	263		150
50 PERCENT EXCEEDS	110		76
90 PERCENT EXCEEDS	73		30

(a) Ice affected  
(b) Gage height, 1.81 ft  
(c) Backwater from ice, high-water mark on outside staff

## ROCK RIVER BASIN

424608088414800 WHITEWATER LAKE NEAR WHITEWATER, WI

LOCATION.--Lat 42°46'08", long 88°41'48", in NW 1/4 NW 1/4 sec.35, T.4 N., R.15 E., Walworth County, Hydrologic Unit 07090001, at outlet, 5.0 mi southeast of Whitewater and 10.0 mi north of Beltsvan.

DRAINAGE AREA.--10.9 mi<sup>2</sup>, of which 8.5 mi<sup>2</sup> 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 Oct. 1-26, Apr. 17 to May 20, June 1-22, and June 27 to July 14, 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, 11.32 ft, Feb. 25, 26, 1994; minimum daily gage height, 8.89 ft, Oct. 2, 3, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 11.32 ft, Feb. 25, 26; minimum daily gage height, 10.41 ft, July 13.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.95	10.74	10.82	10.87	11.00	11.28	11.15	11.27	10.78	10.74	10.46	10.62
2	10.94	10.74	10.85	10.87	11.00	11.27	11.14	11.27	10.77	10.72	10.49	10.61
3	10.94	10.75	10.85	10.88	11.00	11.26	11.13	11.26	10.76	10.70	10.50	10.60
4	10.92	10.75	10.85	10.88	11.00	11.26	11.12	11.24	10.77	10.69	10.60	10.59
5	10.92	10.75	10.86	10.89	11.01	11.26	11.11	11.20	10.77	10.63	10.59	10.59
6	10.91	10.75	10.86	10.92	11.01	11.26	11.10	11.18	10.78	10.60	10.58	10.57
7	10.90	10.75	10.86	10.92	11.01	11.26	11.09	11.18	10.76	10.63	10.57	10.56
8	10.88	10.73	10.86	10.92	11.01	11.25	11.09	11.18	10.73	10.67	10.55	10.55
9	10.86	10.73	10.86	10.92	11.01	11.24	11.08	11.16	10.71	10.69	10.53	10.55
10	10.85	10.73	10.85	10.92	11.02	11.23	11.07	11.11	10.72	10.64	10.54	10.58
11	10.84	10.73	10.85	10.92	11.02	11.22	11.06	11.09	10.71	10.57	10.60	10.60
12	10.84	10.74	10.85	10.92	11.02	11.21	11.10	11.06	10.67	10.53	10.60	10.59
13	10.83	10.78	10.85	10.92	11.03	11.21	11.14	11.05	10.66	10.47	10.64	10.58
14	10.82	10.77	10.85	10.93	11.04	11.20	11.15	11.05	10.66	10.58	10.61	10.57
15	10.81	10.79	10.85	10.93	11.07	11.20	11.19	11.05	10.64	10.59	10.59	10.56
16	10.82	10.79	10.85	10.93	11.07	11.19	11.19	11.01	10.63	10.59	10.58	10.54
17	10.82	10.78	10.86	10.93	11.07	11.18	11.20	10.97	10.65	10.59	10.58	10.52
18	10.82	10.79	10.87	10.93	11.08	11.18	11.21	10.96	10.64	10.58	10.62	10.51
19	10.83	10.78	10.88	10.93	11.15	11.17	11.22	10.92	10.64	10.56	10.67	10.51
20	10.83	10.78	10.88	10.93	11.26	11.17	11.22	10.92	10.62	10.58	10.70	10.50
21	10.83	10.78	10.88	10.92	11.26	11.20	11.22	10.89	10.53	10.58	10.69	10.49
22	10.82	10.77	10.88	10.92	11.25	11.20	11.23	10.88	10.58	10.58	10.68	10.48
23	10.81	10.77	10.88	10.92	11.27	11.19	11.23	10.88	10.62	10.55	10.67	10.49
24	10.81	10.76	10.88	10.94	11.28	11.19	11.23	10.89	10.69	10.54	10.66	10.50
25	10.80	10.78	10.88	10.96	11.30	11.18	11.25	10.89	10.70	10.53	10.65	10.52
26	10.80	10.83	10.88	10.96	11.31	11.17	11.29	10.88	10.73	10.52	10.67	10.53
27	10.78	10.83	10.88	10.97	11.30	11.19	11.26	10.86	10.75	10.50	10.67	10.53
28	10.78	10.82	10.88	10.98	11.30	11.18	11.24	10.84	10.75	10.48	10.65	10.51
29	10.76	10.82	10.88	10.98	---	11.17	11.23	10.81	10.75	10.47	10.63	10.50
30	10.75	10.82	10.88	10.99	---	11.17	11.24	10.80	10.76	10.45	10.63	10.49
31	10.74	---	10.87	11.00	---	11.16	---	10.79	---	10.44	10.63	---
MEAN	10.84	10.77	10.86	10.93	11.11	11.21	11.17	11.02	10.70	10.58	10.61	10.54
MAX	10.95	10.83	10.88	11.00	11.31	11.28	11.29	11.27	10.78	10.74	10.70	10.62
MIN	10.74	10.73	10.82	10.87	11.00	11.16	11.06	10.79	10.53	10.44	10.46	10.48

## ROCK RIVER BASIN

225

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 Pottawatomi Trail Bridge at Bingham Point Estates, and 4.5 mi northeast of Newville.

DRAINAGE AREA.--2,560 mi<sup>2</sup>, at lake outlet. Area of Lake Koshkonong, 16.3 mi<sup>2</sup>.

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, 9.19 ft, Mar. 21; minimum, 5.69 ft, Jan. 18.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.68	6.46	6.67	6.12	5.93	8.36	8.55	6.57	6.20	6.84	6.31	5.99
2	7.67	6.43	6.72	6.06	5.93	8.32	8.48	6.56	6.18	6.86	6.22	6.04
3	7.66	6.42	6.75	6.01	5.94	8.29	8.38	6.57	6.16	6.85	6.20	6.08
4	7.64	6.41	6.78	5.96	6.01	8.25	8.28	6.57	6.16	6.87	6.34	6.11
5	7.59	6.43	6.79	5.91	6.02	8.21	8.22	6.58	6.17	6.93	6.28	6.15
6	7.54	6.38	6.82	5.90	6.03	8.23	8.09	6.56	6.22	6.89	6.24	6.20
7	7.52	6.31	6.76	5.87	6.03	8.34	8.00	6.56	6.20	6.89	6.20	6.14
8	7.47	6.30	6.74	5.84	6.05	8.51	7.90	6.55	6.15	6.95	6.19	6.12
9	7.42	6.29	6.71	5.82	6.06	8.67	7.87	6.55	6.14	7.01	6.14	6.11
10	7.32	6.28	6.73	5.83	6.07	8.81	7.79	6.49	6.16	7.03	6.16	6.14
11	7.25	6.28	6.65	5.82	6.07	8.90	7.67	6.52	6.18	7.08	6.29	6.13
12	7.20	6.26	6.60	5.82	6.08	8.95	7.57	6.45	6.19	7.14	6.33	6.11
13	7.13	6.32	6.57	5.81	6.10	8.99	7.53	6.39	6.23	7.14	6.52	6.10
14	7.07	6.35	6.56	5.81	6.09	9.03	7.48	6.33	6.23	7.21	6.61	6.09
15	7.01	6.37	6.55	5.80	6.08	9.07	7.49	6.35	6.24	7.24	6.61	6.08
16	6.95	6.38	6.53	5.80	6.07	9.10	7.49	6.27	6.23	7.25	6.57	6.11
17	6.89	6.42	6.53	5.80	6.07	9.12	7.41	6.20	6.22	7.26	6.50	6.12
18	6.82	6.41	6.55	5.73	6.07	9.14	7.37	6.16	6.22	7.24	6.46	6.11
19	6.77	6.50	6.55	5.73	6.12	9.15	7.36	6.11	6.21	7.20	6.52	6.12
20	6.73	6.45	6.57	5.74	6.53	9.16	7.27	6.07	6.24	7.20	6.54	6.14
21	6.75	6.45	6.57	5.75	7.02	9.18	7.20	6.06	6.23	7.16	6.53	6.14
22	6.67	6.46	6.56	5.75	7.49	9.17	7.12	6.05	6.21	7.12	6.49	6.13
23	6.65	6.47	6.53	5.75	7.85	9.14	7.00	6.04	6.22	7.07	6.44	6.17
24	6.64	6.45	6.48	5.74	8.09	9.11	6.94	6.05	6.32	7.01	6.37	6.20
25	6.62	6.43	6.43	5.77	8.28	9.06	6.89	6.05	6.35	6.95	6.32	6.22
26	6.62	6.50	6.39	5.80	8.35	8.99	6.81	6.07	6.48	6.85	6.28	6.24
27	6.60	6.53	6.34	5.86	8.35	8.95	6.73	6.04	6.58	6.76	6.19	6.21
28	6.58	6.58	6.31	5.90	8.38	8.87	6.59	6.09	6.68	6.66	6.16	6.18
29	6.58	6.63	6.28	5.92	---	8.79	6.60	6.14	6.80	6.56	6.07	6.12
30	6.54	6.65	6.24	5.93	---	8.70	6.56	6.18	6.82	6.46	6.01	6.08
31	6.50	---	6.18	5.93	---	8.62	---	6.23	---	6.36	6.03	---
MEAN	7.03	6.42	6.56	5.85	6.61	8.81	7.49	6.30	6.29	6.97	6.33	6.13
MAX	7.68	6.65	6.82	6.12	8.38	9.18	8.55	6.58	6.82	7.26	6.61	6.24
MIN	6.50	6.26	6.18	5.73	5.93	8.21	6.56	6.04	6.14	6.36	6.01	5.99

## ROCK RIVER BASIN

05427570 ROCK RIVER AT INDIANFORD, WI

LOCATION.--Lat 42°48'15", long 89°05'25", in SW 1/4 SW 1/4 sec.16, T.4 N., R.12 E., Rock County, Hydrologic Unit 07090001, on right bank 50 ft upstream from bridge on County Trunk Highways F and M, 250 ft upstream from dam in Indianford, and 1.8 mi upstream from Yahara River.

DRAINAGE AREA.--2,630 mi<sup>2</sup>.

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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2670	1150	1460	960	467	3550	3920	1400	406	861	1170	433
2	2750	1100	1500	942	481	3480	3820	1430	410	947	1160	284
3	2580	1080	1580	890	485	3400	3700	1430	387	922	965	323
4	2710	1090	1610	834	494	3360	3530	1410	371	869	1100	341
5	2650	1120	1600	813	500	3350	3690	1350	319	1070	1080	343
6	2500	1090	1600	799	514	3380	3460	1430	378	1330	982	559
7	2480	939	1600	748	513	3550	3230	1430	464	1350	949	725
8	2540	1020	1530	728	524	3880	3080	1230	500	1490	840	687
9	2610	1030	1500	730	528	4120	2900	1280	380	1650	713	629
10	2300	1040	1540	733	527	4270	2990	1280	367	1840	611	592
11	2150	987	1430	748	527	4390	2900	1140	312	1900	676	585
12	2160	1070	1370	730	542	4450	2810	1260	322	2040	737	559
13	2080	919	1400	745	537	4510	2530	1160	359	2150	888	505
14	1960	1150	1420	723	539	4520	2490	1120	340	2140	944	550
15	1910	1110	1420	715	529	4610	2170	1090	331	2140	1300	355
16	1850	1080	1390	714	532	4680	2310	1120	377	2160	1490	234
17	1790	1220	1360	707	537	4710	2380	994	397	2160	1450	323
18	1670	1110	1370	698	532	4720	2300	927	393	2160	1350	320
19	1620	1130	1330	692	574	4750	2270	875	397	2100	1450	338
20	1530	1170	1310	690	967	4800	2240	737	347	2080	1490	332
21	1320	1090	1350	695	1770	4780	2180	581	393	2010	1520	313
22	1460	1260	1320	700	2640	4750	2080	583	367	1980	1480	320
23	1370	1260	1290	698	3010	4760	1780	629	482	1920	1380	379
24	1360	1430	1220	598	3230	4640	1760	521	557	1880	1300	424
25	1360	1350	1170	403	3480	4640	1770	515	461	1770	1300	393
26	1360	1200	1120	433	3550	4530	1440	628	584	1730	1240	635
27	1300	1300	1080	423	3560	4440	1570	431	663	1660	1120	853
28	1130	1330	1050	433	3580	4330	1700	245	616	1560	1080	853
29	1190	1410	1000	456	---	4220	1340	282	790	1440	1030	857
30	1310	1430	993	459	---	4100	1490	330	863	1340	791	868
31	1240	---	978	456	---	3900	---	331	---	1210	662	---
TOTAL	58910	34665	41891	21093	35669	131570	75830	29169	13333	51859	34248	14912
MEAN	1900	1155	1351	680	1274	4244	2528	941	444	1673	1105	497
MAX	2750	1430	1610	960	3580	4800	3920	1430	863	2160	1520	868
MIN	1130	919	978	403	467	3350	1340	245	312	861	611	234
CFSM	.72	.44	.51	.26	.48	1.61	.96	.36	.17	.64	.42	.19
IN.	.83	.49	.59	.30	.50	1.86	1.07	.41	.19	.73	.48	.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1994, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
MEAN	1549	1774	1765	1173	1262	3080	3987	2349	1385	1296	961	1174									
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 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	FOR WATER YEARS 1975 - 1994
ANNUAL TOTAL	1168682	543149	
ANNUAL MEAN	3202	1488	1815
HIGHEST ANNUAL MEAN			3252
LOWEST ANNUAL MEAN			509
HIGHEST DAILY MEAN	10000	4800	11700
LOWEST DAILY MEAN	855	234	39
ANNUAL SEVEN-DAY MINIMUM	974	311	85
INSTANTANEOUS PEAK FLOW		4830	11900
INSTANTANEOUS PEAK STAGE		13.90	(a)16.23
ANNUAL RUNOFF (CFSM)	1.22	.57	.69
ANNUAL RUNOFF (INCHES)	16.53	7.68	9.38
10 PERCENT EXCEEDS	6390	3470	3870
50 PERCENT EXCEEDS	2530	1170	1300
90 PERCENT EXCEEDS	1120	401	339

(a) Datum then in use

ROCK RIVER BASIN

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05427718 YAHARA RIVER AT WINDSOR, WI

LOCATION.--Lat 43°12'32", Long 89°21'09", in NW 1/4 NE 1/4 sec.31, T.9 N., R.10 E., Dane County, Hydrologic Unit 07090001, at bridge on road to Lake Windsor Country Club.

DRAINAGE AREA.--73.6 mi<sup>2</sup>.

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. 26 to Jan. 1, Jan. 5, 6, Jan. 8 to Feb. 18, and Feb. 23 to Mar. 1. Records good except those for ice-affected periods and flows over 800 ft<sup>3</sup>/s, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	29	28	25	23	36	28	28	18	24	19	18
2	29	29	29	25	23	26	27	27	18	22	19	18
3	28	29	29	25	23	25	27	24	18	21	22	18
4	28	30	29	24	23	30	26	23	18	58	26	19
5	28	30	29	24	23	119	26	22	18	51	21	19
6	28	29	30	24	22	242	26	22	18	36	20	18
7	27	29	29	23	22	296	25	22	19	45	20	18
8	27	29	29	23	22	169	25	22	19	35	19	18
9	35	29	28	23	21	71	26	21	18	28	19	18
10	30	29	29	23	21	50	25	21	17	24	26	31
11	29	29	27	24	21	37	25	24	17	22	36	21
12	29	29	27	24	22	36	29	22	17	22	25	19
13	28	33	27	22	22	36	34	22	18	21	23	18
14	28	31	28	22	22	35	29	22	18	25	22	24
15	28	33	28	21	22	39	37	23	18	24	21	23
16	29	31	28	21	23	34	30	22	17	22	20	29
17	29	30	28	20	24	31	26	21	17	21	19	22
18	28	29	29	20	26	31	25	20	16	21	20	20
19	29	30	28	19	183	30	24	20	22	20	23	19
20	29	29	28	19	491	34	24	20	21	38	24	19
21	33	28	27	19	413	47	23	20	18	28	21	18
22	31	29	26	20	163	41	23	19	18	32	20	18
23	30	29	26	21	110	38	22	19	48	25	19	20
24	30	28	26	22	90	35	22	20	69	23	19	20
25	30	30	25	23	70	31	25	20	35	34	19	24
26	30	49	24	24	58	31	25	20	192	25	19	46
27	29	35	24	25	50	32	23	19	75	22	18	36
28	29	31	23	25	45	31	22	19	43	21	18	26
29	29	29	23	24	---	29	22	19	42	20	18	22
30	29	28	23	23	---	28	24	19	28	20	18	21
31	29	---	24	23	---	28	---	18	---	20	19	---
TOTAL	906	912	838	700	2078	1778	775	660	930	850	652	660
MEAN	29.2	30.4	27.0	22.6	74.2	57.4	25.8	21.3	31.0	27.4	21.0	22.0
MAX	35	49	30	25	491	296	37	28	192	58	36	46
MIN	27	28	23	19	21	25	22	18	16	20	18	18
CFSM	.40	.41	.37	.31	1.01	.78	.35	.29	.42	.37	.29	.30
IN.	.46	.46	.42	.35	1.05	.90	.39	.33	.47	.43	.33	.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1994, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	15.1	16.3	14.2	13.8	22.6	46.5	23.2	16.6	19.4	23.4	17.6	19.4	19.4	23.4	17.6	19.4	19.4	19.4	19.4
MAX	29.2	30.4	27.0	23.4	74.2	135	47.8	29.7	38.9	95.3	40.3	50.1	50.1	95.3	40.3	50.1	50.1	50.1	50.1
(WY)	1994	1994	1994	1980	1994	1976	1993	1993	1993	1993	1993	1980	1980	1993	1993	1993	1993	1993	1993
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	7.12	7.12	7.29	7.12	7.12	7.12	7.12
(WY)	1978	1978	1978	1978	1978	1978	1978	1977	1977	1977	1991	1977	1977	1977	1991	1977	1977	1977	1977

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1976 - 1994	
ANNUAL TOTAL	15114		11739			
ANNUAL MEAN	41.4		32.2		20.1	
HIGHEST ANNUAL MEAN					39.1	
LOWEST ANNUAL MEAN					10.9	
HIGHEST DAILY MEAN	519		491		519	
LOWEST DAILY MEAN	(a)13		16		4.6	
ANNUAL SEVEN-DAY MINIMUM	(a)13		17		4.6	
INSTANTANEOUS PEAK FLOW			543		2050	
INSTANTANEOUS PEAK STAGE			5.74		6.58	
INSTANTANEOUS LOW FLOW					(b)2.9	
ANNUAL RUNOFF (CFSM)	.56		.44		.27	
ANNUAL RUNOFF (INCHES)	7.64		5.93		3.70	
10 PERCENT EXCEEDS	64		36		33	
50 PERCENT EXCEEDS	29		25		13	
90 PERCENT EXCEEDS	16		19		8.0	

(a) Ice affected  
(b) Result of freezeup

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to September 1980, October 1989 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: March 1990 to current year.

TOTAL-PHOSPHORUS DISCHARGE: March 1990 to current year.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: October 1990 to 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, 4.0 mg/L, Aug. 24, 1994.

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, 3,240 lb, Feb. 20, 1994; 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 and June 26, 1994.

TOTAL ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 1,260 lb, Mar. 2, 1991; minimum daily, 0.49 lb, Nov. 26, 1990.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 1,130 mg/L, Apr. 12; minimum observed, 4.0 mg/L, Aug. 24.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 286 tons, Feb. 20; minimum daily, 0.22 ton, Aug. 24.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.80 mg/L, Feb. 19; minimum observed, 0.04 mg/L, Nov. 2.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 3,240 lb, Feb. 20; minimum daily, 5.49 lb, Jan. 21.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993					APR 1994				
06...	1455	28	760	14.0	20...	1336	23	730	11.5
NOV					MAY				
02...	1300	28	760	6.0	25...	0755	20	760	15.0
DEC					JUN				
16...	1437	28	740	5.0	24...	0925	72	595	16.0
JAN 1994					JUL				
04...	1427	25	750	1.0	18...	1533	21	750	20.5
31...	1540	23	810	0.0	SEP				
MAR					09...	1004	18	765	15.0
02...	0952	26	740	2.0					

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO-DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 1993						
*06...	1500	--	28	0.050	--	55
NOV						
*02...	1250	--	29	0.040	--	23
26...	0345	--	38	0.110	--	64
26...	0600	--	44	--	--	59
26...	0730	--	51	0.130	--	88
26...	1030	--	58	0.240	--	92
26...	1630	--	55	0.190	--	62
26...	2215	--	46	0.320	--	54
27...	0415	--	39	0.290	--	45
28...	0945	--	40	0.150	--	109
DEC						
16...	1440	--	28	0.070	--	--
JAN 1994						
04...	1405	--	25	0.060	--	17
*31...	1540	23	--	0.050	--	28
FEB						
12...	0145	22	--	0.110	--	38
13...	0400	22	--	0.070	--	26
19...	0645	--	45	0.350	--	112
19...	0945	--	60	0.440	--	204
19...	1245	--	92	0.740	--	431
19...	1330	--	112	0.820	--	531
19...	1805	--	419	1.90	1.00	485
*19...	1833	--	448	1.70	--	347

\* 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 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
<b>FEB 1994</b>						
19...	1836	--	448	1.80	--	336
20...	0015	--	482	1.40	--	375
20...	1215	--	470	1.20	--	168
20...	1815	--	476	1.10	0.600	194
21...	0015	--	525	--	--	115
21...	1030	--	414	1.20	--	84
22...	0300	--	219	0.920	--	126
22...	1315	--	154	0.870	--	88
22...	1915	--	103	1.00	--	87
23...	1445	110	--	--	--	29
23...	2045	110	--	0.550	--	41
24...	1915	90	--	--	--	45
25...	0330	70	--	0.340	--	34
25...	2130	70	--	0.290	--	28
26...	1430	58	--	0.190	--	36
27...	1415	50	--	0.210	--	37
<b>MAR</b>						
*02...	1010	--	26	0.130	--	48
07...	0930	--	277	1.30	--	--
07...	1245	--	306	1.00	--	235
07...	1845	--	303	0.870	--	172
08...	0700	--	214	0.620	--	97
08...	1930	--	122	0.550	--	118
09...	0915	--	71	0.450	--	69
10...	2115	--	44	0.280	--	46
12...	0825	--	33	0.200	--	27
21...	0415	--	43	0.160	--	46
21...	1615	--	49	0.180	--	43
22...	0415	--	44	0.150	--	36
<b>APR</b>						
06...	1218	--	26	0.070	--	38
12...	1645	--	36	1.20	--	1130
12...	1800	--	43	0.230	--	131
13...	0300	--	37	0.120	--	48
15...	0500	--	36	0.120	--	44
15...	0600	--	43	0.140	--	92
15...	1200	--	39	0.130	--	35
15...	2400	--	34	0.170	--	43
*20...	1340	--	23	0.050	--	16
25...	0845	--	32	0.150	--	146
<b>MAY</b>						
*02...	1330	--	26	0.050	--	32
11...	1100	--	28	0.100	--	45
*25...	0755	--	20	0.140	--	74
DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
<b>JUN 1994</b>						
09...	1420	18	0.130	--	0.052	--
13...	1335	18	0.170	--	0.067	--
16...	1120	17	0.180	--	0.077	--
20...	0530	26	0.870	--	0.167	318
*20...	1315	20	0.250	--	0.104	66
*22...	1530	19	0.200	--	0.081	75
23...	1430	22	0.360	0.115	--	95
23...	1600	39	0.390	0.139	0.140	169
23...	1730	74	0.700	0.160	0.170	416
23...	1815	100	0.870	0.159	--	634
23...	1900	132	0.980	0.297	0.230	579
23...	2215	112	0.550	--	--	232
24...	0415	88	0.520	0.266	0.230	148
*24...	0925	72	0.720	--	--	111
24...	0930	72	0.690	0.399	0.350	104
24...	1445	59	0.450	--	--	89
25...	0015	45	0.390	--	--	77
25...	2100	37	0.290	--	0.123	98
26...	0045	60	0.500	--	0.177	191
26...	0130	97	0.810	--	--	390
26...	0230	142	0.920	--	0.230	638
26...	0300	173	1.20	--	--	1110
26...	0345	227	1.80	--	0.150	1090
*26...	1110	238	0.950	--	--	259
26...	1112	238	0.900	--	0.430	310
26...	1645	182	0.840	--	--	194

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE



## ROCK RIVER BASIN

05427718 YAHARA RIVER AT WINDSOR, WI--CONTINUED

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
JUN 1994						
27...	0130	116	0.510	--	0.250	160
27...	1315	62	0.330	--	--	86
28...	0715	47	0.320	--	0.111	78
28...	1915	40	0.280	--	--	63
29...	0230	49	0.310	--	--	89
29...	1430	40	0.270	--	--	76
*30...	1045	29	0.230	--	0.111	68
JUL						
04...	0545	31	0.250	--	--	107
04...	0715	44	0.320	--	0.081	149
04...	1100	52	0.340	--	--	129
04...	1300	69	0.410	--	0.109	218
04...	2000	85	0.550	--	0.278	176
05...	0715	56	0.460	--	0.220	104
06...	1315	31	0.240	--	--	61
06...	1845	37	0.340	--	--	119
06...	2115	52	0.450	--	--	182
*07...	0750	38	0.240	--	0.104	112
07...	1515	33	0.280	--	--	66
07...	1800	61	0.750	--	0.246	248
07...	1915	77	1.40	--	0.250	753
07...	2300	48	--	--	0.146	--
07...	2330	45	0.440	--	--	165
08...	0530	37	0.310	--	--	103
08...	2330	30	0.420	--	--	58
14...	0800	29	0.280	--	--	65
*18...	1535	21	0.100	--	--	58
20...	0330	31	0.280	--	--	87
20...	0500	52	0.470	--	0.121	257
20...	0530	61	0.630	--	0.120	496
20...	0900	46	--	--	--	162
20...	1500	38	0.270	--	0.117	83
*20...	1615	37	0.260	--	0.117	86
21...	2145	39	0.250	--	--	66
22...	1545	31	0.260	--	--	66
25...	1200	37	0.310	--	--	72
*28...	1020	21	0.320	--	0.176	45
DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	
AUG 1994						
03...	2000	30	0.370	0.140	107	
04...	0200	31	0.240	0.095	56	
*04...	1415	25	0.116	0.065	45	
10...	1830	31	0.220	--	62	
10...	2100	44	0.250	0.122	80	
10...	2330	52	0.270	0.107	96	
11...	0400	39	0.210	0.134	50	
11...	1000	39	0.170	0.107	33	
11...	2200	29	0.240	--	28	
*18...	1700	20	0.090	0.045	10	
*24...	1055	19	0.086	0.050	4	
*31...	1305	19	0.080	0.054	17	
SEP						
09...	1000	18	0.069	0.050	--	
*09...	1005	18	0.090	--	7	
09...	2400	32	--	--	878	
10...	0245	23	0.450	--	--	
10...	0430	53	0.720	--	230	
10...	0700	33	0.590	--	110	
*14...	1215	30	0.210	--	45	
15...	1435	22	0.343	0.218	12	
16...	0315	36	0.340	--	126	
16...	1515	30	0.210	--	29	
22...	1000	18	0.125	0.063	--	
26...	0230	35	--	--	113	
26...	0300	43	0.350	--	140	
26...	0345	50	0.380	0.166	--	
26...	0945	52	--	--	97	
*26...	1135	50	0.390	0.244	99	
26...	1136	50	0.390	0.252	76	
26...	2145	45	--	--	75	
27...	0345	41	0.580	--	--	
27...	0945	37	--	--	39	
27...	2145	30	--	--	33	
*29...	1617	22	0.119	0.083	19	

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

## ROCK RIVER BASIN

231

05427718 YAHARA RIVER AT WINDSOR, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	1.9	1.5	1.2	1.8	4.3	2.8	2.8	3.1	4.3	2.2	.77
2	3.6	1.8	1.6	1.2	1.8	3.3	2.8	2.3	3.0	3.7	2.1	.68
3	3.7	1.8	1.5	1.1	1.9	3.0	2.7	2.0	2.9	3.4	3.2	.63
4	3.8	1.8	1.5	1.1	1.9	4.5	2.7	1.9	2.9	25	3.4	.58
5	4.0	1.8	1.5	1.1	2.0	88	2.7	1.8	2.9	14	2.5	.53
6	4.1	1.8	1.6	1.1	2.0	191	2.6	1.7	2.8	9.4	2.3	.48
7	4.0	1.8	1.5	1.1	2.0	181	2.5	1.7	2.9	27	2.2	.42
8	3.8	1.8	1.5	1.1	2.1	50	2.5	1.6	2.8	8.6	2.2	.37
9	4.7	1.8	1.5	1.2	2.0	14	2.6	1.5	2.6	4.1	2.1	1.1
10	4.0	1.8	1.5	1.2	2.1	6.9	2.5	1.5	2.5	3.4	4.0	14
11	3.7	1.8	1.4	1.2	2.1	3.6	2.4	2.7	2.5	2.9	4.0	2.0
12	3.6	1.8	1.4	1.3	2.0	2.7	11	2.8	2.3	2.6	1.7	1.6
13	3.4	2.0	1.4	1.2	1.5	2.6	4.1	2.9	2.4	2.3	1.4	1.4
14	3.2	1.9	1.4	1.2	1.5	2.5	2.7	3.0	2.4	3.9	1.1	2.0
15	3.2	2.0	1.4	1.2	1.5	2.7	4.5	3.2	2.3	4.0	.89	1.0
16	3.1	1.9	1.4	1.2	1.6	2.3	3.2	3.1	2.2	3.6	.72	3.8
17	3.0	1.8	1.4	1.2	1.7	2.2	2.2	3.1	2.1	3.4	.59	1.7
18	2.9	1.8	1.4	1.2	2.4	2.1	1.7	3.1	2.0	3.3	.53	1.5
19	2.9	1.8	1.4	1.1	181	2.0	1.3	3.2	9.4	3.1	.52	1.3
20	2.8	1.7	1.4	1.2	286	2.6	1.0	3.3	6.0	16	.47	1.2
21	3.1	1.7	1.3	1.2	110	5.3	.99	3.4	3.5	5.0	.36	1.2
22	2.8	1.7	1.3	1.3	45	4.1	.96	3.5	3.7	6.2	.29	1.1
23	2.6	1.7	1.3	1.4	13	3.7	.96	3.6	38	4.0	.25	1.2
24	2.5	1.7	1.2	1.5	10	3.4	.97	3.9	22	3.3	.22	1.1
25	2.4	2.1	1.2	1.6	5.9	3.1	2.7	3.9	7.9	6.7	.26	2.2
26	2.3	8.8	1.1	1.7	5.4	3.0	2.5	3.8	213	3.5	.31	11
27	2.2	4.0	1.1	1.8	5.0	3.2	2.1	3.7	23	2.8	.38	4.2
28	2.1	3.2	1.1	1.8	4.9	3.1	1.8	3.5	8.4	2.6	.45	2.0
29	2.1	1.8	1.1	1.7	---	2.9	1.7	3.5	9.4	2.4	.54	1.2
30	2.0	1.5	1.1	1.7	---	2.8	2.0	3.4	5.2	2.3	.67	.97
31	1.9	---	1.1	1.7	---	2.8	---	3.2	---	2.3	.82	---
TOTAL	97.1	64.8	42.1	40.8	700.1	608.7	77.18	88.6	396.1	189.1	42.67	63.23

WTR YR 1994 TOTAL 2410.48

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.5	6.26	13.1	8.31	6.59	29.7	13.5	10.1	13.1	28.7	24.6	8.06
2	13.1	6.30	13.6	8.24	7.06	18.7	12.6	7.51	12.8	24.9	22.8	7.94
3	11.3	6.34	13.2	8.05	7.56	17.1	11.8	6.54	12.8	22.7	28.4	8.19
4	9.92	6.41	12.9	7.94	8.10	24.5	11.0	6.27	12.8	134	22.0	8.47
5	8.84	6.42	12.8	7.73	8.68	766	10.5	6.06	12.9	118	13.1	8.58
6	7.66	6.35	13.0	7.68	8.90	1750	9.77	5.90	12.8	60.4	12.2	8.61
7	7.37	6.21	12.4	7.43	9.54	1770	9.46	6.01	13.3	125	11.9	8.48
8	7.27	6.22	12.1	7.26	10.2	560	9.46	5.96	13.1	68.8	11.7	8.43
9	9.16	6.22	11.9	7.21	10.5	169	9.72	5.78	12.5	53.0	11.3	8.90
10	7.91	6.27	11.8	7.16	11.2	86.1	9.43	5.69	12.9	36.8	24.0	70.5
11	7.45	6.26	11.1	7.42	12.0	48.2	9.29	12.0	13.9	30.1	40.7	22.3
12	7.44	6.23	10.8	7.37	11.1	39.0	33.4	13.6	14.2	25.9	30.1	17.0
13	7.18	7.22	10.7	6.71	8.37	36.4	21.3	13.6	16.0	21.6	24.1	13.7
14	7.05	6.71	10.7	6.67	8.32	32.8	15.2	13.9	16.8	27.4	19.8	26.4
15	7.12	7.12	10.7	6.32	8.32	34.3	27.2	14.8	16.9	21.6	16.1	39.8
16	7.19	6.62	10.5	6.28	8.69	28.1	24.4	13.9	16.4	16.9	13.2	41.1
17	7.15	6.46	10.6	5.94	9.49	24.7	16.3	13.6	15.7	14.0	11.0	23.4
18	6.96	6.30	10.8	5.90	14.0	22.6	12.0	13.4	15.3	11.6	10.0	19.3
19	7.15	6.39	10.5	5.57	1370	20.8	8.80	13.6	75.8	10.3	10.9	16.8
20	6.98	6.17	10.2	5.53	3240	23.5	6.65	13.8	49.8	73.2	11.3	14.9
21	7.97	6.13	9.89	5.49	2520	41.4	6.25	13.8	22.5	34.0	10.0	13.4
22	7.31	6.19	9.50	5.74	807	33.2	6.08	13.9	20.3	47.9	9.38	12.4
23	6.98	6.16	9.28	5.99	414	28.9	6.03	14.2	148	30.4	9.02	13.1
24	6.89	6.13	9.14	6.23	214	25.4	6.05	15.1	196	24.0	8.78	12.3
25	6.87	7.44	8.78	6.47	120	21.6	11.3	14.8	60.3	56.4	8.57	18.0
26	6.80	51.4	8.37	6.71	67.8	20.1	10.0	14.8	1060	42.2	8.44	99.2
27	6.58	43.2	8.30	6.94	55.0	20.2	8.42	14.3	162	37.8	8.29	92.6
28	6.58	18.4	7.89	6.89	43.9	18.3	7.33	14.0	70.3	36.2	8.02	35.9
29	6.54	14.2	7.83	6.57	---	16.4	6.68	14.0	66.9	31.9	7.78	16.6
30	6.34	13.4	7.77	6.26	---	14.9	7.82	14.0	35.6	29.1	7.83	12.1
31	6.30	---	8.04	6.25	---	14.0	---	13.5	---	27.1	8.09	---
TOTAL	244.86	301.13	328.19	210.26	9020.32	5755.9	357.74	358.42	2221.7	1321.9	463.40	706.46

WTR YR 1994 TOTAL 21290.28

## ROCK RIVER BASIN

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 mi<sup>2</sup>, of which 1.22 mi<sup>2</sup> 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 periods, Dec. 29, Jan. 13, 14, and Feb. 9, 10. Records fair. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	2.7	2.9	2.2	2.2	3.2	3.2	4.9	1.7	2.2	1.8	1.8
2	3.3	2.8	3.3	2.2	2.2	3.1	3.2	3.8	1.8	2.2	2.0	1.7
3	3.3	2.9	3.1	2.2	2.2	3.4	3.2	3.2	1.7	2.2	11	1.9
4	3.3	2.9	3.2	2.2	2.2	19	3.0	2.9	1.8	13	6.3	1.8
5	3.1	2.9	3.3	2.2	2.2	106	3.1	2.7	2.2	14	2.7	1.7
6	3.3	2.7	3.5	2.3	2.2	82	2.8	2.7	2.0	3.0	2.4	1.7
7	3.2	2.6	3.1	2.3	2.0	30	2.9	3.2	2.1	5.5	2.2	1.6
8	3.2	2.7	2.9	2.2	2.0	11	2.8	2.7	2.0	7.6	2.1	1.6
9	5.9	2.7	3.0	2.2	2.0	5.5	2.8	2.7	1.8	3.1	2.0	3.3
10	3.2	2.8	3.3	2.2	2.0	4.5	2.6	2.3	1.8	2.6	13	16
11	3.1	2.8	3.0	2.3	2.1	4.1	2.7	3.1	2.1	2.5	30	2.9
12	3.1	3.2	2.7	2.3	2.1	4.5	9.3	2.4	2.0	2.3	5.1	2.0
13	2.9	3.6	2.7	2.2	2.1	4.4	4.7	2.3	3.4	2.1	4.3	1.8
14	3.0	3.3	2.9	2.1	2.2	4.6	3.5	3.4	2.0	2.4	3.2	21
15	3.2	3.8	2.9	2.0	2.3	4.9	6.7	3.0	1.8	2.2	2.8	8.6
16	3.2	2.9	3.1	2.1	2.3	3.8	3.5	2.4	1.8	2.2	2.5	24
17	3.1	2.9	3.3	2.1	2.4	3.6	3.0	2.2	1.7	3.1	2.4	4.4
18	3.0	2.8	3.3	2.0	3.0	3.6	3.1	2.1	2.4	2.5	2.8	3.0
19	2.9	3.0	3.0	2.0	126	3.5	3.0	2.2	5.9	1.9	3.3	2.7
20	3.2	2.7	3.0	2.0	333	3.9	2.8	2.3	2.9	13	2.5	2.4
21	3.8	2.7	2.8	2.0	34	8.1	2.8	2.1	1.9	2.9	2.1	2.3
22	3.0	2.8	2.7	2.0	16	4.7	2.7	2.2	1.7	2.3	1.9	3.0
23	3.0	2.8	2.7	2.1	5.5	4.5	2.6	3.1	23	2.1	1.9	4.5
24	3.0	2.8	2.5	2.2	4.4	4.1	2.5	2.6	27	2.1	1.8	4.4
25	3.0	5.2	2.4	2.2	3.7	3.5	4.1	2.4	3.5	2.2	1.8	6.5
26	2.9	15	2.2	2.1	3.5	3.4	3.8	2.5	23	1.9	1.8	17
27	2.8	4.2	2.1	2.3	3.3	4.0	2.8	2.0	3.9	1.9	1.7	7.2
28	2.9	3.3	1.9	2.4	3.2	3.4	2.6	1.9	4.2	1.9	1.7	4.0
29	2.8	3.0	1.9	2.3	---	3.2	2.7	1.9	3.0	2.0	1.6	3.4
30	2.7	2.8	1.9	2.3	---	3.1	3.9	1.9	2.5	1.9	2.4	3.2
31	2.7	---	2.0	2.2	---	3.0	---	1.8	---	1.8	2.0	---
TOTAL	98.7	103.3	86.6	67.4	572.3	353.6	102.4	80.9	138.6	112.6	125.1	161.4
MEAN	3.18	3.44	2.79	2.17	20.4	11.4	3.41	2.61	4.62	3.63	4.04	5.38
MAX	5.9	15	3.5	2.4	333	106	9.3	4.9	27	14	30	24
MIN	2.7	2.6	1.9	2.0	2.0	3.0	2.5	1.8	1.7	1.8	1.6	1.6
CFSM	.19	.20	.16	.13	1.20	.67	.20	.15	.27	.21	.24	.31
IN.	.21	.22	.19	.15	1.25	.77	.22	.18	.30	.25	.27	.35

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1994, BY WATER YEAR (WY)

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
MEAN	2.37	3.19	2.44	2.26	5.82	12.0	5.07	2.73	4.18	5.59	3.15	3.95										
MAX	6.42	12.3	6.11	7.52	20.4	34.6	14.7	6.15	17.8	32.5	8.78	13.0										
(WY)	1987	1986	1985	1989	1994	1993	1993	1978	1978	1993	1993	1980										
MIN	.86	.67	.34	.36	.46	1.63	.95	.96	.92	.94	1.07	.74										
(WY)	1977	1991	1990	1991	1978	1981	1990	1977	1989	1976	1976	1976										

## SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1974 - 1994	
ANNUAL TOTAL	3897.62		2002.9			
ANNUAL MEAN	10.7		5.49		4.43	
HIGHEST ANNUAL MEAN					11.0	
LOWEST ANNUAL MEAN					2.78	
HIGHEST DAILY MEAN	335		333		349	
LOWEST DAILY MEAN	.81		1.6		.17	
ANNUAL SEVEN-DAY MINIMUM	.90		1.7		.18	
INSTANTANEOUS PEAK FLOW			615		746	
INSTANTANEOUS PEAK STAGE			8.44		8.92	
INSTANTANEOUS LOW FLOW			1.6		.15	
ANNUAL RUNOFF (CFSM)	.63		.32		.26	
ANNUAL RUNOFF (INCHES)	8.49		4.36		3.52	
10 PERCENT EXCEEDS	22		5.3		5.9	
50 PERCENT EXCEEDS	3.2		2.8		1.7	
90 PERCENT EXCEEDS	1.7		1.9		.74	

(a) Also occurred Sept. 7, 8

(b) Also occurred Aug. 30, Sept. 7-9

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 December 1993.

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, 15.1 mg/L, July 4, 1994; minimum observed, 0.07 mg/L, Jan. 3, 1994.

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, 2,260 mg/L, Feb. 20; minimum observed, 6 mg/L, May 1.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,090 tons, Feb. 20; minimum daily, 0.04 ton, June 15-17.

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 15.1 mg/L, July 4; minimum observed, 0.07 mg/L, Jan. 3.

TOTAL-PHOSPHORUS DISCHARGE (OCTOBER TO DECEMBER): Maximum daily, 50 lb, Nov. 26; minimum daily, 0.76 lb, Dec. 30.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDE (MG/L) (80154)	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDE (MG/L) (80154)
OCT 1993					FEB 1994				
09...	0205	9.6	0.290	33	21...	0405	39	--	85
09...	0805	6.2	0.240	20	21...	1225	34	--	76
NOV					21...	1655	36	--	112
*04...	1351	2.9	--	45	22...	0625	20	--	53
14...	2300	5.7	0.200	34	22...	1825	15	--	46
*15...	1003	3.8	0.220	33	*23...	1036	7.0	--	24
25...	1155	10	0.110	78	MAR				
26...	0240	11	--	72	04...	1545	10	--	27
26...	0840	19	0.490	46	04...	1825	31	--	149
26...	1440	17	0.980	--	04...	2055	70	--	749
26...	2040	9.6	--	53	05...	0255	47	--	137
DEC					05...	1135	34	--	90
*16...	1302	3.6	0.290	--	05...	1415	110	--	624
JAN 1994					05...	1640	201	--	1250
*03...	1037	2.2	0.070	--	05...	1905	254	--	1810
*20...	1426	2.0	--	23	05...	2320	166	--	1160
FEB					*07...	0937	24	--	61
*11...	1412	2.1	--	68	07...	1530	28	--	72
19...	0210	7.0	--	48	08...	0235	13	--	55
19...	0810	16	--	50	08...	1435	10	--	22
19...	1205	41	--	182	09...	2135	6.2	--	29
19...	1510	137	--	1620	*10...	1414	4.2	--	26
19...	1925	284	--	1750	12...	2235	5.7	--	28
20...	0010	461	--	2260	14...	2235	6.2	--	31
20...	0550	602	--	1190	*15...	1336	4.4	--	32
*20...	1257	237	--	725	15...	1337	4.4	--	28
20...	1300	239	--	781	21...	0145	11	--	113
20...	1605	141	--	499	21...	1345	8.3	--	46
20...	2205	60	--	206	*22...	1115	4.6	--	27
					*29...	1049	3.1	--	50

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

## ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
APR 1994						
*05...	1118	3.2	--	--	--	27
12...	1225	11	--	--	--	44
12...	1255	25	--	--	--	322
13...	0035	8.7	--	--	--	105
15...	0145	10	--	--	--	52
*15...	1114	6.2	--	--	--	48
15...	1345	8.3	--	--	--	56
*19...	1238	2.9	--	--	--	19
25...	0905	9.2	--	--	--	64
26...	0620	6.6	--	--	--	46
*26...	0752	4.5	--	--	--	30
*28...	0743	2.5	--	--	--	9
30...	2030	6.6	--	--	--	26
MAY						
01...	1420	9.2	--	--	--	6
*06...	1036	2.7	--	--	--	82
*11...	1318	3.5	--	--	--	27
14...	1615	10	--	--	--	50
*17...	1020	2.2	--	--	--	30
23...	2015	11	--	--	--	77
*31...	1103	2.0	--	--	--	45
JUN						
*09...	0835	1.7	0.170	--	0.077	--
13...	0410	11	0.240	--	0.062	54
*13...	1005	3.1	0.180	--	0.060	--
*13...	1436	2.6	0.160	--	0.071	9
*16...	0840	1.9	0.240	--	0.138	--
18...	2310	11	0.400	--	0.070	91
19...	0740	10	0.290	--	0.116	--
19...	1340	6.6	--	--	--	39
*20...	0950	2.9	0.240	--	0.096	--
*20...	1105	2.6	0.230	--	--	11
*22...	0750	1.7	0.130	--	0.052	--
23...	1330	7.9	--	--	--	46
23...	1332	8.4	0.430	0.072	--	--
*23...	1333	8.7	0.410	0.058	--	59
23...	1415	22	--	--	--	90
23...	1530	35	0.430	--	--	--
23...	1700	41	--	--	--	209
23...	2000	52	0.560	0.162	--	--
23...	2130	66	--	--	--	586
23...	2300	67	1.06	0.248	--	--
24...	0200	61	--	--	--	278
24...	0330	52	1.10	0.581	--	--
24...	1625	16	--	--	--	41
24...	2215	6.2	0.650	--	0.470	--
26...	0040	13	--	--	--	14
26...	0120	37	0.740	--	--	--
26...	0130	56	0.700	--	0.210	337
26...	0430	33	--	--	--	609
26...	0535	20	0.790	--	--	--
26...	1735	19	0.930	--	0.470	--
26...	2335	9.6	--	--	--	117
*27...	1116	3.5	0.600	--	0.400	27
28...	0340	10	--	--	--	37
*30...	0820	2.6	0.480	--	0.296	--

\* 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 1993 TO SEPTEMBER 1994

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- PENDE (MG/L) (80154)
JUL 1994					
04...	0135	12	0.330	0.099	--
04...	1030	11	--	--	37
04...	1630	16	15.1	0.840	--
04...	1930	29	--	--	189
04...	2210	16	--	--	85
05...	0010	29	8.18	0.520	--
*05...	0812	17	0.710	0.400	112
05...	1210	14	--	--	76
*06...	0810	2.9	--	--	19
*07...	1045	2.6	0.550	0.385	--
07...	1455	7.4	0.540	--	22
07...	1545	20	0.570	--	213
08...	0040	8.3	--	--	20
*08...	0659	6.2	3.12	--	59
08...	1240	8.7	--	--	58
*11...	1033	2.8	--	--	11
20...	0135	12	0.360	--	137
20...	0200	41	0.750	--	249
20...	0400	22	--	--	98
*20...	0845	13	0.320	0.198	--
20...	1430	15	--	--	223
20...	2030	7.9	0.480	--	--
*28...	0830	1.9	0.110	0.063	--
AUG					
03...	1405	11	--	--	64
03...	1415	31	0.400	0.051	--
03...	1425	51	--	--	433
03...	1535	33	0.535	0.124	--
03...	1635	20	--	--	163
03...	2235	18	0.405	--	--
04...	0435	11	--	--	46
*04...	0755	6.6	3.03	1.74	--
*04...	0825	6.2	--	--	63
*08...	1048	2.1	--	--	36
*10...	1137	5.9	--	--	80
10...	1205	10	0.280	--	--
10...	1710	22	--	--	47
10...	2040	35	0.307	0.162	--
10...	2210	34	--	--	90
11...	0110	49	--	--	363
11...	0240	52	0.816	0.240	--
11...	0410	51	--	--	296
*11...	0725	38	1.45	0.790	132
11...	0727	38	--	--	124
11...	2040	15	--	--	41
12...	0240	7.0	0.725	--	--
*16...	0727	2.6	--	--	91
*18...	0900	4.8	0.236	0.096	--
*18...	1117	3.4	--	--	22
19...	1720	10	--	--	87
*24...	0845	1.8	0.507	0.157	--
*29...	0753	1.6	--	--	19
*31...	0750	2.0	0.215	0.096	--
SEP					
*09...	0830	1.6	0.181	0.089	--
09...	1340	12	--	--	48
09...	2320	11	0.305	0.148	--
09...	2345	25	--	--	448
09...	2355	44	0.845	0.111	--
10...	0125	33	--	--	238
10...	0230	19	0.873	--	--
10...	0910	11	--	--	85
10...	1510	17	0.965	--	--
10...	2110	9.2	--	--	186
14...	0610	16	--	--	95
14...	0620	30	0.323	--	--
14...	0845	37	--	--	119
14...	1125	22	0.589	--	--
14...	1725	28	--	--	187
14...	2325	20	1.42	--	--
15...	0525	9.6	--	--	137
*15...	0838	5.7	1.29	1.00	--
15...	2220	11	1.00	--	--
15...	2245	24	--	--	255

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)
SEP 1994					
16...	0405	33	0.737	--	--
16...	0535	34	--	--	397
16...	0705	34	1.02	--	--
16...	1905	18	--	--	80
17...	0050	7.9	0.929	--	--
*22...	0820	2.2	--	--	21
*22...	0825	2.2	0.288	0.131	--
*23...	1203	3.9	--	--	30
24...	2225	6.2	0.675	--	16
25...	1055	7.9	--	--	14
25...	1655	6.6	0.570	0.360	--
25...	2350	11	--	--	43
26...	0345	22	0.524	0.332	--
26...	0945	23	--	--	86
*26...	1234	19	0.445	0.306	63
26...	1235	19	0.450	0.312	60
26...	2145	14	--	--	42
27...	0345	9.2	0.686	0.530	--
27...	1545	5.7	0.826	--	--
*28...	0645	4.1	--	--	24
*29...	0740	3.4	0.320	0.193	--
*30...	1219	3.3	--	--	47

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.16	.18	.14	.13	.19	.33	.44	.14	.11	.11	.10
2	.17	.20	.21	.14	.13	.18	.31	.23	.10	.10	.11	.09
3	.17	.27	.19	.14	.13	.19	.28	.18	.09	.10	5.3	.10
4	.17	.34	.20	.14	.13	19	.24	.17	.08	2.8	.96	.10
5	.16	.32	.21	.14	.13	331	.22	.19	.09	4.4	.30	.09
6	.17	.28	.22	.14	.12	112	.19	.45	.08	.17	.25	.09
7	.16	.24	.19	.14	.11	9.3	.18	.32	.08	1.3	.22	.08
8	.17	.23	.18	.13	.12	1.0	.16	.21	.07	1.2	.20	.08
9	.42	.21	.19	.13	.17	.42	.15	.18	.05	.15	.18	.93
10	.18	.20	.20	.13	.25	.33	.13	.14	.05	.10	3.0	8.9
11	.17	.18	.18	.14	.35	.30	.12	.24	.05	.08	14	.30
12	.17	.23	.17	.14	.30	.36	3.8	.16	.05	.07	.47	.13
13	.16	.26	.17	.13	.22	.36	.46	.14	.24	.06	1.2	.11
14	.17	.23	.18	.13	.17	.39	.19	.32	.05	.07	.84	8.1
15	.17	.33	.18	.12	.17	.40	.83	.28	.04	.06	.70	3.5
16	.17	.21	.19	.12	.16	.30	.19	.21	.04	.06	.61	15
17	.16	.20	.21	.13	.17	.27	.15	.18	.04	.15	.57	.43
18	.16	.19	.21	.12	.24	.27	.16	.16	.21	.14	.38	.20
19	.15	.20	.19	.12	610	.26	.17	.14	.70	.10	.41	.18
20	.18	.17	.18	.12	1090	.28	.12	.13	.09	5.8	.16	.15
21	.25	.17	.17	.12	9.2	1.4	.11	.11	.06	.33	.13	.13
22	.18	.17	.17	.12	2.5	.37	.09	.10	.05	.17	.11	.18
23	.18	.17	.16	.13	.40	.36	.08	.30	22	.14	.11	.34
24	.18	.16	.15	.13	.28	.36	.06	.15	13	.14	.11	.21
25	.18	.69	.15	.13	.23	.33	.34	.12	.17	.14	.10	.31
26	.17	2.8	.14	.13	.22	.36	.24	.11	19	.12	.10	2.9
27	.17	.44	.13	.14	.20	.45	.10	.07	.53	.12	.09	.69
28	.17	.28	.12	.14	.20	.43	.06	.06	.30	.12	.09	.28
29	.16	.22	.12	.14	---	.43	.06	.06	.17	.12	.08	.32
30	.16	.18	.12	.13	---	.39	.23	.12	.13	.12	.15	.39
31	.16	---	.12	.13	---	.34	---	.20	---	.11	.11	---
TOTAL	5.57	9.93	5.38	4.08	1716.43	482.02	9.75	5.87	57.75	18.65	31.15	44.41

WTR YR 1994 TOTAL 2390.99





## ROCK RIVER BASIN

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 mi<sup>2</sup>.

## 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: Aug. 14-18, 21, and 22. Records are good except those for estimated daily discharges and for periods of flow between 0.00 ft<sup>3</sup>/s and 0.3 ft<sup>3</sup>/s, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.00	.47	.00	.00	.02	.05	.89	.00	.06	.00	.15
2	.00	.00	.28	.00	.00	.24	.05	.21	.00	.00	.00	.04
3	.00	.00	.01	.00	.00	2.7	.05	.12	.00	.04	9.7	.21
4	.00	.00	.00	.00	.00	11	.46	.02	.00	15	4.6	.08
5	.00	.00	.00	.00	.00	11	.27	.00	2.0	4.5	.30	.00
6	.53	.00	.11	.00	.00	6.5	.07	.00	.20	.87	.09	.11
7	.10	.00	.01	.00	.00	1.9	.04	1.3	.22	.23	.00	.08
8	.08	.00	.00	.00	.00	.33	.03	.06	.16	.84	.00	.00
9	3.9	.05	.00	.00	.00	.27	.02	.05	.02	.07	.00	8.5
10	.17	.00	.00	.00	.00	.17	.00	.00	.00	.02	21	13
11	.10	.00	.00	.00	.00	.25	.00	.88	.78	.29	12	.58
12	.04	2.4	.00	.00	.00	.87	6.5	.11	.18	.07	.86	.19
13	.00	1.2	.00	.00	.00	.26	.61	.05	2.1	.03	.48	.12
14	.14	2.3	.00	.00	.02	.88	.38	1.0	.45	1.0	.04	18
15	.03	1.5	.00	.00	.15	.60	3.2	.16	.16	.08	.00	9.0
16	.00	.10	.00	.00	.11	.28	.21	.04	.07	.03	.00	15
17	.08	.01	1.5	.00	1.3	.17	.12	.00	.05	6.9	.00	.97
18	.02	.00	.39	.00	8.3	.15	.22	.00	12	.29	.58	.19
19	.00	.03	.11	.00	60	.13	.21	.00	9.0	.10	1.0	.09
20	1.2	.00	.06	.00	30	.33	.11	.00	1.7	8.8	.39	.00
21	.83	.00	.02	.00	.64	1.8	.23	.00	.23	.47	.09	.00
22	.02	.00	.00	.00	.19	.21	.15	.00	.13	.15	.00	1.4
23	.00	.00	.00	.00	.10	.15	.04	1.8	28	.04	.00	4.6
24	.00	.00	.00	.00	.05	.11	.00	.21	15	.20	.01	2.2
25	.00	6.2	.00	.00	.04	.10	3.0	.10	4.3	.22	.00	2.6
26	.00	9.5	.00	.00	.00	.23	3.4	.51	17	.01	.10	5.6
27	.03	.18	.00	.00	.00	.21	.09	.09	.66	.00	.03	1.1
28	.14	.02	.00	.00	.00	.09	.02	.04	1.5	.00	.00	.24
29	.02	.04	.00	.00	---	.05	.04	.02	.30	.00	.00	.28
30	.11	.00	.00	.00	---	.05	2.6	.04	.11	.00	3.4	.14
31	.00	---	.00	.00	---	.05	---	.00	---	.00	.33	---
TOTAL	7.61	23.53	2.96	0.00	100.90	41.10	22.17	7.70	96.32	40.31	55.00	84.47
MEAN	.25	.78	.095	.000	3.60	1.33	.74	.25	3.21	1.30	1.77	2.82
MAX	3.9	9.5	1.5	.00	60	11	6.5	1.8	28	15	21	18
MIN	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
CFSM	.07	.24	.03	.00	1.10	.40	.22	.08	.98	.40	.54	.86
IN.	.09	.27	.03	.00	1.14	.46	.25	.09	1.09	.46	.62	.96

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1994, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	1.06	1.33	.64	.43	1.27	2.39	1.68	1.18	1.99	2.07	1.95	1.92							
MAX	3.19	3.64	1.99	1.73	3.60	6.97	4.30	2.71	5.00	6.51	4.24	4.97							
(WY)	1985	1993	1985	1990	1994	1993	1993	1990	1984	1993	1981	1980							
MIN	.25	.027	.000	.000	.050	.49	.54	.25	.33	.30	.36	.11							
(WY)	1994	1977	1990	1977	1978	1981	1985	1994	1987	1976	1988	1976							

## SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1976 - 1994	
ANNUAL TOTAL	989.94		482.07			
ANNUAL MEAN	2.71		1.32		1.50	
HIGHEST ANNUAL MEAN					3.09	
LOWEST ANNUAL MEAN					.97	
HIGHEST DAILY MEAN	61	Jul 5	60	Feb 19	77	Jul 1 1978
LOWEST DAILY MEAN	.00	Many days	.00	Many days	.00	Many days
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 6	.00	Oct 31	.00	(a)
INSTANTANEOUS PEAK FLOW			192		754	
INSTANTANEOUS PEAK STAGE			2.36		4.16	
ANNUAL RUNOFF (CFSM)	.82		.40		.46	
ANNUAL RUNOFF (INCHES)	11.19		5.45		6.21	
10 PERCENT EXCEEDS	7.7		2.6		3.4	
50 PERCENT EXCEEDS	.15		.05		.12	
90 PERCENT EXCEEDS	.00		.00		.00	

(a) Annual seven-day minimum flows are 0.00 for most years

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1976 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1991 to current year.

INSTRUMENTATION.--Automatic pumping sampler.

REMARKS.--Records good. Samples are point samples unless otherwise indicated.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 3,870 mg/L, July 4, 1994; minimum observed, 1 mg/L, Aug. 6, 1993.

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, 3,870 mg/L, July 4; minimum observed, 3 mg/L, Apr. 5.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 45 tons, Feb. 19; minimum daily, 0.00 ton, on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1993				APR 1994			
09...	0100	7.7	91	25...	0740	20	1050
09...	0140	19	121	25...	0745	40	1500
09...	0510	6.4	16	25...	0805	42	742
20...	2015	7.7	78	25...	0835	20	849
NOV				25...	0925	6.7	238
12...	2100	14	160	26...	0320	31	1740
13...	0105	4.4	20	26...	0325	89	1450
14...	2015	9.1	30	26...	0345	78	2170
*15...	1031	1.4	5	26...	0400	46	1370
25...	1030	8.7	103	26...	0605	3.8	107
25...	1100	26	231	30...	1525	7.2	28
25...	1555	9.6	18	MAY			
26...	0135	7.2	30	07...	0715	9.1	151
26...	0240	38	73	*11...	1252	0.46	16
26...	0620	23	20	14...	1435	8.2	134
26...	1340	4.1	22	14...	1525	10	105
FEB 1994				23...	1840	8.7	239
17...	1610	8.2	244	23...	1930	24	276
18...	1250	7.2	132	23...	2030	9.6	63
18...	1710	23	137	JUN			
19...	0510	31	68	05...	1510	51	1110
19...	1110	83	834	05...	1525	18	369
19...	1225	107	418	05...	1535	43	861
19...	1515	87	333	05...	1625	8.7	306
19...	1815	76	161	11...	1520	21	760
19...	2400	103	252	11...	1540	5.5	209
20...	0545	50	96	13...	0230	7.2	58
20...	0940	17	70	13...	0345	21	82
*20...	1208	6.7	45	13...	0455	8.7	33
20...	1300	6.1	45	18...	2000	18	314
MAR				18...	2015	40	458
03...	1530	8.2	149	18...	2020	98	1250
03...	2130	4.4	34	18...	2125	19	146
04...	1400	37	184	18...	2205	109	578
04...	2225	7.2	68	18...	2250	142	465
05...	1335	21	60	18...	2325	46	417
06...	0135	5.8	41	19...	1110	5.2	77
06...	1805	11	36	20...	0015	6.7	26
07...	1500	6.7	60	23...	1045	9.1	128
15...	1257	0.50	32	23...	1403	48	138
21...	0030	7.7	748	*23...	1404	49	218
*22...	1050	0.15	5	23...	1500	58	96
APR				23...	1705	87	143
*05...	1042	0.21	3	23...	1835	60	139
12...	1200	18	642	24...	0035	44	72
12...	1225	57	522	24...	0940	14	118
12...	1410	18	332	24...	1540	7.7	148
12...	1730	6.1	281	25...	2120	55	695
15...	0010	13	358	25...	2125	72	1560
15...	0055	26	1510	25...	2200	16	369
15...	0610	3.8	83	25...	2220	51	472
*15...	1031	1.7	80	25...	2340	14	203

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

## ROCK RIVER BASIN

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1994				AUG 1994			
26...	0040	56	592	*04...	0737	5.2	22
26...	0055	95	191	10...	1045	7.2	94
26...	0105	117	661	*10...	1106	6.1	53
26...	0135	87	487	10...	1107	6.0	47
26...	0300	35	143	10...	1605	22	62
26...	1730	5.0	30	10...	1720	71	124
28...	0225	25	597	10...	1800	47	92
28...	0230	26	313	10...	2030	102	334
28...	0250	8.2	763	10...	2115	49	137
28...	0335	7.2	424	10...	2210	76	60
JUL				11...	0425	18	19
04...	0825	17	389	11...	1625	5.2	18
04...	0905	17	573	*18...	1037	1.0	5
04...	1130	6.1	51	30...	1100	16	870
04...	1505	90	835	30...	1135	35	753
04...	1525	126	3870	30...	1200	18	297
04...	1540	76	1720	30...	1505	12	180
04...	1650	12	262	30...	1725	3.8	35
04...	1820	89	524	SEP			
04...	1845	103	526	09...	1225	9.1	1220
04...	1950	40	259	09...	1250	96	984
05...	0225	11	34	09...	1310	37	602
05...	0825	5.0	20	09...	1410	7.2	103
06...	1640	24	446	09...	2310	30	555
06...	1655	8.7	136	09...	2320	147	599
08...	0035	11	234	10...	0010	53	474
14...	0155	9.1	127	10...	1615	5.5	24
*14...	0705	0.66	10	14...	0525	35	350
17...	0440	24	387	14...	0550	131	510
17...	0445	91	894	14...	0650	74	218
17...	0500	151	2890	14...	1245	13	61
17...	0530	56	773	14...	1845	6.4	28
17...	0700	6.7	230	15...	2015	8.7	372
20...	0055	22	262	15...	2210	44	200
20...	0130	96	1190	15...	2255	136	638
20...	0210	37	173	15...	2350	58	891
20...	0610	8.7	29	16...	0150	41	486
AUG				16...	0930	17	906
03...	1345	14	334	16...	1530	8.2	106
03...	1425	12	386	22...	1005	7.2	114
03...	1720	109	542	23...	0510	8.7	189
03...	1725	116	1590	24...	1910	8.2	28
03...	1735	86	1010	26...	0210	12	120
03...	1755	36	467	26...	0250	28	290
				26...	1830	7.7	32

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

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05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.03	.00	.00	.00	.00	.04	.00	.00	.00	.01
2	.00	.00	.01	.00	.00	.01	.00	.01	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.73	.00	.00	.00	.00	14	.01
4	.00	.00	.00	.00	.00	3.6	.01	.00	.00	29	.86	.00
5	.00	.00	.00	.00	.00	2.1	.00	.00	2.7	.39	.01	.00
6	.05	.00	.00	.00	.00	.78	.00	.00	.01	.31	.00	.00
7	.00	.00	.00	.00	.00	.18	.00	.36	.01	.01	.00	.00
8	.00	.00	.00	.00	.00	.01	.00	.00	.00	.25	.00	.00
9	.75	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	12
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.1	7.2
11	.00	.00	.00	.00	.00	.01	.00	.14	.46	.06	.77	.03
12	.00	.66	.00	.00	.00	.08	6.4	.00	.01	.00	.08	.01
13	.00	.06	.00	.00	.00	.01	.04	.00	.28	.00	.05	.00
14	.00	.20	.00	.00	.00	.11	.07	.19	.03	.23	.00	10
15	.00	.05	.00	.00	.01	.07	4.6	.01	.00	.00	.00	15
16	.00	.00	.00	.00	.00	.01	.01	.00	.00	.00	.00	22
17	.00	.00	.08	.00	.44	.00	.00	.00	.00	21	.00	.12
18	.00	.00	.01	.00	2.6	.00	.02	.00	16	.02	.01	.01
19	.00	.00	.00	.00	45	.00	.01	.00	5.2	.00	.03	.00
20	.21	.00	.00	.00	14	.01	.00	.00	.27	6.5	.01	.00
21	.07	.00	.00	.00	.04	2.3	.02	.00	.01	.03	.00	.00
22	.00	.00	.00	.00	.01	.00	.01	.00	.00	.01	.00	.28
23	.00	.00	.00	.00	.00	.00	.00	.73	9.1	.00	.00	1.5
24	.00	.00	.00	.00	.00	.00	.00	.01	4.0	.01	.00	.21
25	.00	2.0	.00	.00	.00	.00	4.2	.00	5.7	.01	.00	.18
26	.00	.94	.00	.00	.00	.00	10	.06	10	.00	.00	1.9
27	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.06
28	.00	.00	.00	.00	.00	.00	.00	.00	1.4	.00	.00	.01
29	.00	.00	.00	.00	---	.00	.00	.00	.01	.00	.00	.02
30	.00	.00	.00	.00	---	.00	.18	.00	.00	.00	2.7	.01
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.02	---
TOTAL	1.08	3.91	0.13	0.00	62.10	10.02	25.57	1.55	55.22	57.83	24.64	70.56

WTR YR 1994 TOTAL 312.61

## ROCK RIVER BASIN

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 mi<sup>2</sup>. Area of Lake Mendota, 15.2 mi<sup>2</sup>.

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: Oct. 1-7, Feb. 23-27, and Apr. 8-18. 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, 10.68 ft, Sept. 26; minimum, 9.32 ft, Nov. 25.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.57	9.59	9.53	9.58	9.66	10.55	9.83	9.84	9.73	10.33	10.04	10.26
2	10.50	9.56	9.55	9.59	9.66	10.51	9.82	9.84	9.71	10.32	10.01	10.25
3	10.44	9.55	9.56	9.60	9.65	10.47	9.78	9.83	9.69	10.29	10.04	10.25
4	10.42	9.54	9.56	9.59	9.65	10.42	9.75	9.83	9.68	10.35	10.12	10.24
5	10.38	9.55	9.57	9.60	9.65	10.40	9.76	9.83	9.67	10.46	10.09	10.24
6	10.35	9.52	9.60	9.63	9.65	10.46	9.74	9.81	9.70	10.47	10.05	10.25
7	10.33	9.48	9.58	9.62	9.65	10.55	9.74	9.82	9.71	10.49	10.03	10.24
8	10.32	9.47	9.59	9.62	9.66	10.61	9.71	9.82	9.69	10.54	10.02	10.24
9	10.32	9.46	9.60	9.62	9.67	10.64	9.72	9.81	9.69	10.52	10.00	10.24
10	10.28	9.45	9.63	9.62	9.66	10.62	9.73	9.79	9.68	10.50	10.04	10.35
11	10.24	9.44	9.61	9.62	9.66	10.58	9.74	9.80	9.68	10.48	10.17	10.37
12	10.21	9.42	9.59	9.62	9.67	10.54	9.75	9.80	9.68	10.47	10.19	10.37
13	10.18	9.44	9.59	9.62	9.69	10.50	9.76	9.78	9.71	10.44	10.23	10.37
14	10.15	9.45	9.60	9.61	9.68	10.46	9.77	9.79	9.71	10.44	10.23	10.46
15	10.13	9.47	9.61	9.60	9.67	10.41	9.78	9.82	9.73	10.41	10.21	10.50
16	10.12	9.45	9.61	9.62	9.66	10.36	9.79	9.82	9.74	10.37	10.21	10.60
17	10.09	9.46	9.62	9.62	9.65	10.32	9.80	9.79	9.72	10.35	10.20	10.60
18	10.06	9.43	9.64	9.62	9.63	10.27	9.82	9.79	9.74	10.31	10.24	10.58
19	10.04	9.46	9.64	9.62	9.66	10.22	9.83	9.79	9.83	10.28	10.26	10.57
20	10.03	9.41	9.65	9.61	9.96	10.18	9.81	9.76	9.87	10.31	10.29	10.56
21	10.04	9.39	9.64	9.61	10.29	10.16	9.80	9.74	9.87	10.29	10.28	10.53
22	9.99	9.38	9.64	9.61	10.36	10.13	9.79	9.60	9.86	10.26	10.28	10.53
23	9.97	9.39	9.65	9.61	10.40	10.09	9.77	9.66	9.91	10.26	10.26	10.57
24	9.94	9.40	9.64	9.60	10.44	10.06	9.71	9.81	10.09	10.23	10.27	10.58
25	9.92	9.40	9.64	9.61	10.48	10.02	9.80	9.81	10.11	10.23	10.27	10.60
26	9.90	9.49	9.61	9.61	10.52	9.99	9.82	9.81	10.20	10.20	10.27	10.63
27	9.85	9.50	9.60	9.64	10.55	9.99	9.81	9.78	10.25	10.17	10.27	10.61
28	9.79	9.53	9.59	9.66	10.58	9.96	9.78	9.78	10.30	10.14	10.28	10.58
29	9.75	9.53	9.58	9.67	---	9.93	9.79	9.76	10.34	10.11	10.25	10.53
30	9.69	9.52	9.58	9.67	---	9.90	9.80	9.75	10.33	10.09	10.25	10.49
31	9.64	---	9.58	9.66	---	9.86	---	9.76	---	10.05	10.27	---
MEAN	10.12	9.47	9.60	9.62	9.90	10.30	9.78	9.79	9.85	10.33	10.18	10.44
MAX	10.57	9.59	9.65	9.67	10.58	10.64	9.83	9.84	10.34	10.54	10.29	10.63
MIN	9.64	9.38	9.53	9.58	9.63	9.86	9.71	9.60	9.67	10.05	10.00	10.24

ROCK RIVER BASIN

243

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 mi<sup>2</sup>. Area of Lake Monona, 5.3 mi<sup>2</sup>.

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.--Estimated daily gage heights: Feb. 26-28 and Mar. 2-4, 10. Records good except estimated daily gage heights, which are fair. 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, 6.07 ft, Oct. 1; minimum, 4.25 ft, Dec. 29 to Jan. 2.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.04	5.23	4.55	4.26	4.33	5.37	5.54	5.15	4.88	5.34	5.45	5.44
2	5.99	5.18	4.53	4.26	4.33	5.40	5.50	5.17	4.88	5.31	5.44	5.42
3	5.95	5.13	4.50	4.27	4.33	5.43	5.46	5.18	4.86	5.28	5.46	5.41
4	5.93	5.10	4.48	4.26	4.32	5.47	5.43	5.18	4.86	5.33	5.59	5.39
5	5.90	5.05	4.47	4.27	4.32	5.53	5.36	5.16	4.88	5.38	5.59	5.37
6	5.89	4.99	4.44	4.30	4.32	5.61	5.28	5.16	4.91	5.38	5.59	5.34
7	5.88	4.96	4.42	4.30	4.31	5.69	5.21	5.18	4.90	5.38	5.58	5.32
8	5.86	4.94	4.41	4.29	4.31	5.73	5.16	5.18	4.88	5.41	5.57	5.30
9	5.82	4.91	4.40	4.29	4.33	5.73	5.10	5.17	4.85	5.39	5.53	5.31
10	5.77	4.88	4.36	4.29	4.33	5.76	5.04	5.16	4.84	5.38	5.56	5.53
11	5.73	4.87	4.34	4.29	4.33	5.77	5.00	5.15	4.83	5.37	5.73	5.54
12	5.68	4.87	4.35	4.28	4.33	5.77	5.00	5.15	4.83	5.37	5.73	5.52
13	5.64	4.88	4.34	4.28	4.35	5.78	4.99	5.14	4.86	5.37	5.76	5.50
14	5.61	4.87	4.34	4.28	4.35	5.78	4.96	5.12	4.88	5.38	5.74	5.62
15	5.59	4.87	4.33	4.28	4.35	5.79	4.97	5.08	4.89	5.41	5.72	5.64
16	5.56	4.85	4.33	4.29	4.38	5.79	4.93	5.04	4.88	5.44	5.71	5.68
17	5.52	4.84	4.34	4.30	4.42	5.79	4.94	5.01	4.88	5.48	5.69	5.66
18	5.49	4.82	4.34	4.30	4.45	5.79	4.97	4.97	4.89	5.51	5.70	5.64
19	5.47	4.79	4.33	4.30	4.57	5.79	4.98	4.93	4.99	5.54	5.70	5.63
20	5.44	4.76	4.32	4.30	4.92	5.79	4.99	4.91	4.99	5.61	5.69	5.60
21	5.39	4.75	4.32	4.30	5.11	5.82	5.00	4.89	4.98	5.62	5.66	5.58
22	5.36	4.74	4.32	4.30	5.18	5.84	5.02	4.89	4.97	5.63	5.64	5.56
23	5.33	4.69	4.31	4.30	5.23	5.85	5.02	4.90	5.06	5.61	5.62	5.58
24	5.30	4.66	4.29	4.30	5.24	5.84	5.03	4.93	5.25	5.58	5.59	5.59
25	5.29	4.65	4.28	4.29	5.27	5.83	5.07	4.93	5.25	5.56	5.57	5.58
26	5.28	4.68	4.28	4.30	5.31	5.81	5.09	4.93	5.36	5.52	5.56	5.59
27	5.28	4.67	4.27	4.33	5.35	5.79	5.09	4.92	5.37	5.49	5.54	5.64
28	5.28	4.63	4.27	4.33	5.37	5.74	5.11	4.90	5.36	5.48	5.51	5.64
29	5.26	4.60	4.26	4.34	---	5.69	5.06	4.90	5.38	5.47	5.47	5.66
30	5.25	4.57	4.25	4.34	---	5.65	5.10	4.91	5.36	5.46	5.48	5.67
31	5.24	---	4.25	4.34	---	5.59	---	4.89	---	5.45	5.47	---
MEAN	5.58	4.85	4.36	4.30	4.63	5.71	5.11	5.04	5.00	5.45	5.60	5.53
MAX	6.04	5.23	4.55	4.34	5.37	5.85	5.54	5.18	5.38	5.63	5.76	5.68
MIN	5.24	4.57	4.25	4.26	4.31	5.37	4.93	4.89	4.83	5.28	5.44	5.30



ROCK RIVER BASIN

245

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 mi<sup>2</sup>.

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. 26, 28-30, Jan. 8, 9, 14-23, 31, and Feb. 1, 8-11. Records good except those for ice-affected periods, which are fair. Approximately 57 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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	110	108	91	88	121	116	127	95	98	83	91
2	122	113	122	85	91	119	111	131	95	93	86	91
3	118	114	115	92	88	120	107	119	94	90	106	87
4	119	114	111	93	91	136	106	114	92	99	168	83
5	117	114	108	93	89	243	115	111	92	114	101	82
6	118	108	114	94	88	395	113	107	100	105	90	90
7	118	106	111	91	90	277	111	108	102	104	84	89
8	120	110	111	87	90	196	111	101	101	105	86	89
9	126	112	110	86	92	165	110	100	98	95	88	89
10	116	113	110	92	94	154	107	102	98	92	94	123
11	118	112	102	92	92	144	108	104	96	92	136	98
12	119	114	98	92	92	145	120	101	96	100	107	97
13	115	126	104	91	90	143	127	99	108	97	138	96
14	115	114	106	90	93	140	120	96	107	98	105	101
15	117	127	107	86	93	144	129	98	105	97	96	100
16	118	120	106	90	91	137	118	96	105	95	96	108
17	116	117	109	90	94	131	112	97	104	98	94	95
18	116	113	110	90	100	129	113	97	102	95	98	90
19	119	114	105	100	371	125	113	97	114	98	117	91
20	117	106	107	96	1070	130	110	98	104	111	129	92
21	123	105	105	100	427	169	111	93	102	100	103	90
22	118	107	104	100	214	152	109	90	97	93	98	92
23	114	108	101	98	169	145	105	96	112	93	98	102
24	113	107	96	96	150	138	109	103	168	88	98	99
25	116	109	88	101	141	131	115	100	113	92	97	105
26	118	137	90	100	127	126	119	101	111	90	101	130
27	115	115	88	97	120	128	114	97	108	88	95	121
28	117	107	92	91	124	122	110	92	103	85	92	108
29	114	109	92	87	---	120	110	85	104	88	91	102
30	112	108	90	86	---	117	108	86	102	86	92	99
31	109	---	91	87	---	116	---	93	---	81	94	---
TOTAL	3645	3389	3211	2864	4559	4758	3387	3139	3128	2960	3161	2930
MEAN	118	113	104	92.4	163	153	113	101	104	95.5	102	97.7
MAX	132	137	122	101	1070	395	129	131	168	114	168	130
MIN	109	105	88	85	88	116	105	85	92	81	83	82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1994, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	93.7	101	95.9	88.3	102	128	120	101	105	101	90.4	95.7						
MAX	139	162	129	122	163	190	193	129	174	171	123	139						
(WY)	1987	1986	1983	1988	1994	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 1993 CALENDAR YEAR FOR 1994 WATER YEAR WATER YEARS 1977 - 1994

ANNUAL TOTAL	50323	41131																
ANNUAL MEAN	138	113																
HIGHEST ANNUAL MEAN																		
LOWEST ANNUAL MEAN																		
HIGHEST DAILY MEAN	596	Mar 24	1070	Feb 20	1070	Feb 20	1070	Feb 20	1070	Feb 20	1070	Feb 20	1070	Feb 20	1070	Feb 20	1070	Feb 20
LOWEST DAILY MEAN	(a)74	Feb 24, 25	81	Jul 31	81	Jul 31	81	Jul 31	81	Jul 31	81	Jul 31	81	Jul 31	81	Jul 31	81	Jul 31
ANNUAL SEVEN-DAY MINIMUM	79	Feb 22	85	Jul 27	85	Jul 27	85	Jul 27	85	Jul 27	85	Jul 27	85	Jul 27	85	Jul 27	85	Jul 27
INSTANTANEOUS PEAK FLOW			1210	Feb 20	1210	Feb 20	1210	Feb 20	1210	Feb 20	1210	Feb 20	1210	Feb 20	1210	Feb 20	1210	Feb 20
INSTANTANEOUS PEAK STAGE			8.97	Feb 20	8.97	Feb 20	8.97	Feb 20	8.97	Feb 20	8.97	Feb 20	8.97	Feb 20	8.97	Feb 20	8.97	Feb 20
10 PERCENT EXCEEDS	197		129		129		129		129		129		129		129		129	
50 PERCENT EXCEEDS	118		105		105		105		105		105		105		105		105	
90 PERCENT EXCEEDS	90		90		90		90		90		90		90		90		90	

(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 mi<sup>2</sup>.

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. 6, 26-28, Dec. 30 to Jan. 1, Jan. 7-10, Jan. 14 to Feb. 18, Feb. 26 and 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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	691	488	462	400	310	693	700	253	263	449	390	202
2	674	498	468	433	310	614	683	335	255	440	318	230
3	670	520	324	312	310	684	674	288	208	443	195	153
4	660	521	457	310	310	587	654	411	262	368	594	197
5	614	512	447	458	310	680	629	347	202	458	561	178
6	656	500	340	323	310	961	616	332	201	417	428	179
7	636	487	472	320	300	1180	608	339	269	371	354	240
8	616	515	458	320	300	995	621	342	168	403	345	208
9	600	514	382	320	300	837	622	340	167	389	425	186
10	584	485	466	300	310	764	612	339	165	382	365	334
11	627	526	321	467	310	769	601	342	162	377	447	302
12	622	397	433	426	300	753	593	369	159	157	572	214
13	617	515	438	283	290	758	556	349	165	150	655	275
14	634	467	394	300	300	751	546	435	159	148	560	198
15	524	405	374	300	300	754	557	430	151	148	597	241
16	553	479	433	310	310	752	443	425	141	150	597	361
17	544	476	298	310	320	733	351	369	133	154	565	337
18	576	507	465	290	380	691	233	416	137	365	482	381
19	585	515	338	290	751	679	330	414	152	285	370	239
20	579	503	314	290	2430	733	253	359	148	409	498	351
21	583	483	444	290	1150	784	274	377	157	270	455	253
22	574	396	365	300	874	807	279	286	179	255	377	359
23	570	477	403	300	773	784	289	271	317	286	426	317
24	567	469	285	300	540	764	292	184	254	248	398	410
25	569	417	298	300	675	744	382	280	209	346	382	367
26	537	534	310	300	680	713	310	275	319	435	374	436
27	579	496	290	310	660	717	379	184	391	293	291	407
28	545	480	330	310	630	725	291	252	375	411	221	458
29	465	407	288	310	---	727	352	246	322	306	160	466
30	511	464	350	310	---	725	326	263	455	340	234	472
31	505	---	290	300	---	709	---	273	---	158	317	---
TOTAL	18267	14453	11737	10092	14743	23567	14056	10125	6645	9811	12953	8951
MEAN	589	482	379	326	527	760	469	327	221	316	418	298
MAX	691	534	472	467	2430	1180	700	435	455	458	655	472
MIN	465	396	285	283	290	587	233	184	133	148	160	153
CFSM	1.14	.93	.73	.63	1.02	1.47	.91	.63	.43	.61	.81	.58
IN.	1.31	1.04	.84	.73	1.06	1.70	1.01	.73	.48	.71	.93	.64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1994, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	349	404	405	347	365	474	462	356	304	303	281	329						
MAX	596	711	558	542	585	760	1043	858	735	862	760	696						
(WY)	1987	1986	1983	1986	1986	1994	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	1981	1988	1988	1988	1988	1988						

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1977 - 1994
ANNUAL TOTAL	236573	155400	
ANNUAL MEAN	648	426	366
HIGHEST ANNUAL MEAN			629
LOWEST ANNUAL MEAN			262
HIGHEST DAILY MEAN	1680	2430	2430
LOWEST DAILY MEAN	(a)230	133	60
ANNUAL SEVEN-DAY MINIMUM	307	146	104
INSTANTANEOUS PEAK FLOW		2730	3040
INSTANTANEOUS PEAK STAGE		7.93	8.36
ANNUAL RUNOFF (CFSM)	1.25	.82	.71
ANNUAL RUNOFF (INCHES)	17.02	11.18	9.63
10 PERCENT EXCEEDS	1010	680	600
50 PERCENT EXCEEDS	614	381	330
90 PERCENT EXCEEDS	350	208	146

(a) Result of freezup



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 mi<sup>2</sup>.

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: Oct. 25, July 23, 25, and ice-affected period, Dec. 26 to Feb. 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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.32	.80	.43	.18	2.8	2.8	3.5	.32	1.2	.10	.10
2	.95	.31	1.9	.42	.18	2.6	2.5	3.1	.32	1.1	.10	.05
3	.87	.35	1.6	.42	.17	2.7	2.2	2.6	.30	.87	.08	.05
4	.84	.36	1.5	.41	.16	3.6	2.1	2.3	.25	.84	.56	.06
5	.70	.39	1.4	.41	.15	8.8	2.0	2.1	.31	.79	.23	.07
6	.70	.35	1.4	.40	.14	56	1.7	1.8	.32	.60	.13	.07
7	.70	.28	1.2	.40	.13	41	1.4	1.8	.22	.56	.14	.04
8	.66	.29	1.1	.39	.12	21	1.4	1.8	.26	.74	.14	.06
9	.74	.25	1.1	.39	.11	11	1.6	1.7	.19	.55	.11	.08
10	.65	.25	1.1	.39	.09	7.4	1.5	1.5	.21	.38	.23	.09
11	.67	.26	.84	.38	.09	5.3	1.3	1.6	.23	.31	1.2	.09
12	.69	.28	.84	.38	.08	5.2	2.3	1.5	.27	.25	.40	.10
13	.57	.70	.83	.38	.08	5.6	3.3	1.3	.37	.25	4.2	.10
14	.56	.64	.82	.36	.07	5.4	2.5	1.2	.36	.34	1.9	.09
15	.52	.96	.77	.33	.08	5.4	2.8	1.4	.26	.28	.78	.07
16	.58	.82	.72	.30	.07	4.3	2.4	1.1	.22	.21	.40	.08
17	.60	.78	.74	.28	.12	3.6	1.8	1.0	.19	.19	.26	.06
18	.53	.67	1.4	.26	.40	3.5	1.6	.90	.19	.16	.19	.06
19	.51	.78	1.8	.25	170	2.9	1.6	.91	.16	.13	.18	.06
20	.50	.66	1.6	.24	226	3.0	1.3	.97	.27	.19	.20	.07
21	.54	.64	1.3	.24	55	15	1.2	.78	.23	.13	.22	.07
22	.51	.59	1.1	.24	24	11	1.1	.72	.19	.17	.17	.08
23	.44	.54	.85	.25	12	7.8	1.1	.70	.35	.20	.12	.09
24	.42	.52	.81	.26	10	6.3	1.1	.78	2.8	.16	.11	.12
25	.40	.58	.71	.25	6.3	4.7	10	.74	1.8	.10	.12	.19
26	.43	1.9	.66	.24	6.7	4.3	16	.73	13	.08	.09	.13
27	.38	1.6	.56	.23	3.7	4.8	6.6	.60	5.2	.09	.08	.16
28	.40	1.3	.50	.22	3.2	4.3	3.9	.52	3.0	.09	.08	.11
29	.43	1.1	.47	.22	---	3.7	3.5	.46	2.4	.09	.10	.10
30	.37	.83	.44	.21	---	2.9	2.9	.48	1.4	.10	.08	.09
31	.33	---	.43	.19	---	2.8	---	.44	---	.10	.09	---
TOTAL	18.49	19.30	31.29	9.77	519.32	268.7	87.5	41.03	35.59	11.25	12.79	2.59
MEAN	.60	.64	1.01	.32	18.5	8.67	2.92	1.32	1.19	.36	.41	.086
MAX	1.3	1.9	1.9	.43	226	56	16	3.5	13	1.2	4.2	.19
MIN	.33	.25	.43	.19	.07	2.6	1.1	.44	.16	.08	.08	.04
CFSM	.07	.07	.11	.04	2.07	.97	.33	.15	.13	.04	.05	.01
IN.	.08	.08	.13	.04	2.16	1.12	.36	.17	.15	.05	.05	.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1994, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
MEAN	2.19	5.81	5.06	2.45	6.69	11.0	8.99	4.17	4.34	3.02	.80	2.59
MAX	8.56	24.1	12.7	7.67	18.5	24.3	37.8	13.2	26.2	11.8	2.78	13.7
(WY)	1987	1986	1992	1993	1994	1993	1993	1990	1993	1993	1989	1986
MIN	.12	.28	.32	.15	.50	3.78	1.03	.33	.11	.063	.063	.086
(WY)	1989	1990	1990	1991	1989	1988	1989	1989	1988	1991	1991	1994

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1984 - 1994

ANNUAL TOTAL	3616.51	1057.62	
ANNUAL MEAN	9.91	2.90	4.73
HIGHEST ANNUAL MEAN			11.8
LOWEST ANNUAL MEAN			1.89
HIGHEST DAILY MEAN	213	Apr 20	285
LOWEST DAILY MEAN	.13	Sep 11	.03
ANNUAL SEVEN-DAY MINIMUM	.17	Sep 6	.04
INSTANTANEOUS PEAK FLOW			378
INSTANTANEOUS PEAK STAGE			8.67
ANNUAL RUNOFF (CFSM)	1.11		.32
ANNUAL RUNOFF (INCHES)	15.01		4.39
10 PERCENT EXCEEDS	26		3.7
50 PERCENT EXCEEDS	1.9		.52
90 PERCENT EXCEEDS	.37		.09
			9.13
			.53
			7.18
			11
			1.0
			.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 1993 to current year.

PERIOD OF DAILY RECORD.--

- SUSPENDED-SEDIMENT DISCHARGE: Water years 1984-85, February 1993 to current year.
- DISSOLVED AMMONIA NITROGEN DISCHARGE: February 1993 to current year.
- TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Water years 1984-85, February 1993 to current year.
- DISSOLVED NITRITE PLUS NITRATE DISCHARGE: February 1993 to current year.
- TOTAL NITRITE PLUS NITRATE DISCHARGE: Water years 1984-85.
- TOTAL PHOSPHORUS DISCHARGE: Water years 1984-85, February 1993 to current year.
- DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: February 1993 to current year.

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 µm 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 and many days during 1994 water year.
- DISSOLVED AMMONIA NITROGEN CONCENTRATIONS: Maximum observed, 3.60 mg/L, Mar. 4, 1993; minimum observed, 0.02 mg/L, June 5, 1993.
- DISSOLVED AMMONIA NITROGEN DISCHARGE: Maximum daily, 674 lb, Mar. 23, 1993; minimum daily, 0.01 lb, on many days in 1994 water year.
- TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 9.4 mg/L, Nov. 9, 1984; minimum observed, 0.20 mg/L, Sept. 21, 1994.
- TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 3,120 lb, Feb. 19, 1994; minimum daily, 0.07 lb, Sept. 7, 17-19, 21, 1994.
- DISSOLVED NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 14 mg/L, June 26, 1994; minimum observed, <0.05 mg/L, Sept. 21, 1994.
- DISSOLVED NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 5,640 lb, Feb. 20, 1994; minimum daily, 0.02 lb, Sept. 2, 3, 7, 8, 15-23, 30, 1994.
- 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, 2.00 mg/L, Feb. 19, 1994; minimum observed, <0.01 mg/L, June 5 and Aug. 7, 1985.
- TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 1,200 lb, Feb. 19, 1994; minimum daily, 0.01 lb, on several days during 1985, July 25 and Aug. 3, 1994.

EXTREMES FOR CURRENT YEAR.--

- SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 674 mg/L, Feb. 19; minimum observed, 7 mg/L, Mar. 10.
- SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 244 tons, Feb. 19; minimum daily, 0.0 ton, on many days.
- DISSOLVED AMMONIA NITROGEN CONCENTRATIONS: Maximum observed, 0.85 mg/L, Feb. 19; minimum observed, 0.03 mg/L, Mar. 9 and Aug. 23.
- DISSOLVED AMMONIA NITROGEN DISCHARGE: Maximum daily, 494 lb, Feb. 19; minimum daily, 0.01 lb, on many days.
- TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 5.1 mg/L, Apr. 25; minimum observed, 0.20 mg/L, Sept. 21.
- TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 3,120 lb, Feb. 19; minimum daily, 0.07 lb, Sept. 7, 17-19, 21.
- DISSOLVED NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 14.0 mg/L, June 26; minimum observed, <0.05 mg/L, Sept. 21.
- DISSOLVED NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 5,640 lb, Feb. 20; minimum daily, 0.02 lb, Sept. 2, 3, 7, 8, 15-23, 30.
- TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 2.00 mg/L, Feb. 19; minimum observed, 0.01 mg/L, Dec. 15.
- TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 1,200 lb, Feb. 19; minimum daily, 0.01 lb, July 25 and Aug. 3.
- DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.00 mg/L, Feb. 19; minimum observed, 0.01 mg/L, Dec. 15, Jan. 24, Apr. 18, and May 9.
- DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 581 lb, Feb. 19; minimum daily, 0.00 lb, Feb. 10-16 and Aug. 3.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	NITRO-GEN, NO2+NO3 SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS, ORTHO, SOLVED (MG/L AS P) (00665)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 1993									
*06...	1405	--	0.71	2.50	0.100	0.60	0.050	0.030	--
NOV									
*16...	1100	--	0.80	1.10	0.110	0.50	0.050	0.020	24
26...	1115	--	2.5	--	--	1.6	0.300	--	120
26...	1415	--	2.5	--	--	1.0	0.180	--	48
DEC									
*15...	1410	--	0.80	3.00	0.080	0.30	<0.010	<0.010	--
JAN 1994									
*24...	1430	0.26	--	1.20	2.90	5.8	0.190	0.010	--

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

## ROCK RIVER BASIN

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 1994								
19...	0400	4.3	--	--	--	--	--	166
19...	0515	9.0	1.60	0.610	3.3	1.30	0.850	--
19...	0830	64	--	--	--	--	--	386
19...	0930	86	2.30	0.850	4.1	2.00	1.00	--
19...	1415	225	--	--	--	--	--	674
19...	2030	358	--	--	--	--	--	511
20...	0030	364	3.80	0.350	2.9	0.890	0.410	--
20...	0430	375	--	--	--	--	--	329
20...	1100	206	5.00	0.320	2.2	0.640	0.360	--
20...	1400	159	--	--	--	--	--	125
20...	2000	108	--	--	--	--	--	79
*21...	1021	46	--	--	--	--	--	41
21...	1025	46	6.20	0.220	1.3	0.340	0.210	--
*21...	1026	46	6.00	0.220	1.4	0.330	0.200	--
21...	1400	45	--	--	--	--	--	43
21...	1700	43	--	--	--	0.290	--	--
22...	0200	31	--	--	--	0.230	--	--
22...	0500	28	--	--	--	--	--	37
MAR								
07...	1045	35	--	--	--	0.340	--	--
07...	1345	36	--	--	--	--	--	37
07...	1645	41	--	--	--	--	--	29
07...	1945	41	--	--	--	0.240	--	--
08...	0145	28	--	--	--	--	--	15
*08...	0820	33	6.50	0.090	0.70	0.160	0.120	9
*09...	0855	10	6.30	0.030	0.50	0.080	0.070	16
*10...	1230	7.1	6.50	0.080	0.40	0.090	0.080	7
21...	0500	12	4.30	0.150	1.5	0.280	0.090	74
21...	0800	18	4.60	0.130	1.6	0.320	0.110	75
*21...	0810	19	4.70	0.140	1.3	0.280	0.120	63
21...	1100	19	--	--	--	--	--	29
21...	1400	19	--	--	--	0.160	--	--
21...	1700	18	--	--	--	--	--	24
21...	2300	14	--	--	--	0.110	--	--
22...	0200	14	--	--	--	--	--	16
22...	0800	11	--	--	--	0.080	--	15
*22...	0810	10	--	--	--	0.090	--	14
22...	1400	9.7	--	--	--	--	--	11
*23...	0820	7.7	--	--	--	0.110	--	17
*28...	0850	4.3	--	--	--	0.040	--	--
*28...	0855	4.3	--	--	--	--	--	9
APR								
12...	1745	3.8	--	--	--	0.120	--	35
12...	2345	3.8	--	--	--	0.080	--	13
13...	0545	3.4	--	--	--	0.050	--	11
*18...	1145	1.6	4.70	0.060	0.50	0.030	0.010	16
25...	1600	3.4	--	--	--	--	--	25
25...	1745	5.3	2.90	0.140	1.7	1.30	0.180	151
25...	1815	11	--	--	--	--	--	156
25...	1845	24	--	--	--	--	--	524
25...	1915	45	3.00	0.230	5.1	1.70	0.330	--
25...	2215	35	5.30	0.240	3.6	0.980	0.170	631
26...	0415	22	6.50	0.160	1.6	0.320	0.130	80
26...	1015	18	6.80	0.110	1.1	0.170	0.080	24
26...	1915	11	--	--	--	0.110	--	--
27...	0115	9.9	--	--	--	--	--	31
27...	0415	9.9	--	--	--	0.110	--	--
27...	1015	6.1	--	--	--	--	--	13
27...	1315	6.1	--	--	--	0.050	--	--
*28...	0805	3.9	--	--	--	--	--	45
MAY								
*09...	1205	1.7	5.80	0.050	0.50	0.030	<0.010	27
JUN								
*13...	1320	0.41	0.200	0.190	1.2	0.170	--	38
24...	0830	3.8	1.80	0.460	2.5	0.530	0.170	67
24...	1130	4.1	6.90	0.350	2.4	0.440	0.180	51
*24...	1325	3.9	7.70	0.280	1.8	0.370	0.160	46
24...	1730	3.5	5.50	0.170	1.8	0.300	0.100	39
26...	0315	3.9	6.00	0.170	1.3	0.130	0.030	44
26...	0500	17	6.00	0.200	2.0	0.450	0.130	227
26...	0800	23	12.0	0.130	1.8	0.320	0.130	98
26...	1100	18	14.0	0.100	1.8	0.260	0.130	52
27...	0800	6.0	3.50	0.060	0.70	0.070	0.030	16
*27...	0810	6.0	11.0	0.080	0.70	0.070	0.040	22
JUL								
*08...	1130	0.77	1.20	0.120	0.70	0.100	0.050	18
*11...	0810	0.31	--	--	--	0.280	--	9
*18...	1215	0.15	0.200	0.040	0.40	0.070	0.050	9

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)
AUG 1994								
04...	0915	0.83	0.088	0.070	0.60	0.110	0.030	16
04...	1215	0.87	0.410	0.060	1.0	0.230	0.120	24
*05...	0840	0.20	--	--	--	--	--	16
10...	2215	0.87	0.120	0.060	0.60	0.130	0.020	18
11...	0115	1.2	--	--	--	--	--	18
11...	0415	1.6	0.500	0.100	1.4	0.360	0.180	26
11...	0715	1.8	--	--	--	--	--	21
*11...	0810	1.7	0.870	0.070	1.2	0.250	0.110	21
11...	1045	1.4	--	--	--	0.320	--	20
11...	1400	1.1	--	--	--	0.290	--	20
11...	1700	0.94	--	--	--	--	--	21
11...	2000	0.70	--	--	--	0.250	--	15
*12...	0810	0.37	--	--	--	--	--	15
*12...	0815	0.36	0.780	0.100	1.0	0.180	0.090	--
13...	0345	1.2	0.430	0.110	1.0	0.160	0.050	20
13...	0530	3.3	--	--	--	--	--	40
13...	0700	6.5	1.80	0.570	2.4	0.690	0.290	54
13...	0930	7.7	2.90	0.270	1.9	0.500	0.250	37
*13...	0940	7.8	2.90	0.300	2.0	0.510	0.250	39
*22...	0800	0.17	<0.050	0.150	0.90	0.270	0.130	9
**23...	1015	0.11	0.130	0.030	0.40	0.070	0.040	--
SEP								
*21...	1000	0.06	<0.050	0.040	0.20	0.070	0.030	25

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

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.01	.04	.01	.01	.10	.06	.36	.03	.07	.00	.00
2	.07	.01	.21	.01	.01	.09	.05	.31	.03	.06	.00	.00
3	.07	.01	.16	.01	.01	.08	.04	.25	.03	.05	.00	.00
4	.06	.01	.14	.01	.01	.15	.04	.21	.02	.04	.03	.00
5	.05	.01	.06	.01	.00	.28	.04	.18	.03	.04	.01	.00
6	.05	.01	.05	.01	.00	8.9	.03	.15	.03	.03	.00	.00
7	.05	.01	.05	.01	.00	5.0	.02	.15	.02	.03	.00	.00
8	.04	.01	.04	.01	.00	.67	.02	.14	.03	.04	.00	.00
9	.05	.01	.04	.01	.00	.41	.02	.12	.02	.02	.00	.00
10	.04	.01	.04	.01	.00	.16	.02	.11	.02	.01	.01	.00
11	.04	.01	.03	.01	.00	.10	.02	.12	.02	.01	.07	.00
12	.04	.01	.03	.01	.00	.10	.10	.11	.03	.01	.01	.00
13	.03	.04	.02	.01	.00	.10	.10	.10	.04	.01	.43	.01
14	.03	.04	.02	.01	.00	.09	.08	.10	.04	.01	.13	.00
15	.03	.07	.02	.01	.00	.09	.10	.11	.03	.01	.04	.00
16	.03	.05	.02	.01	.00	.07	.09	.09	.02	.00	.02	.00
17	.03	.05	.02	.01	.00	.06	.07	.08	.02	.00	.01	.00
18	.03	.04	.13	.01	.04	.05	.07	.07	.02	.00	.01	.00
19	.03	.04	.19	.01	244	.04	.06	.07	.01	.00	.01	.00
20	.02	.03	.16	.01	147	.04	.05	.08	.02	.00	.01	.00
21	.03	.03	.11	.01	7.3	1.4	.04	.06	.02	.00	.01	.00
22	.02	.03	.09	.01	2.3	.40	.04	.06	.02	.00	.00	.00
23	.02	.02	.02	.01	.99	.34	.03	.06	.04	.01	.00	.01
24	.02	.02	.02	.01	.71	.25	.03	.07	.39	.00	.00	.01
25	.02	.03	.02	.01	.15	.16	13	.06	.13	.00	.00	.01
26	.02	.30	.02	.01	.17	.13	3.2	.06	2.6	.00	.00	.01
27	.02	.12	.02	.01	.17	.13	.39	.05	.31	.00	.00	.01
28	.02	.07	.02	.01	.13	.10	.43	.05	.18	.00	.00	.01
29	.02	.05	.01	.01	---	.08	.40	.04	.14	.00	.00	.00
30	.01	.04	.01	.01	---	.06	.32	.04	.08	.00	.00	.00
31	.01	---	.01	.01	---	.06	---	.04	---	.00	.00	---
TOTAL	1.11	1.19	1.82	0.31	403.00	19.69	18.96	3.50	4.42	0.45	0.80	0.07

WTR YR 1994 TOTAL 455.32

## ROCK RIVER BASIN

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

NITROGEN, AMMONIA, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.48	.11	.25	.16	.05	2.0	1.2	1.2	.21	.60	.02	.02
2	.38	.10	.79	.16	.05	1.7	1.1	1.0	.22	.59	.02	.01
3	.37	.11	.64	.16	.05	1.7	.95	.84	.21	.47	.01	.01
4	.39	.11	.49	.15	.05	2.0	.88	.70	.19	.47	.17	.01
5	.35	.12	.47	.15	.04	5.5	.84	.63	.23	.46	.05	.01
6	.37	.11	.48	.15	.04	58.0	.71	.53	.25	.36	.03	.01
7	.37	.08	.44	.15	.04	39.0	.57	.53	.18	.35	.03	.01
8	.34	.08	.41	.14	.03	8.8	.55	.50	.22	.47	.03	.01
9	.38	.07	.43	.14	.03	2.3	.62	.46	.17	.32	.02	.02
10	.33	.07	.44	.14	.03	2.8	.55	.43	.19	.20	.06	.02
11	.33	.07	.33	.13	.03	2.2	.47	.47	.22	.14	.52	.02
12	.33	.08	.34	.13	.02	2.1	1.0	.45	.27	.11	.20	.02
13	.27	.22	.34	.13	.02	2.1	1.6	.39	.37	.09	7.0	.02
14	.26	.20	.35	.12	.02	1.9	1.1	.41	.34	.11	2.4	.02
15	.24	.33	.33	.11	.02	1.9	1.3	.46	.23	.08	.83	.01
16	.26	.47	.31	.10	.02	1.4	1.1	.38	.19	.06	.41	.02
17	.26	.43	.32	.09	.04	1.1	.59	.37	.15	.05	.25	.01
18	.23	.33	.54	.09	.34	1.1	.52	.34	.14	.03	.18	.01
19	.22	.36	.74	.08	494	.84	.50	.36	.11	.03	.16	.01
20	.21	.28	.64	.08	394	.83	.39	.40	.17	.04	.17	.01
21	.22	.25	.54	.08	69.1	10.3	.36	.33	.14	.03	.18	.01
22	.21	.21	.46	.08	26.8	6.5	.33	.32	.11	.03	.10	.02
23	.17	.18	.35	.08	12.8	4.2	.32	.32	.38	.04	.02	.02
24	.16	.15	.33	.08	10.1	3.3	.32	.37	4.1	.03	.02	.03
25	.15	.16	.29	.08	3.6	2.4	11.4	.37	1.2	.02	.02	.04
26	.16	.79	.26	.08	3.9	2.2	11.7	.38	8.0	.02	.01	.03
27	.14	.64	.22	.07	3.0	2.4	2.7	.32	2.1	.02	.01	.03
28	.15	.39	.20	.07	2.4	2.1	1.4	.29	1.4	.02	.01	.02
29	.15	.31	.18	.07	---	1.8	1.3	.27	1.1	.02	.02	.02
30	.13	.25	.17	.06	---	1.4	1.0	.29	.69	.02	.01	.02
31	.11	---	.17	.06	---	1.3	---	.28	---	.02	.02	---
TOTAL	8.12	7.06	12.25	3.37	1020.62	177.17	47.37	14.39	23.48	5.30	12.98	0.52
WTR YR 1994	TOTAL 1332.63											

NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (POUNDS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	.63	2.0	.63	.21	10.6	11.6	11.7	1.5	4.5	.12	.17
2	3.1	.62	5.0	.61	.21	8.9	10.3	10.2	1.6	4.3	.11	.08
3	2.8	.67	4.0	.60	.20	8.6	8.8	8.5	1.5	3.3	.09	.08
4	2.7	.69	3.3	.58	.19	10.4	8.1	7.0	1.3	3.2	1.9	.09
5	2.3	.72	3.0	.58	.17	37.0	7.6	6.3	1.6	3.0	.32	.11
6	2.3	.65	2.9	.56	.16	421	6.5	5.4	1.7	2.3	.15	.11
7	2.2	.49	2.6	.56	.15	280	5.2	5.3	1.2	2.1	.15	.07
8	2.1	.50	2.3	.54	.14	74.6	4.9	5.0	1.5	2.8	.15	.08
9	2.3	.43	2.2	.54	.12	29.2	5.5	4.6	1.1	2.0	.12	.11
10	2.0	.42	2.2	.54	.10	16.4	4.8	4.2	1.2	1.3	.55	.12
11	2.0	.43	1.5	.52	.10	11.2	4.1	4.6	1.4	.99	7.6	.12
12	2.0	.46	1.5	.51	.09	10.6	6.4	4.3	1.7	.77	2.1	.13
13	1.6	1.2	1.4	.51	.09	11.1	10.3	3.7	2.4	.71	42.4	.14
14	1.6	1.3	1.4	.48	.08	10.4	7.2	3.8	2.3	.91	13.6	.12
15	1.4	2.3	1.3	.44	.09	10.1	8.3	4.3	1.6	.71	4.2	.09
16	1.6	2.2	1.2	.40	.08	7.9	7.0	3.5	1.4	.50	2.1	.09
17	1.6	2.0	1.2	.37	.17	6.4	5.0	3.3	1.1	.43	1.3	.07
18	1.4	1.6	3.4	.34	1.5	6.1	4.3	3.1	1.2	.34	.97	.07
19	1.3	1.8	4.7	.32	3120	4.9	4.2	3.1	.95	.28	.90	.07
20	1.2	1.4	4.0	.31	2890	4.9	3.2	3.5	1.5	.37	.99	.08
21	1.3	1.3	2.0	.31	430	99.1	2.9	2.8	1.3	.26	1.1	.07
22	1.2	1.1	1.7	.31	167	63.2	2.7	2.7	1.1	.31	.70	.08
23	1.0	.99	1.3	.32	78.1	41.8	2.6	2.7	2.4	.35	.28	.09
24	.98	.90	1.2	.33	60.6	32.9	2.6	3.1	29.8	.27	.22	.13
25	.91	1.2	1.1	.31	24.0	23.8	196	3.0	12.8	.16	.24	.21
26	.96	5.0	1.0	.30	26.0	21.1	124	3.0	113	.13	.18	.15
27	.83	4.0	.84	.28	16.7	23.0	26.9	2.6	21.6	.13	.15	.17
28	.87	3.0	.75	.27	13.1	20.2	14.4	2.2	11.5	.13	.15	.12
29	.90	2.8	.70	.27	---	16.8	12.6	2.0	8.9	.13	.19	.11
30	.77	2.1	.65	.25	---	13.0	10.2	2.2	5.4	.13	.15	.10
31	.68	---	.63	.23	---	12.2	---	2.1	---	.12	.17	---
TOTAL	52.10	42.90	62.97	13.12	6829.35	1347.4	528.2	133.8	237.55	36.93	83.35	3.23
WTR YR 1994	TOTAL 9370.90											

ROCK RIVER BASIN

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05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

NITROGEN, NITRITE PLUS NITRATE, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.1	4.8	8.0	8.0	4.3	90.5	68.0	111	1.1	21.0	.15	.05
2	11.9	4.8	60.0	7.9	4.3	82.9	62.2	99.2	1.0	17.2	.15	.02
3	11.1	5.4	51.0	7.9	4.1	87.2	54.6	84.2	.84	11.5	.13	.02
4	10.9	5.7	16.3	7.8	3.9	115	51.7	71.7	.65	9.6	.93	.03
5	9.3	6.1	15.7	7.9	3.7	254	49.9	66.3	.72	7.8	.60	.03
6	9.5	5.6	16.4	7.7	3.5	1450	43.5	57.5	.67	5.2	.33	.03
7	9.5	4.4	15.1	7.8	3.2	1080	35.7	58.1	.43	4.1	.30	.02
8	9.0	4.5	14.4	7.7	3.0	731	35.0	57.0	.45	4.8	.28	.02
9	10.1	4.0	15.0	7.7	2.8	373	40.5	51.8	.30	3.0	.19	.03
10	9.0	4.0	15.5	7.8	2.3	257	36.3	43.2	.30	1.7	.24	.03
11	9.3	4.2	11.9	7.6	2.3	185	31.5	41.7	.31	1.2	4.5	.03
12	9.6	4.5	12.2	7.7	2.1	179	72.0	34.7	.32	.81	1.7	.04
13	8.0	10.0	12.5	7.8	2.1	192	101	26.7	.40	.66	54.0	.04
14	7.9	8.0	12.8	7.4	1.8	183	78.0	24.2	.38	.74	19.3	.03
15	7.4	18.0	12.5	6.9	2.1	182	87.0	24.1	.28	.52	4.8	.02
16	8.2	5.0	11.8	6.3	1.9	143	75.0	17.3	.24	.32	1.6	.02
17	8.5	4.8	12.2	5.9	3.0	119	45.6	14.5	.20	.25	.64	.02
18	7.6	4.3	45.0	5.5	7.8	116	40.7	11.9	.21	.18	.30	.02
19	7.4	5.2	57.0	5.4	2790	95.5	40.9	10.9	.18	.15	.17	.02
20	7.2	4.5	51.0	5.2	5640	97.6	32.7	10.6	.29	.21	.12	.02
21	7.9	4.5	22.2	5.2	1760	369	30.9	7.7	.25	.16	.09	.02
22	7.5	4.3	19.3	5.3	780	265	30.0	6.5	.21	.20	.06	.02
23	6.5	4.1	14.6	5.5	398	191	29.4	5.7	.68	.24	.08	.02
24	6.2	4.1	14.1	5.8	336	154	30.7	5.8	72.9	.20	.07	.03
25	5.9	4.7	12.5	5.6	186	115	230	5.0	50.5	.13	.08	.05
26	6.4	60.0	11.7	5.4	197	105	573	4.5	820	.11	.06	.04
27	5.6	51.0	10.0	5.3	120	117	219	3.3	286	.12	.05	.04
28	6.1	42.0	9.0	5.1	103	106	127	2.6	90.6	.13	.05	.03
29	6.4	9.8	8.5	5.1	---	90.8	113	2.1	55.2	.13	.06	.03
30	5.6	8.0	8.0	4.9	---	72.1	94.4	2.0	29.1	.14	.05	.02
31	5.1	---	7.9	4.5	---	69.6	---	1.7	---	.14	.05	---
TOTAL	256.7	310.3	604.1	201.6	12368.2	7667.2	2559.2	963.5	1414.71	92.64	91.13	0.84
WTR YR 1994	TOTAL 26530.12											

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	.06	.27	.08	.12	1.04	.55	.79	.16	.51	.02	.04
2	.26	.06	1.20	.08	.11	.86	.49	.68	.17	.51	.02	.02
3	.24	.06	.88	.09	.10	.81	.42	.55	.17	.40	.01	.02
4	.23	.07	.34	.10	.09	1.06	.39	.45	.15	.40	.45	.02
5	.19	.07	.28	.10	.08	4.20	.37	.40	.19	.39	.12	.03
6	.19	.06	.25	.11	.07	123	.32	.34	.21	.31	.03	.03
7	.19	.05	.19	.12	.06	61.3	.26	.33	.15	.29	.03	.02
8	.17	.05	.16	.12	.05	17.5	.24	.31	.18	.40	.03	.02
9	.19	.04	.14	.13	.05	5.07	.28	.27	.14	.29	.02	.03
10	.17	.04	.12	.14	.04	3.50	.24	.26	.16	.19	.11	.03
11	.17	.04	.08	.15	.03	2.44	.21	.29	.19	.15	1.82	.03
12	.17	.05	.07	.16	.03	2.25	.91	.28	.23	.12	.36	.04
13	.14	.24	.06	.17	.03	2.30	.92	.25	.33	.11	10.6	.04
14	.14	.21	.05	.18	.02	2.09	.59	.26	.31	.15	2.99	.03
15	.12	.40	.04	.17	.02	1.98	.60	.30	.21	.12	.86	.03
16	.14	.22	.04	.17	.02	1.49	.48	.25	.17	.08	.46	.03
17	.14	.21	.05	.17	.06	1.18	.32	.24	.14	.07	.31	.02
18	.12	.17	.72	.17	.68	1.09	.26	.23	.14	.06	.24	.02
19	.12	.20	1.10	.18	1200	.86	.24	.24	.11	.05	.23	.02
20	.11	.16	.88	.18	856	.83	.18	.27	.17	.06	.27	.03
21	.12	.15	.60	.20	106	14.6	.16	.23	.14	.04	.30	.03
22	.11	.14	.10	.21	27.6	5.48	.15	.22	.11	.05	.19	.03
23	.09	.12	.08	.24	11.2	4.41	.14	.23	.29	.09	.05	.03
24	.09	.12	.08	.26	7.64	3.01	.13	.26	5.33	.05	.04	.04
25	.08	.17	.08	.24	2.20	1.81	60.9	.26	1.21	.01	.04	.06
26	.09	1.86	.08	.22	2.50	1.95	22.7	.28	17.8	.02	.03	.04
27	.08	1.08	.07	.20	1.68	1.24	2.76	.24	2.25	.02	.03	.05
28	.08	.65	.07	.18	1.30	.94	1.02	.22	1.19	.02	.03	.03
29	.08	.47	.07	.17	---	.78	.88	.20	.96	.02	.04	.03
30	.07	.33	.07	.15	---	.61	.70	.22	.60	.02	.03	.02
31	.06	---	.07	.13	---	.57	---	.21	---	.02	.04	---
TOTAL	4.50	7.55	8.29	4.97	2217.78	269.65	97.81	9.56	33.56	5.02	19.80	0.91
WTR YR 1994	TOTAL 2679.40											



## ROCK RIVER BASIN

05431014 JACKSON CREEK AT PETRIE ROAD NEAR ELKHORN, WI--CONTINUED

PHOSPHORUS ORTHO WATER, WHOLE, TOTAL, LBS/DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.02	.16	.02	.01	.46	.15	.30	.04	.28	.01	.02
2	.28	.02	.37	.02	.01	.37	.14	.25	.04	.27	.01	.01
3	.22	.02	.28	.02	.01	.34	.12	.20	.04	.21	.00	.01
4	.18	.03	.22	.02	.01	.99	.11	.16	.03	.21	.21	.01
5	.13	.03	.19	.02	.01	3.97	.11	.14	.04	.20	.06	.01
6	.12	.02	.17	.02	.01	70.0	.09	.12	.05	.16	.01	.01
7	.11	.02	.14	.02	.01	37.1	.08	.11	.03	.15	.01	.01
8	.10	.02	.12	.02	.01	13.2	.08	.10	.04	.20	.01	.01
9	.11	.01	.11	.02	.01	4.39	.09	.09	.03	.15	.01	.01
10	.09	.01	.10	.02	.00	3.08	.08	.08	.03	.10	.02	.02
11	.09	.01	.07	.02	.00	2.02	.07	.09	.04	.08	.72	.02
12	.09	.02	.06	.02	.00	1.72	.38	.09	.05	.07	.16	.02
13	.08	.08	.05	.02	.00	1.63	.52	.08	.07	.07	5.03	.02
14	.07	.07	.05	.02	.00	1.37	.31	.08	.07	.09	1.48	.02
15	.06	.13	.04	.02	.00	1.21	.28	.09	.05	.08	.43	.01
16	.07	.09	.04	.02	.00	.84	.20	.08	.05	.06	.23	.01
17	.07	.08	.04	.02	.02	.61	.12	.07	.04	.05	.15	.01
18	.06	.07	.23	.01	.37	.53	.09	.07	.04	.04	.12	.01
19	.06	.08	.34	.01	581	.38	.09	.07	.04	.03	.11	.01
20	.05	.07	.28	.01	445	.35	.07	.08	.06	.04	.13	.01
21	.06	.07	.20	.01	64.2	6.42	.06	.06	.06	.03	.15	.01
22	.05	.06	.06	.01	17.6	2.04	.06	.06	.05	.03	.10	.01
23	.04	.06	.05	.01	6.66	1.57	.06	.06	.14	.03	.03	.01
24	.04	.06	.04	.01	4.22	1.01	.06	.07	1.96	.02	.02	.02
25	.04	.09	.04	.01	2.37	.56	11.3	.07	.32	.01	.02	.03
26	.04	1.03	.04	.01	2.60	.39	8.32	.07	7.41	.01	.02	.02
27	.03	.56	.03	.01	.80	.33	.94	.06	1.14	.01	.02	.02
28	.03	.33	.03	.01	.60	.24	.40	.06	.67	.01	.02	.01
29	.04	.25	.03	.01	---	.20	.34	.05	.53	.01	.02	.01
30	.03	.18	.02	.01	---	.16	.27	.05	.33	.01	.02	.01
31	.03	---	.02	.01	---	.15	---	.05	---	.01	.02	---

TOTAL	2.91	3.59	3.62	0.48	1125.53	157.63	24.99	3.01	13.49	2.72	9.35	0.41
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WTR YR 1994 TOTAL 1347.73

ROCK RIVER BASIN

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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 mi<sup>2</sup>.

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. 29 to Nov. 1, Mar. 12-16, June 14, July 1-3, 25-31, Aug. 1-2, 5-10, Sept. 1-7, and ice-affected periods, Dec. 24 to Feb. 16 and Feb. 23 to Mar. 2. Records good except those for estimated daily discharges and record from June 10 to Sept. 20, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	.70	1.3	.60	.33	2.4	1.9	2.8	.25	.25	.08	.20
2	1.5	1.0	4.4	.70	.32	2.3	1.8	2.1	.28	.20	.08	.15
3	1.4	1.1	1.7	.58	.31	4.3	1.5	1.7	.38	.17	.89	.12
4	1.4	.98	1.6	.50	.30	7.8	1.7	1.6	.28	.44	14	.11
5	1.2	.96	1.4	.46	.30	14	1.5	1.5	.65	.25	2.5	.10
6	1.4	.74	1.7	.44	.29	25	1.3	1.3	.41	.15	1.0	.09
7	1.2	.74	1.2	.43	.29	12	1.3	1.6	.20	7.8	.70	.09
8	1.1	.70	1.3	.43	.28	5.8	1.4	1.4	.21	2.2	.50	.79
9	1.9	.72	1.3	.42	.28	4.0	1.3	1.3	.15	.42	.40	1.9
10	.98	.75	1.3	.42	.26	3.4	1.1	1.1	.14	.10	.35	.50
11	1.1	.85	.96	.45	.26	2.7	1.1	1.6	.13	.22	7.2	.09
12	1.1	1.9	.87	.43	.26	2.5	3.7	1.1	.12	.32	.64	.25
13	.95	2.2	.99	.43	.25	2.2	2.3	1.0	1.6	.30	15	.32
14	.99	1.6	1.1	.41	.25	2.0	1.7	.95	.11	4.8	1.4	.34
15	1.0	1.8	.89	.38	.45	1.9	2.9	1.2	.25	.48	.64	.37
16	1.0	1.0	.79	.36	1.1	1.8	1.7	.96	.15	.29	.58	.40
17	.94	.88	1.0	.35	3.7	1.7	1.3	.85	.27	1.2	.63	.17
18	.92	.85	3.7	.34	12	1.7	1.5	.83	.13	.54	.70	.14
19	.95	.90	1.6	.33	113	1.5	2.5	.77	.05	.78	1.9	.35
20	1.3	.68	1.4	.32	61	1.5	1.2	.71	1.7	2.7	1.1	.51
21	1.5	.68	1.1	.32	9.1	9.6	1.1	.62	.18	.97	.48	.21
22	.92	.63	1.1	.32	5.3	3.7	1.1	.53	.11	.74	.38	.24
23	1.1	.71	.82	.50	4.0	3.2	1.1	.75	4.6	.61	.71	.91
24	.94	.69	.74	.80	3.5	2.6	1.3	.98	6.0	.45	.92	2.0
25	.99	1.9	.70	.70	3.1	2.0	10	.62	1.1	.30	.97	.32
26	.95	5.2	.62	.58	2.9	2.4	7.6	.44	10	.20	1.5	1.6
27	.95	1.4	.58	.45	2.7	3.0	2.6	.38	1.2	.15	.37	.47
28	1.2	1.1	.56	.39	2.5	2.4	2.0	.36	.69	.12	.20	.16
29	.90	.95	.56	.36	---	2.0	2.0	.34	.90	.10	.26	.25
30	.80	.90	.54	.35	---	1.9	2.6	.34	.37	.09	2.8	.33
31	.74	---	.52	.34	---	1.9	---	.38	---	.09	.65	---
TOTAL	35.32	35.21	38.34	13.89	228.33	135.2	66.1	32.11	32.61	27.43	59.53	13.48
MEAN	1.14	1.17	1.24	.45	8.15	4.36	2.20	1.04	1.09	.88	1.92	.45
MAX	2.0	5.2	4.4	.80	113	25	10	2.8	10	7.8	15	2.0
MIN	.74	.63	.52	.32	.25	1.5	1.1	.34	.05	.09	.08	.09
CFSM	.26	.27	.28	.10	1.88	1.00	.51	.24	.25	.20	.44	.10
IN.	.30	.30	.33	.12	1.96	1.16	.57	.28	.28	.24	.51	.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1994, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
MEAN	2.50	4.59	3.15	1.75	3.83	5.98	5.01	2.87	2.43	2.40	1.50	2.82
MAX	7.23	13.3	6.55	4.61	8.81	10.7	14.4	7.11	8.72	5.39	3.00	10.8
(WY)	1986	1986	1985	1993	1985	1986	1993	1990	1993	1992	1990	1986
MIN	.38	.58	.49	.45	.33	3.18	1.28	.79	.54	.44	.30	.27
(WY)	1993	1990	1990	1994	1989	1987	1989	1989	1988	1988	1988	1987

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1984 - 1994
ANNUAL TOTAL	1708.98	717.55	
ANNUAL MEAN	4.68	1.97	3.23
HIGHEST ANNUAL MEAN			5.74
LOWEST ANNUAL MEAN			1.70
HIGHEST DAILY MEAN	84	Mar 23	113
LOWEST DAILY MEAN	.23	Aug 28	.05
ANNUAL SEVEN-DAY MINIMUM	.48	Aug 22	.10
INSTANTANEOUS PEAK FLOW			210
INSTANTANEOUS PEAK STAGE			10.00
ANNUAL RUNOFF (CFSM)	1.08	.45	.74
ANNUAL RUNOFF (INCHES)	14.65	6.15	10.10
10 PERCENT EXCEEDS	11	2.9	7.1
50 PERCENT EXCEEDS	2.0	.90	1.3
90 PERCENT EXCEEDS	.70	.21	.42

## WATER-QUALITY RECORDS

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

## PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1983 to current year.  
 DISSOLVED AMMONIA NITROGEN DISCHARGE: February 1993 to current year.  
 TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Water years 1984-85 and February 1993 to current year.  
 DISSOLVED NITRITE PLUS NITRATE DISCHARGE: February 1993 to current year.  
 TOTAL NITRITE PLUS NITRATE DISCHARGE: Water years 1984-85.  
 TOTAL-PHOSPHORUS DISCHARGE: October 1983 to current year.  
 DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: February 1993 to current year.

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  $\mu$ 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, 0.00 ton, on several days in 1994 water year.  
 DISSOLVED AMMONIA NITROGEN CONCENTRATIONS: Maximum observed, 1.00 mg/L, Jan. 24, 1994; minimum observed, 0.05 mg/L, Aug. 23, 1994.  
 DISSOLVED AMMONIA NITROGEN DISCHARGE: Maximum daily, 298 lb, Mar. 23, 1993; minimum daily, 0.03 lb, June 19, 1994.  
 TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 16 mg/L, Nov. 19, 1983; minimum observed, 0.10 mg/L, Oct. 12, 1984.  
 TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 1,710 lb, Feb. 19, 1994; minimum daily, 0.14 lb, June 19, 1994.  
 DISSOLVED NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 7.3 mg/L, June 27, 1993; minimum observed, 0.32 mg/L, Aug. 4, 1994.  
 DISSOLVED NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 1,080 lb, June 8, 1993; minimum daily, 0.55 lb, Sept. 6, 1994.  
 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, 584 lb, Feb. 19, 1994; minimum daily, 0.01 lb, Aug. 2, 1994.  
 DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.81 mg/L, Mar. 4, 1993; minimum observed, 0.01 mg/L, Apr. 18, 1994.  
 DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 126 lb, Mar. 23, 1993; minimum daily, 0.00 lb, Aug. 2, 1994.

## EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 4,300 mg/L, Apr. 25; minimum observed, 2 mg/L, Aug. 11.  
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 99 tons, Feb. 19; minimum daily, 0.00 ton, on several days, Aug. 23.  
 DISSOLVED AMMONIA NITROGEN CONCENTRATIONS: Maximum observed, 1.00 mg/L, Jan. 24; minimum observed, 0.05 mg/L, Aug. 23.  
 DISSOLVED AMMONIA NITROGEN DISCHARGE: Maximum daily, 285 lb, Feb. 19; minimum daily, 0.03 lb, June 19.  
 TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 7.5 mg/L, June 13; minimum observed, 0.30 mg/L, Aug. 23.  
 TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 1,710 lb, Feb. 19; minimum daily, 0.14 lb, June 19.  
 DISSOLVED NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 6.2 mg/L, June 27; minimum observed, 0.32 mg/L, Aug. 4.  
 DISSOLVED NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 896 lb, Feb. 20; minimum daily, 0.55 lb, Sept. 6.  
 TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.9 mg/L, July 7; minimum observed, 0.02 mg/L, Oct. 6, Dec. 15, and July 20.  
 TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 584 lb, Feb. 19; minimum daily, 0.01 lb, Aug. 2.  
 DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.25 mg/L, Feb. 18; minimum observed, 0.01 mg/L, Apr. 18.  
 DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 86.4 lb, Feb. 19; minimum daily, 0.00 lb, Aug. 2.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 + DIS- ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT 1993								
*06...	1320	1.5	4.50	0.060	0.50	0.020	0.020	32
NOV								
13...	0100	6.3	--	--	--	--	--	131
14...	2145	6.9	--	--	--	--	--	239
*16...	1145	1.0	1.60	0.200	0.60	0.070	0.030	50
25...	1600	6.0	--	--	1.8	0.650	--	228
26...	0445	7.7	--	--	2.1	0.730	--	419
26...	0600	13	--	--	1.8	0.650	--	265
26...	0900	11	--	--	--	0.100	--	42
26...	1200	6.1	--	--	0.60	0.120	--	23
*29...	0930	0.91	--	--	--	--	--	42

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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, AMMONIA + 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)
DEC 1993									
01...	2330	--	6.9	--	--	2.1	0.600	--	290
02...	0230	--	10	--	--	1.1	0.350	--	99
02...	0530	--	5.8	--	--	0.80	0.210	--	58
*02...	0820	--	3.9	--	--	--	--	--	28
*15...	1300	--	0.91	2.00	0.150	0.40	0.020	0.020	130
18...	0730	--	6.1	--	--	--	--	--	316
18...	1030	--	6.1	--	--	--	--	--	70
18...	1330	--	6.1	--	--	--	--	--	93
*20...	0855	--	1.4	--	--	--	--	--	161
JAN 1994									
*24...	1320	0.80	--	1.70	1.00	1.3	0.120	--	147
FEB									
18...	0400	--	6.7	--	--	--	--	--	172
18...	1200	--	6.6	3.40	0.210	1.9	0.670	0.250	--
18...	2045	--	23	--	--	--	--	--	358
19...	0100	--	55	--	--	--	--	--	468
19...	0215	--	69	1.20	0.250	1.7	0.600	0.240	--
19...	0715	--	113	--	--	--	--	--	204
19...	1115	--	133	0.950	0.480	2.2	0.720	0.190	--
19...	1315	--	132	--	--	--	--	--	483
19...	1915	--	121	--	--	--	--	--	441
19...	2115	--	131	1.00	0.620	4.5	1.60	0.050	--
19...	2315	--	129	--	--	--	--	--	56
20...	0315	--	123	--	--	--	--	--	42
20...	1015	--	54	--	--	--	--	--	57
20...	1245	--	39	4.60	0.140	1.2	0.280	0.170	--
20...	1645	--	26	--	--	--	--	--	33
21...	1110	--	8.4	--	--	--	--	--	20
21...	1115	--	8.4	4.20	0.200	0.80	0.150	0.070	--
*21...	1116	--	8.4	4.10	0.200	0.80	0.140	0.070	19
MAR									
04...	1600	--	15	1.40	0.280	1.2	0.260	0.100	54
04...	2000	--	12	--	--	--	--	--	68
05...	1415	--	16	1.10	0.200	1.3	0.330	0.100	109
05...	1600	--	22	--	--	--	--	--	54
05...	2000	--	27	1.30	0.150	0.70	0.150	0.100	31
06...	2130	--	27	2.30	0.130	0.80	0.210	0.120	--
*07...	0955	--	8.8	4.20	0.170	1.0	0.160	0.090	57
07...	1315	--	11	--	--	--	--	--	35
*10...	1430	--	3.7	3.70	0.310	0.70	0.040	0.040	18
21...	0145	--	11	2.10	0.840	3.5	0.890	0.050	756
21...	0230	--	18	1.70	0.450	2.4	0.530	0.050	654
21...	0630	--	16	--	--	--	--	--	79
*21...	0840	--	12	2.40	0.150	1.0	0.180	0.070	59
21...	1030	--	9.9	--	--	--	--	--	24
*22...	0830	--	3.6	--	--	--	0.050	--	109
*28...	0830	--	2.2	--	--	--	0.040	--	5

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, AMMONIA + 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 1994								
*13...	0830	2.6	--	--	--	0.100	--	13
*18...	1100	1.5	2.30	0.140	0.60	0.040	0.010	20
19...	0615	6.1	--	--	--	--	--	84
25...	1700	9.2	1.60	0.540	3.2	0.740	0.030	2300
25...	1715	16	--	--	--	--	--	1430
25...	1745	51	--	--	--	--	--	4300
25...	1800	64	0.890	0.960	5.7	1.70	0.150	2240
25...	1930	47	--	--	--	--	--	415
25...	2030	31	2.00	0.540	2.5	0.640	0.200	175
*26...	0840	8.6	3.10	0.240	1.0	0.140	0.070	22
MAY								
*09...	1045	1.3	2.80	0.100	0.70	0.060	0.020	55
JUN								
13...	0530	5.7	0.820	0.380	7.5	1.70	--	--
13...	0730	7.2	0.850	0.260	2.0	0.370	--	--
*13...	1340	0.80	0.960	0.160	1.2	0.200	--	15

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

## ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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 D (MG/L) (80154)	
JUN 1994									
20...	0115	8.1	2.00	0.820	4.7	1.50	0.200	805	
20...	0315	7.4	1.60	0.670	2.3	0.450	0.140	128	
*20...	0820	1.2	1.30	0.380	1.2	0.180	0.060	20	
23...	1145	4.5	1.80	0.770	2.6	0.330	0.100	120	
23...	1345	6.0	1.20	0.390	1.5	0.260	0.100	56	
23...	1615	17	1.00	0.510	1.9	0.510	0.180	197	
24...	0015	4.6	1.40	0.270	1.0	0.210	0.120	25	
24...	0515	16	1.80	0.200	1.2	0.250	0.120	61	
24...	1115	5.5	4.30	0.120	1.0	0.180	0.100	15	
*24...	1350	3.1	4.70	0.090	1.0	0.160	0.090	--	
*27...	0900	1.3	6.20	0.140	0.80	0.090	0.030	9	
JUL									
07...	1545	4.8	1.10	0.580	3.0	1.90	0.210	1400	
07...	1600	33	--	--	--	--	--	574	
07...	1615	39	1.10	0.370	1.6	0.380	0.160	97	
07...	1745	24	1.20	0.330	1.5	0.340	0.170	68	
07...	1945	21	--	--	--	--	--	40	
07...	2145	17	--	--	--	--	--	19	
07...	2345	9.9	1.90	0.170	1.1	0.190	0.100	13	
08...	0145	6.3	--	--	--	--	--	15	
08...	0345	4.1	--	--	--	--	--	10	
*08...	1015	1.4	2.80	0.120	1.0	0.140	0.070	5	
*11...	0830	0.07	--	--	--	0.070	--	15	
14...	0245	2.6	2.00	0.270	0.80	0.090	0.030	36	
14...	0315	12	2.20	0.350	2.2	0.500	0.060	257	
14...	0515	11	2.00	0.460	1.6	0.250	0.070	63	
14...	0715	14	2.00	0.610	1.6	0.250	0.130	50	
14...	0915	7.1	--	--	--	--	--	16	
14...	1115	4.8	--	--	--	--	--	10	
14...	1315	3.2	2.00	0.200	0.80	0.100	0.060	--	
14...	1515	2.2	--	--	--	--	--	7	
17...	1000	2.9	1.80	0.240	1.0	0.160	0.070	30	
17...	1200	2.9	1.40	0.160	0.70	0.120	0.070	14	
17...	1400	2.0	1.40	0.100	0.70	0.110	0.050	9	
*18...	0930	0.47	1.80	0.090	0.50	0.070	0.040	62	
19...	1930	2.0	--	--	--	0.100	--	12	
19...	2130	1.7	--	--	--	--	--	11	
20...	0500	4.1	--	--	--	0.120	--	26	
20...	0700	7.2	--	--	--	0.130	--	27	
20...	0900	4.4	--	--	--	--	--	12	
20...	1100	3.2	--	--	--	0.100	--	--	
20...	1300	2.7	--	--	--	--	--	5	
20...	1700	2.0	--	--	--	--	--	5	
20...	1900	1.8	--	--	--	0.020	--	--	
*21...	0805	0.84	--	--	--	0.080	--	32	
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- PENDE D (MG/L) (80154)
AUG 1994									
03...	1815	--	1.3	--	--	--	--	--	19
03...	2015	--	1.3	1.10	0.170	0.80	0.080	0.030	--
03...	2045	--	4.2	1.10	0.200	2.1	0.330	0.060	137
04...	0045	--	2.7	--	--	--	--	--	18
04...	0245	--	2.2	0.800	0.130	0.70	0.110	0.040	--
04...	0345	--	6.9	--	--	--	--	--	95
04...	0400	--	20	--	--	--	--	--	548
04...	0415	--	27	0.480	0.130	1.9	0.650	0.080	--
04...	0445	--	54	--	--	--	--	--	484
04...	0515	--	65	0.320	0.100	1.3	0.550	0.100	276
04...	0715	--	47	0.690	0.070	0.70	0.270	0.140	56
04...	0800	--	31	--	--	--	--	--	29
04...	0915	--	18	1.20	0.080	0.90	0.220	0.150	--
04...	1315	--	6.0	1.70	0.080	1.0	0.220	0.140	10
*04...	1320	--	5.9	1.70	0.080	1.0	0.220	0.140	--
04...	1715	--	2.8	--	--	--	--	--	8
04...	2115	--	1.3	--	--	--	0.140	--	--
05...	0115	2.5	--	--	--	--	--	--	15
*05...	0820	2.5	--	--	--	--	--	--	11
10...	1515	0.35	--	--	--	--	--	--	55
10...	1715	0.35	--	0.870	0.170	0.90	0.190	0.040	--
10...	1915	0.35	--	--	--	--	--	--	59
10...	2115	0.35	--	--	--	--	--	--	108
10...	2145	0.35	--	--	--	--	--	--	192
10...	2215	0.35	--	0.750	0.090	0.80	0.200	0.080	162

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

259

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)
AUG 1994								
11...	0015	26	--	--	--	--	--	33
11...	0215	18	0.610	0.190	1.3	0.390	0.090	38
11...	0415	13	--	--	--	--	--	30
*11...	0840	7.0	1.20	0.080	0.80	0.170	0.070	19
11...	1415	3.6	--	--	--	--	--	2
11...	1615	2.9	--	--	--	0.130	--	--
*12...	0830	0.62	1.50	0.120	0.70	0.140	0.030	50
13...	0030	11	1.50	0.200	3.3	1.20	0.050	691
13...	0045	18	--	--	--	--	--	357
13...	0230	30	--	--	--	--	--	132
13...	0300	39	0.930	0.200	1.3	0.400	0.100	153
13...	0500	38	1.20	0.110	1.0	0.290	0.130	68
13...	0700	25	--	--	--	--	--	61
*13...	0915	17	--	--	--	--	--	34
13...	1300	9.9	2.40	0.080	0.70	0.170	0.100	24
13...	1700	6.1	--	--	--	--	--	10
13...	2100	3.7	2.60	0.080	0.60	0.130	0.070	--
13...	2300	3.0	--	--	--	--	--	14
*14...	0900	1.3	2.80	0.090	0.50	0.090	0.050	10
19...	1845	4.0	--	--	--	0.480	--	194
19...	2045	5.4	--	--	--	0.230	--	51
19...	2245	3.0	--	--	--	0.170	--	19
*22...	0830	0.22	1.70	0.080	0.50	0.090	0.040	38
*23...	1200	0.67	1.50	0.050	0.30	0.080	0.040	79
30...	1300	3.4	1.30	0.360	1.5	0.300	0.080	79
30...	1500	6.0	0.870	0.170	1.2	0.270	0.090	77
30...	1630	10	0.660	0.170	1.2	0.330	0.120	92
30...	1830	5.7	0.590	0.120	0.60	0.160	0.100	27
30...	2030	4.2	0.690	0.120	1.0	0.240	0.080	39
*31...	0810	0.52	1.00	0.180	0.70	0.130	0.050	56
SEP								
09...	1515	8.3	--	--	--	1.60	--	1060
09...	1715	6.7	--	--	--	0.420	--	116
*12...	0810	0.10	--	--	--	0.140	--	38
*19...	0815	0.15	--	--	--	0.190	--	75
*21...	1030	0.23	1.50	0.120	0.40	0.070	0.030	78
23...	0115	3.4	--	--	--	0.130	--	119
23...	0445	2.6	--	--	--	0.240	--	113
24...	1615	5.2	1.70	0.190	2.0	0.590	0.070	307
24...	1815	6.8	1.30	0.300	1.6	0.340	0.100	118
24...	2015	6.2	--	--	--	--	--	166
24...	2215	4.0	--	--	--	0.250	--	71
26...	0130	4.4	1.30	0.220	1.3	0.300	0.070	115
26...	0330	2.9	0.900	0.300	1.2	0.270	0.070	111
*26...	0900	0.36	0.770	0.150	0.70	0.150	0.050	28
26...	2030	4.6	1.00	0.200	1.2	0.240	0.060	137
26...	2230	3.4	0.870	0.240	1.1	0.240	0.080	71
*27...	0825	0.36	0.960	0.140	0.60	0.120	0.040	25

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

## ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.06	.38	.25	.10	.10	.02	.24	.01	.01	.00	.03
2	.14	.09	.86	.29	.10	.10	.02	.19	.01	.01	.00	.02
3	.12	.09	.14	.24	.09	.18	.02	.17	.02	.00	.15	.01
4	.13	.08	.15	.21	.09	.93	.02	.17	.01	.01	5.3	.01
5	.11	.08	.15	.19	.08	1.6	.02	.17	.03	.01	.08	.01
6	.12	.06	.20	.18	.08	5.1	.02	.16	.02	.00	.02	.01
7	.10	.06	.16	.18	.08	1.5	.02	.21	.01	1.9	.01	.01
8	.10	.06	.20	.18	.07	.45	.02	.19	.01	.06	.01	.07
9	.30	.06	.23	.17	.07	.25	.02	.19	.00	.01	.01	1.3
10	.08	.06	.26	.17	.06	.17	.01	.16	.00	.00	.03	.12
11	.10	.07	.21	.18	.06	.13	.02	.22	.00	.01	.48	.01
12	.09	.30	.22	.18	.06	.11	.20	.14	.00	.01	.07	.03
13	.08	.38	.28	.18	.06	.09	.08	.12	.13	.02	3.6	.04
14	.08	.24	.33	.17	.06	.08	.07	.11	.00	.78	.04	.04
15	.09	.29	.30	.15	.10	.07	.13	.14	.01	.01	.01	.05
16	.09	.16	.25	.15	.23	.06	.08	.10	.00	.00	.01	.06
17	.08	.12	.29	.14	.96	.05	.03	.09	.01	.05	.01	.03
18	.08	.11	1.2	.14	8.9	.05	.04	.08	.00	.05	.01	.03
19	.08	.11	.55	.13	99	.04	.10	.07	.00	.02	.19	.07
20	.17	.08	.61	.13	7.6	.04	.09	.06	.99	.10	.07	.11
21	.22	.08	.50	.13	.52	4.0	.07	.05	.01	.07	.04	.04
22	.08	.07	.47	.13	.27	.88	.06	.04	.00	.05	.05	.04
23	.09	.08	.35	.20	.20	.52	.06	.06	1.3	.04	.14	.26
24	.08	.08	.32	.32	.17	.25	.06	.07	.51	.02	.17	.77
25	.08	.52	.30	.27	.15	.11	24	.04	.07	.01	.16	.06
26	.08	1.4	.26	.22	.13	.08	.80	.03	3.2	.01	.25	.38
27	.08	.11	.25	.16	.12	.06	.17	.02	.03	.01	.05	.05
28	.10	.10	.24	.14	.11	.03	.14	.02	.02	.00	.02	.01
29	.07	.11	.24	.12	---	.03	.15	.02	.02	.00	.02	.01
30	.07	.10	.23	.12	---	.02	.21	.02	.01	.00	.43	.02
31	.06	---	.22	.11	---	.02	---	.02	---	.00	.09	---
TOTAL	3.33	5.21	10.35	5.53	119.52	17.10	26.75	3.37	6.43	3.27	11.52	3.70

WTR YR 1994 TOTAL 216.08

NITROGEN, AMMONIA, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.95	.49	.90	1.1	.83	1.6	1.5	2.9	.14	.17	.04	.19
2	.67	.74	4.1	1.3	.73	1.4	1.4	1.8	.15	.13	.04	.14
3	.57	.82	1.5	1.2	.64	2.5	1.2	1.3	.20	.11	.82	.11
4	.54	.74	1.4	1.0	.57	8.3	1.3	1.2	.15	.26	6.5	.10
5	.43	.75	1.2	1.0	.51	11.6	1.2	1.0	.49	.15	1.1	.09
6	.45	.60	1.5	1.0	.45	21.8	1.0	.87	.26	.08	.46	.08
7	.40	.61	1.0	1.0	.41	10.5	1.0	.99	.11	12.0	.34	.08
8	.73	.60	1.1	1.1	.36	6.4	1.1	.79	.11	1.7	.25	.66
9	1.4	.63	1.1	1.1	.33	5.5	1.0	.72	.08	.26	.21	1.4
10	.36	.68	1.1	1.2	.28	5.4	.83	.60	.07	.06	.21	.41
11	.42	.79	.81	1.3	.25	4.5	.88	.87	.07	.13	4.9	.07
12	.43	1.4	.73	1.3	.23	4.2	4.5	.57	.06	.18	.39	.19
13	.38	1.7	.82	1.4	.20	3.7	2.1	.55	2.2	.17	10.3	.24
14	.40	1.2	.86	1.4	.18	3.3	1.3	.51	.06	10.5	.64	.25
15	.43	1.3	.72	1.3	.29	3.1	3.1	.67	.14	.42	.30	.27
16	.44	1.1	.67	1.3	.65	3.0	1.3	.52	.08	.19	.27	.29
17	.42	.94	.89	1.3	2.7	2.7	.97	.46	.15	.86	.29	.12
18	.42	.90	3.3	1.4	14.3	2.8	1.1	.45	.07	.27	.32	.10
19	.45	.95	1.6	1.4	285	2.4	1.8	.42	.03	.63	1.4	.23
20	.90	.71	1.5	1.4	91.7	2.4	.84	.38	5.4	3.5	.85	.34
21	1.1	.70	1.2	1.5	9.2	12.8	.72	.34	.23	.48	.39	.14
22	.47	.64	1.2	1.6	5.4	3.0	.66	.28	.09	.37	.15	.15
23	.58	.71	.97	2.6	3.8	2.6	.68	.40	10.7	.30	.20	.53
24	.52	.69	.92	4.2	3.1	2.1	.74	.53	5.5	.23	.25	2.6
25	.56	1.4	.91	3.5	2.6	1.6	35.5	.34	1.0	.15	.26	.33
26	.55	5.0	.84	2.6	2.3	1.9	11.7	.24	21.2	.10	1.1	1.9
27	.57	1.4	.83	1.8	2.0	2.4	3.2	.21	.86	.08	.10	.44
28	.71	1.0	.84	1.4	1.7	1.9	2.3	.19	.50	.06	.05	.11
29	.57	.90	.88	1.2	---	1.6	2.2	.18	.63	.05	.07	.15
30	.52	.85	.89	1.1	---	1.5	2.6	.18	.25	.05	2.3	.19
31	.50	---	.90	.94	---	1.5	---	.21	---	.05	.57	---
TOTAL	17.84	30.94	37.18	46.94	430.71	140.0	89.72	20.67	50.98	33.69	35.07	11.90

WTR YR 1994 TOTAL 945.64

## ROCK RIVER BASIN

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054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (POUNDS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	2.1	6.7	2.1	1.7	7.4	8.3	13.0	.76	.89	.22	.73
2	4.1	3.1	23.2	2.6	1.6	6.7	7.8	9.4	.85	.68	.22	.54
3	3.8	3.4	6.7	2.2	1.5	12.1	6.4	7.4	1.1	.55	6.6	.42
4	3.9	3.0	6.0	1.9	1.4	37.2	7.0	6.9	.84	1.4	76.4	.37
5	3.3	3.0	5.0	1.8	1.3	59.8	6.1	6.2	2.9	.75	12.1	.33
6	3.7	2.3	5.8	1.8	1.2	113	5.4	5.4	1.7	.41	4.3	.29
7	3.3	2.3	3.9	1.8	1.2	59.0	5.1	6.4	.58	58.8	2.7	.28
8	4.0	2.2	4.0	1.9	1.1	27.7	5.3	5.4	.60	12.4	1.7	2.4
9	8.0	2.3	3.8	1.9	1.0	17.2	4.9	5.0	.41	2.0	1.2	10.4
10	2.7	2.4	3.8	2.0	.93	13.0	4.0	4.1	.38	.43	1.2	2.2
11	3.1	2.7	2.6	2.2	.89	10.1	4.2	6.0	.35	.80	38.8	.26
12	3.1	8.0	2.2	2.1	.86	9.2	18.5	3.9	.33	1.0	2.5	.68
13	2.7	9.6	2.4	2.2	.79	8.0	10.2	3.7	24.6	.87	90.7	.86
14	2.8	6.5	2.4	2.1	.76	7.1	6.0	3.4	.35	37.1	3.8	.87
15	2.8	7.5	1.9	2.0	1.3	6.7	13.6	4.4	.78	1.8	1.7	.94
16	2.8	3.3	1.8	2.0	3.1	6.2	5.6	3.4	.45	.90	1.6	.99
17	2.7	2.8	3.6	2.0	16.1	5.7	4.2	3.0	.80	4.5	1.7	.41
18	2.6	2.7	18.5	2.0	113	5.7	4.7	2.9	.38	1.5	1.9	.33
19	2.7	2.8	4.0	2.0	1710	4.9	8.0	2.7	.14	3.6	10.4	.79
20	5.0	2.0	3.6	2.0	713	4.9	3.8	2.4	22.4	15.8	5.5	1.1
21	6.0	2.0	2.9	2.1	41.4	73.3	3.3	2.1	.86	2.6	2.0	.46
22	2.7	1.8	2.9	2.1	22.1	19.6	3.1	1.8	.38	2.0	.91	.53
23	3.2	2.0	2.2	3.4	15.8	16.6	3.2	2.5	39.9	1.6	1.2	2.0
24	2.8	1.9	2.1	5.6	13.3	13.0	3.6	3.2	35.2	1.2	1.5	15.2
25	2.9	12.7	2.0	4.7	11.3	9.9	188	2.0	5.5	.81	1.5	1.6
26	2.8	30.1	1.8	3.8	10.1	11.7	50.4	1.4	73.9	.54	7.9	9.3
27	2.8	4.5	1.8	2.8	9.0	14.7	13.8	1.2	5.0	.40	.54	1.9
28	3.4	3.3	1.8	2.3	8.0	11.2	10.3	1.1	2.8	.32	.29	.49
29	2.7	2.8	1.8	2.1	---	9.2	10.1	1.1	3.5	.27	.35	.71
30	2.4	2.6	1.8	1.9	---	8.5	11.9	1.0	1.4	.24	14.5	.92
31	2.2	---	1.8	1.8	---	8.6	---	1.2	---	.24	2.7	---
TOTAL	106.4	137.7	134.8	73.2	2703.73	617.9	436.8	123.6	229.14	156.40	298.63	58.30
WTR YR 1994	TOTAL 5076.60											

NITROGEN, NITRITE PLUS NITRATE, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.7	8.8	12.4	6.1	4.0	52.2	24.0	44.3	4.0	8.3	1.2	1.1
2	28.6	12.7	43.7	7.0	4.0	49.9	22.9	32.7	4.5	6.6	1.3	.84
3	28.3	13.4	16.3	5.8	4.1	93.7	19.0	26.4	6.0	5.6	5.7	.69
4	30.7	11.4	15.6	5.0	4.1	89.2	21.3	25.2	4.5	14.3	55.9	.64
5	28.0	11.0	13.7	4.6	4.2	93.0	19.0	22.9	6.2	8.2	23.5	.60
6	32.7	8.3	16.9	4.4	4.2	266	17.0	20.4	3.9	4.7	9.7	.55
7	28.7	8.0	12.0	4.2	4.4	235	16.2	24.8	3.2	66.7	7.0	.56
8	26.2	7.4	13.1	4.2	4.4	125	17.2	21.0	3.4	28.3	5.1	5.0
9	43.7	7.4	13.4	4.1	4.5	84.1	16.2	20.0	2.4	6.7	4.2	18.4
10	21.5	7.6	13.9	4.1	4.4	67.9	13.5	16.8	2.2	1.7	2.9	4.6
11	24.2	8.3	10.0	4.4	4.5	54.5	14.4	24.5	2.0	4.1	34.8	.61
12	23.2	18.4	9.2	4.1	4.7	50.7	36.6	16.1	2.0	6.2	5.5	1.7
13	19.4	21.4	10.6	4.1	4.7	44.9	22.4	15.6	7.9	6.3	127	2.2
14	19.6	15.4	11.3	3.9	4.9	41.1	21.5	14.5	.76	53.5	20.0	2.4
15	19.6	17.4	9.5	3.6	9.0	39.4	28.4	19.0	2.0	5.9	8.9	2.7
16	19.1	8.9	8.5	3.4	22.9	37.6	20.6	14.7	1.3	4.1	7.6	3.0
17	17.4	7.6	9.5	3.3	76.8	34.9	15.9	13.1	2.8	10.6	7.9	1.3
18	16.5	7.5	36.6	3.2	155	36.2	18.1	12.8	1.5	5.2	8.2	1.1
19	16.6	8.0	17.5	3.1	632	31.3	31.9	11.9	.67	7.5	18.4	2.7
20	21.6	6.1	15.2	3.0	896	32.3	15.6	10.9	14.8	26.4	10.5	4.1
21	25.0	6.1	12.1	3.0	206	114	14.2	9.6	1.7	10.4	4.5	1.7
22	14.9	5.7	11.5	3.0	118	47.9	13.7	8.2	1.4	8.2	3.4	2.2
23	17.2	6.5	8.6	4.6	88.2	41.4	14.9	11.6	29.4	6.9	5.9	8.6
24	14.6	6.4	7.7	7.4	77.0	32.9	17.3	15.3	86.5	5.3	7.5	15.7
25	14.9	18.4	7.3	6.6	68.0	25.4	89.6	9.7	10.5	3.7	7.8	2.8
26	14.0	51.9	6.4	5.7	63.5	30.7	117	6.9	102	2.5	14.4	8.9
27	13.6	13.4	6.0	4.6	59.0	39.1	43.7	6.0	38.6	2.0	3.0	2.4
28	16.1	10.3	5.7	4.1	54.5	30.4	33.2	5.6	23.1	1.6	1.6	.84
29	12.2	9.1	5.7	3.9	---	25.2	33.3	5.4	29.8	1.4	2.1	1.3
30	10.6	8.7	5.5	4.0	---	23.8	42.9	5.4	12.4	1.3	12.5	1.8
31	9.6	---	5.3	4.0	---	24.4	---	6.0	---	1.3	3.2	---
TOTAL	664.0	351.5	390.7	136.5	2587.0	1994.1	831.5	497.3	411.43	325.5	431.2	101.03
WTR YR 1994	TOTAL 8721.76											



## ROCK RIVER BASIN

054310157 JACKSON CREEK TRIBUTARY NEAR ELKHORN, WI--CONTINUED

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.08	1.53	.35	.20	1.42	.38	1.49	.07	.10	.02	.12
2	.30	.11	5.36	.41	.19	1.32	.35	1.04	.08	.07	.01	.08
3	.24	.12	.78	.34	.19	2.40	.29	.80	.11	.06	.96	.06
4	.21	.11	.65	.29	.18	8.21	.32	.71	.08	.14	26.1	.05
5	.16	.10	.50	.27	.18	14.3	.28	.61	.18	.08	1.70	.04
6	.15	.08	.55	.26	.17	25.7	.24	.52	.11	.04	.57	.03
7	.13	.08	.34	.26	.17	9.91	.23	.59	.06	13.8	.33	.03
8	.12	.08	.33	.26	.16	3.19	.24	.47	.06	1.92	.20	.24
9	.40	.08	.29	.25	.16	1.41	.22	.43	.04	.25	.13	5.81
10	.11	.08	.27	.25	.15	.79	.18	.36	.04	.05	.20	.86
11	.12	.09	.17	.27	.15	.57	.19	.52	.03	.08	9.87	.10
12	.12	.40	.14	.26	.15	.51	2.30	.34	.03	.10	.50	.19
13	.10	.60	.14	.26	.14	.44	1.11	.32	4.97	.09	26.7	.26
14	.11	.25	.13	.25	.14	.39	.76	.30	.10	6.04	.71	.28
15	.11	.35	.10	.24	.25	.36	1.08	.39	.18	.21	.27	.32
16	.11	.37	.09	.22	.60	.33	.51	.30	.09	.10	.22	.37
17	.10	.32	.11	.22	4.24	.30	.33	.27	.12	.69	.22	.16
18	.10	.30	2.20	.21	39.5	.30	.34	.26	.05	.20	.22	.14
19	.10	.31	1.00	.21	584	.25	.80	.24	.02	.33	1.64	.31
20	.15	.22	.78	.20	205	.25	.30	.22	5.26	1.32	.91	.31
21	.21	.21	.63	.20	7.84	13.3	.25	.19	.14	.36	.30	.08
22	.10	.19	.60	.21	3.91	1.10	.22	.16	.07	.29	.18	.07
23	.12	.21	.45	.32	2.84	.83	.22	.23	9.12	.22	.31	.75
24	.10	.19	.41	.52	2.41	.64	.23	.29	6.70	.15	.37	3.52
25	.11	2.94	.39	.45	2.07	.47	50.9	.19	.60	.10	.37	.34
26	.10	6.84	.35	.37	1.88	.55	8.33	.13	20.0	.06	.90	2.01
27	.10	.84	.33	.29	1.70	.68	1.85	.11	.54	.04	.12	.40
28	.12	.58	.32	.25	1.52	.51	1.33	.10	.32	.03	.06	.10
29	.10	.46	.32	.22	---	.42	1.26	.10	.39	.02	.07	.14
30	.09	.39	.31	.22	---	.39	1.52	.10	.15	.02	3.51	.18
31	.08	---	.30	.21	---	.39	---	.11	---	.02	.54	---
TOTAL	4.64	16.98	19.87	8.54	860.09	91.63	76.56	11.89	49.71	26.98	78.21	17.35
WTR YR 1994	TOTAL 1262.45											

PHOSPHORUS ORTHO WATER, WHOLE, TOTAL, LBS/DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.05	.18	.16	.09	.71	.17	.64	.03	.04	.01	.05
2	.27	.07	2.00	.19	.09	.66	.15	.43	.03	.03	.00	.04
3	.22	.07	.41	.16	.08	1.20	.12	.32	.04	.03	.22	.03
4	.20	.06	.37	.13	.08	3.40	.13	.28	.03	.07	8.76	.02
5	.15	.06	.30	.12	.08	6.98	.11	.23	.07	.04	1.50	.02
6	.15	.05	.34	.12	.08	14.4	.10	.19	.04	.02	.46	.02
7	.13	.04	.22	.12	.08	5.75	.09	.21	.02	5.95	.25	.02
8	.12	.04	.23	.12	.08	2.15	.09	.16	.02	.99	.14	.14
9	.40	.04	.21	.11	.08	1.15	.08	.14	.02	.13	.09	.70
10	.10	.04	.21	.11	.07	.76	.06	.12	.01	.02	.08	.10
11	.11	.05	.14	.12	.07	.55	.06	.17	.01	.04	2.96	.03
12	.11	.40	.12	.12	.07	.48	.85	.11	.01	.05	.10	.09
13	.09	.50	.12	.12	.07	.39	.53	.11	.54	.04	8.56	.11
14	.09	.27	.12	.11	.07	.33	.33	.10	.01	2.15	.39	.10
15	.09	.35	.10	.10	.12	.30	.41	.13	.03	.12	.14	.10
16	.09	.16	.09	.10	.30	.26	.17	.10	.02	.06	.11	.10
17	.08	.14	.11	.09	1.87	.23	.09	.09	.03	.34	.10	.04
18	.08	.13	1.50	.09	15.3	.22	.10	.09	.01	.11	.09	.03
19	.08	.13	.27	.09	86.4	.17	.40	.08	.01	.20	.70	.07
20	.18	.09	.39	.09	34.8	.17	.11	.08	1.15	1.10	.15	.09
21	.24	.09	.31	.09	3.94	2.93	.09	.07	.06	.31	.08	.03
22	.07	.08	.29	.09	1.96	.63	.08	.06	.03	.20	.08	.03
23	.09	.08	.22	.13	1.42	.48	.08	.08	3.59	.15	.15	.25
24	.07	.08	.20	.22	1.21	.36	.08	.11	3.42	.09	.19	.89
25	.08	.40	.19	.19	1.04	.26	8.37	.07	.33	.06	.19	.12
26	.07	3.00	.17	.16	.94	.29	3.63	.05	6.60	.03	.50	.56
27	.07	.35	.16	.12	.85	.35	.90	.04	.19	.02	.07	.13
28	.08	.24	.15	.11	.76	.25	.62	.04	.11	.01	.04	.03
29	.06	.19	.15	.10	---	.20	.57	.04	.15	.01	.04	.04
30	.06	.17	.15	.09	---	.18	.67	.04	.06	.01	1.34	.06
31	.05	---	.14	.09	---	.18	---	.04	---	.01	.20	---
TOTAL	4.08	7.42	9.56	3.76	152.00	46.37	19.24	4.42	16.67	12.43	27.69	4.04
WTR YR 1994	TOTAL 307.68											

ROCK RIVER BASIN

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05431016 JACKSON CREEK AT MOUND ROAD NEAR ELKHORN, WI

LOCATION.--Lat 42°38'27", long 88°33'39", in SE 1/4 SE 1/4 sec.11, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on left bank at bridge on Mound Road, 2.3 mi south of Elkhorn.

DRAINAGE AREA.--16.8 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 920.00 ft above sea level (Wisconsin Department of Transportation benchmark).

REMARKS.--Estimated daily discharges February to September 1993: Feb. 1-3, Feb. 22 to Mar. 1, and ice-affected days, Feb. 12, 17, 18; estimated daily discharges 1994 water year: Sept. 2-8 and ice-affected periods, Dec. 23 to Feb. 17, Feb. 22 to Mar. 2, and Mar. 8. Records fair 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	---	---	---	---	8.0	4.0	129	20	5.9	56	5.2	4.1
2	---	---	---	---	6.0	7.8	60	18	5.6	31	4.3	2.8
3	---	---	---	---	7.0	12	53	23	7.7	22	3.6	2.4
4	---	---	---	---	14	39	51	31	7.8	17	3.1	1.7
5	---	---	---	---	29	52	39	27	24	14	2.6	1.4
6	---	---	---	---	30	68	32	19	14	37	3.0	1.3
7	---	---	---	---	15	69	29	16	48	21	2.8	1.1
8	---	---	---	---	10	56	70	13	120	21	2.2	1.3
9	---	---	---	---	8.4	35	114	11	109	54	3.0	1.2
10	---	---	---	---	8.4	27	50	9.2	45	29	4.0	1.2
11	---	---	---	---	6.7	16	37	7.9	26	95	2.6	1.1
12	---	---	---	---	6.7	12	29	7.5	19	47	2.2	1.6
13	---	---	---	---	6.7	9.4	23	6.1	15	24	2.2	8.0
14	---	---	---	---	5.9	7.9	20	5.7	36	27	1.8	20
15	---	---	---	---	5.3	7.2	217	5.5	26	18	2.7	12
16	---	---	---	---	5.0	73	207	4.7	17	13	3.1	5.5
17	---	---	---	---	4.5	46	79	4.7	15	11	2.1	3.9
18	---	---	---	---	4.0	20	45	5.2	84	22	1.7	3.5
19	---	---	---	---	3.4	14	110	5.0	130	22	1.6	3.0
20	---	---	---	---	3.2	11	578	4.9	144	13	1.5	3.8
21	---	---	---	---	2.7	11	104	4.6	65	9.4	1.3	4.7
22	---	---	---	---	2.5	18	55	4.3	35	7.3	1.0	3.4
23	---	---	---	---	2.3	283	40	7.3	23	6.1	.96	3.2
24	---	---	---	---	2.2	169	27	6.5	21	5.7	.91	2.6
25	---	---	---	---	2.2	87	21	5.0	21	29	.85	13
26	---	---	---	---	2.3	58	17	3.8	15	18	.82	60
27	---	---	---	---	2.4	49	15	4.9	13	9.3	.83	19
28	---	---	---	---	2.7	41	15	4.9	17	6.8	.83	12
29	---	---	---	---	---	40	28	3.9	13	5.2	6.0	8.6
30	---	---	---	---	---	36	27	7.4	108	4.5	10	7.5
31	---	---	---	---	---	116	---	9.5	---	4.2	9.3	---
TOTAL	---	---	---	---	206.5	1494.3	2321	306.5	1230.0	699.5	88.10	214.9
MEAN	---	---	---	---	7.37	48.2	77.4	9.89	41.0	22.6	2.84	7.16
MAX	---	---	---	---	30	283	578	31	144	95	10	60
MIN	---	---	---	---	2.2	4.0	15	3.8	5.6	4.2	.82	1.1
CFSM	---	---	---	---	.44	2.87	4.61	.59	2.44	1.34	.17	.43
IN.	---	---	---	---	.46	3.31	5.14	.68	2.72	1.55	.20	.48

05431016 JACKSON CREEK AT MOUND ROAD NEAR ELKHORN, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	2.7	4.1	1.6	.90	8.0	8.7	12	1.5	3.4	3.1	3.0
2	6.9	2.8	11	1.8	.80	7.6	8.1	9.9	1.4	3.0	4.1	2.3
3	6.4	3.7	8.1	1.5	.80	10	7.1	8.3	1.2	2.4	4.7	1.9
4	6.7	3.6	7.1	1.4	.80	13	6.4	7.0	1.6	2.4	21	1.6
5	5.8	3.7	6.5	1.2	.80	25	7.0	6.1	1.7	2.6	8.9	1.4
6	4.6	3.6	6.5	1.2	.80	81	5.7	5.2	2.5	1.9	4.0	1.3
7	3.7	2.7	5.7	1.2	.80	77	4.9	5.5	1.7	5.0	3.5	1.2
8	3.9	2.8	5.4	1.1	.80	40	4.7	5.1	1.3	13	4.2	1.1
9	6.0	3.1	5.0	1.1	.80	26	4.8	4.5	.89	4.1	5.1	4.0
10	4.7	3.1	4.8	1.1	.80	21	4.7	4.2	.78	2.6	8.9	9.3
11	4.1	3.1	4.5	1.3	.80	16	4.2	4.3	.71	1.5	27	4.9
12	4.0	3.7	3.5	1.2	.80	14	7.1	4.3	.78	1.4	6.5	1.9
13	4.7	6.6	3.8	1.1	.80	15	9.9	3.5	2.4	1.7	26	1.3
14	4.5	5.0	4.2	1.1	.80	15	7.7	3.4	1.5	6.0	13	1.3
15	4.3	6.4	4.0	1.0	.90	15	8.1	3.9	.94	3.5	5.9	1.0
16	4.1	4.4	3.7	1.0	1.2	12	7.4	3.3	.69	2.2	3.9	.83
17	3.9	4.0	3.7	1.0	1.9	11	5.6	3.0	.73	2.4	3.1	.75
18	3.4	3.7	7.3	1.0	5.0	11	5.2	2.9	.97	1.8	4.7	.63
19	3.6	3.8	8.3	1.0	309	9.4	6.9	2.8	.70	1.6	8.9	.69
20	3.9	3.4	7.1	1.0	439	9.4	5.0	2.7	2.4	3.1	14	.72
21	4.9	3.4	6.2	1.0	80	32	4.5	2.7	1.2	2.8	7.3	.69
22	4.2	3.4	5.2	1.0	35	26	4.4	2.7	.75	2.0	2.9	1.2
23	3.9	3.2	4.0	1.3	15	21	3.9	2.6	3.3	1.8	1.8	2.9
24	3.5	3.6	3.0	2.0	13	17	3.9	3.5	15	1.3	2.1	3.8
25	3.2	4.4	2.2	1.6	11	13	12	3.0	6.7	1.3	1.9	9.3
26	3.3	12	1.8	1.2	10	12	42	3.0	27	1.3	2.6	4.6
27	2.1	8.1	1.6	1.0	9.0	14	18	2.5	15	1.3	2.0	3.0
28	2.5	6.3	1.5	.90	8.6	13	12	2.0	7.7	1.1	2.2	2.2
29	3.1	5.1	1.4	.90	---	11	10	1.9	6.0	1.1	2.0	1.9
30	3.1	4.3	1.4	.90	---	9.7	9.6	2.0	4.5	1.9	3.8	1.9
31	2.9	---	1.4	.90	---	8.9	---	1.7	---	2.6	7.3	---
TOTAL	132.7	129.7	144.0	36.60	949.90	614.0	249.5	129.5	113.54	84.1	216.4	72.61
MEAN	4.28	4.32	4.65	1.18	33.9	19.8	8.32	4.18	3.78	2.71	6.98	2.42
MAX	6.9	12	11	2.0	439	81	42	12	27	13	27	9.3
MIN	2.1	2.7	1.4	.90	.80	7.6	3.9	1.7	.69	1.1	1.8	.63
CFSM	.25	.26	.28	.07	2.02	1.18	.50	.25	.23	.16	.42	.14
IN.	.29	.29	.32	.08	2.10	1.36	.55	.29	.25	.19	.48	.16

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1994, BY WATER YEAR (WY)

	1993	1994	1994	1994	1993	1994	1993	1994	1994	1994	1993	1994
MEAN	4.28	4.32	4.65	1.18	20.6	34.0	42.8	7.03	22.4	12.6	4.91	4.79
MAX	4.28	4.32	4.65	1.18	33.9	48.2	77.4	9.89	41.0	22.6	6.98	7.16
(WY)	1994	1994	1994	1994	1994	1993	1993	1993	1993	1993	1994	1993
MIN	4.28	4.32	4.65	1.18	7.37	19.8	8.32	4.18	3.78	2.71	2.84	2.42
(WY)	1994	1994	1994	1994	1993	1994	1994	1994	1994	1994	1993	1994

## SUMMARY STATISTICS

## FOR 1994 WATER YEAR

## WATER YEARS 1993 - 1994

ANNUAL TOTAL	2872.55		
ANNUAL MEAN	7.87		
HIGHEST ANNUAL MEAN		7.87	1994
LOWEST ANNUAL MEAN		7.87	1994
HIGHEST DAILY MEAN	439	Feb 20	578
LOWEST DAILY MEAN	.63	Sep 18	.63
ANNUAL SEVEN-DAY MINIMUM	.76	Sep 15	.76
INSTANTANEOUS PEAK FLOW	687	Feb 20	1190
INSTANTANEOUS PEAK STAGE	10.96	Feb 20	11.60
INSTANTANEOUS LOW FLOW	.39	Aug 22, 23	.39
ANNUAL RUNOFF (CFSM)	.47		.47
ANNUAL RUNOFF (INCHES)	6.36		6.36
10 PERCENT EXCEEDS	12		33
50 PERCENT EXCEEDS	3.6		4.7
90 PERCENT EXCEEDS	1.0		1.1

05431016 JACKSON CREEK AT MOUND ROAD NEAR ELKHORN, WI--CONTINUED

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to September 1985, February 1993 to current year.

## PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: February 1993 to current year.  
DISSOLVED AMMONIA NITROGEN DISCHARGE: February 1993 to current year.  
TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: February 1993 to current year.  
DISSOLVED NITRITE PLUS NITRATE DISCHARGE: February 1993 to current year.  
TOTAL PHOSPHORUS DISCHARGE: February 1993 to current year.  
DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: February 1993 to current year.

INSTRUMENTATION.--Automatic pumping sampler since February 1993.

REMARKS.--Records fair. After Feb. 1, 1993, samples analyzed for dissolved ammonia nitrogen, dissolved nitrite plus nitrate, and dissolved ortho-phosphorus were filtered through a 0.45  $\mu$ m filter.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

## EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--

TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 2.1 mg/L, July 10, 1985; minimum observed, 0.30 mg/L, Jan. 24, 1985.  
TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.55 mg/L, July 10, 1985; minimum observed, 0.03 mg/L, Apr. 2, 1985.  
DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.20 mg/L, Nov. 20, 1984 and May 22, 1985; minimum observed, <0.01 mg/L, July 10, 23, 1985.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 1,050 mg/L, Apr. 20, 1993; minimum observed, 2 mg/L, Sept. 16, 1993.  
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 887 tons, Apr. 20, 1993; minimum daily, 0.01 ton, Aug. 25-28 and Sept. 11, 1993, and many days in 1994 water year.  
DISSOLVED AMMONIA NITROGEN CONCENTRATIONS: Maximum observed, 1.70 mg/L, Mar. 5, 1993; minimum observed, 0.01 mg/L, Aug. 1, 29, and Sept. 25, 1994.  
DISSOLVED AMMONIA NITROGEN DISCHARGE: Maximum daily, 1,410 lb, Feb. 20, 1994; minimum daily, 0.11 lb, July 29 and Aug. 29, 1994.  
TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 4.6 mg/L, Mar. 5, 1993; minimum observed, 0.40 mg/L, Oct. 6 and Dec. 15, 1993.  
TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 4,900 lb, Apr. 20, 1993; minimum daily, 1.5 lb, June 19, 1994.  
DISSOLVED NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 9.2 mg/L, June 9, 1993; minimum observed, <0.05 mg/L, Sept. 2, 1993, and many days in 1994 water year.  
DISSOLVED NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 5,310 lb, Apr. 20, 1993; minimum daily, 0.17 lb, Sept. 18, 1994.  
TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.2 mg/L, Apr. 20, 1993; minimum observed, 0.02 mg/L, Dec. 15, 1993.  
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 2,630 lb, Apr. 20, 1993; minimum daily, 0.16 lb, Dec. 29, 1993.  
DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.58 mg/L, Feb. 20, 1994; minimum observed, <0.01 mg/L, May 13, 1993 and Mar. 21, Apr. 14, 18, 1994.  
DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 609 lb, Feb. 20, 1994; minimum daily, 0.09 lb, Feb. 12-14, 1994.

## EXTREMES FOR FEBRUARY TO SEPTEMBER 1993.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 1,050 mg/L, Apr. 20; minimum observed, 2 mg/L, Sept. 16.  
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 887 tons, Apr. 20; minimum daily, 0.01 ton, Aug. 25-28 and Sept. 11.  
DISSOLVED AMMONIA NITROGEN CONCENTRATIONS: Maximum observed, 1.70 mg/L, Mar. 5; minimum observed, 0.02 mg/L, Apr. 15 and June 14.  
DISSOLVED AMMONIA NITROGEN DISCHARGE: Maximum daily, 1,360 lb, Mar. 23; minimum daily, 0.13 lb, Aug. 28.  
TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 4.6 mg/L, Mar. 5; minimum observed, 0.50 mg/L, Mar. 1 and Sept. 25.  
TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 4,900 lb, Apr. 20; minimum daily, 1.7 lb, Aug. 28.  
DISSOLVED NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 9.2 mg/L, June 9; minimum observed, <0.05 mg/L, Sept. 2.  
DISSOLVED NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 5,310 lb, Apr. 20; minimum daily, 0.80 lb, Sept. 4.  
TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 1.2 mg/L, Apr. 20; minimum observed, 0.05 mg/L, Mar. 1.  
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 2,630 lb, Apr. 20; minimum daily, 0.19 lb, Aug. 28.  
DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.46 mg/L, Mar. 23; minimum observed, <0.01 mg/L, May 13.  
DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 530 lb, Mar. 23; minimum daily, 0.14 lb, Aug. 28.

## EXTREMES FOR 1994 WATER YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 174 mg/L, Feb. 22; minimum observed, 3 mg/L, Aug. 14 and Sept. 25.  
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 76 tons, Feb. 20; minimum daily, 0.01 ton, on many days.  
DISSOLVED AMMONIA NITROGEN CONCENTRATIONS: Maximum observed, 0.69 mg/L, Feb. 20; minimum observed, 0.01 mg/L, Aug. 1, 29, and Sept. 25.  
DISSOLVED AMMONIA NITROGEN DISCHARGE: Maximum daily, 1,410 lb, Feb. 20; minimum daily, 0.11 lb, July 29 and Aug. 29.  
TOTAL AMMONIA PLUS ORGANIC NITROGEN CONCENTRATIONS: Maximum observed, 3.2 mg/L, Feb. 19; minimum observed, 0.40 mg/L, Oct. 6 and Dec. 15.  
TOTAL AMMONIA PLUS ORGANIC NITROGEN DISCHARGE: Maximum daily, 3,680 lb, Feb. 20; minimum daily, 1.5 lb, June 19.  
DISSOLVED NITRITE PLUS NITRATE CONCENTRATIONS: Maximum observed, 7.4 mg/L, June 27; minimum observed, <0.05 mg/L, on many days.  
DISSOLVED NITRITE PLUS NITRATE DISCHARGE: Maximum daily, 4,460 lb, Feb. 19; minimum daily, 0.17 lb, Sept. 18.  
TOTAL PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.92 mg/L, Feb. 19; minimum observed, 0.02 mg/L, Dec. 15.  
TOTAL PHOSPHORUS DISCHARGE: Maximum daily, 865 lb, Feb. 19; minimum daily, 0.16 lb, Dec. 29.  
DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.58 mg/L, Feb. 20; minimum observed, <0.01 mg/L, Mar. 21 and Apr. 14, 18.  
DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 609 lb, Feb. 20; minimum daily, 0.09 lb, Feb. 12-14.

## ROCK RIVER BASIN

05431016 JACKSON CREEK AT MOUND 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, AMMONIA + 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...	1215	8.0	--	5.60	0.120	0.60	0.070	0.050	9	
*15...	1125	--	5.1	--	--	--	0.110	--	--	
MAR										
*01...	1400	4.0	--	4.00	0.180	0.50	0.050	0.030	9	
04...	0931	--	20	--	--	--	--	--	15	
04...	0945	--	20	2.80	1.10	2.9	0.490	0.290	--	
04...	1130	--	22	--	--	--	--	--	11	
04...	1200	--	22	3.10	1.30	4.0	0.460	0.250	--	
04...	1330	--	25	--	--	--	--	--	10	
04...	1445	--	30	--	--	--	--	--	10	
04...	1500	--	31	3.10	1.40	3.5	0.420	0.250	--	
05...	1550	--	46	2.60	1.60	4.0	0.600	0.390	16	
05...	1551	--	46	2.00	1.10	2.8	0.540	0.370	34	
05...	1900	--	73	--	--	--	--	--	34	
05...	2145	--	83	--	--	--	--	--	43	
05...	2200	--	83	2.30	1.70	4.6	0.770	0.430	--	
08...	1010	--	51	1.50	0.820	3.0	0.670	0.430	37	
*09...	0945	--	35	1.50	0.580	2.3	0.550	0.330	56	
16...	0930	--	53	--	--	--	--	--	53	
16...	1045	--	71	2.80	0.300	1.5	0.210	0.070	--	
16...	1445	--	121	2.30	1.10	2.4	0.370	0.240	36	
16...	2315	--	73	--	--	--	--	--	34	
17...	1000	--	54	1.50	0.730	2.2	0.440	0.260	--	
*17...	1345	--	81	1.80	0.770	2.2	0.460	0.310	34	
23...	0145	--	51	1.80	0.240	1.7	0.270	0.140	63	
23...	0330	--	97	--	--	--	--	--	96	
23...	0500	--	154	--	--	--	--	--	74	
23...	0545	--	188	2.20	1.10	2.4	0.280	0.220	--	
*23...	0945	--	283	--	--	--	--	--	61	
23...	1445	--	373	1.40	1.10	2.7	0.540	0.410	71	
*23...	1446	--	374	1.30	0.720	2.0	0.420	0.300	112	
23...	1630	--	444	--	--	--	--	--	103	
23...	1830	--	482	1.40	1.00	2.3	0.620	0.460	126	
23...	2200	--	392	--	--	--	--	--	104	
23...	2400	--	316	1.30	0.820	2.0	0.550	0.420	--	
*24...	0920	--	151	--	--	--	--	--	46	
24...	1030	--	142	1.50	0.760	2.2	0.470	0.380	32	
24...	1730	--	142	--	--	--	--	--	33	
*25...	0920	--	86	1.80	0.670	1.8	0.450	0.340	50	
*26...	0930	--	57	2.40	0.520	1.6	0.400	0.260	47	
29...	0930	--	40	3.50	0.160	1.0	0.200	0.150	12	
DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)	NITRO-GEN, AMMONIA + 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										
*01...	1020	122	--	--	4.10	0.280	1.5	0.260	0.180	46
01...	1730	91	--	--	--	--	--	--	--	24
02...	0900	69	--	--	--	--	0.190	--	17	
03...	2045	66	--	--	--	--	0.150	--	11	
*05...	0920	40	--	--	--	--	0.130	--	10	
08...	1245	66	--	--	4.10	0.120	1.2	0.170	0.170	32
08...	1530	109	--	--	--	--	--	--	34	
09...	0115	136	--	--	--	--	--	--	30	
09...	0330	158	--	--	5.20	0.030	1.6	0.380	0.050	104
09...	1000	125	--	--	--	--	--	--	86	
09...	1245	111	--	--	--	--	--	--	35	
09...	2330	69	--	--	--	--	0.180	--	22	
*12...	0910	30	--	--	--	--	0.120	--	37	
15...	0430	67	--	--	5.00	0.020	0.60	0.070	0.030	23
15...	0630	149	--	--	--	--	--	--	50	
15...	0715	180	--	--	5.00	0.050	0.90	0.140	0.060	--
15...	0800	209	--	--	--	--	--	--	69	
*15...	0945	252	--	--	2.80	0.080	1.3	0.320	0.090	61
15...	1130	271	--	--	--	--	--	--	156	
15...	1430	271	--	--	3.30	0.120	1.6	0.350	0.140	--
15...	1630	258	--	--	--	--	--	--	145	
15...	2000	320	--	--	--	--	--	--	120	
15...	2145	355	--	--	3.60	0.130	1.3	0.310	0.150	--
15...	2345	344	--	--	--	--	--	--	130	

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

ROCK RIVER BASIN

05431016 JACKSON CREEK AT MOUND 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)	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)	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										
16...	0445	264	--	--	--	--	--	--	--	78
*16...	1000	226	--	--	3.90	0.090	1.1	0.300	0.160	53
16...	1445	175	--	--	--	--	--	--	--	28
16...	1845	144	--	--	4.70	0.060	1.1	0.210	0.150	--
17...	0015	116	--	--	--	--	--	--	--	17
17...	0815	83	--	--	5.70	0.050	0.90	0.170	0.120	--
*17...	1000	79	--	--	--	--	--	--	--	19
17...	1415	71	--	--	--	--	--	--	--	13
*19...	1020	35	--	--	--	--	--	--	--	26
19...	1815	66	--	--	5.10	0.030	3.4	1.20	0.040	15
19...	2030	156	--	--	--	--	--	--	--	23
19...	2200	370	--	--	4.20	0.060	1.1	0.120	0.060	54
19...	2300	666	--	--	--	--	--	--	--	378
19...	2345	894	--	--	2.30	0.130	3.0	0.880	0.140	655
20...	0015	1070	--	--	--	--	--	--	--	922
20...	0100	1180	--	--	1.60	0.140	3.5	1.20	0.160	1050
20...	0300	1110	--	--	--	--	--	--	--	928
20...	0500	962	--	--	--	--	--	--	--	727
20...	0700	858	--	--	1.60	0.120	1.0	0.190	0.160	553
20...	0845	729	--	--	--	--	--	--	--	458
20...	1000	626	--	--	--	--	--	--	--	409
20...	1315	408	--	--	1.70	0.080	2.7	1.00	0.150	314
20...	1316	407	--	--	1.70	0.100	2.2	0.670	0.150	294
20...	1915	223	--	--	--	--	--	--	--	201
20...	2245	178	--	--	3.00	0.120	2.0	0.670	0.170	--
21...	0445	131	--	--	--	--	--	--	--	129
*21...	0950	107	--	--	--	--	--	--	--	72
21...	1045	102	--	--	--	--	--	--	--	71
21...	1245	93	--	--	4.30	0.070	2.6	0.900	0.140	--
*30...	0848	28	--	--	--	--	--	0.280	--	11
MAY										
**05...	1310	26	4	488	--	--	--	0.110	0.057	--
**12...	1145	7.5	4	378	--	--	--	0.450	0.300	--
**13...	1635	5.8	6	432	--	--	--	0.060	0.009	--
**18...	1520	5.5	<2	556	--	--	--	0.090	0.020	--
**26...	1310	3.6	<2	--	--	--	--	0.120	0.054	--
*31...	0930	9.9	--	--	--	--	--	0.120	--	6

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)	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										
**02...	1125	5.1	--	2	--	--	--	0.140	0.079	--
*03...	1000	7.9	--	--	1.10	0.370	1.0	0.140	0.070	13
05...	0030	23	--	--	1.20	0.040	1.3	0.180	0.020	49
05...	0430	27	--	--	1.60	0.030	0.60	0.090	0.020	19
05...	0830	27	--	--	1.80	0.030	0.60	0.080	0.020	16
*05...	0925	26	--	--	2.10	0.110	0.60	0.110	0.050	16
05...	1230	24	--	--	2.40	0.030	0.70	0.110	0.040	14
07...	1415	24	--	--	1.80	0.330	2.0	0.580	0.180	11
07...	1545	54	--	--	--	--	--	--	--	24
07...	1630	75	--	--	3.40	0.160	1.1	0.230	0.070	39
07...	1845	123	--	--	3.50	0.120	1.0	0.260	0.090	61
07...	2245	116	--	--	4.20	0.090	1.2	0.280	0.110	54
08...	0245	102	--	--	5.80	0.130	1.2	0.270	0.150	31
08...	0530	127	--	--	7.50	0.130	1.2	0.280	0.150	29
08...	0930	142	--	--	7.20	0.080	0.90	0.190	0.130	47
08...	1330	131	--	--	--	--	--	--	--	27
08...	1730	111	--	--	--	--	--	--	--	21
08...	2130	104	--	--	9.10	0.060	1.1	0.220	0.140	31
09...	0130	123	--	--	--	--	--	--	--	26
09...	0530	136	--	--	9.00	0.070	1.0	0.220	0.160	39
*09...	0905	129	--	--	--	--	--	--	--	36
*09...	0925	126	--	--	7.80	0.030	1.0	0.120	0.050	--
09...	0930	125	--	--	--	--	--	--	--	32
09...	1730	93	--	--	9.20	0.040	1.1	0.240	0.150	20
10...	0130	62	--	--	--	--	--	--	--	11
**10...	1300	43	--	2	--	--	--	0.190	0.147	--
*11...	1000	26	--	--	5.90	0.130	1.4	0.170	0.070	--
14...	0945	41	--	--	5.40	0.030	1.1	0.160	0.030	12
14...	1345	47	--	--	6.10	0.020	1.0	0.190	0.060	18

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

## ROCK RIVER BASIN

05431016 JACKSON CREEK AT MOUND 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)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	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									
14...	1745	44	--	--	--	--	--	--	14
15...	0145	34	--	6.80	0.110	1.1	0.220	0.100	9
15...	1345	24	--	7.60	0.110	1.0	0.190	0.090	6
**17...	1310	13	2	--	--	--	0.102	0.071	--
17...	2330	29	--	5.30	0.140	1.0	0.090	0.040	10
18...	0445	109	--	5.50	0.140	0.80	0.200	0.150	--
*18...	0920	111	--	3.00	0.120	0.90	0.220	0.130	68
18...	2000	66	--	5.60	0.110	0.90	0.200	0.150	56
19...	0450	118	--	--	--	--	--	--	145
19...	0545	136	--	5.30	0.160	1.0	0.230	0.160	190
*19...	0935	163	--	4.10	0.170	0.80	0.190	0.140	53
19...	1615	131	--	4.90	0.070	0.70	0.250	0.180	105
19...	2015	127	--	--	--	--	--	--	70
20...	0115	178	--	--	--	--	--	--	47
20...	0515	193	--	5.00	0.100	1.2	0.180	0.160	87
*20...	0930	156	--	5.70	0.120	1.0	0.250	0.170	58
20...	1630	114	--	--	--	--	--	--	65
21...	0830	71	--	6.20	0.120	1.0	0.220	0.180	31
*21...	0943	69	--	4.70	0.170	0.90	0.210	0.190	--
*21...	0945	69	--	--	--	--	--	--	26
*22...	0855	37	--	--	--	--	--	--	15
*23...	0845	24	--	7.20	0.120	0.80	0.150	0.130	21
**24...	1400	18	4	--	--	--	0.200	0.136	--
30...	1345	190	--	3.30	0.070	2.0	0.390	0.090	75
30...	1745	144	--	--	--	--	--	--	69
30...	2145	107	--	3.20	0.090	1.4	0.320	0.120	51
JUL									
*01...	0905	59	--	4.10	0.060	1.2	0.220	0.080	14
**01...	1345	50	6	--	--	--	0.194	0.147	--
06...	0845	45	--	4.00	0.030	1.0	0.150	0.050	--
06...	1245	43	--	--	--	--	--	--	12
06...	2045	31	--	--	--	--	--	--	7
*07...	1115	22	--	4.40	0.080	0.70	0.150	0.110	10
**08...	1255	15	3	--	--	--	0.139	0.110	--
08...	2100	33	--	--	--	--	0.090	--	10
09...	0345	61	--	--	--	--	0.130	--	21
*09...	0855	62	--	--	--	--	--	--	18
09...	1145	59	--	--	--	--	0.120	--	10
10...	0330	33	--	--	--	--	0.150	--	6
10...	2200	34	--	--	--	--	--	--	5
10...	2330	47	--	4.30	0.050	1.0	0.150	0.080	9
11...	0215	89	--	--	--	--	--	--	11
11...	0400	114	--	--	--	--	0.180	--	25
11...	0800	123	--	3.60	0.050	1.2	0.190	0.080	23
11...	1345	97	--	--	--	--	--	--	23
12...	0145	66	--	2.80	0.070	1.2	0.230	0.120	14
*12...	0920	50	--	--	--	--	--	--	13
12...	1130	45	--	--	--	--	--	--	12
12...	1930	35	--	--	--	--	0.150	--	7
*13...	0915	24	--	--	--	--	0.170	--	9
14...	0615	30	--	--	--	--	--	--	34
**15...	1520	16	4	--	--	--	0.172	0.127	--
**19...	1105	22	6	--	--	--	0.230	0.131	--
**21...	1015	9.9	2	--	--	--	0.170	0.133	--
25...	0930	23	--	3.20	0.090	1.8	0.260	0.050	21
25...	1100	35	--	--	--	--	--	--	11
25...	1430	48	--	1.80	0.080	1.1	0.220	0.060	9
25...	1830	45	--	--	--	--	--	--	9
26...	0230	27	--	2.30	0.070	1.0	0.190	0.100	5
**26...	0930	18	--	--	--	--	--	--	5
**29...	1400	5.1	4	--	--	--	0.165	0.105	--
AUG									
*05...	1100	2.7	--	1.20	0.100	0.70	0.230	0.160	15
29...	1430	8.4	--	0.059	0.050	1.3	0.370	0.090	25
29...	1900	13	--	0.290	0.090	0.80	0.260	0.150	15
30...	0615	8.9	--	0.120	0.070	0.90	0.260	0.170	7
*30...	0906	13	--	0.100	0.090	0.80	0.230	0.150	10
30...	1015	13	--	0.190	0.080	0.70	0.220	0.140	7
31...	0645	9.4	--	0.290	0.110	0.80	0.200	0.120	5
*31...	0845	11	--	0.130	0.090	0.80	0.220	0.140	6
31...	1430	10	--	--	--	--	--	--	3
SEP									
*01...	0820	4.4	--	--	--	--	0.330	--	7
*02...	1200	2.7	--	<0.050	0.150	0.80	0.330	0.270	6
14...	1045	18	--	--	--	--	0.220	--	15
14...	1445	19	--	--	--	--	0.180	--	9
14...	1845	22	--	--	--	--	0.160	--	10
14...	2245	22	--	--	--	--	0.160	--	6
15...	0645	14	--	--	--	--	0.160	--	6

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

\*\* GRAB SAMPLE

ROCK RIVER BASIN

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05431016 JACKSON CREEK AT MOUND 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)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
SEP 1993									
*15...	0950	12	--	--	--	--	0.140	--	6
15...	1615	9.4	--	--	--	--	0.160	--	4
16...	0015	7.0	--	--	--	--	--	--	5
16...	0815	5.8	--	--	--	--	0.210	--	4
*16...	0840	5.5	--	--	--	--	--	--	2
25...	1700	7.9	--	0.110	0.050	0.60	0.100	0.060	21
25...	1845	15	--	--	--	--	--	--	10
25...	2045	35	--	0.220	0.040	0.50	0.170	0.140	12
25...	2300	66	--	0.480	0.040	0.50	0.170	0.140	26
26...	0100	85	--	--	--	--	--	--	28
26...	0500	95	--	0.790	0.060	0.70	0.250	0.180	24
26...	0900	73	--	--	--	--	--	--	19
*26...	1015	66	--	--	--	--	--	--	17
26...	1300	53	--	1.20	0.050	0.70	0.230	0.170	17
26...	1845	35	--	--	--	--	--	--	14
27...	0245	24	--	1.80	0.040	0.70	0.170	0.130	13
*27...	0925	19	--	2.10	0.050	0.60	0.150	0.120	20

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, 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)
OCT 1993									
*06...	1115	--	5.1	2.00	0.060	0.40	0.030	0.020	--
NOV									
*15...	1500	--	6.6	0.960	0.060	0.60	0.080	0.030	37
DEC									
*15...	1115	--	3.9	2.10	0.090	0.40	0.020	0.020	--
FEB 1994									
**01...	1130	0.90	--	1.20	0.630	1.1	0.070	0.030	--
19...	0030	--	22	--	--	--	--	--	58
19...	0145	--	34	3.70	0.290	2.3	0.640	0.340	--
19...	0630	--	111	--	--	--	--	--	127
19...	1245	--	293	4.40	0.290	3.2	0.920	0.340	--
19...	1715	--	517	--	--	--	--	--	45
20...	0100	--	676	--	--	--	--	--	53
20...	0300	--	687	0.970	0.660	2.1	0.360	0.080	--
20...	1045	--	499	--	--	--	--	--	96
20...	1230	--	408	1.90	0.690	2.1	0.580	0.580	--
20...	1930	--	204	--	--	--	--	--	48
21...	0300	--	114	--	--	--	--	--	38
21...	1257	--	68	--	--	--	--	--	43
*21...	1258	--	68	--	--	--	--	--	31
21...	1259	--	68	5.50	0.230	1.7	0.350	0.180	--
*21...	1300	--	67	5.50	0.230	1.4	0.300	0.180	--
21...	2300	--	56	--	--	--	0.210	--	--
22...	0300	35	--	--	--	--	--	--	127
22...	0815	35	--	--	--	--	--	--	174
22...	1315	35	--	--	--	--	0.180	--	--
22...	1715	35	--	--	--	--	--	--	18
23...	0115	15	--	--	--	--	0.170	--	--
23...	0745	15	--	--	--	--	--	--	14
24...	0345	13	--	--	--	--	0.120	--	--
24...	0745	13	--	--	--	--	--	--	8
MAR									
05...	1915	--	39	--	--	--	--	--	57
05...	2315	--	48	3.10	0.320	1.6	0.230	0.080	--
05...	2400	--	48	--	--	--	--	--	24
06...	0715	--	50	--	--	--	--	--	46
06...	1115	--	48	2.90	0.510	1.9	0.370	0.220	--
06...	1430	--	66	--	--	--	--	--	50
06...	1545	--	87	3.00	0.400	1.6	0.330	0.200	--
06...	1815	--	138	--	--	--	--	--	118
06...	2130	--	151	--	--	--	--	--	81
06...	2215	--	147	2.80	0.300	1.7	0.440	0.270	--
07...	0615	--	85	--	--	--	--	--	39
07...	0945	--	66	4.10	0.270	1.7	0.440	0.210	61
*07...	0946	--	66	4.10	0.230	1.2	0.320	0.200	51
07...	1800	--	64	--	--	--	--	--	19
07...	2200	--	66	--	--	--	0.230	--	--

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



## ROCK RIVER BASIN

05431016 JACKSON CREEK AT MOUND ROAD NEAR ELKHORN, WI--CONTINUED

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	NITRO-GEN, NO2+NO3 SOLVED (MG/L AS N) (00631)	NITRO-GEN, DIS-AMMONIA 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 1994									
08...	1345	40	--	--	--	--	--	--	36
*09...	0930	--	25	4.10	0.180	1.0	0.060	0.030	88
*10...	1100	--	20	5.30	0.170	0.60	0.060	0.050	44
21...	0545	--	26	3.40	0.140	1.2	0.120	0.010	29
21...	0845	--	37	3.00	0.080	0.80	0.090	<0.010	26
21...	1145	--	41	--	--	--	--	--	23
21...	1445	--	41	--	--	--	0.060	--	--
21...	1745	--	39	--	--	--	--	--	15
21...	2045	--	37	--	--	--	0.090	--	--
21...	2345	--	34	--	--	--	--	--	10
22...	0845	--	26	--	--	--	0.080	--	13
*22...	0846	--	26	--	--	--	0.050	--	13
*23...	0855	--	20	--	--	--	0.070	--	19
*28...	0910	--	13	--	--	--	0.060	--	30
APR 1994									
**14...	1715	7.0	--	--	--	0.050	<0.010	--	--
18...	1215	5.1	2.10	0.060	0.70	0.110	<0.010	--	55
25...	2000	22	0.510	0.250	1.5	0.250	0.030	--	35
25...	2100	35	--	--	--	--	--	--	50
26...	0145	64	2.50	0.150	1.6	0.350	0.050	--	114
26...	0445	59	--	--	--	--	--	--	145
26...	0745	48	3.80	0.180	1.8	0.320	0.090	--	85
26...	1045	43	--	--	--	--	--	--	44
*26...	1235	37	--	--	--	--	--	--	23
26...	1345	35	--	--	--	0.190	--	--	--
26...	1645	31	--	--	--	--	--	--	33
26...	2245	26	--	--	--	0.100	--	--	--
27...	0145	24	--	--	--	--	--	--	22
MAY									
*02...	0953	9.9	--	--	--	0.050	0.020	--	--
**09...	1240	4.8	1.80	0.040	0.50	0.060	0.020	--	--
*16...	0825	3.4	--	--	--	0.260	0.020	--	--
*23...	0845	2.7	--	--	--	0.150	0.070	--	--
*31...	0825	1.9	--	--	--	0.350	0.160	--	--
JUN									
*06...	0820	2.9	--	--	--	0.610	0.320	--	--
*13...	0835	1.5	<0.050	0.320	2.5	0.660	--	--	--
*13...	1400	3.9	<0.050	0.080	1.5	0.480	--	--	--
*20...	1425	3.0	<0.050	0.250	1.3	0.430	0.360	--	--
24...	0600	14	0.270	0.210	1.3	0.380	0.160	--	8
24...	1200	19	0.960	0.140	1.1	0.240	0.100	--	8
*24...	1405	19	0.560	0.050	1.1	0.210	0.060	--	--
24...	1800	15	0.290	0.040	1.3	0.240	0.060	--	10
26...	0515	15	1.30	0.150	1.2	0.200	0.060	--	7
26...	0830	35	7.10	0.080	1.4	0.160	0.060	--	9
26...	1130	39	2.20	0.040	1.4	0.240	0.060	--	11
26...	1430	37	3.00	0.040	1.5	0.210	0.050	--	15
26...	2330	23	4.30	0.050	1.4	0.160	0.050	--	7
27...	0830	16	--	--	--	--	--	--	8
*27...	0920	15	7.40	0.070	1.3	0.150	0.060	--	7
*27...	1015	15	--	--	--	0.100	0.010	--	--
JUL									
*05...	1020	2.9	--	--	--	0.330	0.180	--	--
07...	2115	15	3.00	0.040	1.4	0.330	0.040	--	7
08...	0015	22	0.360	0.170	1.1	0.290	0.130	--	6
08...	0315	22	0.230	0.160	1.2	0.330	0.180	--	4
08...	0615	19	--	--	--	--	--	--	6
08...	0915	15	0.097	0.090	1.2	0.400	0.240	--	5
*08...	1115	12	0.160	0.130	1.0	0.350	0.210	--	5
*11...	0845	1.8	--	--	--	0.650	--	--	8
*18...	1115	1.8	<0.050	0.180	1.0	0.680	0.400	--	11
*25...	0815	1.2	--	--	--	0.450	0.200	--	--
AUG									
*01...	0820	3.1	<0.050	<0.010	1.3	0.350	0.030	--	--
04...	0745	16	<0.050	0.030	1.0	0.380	0.140	--	15
04...	0945	25	--	--	--	--	--	--	7
04...	1245	33	0.190	0.050	0.70	0.190	0.090	--	--
04...	1545	31	--	--	--	--	--	--	10
04...	1845	26	0.097	0.030	0.60	0.210	0.130	--	7

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

\*\* GRAB SAMPLE

ROCK RIVER BASIN

05431016 JACKSON CREEK AT MOUND ROAD NEAR ELKHORN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)
AUG 1994								
05...	0045	17	--	--	--	--	--	6
05...	0345	13	<0.050	0.030	0.70	0.260	0.150	--
05...	0645	11	--	--	--	--	--	4
*05...	0915	9.4	--	--	--	--	--	9
*08...	0820	4.2	<0.050	0.020	1.3	0.390	0.060	--
11...	0930	36	0.250	0.060	0.90	0.200	0.080	8
*11...	0931	36	0.260	0.070	0.60	0.180	0.090	10
11...	1230	28	0.230	0.050	0.70	0.170	0.060	3
11...	1530	21	--	--	--	--	--	6
11...	2130	13	--	--	--	--	--	7
12...	0030	10	--	--	--	--	--	5
*12...	0850	6.6	--	--	--	--	--	3
13...	0330	9.4	0.065	0.050	0.70	0.190	0.080	7
13...	0530	17	--	--	--	--	--	9
13...	0730	26	--	--	--	--	--	20
*13...	1000	36	0.520	0.100	0.80	0.180	0.100	11
13...	1030	36	0.530	0.060	0.80	0.190	0.090	13
13...	1330	37	--	--	--	--	--	11
13...	1930	29	0.480	0.050	0.70	0.170	0.090	8
13...	2230	25	--	--	--	--	--	6
14...	0130	22	0.470	0.070	0.80	0.180	0.100	--
14...	0730	15	--	--	--	--	--	4
*14...	0930	13	--	--	--	--	--	3
14...	1330	11	0.460	0.060	0.70	0.130	0.070	--
14...	1630	9.4	--	--	--	--	--	4
*15...	0835	6.5	0.110	0.040	0.80	0.170	0.060	5
**16...	1615	3.6	--	--	--	0.210	0.110	--
**16...	1620	3.6	--	--	--	0.200	0.100	--
19...	1730	9.9	--	--	--	0.250	--	10
19...	2030	11	--	--	--	--	--	16
19...	2330	12	--	--	--	0.230	--	10
20...	0830	17	--	--	--	--	--	7
20...	1130	15	--	--	--	0.320	--	7
20...	1430	15	--	--	--	--	--	29
20...	2330	10	--	--	--	0.230	--	8
21...	0830	7.9	--	--	--	0.290	--	5
21...	1730	6.2	--	--	--	0.290	--	12
*22...	0840	3.2	--	--	--	--	--	6
*22...	0900	3.1	--	--	--	0.170	0.140	--
22...	1430	2.4	--	--	--	--	--	6
*22...	1645	2.2	<0.050	0.100	0.70	0.330	0.170	11
**22...	1650	2.2	<0.050	0.050	0.60	0.260	0.130	--
*29...	0822	2.0	<0.050	<0.010	1.3	0.820	0.250	--
31...	0015	9.4	<0.050	0.050	0.80	0.270	0.120	6
31...	0315	10	<0.050	0.060	0.60	0.220	0.100	6
31...	0615	9.4	<0.050	0.060	0.50	0.240	0.120	5
*31...	0835	8.7	<0.050	0.050	0.60	0.230	0.100	5
31...	0915	8.9	--	--	--	--	--	3
SEP								
*06...	0825	--	--	--	--	0.330	0.100	--
10...	0145	9.4	--	--	--	0.720	--	10
10...	0445	9.9	--	--	--	0.180	--	8
10...	0745	10	--	--	--	--	--	6
10...	1045	10	--	--	--	0.240	--	--
10...	1645	8.9	--	--	--	--	--	5
10...	1945	8.4	--	--	--	0.290	--	--
11...	0345	6.2	--	--	--	--	--	6
11...	0745	5.5	--	--	--	0.190	--	--
11...	1645	4.2	--	--	--	--	--	11
11...	1945	3.6	--	--	--	0.420	--	--
12...	0445	2.7	--	--	--	--	--	67
12...	0745	2.4	--	--	--	0.230	--	--
12...	0845	2.2	--	--	--	0.240	0.100	5
*13...	1315	1.2	<0.050	0.100	0.80	0.390	0.180	6
*13...	1320	1.2	<0.050	0.100	1.1	0.500	0.180	--
19...	0830	0.72	--	--	--	0.340	0.110	36
*21...	1055	0.72	<0.050	0.160	0.80	0.300	0.110	39
**21...	1100	0.72	<0.050	0.150	0.60	0.270	0.120	--
25...	0045	8.4	<0.050	0.010	0.90	0.240	0.050	21
25...	0345	10	--	--	--	--	--	12
25...	0945	11	0.110	0.110	0.80	0.270	0.140	11
25...	1245	10	--	--	--	--	--	12
25...	1845	7.5	--	--	--	--	--	3
25...	1846	7.5	0.065	0.050	1.1	0.280	0.120	--
26...	0345	5.5	--	--	--	--	--	18
26...	0645	5.8	<0.050	0.080	0.70	0.230	0.140	6
*26...	0925	5.5	<0.050	0.090	0.80	0.230	0.130	7
26...	0945	5.1	--	--	--	--	--	9
27...	0645	3.4	--	--	--	--	--	9
*27...	0845	3.1	--	--	--	0.280	--	4

\* EQUAL-WIDTH INCREMENT (EWI) SAMPLE

\*\* GRAB SAMPLE

## ROCK RIVER BASIN

05431016 JACKSON CREEK AT MOUND 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	---	---	---	---	.18	.10	16	.58	.08	2.3	.09	.07
2	---	---	---	---	.14	.24	2.6	.48	.09	.45	.09	.05
3	---	---	---	---	.15	.56	1.6	.80	.24	.31	.10	.04
4	---	---	---	---	.34	2.8	1.4	1.3	.33	.22	.10	.03
5	---	---	---	---	1.2	4.0	1.0	1.1	1.1	.17	.10	.02
6	---	---	---	---	1.3	8.3	.81	.46	.42	.81	.12	.02
7	---	---	---	---	.38	8.3	.73	.37	5.4	.53	.11	.02
8	---	---	---	---	.28	6.1	4.8	.30	9.5	.54	.09	.02
9	---	---	---	---	.22	4.9	17	.23	7.6	1.8	.14	.02
10	---	---	---	---	.23	3.0	3.1	.19	1.2	.37	.22	.02
11	---	---	---	---	.20	1.4	3.0	.16	.56	4.9	.11	.01
12	---	---	---	---	.21	.76	2.7	.14	.32	1.4	.08	.02
13	---	---	---	---	.22	.47	1.5	.11	.21	.53	.08	.29
14	---	---	---	---	.21	.30	.92	.10	1.1	1.7	.07	.64
15	---	---	---	---	.20	.21	64	.09	.48	.78	.14	.16
16	---	---	---	---	.18	6.7	31	.08	.25	.42	.15	.04
17	---	---	---	---	.16	3.7	3.3	.07	.23	.30	.08	.02
18	---	---	---	---	.14	.94	2.2	.08	11	.74	.05	.02
19	---	---	---	---	.11	.53	63	.07	29	.70	.05	.02
20	---	---	---	---	.10	.33	887	.07	23	.12	.04	.04
21	---	---	---	---	.09	.33	25	.06	5.0	.05	.03	.10
22	---	---	---	---	.08	1.1	7.6	.06	1.5	.04	.02	.05
23	---	---	---	---	.07	66	4.3	.15	.94	.03	.02	.03
24	---	---	---	---	.07	22	2.3	.09	.68	.03	.02	.02
25	---	---	---	---	.06	11	1.4	.04	.60	.63	.01	.52
26	---	---	---	---	.06	6.8	.85	.02	.46	.24	.01	3.1
27	---	---	---	---	.06	3.8	.59	.08	.35	.12	.01	.89
28	---	---	---	---	.07	2.0	.45	.07	.48	.08	.01	.58
29	---	---	---	---	---	1.3	1.1	.03	.30	.05	.24	.38
30	---	---	---	---	---	.99	1.0	.23	14	.05	.18	.30
31	---	---	---	---	---	13	---	.21	---	.06	.11	---
TOTAL	---	---	---	---	6.71	181.96	1152.25	7.82	116.42	20.47	2.67	7.54

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.07	.10	.05	.03	.12	.61	.29	.02	.04	.08	.02
2	.23	.07	.35	.06	.03	.11	.55	.24	.02	.04	.10	.02
3	.20	.09	.24	.05	.03	.13	.47	.20	.02	.03	.12	.01
4	.19	.09	.23	.04	.03	.23	.41	.17	.02	.03	.46	.01
5	.16	.09	.20	.04	.03	2.1	.44	.14	.02	.03	.15	.01
6	.12	.09	.20	.04	.03	14	.35	.12	.03	.02	.08	.01
7	.09	.07	.17	.04	.03	7.7	.29	.12	.02	.08	.06	.01
8	.10	.07	.16	.03	.03	3.7	.26	.11	.02	.18	.07	.01
9	.15	.08	.15	.03	.03	5.0	.26	.10	.01	.07	.07	.05
10	.12	.08	.14	.03	.04	2.6	.25	.09	.01	.05	.15	.14
11	.10	.08	.13	.04	.04	1.6	.22	.09	.01	.03	.50	.13
12	.10	.10	.10	.03	.04	1.3	.85	.09	.01	.02	.07	.11
13	.12	.65	.10	.03	.04	1.2	1.3	.07	.05	.02	.67	.02
14	.11	.32	.11	.04	.04	.96	.95	.07	.03	.16	.13	.03
15	.11	.61	.11	.03	.04	.86	.68	.08	.02	.08	.08	.03
16	.10	.29	.10	.03	.06	.61	.73	.06	.01	.07	.05	.03
17	.10	.20	.09	.03	.09	.47	.66	.06	.01	.08	.04	.04
18	.09	.18	.21	.03	.51	.40	.69	.05	.01	.05	.07	.04
19	.09	.17	.25	.03	46	.29	.84	.05	.01	.05	.22	.06
20	.10	.15	.19	.03	76	.26	.52	.05	.05	.07	.43	.07
21	.12	.15	.17	.03	9.3	1.5	.41	.05	.02	.06	.14	.07
22	.11	.14	.13	.03	7.7	.91	.35	.05	.01	.04	.06	.10
23	.10	.13	.11	.04	.48	1.1	.27	.05	.05	.05	.05	.20
24	.09	.14	.08	.08	.26	.96	.23	.06	.33	.04	.05	.22
25	.08	.11	.06	.05	.20	.82	1.4	.05	.12	.04	.04	.24
26	.08	.39	.05	.04	.17	.83	7.7	.05	.70	.04	.06	.11
27	.05	.24	.04	.03	.15	1.1	.92	.04	.26	.03	.03	.04
28	.06	.17	.04	.03	.13	1.0	.49	.03	.11	.03	.03	.03
29	.08	.18	.04	.03	---	.87	.35	.03	.08	.03	.03	.03
30	.08	.15	.04	.03	---	.72	.26	.03	.06	.05	.05	.03
31	.07	---	.04	.03	---	.64	---	.03	---	.07	.08	---
TOTAL	3.55	5.35	4.13	1.15	141.56	54.09	23.71	2.72	2.14	1.68	4.22	1.92

WTR YR 1994 TOTAL 246.22

ROCK RIVER BASIN

05431016 JACKSON CREEK AT MOUND ROAD 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	---	---	---	---	5.1	3.9	566	3.8	2.3	19.1	2.4	2.6
2	---	---	---	---	3.8	7.4	244	3.2	2.2	7.6	2.0	2.2
3	---	---	---	---	4.4	25.4	42.0	4.6	3.1	4.2	1.8	1.7
4	---	---	---	---	16.8	270	32.4	7.0	3.2	2.4	1.6	1.0
5	---	---	---	---	96.0	388	19.4	5.7	4.4	1.5	1.2	.72
6	---	---	---	---	104	586	12.5	5.9	1.8	11.2	1.2	.58
7	---	---	---	---	19.8	393	9.0	4.9	26.9	7.2	1.1	.42
8	---	---	---	---	6.6	244	25.1	4.1	52.5	7.0	.82	.41
9	---	---	---	---	5.6	110	16.5	3.3	26.6	15.1	1.6	.34
10	---	---	---	---	5.7	57.3	5.2	2.8	15.6	9.3	2.0	.27
11	---	---	---	---	4.7	25.0	3.3	2.4	16.8	26.5	.99	.22
12	---	---	---	---	4.7	12.2	2.2	2.2	11.5	14.7	.75	.27
13	---	---	---	---	4.8	7.0	1.5	1.8	8.0	8.0	.66	3.4
14	---	---	---	---	4.3	4.1	1.1	1.7	8.0	8.8	.50	6.9
15	---	---	---	---	4.0	2.6	115	1.6	14.2	6.4	.84	4.7
16	---	---	---	---	3.8	276	97.1	1.3	9.1	3.8	1.6	1.3
17	---	---	---	---	3.5	166	19.2	1.3	8.3	2.9	1.2	.89
18	---	---	---	---	3.1	59.3	7.4	1.5	53.8	7.5	.45	.75
19	---	---	---	---	2.7	23.3	38.3	1.4	79.2	7.0	.41	.61
20	---	---	---	---	2.6	11.8	350	1.3	82.9	5.0	.37	1.9
21	---	---	---	---	2.2	8.3	44.4	1.3	49.0	2.9	.30	2.2
22	---	---	---	---	2.2	12.4	19.4	1.2	26.6	2.2	.23	.61
23	---	---	---	---	2.0	1360	13.9	2.9	14.9	1.7	.20	.54
24	---	---	---	---	1.9	661	9.4	2.6	9.1	1.5	.18	.42
25	---	---	---	---	2.0	305	7.3	1.3	9.0	11.3	.16	2.6
26	---	---	---	---	2.1	157	5.7	1.0	5.6	6.5	.15	15.8
27	---	---	---	---	2.2	90.0	5.1	1.3	4.0	3.5	.14	4.7
28	---	---	---	---	2.6	50.8	4.9	1.3	7.3	2.6	.13	3.3
29	---	---	---	---	---	33.3	6.0	.99	5.4	2.1	2.1	2.4
30	---	---	---	---	---	20.1	5.7	3.0	38.5	1.9	4.4	2.1
31	---	---	---	---	---	497	---	3.9	---	1.9	4.9	---
TOTAL	---	---	---	---	323.2	5867.2	1729.0	82.59	599.8	213.3	36.38	65.85

NITROGEN, AMMONIA, TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	.88	1.4	1.5	2.8	5.2	3.1	4.7	.34	.74	.17	.85
2	2.1	.90	6.2	1.8	2.4	4.6	2.9	3.7	.32	.61	.22	.70
3	2.0	1.2	4.0	1.5	2.2	5.6	2.5	2.8	.30	.47	.24	.61
4	2.1	1.2	2.7	1.5	2.1	7.6	2.2	2.2	.39	.43	3.7	.54
5	1.8	1.2	2.5	1.3	2.0	30.7	2.4	1.8	.41	.45	1.3	.50
6	1.5	1.2	2.5	1.4	1.8	153	2.0	1.4	.60	.31	.53	.48
7	1.2	.87	2.3	1.4	1.7	102	1.7	1.3	.41	1.4	.42	.47
8	1.2	.92	2.2	1.4	1.6	43.5	1.6	1.1	.31	9.1	.45	.60
9	1.9	1.0	2.1	1.4	1.5	25.1	1.6	.93	.22	2.9	.54	1.4
10	1.5	1.0	2.1	1.5	1.4	18.9	1.5	.85	.19	1.9	2.1	2.5
11	1.3	1.0	2.0	1.8	1.3	13.6	1.4	.88	.18	1.2	9.0	1.6
12	1.3	1.3	1.6	1.7	1.2	11.7	3.3	.89	.20	1.1	1.2	.98
13	1.5	3.0	1.7	1.7	1.1	11.7	5.4	.73	1.3	1.4	8.1	.68
14	1.5	2.0	2.0	1.7	1.1	10.6	2.4	.71	.45	4.8	4.1	.73
15	1.4	2.8	2.0	1.6	1.1	10.5	2.5	.82	.24	3.0	1.3	.61
16	1.3	1.6	1.9	1.7	1.4	8.1	2.3	.70	.18	2.0	.73	.51
17	1.2	1.1	1.9	1.8	2.1	6.9	1.7	.65	.19	2.3	.51	.48
18	1.1	.98	3.4	1.8	5.9	6.4	1.6	.62	.25	1.7	.75	.42
19	1.2	.96	4.1	1.9	617	5.2	2.1	.60	.18	1.2	1.8	.48
20	1.3	.91	3.3	2.0	1410	4.9	1.5	.58	3.1	2.7	3.3	.53
21	1.6	.93	3.8	2.1	119	14.4	1.3	.60	1.3	2.5	1.4	.52
22	1.4	.93	3.3	2.2	40.2	10.5	1.2	.60	.53	.86	.40	1.0
23	1.2	.90	2.7	2.9	15.9	8.2	1.0	.58	2.4	.62	.38	2.0
24	1.1	1.0	2.1	4.7	12.7	6.6	1.0	.79	8.9	.37	.34	.49
25	1.0	1.6	1.6	3.9	9.9	5.2	9.5	.68	1.2	.30	.26	2.7
26	1.1	7.1	1.3	3.0	8.3	4.7	35.7	.68	7.7	.25	.28	2.1
27	.69	4.0	1.2	2.6	6.9	5.5	12.9	.56	4.9	.19	.17	1.7
28	.81	2.8	1.2	2.5	6.1	4.9	6.7	.46	2.2	.13	.14	1.4
29	1.0	1.7	1.2	2.6	---	4.2	5.1	.43	1.5	.11	.11	1.4
30	1.0	1.4	1.2	2.7	---	3.6	4.2	.46	1.1	.15	.57	1.6
31	.94	---	1.3	2.8	---	3.2	---	.39	---	.16	2.0	---
TOTAL	42.24	48.38	72.8	64.4	2280.7	556.8	124.3	34.19	41.49	45.35	46.51	30.58

WTR YR 1994 TOTAL 3387.74

## ROCK RIVER BASIN

05431016 JACKSON CREEK AT MOUND 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	---	---	---	---	23.9	10.7	1080	81.0	21.0	336	20.0	17.8
2	---	---	---	---	17.7	18.4	370	72.0	20.0	135	16.4	12.0
3	---	---	---	---	18.7	41.2	188	94.0	28.0	66.9	13.6	9.7
4	---	---	---	---	57.0	664	162	131	28.0	34.0	11.7	6.3
5	---	---	---	---	246	871	109	112	68.5	19.3	9.5	4.6
6	---	---	---	---	264	1240	79.2	49.3	33.6	160	9.9	4.0
7	---	---	---	---	65.0	1130	63.8	40.8	202	85.0	8.4	3.0
8	---	---	---	---	24.5	864	460	33.9	504	80.0	6.0	3.2
9	---	---	---	---	20.6	433	910	27.2	499	243	10.0	2.8
10	---	---	---	---	20.6	237	287	23.1	248	122	14.0	2.4
11	---	---	---	---	16.7	108	115	19.5	184	445	6.1	2.1
12	---	---	---	---	16.7	55.2	69.0	18.3	110	210	4.9	2.7
13	---	---	---	---	16.6	32.8	41.4	14.8	67.7	99.0	4.6	29.0
14	---	---	---	---	14.8	20.2	27.7	13.5	151	112	3.7	80.0
15	---	---	---	---	13.4	13.4	1210	13.0	105	72.0	9.6	45.0
16	---	---	---	---	12.6	564	1090	10.9	55.0	39.1	10.0	12.0
17	---	---	---	---	11.5	427	275	10.9	42.9	28.1	7.0	8.1
18	---	---	---	---	10.2	116	110	11.9	334	90.0	4.9	6.7
19	---	---	---	---	8.6	37.7	743	11.2	474	85.0	4.5	5.3
20	---	---	---	---	8.2	25.5	4900	10.9	691	50.0	4.2	13.0
21	---	---	---	---	7.0	24.2	976	10.2	294	23.2	3.5	16.0
22	---	---	---	---	6.5	53.3	470	9.4	159	17.0	2.7	5.1
23	---	---	---	---	6.0	2670	273	26.0	99.1	13.4	2.4	4.4
24	---	---	---	---	5.8	1460	151	23.0	85.0	11.9	2.2	3.4
25	---	---	---	---	5.8	819	95.9	10.5	80.0	132	2.0	24.5
26	---	---	---	---	6.1	495	61.1	8.0	45.0	72.4	1.8	162
27	---	---	---	---	6.4	356	44.1	10.1	34.1	36.9	1.8	58.3
28	---	---	---	---	7.2	255	35.1	9.9	67.0	26.7	1.7	36.5
29	---	---	---	---	---	205	117	7.8	50.0	20.6	21.7	25.4
30	---	---	---	---	---	132	112	27.0	654	17.6	32.7	21.0
31	---	---	---	---	---	932	---	35.0	---	16.3	36.8	---
TOTAL	---	---	---	---	938.1	14310.6	14625.3	976.1	5433.9	2899.4	288.3	626.3

NITROGEN, AMMONIA PLUS ORGANIC, TOTAL(POUNDS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.5	7.6	8.5	4.4	3.9	29.4	26.3	23.2	3.6	8.5	20.3	9.9
2	17.7	7.9	36.3	5.1	3.5	25.5	24.5	19.7	3.4	7.2	19.6	7.8
3	15.9	10.5	24.1	4.3	3.5	31.0	21.4	16.5	3.2	5.7	16.0	6.6
4	15.7	10.5	15.0	4.1	3.5	40.2	19.2	13.9	4.2	5.3	59.9	5.7
5	13.1	10.9	13.6	3.5	3.4	130	21.0	12.1	4.4	5.7	26.7	5.1
6	10.0	10.6	13.6	3.6	3.4	550	17.0	10.5	6.5	3.9	16.4	4.8
7	8.0	8.0	12.0	3.6	3.4	504	14.4	10.9	4.4	20.0	19.6	4.5
8	8.5	8.5	11.5	3.4	3.4	235	13.7	10.1	3.3	65.4	27.4	4.3
9	13.3	9.5	10.6	3.4	3.4	130	13.9	9.0	2.4	21.9	26.6	15.6
10	10.7	9.6	10.2	3.5	3.3	70.5	13.7	8.4	2.1	13.8	43.4	34.2
11	9.4	9.8	9.7	4.2	3.3	48.7	12.1	8.7	2.0	8.4	103	18.5
12	9.2	11.6	7.5	3.9	3.3	42.3	20.2	8.8	2.2	7.4	15.0	7.8
13	10.8	18.3	8.1	3.7	3.3	42.5	31.5	7.3	14.3	9.1	81.8	5.4
14	10.6	12.6	9.0	3.7	3.3	39.1	21.9	7.1	6.0	22.8	39.8	5.3
15	10.1	17.6	8.7	3.4	3.7	38.8	23.0	8.2	2.8	13.8	23.7	3.9
16	9.8	10.6	8.1	3.5	4.9	30.4	20.9	7.0	1.9	12.0	13.3	2.9
17	9.3	10.0	8.2	3.5	7.6	26.3	15.8	6.6	1.8	13.2	8.5	2.4
18	8.3	8.0	21.0	3.6	28.5	24.5	14.4	6.3	2.2	9.9	18.1	1.9
19	8.8	7.5	24.9	3.6	3350	20.1	18.5	6.1	1.5	8.7	32.8	1.9
20	9.7	6.9	20.2	3.7	3680	19.3	12.7	5.9	15.0	12.3	50.0	1.9
21	12.2	6.9	14.6	3.7	582	107	11.0	6.1	6.7	11.2	27.3	1.7
22	10.8	6.8	12.5	3.8	243	82.8	10.2	6.2	2.9	11.9	11.6	3.5
23	9.9	6.4	9.7	5.0	95.0	65.2	8.6	6.0	12.3	10.6	4.9	11.1
24	9.1	7.3	7.4	7.8	75.2	53.3	8.1	8.1	76.0	7.9	6.6	14.0
25	8.3	10.6	5.5	6.3	58.1	41.7	56.9	7.1	30.3	8.2	7.3	33.8
26	8.8	40.8	4.6	4.8	48.3	38.2	272	7.0	150	8.4	11.7	17.5
27	5.7	24.1	4.1	4.1	39.7	44.7	76.4	5.9	90.7	8.1	10.6	12.1
28	6.7	17.2	3.9	3.7	34.6	40.1	30.3	4.8	29.9	7.1	13.2	8.5
29	8.5	10.6	3.7	3.8	---	34.8	20.8	4.5	16.5	7.6	13.0	6.7
30	8.6	8.8	3.8	3.8	---	29.5	19.1	4.8	12.0	12.8	18.3	6.6
31	8.0	---	3.8	3.9	---	27.0	---	4.1	---	17.7	21.1	---
TOTAL	324.0	346.0	354.4	126.4	8298.5	2641.9	889.5	270.9	514.5	386.5	807.5	265.9

WTR YR 1994 TOTAL 15226.0

## ROCK RIVER BASIN

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05431016 JACKSON CREEK AT MOUND ROAD 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	---	---	---	---	239	86.0	2830	1030	100	1190	42.5	1.8
2	---	---	---	---	179	165	1870	976	94.0	714	32.9	.84
3	---	---	---	---	206	190	1150	1110	136	534	25.9	.87
4	---	---	---	---	301	596	1150	1310	138	410	21.1	.80
5	---	---	---	---	474	795	906	1220	255	345	16.8	.87
6	---	---	---	---	484	695	771	409	224	854	20.1	1.1
7	---	---	---	---	315	652	726	344	906	440	19.8	1.2
8	---	---	---	---	279	553	1670	292	4710	400	16.5	1.8
9	---	---	---	---	230	327	3160	239	4960	1330	45.0	2.2
10	---	---	---	---	226	255	1540	206	1800	643	63.0	2.8
11	---	---	---	---	180	186	1200	177	850	1720	13.3	3.5
12	---	---	---	---	177	154	977	170	588	699	12.5	6.5
13	---	---	---	---	174	147	796	140	458	515	13.5	142
14	---	---	---	---	152	146	724	130	1130	590	12.7	416
15	---	---	---	---	135	156	4060	128	952	368	13.7	229
16	---	---	---	---	125	927	4460	109	515	180	47.0	68.5
17	---	---	---	---	112	455	2300	111	364	159	30.0	49.3
18	---	---	---	---	98.0	376	1490	124	1970	465	9.3	43.9
19	---	---	---	---	81.6	162	2420	119	3280	460	9.0	37.4
20	---	---	---	---	76.3	133	5310	117	4170	250	9.0	60.0
21	---	---	---	---	63.8	155	2080	113	1910	152	7.9	76.0
22	---	---	---	---	58.0	247	1250	105	1120	131	6.6	44.1
23	---	---	---	---	54.0	2260	919	128	861	121	6.2	40.9
24	---	---	---	---	51.0	1300	640	112	440	125	6.1	33.7
25	---	---	---	---	50.0	861	512	105	400	349	5.9	42.1
26	---	---	---	---	52.0	752	412	96.4	314	211	5.9	308
27	---	---	---	---	53.0	725	376	124	220	102	6.1	202
28	---	---	---	---	59.0	691	377	124	344	70.1	6.3	133
29	---	---	---	---	---	749	1240	99.4	251	51.2	7.8	96.5
30	---	---	---	---	---	716	1220	130	1710	41.6	9.8	83.1
31	---	---	---	---	---	2670	---	174	---	36.5	8.1	---
TOTAL	---	---	---	---	4684.7	18282.0	48536	9771.8	35170.0	13656.4	550.3	2129.78

NITROGEN, NITRITE PLUS NITRATE, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76.0	18.3	44.4	14.7	5.6	246	117	139	2.0	129	.84	.81
2	75.9	18.4	159	16.3	5.0	234	108	115	1.7	113	1.1	.62
3	70.6	23.7	115	13.4	5.1	313	94.0	93.3	1.5	90.9	1.2	.51
4	72.7	23.0	78.1	12.4	5.2	374	83.3	75.9	1.7	88.4	11.6	.43
5	63.1	23.3	71.2	10.5	5.2	468	90.4	64.4	1.7	96.4	2.4	.38
6	49.6	21.9	71.3	10.3	5.3	1230	72.7	53.7	2.2	68.9	1.0	.35
7	38.8	16.2	63.0	10.2	5.4	1530	61.2	54.2	1.4	90.6	.95	.32
8	40.1	16.7	60.2	9.2	5.5	886	57.6	48.8	.96	12.8	1.1	.30
9	60.9	18.0	55.6	9.1	5.5	597	58.0	42.0	.63	3.1	1.3	1.1
10	47.6	17.7	53.6	9.0	5.6	574	56.7	35.8	.50	1.8	5.9	5.4
11	40.5	17.5	50.9	10.5	5.7	446	49.7	33.9	.42	.95	34.4	1.6
12	38.7	50.6	39.3	9.6	5.7	403	100	31.2	.43	.74	3.3	.52
13	44.2	92.8	42.3	8.7	5.8	419	142	23.5	.68	.82	58.0	.34
14	42.3	69.4	47.2	8.6	5.9	400	88.1	20.8	.44	2.4	28.6	.35
15	39.3	89.9	45.5	7.7	6.7	412	91.5	22.0	.30	.90	4.1	.28
16	36.7	60.6	41.6	7.6	9.1	334	82.7	17.1	.24	.75	2.2	.22
17	34.1	30.7	40.7	7.5	14.6	300	62.1	14.6	.29	.74	1.7	.20
18	29.4	34.7	103	7.4	57.4	290	56.5	12.7	.42	.50	1.5	.17
19	30.3	39.0	118	7.3	4460	246	75.0	11.2	.34	.43	5.0	.18
20	32.4	35.8	100	7.2	3580	246	53.7	9.9	.92	.70	11.7	.19
21	39.8	36.0	65.2	7.1	1920	526	48.4	9.4	.33	.60	3.4	.18
22	34.2	35.2	54.0	7.1	1040	399	46.5	8.6	.20	.55	.60	.41
23	30.6	33.5	41.0	9.0	449	312	40.9	7.6	1.9	.48	.46	1.3
24	27.2	37.8	30.4	13.7	391	253	40.4	9.4	34.5	.36	.54	1.2
25	24.3	60.6	22.0	10.9	332	196	73.9	7.4	25.4	.36	.51	3.8
26	24.9	174	17.8	8.0	303	178	714	6.8	468	.36	.70	1.3
27	15.6	115	15.6	6.6	274	207	298	5.2	518	.34	.54	.80
28	18.0	88.4	14.5	5.9	263	185	166	3.8	305	.30	.58	.59
29	22.1	55.1	13.3	5.8	---	159	133	3.3	235	.31	.53	.49
30	21.7	46.1	13.2	5.7	---	134	118	3.2	176	.51	.99	.51
31	19.7	---	13.0	5.7	---	121	---	2.5	---	.69	1.9	---
TOTAL	1241.3	1399.9	1699.9	282.7	13176.3	12618	3279.3	986.2	1783.10	708.69	188.64	24.85

WTR YR 1994 TOTAL 37388.88

## ROCK RIVER BASIN

05431016 JACKSON CREEK AT MOUND 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	---	---	---	---	2.82	4.00	174	20.1	3.62	59.0	4.61	7.14
2	---	---	---	---	2.10	1.89	48.9	11.9	3.47	19.2	4.11	4.91
3	---	---	---	---	2.26	13.9	35.8	15.6	5.41	10.1	3.74	3.61
4	---	---	---	---	10.6	105	33.9	23.6	4.66	5.48	3.52	2.11
5	---	---	---	---	45.6	156	26.4	19.5	11.1	3.30	3.11	1.39
6	---	---	---	---	48.8	231	18.5	11.9	6.24	22.1	3.32	1.08
7	---	---	---	---	12.1	221	14.1	6.33	50.9	16.3	2.85	.74
8	---	---	---	---	7.85	191	61.2	4.94	114	10.8	2.07	.70
9	---	---	---	---	5.28	101	141	3.72	94.4	28.5	3.70	.56
10	---	---	---	---	5.20	51.7	36.7	2.96	38.2	17.3	4.60	.43
11	---	---	---	---	4.15	21.5	25.7	2.35	22.6	78.6	2.37	.34
12	---	---	---	---	4.09	10.0	17.8	2.07	12.6	37.7	1.75	.39
13	---	---	---	---	4.03	5.43	9.34	1.58	7.37	17.3	1.58	8.00
14	---	---	---	---	3.53	3.05	5.27	1.53	26.6	13.4	1.23	17.0
15	---	---	---	---	3.13	1.85	283	1.61	21.4	12.1	3.40	8.35
16	---	---	---	---	2.79	127	273	1.48	10.2	8.77	3.80	4.41
17	---	---	---	---	2.39	89.5	54.6	1.63	6.67	6.94	1.66	2.35
18	---	---	---	---	2.00	21.2	21.1	1.93	78.6	14.6	1.17	1.47
19	---	---	---	---	1.59	13.5	161	1.67	128	14.6	.99	.88
20	---	---	---	---	1.42	5.10	2630	1.42	152	11.1	.85	4.40
21	---	---	---	---	1.14	3.52	352	1.18	67.8	6.70	.66	5.20
22	---	---	---	---	1.00	12.2	168	1.01	33.0	4.52	.47	1.15
23	---	---	---	---	.87	592	96.3	3.10	19.2	3.26	.38	.92
24	---	---	---	---	.79	361	52.1	2.60	13.7	2.65	.33	.65
25	---	---	---	---	.75	202	32.6	2.99	13.7	25.7	.27	7.73
26	---	---	---	---	.74	122	20.4	1.94	12.2	14.4	.24	56.7
27	---	---	---	---	.73	82.2	14.4	3.30	8.92	7.05	.21	13.8
28	---	---	---	---	.77	54.6	11.3	3.27	10.2	4.92	.19	5.57
29	---	---	---	---	---	41.2	20.5	2.01	7.00	3.69	6.61	2.40
30	---	---	---	---	---	26.2	19.5	3.20	147	3.39	9.26	1.24
31	---	---	---	---	---	150	---	4.50	---	3.44	10.5	---
TOTAL	---	---	---	---	178.52	3021.54	4858.41	166.92	1130.76	486.91	83.55	165.62

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.88	.37	.71	.21	.26	2.31	2.50	3.38	2.34	4.06	5.73	3.97
2	.93	.38	3.80	.24	.23	1.98	2.28	2.68	1.88	3.95	6.53	3.25
3	.91	.49	2.40	.20	.23	2.37	1.94	2.21	1.49	3.55	6.45	2.85
4	.99	.48	1.12	.19	.22	3.32	1.69	1.84	1.69	3.86	21.2	2.55
5	.90	.50	.98	.17	.22	17.1	1.81	1.60	1.56	4.44	10.2	2.37
6	.74	.47	.94	.17	.21	124	1.43	1.36	6.59	2.62	5.73	2.25
7	.59	.35	.81	.18	.21	120	1.19	1.41	3.36	6.24	6.29	1.84
8	.62	.37	.74	.17	.20	27.0	1.10	1.29	1.68	21.7	8.29	1.48
9	.95	.40	.66	.17	.20	8.95	1.09	1.17	1.03	9.49	8.20	8.55
10	.75	.40	.61	.18	.20	6.65	1.05	1.35	.83	7.41	13.0	11.6
11	.64	.40	.56	.21	.19	4.87	.90	1.80	.69	5.34	25.4	5.57
12	.62	.47	.42	.21	.19	4.24	2.28	2.27	.70	4.87	4.35	2.55
13	.72	1.80	.43	.19	.18	4.26	3.25	2.40	4.98	6.02	20.5	2.51
14	.70	1.20	.47	.20	.18	3.92	1.81	2.99	2.24	13.5	8.56	2.69
15	.65	2.53	.43	.18	.20	3.90	2.02	4.41	1.08	9.50	5.17	2.07
16	.62	1.79	.37	.19	.26	3.05	2.25	4.46	.70	8.05	3.45	1.63
17	.58	1.52	.33	.19	.40	2.64	2.11	3.91	.64	8.90	2.82	1.44
18	.51	1.30	2.10	.20	6.00	2.47	2.32	3.41	.76	6.64	4.51	1.18
19	.53	1.22	2.50	.21	865	2.02	4.49	3.03	.48	5.45	9.04	1.21
20	.57	1.04	1.80	.21	854	2.88	2.04	2.69	5.10	10.1	16.5	1.02
21	.71	.97	.58	.22	122	11.4	1.74	2.57	1.97	8.64	8.42	.80
22	.62	.88	.49	.22	22.0	8.37	1.58	2.37	.74	5.87	2.98	1.27
23	.56	.78	.38	.30	9.43	7.56	1.32	2.17	3.82	4.88	2.31	3.05
24	.50	.81	.30	.48	6.36	6.18	1.23	3.21	18.0	3.37	3.31	3.88
25	.45	1.00	.23	.39	4.84	4.71	10.7	3.07	4.39	3.23	3.82	10.4
26	.47	4.40	.19	.29	3.96	4.20	45.4	3.37	21.5	3.14	6.41	5.51
27	.30	2.40	.17	.26	3.21	4.79	7.30	3.11	11.6	2.83	6.10	4.30
28	.35	1.20	.17	.24	2.76	4.20	4.38	2.78	6.93	2.38	8.00	2.73
29	.43	.95	.16	.24	---	3.55	3.57	2.89	5.98	2.39	8.16	1.88
30	.43	.76	.17	.25	---	2.95	3.01	3.38	4.96	3.81	8.10	1.63
31	.40	---	.17	.26	---	2.63	---	3.03	---	4.98	8.37	---
TOTAL	19.62	31.63	25.19	7.02	1903.34	408.47	119.78	81.61	119.71	191.21	257.90	98.03

WTR YR 1994 TOTAL 3263.51

## ROCK RIVER BASIN

277

05431016 JACKSON CREEK AT MOUND ROAD NEAR ELKHORN, WI--CONTINUED

PHOSPHORUS ORTHO WATER, WHOLE, 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	---	---	---	---	2.14	.65	222	11.0	2.83	33.1	3.43	4.38
2	---	---	---	---	1.60	1.24	46.1	6.89	2.31	17.1	3.01	3.85
3	---	---	---	---	1.84	9.83	32.6	9.30	2.80	8.55	2.69	2.92
4	---	---	---	---	4.70	78.3	25.4	13.5	1.89	4.38	2.49	1.69
5	---	---	---	---	27.4	115	15.4	11.3	3.92	2.47	2.19	1.11
6	---	---	---	---	29.7	174	10.0	7.30	2.55	10.7	2.49	.85
7	---	---	---	---	5.60	173	7.25	3.01	22.2	11.6	2.28	.58
8	---	---	---	---	4.75	129	35.3	2.02	85.8	9.40	1.78	.54
9	---	---	---	---	2.99	61.6	39.5	1.31	67.8	15.8	2.80	.43
10	---	---	---	---	2.86	32.1	22.3	.89	32.2	8.37	3.40	.32
11	---	---	---	---	2.22	13.8	11.9	.61	10.1	44.2	2.14	.25
12	---	---	---	---	2.12	6.61	6.82	.46	4.26	25.0	1.58	.29
13	---	---	---	---	2.02	3.70	3.88	.30	2.05	8.06	1.38	5.90
14	---	---	---	---	1.72	2.14	2.46	.30	10.0	9.30	1.04	15.2
15	---	---	---	---	1.49	1.34	137	.34	12.4	10.4	2.50	5.28
16	---	---	---	---	1.34	97.0	169	.34	7.06	7.17	2.80	1.86
17	---	---	---	---	1.17	64.5	46.0	.41	4.99	5.00	1.52	1.09
18	---	---	---	---	1.00	16.9	14.5	.52	59.2	13.0	1.05	.80
19	---	---	---	---	.81	10.1	43.3	.45	110	13.0	.87	.56
20	---	---	---	---	.73	3.76	476	.37	128	9.12	.74	3.30
21	---	---	---	---	.60	2.49	79.6	.30	62.1	6.13	.56	3.90
22	---	---	---	---	.54	7.58	36.8	1.10	29.2	3.34	.39	.75
23	---	---	---	---	.47	530	24.2	2.20	16.6	1.86	.31	.63
24	---	---	---	---	.44	340	15.1	1.90	8.30	1.17	.26	.46
25	---	---	---	---	.42	154	10.9	1.72	8.30	9.52	.22	7.49
26	---	---	---	---	.42	81.2	7.84	1.06	5.40	9.35	.18	51.8
27	---	---	---	---	.42	56.2	6.41	1.30	4.50	4.92	.16	11.6
28	---	---	---	---	.45	39.2	5.77	1.30	6.40	3.62	.14	4.49
29	---	---	---	---	---	31.4	11.9	1.06	4.50	2.86	3.73	1.95
30	---	---	---	---	---	22.4	11.3	2.20	53.9	2.61	6.89	1.02
31	---	---	---	---	---	192	---	3.10	---	2.61	6.66	---
TOTAL	---	---	---	---	101.96	2451.04	1576.53	87.86	771.56	313.71	61.68	135.29

PHOSPHORUS ORTHO WATER, WHOLE, TOTAL, LBS/DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.71	.29	.43	.11	.14	1.60	.45	1.45	1.14	1.90	.50	1.61
2	.72	.29	2.15	.14	.12	1.40	.42	1.08	.96	1.92	.55	1.25
3	.68	.38	1.34	.12	.12	1.71	.37	.89	.81	1.80	.53	.97
4	.71	.38	.75	.11	.12	2.28	.33	.74	.97	2.03	11.7	.84
5	.62	.39	.69	.10	.11	8.15	.36	.65	.94	2.19	6.42	.73
6	.50	.37	.69	.10	.11	87.9	.30	.55	3.63	.66	2.17	.69
7	.40	.28	.61	.10	.11	79.4	.25	.57	1.91	1.27	1.45	.64
8	.42	.29	.58	.10	.10	17.0	.24	.53	1.02	13.9	1.35	.57
9	.64	.32	.53	.10	.10	4.96	.25	.47	.64	5.66	1.47	2.30
10	.51	.32	.51	.10	.10	5.17	.24	.43	.51	4.40	3.40	5.50
11	.44	.33	.49	.12	.10	3.64	.22	.45	.43	3.16	10.8	2.90
12	.43	.38	.38	.12	.09	2.83	1.09	.45	.43	2.87	1.83	1.27
13	.50	.98	.40	.11	.09	2.56	1.46	.37	3.14	3.55	12.3	1.14
14	.48	.63	.45	.11	.09	2.11	.51	.36	1.39	8.20	5.50	1.17
15	.46	.93	.42	.10	.10	1.89	.42	.42	.66	5.80	2.10	.85
16	.44	.69	.30	.11	.13	1.33	.38	.37	.42	4.74	1.95	.63
17	.41	.60	.23	.11	.20	1.03	.29	.40	.38	5.24	.92	.52
18	.36	.53	1.14	.11	3.66	.86	.29	.46	.45	3.88	1.50	.40
19	.38	.51	1.39	.11	357	.63	2.24	.52	.28	3.07	3.20	.41
20	.41	.45	.99	.12	609	.55	.92	.60	3.79	5.47	5.50	.44
21	.52	.43	.34	.12	94.1	1.68	.65	.74	1.49	4.50	2.50	.41
22	.45	.40	.29	.12	13.0	1.35	.50	.89	.49	2.93	2.10	.55
23	.41	.36	.23	.17	6.36	1.07	.35	1.00	1.70	2.34	1.30	1.08
24	.37	.39	.18	.26	3.95	.88	.27	1.49	7.67	1.55	1.68	1.10
25	.34	.52	.13	.21	3.06	.69	1.72	1.42	1.47	1.36	1.75	5.31
26	.35	2.46	.11	.16	2.56	.63	14.4	1.56	7.42	1.09	2.64	3.19
27	.22	1.34	.10	.13	2.12	.75	4.32	1.43	4.64	.75	2.26	1.81
28	.26	.65	.10	.13	1.87	.67	2.39	1.28	2.89	.51	2.66	1.17
29	.33	.54	.10	.13	---	.59	1.80	1.33	2.59	.40	2.51	.85
30	.33	.45	.10	.13	---	.50	1.40	1.55	2.23	.50	3.14	.78
31	.30	---	.10	.14	---	.46	---	1.40	---	.52	4.03	---
TOTAL	14.10	16.88	16.25	3.90	1098.61	236.27	38.83	25.85	56.49	98.16	101.71	41.08

WTR YR 1994 TOTAL 1748.13



## ROCK RIVER BASIN

423755088341700 DELAVAN LAKE INLET, BASE SITE, NEAR LAKE LAWN, WI

LOCATION.--Lat 42°37'55", long 88°34'17", in NE 1/4 SW 1/4 sec.14, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, 1.0 mi upstream of State Highway 50.

PERIOD OF DAILY RECORD.--April to September 1994 (discontinued).

INSTRUMENTATION.--Water-quality monitor recording at one-hour intervals 0.3 ft above the bottom.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 32.0°C, June 18 and July 6; minimum observed, 4.0°C, May 1.

pH: Maximum observed, 10.26, June 5; minimum observed, 7.34, Aug. 14.

DISSOLVED OXYGEN: Maximum observed, &gt;20.0 mg/L, on many days; minimum observed, 0.1 mg/L, July 6, 7, and Aug. 2, 3, 5.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	TEMPERATURE WATER (DEG C) (00010)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)
APR 1994										
14...	1540	0.30	16.5	754	8.9	21.0	0.230	0.004	<50	<40
14...	1550	0.80	16.5	749	8.9	21.4	0.200	0.003	<50	<40
25...	1225	0.20	20.0	895	8.4	13.3	0.410	0.179	<50	<40
25...	1235	0.70	20.0	896	8.4	13.0	0.410	0.183	<50	<40
MAY										
03...	0645	0.20	11.0	789	8.2	10.2	0.053	0.019	<50	<40
03...	0655	1.00	11.0	792	8.2	10.0	0.064	0.019	<50	<40
03...	1030	0.20	12.0	796	8.4	13.8	0.049	0.018	<50	<40
03...	1040	1.00	12.0	797	8.5	13.7	0.054	0.021	<50	<40
03...	1425	0.20	16.0	773	8.7	18.2	0.044	0.013	<50	<40
03...	1435	1.00	16.0	769	8.7	18.8	0.044	0.013	<50	<40
03...	1830	0.20	17.5	729	8.8	>21.0	0.040	0.008	<50	<40
03...	1840	1.00	17.5	729	8.9	>21.0	0.041	0.007	<50	<40
03...	2215	0.20	15.5	711	9.0	>21.0	0.042	0.005	<50	<40
03...	2220	1.00	15.5	720	8.9	>21.0	0.075	0.005	<50	<40
04...	0615	0.20	11.5	734	8.4	13.2	0.045	0.015	<50	<40
04...	0625	1.10	12.0	737	8.4	12.9	0.050	0.018	<50	<40
04...	1000	0.20	12.5	735	8.5	16.5	0.042	0.006	<50	<40
04...	1005	1.10	12.5	742	8.5	16.5	0.041	0.009	<50	<40
04...	1415	0.20	17.5	686	8.8	>21.0	0.041	0.012	<50	<40
04...	1420	1.10	17.5	686	8.8	>21.0	0.044	0.009	<50	<40
04...	1810	0.20	19.0	665	9.0	>21.0	0.041	0.007	<50	<40
04...	1815	1.10	19.0	664	9.0	>21.0	0.039	0.008	<50	<40
04...	2210	0.20	17.0	669	8.9	>21.0	0.051	0.014	<50	<40
04...	2215	1.10	17.0	670	8.9	>21.0	0.040	0.015	<50	<40
16...	1315	0.20	19.5	740	8.6	13.4	0.655	0.520	<50	<40
16...	1320	1.30	18.5	685	8.6	16.6	0.670	0.520	<50	<40
JUN										
07...	0715	0.30	21.5	904	9.1	2.9	0.590	0.450	<50	<40
07...	0720	1.10	21.5	904	9.1	2.2	0.630	0.480	<50	<40
07...	1020	0.30	23.0	898	9.2	5.8	0.730	0.570	<50	<40
07...	1025	1.10	22.5	912	9.2	4.2	0.710	0.550	<50	<40
07...	1441	0.30	22.0	881	9.4	8.9	0.740	0.580	<50	<40
07...	1452	1.10	22.0	890	9.3	8.4	0.770	0.580	<50	<40
07...	2125	0.30	19.0	898	9.3	5.7	0.920	0.760	<50	<40
07...	2130	1.10	19.0	916	9.2	2.6	0.940	0.740	<50	<40
08...	0525	0.30	14.5	905	8.8	3.4	1.02	0.900	<50	<40
08...	0530	1.10	14.5	904	8.9	3.2	1.03	0.910	<50	<40
21...	1305	0.30	30.0	844	9.0	12.1	0.930	0.795	<50	<40
21...	1325	1.00	30.0	842	9.0	11.3	1.18	0.790	<50	<40
JUL										
07...	0540	0.20	26.0	--	8.4	0.3	1.32	1.17	<50	200
07...	0545	1.20	26.0	--	8.4	0.3	1.32	1.17	<50	210
07...	0840	0.20	26.0	647	8.5	1.6	1.26	1.20	<50	170
07...	0850	1.20	26.0	649	8.5	1.2	2.66	0.123	<50	160
07...	1250	0.20	29.0	639	8.7	5.1	1.30	1.10	<50	68
07...	1305	1.20	29.0	640	8.7	4.8	2.06	0.730	<50	130
12...	0430	0.20	24.0	789	8.6	1.9	1.06	0.920	<50	50
12...	0435	1.20	24.0	791	8.6	1.5	1.07	0.930	<50	55
12...	0810	0.20	23.5	798	8.5	2.0	1.14	1.06	<50	66
12...	0815	1.20	23.5	798	8.5	1.8	1.12	1.07	<50	63
12...	1230	0.20	27.0	755	8.8	9.5	0.950	0.900	<50	<40
12...	1240	1.20	27.0	749	8.9	9.3	0.930	0.670	<50	<40
12...	1605	0.20	27.5	738	8.9	11.3	0.920	0.900	<50	<40
12...	1606	0.20	27.5	738	8.9	11.3	0.910	0.910	<50	<40
12...	1610	1.20	27.5	743	8.9	9.5	0.940	0.830	<50	<40
12...	1611	1.20	27.5	743	8.9	9.5	0.930	0.910	<50	<40
12...	1920	0.20	27.0	750	8.8	7.9	0.950	0.930	<50	<40
12...	1925	1.20	27.0	757	8.8	7.5	0.960	0.930	<50	<40
25...	1130	0.20	24.5	887	8.8	7.2	0.900	0.840	<50	61
25...	1135	1.20	25.0	886	8.9	6.9	0.850	0.830	<50	63

ROCK RIVER BASIN

423755088341700 DELAVAN LAKE INLET, BASE SITE, NEAR LAKE LAWN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	TEMPER- ATURE WATER (DEG C) (00010)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
AUG 1994										
03...	0415	0.20	23.0	867	8.7	1.0	1.51	0.880	<50	44
03...	0420	1.20	23.0	870	8.8	0.8	1.20	0.880	<50	48
03...	0755	0.20	22.0	877	8.8	1.0	1.06	0.910	<50	65
03...	0800	1.20	22.0	878	8.8	0.9	1.12	0.940	<50	66
03...	1255	0.20	26.0	--	9.2	11.8	0.796	0.670	<50	<40
03...	1310	1.20	26.0	--	9.2	10.8	0.792	0.670	<50	<40
03...	1700	0.20	26.0	--	10.3	9.4	0.680	0.530	<50	<40
03...	1715	1.20	26.5	--	9.3	9.3	0.684	0.530	<50	<40
03...	2055	0.20	24.5	--	9.0	2.8	0.836	0.640	<50	<40
03...	2105	1.20	24.5	--	9.0	2.3	0.782	0.690	<50	<40
04...	0400	0.20	22.5	--	8.6	2.0	0.968	0.910	<50	73
04...	0410	1.20	22.5	--	8.6	1.6	0.950	0.670	<50	58
09...	1125	0.20	20.0	842	9.0	6.1	0.740	0.640	<50	<40
09...	1130	1.20	20.0	843	9.0	5.9	0.702	0.640	<50	<40
22...	1250	0.20	24.5	757	8.6	11.1	0.669	0.560	<50	<40
22...	1251	0.20	24.5	757	8.6	11.1	0.658	0.520	<50	<40
22...	1255	1.20	24.0	791	8.8	12.0	0.682	0.560	<50	<40
22...	1256	1.20	24.0	791	8.8	12.0	0.683	0.540	<50	<40
SEP										
06...	1300	0.20	19.5	927	9.0	12.6	0.600	0.580	<50	<40
06...	1305	1.20	20.0	930	8.9	10.9	0.560	0.550	<50	<40
14...	0640	0.20	22.5	929	9.1	3.1	0.539	0.510	<50	<40
14...	0645	1.20	22.5	932	9.2	2.3	0.556	0.550	<50	<40
14...	1120	0.20	24.0	930	9.3	9.3	0.554	0.510	<50	<40
14...	1125	1.20	24.0	930	9.3	7.8	0.561	0.500	<50	<40
14...	1430	0.20	27.5	925	9.4	>21.0	0.532	0.500	<50	<40
14...	1435	1.20	27.5	926	9.4	>21.0	0.538	0.470	<50	<40
14...	1800	0.20	28.0	916	9.6	>21.0	0.435	0.390	<50	<40
14...	1805	1.20	28.0	918	9.6	>21.0	0.441	0.410	<50	<40
14...	1915	0.20	27.0	918	9.5	>21.0	0.425	0.370	<50	<40
14...	1920	1.20	27.5	915	9.6	>21.0	0.432	0.390	<50	<40
15...	0715	0.20	23.0	947	9.1	2.1	0.583	0.540	<50	<40
15...	0720	1.20	23.0	949	9.1	1.8	0.584	0.560	<50	<40
20...	1120	0.20	22.5	1020	9.3	12.2	0.599	0.600	<50	<40
20...	1121	0.20	22.5	1020	9.3	12.2	0.599	0.620	<50	<40
20...	1125	1.20	22.0	1030	9.3	8.5	0.541	0.580	<50	<40
20...	1126	1.20	22.0	1030	9.3	8.5	0.561	0.580	<50	<40

## ROCK RIVER BASIN

423755088341700 DELAVAN LAKE INLET, BASE SITE, NEAR LAKE LAWN, WI--CONTINUED

## WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
													FEBRUARY
1	---	---	---	---	---	---	---	---	---	14.0	4.0	8.5	
2	---	---	---	---	---	---	---	---	---	17.5	9.5	13.5	
3	---	---	---	---	---	---	---	---	---	18.0	11.0	14.0	
4	---	---	---	---	---	---	---	---	---	19.0	12.0	15.5	
5	---	---	---	---	---	---	---	---	---	17.0	12.5	15.0	
6	---	---	---	---	---	---	---	---	---	17.5	10.0	14.0	
7	---	---	---	---	---	---	---	---	---	16.0	11.5	14.0	
8	---	---	---	---	---	---	---	---	---	18.5	12.0	15.0	
9	---	---	---	---	---	---	---	---	---	19.0	13.0	16.0	
10	---	---	---	---	---	---	---	---	---	20.5	13.5	17.0	
11	---	---	---	---	---	---	---	---	---	17.5	14.0	15.5	
12	---	---	---	---	---	---	---	---	---	21.0	13.0	16.5	
13	---	---	---	---	---	---	---	---	---	21.0	14.5	17.5	
14	---	---	---	---	---	---	---	---	---	17.0	14.0	15.5	
15	---	---	---	---	---	---	14.5	9.0	13.0	21.5	15.5	18.0	
16	---	---	---	---	---	---	13.5	6.5	10.0	21.5	15.0	17.5	
17	---	---	---	---	---	---	16.5	7.5	12.0	20.0	13.5	16.5	
18	---	---	---	---	---	---	21.0	11.5	16.0	21.0	13.5	16.5	
19	---	---	---	---	---	---	18.5	13.0	15.5	19.5	14.5	17.0	
20	---	---	---	---	---	---	15.5	10.0	13.0	21.0	16.0	18.5	
21	---	---	---	---	---	---	17.5	9.5	12.5	24.0	19.0	21.5	
22	---	---	---	---	---	---	19.5	8.5	13.5	26.0	20.5	23.0	
23	---	---	---	---	---	---	18.0	9.5	13.5	26.5	21.0	23.0	
24	---	---	---	---	---	---	19.5	11.0	15.0	23.5	20.5	22.0	
25	---	---	---	---	---	---	23.0	15.5	19.0	22.5	19.5	21.0	
26	---	---	---	---	---	---	22.5	16.0	19.5	20.5	15.5	17.0	
27	---	---	---	---	---	---	18.0	9.0	13.0	21.0	13.0	16.5	
28	---	---	---	---	---	---	9.0	5.0	6.0	22.5	16.0	18.5	
29	---	---	---	---	---	---	13.0	5.0	8.5	22.5	17.0	19.5	
30	---	---	---	---	---	---	11.0	5.0	7.5	24.5	19.0	21.0	
31	---	---	---	---	---	---	---	---	---	24.5	21.0	22.5	
MONTH	---	---	---	---	---	---	---	---	---	26.5	4.0	17.3	
		JUNE			JULY			AUGUST			SEPTEMBER		
1	22.5	18.5	20.5	27.5	22.5	25.0	28.5	22.0	25.0	22.5	15.5	19.0	
2	21.5	16.5	18.5	25.5	20.5	22.5	28.5	22.0	25.5	20.0	17.5	18.5	
3	21.0	16.5	18.5	23.5	18.5	21.0	27.5	22.5	24.5	20.5	17.5	18.5	
4	22.0	18.0	20.0	26.5	21.0	23.5	26.0	21.0	23.5	---	---	---	
5	22.5	18.0	20.0	31.5	24.5	28.0	24.0	17.5	20.5	---	---	---	
6	25.0	19.5	22.0	32.0	26.5	29.0	23.0	18.5	20.5	---	---	---	
7	23.5	17.5	21.5	30.0	26.0	27.5	25.5	18.5	22.0	23.5	17.5	20.5	
8	20.5	14.5	17.5	27.0	23.0	25.0	26.0	21.0	23.5	23.0	18.5	21.0	
9	24.0	15.0	18.5	23.0	20.5	21.5	23.0	19.5	21.5	24.0	19.5	22.0	
10	21.5	17.0	19.0	26.5	19.5	23.0	20.5	16.5	18.5	27.5	20.5	23.5	
11	24.0	18.5	20.5	27.0	21.0	24.0	18.5	16.0	17.0	27.5	21.5	24.0	
12	25.5	18.5	22.0	28.0	23.5	25.5	18.5	17.0	18.0	27.0	22.0	24.5	
13	27.0	20.5	23.0	26.0	21.5	23.5	24.5	18.5	21.5	26.5	21.0	24.0	
14	28.0	21.5	24.5	23.5	20.0	21.5	23.0	18.5	21.0	28.5	22.5	25.0	
15	30.0	24.5	27.0	28.0	20.5	24.0	26.5	19.0	22.5	27.5	23.0	25.0	
16	31.5	25.5	28.5	28.0	23.5	26.0	25.5	20.5	23.0	25.5	22.0	23.5	
17	31.0	26.5	28.5	29.0	23.5	26.0	27.5	21.0	24.0	23.5	19.5	21.5	
18	32.0	26.5	29.0	29.5	24.0	26.5	25.0	23.0	24.0	24.5	18.5	21.5	
19	31.0	25.0	27.5	28.5	23.5	26.0	27.5	22.0	24.0	26.0	19.5	22.5	
20	30.0	25.0	27.5	28.5	23.5	25.5	24.5	21.5	22.5	25.0	20.5	22.5	
21	---	---	---	29.0	23.5	26.0	25.0	20.0	22.5	23.5	19.5	21.5	
22	---	---	---	26.5	22.5	24.0	27.5	20.5	23.5	20.5	18.5	19.5	
23	---	---	---	29.0	22.5	25.5	25.5	21.5	23.5	20.0	17.5	18.5	
24	---	---	---	29.5	23.5	26.5	28.0	21.0	24.5	19.0	17.5	18.0	
25	---	---	---	27.0	23.0	25.0	28.5	23.5	26.0	22.5	17.0	19.5	
26	---	---	---	25.0	21.0	23.0	29.5	24.0	26.5	19.0	14.5	16.5	
27	---	---	---	24.0	20.0	22.0	28.0	24.5	26.5	14.5	13.0	13.5	
28	26.0	22.5	24.0	28.0	19.5	23.5	25.0	21.5	23.0	15.5	11.0	13.0	
29	24.0	20.5	22.5	28.0	21.5	25.0	25.0	19.0	22.0	18.0	11.5	14.5	
30	26.0	21.0	23.5	28.0	23.0	25.5	22.5	19.0	20.0	18.0	14.0	15.5	
31	---	---	---	28.5	22.0	25.0	19.5	17.5	18.5	---	---	---	
MONTH	---	---	---	32.0	18.5	24.7	29.5	16.0	22.5	---	---	---	

ROCK RIVER BASIN

423755088341700 DELAVAN LAKE INLET, BASE SITE, NEAR LAKE LAWN, WI--CONTINUED

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	8.77	8.45	9.99	9.29	9.15	8.51	9.33	8.88	9.27	8.75
2	---	---	8.58	8.16	10.18	9.34	8.99	8.37	9.39	8.66	9.29	9.04
3	---	---	8.84	7.95	10.25	9.59	9.16	8.49	9.28	8.48	9.22	9.01
4	---	---	9.05	8.32	10.23	9.68	9.46	8.66	9.23	7.71	---	---
5	---	---	8.92	8.39	10.26	9.71	9.22	8.53	9.02	7.38	---	---
6	---	---	9.04	8.19	9.79	9.44	9.14	8.41	8.87	7.86	---	---
7	---	---	9.20	8.16	9.44	9.04	8.75	8.42	9.13	7.83	9.27	8.96
8	---	---	9.16	8.73	9.45	8.89	9.00	8.56	9.24	8.30	9.36	9.00
9	---	---	9.10	8.30	9.65	9.29	8.78	8.22	9.19	8.67	9.39	9.17
10	---	---	9.29	8.30	9.53	9.23	8.92	8.14	8.94	8.54	9.53	9.15
11	---	---	9.22	8.19	9.80	9.04	9.04	8.17	8.54	7.63	9.41	9.10
12	---	---	9.29	8.19	9.56	9.16	8.94	8.38	8.17	7.40	9.44	9.03
13	---	---	9.34	8.81	9.36	9.09	9.13	8.31	8.67	7.50	9.45	9.05
14	---	---	9.19	8.45	9.53	8.87	8.85	8.34	9.10	7.34	9.46	9.02
15	8.61	7.96	9.50	8.28	9.50	8.93	8.94	8.37	9.00	7.72	9.32	9.02
16	8.79	8.20	9.44	8.70	9.35	8.90	8.88	8.26	9.20	8.11	9.27	8.63
17	8.66	8.35	9.78	9.10	9.27	8.88	8.96	8.20	9.22	8.68	9.32	8.96
18	8.79	7.99	9.69	8.63	9.25	8.77	9.01	8.20	9.03	8.56	9.25	8.89
19	8.93	7.92	9.82	9.28	9.35	8.68	8.97	8.32	9.09	8.51	9.38	8.95
20	8.84	7.83	9.72	9.45	9.19	8.80	8.96	8.11	9.03	8.30	9.35	8.85
21	9.01	8.00	9.78	9.26	---	---	9.05	8.31	9.20	8.20	9.38	8.95
22	9.02	8.16	9.86	8.93	---	---	8.93	8.43	9.19	8.48	9.21	8.63
23	8.88	8.41	9.73	8.94	---	---	9.18	8.35	9.34	8.77	9.10	8.50
24	8.84	8.10	9.64	9.10	---	---	9.23	8.43	9.45	8.94	8.90	8.58
25	8.73	7.85	9.57	9.11	---	---	9.19	8.45	9.42	9.08	9.03	8.10
26	8.59	7.56	9.33	8.63	---	---	9.28	8.75	9.39	8.86	8.83	8.14
27	8.46	7.67	9.50	8.61	---	---	9.27	8.72	9.42	9.03	8.56	7.71
28	8.46	8.10	9.75	9.10	9.26	8.49	9.29	8.82	9.18	8.53	8.88	8.28
29	8.73	8.25	9.66	9.15	9.22	8.63	9.32	8.74	9.37	8.85	9.07	8.56
30	8.62	8.19	9.69	8.93	9.11	8.53	9.40	8.64	9.33	8.99	9.15	8.75
31	---	---	9.83	8.89	---	---	9.60	8.74	9.00	8.37	---	---
MONTH	---	---	9.86	7.95	---	---	9.60	8.11	9.45	7.34	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	>20.0	12.3	>20.0	3.6	16.4	1.9	15.1	.2	>20.0	7.9
2	---	---	>20.0	11.3	>20.0	1.1	12.1	.3	15.3	.1	19.5	10.2
3	---	---	>20.0	9.5	>20.0	1.2	15.3	1.1	13.4	.1	19.7	8.4
4	---	---	>20.0	12.9	>20.0	9.7	9.0	1.3	14.0	.2	---	---
5	---	---	>20.0	10.0	>20.0	8.4	7.1	.2	17.2	.1	---	---
6	---	---	>20.0	6.7	>20.0	2.4	4.6	.1	17.4	1.8	---	---
7	---	---	>20.0	8.2	9.6	.5	1.2	.1	16.6	2.3	18.4	7.7
8	---	---	18.8	7.5	19.4	2.9	3.4	.3	15.2	.6	17.4	7.5
9	---	---	18.5	6.1	17.2	3.7	7.5	.6	12.5	.6	15.6	5.3
10	---	---	>20.0	6.3	15.4	1.6	9.3	.5	6.3	1.2	19.1	4.3
11	---	---	19.1	5.4	16.8	1.2	20.0	.6	12.1	1.8	19.3	5.4
12	---	---	>20.0	4.0	>20.0	.4	9.8	.5	8.7	.5	18.4	2.7
13	---	---	20.0	10.2	15.9	2.1	19.0	.8	15.1	2.6	17.1	2.6
14	---	---	12.8	5.8	13.8	.4	11.6	1.5	15.7	.7	19.8	1.1
15	13.0	7.9	>20.0	7.3	12.9	.3	18.2	1.7	18.3	1.6	16.8	1.5
16	15.3	9.9	>20.0	5.1	13.0	.3	19.5	.9	17.4	2.6	17.4	.8
17	18.0	9.8	>20.0	8.4	11.7	.3	>20.0	.5	16.3	4.6	19.0	2.3
18	19.2	7.0	>20.0	9.1	10.2	.3	>20.0	.7	12.6	3.1	>20.0	3.3
19	18.1	4.7	>20.0	9.1	14.1	.3	18.2	.8	12.7	1.8	>20.0	5.6
20	>20.0	1.5	18.6	13.6	12.7	.3	13.2	.7	14.6	.5	16.8	2.2
21	>20.0	5.8	17.5	3.4	---	---	13.6	.7	13.3	1.5	15.9	3.2
22	>20.0	8.9	>20.0	.4	---	---	7.3	.8	19.6	4.5	9.1	.8
23	17.3	7.6	18.4	.4	---	---	6.7	.9	17.6	4.7	12.9	.9
24	15.2	5.2	12.9	.5	---	---	3.8	.9	18.9	4.2	11.0	2.2
25	13.0	3.5	10.2	.5	---	---	12.4	1.1	18.3	4.0	18.6	1.6
26	10.1	3.5	19.3	.9	---	---	14.3	.7	18.4	1.7	10.6	4.7
27	12.1	3.5	>20.0	5.6	---	---	13.4	.6	15.6	2.8	13.3	2.3
28	12.7	8.5	>20.0	9.5	13.7	2.2	15.9	1.3	17.6	1.8	16.9	7.4
29	16.6	10.3	>20.0	3.0	14.4	1.1	16.9	.6	>20.0	5.4	19.6	7.7
30	13.3	9.4	>20.0	1.3	18.3	.5	17.1	.5	13.7	5.1	>20.0	8.9
31	---	---	>20.0	.5	---	---	16.4	.2	17.3	2.3	---	---
MONTH	---	---	20.0	.4	---	---	20.0	.1	20.0	.1	---	---

> Actual value is known to be greater than the value shown

## ROCK RIVER BASIN

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI

LOCATION.--Lat 42°37'16", long 88°34'57", in NE 1/4 sec.22, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, on downstream headwall of State Highway 50 bridge, and 1.0 mi east of Lake Lawn.

DRAINAGE AREA.--21.8 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1984 and 1985 water years (unpublished) to current year. Published as "at U.S. Highway 50" prior to October 1988.

GAGE.--Nonrecording gage. Datum of gage is 922.94 ft above sea level (Wisconsin Department of Transportation bench mark). Previously published datum of 914.48 ft in 1989-91 annual data reports was in error. Acoustical velocity meter used to determine discharges equal to or greater than 20 ft<sup>3</sup>/s for period from Oct. 1, 1985 to May 7, 1987.

REMARKS.--Daily mean discharges were estimated based on discharges upstream at Jackson Creek near Elkhorn (05431014) and Jackson Creek Tributary near Elkhorn (054310157) for Oct. 1, 1992 to Jan. 31, 1993, and on discharges upstream at Jackson Creek at Mound Road near Elkhorn (05431016) for subsequent periods. Records 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	1.5	5.7	14	22	10	5.2	168	26	7.7	73	6.8	5.3
2	1.4	72	13	12	7.8	10	78	23	7.3	40	5.6	3.6
3	1.3	54	10	29	9.1	16	69	30	10	29	4.7	3.1
4	1.2	42	9.4	149	18	51	66	40	10	22	4.0	2.2
5	1.0	32	7.5	47	38	68	51	35	31	18	3.4	1.8
6	.98	22	6.3	23	39	88	42	25	18	48	3.9	1.7
7	1.0	17	5.9	15	19	90	38	21	62	27	3.6	1.4
8	1.1	14	5.3	13	13	73	91	17	156	27	2.9	1.7
9	1.2	16	5.4	10	11	45	148	14	142	70	3.9	1.6
10	1.1	16	5.7	8.8	11	35	65	12	58	38	5.2	1.6
11	1.0	19	5.3	8.5	8.7	21	48	10	34	123	3.4	1.4
12	.96	84	4.4	8.4	8.7	16	38	9.7	25	61	2.9	2.1
13	.89	89	4.4	8.7	8.7	12	30	7.9	19	31	2.9	10
14	.87	52	4.9	7.1	7.7	10	26	7.4	47	35	2.3	26
15	1.0	35	66	5.2	6.9	9.4	282	7.1	34	23	3.5	16
16	1.5	27	156	4.0	6.5	95	269	6.1	22	17	4.0	7.1
17	1.5	22	66	3.6	5.8	60	103	6.1	19	14	2.7	5.1
18	1.4	18	36	3.3	5.2	26	58	6.8	109	29	2.2	4.5
19	1.1	17	25	3.1	4.4	18	143	6.5	169	29	2.1	3.9
20	1.4	48	17	3.1	4.2	14	751	6.4	187	17	1.9	4.9
21	1.4	114	13	24	3.5	14	135	6.0	84	12	1.7	6.1
22	1.3	76	11	40	3.2	23	71	5.6	45	9.5	1.3	4.4
23	1.3	99	8.6	38	3.0	368	52	9.5	30	7.9	1.2	4.2
24	1.2	48	7.0	41	2.9	220	35	8.4	27	7.4	1.2	3.4
25	1.3	40	4.4	25	2.9	113	27	6.5	27	38	1.1	17
26	1.3	56	3.2	14	3.0	75	22	4.9	19	23	1.1	78
27	1.1	33	3.0	11	3.1	64	19	6.4	17	12	1.1	25
28	1.0	25	2.9	8.8	3.5	53	19	6.4	22	8.8	1.1	16
29	.97	21	20	6.9	---	52	36	5.1	17	6.8	7.8	11
30	.94	16	79	5.7	---	47	35	9.6	140	5.8	13	9.7
31	.94	---	65	6.6	---	151	---	12	---	5.5	12	---
TOTAL	36.15	1229.7	684.6	604.8	267.8	1942.6	3015	397.4	1595.0	907.7	114.5	279.8
MEAN	1.17	41.0	22.1	19.5	9.56	62.7	100	12.8	53.2	29.3	3.69	9.33
MAX	1.5	114	156	149	39	368	751	40	187	123	13	78
MIN	.87	5.7	2.9	3.1	2.9	5.2	19	4.9	7.3	5.5	1.1	1.4
CFSM	.05	1.88	1.01	.89	.44	2.87	4.61	.59	2.44	1.34	.17	.43
IN.	.06	2.10	1.17	1.03	.46	3.31	5.14	.68	2.72	1.55	.20	.48

## 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	7.82	16.7	13.8	7.16	14.7	30.0	25.6	12.0	10.6	9.22	3.22	8.94
MAX	25.9	54.5	30.3	19.5	36.5	68.3	100	32.9	53.2	29.3	7.13	37.4
(WY)	1987	1986	1992	1993	1984	1986	1993	1990	1993	1993	1989	1986
MIN	.67	1.14	1.12	1.11	1.31	10.7	3.28	1.44	.76	.61	.50	.61
(WY)	1989	1990	1990	1991	1989	1988	1989	1989	1988	1988	1988	1988

## SUMMARY STATISTICS

	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1984 - 1993	
ANNUAL TOTAL	5014.01		11075.05			
ANNUAL MEAN	13.7		30.3		13.3	
HIGHEST ANNUAL MEAN					30.3	
LOWEST ANNUAL MEAN					5.38	
HIGHEST DAILY MEAN	282		751		751	
LOWEST DAILY MEAN	.74		.87		.22	
ANNUAL SEVEN-DAY MINIMUM	.95		1.0		.25	
ANNUAL RUNOFF (CFSM)	.63		1.39		.61	
ANNUAL RUNOFF (INCHES)	8.56		18.90		8.27	
10 PERCENT EXCEEDS	35		73		32	
50 PERCENT EXCEEDS	4.8		12		4.0	
90 PERCENT EXCEEDS	1.1		1.4		.77	

ROCK RIVER BASIN

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	3.5	5.3	2.1	1.2	10	11	16	1.9	4.4	4.0	3.9
2	9.0	3.6	14	2.3	1.0	9.9	11	13	1.8	3.9	5.3	3.0
3	8.3	4.8	11	1.9	1.0	13	9.2	11	1.6	3.1	6.1	2.5
4	8.7	4.7	9.2	1.8	1.0	17	8.3	9.1	2.1	3.1	27	2.1
5	7.5	4.8	8.4	1.6	1.0	32	9.1	7.9	2.2	3.4	12	1.8
6	6.0	4.7	8.4	1.6	1.0	105	7.4	6.8	3.2	2.5	5.2	1.7
7	4.8	3.5	7.4	1.6	1.0	100	6.4	7.1	2.2	6.5	4.5	1.6
8	5.1	3.6	7.0	1.4	1.0	52	6.1	6.6	1.7	17	5.5	1.4
9	7.8	4.0	6.5	1.4	1.0	34	6.2	5.8	1.2	5.3	6.6	5.2
10	6.1	4.0	6.2	1.4	1.0	27	6.1	5.5	1.0	3.4	12	12
11	5.3	4.0	5.8	1.7	1.0	21	5.5	5.6	.92	1.9	35	6.4
12	5.2	4.8	4.5	1.6	1.0	18	9.2	5.6	1.0	1.8	8.4	2.5
13	6.1	8.6	4.9	1.4	1.0	19	13	4.5	3.1	2.2	34	1.7
14	5.8	6.5	5.5	1.4	1.0	19	10	4.4	1.9	7.8	17	1.7
15	5.6	8.3	5.2	1.3	1.2	19	11	5.1	1.2	4.5	7.7	1.3
16	5.3	5.7	4.8	1.3	1.6	16	9.6	4.3	.90	2.9	5.1	1.1
17	5.1	5.2	4.8	1.3	2.5	14	7.3	3.9	.95	3.1	4.0	.97
18	4.4	4.8	9.5	1.3	6.5	14	6.8	3.8	1.3	2.3	6.1	.82
19	4.7	4.9	11	1.3	402	12	9.0	3.6	.91	2.1	12	.90
20	5.1	4.4	9.2	1.3	571	12	6.5	3.5	3.1	4.0	18	.94
21	6.4	4.4	8.1	1.3	104	42	5.8	3.5	1.6	3.6	9.5	.90
22	5.5	4.4	6.8	1.3	45	34	5.7	3.5	.97	2.6	3.8	1.6
23	5.1	4.2	5.2	1.7	19	27	5.1	3.4	4.3	2.3	2.3	3.8
24	4.5	4.7	3.9	2.6	17	22	5.1	4.5	19	1.7	2.7	4.9
25	4.2	5.7	2.9	2.1	14	17	16	3.9	8.7	1.7	2.5	12
26	4.3	16	2.3	1.6	13	16	55	3.9	35	1.7	3.4	6.0
27	2.7	11	2.1	1.3	12	18	23	3.2	19	1.7	2.6	3.9
28	3.2	8.2	1.9	1.2	11	17	16	2.6	10	1.4	2.9	2.9
29	4.0	6.6	1.8	1.2	---	14	13	2.5	7.8	1.4	2.6	2.5
30	4.0	5.6	1.8	1.2	---	13	12	2.6	5.8	2.5	4.9	2.5
31	3.8	---	1.8	1.2	---	12	---	2.2	---	3.4	9.5	---
TOTAL	172.4	169.2	187.2	47.7	1234.0	795.9	325.4	168.9	146.35	109.2	282.2	94.53
MEAN	5.56	5.64	6.04	1.54	44.1	25.7	10.8	5.45	4.88	3.52	9.10	3.15
MAX	9.0	16	14	2.6	571	105	55	16	35	17	35	12
MIN	2.7	3.5	1.8	1.2	1.0	9.9	5.1	2.2	.90	1.4	2.3	.82
CFSM	.26	.26	.28	.07	2.02	1.18	.50	.25	.22	.16	.42	.14
IN.	.29	.29	.32	.08	2.11	1.36	.56	.29	.25	.19	.48	.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1994, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
MEAN	7.61	15.7	13.1	6.65	17.3	29.6	24.2	11.4	10.1	8.71	3.76	8.41
MAX	25.9	54.5	30.3	19.5	44.1	68.3	100	32.9	53.2	29.3	9.10	37.4
(WY)	1987	1986	1992	1993	1994	1986	1993	1990	1993	1994	1986	1986
MIN	.67	1.14	1.12	1.11	1.31	10.7	3.28	1.44	.76	.61	.50	.61
(WY)	1989	1990	1990	1991	1989	1988	1989	1989	1988	1988	1988	1988

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1984 - 1994

ANNUAL TOTAL	9653.4	3732.98	
ANNUAL MEAN	26.4	10.2	13.0
HIGHEST ANNUAL MEAN			30.3
LOWEST ANNUAL MEAN			5.38
HIGHEST DAILY MEAN	751	Apr 20	751
LOWEST DAILY MEAN	1.1	Aug 25-28	.82
ANNUAL SEVEN-DAY MINIMUM	1.2	Aug 22	.99
ANNUAL RUNOFF (CFSM)	1.21		.47
ANNUAL RUNOFF (INCHES)	16.47		6.37
10 PERCENT EXCEEDS	64		31
50 PERCENT EXCEEDS	8.6		4.1
90 PERCENT EXCEEDS	3.0		.80

## ROCK RIVER BASIN

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--CONTINUED

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: 1984 and 1985 water years (unpublished), October 1989 to current year.  
 TOTAL-PHOSPHORUS DISCHARGE: 1984 and 1985 water years (unpublished) to current year.  
 DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: April to September 1994.

REMARKS.--Records poor. Daily mean discharges are estimated based on discharges from upstream stations 05431014 and 054310157 from Oct. 1, 1992 to Jan. 31, 1993, and from station 05431016 from Feb. 1, 1993 to Sept. 30, 1994. Samples are equal-width increment unless otherwise indicated.

COOPERATION.--Observer furnished by Delavan Lake Sanitary District.

## EXTREMES FOR PERIOD OF RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 345 mg/L, Apr. 16, 1984; minimum observed, 0 mg/L, Sept. 23, 1991, July 17, 1992, and Sept. 26, 1992.  
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 468 tons, Apr. 20, 1993; minimum daily, 0.00 ton, Sept. 26, 1990, and many days during 1992 to 1994 water years.  
 TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 3.8 mg/L, May 27, 1985; minimum observed, 0.01 mg/L, Mar. 7, 1990 and Dec. 15, 1994.  
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,910 lb, Apr. 20, 1993; minimum daily, 0.10 lb, Dec. 28, 1989.

## EXTREMES FOR 1993 WATER YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 339 mg/L, Apr. 20; minimum observed, 1 mg/L, Aug. 31 and Sept. 2.  
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 468 tons, Apr. 20; minimum daily, 0.00 ton, on many days.  
 TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.78 mg/L, May 31 and Aug. 30; minimum observed, 0.05 mg/L, Dec. 30.  
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,910 lb, Apr. 20; minimum daily, 0.45 lb, Oct. 1.

## EXTREMES FOR 1994 WATER YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum observed, 62 mg/L, Mar. 21; minimum observed, 1 mg/L, June 27 and July 8.  
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 44 tons, Feb. 20; minimum daily, 0.00 ton, on many days.  
 TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.88 mg/L, Aug. 12; minimum observed, 0.01 mg/L, Dec. 15.  
 TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1,330 lb, Feb. 20; minimum daily, 0.26 lb, Dec. 16-17.  
 DISSOLVED ORTHO-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.62 mg/L, Aug. 22; minimum observed, <0.01 mg/L, Apr. 14.  
 DISSOLVED ORTHO-PHOSPHORUS DISCHARGE: Maximum daily, 132 lb, Aug. 13; minimum daily, 0.28 lb, Apr. 23-24.

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

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PEN- DED (MG/L) (80154)
OCT 1992					
07...	1045	1.0	0.190	0.170	4
12...	1430	0.96	0.210	--	3
NOV					
16...	1320	27	0.070	--	--
27...	1020	33	0.100	--	--
DEC					
17...	0920	66	0.320	--	15
18...	1030	36	0.300	--	11
18...	1530	36	0.280	--	11
19...	0835	25	0.260	--	10
20...	0835	17	0.210	--	7
30...	1000	79	0.050	--	4
30...	1525	79	0.050	--	7
31...	0930	65	0.200	--	10
31...	1505	65	--	--	14
31...	1520	65	0.240	--	--
JAN 1993					
01...	0920	22	0.350	--	21
01...	1435	22	0.360	--	16
02...	0920	12	0.330	--	13
03...	0920	29	0.290	--	12
04...	1005	149	0.120	--	4
05...	1510	47	0.510	--	38
07...	1015	15	0.390	--	20
22...	0950	40	0.110	--	10
22...	1500	40	0.110	--	3
23...	1000	38	0.200	--	3
23...	1345	38	0.230	--	4
24...	0915	41	0.260	--	3
24...	1345	41	0.250	--	3
25...	0920	25	0.280	--	6
26...	0840	14	0.310	--	4
FEB					
15...	1150	6.9	0.200	--	8

## ROCK RIVER BASIN

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05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--CONTINUED

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

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
MAR 1993				
02...	1115	10	0.240	7
05...	1615	68	0.470	23
08...	1150	73	0.460	15
08...	1525	73	0.400	12
09...	1010	45	0.110	11
09...	1525	45	0.320	12
10...	1030	35	0.270	8
10...	1530	35	0.350	7
11...	0915	21	0.280	7
12...	0845	16	0.340	28
17...	1040	60	0.330	25
17...	1525	60	0.330	--
17...	1530	60	--	17
18...	0850	26	--	13
18...	0855	26	0.330	--
18...	1505	26	0.310	--
18...	1510	26	--	15
19...	0850	18	--	11
19...	0855	18	0.190	--
19...	1540	18	--	8
19...	1545	18	0.210	--
23...	1020	368	0.190	38
23...	1540	368	0.350	71
24...	1015	220	0.380	62
24...	1435	220	0.350	49
25...	1435	113	0.400	--
25...	1440	113	--	27
26...	1000	75	0.300	21
26...	1520	75	0.400	20
27...	0920	64	0.320	15
27...	1440	64	0.300	--
27...	1450	64	--	15
28...	0930	53	0.240	10
28...	1455	53	0.230	10
29...	1105	52	0.210	6
30...	0825	47	0.130	5
APR				
01...	1040	168	0.200	61
01...	1400	168	0.270	53
02...	1330	78	0.230	20
02...	1515	78	0.230	--
03...	0915	69	0.220	--
03...	0920	69	--	16
03...	1515	69	0.220	15
04...	0900	66	0.160	10
05...	1000	51	0.140	--
05...	1005	51	--	106
09...	1035	148	--	11
09...	1040	148	0.160	--
09...	1340	148	0.160	13
10...	0850	65	0.190	18
10...	1220	65	0.210	17
11...	0845	48	0.180	10
11...	1725	48	0.170	7
12...	0955	38	0.170	5
13...	0820	30	0.140	5
15...	1015	282	0.130	9
15...	1515	282	0.120	17
16...	1025	269	0.210	63
16...	1510	269	0.210	50
17...	1025	103	0.190	31
17...	1440	103	0.230	26
18...	0900	58	0.210	17
19...	1045	143	0.170	10
20...	1530	751	0.570	339
21...	1040	135	0.450	174
21...	1515	135	0.390	142
22...	0915	71	0.320	107
22...	1510	71	0.300	62
23...	0900	52	0.270	44
24...	0700	35	0.230	24
30...	0920	35	0.200	5
30...	1400	35	0.200	--
30...	1500	35	--	5



## ROCK RIVER BASIN

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--CONTINUED

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

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	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)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
MAY 1993						
02...	0855	23	--	0.260	--	6
02...	1525	23	--	0.220	--	12
03...	0940	30	--	0.230	--	4
04...	0830	40	--	0.230	--	5
*05...	1515	35	2	0.230	0.153	--
*12...	1245	9.7	<2	0.120	0.074	--
*13...	1345	7.9	3	0.660	0.242	--
*18...	1340	6.8	2	0.640	0.530	--
*26...	1410	4.9	2	0.360	0.280	--
31...	0950	12	--	0.780	--	6
31...	1450	12	--	0.740	--	6
JUN						
01...	1000	7.7	--	0.670	--	6
02...	0915	7.3	--	0.730	--	4
*02...	1205	7.3	2	0.720	0.560	--
02...	1520	7.3	--	0.700	--	4
03...	0925	10	--	0.710	--	5
03...	1315	10	--	0.720	--	6
04...	1035	10	--	0.680	--	8
05...	1000	31	--	0.630	--	6
05...	1430	31	--	0.640	--	--
05...	1450	31	--	--	--	7
06...	0925	18	--	0.520	--	6
06...	1445	18	--	0.510	--	14
07...	1015	62	--	0.440	--	4
07...	1530	62	--	0.460	--	11
08...	0955	156	--	0.430	--	4
08...	1455	156	--	0.400	--	5
09...	0955	142	--	0.300	--	8
09...	1540	142	--	0.270	--	7
10...	1010	58	--	0.240	--	--
10...	1015	58	--	--	--	6
*10...	1220	58	<2	0.200	<0.002	--
10...	1555	58	--	0.200	--	5
11...	1105	34	--	0.150	--	4
11...	1430	34	--	0.230	--	6
12...	0930	25	--	0.310	--	3
13...	0910	19	--	0.270	--	4
14...	1015	47	--	0.330	--	4
14...	1525	47	--	0.300	--	7
15...	0925	34	--	0.450	--	4
15...	1510	34	--	0.470	--	2
16...	0840	22	--	0.470	--	3
16...	1540	22	--	0.460	--	3
17...	0815	19	--	0.470	--	3
*17...	1230	19	2	0.500	0.390	--
18...	1010	109	--	--	--	4
18...	1020	109	--	0.420	--	--
18...	1520	109	--	0.360	--	--
18...	1525	109	--	--	--	4
19...	1020	169	--	--	--	4
19...	1025	169	--	0.270	--	--
19...	1430	169	--	0.240	--	5
20...	1020	187	--	--	--	9
20...	1030	187	--	0.250	--	--
20...	1440	187	--	0.230	--	6
21...	1105	84	--	0.210	--	8
21...	1540	84	--	0.190	--	8
22...	0910	45	--	0.200	--	4
22...	1515	45	--	0.180	--	4
23...	0910	30	--	0.240	--	27
23...	1405	30	--	0.290	--	9
24...	0820	27	--	0.260	--	2
*24...	1325	27	4	0.330	0.260	--
25...	1020	27	--	0.340	--	7

\* SINGLE VERTICAL SAMPLE

ROCK RIVER BASIN

287

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--CONTINUED

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

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	PHOS-PHORUS TOTAL (MG/L) AS P (00665)	PHOS-ORTHO, DIS-SOLVED (MG/L) AS P (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
JUL 1993						
01...	0940	73	--	0.300	--	15
*01...	1255	73	6	0.270	0.195	--
01...	1435	73	--	0.340	--	13
02...	0855	40	--	0.280	--	9
03...	0950	29	--	0.300	--	14
03...	1500	29	--	0.390	--	8
04...	0700	22	--	0.380	--	6
05...	0700	18	--	0.510	--	6
06...	0955	48	--	0.640	--	6
06...	1530	48	--	0.500	--	10
07...	1230	27	--	0.710	--	10
08...	0830	27	--	--	--	8
08...	0845	27	--	0.710	--	--
*08...	1205	27	5	0.730	0.560	--
08...	1530	27	--	0.680	--	14
09...	0930	70	--	0.740	--	7
09...	1525	70	--	0.700	--	9
10...	0930	38	--	0.670	--	5
10...	1300	38	--	0.670	--	9
11...	0915	123	--	0.630	--	5
11...	1415	123	--	0.540	--	4
12...	1100	61	--	0.330	--	4
12...	1335	61	--	0.270	--	--
12...	1535	61	--	--	--	3
13...	0945	31	--	0.290	--	4
13...	1430	31	--	0.320	--	--
13...	1440	31	--	--	--	5
14...	0915	35	--	0.290	--	5
15...	0930	23	--	0.390	--	3
*15...	1300	23	3	0.340	0.240	--
19...	1010	29	--	0.520	--	6
*19...	1030	29	4	0.490	0.360	--
19...	1530	29	--	0.530	--	6
20...	0950	17	--	0.540	--	2
*21...	0805	12	4	0.480	0.330	--
21...	0920	12	--	0.570	--	47
21...	1525	12	--	0.500	--	6
22...	0900	9.5	--	0.500	--	6
26...	1040	23	--	0.560	--	25
26...	1405	23	--	0.490	--	9
27...	0810	12	--	0.670	--	2
28...	0805	8.8	--	0.620	--	3
*29...	1315	6.8	4	0.660	0.470	--
29...	1415	6.8	--	0.640	--	3
AUG						
05...	1215	3.4	--	0.460	--	10
30...	1120	13	--	0.780	--	2
30...	1525	13	--	0.700	--	3
31...	0915	12	--	0.690	--	1
31...	1320	12	--	0.670	--	6
SEP						
01...	0910	5.3	--	0.620	--	4
01...	1535	5.3	--	0.550	--	5
02...	0810	3.6	--	0.570	--	5
02...	1230	3.6	--	0.540	--	1
03...	1415	3.1	--	0.550	--	3
04...	0700	2.2	--	0.560	--	4
13...	1540	10	--	0.280	--	--
14...	0915	26	--	0.360	--	2
14...	1525	26	--	0.350	--	3
15...	1015	16	--	0.330	--	4
15...	1535	16	--	0.340	--	1
16...	0905	7.1	--	0.360	--	2
17...	0845	5.1	--	0.380	--	2
17...	1535	5.1	--	0.370	--	2
18...	0925	4.5	--	0.330	--	2
19...	0925	3.9	--	0.360	--	2
26...	0910	78	--	0.230	--	3
27...	1040	25	--	0.160	--	2
27...	1450	25	--	0.170	--	2
28...	0905	16	--	0.140	--	1
29...	1100	11	--	0.120	--	2
29...	1515	11	--	0.130	--	1
30...	0925	9.7	--	0.120	--	2

\* SINGLE VERTICAL SAMPLE

## ROCK RIVER BASIN

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--CONTINUED

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	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)
OCT 1993								
01...	0945	8.8	--	--	--	0.110	--	3
06...	1045	6.0	--	--	--	0.060	--	1
NOV								
15...	1535	8.3	--	--	--	0.060	--	13
DEC								
15...	1045	5.2	--	--	--	0.010	--	--
FEB 1994								
01...	1215	1.2	--	--	--	0.210	--	4
20...	1030	571	--	--	--	0.440	--	30
MAR								
03...	1300	13	--	--	--	0.190	--	14
07...	1115	100	--	--	--	0.280	--	20
10...	0945	27	--	--	--	0.130	--	8
21...	1430	42	--	--	--	0.100	--	62
28...	1025	17	--	--	--	0.090	--	15
APR								
13...	0905	13	--	--	--	0.100	--	12
13...	1525	13	--	--	--	0.130	--	10
14...	0800	10	--	--	--	0.100	--	8
14...	1630	10	--	--	--	0.140	<0.010	--
18...	1315	6.8	--	--	--	0.080	--	13
26...	1000	55	--	--	--	0.300	--	9
26...	1250	55	--	--	--	0.350	--	7
27...	0920	23	--	--	--	0.260	--	10
27...	1415	23	--	--	--	0.280	--	6
28...	0855	16	--	--	--	0.250	--	10
29...	0945	13	--	--	--	0.180	--	6
MAY								
02...	0920	13	--	--	--	0.120	<0.010	--
09...	0930	5.8	--	--	--	0.090	0.040	--
16...	0915	4.3	--	--	--	0.190	0.150	--
23...	0930	3.4	--	--	--	0.280	0.200	--
31...	0925	2.2	--	--	--	0.330	0.260	--
JUN								
06...	0845	3.2	--	--	--	0.550	0.270	--
13...	0930	3.1	<0.050	0.080	1.0	0.280	--	--
13...	1440	3.1	--	--	--	--	--	4
20...	0945	3.1	--	--	--	0.310	--	2
20...	1435	3.1	<0.050	0.070	0.90	0.320	0.280	--
24...	1435	19	--	--	--	0.510	--	7
27...	1055	19	--	--	--	0.640	0.550	1
28...	0940	10	--	--	--	0.530	--	2
JUL								
05...	1115	3.4	--	--	--	0.500	0.510	--
08...	1045	17	--	--	--	0.530	--	--
08...	1050	17	--	--	--	--	--	1
08...	1545	17	--	--	--	0.510	--	--
08...	1550	17	--	--	--	--	--	3
09...	0935	5.3	--	--	--	0.570	--	2
10...	0910	3.4	--	--	--	0.610	--	3
11...	1015	1.9	--	--	--	0.570	0.540	4
18...	0925	2.3	--	--	--	0.600	0.260	--
18...	1340	2.3	--	--	--	0.580	--	5
25...	0915	1.7	--	--	--	0.520	0.440	--
AUG								
01...	0910	4.0	--	--	--	0.490	0.390	--
04...	0920	27	--	--	--	0.560	--	5
04...	1510	27	--	--	--	0.640	--	7
05...	0955	12	--	--	--	0.690	--	4
05...	1550	12	--	--	--	0.740	--	6
06...	0650	5.2	--	--	--	0.730	--	3
06...	1340	5.2	--	--	--	0.700	--	3
07...	0645	4.5	--	--	--	0.690	--	3
08...	0910	5.5	--	--	--	0.590	0.540	--
11...	0915	35	--	--	--	0.630	--	2
12...	0920	8.4	--	--	--	0.880	--	4
12...	1415	8.4	--	--	--	0.860	--	4
13...	1040	34	--	--	--	0.790	--	6
13...	1445	34	--	--	--	0.780	--	5
14...	1000	17	--	--	--	0.750	--	3
14...	1545	17	--	--	--	0.750	--	2
15...	0940	7.7	--	--	--	0.760	0.600	5
16...	0830	5.1	--	--	--	0.700	--	3
22...	0950	3.8	--	--	--	0.690	0.620	--
29...	0900	2.6	<0.050	<0.010	1.0	0.660	0.510	--
SEP								
06...	1025	1.7	--	--	--	0.610	0.530	--
10...	0940	12	--	--	--	0.470	--	3
11...	0925	6.4	--	--	--	0.430	--	3
12...	1100	2.5	--	--	--	0.390	0.320	2
13...	0910	1.7	--	--	--	0.350	--	3
19...	1005	0.90	--	--	--	0.420	0.310	--
21...	1215	0.90	--	--	--	0.390	0.260	4
26...	1000	6.0	--	--	--	0.360	0.320	--

ROCK RIVER BASIN

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, 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	.01	.03	.58	1.0	.06	.10	24	.41	.11	2.6	.09	.07
2	.01	3.0	.51	.43	.04	.20	5.0	.51	.08	1.1	.09	.03
3	.01	2.6	.36	.82	.07	.53	2.9	.39	.16	.82	.09	.02
4	.01	1.8	.31	2.8	.27	2.6	3.6	.50	.20	.36	.09	.02
5	.01	1.3	.23	3.7	.95	4.3	11	.43	.54	.29	.09	.01
6	.01	.78	.17	1.8	1.0	7.5	3.9	.30	.44	1.0	.10	.01
7	.01	.54	.15	.84	.49	5.8	1.1	.24	1.2	.70	.08	.01
8	.01	.40	.12	.64	.32	2.9	1.7	.19	2.2	.76	.06	.01
9	.01	.39	.12	.44	.27	1.4	4.8	.15	2.7	1.6	.07	.01
10	.01	.31	.11	.35	.26	.77	2.8	.12	.83	.71	.09	.01
11	.01	.29	.10	.31	.20	.56	1.2	.10	.42	1.7	.05	.00
12	.01	4.5	.07	.27	.19	1.0	.50	.09	.24	.57	.04	.01
13	.01	5.3	.07	.26	.19	.54	.36	.07	.21	.34	.04	.05
14	.01	2.8	.07	.19	.16	.28	.29	.07	.66	.43	.03	.17
15	.01	1.6	1.7	.12	.14	.17	11	.06	.30	.21	.04	.11
16	.01	1.1	7.5	.09	.13	5.9	35	.05	.18	.13	.04	.04
17	.01	.81	2.6	.07	.12	3.5	8.2	.05	.15	.08	.02	.03
18	.01	.58	1.1	.06	.10	.99	2.6	.05	1.2	.58	.02	.02
19	.01	.49	.64	.05	.09	.46	8.5	.05	2.2	.48	.01	.02
20	.01	2.0	.33	.04	.08	.23	468	.05	3.7	.29	.01	.02
21	.01	8.4	.22	.43	.07	.31	63	.04	1.7	.68	.01	.02
22	.01	5.7	.17	.68	.06	1.2	17	.04	.68	.15	.01	.02
23	.01	6.8	.12	.35	.06	49	5.7	.06	1.1	.12	.01	.01
24	.01	3.1	.09	.39	.06	33	2.1	.05	.25	.10	.01	.01
25	.01	2.3	.05	.36	.06	9.1	1.1	.04	.48	2.4	.00	.08
26	.01	3.0	.03	.14	.06	4.1	.62	.03	.33	1.0	.00	.53
27	.01	1.7	.03	.10	.06	2.6	.37	.04	.27	.07	.00	.13
28	.01	1.2	.02	.07	.07	1.4	.25	.04	.31	.07	.00	.06
29	.01	.97	.19	.05	---	.91	.41	.03	.73	.05	.05	.05
30	.01	.70	1.2	.04	---	.57	.47	.08	6.4	.05	.08	.05
31	.01	---	2.2	.04	---	16	---	.17	---	.06	.11	---
TOTAL	0.31	64.49	21.16	16.93	5.63	157.92	687.47	4.50	29.97	19.50	1.43	1.63

WTR YR 1993 TOTAL 1010.94

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.02	.14	.04	.01	.42	.32	.23	.01	.02	.03	.04
2	.06	.02	.64	.05	.01	.39	.30	.18	.01	.01	.05	.03
3	.05	.02	.45	.04	.01	.49	.23	.15	.01	.01	.07	.02
4	.04	.02	.29	.04	.01	.67	.20	.12	.01	.01	.40	.01
5	.03	.02	.23	.03	.01	1.7	.20	.10	.01	.01	1.16	.01
6	.02	.02	.23	.03	.01	7.6	.15	.08	.01	.01	.04	.01
7	.02	.02	.20	.03	.01	5.3	.12	.08	.01	.02	.03	.01
8	.02	.02	.19	.03	.01	2.0	.11	.07	.01	.09	.03	.00
9	.03	.02	.18	.02	.01	.96	.10	.06	.00	.03	.02	.02
10	.02	.02	.17	.02	.01	.58	.09	.06	.00	.03	.04	.08
11	.02	.02	.16	.03	.01	.42	.08	.05	.00	.02	.19	.05
12	.02	.06	.12	.03	.01	.35	.18	.05	.00	.02	.08	.01
13	.02	.30	.13	.02	.01	.35	.36	.04	.03	.02	.45	.01
14	.02	.25	.15	.02	.01	.34	.21	.04	.02	.09	.14	.02
15	.02	.30	.14	.02	.01	.32	.26	.04	.01	.05	.09	.01
16	.02	.20	.13	.02	.03	.26	.26	.03	.00	.04	.04	.01
17	.02	.18	.13	.02	.07	.22	.23	.03	.00	.04	.02	.01
18	.02	.16	.33	.02	.28	.21	.23	.03	.00	.03	.04	.01
19	.02	.16	.55	.02	25	.17	.28	.03	.00	.03	.11	.01
20	.02	.14	.41	.02	44	.17	.17	.02	.02	.04	.23	.01
21	.03	.13	.30	.02	7.7	5.0	.13	.02	.01	.04	.11	.01
22	.02	.13	.20	.02	3.1	4.8	.11	.02	.01	.02	.03	.02
23	.02	.12	.14	.02	1.2	3.1	.09	.02	.04	.02	.02	.07
24	.02	.13	.10	.03	1.0	2.0	.07	.03	.31	.01	.02	.11
25	.02	.17	.07	.02	.79	1.3	.37	.02	.14	.01	.02	.31
26	.02	.77	.06	.02	.68	.96	1.2	.02	.42	.01	.02	.13
27	.01	.45	.05	.01	.59	.88	.48	.02	.08	.01	.02	.07
28	.02	.26	.04	.01	.50	.68	.38	.01	.04	.01	.02	.04
29	.02	.18	.04	.01	---	.51	.22	.01	.03	.01	.01	.03
30	.02	.15	.04	.01	---	.44	.18	.01	.02	.01	.04	.02
31	.02	---	.04	.01	---	.38	---	.01	---	.02	.12	---
TOTAL	0.78	4.46	6.05	0.73	85.09	42.97	7.31	1.68	1.26	0.79	2.69	1.19

WTR YR 1994 TOTAL 155.00

## ROCK RIVER BASIN

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, 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	.45	3.14	6.96	40.4	6.76	6.66	204	32.2	28.6	122	20.5	16.9
2	.52	96.3	6.33	21.1	4.55	13.1	99.1	29.6	28.1	62.4	16.1	10.7
3	.59	82.2	4.77	40.2	6.27	23.3	80.2	37.1	38.3	53.4	12.9	9.20
4	.67	60.1	4.40	133	19.2	85.9	57.5	49.7	36.5	48.9	10.4	6.46
5	.69	43.0	3.44	106	58.2	162	38.2	43.2	105	51.7	8.51	4.73
6	.83	27.8	2.83	55.8	60.7	271	27.6	28.6	50.5	150	9.82	3.97
7	1.01	20.2	2.60	31.3	28.4	256	21.9	21.9	152	98.4	9.18	2.90
8	1.15	15.6	2.29	23.3	18.7	162	58.6	16.1	34.5	103	7.50	3.13
9	1.28	15.5	2.28	15.4	15.2	55.3	127	12.1	225	269	10.2	2.62
10	1.20	12.3	2.36	11.7	14.6	57.9	68.2	9.43	68.4	137	13.8	2.33
11	1.11	11.6	2.15	9.69	11.1	33.8	46.1	7.15	36.9	375	9.15	1.81
12	1.08	108	1.75	8.23	10.6	28.2	33.7	8.07	39.7	107	7.91	2.41
13	.98	102	1.71	7.33	10.2	18.7	22.1	23.2	29.1	50.2	8.01	14.0
14	.92	41.8	1.87	5.14	8.66	13.5	15.6	26.2	81.7	58.7	6.44	48.4
15	1.02	19.6	65.4	3.24	7.50	11.0	191	25.0	81.3	43.9	9.93	29.3
16	1.48	10.7	273	2.14	7.11	143	285	21.4	55.4	29.7	11.5	13.9
17	1.42	7.59	114	1.66	6.42	106	116	21.2	48.8	23.3	7.87	10.2
18	1.28	5.63	56.5	1.30	5.83	43.2	64.0	23.4	231	70.9	6.49	8.25
19	.97	4.83	33.9	1.05	4.99	19.8	161	21.0	243	81.4	6.28	7.23
20	1.19	27.9	18.7	.91	4.82	10.3	1910	19.3	240	88.4	5.76	7.44
21	1.15	160	11.5	8.91	4.07	8.70	313	16.8	92.7	32.9	5.22	7.38
22	1.03	103	7.75	24.2	3.76	18.6	120	14.6	47.2	24.7	4.05	4.23
23	.99	111	4.84	42.5	3.57	51.9	74.1	23.1	41.5	17.2	3.79	3.22
24	.88	44.8	3.14	56.5	3.50	434	42.0	19.0	44.0	13.3	3.84	2.07
25	.92	31.0	1.58	38.2	3.54	232	27.2	13.7	48.3	78.2	3.47	16.4
26	.89	36.1	.92	22.6	3.70	142	18.6	9.51	29.8	65.0	2.94	90.1
27	.73	18.1	.69	15.6	3.88	108	13.4	10.7	23.0	41.7	2.41	22.6
28	.64	13.2	.53	10.8	4.43	68.4	11.3	8.99	25.7	29.9	1.98	12.0
29	.60	10.9	3.94	7.28	---	55.7	25.7	6.03	28.4	23.6	23.0	7.45
30	.56	8.12	24.3	5.18	---	31.7	37.0	18.8	244	19.2	50.7	6.24
31	.54	---	72.8	5.18	---	117	---	45.5	---	17.4	43.7	---
TOTAL	28.77	1252.01	739.23	755.84	340.26	3255.76	4309.1	662.58	2788.9	2347.4	343.35	377.57
WTR YR 1993	TOTAL 17200.77											

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.12	1.00	.94	.79	1.35	12.0	4.98	11.7	3.29	12.3	10.7	16.1
2	4.70	1.02	3.34	.90	1.13	11.0	4.90	8.45	3.03	10.8	14.7	11.8
3	3.84	1.35	2.63	.77	1.13	13.5	4.03	6.81	2.63	8.51	17.7	9.42
4	3.57	1.32	1.94	.76	1.12	17.8	3.57	5.41	3.90	8.44	87.7	7.56
5	2.73	1.34	1.57	.70	1.12	34.2	3.85	4.51	5.28	9.21	45.8	6.19
6	1.97	1.30	1.38	.72	1.11	137	3.08	3.72	9.02	6.89	20.0	5.48
7	1.55	.97	1.08	.75	1.11	144	2.61	3.73	5.35	18.3	16.2	4.44
8	1.64	.99	.90	.68	1.11	60.6	2.45	3.33	3.46	48.2	17.4	3.29
9	2.49	1.09	.74	.70	1.10	30.5	2.45	2.88	2.04	16.3	18.8	11.9
10	1.94	1.09	.62	.73	1.10	19.1	2.37	3.01	1.42	11.0	35.3	29.7
11	1.67	1.08	.51	.92	1.09	13.2	2.10	3.41	1.09	5.89	126	14.7
12	1.63	1.68	.35	.89	1.09	10.3	3.99	3.80	1.23	5.58	38.2	5.23
13	1.91	4.27	.34	.81	1.09	9.81	7.72	3.40	4.56	6.88	145	3.26
14	1.81	2.79	.33	.84	1.08	8.88	6.53	3.70	2.70	24.6	69.2	3.32
15	1.73	2.82	.28	.81	1.42	8.04	7.41	4.77	1.62	14.3	31.1	2.62
16	1.63	1.74	.26	.84	2.25	6.13	5.60	4.42	1.15	9.27	19.4	2.28
17	1.56	1.48	.26	.87	4.18	4.85	3.68	4.26	1.15	9.98	15.1	2.08
18	1.34	1.27	1.45	.90	12.9	4.39	3.00	4.38	1.48	7.31	22.9	1.81
19	1.43	1.21	5.00	.93	898	3.41	3.81	4.39	1.06	6.48	45.0	2.02
20	1.54	1.01	4.10	.96	1330	4.11	2.70	4.51	5.01	12.1	67.4	2.05
21	1.92	.95	2.96	1.00	228	21.1	2.36	4.77	2.33	10.8	35.5	1.92
22	1.64	.88	2.04	1.03	91.5	18.1	2.27	5.04	1.16	7.65	14.1	3.57
23	1.52	.78	1.43	1.40	35.8	14.2	1.99	5.14	8.39	6.66	8.51	9.04
24	1.33	.82	1.11	2.22	29.7	11.4	1.95	6.96	51.0	4.84	9.93	12.4
25	1.24	1.12	.86	1.86	22.7	8.64	15.5	6.16	27.9	4.77	9.13	30.8
26	1.26	7.38	.70	1.47	19.5	8.01	90.1	6.29	128	4.73	12.3	12.0
27	.79	4.55	.67	1.23	16.7	8.88	34.1	5.26	64.5	4.69	9.38	7.38
28	.93	2.57	.62	1.18	14.2	8.25	20.6	4.37	29.1	3.83	10.4	5.35
29	1.16	1.64	.61	1.22	---	6.68	12.7	4.29	22.1	3.80	9.01	4.49
30	1.15	1.18	.63	1.27	---	6.10	10.1	4.55	16.3	6.72	17.6	4.38
31	1.09	---	.66	1.31	---	5.53	---	3.90	---	9.06	39.9	---
TOTAL	59.83	52.69	40.31	31.46	2722.58	669.71	272.50	151.32	411.25	319.89	1039.36	236.58
WTR YR 1994	TOTAL 6007.48											

## ROCK RIVER BASIN

291

05431017 DELAVAN LAKE INLET AT STATE HIGHWAY 50 AT LAKE LAWN, WI--CONTINUED

PHOSPHORUS ORTHO WATER, WHOLE, DISSOLVED, LBS/DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							.59	1.90	2.46	11.3	8.51	10.9
2							.59	.78	2.17	10.2	11.8	8.43
3							.50	.74	1.79	8.25	14.2	7.06
4							.45	.75	2.42	8.39	69.2	5.95
5							.49	.79	2.88	9.34	39.5	5.13
6							.40	.83	4.59	6.84	17.2	4.80
7							.35	1.06	3.06	17.7	13.9	4.19
8							.33	1.20	2.26	46.1	16.2	3.37
9							.33	1.28	1.53	14.7	20.0	11.5
10							.33	1.47	1.22	9.68	37.7	24.5
11							.30	1.81	1.08	5.43	120	12.0
12							.50	2.19	1.12	4.70	34.9	4.32
13							.70	2.12	3.39	5.17	132	2.77
14							.54	2.51	2.16	16.5	60.1	2.77
15							.59	3.51	1.43	8.57	25.2	2.13
16							.52	3.46	1.12	4.97	16.6	1.81
17							.39	3.31	1.24	4.79	13.1	1.61
18							.37	3.36	1.78	3.30	20.0	1.37
19							.49	3.31	1.31	3.21	39.6	1.49
20							.35	3.36	4.68	6.59	59.7	1.44
21							.31	3.50	2.62	6.39	31.7	1.28
22							.31	3.64	1.74	4.98	12.7	2.34
23							.28	3.68	8.42	4.75	7.47	5.81
24							.28	5.04	41.1	3.78	8.53	7.81
25							3.06	4.51	22.9	4.00	7.68	20.0
26							37.2	4.66	109	3.96	10.1	10.3
27							16.3	3.95	55.3	3.89	7.55	6.67
28							9.91	3.32	24.8	3.15	8.19	4.92
29							6.57	3.30	19.3	3.10	7.18	4.20
30							3.16	3.55	14.6	5.44	13.6	4.16
31							---	3.04	---	7.27	26.4	---
TOTAL							86.49	81.93	343.47	256.44	910.51	185.03

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 mi<sup>2</sup>.

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

REMARKS.--Lake ice-covered during March sampling.

WATER-QUALITY DATA, NOVEMBER 15, 1993 TO MAY 10, 1994  
(Milligrams per liter unless otherwise indicated)

	Nov. 15		Mar. 03		Apr. 07		May 10	
Depth of sample (ft)	1.5	29	1.5	28	1.5	29	1.5	29
Lake stage (ft)	5.09		4.99		4.76		5.06	
Specific conductance (µS/cm)	562	568	376	595	564	565	575	580
pH (units)	8.2	8.2	8.1	8.0	8.6	8.6	8.3	8.2
Water temperature (°C)	7.0	7.0	1.5	2.5	5.5	5.0	12.5	11.5
Color (Pt-Co. scale)	---	---	---	---	8	9	---	---
Turbidity (NTU)	---	---	---	---	0.80	0.50	---	---
Secchi-depth (meters)	4.4		0.4		1.6		6.8	
Dissolved oxygen	10.6	10.6	15.5	9.6	13.9	13.6	9.6	8.0
Hardness, as CaCO <sub>3</sub>	---	---	---	---	240	240	---	---
Calcium, dissolved (Ca)	---	---	---	---	43	44	---	---
Magnesium, dissolved (Mg)	---	---	---	---	31	31	---	---
Sodium, dissolved (Na)	---	---	---	---	23	22	---	---
Potassium, dissolved (K)	---	---	---	---	3	3	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	---	---	190	190	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	---	---	31	31	---	---
Chloride, dissolved (Cl)	---	---	---	---	55	53	---	---
Fluoride, dissolved (F)	---	---	---	---	0.1	0.1	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	---	---	<0.1	<0.1	---	---
Solids, dissolved, at 180°C	---	---	---	---	323	331	---	---
Nitrogen, amm. + org., total (as N)	---	---	---	---	0.70	0.80	---	---
Phosphorus, total (as P)	0.073	0.071	0.258	0.092	0.069	0.069	0.050	0.057
Phosphorus, ortho, dissolved (as P)	0.056	0.052	0.349	0.069	0.013	0.014	0.026	0.034
Iron, dissolved (Fe) µg/L	---	---	---	---	4	5	---	---
Manganese, dissolved (Mn) µg/L	---	---	---	---	<1	<1	---	---
Chlorophyll a, phytoplankton (µg/L)	1.4	---	15	---	0.3	---	0.2	---

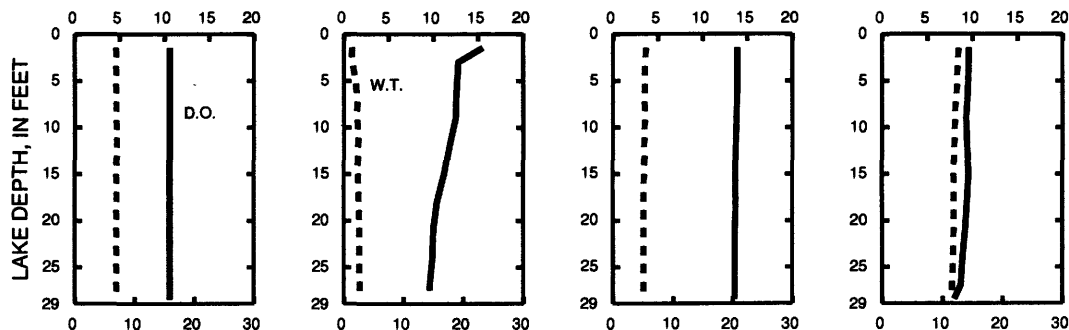
11-15-93

3-3-94

4-7-94

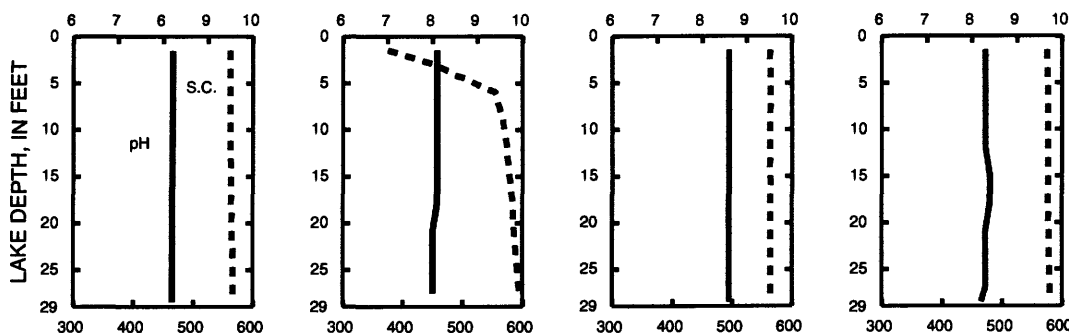
5-10-94

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

423526088380101 DELAVAN LAKE, AT SW END, NEAR DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, JUNE 22 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

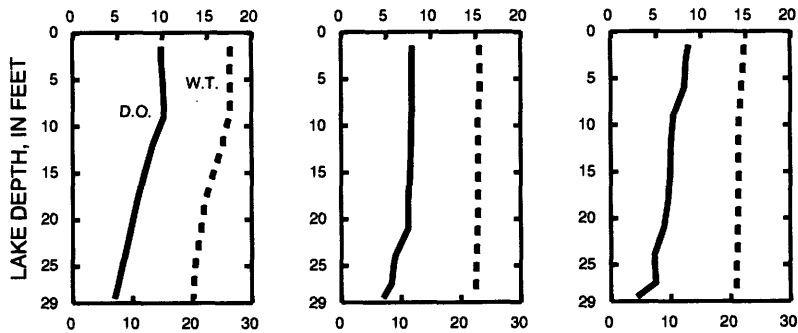
	June 22		July 15		Aug. 16	
Depth of sample (ft)	1.5	29	1.5	29	1.5	29
Lake stage (ft)		5.09		5.14		5.10
Specific conductance ( $\mu\text{S}/\text{cm}$ )	575	583	559	568	555	566
pH (units)	8.4	7.8	8.5	8.3	8.5	8.0
Water temperature ( $^{\circ}\text{C}$ )	26.5	20.0	23.0	22.5	22.5	21.0
Secchi-depth (meters)		4.8		3.0		3.4
Dissolved oxygen	9.9	4.7	8.0	4.7	8.7	2.9
Phosphorus, total (as P)	0.033	0.062	0.045	0.054	0.056	0.062
Phosphorus, ortho, dissolved (as P)	0.003	0.049	0.008	0.029	0.022	0.035
Chlorophyll a, phytoplankton ( $\mu\text{g}/\text{L}$ )	---	---	4.8	---	1.4	---

6-22-94

7-15-94

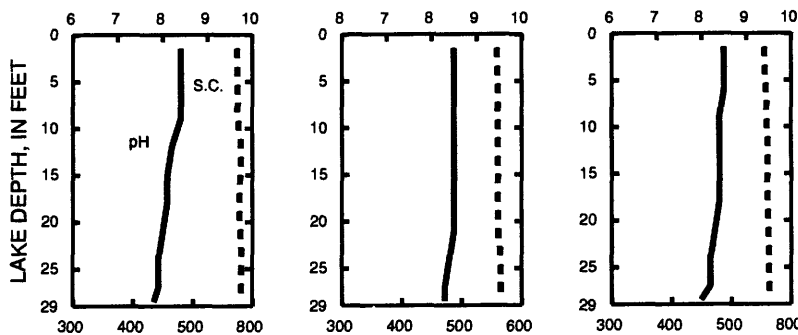
8-16-94

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

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.

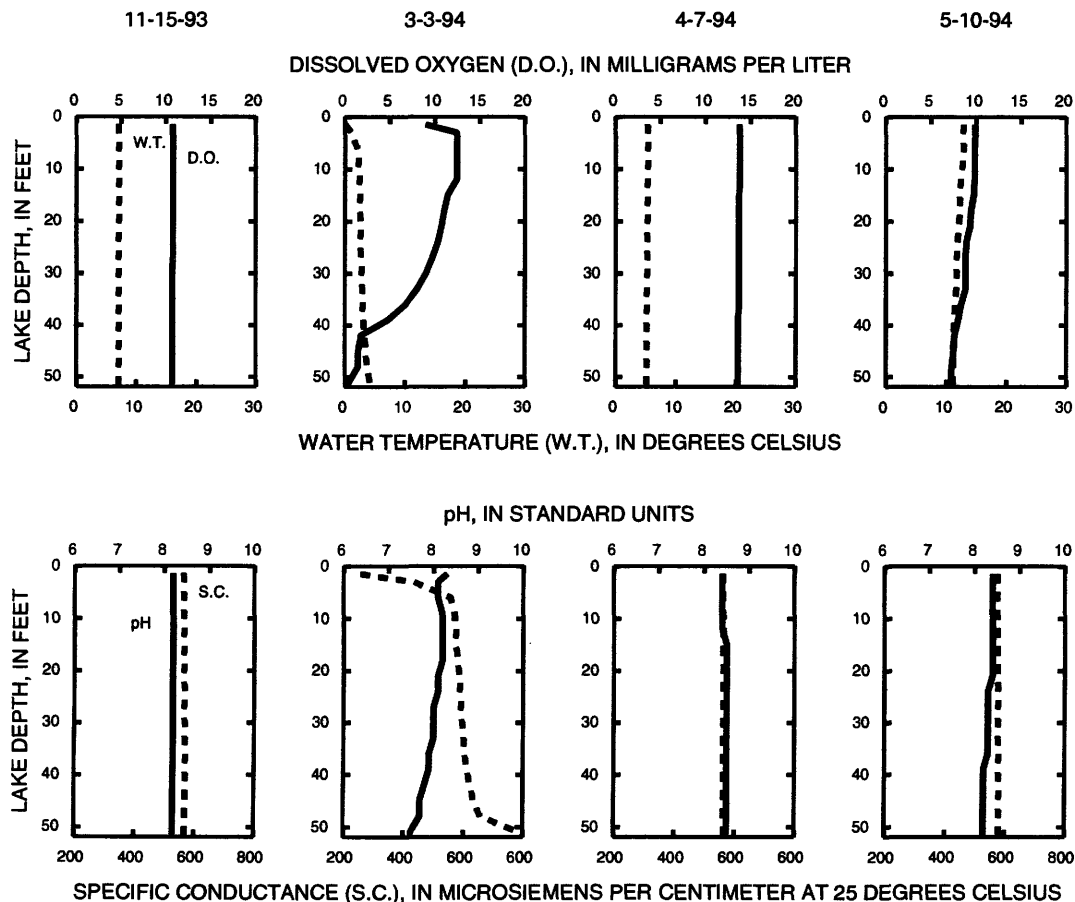
DRAINAGE AREA.--41.2 mi<sup>2</sup>.

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

REMARKS.--Lake ice-covered during March sampling.

WATER-QUALITY DATA, NOVEMBER 15, 1993 TO MAY 10, 1994  
(Milligrams per liter unless otherwise indicated)

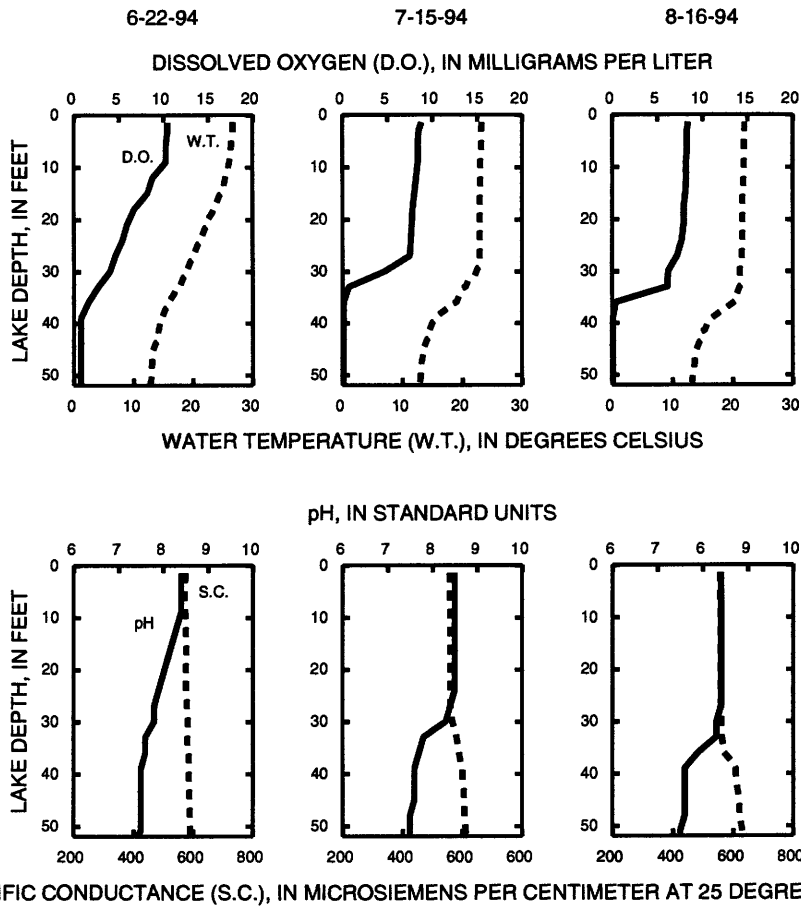
	Nov. 15		Mar. 03			Apr. 07		May 10	
	1.5	52	1.5	48	52	1.5	52	1.5	52
Depth of sample (ft)									
Lake stage (ft)		5.09		4.99			4.76		5.06
Specific conductance (µS/cm)	564	570	257	659	800	563	566	576	581
pH (units)	8.2	8.2	8.3	7.7	7.5	8.4	8.5	8.4	8.2
Water temperature (°C)	7.0	7.0	0.0	3.5	4.5	5.5	5.0	13.0	11.0
Color (Pt-Co. scale)	---	---	---	---	---	8	8	---	---
Turbidity (NTU)	---	---	---	---	---	0.20	0.70	---	---
Secchi-depth (meters)		4.7		0.6			1.4		7.5
Dissolved oxygen	10.8	10.7	9.0	1.5	0.4	13.8	13.6	9.9	7.2
Hardness, as CaCO <sub>3</sub>	---	---	---	---	---	240	240	---	---
Calcium, dissolved (Ca)	---	---	---	---	---	44	44	---	---
Magnesium, dissolved (Mg)	---	---	---	---	---	31	31	---	---
Sodium, dissolved (Na)	---	---	---	---	---	22	22	---	---
Potassium, dissolved (K)	---	---	---	---	---	3	3	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	---	---	---	190	190	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	---	---	---	31	31	---	---
Chloride, dissolved (Cl)	---	---	---	---	---	54	54	---	---
Fluoride, dissolved (F)	---	---	---	---	---	0.1	0.1	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	---	---	---	0.1	<0.1	---	---
Solids, dissolved, at 180°C	---	---	---	---	---	326	324	---	---
Nitrogen, amm. + org., total (as N)	---	---	---	---	---	0.80	0.60	---	---
Phosphorus, total (as P)	0.074	0.076	0.577	0.153	0.172	0.076	0.107	0.071	0.077
Phosphorus, ortho, dissolved (as P)	0.053	0.053	0.414	0.123	0.149	0.015	0.015	0.024	0.049
Iron, dissolved (Fe) µg/L	---	---	---	---	---	5	5	---	---
Manganese, dissolved (Mn) µg/L	---	---	---	---	---	1	<1	---	---
Chlorophyll a, phytoplankton (µg/L)	1.3	---	1.5	---	---	0.3	---	0.1	---



423556088365001 DELAVAN LAKE, AT CENTER, NEAR DELAVAN LAKE, WI--CONTINUED

WATER-QUALITY DATA, JUNE 22 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	June 22		July 15				Aug. 16			
	1.5	52	1.5	30	42	52	1.5	33	45	52
Depth of sample (ft)										
Lake stage (ft)		5.09		5.14				5.10		
Specific conductance ( $\mu\text{S}/\text{cm}$ )	574	594	558	567	604	613	557	562	618	632
pH (units)	8.5	7.4	8.5	8.3	7.6	7.5	8.4	8.3	7.6	7.5
Water temperature ( $^{\circ}\text{C}$ )	26.5	13.0	23.5	22.5	14.5	13.0	22.0	21.0	14.0	13.0
Secchi-depth (meters)		3.7		2.4				3.2		
Dissolved oxygen	10.5	0.8	8.8	4.7	0.1	0.1	8.4	6.1	0.1	0.1
Phosphorus, total (as P)	0.047	0.325	0.055	0.083	0.330	0.528	0.045	0.051	0.463	0.693
Phosphorus, ortho, dissolved (as P)	0.008	0.262	0.005	0.055	0.304	0.283	0.021	0.026	0.409	0.621
Chlorophyll a, phytoplankton ( $\mu\text{g}/\text{L}$ )	---	---	15	---	---	---	2.1	---	---	---



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

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 mi<sup>2</sup>.

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

REMARKS.--Lake ice-covered during March sampling.

WATER-QUALITY DATA, NOVEMBER 15, 1993 TO MAY 10, 1994  
(Milligrams per liter unless otherwise indicated)

	Nov. 15		Mar. 03		Apr. 07		May 10	
Depth of sample (ft)	1.5	29	1.5	28	1.5	29	1.5	29
Lake stage (ft)	5.09		4.99		4.76		5.06	
Specific conductance (µS/cm)	567	571	438	606	559	560	575	580
pH (units)	8.5	8.4	8.1	7.9	8.6	8.5	8.5	8.2
Water temperature (°C)	7.0	7.0	1.0	2.5	6.0	5.0	12.5	12.0
Color (Pt-Co. scale)	---	---	---	---	8	8	---	---
Turbidity (NTU)	---	---	---	---	0.50	0.70	---	---
Secchi-depth (meters)	5.0		0.4		1.8		7.5	
Dissolved oxygen	10.5	10.5	11.3	10.2	13.7	13.2	9.9	7.6
Hardness, as CaCO <sub>3</sub>	---	---	---	---	240	240	---	---
Calcium, dissolved (Ca)	---	---	---	---	43	43	---	---
Magnesium, dissolved (Mg)	---	---	---	---	31	31	---	---
Sodium, dissolved (Na)	---	---	---	---	23	23	---	---
Potassium, dissolved (K)	---	---	---	---	3	3	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	---	---	190	190	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	---	---	31	31	---	---
Chloride, dissolved (Cl)	---	---	---	---	54	54	---	---
Fluoride, dissolved (F)	---	---	---	---	0.1	0.2	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	---	---	<0.1	<0.1	---	---
Solids, dissolved, at 180°C	---	---	---	---	306	309	---	---
Nitrogen, amm. + org., total (as N)	---	---	---	---	0.70	0.70	---	---
Phosphorus, total (as P)	0.072	0.077	0.337	0.084	0.056	0.066	0.044	0.056
Phosphorus, ortho, dissolved (as P)	0.057	0.057	0.228	0.059	0.013	0.013	0.024	0.030
Iron, dissolved (Fe) µg/L	---	---	---	---	3	6	---	---
Manganese, dissolved (Mn) µg/L	---	---	---	---	<1	<1	---	---
Chlorophyll a, phytoplankton (µg/L)	1.2	---	5.7	---	0.2	---	0.2	---

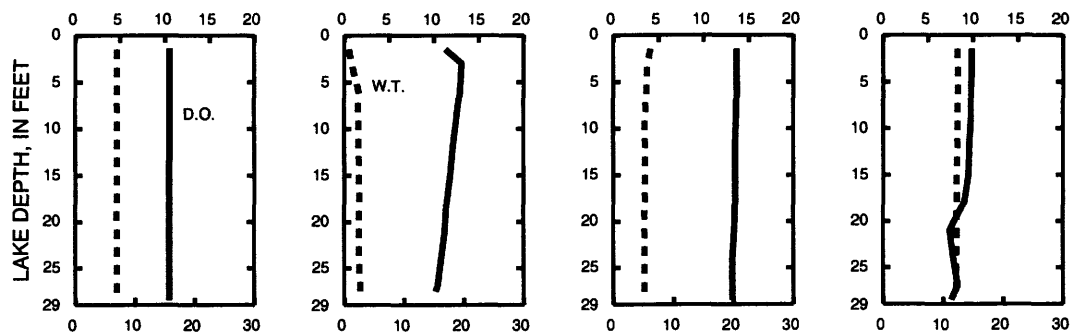
11-15-93

3-3-94

4-7-94

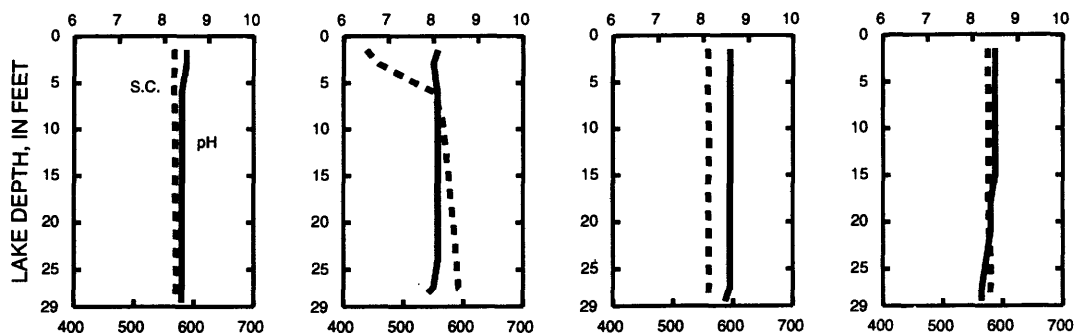
5-10-94

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



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

pH, IN STANDARD UNITS

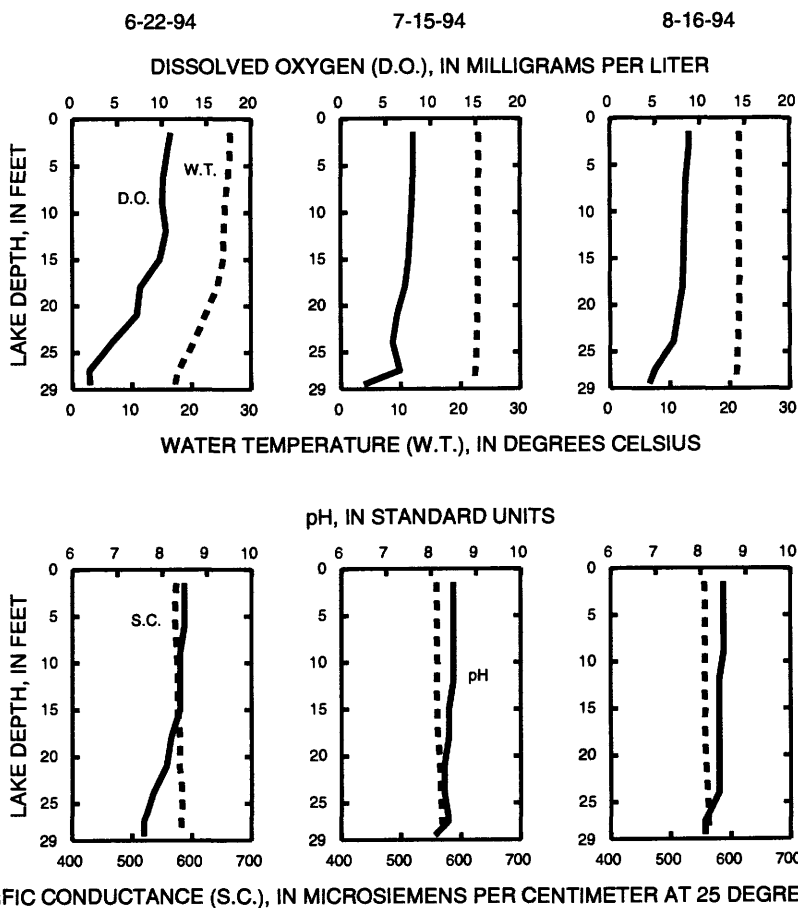


SPECIFIC CONDUCTANCE (S.C.), IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

423659088354401 DELAVAN LAKE, AT NORTH END, NEAR LAKE LAWN, WI--CONTINUED

WATER-QUALITY DATA, JUNE 22 TO AUGUST 16, 1994  
(Milligrams per liter unless otherwise indicated)

	June 22		July 15		Aug. 16	
Depth of sample (ft)	1.5	29	1.5	29	1.5	29
Lake stage (ft)	5.09		5.14		5.10	
Specific conductance ( $\mu\text{S}/\text{cm}$ )	574	586	560	574	557	564
pH (units)	8.5	7.6	8.5	8.1	8.5	8.1
Water temperature ( $^{\circ}\text{C}$ )	26.5	17.0	23.0	22.0	21.5	21.0
Secchi-depth (meters)	3.4		3.2		2.9	
Dissolved oxygen	11.0	2.0	8.1	2.6	8.8	4.4
Phosphorus, total (as P)	0.043	0.116	0.050	0.097	0.052	0.070
Phosphorus, ortho, dissolved (as P)	<0.001	0.086	0.009	0.082	0.019	0.036
Chlorophyll a, phytoplankton ( $\mu\text{g}/\text{L}$ )	---	---	7.0	---	2.3	---



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

## ROCK RIVER BASIN

423706088363400 DELAVAN LAKE NEAR DELAVAN, WI

LOCATION.--Lat 42°36'27", long 88°36'19", in SW 1/4 NE 1/4 sec.28, T.2 N., R.16 E., Walworth County, Hydrologic Unit 07090001, at Delavan Lake Sanitary District Lift Station No. 2 at Delavan Lake Yacht Club, 1.0 mi southeast of outlet, and 2.7 mi southeast of Delavan.

DRAINAGE AREA.--41.4 mi<sup>2</sup>, of which 2.3 mi<sup>2</sup> 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: June 21-23. Records good except estimated daily gage heights, which are fair. Lake was ice covered from Dec. 23 to Mar. 29. Lake levels controlled by Town of Delavan.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 6.19 ft, Feb. 21, 1994; minimum daily, -4.44 ft Nov. 6, 1989 (lake drawn down for lake rehabilitation program).

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 6.19 ft, Feb. 21; minimum observed, 4.61 ft, Apr. 18.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.25	4.94	5.03	4.99	5.14	4.98	4.78	4.99	5.05	5.26	4.92	5.07
2	5.22	4.93	5.06	4.99	5.15	4.98	4.79	5.00	5.04	5.25	4.92	5.05
3	5.18	4.95	5.06	5.01	5.15	4.99	4.79	5.02	5.03	5.23	4.91	5.04
4	5.16	4.96	5.05	5.02	5.15	4.98	4.79	5.03	5.02	5.24	4.98	5.03
5	5.13	4.97	5.05	5.03	5.15	4.92	4.78	5.03	5.01	5.24	5.00	5.01
6	5.11	4.97	5.06	5.06	5.15	4.91	4.77	5.04	5.01	5.23	4.99	5.02
7	5.09	4.96	5.04	5.08	5.14	4.98	4.76	5.05	5.00	5.22	4.97	5.01
8	5.07	4.97	5.04	5.07	5.15	5.01	4.76	5.06	5.00	5.24	4.96	5.00
9	5.06	4.98	5.03	5.07	5.16	4.94	4.76	5.06	4.98	5.22	4.93	5.01
10	5.03	4.98	5.03	5.08	5.15	4.92	4.77	5.06	4.97	5.21	4.95	5.04
11	5.01	4.98	5.02	5.09	5.15	4.88	4.75	5.07	4.97	5.19	5.02	5.04
12	5.00	5.00	5.02	5.10	5.18	4.88	4.76	5.07	4.97	5.19	5.03	5.04
13	4.97	5.04	5.01	5.10	5.21	4.89	4.78	5.07	4.99	5.18	5.10	5.04
14	4.94	5.06	5.00	5.10	5.21	4.90	4.77	5.06	5.01	5.16	5.11	5.03
15	4.95	5.09	5.01	5.09	5.21	4.90	4.71	5.08	5.01	5.14	5.10	5.03
16	4.96	5.10	5.01	5.09	5.21	4.89	4.69	5.08	5.01	5.11	5.10	5.02
17	4.97	5.11	5.02	5.10	5.22	4.88	4.65	5.08	5.01	5.09	5.10	5.00
18	4.97	5.11	5.04	5.09	5.21	4.88	4.62	5.07	5.02	5.08	5.08	4.99
19	4.98	5.12	5.05	5.09	5.27	4.87	4.63	5.06	5.02	5.07	5.09	4.98
20	4.98	5.12	5.04	5.09	5.96	4.84	4.63	5.06	5.04	5.07	5.11	4.98
21	4.99	5.13	5.03	5.10	6.16	4.92	4.63	5.06	5.12	5.06	5.11	4.96
22	4.98	5.14	5.03	5.10	5.99	4.95	4.63	5.06	5.09	5.05	5.10	4.95
23	4.97	5.13	5.02	5.10	5.80	4.96	4.63	5.07	5.05	5.05	5.10	4.96
24	4.97	5.04	5.00	5.10	5.62	4.93	4.63	5.10	5.16	5.04	5.08	4.97
25	4.97	5.02	4.99	5.10	5.45	4.89	4.69	5.09	5.16	5.04	5.08	5.00
26	4.97	5.06	4.97	5.10	5.28	4.83	4.88	5.10	5.22	5.01	5.10	5.01
27	4.96	5.05	4.96	5.13	5.10	4.79	4.91	5.08	5.24	4.99	5.10	5.02
28	4.95	5.05	4.96	5.15	4.97	4.76	4.92	5.08	5.25	4.98	5.09	5.00
29	4.94	5.04	4.97	5.15	---	4.77	4.94	5.07	5.27	4.97	5.08	4.99
30	4.94	5.03	4.97	5.15	---	4.78	4.95	5.07	5.27	4.96	5.08	4.98
31	4.94	---	4.97	5.15	---	4.78	---	5.07	---	4.94	5.08	---
MEAN	5.02	5.03	5.02	5.09	5.31	4.90	4.75	5.06	5.07	5.12	5.04	5.01
MAX	5.25	5.14	5.06	5.15	6.16	5.01	4.95	5.10	5.27	5.26	5.11	5.07
MIN	4.94	4.93	4.96	4.99	4.97	4.76	4.62	4.99	4.97	4.94	4.91	4.95
CAL YR 1993	MEAN 5.12	MAX 5.93	MIN 4.78									
WTR YR 1994	MEAN 5.03	MAX 6.16	MIN 4.62									

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 mi<sup>2</sup>, of which 2.3 mi<sup>2</sup> 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.--No estimated daily discharges. Records good except those for Jan. 15 to Feb. 15, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	.58	11	2.2	9.1	17	16	.26	.17	.37	.29	1.9
2	30	.64	22	2.7	9.2	21	8.1	.26	.17	.20	.30	12
3	28	.69	17	2.0	9.0	21	6.3	.26	.16	.18	.30	.98
4	27	.73	14	2.3	9.0	62	10	.25	.16	.22	7.0	28
5	26	.63	14	6.1	8.8	94	11	.25	.16	13	12	.17
6	25	.56	14	2.2	8.9	96	5.8	1.7	.14	15	2.2	2.6
7	25	.56	17	2.2	8.9	82	5.9	.25	.08	13	2.6	2.7
8	36	.55	16	5.2	9.6	100	6.3	.23	.04	28	.38	3.5
9	28	.51	14	4.0	9.5	125	6.4	.25	.03	4.6	.10	1.6
10	16	.48	13	4.4	9.5	57	6.6	.23	.03	1.2	4.2	2.5
11	16	.43	8.9	6.0	9.2	41	12	.25	.03	.42	5.0	.19
12	21	.43	10	5.9	9.8	33	24	.24	.03	.17	3.3	.12
13	25	.44	15	7.3	9.2	23	14	.23	.07	40	18	.11
14	14	.36	12	6.4	8.9	15	42	.22	.03	50	15	2.8
15	4.0	.30	10	12	8.2	41	106	.22	.03	39	2.6	4.9
16	3.9	.28	9.7	9.6	3.0	23	34	1.7	.03	37	.15	6.6
17	3.7	.29	11	9.5	7.7	22	53	.16	.03	20	.14	.18
18	3.5	.27	17	9.8	66	7.7	24	.75	.04	17	.11	.14
19	3.3	.27	18	9.7	122	49	.29	.23	.03	20	.06	.11
20	4.6	.25	14	9.2	186	31	.27	.23	.05	36	.04	.08
21	6.9	.26	15	9.4	296	17	.29	.23	.03	2.1	.06	.11
22	7.8	.24	12	9.2	406	29	.29	.23	.55	.32	.02	.16
23	7.9	60	13	9.3	337	51	.28	.19	.08	.30	.03	.17
24	7.9	52	13	8.9	308	64	.27	.16	.05	.31	1.8	.19
25	7.9	6.6	13	9.0	288	78	.37	.15	.01	.32	.17	.19
26	5.5	16	12	9.0	262	83	.34	.14	.05	.32	.11	.13
27	.76	16	7.9	9.3	236	79	.28	.13	.01	.37	.13	.13
28	.75	13	3.0	9.1	84	27	.26	.14	.01	.37	.12	1.8
29	.66	13	4.6	9.0	---	3.2	.26	.16	.06	.35	.15	.20
30	.61	11	2.6	9.0	---	5.6	.25	.16	.07	.34	2.2	.23
31	.60	---	1.6	9.0	---	9.3	---	.17	---	.29	8.8	---
TOTAL	418.28	197.35	375.3	218.9	2738.5	1406.8	394.85	10.03	2.43	340.75	87.36	74.49
MEAN	13.5	6.58	12.1	7.06	97.8	45.4	13.2	.32	.081	11.0	2.82	2.48
MAX	36	60	22	12	406	125	106	1.7	.55	50	18	28
MIN	.60	.24	1.6	2.0	3.0	3.2	.25	.13	.01	.17	.02	.08
AC-FT	830	391	744	434	5430	2790	783	20	4.8	676	173	148
CFSM	.34	.17	.30	.18	2.46	1.14	.33	.01	.00	.28	.07	.06
IN.	.39	.18	.35	.20	2.56	1.31	.37	.01	.00	.32	.08	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1994, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
MEAN	30.1	24.9	22.4	17.6	29.3	33.8	36.5	11.1	14.5	13.2	3.19	20.1
MAX	127	93.1	51.1	44.7	97.8	71.2	145	37.3	84.6	53.7	9.50	110
(WY)	1990	1986	1986	1993	1994	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 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1984 - 1994
ANNUAL TOTAL	14576.36	6265.04	
ANNUAL MEAN	39.9	17.2	21.3
HIGHEST ANNUAL MEAN			42.6
LOWEST ANNUAL MEAN			11.0
HIGHEST DAILY MEAN	345	406	406
LOWEST DAILY MEAN	.24	.01	.00
ANNUAL SEVEN-DAY MINIMUM	.27	.03	.00
INSTANTANEOUS PEAK FLOW		473	473
INSTANTANEOUS PEAK STAGE		8.27	8.27
ANNUAL RUNOFF (AC-FT)	28910	12430	15430
ANNUAL RUNOFF (CFSM)	1.00	.43	.54
ANNUAL RUNOFF (INCHES)	13.62	5.86	7.27
10 PERCENT EXCEEDS	114	36	59
50 PERCENT EXCEEDS	16	3.9	6.9
90 PERCENT EXCEEDS	.63	.12	.01

(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

ROCK RIVER BASIN

05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water years 1984-85, 1990-91.  
 TOTAL-PHOSPHORUS DISCHARGE: October 1983 to current year.

INSTRUMENTATION.--Automatic pumping sampler from October to December 1983. Manual samples from January 1984 to present.

REMARKS.--Records good except for period of Jan. 15 to Feb. 15, which is poor. 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 and 1994 water years.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 585 lb, Feb. 22, 1994; minimum daily, 0.00 lb, Aug. 9, 13, 1987, and many days during 1990, 1991, and 1994 water years.

EXTREMES FOR CURRENT YEAR.--

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.35 mg/L, Feb. 21; minimum observed, <0.01 mg/L, Dec. 15 and Sept. 19,

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 585 lb, Feb. 22; minimum daily, 0.00 lb, on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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)
OCT 1993				JUN 1994			
01...	0930	27	0.020	13...	1420	0.06	0.060
06...	1500	25	0.020	20...	0920	0.04	0.040
NOV				24...	1420	0.06	0.090
16...	1000	0.29	0.040	27...	1035	0.01	0.040
DEC				28...	0825	0.01	0.050
15...	1015	20	<0.010	JUL			
JAN 1994				08...	1020	174	0.100
24...	1630	9.0	0.090	08...	1415	140	0.080
FEB				09...	0920	2.5	0.070
20...	1020	181	0.110	10...	0850	2.3	0.110
21...	1010	328	0.350	11...	0950	0.16	0.040
22...	0900	464	0.270	18...	1510	0.89	0.050
23...	0920	341	0.220	AUG			
24...	0855	312	0.190	04...	0905	0.37	0.040
25...	0825	290	0.190	04...	1455	0.32	0.050
MAR				05...	0935	0.72	0.060
07...	0940	114	0.100	05...	1540	4.7	0.060
08...	0920	25	0.140	06...	0800	4.2	0.060
09...	0940	170	0.170	06...	1400	0.19	0.050
10...	0915	46	0.180	07...	0810	3.6	0.070
11...	0855	16	0.170	11...	0900	0.46	0.090
22...	0900	36	0.100	12...	0905	7.0	0.100
23...	0910	20	0.110	12...	1400	3.4	0.090
28...	0945	2.0	0.070	13...	1025	19	0.090
APR				13...	1425	26	0.090
13...	0855	9.8	0.030	14...	0940	17	0.060
13...	1505	1.3	0.020	14...	1525	4.7	0.060
14...	0750	33	0.030	15...	0910	1.2	0.050
15...	0825	192	0.030	16...	0815	0.13	0.030
18...	0930	52	0.050	*23...	0800	0.03	0.020
26...	0940	0.34	0.030	SEP			
26...	1240	0.31	0.070	10...	0850	2.4	0.040
27...	0905	0.28	0.020	11...	0905	0.28	0.070
27...	1440	0.28	0.010	13...	0855	0.10	0.030
28...	0840	0.25	0.020	19...	0940	0.10	<0.010
29...	0930	0.28	0.010	*21...	1230	0.10	0.020
MAY							
*09...	1430	0.22	0.030				

\* GRAB SAMPLE

## ROCK RIVER BASIN

301

05431022 DELAVAN LAKE OUTLET AT BORG ROAD NEAR DELAVAN, WI--CONTINUED

PHOSPHORUS TOTAL, POUNDS PER DAY, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.29	.10	1.13	.30	3.63	8.45	4.99	.02	.04	.10	.06	.21
2	3.22	.11	2.23	.38	3.59	9.44	2.33	.02	.04	.05	.07	1.32
3	3.01	.12	1.59	.30	3.44	8.04	1.72	.02	.04	.05	.06	.11
4	2.96	.13	1.26	.37	3.33	19.2	2.64	.02	.04	.06	1.99	3.02
5	2.83	.11	1.24	1.04	3.20	27.0	2.63	.03	.04	3.54	3.76	.02
6	2.71	.10	1.20	.39	3.15	37.8	1.36	.20	.04	4.12	.68	.29
7	2.76	.10	1.37	.42	3.06	45.1	1.31	.03	.02	3.43	.96	.29
8	4.04	.10	1.18	1.05	3.23	79.5	1.33	.03	.01	12.5	.15	.38
9	3.20	.10	.99	.84	3.13	113	1.28	.04	.01	2.01	.04	.18
10	1.82	.09	.86	.97	3.04	54.8	1.25	.04	.01	.64	1.98	.55
11	1.93	.09	.58	1.42	2.87	37.5	2.09	.04	.01	.09	2.39	.06
12	2.47	.09	.63	1.47	2.98	28.6	4.03	.04	.01	.04	1.68	.03
13	3.07	.09	.90	1.93	2.76	19.3	1.98	.04	.02	9.36	8.28	.02
14	1.74	.08	.66	1.79	2.59	11.9	6.66	.04	.01	11.9	5.04	.37
15	.50	.06	.57	3.51	2.33	30.4	17.3	.04	.01	9.52	.74	.51
16	.49	.06	.55	2.99	.82	16.4	6.98	.32	.01	9.43	.02	.63
17	.48	.06	.67	3.10	2.52	15.0	12.3	.03	.01	5.24	.02	.01
18	.46	.05	1.08	3.39	35.2	4.98	6.27	.15	.01	4.65	.02	.01
19	.44	.05	1.22	3.57	69.3	30.5	.07	.04	.01	5.36	.01	.01
20	.63	.05	.98	3.57	140	18.6	.06	.05	.01	9.58	.00	.01
21	.96	.04	1.10	3.84	494	9.63	.06	.05	.01	.54	.01	.01
22	1.10	.04	.94	3.99	585	15.9	.06	.05	.18	.08	.00	.02
23	1.14	9.16	1.07	4.21	396	29.7	.05	.04	.03	.08	.00	.02
24	1.15	7.72	1.18	4.29	320	34.3	.05	.03	.03	.08	.19	.02
25	1.18	.92	1.19	4.29	286	38.4	.06	.03	.00	.08	.02	.02
26	.83	2.12	1.20	4.18	224	37.2	.08	.03	.01	.08	.01	.01
27	.12	2.04	.82	4.21	171	32.4	.03	.03	.00	.09	.01	.01
28	.12	1.53	.33	4.03	54.3	10.6	.02	.03	.00	.09	.01	.17
29	.11	1.49	.54	3.88	---	1.13	.02	.04	.02	.08	.02	.02
30	.10	1.26	.32	3.77	---	1.87	.01	.04	.02	.08	.24	.02
31	.10	---	.21	3.68	---	2.98	---	.04	---	.07	.95	---
TOTAL	48.96	28.06	29.79	77.17	2824.47	829.62	79.02	1.65	0.70	93.02	29.41	8.35
WTR YR 1994	TOTAL 4050.22											









ROCK RIVER BASIN

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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 mi<sup>2</sup>.

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 wire-weight gage 1.2 mi downstream, at same datum.

REMARKS.--Estimated daily discharges: Ice-affected period, Dec. 26 to Mar. 10. Records good except those for ice-affected period, which is 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 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1420	981	896	720	580	1500	921	756	588	612	532	614
2	1350	974	928	760	580	1300	902	811	566	587	527	611
3	1310	975	972	760	580	1200	884	811	551	564	524	601
4	1260	983	968	760	580	1100	867	764	545	576	528	601
5	1230	984	951	740	580	1400	853	732	540	643	604	603
6	1200	975	947	720	560	1800	847	716	537	704	635	598
7	1180	957	941	720	560	2400	836	708	540	675	565	586
8	1170	940	920	720	560	2800	819	704	542	646	531	574
9	1260	931	898	720	560	2700	812	702	545	933	517	563
10	1320	925	890	720	560	2300	808	694	548	1100	508	552
11	1270	921	879	740	560	1860	796	672	538	859	550	545
12	1220	921	857	760	560	1460	790	659	541	728	606	537
13	1190	951	823	760	560	1340	829	651	556	700	782	527
14	1160	976	852	740	580	1300	876	641	572	704	884	523
15	1140	993	866	700	580	1280	879	645	584	699	738	517
16	1140	985	856	680	600	1260	855	654	582	659	618	527
17	1140	966	843	660	600	1230	833	642	540	631	572	570
18	1130	938	865	620	620	1160	795	619	514	641	556	596
19	1110	923	890	600	1200	1120	766	604	542	639	612	543
20	1100	908	879	600	2000	1090	751	596	626	681	1180	519
21	1100	903	857	600	2700	1150	738	592	653	881	1510	509
22	1100	890	841	600	3800	1260	725	586	616	878	1490	507
23	1090	884	832	600	3900	1270	716	582	591	765	1170	543
24	1070	882	731	600	3800	1210	708	601	898	679	873	609
25	1060	889	715	600	3600	1140	714	707	1170	633	766	971
26	1050	1000	680	600	3000	1080	765	755	1050	619	719	1200
27	1040	1090	660	620	2200	1070	811	693	810	616	694	1050
28	1030	1050	660	640	1800	1060	759	653	698	586	672	877
29	1020	967	680	640	---	1040	720	617	651	566	647	764
30	1010	936	680	640	---	987	716	605	631	553	627	704
31	994	---	700	600	---	949	---	605	---	541	614	---
TOTAL	35864	28598	25957	20940	38360	43816	24091	20777	18865	21298	22351	19041
MEAN	1157	953	837	675	1370	1413	803	670	629	687	721	635
MAX	1420	1090	972	760	3900	2800	921	811	1170	1100	1510	1200
MIN	994	882	660	600	560	949	708	582	514	541	508	507
CFSM	1.12	.92	.81	.65	1.32	1.37	.78	.65	.61	.66	.70	.61
IN.	1.29	1.03	.93	.75	1.38	1.58	.87	.75	.68	.77	.80	.69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

	525	583	513	588	806	1441	962	777	784	770	568	568
MEAN	525	583	513	588	806	1441	962	777	784	770	568	568
MAX	1226	2429	1492	2049	2512	3155	2943	3200	2075	5190	1752	1920
(WY)	1987	1962	1983	1960	1953	1950	1960	1973	1993	1993	1993	1965
MIN	187	211	162	147	182	259	327	234	233	181	167	166
(WY)	1957	1965	1959	1959	1959	1957	1957	1958	1965	1965	1958	1958

SUMMARY STATISTICS FOR 1993 CALENDAR YEAR FOR 1994 WATER YEAR WATER YEARS 1940 - 1994

ANNUAL TOTAL	654830	319958	
ANNUAL MEAN	1794	877	740
HIGHEST ANNUAL MEAN			1720
LOWEST ANNUAL MEAN			292
HIGHEST DAILY MEAN	9400	Jul 9	(a)3900
LOWEST DAILY MEAN	(a)540	Feb 16-28	507
ANNUAL SEVEN-DAY MINIMUM	540	Feb 16	533
INSTANTANEOUS PEAK FLOW			15100
INSTANTANEOUS PEAK STAGE			21.46
INSTANTANEOUS LOW FLOW			(c).00
ANNUAL RUNOFF (CFSM)	1.74	.85	.72
ANNUAL RUNOFF (INCHES)	23.56	11.51	9.73
10 PERCENT EXCEEDS	3100	1220	1340
50 PERCENT EXCEEDS	1310	740	503
90 PERCENT EXCEEDS	680	556	250

(a) Ice affected  
(b) Backwater from ice  
(c) Result of regulation

## ROCK RIVER BASIN

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 mi<sup>2</sup>.

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 period, Dec. 24 to Mar. 3. Records good except those for ice-affected period, which is fair. Some regulation from dam and powerplant upstream. Gage-height telemeter at station.

DAY	DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	589	400	409	340	280	520	415	359	278	291	234	261
2	533	398	438	350	280	500	411	389	271	264	231	260
3	508	401	462	350	280	490	404	399	268	232	226	258
4	489	414	462	340	280	528	398	386	265	275	286	258
5	474	424	442	330	280	700	397	354	264	295	316	260
6	479	401	440	330	280	1340	399	341	264	309	297	265
7	455	394	433	320	280	1860	393	339	262	304	265	259
8	443	392	439	320	260	1790	386	341	262	303	251	251
9	481	391	400	320	260	1400	388	341	266	304	242	246
10	511	390	404	330	260	958	395	333	259	302	244	261
11	497	390	397	340	260	687	384	328	255	282	261	283
12	480	388	381	340	270	575	380	327	255	269	287	276
13	462	410	382	340	280	560	389	321	268	260	355	257
14	457	430	383	330	290	556	413	318	279	260	382	246
15	459	443	388	310	300	553	422	323	283	261	344	242
16	445	443	386	290	300	543	408	329	263	256	285	228
17	454	438	385	280	310	525	391	304	248	269	270	246
18	452	421	397	270	320	496	374	299	246	298	268	254
19	445	413	409	260	320	474	368	299	237	299	373	246
20	445	405	409	260	1900	468	354	297	261	346	479	237
21	446	398	395	260	2700	507	345	295	295	378	490	233
22	446	383	384	280	3100	569	347	291	260	364	483	237
23	443	388	374	280	2000	597	346	292	254	313	413	261
24	435	385	340	290	1300	562	338	319	351	291	325	295
25	430	390	290	300	1000	513	342	334	437	269	288	360
26	426	446	310	300	720	482	346	327	465	267	288	412
27	428	519	300	300	640	473	340	313	376	262	281	440
28	428	543	300	300	580	473	314	301	320	253	274	428
29	414	479	300	300	---	461	330	297	311	247	263	367
30	409	426	310	290	---	441	334	296	296	240	259	326
31	403	---	320	280	---	424	---	290	---	237	261	---
TOTAL	14266	12543	11869	9530	19330	21025	11251	10082	8619	8800	9521	8453
MEAN	460	418	383	307	690	678	375	325	287	284	307	282
MAX	589	543	462	350	3100	1860	422	399	465	378	490	440
MIN	403	383	290	260	260	424	314	290	237	232	226	228
CFSM	.88	.80	.73	.59	1.32	1.30	.72	.62	.55	.54	.59	.54
IN.	1.01	.89	.84	.68	1.37	1.50	.80	.72	.61	.63	.68	.60
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1994, BY WATER YEAR (WY)												
MEAN	281	304	269	290	422	677	456	358	341	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 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1914 - 1994	
	ANNUAL TOTAL	256600		145289		
ANNUAL MEAN	703		398		353	
HIGHEST ANNUAL MEAN					694	
LOWEST ANNUAL MEAN					172	
HIGHEST DAILY MEAN	4170		Mar 25 (a)3100		Feb 22 10800	
LOWEST DAILY MEAN	(a)240		(b)Jan 17-20		Aug 3 51	
ANNUAL SEVEN-DAY MINIMUM	(a)254		Jan 15		Jul 28 71	
INSTANTANEOUS PEAK FLOW			(a)3500		Feb 22 (c)14800	
INSTANTANEOUS PEAK STAGE			(d)8.36		Feb 22 (e)11.40	
INSTANTANEOUS LOW FLOW					35	
ANNUAL RUNOFF (CFSM)	1.34		.76		.67	
ANNUAL RUNOFF (INCHES)	18.25		10.33		9.17	
10 PERCENT EXCEEDS	1290		498		577	
50 PERCENT EXCEEDS	507		340		254	
90 PERCENT EXCEEDS	322		260		148	

- (a) Ice affected  
 (b) Also occurred Feb. 18  
 (c) From rating curve extended above 7,500 ft<sup>3</sup>/s  
 (d) Estimated, lagging intakes  
 (e) From floodmarks



ROCK RIVER BASIN

05438283 PISCASAW CREEK NEAR WALWORTH, WI

LOCATION.--Lat 42°31'18", long 88°39'39", in NE 1/4 NE 1/4 sec.25, T.1 N., R.15 E., Walworth County, Hydrologic Unit 07090006, on right bank 0.9 mi upstream from County Trunk Highway B bridge, 3.2 mi southwest of Walworth.

DRAINAGE AREA.--9.58 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Elevation of gage is 935 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except those for Oct. 1-27, which are poor. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	2.6	2.2	2.1	2.0	2.5	2.6	2.3	1.9	1.8	1.5	1.3
2	4.6	2.6	2.9	2.1	2.0	2.6	2.5	2.3	1.9	1.7	1.5	1.3
3	4.5	2.5	2.6	2.1	2.1	2.5	2.4	2.3	1.9	1.7	1.4	1.3
4	4.4	2.4	2.5	2.1	2.1	2.7	2.7	2.3	1.9	1.7	1.5	1.3
5	4.3	2.4	2.3	2.1	2.0	5.6	2.4	2.3	1.9	1.7	1.4	1.3
6	3.7	2.3	2.3	2.1	2.0	66	2.3	2.3	1.8	1.7	1.4	1.3
7	3.1	2.4	2.1	2.0	2.0	16	2.3	2.3	1.8	1.8	1.4	1.3
8	3.1	2.3	2.1	2.1	2.1	5.8	2.3	2.3	1.8	1.7	1.4	1.2
9	3.2	2.3	2.1	2.0	2.0	4.5	2.3	2.2	1.8	1.7	1.4	1.2
10	3.3	2.3	2.2	2.0	2.0	3.7	2.3	2.1	1.8	1.7	1.6	1.2
11	3.4	2.4	2.1	2.0	1.9	3.3	2.3	2.3	1.9	1.9	1.6	1.2
12	3.1	2.4	2.1	2.0	1.9	3.2	2.4	2.2	1.9	1.9	1.5	1.2
13	3.1	2.6	2.1	2.0	1.9	3.2	2.4	2.2	2.0	1.9	1.8	1.2
14	2.9	2.4	2.1	2.0	1.9	3.1	2.4	2.1	1.9	1.9	1.6	1.2
15	3.6	2.4	2.1	2.0	1.9	3.2	2.5	2.1	1.9	1.9	1.5	1.1
16	4.1	2.2	2.1	2.0	1.9	3.0	2.4	2.1	1.9	1.9	1.5	1.2
17	4.0	2.2	2.1	2.0	1.9	2.9	2.4	2.1	1.9	1.9	1.4	1.2
18	4.0	2.1	2.2	2.0	2.0	2.9	2.3	2.1	2.0	1.9	1.4	1.2
19	4.3	2.2	2.3	2.0	122	2.8	2.2	2.1	2.1	1.9	1.4	1.2
20	4.7	2.0	2.3	2.0	165	2.8	2.1	2.0	2.1	1.8	1.4	1.2
21	4.7	2.0	2.2	2.0	7.1	4.5	2.1	2.0	2.1	1.6	1.4	1.2
22	4.7	2.0	2.1	2.1	4.5	4.2	2.1	2.0	2.1	1.7	1.4	1.3
23	4.6	2.0	2.1	2.1	3.8	3.5	2.2	2.1	2.1	1.6	1.4	1.3
24	3.7	2.0	2.1	2.0	3.2	3.2	2.3	2.1	2.3	1.6	1.4	1.3
25	3.0	2.1	2.1	2.0	2.9	2.8	2.4	2.1	2.2	1.6	1.3	1.3
26	2.9	2.5	2.1	2.0	2.8	2.8	2.6	2.1	2.1	1.6	1.4	1.4
27	3.0	2.5	2.0	2.2	2.7	2.8	2.5	2.0	2.0	1.6	1.3	1.4
28	2.9	2.3	1.9	2.1	2.6	2.7	2.5	2.0	2.1	1.6	1.4	1.3
29	2.8	2.2	2.0	2.0	---	2.6	2.5	2.0	2.0	1.6	1.4	1.3
30	2.8	2.1	2.0	2.0	---	2.6	2.4	1.9	2.0	1.5	1.4	1.3
31	2.7	---	2.1	2.0	---	2.6	---	1.9	---	1.5	1.3	---
TOTAL	114.0	68.7	67.5	63.2	352.2	176.6	71.1	66.2	59.1	53.6	44.7	37.7
MEAN	3.68	2.29	2.18	2.04	12.6	5.70	2.37	2.14	1.97	1.73	1.44	1.26
MAX	4.8	2.6	2.9	2.2	165	66	2.7	2.3	2.3	1.9	1.8	1.4
MIN	2.7	2.0	1.9	2.0	1.9	2.5	2.1	1.9	1.8	1.5	1.3	1.1
CFSM	.38	.24	.23	.21	1.31	.59	.25	.22	.21	.18	.15	.13
IN.	.44	.27	.26	.25	1.37	.69	.28	.26	.23	.21	.17	.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1994, BY WATER YEAR (WY)

	1992	1993	1994	1994	1993	1994	1994	1994	1994	1994	1994	1994
MEAN	2.64	2.79	3.36	3.94	7.68	8.86	7.39	3.27	8.48	3.97	2.86	2.72
MAX	3.68	3.29	4.54	5.85	12.6	12.0	12.4	4.40	15.0	6.22	4.27	4.48
(WY)	1994	1993	1993	1993	1994	1993	1993	1993	1993	1993	1993	1993
MIN	1.60	2.29	2.18	2.04	2.79	5.70	2.37	2.14	1.97	1.73	1.44	1.26
(WY)	1993	1994	1994	1994	1993	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	FOR WATER YEARS 1992 - 1994
ANNUAL TOTAL	2300.4	1174.6	
ANNUAL MEAN	6.30	3.22	4.81
HIGHEST ANNUAL MEAN			6.41
LOWEST ANNUAL MEAN			3.22
HIGHEST DAILY MEAN	148	Mar 23	165
LOWEST DAILY MEAN	1.7	(a)Feb 23	1.1
ANNUAL SEVEN-DAY MINIMUM	1.7	Feb 23	1.2
INSTANTANEOUS PEAK FLOW			371
INSTANTANEOUS PEAK STAGE			9.86
INSTANTANEOUS LOW FLOW			1.1
ANNUAL RUNOFF (CFSM)	.66		.34
ANNUAL RUNOFF (INCHES)	8.93		4.56
10 PERCENT EXCEEDS	9.4		3.2
50 PERCENT EXCEEDS	4.0		2.1
90 PERCENT EXCEEDS	2.1		1.4

(a) Also occurred Feb. 24 to Mar. 2

ILLINOIS RIVER BASIN

309

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 mi<sup>2</sup>.

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: Ice affected period, Dec. 30 to Mar. 15. Water-discharge records good except those for ice-affected period, which is poor. Recording rain gage and gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	3.9	18	8.2	15	460	138	133	14	9.0	.18	.36
2	11	4.7	28	8.0	13	430	126	131	13	7.1	.08	.29
3	7.2	5.6	46	8.4	12	400	113	124	13	5.7	.04	.25
4	4.9	5.5	52	8.9	11	370	100	111	11	4.9	.29	.22
5	3.4	5.1	45	9.2	10	350	84	92	9.6	5.2	.78	.18
6	3.2	5.5	39	8.8	9.4	360	72	75	8.6	7.2	2.0	.13
7	3.9	6.9	34	10	8.8	400	67	65	8.1	9.6	1.2	.06
8	3.8	7.3	31	9.6	8.4	510	62	63	8.6	12	.66	.01
9	3.9	5.8	29	9.3	8.1	650	60	58	9.0	12	.50	.02
10	5.6	5.4	26	9.1	7.9	700	56	51	7.7	9.3	1.0	.07
11	8.3	5.7	24	9.0	7.7	660	54	47	4.9	7.0	15	.08
12	7.9	6.6	22	8.6	7.4	600	55	46	3.2	6.0	34	.07
13	5.9	22	20	8.5	7.3	538	65	47	3.1	5.9	32	.05
14	6.0	12	17	8.5	7.1	434	74	49	1.7	5.6	37	.01
15	6.0	10	16	8.1	7.0	367	92	43	1.4	4.5	33	.00
16	5.7	13	16	7.8	6.9	317	109	38	1.1	3.4	17	.00
17	8.8	13	15	8.4	8.0	285	104	35	.88	2.8	9.2	.00
18	10	11	16	8.2	15	257	90	32	.71	2.4	6.2	.00
19	7.3	10	24	8.0	50	227	72	28	.45	2.2	4.7	.00
20	5.9	12	30	7.7	150	194	62	27	.47	2.1	5.9	.00
21	5.8	15	31	7.4	500	186	56	24	.47	3.1	8.5	.00
22	5.4	10	29	7.4	800	208	54	22	.44	3.2	9.0	.00
23	5.6	12	28	7.2	860	232	50	20	.85	5.1	6.7	.00
24	5.5	7.2	23	7.0	830	246	47	20	9.0	3.6	4.5	.00
25	5.0	4.5	19	6.8	700	246	44	20	29	1.9	3.1	.00
26	4.2	7.3	16	7.2	600	235	58	20	36	1.3	2.3	.00
27	3.8	22	14	8.5	550	218	99	23	30	.79	1.8	.00
28	3.7	28	12	35	500	197	130	25	24	.53	1.3	.00
29	3.3	25	10	31	---	177	146	23	16	.36	.88	.00
30	3.2	21	9.2	24	---	159	138	20	11	.30	.57	.00
31	3.3	---	8.6	18	---	145	---	16	---	.24	.37	---
TOTAL	190.5	323.0	747.8	331.8	5710.0	10758	2477	1528	277.27	144.32	239.75	1.80
MEAN	6.15	10.8	24.1	10.7	204	347	82.6	49.3	9.24	4.66	7.73	.060
MAX	23	28	52	35	860	700	146	133	36	12	37	.36
MIN	3.2	3.9	8.6	6.8	6.9	145	44	16	.44	.24	.04	.00
CFSM	.05	.09	.20	.09	1.66	2.82	.67	.40	.08	.04	.06	.00
IN.	.06	.10	.23	.10	1.73	3.25	.75	.46	.08	.04	.07	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1994, BY WATER YEAR (WY)												
MEAN	45.9	69.4	98.8	61.8	97.8	235	227	104	71.6	60.0	45.9	60.5
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	.060
(WY)	1989	1972	1977	1977	1977	1968	1977	1977	1988	1988	1988	1994

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1967 - 1994	
ANNUAL TOTAL	63494.4		22729.24			
ANNUAL MEAN	174		62.3		98.4	
HIGHEST ANNUAL MEAN					206	
LOWEST ANNUAL MEAN					9.24	
HIGHEST DAILY MEAN	1710		(a)860		2100	
LOWEST DAILY MEAN	2.9		.00		.00	
ANNUAL SEVEN-DAY MINIMUM	3.6		.00		.00	
INSTANTANEOUS PEAK FLOW			.00		.00	
INSTANTANEOUS PEAK STAGE			(d)9.95		(c)2120	
ANNUAL RUNOFF (CFSM)	1.41		.51		.80	
ANNUAL RUNOFF (INCHES)	19.20		6.87		10.87	
10 PERCENT EXCEEDS	482		181		270	
50 PERCENT EXCEEDS	45		9.3		31	
90 PERCENT EXCEEDS	5.0		.36		3.0	

- (a) Ice affected
- (b) At times in most years
- (c) Gage height, 9.69 ft
- (d) From floodmark, ice jam
- (e) Also occurred Sept. 27, 1986



ILLINOIS RIVER BASIN

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 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Elevation of gage is 820 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Ice-affected periods, Jan. 7-9 and 14-21. Records are good. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	37	45	25	24	102	104	64	22	24	36	34
2	120	36	64	25	24	93	110	71	22	22	38	30
3	89	39	69	26	24	87	109	65	22	22	50	27
4	68	39	62	25	23	93	101	58	21	37	142	29
5	58	43	58	24	23	118	95	53	22	170	105	29
6	53	40	54	24	23	155	85	48	25	162	63	28
7	66	37	51	23	23	218	77	46	24	167	47	26
8	66	37	48	23	23	237	72	47	23	315	39	26
9	68	35	46	23	23	245	69	44	23	313	35	27
10	67	35	45	23	23	232	66	39	22	275	33	25
11	58	36	41	23	23	211	61	57	22	260	47	24
12	53	36	39	24	23	195	71	67	24	237	44	25
13	48	59	39	24	23	196	106	53	26	201	85	23
14	46	57	39	23	23	185	100	46	24	204	101	23
15	44	61	40	22	23	175	98	43	23	219	70	23
16	46	57	40	22	24	158	93	42	22	190	50	23
17	44	51	40	22	24	143	82	41	21	188	41	22
18	44	47	40	22	27	129	73	37	20	190	41	22
19	45	44	40	22	101	118	65	34	21	174	41	22
20	52	43	39	22	356	117	58	33	27	160	51	21
21	59	41	38	22	468	165	55	32	25	139	51	21
22	59	39	35	22	435	202	51	29	22	110	42	22
23	52	37	33	23	357	198	48	29	24	83	34	22
24	48	38	32	23	262	194	47	29	73	65	34	22
25	44	37	29	23	225	190	44	28	52	53	30	26
26	43	63	26	23	174	179	46	28	57	46	36	47
27	40	77	24	24	137	171	46	30	48	42	43	55
28	42	64	24	24	115	162	43	27	36	40	37	39
29	40	56	24	24	---	142	46	24	34	36	32	33
30	38	49	24	24	---	126	47	24	27	34	29	30
31	37	---	24	25	---	112	---	24	---	34	41	---
TOTAL	1779	1370	1252	724	3053	5048	2168	1292	854	4212	1568	826
MEAN	57.4	45.7	40.4	23.4	109	163	72.3	41.7	28.5	136	50.6	27.5
MAX	142	77	69	26	468	245	110	71	73	315	142	55
MIN	37	35	24	22	23	87	43	24	20	22	29	21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1994, BY WATER YEAR (WY)

	1993	1994	1993	1994	1993	1994	1993	1994	1993	1994	1993	1994
MEAN	57.4	45.7	62.5	54.7	78.4	152	245	71.0	99.8	157	49.3	68.4
MAX	57.4	45.7	84.6	86.0	109	163	418	100	171	178	50.6	109
(WY)	1994	1994	1993	1993	1994	1994	1993	1993	1993	1993	1994	1993
MIN	57.4	45.7	40.4	23.4	47.8	142	72.3	41.7	28.5	136	48.0	27.5
(WY)	1994	1994	1994	1994	1993	1993	1994	1994	1994	1994	1993	1994

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1993 - 1994
ANNUAL TOTAL	43873	24146	
ANNUAL MEAN	120	66.2	66.2
HIGHEST ANNUAL MEAN			66.2
LOWEST ANNUAL MEAN			66.2
HIGHEST DAILY MEAN	1130	468	1130
LOWEST DAILY MEAN	24	20	20
ANNUAL SEVEN-DAY MINIMUM	25	22	22
INSTANTANEOUS PEAK FLOW		481	1170
INSTANTANEOUS PEAK STAGE		9.39	11.55
INSTANTANEOUS LOW FLOW		18	18
10 PERCENT EXCEEDS	281	166	225
50 PERCENT EXCEEDS	67	41	58
90 PERCENT EXCEEDS	36	23	24

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 mi<sup>2</sup>.

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 period, Jan. 5 to Feb. 15. Records good except those for ice-affected period, which is fair. There is occasional regulation from mill dam 1.0 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	201	54	59	32	33	160	143	83	27	28	79	50
2	180	55	76	33	33	149	145	88	24	23	57	44
3	150	56	94	34	33	143	142	80	22	21	108	39
4	127	60	83	35	32	155	133	68	21	102	177	39
5	112	59	78	35	32	182	127	60	27	217	145	39
6	106	56	74	35	32	242	119	55	27	246	95	40
7	113	51	72	33	32	324	111	52	26	315	72	39
8	115	51	67	33	32	342	104	51	24	405	60	49
9	111	54	64	33	32	335	100	57	24	394	54	41
10	109	53	61	34	32	306	99	57	25	323	56	36
11	105	53	54	34	32	275	88	89	28	279	67	34
12	96	57	56	34	32	255	101	108	24	250	64	35
13	88	79	54	34	33	252	135	85	27	213	120	36
14	81	91	52	33	36	241	134	70	23	274	135	37
15	77	84	54	32	38	228	129	72	18	266	107	38
16	77	77	54	31	43	209	127	69	19	224	79	38
17	75	66	57	31	43	193	114	60	20	206	65	34
18	75	56	53	31	51	175	102	56	20	208	70	30
19	76	52	52	31	200	162	84	49	18	189	65	29
20	82	50	53	31	550	160	65	45	21	181	73	29
21	86	49	55	31	613	221	62	44	25	160	75	31
22	90	48	48	31	557	267	59	39	23	134	64	30
23	78	46	46	32	406	257	53	36	39	109	53	29
24	73	46	42	32	349	242	50	39	80	85	53	30
25	69	44	39	32	333	231	50	37	65	71	50	32
26	68	71	36	32	260	219	49	34	66	63	64	61
27	65	101	34	33	215	209	49	34	54	57	65	75
28	61	87	32	34	182	202	51	34	39	59	54	54
29	63	76	32	34	---	185	46	30	35	59	48	45
30	61	66	31	34	---	165	59	27	31	51	52	41
31	55	---	31	34	---	152	---	27	---	47	58	---
TOTAL	2925	1848	1693	1018	4296	6838	2830	1735	922	5259	2384	1184
MEAN	94.4	61.6	54.6	32.8	153	221	94.3	56.0	30.7	170	76.9	39.5
MAX	201	101	94	35	613	342	145	108	80	405	177	75
MIN	55	44	31	31	32	143	46	27	18	21	48	29
CFSM	.75	.49	.43	.26	1.22	1.75	.75	.44	.24	1.35	.61	.31
IN.	.86	.55	.50	.30	1.27	2.02	.84	.51	.27	1.55	.70	.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1994, BY WATER YEAR (WY)

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994							
MEAN	76.0	83.9	85.7	63.1	85.8	201	214	119	80.8	73.4	56.5	77.3	346	303	207	188	213	451	598	371	265	271	146	385	1987	1986	1992	1973	1984	1974	1993	1990	1993	1993	1980	1986			
MAX	346	303	207	188	213	451	598	371	265	271	146	385	1987	1986	1992	1973	1984	1974	1993	1990	1993	1993	1980	1986	6.44	8.14	4.80	6.35	6.26	22.5	53.4	26.6	19.0	9.33	8.23	6.44	1963	1963	1963
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	1963	1964	1964	1964	1964	1968	1963	1977	1964	1963	1963	1963															

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1963 - 1994	
ANNUAL TOTAL	65572	32932		
ANNUAL MEAN	180	90.2	103	
HIGHEST ANNUAL MEAN			193	1993
LOWEST ANNUAL MEAN			31.6	1964
HIGHEST DAILY MEAN	1490	Apr 21	2160	Apr 22 1973
LOWEST DAILY MEAN	31	Dec 30,31	3.2	(a)Dec 29-31 1963
ANNUAL SEVEN-DAY MINIMUM	34	Dec 25	3.3	Dec 26 1963
INSTANTANEOUS PEAK FLOW		800	2260	Apr 22 1973
INSTANTANEOUS PEAK STAGE		5.45	7.42	Apr 22 1973
ANNUAL RUNOFF (CFSM)	1.43	.72	.82	
ANNUAL RUNOFF (INCHES)	19.36	9.72	11.14	
10 PERCENT EXCEEDS	418	211	227	
50 PERCENT EXCEEDS	110	57	62	
90 PERCENT EXCEEDS	52	31	17	

(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.

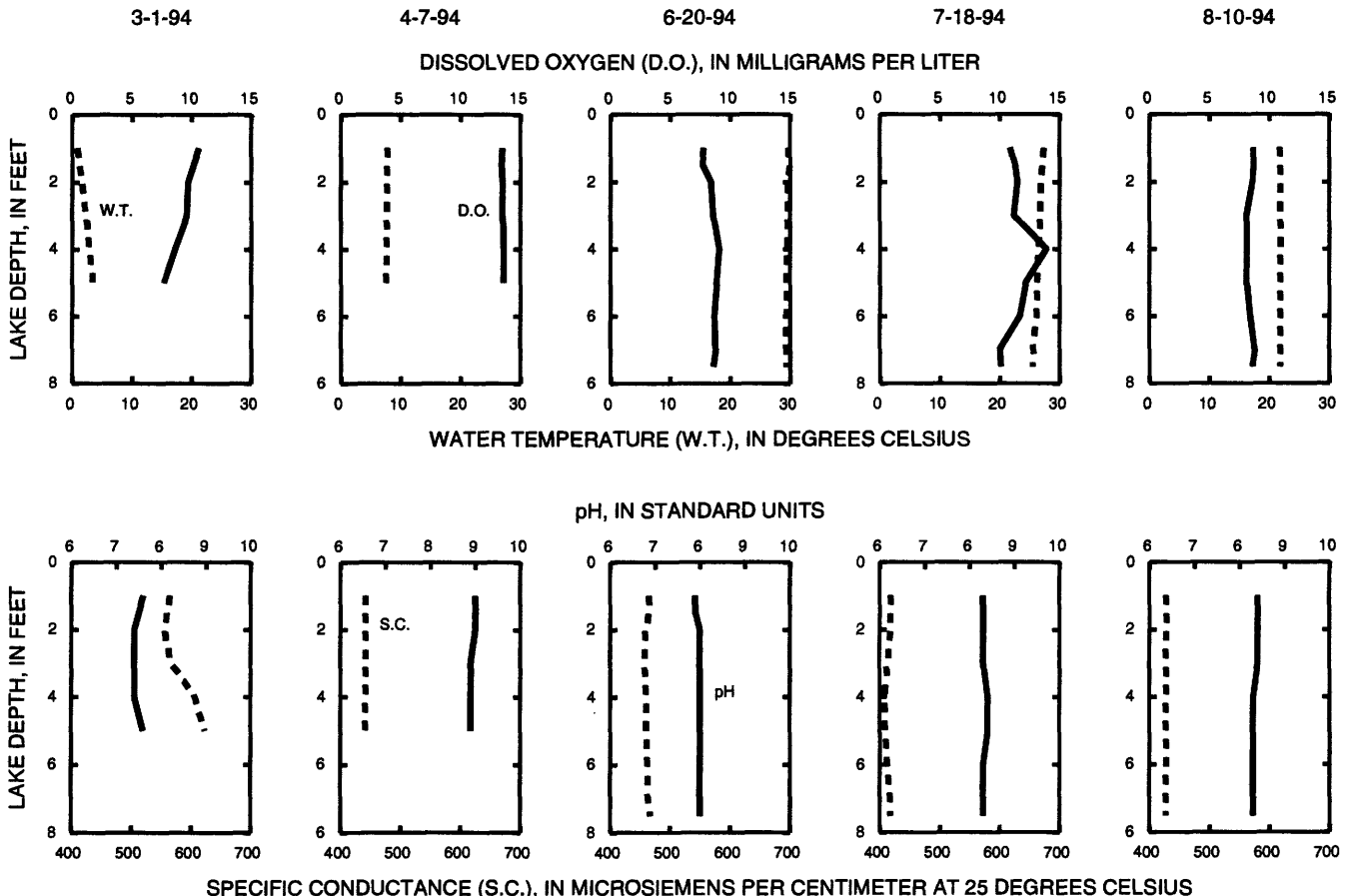
DRAINAGE AREA.--33.2 mi<sup>2</sup>.

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

WATER-QUALITY DATA, MARCH 01 TO AUGUST 10, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 01		Apr. 07		June 20		July 18		Aug. 10	
Depth of sample (ft)	1.0	5.0	1.5	4.0	1.5	7.5	1.5	7.5	1.5	7.5
Lake stage (ft)	9.36		9.56		9.52		9.53		9.56	
Specific conductance (µS/cm)	565	623	442	442	465	467	419	417	428	427
pH (units)	7.6	7.6	9.0	8.9	7.9	8.0	8.3	8.3	8.4	8.3
Water temperature (°C)	1.0	3.5	8.0	7.5	29.5	29.5	27.5	25.5	22.0	22.0
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.3	1.2	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.7		1.2		1.1		1.4	
Dissolved oxygen	10.6	7.7	13.4	13.6	7.8	8.6	10.9	10.1	8.7	8.6
Hardness, as CaCO <sub>3</sub>	---	---	230	230	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	51	51	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	26	26	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	5.0	5.0	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	1	1	---	---	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	210	210	---	---	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	15	15	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	12	12	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	5.0	4.9	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	248	252	---	---	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	1.1	1.1	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	<0.00	<0.00	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.30	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.4	1.5	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.009	0.009	0.012	0.030	0.019	0.021	0.017	0.018
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	6.4	---	4.3	---	10	---	9.7	---



ILLINOIS RIVER BASIN

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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 mi<sup>2</sup>.

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.--Estimated daily discharges: Jan. 8-11 and 15-24. Records good except those for estimated daily discharges, which are fair. Discharge affected by manipulation of gates at dams 800 ft and 11.4 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	43	74	45	45	50	78	55	36	30	22	21
2	87	25	74	45	44	55	76	56	33	12	20	22
3	82	19	52	44	42	58	72	54	23	13	27	23
4	31	26	14	44	42	58	29	55	17	16	94	25
5	9.7	34	20	42	44	58	11	57	18	25	108	25
6	13	38	54	31	44	62	15	57	20	29	102	29
7	18	41	64	10	44	43	19	51	20	37	93	28
8	44	69	63	11	46	48	23	49	26	138	37	26
9	54	74	62	13	47	117	31	48	28	109	13	54
10	49	65	62	18	46	128	35	50	24	39	16	62
11	46	61	60	21	46	109	71	59	22	23	25	57
12	46	55	59	25	47	73	88	62	22	24	62	27
13	45	62	58	26	47	63	88	62	24	24	127	15
14	43	62	53	26	47	67	85	60	22	65	141	15
15	43	64	50	26	46	69	82	58	24	79	155	15
16	43	64	49	25	46	68	77	57	26	74	125	14
17	44	63	47	24	43	66	72	55	29	69	102	14
18	44	61	48	23	58	65	55	51	26	67	66	16
19	46	62	50	22	82	66	41	49	21	32	58	17
20	48	59	54	22	167	67	43	47	25	21	58	17
21	58	58	54	24	196	75	43	45	25	23	59	17
22	50	30	54	30	188	82	40	27	22	25	62	16
23	51	22	54	35	178	108	33	27	40	26	61	17
24	57	25	53	42	164	124	35	26	74	27	58	18
25	56	55	52	47	146	111	33	26	69	28	52	20
26	57	89	50	49	129	102	34	38	63	27	33	23
27	56	93	50	55	118	98	41	37	67	25	21	28
28	55	90	48	59	79	95	41	36	65	25	68	29
29	50	84	48	59	---	84	60	37	61	23	70	56
30	46	77	47	57	---	79	58	38	56	22	41	78
31	44	---	46	49	---	80	---	39	---	21	19	---
TOTAL	1511.7	1670	1623	1049	2271	2428	1509	1468	1028	1198	1995	824
MEAN	48.8	55.7	52.4	33.8	81.1	78.3	50.3	47.4	34.3	38.6	64.4	27.5
MAX	96	93	74	59	196	128	88	62	74	138	155	78
MIN	9.7	19	14	10	42	43	11	26	17	12	13	14
CFSM	.66	.75	.71	.46	1.09	1.06	.68	.64	.46	.52	.87	.37
IN.	.76	.84	.81	.53	1.14	1.22	.76	.74	.52	.60	1.00	.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1994, BY WATER YEAR (WY)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
MEAN	49.7	58.1	57.4	46.6	54.1	81.2	80.7	63.6	50.9	45.2	44.6	50.3											
MAX	98.7	110	83.7	77.8	83.7	151	150	155	138	80.8	83.5	88.7											
(WY)	1987	1986	1983	1974	1974	1974	1993	1975	1975	1993	1979	1986											
MIN	25.5	29.2	26.2	22.8	31.1	43.9	43.3	16.9	14.4	13.3	18.5	23.5											
(WY)	1990	1977	1990	1977	1978	1981	1977	1977	1988	1988	1991	1976											

SUMMARY STATISTICS

	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1973 - 1994	
ANNUAL TOTAL	27160.7		18574.7			
ANNUAL MEAN	74.4		50.9		56.7	
HIGHEST ANNUAL MEAN					90.3	
LOWEST ANNUAL MEAN					30.8	
HIGHEST DAILY MEAN	264	Apr 21	196	Feb 21	275	Mar 6 1974
LOWEST DAILY MEAN	9.7	Oct 5	9.7	Oct 5	1.8	Dec 23 1975
ANNUAL SEVEN-DAY MINIMUM	23	Sep 6	15	Sep 13	6.8	Oct 31 1988
INSTANTANEOUS PEAK FLOW			199	Feb 21	(a)300	Mar 5 1976
INSTANTANEOUS PEAK STAGE			3.06	Feb 21	3.55	Sep 29 1986
ANNUAL RUNOFF (CFSM)	1.00		.69		.77	
ANNUAL RUNOFF (INCHES)	13.64		9.32		10.40	
10 PERCENT EXCEEDS	126		84		104	
50 PERCENT EXCEEDS	63		47		48	
90 PERCENT EXCEEDS	33		20		22	

(a) Gage height, 2.50 ft, datum then in use

ILLINOIS RIVER BASIN

424854088123300 TICHIGAN LAKE NEAR WATERFORD, WI

LOCATION.--Lat 42°48'54" long 88°12'33", in SE 1/4 SE 1/4 sec.11, T.4 N., R.19 E., Racine County, Hydrologic Unit 07120006, 3.5 mi north of Waterford.

PERIOD OF RECORD.--March to August 1994.

REMARKS.--Lake sampled near center at a lake depth of about 60 ft. Lake ice-covered during March sampling. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MARCH 01 TO AUGUST 08, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 01		Apr. 19		June 08		July 06		Aug. 08	
Depth of sample (ft)	3.0	62	1.5	60	1.5	46	1.5	60	1.5	59
Lake stage (ft)	---		4.92		4.61		5.15		4.98	
Specific conductance (µS/cm)	732	930	726	741	752	760	740	795	712	814
pH (units)	7.7	7.2	8.6	8.4	8.4	7.6	8.3	7.2	8.4	7.2
Water temperature (°C)	2.0	3.0	11.0	8.5	20.5	10.0	28.0	9.0	23.5	9.0
Color (Pt-Co. scale)	---	---	20	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	2.4	2.0	---	---	---	---	---	---
Secchi-depth (meters)	---	---	0.9		2.7		1.2		2.4	
Dissolved oxygen	7.2	0.5	12.5	11.7	9.1	0.1	11.1	1.2	9.0	1.0
Hardness, as CaCO3	---	---	280	280	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	57	58	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	34	34	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	43	43	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	240	240	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	38	37	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	80	81	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.2	0.2	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	<0.2	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	450	448	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.60	0.61	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.03	0.18	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.0	1.0	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.6	1.6	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.061	0.057	0.051	0.270	0.036	0.690	0.026	0.875
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.006	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton(µg/L)	---	---	35	---	8.0	---	11	---	9.6	---

3-1-94

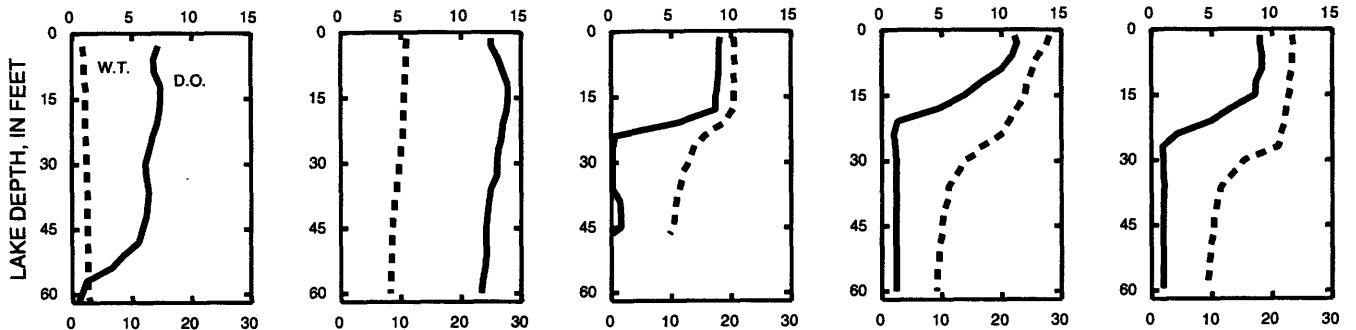
4-19-94

6-8-94

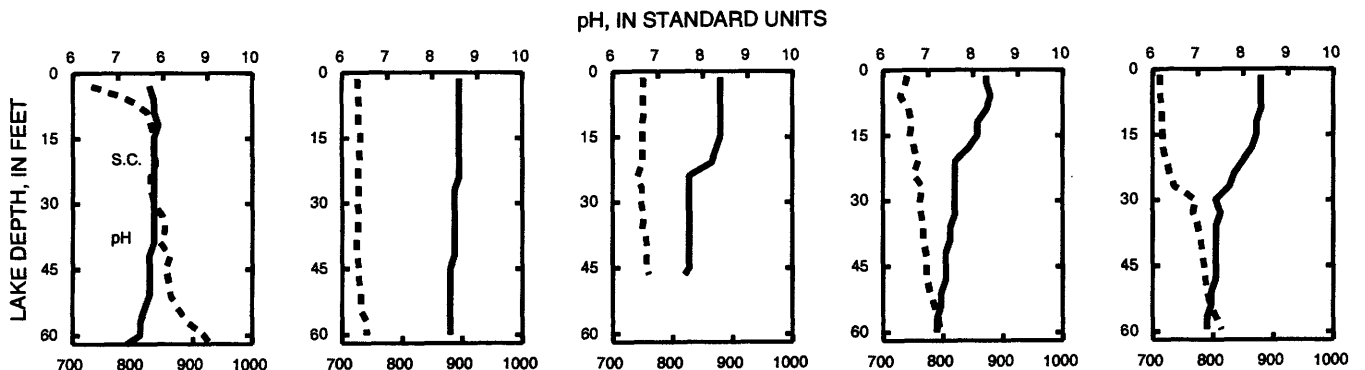
7-6-94

8-8-94

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



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



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

425425088083500 LITTLE MUSKEGO LAKE AT MUSKEGO, WI

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 mi<sup>2</sup>.

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; the system has been shut off since 1992. During the years the system was operating the lake's physical and chemical measurements may have been disrupted. Water-quality analyses by Wisconsin State Laboratory of Hygiene. Lake ice-covered during February sampling. Published previously as station number 425450088083500.

WATER-QUALITY DATA, FEBRUARY 25 TO AUGUST 09, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 25		Apr. 13		June 09		July 07		Aug. 09	
Depth of sample (ft)	3.0	63	1.5	64	1.5	66	1.5	66	1.5	66
Lake stage (ft)	---	---	98.74	---	98.67	---	98.92	---	98.88	---
Specific conductance (µS/cm)	653	793	661	667	662	695	619	705	587	705
pH (units)	8.1	7.7	8.4	8.3	8.4	7.5	8.6	7.5	8.6	7.3
Water temperature (°C)	2.5	3.0	7.0	6.0	20.5	9.5	26.5	9.5	22.5	10.0
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.8	1.8	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	1.3	1.8	---	2.2	---	2.2	---
Dissolved oxygen	10.6	4.5	13.0	12.5	9.4	1.0	9.6	1.0	8.5	0.9
Hardness, as CaCO <sub>3</sub>	---	---	260	260	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	52	52	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	31	31	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	41	40	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	210	210	---	---	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	32	32	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	75	75	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	1.4	1.7	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	376	378	---	---	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	0.16	0.18	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.02	0.05	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.1	0.60	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.3	0.78	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.025	0.020	0.018	0.129	0.019	0.160	0.020	0.220
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)	---	---	25	---	7.5	---	4.4	---	5.9	---

2-25-94

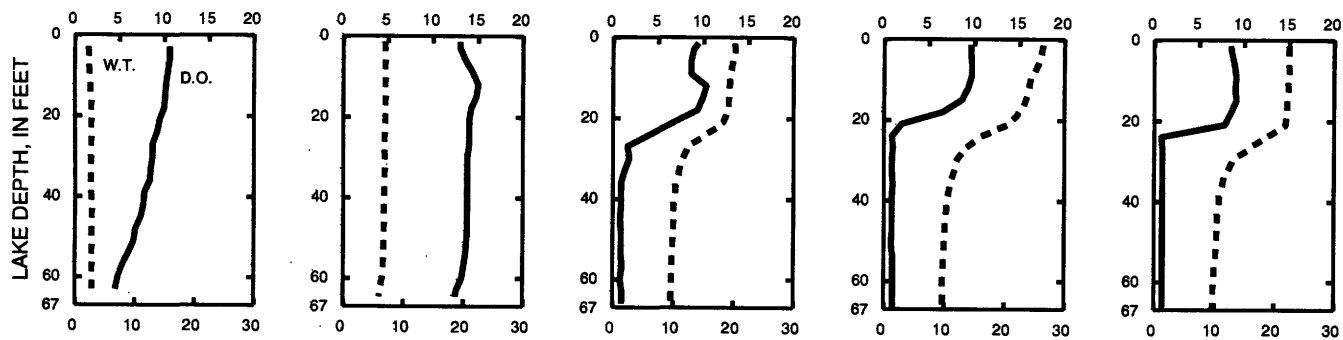
4-13-94

6-9-94

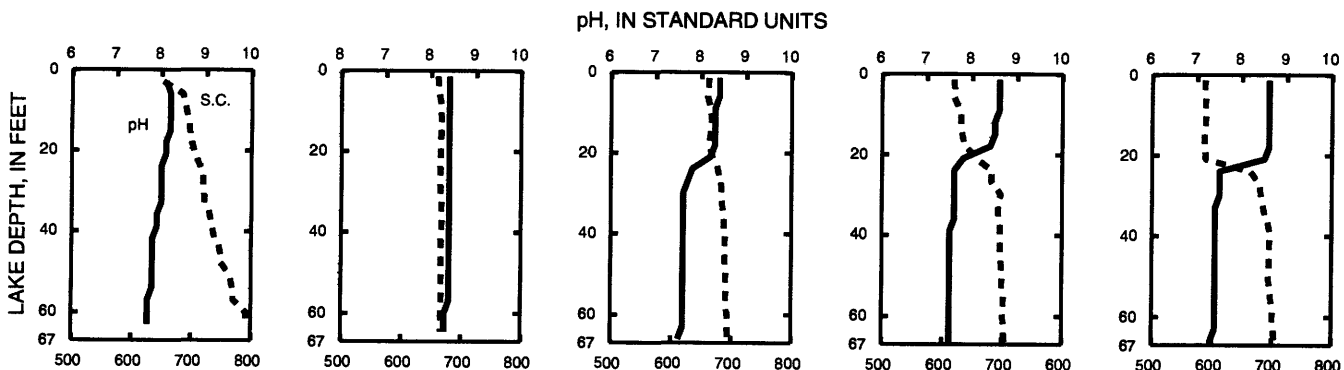
7-7-94

8-9-94

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

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 28 TO AUGUST 11, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 28		Apr. 19		June 15		July 11		Aug. 11	
Depth of sample (ft)	3.0	24	1.5	24	1.5	22	1.5	22	1.5	22
Lake stage (ft)	---	---	---	---	11.26	---	11.71	---	11.85	---
Specific conductance (µS/cm)	534	577	461	463	486	524	472	542	477	476
pH (units)	7.8	7.5	8.9	8.8	8.6	7.5	8.1	7.0	8.1	8.1
Water temperature (°C)	3.0	3.5	11.5	10.5	24.5	18.0	24.0	19.5	21.5	21.5
Secchi-depth (meters)	---	---	---	0.6	---	---	---	1.6	---	1.0
Dissolved oxygen	9.9	1.1	13.8	11.5	10.1	0.0	7.3	0.6	5.7	5.4
Phosphorus, total (as P)	---	---	0.093	0.080	0.066	0.176	0.045	0.300	0.059	0.075
Chlorophyll a, phytoplankton(µg/L)	---	---	68	---	23	---	9.4	---	28	---

2-28-94

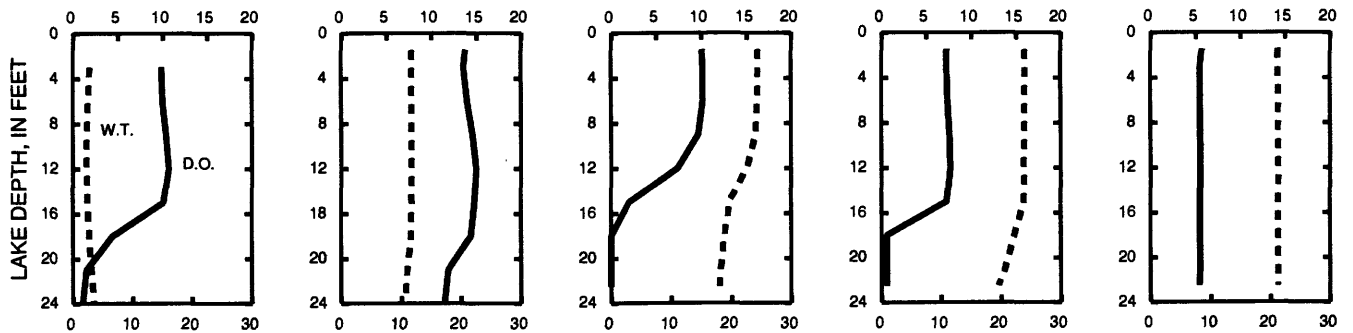
4-19-94

6-15-94

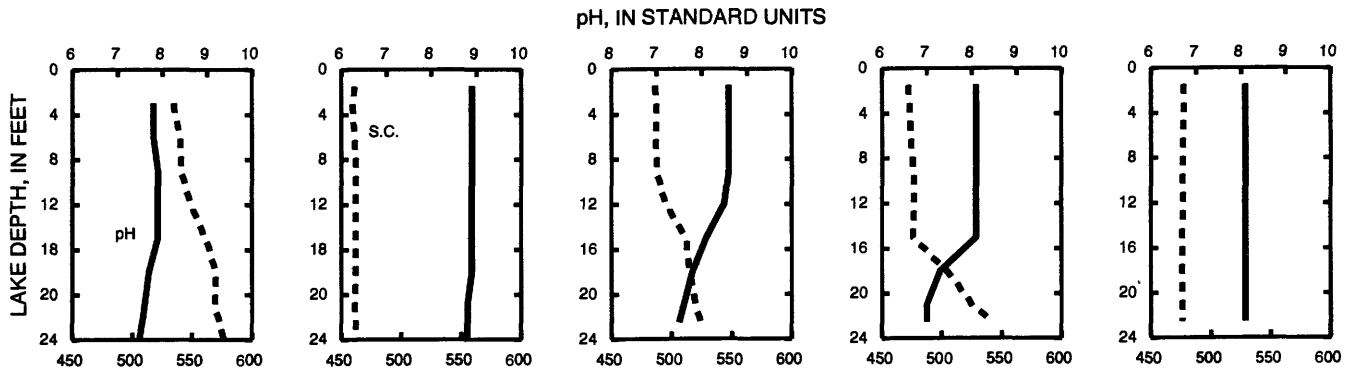
7-11-94

8-11-94

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

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 mi<sup>2</sup>.

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 28 TO AUGUST 11, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 28		Apr. 19	Aug. 11	
Depth of sample (ft)	0.5	2.5	0.5	0.5	2.0
Lake stage (ft)	---	---	---	11.85	---
Specific conductance (µS/cm)	456	465	450	422	422
pH (units)	7.4	7.5	8.5	9.0	9.0
Water temperature (°C)	2.5	1.5	15.5	17.0	17.0
Color (Pt-Co. scale)	---	---	20	---	---
Turbidity (NTU)	---	---	15	---	---
Secchi-depth (meters)	---	---	0.3	0.3	---
Dissolved oxygen	6.2	5.7	11.4	7.2	6.8
Hardness, as CaCO <sub>3</sub>	---	---	190	---	---
Calcium, dissolved (Ca)	---	---	38	---	---
Magnesium, dissolved (Mg)	---	---	22	---	---
Sodium, dissolved (Na)	---	---	20	---	---
Potassium, dissolved (K)	---	---	2	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	160	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	27	---	---
Chloride, dissolved (Cl)	---	---	38	---	---
Fluoride, dissolved (F)	---	---	0.2	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	<0.2	---	---
Solids, dissolved, at 180°C	---	---	276	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	<0.01	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.1	---	---
Nitrogen, total (as N)	---	---	1.1	---	---
Phosphorus, total (as P)	---	---	0.109	0.099	0.104
Phosphorus, ortho, dissolved (as P)	---	---	0.002	0.002	0.004
Iron, dissolved (Fe) µg/L	---	---	<50	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	46	25	---





## ILLINOIS RIVER BASIN

319

425109088075000 BIG MUSKEGO LAKE NEAR WIND LAKE, WI

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 07120006, 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.

DRAINAGE AREA.--28.3 mi<sup>2</sup>.

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. Formerly called Muskego Lake Outlet near Wind Lake, WI.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 12.60 ft, Oct. 7, 1991 and Aug. 8, 1994; minimum instantaneous, 9.81 ft, Sept. 20, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage-height, 12.60 ft, Aug. 8; minimum observed, 11.20 ft, June 20, 27.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	11.60	---	---	---	---	---	---	---	---	11.66	---
2	---	---	---	---	---	---	---	11.60	---	---	---	---
3	---	---	---	11.64	---	---	---	---	---	---	---	---
4	11.72	---	---	---	---	---	11.62	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	11.38	---	11.70
6	---	---	11.68	---	---	---	---	---	11.40	---	---	---
7	---	---	---	---	11.62	11.95	---	---	---	---	---	---
8	---	11.60	---	---	---	---	---	---	---	---	12.60	---
9	---	---	---	---	---	---	---	11.68	---	---	---	---
10	---	---	---	11.62	---	---	---	---	---	---	---	---
11	11.57	---	---	---	---	---	11.62	---	---	11.71	11.85	---
12	---	---	---	---	---	---	---	---	---	---	---	11.60
13	---	---	11.62	---	---	---	---	---	11.28	---	---	---
14	---	---	---	---	11.62	12.00	---	---	---	---	---	---
15	---	11.70	---	---	---	---	---	---	11.26	---	12.40	---
16	---	---	---	---	---	---	---	11.66	---	---	---	---
17	---	---	---	11.62	---	---	---	---	---	---	---	---
18	11.59	---	---	---	---	---	11.62	---	---	11.60	---	---
19	---	---	---	---	---	---	---	---	---	---	---	11.60
20	---	---	11.70	---	---	---	---	---	11.20	---	---	---
21	---	---	---	---	12.10	11.90	---	---	---	---	---	---
22	---	11.70	---	---	---	---	---	---	---	---	12.20	---
23	---	---	---	---	---	---	---	11.60	---	---	---	---
24	---	---	---	11.62	---	---	---	---	---	---	---	---
25	11.50	---	---	---	---	---	11.64	---	---	11.64	---	---
26	---	---	---	---	---	---	---	---	---	---	---	11.62
27	---	---	11.68	---	---	---	---	---	11.20	---	---	---
28	---	---	---	---	12.05	11.87	---	---	---	---	---	---
29	---	11.70	---	---	---	---	---	---	---	---	11.90	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	11.62	---	---	---	11.58	---	---	---	---

424915088083900 WIND LAKE AT WIND LAKE, WI

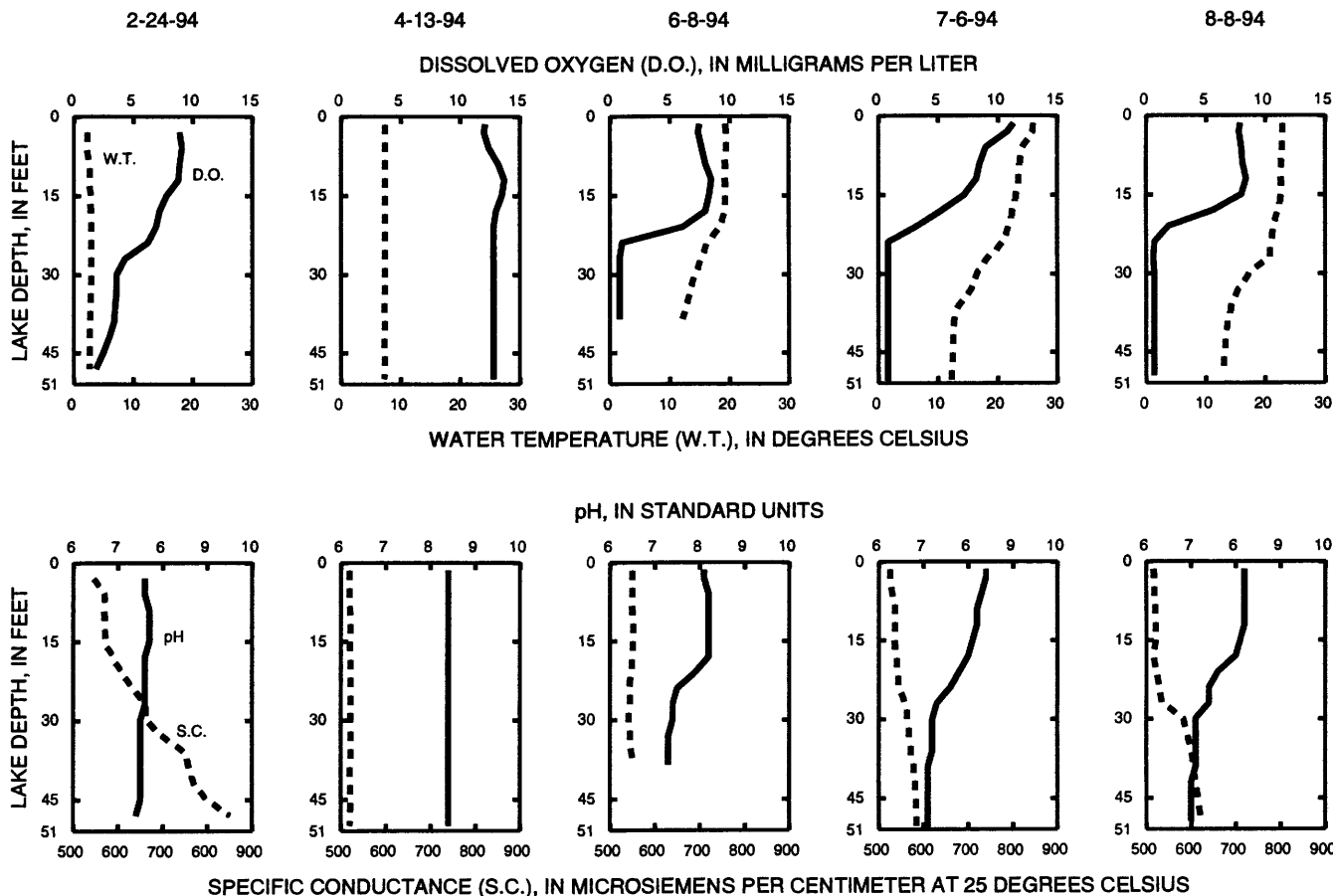
LOCATION.--Lat 42°49'15", long 88°08'39", in NW 1/4 SW 1/4 sec.9, T.4 N., R.20 E., Racine County, Hydrologic Unit 07120006, at Wind Lake.

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 24 TO AUGUST 08, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 24		Apr. 13		June 08		July 06		Aug. 08	
Depth of sample (ft)	3.0	48	1.5	50	1.5	38	1.5	50	1.5	49
Lake stage (ft)	8.17		8.01		7.85		7.73		8.25	
Specific conductance (µS/cm)	547	850	519	520	549	553	525	584	517	622
pH (units)	7.6	7.4	8.4	8.4	8.1	7.3	8.4	7.1	8.2	7.0
Water temperature (°C)	2.5	2.5	7.5	7.5	19.5	12.0	26.0	12.5	23.0	13.0
Color (Pt-Co. scale)	---	---	30	30	---	---	---	---	---	---
Turbidity (NTU)	---	---	2.3	2.8	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	1.1	1.6	---	0.8	---	1.0	---
Dissolved oxygen	8.9	1.9	12.1	12.8	7.5	0.8	11.3	0.8	7.9	0.7
Hardness, as CaCO3	---	---	210	220	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	44	45	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	25	25	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	25	25	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	170	170	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	30	30	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	47	47	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.2	0.2	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	<0.2	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	308	308	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.26	0.39	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.14	0.13	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.5	1.5	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.8	1.9	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.070	0.055	0.041	0.214	0.051	0.410	0.033	0.428
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)	---	---	32	---	5.9	---	36	---	19	---



## ILLINOIS RIVER BASIN

321

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 mi<sup>2</sup>.

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. 22 to Mar. 25. 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, 8.52 ft, Oct. 11; minimum recorded, 6.60 ft, Mar. 5, 6.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.69	7.73	7.49	7.06	7.81	7.47	7.49	8.26	7.95	7.77	8.18	8.23
2	7.81	7.71	7.47	7.07	7.83	7.11	7.59	8.27	7.93	7.76	8.18	8.19
3	7.92	7.72	7.43	7.10	7.88	6.84	7.69	8.27	7.90	7.74	8.19	8.18
4	8.03	7.72	7.39	7.12	7.91	6.71	7.75	8.26	7.88	7.71	8.32	8.19
5	8.13	7.73	7.34	7.14	7.93	6.64	7.82	8.25	7.87	7.72	8.36	8.19
6	8.22	7.73	7.33	7.20	7.94	6.63	7.87	8.25	7.88	7.74	8.34	8.20
7	8.31	7.71	7.33	7.23	7.97	6.79	7.88	8.27	7.87	7.85	8.30	8.20
8	8.39	7.71	7.33	7.24	8.02	7.00	7.89	8.26	7.84	7.90	8.25	8.20
9	8.46	7.71	7.32	7.26	8.05	7.16	7.89	8.22	7.81	7.94	8.25	8.19
10	8.49	7.71	7.34	7.28	8.07	7.31	7.90	8.20	7.80	7.98	8.27	8.19
11	8.42	7.71	7.32	7.31	8.08	7.43	7.91	8.17	7.80	7.99	8.36	8.19
12	8.25	7.71	7.32	7.33	8.12	7.54	7.96	8.19	7.78	8.03	8.36	8.19
13	8.22	7.74	7.31	7.35	8.18	7.65	8.00	8.18	7.80	8.05	8.41	8.18
14	8.20	7.77	7.30	7.36	8.19	7.75	8.03	8.16	7.81	8.10	8.35	8.18
15	8.20	7.82	7.30	7.38	8.21	7.85	8.03	8.14	7.78	8.14	8.27	8.18
16	8.21	7.82	7.29	7.40	8.23	7.87	8.02	8.13	7.77	8.16	8.17	8.18
17	8.21	7.84	7.27	7.44	8.24	7.78	8.05	8.11	7.77	8.20	8.16	8.18
18	8.20	7.85	7.27	7.45	8.25	7.67	8.06	8.11	7.76	8.22	8.22	8.15
19	8.20	7.86	7.25	7.47	8.28	7.53	8.07	8.10	7.74	8.23	8.27	8.14
20	8.20	7.87	7.23	7.48	8.28	7.40	8.07	8.09	7.75	8.25	8.25	8.13
21	8.18	7.87	7.22	7.50	8.30	7.38	8.07	8.08	7.75	8.26	8.20	8.09
22	8.18	7.88	7.20	7.51	8.26	7.33	8.07	8.07	7.73	8.28	8.17	8.07
23	8.21	7.90	7.18	7.53	8.25	7.28	8.05	8.07	7.74	8.28	8.13	8.07
24	8.25	7.92	7.15	7.55	8.15	7.19	8.06	8.06	7.83	8.28	8.15	8.07
25	8.29	7.86	7.13	7.56	8.22	7.17	8.09	8.05	7.81	8.28	8.17	8.08
26	8.32	7.82	7.10	7.58	8.14	7.11	8.13	8.04	7.83	8.28	8.22	8.09
27	8.30	7.75	7.07	7.64	8.14	7.08	8.16	8.03	7.83	8.28	8.24	8.11
28	8.13	7.69	7.04	7.70	7.83	7.09	8.19	8.00	7.81	8.25	8.25	8.11
29	8.03	7.63	7.02	7.73	---	7.19	8.20	7.98	7.80	8.20	8.24	8.11
30	7.93	7.56	7.03	7.76	---	7.30	8.23	7.97	7.78	8.18	8.24	8.11
31	7.82	---	7.05	7.78	---	7.40	---	7.96	---	8.18	8.26	---
MEAN	8.17	7.77	7.25	7.40	8.10	7.28	7.97	8.14	7.81	8.07	8.25	8.15
MAX	8.49	7.92	7.49	7.78	8.30	7.87	8.23	8.27	7.95	8.28	8.41	8.23
MIN	7.69	7.56	7.02	7.06	7.81	6.63	7.49	7.96	7.73	7.71	8.13	8.07

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.

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 24 TO AUGUST 09, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 24		Apr. 13		June 09		July 07		Aug. 09	
Depth of sample (ft)	3.0	48	1.5	51	1.5	52	1.5	52	1.5	52
Lake stage (ft)	---	---	---	6.77	---	7.06	---	7.18	---	7.55
Specific conductance (µS/cm)	422	507	458	462	466	488	441	499	423	503
pH (units)	8.2	7.5	8.2	8.1	8.5	7.4	8.3	7.4	8.6	7.3
Water temperature (°C)	1.5	3.0	7.0	6.5	20.0	9.5	26.0	10.0	22.5	10.0
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.1	1.00	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	2.1	---	1.2	---	2.0	---	1.8
Dissolved oxygen	13.6	1.4	12.2	11.8	10.1	0.6	8.9	0.5	9.0	0.0
Hardness, as CaCO3	---	---	210	210	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	41	41	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	25	25	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	15	15	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	170	170	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	30	30	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	31	31	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	0.9	1.1	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	270	270	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.18	0.18	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.06	0.10	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.90	0.90	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.1	1.1	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.029	0.026	0.041	0.252	0.016	0.290	0.016	0.337
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)	---	---	16	---	23	---	6.1	---	7.7	---

2-24-94

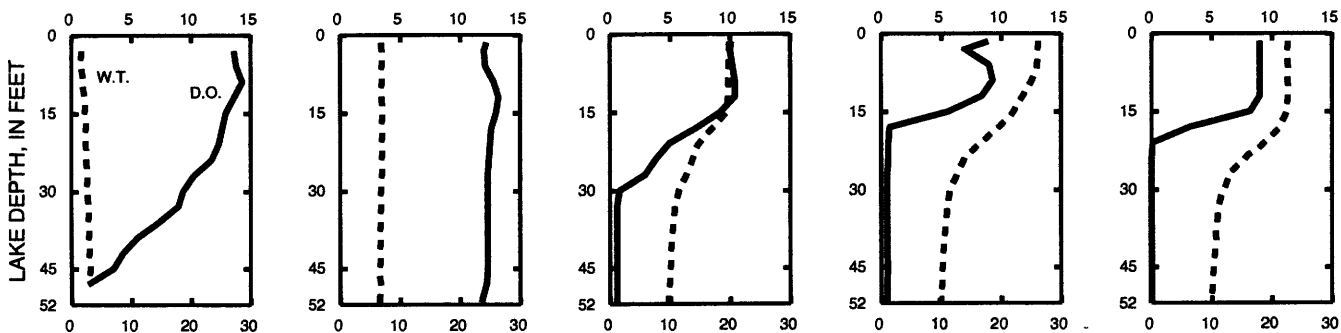
4-13-94

6-9-94

7-7-94

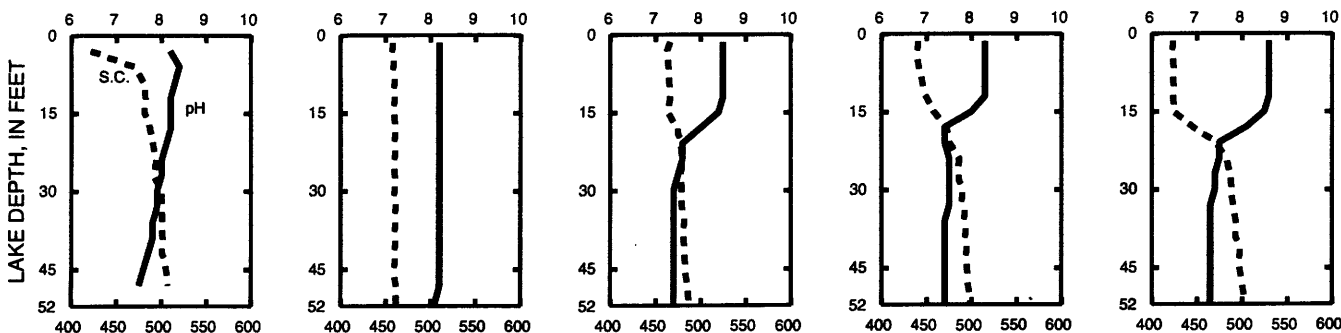
8-9-94

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



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

pH, IN STANDARD UNITS



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



WATER-QUALITY 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 24 TO AUGUST 09, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 24		Apr. 14		June 20		July 11		Aug. 09	
Depth of sample (ft)	3.0	24	1.5	26	1.5	25	1.5	25	1.5	25
Lake stage (ft)	5.91		5.62		5.20		5.22		5.17	
Specific conductance (µS/cm)	482	545	469	473	450	504	436	518	416	545
pH (units)	7.5	7.4	8.1	7.8	8.3	7.2	8.3	7.1	8.6	6.9
Water temperature (°C)	1.0	3.5	8.0	7.5	28.5	10.0	24.0	11.0	22.5	11.5
Color (Pt-Co. scale)	---	---	50	50	---	---	---	---	---	---
Turbidity (NTU)	---	---	2.1	2.4	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.2	---	1.9	---	1.8	---	1.9	---
Dissolved oxygen	6.4	1.0	10.9	8.6	8.4	0.5	7.8	0.4	8.8	0.4
Hardness, as CaCO3	---	---	230	230	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	50	50	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	25	25	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	11	11	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	---	3	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	190	190	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	23	22	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	23	23	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.2	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	1.1	1.5	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	288	288	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.04	0.05	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.03	0.13	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.1	1.4	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.1	1.4	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.043	0.047	0.023	0.300	0.027	0.390	0.022	0.596
Phosphorus, ortho, dissolved (as P)	---	---	0.006	0.005	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	73	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	23	---	6.0	---	14	---	8.4	---

2-24-94

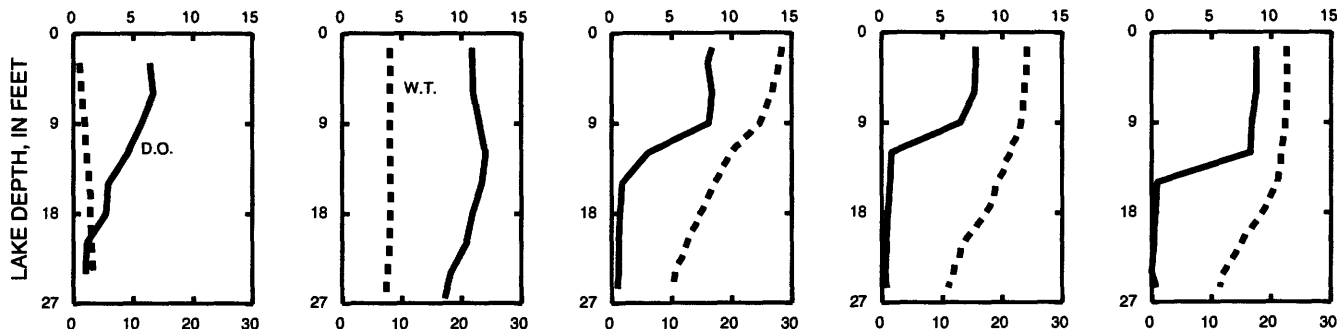
4-14-94

6-20-94

7-11-94

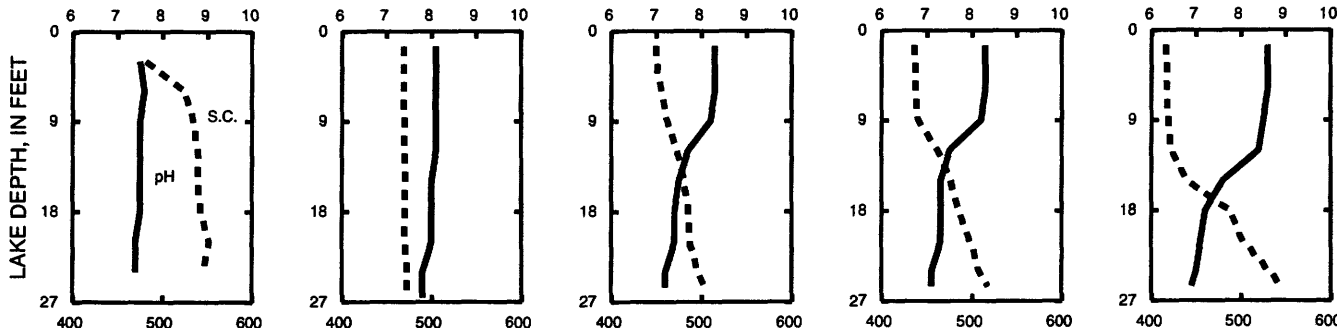
8-9-94

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

424857088101500 WAUBEESEE LAKE AT WIND LAKE, WI

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 mi<sup>2</sup>.

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 24 TO AUGUST 09, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 24		Apr. 14		June 09		July 07		Aug. 09	
Depth of sample (ft)	3.0	71	1.5	70	1.5	71	1.5	68	1.5	71
Lake stage (ft)	5.26		4.99		4.90		4.77		4.60	
Specific conductance (µS/cm)	380	503	449	452	458	459	439	460	422	463
pH (units)	7.7	7.5	8.2	7.9	8.3	7.4	8.4	7.4	8.5	7.4
Water temperature (°C)	2.5	3.5	7.5	5.5	20.5	6.5	27.5	7.0	22.5	7.0
Color (Pt-Co. scale)	---	---	30	20	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.00	1.00	---	---	---	---	---	---
Secchi-depth (meters)	---	---	3.5	---	3.6	---	2.4	---	2.8	---
Dissolved oxygen	12.3	2.2	11.8	10.3	9.0	0.4	8.1	0.1	7.7	0.2
Hardness, as CaCO <sub>3</sub>	---	---	210	220	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	44	45	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	25	25	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	12	12	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	170	170	---	---	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	30	30	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	24	24	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.2	---	---	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	1.1	1.4	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	272	268	---	---	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	0.15	0.17	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.05	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.90	0.80	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.0	0.97	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.015	0.014	0.017	0.142	0.017	0.080	0.010	0.093
Phosphorus, ortho, dissolved (as P)	---	---	0.004	0.001	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	5.6	---	4.2	---	3.9	---	3.3	---

2-24-94

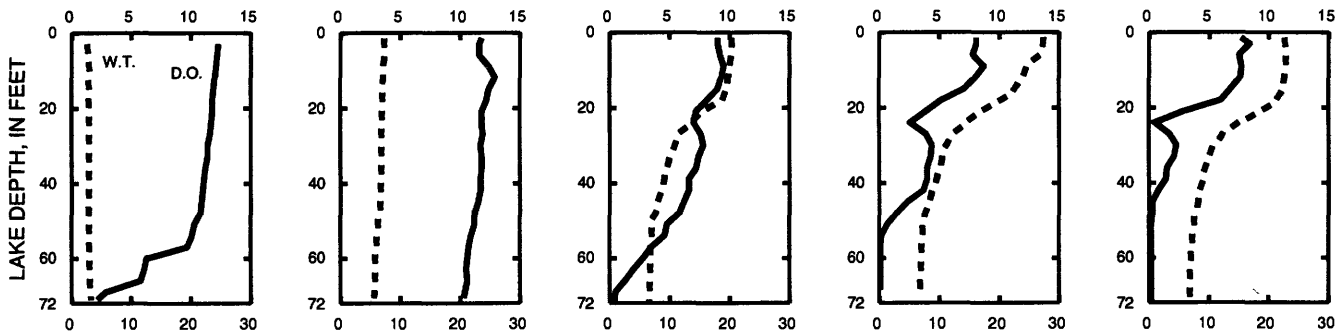
4-14-94

6-9-94

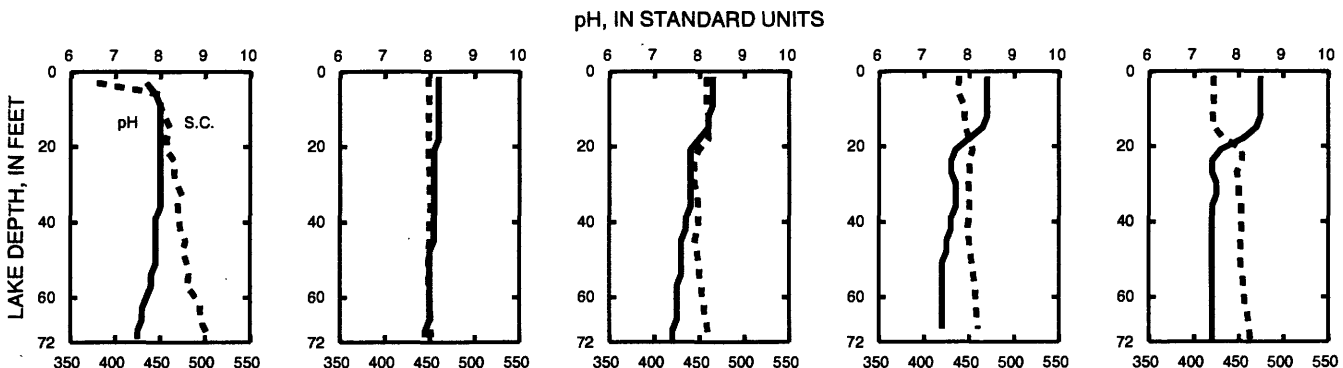
7-7-94

8-9-94

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

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.

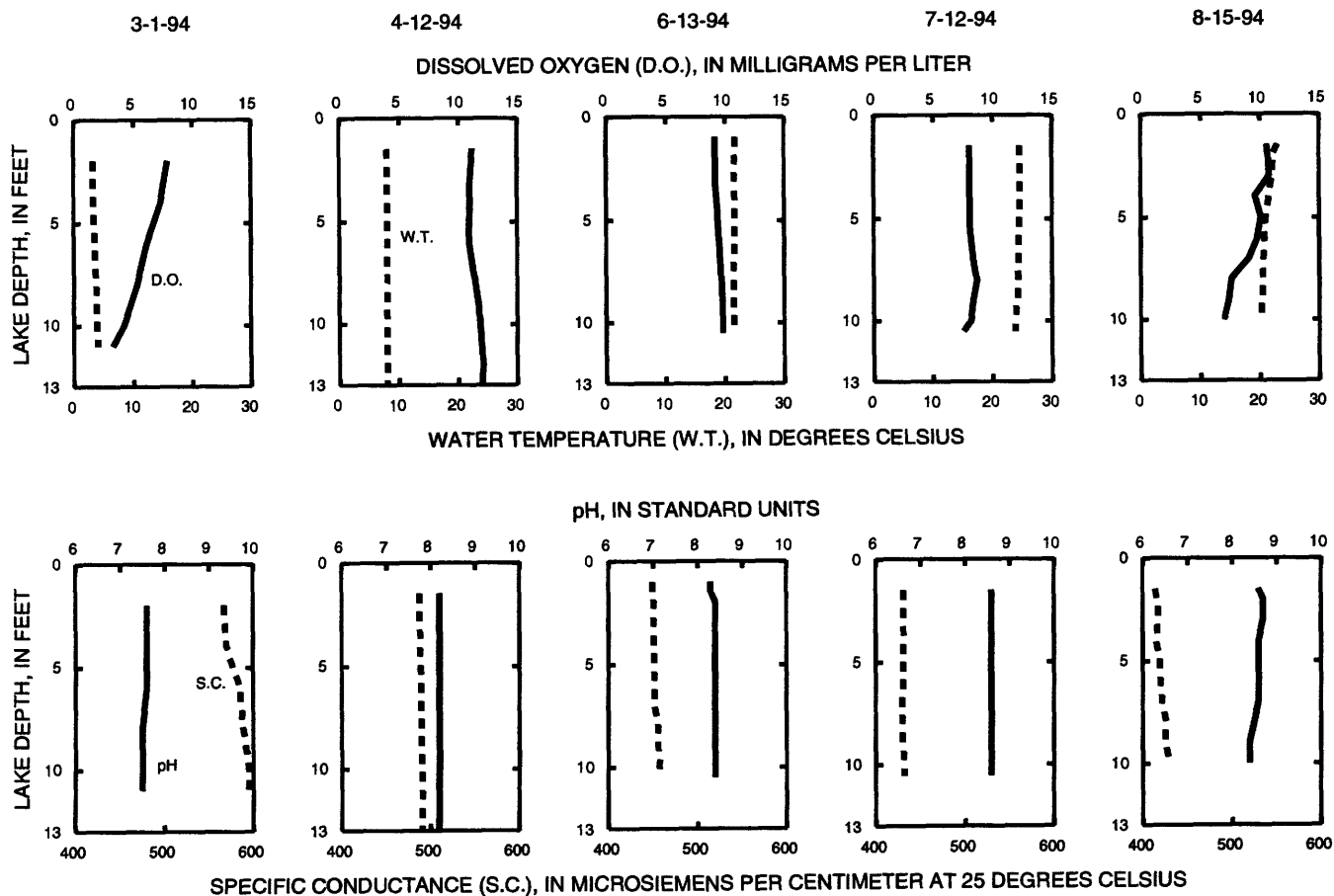
DRAINAGE AREA.--6.99 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1993 to current year.

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

WATER-QUALITY DATA, MARCH 01 TO AUGUST 15, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 01		Apr. 12		June 13		July 12		Aug. 15	
Depth of sample (ft)	2.0	11	1.5	13	1.5	10	1.5	10	1.5	10
Lake stage (ft)	---	---	11.46	---	---	---	10.92	---	10.90	---
Specific conductance (µS/cm)	567	595	487	491	450	459	431	432	414	429
pH (units)	7.6	7.5	8.2	8.2	8.3	8.4	8.6	8.6	8.6	8.4
Water temperature (°C)	3.5	4.0	8.0	8.0	22.0	21.5	24.5	24.0	23.0	23.0
Color (Pt-Co. scale)	---	---	20	20	---	---	---	---	---	---
Turbidity (NTU)	---	---	2.9	2.8	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	1.0	2.7	---	1.0	---	0.8	---
Dissolved oxygen	7.9	3.3	11.2	12.0	9.2	9.8	8.1	7.6	10.6	7.0
Hardness, as CaCO <sub>3</sub>	---	---	220	220	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	50	50	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	24	24	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	13	13	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	170	170	---	---	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	41	41	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	30	31	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.2	0.2	---	---	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	2.0	2.0	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	288	290	---	---	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	0.36	0.36	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.00	0.01	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	1.1	1.0	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	1.5	1.4	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.046	0.052	0.026	0.030	0.077	0.070	0.073	0.081
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)	---	---	12	---	1.8	---	19	---	16	---





## ILLINOIS RIVER BASIN

05544500 EAGLE LAKE NEAR KANSASVILLE, WI--CONTINUED

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	11.22	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	10.96	---	---	---	---	---	---	---	---	10.76	---
4	---	---	---	---	---	---	---	11.70	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	11.16	---	---	---	---	---	11.54	---	---	11.00	---	---
7	---	---	---	---	---	---	---	---	---	---	---	10.72
8	---	---	11.10	---	---	---	---	---	11.10	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	10.94	---	---	---	---	---	---	---	---	10.84	---
11	---	---	---	---	---	---	---	11.50	---	---	---	---
12	---	---	---	---	---	---	11.46	---	---	10.92	---	---
13	11.10	---	---	---	---	---	11.50	---	---	10.90	---	---
14	---	---	---	---	---	---	---	---	---	---	---	10.68
15	---	---	11.12	---	---	---	---	---	11.04	---	10.90	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	10.90	---	---	---	---	---	---	---	---	10.90	---
18	---	---	---	---	---	---	---	11.42	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	11.05	---	---	---	---	---	11.40	---	---	10.90	---	---
21	---	---	---	---	---	---	---	---	---	---	---	10.60
22	---	---	11.10	---	---	---	---	---	11.00	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	10.90	---	---	---	---	---	---	---	---	10.89	---
25	---	---	---	---	---	---	---	11.38	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	10.96	---	---	---	---	---	11.63	---	---	10.80	---	---
28	---	---	---	---	---	---	---	---	---	---	---	10.60
29	---	---	---	---	---	---	---	---	11.03	---	---	---
30	---	---	---	---	---	11.58	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	10.80	---

424652088341500 GREEN LAKE NEAR LAUDERDALE, WI

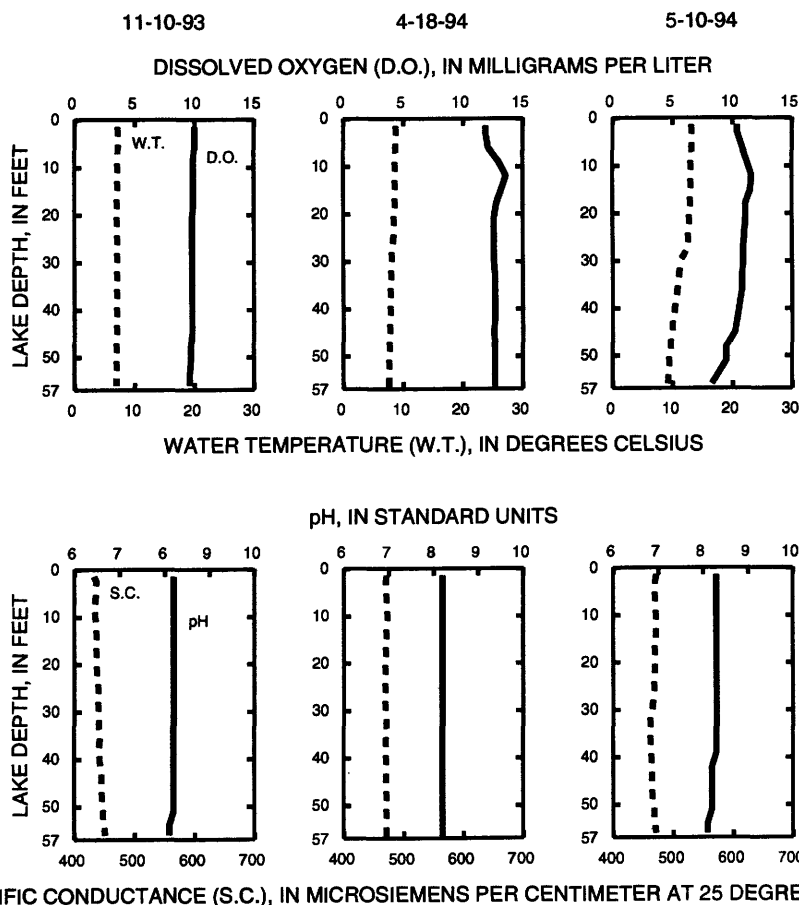
LOCATION.--Lat 42°46'52" long 88°34'15", in SW 1/4 NE 1/4 sec.26, T.4 N., R.16 E., Walworth County, Hydrologic Unit 07120006, 1.2 mi northwest of Lauderdale.

PERIOD OF RECORD.--November 1993 to November 1994 (discontinued).

REMARKS.--Lake sampled near center of lake at lake depth of about 57 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, NOVEMBER 10, 1993 TO MAY 10, 1994  
(Milligrams per liter unless otherwise indicated)

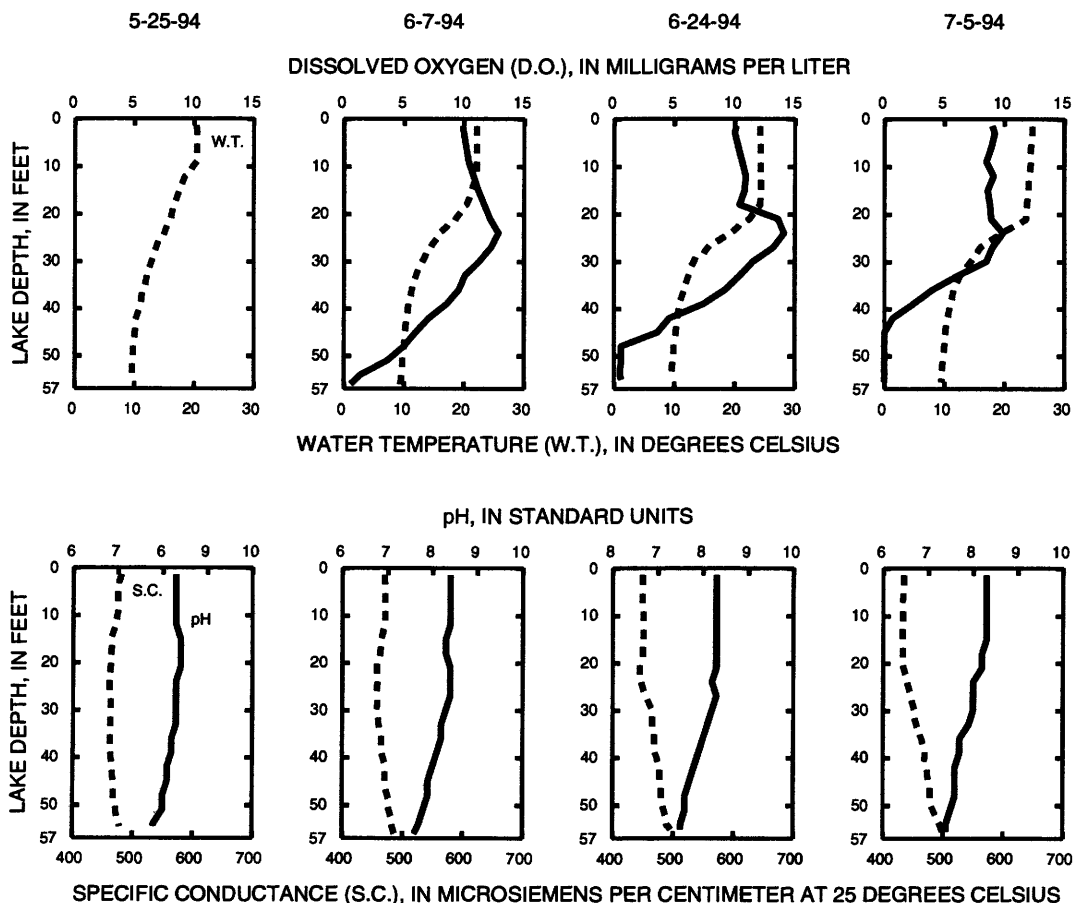
	Nov. 10		Apr. 18		May 10			
	1.5	56	1.5	56	1.5	27	30	56
Depth of sample (ft)								
Lake stage (ft)		5.12		5.01		5.02		
Specific conductance (µS/cm)	434	451	471	471	472	468	464	472
pH (units)	8.2	8.1	8.2	8.2	8.3	8.3	8.3	8.1
Water temperature (°C)	7.0	7.0	9.0	7.5	13.0	12.5	11.5	9.0
Color (Pt-Co. scale)	10	10	5	5	---	---	---	---
Turbidity (NTU)	1.4	1.3	0.50	0.60	---	---	---	---
Secchi-depth (meters)		3.6		5.4		6.3		
Dissolved oxygen	10.0	9.6	11.9	12.7	10.4	10.9	10.8	8.3
Hardness, as CaCO3	220	230	240	240	---	---	---	---
Calcium, dissolved (Ca)	37	38	40	40	---	---	---	---
Magnesium, dissolved (Mg)	32	33	33	33	---	---	---	---
Sodium, dissolved (Na)	6.1	6.2	6.2	6.2	---	---	---	---
Potassium, dissolved (K)	2	2	2	2	---	---	---	---
Alkalinity, as CaCO3	190	190	200	200	---	---	---	---
Sulfate, dissolved (SO4)	31	31	30	31	---	---	---	---
Chloride, dissolved (Cl)	17	17	16	17	---	---	---	---
Fluoride, dissolved (F)	0.1	0.1	0.1	0.1	---	---	---	---
Silica, dissolved (SiO2)	2.0	2.0	1.4	1.4	---	---	---	---
Solids, dissolved, at 180°C	250	246	278	274	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	0.11	0.12	0.28	0.29	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	0.31	0.31	0.29	0.29	---	---	---	---
Nitrogen, amm. + org., total (as N)	0.80	0.80	0.70	0.70	---	---	---	---
Nitrogen, total (as N)	0.90	0.92	0.98	0.98	---	---	---	---
Phosphorus, total (as P)	0.012	0.013	0.005	0.008	0.004	0.006	0.008	<0.020
Phosphorus, ortho, dissolved (as P)	0.004	0.005	<0.002	<0.002	---	---	---	---
Iron, dissolved (Fe) µg/L	<50	<50	<50	<50	---	---	---	---
Manganese, dissolved (Mn) µg/L	<40	<40	<40	<40	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	5.6	---	0.8	---	1.2	---	---	---



WATER-QUALITY DATA, MAY 25 TO JULY 05, 1994  
(Milligrams per liter unless otherwise indicated)

	May 25				June 07			
	1.5	9.0	27	54	1.5	15	36	56
Depth of sample (ft)								
Lake stage (ft)		5.02				5.01		
Specific conductance (μS/cm)	481	475	464	479	470	464	465	486
pH (units)	8.3	8.3	8.3	7.8	8.4	8.3	8.2	7.6
Water temperature (°C)	20.5	20.5	13.5	9.5	22.0	21.5	11.0	9.5
Secchi-depth (meters)		5.6				3.2		
Dissolved oxygen	9.8	---	---	---	9.9	11.2	9.6	0.6
Phosphorus, total (as P)	0.011	0.007	0.011	0.013	0.008	<0.020	<0.020	<0.020
Chlorophyll a, phytoplankton (μg/L)	1.7	---	---	---	3.3	---	---	---

	June 24				July 05			
	1.5	18	30	55	1.5	21	36	55
Depth of sample (ft)								
Lake stage (ft)		5.09				5.10		
Specific conductance (μS/cm)	450	450	465	496	435	434	464	499
pH (units)	8.3	8.3	8.2	7.5	8.3	8.2	7.7	7.4
Water temperature (°C)	24.0	24.0	13.0	9.5	24.5	23.5	11.5	9.5
Secchi-depth (meters)		2.0				2.0		
Dissolved oxygen	10.1	10.4	11.5	0.6	9.0	8.9	4.0	0.0
Phosphorus, total (as P)	0.010	0.010	<0.020	0.030	0.010	0.011	<0.020	0.030
Chlorophyll a, phytoplankton (μg/L)	6.9	---	---	---	4.4	---	---	---

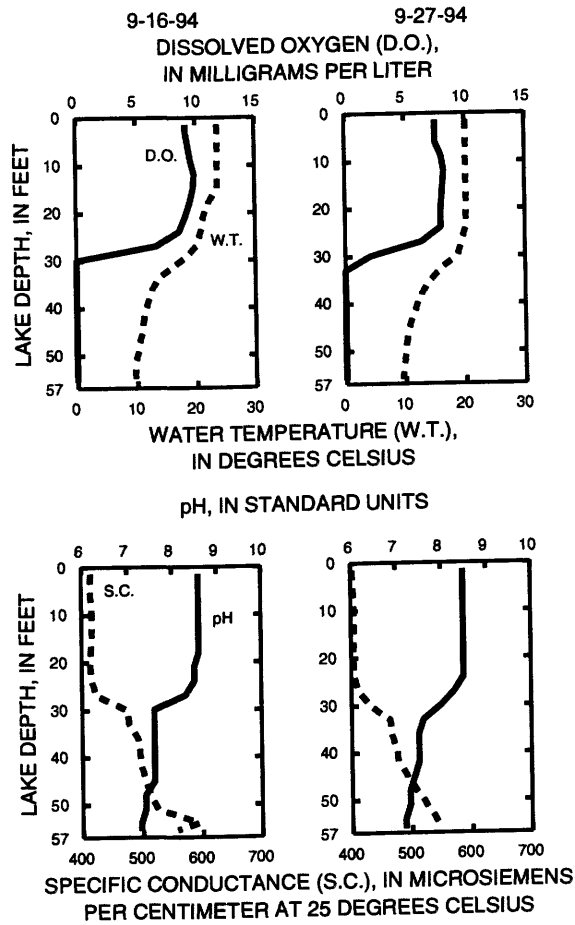


ILLINOIS RIVER BASIN

424652088341500 GREEN LAKE NEAR LAUDERDALE, WI--CONTINUED

WATER-QUALITY DATA, SEPTEMBER 16-27, 1994  
(Milligrams per liter unless otherwise indicated)

	Sep. 16				Sep. 27			
	1.5	15	36	55	1.5	27	45	56
Depth of sample (ft)								
Lake stage (ft)		4.96				4.98		
Specific conductance ( $\mu\text{S}/\text{cm}$ )	416	417	492	558	403	412	494	548
pH (units)	8.6	8.6	7.6	7.3	8.5	8.3	7.4	7.2
Water temperature ( $^{\circ}\text{C}$ )	23.5	23.5	12.5	9.5	20.0	19.5	10.5	9.5
Secchi-depth (meters)		3.5				4.8		
Dissolved oxygen	9.2	9.8	0.0	0.0	7.6	6.4	0.0	0.0
Phosphorus, total (as P)	0.009	0.009	0.013	0.044	0.010	0.011	0.019	0.041
Chlorophyll a, phytoplankton ( $\mu\text{g}/\text{L}$ )	2.2	---	---	---	2.3	---	---	---



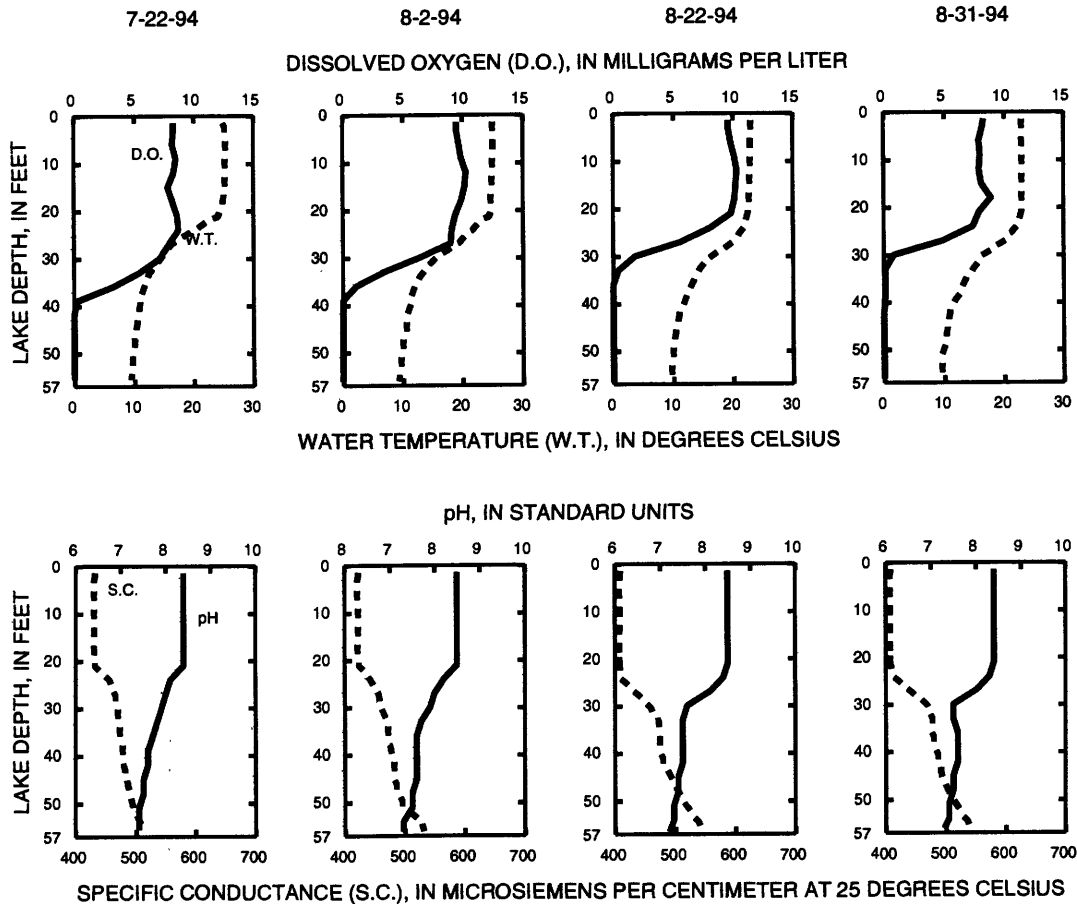
424652088341500 GREEN LAKE NEAR LAUDERDALE, WI--CONTINUED

WATER-QUALITY DATA, JULY 22 TO AUGUST 31, 1994  
(Milligrams per liter unless otherwise indicated)

	July 22				Aug. 02			
	1.5	21	36	55	1.5	21	36	56
Depth of sample (ft)								
Lake stage (ft)		4.98				4.92		
Specific conductance ( $\mu\text{S}/\text{cm}$ )	433	431	475	511	423	423	473	531
pH (units)	8.4	8.4	7.7	7.4	8.5	8.5	7.6	7.3
Water temperature ( $^{\circ}\text{C}$ )	25.0	24.0	11.5	9.5	25.0	24.5	12.0	9.5
Secchi-depth (meters)		3.6				3.0		
Dissolved oxygen	8.3	8.6	3.2	0.4	9.5	9.4	1.1	0.0
Phosphorus, total (as P)	0.007	0.009	0.011	0.050	0.006	0.007	0.031	0.053
Chlorophyll a, phytoplankton ( $\mu\text{g}/\text{L}$ )	2.4	---	---	---	3.5	---	---	---

	Aug. 22				Aug. 31			
	1.5	21	42	56	1.5	24	42	56
Depth of sample (ft)								
Lake stage (ft)		5.05				4.99		
Specific conductance ( $\mu\text{S}/\text{cm}$ )	409	408	481	548	408	413	490	544
pH (units)	8.5	8.5	7.5	7.2	8.4	8.3	7.6	7.3
Water temperature ( $^{\circ}\text{C}$ )	23.0	22.5	11.0	9.5	23.0	22.0	11.0	9.5
Secchi-depth (meters)		3.9				3.6		
Dissolved oxygen	9.6	9.8	0.0	0.0	8.3	7.4	0.0	0.0
Phosphorus, total (as P)	0.007	0.010	0.023	0.051	0.008	0.009	0.020	0.055
Chlorophyll a, phytoplankton ( $\mu\text{g}/\text{L}$ )	2.0	---	---	---	2.7	---	---	---



ILLINOIS RIVER BASIN

424621088335500 MIDDLE LAKE AT LAUDERDALE, WI

LOCATION.--Lat 42°46'21" long 88°33'55", in SE 1/4 SE 1/4 sec.26, T.4 N., R.16 E., Walworth County, Hydrologic Unit 07120006, at Lauderdale.

PERIOD OF RECORD.--November 1993 to November 1994 (discontinued).

REMARKS.--Lake sampled near east end of lake at lake depth of about 52 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, NOVEMBER 10, 1993 TO MAY 10, 1994  
(Milligrams per liter unless otherwise indicated)

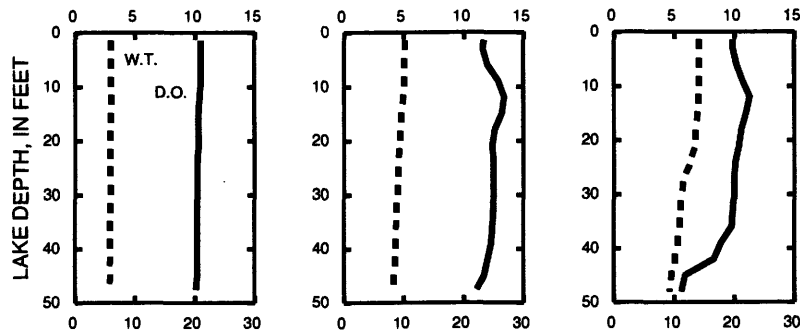
	Nov. 10		Apr. 18		May 10			
	1.5	47	1.5	47	1.5	21	30	48
Depth of sample (ft)								
Lake stage (ft)		5.12		5.01		5.02		
Specific conductance (µS/cm)	493	510	548	564	532	530	531	550
pH (units)	8.2	8.2	8.2	8.0	8.3	8.2	8.2	7.8
Water temperature (°C)	6.0	6.0	10.5	8.0	14.0	13.5	11.0	9.0
Color (Pt-Co. scale)	10	10	5	5	---	---	---	---
Turbidity (NTU)	1.2	0.60	0.70	0.80	---	---	---	---
Secchi-depth (meters)		4.4		3.4		6.4		
Dissolved oxygen	10.5	10.1	11.7	11.1	9.9	10.4	10.0	5.6
Hardness, as CaCO3	260	260	280	280	---	---	---	---
Calcium, dissolved (Ca)	48	48	55	57	---	---	---	---
Magnesium, dissolved (Mg)	35	35	34	34	---	---	---	---
Sodium, dissolved (Na)	6.7	6.8	6.6	6.5	---	---	---	---
Potassium, dissolved (K)	2	2	2	2	---	---	---	---
Alkalinity, as CaCO3	220	220	230	240	---	---	---	---
Sulfate, dissolved (SO4)	34	34	34	35	---	---	---	---
Chloride, dissolved (Cl)	19	19	18	18	---	---	---	---
Fluoride, dissolved (F)	0.1	0.1	0.1	0.1	---	---	---	---
Silica, dissolved (SiO2)	3.2	3.3	4.4	5.5	---	---	---	---
Solids, dissolved, at 180°C	288	288	326	332	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	0.53	0.55	1.4	1.4	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	0.33	0.34	0.16	0.24	---	---	---	---
Nitrogen, amm. + org., total (as N)	0.80	0.80	0.60	0.60	---	---	---	---
Nitrogen, total (as N)	1.3	1.4	2.0	2.0	---	---	---	---
Phosphorus, total (as P)	0.010	0.009	0.006	0.008	0.011	0.010	0.013	0.030
Phosphorus, ortho, dissolved (as P)	0.003	0.002	<0.002	<0.002	---	---	---	---
Iron, dissolved (Fe) µg/L	<50	<50	<50	<50	---	---	---	---
Manganese, dissolved (Mn) µg/L	<40	<40	<40	<40	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	2.0	---	2.3	---	1.1	---	---	---

11-10-93

4-18-94

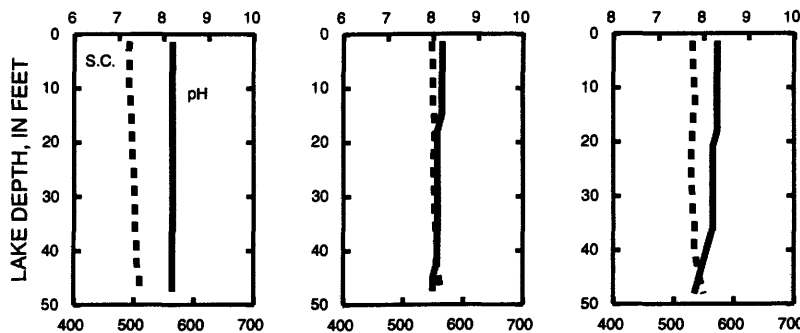
5-10-94

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

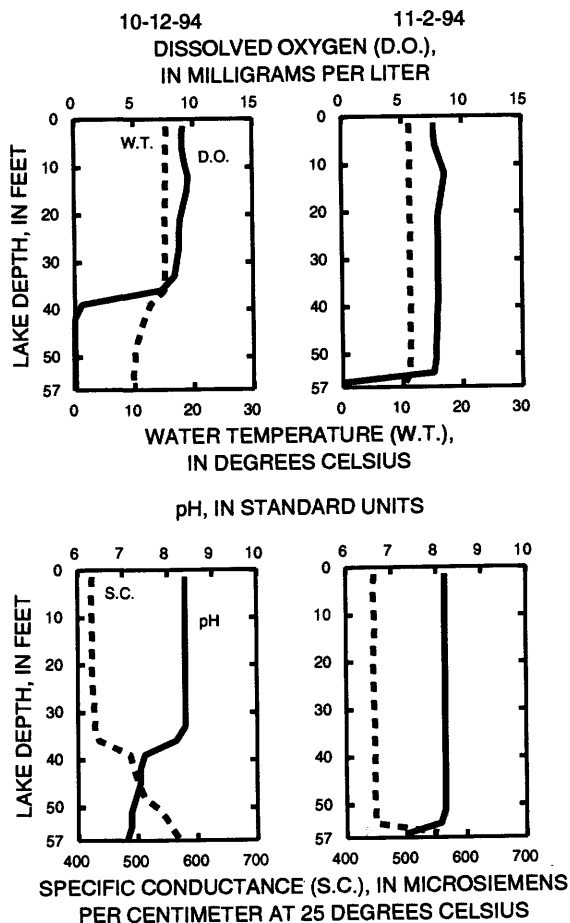


ILLINOIS RIVER BASIN

424652088341500 GREEN LAKE NEAR LAUDERDALE, WI--CONTINUED

WATER-QUALITY DATA, OCTOBER 12 TO NOVEMBER 02, 1994  
(Milligrams per liter unless otherwise indicated)

	Oct. 12				Nov. 02	
	1.5	36	48	57	1.5	56
Depth of sample (ft)						
Lake stage (ft)		4.94			4.92	
Specific conductance (µS/cm)	424	435	512	571	447	552
pH (units)	8.4	8.2	7.3	7.1	8.2	7.4
Water temperature (°C)	15.5	15.0	10.5	9.5	11.5	10.5
Color (Pt-Co. scale)	---	---	---	---	5	10
Turbidity (NTU)	---	---	---	---	0.70	15
Secchi-depth (meters)		4.0				3.9
Dissolved oxygen	9.2	7.3	0.0	0.0	7.7	0.0
Hardness, as CaCO3	---	---	---	---	220	270
Calcium, dissolved (Ca)	---	---	---	---	34	50
Magnesium, dissolved (Mg)	---	---	---	---	34	35
Sodium, dissolved (Na)	---	---	---	---	6.4	6.2
Potassium, dissolved (K)	---	---	---	---	2	2
Alkalinity, as CaCO3	---	---	---	---	180	250
Sulfate, dissolved (SO4)	---	---	---	---	31	13
Chloride, dissolved (Cl)	---	---	---	---	24	21
Fluoride, dissolved (F)	---	---	---	---	0.1	0.1
Silica, dissolved (SiO2)	---	---	---	---	1.8	8.8
Solids, dissolved, at 180°C	---	---	---	---	254	300
Nitrogen, NO2 + NO3, diss. (as N)	---	---	---	---	0.03	<0.01
Nitrogen, ammonia, dissolved (as N)	---	---	---	---	0.31	2.8
Nitrogen, amm. + org., total (as N)	---	---	---	---	0.70	3.7
Nitrogen, total (as N)	---	---	---	---	0.73	3.7
Phosphorus, total (as P)	0.014	0.013	0.022	---	0.012	0.028
Phosphorus, ortho, dissolved (as P)	---	---	---	---	<0.002	<0.002
Iron, dissolved (Fe) µg/L	---	---	---	---	<10	30
Manganese, dissolved (Mn) µg/L	---	---	---	---	0.8	250
Chlorophyll a, phytoplankton (µg/L)	6.0	---	---	---	2.7	---

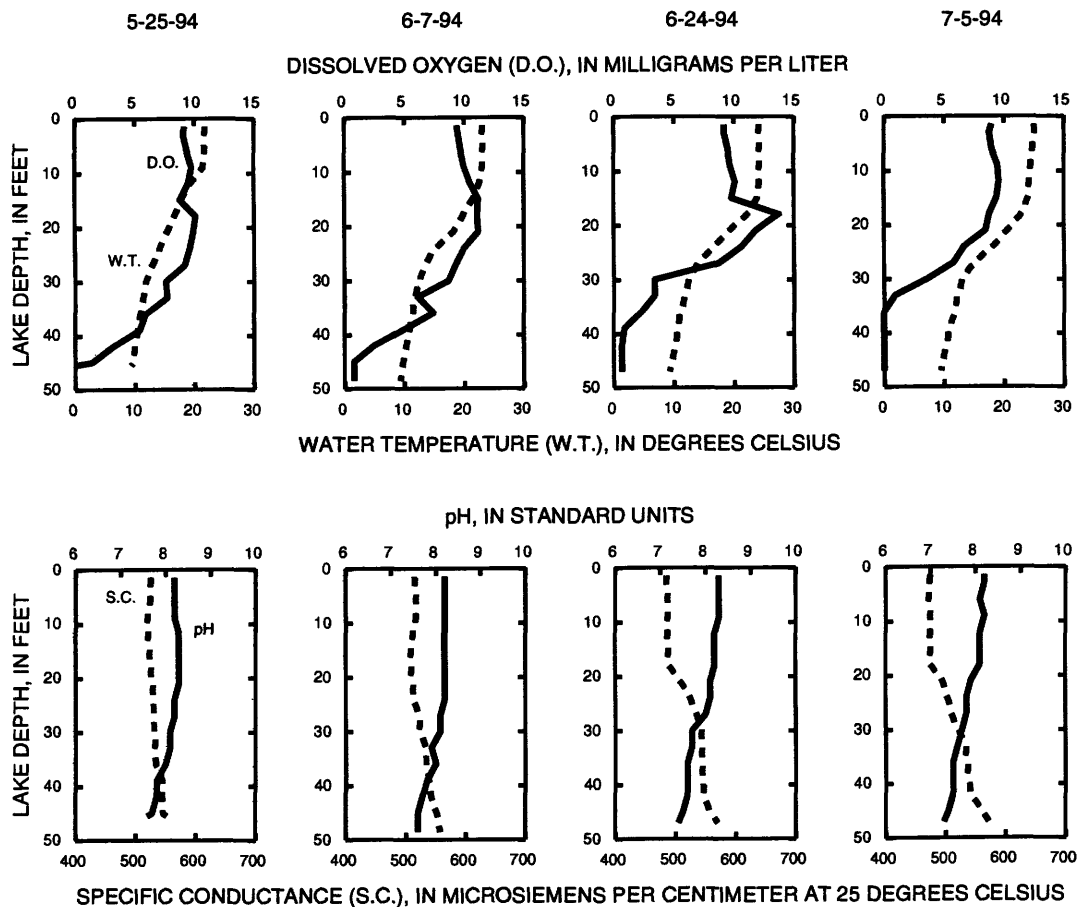


424621088335500 MIDDLE LAKE AT LAUDERDALE, WI--CONTINUED

WATER-QUALITY DATA, MAY 25 TO JULY 05, 1994  
(Milligrams per liter unless otherwise indicated)

	May 25				June 07			
Depth of sample (ft)	1.5	9.0	30	45	1.5	12	30	48
Lake stage (ft)	5.02				5.01			
Specific conductance ( $\mu\text{S}/\text{cm}$ )	526	519	531	552	515	512	524	557
pH (units)	8.2	8.2	8.1	7.6	8.2	8.2	8.1	7.6
Water temperature ( $^{\circ}\text{C}$ )	22.0	21.5	12.0	9.5	23.0	22.5	12.5	9.5
Secchi-depth (meters)	4.0				2.6			
Dissolved oxygen	9.2	9.8	7.6	0.5	9.4	10.5	8.7	0.8
Phosphorus, total (as P)	0.016	0.011	0.011	0.014	0.009	0.011	<0.020	0.040
Chlorophyll a, phytoplankton ( $\mu\text{g}/\text{L}$ )	1.6	---	---	---	3.3	---	---	---

	June 24				July 05			
Depth of sample (ft)	1.5	15	30	47	1.5	15	33	47
Lake stage (ft)	5.09				5.10			
Specific conductance ( $\mu\text{S}/\text{cm}$ )	486	488	541	570	475	475	533	572
pH (units)	8.3	8.2	7.7	7.4	8.2	8.1	7.6	7.3
Water temperature ( $^{\circ}\text{C}$ )	24.0	24.0	12.5	9.5	25.0	24.0	12.0	9.5
Secchi-depth (meters)	2.0				2.1			
Dissolved oxygen	9.2	9.8	4.0	0.7	9.0	9.4	0.9	0.7
Phosphorus, total (as P)	0.010	0.010	<0.020	0.040	0.010	0.011	<0.020	0.050
Chlorophyll a, phytoplankton ( $\mu\text{g}/\text{L}$ )	6.2	---	---	---	3.6	---	---	---



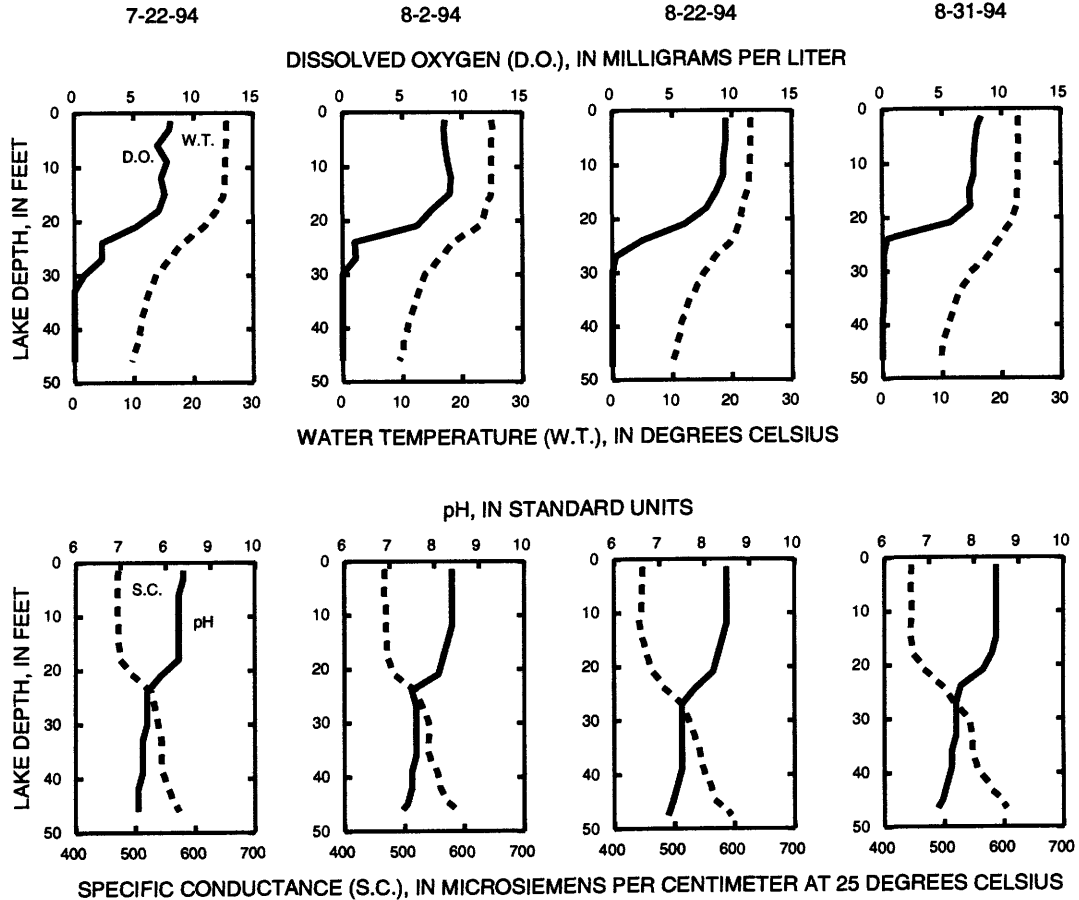
ILLINOIS RIVER BASIN

424621088335500 MIDDLE LAKE AT LAUDERDALE, WI--CONTINUED

WATER-QUALITY DATA, JULY 22 TO AUGUST 31, 1994  
(Milligrams per liter unless otherwise indicated)

	July 22				Aug. 02			
	1.5	15	33	46	1.5	18	33	46
Depth of sample (ft)	1.5	15	33	46	1.5	18	33	46
Lake stage (ft)		4.98				4.92		
Specific conductance (µS/cm)	472	472	544	573	467	473	541	592
pH (units)	8.4	8.3	7.5	7.4	8.4	8.2	7.6	7.3
Water temperature (°C)	25.5	25.0	12.5	9.5	25.0	24.0	13.0	9.5
Secchi-depth (meters)		2.4				2.8		
Dissolved oxygen	8.1	7.6	0.1	0.0	8.6	7.5	0.0	0.0
Phosphorus, total (as P)	0.011	0.010	0.019	0.041	0.008	0.007	0.013	0.048
Chlorophyll a, phytoplankton (µg/L)	3.5	---	---	---	3.6	---	---	---

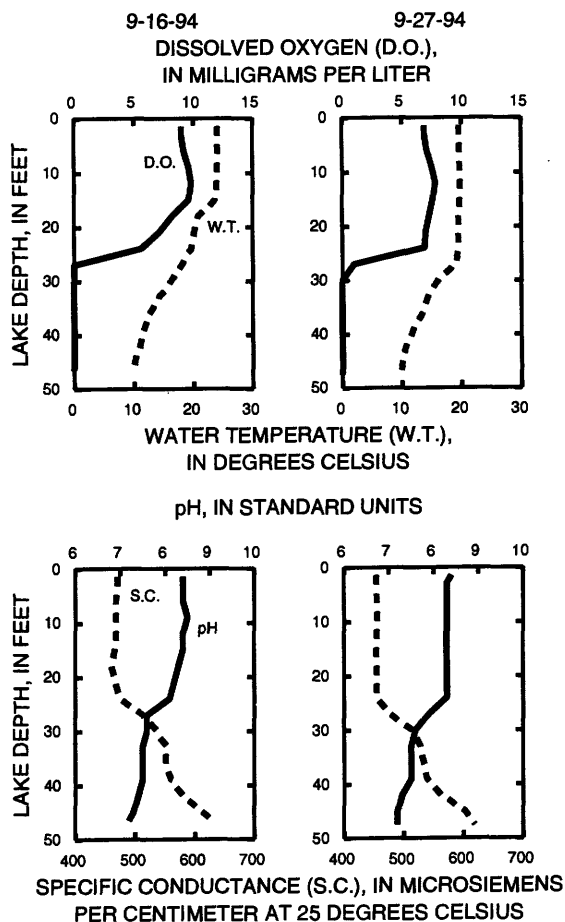
	Aug. 22				Aug. 31			
	1.5	18	39	47	1.5	18	36	46
Depth of sample (ft)	1.5	18	39	47	1.5	18	36	46
Lake stage (ft)		5.05				4.99		
Specific conductance (µS/cm)	447	455	548	595	446	449	547	605
pH (units)	8.5	8.3	7.5	7.2	8.5	8.4	7.5	7.2
Water temperature (°C)	23.0	22.0	11.5	10.0	23.0	22.5	12.0	10.0
Secchi-depth (meters)		2.3				2.9		
Dissolved oxygen	9.5	7.9	0.0	0.0	8.3	7.4	0.1	0.0
Phosphorus, total (as P)	0.009	0.009	0.028	0.044	0.009	0.010	0.024	0.045
Chlorophyll a, phytoplankton (µg/L)	3.1	---	---	---	3.3	---	---	---



424621088335500 MIDDLE LAKE AT LAUDERDALE, WI--CONTINUED

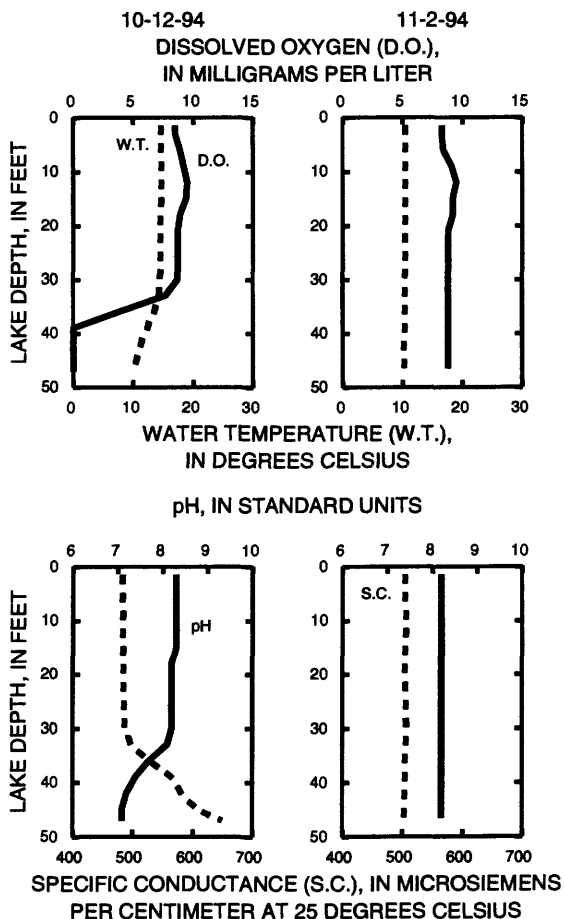
WATER-QUALITY DATA, SEPTEMBER 16-27, 1994  
(Milligrams per liter unless otherwise indicated)

	Sep. 16				Sep. 27			
	1.5	15	36	46	1.5	27	42	47
Depth of sample (ft)								
Lake stage (ft)		4.96				4.98		
Specific conductance ( $\mu\text{S}/\text{cm}$ )	471	466	551	634	455	475	562	619
pH (units)	8.4	8.4	7.5	7.2	8.4	7.9	7.3	7.2
Water temperature ( $^{\circ}\text{C}$ )	24.0	23.5	12.5	10.0	19.5	19.0	10.5	10.0
Secchi-depth (meters)		2.9				3.4		
Dissolved oxygen	9.0	9.6	0.0	0.0	6.9	1.0	0.0	0.0
Phosphorus, total (as P)	0.009	0.008	0.016	0.035	0.010	0.029	0.023	0.035
Chlorophyll a, phytoplankton ( $\mu\text{g}/\text{L}$ )	3.3	---	---	---	3.5	---	---	---



WATER-QUALITY DATA, OCTOBER 12 TO NOVEMBER 02, 1994  
(Milligrams per liter unless otherwise indicated)

	Oct. 12				Nov. 02	
	1.5	33	45	47	1.5	46
Depth of sample (ft)						
Lake stage (ft)		4.94				4.92
Specific conductance (µS/cm)	483	498	608	649	505	503
pH (units)	8.3	8.1	7.1	7.1	8.2	8.2
Water temperature (°C)	14.5	14.5	10.5	10.0	10.5	10.5
Color (Pt-Co. scale)	---	---	---	---	10	5
Turbidity (NTU)	---	---	---	---	0.70	1.00
Secchi-depth (meters)		4.5				4.3
Dissolved oxygen	8.5	7.7	0.0	0.0	8.3	8.8
Hardness, as CaCO3	---	---	---	---	260	260
Calcium, dissolved (Ca)	---	---	---	---	44	43
Magnesium, dissolved (Mg)	---	---	---	---	37	36
Sodium, dissolved (Na)	---	---	---	---	7.0	6.9
Potassium, dissolved (K)	---	---	---	---	2	2
Alkalinity, as CaCO3	---	---	---	---	210	210
Sulfate, dissolved (SO4)	---	---	---	---	34	33
Chloride, dissolved (Cl)	---	---	---	---	20	20
Fluoride, dissolved (F)	---	---	---	---	0.1	0.1
Silica, dissolved (SiO2)	---	---	---	---	3.4	3.4
Solids, dissolved, at 180°C	---	---	---	---	280	278
Nitrogen, NO2 + NO3, diss. (as N)	---	---	---	---	0.28	0.25
Nitrogen, ammonia, dissolved (as N)	---	---	---	---	0.46	0.49
Nitrogen, amm. + org., total (as N)	---	---	---	---	1.0	1.0
Nitrogen, total (as N)	---	---	---	---	1.3	1.3
Phosphorus, total (as P)	0.008	0.009	0.022	0.087	0.011	0.012
Phosphorus, ortho, dissolved (as P)	---	---	---	---	<0.002	<0.002
Iron, dissolved (Fe) µg/L	---	---	---	---	<10	<10
Manganese, dissolved (Mn) µg/L	---	---	---	---	0.6	<0.4
Chlorophyll a, phytoplankton (µg/L)	3.0	---	---	---	1.8	---



ILLINOIS RIVER BASIN

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424555088335700 MILL LAKE AT LAUDERDALE, WI

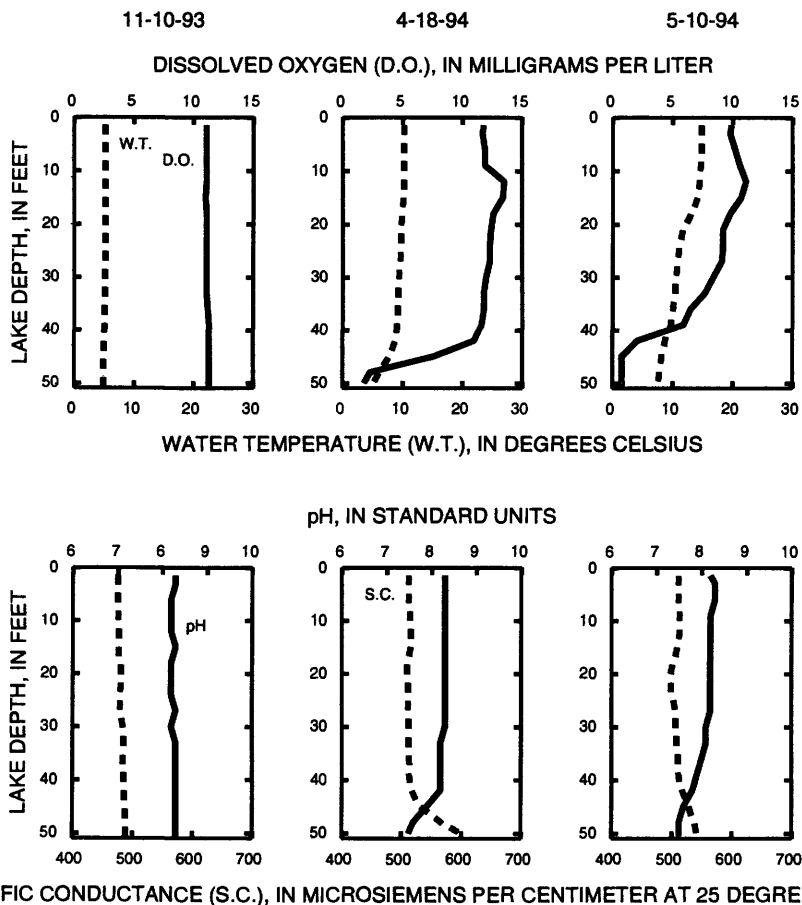
LOCATION.--Lat 42°45'55" long 88°33'57", in SE 1/4 NE 1/4 sec.35, T.4 N., R.16 E., Walworth County, Hydrologic Unit 07120006, at Lauderdale.

PERIOD OF RECORD.--November 1993 to November 1994 (discontinued).

REMARKS.--Lake sampled near center of lake at lake depth of about 52 ft. Water-quality analyses by Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, NOVEMBER 10, 1993 TO MAY 10, 1994  
(Milligrams per liter unless otherwise indicated)

	Nov. 10		Apr. 18		May 10			
Depth of sample (ft)	1.5	51	1.5	50	1.5	15	24	50
Lake stage (ft)		5.12		5.01		5.02		
Specific conductance (µS/cm)	475	489	512	599	512	510	502	545
pH (units)	8.3	8.3	8.3	7.5	8.2	8.2	8.2	7.5
Water temperature (°C)	5.0	5.0	10.5	5.0	15.0	14.0	11.0	7.5
Color (Pt-Co. scale)	10	10	5	10	---	---	---	---
Turbidity (NTU)	0.80	0.90	0.70	2.1	---	---	---	---
Secchi-depth (meters)		4.0		2.6		5.1		
Dissolved oxygen	11.1	11.3	11.8	1.8	9.9	10.7	9.2	0.8
Hardness, as CaCO <sub>3</sub>	250	250	250	300	---	---	---	---
Calcium, dissolved (Ca)	44	44	47	56	---	---	---	---
Magnesium, dissolved (Mg)	34	34	32	38	---	---	---	---
Sodium, dissolved (Na)	7.5	7.5	7.3	8.5	---	---	---	---
Potassium, dissolved (K)	2	2	2	2	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	210	210	220	260	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	31	31	30	33	---	---	---	---
Chloride, dissolved (Cl)	20	20	19	22	---	---	---	---
Fluoride, dissolved (F)	0.1	0.1	0.1	0.1	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	3.6	3.5	1.7	5.7	---	---	---	---
Solids, dissolved, at 180°C	276	272	306	346	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	0.22	0.22	0.62	0.02	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	0.28	0.28	0.09	1.1	---	---	---	---
Nitrogen, amm. + org., total (as N)	0.80	0.80	0.60	<0.20	---	---	---	---
Nitrogen, total (as N)	1.0	1.0	1.2	---	---	---	---	---
Phosphorus, total (as P)	0.011	0.010	0.009	0.046	0.006	0.016	0.033	0.090
Phosphorus, ortho, dissolved (as P)	0.003	0.002	<0.002	<0.002	---	---	---	---
Iron, dissolved (Fe) µg/L	<50	<50	<50	<50	---	---	---	---
Manganese, dissolved (Mn) µg/L	<40	<40	<40	210	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	1.9	---	4.6	---	1.2	---	---	---



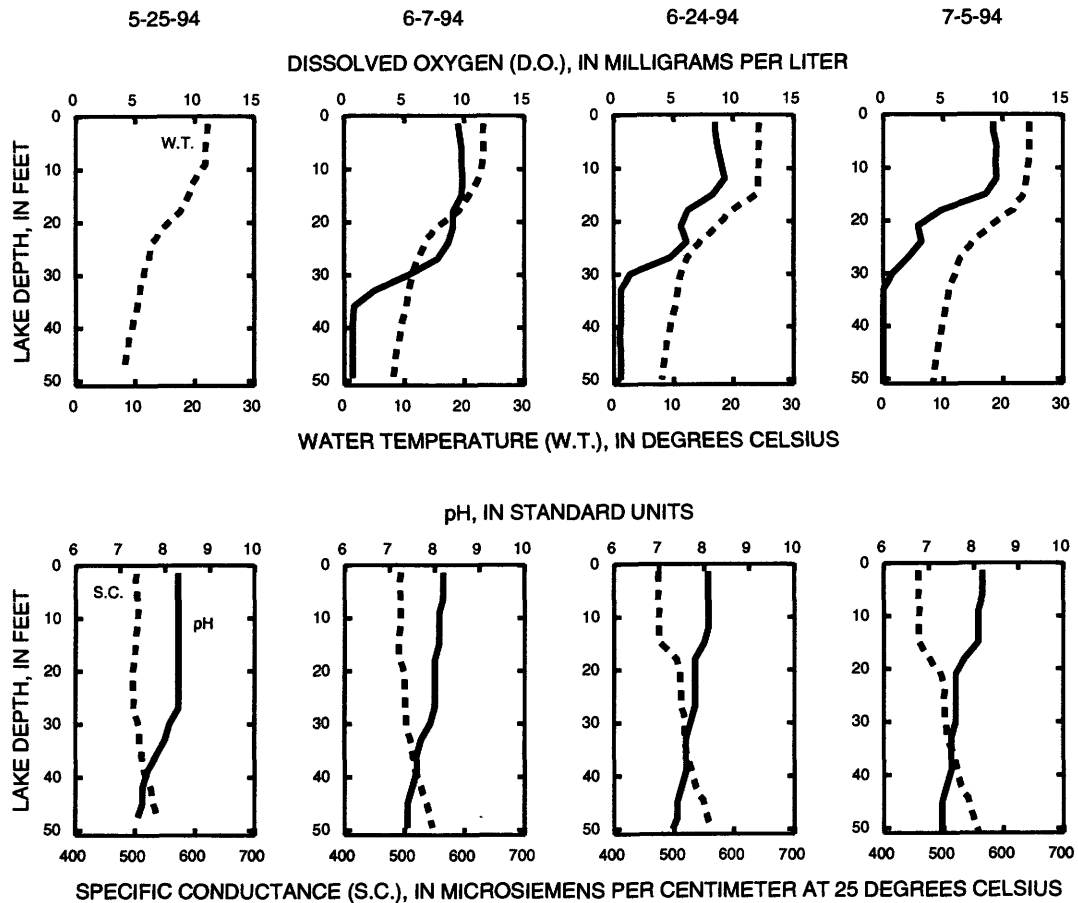
ILLINOIS RIVER BASIN

424555088335700 MILL LAKE AT LAUDERDALE, WI--CONTINUED

WATER-QUALITY DATA, MAY 25 TO JULY 05, 1994  
(Milligrams per liter unless otherwise indicated)

	May 25				June 07			
	1.5	9.0	24	47	1.5	12	30	49
Depth of sample (ft)								
Lake stage (ft)		5.02				5.01		
Specific conductance (μS/cm)	503	505	498	538	494	493	503	547
pH (units)	8.3	8.3	8.3	7.4	8.2	8.1	7.9	7.4
Water temperature (°C)	22.0	22.0	13.0	8.0	23.0	22.5	11.5	8.0
Secchi-depth (meters)		2.9				2.6		
Dissolved oxygen					9.5	9.9	5.4	0.7
Phosphorus, total (as P)	0.013	0.013	0.014	0.043	0.012	<0.020	<0.020	0.060
Chlorophyll a, phytoplankton (μg/L)	2.3				3.4			

	June 24				July 05			
	1.5	15	30	50	1.5	15	33	51
Depth of sample (ft)								
Lake stage (ft)		5.09				5.10		
Specific conductance (μS/cm)	474	478	517	562	458	459	505	559
pH (units)	8.1	8.0	7.7	7.3	8.2	8.1	7.5	7.3
Water temperature (°C)	24.0	24.0	11.0	8.0	24.5	23.5	11.0	8.5
Secchi-depth (meters)		1.6				2.1		
Dissolved oxygen	8.5	8.3	1.4	0.6	9.2	8.6	0.0	0.0
Phosphorus, total (as P)	0.014	0.015	0.020	0.100	0.016	0.017	0.019	0.139
Chlorophyll a, phytoplankton (μg/L)	5.6				7.1			

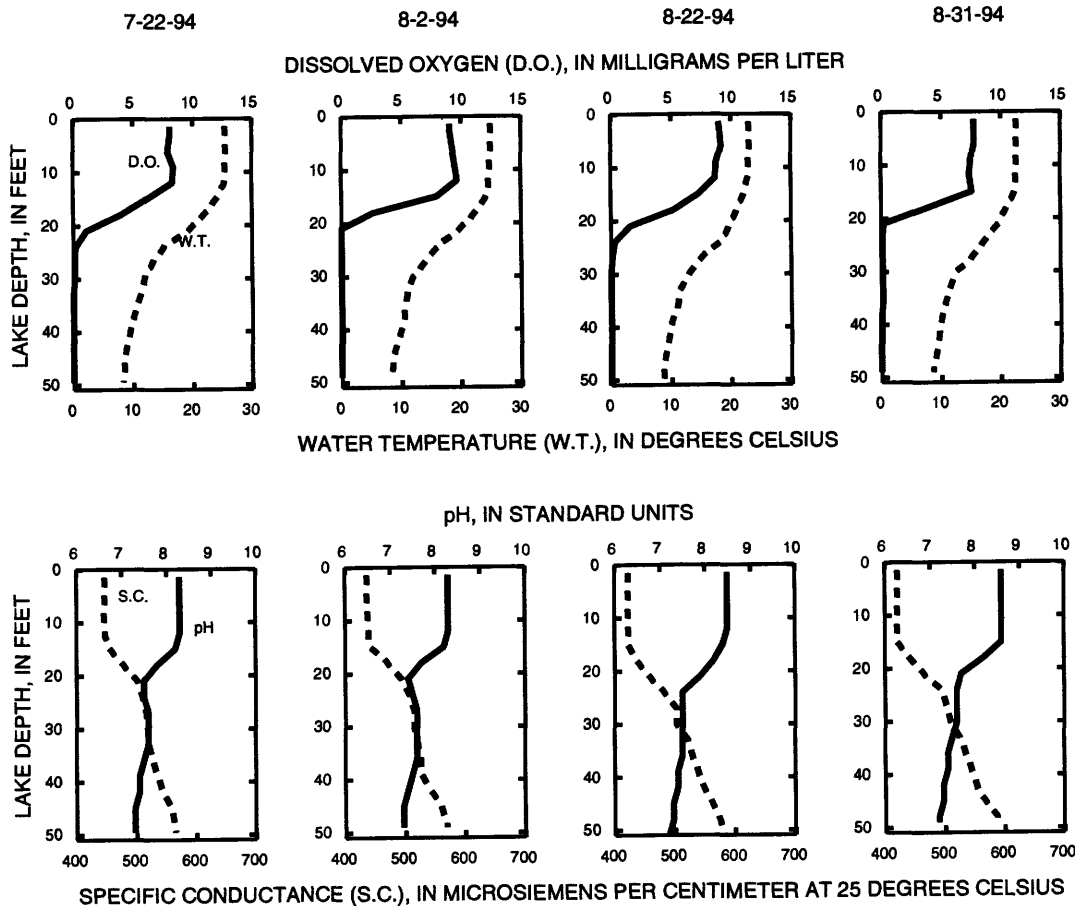


42455088335700 MILL LAKE AT LAUDERDALE, WI--CONTINUED

WATER-QUALITY DATA, JULY 22 TO AUGUST 31, 1994  
(Milligrams per liter unless otherwise indicated)

	July 22				Aug. 02			
	1.5	12	30	49	1.5	15	33	49
Depth of sample (ft)								
Lake stage (ft)		4.98				4.92		
Specific conductance (μS/cm)	447	447	519	565	437	443	521	570
pH (units)	8.3	8.3	7.6	7.3	8.3	8.2	7.6	7.3
Water temperature (°C)	25.5	25.5	12.0	8.5	25.0	24.5	11.0	8.5
Secchi-depth (meters)		1.7				1.8		
Dissolved oxygen	8.1	8.3	0.1	0.0	9.1	8.0	0.6	0.7
Phosphorus, total (as P)	0.013	0.016	0.025	0.078	0.011	0.016	0.034	0.058
Chlorophyll a, phytoplankton (μg/L)	6.3	---	---	---	8.0	---	---	---

	Aug. 22				Aug. 31			
	1.5	12	39	51	1.5	18	33	49
Depth of sample (ft)								
Lake stage (ft)		5.05				4.99		
Specific conductance (μS/cm)	423	423	539	582	422	441	525	588
pH (units)	8.5	8.5	7.4	7.2	8.6	8.2	7.5	7.2
Water temperature (°C)	23.0	23.0	10.0	8.5	22.5	21.0	11.5	8.5
Secchi-depth (meters)		1.8				2.0		
Dissolved oxygen	9.0	8.7	0.0	0.0	7.8	3.9	0.1	0.0
Phosphorus, total (as P)	0.014	0.015	0.030	0.043	0.013	0.040	0.012	0.030
Chlorophyll a, phytoplankton (μg/L)	7.7	---	---	---	7.7	---	---	---



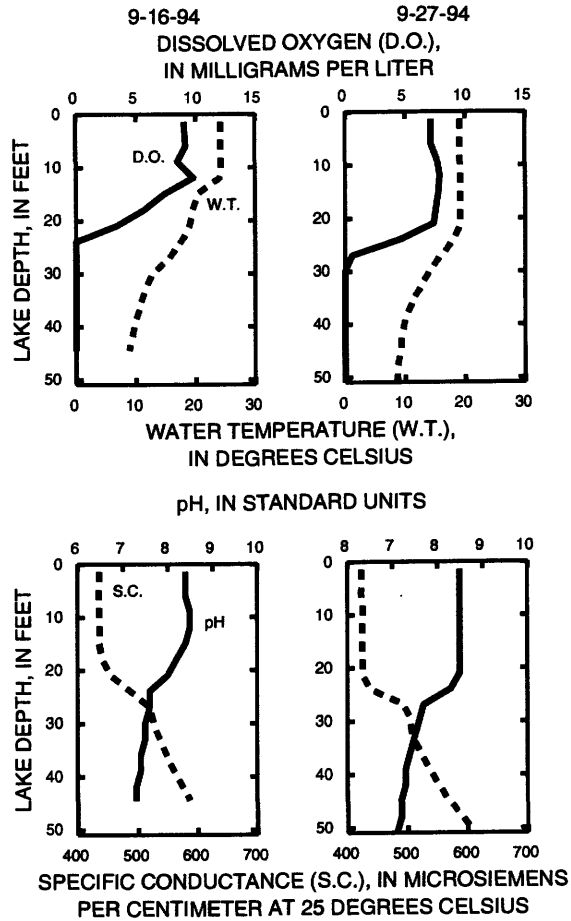


ILLINOIS RIVER BASIN

42455088335700 MILL LAKE AT LAUDERDALE, WI--CONTINUED

WATER-QUALITY DATA, SEPTEMBER 16-27, 1994  
(Milligrams per liter unless otherwise indicated)

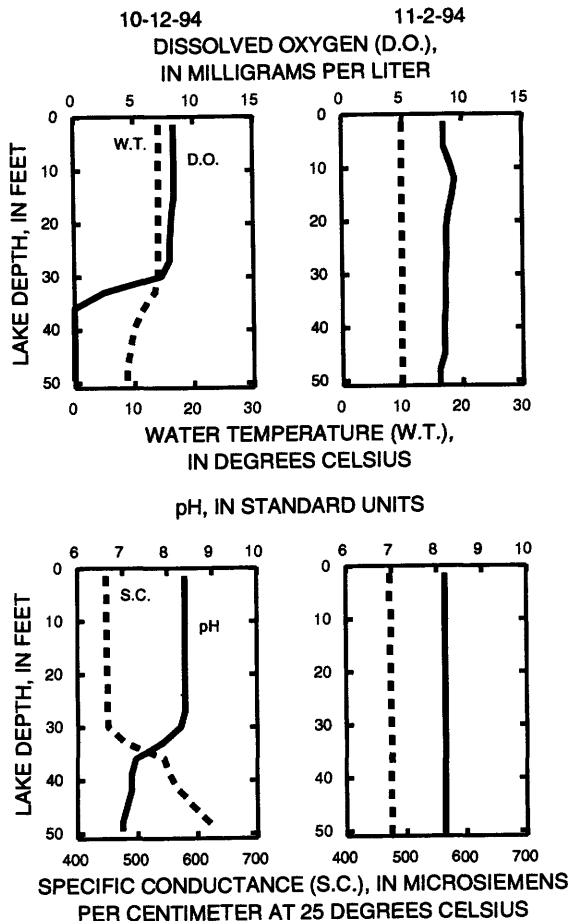
	Sep. 16				Sep. 27			
	1.5	12	33	44	1.5	21	39	51
Depth of sample (ft)								
Lake stage (ft)		4.96				4.98		
Specific conductance (µS/cm)	436	437	537	588	424	425	537	611
pH (units)	8.4	8.5	7.5	7.3	8.5	8.5	7.3	7.1
Water temperature (°C)	24.0	24.0	11.5	9.0	19.0	19.0	10.0	8.5
Secchi-depth (meters)		2.0				2.4		
Dissolved oxygen	9.1	9.8	0.0	0.0	7.2	7.4	0.0	0.0
Phosphorus, total (as P)	0.013	0.015	0.029	0.031	0.014	0.014	0.027	0.046
Chlorophyll a, phytoplankton (µg/L)	4.2				6.1			



424555088335700 MILL LAKE AT LAUDERDALE, WI--CONTINUED

WATER-QUALITY DATA, OCTOBER 12 TO NOVEMBER, 1994  
(Milligrams per liter unless otherwise indicated)

	Oct. 12				Nov. 02	
	1.5	33	42	49	1.5	50
Depth of sample (ft)						
Lake stage (ft)		4.94				4.92
Specific conductance (µS/cm)	448	480	570	630	473	475
pH (units)	8.4	7.9	7.2	7.0	8.2	8.2
Water temperature (°C)	14.5	13.5	9.5	8.5	10.0	10.0
Color (Pt-Co. scale)	---	---	---	---	10	10
Turbidity (NTU)	---	---	---	---	1.1	1.4
Secchi-depth (meters)		3.6				3.7
Dissolved oxygen	8.4	2.5	0.0	0.0	8.5	8.1
Hardness, as CaCO3	---	---	---	---	240	240
Calcium, dissolved (Ca)	---	---	---	---	37	37
Magnesium, dissolved (Mg)	---	---	---	---	36	36
Sodium, dissolved (Na)	---	---	---	---	7.6	7.5
Potassium, dissolved (K)	---	---	---	---	2	2
Alkalinity, as CaCO3	---	---	---	---	190	190
Sulfate, dissolved (SO4)	---	---	---	---	31	32
Chloride, dissolved (Cl)	---	---	---	---	20	20
Fluoride, dissolved (F)	---	---	---	---	0.1	0.1
Silica, dissolved (SiO2)	---	---	---	---	3.0	3.0
Solids, dissolved, at 180°C	---	---	---	---	266	266
Nitrogen, NO2 + NO3, diss. (as N)	---	---	---	---	0.06	0.05
Nitrogen, ammonia, dissolved (as N)	---	---	---	---	0.42	0.38
Nitrogen, amm. + org., total (as N)	---	---	---	---	0.90	0.90
Nitrogen, total (as N)	---	---	---	---	0.96	0.95
Phosphorus, total (as P)	0.011	0.020	0.026	0.053	0.012	0.012
Phosphorus, ortho, dissolved (as P)	---	---	---	---	<0.002	<0.002
Iron, dissolved (Fe) µg/L	---	---	---	---	<10	<10
Manganese, dissolved (Mn) µg/L	---	---	---	---	1	<0.4
Chlorophyll a, phytoplankton (µg/L)	5.3	---	---	---	2.7	---



## ILLINOIS RIVER BASIN

424554088332700 LAUDERDALE LAKES AT LAUDERDALE, WI

LOCATION.--Lat 42°45'54" long 88°33'27", in SE 1/4 NW 1/4 sec.36, T.4 N., R.16 E., Walworth County, Hydrologic Unit 07120006, at Lauderdale.

DRAINAGE AREA.--16.1 mi<sup>2</sup>.

## LAKE-STAGE RECORDS

PERIOD OF RECORD.--October 1993 to October 1994 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 879.57 ft above sea level.

REMARKS.--Estimated daily gage heights 1994 water year: Oct. 1-19, Jan. 7-13, Feb. 5, 10, 11, 16, 21, 27, Mar. 4, 9, 10, 15-20, 25, 30, 31, June 25-30, and July 9-20. Records good except estimated daily gage heights, which are fair. No estimated daily heights October 1995.

## EXTREMES FOR CURRENT PERIOD.--

1994 WATER YEAR: Maximum gage height observed, 5.45 ft, Dec. 6; minimum observed, 4.63 ft, Jan. 24.

OCTOBER 1995: Maximum gage height observed, 4.99 ft, Oct. 8, 9; minimum observed, 4.89 ft, Oct. 28.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.17	5.06	5.36	4.97	5.04	5.06	4.96	4.93	5.00	5.05	4.92	4.97
2	5.16	5.07	5.39	4.95	5.04	4.98	4.94	4.94	4.98	5.03	4.92	4.96
3	5.16	5.08	5.39	4.96	5.04	4.88	4.98	4.93	4.98	5.00	4.93	4.96
4	5.15	5.09	5.40	5.01	5.04	4.93	4.95	4.92	4.99	5.02	5.01	4.95
5	5.15	5.11	5.40	4.98	5.04	4.99	4.94	4.92	5.00	5.05	5.00	4.95
6	5.14	5.10	5.42	4.95	5.03	4.97	4.93	4.97	5.02	5.03	4.98	4.95
7	5.15	5.10	5.41	4.95	5.01	4.98	4.91	5.04	5.01	5.04	4.97	4.94
8	5.14	5.10	5.41	4.94	5.01	5.00	4.89	5.04	4.96	5.09	4.97	4.94
9	5.13	5.11	5.41	4.94	5.01	4.98	4.90	5.03	4.97	5.08	4.95	4.96
10	5.12	5.12	5.42	4.93	4.98	4.95	4.90	5.02	5.01	5.06	4.97	4.98
11	5.10	5.13	5.30	4.93	4.95	4.95	4.95	5.03	5.01	5.05	5.05	4.98
12	5.10	5.13	5.33	4.92	4.92	5.02	4.95	5.02	5.00	5.04	5.04	4.98
13	5.08	5.19	5.30	4.91	4.93	4.97	4.97	5.01	5.02	5.03	5.10	4.97
14	5.08	5.20	5.31	4.90	4.94	4.94	4.98	4.98	5.01	5.07	5.08	4.97
15	5.07	5.22	5.31	4.86	4.93	4.98	5.05	4.98	4.98	5.06	5.05	4.96
16	5.08	5.22	5.30	4.84	4.90	5.02	5.03	4.96	4.99	5.05	5.04	4.96
17	5.08	5.23	5.29	4.83	4.89	5.02	5.01	4.97	4.98	5.04	5.03	4.94
18	5.07	5.23	5.30	4.88	5.04	5.02	5.00	4.97	4.99	5.02	5.02	4.93
19	5.07	5.25	5.26	4.88	5.04	5.03	4.97	4.94	5.01	5.00	5.05	4.93
20	5.07	5.24	5.25	4.84	5.08	5.03	4.93	4.95	5.03	5.00	5.09	4.93
21	5.09	5.25	5.34	4.79	5.07	5.03	4.93	5.01	5.02	4.99	5.07	4.93
22	5.06	5.25	5.31	4.87	5.06	4.99	4.95	5.01	5.00	4.98	5.05	4.92
23	5.06	5.26	5.26	4.90	5.07	4.88	4.94	5.00	5.02	4.97	5.04	4.94
24	5.06	5.27	5.22	4.91	5.09	4.89	4.93	5.02	5.08	4.96	5.02	4.95
25	5.06	5.28	5.18	5.01	5.08	4.90	4.87	5.02	5.08	4.96	5.01	4.96
26	5.07	5.34	5.12	5.02	5.11	4.90	4.92	5.01	5.10	4.94	5.04	4.98
27	5.07	5.34	5.10	5.05	5.07	4.96	4.94	4.93	5.10	4.93	5.03	4.98
28	5.07	5.35	5.00	5.06	5.03	5.05	4.92	4.95	5.09	4.92	5.01	4.97
29	5.06	5.35	5.05	5.05	---	5.04	4.93	4.99	5.08	4.91	4.99	4.96
30	5.06	5.35	5.03	5.05	---	5.02	4.92	5.00	5.08	4.91	4.99	4.96
31	5.06	---	4.95	5.04	---	5.00	---	5.01	---	4.91	4.99	---
MEAN	5.10	5.20	5.27	4.94	5.02	4.98	4.95	4.98	5.02	5.01	5.01	4.96
MAX	5.17	5.35	5.42	5.06	5.11	5.06	5.05	5.04	5.10	5.09	5.10	4.98
MIN	5.06	5.06	4.95	4.79	4.89	4.88	4.87	4.92	4.96	4.91	4.92	4.92



## ILLINOIS RIVER BASIN

424554088332700 LAUDERDALE LAKES AT LAUDERDALE, WI--CONTINUED

## PRECIPITATION QUANTITY

PERIOD OF RECORD.--June to October 1994 (discontinued).

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

REMARKS.--Gage established June 10, 1994. Rainfall data missing for the period June 24 to July 1.

EXTREMES FOR CURRENT PERIOD.--1994 water year: Maximum daily rainfall, 1.55 in., Aug. 10; 1995 water year: Maximum daily rainfall, 0.39 in., Oct. 8.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	.27	.00
2	---	---	---	---	---	---	---	---	---	.00	.00	.00
3	---	---	---	---	---	---	---	---	---	.00	.70	.06
4	---	---	---	---	---	---	---	---	---	.45	.62	.00
5	---	---	---	---	---	---	---	---	---	.00	.00	.00
6	---	---	---	---	---	---	---	---	---	.00	.00	.00
7	---	---	---	---	---	---	---	---	---	1.34	.00	.00
8	---	---	---	---	---	---	---	---	---	.00	.00	.01
9	---	---	---	---	---	---	---	---	---	.00	.00	.39
10	---	---	---	---	---	---	---	---	---	.00	1.55	.06
11	---	---	---	---	---	---	---	---	.06	.00	.06	.00
12	---	---	---	---	---	---	---	---	.00	.00	.63	.00
13	---	---	---	---	---	---	---	---	.47	.00	.28	.00
14	---	---	---	---	---	---	---	---	.02	1.04	.00	.00
15	---	---	---	---	---	---	---	---	.00	.00	.00	.00
16	---	---	---	---	---	---	---	---	.00	.00	.00	.00
17	---	---	---	---	---	---	---	---	.05	.07	.00	.02
18	---	---	---	---	---	---	---	---	.00	.00	.24	.00
19	---	---	---	---	---	---	---	---	.00	.03	.83	.00
20	---	---	---	---	---	---	---	---	.35	.32	.25	.00
21	---	---	---	---	---	---	---	---	.00	.00	.00	.00
22	---	---	---	---	---	---	---	---	.00	.02	.00	.17
23	---	---	---	---	---	---	---	---	1.25	.00	.00	.15
24	---	---	---	---	---	---	---	---	---	.14	.00	.30
25	---	---	---	---	---	---	---	---	---	.00	.00	.08
26	---	---	---	---	---	---	---	---	---	.00	.51	.28
27	---	---	---	---	---	---	---	---	---	.00	.00	.01
28	---	---	---	---	---	---	---	---	---	.00	.00	.00
29	---	---	---	---	---	---	---	---	---	.00	.00	.00
30	---	---	---	---	---	---	---	---	---	.00	.29	.00
31	---	---	---	---	---	---	---	---	---	.00	.00	---
TOTAL	---	---	---	---	---	---	---	---	---	---	6.23	1.53



## ILLINOIS RIVER BASIN

05544800 LAUDERDALE LAKES OUTLET AT LAUDERDALE, WI

LOCATION.--Lat 42°45'59" long 88°33'22", in SE 1/4 NW 1/4 sec.36, T.4 N., R.16 E., Walworth County, Hydrologic Unit 07120006, on left bank 200 ft upstream from State Highways 12 and 67, at Lauderdale.

DRAINAGE AREA.--16.1 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1993 to October 1994 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 844 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges 1994 water year: Oct. 1-21, Jan. 7-22, Feb. 3-11, 15, 16, 20-22, 26, 27, and Mar. 3, 4, 8, 9. No estimated discharges October 1995. Records good except those for estimated periods, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	4.3	4.3	12	8.9	13	8.3	7.1	1.9	6.5	3.4	5.4
2	11	4.3	4.9	12	8.5	12	8.2	6.9	1.8	5.6	3.2	4.9
3	10	4.5	4.9	12	8.0	12	7.7	6.7	1.7	4.9	3.4	4.6
4	9.0	4.5	5.1	11	7.8	11	7.1	6.7	1.6	5.6	6.7	4.0
5	9.0	4.3	5.0	11	7.6	11	7.0	6.6	1.7	6.3	6.0	3.6
6	8.8	4.3	5.3	12	7.4	11	6.7	5.9	2.1	6.0	5.3	3.6
7	8.6	3.6	5.0	12	8.0	11	6.4	6.4	2.1	6.6	4.8	3.2
8	8.4	3.0	5.1	11	8.0	11	6.0	6.6	1.9	8.3	4.6	3.2
9	11	3.1	5.1	10	7.8	10	6.4	6.0	2.1	7.5	4.1	3.4
10	12	3.2	5.3	9.6	7.4	9.9	6.0	5.3	3.1	6.5	4.9	4.3
11	11	3.1	5.0	10	8.0	9.6	5.7	5.0	4.3	5.9	8.6	4.3
12	10	3.1	4.8	11	8.2	9.6	6.4	4.4	4.0	5.8	8.0	4.3
13	9.4	3.2	4.8	11	8.6	9.6	7.7	4.2	3.8	5.2	11	4.2
14	9.0	3.1	4.9	10	9.2	9.7	7.5	4.2	3.7	7.5	11	3.9
15	9.0	3.5	4.9	9.2	8.7	9.7	8.4	4.7	3.7	7.4	9.8	3.7
16	10	3.4	4.8	8.6	8.4	9.5	8.1	4.5	3.9	7.0	9.0	3.3
17	12	3.3	4.9	8.0	8.1	9.2	6.7	4.0	4.3	6.8	8.4	2.4
18	12	3.1	5.4	8.0	8.0	9.1	5.8	3.8	4.1	6.2	8.1	2.1
19	11	3.5	5.5	7.8	12	8.8	5.8	3.7	3.6	5.8	9.5	1.6
20	10	3.4	17	7.8	16	8.8	5.6	3.6	4.1	6.4	11	1.5
21	9.4	3.3	24	8.0	15	11	5.4	3.6	3.7	6.0	11	1.4
22	8.0	3.4	22	8.2	14	11	5.3	3.6	3.2	5.4	9.6	1.3
23	7.4	3.4	21	8.4	15	11	5.2	3.6	3.5	5.0	8.9	1.6
24	6.0	3.4	20	8.2	15	10	5.8	4.1	6.9	4.7	8.1	1.7
25	6.0	3.6	19	8.2	15	9.8	6.7	4.1	6.8	5.3	7.4	1.9
26	6.0	4.4	19	8.0	14	9.6	7.6	4.0	8.3	5.0	8.6	2.1
27	5.8	4.2	18	9.4	14	10	7.3	3.4	8.0	4.3	7.9	2.3
28	5.3	4.3	18	9.8	14	9.8	6.3	2.8	7.4	3.9	7.6	1.8
29	4.1	4.3	18	9.8	---	9.3	6.4	2.3	7.5	3.7	6.4	1.5
30	3.7	4.2	18	9.5	---	8.8	6.3	2.1	7.0	3.6	6.1	1.5
31	3.9	---	15	9.4	---	8.5	---	2.1	---	3.2	6.4	---
TOTAL	268.8	110.3	324.0	300.9	290.6	314.3	199.8	142.0	121.8	177.9	228.8	88.6
MEAN	8.67	3.68	10.5	9.71	10.4	10.1	6.66	4.58	4.06	5.74	7.38	2.95
MAX	12	4.5	24	12	16	13	8.4	7.1	8.3	8.3	11	5.4
MIN	3.7	3.0	4.3	7.8	7.4	8.5	5.2	2.1	1.6	3.2	3.2	1.3
CFSM	.54	.23	.65	.60	.64	.63	.41	.28	.25	.36	.46	.18
IN.	.62	.25	.75	.70	.67	.73	.46	.33	.28	.41	.53	.20

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1994, BY WATER YEAR (WY)

	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994
MEAN	8.67	3.68	10.5	9.71	10.4	10.1	6.66	4.58	4.06	5.74	7.38	2.95
MAX	8.67	3.68	10.5	9.71	10.4	10.1	6.66	4.58	4.06	5.74	7.38	2.95
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994
MIN	8.67	3.68	10.5	9.71	10.4	10.1	6.66	4.58	4.06	5.74	7.38	2.95
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994

## SUMMARY STATISTICS

## FOR 1994 WATER YEAR

ANNUAL TOTAL	2567.8
ANNUAL MEAN	7.04
HIGHEST DAILY MEAN	24
LOWEST DAILY MEAN	1.3
ANNUAL SEVEN-DAY MINIMUM	1.6
INSTANTANEOUS PEAK FLOW	26
INSTANTANEOUS PEAK STAGE	3.50
INSTANTANEOUS LOW FLOW	1.2
ANNUAL RUNOFF (CFSM)	.44
ANNUAL RUNOFF (INCHES)	5.93
10 PERCENT EXCEEDS	11
50 PERCENT EXCEEDS	6.4
90 PERCENT EXCEEDS	3.2

05544800 LAUDERDALE LAKES OUTLET AT LAUDERDALE, WI--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	---	---	---	---	---	---	---	---	---	---	---
2	1.4	---	---	---	---	---	---	---	---	---	---	---
3	1.3	---	---	---	---	---	---	---	---	---	---	---
4	1.3	---	---	---	---	---	---	---	---	---	---	---
5	1.2	---	---	---	---	---	---	---	---	---	---	---
6	1.1	---	---	---	---	---	---	---	---	---	---	---
7	1.1	---	---	---	---	---	---	---	---	---	---	---
8	2.3	---	---	---	---	---	---	---	---	---	---	---
9	4.0	---	---	---	---	---	---	---	---	---	---	---
10	4.0	---	---	---	---	---	---	---	---	---	---	---
11	3.5	---	---	---	---	---	---	---	---	---	---	---
12	3.0	---	---	---	---	---	---	---	---	---	---	---
13	2.9	---	---	---	---	---	---	---	---	---	---	---
14	2.9	---	---	---	---	---	---	---	---	---	---	---
15	2.9	---	---	---	---	---	---	---	---	---	---	---
16	2.8	---	---	---	---	---	---	---	---	---	---	---
17	2.8	---	---	---	---	---	---	---	---	---	---	---
18	2.9	---	---	---	---	---	---	---	---	---	---	---
19	2.7	---	---	---	---	---	---	---	---	---	---	---
20	2.3	---	---	---	---	---	---	---	---	---	---	---
21	2.1	---	---	---	---	---	---	---	---	---	---	---
22	2.2	---	---	---	---	---	---	---	---	---	---	---
23	2.3	---	---	---	---	---	---	---	---	---	---	---
24	2.2	---	---	---	---	---	---	---	---	---	---	---
25	2.0	---	---	---	---	---	---	---	---	---	---	---
26	2.0	---	---	---	---	---	---	---	---	---	---	---
27	2.0	---	---	---	---	---	---	---	---	---	---	---
28	1.9	---	---	---	---	---	---	---	---	---	---	---
29	1.8	---	---	---	---	---	---	---	---	---	---	---
30	1.9	---	---	---	---	---	---	---	---	---	---	---
31	2.3	---	---	---	---	---	---	---	---	---	---	---
TOTAL	70.6	---	---	---	---	---	---	---	---	---	---	---
MEAN	2.28	---	---	---	---	---	---	---	---	---	---	---
MAX	4.0	---	---	---	---	---	---	---	---	---	---	---
MIN	1.1	---	---	---	---	---	---	---	---	---	---	---
CFSM	.14	---	---	---	---	---	---	---	---	---	---	---
IN.	.16	---	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994
MEAN	5.47	3.68	10.5	9.71	10.4	10.1	6.66	4.58	4.06	5.74	7.38	2.95
MAX	8.67	3.68	10.5	9.71	10.4	10.1	6.66	4.58	4.06	5.74	7.38	2.95
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994
MIN	2.28	3.68	10.5	9.71	10.4	10.1	6.66	4.58	4.06	5.74	7.38	2.95
(WY)	1995	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR  
(JANUARY-OCTOBER)

FOR 1995 WATER YEAR  
(OCTOBER)

WATER YEARS 1994 - 1995

ANNUAL MEAN										7.04		
HIGHEST ANNUAL MEAN										7.04		1994
LOWEST ANNUAL MEAN										7.04		1994
HIGHEST DAILY MEAN				16	Feb 20		4.0	Oct 9,10		24		Dec 21 1993
LOWEST DAILY MEAN				1.1	Oct 6,7		1.1	Oct 6,7		1.1		Oct 6,7 1994
ANNUAL SEVEN-DAY MINIMUM				1.3	Oct 1		1.3	Oct 1		1.3		Oct 1 1994
INSTANTANEOUS PEAK FLOW										26		Dec 20 1993
INSTANTANEOUS PEAK STAGE										3.50		Dec 20 1993
INSTANTANEOUS LOW FLOW										1.2		Sep 22 1994
ANNUAL RUNOFF (CFSM)										.44		
ANNUAL RUNOFF (INCHES)										5.94		
10 PERCENT EXCEEDS				11			3.4			11		
50 PERCENT EXCEEDS				6.4			2.2			6.0		
90 PERCENT EXCEEDS				2.1			1.2			2.3		



## ILLINOIS RIVER BASIN

05544800 LAUDERDALE LAKES OUTLET AT LAUDERDALE, WI--CONTINUED

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to October 1994 (discontinued).

PERIOD OF DAILY RECORD.--

TOTAL-PHOSPHORUS DISCHARGE: October 1993 to October 1994 (discontinued).

INSTRUMENTATION.--None. Samples collected using equal-width increment method.

REMARKS.--Records good except for periods of Oct. 1-21, Jan. 7-22, Feb. 3-11, 15-16, 21, 26-27, and Mar. 3, 4, 9, which are fair. Sample analyses by the Wisconsin State Laboratory of Hygiene.

EXTREMES FOR PERIOD OF DAILY RECORD.--

TOTAL-PHOSPHORUS CONCENTRATIONS: Maximum observed, 0.022 mg/L, June 23, 1994; minimum observed, 0.005 mg/L, Feb. 1, 1994.

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 1.94 lb, Feb. 20, 1994; minimum daily, 0.11 lb, Oct. 6-7, 1994.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	PHOS- TOTAL (MG/L AS P) (00665)
OCT 1993					
21...	1100	9.4	--	6	<0.020
NOV					
10...	1340	--	3.2	<2	<0.020
DEC					
01...	0945	--	4.2	2	<0.020
21...	1040	--	24	<2	0.008
FEB 1994					
01...	1050	--	8.8	<2	0.005
MAR					
16...	1005	--	9.5	<2	0.011
APR					
18...	1425	--	5.9	2	0.010
MAY					
05...	1035	--	6.7	4	0.012
10...	1430	--	5.2	<2	0.011
JUN					
09...	1010	--	1.8	<2	0.020
16...	1100	--	3.8	<2	0.017
23...	1500	--	4.0	--	0.022
JUL					
05...	1420	--	6.3	3	0.018
20...	0940	--	6.5	4	0.018
AUG					
11...	0955	--	8.7	5	0.017
17...	1010	--	8.5	5	0.015
24...	0920	--	8.4	3	0.015
SEP					
16...	1445	--	3.5	5	0.015
20...	1000	--	1.5	3	0.019
28...	0925	--	1.9	<2	0.020

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	PHOS- TOTAL (MG/L AS P) (00665)
OCT 1994				
13...	1055	3.0	<5	0.018



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 August 1994 (discontinued).

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

WATER-QUALITY DATA, MARCH 01 TO AUGUST 10, 1994  
(Milligrams per liter unless otherwise indicated)

	Mar. 01		Apr. 12		June 15		July 18		Aug. 10	
Depth of sample (ft)	3.0	24	1.5	23	1.5	22	1.5	21	1.5	21
Lake stage (ft)	12.01		11.59		11.20		11.51		11.10	
Specific conductance (µS/cm)	345	373	328	330	337	370	334	393	333	331
pH (units)	8.3	7.6	8.2	8.2	8.1	7.4	8.1	7.2	8.3	8.2
Water temperature (°C)	3.0	4.5	9.0	8.5	24.5	18.0	26.5	22.0	23.0	23.0
Color (Pt-Co. scale)	---	---	5	5	---	---	---	---	---	---
Turbidity (NTU)	---	---	0.70	1.00	---	---	---	---	---	---
Secchi-depth (meters)	---	---	2.8		2.4		3.3		2.6	
Dissolved oxygen	13.3	4.9	12.4	12.1	8.0	0.3	8.6	0.4	8.5	8.4
Hardness, as CaCO3	---	---	160	160	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	34	34	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	18	18	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	6.3	6.3	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	1	1	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	140	140	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	16	16	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	13	13	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	<0.2	<0.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	190	190	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.07	0.13	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.12	0.12	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.70	0.60	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.77	0.73	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.006	0.007	0.011	<0.020	0.010	0.021	0.012	0.027
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)	---	---	4.8	---	2.9	---	2.9	---	6.6	---

3-1-94

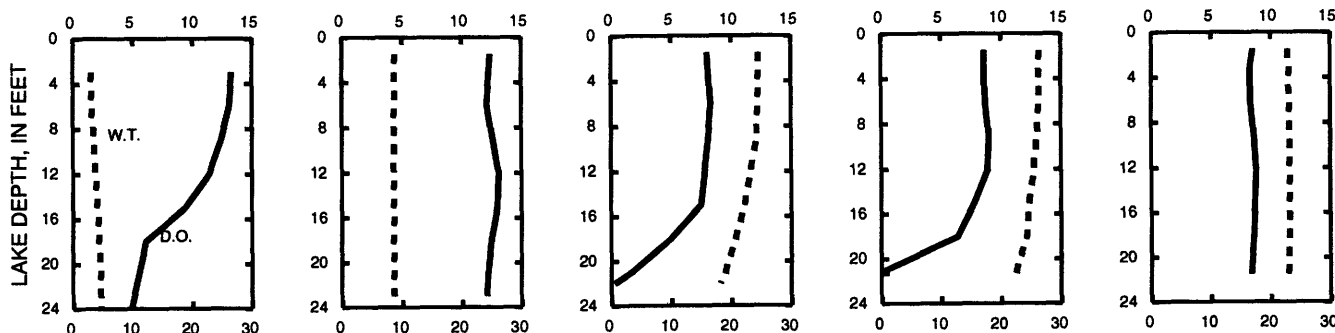
4-12-94

6-15-94

7-18-94

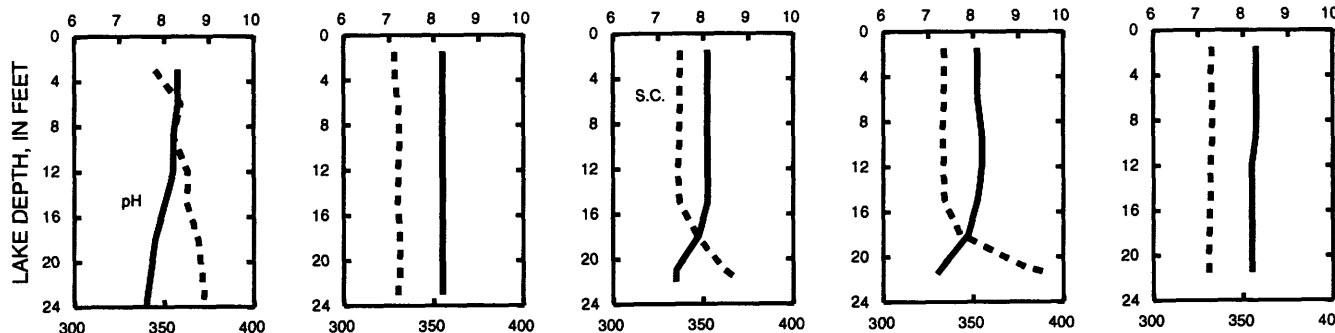
8-10-94

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

424905088204000 POTTER LAKE NEAR MUKWONAGO, WI

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.--February 1993 to current year.

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 28 TO AUGUST 10, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 28		Apr. 11		June 15		July 18		Aug. 10	
Depth of sample (ft)	3.0	22	1.5	23	1.5	22	1.5	21	1.5	22
Lake stage (ft)	---	---	7.36	---	7.03	---	6.84	---	6.82	---
Specific conductance (µS/cm)	510	606	481	482	476	520	467	571	443	593
pH (units)	7.7	7.5	9.0	8.6	8.3	7.2	8.2	7.0	8.4	6.7
Water temperature (°C)	3.0	4.5	9.5	8.5	26.0	15.0	26.0	16.0	22.5	17.0
Color (Pt-Co. scale)	---	---	15	15	---	---	---	---	---	---
Turbidity (NTU)	---	---	1.4	1.3	---	---	---	---	---	---
Secchi-depth (meters)	---	---	1.8	---	0.8	---	1.2	---	0.8	---
Dissolved oxygen	8.4	0.8	12.2	11.6	9.5	0.1	9.5	0.7	8.0	0.7
Hardness, as CaCO3	---	---	200	200	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	41	41	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	24	24	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	21	21	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	3	3	---	---	---	---	---	---
Alkalinity, as CaCO3	---	---	180	180	---	---	---	---	---	---
Sulfate, dissolved (SO4)	---	---	10	10	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	45	45	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO2)	---	---	1.7	1.9	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	272	272	---	---	---	---	---	---
Nitrogen, NO2 + NO3, diss. (as N)	---	---	0.02	0.03	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	0.01	0.05	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.70	0.70	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.72	0.73	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.026	0.026	0.045	0.090	0.033	0.089	0.044	0.128
Phosphorus, ortho, dissolved (as P)	---	---	0.009	0.009	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	6.1	---	15	---	7.9	---	16	---

2-28-94

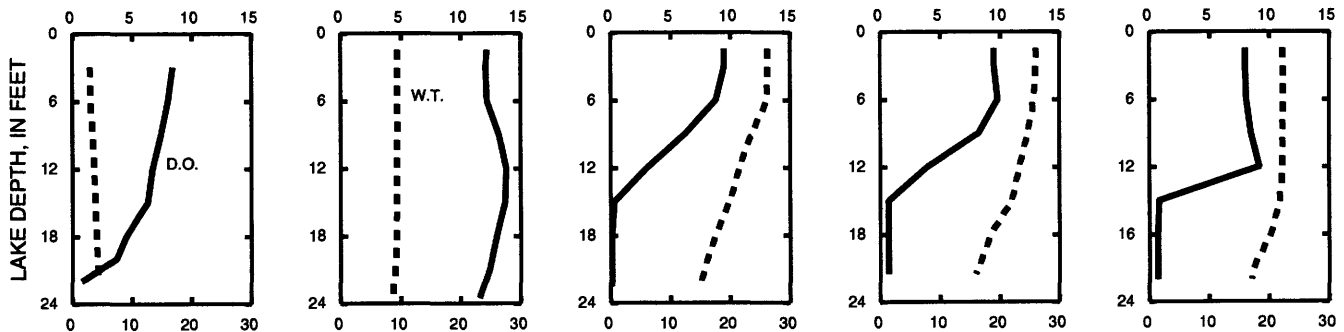
4-11-94

6-15-94

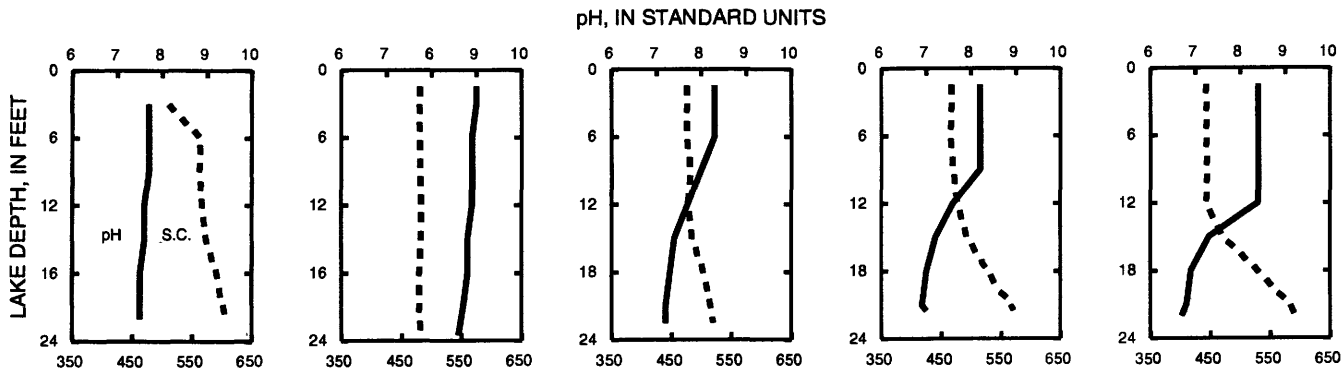
7-18-94

8-10-94

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

05545750 FOX RIVER NEAR NEW MUNSTER, WI  
(FORMERLY PUBLISHED AS FOX RIVER AT WILMOT)

LOCATION.--Lat 42°36'39", long 88°13'33", in NW 1/4 NW 1/4 sec.26, T.2 N., R.19 E., Kenosha County, Hydrologic Unit 07120006, on right bank 40 ft downstream from bridge on County Trunk Highway JB, 2.2 mi north of New Munster, and 17.0 mi upstream from Fox Chain of Lakes.

DRAINAGE AREA.--811 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1993, published as "at Wilmot" under station number 05546500.

REVISED RECORDS.--WSP 1308: 1943(M), 1945(M). WDR WI-67-1: Drainage area. WDR WI-92-1: 1991.

GAGE.--Water-stage recorder. Datum of gage is 735.72 ft above sea level (Racine County Surveyor bench mark). Prior to Sept. 1, 1965, nonrecording gage at bridge in Wilmot 11 mi downstream at datum 0.50 ft lower, and recording gage Sept. 1, 1965 to Sept. 30, 1993.

REMARKS.--Estimated daily discharges; Ice-affected periods, Dec. 12-17 and Dec. 23 to Mar. 6. Records are good, except for ice-affected periods, which are fair. Gage-height telemeter and data-collection platform at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	769	513	513	260	270	1700	797	558	218	258	184	276
2	795	585	560	270	270	1500	777	571	201	231	218	248
3	803	613	612	270	270	1500	753	598	195	219	238	224
4	775	711	603	270	270	1600	706	446	187	204	425	236
5	749	328	592	270	260	2000	677	428	185	171	623	233
6	648	283	582	270	250	2600	659	443	182	211	602	243
7	520	282	604	270	250	2930	587	432	185	378	559	255
8	452	281	611	270	250	2760	421	424	198	419	494	211
9	540	222	571	270	250	2430	321	400	188	610	418	210
10	519	209	469	280	250	2110	368	402	162	649	313	216
11	521	218	412	280	250	1930	439	421	140	627	375	221
12	610	253	400	280	250	1810	498	444	145	604	457	296
13	518	328	400	280	260	1780	623	435	167	626	614	490
14	447	399	400	270	280	1750	587	439	185	624	865	507
15	435	521	400	260	320	1720	612	321	171	611	795	456
16	435	612	420	250	370	1630	632	377	164	606	675	266
17	451	413	430	240	430	1570	724	358	162	591	564	189
18	446	552	467	240	520	1480	606	275	156	588	471	198
19	433	498	487	240	760	1350	470	316	151	575	345	155
20	427	476	478	240	2200	1200	511	287	184	571	470	159
21	429	445	459	240	3600	1270	505	261	173	554	463	160
22	435	386	439	240	3400	1330	428	265	167	505	449	155
23	426	333	410	250	3000	1170	320	259	195	466	387	118
24	425	360	370	250	2600	1080	325	258	323	336	291	110
25	431	390	350	250	2200	1170	416	259	346	225	277	120
26	420	449	320	260	2000	1210	670	268	339	267	285	130
27	422	512	280	260	1900	1210	709	270	353	253	285	134
28	467	521	270	270	1800	1230	640	243	325	182	270	132
29	464	534	260	270	---	1130	479	215	307	186	269	114
30	485	528	260	270	---	1030	505	217	292	194	283	105
31	472	---	250	270	---	979	---	214	---	186	369	---
TOTAL	16169	12755	13679	8110	28730	50159	16765	11104	6346	12727	13333	6567
MEAN	522	425	441	262	1026	1618	559	358	212	411	430	219
MAX	803	711	612	280	3600	2930	797	598	353	649	865	507
MIN	420	209	250	240	250	979	320	214	140	171	184	105
CFSM	.64	.52	.54	.32	1.27	2.00	.69	.44	.26	.51	.53	.27
IN.	.74	.59	.63	.37	1.32	2.30	.77	.51	.29	.58	.61	.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)												
MEAN	390	481	459	419	513	1160	1093	683	494	386	323	343
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 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1940 - 1994		
ANNUAL TOTAL	421632		196444				
ANNUAL MEAN	1155		538		562		
HIGHEST ANNUAL MEAN					1240		
LOWEST ANNUAL MEAN					174		
HIGHEST DAILY MEAN	4990	Apr 22	(a)3600	Feb 21	7100	Apr 1	1960
LOWEST DAILY MEAN	209	Nov 10	105	Sep 30	35	Sep 9	1958
ANNUAL SEVEN-DAY MINIMUM	250	Nov 6	121	Sep 24	41	Sep 7	1958
INSTANTANEOUS PEAK FLOW					(b)7520	Mar 31	1960
INSTANTANEOUS PEAK STAGE			(c)14.10		Feb 21	1994	
INSTANTANEOUS LOW FLOW			100		Sep 30		(d)Oct 26 1945
ANNUAL RUNOFF (CFSM)	1.42		.66		.00		
ANNUAL RUNOFF (INCHES)	19.34		9.01		.69		
10 PERCENT EXCEEDS	2930		1150		1270		
50 PERCENT EXCEEDS	762		402		357		
90 PERCENT EXCEEDS	400		192		120		

(a) Ice affected  
(b) Gage height, 9.25 ft, from graph based on gage readings, site and datum then in use  
(c) Backwater from ice  
(d) Also occurred Aug. 10, 1990

423246088175800 POWERS LAKE AT POWERS LAKE, WI

LOCATION.--Lat 42°32'46", long 88°17'58", in NW 1/4 SE 1/4 sec.13, T.1 N., R.18 E., Walworth County, Hydrologic Unit 07120006, at Powers Lake.

DRAINAGE AREA.--3.42 mi<sup>2</sup>.

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 24 TO AUGUST 15, 1994  
(Milligrams per liter unless otherwise indicated)

	Feb. 24		Apr. 11		June 13		July 12		Aug. 15	
Depth of sample (ft)	3.0	33	1.5	32	1.5	33	1.5	33	1.5	33
Lake stage (ft)	10.72		10.42		9.80		10.00		9.93	
Specific conductance (µS/cm)	490	556	490	492	507	519	492	524	486	556
pH (units)	8.2	7.7	8.9	8.5	8.1	7.5	8.1	7.4	8.1	7.3
Water temperature (°C)	3.5	4.0	8.0	7.5	22.0	14.5	24.5	15.5	22.5	17.0
Color (Pt-Co. scale)	---	---	10	10	---	---	---	---	---	---
Turbidity (NTU)	---	---	<0.50	0.50	---	---	---	---	---	---
Secchi-depth (meters)	---	---	---	4.6	---	4.0	---	3.4	---	3.2
Dissolved oxygen	13.5	5.4	12.2	12.7	9.5	0.1	7.4	0.0	8.5	0.7
Hardness, as CaCO <sub>3</sub>	---	---	230	230	---	---	---	---	---	---
Calcium, dissolved (Ca)	---	---	42	42	---	---	---	---	---	---
Magnesium, dissolved (Mg)	---	---	30	31	---	---	---	---	---	---
Sodium, dissolved (Na)	---	---	14	14	---	---	---	---	---	---
Potassium, dissolved (K)	---	---	2	2	---	---	---	---	---	---
Alkalinity, as CaCO <sub>3</sub>	---	---	190	190	---	---	---	---	---	---
Sulfate, dissolved (SO <sub>4</sub> )	---	---	33	34	---	---	---	---	---	---
Chloride, dissolved (Cl)	---	---	31	30	---	---	---	---	---	---
Fluoride, dissolved (F)	---	---	0.1	0.1	---	---	---	---	---	---
Silica, dissolved (SiO <sub>2</sub> )	---	---	7.3	7.2	---	---	---	---	---	---
Solids, dissolved, at 180°C	---	---	286	280	---	---	---	---	---	---
Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , diss. (as N)	---	---	0.08	0.08	---	---	---	---	---	---
Nitrogen, ammonia, dissolved (as N)	---	---	<0.00	<0.00	---	---	---	---	---	---
Nitrogen, amm. + org., total (as N)	---	---	0.50	0.40	---	---	---	---	---	---
Nitrogen, total (as N)	---	---	0.58	0.48	---	---	---	---	---	---
Phosphorus, total (as P)	---	---	0.007	0.008	0.008	<0.020	0.014	0.040	0.011	0.061
Phosphorus, ortho, dissolved (as P)	---	---	<0.002	<0.002	---	---	---	---	---	---
Iron, dissolved (Fe) µg/L	---	---	<50	<50	---	---	---	---	---	---
Manganese, dissolved (Mn) µg/L	---	---	<40	<40	---	---	---	---	---	---
Chlorophyll a, phytoplankton (µg/L)	---	---	2.7	---	3.3	---	3.9	---	2.9	---

2-24-94

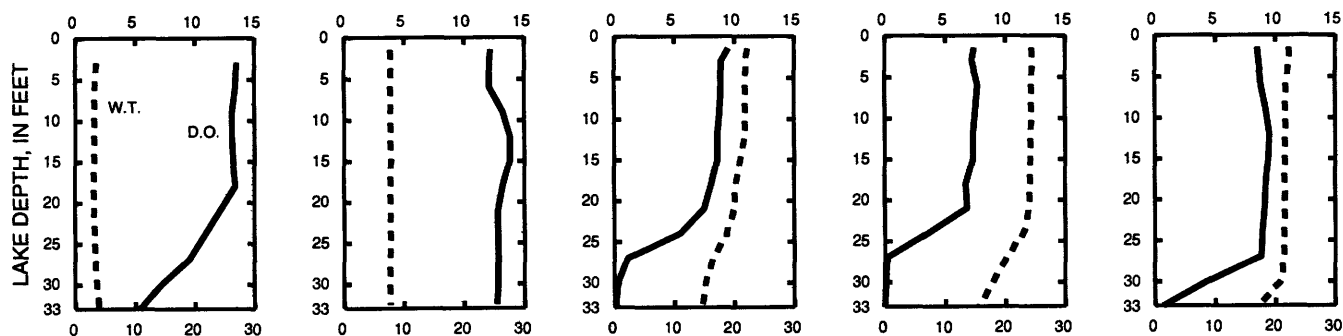
4-11-94

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7-12-94

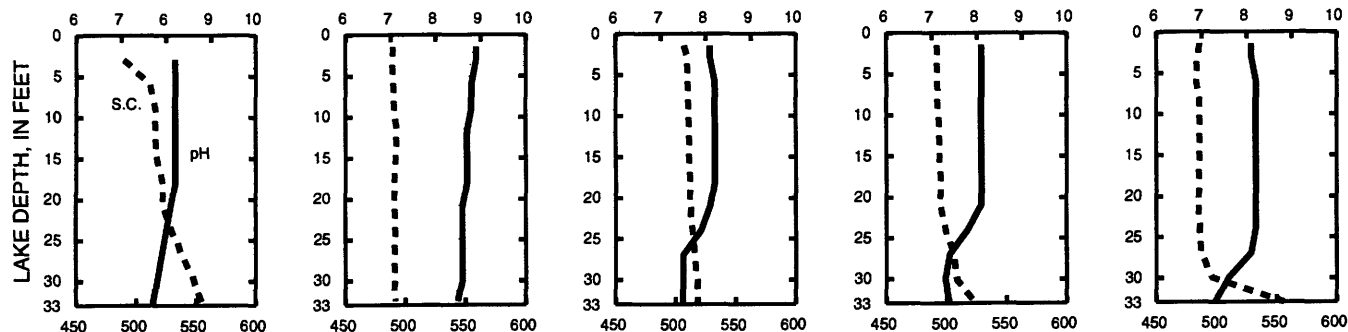
8-15-94

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

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow and flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to these events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at miscellaneous sites and for special studies are given in separate tables.

## CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual minimum has been determined.

## MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

Station number and name	Location and drainage area	Period of record	Water year 1994 maximum		Period of record maximum	
			Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)	Date
ST. CROIX RIVER BASIN						
*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 southwest of Frederic. Drainage area is 6.34 mi <sup>2</sup> .	1958-94	09-14-94	12.18	140	06-12-84 18.89 1,050
05341900 Kinnickinnic River Tributary at River Falls, WI	Lat 44°49'57", long 92°38'23", in NE 1/4 sec.14, T.27 N., R.19 W., Pierce County, Hydrologic Unit 07030005, at bridge on County Trunk Highway FF, 1.6 mi southwest of River Falls. Drainage area is 7.26 mi <sup>2</sup> .	1959-94	02-19-94	13.10	1,250	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 Highway 182, 3.0 mi west of Powell. Drainage area is 120 mi <sup>2</sup> .	1970-94	09-23-94	12.31	620	04-16-82 12.83 720
*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 <sup>2</sup> .	1958-65 1966# 1967-94	09-15-94	17.43	552	09-15-94 17.43 552
*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. Highway 8, 3.5 mi west of Prentice. Drainage area is 22.6 mi <sup>2</sup> .	1961-94	09-16-94	15.39	1,650	09-16-94 15.39 1,650
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 <sup>2</sup> .	1970-94	09-15-94	17.66	1,620	09-15-94 17.66 1,620
*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 Highway 27, at Cadott. Drainage area is 364 mi <sup>2</sup> .	1943-61# 1962-94	04-26-94 F09-22-86	12.25 15.82	7,750 16,600	F09-22-86 15.82 16,600

## MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

Station number and name	Location and drainage area	Period of record	Water year 1994 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
CHIPPEWA RIVER BASIN--CONTINUED								
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 <sup>2</sup> .	1962-94	04-25-94	12.98	180	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 <sup>2</sup> .	1945-51# 1958-94	04-26-94	5.76	700	06-29-79	11.81	5,400
*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 <sup>2</sup> .	1943-55# 1958-94	04-28-94	10.35	12,100	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 <sup>2</sup> .	1958-94	07-05-94	11.75	175	07-08-59	14.12	400
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 <sup>2</sup> .	1958-94	1994	B	<60	03-30-67	12.39	1,550
*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 <sup>2</sup> .	1962-94	07-07-94	14.10	450	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 <sup>2</sup> .	1960-94	07-07-94	11.59	85	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 <sup>2</sup> .	1974-94	04-27-94	13.30	1,410	09-10-75	15.39	5,180
BLACK RIVER BASIN								
*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 <sup>2</sup> .	1958-65 1966# 1967-94	04-26-94	14.76	2,660	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 <sup>2</sup> .	1961-94	04-15-94	15.90	1,600	09-22-86	20.62	7,880



## 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 1994 maximum		Period of record maximum			
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
BLACK RIVER BASIN--CONTINUED								
*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 <sup>2</sup> .	1960-94	09-14-94 06-20-93 04-16-92 05-17-91 03-12-90 03-27-89	10.97 11.03 10.96 11.00 11.18 9.46	1,440 F1,480 F1,430 F1,460 F1,590 F643	03-12-90	11.18	F1,590
Maximums for water years 1972-88 were discarded based on recently collected data.								
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 <sup>2</sup> .	1959-65 1966# 1967-94	02-19-94	13.38	940	08-27-59	19.59	10,000
WISCONSIN RIVER BASIN								
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 <sup>2</sup> .	1970-94	09-16-94	11.42	48	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 <sup>2</sup> .	1970-94	09-15-94 06-20-93 04-16-92 05-29-91 05-09-90 05-25-89 07-09-88 03-03-87 09-22-86 04-17-85 04-30-84 05-23-83 05-06-82 06-14-81 09-21-80 04-16-79 04-02-78 03-12-77 05-16-76 09-10-75 04-13-74 08-20-73 08-18-72 04-13-71 05-31-70	11.21 10.54 10.92 10.68 10.80 10.53 10.51 11.35 11.07 10.82 11.32 11.24 11.03 10.91 10.78 11.03 10.27 10.61 10.59 10.44 10.28 10.68 10.29 10.78 10.47	45 F21 F34 F26 F30 F21 F21 F51 F40 F31 F50 F46 F38 F34 F29 F38 F14 F24 F23 F18 F14 F26 F14 F29 F19	03-03-87	11.35	F51
*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 <sup>2</sup> .	1958-94	09-16-94	11.12	65	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 <sup>2</sup> .	1958-65 1966# 1967-94	09-16-94	9.88	93	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 <sup>2</sup> .	1970-94	09-15-94	13.34	194	06-14-81	14.38	310

## MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

Station number and name	Location and drainage area	Period of record	Water year 1994 maximum		Period of record maximum	
			Date	Gage height (ft)	Date	Gage height (ft)
WISCONSIN RIVER BASIN--CONTINUED						
*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 <sup>2</sup> .	1961-94	04-23-94	12.13	220	06-13-90 17.98 1,600
05395020 Lloyd Creek near Doering, WI	Lat 45°13'57", long 89°22'04", in SE 1/41, 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 <sup>2</sup> .	1970-94	09-15-94	11.83	103	06-13-90 >16.00 >1,000
05395100 Trappe River Tributary near Merrill, WI	Lat 45°08'07", long 89°30'08", in SW 1/4 sec.28, T.31 N., R.8 E., Lincoln County, Hydrologic Unit 07070002, at culvert on County Trunk Highway P, 9.5 mi southeast of Merrill. Drainage area is 1.58 mi <sup>2</sup> .	1959-94	04-24-94	12.25	90	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 <sup>2</sup> .	1982-94	07-08-94	6.91	283	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 <sup>2</sup> .	1959-94	04-24-94	12.11	375	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 <sup>2</sup> .	1973-94	04-24-94	16.74	1,850	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 <sup>2</sup> .	1959-94	04-24-94	11.35	160	05-02-73 13.82 810
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 <sup>2</sup> .	1957-65# 1966-70 1971-80# 1983-94	03-06-94	6.63	284	09-14-92 9.80 1,200
*05405600 Rowan Creek at Poynette, WI	Lat 43°23'13", long 89°23'25", in S 1/2 sec.35, T.11 N., R.9 E., Columbia County, Hydrologic Unit 07070005, at bridge on U.S. Highway 51, at Poynette. Drainage area is 10.4 mi <sup>2</sup> .	1961-94	02-19-94	13.13	360	09-09-65 17.90 2,260
*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 <sup>2</sup> .	1959-94	07-19-94	E10.05	115	07-27-64 18.21 2,460

## 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 1994 maximum		Period of record maximum	
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date
GRANT RIVER BASIN						
*05413400 Pigeon Creek near Lancaster, WI	Lat 42°49'00", long 90°43'20", in SW 1/4 sec.15, T.4 N., R.3 W., Grant County, Hydrologic Unit 07060003, at culvert on country road, 2.0 mi south of Lancaster. Drainage area is 6.93 mi <sup>2</sup> .	1960-65 1966# 1967-94	02-19-94	D10.91	E300	01-24-67 20.85 2,800
PLATTE RIVER BASIN						
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 <sup>2</sup> .	1987-90# 1991-94	02-19-94	12.85	2,350	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 <sup>2</sup> .	1960-94	02-19-94	13.56	660	06-29-69 17.32 7,040
ROCK RIVER BASIN						
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 <sup>2</sup> .	1982-94	06-23-94	6.77	430	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 <sup>2</sup> .	1962-94	02-19-94	11.11	650	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 <sup>2</sup> .	1959-94	05-24-94	17.74	1,570	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 <sup>2</sup> .	1954-65# 1966-94	08-19-94 02-14-94	9.52 G9.82	2,150	06-29-90 11.40 8,500
*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 <sup>2</sup> .	1961-94	02-19-94	G13.66	140	03-31-65 15.06 370

## MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

Station number and name	Location and drainage area	Period of record	Water year 1994 maximum		Period of record maximum			
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
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 <sup>2</sup> .	1962-94	02-20-94	12.62	185	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 <sup>2</sup> .	1958-94	02-19-94	13.04	130	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 <sup>2</sup> .	1962-94	02-19-94	G13.61	E350	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 debris  
E Estimated  
F Revised  
G Backwater from ice

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## MEASUREMENTS AT MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

## DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1994

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Measured Previously (Water Years)	Date	Measurements Discharge (ft <sup>3</sup> /s)
<b>CHIPPEWA RIVER BASIN</b>						
Allequash Creek, Site 3	Trout River	Lat 46°01'58", long 89°36'28", in NE 1/4 SW 1/4 sec.15, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07050002, upstream of bridge on unnamed road, near Boulder Junction.	--	--	06-03-92	2.04
					08-05-92	3.52
					09-10-92	2.45
					11-12-92	5.29
					12-10-92	4.30
					01-12-93	4.68
					03-02-93	3.91
					03-23-93	3.86
					04-16-93	5.72
					06-09-93	9.20
					07-21-93	3.12
					08-19-93	3.54
					09-15-93	6.18
					10-13-93	4.51
					11-23-93	4.16
					01-07-94	4.21
					03-23-94	4.18
					04-25-94	3.79
					05-23-94	3.04
					06-26-94	4.19
07-30-94	3.23					
09-08-94	3.26					
09-30-94	4.00					
Little John Lake Tributary	Allequash Creek	Lat 46°01'29", long 89°39'00", in NE 1/4 NW 1/4 sec.20, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07050002, at confluence with Allequash Creek, near Boulder Junction.	--	--	04-22-92	2.41
					06-03-92	1.02
					08-05-92	1.12
					09-10-92	0.63
					11-12-92	0.66
					12-10-92	1.10
					03-02-93	1.31
					03-24-93	1.23
					04-16-93	2.19
					06-09-93	0.57
					07-21-93	0.06
					08-19-93	0.64
					09-15-93	1.60
					10-13-93	0.34
					11-23-93	0.50
					02-17-94	0.97
					04-25-94	0.71
					05-23-94	1.24
					06-27-94	2.32
					07-30-94	0.66
09-08-94	2.56					
09-29-94	2.69					
North Creek	Trout River	Lat 46°04'43", long 89°40'02", in SW 1/4 NE 1/4 sec.31, T.42 N., R.7 E., Vilas County, Hydrologic Unit 07050002, at inlet to Trout Lake, 2.6 mi southwest of Boulder Junction.	3.58	1992-93	10-13-93	3.24
					11-23-93	3.30
					02-17-94	2.71
					03-23-94	3.26
					04-25-94	3.67
					05-23-94	2.93
					06-27-94	2.55
					07-30-94	3.13
					09-08-94	2.48
					09-29-94	5.24
Mann Creek	Trout River	Lat 46°00'41", long 89°40'33", in NW 1/4 NW 1/4 sec.30, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07050002, at County Trunk Highway N, near Boulder Junction.	--	1991-93	10-13-93	9.29
					11-23-93	4.97
					01-06-94	3.09
					02-15-94	3.04
					03-22-94	1.23
					05-23-94	1.72
					06-27-94	0.73
					07-30-94	1.95
					09-08-94	1.44
<b>BLACK RIVER BASIN</b>						
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	1985-93	10-12-93	430
					04-21-94	2,500
					06-08-94	597
					08-05-94	333

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 1993 TO SEPTEMBER 1994

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)
<b>ST. CROIX RIVER BASIN</b>									
05333500		ST. CROIX RIVER NEAR DANBURY, WI (LAT 46 04 28N LONG 092 14 50W)							
OCT 1993					MAR 1994				
01...	1045	1060	142	10.5	16...	0925	1300	155	1.0
NOV 22...	1210	1390	140	1.0	30...	1050	1290	140	3.5
JAN 1994					MAY 25...	0800	1190	120	19.0
06...	1050	867	160	0.0	AUG 05...	1140	1220	110	19.0
FEB 16...	1250	962	155	0.0	SEP 12...	1140	760	120	21.0
05340500		ST. CROIX RIVER AT ST. CROIX FALLS, WI (LAT 45 24 25N LONG 092 38 49W)							
OCT 1993					MAY 1994				
01...	1245	3940	207	11.0	06...	1310	13700	110	13.0
NOV 29...	1200	3940	198	1.5	19...	1015	6190	150	19.5
DEC 28...	1115	4180	222	0.0	JUN 20...	1310	6320	145	24.0
MAR 1994					JUL 08...	1215	6160	160	24.0
30...	0905	7190	260	2.5	AUG 30...	0950	3200	180	21.5
APR 07...	0915	7970	150	4.5					
13...	0915	9400	120	8.0					
<b>CHIPPEWA RIVER BASIN</b>									
05356000		CHIPPEWA RIVER AT BISHOPS BRIDGE NEAR WINTER, WI (LAT 45 50 57N LONG 091 04 44W)							
OCT 1993					APR 1994				
06...	1330	890	90	12.5	11...	1130	205	110	5.5
NOV 23...	1415	772	100	1.5	MAY 23...	1140	358	70	16.5
JAN 1994					JUL 20...	1250	1100	70	24.0
03...	0930	1220	105	1.0	AUG 23...	1230	245	80	20.5
FEB 15...	1510	751	100	1.0	SEP 16...	1540	5420	78	20.0
MAR 15...	0850	487	140	2.5					
29...	0915	265	120	3.0					
05356500		CHIPPEWA RIVER NEAR BRUCE, WI (LAT 45 27 08N LONG 091 15 39W)							
OCT 1993					APR 1994				
04...	1330	1220	110	12.0	11...	1130	1460	85	8.0
JAN 1994					MAY 09...	1235	1090	188	15.5
21...	1140	1050	120	0.0	JUL 13...	1050	896	110	21.0
FEB 22...	1000	1140	135	0.0	SEP 12...	1515	441	120	22.0
MAR 14...	1040	977	130	0.5	18...	1015	16200	55	19.5
22...	1430	1100	110	2.5					
05360500		FLAMBEAU RIVER NEAR BRUCE, WI (LAT 45 22 21N LONG 091 12 34W)							
OCT 1993					MAY 1994				
04...	1110	798	130	12.0	09...	1000	1260	92	13.0
NOV 30...	0925	1300	120	0.5	13...	1440	1580	90	18.5
JAN 1994					JUL 14...	1420	1380	120	21.0
21...	1335	810	112	0.0	SEP 12...	1230	1390	130	21.0
FEB 22...	1205	817	185	0.0	16...	1200	23000	80	20.0
MAR 22...	1115	625	162	8.0					

## SPECIFIC CONDUCTANCE AND WATER TEMPERATURE AT GAGING STATIONS

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE PER CENT (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE PER CENT (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 1993					MAY 1994				
01...	1610	173	140	11.5	02...	1445	1560	65	8.0
DEC 30...	1620	60	200	0.0	23...	1535	213	115	23.5
FEB 1994					JUN 22...	1400	151	125	28.0
03...	1405	58	232	0.0	AUG 15...	1340	60	164	22.5
MAR 02...	1150	103	225	0.0					
31...	1430	480	102	1.5					
		05365500		CHIPPEWA RIVER AT CHIPPEWA FALLS, WI (LAT 44 55 37N LONG 091 24 33W)					
OCT 1993					MAR 1994				
06...	1245	6290	155	15.0	14...	1300	2630	190	4.0
JAN 1994					23...	1215	6100	260	3.0
25...	1430	1180	250	1.0	MAY 11...	1300	6100	110	13.0
FEB 24...	1125	6160	184	1.0	13...	1155	7820	108	16.0
					JUL 19...	1200	5110	145	24.0
		05365707		NORTH FORK EAU CLAIRE RIVER NEAR THORP, WI (LAT 44 58 25N LONG 090 50 57W)					
OCT 1993					MAR 1994				
01...	1130	38	150	10.0	02...	1540	11	264	0.5
NOV 10...	1248	24	280	2.5	31...	1200	43	132	3.0
DEC 30...	1244	3.5	272	0.0	MAY 02...	1115	93	108	8.0
FEB 1994					23...	1225	8.7	183	21.5
03...	1105	3.0	282	0.0	JUN 22...	1138	1.9	212	25.0
					AUG 15...	1148	0.88	220	21.0
		05368000		HAY RIVER AT WHEELER, WI (LAT 45 02 52N LONG 091 54 39W)					
OCT 1993					APR 1994				
13...	1530	269	390	7.0	27...	1510	2000	120	9.0
DEC 06...	1300	289	375	3.0	MAY 18...	1530	306	390	18.0
FEB 1994					JUL 21...	1630	348	230	20.5
25...	1425	337	305	0.0	SEP 26...	1015	324	330	12.0
MAR 14...	1540	401	360	6.0					
28...	1305	378	300	4.5					
		05369000		RED CEDAR RIVER AT MENOMONIE, WI (LAT 44 53 02N LONG 091 55 57W)					
OCT 1993					MAR 1994				
05...	1515	816	250	13.0	14...	1505	1390	265	3.5
DEC 07...	0820	1440	57	1.5	29...	0910	1890	215	5.0
FEB 1994					MAY 18...	0840	2470	210	12.0
24...	1000	2100	274	1.0	JUL 20...	1100	914	240	24.0
		05369945		EAU GALLE R AT LOW-WTR BRIDGE AT SPRING VALLEY, WI (LAT 44 52 02N LONG 092 15 07W)					
OCT 1993					APR 1994				
13...	1145	14	450	5.5	26...	1135	1030	180	10.5
DEC 07...	1250	13	412	1.5	27...	1200	151	185	9.5
JAN 1994					MAY 17...	0805	16	435	12.0
25...	1025	12	410	0.0	JUL 21...	1000	13	420	17.5
FEB 24...	1155	19	390	0.5	SEP 21...	1245	16	410	15.5
MAR 29...	1525	17	335	4.5					

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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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TREMPEALEAU RIVER BASIN

05379500 TREMPEALEAU RIVER AT DODGE, WI (LAT 44 07 55N LONG 091 33 14W)

OCT 1993					APR 1994				
05...	1520	589	320	11.5	28...	1555	1930	210	9.0
NOV					JUN				
30...	1505	500	335	0.0	07...	1945	532	272	19.0
JAN 1994					JUL				
10...	1408	427	338	0.0	25...	1330	480	290	21.5
MAR					SEP				
01...	1405	581	318	0.0	20...	0920	811	272	17.5
23...	1610	683	265	9.0					

BLACK RIVER BASIN

05381000 BLACK RIVER AT NEILLSVILLE, WI (LAT 44 33 34N LONG 090 36 52W)

OCT 1993					APR 1994				
12...	1340	444	177	9.5	21...	1325	810	104	12.0
DEC					JUN				
02...	1605	291	178	1.5	08...	1505	206	190	22.5
JAN 1994					AUG				
27...	1150	87	241	0.0	05...	1220	216	178	21.5
MAR									
10...	1210	752	170	1.5					

LA CROSSE RIVER BASIN

05382325 LA CROSSE RIVER AT SPARTA, WI (LAT 43 56 15N LONG 090 48 38W)

OCT 1993					APR 1994				
06...	1040	164	170	11.0	20...	1002	161	175	10.5
DEC					25...	1340	662	140	15.5
07...	1245	154	180	3.5	MAY				
JAN 1994					19...	1405	176	173	16.0
12...	1020	147	180	0.5	JUL				
MAR					14...	0815	195	168	16.0
08...	1147	188	155	2.0	SEP				
					15...	1221	506	135	19.5

WISCONSIN RIVER BASIN

05391000 WISCONSIN R AT RAINBOW LK NEAR LAKE TOMAHAWK, WI (LAT 45 49 50N LONG 089 33 08W)

OCT 1993					MAY 1994				
13...	1030	516	--	6.5	19...	1305	251	78	18.0

05393500 SPIRIT RIVER AT SPIRIT FALLS, WI (LAT 45 26 58N LONG 089 58 47W)

OCT 1993					APR 1994				
05...	1255	17	114	9.5	11...	1345	97	83	6.0
NOV					MAY				
30...	1405	27	110	0.0	27...	1435	31	105	17.5
JAN 1994					JUL				
12...	1345	12	159	0.0	29...	1300	17	118	20.5
MAR					SEP				
02...	1235	17	173	0.0	15...	1450	2460	38	19.5

05394500 PRAIRIE RIVER NEAR MERRILL, WI (LAT 45 14 09N LONG 089 38 59W)

OCT 1993					MAR 1994				
05...	1630	133	167	11.0	02...	1505	123	222	1.0
NOV					APR				
30...	1600	134	172	1.0	22...	1135	216	112	8.5
JAN 1994					JUL				
11...	1505	101	212	0.0	13...	1605	109	150	20.0



## SPECIFIC CONDUCTANCE AND WATER TEMPERATURE AT GAGING STATIONS

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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										
05395000 WISCONSIN RIVER AT MERRILL, WI (LAT 45 10 41N LONG 089 40 52W)										
AUG 1994	12...	1120	1320	103					20.0	
05397500 EAU CLAIRE RIVER AT KELLY, WI (LAT 44 55 06N LONG 089 33 00W)										
OCT 1993	07...	1205	198	238	APR 1994	22...	0905	365	138	8.0
DEC	01...	1405	271	245	JUN	09...	0905	118	258	17.5
JAN 1994	21...	1440	63	320	AUG	03...	1410	212	160	22.5
MAR	11...	1225	191	241	SEP	23...	1030	254	179	15.5
05398000 WISCONSIN RIVER AT ROTHSCHILD, WI (LAT 44 53 09N LONG 089 38 05W)										
AUG 1994	19...	1705	1800	127					19.5	
05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI (LAT 44 49 19N LONG 090 04 46W)										
OCT 1993	07...	1535	199	246	JUN 1994	09...	1105	46	188	20.0
DEC	02...	1155	42	237	AUG	05...	1550	13	246	23.5
MAR 1994	18...	1510	17	170	SEP	23...	1325	72	241	20.5
APR	21...	1455	129	150					13.0	
05400760 WISCONSIN RIVER AT WISCONSIN RAPIDS, WI (LAT 44 23 41N LONG 089 49 31W)										
SEP 1994	21...	1200	5620	98					22.5	
05402000 YELLOW RIVER AT BABCOCK, WI (LAT 44 18 05N LONG 090 07 15W)										
OCT 1993	13...	1220	133	168	APR 1994	20...	1355	239	110	10.5
DEC	03...	1150	53	175	JUN	07...	1335	17	140	18.0
JAN 1994	26...	1435	14	202	AUG	04...	1420	36	125	21.0
MAR	18...	1110	184	150	SEP	21...	1535	36	155	22.0
05403500 LEMONWEIR RIVER AT NEW LISBON, WI (LAT 43 52 47N LONG 090 09 40W)										
DEC 1993	08...	1256	357	160	MAY 1994	19...	1100	418	152	17.0
JAN 1994	12...	1245	211	160	JUL	18...	1255	566	124	22.0
MAR	08...	1440	965	130	SEP	16...	1015	910	125	21.5
APR	20...	1445	931	100					11.5	
05404000 WISCONSIN RIVER NEAR WISCONSIN DELLS, WI (LAT 43 36 22N LONG 089 45 25W)										
OCT 1993	12...	1300	6300	185	MAY 1994	20...	1030	5220	165	18.0
NOV	19...	1210	8670	188	JUL	21...	1215	4680	185	20.5
MAR 1994	31...	1246	5130	180	SEP	20...	1130	9740	205	21.5

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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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WISCONSIN RIVER BASIN--CONTINUED

05404116 SOUTH BRANCH BARABOO RIVER AT HILLSBORO, WI (LAT 43 39 10N LONG 090 20 09W)

OCT 1993					MAY 1994				
05...	1110	22	435	7.5	02...	1300	33	400	11.5
27...	1100	23	450	6.5	26...	1030	20	435	15.0
DEC					JUN				
01...	1320	22	460	1.5	28...	1419	18	420	22.0
29...	1025	14	495	0.0	JUL				
FEB 1994					26...	1355	1.3	450	17.5
04...	1400	19	425	0.0	AUG				
MAR					30...	1215	28	485	19.0
03...	1428	24	566	0.5	SEP				
30...	0845	23	440	2.5	29...	1130	28	410	12.5
APR									
25...	1120	1040	165	14.5					

05405000 BARABOO RIVER NEAR BARABOO, WI (LAT 43 28 51N LONG 089 38 09W)

OCT 1993					APR 1994				
07...	1325	396	390	13.5	19...	1320	640	340	11.0
NOV					MAY				
29...	1315	512	370	1.0	20...	1330	321	375	17.5
JAN 1994					JUL				
11...	1145	304	455	0.5	21...	1503	373	450	21.5
MAR					SEP				
07...	1500	1250	270	1.5	19...	1042	959	260	19.0

05408000 KICKAPOO RIVER AT LA FARGE, WI (LAT 43 34 27N LONG 090 38 35W)

OCT 1993					APR 1994				
27...	0910	188	455	7.5	21...	1225	188	445	8.5
DEC					MAY				
06...	1135	197	455	4.0	19...	1745	172	450	17.0
JAN 1994					SEP				
13...	1320	158	470	0.5	13...	1313	146	470	19.0
MAR					15...	0950	798	295	21.0
03...	1320	192	519	1.0					

05410490 KICKAPOO RIVER AT STEUBEN, WI (LAT 43 10 58N LONG 090 51 30W)

NOV 1993					APR 1994				
02...	1010	598	528	5.0	11...	1210	596	500	9.0
DEC					MAY				
13...	1016	550	507	2.5	23...	0945	535	494	20.0
JAN 1994					JUL				
26...	1100	486	512	0.0	08...	1020	816	389	23.0
MAR					AUG				
03...	1050	662	511	0.0	29...	0940	476	500	19.5

PLATTE RIVER BASIN

05414000 PLATTE RIVER NEAR ROCKVILLE, WI (LAT 42 43 52N LONG 090 38 25W)

NOV 1993					APR 1994				
03...	1040	128	683	6.0	12...	1140	95	599	8.5
DEC					MAY				
15...	1145	108	662	4.5	25...	1125	76	614	20.0
JAN 1994					JUL				
28...	1100	82	665	0.0	11...	1340	85	619	23.5
MAR					AUG				
02...	1310	108	664	1.5	29...	1508	62	607	21.5

## SPECIFIC CONDUCTANCE AND WATER TEMPERATURE AT GAGING STATIONS

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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									
05423500 SOUTH BRANCH ROCK RIVER AT WAUPUN, WI (LAT 43 38 30N LONG 088 44 15W)									
OCT 1993					MAY 1994				
05...	1309	22	900	12.0	02...	0951	33	770	9.0
NOV					25...	1125	9.3	930	21.5
01...	1115	18	950	4.5	JUN				
DEC					21...	1315	5.9	1020	26.0
15...	1225	15	915	3.0	AUG				
JAN 1994					09...	1420	7.7	920	20.0
04...	1051	7.7	950	0.0	SEP				
31...	1145	4.1	1050	0.0	02...	1203	12	625	18.0
MAR									
22...	1105	98	585	5.0					
31...	1030	46	735	5.5					
05425912 BEAVERDAM RIVER AT BEAVER DAM, WI (LAT 43 26 57N LONG 088 50 21W)									
OCT 1993					MAY 1994				
05...	0952	18	440	11.0	02...	1202	12	400	12.0
NOV					23...	1000	6.7	447	21.5
01...	1015	34	460	4.0	JUN				
DEC					29...	1422	15	420	22.0
15...	1024	96	500	2.0	AUG				
JAN 1994					01...	1423	12	407	25.5
04...	0922	25	565	2.0	SEP				
31...	1338	49	630	1.5	02...	1015	9.1	450	19.5
MAR									
31...	0906	212	353	4.5					
05426250 BARK RIVER NEAR ROME, WI (LAT 42 57 39N LONG 088 40 09W)									
OCT 1993					APR 1994				
28...	1043	76	674	8.5	14...	0942	80	630	8.0
DEC					MAY				
10...	1420	84	674	1.5	25...	1050	59	580	21.0
FEB 1994					JUL				
15...	1137	53	790	0.0	22...	1413	116	600	24.5
MAR					SEP				
02...	1440	142	655	0.0	16...	1146	38	670	23.0
05427570 ROCK RIVER AT INDIANFORD, WI (LAT 42 48 15N LONG 089 05 25W)									
NOV 1993					JUN 1994				
02...	1050	1070	625	3.0	03...	1145	402	610	21.5
DEC					JUL				
07...	1100	1610	664	0.0	15...	1320	2150	560	23.5
MAR 1994					AUG				
07...	1145	3470	450	2.0	17...	1035	1440	545	20.5
APR					SEP				
07...	0740	3200	470	5.0	06...	0945	351	570	17.5
MAY									
13...	1125	1160	540	17.0					
05429500 YAHARA RIVER NEAR MC FARLAND, WI (LAT 43 00 32N LONG 089 18 18W)									
OCT 1993					APR 1994				
07...	0935	390	481	13.0	14...	1140	307	480	9.0
25...	0800	339	481	10.5	MAY				
NOV					04...	0850	172	480	11.5
22...	1355	241	497	4.0	JUN				
DEC					01...	1342	98	455	24.0
08...	1030	183	502	1.0	21...	1005	80	480	27.0
JAN 1994					JUL				
05...	1120	150	575	1.0	14...	0925	188	480	22.5
28...	1340	158	540	1.0	AUG				
FEB					03...	1040	146	445	24.0
14...	1235	150	560	2.0	24...	1140	141	430	22.5
28...	1407	367	550	1.5	SEP				
MAR					13...	0956	152	420	21.5
23...	1026	461	724	5.0					

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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									
05430150		BADFISH CREEK NEAR COOKSVILLE, WI (LAT 42 50 00N LONG 089 11 48W)							
NOV 1993					APR 1994				
03...	0855	117	1200	8.0	18...	1111	120	1130	12.5
DEC 13...	1053	111	1220	5.5	MAY 18...	0945	104	1200	14.0
JAN 1994					JUL 14...	1256	100	1220	19.0
22...	1446	96	2100	0.5	SEP 20...	0835	95	1170	17.0
MAR 04...	1440	113	1230	9.5					
05430175		YAHARA RIVER NEAR FULTON, WI (LAT 42 49 50N LONG 089 10 09W)							
OCT 1993					APR 1994				
25...	1150	559	857	12.0	18...	0900	240	1090	12.0
DEC 13...	0929	439	1100	4.0	MAY 18...	0808	438	1000	15.0
JAN 1994					JUL 15...	0955	153	1150	19.5
28...	1200	368	880	1.0	SEP 20...	1005	372	1030	18.5
MAR 04...	1230	431	980	6.0					
05430500		ROCK RIVER AT AFTON, WI (LAT 42 36 33N LONG 089 04 14W)							
NOV 1993					MAY 1994				
03...	1045	1920	635	5.0	23...	1110	1090	640	21.5
DEC 06...	1140	2320	655	3.0	JUN 30...	1200	1490	628	24.0
JAN 1994					JUL 19...	0935	2800	600	24.0
22...	1000	1020	1260	0.0	SEP 21...	1020	753	650	19.5
FEB 16...	1030	1190	890	0.5					
APR 06...	0945	4300	472	6.5					
05431486		TURTLE CREEK AT CARVERS ROCK ROAD NR CLINTON, WI (LAT 42 35 50N LONG 088 49 45W)							
OCT 1993					APR 1994				
26...	0955	97	767	9.0	04...	1130	114	705	7.5
DEC 06...	1015	118	738	3.5	MAY 20...	1030	69	745	16.5
JAN 1994					JUL 20...	1052	84	690	22.0
21...	1130	74	880	0.0	SEP 14...	0907	51	750	21.0
MAR 03...	1010	132	740	0.0					
05432500		PECATONICA RIVER AT DARLINGTON, WI (LAT 42 40 40N LONG 090 07 07W)							
NOV 1993					APR 1994				
05...	0730	236	740	7.5	12...	0815	165	658	9.0
DEC 15...	0838	194	722	3.0	MAY 27...	0900	154	628	16.5
JAN 1994					JUL 11...	0830	197	635	21.0
28...	1505	150	704	0.0	AUG 25...	1204	180	676	23.0
FEB 21...	1202	3040	255	0.5					
MAR 02...	1027	250	692	0.0					
05433000		EAST BR PECATONICA R NR BLANCHARDVILLE, WI (LAT 42 47 10N LONG 089 51 40W)							
NOV 1993					APR 1994				
05...	1215	188	617	7.5	14...	1118	181	568	10.5
DEC 14...	1435	172	594	4.0	MAY 27...	1350	139	582	16.5
JAN 1994					JUL 12...	1405	161	591	23.5
24...	1640	140	592	0.0	AUG 30...	1345	138	594	18.0
MAR 01...	1650	204	592	0.0					

## SPECIFIC CONDUCTANCE AND WATER TEMPERATURE AT GAGING STATIONS

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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									
05434500		PECATONICA RIVER AT MARTINTOWN, WI (LAT 42 30 34N LONG 089 47 58W)							
NOV 1993					APR 1994				
04...	1120	949	704	7.5	13...	1635	816	626	9.5
DEC					MAY				
14...	1220	827	686	3.0	24...	1428	579	632	21.5
JAN 1994					JUL				
24...	1255	599	702	0.0	12...	1220	718	596	23.5
MAR					AUG				
01...	1420	1480	629	0.0	30...	1036	632	636	20.5
05436500		SUGAR RIVER NEAR BRODHEAD, WI (LAT 42 36 42N LONG 089 23 53W)							
NOV 1993					APR 1994				
04...	0900	409	648	7.5	13...	1120	381	594	9.5
DEC					MAY				
14...	0845	388	632	3.0	24...	1000	315	558	22.0
JAN 1994					JUL				
24...	0950	290	660	0.0	12...	0840	276	578	24.5
FEB					SEP				
22...	1050	3370	225	0.5	09...	1435	233	606	22.0
MAR									
01...	0950	531	638	0.5					
05438283		PISCASAW CREEK NEAR WALWORTH, WI (LAT 42 31 18N LONG 088 39 39W)							
OCT 1993					APR 1994				
26...	1130	2.9	876	10.0	11...	1134	2.3	1160	8.5
NOV					MAY				
11...	1108	2.5	753	8.0	20...	1235	2.1	940	16.0
DEC					JUL				
09...	1017	2.2	719	7.0	01...	1152	1.7	945	15.5
JAN 1994					20...	1228	1.7	920	16.5
21...	1334	2.1	1000	3.5	SEP				
MAR					14...	1127	1.2	1060	15.5
03...	1325	2.4	750	9.5					
ILLINOIS RIVER BASIN									
05543830		FOX RIVER AT WAUKESHA, WI (LAT 43 00 17N LONG 088 14 37W)							
OCT 1993					MAY 1994				
18...	0810	73	1040	10.5	09...	0857	57	1170	14.5
DEC					JUN				
01...	0908	59	1170	2.0	03...	0715	22	1530	17.5
JAN 1994					JUL				
10...	1002	34	1400	0.0	05...	0905	208	717	23.0
FEB					AUG				
16...	0915	41	1460	0.0	16...	0830	77	894	20.0
MAR									
28...	0850	213	893	5.5					
05544200		MUKWONAGO RIVER AT MUKWONAGO, WI (LAT 42 51 24N LONG 088 19 40W)							
OCT 1993					APR 1994				
28...	0905	56	576	7.5	13...	1107	84	495	9.0
DEC					MAY				
10...	1242	62	546	2.0	25...	0947	25	480	22.5
JAN 1994					JUL				
25...	1333	48	--	0.5	22...	1215	26	455	25.5
MAR					SEP				
02...	1250	56	570	0.5	16...	0935	16	490	24.0
05545750		FOX RIVER NEAR NEW MUNSTER, WI (LAT 42 36 39N LONG 088 13 33W)							
OCT 1993					MAY 1994				
26...	1630	386	838	11.5	24...	1015	254	700	22.0
DEC					JUN				
09...	1348	552	782	2.0	22...	1110	165	800	26.0
JAN 1994					JUL				
24...	1125	247	--	0.0	21...	1335	576	680	26.5
MAR					SEP				
01...	1205	1650	672	0.0	15...	0850	519	830	23.5
APR									
12...	0825	448	900	8.5					

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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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 1993 TO SEPTEMBER 1994

CHIPPEWA RIVER BASIN

454657091300600 - BIG SISSABAGAMA TRIBUTARY NEAR STONE LAKE, WI (LAT 45 46 57N LONG 091 30 06W)

DATE	TIME	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 1994						
03...	1045	59	7.7	10.0	11.6	0.030
JUN						
13...	0950	82	7.8	21.0	7.6	0.016
JUL						
15...	1100	75	8.4	22.5	7.8	0.022
AUG						
15...	1100	104	8.5	20.5	8.8	0.020

WAUMANDEE CREEK BASIN

05378180 - EAGLE CREEK @ SHAFFNER FARM NR FOUNTAIN CITY, WI (LAT 44 14 01N LONG 91 40 52W)

DATE	TIME	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
FEB 1994			
19...	1530	1660	90
19...	1540	1500	92

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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- 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)
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053781805 - EAGLE CR 3 @ SCHAFFNR VLY RD NR FOUNTAIN CTY, WI (LAT 44 13 55N LONG 091 40 52W)

OCT 1993												
12...	0822	3.1	6.0	11.0	8.3	1.1	1100	13	352	4	<0.005	0.050
MAY 1994												
12...	0845	3.3	9.5	9.0	8.3	1.6	730	14	342	3	0.010	0.030
JUN												
14...	1240	2.8	23.0	8.3	8.3	1.7	4100	45	384	14	0.067	0.110
JUL												
13...	0755	2.8	14.0	9.8	8.1	5.8	7600	216	--	--	0.093	0.640
AUG												
17...	0700	2.9	13.5	9.2	8.2	1.1	3500	20	--	--	0.023	0.067
SEP												
14...	1020	24	18.5	7.7	7.5	12	250000	1200	--	--	0.142	1.84

05378181 - EAGLE CR 2 @ SCHAFFNR VLY RD NR FOUNTAIN CTY, WI (LAT 44 13 11N LONG 091 40 45W)

OCT 1993												
12...	0940	6.9	7.0	12.2	8.2	1.1	2600	13	348	3	<0.005	0.060
MAY 1994												
12...	0915	6.1	9.5	12.0	8.3	1.1	830	17	336	2	0.008	0.040
JUN												
14...	1335	5.3	22.5	8.4	8.2	3.2	26000	125	448	27	0.086	0.250
JUL												
13...	0825	5.1	13.5	10.4	8.0	<3.0	5000	43	--	--	0.038	0.120
AUG												
17...	0745	4.8	13.0	9.5	8.1	1.1	4000	28	--	--	0.022	0.077
SEP												
14...	0920	33	18.0	8.4	7.7	10	280000	1100	--	--	0.095	1.60

## MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

## WAUMANDEE CREEK BASIN--CONTINUED

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)	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)
05378182 - JOOS VLY CR 4 @ JOOS VLY RD NR FOUNTAIN CITY, WI (LAT 44 13 51N LONG 091 38 13W)												
OCT 1993												
12...	1247	3.2	8.5	12.3	8.2	1.1	1900	6	328	3	0.018	0.050
MAY 1994												
11...	1715	3.1	17.0	11.4	8.5	1.6	920	16	324	2	0.022	0.050
JUN												
14...	1600	2.5	23.0	9.0	8.2	1.6	1800	32	344	10	0.062	0.080
JUL												
13...	0630	2.6	12.5	10.3	8.0	<1.0	6100	24	--	--	0.036	0.070
AUG												
16...	1945	2.5	17.0	9.2	8.1	1.4	5500	18	--	--	0.034	0.073
SEP												
13...	1820	2.8	18.0	8.0	8.1	2.2	8100	15	--	--	0.018	0.067
053781825 - JOOS VLY CR 3 @ JOOS VLY RD NR FOUNTAIN CITY, WI (LAT 44 13 03N LONG 091 39 38W)												
OCT 1993												
12...	1130	4.5	8.0	12.6	8.3	<1.0	430	8	332	4	<0.005	0.040
MAY 1994												
11...	1800	4.3	17.5	11.8	8.6	2.0	--	32	316	4	0.011	0.050
JUN												
14...	1510	3.6	27.0	10.9	8.3	2.5	6400	21	326	10	0.044	0.080
JUL												
13...	0710	3.6	14.0	10.8	8.1	<1.0	6000	21	--	--	0.014	0.090
AUG												
16...	1830	3.2	21.5	7.6	8.2	1.3	4000	16	--	--	0.024	0.093
SEP												
13...	1750	3.4	21.0	7.2	8.2	2.2	24000	12	--	--	0.021	0.076
WISCONSIN RIVER BASIN												
05406320 - DUNLAP CREEK AT SR78 NEAR MAZOMANIE, WI (LAT 43 12 22N LONG 089 45 23W)												
OCT 1993												
19...	0945	6.4	9.5	11.2	7.9	<1.0	100	10	348	3	0.032	0.060
05406528 - WENDT CREEK AT CT HIGHWAY F NEAR BLACK EARTH, WI (LAT 43 09 52N LONG 089 44 24W)												
OCT 1993												
19...	1030	4.6	10.0	11.0	7.9	1.4	1300	25	414	6	0.047	0.120
GRANT RIVER BASIN												
05413269 - HACKETT BRANCH AT SR81 NEAR HURRICANE, WI (LAT 42 48 47N LONG 090 50 17W)												
OCT 1993												
14...	1005	11	8.5	10.9	8.3	<1.0	590	12	466	4	0.009	0.090
05413407 - PIGEON CREEK AT CT HIGHWAY N NEAR LANCASTER, WI (LAT 42 48 31N LONG 090 45 46W)												
OCT 1993												
14...	1750	11	12.0	11.8	8.7	<1.0	100	2	548	2	0.007	0.710
05413415 - PIGEON CREEK AT PIGEON RIVER ROAD NR BEETOWN, WI (LAT 42 47 10N LONG 090 48 58W)												
OCT 1993												
14...	1640	18	11.5	13.8	8.6	<1.0	140	4	512	4	0.018	0.390
054134415 - RATTLESNAKE CR @ MUSKELLUNGE RD NR N ANDOVER, WI (LAT 42 47 29N LONG 090 57 19W)												
OCT 1993												
14...	1320	29	10.0	12.6	8.3	<1.0	370	8	486	4	0.010	0.080
05413443 - KUENSTER CREEK @ TEXAS ROAD NR NORTH ANDOVER, WI (LAT 42 47 31N LONG 090 59 53W)												
OCT 1993												
14...	1500	5.5	12.0	12.4	8.3	1.0	1500	13	494	4	0.009	0.090

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

GRANT RIVER BASIN--CONTINUED

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	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, 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)	
05413447 - MUSKELLUNGE CREEK @ MUSKELLNGE RD NR BEETOWN, WI (LAT 42 47 38N LONG 090 56 09W)													
OCT 1993	14...	1150	6.6	10.0	10.8	8.2	1.4	970	24	514	9	0.015	0.140
JUL 1994	12...	1130	3.4	21.5	--	8.1	1.6	8700	29	538	6	0.056	0.280
	19...	1025	3.4	18.5	--	8.1	2.6	4800	23	--	--	0.032	0.210
	25...	1140	3.2	19.0	--	7.7	<1.0	4300	11	--	--	0.012	0.130
AUG	01...	1210	3.0	21.0	--	8.3	1.3	3400	11	--	--	0.021	0.117
	08...	1130	--	20.0	--	8.0	2.1	3400	4	--	--	0.021	0.126
	15...	1100	2.6	16.0	--	8.0	<1.0	2400	15	--	--	0.023	0.159
	22...	1135	2.6	17.0	--	8.2	<1.0	2600	16	--	--	0.025	0.207
	30...	1045	2.8	15.5	--	8.0	1.8	4800	19	--	--	0.034	0.178
SEP	06...	1230	2.7	15.5	--	8.2	1.3	1400	10	--	--	0.037	0.180
	12...	1310	2.1	18.5	--	8.2	1.7	3100	8	--	--	0.022	0.160
	20...	1200	2.4	16.0	--	8.2	1.4	2600	13	--	--	0.053	0.200

ROCK RIVER BASIN

05427800 - TOKEN CREEK NEAR MADISON, WI (LAT 43 10 52N LONG 89 19 28W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	
JUL 1993	05...	1610	28	0.130

05427851 - YAHARA RIVER AT WESTPORT ROAD NEAR MADISON, WI (LAT 43 07 52N LONG 89 24 15W)

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)	
MAY 1994	26...	1345	83	0.220	--
JUN	02...	1055	--	0.260	0.006
	09...	1330	69	0.270	<0.002
	13...	1255	--	0.380	<0.002
	16...	1055	--	0.410	<0.002
	20...	1235	--	0.400	0.010
	22...	1255	46	0.370	0.003
	23...	1635	--	0.630	0.002
	23...	2245	--	0.380	0.005
	24...	1330	188	0.270	--
	25...	0830	117	0.200	--
	26...	1130	206	0.310	--
	26...	1955	269	0.180	--
	27...	1325	203	0.170	--
	30...	1008	--	0.260	0.007
JUL	05...	1445	54	0.270	--
	07...	0920	--	0.250	0.003
	14...	1600	--	0.260	--
	20...	1510	110	0.170	0.006
	28...	0955	--	0.170	0.006
AUG	04...	1310	146	0.255	0.008
	11...	1315	101	0.239	0.005
	18...	1605	87	0.180	0.007
	24...	1025	--	0.196	0.003
	31...	1245	--	0.223	0.004
SEP	09...	0945	--	0.127	0.002
	15...	1335	--	0.099	0.002
	16...	0920	--	0.118	--
	22...	0940	--	0.263	0.005
	29...	1300	110	0.304	<0.002



## WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

## ROCK RIVER BASIN--CONTINUED

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)
05427905 - SIXMILE CREEK @ WOODLAND DRIVE NEAR WAUNAKEE, WI (LAT 42 08 27N LONG 89 25 55W)				
MAY 1994				
26...	1035	16	0.250	--
JUN				
02...	1005	13	0.220	0.129
09...	1150	12	0.750	--
13...	1205	17	0.280	0.114
16...	1017	12	0.260	0.161
20...	1205	14	0.520	0.169
22...	1235	11	0.400	0.194
23...	1600	25	0.280	0.156
23...	2325	115	1.21	0.272
24...	1150	51	0.540	--
25...	1025	29	0.430	--
26...	0956	102	0.810	--
26...	1830	53	0.920	--
27...	1615	32	0.410	--
30...	0930	27	0.530	0.296
JUL				
05...	1630	48	0.500	--
07...	0955	50	0.510	0.305
14...	1435	27	0.900	--
20...	1115	36	0.300	0.145
28...	0940	15	0.200	0.137
AUG				
04...	1040	24	0.543	0.124
11...	1035	37	0.354	0.191
18...	1320	17	0.236	0.159
24...	1005	14	0.236	0.144
31...	1120	13	0.234	0.128
SEP				
09...	0930	14	0.206	0.133
15...	1210	17	0.300	0.169
16...	0905	31	0.512	--
22...	0930	14	0.258	0.146
29...	1155	24	0.375	0.149
05427933 - SPRING CREEK AT NORTH SHORE ROAD NR WESTPORT, WI (LAT 43 07 59N LONG 89 26 16W)				
MAY 1994				
26...	0930	5.6	0.190	--
JUN				
02...	0935	--	0.160	0.065
09...	1135	4.3	0.140	0.060
13...	1130	--	0.230	0.072
16...	0955	--	0.290	0.110
20...	1135	--	0.350	0.119
22...	1010	7.1	0.210	0.136
23...	1540	--	0.230	0.108
23...	2315	--	0.290	0.149
24...	1100	23	0.630	--
25...	1045	16	0.470	--
26...	0944	--	0.330	--
26...	1826	--	0.300	--
27...	1630	--	0.610	--
30...	0915	--	0.360	0.240
JUL				
05...	1515	10	0.300	--
07...	1000	--	0.300	0.187
14...	1450	--	0.240	--
20...	1100	6.8	0.320	0.108
28...	0920	--	0.450	0.085
AUG				
04...	0920	18	0.576	0.183
11...	1015	21	0.457	0.264
18...	1215	5.2	0.188	0.120
24...	0940	--	0.187	0.116
31...	1000	5.1	0.152	0.092
SEP				
09...	0905	--	0.144	0.096
15...	1100	11	0.584	0.335
16...	0900	--	0.537	--
22...	0915	--	0.278	0.120
29...	1055	7.3	0.311	0.270

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

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MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

ROCK RIVER BASIN--CONTINUED

05427952 - PHEASANT BRANCH AT MOUTH AT MIDDLETON, WI (LAT 43 06 28N LONG 89 29 01W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-ORTHODIS-SOLVED (MG/L AS P) (00671)
MAY 1994				
26...	1530	8.7	0.290	--
JUN				
02...	0845	--	1.90	0.042
09...	1020	5.5	0.130	0.039
13...	1045	--	0.480	0.067
16...	0930	--	0.270	0.054
20...	1040	--	0.190	0.067
22...	0820	6.0	0.200	0.123
23...	1505	--	0.220	0.072
23...	2140	--	0.340	0.113
23...	2345	--	1.20	0.129
24...	0920	58	0.560	--
25...	1140	--	0.260	--
26...	0925	38	0.300	--
26...	1800	29	0.430	--
27...	1655	--	0.280	--
30...	0853	--	0.220	0.081
JUL				
05...	1403	21	0.480	--
07...	1030	--	0.250	0.109
14...	1515	--	0.130	--
20...	0935	22	0.240	0.080
28...	0850	--	0.080	0.038
AUG				
04...	0845	24	0.530	0.244
11...	0926	56	0.634	0.245
12...	1430	12	0.336	--
18...	0945	9.7	0.134	0.053
24...	0910	--	0.230	0.048
31...	0825	7.7	0.141	0.067
SEP				
09...	0853	--	0.104	0.044
15...	0903	15	0.615	0.344
16...	0845	--	0.486	--
22...	0900	--	0.239	0.091
29...	0825	7.7	0.202	0.087

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)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE LAB (STAND-ARD) (MG/L) (00403)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L) (00310)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, 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) (00608)	PHOS-PHORUS TOTAL (MG/L) (00665)
OCT 1993												
04...	1454	6.0	14.0	10.2	8.1	<1.0	210	86	512	14	0.007	0.060

054310158 - JACKSON CREEK TRIB #2 AT MARSH RD NR ELKHORN, WI (LAT 42 38 52N LONG 088 33 25W)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L) (00625)	PHOS-PHORUS TOTAL (MG/L) (00665)	PHOS-ORTHODIS-SOLVED (MG/L) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 1993								
06...	1225	0.15	1.20	0.090	0.60	0.070	0.040	3
NOV								
16...	1235	0.09	2.90	0.040	0.30	0.030	0.010	4
DEC								
15...	1210	0.12	4.30	0.040	0.30	<0.010	0.010	15
FEB 1994								
21...	1415	5.4	5.70	0.110	1.0	0.240	0.160	18
MAR								
10...	1330	1.1	6.20	0.050	0.50	0.070	0.060	30
APR								
18...	1015	0.19	4.30	0.040	0.30	<0.010	<0.010	--
MAY								
09...	0930	0.18	5.60	0.030	0.40	0.030	<0.010	46

WATER-QUALITY ANALYSES AT MISCELLANEOUS SITES

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

ROCK RIVER BASIN--CONTINUED

054310161 - JACKSON CREEK AT MOUND RD SITE #1 NR ELKHORN, WI (LAT 42 38 12N LONG 088 33 48W)

DATE	TIME	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
JUN 1994		
08...	0715	0.298
14...	1200	2.01

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY (MG/L) (00310)	COLIFORM, FECA, UM-MF (COLS./100 ML) (31625)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDEDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	RESIDUE VOLATILE, SUS-PENDEDED (MG/L) (00535)	NITROGEN, 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)												
OCT 1993	1026	6.1	10.0	9.4	7.8	<1.0	180	16	432	4	0.009	0.060

05436203 - GILL CREEK AT TOWN ROAD NEAR DAYTON, WI (LAT 42 48 48N LONG 089 27 55W)												
OCT 1993	1240	3.1	13.0	9.5	8.1	<1.0	190	10	406	2	0.014	0.060

ILLINOIS RIVER BASIN

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
05544793 - UNNAMED LAUDERDALE LKS TRIB #2 NR LAUDERDALE, WI (LAT 42 47 10N LONG 088 33 52W)				
FEB 1994				
20...	1600	0.0	200	0.810
20...	1605	E0.60	195	0.840
APR				
12...	2030	--	--	0.113

05544795 - UNNAMED LAUDERDALE LKS TRIB #1 NR LAUDERDALE, WI (LAT 42 46 35N LONG 088 33 31W)				
FEB 1994				
20...	1515	E0.16	125	0.410
APR				
24...	1230	--	--	0.560

05544798 - UNNAMED LAUDERDALE LKS TRIB #4 NR LAUDERDALE, WI (LAT 42 45 40N LONG 088 34 24W)				
DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	
MAR 1994				
21...	1845	E0.01	0.700	
APR				
12...	2015	<0.01	0.125	
JUL				
04...	1630	<0.01	0.390	

E ESTIMATED

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.)	$2.54 \times 10^1$	millimeter
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter
mile (mi)	$1.609 \times 10^0$	kilometer
<i>Area</i>		
acre	$4.047 \times 10^3$	square meter
	$4.047 \times 10^{-1}$	square hectometer
	$4.047 \times 10^{-3}$	square kilometer
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer
<i>Volume</i>		
gallon (gal)	$3.785 \times 10^0$	liter
	$3.785 \times 10^0$	cubic decimeter
	$3.785 \times 10^{-3}$	cubic meter
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter
	$3.785 \times 10^{-3}$	cubic hectometer
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeter
	$2.832 \times 10^{-2}$	cubic meter
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter
	$2.447 \times 10^{-3}$	cubic hectometer
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter
	$1.233 \times 10^{-3}$	cubic hectometer
	$1.233 \times 10^{-6}$	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second
	$2.832 \times 10^1$	cubic decimeter per second
	$2.832 \times 10^{-2}$	cubic meter per second
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second
	$6.309 \times 10^{-2}$	cubic decimeter per second
	$6.309 \times 10^{-5}$	cubic meter per second
million gallons per day (Mgal/d)	$4.381 \times 10^1$	cubic decimeter per second
	$4.381 \times 10^{-2}$	cubic meter per second
<i>Mass</i>		
ton (short)	$9.072 \times 10^{-1}$	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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