

Temperature, pH, Conductance, and Dissolved Oxygen in Cross Sections of 11 Lake Michigan Tributaries, 1994–95

By D.W. Hall, T.E. Behrendt, and P.E. Hughes

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U.S. GEOLOGICAL SURVEY
Thomas J. Casadevall, Acting Director

For additional information write to:

District Chief
U.S. Geological Survey
8505 Research Way
Middleton, WI 53562-3586

Copies of this report can be purchased from:

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CONVERSION FACTORS AND ABBREVIATED WATER-QUALITY UNITS

Multiply	By	To Obtain
inch (in.)	25.4	millimeter
foot (ft)	0.3048	meter
acre	0.4048	hectare
square mile (mi ²)	2.590	square kilometer
pound (lb)	453.6	gram
ton (short)	0.9072	megagram (mg)

Abbreviated water-quality units used in this report: Chemical concentrations and water temperature are given in metric units. Chemical concentration is given in milligrams per liter (mg/L) or micrograms per liter (µg/L). Milligrams per liter is a unit expressing the concentration of chemical constituents in solution as weight (milligrams) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter. For concentrations less than 7,000 mg/L, the numerical value is the same as for concentrations in parts per million. Other units of measurement used in this report are microsiemens per centimeter at 25°Celsius (µS/cm).

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Technical Reviewers

Roy S. Socolow, Hydrologist, U.S. Geological Survey, Marlborough, Mass.
Dale M. Robertson, Research Hydrologist, U.S. Geological Survey, Middleton, Wis.

Editorial and Graphics

Susan Z. Jones, Editorial Assistant, U.S. Geological Survey, Middleton, Wis.
Karen A. Lonsdorf, Publications Graphics Specialist, U.S. Geological Survey, Middleton, Wis.

Approving Officials

Peter E. Hughes, Supervisory Hydrologist, U.S. Geological Survey, Middleton, Wis.
Warren A. Gebert, District Chief, U.S. Geological Survey, Middleton, Wis.

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Temperature, pH, Conductance, and Dissolved Oxygen in Cross Sections of 11 Lake Michigan Tributaries, 1994–95

By David W. Hall¹, Thomas E. Behrendt², and Peter E. Hughes¹

Abstract

Temperature, pH, conductance, and dissolved oxygen data were collected along cross sections at 11 major tributaries to Lake Michigan from April 1994 through October 1995 as part of the U.S. Geological Survey Lake Michigan Tributary Monitoring Project. Eleven tributary monitoring stations were installed near their points of discharge into Lake Michigan, and were located sufficiently upstream to minimize mixing of lake and tributary water during most flow conditions. A total of 405 samples were collected from the 11 tributaries. The Grand Calumet, Kalamazoo, and Pere Marquette Rivers were generally well mixed throughout the sampling period. The Sheboygan, Menominee, Manistique, Muskegon, Grand, and St. Joseph Rivers were generally well mixed during winter months and stratified with respect to temperature and conductance in summer months. The Milwaukee River, and to a lesser extent the Fox River, were found to be poorly mixed at irregular intervals throughout the sampling period.

INTRODUCTION

Temperature, pH, conductance, and dissolved oxygen data were collected along cross sections at 11 major tributaries to Lake Michigan from April 1994 through October 1995 as part of the U.S. Geological Survey (USGS) Lake Michigan Tributary Monitoring Project (LMTMP). This project was part of the U.S. Environmental Protection Agency's (USEPA) Lake Michigan Mass Balance Project (USEPA Great Lakes National Program Office, 1995; Blume, 1997a, 1997b, 1997c) and was conducted by the USGS in cooperation with the Wisconsin Department of Natural Resources, the Michigan Department of Environmental Quality, the Wis-

consin State Laboratory of Hygiene, and the University of Wisconsin Water Chemistry Program. The primary objective of the LMTMP was to provide tributary contaminant-loading data for input into the USEPA's Lake Michigan Mass Balance model.

The primary objective of this report is to describe ancillary field data collected during sampling. These data may be of interest because they illustrate spatial and temporal heterogeneities that may be considered when constructing a mass-balance model or designing a representative water-quality-sampling program on rivers.

DISCHARGE MEASUREMENT AND RIVER SAMPLING

Eleven tributary monitoring stations were installed near their points of discharge into Lake Michigan (fig. 1; table 1), and were located sufficiently upstream to minimize mixing of lake and tributary water during most flow conditions (Holmstrom and others, 1995, 1996; Blumer and others, 1995, 1996; Stewart and others, 1995, 1996). Discharge was measured using traditional stage/discharge techniques at the Manistique, Pere Marquette, and Kalamazoo Rivers in Michigan. Acoustic velocity meters were installed to measure discharge at the Muskegon, Grand, and St. Joseph Rivers in Michigan, at the Grand Calumet River in Indiana, and on the Milwaukee, Sheboygan, Fox, and Menominee Rivers in Wisconsin. A total of 405 samples (including quality control blanks) were collected from the 11 tributaries (appendix 1). To reduce the error associated with load calculations, sampling was deliberately biased toward high-flow conditions (more than 20 percent of samples were collected at times of discharge above the 20 percent exceedance) at each site (Dolan, 1981).

¹U.S. Geological Survey, Middleton, Wis.

²U.S. Geological Survey, Lansing, Mich.

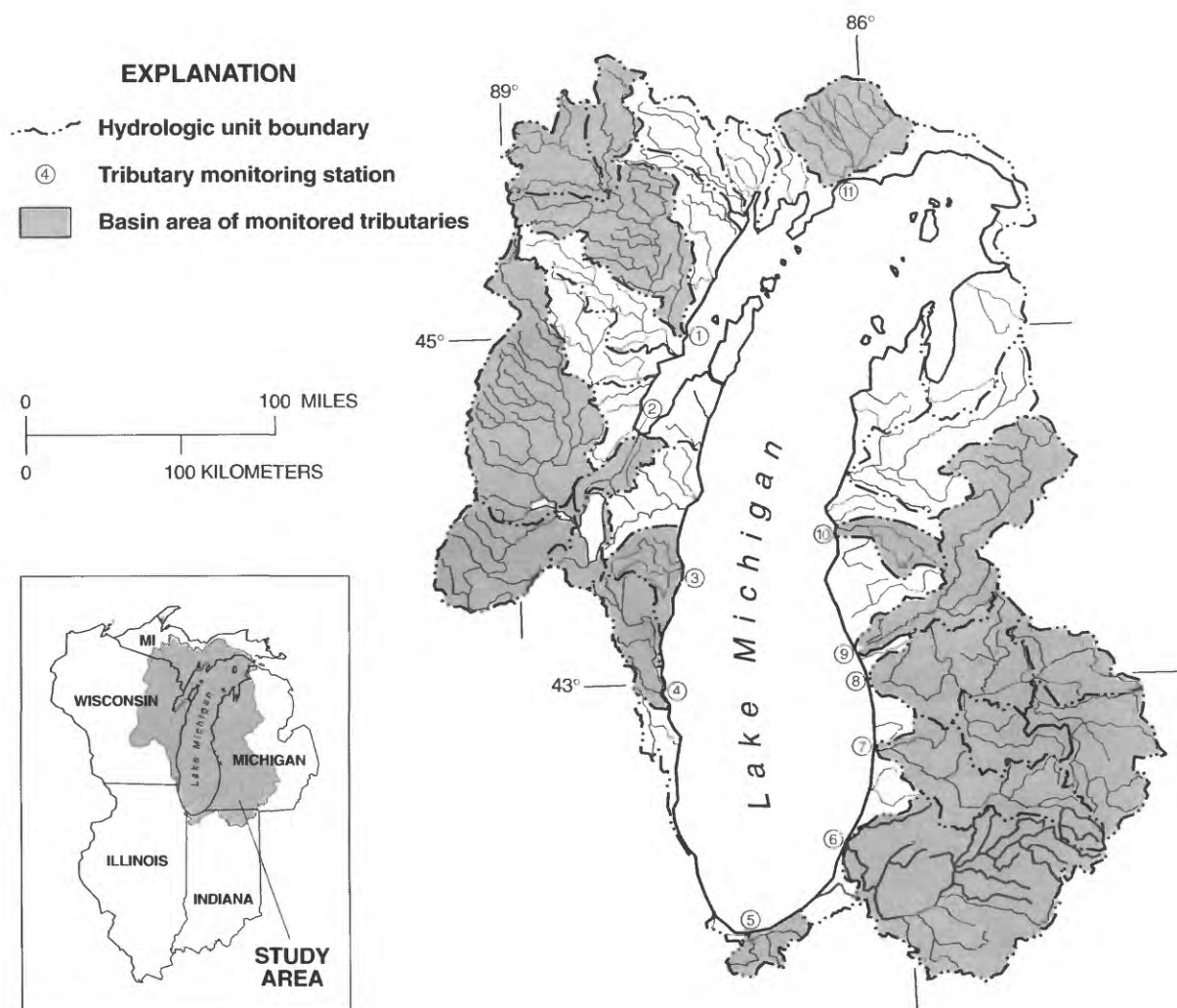


Figure 1. Location of Lake Michigan Tributary Monitoring Project sampling stations (figure modified from Robertson, 1996).

Table 1. Identifier numbers, station names, and station numbers of monitored tributaries to Lake Michigan

Identifier number (from figure 1)	USGS station number	USGS station name
1	04067651	Menominee River, at mouth, at Marinette, Wis.
2	040851385	Fox River, Oil Tank Depot at Green Bay, Wis.
3	040860041	Sheboygan River, at mouth, at Sheboygan, Wis.
4	04087170	Milwaukee River, at mouth, at Milwaukee, Wis.
5	04092750	Grand Calumet River at Indiana Harbor, Ind.
6	04102533	St. Joseph River at St. Joseph, Mich.
7	04108660	Kalamazoo River at New Richmond, Mich.
8	04120250	Grand River at Grand Haven, Mich.
9	04122150	Muskegon River at Muskegon, Mich.
10	04122500	Pere Marquette River at Scottville, Mich.
11	04057005	Manistique River at Manistique, Mich.

SPATIAL AND TEMPORAL VARIATION IN TEMPERATURE, pH, CONDUCTANCE, AND DISSOLVED OXYGEN IN RIVER CROSS SECTIONS

Subsampling locations were determined by sampling in the center of three estimated areas of equal flow across each river, approximately at quarterpoints. At each of these three points, a hydrolab was used to measure temperature, pH, conductance, and dissolved oxygen at 0.2 and 0.8 times the river depth prior to the collection of samples for water-quality analysis. All of these data are presented in appendix 2. The Pere Marquette and Kalamazoo Rivers were sufficiently shallow at the sampled cross section that water was assumed to be well mixed vertically, and therefore data were collected and rivers were sampled at only one depth in each of the three equal flow areas.

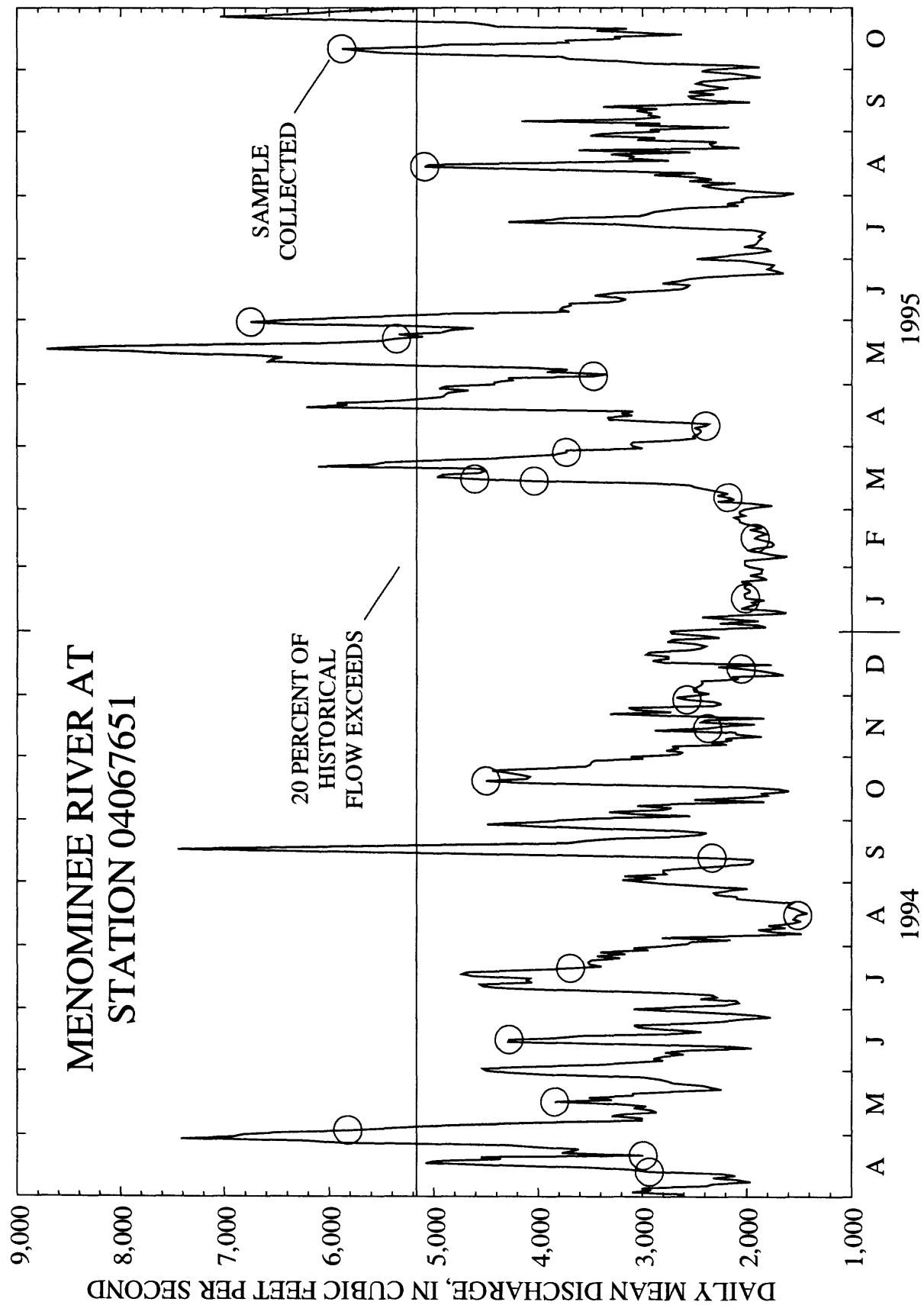
Qualitative analysis of the data presented in appendix 2 indicate that the Kalamazoo, Pere Marquette, and Grand Calumet/Indiana Harbor Rivers may be classified as being well mixed throughout the year. The Sheboygan, Menominee, Manistique, Muskegon, Grand, and St. Joseph Rivers were generally well mixed during winter months and stratified with respect to temperature and conductance in summer months. The Milwaukee River, and to a lesser extent the Fox River, were found to be poorly mixed at irregular intervals throughout the year.

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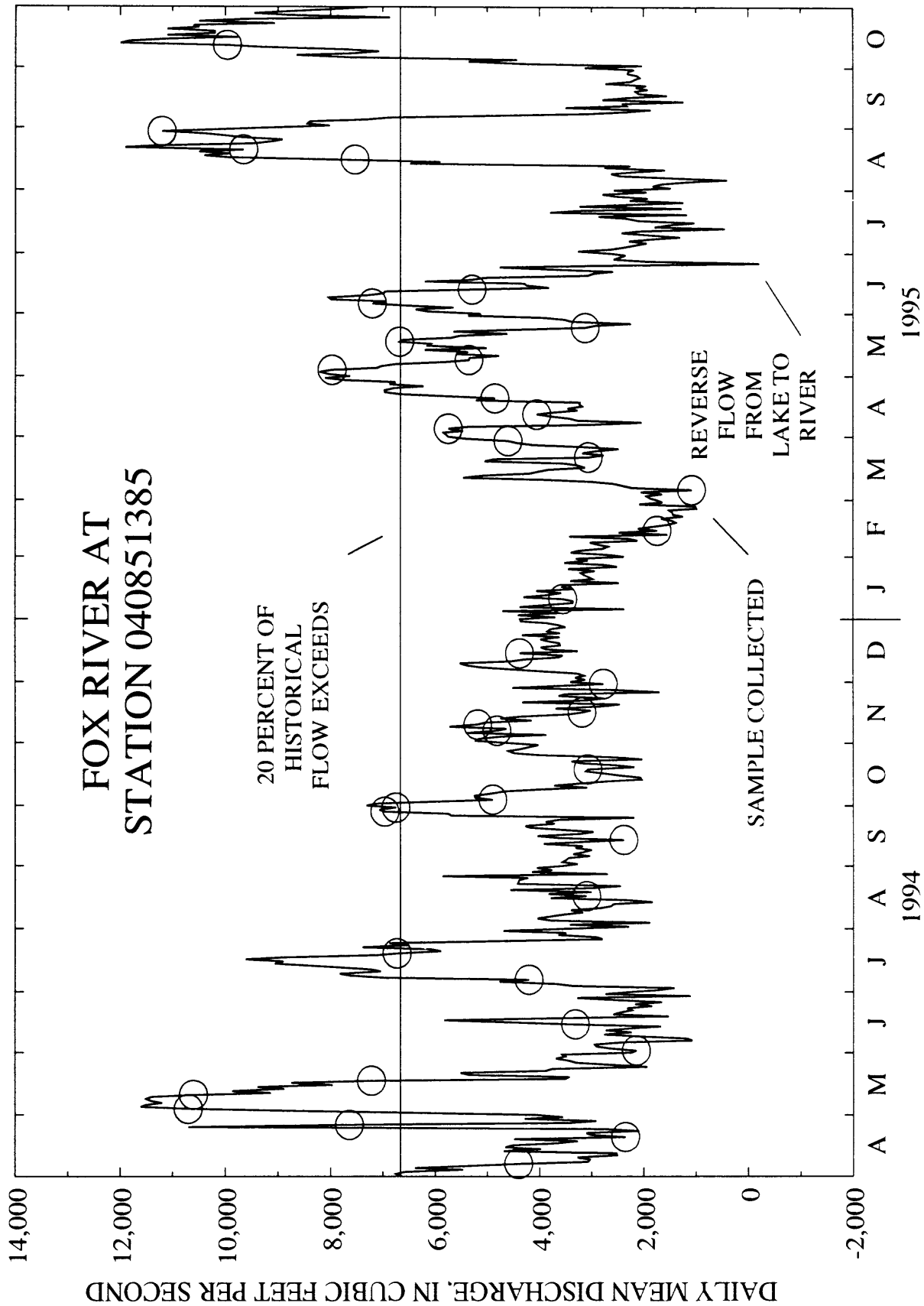
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APPENDIXES 1-2

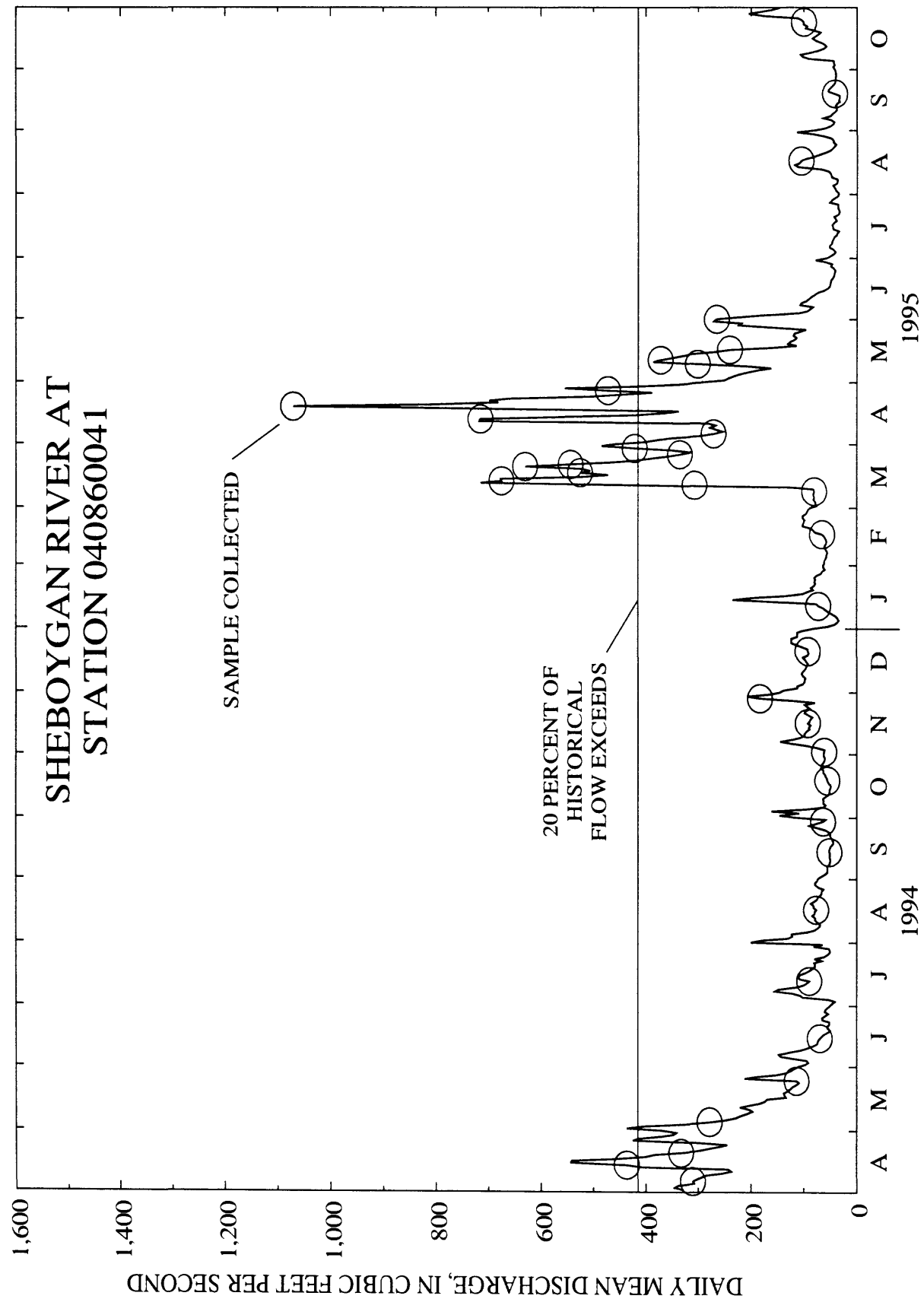
APPENDIX 1. River hydrographs and sample collection times.



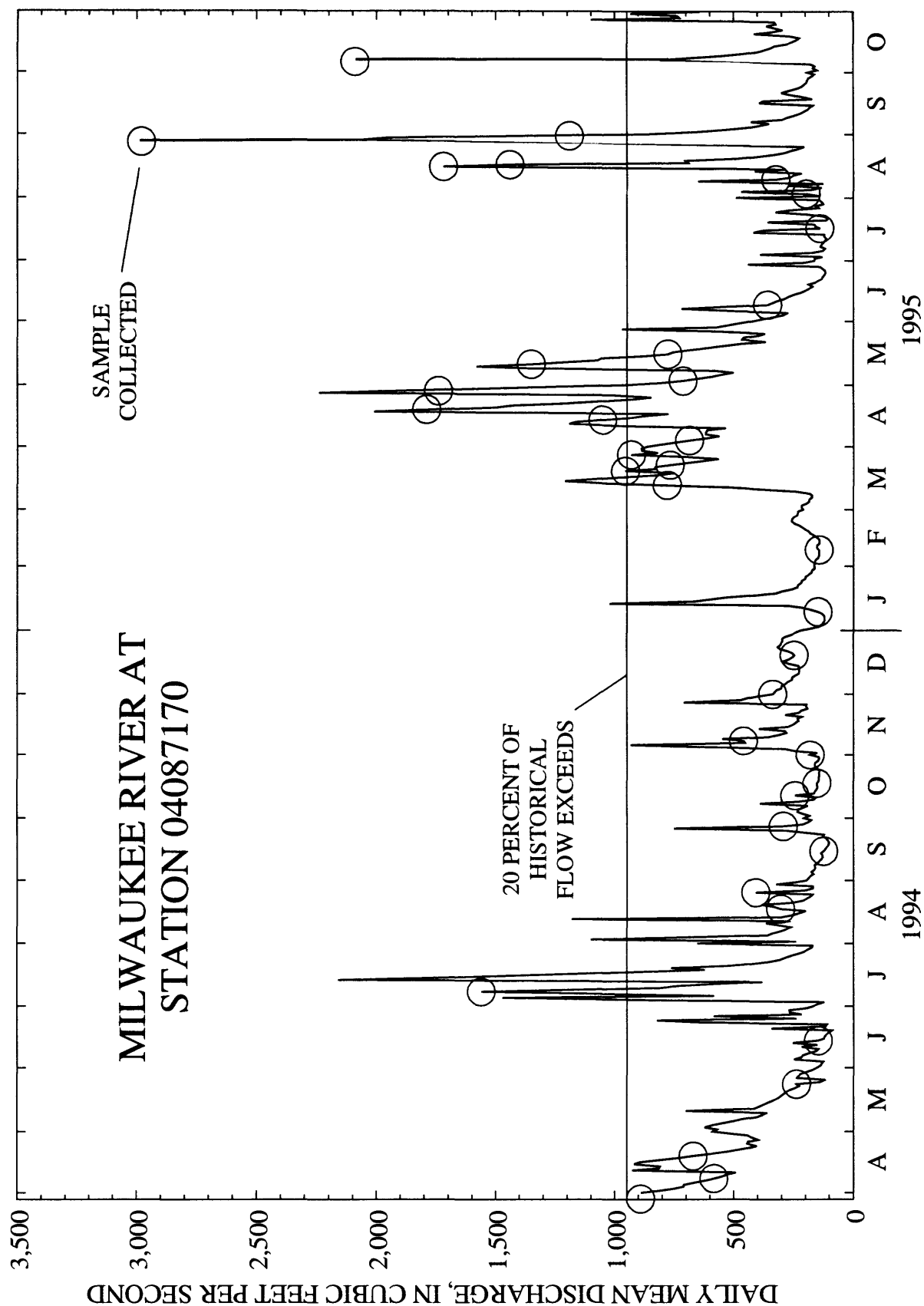
Appendix 1.1. Daily mean discharge, times of sample collection, and 20 percent flow exceedance level at Menominee River, Wisconsin, station 04067651.



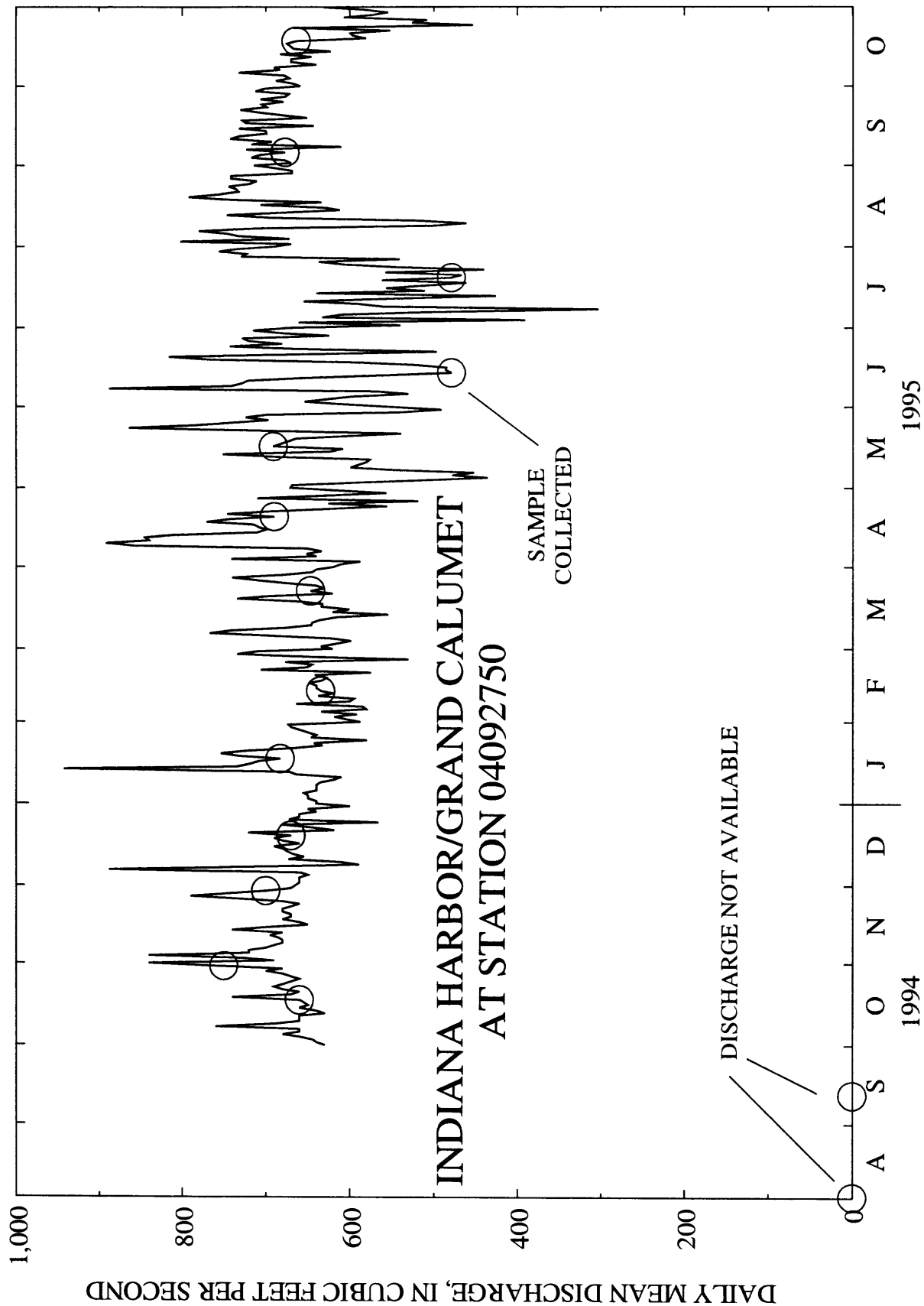
Appendix 1.2. Daily mean discharge, times of sample collection, and 20 percent flow exceedance level at Fox River, Wisconsin, station 040851385.



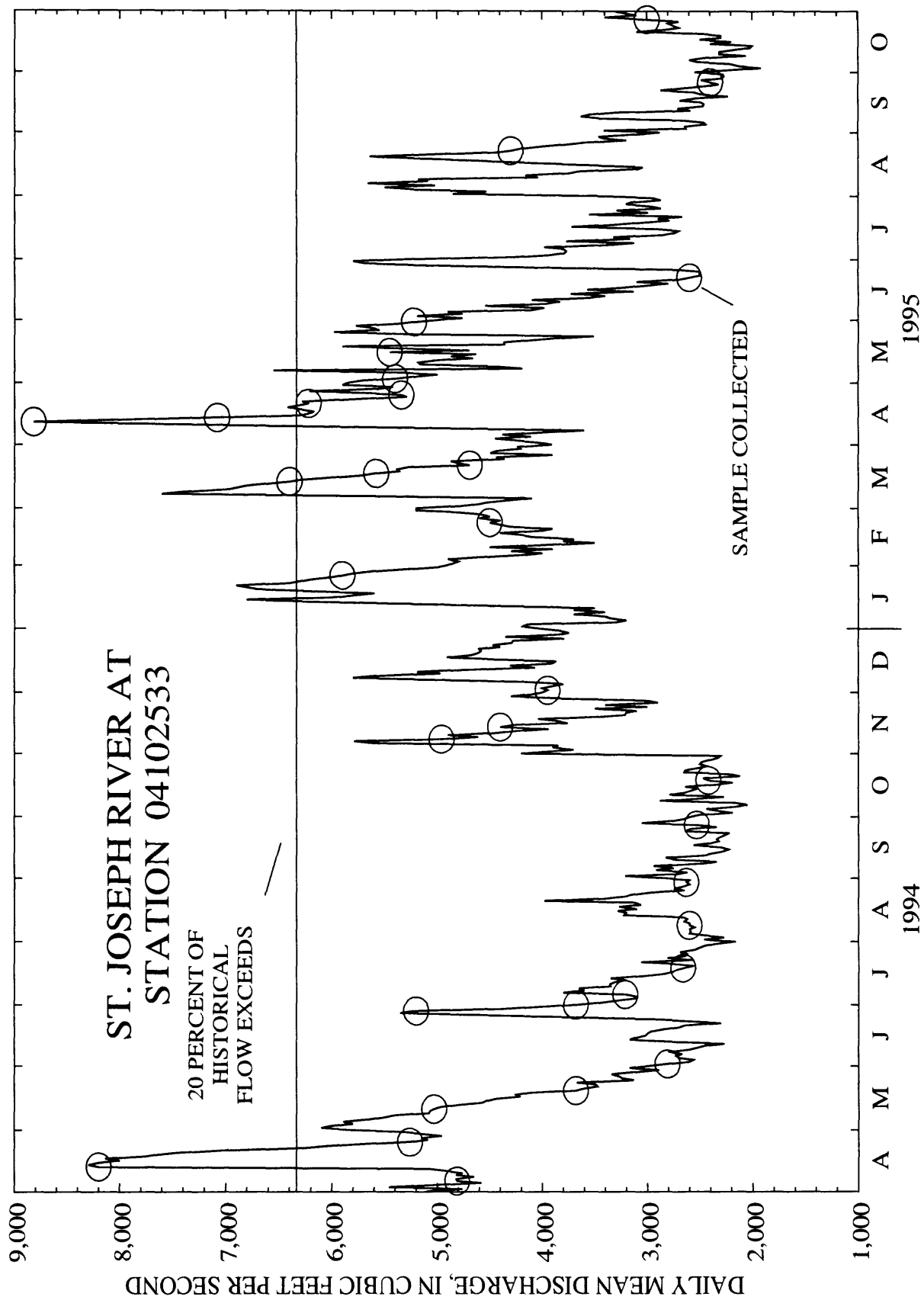
Appendix 1.3. Daily mean discharge, times of sample collection, and 20 percent flow exceedance level at Sheboygan, Wisconsin, station 040860041.



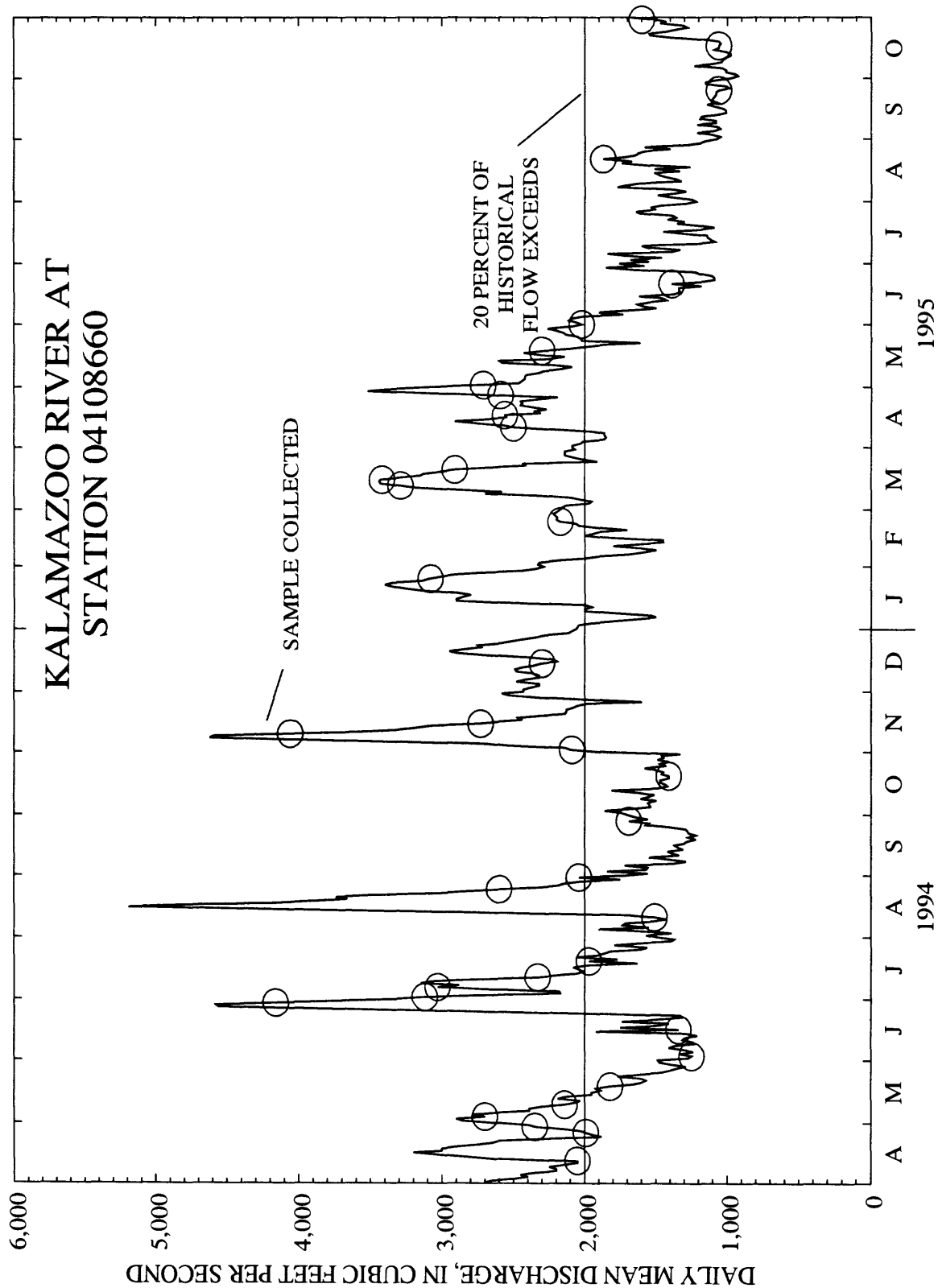
Appendix 1.4. Daily mean discharge, times of sample collection, and 20 percent flow exceedance level at Milwaukee River, Wisconsin, station 04087170.



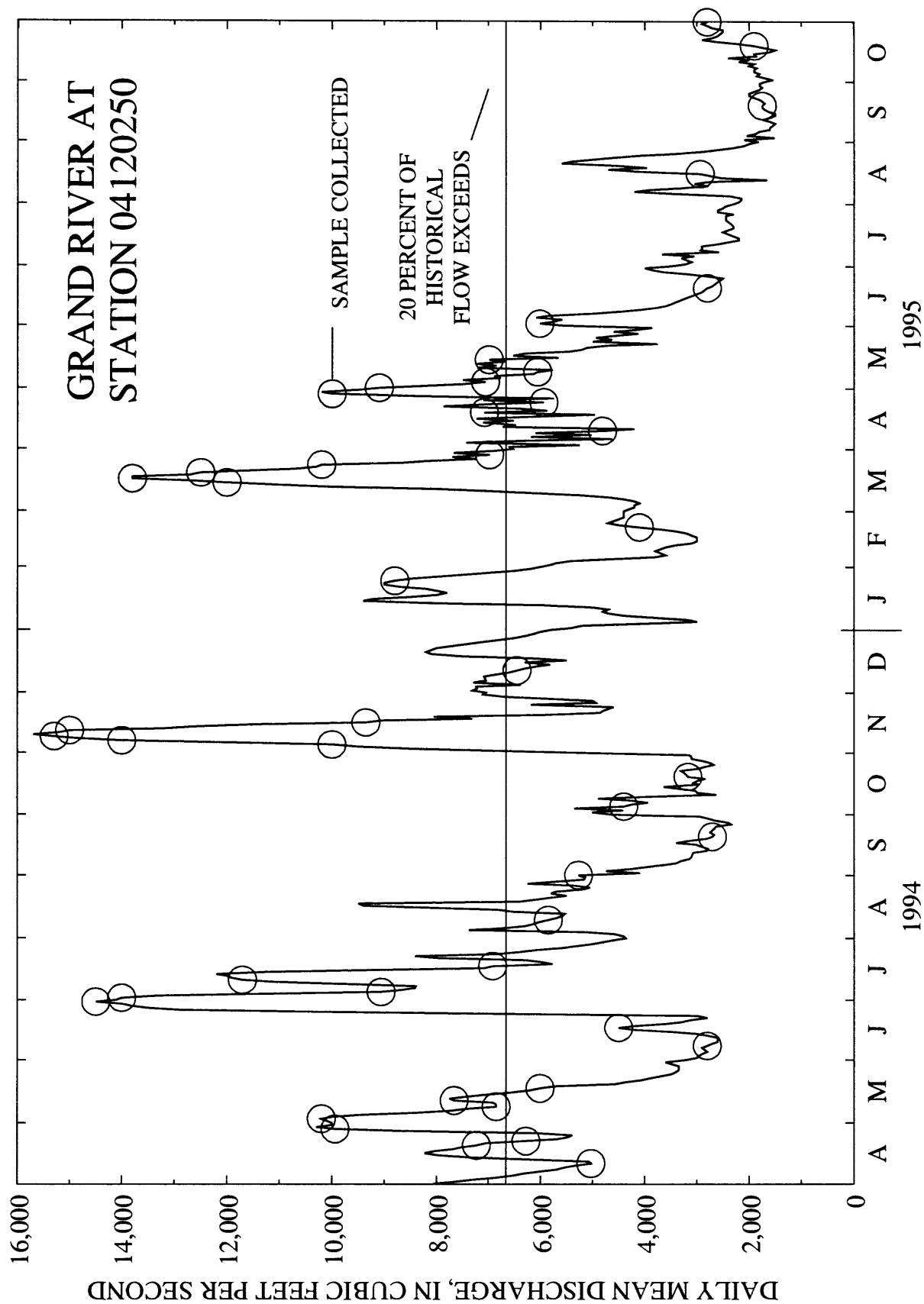
Appendix 1.5. Daily mean discharge and times of sample collection, at Indiana Harbor/Grand Calumet, Indiana, station 04092759 (historical data do not exist from which to derive a 20 percent flow exceedance).



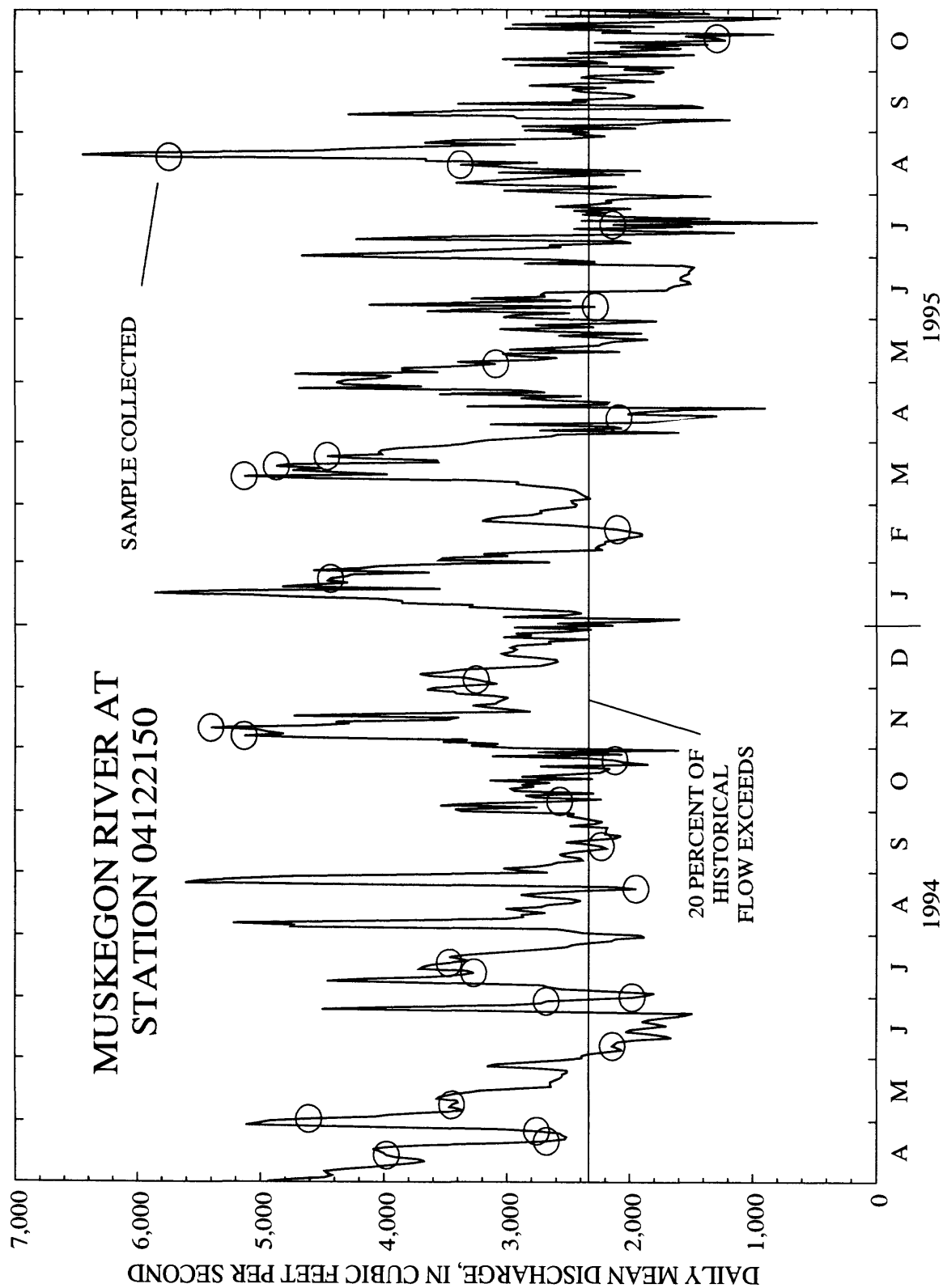
Appendix 1.6. Daily mean discharge, times of sample collection, and 20 percent flow exceedance level at St. Joseph River, Michigan, station 04102533.



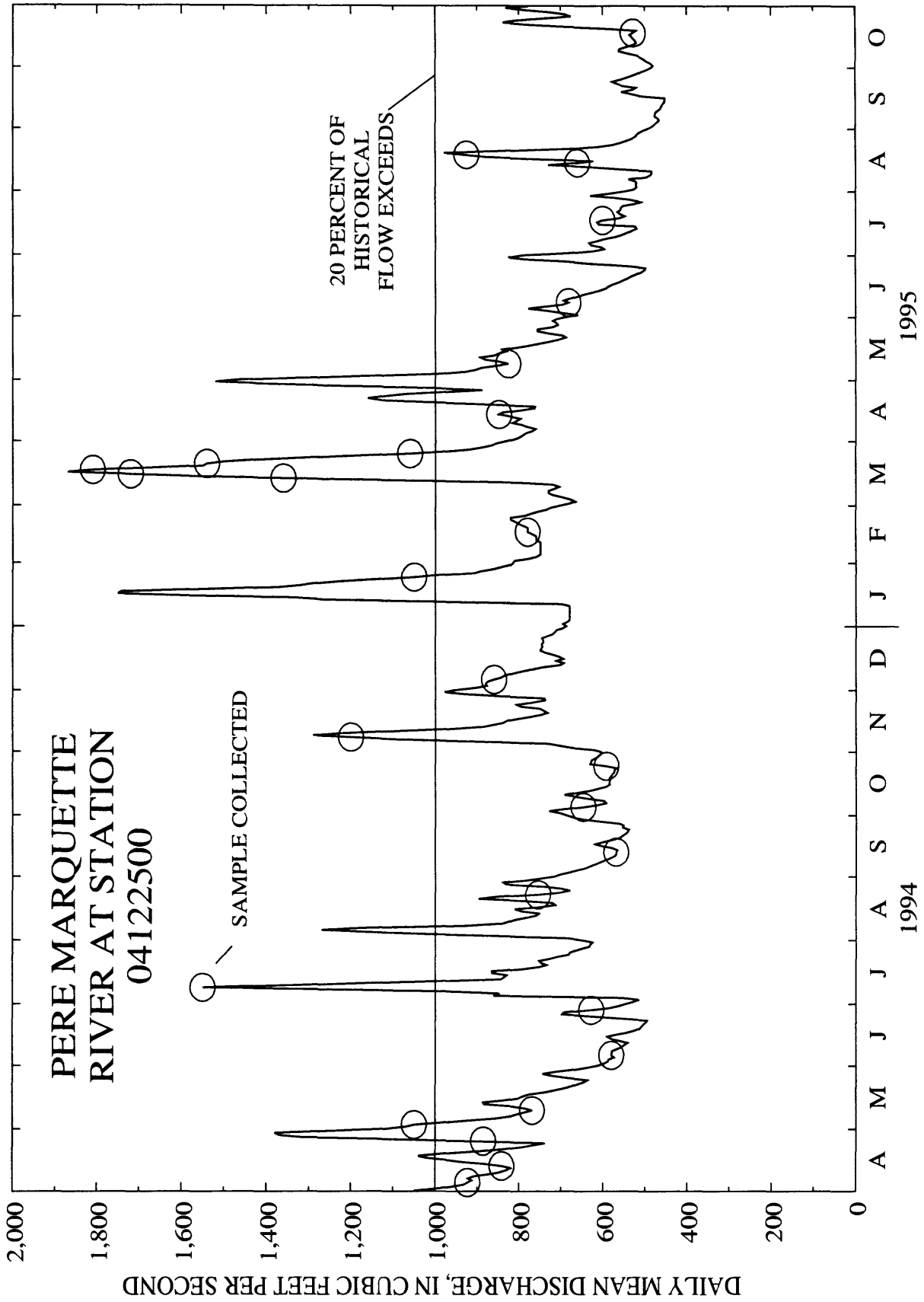
Appendix 1.7. Daily mean discharge, times of sample collection, and 20 percent flow exceedance level at Kalamazoo, Michigan, station 04108660.



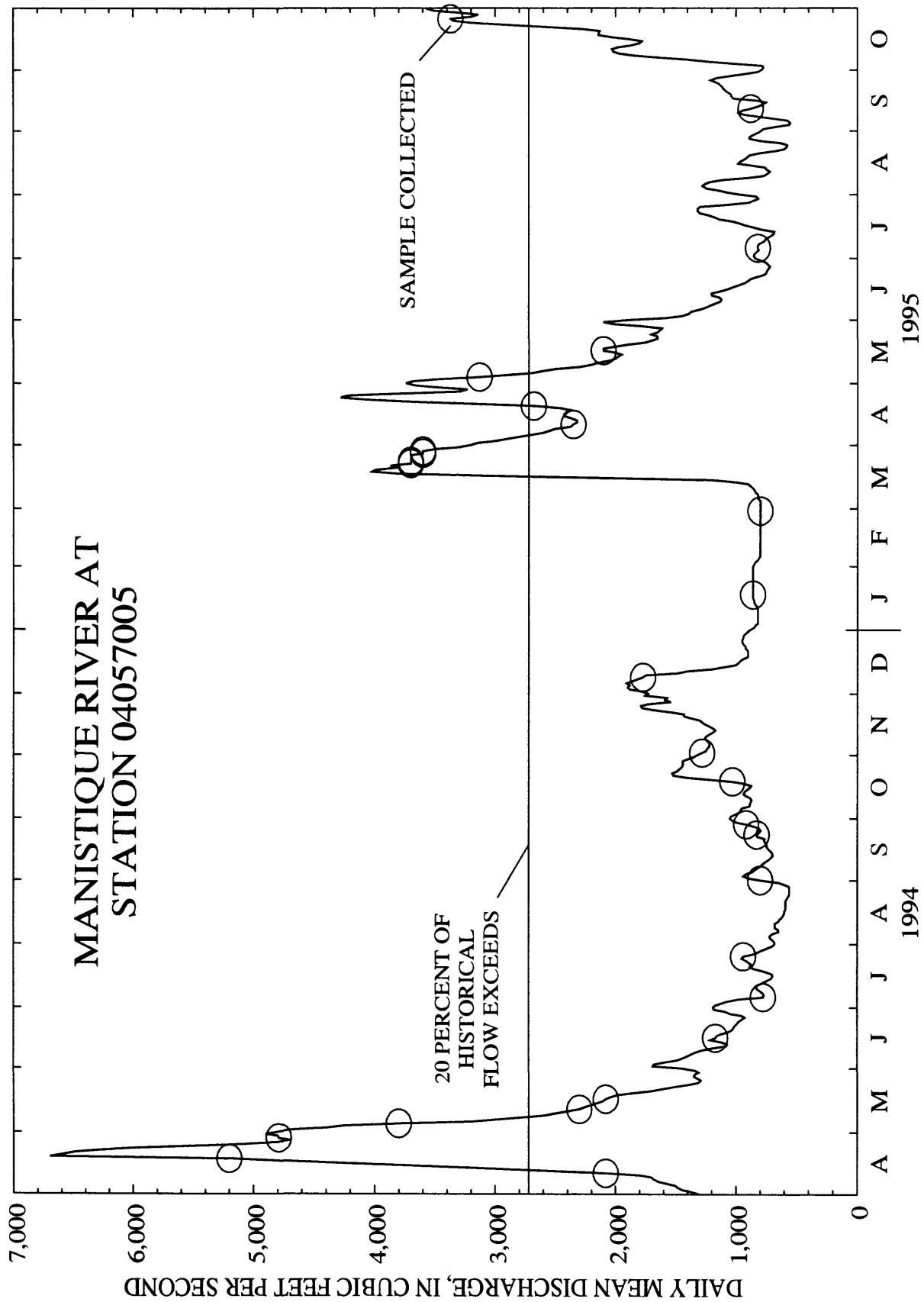
Appendix 1.8. Daily mean discharge, times of sample collection, and 20 percent flow exceedance level at Grand River, Michigan, station 04120250.



Appendix 1.9. Daily mean discharge, times of sample collection, and 20 percent flow exceedance level at Muskegon, Michigan, station 04122150.



Appendix 1.10. Daily mean discharge, times of sample collection, and 20 percent flow exceedance level at Pere Marquette, Michigan, station 04122500.



Appendix 1.11. Daily mean discharge, times of sample collection, and 20 percent flow exceedance level at Manistique River, Michigan, station 04057005.

APPENDIX 2. Temperature, pH, conductance, and dissolved oxygen data from tributary samples.

DATE

sample

15:50

LEFT 30.0

T

pH

COND

D.O.

DEPTH 0.2

DEPTH 0.8

*

EXPLANATION

SAMPLE IDENTIFICATION NUMBER (R = REPLICATE SAMPLE)

GREENWICH TIME

SAMPLE COLLECTED NEAR LEFT SIDE OF STREAM, DEPTH = 30 FEET

TEMPERATURE, IN DEGREES CELSIUS

pH, IN pH UNITS

CONDUCTANCE, IN MICROSIEMENS PER CENTIMETER

DISSOLVED OXYGEN, IN MILLIGRAMS PER LITER

SAMPLE COLLECTED AT 0.2 TIMES DEPTH AT THAT LOCATION

SAMPLE COLLECTED AT 0.8 TIMES DEPTH AT THAT LOCATION

MISSING DATA

Sample Identification

T	MILW	D	12
Tributary Sample	Milwaukee River	Alpha label	Sample #

DATE		10/18/94		TMILWD12		15:50	
sample		LEFT 30.0		CENTER 31.0		RIGHT 30.0	
0.2	T	17.0	T	16.7	T	16.6	
	pH	7.8	pH	7.9	pH	8.4	
	COND	549.0	COND	533.0	COND	529.0	
	D.O.	6.5	D.O.	6.8	D.O.	6.5	
0.8	T	15.1	T	14.8	T	14.6	
	pH	7.7	pH	7.9	pH	7.8	
	COND	440.0	COND	417.0	COND	396.0	
	D.O.	7.7	D.O.	8.4	D.O.	8.8	

Appendix 2.1. SITE MENOMINEE RIVER, WISCONSIN

DATE sample		4/13/94 TMENOA01 16:40	
DEPTH	LEFT 25.0	CENTER 30.0	RIGHT 25.0
0.2	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.
0.8	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE		5/3/94	
sample		TMENOA03	
		20:25	
DEPTH	LEFT 28.0	CENTER 30.0	RIGHT 25.0
0.2	T	9.4	T
	pH	7.8	pH
	COND	219.0	COND
	D.O.	12.3	D.O.
0.8	T	9.2	T
	pH	7.8	pH
	COND	219.0	COND
	D.O.	12.2	D.O.

DATE sample		6/16/94 TMENOA05 13:50		
DEPTH		LEFT 25.0	CENTER 29.0	RIGHT 23.0
0.2	T	22.8	T	23.4
	pH	7.6	pH	7.6
	COND	240.0	COND	230.0
	D.O.	7.9	D.O.	7.9
0.8	T	12.2	T	11.2
	pH	7.5	pH	7.7
	COND	299.0	COND	297.0
	D.O.	8.4	D.O.	8.4

DATE sample		4/21/94 TMENOA02 13:50		
DEPTH	LEFT 28.0	CENTER 28.0	RIGHT 21.0	
0.2	T	9.4	9.4	T
	pH	8.0	8.0	pH
	COND	252.0	COND	259.0
	D.O.	11.8	D.O.	11.8
0.8	T	9.4	9.4	T
	pH	8.0	pH	7.9
	COND	261.0	COND	266.0
	D.O.	11.7	D.O.	11.6

DATE sample		5/17/94 TMENOA04 20:05		
DEPTH	LEFT 20.0	CENTER 25.0	RIGHT 20.0	
0.2	T	14.3	T	14.2
	pH	7.9	pH	7.9
	COND	249.0	COND	240.0
	D.O.	10.6	D.O.	10.7
0.8	T	14.0	T	14.1
	pH	7.8	pH	7.8
	COND	249.0	COND	252.0
	D.O.	10.4	D.O.	10.5

DATE sample		7/6/94 TMENOA06 21:00	
DEPTH	LEFT 27.0	CENTER 30.0	RIGHT 24.0
0.2	T	22.8	T
	pH	7.4	pH
	COND	266.0	COND
	D.O.	6.9	D.O.
0.8	T	20.1	T
	pH	7.5	pH
	COND	313.0	COND
	D.O.	7.5	D.O.

DATE sample		7/21/94 TMENOA07 13:34	
DEPTH		LEFT	29.0
0.2		T	
		pH	
		COND	
		D.O.	
0.8		T	
		pH	
		COND	
		D.O.	

DATE sample		8/16/94 TMENOA08 19:10	
DEPTH	LEFT 27.0		
0.2	T		
	pH		
	COND		
	D.O.		
0.8	T		
	pH		
	COND		
	D.O.		

DATE sample	9/13/94 TMENOA09 19:55
DEPTH	LEFT 23.0
0.2	T
	pH
	COND
	D.O.
0.8	T
	pH
	COND
	D.O.

DATE sample	10/20/94 TMENO10 13:30
DEPTH	LEFT 25.0
0.2	T
	pH
	COND
	D.O.
0.8	T
	pH
	COND
	D.O.

DATE sample	11/15/94 TMENOA11 20:05
DEPTH	LEFT 23.0
0.2	T
	pH
	COND
	D.O.
0.8	T
	pH
	COND
	D.O.

DATE sample	11/29/94 TMENOA12 19:30
DEPTH	LEFT 27.0
0.2	T
	pH
	COND
	D.O.
0.8	T
	pH
	COND
	D.O.

DATE sample	12/14/94 TMENOA13 20:10	D.O. SUSPECT - EXCEEDS SATURATION				
DEPTH	LEFT 30.0	CENTER 30.0			RIGHT 30.0	
0.2	T	0.2	T	0.2	T	0.2
	pH	-	pH	-	pH	-
	COND	304.0	COND	304.0	COND	305.0
	D.O.	15.2	D.O.	15.2	D.O.	15.0
0.8	T	0.2	T	0.2	T	0.2
	pH	-	pH	-	pH	-
	COND	305.0	COND	306.0	COND	305.0
	D.O.	15.1	D.O.	15.0	D.O.	14.9

DATE sample	2/15/95 TMENOA15R1 19:00	HYDROLAB MALFUNCTION				
DEPTH	LEFT 28.0	CENTER 30.0			RIGHT 25.0	
0.2	T	0.1	T	0.1	T	0.1
	pH	8.1	pH	8.0	pH	8.0
	COND	307.0	COND	280.0	COND	300.0
	D.O.	13.8	D.O.	13.8	D.O.	13.6
0.8	T	0.3	T	0.3	T	0.1
	pH	8.1	pH	8.0	pH	8.0
	COND	314.0	COND	234.0	COND	299.0
	D.O.	13.7	D.O.	13.8	D.O.	13.6

DATE sample	3/7/95 TMENOA17 15:20	HYDROLAB MALFUNCTION				
DEPTH	LEFT	CENTER			RIGHT	
0.2	T	*	T	*	T	*
	pH	*	pH	*	pH	*
	COND	*	COND	*	COND	*
	D.O.	*	D.O.	*	D.O.	*
0.8	T	*	T	*	T	*
	pH	*	pH	*	pH	*
	COND	*	COND	*	COND	*
	D.O.	*	D.O.	*	D.O.	*

DATE sample	1/17/95 TMENOA14 20:26	HYDROLAB MALFUNCTION				
DEPTH	LEFT 27.0	CENTER 30.0			RIGHT 29.0	
0.2	T	0.8	T	0.3	T	0.2
	pH	8.0	pH	7.9	pH	7.9
	COND	277.0	COND	279.0	COND	280.0
	D.O.	12.2	D.O.	12.9	D.O.	12.9
0.8	T	0.6	T	0.5	T	0.2
	pH	8.2	pH	7.9	pH	7.9
	COND	280.0	COND	285.0	COND	280.0
	D.O.	11.1	D.O.	12.5	D.O.	12.7

DATE sample	2/15/95 TMENOA16R2 19:35	HYDROLAB MALFUNCTION				
DEPTH	LEFT	CENTER			RIGHT	
0.2	T	*	T	*	T	*
	pH	*	pH	*	pH	*
	COND	*	COND	*	COND	*
	D.O.	*	D.O.	*	D.O.	*
0.8	T	*	T	*	T	*
	pH	*	pH	*	pH	*
	COND	*	COND	*	COND	*
	D.O.	*	D.O.	*	D.O.	*

DATE sample	3/15/95 TMENOA18 20:00	HYDROLAB MALFUNCTION				
DEPTH	LEFT	CENTER			RIGHT	
0.2	T	0.5	T	0.6	T	0.5
	pH	7.7	pH	8.0	pH	8.0
	COND	243.0	COND	238.0	COND	239.0
	D.O.	13.2	D.O.	12.5	D.O.	12.5
0.8	T	0.5	T	0.5	T	0.5
	pH	7.8	pH	8.0	pH	7.9
	COND	238.0	COND	239.0	COND	240.0
	D.O.	12.7	D.O.	12.5	D.O.	12.4

DATE		3/16/95		
sample		TMENOA19		
		14:30		
DEPTH		LEFT	CENTER	RIGHT
0.2	T	0.2	T	0.1
	pH	7.4	pH	7.7
	COND	236.0	COND	238.0
	D.O.	12.8	D.O.	12.6
0.8	T	0.2	T	0.1
	pH	7.6	pH	7.7
	COND	240.0	COND	240.0
	D.O.	12.6	D.O.	12.5

DATE		4/11/95		
sample		TMENOA21		
		18:30		
DEPTH		LEFT 28.0	CENTER 30.0	RIGHT 25.0
0.2	T	4.2	T	4.2
	pH	8.6	pH	8.0
	COND	241.0	COND	240.0
	D.O.	13.9	D.O.	13.6
0.8	T	4.2	T	4.2
	pH	8.3	pH	8.1
	COND	244.0	COND	240.0
	D.O.	13.5	D.O.	13.5

DATE sample		5/23/95 TMENOA23 18:30		
DEPTH		LEFT 27.0	CENTER 30.0	RIGHT 23.0
0.2	T	16.2	T	16.1
	pH	7.5	pH	7.5
	COND	181.0	COND	179.0
	D.O.	9.3	D.O.	9.9
0.8	T	16.0	T	16.1
	pH	7.4	pH	7.5
	COND	181.0	COND	179.0
	D.O.	9.6	D.O.	9.6

DATE sample		3/29/95 TMENOA20 20:25			
DEPTH		LEFT	CENTER		RIGHT
0.2	T	3.2	T	3.3	T
	pH	8.0	pH	7.8	pH
	COND	216.0	COND	216.0	COND
	D.O.	13.8	D.O.	13.8	D.O.
0.8	T	3.2	T	3.2	T
	pH	7.9	pH	7.8	pH
	COND	216.0	COND	316.0	COND
	D.O.	13.5	D.O.	13.3	D.O.

DATE		5/5/95		
sample		TMENOA22		
		13:35		
DEPTH		LEFT 30.0	CENTER 27.0	RIGHT 15.0
0.2	T	11.0	T	11.9
	pH	8.3	pH	8.1
	COND	218.0	COND	218.0
	D.O.	11.6	D.O.	11.1
0.8	T	11.0	T	11.0
	pH	8.0	pH	8.1
	COND	217.0	COND	218.0
	D.O.	12.4	D.O.	11.2

DATE sample		5/31/95 TMENOA24 19:30			
DEPTH		LEFT 25.0		CENTER 25.0	RIGHT 17.0
0.2	T	17.6	T	17.4	T
	pH	7.7	pH	7.6	pH
	COND	217.0	COND	212.0	COND
	D.O.	9.7	D.O.	9.7	D.O.
0.8	T	17.9	T	17.3	T
	pH	7.6	pH	7.6	pH
	COND	213.0	COND	210.0	COND
	D.O.	9.6	D.O.	9.7	D.O.

DATE
sample

8/15/95
TMENOA25

18:30

DEPTH	LEFT	27.0	CENTER	30.0	RIGHT	22.0
0.2	T	24.7	T	24.8	T	25.0
	pH	7.7	pH	7.8	pH	7.8
	COND	253.0	COND	251.0	COND	251.0
	D.O.	7.7	D.O.	7.7	D.O.	7.9
0.8	T	23.7	T	21.5	T	24.7
	pH	7.7	pH	7.6	pH	7.7
	COND	258.0	COND	272.0	COND	252.0
	D.O.	7.1	D.O.	6.5	D.O.	7.6

DATE
sample

10/11/95
TMENOA26R1

18:05

DEPTH	LEFT	CENTER	RIGHT
0.2	T	13.0	T
	pH	7.9	pH
	COND	246.0	COND
	D.O.	10.4	D.O.
0.8	T	12.9	T
	pH	7.8	pH
	COND	244.0	COND
	D.O.	10.3	D.O.

DATE
sample

10/11/95
TMENOA26R2

20:15

DEPTH	LEFT	CENTER	RIGHT
0.2	T	13.2	T
	pH	7.7	pH
	COND	243.0	COND
	D.O.	10.3	D.O.
0.8	T	13.0	T
	pH	7.7	pH
	COND	241.0	COND
	D.O.	10.4	D.O.

Appendix 2.2. SITE FOX RIVER, WISCONSIN

DATE sample		4/7/94 TFOXR001 17:20	
DEPTH	LEFT 24.0	CENTER 26.0	RIGHT 25.0
0.2	T	4.9 T	4.9 T
	pH	8.2 pH	8.3 pH
	COND	475.0 COND	474.0 COND
	D.O.	12.8 D.O.	12.9 D.O.
0.8	T	4.9 T	4.8 T
	pH	8.2 pH	8.3 pH
	COND	473.0 COND	480.0 COND
	D.O.	12.8 D.O.	12.8 D.O.

DATE sample		4/26/94 TFOXR003 21:45	
DEPTH	LEFT 24.0	CENTER 27.0	RIGHT 29.0
0.2	T	11.7 T	11.5 T
	pH	8.2 pH	7.8 pH
	COND	382.0 COND	366.0 COND
	D.O.	9.4 D.O.	9.0 D.O.
0.8	T	11.5 T	11.5 T
	pH	7.8 pH	7.8 pH
	COND	384.0 COND	367.0 COND
	D.O.	9.2 D.O.	8.9 D.O.

DATE sample		5/11/94 TFOXR05 18:45				
DEPTH	LEFT 23.0		CENTER 28.0		RIGHT 27.0	
	T	14.3	T	14.1	T	14.2
0.2	pH	7.7	pH	8.2	pH	8.0
	COND	386.0	COND	386.0	COND	384.0
	D.O.	10.1	D.O.	10.0	D.O.	10.1
0.8	T	13.9	T	14.2	T	14.2
	pH	7.8	pH	8.2	pH	8.1
	COND	385.0	COND	387.0	COND	386.0
	D.O.	10.0	D.O.	10.0	D.O.	10.0

DATE sample		4/20/94 TFOXR02 20:15				
DEPTH	LEFT 21.0	CENTER 28.0		RIGHT 28.0		
0.2	T	11.7	T	12.3	T	11.8
	pH	8.1	pH	8.3	pH	8.3
	COND	494.0	COND	490.0	COND	494.0
	D.O.	11.3	D.O.	11.4	D.O.	11.4
0.8	T	11.7	T	12.1	T	11.7
	pH	8.2	pH	8.4	pH	8.2
	COND	501.0	COND	493.0	COND	503.0
	D.O.	11.1	D.O.	11.4	D.O.	11.1

DATE sample		5/4/94 TFOXR04 16:30	
DEPTH	LEFT 24.0	CENTER 30.0	RIGHT 26.0
0.2	T	11.0	T
	pH	7.9	pH
	COND	406.0	COND
	D.O.	10.6	D.O.
0.8	T	11.0	T
	pH	7.9	pH
	COND	410.0	COND
	D.O.	10.6	D.O.

DATE		5/18/94		
sample		TFOXR06R1		
		15:50		
DEPTH		LEFT 20.0	CENTER 30.0	RIGHT 22.0
0.2	T	15.5	T	15.8
	pH	8.0	pH	8.1
	COND	387.0	COND	383.0
	D.O.	9.9	D.O.	9.9
0.8	T	15.5	T	15.4
	pH	8.0	pH	8.1
	COND	391.0	COND	388.0
	D.O.	9.8	D.O.	9.8

DATE
sample

5/18/94
TFOXR06R2
18:05

DEPTH	LEFT 20.0	CENTER 28.0	RIGHT 28.0
0.2	T 16.6 pH 8.3 COND 382.0 D.O. 10.9	T 15.7 pH 8.2 COND 385.0 D.O. 10.1	T 15.9 pH 8.2 COND 387.0 D.O. 10.0
0.8	T 15.6 pH 8.2 COND 389.0 D.O. 9.9	T 15.5 pH 8.2 COND 387.0 D.O. 9.9	T 15.5 pH 8.2 COND 387.0 D.O. 9.9

DATE
sample

6/2/94
TFOXR07
18:45

DEPTH	LEFT 22.0	CENTER 28.0	RIGHT 25.0
0.2	T 21.7 pH 8.1 COND 450.0 D.O. 8.4	T 21.8 pH 8.3 COND 446.0 D.O. 8.6	T 21.9 pH 8.3 COND 443.0 D.O. 9.0
0.8	T 21.2 pH 8.1 COND 452.0 D.O. 7.8	T 21.3 pH 8.2 COND 449.0 D.O. 7.8	T 21.4 pH 8.3 COND 450.0 D.O. 8.1

DATE
sample

6/15/94
TFOXR08
18:25

DEPTH	LEFT 25.0	CENTER 27.0	RIGHT 25.0
0.2	T 23.8 pH 8.1 COND 449.0 D.O. 7.9	T 23.9 pH 8.1 COND 448.0 D.O. 8.2	T 24.2 pH 8.1 COND 450.0 D.O. 8.7
0.8	T 22.6 pH 8.0 COND 440.0 D.O. 6.4	T 21.9 pH 8.0 COND 411.0 D.O. 6.5	T 23.3 pH 8.0 COND 454.0 D.O. 7.0

DATE
sample

7/7/94
TFOXR09
15:07

DEPTH	LEFT 21.0	CENTER 25.0	RIGHT 27.0
0.2	T 25.3 pH 8.1 COND 431.0 D.O. 8.0	T 25.3 pH 8.3 COND 432.0 D.O. 7.8	T 25.5 pH 8.5 COND 429.0 D.O. 8.6
0.8	T 25.3 pH 8.1 COND 436.0 D.O. 7.5	T 25.3 pH 8.3 COND 437.0 D.O. 7.7	T 25.3 pH 8.4 COND 434.0 D.O. 7.7

DATE
sample

7/20/94
TFOXR10R1
16:45

DEPTH	LEFT 26.0	CENTER 28.0	RIGHT 26.0
0.2	T 24.4 pH 8.4 COND 353.0 D.O. 7.7	T 24.4 pH 8.5 COND 349.0 D.O. 7.6	T 24.5 pH 8.6 COND 350.0 D.O. 7.8
0.8	T 24.3 pH 8.4 COND 354.0 D.O. 7.4	T 24.3 pH 8.5 COND 351.0 D.O. 7.4	T 24.3 pH 8.5 COND 350.0 D.O. 7.5

DATE
sample

7/20/94
TFOXR11R2
19:19

DEPTH	LEFT 23.0	CENTER 27.0	RIGHT 28.0
0.2	T 24.8 pH 8.6 COND 346.0 D.O. 9.0	T 24.6 pH 7.8 COND 350.0 D.O. 7.9	T 24.5 pH 8.5 COND 350.0 D.O. 7.8
0.8	T 24.4 pH 8.5 COND 349.0 D.O. 7.4	T 24.4 pH 8.5 COND 351.0 D.O. 7.5	T 24.4 pH 8.5 COND 351.0 D.O. 7.5

DATE
sample 8/17/94
TFOXRBI2
14:15

DEPTH	LEFT 24.0	CENTER 28.0	RIGHT 27.0
0.2	T 21.6 pH 8.2 COND 379.0 D.O. 8.3	T 21.7 pH 8.4 COND 379.0 D.O. 8.5	T 21.1 pH 8.6 COND 380.0 D.O. 8.5
0.8	T 20.9 pH 8.2 COND 375.0 D.O. 7.4	T 20.7 pH 8.4 COND 375.0 D.O. 7.3	T 21.3 pH 8.5 COND 384.0 D.O. 7.5

DATE
sample 9/28/94
TFOXRBI4
17:50

DEPTH	LEFT 22.0	CENTER 26.0	RIGHT 26.0
0.2	T 17.0 pH 8.5 COND 360.0 D.O. 7.6	T 17.0 pH 8.6 COND 360.0 D.O. 7.5	T 17.0 pH 8.4 COND 361.0 D.O. 7.7
0.8	T 16.9 pH 8.3 COND 367.0 D.O. 7.1	T 16.9 pH 8.5 COND 364.0 D.O. 7.2	T 16.9 pH 8.3 COND 364.0 D.O. 7.3

DATE
sample 10/4/94
TFOXRBI6R1
16:55

DEPTH	LEFT 22.0	CENTER 27.0	RIGHT 27.0
0.2	T 15.0 pH 8.3 COND 362.0 D.O. 9.8	T 15.0 pH 8.2 COND 364.0 D.O. 9.9	T 15.0 pH 8.4 COND 369.0 D.O. 9.8
0.8	T 15.0 pH 8.3 COND 362.0 D.O. 9.7	T 15.1 pH 8.2 COND 374.0 D.O. 9.8	T 15.1 pH 8.2 COND 366.0 D.O. 9.7

DATE
sample 9/14/94
TFOXRBI3
15:30

DEPTH	LEFT 21.0	CENTER 26.0	RIGHT 26.0
0.2	T 22.8 pH 8.5 COND 376.0 D.O. 7.1	T 22.6 pH 8.3 COND 378.0 D.O. 6.9	T 22.9 pH 8.7 COND 382.0 D.O. 7.0
0.8	T 22.7 pH 8.5 COND 380.0 D.O. 6.5	T 22.7 pH 8.4 COND 380.0 D.O. 6.7	T 22.6 pH 8.2 COND 385.0 D.O. 6.6

DATE
sample 9/30/94
TFOXRBI5
13:30

DEPTH	LEFT 22.0	CENTER 27.0	RIGHT 27.0
0.2	T 16.7 pH 8.4 COND 365.0 D.O. 9.7	T 16.6 pH 8.2 COND 367.0 D.O. 9.7	T 16.7 pH 7.9 COND 368.0 D.O. 9.8
0.8	T 16.6 pH 8.4 COND 377.0 D.O. 9.7	T 16.6 pH 8.3 COND 384.0 D.O. 9.7	T 16.6 pH 8.2 COND 382.0 D.O. 9.8

DATE
sample 10/4/94
TFOXRBI7R2
18:55

DEPTH	LEFT 21.0	CENTER 26.0	RIGHT 26.0
0.2	T 15.0 pH 8.4 COND 354.0 D.O. 9.9	T 15.0 pH 8.3 COND 359.0 D.O. 9.9	T 15.0 pH 8.4 COND 358.0 D.O. 10.1
0.8	T 15.0 pH 8.3 COND 363.0 D.O. 9.7	T 15.0 pH 8.3 COND 371.0 D.O. 9.7	T 15.0 pH 8.4 COND 360.0 D.O. 9.9

DATE 10/19/94
sample TFOXR818
18:50

DEPTH	LEFT 25.0	CENTER 28.0	RIGHT 25.0
0.2	T pH COND D.O.	15.6 T 8.1 pH 378.0 COND 8.7 D.O.	15.6 T 8.1 pH 381.0 COND 8.9 D.O.
0.8	T pH COND D.O.	15.6 T 8.1 pH 381.0 COND 8.5 D.O.	15.7 T 8.2 pH 382.0 COND 8.6 D.O.

DATE 11/10/94
sample TFOXR820
16:50

DEPTH	LEFT 24.0	CENTER 28.0	RIGHT 21.0
0.2	T pH COND D.O.	8.3 T 8.1 pH 384.0 COND 12.2 D.O.	8.2 T 8.1 pH 381.0 COND 12.2 D.O.
0.8	T pH COND D.O.	8.2 T 8.1 pH 386.0 COND 12.0 D.O.	8.2 T 8.0 pH 385.0 COND 12.0 D.O.

DATE 11/30/94
sample TFOXR822
14:55

DEPTH	LEFT 20.0	CENTER 27.0	RIGHT 21.0
0.2	T pH COND D.O.	1.4 T * pH 382.0 COND 14.1 D.O.	1.4 T * pH 382.0 COND 14.1 D.O.
0.8	T pH COND D.O.	1.3 T * pH 385.0 COND 14.0 D.O.	1.4 T * pH 384.0 COND 14.0 D.O.

DATE 11/7/94
sample TFOXR819
17:55

DEPTH	LEFT 27.0	CENTER 27.0	RIGHT 18.0
0.2	T pH COND D.O.	8.8 T 8.3 pH 362.0 COND 11.3 D.O.	8.8 T 8.4 pH 372.0 COND 11.4 D.O.
0.8	T pH COND D.O.	8.7 T 8.2 pH 362.0 COND 11.2 D.O.	8.9 T 8.3 pH 363.0 COND 11.3 D.O.

DATE 11/16/94
sample TFOXR821
15:00

DEPTH	LEFT 22.0	CENTER 28.0	RIGHT 25.0
0.2	T pH COND D.O.	8.2 T 7.9 pH 386.0 COND 11.2 D.O.	8.2 T 7.9 pH 385.0 COND 11.1 D.O.
0.8	T pH COND D.O.	8.2 T 7.9 pH 385.0 COND 11.0 D.O.	8.2 T 7.8 pH 386.0 COND 10.9 D.O.

DATE 12/15/94
sample TFOXR823
16:00

DEPTH	LEFT *	HEAVY SNOW: CENTER 28.0	PARTIAL RECORD RIGHT 25.0
0.2	T pH COND D.O.	0.5 T * pH * COND * D.O.	0.5 T * pH * COND 14.5 D.O.
0.8	T pH COND D.O.	* T * pH * COND * D.O.	* T * pH * COND 14.5 D.O.

DATE
sample
1/11/95
TFOXR24
16:00

DEPTH	LEFT 24.0	CENTER 28.0	RIGHT 27.0
0.2	T pH COND D.O.	0.7 8.0 394.0 12.2	T pH COND D.O.
0.8	T pH COND D.O.	1.0 8.0 397.0 13.1	T pH COND D.O.

DATE
sample
2/14/95
TFOXR25
17:50

D.O. SUSPECT - EXCEEDS SATURATION

DEPTH	LEFT 23.0	CENTER 26.0	RIGHT 27.0
0.2	T pH COND D.O.	1.1 8.0 439.0 15.6	T pH COND D.O.
0.8	T pH COND D.O.	1.2 7.9 437.0 15.5	T pH COND D.O.

DATE
sample
3/6/95
TFOXR26
18:00

WATER IN HYDROLAB SONDE

DEPTH	LEFT 28.0	CENTER	RIGHT
0.2	T pH COND D.O.	* pH COND D.O.	T pH COND D.O.
0.8	T pH COND D.O.	* pH COND D.O.	T pH COND D.O.

DATE
sample
3/22/95
TFOXR27
14:20

DEPTH	LEFT 22.0	CENTER 27.0	RIGHT 28.0
0.2	T pH COND D.O.	4.6 7.4 473.0 11.6	T pH COND D.O.
0.8	T pH COND D.O.	4.3 7.3 500.0 11.6	T pH COND D.O.

DATE
sample
3/30/95
TFOXR28
14:45

DEPTH	LEFT 24.0	CENTER 27.0	RIGHT 25.0
0.2	T pH COND D.O.	5.1 7.7 445.0 13.1	T pH COND D.O.
0.8	T pH COND D.O.	5.1 7.8 444.0 12.2	T pH COND D.O.

DATE
sample
4/5/95
TFOXR29
16:50

DEPTH	LEFT 25.0	CENTER 28.0	RIGHT 25.0
0.2	T pH COND D.O.	4.1 8.1 402.0 12.7	T pH COND D.O.
0.8	T pH COND D.O.	4.1 8.2 405.0 12.4	T pH COND D.O.

DATE
sample

4/12/95 TFOXR30 14:30		LEFT 21.0		CENTER 25.0		RIGHT 25.0	
DEPTH							
0.2	T	5.5	T	5.5	T	5.5	5.5
	pH	8.5	pH	8.5	pH	8.3	8.3
	COND	420.0	COND	420.0	COND	416.0	416.0
	D.O.	13.2	D.O.	13.2	D.O.	13.0	13.0
0.8	T	5.5	T	5.5	T	5.5	5.5
	pH	8.4	pH	8.4	pH	8.3	8.3
	COND	420.0	COND	420.0	COND	420.0	420.0
	D.O.	13.0	D.O.	13.0	D.O.	12.0	12.0

DATE
sample

4/20/95 TFOXR31 16:25		LEFT		CENTER		RIGHT	
DEPTH							
0.2	T	8.4	T	8.3	T	8.3	8.3
	pH	8.4	pH	8.5	pH	8.4	8.4
	COND	436.0	COND	430.0	COND	431.0	431.0
	D.O.	11.4	D.O.	12.4	D.O.	11.9	11.9
0.8	T	8.4	T	8.2	T	8.2	8.2
	pH	8.4	pH	8.4	pH	8.4	8.4
	COND	434.0	COND	438.0	COND	431.0	431.0
	D.O.	11.8	D.O.	13.1	D.O.	11.4	11.4

DATE
sample

5/4/95 TFOXR32 17:10		LEFT 20.0		CENTER 27.0		RIGHT 27.0	
DEPTH							
0.2	T	11.7	T	11.7	T	12.0	12.0
	pH	8.5	pH	8.4	pH	8.6	8.6
	COND	376.0	COND	377.0	COND	377.0	377.0
	D.O.	10.6	D.O.	10.5	D.O.	10.5	10.5
0.8	T	11.7	T	11.7	T	11.8	11.8
	pH	8.6	pH	8.5	pH	8.5	8.5
	COND	377.0	COND	377.0	COND	377.0	377.0
	D.O.	10.6	D.O.	10.5	D.O.	10.5	10.5

DATE
sample

5/9/95 TFOXR33 16:50		LEFT 23.0		CENTER 26.0		RIGHT 28.0	
DEPTH							
0.2	T	13.0	T	13.0	T	12.9	12.9
	pH	8.4	pH	8.5	pH	8.4	8.4
	COND	389.0	COND	393.0	COND	390.0	390.0
	D.O.	9.0	D.O.	9.6	D.O.	9.5	9.5
0.8	T	12.9	T	12.8	T	12.7	12.7
	pH	8.4	pH	8.4	pH	8.4	8.4
	COND	391.0	COND	393.0	COND	394.0	394.0
	D.O.	9.4	D.O.	9.4	D.O.	9.4	9.4

DATE
sample

5/18/95 TFOXR34 13:45		LEFT 20.0		CENTER 25.0		RIGHT 27.0	
DEPTH							
0.2	T	16.5	T	16.5	T	16.9	16.9
	pH	8.2	pH	8.1	pH	8.1	8.1
	COND	418.0	COND	417.0	COND	419.0	419.0
	D.O.	8.6	D.O.	9.0	D.O.	8.8	8.8
0.8	T	16.5	T	16.5	T	16.5	16.5
	pH	8.2	pH	8.0	pH	8.1	8.1
	COND	419.0	COND	417.0	COND	416.0	416.0
	D.O.	8.6	D.O.	8.7	D.O.	8.7	8.7

DATE
sample

5/25/95 TFOXR35 14:20		LEFT 22.0		CENTER 26.0		RIGHT 26.0	
DEPTH							
0.2	T	17.4	T	17.5	T	17.4	17.4
	pH	8.2	pH	8.1	pH	8.0	8.0
	COND	410.0	COND	409.0	COND	409.0	409.0
	D.O.	9.7	D.O.	9.6	D.O.	9.6	9.6
0.8	T	17.3	T	17.3	T	17.3	17.3
	pH	8.2	pH	8.1	pH	8.0	8.0
	COND	409.0	COND	409.0	COND	409.0	409.0
	D.O.	9.5	D.O.	9.3	D.O.	9.5	9.5

DATE
sample

6/6/95
TFOXR36
17:15

DEPTH	LEFT 21.0	CENTER 27.0	RIGHT 27.0
0.2	T 23.6	T 23.5	T 23.7
	pH 8.2	pH 8.1	pH 8.1
	COND 390.0	COND 389.0	COND 391.0
	D.O. 7.9	D.O. 7.9	D.O. 8.0
0.8	T 23.5	T 23.5	T 23.6
	pH 8.1	pH 8.1	pH 8.1
	COND 391.0	COND 391.0	COND 391.0
	D.O. 8.1	D.O. 7.9	D.O. 7.9

DATE
sample

6/13/95
TFOXR37
16:15

DEPTH	LEFT 20.0	CENTER 25.0	RIGHT 25.0
0.2	T 20.8	T 20.7	T 21.2
	pH 8.3	pH 8.2	pH 8.2
	COND 385.0	COND 386.0	COND 387.0
	D.O. 9.8	D.O. 9.8	D.O. 9.8
0.8	T 20.4	T 20.3	T 20.4
	pH 8.2	pH 8.1	pH 8.1
	COND 385.0	COND 384.0	COND 384.0
	D.O. 9.2	D.O. 9.1	D.O. 9.0

DATE
sample

8/16/95
TFOXR38
14:30

DEPTH	LEFT 22.0	CENTER 25.0	RIGHT 25.0
0.2	T 25.3	T 25.3	T 25.4
	pH 7.5	pH 7.6	pH 7.6
	COND 384.0	COND 383.0	COND 385.0
	D.O. 5.4	D.O. 5.3	D.O. 5.1
0.8	T 25.3	T 25.2	T 25.3
	pH 7.5	pH 7.6	pH 7.6
	COND 387.0	COND 382.0	COND 382.0
	D.O. 5.2	D.O. 5.2	D.O. 5.1

DATE
sample

8/21/95
TFOXR39
17:00

DEPTH	LEFT 22.0	CENTER 27.0	RIGHT 20.0
0.2	T 25.4	T 25.5	T 25.9
	pH 8.6	pH 8.6	pH 8.7
	COND 347.0	COND 347.0	COND 350.0
	D.O. 7.9	D.O. 8.4	D.O. 8.9
0.8	T 25.3	T 25.3	T 25.4
	pH 8.6	pH 8.6	pH 8.6
	COND 348.0	COND 347.0	COND 348.0
	D.O. 7.6	D.O. 7.9	D.O. 8.2

DATE
sample

8/30/95
TFOXR40R1
17:00

DEPTH	LEFT 22.0	CENTER 27.0	RIGHT 20.0
0.2	T 24.2	T 24.2	T 24.5
	pH 8.5	pH 8.5	pH 8.5
	COND 344.0	COND 343.0	COND 341.0
	D.O. 8.0	D.O. 8.2	D.O. 8.5
0.8	T 24.1	T 24.2	T 24.4
	pH 8.5	pH 8.5	pH 8.5
	COND 343.0	COND 343.0	COND 342.0
	D.O. 7.9	D.O. 8.0	D.O. 8.3

DATE
sample

8/30/95
TFOXR41R2
17:01

DEPTH	LEFT 20.0	CENTER 27.0	RIGHT 20.0
0.2	T 24.3	T 24.4	T 24.5
	pH 8.6	pH 8.6	pH 8.6
	COND 345.0	COND 345.0	COND 343.0
	D.O. 8.2	D.O. 8.5	D.O. 8.5
0.8	T 24.3	T 24.3	T 24.5
	pH 8.5	pH 8.5	pH 8.5
	COND 345.0	COND 344.0	COND 344.0
	D.O. 8.0	D.O. 8.3	D.O. 8.3

DATE		10/12/95			
sample		TFOXR42			
		15:10			
DEPTH		LEFT 22.0		CENTER 25.0	RIGHT 15.0
0.2	T	15.0	T	14.9	T
	pH	8.4	pH	8.5	pH
	COND	364.0	COND	365.0	COND
	D.O.	9.7	D.O.	9.5	D.O.
0.8	T	14.9	T	14.9	T
	pH	8.4	pH	8.5	pH
	COND	366.0	COND	365.0	COND
	D.O.	9.8	D.O.	9.4	D.O.

Appendix 2.3. SITE SHEBOYGAN RIVER, WISCONSIN

DATE
sample 4/6/94
TSHEBC01
19:00

DEPTH	LEFT 7.0	CENTER 11.0	RIGHT 13.0
0.2	T 4.6	T 4.6	T 4.7
	pH 8.5	pH 8.5	pH 8.5
	COND 590.0	COND 589.0	COND 590.0
	D.O. 12.8	D.O. 12.8	D.O. 12.8
0.8	T 4.6	T 4.6	T 4.7
	pH 8.5	pH 8.5	pH 8.5
	COND 590.0	COND 590.0	COND 592.0
	D.O. 12.8	D.O. 12.8	D.O. 12.8

DATE
sample 4/20/94
TSHEBC03
14:00

DEPTH	LEFT 6.0	CENTER 12.0	RIGHT 14.0
0.2	T 12.9	T 12.9	T 12.7
	pH 8.5	pH 8.6	pH 8.6
	COND 600.0	COND 597.0	COND 604.0
	D.O. 11.8	D.O. 11.8	D.O. 11.3
0.8	T 12.7	T 12.7	T 12.7
	pH 8.5	pH 8.6	pH 8.6
	COND 605.0	COND 608.0	COND 607.0
	D.O. 11.1	D.O. 11.0	D.O. 11.1

DATE
sample 5/5/94
TSHEBC05
18:45

DEPTH	LEFT 9.0	CENTER 7.0	RIGHT 13.0
0.2	T 13.9	T 14.2	T 14.3
	pH 8.5	pH 8.5	pH 8.5
	COND 605.0	COND 601.0	COND 605.0
	D.O. 9.0	D.O. 9.2	D.O. 9.2
0.8	T 13.6	T 14.1	T 13.7
	pH 8.5	pH 8.5	pH 8.6
	COND 608.0	COND 602.0	COND 607.0
	D.O. 8.5	D.O. 9.1	D.O. 8.4

DATE
sample 4/14/94
TSHEBC02
18:10

DEPTH	LEFT 6.0	CENTER 11.0	RIGHT 13.0
0.2	T 8.5	T 8.1	T 8.2
	pH 8.3	pH 8.2	pH 8.1
	COND 626.0	COND 626.0	COND 622.0
	D.O. 11.6	D.O. 11.5	D.O. 11.4
0.8	T 7.7	T 7.7	T 7.9
	pH 8.3	pH 8.3	pH 8.1
	COND 627.0	COND 627.0	COND 625.0
	D.O. 11.2	D.O. 11.2	D.O. 11.2

DATE
sample 5/5/94
TSHEBC04
16:35

DEPTH	LEFT 7.0	CENTER 11.0	RIGHT 13.0
0.2	T 14.0	T 14.0	T 13.9
	pH 8.4	pH 8.4	pH 8.2
	COND 601.0	COND 599.0	COND 602.0
	D.O. 9.4	D.O. 9.3	D.O. 9.3
0.8	T 13.8	T 13.9	T 13.9
	pH 8.4	pH 8.4	pH 8.3
	COND 604.0	COND 600.0	COND 604.0
	D.O. 8.6	D.O. 8.8	D.O. 9.1

DATE
sample 5/25/94
TSHEBC06
18:50

DEPTH	LEFT 8.0	CENTER 10.0	RIGHT 13.0
0.2	T 18.8	T 18.2	T 19.0
	pH 8.4	pH 8.3	pH 8.1
	COND 410.0	COND 546.0	COND 560.0
	D.O. 7.8	D.O. 7.1	D.O. 7.7
0.8	T 17.3	T 10.2	T 8.5
	pH 8.4	pH 8.2	pH 8.1
	COND 524.0	COND 361.0	COND 326.0
	D.O. 7.5	D.O. 10.6	D.O. 11.3

DATE sample		6/15/94 TSHEBC07 13:40			
DEPTH		LEFT 9.0	CENTER 12.0		RIGHT 13.0
0.2	T	19.2	T	19.6	T
	pH	8.4	pH	8.2	pH
	COND	525.0	COND	545.0	COND
	D.O.	8.1	D.O.	7.8	D.O.
0.8	T	14.7	T	15.3	T
	pH	8.3	pH	8.2	pH
	COND	406.0	COND	426.0	COND
	D.O.	8.5	D.O.	7.8	D.O.

DATE sample		8/17/94 TSHEBC09 20:10			
DEPTH 0.2	LEFT 8.0	CENTER 13.0		RIGHT 13.0	
	T	19.6	T	20.3	T
	pH	8.3	pH	8.3	pH
	COND	471.0	COND	506.0	COND
	D.O.	9.1	D.O.	9.6	D.O.
0.8	T	17.3	T	14.6	T
	pH	8.2	pH	8.2	pH
	COND	365.0	COND	320.0	COND
	D.O.	7.4	D.O.	7.8	D.O.

DATE sample		9/29/94 TSHEBC11 16:40		
DEPTH		LEFT 9.0	CENTER 11.0	RIGHT 13.0
0.2	T	16.0	T	16.4
	pH	8.7	pH	8.3
	COND	595.0	COND	583.0
	D.O.	9.0	D.O.	9.1
0.8	T	15.6	T	15.6
	pH	8.2	pH	8.2
	COND	597.0	COND	597.0
	D.O.	8.4	D.O.	8.2

DATE		7/13/94		
sample		TSHEBC08		
		16:30		
DEPTH		LEFT 13.0	CENTER 10.0	RIGHT 7.0
0.2	T	18.3	T	18.5
	pH	8.3	pH	8.5
	COND	470.0	COND	467.0
	D.O.	11.1	D.O.	11.5
0.8	T	16.0	T	15.8
	pH	8.4	pH	8.5
	COND	428.0	COND	414.0
	D.O.	10.6	D.O.	10.8

DATE sample		9/10/94 TSHEBC10 21:10			
DEPTH		LEFT 9.0	CENTER 12.0		RIGHT 14.0
0.2	T	20.2	T	20.4	T
	pH	8.4	pH	8.4	pH
	COND	462.0	COND	463.0	COND
	D.O.	10.7	D.O.	11.1	D.O.
0.8	T	18.7	T	18.5	T
	pH	8.4	pH	8.4	pH
	COND	452.0	COND	451.0	COND
	D.O.	9.5	D.O.	9.1	D.O.

DATE sample		10/19/94 TSHEBC12 13:20			
DEPTH		LEFT 9.0	CENTER 10.0		RIGHT 13.0
0.2	T	14.3	T	14.3	T
	pH	8.6	pH	8.4	pH
	COND	650.0	COND	646.0	COND
	D.O.	11.5	D.O.	11.5	D.O.
0.8	T	14.2	T	14.0	T
	pH	8.5	pH	8.4	pH
	COND	637.0	COND	632.0	COND
	D.O.	10.9	D.O.	10.8	D.O.

DATE sample	11/2/94 TSHEBC13 17:22		D.O. SUSPECT - EXCEEDS SATURATION VALUE			
	DEPTH	LEFT 7.0	CENTER 12.0	RIGHT 13.0		
0.2	T	8.3	T	8.2	T	8.2
	pH	8.6	pH	8.4	pH	8.8
	COND	632.0	COND	600.0	COND	644.0
	D.O.	14.5	D.O.	14.3	D.O.	14.1
0.8	T	8.3	T	8.3	T	8.2
	pH	8.6	pH	8.5	pH	8.5
	COND	642.0	COND	635.0	COND	647.0
	D.O.	14.5	D.O.	14.4	D.O.	14.2

DATE sample	11/28/94 TSHEBC15 18:35					
	DEPTH	LEFT 6.0	CENTER 14.0	RIGHT 14.0		
0.2	T	1.1	T	1.1	T	1.1
	pH	8.4	pH	8.4	pH	8.4
	COND	646.0	COND	650.0	COND	650.0
	D.O.	14.1	D.O.	14.2	D.O.	14.0
0.8	T	1.1	T	1.1	T	1.1
	pH	8.4	pH	8.4	pH	8.4
	COND	647.0	COND	650.0	COND	650.0
	D.O.	14.1	D.O.	14.0	D.O.	13.8

DATE sample	1/12/95 TSHEBC17 15:47					
	DEPTH	LEFT 9.0	CENTER 12.0	RIGHT 16.0		
0.2	T	0.2	T	0.2	T	0.3
	pH	8.3	pH	8.2	pH	8.2
	COND	411.0	COND	407.0	COND	412.0
	D.O.	13.1	D.O.	12.7	D.O.	13.5
0.8	T	0.2	T	0.3	T	0.5
	pH	8.1	pH	8.0	pH	8.0
	COND	723.0	COND	876.0	COND	891.0
	D.O.	12.5	D.O.	11.5	D.O.	11.4

DATE sample	11/16/94 TSHEBC14 20:40					
	DEPTH	LEFT 7.0	CENTER 11.0	RIGHT 12.0		
0.2	T	7.9	T	7.8	T	7.8
	pH	8.2	pH	8.3	pH	8.4
	COND	577.0	COND	475.0	COND	482.0
	D.O.	11.7	D.O.	11.4	D.O.	11.3
0.8	T	7.9	T	7.8	T	7.8
	pH	8.2	pH	8.2	pH	8.4
	COND	579.0	COND	583.0	COND	658.0
	D.O.	11.7	D.O.	11.6	D.O.	11.6

DATE sample	12/21/94 TSHEBC16 15:30					
	DEPTH	LEFT 9.0	CENTER 12.0	RIGHT 14.0		
0.2	T	1.4	T	1.1	T	0.7
	pH	8.4	pH	8.5	pH	8.5
	COND	429.0	COND	456.0	COND	501.0
	D.O.	13.5	D.O.	13.0	D.O.	13.6
0.8	T	0.6	T	0.4	T	0.3
	pH	8.4	pH	8.5	pH	8.5
	COND	687.0	COND	754.0	COND	753.0
	D.O.	14.3	D.O.	15.0	D.O.	14.1

DATE sample	2/16/95 TSHEBC18R1 15:15		HOVERCRAFT STARTER FAILED			
	DEPTH	LEFT *	CENTER *	RIGHT 13.0		
0.2	T	*	T	*	T	0.5
	pH	*	pH	*	pH	8.2
	COND	*	COND	*	COND	518.0
	D.O.	*	D.O.	*	D.O.	13.6
0.8	T	*	T	*	T	0.4
	pH	*	pH	*	pH	8.1
	COND	*	COND	*	COND	864.0
	D.O.	*	D.O.	*	D.O.	12.8

DATE sample		2/16/95 TSHEBC19R2		HOVERCRAFT STARTER FAILED				
		*						
DEPTH		LEFT *		CENTER *		RIGHT *		
0.2	T	*		T	*	T	*	
	pH	*		pH	*	pH	*	
	COND	*		COND	*	COND	*	
	D.O.	*		D.O.	*	D.O.	*	
0.8	T	*		T	*	T	*	
	pH	*		pH	*	pH	*	
	COND	*		COND	*	COND	*	
	D.O.	*		D.O.	*	D.O.	*	

DATE sample		3/9/95 TSHEBC20	HYDROLAB PARTIAL MALFUNCTION			
		18:15				
DEPTH		LEFT 8.0		CENTER 10.0		RIGHT 14.0
0.2	T		0.8	T	0.8	T
	pH		*	pH	*	pH
	COND		444.0	COND	446.0	COND
	D.O.		13.4	D.O.	13.6	D.O.
0.8	T		0.7	T	0.6	T
	pH		*	pH	*	pH
	COND		495.0	COND	*	COND
	D.O.		12.4	D.O.	12.9	D.O.
						13.2

DATE		3/12/95					
sample		TSHEBC21					
		20:30					
DEPTH		LEFT 9.0		CENTER 6.0		RIGHT 12.0	
0.2	T	0.4	T	0.4	T	0.3	
	pH	7.8	pH	7.6	pH	7.1	
	COND	568.0	COND	560.0	COND	563.0	
	D.O.	13.5	D.O.	13.6	D.O.	13.9	
0.8	T	0.4	T	0.3	T	0.4	
	pH	7.7	pH	7.5	pH	6.6	
	COND	574.0	COND	565.0	COND	567.0	
	D.O.	13.5	D.O.	13.5	D.O.	14.6	

DATE sample		3/14/95 TSHEBC22		17:30	
DEPTH		LEFT 10.0		CENTER 12.0	RIGHT 14.0
0.2	T		0.5	T	0.4
	pH		8.0	pH	8.0
	COND		422.0	COND	417.0
	D.O.		12.4	D.O.	12.5
0.8	T		0.5	T	0.4
	pH		8.0	pH	7.9
	COND		423.0	COND	417.0
	D.O.		12.4	D.O.	12.5

DATE sample		3/18/95 TSHEBC23		D.O. SUSPECT - EXCEEDS SATURATION			
		16:40					
DEPTH		LEFT 10.0	CENTER 12.0	RIGHT 14.0			
0.2	T	3.5	T	3.5	T		3.4
	pH	8.3	pH	8.2	pH		8.0
	COND	513.0	COND	512.0	COND		512.0
	D.O.	15.1	D.O.	15.1	D.O.		15.5
0.8	T	3.4	T	3.4	T		3.4
	pH	8.3	pH	8.2	pH		8.1
	COND	513.0	COND	510.0	COND		509.0
	D.O.	15.1	D.O.	15.0	D.O.		15.2

DATE sample		3/21/95 TSHEBC24		17:20	
DEPTH		LEFT 7.0	CENTER 12.0		RIGHT 14.0
0.2	T	3.6	T	3.6	T
	pH	7.9	pH	8.0	pH
	COND	582.0	COND	582.0	COND
	D.O.	12.3	D.O.	11.8	D.O.
0.8	T	3.6	T	3.6	T
	pH	7.9	pH	8.0	pH
	COND	586.0	COND	583.0	COND
	D.O.	12.6	D.O.	11.8	D.O.

DATE sample	3/22/95 TSHEBC25 19:35	LEFT 8.0	CENTER 12.0	RIGHT 14.0
DEPTH				
0.2	T	4.6	4.7	4.6
	pH	8.2	8.2	8.2
	COND	592.0	592.0	590.0
	D.O.	11.8	11.9	11.9
0.8	T	4.6	4.5	4.6
	pH	8.2	8.2	8.1
	COND	593.0	591.0	593.0
	D.O.	11.8	11.8	11.9

DATE sample	3/30/95 TSHEBC27 20:10	LEFT 7.0	CENTER 7.0	RIGHT 12.0
DEPTH				
0.2	T	4.2	4.2	4.3
	pH	8.0	8.4	8.4
	COND	611.0	611.0	608.0
	D.O.	12.7	12.7	12.7
0.8	T	4.2	4.2	4.3
	pH	8.3	8.3	8.4
	COND	612.0	610.0	607.0
	D.O.	12.3	12.3	12.4

DATE sample	4/13/95 TSHEBC29 16:05	LEFT 7.0	CENTER 10.0	RIGHT 12.0
DEPTH				
0.2	T	6.1	6.1	6.2
	pH	8.2	8.2	8.6
	COND	587.0	580.0	585.0
	D.O.	11.2	11.2	11.2
0.8	T	6.1	6.1	6.1
	pH	8.2	8.2	8.4
	COND	582.0	582.0	584.0
	D.O.	10.9	10.9	11.1

DATE sample	3/27/95 TSHEBC26 18:40	LEFT 7.0	CENTER 8.0	RIGHT *
DEPTH				
0.2	T	4.7	4.7	T
	pH	8.3	8.4	pH
	COND	581.0	581.0	COND
	D.O.	12.5	12.4	D.O.
0.8	T	4.7	4.7	T
	pH	8.4	8.4	pH
	COND	581.0	580.0	COND
	D.O.	12.0	12.4	D.O.

DATE sample	4/6/95 TSHEBC28 13:35	LEFT 7.0	CENTER 7.0	RIGHT 12.0
DEPTH				
0.2	T	3.2	3.1	T
	pH	8.3	8.5	pH
	COND	645.0	646.0	646.0
	D.O.	13.3	13.3	13.3
0.8	T	3.3	3.1	T
	pH	8.3	8.5	pH
	COND	646.0	645.0	645.0
	D.O.	13.2	13.2	13.2

DATE sample	4/19/95 TSHEBC30 13:25	LEFT 7.0	CENTER 10.0	RIGHT 12.0
DEPTH				
0.2	T	8.0	8.0	T
	pH	8.1	8.2	pH
	COND	497.0	508.0	505.0
	D.O.	10.4	10.4	10.4
0.8	T	8.0	8.1	T
	pH	8.1	8.2	pH
	COND	505.0	509.0	504.0
	D.O.	10.2	10.2	10.1

HYDROLAB BROKEN AT RIGHT SECTION

DATE sample		5/10/95 TSHEBC32 14:00			
DEPTH		LEFT 7.0	CENTER 9.0		RIGHT 12.0
0.2	T	12.8	T	12.8	T
	pH	8.4	pH	8.4	pH
	COND	627.0	COND	626.0	COND
	D.O.	10.4	D.O.	10.6	D.O.
0.8	T	12.8	T	12.9	T
	pH	8.5	pH	8.5	pH
	COND	627.0	COND	628.0	COND
	D.O.	10.3	D.O.	10.4	D.O.

DATE		5/17/95		
sample		TSHEBC34		
		16:20		
DEPTH		LEFT 7.0	CENTER 10.0	RIGHT 12.0
0.2	T	18.4	T	18.4
	pH	8.4	pH	8.4
	COND	640.0	COND	640.0
	D.O.	8.4	D.O.	8.4
0.8	T	17.9	T	17.7
	pH	8.4	pH	8.4
	COND	631.0	COND	624.0
	D.O.	7.6	D.O.	7.5

DATE sample		8/17/95 TSHEBC36 13:30		
DEPTH		LEFT 7.0	CENTER 10.0	RIGHT 24.5
0.2	T	24.6	T	24.6
	pH	8.4	pH	8.4
	COND	488.0	COND	488.0
	D.O.	6.4	D.O.	6.3
0.8	T	24.0	T	23.1
	pH	8.2	pH	7.9
	COND	464.0	COND	425.0
	D.O.	4.9	D.O.	4.6

DATE sample		4/27/95 TSHEBC31 17:45			
DEPTH		LEFT 12.0	CENTER 14.0		RIGHT 9.0
0.2	T	9.0	T	8.8	T
	pH	7.7	pH	7.9	pH
	COND	577.0	COND	577.0	COND
	D.O.	10.4	D.O.	10.2	D.O.
0.8	T	8.9	T	8.8	T
	pH	7.8	pH	7.9	pH
	COND	578.0	COND	578.0	COND
	D.O.	10.1	D.O.	9.8	D.O.

DATE sample		5/12/95 TSHEBC33 15:20			
DEPTH		LEFT 7.0	CENTER 10.0		RIGHT 12.0
0.2	T	13.8	T	13.6	T
	pH	8.3	pH	8.2	pH
	COND	642.0	COND	641.0	COND
	D.O.	9.0	D.O.	9.7	D.O.
0.8	T	13.2	T	13.1	T
	pH	8.3	pH	8.2	pH
	COND	643.0	COND	641.0	COND
	D.O.	8.7	D.O.	9.1	D.O.

DATE sample		6/1/95 TSHEBC35 16:30			
DEPTH		LEFT 7.0	CENTER 10.0		RIGHT 12.0
0.2	T	20.2	T	19.7	T
	pH	8.5	pH	8.4	pH
	COND	592.0	COND	596.0	COND
	D.O.	11.0	D.O.	9.3	D.O.
0.8	T	19.7	T	18.1	T
	pH	8.5	pH	8.3	pH
	COND	592.0	COND	557.0	COND
	D.O.	9.7	D.O.	8.3	D.O.
				8.3	7.9

DATE 9/19/95
sample TSHEBC37R1
16:25

DEPTH	LEFT 7.0		CENTER 10.0		RIGHT 12.0	
0.2	T	17.1	T	17.2	T	17.0
	pH	8.2	pH	8.2	pH	8.0
	COND	462.0	COND	481.0	COND	458.0
	D.O.	5.5	D.O.	6.7	D.O.	5.9
0.8	T	17.0	T	17.2	T	16.8
	pH	8.1	pH	8.2	pH	8.0
	COND	462.0	COND	479.0	COND	436.0
	D.O.	5.1	D.O.	5.7	D.O.	5.2

DATE 9/19/95
sample TSHEBC38R2
18:40

DEPTH	LEFT 7.0		CENTER 10.0		RIGHT 12.0	
0.2	T	17.1	T	17.2	T	17.0
	pH	8.2	pH	8.2	pH	8.2
	COND	466.0	COND	477.0	COND	463.0
	D.O.	6.0	D.O.	5.9	D.O.	6.0
0.8	T	17.1	T	17.1	T	17.0
	pH	8.1	pH	8.1	pH	8.1
	COND	466.0	COND	465.0	COND	460.0
	D.O.	5.8	D.O.	5.4	D.O.	6.0

DATE 10/24/95
sample TSHEBC39R1
17:30

DEPTH	LEFT 7.0		CENTER 10.0		RIGHT 12.0	
0.2	T	9.6	T	9.7	T	9.8
	pH	8.3	pH	8.4	pH	8.4
	COND	679.0	COND	686.0	COND	682.0
	D.O.	10.5	D.O.	10.8	D.O.	10.9
0.8	T	9.6	T	9.7	T	9.8
	pH	8.3	pH	8.4	pH	8.4
	COND	683.0	COND	686.0	COND	684.0
	D.O.	10.4	D.O.	10.9	D.O.	10.9

DATE 10/24/95
sample TSHEBC40R2
20:15

DEPTH	LEFT 7.0		CENTER 10.0		RIGHT 12.0	
0.2	T	9.7	T	9.6	T	9.6
	pH	8.4	pH	8.4	pH	8.4
	COND	686.0	COND	681.0	COND	681.0
	D.O.	11.0	D.O.	11.1	D.O.	11.2
0.8	T	9.7	T	9.6	T	9.6
	pH	8.4	pH	8.4	pH	8.4
	COND	686.0	COND	683.0	COND	683.0
	D.O.	10.8	D.O.	11.0	D.O.	11.0

Appendix 2.4. SITE MILWAUKEE RIVER, WISCONSIN

DATE sample	3/29/94 TMILWD01 17:30	LEFT 31.0	CENTER 32.0	RIGHT 30.0
0.2	T	6.0	T	6.4
	pH	8.1	pH	8.1
	COND	646.0	COND	642.0
	D.O.	11.6	D.O.	12.0
0.8	T	5.9	T	6.0
	pH	8.1	pH	8.0
	COND	660.0	COND	651.0
	D.O.	11.5	D.O.	11.7

DATE sample	4/19/94 TMILWD03 18:00	LEFT 30.0	CENTER 30.0	RIGHT 30.0
0.2	T	12.0	T	12.5
	pH	8.4	pH	8.4
	COND	713.0	COND	740.0
	D.O.	8.5	D.O.	8.3
0.8	T	11.1	T	10.4
	pH	8.2	pH	8.1
	COND	724.0	COND	707.0
	D.O.	8.5	D.O.	8.6

DATE sample	6/14/94 TMILWD05 17:05	LEFT 30.0	CENTER 31.0	RIGHT 30.0
0.2	T	15.5	T	15.8
	pH	7.9	pH	7.8
	COND	442.0	COND	451.0
	D.O.	6.7	D.O.	6.8
0.8	T	12.4	T	11.5
	pH	7.9	pH	7.9
	COND	359.0	COND	352.0
	D.O.	9.1	D.O.	9.8

DATE sample	4/8/94 TMILWD02 15:50	LEFT 31.0	CENTER 32.0	RIGHT 30.0
0.2	T	8.1	T	8.1
	pH	8.4	pH	8.4
	COND	699.0	COND	701.0
	D.O.	10.7	D.O.	10.9
0.8	T	8.0	T	8.1
	pH	8.4	pH	8.4
	COND	713.0	COND	707.0
	D.O.	10.2	D.O.	10.7

DATE sample	5/24/94 TMILWD04 17:15	LEFT 32.0	CENTER 32.0	RIGHT 31.0
0.2	T	13.8	T	13.7
	pH	8.1	pH	8.1
	COND	460.0	COND	460.0
	D.O.	8.5	D.O.	8.8
0.8	T	11.5	T	10.6
	pH	8.1	pH	8.0
	COND	396.0	COND	379.0
	D.O.	8.1	D.O.	10.6

DATE sample	7/8/94 TMILWD06 17:45	LEFT 31.0	CENTER 31.0	RIGHT 30.0
0.2	T	22.2	T	22.2
	pH	8.0	pH	7.9
	COND	375.0	COND	368.0
	D.O.	5.5	D.O.	5.7
0.8	T	12.7	T	12.7
	pH	7.9	pH	7.9
	COND	298.0	COND	300.0
	D.O.	9.8	D.O.	9.6

DATE
sample 8/18/94
TMILWD07
14:00

DEPTH	LEFT 31.0	CENTER 32.0	RIGHT 31.0
0.2	T 21.5	T 21.0	T 21.2
	pH 7.8	pH 7.6	pH 7.3
	COND 475.0	COND 453.0	COND 459.0
	D.O. 4.6	D.O. 4.6	D.O. 4.8
0.8	T 17.9	T 17.2	T 17.8
	pH 7.7	pH 7.7	pH 7.3
	COND 369.0	COND 338.0	COND 372.0
	D.O. 7.1	D.O. 7.6	D.O. 6.8

DATE
sample 9/15/94
TMILWD09
15:05

DEPTH	LEFT 32.0	CENTER 32.0	RIGHT 31.0
0.2	T 17.1	T 17.5	T 17.6
	pH 8.1	pH 8.0	pH 9.2
	COND 395.0	COND 386.0	COND 396.0
	D.O. 7.9	D.O. 8.1	D.O. 7.7
0.8	T 13.0	T 12.5	T 12.5
	pH 8.1	pH 8.1	pH 8.4
	COND 318.0	COND 307.0	COND 321.0
	D.O. 9.7	D.O. 9.7	D.O. 9.6

DATE
sample 10/12/94
TMILWD11
14:50

DEPTH	LEFT 31.0	CENTER 31.0	RIGHT 30.0
0.2	T 15.8	T 16.3	T 16.5
	pH 7.9	pH 7.7	pH 7.5
	COND 477.0	COND 500.0	COND 502.0
	D.O. 6.4	D.O. 6.1	D.O. 6.1
0.8	T 14.9	T 15.0	T 15.3
	pH 7.8	pH 7.6	pH 7.4
	COND 415.0	COND 430.0	COND 434.0
	D.O. 7.7	D.O. 7.6	D.O. 7.1

DATE
sample 8/26/94
TMILWD08
17:55

DEPTH	LEFT 32.0	CENTER 32.0	RIGHT 28.0
0.2	T 19.2	T 19.9	T 20.3
	pH 7.9	pH 7.8	pH 7.4
	COND 429.0	COND 437.0	COND 443.0
	D.O. 6.0	D.O. 5.8	D.O. 6.0
0.8	T 11.3	T 11.0	T 14.2
	pH 8.0	pH 7.9	pH 7.5
	COND 348.0	COND 346.0	COND 389.0
	D.O. 8.7	D.O. 8.6	D.O. 7.8

DATE
sample 9/27/94
TMILWD10
18:55

DEPTH	LEFT 31.0	CENTER 31.0	RIGHT 30.0
0.2	T 15.8	T 16.4	T 16.7
	pH 8.7	pH 7.9	pH 8.1
	COND 419.0	COND 423.0	COND 436.0
	D.O. 7.6	D.O. 7.6	D.O. 7.2
0.8	T 13.2	T 14.8	T 13.7
	pH 8.3	pH 7.7	pH 8.0
	COND 338.0	COND 373.0	COND 359.0
	D.O. 8.9	D.O. 8.5	D.O. 8.5

DATE
sample 10/18/94
TMILWD12
15:50

DEPTH	LEFT 30.0	CENTER 31.0	RIGHT 30.0
0.2	T 17.0	T 16.7	T 16.6
	pH 7.8	pH 7.9	pH 8.4
	COND 549.0	COND 533.0	COND 529.0
	D.O. 6.5	D.O. 6.8	D.O. 6.5
0.8	T 15.1	T 14.8	T 14.6
	pH 7.7	pH 7.9	pH 7.8
	COND 440.0	COND 417.0	COND 396.0
	D.O. 7.7	D.O. 8.4	D.O. 8.8

DATE sample	11/01/94 TMILWD13 16:40	DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 27.0
0.2		T	10.7	T	10.5
		pH	7.9	pH	8.0
		COND	483.0	COND	472.0
		D.O.	8.6	D.O.	8.8
0.8		T	9.9	T	9.7
		pH	7.9	pH	7.9
		COND	471.0	COND	443.0
		D.O.	10.0	D.O.	10.4

DATE sample	12/1/94 TMILWD15 17:15	DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 30.0
0.2		T	5.2	T	5.1
		pH	8.4	pH	8.1
		COND	514.0	COND	515.0
		D.O.	10.6	D.O.	10.6
0.8		T	5.0	T	5.0
		pH	8.4	pH	8.0
		COND	577.0	COND	572.0
		D.O.	10.4	D.O.	10.5

DATE sample	1/10/95 TMILWD17 19:45	DEPTH	LEFT 29.0	CENTER 29.0	RIGHT 24.0
0.2		T	0.3	T	0.5
		pH	8.3	pH	8.3
		COND	412.0	COND	421.0
		D.O.	13.4	D.O.	13.9
0.8		T	1.4	T	1.0
		pH	8.2	pH	8.1
		COND	732.0	COND	641.0
		D.O.	11.8	D.O.	12.9

DATE sample	11/8/94 TMILWD14 20:05	DEPTH	LEFT 31.0	CENTER 31.0	RIGHT 30.0
0.2		T	11.5	T	11.3
		pH	8.0	pH	7.8
		COND	505.0	COND	493.0
		D.O.	8.3	D.O.	8.3
0.8		T	10.0	T	9.6
		pH	7.9	pH	7.8
		COND	430.0	COND	426.0
		D.O.	9.2	D.O.	9.3

DATE sample	12/20/94 TMILWD16 17:15	DEPTH	LEFT 25.0	CENTER 30.0	RIGHT 25.0
0.2		T	2.5	T	2.7
		pH	8.1	pH	8.0
		COND	476.0	COND	465.0
		D.O.	16.8	D.O.	16.5
0.8		T	3.0	T	3.4
		pH	8.1	pH	8.1
		COND	745.0	COND	769.0
		D.O.	15.6	D.O.	15.3

DATE sample	2/9/95 TMILWD18 17:20	DEPTH	LEFT 32.0	CENTER 32.0	RIGHT 30.0
0.2		T	0.6	T	0.8
		pH	7.5	pH	6.6
		COND	460.0	COND	547.0
		D.O.	13.9	D.O.	13.4
0.8		T	1.8	T	1.5
		pH	7.4	pH	5.6
		COND	742.0	COND	698.0
		D.O.	13.1	D.O.	13.7

DATE sample	3/13/95 TMILWD19	16:20				
DEPTH	LEFT 30.0	CENTER 32.0	RIGHT 29.0			
0.2	T	2.8	T	2.8	T	2.8
	pH	8.1	pH	8.1	pH	8.0
	COND	517.0	COND	592.0	COND	603.0
	D.O.	12.6	D.O.	12.5	D.O.	12.7
0.8	T	4.0	T	3.8	T	3.8
	pH	8.3	pH	8.2	pH	8.2
	COND	1143.0	COND	1149.0	COND	1096.0
	D.O.	12.1	D.O.	11.6	D.O.	12.4

DATE sample	3/23/95 TMILWD21	17:10	HOVERCRAFT STALLED			
DEPTH	LEFT *	CENTER *	RIGHT 30.0			
0.2	T	*	T	*	T	5.4
	pH	*	pH	*	pH	7.8
	COND	*	COND	*	COND	531.0
	D.O.	*	D.O.	*	D.O.	12.5
0.8	T	*	T	*	T	5.8
	pH	*	pH	*	pH	7.9
	COND	*	COND	*	COND	600.0
	D.O.	*	D.O.	*	D.O.	12.2

DATE sample	4/4/95 TMILWD23	16:00	ANCHORS NOT HOLDING IN CENTER			
DEPTH	LEFT 17.0	CENTER *	RIGHT 20.0			
0.2	T	7.7	T	*	T	8.1
	pH	8.3	pH	*	pH	8.3
	COND	833.0	COND	*	COND	843.0
	D.O.	10.2	D.O.	*	D.O.	10.5
0.8	T	7.7	T	*	T	8.1
	pH	8.4	pH	*	pH	8.3
	COND	834.0	COND	*	COND	848.0
	D.O.	9.8	D.O.	*	D.O.	10.1

DATE sample	3/20/95 TMILWD20	19:20	EXTREME WIND AND RAIN			
DEPTH	LEFT	CENTER	RIGHT 32.0			
0.2	T	*	T	*	T	7.6
	pH	*	pH	*	pH	7.8
	COND	*	COND	*	COND	700.0
	D.O.	*	D.O.	*	D.O.	10.4
0.8	T	*	T	*	T	7.5
	pH	*	pH	*	pH	7.9
	COND	*	COND	*	COND	700.0
	D.O.	*	D.O.	*	D.O.	10.0

DATE sample	3/28/95 TMILWD22	17:20				
DEPTH	LEFT 30.0	CENTER 32.0	RIGHT 25.0			
0.2	T	4.6	T	4.8	T	4.2
	pH	8.2	pH	8.2	pH	8.2
	COND	506.0	COND	511.0	COND	501.0
	D.O.	11.4	D.O.	11.2	D.O.	11.3
0.8	T	6.0	T	6.1	T	6.1
	pH	8.2	pH	8.2	pH	8.3
	COND	753.0	COND	785.0	COND	732.0
	D.O.	10.1	D.O.	10.0	D.O.	10.1

DATE sample	4/14/95 TMILWD24	15:05				
DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 30.0			
0.2	T	8.5	T	8.6	T	7.0
	pH	8.3	pH	8.3	pH	8.3
	COND	770.0	COND	765.0	COND	602.0
	D.O.	10.6	D.O.	10.9	D.O.	11.3
0.8	T	8.2	T	8.0	T	7.2
	pH	8.3	pH	8.2	pH	8.3
	COND	786.0	COND	801.0	COND	619.0
	D.O.	10.3	D.O.	9.9	D.O.	11.1

DATE
sample

4/19/95
TMILWD25
19:25

DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 20.0
0.2	T pH COND D.O.	10.0 T 8.2 pH 630.0 COND 9.7 D.O.	10.0 T 8.2 pH 611.0 COND 10.1 D.O.
0.8	T pH COND D.O.	9.8 T 8.2 pH 639.0 COND 9.1 D.O.	10.0 T 8.2 pH 619.0 COND 10.4 D.O.

DATE
sample

4/28/95
TMILWD26
16:00

HYDROLAB pH AND CONDUCTANCE NOT WORKING

DEPTH	LEFT 19.5	CENTER 30.0	RIGHT 22.0
0.2	T pH COND D.O.	10.0 T * pH * COND 8.6 D.O.	10.2 T * pH COND 9.4 D.O.
0.8	T pH COND D.O.	10.0 T * pH * COND 8.3 D.O.	10.2 T * pH COND 9.0 D.O.

DATE
sample

5/3/95
TMILWD27
16:40

DEPTH	LEFT 27.0	CENTER 20.0	RIGHT 30.0
0.2	T pH COND D.O.	12.9 T 7.4 pH 720.0 COND 8.4 D.O.	12.5 T 7.6 pH 712.0 COND 8.8 D.O.
0.8	T pH COND D.O.	10.7 T 7.4 pH 622.0 COND 7.8 D.O.	11.7 T 7.6 pH 705.0 COND 7.9 D.O.

DATE
sample

5/11/95
TMILWD28
15:05

DEPTH	LEFT 17.0	CENTER 30.0	RIGHT 20.0
0.2	T pH COND D.O.	12.6 T 8.0 pH 643.0 COND 7.4 D.O.	12.7 T 8.0 pH 655.0 COND 7.2 D.O.
0.8	T pH COND D.O.	12.3 T 7.9 pH 642.0 COND 6.7 D.O.	12.8 T 7.9 pH 650.0 COND 7.2 D.O.

DATE
sample

5/16/95
TMILWD29R1
15:55

DEPTH	LEFT 15.0	CENTER 31.0	RIGHT 20.0
0.2	T pH COND D.O.	16.9 T 8.0 pH 667.0 COND 6.3 D.O.	16.0 T 8.0 pH 656.0 COND 6.4 D.O.
0.8	T pH COND D.O.	14.5 T 8.0 pH 617.0 COND 5.7 D.O.	15.0 T 7.9 pH 634.0 COND 6.9 D.O.

DATE
sample

5/16/95
TMILWD30R2
17:20

DEPTH	LEFT 15.0	CENTER 30.0	RIGHT 20.0
0.2	T pH COND D.O.	16.8 T 8.1 pH 672.0 COND 7.2 D.O.	15.9 T 8.1 pH 659.0 COND 6.7 D.O.
0.8	T pH COND D.O.	15.1 T 8.0 pH 640.0 COND 6.2 D.O.	14.5 T 7.9 pH 610.0 COND 5.9 D.O.

DATE: 6/9/95
sample TMILWD31
15:20

DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 20.0
0.2	T	17.1 T	17.4 T
	pH	7.6 pH	7.6 pH
	COND	560.0 COND	542.0 COND
	D.O.	7.2 D.O.	5.0 D.O.
0.8	T	13.7 T	13.5 T
	pH	7.7 pH	7.7 pH
	COND	434.0 COND	446.0 COND
	D.O.	8.7 D.O.	8.9 D.O.

DATE: 7/17/95
sample TMILWD32
16:45

DEPTH	LEFT 30.0	CENTER *	RIGHT 20.0
0.2	T	19.1 T	T
	pH	7.4 pH	pH
	COND	406.0 COND	404.0 COND
	D.O.	7.5 D.O.	7.3 D.O.
0.8	T	10.2 T	T
	pH	7.7 pH	pH
	COND	304.0 COND	326.0 COND
	D.O.	10.9 D.O.	10.0 D.O.

BOAT MOTOR STALLED

DATE: 8/3/95
sample TMILWD33
16:00

DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 20.0
0.2	T	17.6 T	18.3 T
	pH	6.9 pH	7.3 pH
	COND	360.0 COND	365.0 COND
	D.O.	8.2 D.O.	7.6 D.O.
0.8	T	13.9 T	13.7 T
	pH	7.5 pH	7.6 pH
	COND	309.0 COND	306.0 COND
	D.O.	10.2 D.O.	10.7 D.O.

DATE: 8/10/95
sample TMILWD34
17:50

DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 20.0
0.2	T	23.5 T	22.4 T
	pH	7.3 pH	7.5 pH
	COND	407.0 COND	390.0 COND
	D.O.	4.8 D.O.	5.1 D.O.
0.8	T	19.7 T	19.5 T
	pH	7.5 pH	7.5 pH
	COND	324.0 COND	331.0 COND
	D.O.	7.6 D.O.	7.8 D.O.

DATE: 8/16/95
sample TMILWD35
20:35

DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 28.0
0.2	T	24.0 T	24.9 T
	pH	7.6 pH	7.6 pH
	COND	441.0 COND	471.0 COND
	D.O.	5.0 D.O.	4.7 D.O.
0.8	T	19.6 T	20.2 T
	pH	7.7 pH	7.7 pH
	COND	333.0 COND	345.0 COND
	D.O.	7.9 D.O.	8.1 D.O.

DATE: 8/17/95
sample TMILWD36
17:45

DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 25.0
0.2	T	24.7 T	24.2 T
	pH	7.7 pH	7.6 pH
	COND	408.0 COND	403.0 COND
	D.O.	5.3 D.O.	5.3 D.O.
0.8	T	21.1 T	21.6 T
	pH	7.7 pH	7.6 pH
	COND	365.0 COND	376.0 COND
	D.O.	7.2 D.O.	7.2 D.O.

DATE 8/28/95
sample TMILWD37R1
19:35

DEPTH	LEFT 15.0	CENTER 30.0	RIGHT 17.0
0.2	T 23.4	T 23.4	T 23.7
	pH 7.5	pH 7.5	pH 7.6
	COND 374.0	COND 383.0	COND 397.0
	D.O. 4.8	D.O. 5.3	D.O. 5.3
0.8	T 23.4	T 22.8	T 23.2
	pH 7.5	pH 7.5	pH 7.5
	COND 383.0	COND 359.0	COND 377.0
	D.O. 5.3	D.O. 5.7	D.O. 5.2

DATE 8/28/95
sample TMILWD38R2
21:30

DEPTH	LEFT 15.0	CENTER 30.0	RIGHT 15.0
0.2	T 23.5	T 23.3	T 23.3
	pH 7.6	pH 7.6	pH 7.5
	COND 394.0	COND 396.0	COND 392.0
	D.O. 5.1	D.O. 5.3	D.O. 5.3
0.8	T 23.2	T 22.9	T 23.2
	pH 7.5	pH 7.5	pH 7.5
	COND 386.0	COND 380.0	COND 391.0
	D.O. 5.2	D.O. 5.5	D.O. 5.1

DATE 8/31/95
sample TMILWD39
16:00

DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 20.0
0.2	T 24.4	T 24.8	T 25.1
	pH 7.5	pH 7.6	pH 7.6
	COND 445.0	COND 458.0	COND 465.0
	D.O. 4.6	D.O. 5.0	D.O. 5.2
0.8	T 17.7	T 17.4	T 22.4
	pH 7.7	pH 7.6	pH 7.5
	COND 310.0	COND 329.0	COND 417.0
	D.O. 7.7	D.O. 7.3	D.O. 4.1

DATE 10/6/95
sample TMILWD40
16:00

DEPTH	LEFT 17.0	CENTER 30.0	RIGHT 20.0
0.2	T 17.0	T 16.9	T 17.1
	pH 7.8	pH 7.9	pH 7.9
	COND 591.0	COND 594.0	COND 615.0
	D.O. 6.3	D.O. 6.5	D.O. 6.5
0.8	T 16.9	T 16.4	T 17.0
	pH 7.8	pH 7.8	pH 7.9
	COND 588.0	COND 570.0	COND 608.0
	D.O. 6.2	D.O. 6.5	D.O. 6.3

Appendix 2.5. SITE INDIANA HARBOR/GRAND CALUMET, INDIANA

DATE sample	8/4/94 TIHCAE01 15:35	LEFT 23.0	CENTER 28.0	RIGHT 16.0
DEPTH				
0.2	T pH COND D.O.	26.4 7.4 470.0 3.3	T pH COND D.O.	26.8 7.5 462.0 3.5
0.8	T pH COND D.O.	26.5 7.3 476.0 3.2	T pH COND D.O.	26.7 7.4 467.0 4.1

DATE sample	10/18/94 TIHCAE03R1 15:45	LEFT 32.0	CENTER 32.0	RIGHT 30.0
DEPTH				
0.2	T pH COND D.O.	21.1 7.5 449.0 4.5	T pH COND D.O.	21.3 7.5 454.0 4.5
0.8	T pH COND D.O.	21.0 7.5 448.0 4.7	T pH COND D.O.	21.1 7.5 449.0 4.6

DATE sample	10/31/94 TIHCAE04 15:10	LEFT 25.0	CENTER 30.0	RIGHT 31.0
DEPTH				
0.2	T pH COND D.O.	17.6 7.6 471.0 5.1	T pH COND D.O.	17.6 7.6 473.0 5.2
0.8	T pH COND D.O.	17.6 7.6 472.0 5.1	T pH COND D.O.	17.6 7.6 472.0 5.2

DATE sample	9/12/94 TIHCAE02 14:20	LEFT 10.0	CENTER 35.5	RIGHT 17.5
DEPTH				
0.2	T pH COND D.O.	25.8 7.5 468.0 4.7	T pH COND D.O.	25.6 7.4 473.0 4.4
0.8	T pH COND D.O.	25.5 7.4 471.0 4.6	T pH COND D.O.	25.3 7.4 466.0 5.2

DATE sample	10/18/94 TIHCAE03R2 17:25	LEFT 32.0	CENTER 32.0	RIGHT 30.0
DEPTH				
0.2	T pH COND D.O.	21.4 7.5 457.0 4.7	T pH COND D.O.	21.4 7.5 458.0 4.6
0.8	T pH COND D.O.	21.2 7.5 452.0 4.4	T pH COND D.O.	21.1 7.5 456.0 4.5

DATE sample	11/29/94 TIHCAE05 14:30	LEFT 14.0	CENTER 27.0	RIGHT 25.0
DEPTH				
0.2	T pH COND D.O.	11.4 7.2 510.0 7.4	T pH COND D.O.	11.4 7.2 513.0 7.2
0.8	T pH COND D.O.	11.4 7.2 510.0 7.2	T pH COND D.O.	11.5 7.0 514.0 7.2

DATE
sample
12/20/94
TIHCAE06
15:20

DEPTH	LEFT 16.0	CENTER 31.0	RIGHT 26.0
0.2	T pH COND D.O.	11.2 T 7.6 pH 580.0 COND 7.4 D.O.	11.2 T 7.5 pH 580.0 COND 7.2 D.O.
0.8	T pH COND D.O.	11.2 T 7.6 pH 581.0 COND 7.3 D.O.	11.1 T 7.6 pH 574.0 COND 7.3 D.O.

DATE
sample
2/13/95
TIHCAE08
17:00

DEPTH	LEFT 10.0	CENTER 29.0	RIGHT 26.0
0.2	T pH COND D.O.	5.5 T 7.8 pH 595.0 COND 9.3 D.O.	5.5 T 7.7 pH 593.0 COND 9.3 D.O.
0.8	T pH COND D.O.	5.5 T 7.8 pH 593.0 COND 8.9 D.O.	5.5 T 7.9 pH 593.0 COND 9.2 D.O.

DATE
sample
4/20/95
TIHCAE10
14:00

DEPTH	LEFT	CENTER	RIGHT
0.2	T pH COND D.O.	14.5 T * pH 569.0 COND * D.O.	14.4 T 7.3 pH 567.0 COND * D.O.
0.8	T pH COND D.O.	14.4 T * pH 572.0 COND * D.O.	14.5 T * pH 571.0 COND * D.O.

*BAD CABLE ON HYDROLAB

DATE
sample
1/18/95
TIHCAE07
15:30

DEPTH	LEFT 23.0	CENTER 30.0	RIGHT 24.0
0.2	T pH COND D.O.	9.1 T 7.6 pH 642.0 COND 10.2 D.O.	9.2 T 7.6 pH 639.0 COND 9.5 D.O.
0.8	T pH COND D.O.	9.1 T 7.6 pH 639.0 COND 9.8 D.O.	9.1 T 7.6 pH 642.0 COND 9.7 D.O.

DATE
sample
3/23/95
TIHCAE09
14:15

DEPTH	LEFT 24.0	CENTER 30.0	RIGHT 27.0
0.2	T pH COND D.O.	12.9 T 7.6 pH 575.0 COND 6.5 D.O.	12.7 T 7.5 pH 574.0 COND 6.4 D.O.
0.8	T pH COND D.O.	12.9 T 7.6 pH 570.0 COND 6.6 D.O.	12.7 T 7.6 pH 569.0 COND 6.4 D.O.

DATE
sample
5/17/95
TIHCAE11
13:00

DEPTH	LEFT 17.0	CENTER 25.0	RIGHT *
0.2	T pH COND D.O.	19.4 T 7.5 pH 590.0 COND * D.O.	19.3 T 7.5 pH 583.0 COND * D.O.
0.8	T pH COND D.O.	19.4 T 7.5 pH 590.0 COND * D.O.	19.3 T 7.5 pH 583.0 COND * D.O.

*D.O. NOT AVAILABLE - NO STIRRER
ON HYDROLAB

DATE sample	6/14/95 TIHCAE12 13:00	*D.O. NOT AVAILABLE - NO STIRRER ON HYDROLAB			
DEPTH	LEFT 14.0	CENTER 23.0	RIGHT 22.0		
0.2	T pH COND D.O.	24.0 T 7.5 pH 535.0 COND * D.O.	23.7 T 7.4 pH 538.0 COND * D.O.	23.7 7.5 540.0 *	
0.8	T pH COND D.O.	23.3 T 7.4 pH 540.0 COND * D.O.	23.1 T 7.4 pH 540.0 COND * D.O.	23.9 7.5 539.0 *	

DATE sample	7/20/95 TIHCAE13 13:00	*HYDROLAB "BROKEN"			
DEPTH	LEFT *	CENTER *	RIGHT *		
0.2	T pH COND D.O.	* T * pH * COND * D.O.	* T * pH * COND * D.O.	* * * *	* * * *
0.8	T pH COND D.O.	* T * pH * COND * D.O.	* T * pH * COND * D.O.	* * * *	* * * *

DATE sample	9/6/95 TIHCAE14 14:30	*D.O. NOT AVAILABLE - NO STIRRER ON HYDROLAB			
DEPTH	LEFT 21.0	CENTER 30.0	RIGHT 24.0		
0.2	T pH COND D.O.	28.4 T 7.3 pH 479.0 COND * D.O.	28.3 T 7.3 pH 479.0 COND * D.O.	28.3 7.3 479.0 *	
0.8	T pH COND D.O.	28.2 T 7.3 pH 476.0 COND * D.O.	28.3 T 7.3 pH 478.0 COND * D.O.	28.2 7.3 475.0 *	

DATE sample	10/18/95 TIHCAE15 14:30	LEFT 29.0	CENTER 31.0	RIGHT 30.0	
0.2	T pH COND D.O.	19.8 T 7.7 pH 480.0 COND 5.9 D.O.	19.7 T 7.7 pH 481.0 COND 5.8 D.O.	19.6 T 7.6 pH 481.0 COND 5.5 D.O.	19.6 7.6 481.0 5.5
0.8	T pH COND D.O.	19.6 T 7.6 pH 484.0 COND 5.3 D.O.	19.5 T 7.6 pH 478.0 COND 5.6 D.O.	19.5 T 7.6 pH 430.0 COND 5.4 D.O.	19.5 7.6 430.0 5.4

Appendix 2.6. SITE ST. JOSEPH RIVER, MICHIGAN

DATE sample	4/6/94 TSTJOF01 17:00	LEFT 18.5	CENTER 24.0	RIGHT 24.0
DEPTH				
0.2	T	8.2	T	8.1
	pH	8.3	pH	8.3
	COND	538.0	COND	532.0
	D.O.	11.9	D.O.	12.0
0.8	T	8.2	T	8.1
	pH	8.4	pH	8.3
	COND	544.0	COND	540.0
	D.O.	11.6	D.O.	11.7

DATE sample	4/25/94 TSTJOF03 16:25	LEFT 24.0	CENTER 24.5	RIGHT 25.8
DEPTH				
0.2	T	15.9	T	15.8
	pH	8.6	pH	8.6
	COND	548.0	COND	545.0
	D.O.	9.9	D.O.	10.1
0.8	T	15.8	T	15.8
	pH	8.6	pH	8.6
	COND	550.0	COND	547.0
	D.O.	9.9	D.O.	9.7

DATE sample	5/20/94 TSTJOF05 14:30	LEFT 22.5	CENTER 23.2	RIGHT 23.3
DEPTH				
0.2	T	16.7	T	16.5
	pH	8.6	pH	8.6
	COND	529.0	COND	523.0
	D.O.	9.9	D.O.	9.5
0.8	T	16.5	T	16.6
	pH	8.6	pH	8.6
	COND	528.0	COND	528.0
	D.O.	9.6	D.O.	9.6

DATE sample	4/13/94 TSTJOF02 13:50	LEFT 24.0	CENTER 27.0	RIGHT 26.0
DEPTH				
0.2	T	9.8	T	9.8
	pH	8.2	pH	8.3
	COND	550.0	COND	545.0
	D.O.	10.2	D.O.	10.8
0.8	T	9.8	T	9.8
	pH	8.2	pH	8.3
	COND	551.0	COND	544.0
	D.O.	*	D.O.	10.2

DATE sample	5/11/94 TSTJOF04 13:35	LEFT 25.0	CENTER 24.0	RIGHT 23.0
DEPTH				
0.2	T	14.8	T	14.8
	pH	8.3	pH	8.4
	COND	515.0	COND	515.0
	D.O.	9.6	D.O.	9.6
0.8	T	14.8	T	14.8
	pH	8.4	pH	8.4
	COND	515.0	COND	517.0
	D.O.	9.6	D.O.	9.5

DATE sample	6/2/94 TSTJOF06 15:00	LEFT 20.0	CENTER 25.0	RIGHT 25.5
DEPTH				
0.2	T	19.5	T	19.5
	pH	8.3	pH	8.3
	COND	544.0	COND	544.0
	D.O.	11.0	D.O.	11.1
0.8	T	19.4	T	19.4
	pH	8.3	pH	8.2
	COND	544.0	COND	538.0
	D.O.	10.6	D.O.	10.4

DATE
sample
6/28/94
TSTJOF07
15:05

DEPTH	LEFT 23.4	CENTER 24.2	RIGHT 24.5
0.2	T 22.1	T 22.0	T 22.0
	pH 8.0	pH 7.9	pH 8.0
	COND 523.0	COND 516.0	COND 520.0
	D.O. 8.3	D.O. 8.2	D.O. 8.2
0.8	T 21.8	T 21.7	T 22.0
	pH 8.0	pH 7.9	pH 8.0
	COND 522.0	COND 505.0	COND 521.0
	D.O. 8.2	D.O. 8.1	D.O. 7.9

DATE
sample
7/6/94
TSTJOF09
15:00

DEPTH	LEFT 20.5	CENTER 23.7	RIGHT 24.0
0.2	T 24.3	T 24.4	T 24.5
	pH 8.3	pH 8.3	pH 8.3
	COND 521.0	COND 520.0	COND 521.0
	D.O. 9.6	D.O. 9.6	D.O. 9.3
0.8	T 24.1	T 24.2	T 24.4
	pH 8.2	pH 8.3	pH 8.3
	COND 518.0	COND 521.0	COND 523.0
	D.O. 9.2	D.O. 9.4	D.O. 9.5

DATE
sample
7/19/94
TSTJOF10R2
16:30

DEPTH	LEFT 19.6	CENTER 23.1	RIGHT 24.0
0.2	T 24.6	T 24.5	T 24.4
	pH 8.5	pH 8.5	pH 8.5
	COND 499.0	COND 498.0	COND 499.0
	D.O. 10.5	D.O. 10.4	D.O. 10.3
0.8	T 24.1	T 23.5	T 23.9
	pH 8.4	pH 8.3	pH 8.4
	COND 493.0	COND 480.0	COND 489.0
	D.O. 9.5	D.O. 8.9	D.O. 9.2

DATE
sample
7/1/94
TSTJOF08
13:45

DEPTH	LEFT 22.0	CENTER 23.5	RIGHT 23.7
0.2	T 22.4	T 22.3	T 22.3
	pH 8.2	pH 8.2	pH 8.2
	COND 492.0	COND 486.0	COND 487.0
	D.O. 9.7	D.O. 9.6	D.O. 9.4
0.8	T 21.3	T 21.6	T 21.9
	pH 8.0	pH 8.1	pH 8.1
	COND 457.0	COND 469.0	COND 478.0
	D.O. 8.4	D.O. 8.8	D.O. 8.9

DATE
sample
7/19/94
TSTJOF10R1
14:10

DEPTH	LEFT 21.0	CENTER 23.3	RIGHT 24.2
0.2	T 24.4	T 24.3	T 24.4
	pH 8.5	pH 8.4	pH 8.4
	COND 499.0	COND 499.0	COND 499.0
	D.O. 10.0	D.O. 10.0	D.O. 10.1
0.8	T 24.1	T *	T 24.2
	pH 8.4	pH 8.3	pH 8.4
	COND 492.0	COND 492.0	COND 492.0
	D.O. 9.6	D.O. 9.0	D.O. 9.6

DATE
sample
8/9/94
TSTJOF11
14:30

DEPTH	LEFT 19.0	CENTER 23.5	RIGHT 23.5
0.2	T 21.1	T 21.1	T 21.1
	pH 8.4	pH 8.4	pH 8.4
	COND 544.0	COND 546.0	COND 543.0
	D.O. 8.5	D.O. 8.3	D.O. 8.2
0.8	T 21.1	T 19.3	T 20.4
	pH 8.4	pH 8.1	pH 8.3
	COND 544.0	COND 504.0	COND 528.0
	D.O. 8.2	D.O. 7.2	D.O. 7.6

DATE sample	8/30/94 TSTJOF12 14:50	LEFT 17.0	CENTER 22.0	RIGHT 23.0
DEPTH				
0.2	T	21.9	T	21.7
	pH	8.4	pH	8.4
	COND	546.0	COND	544.0
	D.O.	10.2	D.O.	10.2
0.8	T	21.8	T	21.3
	pH	8.4	pH	8.3
	COND	546.0	COND	538.0
	D.O.	10.0	D.O.	9.2

DATE sample	10/19/94 TSTJOF14 14:15	LEFT 22.0	CENTER 24.0	RIGHT 24.0
DEPTH				
0.2	T	15.4	T	15.4
	pH	8.1	pH	8.1
	COND	584.0	COND	585.0
	D.O.	8.7	D.O.	8.6
0.8	T	15.4	T	15.4
	pH	8.1	pH	8.1
	COND	586.0	COND	583.0
	D.O.	8.8	D.O.	8.7

DATE sample	11/14/94 TSTJOF16 15:30	LEFT 19.0	CENTER 23.0	RIGHT 25.0
DEPTH				
0.2	T	10.7	T	10.6
	pH	8.0	pH	7.9
	COND	551.0	COND	530.0
	D.O.	10.6	D.O.	10.2
0.8	T	10.7	T	10.7
	pH	8.0	pH	7.9
	COND	554.0	COND	537.0
	D.O.	10.5	D.O.	10.1

DATE sample	9/27/94 TSTJOF13 14:30	LEFT 26.5	CENTER 25.0	RIGHT 24.0
DEPTH				
0.2	T	17.9	T	17.9
	pH	8.0	pH	8.0
	COND	550.0	COND	550.0
	D.O.	8.2	D.O.	8.2
0.8	T	17.8	T	17.5
	pH	8.0	pH	8.0
	COND	545.0	COND	530.0
	D.O.	8.1	D.O.	8.0

DATE sample	11/8/94 TSTJOF15 14:30	LEFT 20.5	CENTER 24.0	RIGHT 23.5
DEPTH				
0.2	T	11.0	T	10.6
	pH	8.0	pH	7.9
	COND	*	COND	468.0
	D.O.	10.8	D.O.	8.8
0.8	T	11.0	T	10.6
	pH	8.0	pH	7.9
	COND	*	COND	477.0
	D.O.	10.8	D.O.	8.9

DATE sample	12/2/94 TSTJOF17 15:15	LEFT 21.0	CENTER 23.0	RIGHT 23.0
DEPTH				
0.2	T	3.4	T	3.4
	pH	8.1	pH	8.0
	COND	519.0	COND	498.0
	D.O.	12.8	D.O.	12.9
0.8	T	3.3	T	3.3
	pH	8.1	pH	8.0
	COND	514.0	COND	502.0
	D.O.	12.7	D.O.	12.9

DATE sample	1/27/95 TSTJOF18 14:30				
DEPTH	LEFT 21.0	CENTER 22.0	RIGHT 22.0		
0.2	T 0.4	T 0.5	T 0.4		
	pH 8.0	pH 8.1	pH 8.0		
	COND 529.0	COND 531.0	COND 517.0		
	D.O. 12.8	D.O. 12.9	D.O. 12.7		
0.8	T 0.4	T 0.3	T 0.4		
	pH 8.0	pH 8.1	pH 8.0		
	COND 534.0	COND 528.0	COND 524.0		
	D.O. 12.9	D.O. 12.9	D.O. 12.9		

DATE sample	3/14/95 TSTJOF20 14:00				
DEPTH	LEFT 19.0	CENTER 25.0	RIGHT 26.0		
0.2	T 7.4	T 7.4	T 7.7		
	pH 7.6	pH 7.6	pH 7.5		
	COND 517.0	COND 516.0	COND 486.0		
	D.O. 10.6	D.O. 10.6	D.O. 10.4		
0.8	T 7.4	T 7.4	T 7.6		
	pH 7.6	pH 7.6	pH 7.5		
	COND 513.0	COND 506.0	COND 482.0		
	D.O. 10.6	D.O. 10.4	D.O. 10.5		

DATE sample	3/22/95 TSTJOF22 14:00				
DEPTH	LEFT 20.0	CENTER 26.0	RIGHT 24.0		
0.2	T 9.4	T 9.4	T 9.2		
	pH 8.3	pH 8.3	pH 8.3		
	COND 555.0	COND 547.0	COND 539.0		
	D.O. 9.6	D.O. 9.6	D.O. 9.6		
0.8	T 9.4	T 9.4	T 9.2		
	pH 8.3	pH 8.3	pH 8.3		
	COND 555.0	COND 551.0	COND 537.0		
	D.O. 9.6	D.O. 9.6	D.O. 9.6		

DATE sample	2/22/95 TSTJOF19 15:30	HYDROLAB BROKEN			
DEPTH	LEFT	CENTER	RIGHT		
0.2	T *	T *	T *		
	pH *	pH *	pH *		
	COND *	COND *	COND *		
	D.O. *	D.O. *	D.O. *		
0.8	T *	T *	T *		
	pH *	pH *	pH *		
	COND *	COND *	COND *		
	D.O. *	D.O. *	D.O. *		

DATE sample	3/18/95 TSTJOF21 14:00				
DEPTH	LEFT 22.0	CENTER 23.0	RIGHT 13.0		
0.2	T 10.0	T 9.9	T 9.8		
	pH 7.8	pH 7.8	pH 7.7		
	COND 549.0	COND 538.0	COND 524.0		
	D.O. 9.5	D.O. 9.4	D.O. 9.8		
0.8	T 9.9	T 9.9	T 9.9		
	pH 7.8	pH 7.8	pH 7.8		
	COND 536.0	COND 538.0	COND 530.0		
	D.O. 9.4	D.O. 9.4	D.O. 9.6		

DATE sample	4/12/95 TSTJOF23 13:00	pH PROBE BROKEN			
DEPTH	LEFT 23.0	CENTER 25.0	RIGHT 23.0		
0.2	T 8.3	T 8.2	T 8.3		
	pH *	pH *	pH *		
	COND 500.0	COND 482.0	COND 492.0		
	D.O. 12.3	D.O. 11.9	D.O. 12.3		
0.8	T 8.3	T 8.2	T 8.3		
	pH *	pH *	pH *		
	COND 417.0	COND 500.0	COND 496.0		
	D.O. 12.3	D.O. 12.3	D.O. 12.3		

DATE sample		4/14/95 TSTJOF24 12:45		pH PROBE BROKEN			
DEPTH		LEFT 24.0	CENTER 25.0	RIGHT 24.0			
0.2	T	7.2	T	7.8	T		7.8
	pH	*	pH	*	pH		*
	COND	470.0	COND	468.0	COND		462.0
	D.O.	10.3	D.O.	10.1	D.O.		9.8
0.8	T	7.8	T	7.8	T		7.8
	pH	*	pH	*	pH		*
	COND	468.0	COND	*	COND		468.0
	D.O.	10.2	D.O.	10.4	D.O.		10.2

DATE sample		4/25/95 TSTJOF26 13:00					
DEPTH		LEFT 22.0	CENTER 25.0	RIGHT 22.0			
0.2	T	11.4	T	11.3	T		11.4
	pH	8.2	pH	8.2	pH		8.2
	COND	541.0	COND	547.0	COND		540.0
	D.O.	9.1	D.O.	9.1	D.O.		9.3
0.8	T	11.3	T	11.4	T		11.4
	pH	8.2	pH	8.2	pH		8.2
	COND	554.0	COND	552.0	COND		542.0
	D.O.	8.9	D.O.	9.0	D.O.		9.1

DATE sample		5/3/95 TSTJOF27R2 13:45					
DEPTH		LEFT 20.0	CENTER 25.0	RIGHT 25.0			
0.2	T	11.8	T	11.8	T		11.8
	pH	8.3	pH	8.3	pH		8.3
	COND	540.0	COND	542.0	COND		533.0
	D.O.	9.2	D.O.	9.1	D.O.		9.6
0.8	T	11.8	T	11.8	T		11.7
	pH	8.3	pH	8.3	pH		8.3
	COND	540.0	COND	549.0	COND		529.0
	D.O.	9.4	D.O.	9.4	D.O.		9.4

DATE sample		4/21/95 TSTJOF25 13:00					
DEPTH		LEFT 21.0	CENTER 25.0	RIGHT 23.0			
0.2	T	10.8	T	10.8	T		10.6
	pH	7.7	pH	7.7	pH		7.6
	COND	514.0	COND	521.0	COND		533.0
	D.O.	10.3	D.O.	10.3	D.O.		10.0
0.8	T	10.8	T	10.8	T		10.7
	pH	7.7	pH	7.7	pH		7.6
	COND	515.0	COND	511.0	COND		519.0
	D.O.	10.1	D.O.	10.0	D.O.		10.1

DATE sample		5/3/95 TSTJOF27R1 12:30					
DEPTH		LEFT 19.0	CENTER 25.0	RIGHT 25.0			
0.2	T	11.8	T	11.8	T		11.8
	pH	8.3	pH	8.3	pH		8.3
	COND	549.0	COND	547.0	COND		532.0
	D.O.	9.0	D.O.	9.1	D.O.		9.4
0.8	T	11.8	T	11.8	T		11.9
	pH	8.3	pH	8.3	pH		8.3
	COND	554.0	COND	551.0	COND		534.0
	D.O.	9.1	D.O.	9.2	D.O.		9.2

DATE sample		5/16/95 TSTJOF28 14:15					
DEPTH		LEFT 19.0	CENTER 26.0	RIGHT 24.0			
0.2	T	16.8	T	16.8	T		16.9
	pH	8.3	pH	8.3	pH		8.3
	COND	552.0	COND	551.0	COND		546.0
	D.O.	8.8	D.O.	8.9	D.O.		9.1
0.8	T	16.8	T	16.8	T		16.9
	pH	8.3	pH	8.3	pH		8.3
	COND	551.0	COND	551.0	COND		545.0
	D.O.	8.8	D.O.	9.0	D.O.		9.2

DATE
sample

5/31/95
TSTJOF29
15:00

DEPTH	LEFT 23.0	CENTER 25.0	RIGHT 25.0
0.2	T	17.6 T	17.4 T
	pH	8.1 pH	8.1 pH
	COND	536.0 COND	528.0 COND
	D.O.	8.2 D.O.	8.0 D.O.
0.8	T	17.5 T	17.4 T
	pH	8.1 pH	8.1 pH
	COND	533.0 COND	529.0 COND
	D.O.	8.2 D.O.	8.0 D.O.

DATE
sample

6/22/95
TSTJOF30
13:00

DEPTH	LEFT 21.0	CENTER 23.0	RIGHT 24.0
0.2	T	25.7 T	25.8 T
	pH	8.0 pH	8.0 pH
	COND	546.0 COND	549.0 COND
	D.O.	9.1 D.O.	9.0 D.O.
0.8	T	24.9 T	23.2 T
	pH	8.0 pH	8.0 pH
	COND	533.0 COND	504.0 COND
	D.O.	8.0 D.O.	7.4 D.O.

DATE
sample

8/23/95
TSTJOF31
12:30

DEPTH	LEFT 22.0	CENTER 22.0	RIGHT 21.0
0.2	T	25.0 T	24.9 T
	pH	7.9 pH	7.9 pH
	COND	517.0 COND	518.0 COND
	D.O.	6.6 D.O.	6.9 D.O.
0.8	T	25.1 T	24.9 T
	pH	7.9 pH	7.9 pH
	COND	518.0 COND	516.0 COND
	D.O.	6.7 D.O.	6.8 D.O.

DATE
sample

9/26/95
TSTJOF32
13:00

DEPTH	LEFT 22.0	CENTER 22.0	RIGHT 21.0
0.2	T	15.7 T	15.6 T
	pH	8.0 pH	8.0 pH
	COND	587.0 COND	584.0 COND
	D.O.	8.8 D.O.	8.4 D.O.
0.8	T	15.7 T	15.4 T
	pH	8.0 pH	8.0 pH
	COND	587.0 COND	580.0 COND
	D.O.	8.8 D.O.	8.7 D.O.

DATE
sample

10/27/95
TSTJOF33
14:00

DEPTH	LEFT 25.0	CENTER 30.0	RIGHT 20.0
0.2	T	11.1 T	11.1 T
	pH	8.1 pH	8.1 pH
	COND	578.0 COND	574.0 COND
	D.O.	9.7 D.O.	9.9 D.O.
0.8	T	11.1 T	11.0 T
	pH	8.1 pH	8.0 pH
	COND	578.0 COND	574.0 COND
	D.O.	9.5 D.O.	9.4 D.O.

* HYDROLAB BATTERY DIED

Appendix 2.7. SITE KALAMAZOO RIVER, MICHIGAN

DATE 4/12/94
sample TKALAG01
13:55

DEPTH	LEFT 6.5	CENTER 7.0	RIGHT 9.0
0.6	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE 4/29/94
sample TKALAG03
13:30

DEPTH	LEFT 5.8	CENTER 6.5	RIGHT 9.0
0.6	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE 5/4/94
sample TKALAG04R2
15:45

DEPTH	LEFT 6.7	CENTER 8.5	RIGHT 9.2
0.6	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE 5/19/94
sample TKALAG06
13:45

DEPTH	LEFT 4.2	CENTER 6.3	RIGHT 9.0
0.6	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE 4/26/94
sample TKALAG02
13:40

DEPTH	LEFT 5.5	CENTER 8.0	RIGHT 8.5
0.6	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE 5/4/94
sample TKALAG04R1
13:15

DEPTH	LEFT 6.3	CENTER 6.6	RIGHT 8.4
0.6	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE 5/10/94
sample TKALAG05
13:20

DEPTH	LEFT 4.5	CENTER 8.0	RIGHT 8.0
0.6	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE 6/3/94
sample TKALAG07
12:15

DEPTH	LEFT 3.9	CENTER 5.4	RIGHT 5.8
0.6	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE sample	6/16/94 TKALAG08 14:30
DEPTH	LEFT 4.0
0.6	T
	pH
	COND
	D.O.

DATE	6/29/94
sample	TKALAG09
	13:55
DEPTH	LEFT
0.6	T
	pH
	COND
	D.O.

DATE sample	7/2/94 TKALAG10 17:55
DEPTH	LEFT 5.6
0.6	T
	pH
	COND
	D.O.

DATE	7/7/94
sample	TKALAG11
	14:10
DEPTH	LEFT
0.6	T
	pH
	COND
	D.O.

DATE sample	7/12/94 TKALAG12 14:00
DEPTH	LEFT 5.0
0.6	T
	pH
	COND
	D.O.

DATE	7/20/94
sample	TKALAG13
	13:15
DEPTH	LEFT
0.6	T
	pH
	COND
	D.O.

DATE sample	8/11/94 TKALAG14 13:00
DEPTH	LEFT 3.4
0.6	T
	pH
	COND
	D.O.

DATE	8/25/94
sample	TKALAG15
	15:00
DEPTH	LEFT
0.6	T
	pH
	COND
	D.O.

DATE 8/31/94
sample TKALAG16R1
13:45

DEPTH	LEFT 5.0	CENTER 7.0	RIGHT 8.0
0.6	T	20.6 T	20.5 T
	pH	8.1 pH	8.1 pH
	COND	541.0 COND	540.0 COND
	D.O.	6.9 D.O.	6.8 D.O.

DATE 9/28/94
sample TKALAG17
12:45

DEPTH	LEFT 8.5	CENTER 6.0	RIGHT 7.8
0.6	T	16.6 T	16.6 T
	pH	8.1 pH	8.0 pH
	COND	582.0 COND	577.0 COND
	D.O.	7.8 D.O.	8.1 D.O.

DATE 11/2/94
sample TKALAG19
15:10

DEPTH	LEFT 4.5	CENTER 6.6	RIGHT 9.2
0.2	T	7.9 T	7.9 T
	pH	8.2 pH	8.1 pH
	COND	606.0 COND	603.0 COND
	D.O.	11.2 D.O.	11.2 D.O.

DATE 11/15/94
sample TKALAG21
15:15

DEPTH	LEFT 5.2	CENTER 6.7	RIGHT 10.7
0.6	T	9.1 T	9.2 T
	pH	8.0 pH	7.9 pH
	COND	534.0 COND	533.0 COND
	D.O.	9.8 D.O.	9.0 D.O.

DATE 8/31/94
sample TKALAG16R2
15:30

DEPTH	LEFT 5.0	CENTER 7.0	RIGHT 8.5
0.6	T	20.6 T	20.5 T
	pH	8.1 pH	8.1 pH
	COND	542.0 COND	543.0 COND
	D.O.	7.0 D.O.	7.0 D.O.

DATE 10/20/94
sample TKALAG18
13:30

DEPTH	LEFT 4.0	CENTER 5.2	RIGHT 6.5
0.2	T	14.7 T	14.7 T
	pH	8.3 pH	8.3 pH
	COND	589.0 COND	590.0 COND
	D.O.	9.4 D.O.	9.5 D.O.

DATE 11/10/94
sample TKALAG20
14:00

DEPTH	LEFT 7.0	CENTER 8.5	RIGHT 10.2
0.6	T	8.2 T	8.2 T
	pH	8.0 pH	7.9 pH
	COND	485.0 COND	479.0 COND
	D.O.	9.4 D.O.	9.4 D.O.

DATE 12/15/94
sample TKALAG22
15:20

DEPTH	LEFT 5.0	CENTER 7.0	RIGHT 8.5
0.6	T	1.0 T	1.0 T
	pH	8.0 pH	7.4 pH
	COND	550.0 COND	550.0 COND
	D.O.	13.3 D.O.	13.6 D.O.

DATE sample	1/26/95 TKALAG23 15:00
DEPTH	LEFT 6
0.6	T
	pH
	COND
	D.O.

DATE sample	3/13/95 TKALAG25 15:30
DEPTH	LEFT 7.4
0.6	T
	pH
	COND
	D.O.

DATE sample	3/21/95 TKALAG27 15:00
DEPTH	LEFT 6
0.6	T
	pH
	COND
	D.O.

DATE sample	4/17/95 TKALAG29 14:00
DEPTH	LEFT 5
0.6	T
	pH
	COND
	D.O.

DATE sample	2/23/95 TKALAG24 14:30
DEPTH	LEFT 6.0
0.6	T
	pH
	COND
	D.O.

DATE sample	3/16/95 TKALAG26 14:15
DEPTH	LEFT 7.0
0.6	T
	pH
	COND
	D.O.

DATE sample	4/11/95 TKALAG28 13:15
DEPTH	LEFT 5.7
0.6	T
	pH
	COND
	D.O.

DATE	4/27/95
sample	TKALAG30
	14:30
DEPTH	LEFT 6.0
0.6	T
	pH
	COND
	D.O.

DATE 5/2/95
sample TKALAG31
13:00

DEPTH	LEFT 5.5	CENTER 7.0	RIGHT 11.0
0.6	T	11.2 T	11.1 T
	pH	8.2 pH	8.2 pH
	COND	525.0 COND	520.0 COND
	D.O.	8.8 D.O.	8.8 D.O.

DATE 6/1/95
sample TKALAG33
13:30

DEPTH	LEFT 5.0	CENTER 7.0	RIGHT 8.1
0.6	T	18.2 T	18.2 T
	pH	8.2 pH	8.2 pH
	COND	553.0 COND	551.0 COND
	D.O.	8.9 D.O.	8.8 D.O.

DATE 8/22/95
sample TKALAG35
14:45

DEPTH	LEFT 6.5	CENTER 5.5	RIGHT 4.0
0.6	T	24.5 T	24.5 T
	pH	7.7 pH	7.7 pH
	COND	566.0 COND	566.0 COND
	D.O.	7.6 D.O.	7.7 D.O.

DATE 9/25/95
sample TKALAG36R2
17:00

DEPTH	LEFT 5.4	CENTER 4.7	RIGHT 3.2
0.6	T	14.2 T	14.3 T
	pH	8.2 pH	8.2 pH
	COND	585.0 COND	587.0 COND
	D.O.	9.4 D.O.	9.5 D.O.

DATE 5/19/95
sample TKALAG32
14:00

DEPTH	LEFT 5.0	CENTER 7.0	RIGHT 12.0
0.6	T	15.5 T	15.4 T
	pH	8.1 pH	8.2 pH
	COND	541.0 COND	533.0 COND
	D.O.	8.3 D.O.	8.2 D.O.

DATE 6/21/95
sample TKALAG34
13:30

DEPTH	LEFT 7.0	CENTER 6.0	RIGHT 4.0
0.6	T	24.3 T	24.3 T
	pH	7.9 pH	7.9 pH
	COND	512.0 COND	572.0 COND
	D.O.	7.8 D.O.	7.8 D.O.

DATE 9/25/95
sample TKALAG36R1
14:30

DEPTH	LEFT 6.0	CENTER 4.4	RIGHT 3.6
0.6	T	14.0 T	14.0 T
	pH	8.3 pH	8.2 pH
	COND	586.0 COND	586.0 COND
	D.O.	9.1 D.O.	9.1 D.O.

DATE 10/17/95
sample TKALAG37
14:15

DEPTH	LEFT 7.0	CENTER 4.3	RIGHT 3.0
0.6	T	11.2 T	11.1 T
	pH	8.3 pH	8.3 pH
	COND	632.0 COND	633.0 COND
	D.O.	9.0 D.O.	9.3 D.O.

DATE	10/30/95			
sample	TKALAG38			
	16:00			
DEPTH	LEFT 6.0	CENTER 6.0		RIGHT 3.0
0.6	T	9.3	T	9.3
	pH	8.1	pH	8.1
	COND	620.0	COND	620.0
	D.O.	9.5	D.O.	9.6

Appendix 2.8. SITE GRAND RIVER, MICHIGAN

DATE sample	4/11/94 TGRANHO1 17:30	LEFT 19.0	CENTER 30.0	RIGHT 31.0
DEPTH				
0.2	T	9.7	T	T
	pH	8.5	pH	pH
	COND	595.0	COND	COND
	D.O.	13.1	D.O.	D.O.
0.8	T	9.7	T	T
	pH	8.6	pH	pH
	COND	597.0	COND	COND
	D.O.	13.4	D.O.	D.O.

DATE sample	4/20/94 TGRANHO2R1 15:00	LEFT 33.0	CENTER 32.0	RIGHT 23.0
DEPTH				
0.2	T	11.6	T	T
	pH	8.4	pH	pH
	COND	586.0	COND	COND
	D.O.	11.1	D.O.	D.O.
0.8	T	11.5	T	T
	pH	8.4	pH	pH
	COND	585.0	COND	COND
	D.O.	11.0	D.O.	D.O.

DATE sample	4/20/94 TGRANHO2R2 19:05	LEFT 30.0	CENTER 31.5	RIGHT 23.0
DEPTH				
0.2	T	12.0	T	T
	pH	7.1	pH	pH
	COND	584.0	COND	COND
	D.O.	11.9	D.O.	D.O.
0.8	T	11.6	T	T
	pH	7.4	pH	pH
	COND	585.0	COND	COND
	D.O.	11.3	D.O.	D.O.

DATE sample	4/22/94 TGRANHO3 14:30	LEFT 33.0	CENTER 31.5	RIGHT 27.5
DEPTH				
0.2	T	11.4	T	T
	pH	8.4	pH	pH
	COND	564.0	COND	COND
	D.O.	11.2	D.O.	D.O.
0.8	T	11.4	T	T
	pH	8.5	pH	pH
	COND	564.0	COND	COND
	D.O.	11.2	D.O.	D.O.

DATE sample	4/28/94 TGRANHO4 15:15	LEFT 31.8	CENTER 30.0	RIGHT 13.7
DEPTH				
0.2	T	14.8	T	T
	pH	8.6	pH	pH
	COND	593.0	COND	COND
	D.O.	9.2	D.O.	D.O.
0.8	T	14.8	T	T
	pH	8.6	pH	pH
	COND	592.0	COND	COND
	D.O.	9.2	D.O.	D.O.

DATE sample	5/3/94 TGRANHO5 16:20	LEFT 32.5	CENTER 31.1	RIGHT 22.8
DEPTH				
0.2	T	12.1	T	T
	pH	8.2	pH	pH
	COND	525.0	COND	COND
	D.O.	9.6	D.O.	D.O.
0.8	T	11.8	T	T
	pH	8.2	pH	pH
	COND	526.0	COND	COND
	D.O.	9.6	D.O.	D.O.

DATE
sample 5/9/94
TGRANHO6
15:40

DEPTH	LEFT 19.0	CENTER 31.0	RIGHT 32.0
0.2	T 13.9	T 13.8	T 14.1
	pH 8.2	pH 8.1	pH 8.2
	COND 568.0	COND 569.0	COND 572.0
	D.O. 8.8	D.O. 8.7	D.O. 9.0
0.8	T 13.4	T 13.7	T 13.8
	pH 8.2	pH 8.2	pH 8.2
	COND 570.0	COND 570.0	COND 572.0
	D.O. 8.8	D.O. 8.7	D.O. 8.7

DATE
sample 5/12/94
TGRANHO7
13:35

DEPTH	LEFT 31.0	CENTER 31.0	RIGHT 24.0
0.2	T 13.8	T 13.8	T 13.7
	pH 8.3	pH 8.2	pH 8.2
	COND 577.0	COND 578.0	COND 578.0
	D.O. 8.7	D.O. 8.7	D.O. 8.7
0.8	T 13.9	T 13.8	T 13.7
	pH 8.3	pH 8.2	pH 8.2
	COND 580.0	COND 579.0	COND 579.0
	D.O. 8.6	D.O. 8.7	D.O. 8.7

DATE
sample 5/18/94
TGRANHO8
15:10

DEPTH	LEFT 22.5	CENTER 31.0	RIGHT 15.0
0.2	T 16.2	T 16.1	T 16.1
	pH 8.3	pH 8.3	pH 8.3
	COND 589.0	COND 591.0	COND 588.0
	D.O. 10.4	D.O. 10.4	D.O. 10.8
0.8	T 15.8	T 15.6	T 16.1
	pH 8.2	pH 8.2	pH 8.2
	COND 589.0	COND 591.0	COND 591.0
	D.O. 10.0	D.O. 10.1	D.O. 10.5

DATE
sample 6/8/94
TGRANHO9
14:10

DEPTH	LEFT 32.5	CENTER 26.0	RIGHT 8.0
0.2	T 20.6	T 20.2	T 19.9
	pH 8.6	pH 8.6	pH 8.7
	COND 547.0	COND 544.0	COND 535.0
	D.O. 7.7	D.O. 7.4	D.O. 7.8
0.8	T *	T 10.5	T *
	pH 8.2	pH 8.4	pH *
	COND 289.0	COND 340.0	COND *
	D.O. 7.4	D.O. 8.4	D.O. *

DATE
sample 6/17/94
TGRANHO10
13:30

DEPTH	LEFT 30.0	CENTER 30.5	RIGHT 26.0
0.2	T 26.0	T 26.0	T 25.9
	pH 7.8	pH 7.7	pH 7.7
	COND 609.0	COND 604.0	COND 603.0
	D.O. 8.4	D.O. 8.5	D.O. 8.3
0.8	T 17.4	T 17.2	T 18.1
	pH 7.7	pH 7.8	pH 7.6
	COND 311.0	COND 310.0	COND 329.0
	D.O. 7.6	D.O. 7.9	D.O. 7.1

DATE
sample 6/30/94
TGRANHO11
14:20

DEPTH	LEFT 33.0	CENTER 32.5	RIGHT 10.0
0.2	T 20.2	T 20.2	T 20.3
	pH 7.2	pH 7.2	pH 7.8
	COND 443.0	COND 442.0	COND 441.0
	D.O. 5.8	D.O. 5.8	D.O. 5.6
0.8	T 20.3	T 20.3	T 20.3
	pH 7.7	pH 7.7	pH 7.8
	COND 440.0	COND 440.0	COND 441.0
	D.O. 5.8	D.O. 5.8	D.O. 5.8

DATE
sample

7/2/94
TGRANH12
12:30

DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 28.0
0.2	T 21.1	T 21.1	T 21.2
	pH 8.0	pH 7.6	pH 7.7
	COND 456.0	COND 456.0	COND 454.0
	D.O. 7.4	D.O. 7.3	D.O. 7.2
0.8	T 21.1	T 21.1	T 21.2
	pH 7.7	pH 7.7	pH 7.7
	COND 456.0	COND 456.0	COND 457.0
	D.O. 7.4	D.O. 7.3	D.O. 7.3

DATE
sample

7/5/94
TGRANH13
15:20

DEPTH	LEFT 32.0	CENTER 28.2	RIGHT 10.0
0.2	T 23.0	T 23.0	T 23.1
	pH 7.8	pH 7.8	pH 7.9
	COND 502.0	COND 499.0	COND 499.0
	D.O. 8.2	D.O. 8.3	D.O. 8.6
0.8	T 23.0	T 23.0	T 23.0
	pH 7.8	pH 7.8	pH 7.8
	COND 502.0	COND 500.0	COND 499.0
	D.O. 8.2	D.O. 8.4	D.O. 8.5

DATE
sample

7/11/94
TGRANH14
19:00

DEPTH	LEFT 33.8	CENTER 29.8	RIGHT 8.6
0.2	T 22.5	T 22.4	T 22.4
	pH 7.8	pH 7.8	pH 7.8
	COND 453.0	COND 452.0	COND 452.0
	D.O. 7.6	D.O. 7.6	D.O. 7.8
0.8	T 22.4	T 22.3	T 22.4
	pH 7.8	pH 7.8	pH 7.8
	COND 452.0	COND 452.0	COND 451.0
	D.O. 7.5	D.O. 7.7	D.O. 7.8

DATE
sample

7/18/94
TGRANH15
14:50

DEPTH	LEFT 25.0	CENTER 31.0	RIGHT 20.4
0.2	T 23.5	T 23.4	T 23.4
	pH 7.9	pH 7.9	pH 7.9
	COND 491.0	COND 493.0	COND 493.0
	D.O. 7.8	D.O. 8.1	D.O. 8.7
0.8	T 23.4	T 23.2	T 23.5
	pH 7.8	pH 7.8	pH 7.8
	COND 491.0	COND 493.0	COND 492.0
	D.O. 7.8	D.O. 8.2	D.O. 8.2

DATE
sample

8/10/94
TGRANH16R1
14:20

DEPTH	LEFT 30.0	CENTER 31.3	RIGHT 18.0
0.2	T 20.1	T 20.1	T 20.1
	pH 8.2	pH 8.2	pH 8.2
	COND 540.0	COND 538.0	COND 537.0
	D.O. 7.5	D.O. 7.6	D.O. 7.0
0.8	T 10.9	T 9.2	T 20.0
	pH 7.9	pH 7.9	pH 8.2
	COND 351.0	COND 328.0	COND 537.0
	D.O. 7.8	D.O. 8.5	D.O. 7.7

DATE
sample

8/10/94
TGRANH16R2
18:45

DEPTH	LEFT 30.0	CENTER 31.0	RIGHT 16.7
0.2	T 20.0	T 20.0	T 20.0
	pH 8.2	pH 8.2	pH 8.3
	COND 539.0	COND 541.0	COND 540.0
	D.O. 7.5	D.O. 7.5	D.O. 8.0
0.8	T 12.8	T 10.1	T 19.9
	pH 8.0	pH 8.0	pH 8.2
	COND 397.0	COND 346.0	COND 540.0
	D.O. 7.6	D.O. 8.7	D.O. 7.8

DATE sample	DEPTH	9/1/94 TGRANH17 13:45		
		LEFT 3		
		T		
		pH		
		COND		
	0.2	D.O.		
		T		
		pH		
		COND		
		D.O.		
	0.8	T		
		pH		
		COND		
		D.O.		

DATE		9/20/94	
sample		TGRANH18R1	
		14:00	
DEPTH		LEFT 31	
0.2		T	
		pH	
		COND	
		D.O.	
0.8		T	
		pH	
		COND	
		D.O.	

DATE sample		9/20/94 TGRANH18R2 17:30	
DEPTH	LEFT 3		
0.2	T		
	pH		
	COND		
	D.O.		
0.8	T		
	pH		
	COND		
	D.O.		

DATE sample	10/5/94 TGRANH19 13:30	
	DEPTH	LEFT 32.0
0.2		T
		pH
		COND
		D.O.
0.8		T
		pH
		COND
		D.O.

DATE sample		10/24/94 TGRANH20 14:45	
DEPTH	LEFT 24.0		
0.2	T		
	pH		
	COND		
	D.O.		
0.8	T		
	pH		
	COND		
	D.O.		

DATE sample		11/5/94 TGRANH21 15:50	
DEPTH	LEFT 26.0		
0.2	T		
	pH		
	COND		
	D.O.		
0.8	T		
	pH		
	COND		
	D.O.		

DATE 11/7/94
sample TGRANH22
15:15

DEPTH	LEFT 31.9	CENTER 30.8	RIGHT 13.9
0.2	T pH COND D.O.	10.1 T 7.7 pH 439.0 COND 10.4 D.O.	10.0 T 7.8 pH 437.0 COND 10.4 D.O.
0.8	T pH COND D.O.	10.4 T 7.7 pH 440.0 COND 10.4 D.O.	10.1 T 7.7 pH 439.0 COND 10.3 D.O.

DATE 11/12/94
sample TGRANH24
14:30

DEPTH	LEFT 33.0	CENTER 20.0	RIGHT 18.0
0.2	T pH COND D.O.	7.9 T 7.9 pH 503.0 COND 9.3 D.O.	7.9 T 7.9 pH 500.0 COND 9.3 D.O.
0.8	T pH COND D.O.	7.9 T 7.9 pH 505.0 COND 9.3 D.O.	7.8 T 7.9 pH 503.0 COND 9.2 D.O.

DATE 12/12/94
sample TGRANH26
15:20

DEPTH	LEFT *	CENTER *	RIGHT *
0.2	T pH COND D.O.	* T * pH * COND * D.O.	* T * pH * COND * D.O.
0.8	T pH COND D.O.	* T * pH * COND * D.O.	* T * pH * COND * D.O.

HYDROLAB BROKEN

DATE 11/9/94
sample TGRANH23
14:40

DEPTH	LEFT 30.7	CENTER 29.4	RIGHT 9.9
0.2	T pH COND D.O.	10.0 T 7.7 pH 451.0 COND 8.3 D.O.	9.9 T 7.7 pH 450.0 COND 8.2 D.O.
0.8	T pH COND D.O.	9.9 T 7.7 pH 453.0 COND 8.4 D.O.	9.8 T 7.7 pH 450.0 COND 8.4 D.O.

DATE 11/16/94
sample TGRANH25
14:00

DEPTH	LEFT 32.0	CENTER 32.0	RIGHT 16.2
0.2	T pH COND D.O.	8.5 T 8.0 pH 540.0 COND 9.5 D.O.	8.5 T 8.0 pH 538.0 COND 9.7 D.O.
0.8	T pH COND D.O.	8.4 T 8.0 pH 530.0 COND 9.4 D.O.	8.4 T 8.0 pH 538.0 COND 9.7 D.O.

DATE 1/25/95
sample TGRANH27
15:00

DEPTH	LEFT 32.0	CENTER 32.0	RIGHT 32.0
0.2	T pH COND D.O.	1.7 T 8.1 pH 584.0 COND 12.5 D.O.	1.6 T 8.1 pH 582.0 COND 12.0 D.O.
0.8	T pH COND D.O.	1.7 T 8.1 pH 585.0 COND 11.7 D.O.	1.6 T 8.1 pH 587.0 COND 11.8 D.O.

DATE
sample

2/21/95
TGRANH28
15:30

DEPTH	LEFT 30.0	CENTER 31.0	RIGHT 11.0
0.2	T 0.5	T 0.5	T 0.5
	pH 8.1	pH 8.1	pH 8.2
	COND 659.0	COND 661.0	COND 663.0
	D.O. 10.6	D.O. 6.6	D.O. 17.1
0.8	T 0.5	T 0.5	T 0.5
	pH 8.1	pH 8.1	pH 8.2
	COND 660.0	COND 663.0	COND 662.0
	D.O. 16.5	D.O. 16.2	D.O. 16.5

DATE
sample

3/15/95
TGRANH29
15:30

DEPTH	LEFT 30.0	CENTER 33.0	RIGHT 17.0
0.2	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.
0.8	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE
sample

3/17/95
TGRANH30
15:30

DEPTH	LEFT 27.0	CENTER 34.0	RIGHT 33.0
0.2	T 6.3	T 6.3	T 6.3
	pH 7.4	pH 7.3	pH 7.4
	COND 445.0	COND 445.0	COND 446.0
	D.O. 10.4	D.O. 10.2	D.O. 10.2
0.8	T 6.2	T 6.2	T 6.3
	pH 7.4	pH 7.4	pH 7.4
	COND 445.0	COND 445.0	COND 447.0
	D.O. 10.0	D.O. 10.2	D.O. 9.9

DATE
sample

3/20/95
TGRANH31
15:40

DEPTH	LEFT 35.0	CENTER 35.0	RIGHT 16.0
0.2	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.
0.8	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE
sample

3/24/95
TGRANH32
15:00

DEPTH	LEFT 31.0	CENTER 33.0	RIGHT 16.0
0.2	T 7.2	T 7.2	T 7.1
	pH 8.3	pH 8.3	pH 8.3
	COND 510.0	COND 509.0	COND 509.0
	D.O. 10.4	D.O. 10.7	D.O. 10.5
0.8	T 7.1	T 7.1	T 7.0
	pH 8.2	pH 8.3	pH 8.3
	COND 512.0	COND 510.0	COND 510.0
	D.O. 10.5	D.O. 10.4	D.O. 10.5

DATE
sample

3/29/95
TGRANH33
15:30

DEPTH	LEFT 30.0	CENTER 34.0	RIGHT 18.0
0.2	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.
0.8	T	T	T
	pH	pH	pH
	COND	COND	COND
	D.O.	D.O.	D.O.

DATE sample	4/10/95 TGRANH34 14:30	DEPTH	LEFT 35.0	CENTER 34.0	RIGHT 20.0
0.2		T	6.6	T	6.7
		pH	8.4	pH	8.4
		COND	600.0	COND	600.0
		D.O.	11.2	D.O.	11.2
0.8		T	6.6	T	6.5
		pH	8.4	pH	8.4
		COND	601.0	COND	600.0
		D.O.	11.0	D.O.	10.9

DATE sample	4/24/95 TGRANH36 14:30	DEPTH	LEFT 35.0	CENTER 10.1	RIGHT 20.0
0.2		T	12.2	T	10.1
		pH	8.2	pH	8.2
		COND	584.0	COND	586.0
		D.O.	10.1	D.O.	9.5
0.8		T	10.2	T	10.1
		pH	8.2	pH	8.2
		COND	583.0	COND	585.0
		D.O.	10.2	D.O.	9.5

DATE sample	5/1/95 TGRANH38 14:45	DEPTH	LEFT 34.0	CENTER 33.0	RIGHT 15.0
0.2		T	11.0	T	11.0
		pH	8.0	pH	8.0
		COND	516.0	COND	512.0
		D.O.	9.1	D.O.	9.2
0.8		T	11.0	T	10.4
		pH	8.0	pH	8.0
		COND	516.0	COND	514.0
		D.O.	8.5	D.O.	9.1

DATE sample	4/19/95 TGRANH35 14:30	DEPTH	LEFT 34.6	CENTER 34.6	RIGHT 22.0
0.2		T	10.3	T	10.3
		pH	7.9	pH	7.9
		COND	781.0	COND	780.0
		D.O.	10.2	D.O.	10.1
0.8		T	10.3	T	10.2
		pH	7.9	pH	7.9
		COND	780.0	COND	780.0
		D.O.	10.1	D.O.	10.1

DATE sample	4/28/95 TGRANH37 12:45	DEPTH	LEFT 34.0	CENTER 34.0	RIGHT 18.0
0.2		T	9.4	T	9.3
		pH	8.2	pH	8.2
		COND	477.0	COND	475.0
		D.O.	8.8	D.O.	9.2
0.8		T	9.4	T	9.3
		pH	8.2	pH	8.2
		COND	482.0	COND	479.0
		D.O.	8.9	D.O.	9.1

DATE sample	5/4/95 TGRANH39 12:45	DEPTH	LEFT 30.0	CENTER 33.0	RIGHT 16.0
0.2		T	12.4	T	12.4
		pH	8.2	pH	8.2
		COND	573.0	COND	569.0
		D.O.	9.0	D.O.	9.4
0.8		T	12.4	T	12.4
		pH	8.2	pH	8.2
		COND	573.0	COND	570.0
		D.O.	8.7	D.O.	9.5

DATE
sample

5/9/95
TGRANH40
15:00

DEPTH	LEFT 34.0	CENTER 33.0	RIGHT 19.0
0.2	T 12.7	T 12.6	T 12.9
	pH 8.4	pH 8.3	pH 8.4
	COND 587.0	COND 590.0	COND 589.0
	D.O. 8.4	D.O. 8.3	D.O. 8.4
0.8	T 12.6	T 12.5	T 12.5
	pH 8.3	pH 8.3	pH 8.8
	COND 590.0	COND 590.0	COND 589.0
	D.O. 9.7	D.O. 8.3	D.O. 8.3

DATE
sample

5/15/95
TGRANH41
14:45

DEPTH	LEFT 32.0	CENTER 33.0	RIGHT 17.0
0.2	T 15.4	T 15.2	T 15.4
	pH 8.2	pH 8.2	pH 8.2
	COND 561.0	COND 560.0	COND 560.0
	D.O. 8.3	D.O. 8.6	D.O. 8.2
0.8	T 15.3	T 15.2	T 15.2
	pH 8.2	pH 8.2	pH 8.2
	COND 562.0	COND 562.0	COND 560.0
	D.O. 8.3	D.O. 8.6	D.O. 8.3

DATE
sample

6/20/95
TGRANH42
13:00

DEPTH	LEFT 35.0	CENTER 33.0	RIGHT 15.0
0.2	T 20.7	T 20.7	T 20.6
	pH 8.3	pH 8.3	pH 8.4
	COND 630.0	COND 631.0	COND 630.0
	D.O. 10.3	D.O. 10.6	D.O. 11.2
0.8	T 11.7	T 12.0	T 20.4
	pH 8.3	pH 8.2	pH 8.4
	COND 298.0	COND 304.0	COND 627.0
	D.O. 9.9	D.O. 9.4	D.O. 10.6

DATE
sample

6/20/95
TGRANH43
14:45

DEPTH	LEFT 34.0	CENTER 33.0	RIGHT 19.0
0.2	T 25.8	T 25.6	T 25.8
	pH 8.1	pH 8.1	pH 8.2
	COND 631.0	COND 624.0	COND 635.0
	D.O. 11.2	D.O. 10.3	D.O. 11.6
0.8	T 17.9	T 17.8	T 23.3
	pH 8.2	pH 8.2	pH 8.1
	COND 295.0	COND 295.0	COND 530.0
	D.O. 9.5	D.O. 10.1	D.O. 9.2

DATE
sample

8/16/95
TGRANH44
14:30

DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 16.0
0.2	T 28.1	T 28.0	T 28.3
	pH 7.4	pH 7.5	pH 7.6
	COND 532.0	COND 530.0	COND 532.0
	D.O. 7.4	D.O. 7.7	D.O. 9.0
0.8	T 25.9	T 25.9	T 28.1
	pH 7.7	pH 7.6	pH 7.5
	COND 315.0	COND 314.0	COND 533.0
	D.O. 6.0	D.O. 5.1	D.O. 7.9

DATE
sample

9/19/95
TGRANH45R1
14:30

DEPTH	LEFT 30.6	CENTER 30.0	RIGHT 16.7
0.2	T 18.7	T 18.6	T 18.7
	pH 8.3	pH 8.3	pH 8.4
	COND 662.0	COND 663.0	COND 662.0
	D.O. 9.1	D.O. 9.3	D.O. 9.9
0.8	T 18.7	T 18.6	T 18.6
	pH 8.3	pH 8.3	pH 8.3
	COND 663.0	COND 659.0	COND 659.0
	D.O. 8.9	D.O. 9.2	D.O. 9.4

DATE
sample

9/19/95
TGRANH45R2
16:00

DEPTH	LEFT 30.8	CENTER 27.2	RIGHT 31.8
0.2	T 18.6	T 18.6	T 18.8
	pH 8.2	pH 8.3	pH 8.2
	COND 660.0	COND 657.0	COND 664.0
	D.O. 9.0	D.O. 9.7	D.O. 10.0
0.8	T 15.8	T 17.6	T 17.6
	pH 8.1	pH 8.2	pH 8.2
	COND 662.0	COND 566.0	COND 566.0
	D.O. 8.4	D.O. 8.6	D.O. 9.2

DATE
sample

10/19/95
TGRANH46
13:00

DEPTH	LEFT 12.0	CENTER 30.0	RIGHT 24.0
0.2	T 12.5	T 12.4	T 12.4
	pH 8.3	pH 8.3	pH 8.2
	COND 681.0	COND 681.0	COND 681.0
	D.O. 8.9	D.O. 8.7	D.O. 9.3
0.8	T 12.4	T 12.4	T 12.4
	pH 8.3	pH 8.3	pH 8.3
	COND 681.0	COND 681.0	COND 681.0
	D.O. 9.3	D.O. 9.2	D.O. 8.8

DATE
sample

10/31/95
TGRANH47
14:00

DEPTH	LEFT 20.0	CENTER 30.0	RIGHT 26.6
0.2	T 8.9	T 8.9	T 8.9
	pH 8.1	pH 8.1	pH 8.1
	COND 633.0	COND 636.0	COND 637.0
	D.O. 9.6	D.O. 9.6	D.O. 9.2
0.8	T 8.8	T 8.9	T 8.9
	pH 8.1	pH 8.1	pH 8.1
	COND 632.0	COND 634.0	COND 638.0
	D.O. 9.6	D.O. 9.6	D.O. 9.4

Appendix 2.9. SITE MUSKEGON RIVER, MICHIGAN

DATE sample	4/14/94 TMUSK101 15:00	DEPTH	LEFT 36.2	CENTER 35.5	RIGHT 34.5
0.2		T	6.7	T	6.8
		pH	8.0	pH	8.0
		COND	327.0	COND	327.0
0.8		D.O.	12.2	D.O.	11.8
		T	6.7	T	6.7
		pH	8.0	pH	8.0
		COND	327.0	COND	328.0
		D.O.	12.2	D.O.	11.7

DATE sample	4/26/94 TMUSK103 14:00	DEPTH	LEFT *	CENTER *	RIGHT 22.0
0.2		T	*	T	*
		pH	*	pH	*
		COND	*	COND	*
		D.O.	*	D.O.	*
0.8		T	*	T	10.9
		pH	*	pH	7.9
		COND	*	COND	324.0
		D.O.	*	D.O.	*

DATE sample	5/9/94 TMUSK105 18:00	DEPTH	LEFT 5.6	CENTER 32.0	RIGHT 26.0
0.2		T	12.2	T	12.2
		pH	8.1	pH	8.1
		COND	329.0	COND	329.0
		D.O.	9.5	D.O.	9.5
0.8		T	11.9	T	11.9
		pH	8.1	pH	8.1
		COND	329.0	COND	329.0
		D.O.	9.2	D.O.	9.1

DATE sample	4/21/94 TMUSK102 15:00	DEPTH	LEFT 34.0	CENTER 35.0	RIGHT 25.0
0.2		T	8.8	T	8.7
		pH	8.3	pH	8.3
		COND	329.0	COND	328.0
0.8		D.O.	11.4	D.O.	11.5
		T	8.7	T	8.7
		pH	8.3	pH	8.3
		COND	331.0	COND	330.0
		D.O.	11.3	D.O.	11.6

DATE sample	5/2/94 TMUSK104 18:00	DEPTH	LEFT 22.0	CENTER 30.0	RIGHT 32.0
0.2		T	11.2	T	*
		pH	8.0	pH	8.1
		COND	326.0	COND	327.0
0.8		D.O.	9.0	D.O.	9.3
		T	10.8	T	10.7
		pH	8.0	pH	8.0
		COND	325.0	COND	326.0
		D.O.	8.4	D.O.	9.0

DATE sample	6/7/94 TMUSK106 14:30	DEPTH	LEFT 30.0	CENTER 34.0	RIGHT 28.0
0.2		T	18.8	T	18.0
		pH	8.0	pH	8.1
		COND	339.0	COND	339.0
0.8		D.O.	8.4	D.O.	8.3
		T	17.4	T	11.9
		pH	7.9	pH	8.1
		COND	325.0	COND	300.0
		D.O.	7.9	D.O.	10.2

DATE
sample

6/29/94
TMUSK107
14:00

DEPTH	LEFT 31.0	CENTER 33.0	RIGHT 30.0
0.2	T pH COND D.O.	20.6 7.7 358.0 6.9	T pH COND D.O.
0.8	T pH COND D.O.	17.8 7.6 348.0 6.8	T pH COND D.O.
		20.6 7.8 359.0 7.1	T pH COND D.O.
		17.8 7.6 348.0 7.4	T pH COND D.O.
		20.5 7.8 359.0 7.0	T pH COND D.O.
		17.8 7.6 348.0 6.6	T pH COND D.O.

DATE
sample

7/13/94
TMUSK108
17:00

DEPTH	LEFT 30.0	CENTER 30.0	RIGHT 30.0
0.2	T pH COND D.O.	22.6 7.8 367.0 6.9	T pH COND D.O.
0.8	T pH COND D.O.	22.1 7.8 365.0 6.8	T pH COND D.O.
		22.6 7.8 367.0 7.2	T pH COND D.O.
		22.1 7.8 365.0 7.1	T pH COND D.O.
		22.3 7.8 366.0 7.1	T pH COND D.O.
		22.3 7.8 367.0 7.1	T pH COND D.O.

DATE
sample

7/18/94
TMUSK109
18:00

DEPTH	LEFT 32.0	CENTER 34.0	RIGHT 33.0
0.2	T pH COND D.O.	22.0 7.6 370.0 6.1	T pH COND D.O.
0.8	T pH COND D.O.	22.0 7.6 370.0 6.1	T pH COND D.O.
		22.0 7.6 370.0 7.9	T pH COND D.O.
		20.8 7.4 368.0 4.1	T pH COND D.O.
		21.2 7.4 368.0 4.3	T pH COND D.O.

DATE
sample

8/24/94
TMUSK110
15:00

DEPTH	LEFT 32.0	CENTER 30.0	RIGHT 24.0
0.2	T pH COND D.O.	* * * *	T pH COND D.O.
0.8	T pH COND D.O.	* * * *	T pH COND D.O.
		* * * *	T pH COND D.O.
		* * * *	T pH COND D.O.
		* * * *	T pH COND D.O.

DATE
sample

9/14/94
TMUSK111
14:30

DEPTH	LEFT 33.0	CENTER 34.0	RIGHT 34.0
0.2	T pH COND D.O.	20.5 7.8 372.0 8.1	T pH COND D.O.
0.8	T pH COND D.O.	19.7 7.6 371.0 7.2	T pH COND D.O.
		20.0 7.6 371.0 7.0	T pH COND D.O.
		20.2 7.7 372.0 6.9	T pH COND D.O.

DATE
sample

10/6/94
TMUSK112
15:00

DEPTH	LEFT 28.0	CENTER 32.0	RIGHT 28.0
0.2	T pH COND D.O.	16.3 7.7 376.0 7.1	T pH COND D.O.
0.8	T pH COND D.O.	16.3 7.7 375.0 7.1	T pH COND D.O.
		16.3 7.7 376.0 7.4	T pH COND D.O.
		16.3 7.7 376.0 7.5	T pH COND D.O.
		16.3 7.7 376.0 7.5	T pH COND D.O.

DATE sample		10/26/94 TMUSKI13 15:00	
DEPTH	LEFT 22.0		
0.2	T		
	pH		
	COND		
	D.O.		
0.8	T		
	pH		
	COND		
	D.O.		

DATE sample	11/7/94 TMUSKI14 19:00
DEPTH	LEFT 28.5
0.2	T
	pH
	COND
	D.O.
0.8	T
	pH
	COND
	D.O.

DATE sample		11/11/94 TMUSKI15 17:00	
DEPTH	LEFT 32		
0.2	T		
	pH		
	COND		
	D.O.		
0.8	T		
	pH		
	COND		
	D.O.		

DATE sample	12/5/94 TMUSKI16 18:00	LEFT 29.0			
DEPTH					
0.2		T			
		pH			
		COND			
		D.O.			
0.8		T			
		pH			
		COND			
		D.O.			

DATE sample	1/24/95 TMUSKI17 19:00
DEPTH	LEFT 20
0.2	T
	pH
	COND
	D.O.
0.8	T
	pH
	COND
	D.O.

DATE sample	2/17/95 TMUSKI18 16:00
DEPTH	LEFT 30
0.2	T
	pH
	COND
	D.O.
0.8	T
	pH
	COND
	D.O.

DATE sample		3/15/95 TMUSKI19 16:30		PARTIAL MEASUREMENT RECORDED					
DEPTH		LEFT 33.5		CENTER 33.0		RIGHT 32.0			
0.2	T	2.1		2.1		T		2.2	
	pH	*		pH		8.1		pH	
	COND	*		COND		377.0		COND	
	D.O.	*		D.O.		*		*	
0.8	T	2.9		T		3.0		3.0	
	pH	8.0		pH		8.1		pH	
	COND	398.0		COND		396.0		COND	
	D.O.	*		D.O.		*		D.O.	

DATE sample		3/25/95 TMUSKI21 19:00							
DEPTH		LEFT 26.1		CENTER 27.0		RIGHT 24.2			
0.2	T	5.2		T		5.1		T	
	pH	8.3		pH		8.3		pH	
	COND	377.0		COND		378.0		COND	
	D.O.	11.5		D.O.		11.9		D.O.	
0.8	T	5.1		T		5.1		T	
	pH	8.3		pH		8.2		pH	
	COND	377.0		COND		377.0		COND	
	D.O.	11.0		D.O.		11.8		D.O.	

DATE sample		5/10/95 TMUSKI23 14:00							
DEPTH		LEFT 31.0		CENTER 31.0		RIGHT 32.0			
0.2	T	12.0		T		12.0		T	
	pH	8.0		pH		8.0		pH	
	COND	348.0		COND		347.0		COND	
	D.O.	10.0		D.O.		10.0		D.O.	
0.8	T	12.0		T		12.0		T	
	pH	8.0		pH		8.0		pH	
	COND	347.0		COND		346.0		COND	
	D.O.	10.2		D.O.		10.3		D.O.	

DATE sample		3/20/95 TMUSKI20 20:00							
DEPTH		LEFT 33.0		CENTER 32.0		RIGHT 31.0			
0.2	T	5.6		T		5.6		T	
	pH	8.2		pH		8.2		pH	
	COND	369.0		COND		368.0		COND	
	D.O.	11.6		D.O.		11.8		D.O.	
0.8	T	5.7		T		5.7		T	
	pH	8.1		pH		8.2		pH	
	COND	366.0		COND		368.0		COND	
	D.O.	11.5		D.O.		11.4		D.O.	

DATE sample		4/13/95 TMUSKI22 17:30							
DEPTH		LEFT 30.0		CENTER 31.0		RIGHT 28.0			
0.2	T	5.8		T		5.7		T	
	pH	8.2		pH		8.3		pH	
	COND	370.0		COND		369.0		COND	
	D.O.	11.8		D.O.		11.6		D.O.	
0.8	T	5.8		T		5.7		T	
	pH	8.2		pH		8.3		pH	
	COND	370.0		COND		371.0		COND	
	D.O.	12.0		D.O.		12.0		D.O.	

DATE sample		6/7/95 TMUSKI24 18:00							
DEPTH		LEFT 30.0		CENTER 25.0		RIGHT 24.0			
0.2	T	18.7		T		20.3		T	
	pH	7.9		pH		8.0		pH	
	COND	358.0		COND		362.0		COND	
	D.O.	7.8		D.O.		8.9		D.O.	
0.8	T	15.5		T		16.1		T	
	pH	7.7		pH		7.7		pH	
	COND	355.0		COND		356.0		COND	
	D.O.	6.6		D.O.		6.7		D.O.	

DATE sample	7/17/95 TMUSK125 18:00		SAMPLE COLLECTED FROM CENTER SECTION ONLY					
	DEPTH	LEFT *	CENTER 35.0	RIGHT *				
0.2	T	*	T	25.2	T			
	pH	*	pH	8.4	pH			
	COND	*	COND	381.0	COND			
	D.O.	*	D.O.	9.1	D.O.			
0.8	T	*	T	24.8	T			
	pH	*	pH	8.3	pH			
	COND	*	COND	380.0	COND			
	D.O.	*	D.O.	8.3	D.O.			

DATE sample	8/16/95 TMUSK126 14:00					
	DEPTH	LEFT 31.0	CENTER 30.0	RIGHT 28.0		
0.2	T	26.5	T	26.5	T	26.5
	pH	8.3	pH	8.2	pH	8.2
	COND	393.0	COND	393.0	COND	392.0
	D.O.	8.2	D.O.	8.2	D.O.	8.2
0.8	T	26.4	T	26.5	T	26.5
	pH	8.2	pH	8.2	pH	8.2
	COND	393.0	COND	390.0	COND	390.0
	D.O.	8.2	D.O.	8.0	D.O.	7.8

DATE sample	8/20/95 TMUSK127 16:00							
	DEPTH	LEFT 33.0	CENTER 30.0	RIGHT 29.0				
0.2	T	26.7	T	28.8	T			
	pH	8.2	pH	8.2	pH			
	COND	389.0	COND	389.0	COND			
	D.O.	8.3	D.O.	8.5	D.O.			
0.8	T	26.4	T	26.6	T			
	pH	8.0	pH	8.2	pH			
	COND	391.0	COND	389.0	COND			
	D.O.	7.2	D.O.	8.2	D.O.			

DATE sample	10/17/95 TMUSK128 18:00					
	DEPTH	LEFT	CENTER	RIGHT		
0.2	T	13.3	T	13.3	T	13.3
	pH	8.2	pH	8.2	pH	8.3
	COND	407.0	COND	407.0	COND	406.0
	D.O.	8.8	D.O.	8.8	D.O.	8.6
0.8	T	13.3	T	13.3	T	13.3
	pH	8.2	pH	8.2	pH	8.2
	COND	407.0	COND	407.0	COND	407.0
	D.O.	8.8	D.O.	8.8	D.O.	8.9

Appendix 2.10. SIZE PERE MARQUETTE RIVER, MICHIGAN

DATE sample	4/5/94 TPEREJ01 16:00	LEFT 5.6	CENTER 3.8	RIGHT 2.5
DEPTH				
0.2	T	5.6 T	5.6 T	5.5
	pH	8.0 pH	8.0 pH	8.0
	COND	307.0 COND	307.0 COND	307.0
	D.O.	10.9 D.O.	10.9 D.O.	11.0

DATE sample	4/25/94 TPEREJ03 16:30	LEFT 2.1	CENTER 3.6	RIGHT 5.4
DEPTH				
0.2	T	13.2 T	13.0 T	12.9
	pH	7.8 pH	7.8 pH	7.7
	COND	306.0 COND	305.0 COND	306.0
	D.O.	8.9 D.O.	8.8 D.O.	8.8

DATE sample	5/10/94 TPEREJ05 13:30	LEFT 2.0	CENTER 3.0	RIGHT 4.0
DEPTH				
0.2	T	12.5 T	12.5 T	12.5
	pH	8.0 pH	8.0 pH	7.9
	COND	324.0 COND	324.0 COND	324.0
	D.O.	7.3 D.O.	7.1 D.O.	7.1

DATE sample	6/28/94 TPEREJ07 17:00	LEFT 3.5	CENTER 4.0	RIGHT 4.0
DEPTH				
0.2	T	18.5 T	18.5 T	18.5
	pH	7.9 pH	7.9 pH	7.9
	COND	341.0 COND	342.0 COND	341.0
	D.O.	7.7 D.O.	7.7 D.O.	7.7

DATE sample	4/13/94 TPEREJ02 16:00	LEFT 5.3	CENTER 3.6	RIGHT 2.5
DEPTH				
0.2	T	7.6 T	7.6 T	7.6
	pH	7.9 pH	7.9 pH	7.8
	COND	319.0 COND	318.0 COND	318.0
	D.O.	10.4 D.O.	10.2 D.O.	10.3

DATE sample	5/3/94 TPEREJ04 14:30	LEFT 3.0	CENTER 4.0	RIGHT 5.0
DEPTH				
0.2	T	8.9 T	9.0 T	9.0
	pH	7.9 pH	8.0 pH	8.0
	COND	319.0 COND	285.0 COND	286.0
	D.O.	10.4 D.O.	9.4 D.O.	9.4

DATE sample	6/6/94 TPEREJ06 17:00	LEFT 2.0	CENTER 4.0	RIGHT 4.5
DEPTH				
0.2	T	16.9 T	16.9 T	16.8
	pH	7.9 pH	7.9 pH	7.9
	COND	351.0 COND	352.0 COND	351.0
	D.O.	7.5 D.O.	7.7 D.O.	7.7

DATE sample	7/9/94 TPEREJ08 13:30	LEFT 4.0	CENTER 6.0	RIGHT 5.5
DEPTH				
0.2	T	20.7 T	20.7 T	20.7
	pH	7.3 pH	7.2 pH	7.2
	COND	274.0 COND	273.0 COND	272.0
	D.O.	5.3 D.O.	5.2 D.O.	5.2

DATE sample	8/23/94 TPEREJ09 16:00	NO MEASUREMENTS WERE RECORDED			
DEPTH	LEFT 2.4	CENTER 3.3	RIGHT 3.0		
0.2	T	T	T		*
	pH	pH	pH		*
	COND	COND	COND		*
	D.O.	D.O.	D.O.		*

DATE sample	10/5/94 TPEREJ11 17:30	LEFT 2.5	CENTER 3.2	RIGHT 4.0
DEPTH				
0.2	T	10.4	T	10.4
	pH	8.0	pH	8.0
	COND	338.0	COND	338.0
	D.O.	10.1	D.O.	10.1

DATE sample	11/8/94 TPEREJ13 15:30	LEFT 3.5	CENTER 4.0	RIGHT 4.9
DEPTH				
0.2	T	7.5	T	7.5
	pH	7.5	pH	7.6
	COND	264.0	COND	264.0
	D.O.	10.6	D.O.	9.9

DATE sample	1/25/95 TPEREJ15 15:30	LEFT 3.5	CENTER 3.5	RIGHT 4.0
DEPTH				
0.2	T	0.9	T	0.9
	pH	7.9	pH	7.9
	COND	285.0	COND	286.0
	D.O.	9.0	D.O.	8.6

DATE sample	9/13/94 TPEREJ10 17:00	LEFT 2.8	CENTER 2.5	RIGHT 2.0
DEPTH				
0.2	T	17.3	T	17.3
	pH	8.0	pH	8.0
	COND	343.0	COND	343.0
	D.O.	8.0	D.O.	7.9

DATE sample	10/25/94 TPEREJ12 16:00	LEFT 3.0	CENTER 3.4	RIGHT 4.2
DEPTH				
0.2	T	7.9	T	7.9
	pH	8.0	pH	8.0
	COND	354.0	COND	353.0
	D.O.	10.1	D.O.	9.9

DATE sample	12/6/94 TPEREJ14 15:30	LEFT 2.9	CENTER 5.0	RIGHT 4.2
DEPTH				
0.2	T	5.0	T	5.0
	pH	7.9	pH	7.9
	COND	305.0	COND	305.0
	D.O.	11.2	D.O.	10.8

DATE sample	2/16/95 TPEREJ16 19:00	LEFT 4.0	CENTER 5.0	RIGHT 4.5
DEPTH				
0.2	T	0.0	T	0.0
	pH	7.7	pH	7.8
	COND	325.0	COND	325.0
	D.O.	11.1	D.O.	11.0

DATE sample	3/14/95 TPEREJ17 19:00	D.O. NOT AVAILABLE - HYDROLAB BROKEN			
DEPTH	LEFT 4.0	CENTER 5.0		RIGHT 4.5	
0.2	T	3.1	T	3.2	T
	pH	7.6	pH	7.7	pH
	COND	244.0	COND	241.0	COND
	D.O.	*	D.O.	*	D.O.

DATE sample	3/16/95 TPEREJ18R2 18:30	D.O. NOT AVAILABLE - HYDROLAB BROKEN			
DEPTH	LEFT 4.0	CENTER 5.0		RIGHT 5.0	
0.2	T	4.6	T	4.6	T
	pH	7.7	pH	7.7	pH
	COND	209.0	COND	210.0	COND
	D.O.	*	D.O.	*	D.O.

DATE sample	3/20/95 TPEREJ20 15:00	D.O. NOT AVAILABLE - HYDROLAB BROKEN			
DEPTH	LEFT 4.0	CENTER 4.5		RIGHT 4.5	
0.2	T	5.8	T	5.8	T
	pH	7.7	pH	7.7	pH
	COND	241.0	COND	241.0	COND
	D.O.	10.1	D.O.	10.2	D.O.

DATE sample	4/14/95 TPEREJ22 14:00	PARTIAL MEASUREMENT RECORDED			
DEPTH	LEFT 3.2	CENTER 4.5		RIGHT 3.7	
0.2	T	5.5	T	5.5	T
	pH	8.0	pH	8.1	pH
	COND	309.0	COND	308.0	COND
	D.O.	10.9	D.O.	10.8	D.O.

DATE sample	3/16/95 TPEREJ18R1 16:30	D.O. K43 NOT AVAILABLE - HYDROLAB BROKEN			
DEPTH	LEFT 5.0	CENTER 5.5		RIGHT 6.0	
0.2	T	3.4	T	3.5	T
	pH	3.4	pH	7.7	pH
	COND	210.0	COND	210.0	COND
	D.O.	*	D.O.	*	D.O.

DATE sample	3/18/95 TPEREJ19 18:00	D.O. NOT AVAILABLE - HYDROLAB BROKEN			
DEPTH	LEFT 3.5	CENTER 4.0		RIGHT 5.0	
0.2	T	5.4	T	5.4	T
	pH	8.0	pH	8.1	pH
	COND	196.0	COND	195.0	COND
	D.O.	11.1	D.O.	11.1	D.O.

DATE sample	3/26/95 TPEREJ21 15:30	D.O. NOT AVAILABLE - HYDROLAB BROKEN			
DEPTH	LEFT 2.5	CENTER 3.6		RIGHT 3.8	
0.2	T	6.0	T	6.0	T
	pH	7.8	pH	7.8	pH
	COND	294.0	COND	294.0	COND
	D.O.	11.0	D.O.	11.0	D.O.

DATE sample	5/9/95 TPEREJ23 15:30	D.O. NOT AVAILABLE - HYDROLAB BROKEN			
DEPTH	LEFT 2.5	CENTER 3.5		RIGHT 4.5	
0.2	T	9.6	T	9.6	T
	pH	8.0	pH	8.0	pH
	COND	322.0	COND	322.0	COND
	D.O.	10.0	D.O.	10.0	D.O.

DATE sample	6/8/95 TPEREJ24 14:30	PARTIAL MEASUREMENT RECORDED			
DEPTH	LEFT 2.5	CENTER 3.5	RIGHT 4.0		
0.2	T	17.2 T	17.2 T		
	pH	7.8 pH	7.8 pH		
	COND	347.0 COND	347.0 COND		
	D.O.	9.6 D.O.	8.4 D.O.		8.7

DATE sample	8/15/95 TPEREJ26R1 16:15	PARTIAL MEASUREMENT RECORDED			
DEPTH	LEFT 2.5	CENTER 4.0	RIGHT 4.5		
0.2	T	20.8 T	20.8 T		
	pH	7.8 pH	7.8 pH		
	COND	338.0 COND	338.0 COND		
	D.O.	7.4 D.O.	7.4 D.O.		7.4

DATE sample	8/19/95 TPEREJ27 16:00	PARTIAL MEASUREMENT RECORDED			
DEPTH	LEFT 3.0	CENTER 4.0	RIGHT 4.5		
0.2	T	21.4 T	21.4 T		
	pH	7.6 pH	7.6 pH		
	COND	318.0 COND	318.0 COND		
	D.O.	6.6 D.O.	6.9 D.O.		6.8

DATE sample	7/18/95 TPEREJ25 15:15	PARTIAL MEASUREMENT RECORDED			
DEPTH	LEFT	CENTER	RIGHT		
0.2	T	T	20.1 T		
	pH	pH	7.9 pH		
	COND	COND	343.0 COND		
	D.O.	D.O.	7.5 D.O.		

DATE sample	8/15/95 TPEREJ26R2 16:16	PARTIAL MEASUREMENT RECORDED			
DEPTH	LEFT 2.0	CENTER 3.5	RIGHT *		
0.2	T	21.1 T	21.1 T		
	pH	7.8 pH	7.8 pH		
	COND	339.0 COND	339.0 COND		
	D.O.	7.5 D.O.	7.5 D.O.		

DATE sample	10/18/95 TPEREJ28 17:00	PARTIAL MEASUREMENT RECORDED			
DEPTH	LEFT 2.2	CENTER 3.6	RIGHT 4.4		
0.2	T	9.5 T	9.5 T		
	pH	8.2 pH	8.2 pH		
	COND	355.0 COND	355.0 COND		
	D.O.	9.6 D.O.	9.6 D.O.		

Appendix 2.11. SITE MANISTIQUE RIVER, MICHIGAN

DATE sample		4/18/94 TMANIK02 18:00			
DEPTH		LEFT 13.0	CENTER 15.0		RIGHT 14.0
0.2	T	4.1	T	4.1	T
	pH		6.9	pH	6.8
	COND		77.0	COND	74.0
	D.O.		11.6	D.O.	11.8
0.8	T		4.1	T	4.1
	pH		6.9	pH	6.9
	COND		77.0	COND	75.0
	D.O.		11.5	D.O.	11.8

DATE sample		5/5/94 TMANIK04 13:00		
DEPTH		LEFT 23.5	CENTER 20.0	RIGHT 22.0
0.2	T	9.7	T	9.8
	pH	7.2	pH	7.2
	COND	96.0	COND	97.0
	D.O.	10.4	D.O.	10.6
0.8	T	9.7	T	9.8
	pH	7.2	pH	7.2
	COND	96.0	COND	97.0
	D.O.	10.2	D.O.	10.6

DATE sample		5/17/94 TMANIK06 14:00			
DEPTH		LEFT 11.0	CENTER 12.0		RIGHT 11.0
0.2	T	10.9	T	10.8	T
	pH	7.7	pH	7.7	pH
	COND	146.0	COND	143.0	COND
	D.O.	10.7	D.O.	11.0	D.O.
0.8	T	10.8	T	10.7	T
	pH	7.7	pH	7.7	pH
	COND	146.0	COND	141.0	COND
	D.O.	10.9	D.O.	11.1	D.O.

DATE sample		4/11/94 TMANIK01 22:00			
DEPTH	LEFT 13.0	CENTER 16.0		RIGHT 18.0	
0.2	T	5.2	T	5.2	T
	pH	7.4	pH	7.4	pH
	COND	160.0	COND	159.0	COND
	D.O.	12.4	D.O.	12.4	D.O.
0.8	T	5.2	T	5.2	T
	pH	7.4	pH	7.4	pH
	COND	161.0	COND	160.0	COND
	D.O.	12.3	D.O.	12.8	D.O.

DATE sample		4/28/94 TMANIK03 18:00		
DEPTH		LEFT *	CENTER *	RIGHT 10.5
0.2	T	7.7	T	7.6
	pH	7.4	pH	7.4
	COND	89.0	COND	91.0
	D.O.	11.0	D.O.	11.5
0.8	T	7.7	T	7.6
	pH	7.5	pH	7.4
	COND	90.0	COND	92.0
	D.O.	10.6	D.O.	11.0

DATE sample		5/12/94 TMANIK05 13:30		
DEPTH		LEFT 22.0	CENTER 20.0	RIGHT 20.0
0.2	T	11.0	T	11.0
	pH	7.4	pH	7.4
	COND	129.0	COND	132.0
	D.O.	10.1	D.O.	10.6
0.8	T	11.0	T	11.0
	pH	7.4	pH	7.4
	COND	129.0	COND	130.0
	D.O.	10.3	D.O.	10.1

DATE: 6/16/94		TMANIK08		18:00		PARTIAL MEASUREMENT RECORDED					
DEPTH		LEFT		CENTER		RIGHT					
0.2	T	20.1	T	20.1	T	20.0					
	pH	7.5	pH	7.4	pH	7.4					7.4
	COND	166.0	COND	174.0	COND	171.0					171.0
	D.O.	8.5	D.O.	8.4	D.O.	8.3					8.3
0.8	T	*	T	*	T	19.2					
	pH	*	pH	*	pH	7.5					7.5
	COND	262.0	COND	258.0	COND	180.0					180.0
	D.O.	9.4	D.O.	9.6	D.O.	8.5					8.5

DATE sample	7/6/94 TMANIK09 14:00		PARTIAL MEASUREMENT RECORDED			
	DEPTH	LEFT	CENTER	RIGHT	LEFT	RIGHT
0.2	T	20.0	T	19.7	T	19.6
	pH	7.5	pH	7.5	pH	7.5
	COND	189.0	COND	192.0	COND	197.0
	D.O.	8.1	D.O.	8.0	D.O.	6.7
0.8	T	17.4	T	14.8	T	17.1
	pH	7.9	pH	8.2	pH	7.8
	COND	230.0	COND	278.0	COND	251.0
	D.O.	8.6	D.O.	9.2	D.O.	8.2

DATE sample	7/26/94 TMANIK10 13:30		PARTIAL MEASUREMENT RECORDED			
	DEPTH	LEFT	CENTER	RIGHT	LEFT	RIGHT
0.2	T	20.3	T	20.2	T	20.2
	pH	7.6	pH	7.6	pH	7.6
	COND	201.0	COND	198.0	COND	206.0
	D.O.	8.6	D.O.	8.7	D.O.	8.7
0.8	T	18.1	T	19.4	T	*
	pH	7.9	pH	7.6	pH	7.6
	COND	234.0	COND	225.0	COND	206.0
	D.O.	9.0	D.O.	8.6	D.O.	8.6

DATE sample	9/1/94 TMANIK12 20:00		(SAMPLE TMANIK11 WAS NOT COLLECTED)			
	DEPTH	LEFT	CENTER	RIGHT	LEFT	RIGHT
0.2	T	15.7	T	15.8	T	15.6
	pH	7.8	pH	7.8	pH	7.8
	COND	208.0	COND	209.0	COND	209.0
	D.O.	8.7	D.O.	8.7	D.O.	8.9
0.8	T	15.6	T	15.6	T	15.4
	pH	7.8	pH	7.8	pH	7.8
	COND	206.0	COND	207.0	COND	206.0
	D.O.	9.0	D.O.	9.1	D.O.	9.0

DATE sample	9/23/94 TMANIK13 14:00		PARTIAL MEASUREMENT RECORDED			
	DEPTH	LEFT	CENTER	RIGHT	LEFT	RIGHT
0.2	T	18.8	T	18.7	T	15.1
	pH	7.5	pH	7.5	pH	7.6
	COND	204.0	COND	203.0	COND	*
	D.O.	8.0	D.O.	7.9	D.O.	*
0.8	T	18.7	T	18.6	T	15.5
	pH	7.5	pH	7.5	pH	7.6
	COND	204.0	COND	202.0	COND	205.0
	D.O.	7.9	D.O.	7.9	D.O.	9.1

DATE sample	9/28/94 TMANIK14 14:00		PARTIAL MEASUREMENT RECORDED			
	DEPTH	LEFT	CENTER	RIGHT	LEFT	RIGHT
0.2	T	*	T	*	T	15.1
	pH	*	pH	*	pH	7.6
	COND	*	COND	*	COND	*
	D.O.	*	D.O.	*	D.O.	*
0.8	T	*	T	*	T	15.5
	pH	*	pH	*	pH	7.6
	COND	*	COND	*	COND	205.0
	D.O.	*	D.O.	*	D.O.	9.1

DATE		10/19/94		
sample		TMANIK15		
		14:00		
DEPTH		LEFT	CENTER	RIGHT
0.2	T	12.2	T	12.3
	pH	7.6	pH	7.6
	COND	195.0	COND	197.0
	D.O.	9.4	D.O.	9.7
0.8	T	12.2	T	12.3
	pH	7.6	pH	7.6
	COND	195.0	COND	197.0
	D.O.	9.8	D.O.	9.2

DATE sample		12/9/94 TMANIK17 15:00		PARTIAL MEASUREMENT RECORDED			
DEPTH		LEFT		CENTER		RIGHT	
0.2	T	0.2	T	0.2	T	0.3	
	pH	7.6	pH	7.6	pH	7.6	
	COND	169.0	COND	170.0	COND	172.0	
	D.O.	14.5	D.O.	14.4	D.O.	14.4	
0.8	T		T		T		
	pH		pH		pH		
	COND		COND		COND		
	D.O.		D.O.		D.O.		

DATE sample		2/28/95 TMANIK19 17:00		SAMPLE COLLECTED FROM CENTER ONLY				
DEPTH		LEFT		CENTER		RIGHT		
0.2	T		*	T		0.2	T	*
	pH		*	pH		7.2	pH	*
	COND		*	COND		223.0	COND	*
	D.O.		*	D.O.		14.6	D.O.	*
0.8	T		*	T		0.2	T	*
	pH		*	pH		7.3	pH	*
	COND		*	COND		224.0	COND	*
	D.O.		*	D.O.		13.6	D.O.	*

DATE sample		11/2/94 TMANIK16 16:00			
DEPTH		LEFT	CENTER		RIGHT
0.2	T	5.9	T	6.0	T
	pH	7.9	pH	7.9	pH
	COND	194.0	COND	198.0	COND
	D.O.	12.2	D.O.	11.9	D.O.
0.8	T	6.0	T	6.0	T
	pH	7.9	pH	7.8	pH
	COND	196.0	COND	197.0	COND
	D.O.	12.4	D.O.	12.3	D.O.

DATE sample		1/18/95 TMANIK18 15:00		
DEPTH		LEFT	CENTER	RIGHT
0.2	T	0.2	T	0.4
	pH	7.3	pH	7.3
	COND	208.0	COND	210.0
	D.O.	8.9	D.O.	9.8
0.8	T	0.3	T	0.6
	pH	7.3	pH	7.3
	COND	210.0	COND	214.0
	D.O.	8.9	D.O.	9.0

DATE		3/23/95		
sample		TMANIK20		
15:30				
DEPTH		LEFT	CENTER	RIGHT
0.2	T	1.5	T	1.6
	pH	7.4	pH	7.4
	COND	120.0	COND	121.0
	D.O.	13.6	D.O.	13.9
0.8	T	1.5	T	1.6
	pH	7.4	pH	7.4
	COND	119.0	COND	122.0
	D.O.	13.8	D.O.	13.9

DATE
sample 3/24/95
TMANIK21
16:00

DEPTH	LEFT	CENTER	RIGHT
0.2	T 1.9	T 2.0	T 2.2
	pH 7.3	pH 7.3	pH 7.3
	COND 117.0	COND 117.0	COND 121.0
	D.O. 13.8	D.O. 13.6	D.O. 14.1
0.8	T 1.8	T 2.0	T 2.0
	pH 7.3	pH 7.3	pH 7.3
	COND 116.0	COND 117.0	COND 120.0
	D.O. 13.6	D.O. 7.3	D.O. 14.2

DATE
sample 3/29/95
TMANIK23
14:00

DEPTH	LEFT	CENTER	RIGHT
0.2	T 3.9	T 3.9	T 3.9
	pH 7.5	pH 7.5	pH 7.5
	COND 114.0	COND 114.0	COND 114.0
	D.O. 12.6	D.O. 12.5	D.O. 12.6
0.8	T 3.9	T 3.9	T 3.9
	pH 7.5	pH 7.5	pH 7.5
	COND 113.0	COND 114.0	COND 115.0
	D.O. 12.5	D.O. 12.7	D.O. 12.7

DATE
sample 4/20/95
TMANIK25
16:00

DEPTH	LEFT	CENTER	RIGHT
0.2	T 4.8	T 4.7	T 4.9
	pH 7.6	pH 7.6	pH 7.6
	COND 118.0	COND 119.0	COND 123.0
	D.O. 12.0	D.O. 12.4	D.O. 12.2
0.8	T 4.7	T 4.7	T 4.9
	pH 7.6	pH 7.6	pH 7.6
	COND 117.0	COND 119.0	COND 123.0
	D.O. 12.4	D.O. 12.5	D.O. 12.2

DATE
sample 3/28/95
TMANIK22
17:00

DEPTH	LEFT	CENTER	RIGHT
0.2	T 4.1	T 4.2	T 4.4
	pH 7.4	pH 7.4	pH 7.4
	COND 111.0	COND 110.0	COND 116.0
	D.O. 12.4	D.O. 12.3	D.O. 12.6
0.8	T 4.0	T 4.0	T 4.3
	pH 7.4	pH 7.4	pH 7.4
	COND 114.0	COND 113.0	COND 114.0
	D.O. 12.6	D.O. 12.4	D.O. 12.5

DATE
sample 4/11/95
TMANIK24
14:00

PARTIAL MEASUREMENT RECORDED

DEPTH	LEFT	CENTER	RIGHT
0.2	T 4.0	T 4.0	T 4.0
	pH 7.4	pH 7.5	pH 7.4
	COND 135.0	COND 137.0	COND *
	D.O. 13.2	D.O. 12.7	D.O. 13.0
0.8	T 3.9	T *	T *
	pH 7.4	pH *	pH *
	COND 134.0	COND *	COND *
	D.O. 13.3	D.O. *	D.O. *

DATE
sample 5/4/95
TMANIK26
19:00

DEPTH	LEFT	CENTER	RIGHT
0.2	T 11.1	T 11.0	T 10.9
	pH 7.3	pH 7.3	pH 7.2
	COND 111.0	COND 107.0	COND 107.0
	D.O. 9.9	D.O. 9.9	D.O. 9.7
0.8	T 11.1	T 11.0	T 10.9
	pH 7.3	pH 7.3	pH 7.1
	COND 110.0	COND 109.0	COND 107.0
	D.O. 9.9	D.O. 9.9	D.O. 9.8

DATE sample	5/17/95 TMANIK27 14:00	DEPTH	LEFT	CENTER	RIGHT
0.2		T	11.6	T	11.7
		pH	7.7	pH	7.7
		COND	141.0	COND	142.0
		D.O.	10.0	D.O.	10.0
0.8		T	11.6	T	11.7
		pH	7.7	pH	7.7
		COND	142.0	COND	141.0
		D.O.	10.0	D.O.	10.1

DATE sample	9/12/95 TMANIK29 19:00	DEPTH	LEFT	CENTER	RIGHT
0.2		T	16.4	T	16.1
		pH	7.8	pH	7.8
		COND	193.0	COND	187.0
		D.O.	8.9	D.O.	9.0
0.8		T	15.9	T	15.8
		pH	7.7	pH	7.8
		COND	183.0	COND	175.0
		D.O.	9.0	D.O.	9.1

DATE sample	7/6/95 TMANIK28 18:00	DEPTH	LEFT	CENTER	RIGHT
0.2		T	20.9	T	20.9
		pH	7.6	pH	7.8
		COND	209.0	COND	209.0
		D.O.	8.1	D.O.	8.3
0.8		T	20.8	T	20.8
		pH	7.7	pH	7.8
		COND	209.0	COND	209.0
		D.O.	8.2	D.O.	8.4

DATE sample	10/26/95 TMANIK30 14:00	DEPTH	LEFT	CENTER	RIGHT
0.2		T	7.2	T	7.1
		pH	7.4	pH	7.3
		COND	151.0	COND	145.0
		D.O.	11.8	D.O.	11.7
0.8		T	7.1	T	7.1
		pH	7.4	pH	7.4
		COND	147.0	COND	145.0
		D.O.	11.5	D.O.	11.6