

# **HYDROLOGIC AND WATER-QUALITY DATA FOR THE EAST RIVER BASIN IN NORTHEASTERN WISCONSIN**

*By* **Peter E. Hughes**

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## CONVERSION FACTORS

<b><i>Multiply</i></b>	<b><i>By</i></b>	<b><i>To obtain</i></b>
inch (in.)	25.4	millimeter
inch (in.)	2.54	centimeter
foot (ft)	0.3048	meter
mile (mi)	1.609	kilometer
acre	0.4047	hectare
square mile (mi <sup>2</sup> )	2.590	square kilometer
acre-feet	1,233	cubic meter
cubic foot per second (ft <sup>3</sup> /s)	0.02832	cubic meter per second
pound, avoirdupois (lb)	453.6	gram
ton, short	0.9072	megagram

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Temperature, in degrees Fahrenheit, can be converted to degree Celsius by use of the following formula:

degree Fahrenheit (°F)	$^{\circ}\text{C} = 5/9 (^{\circ}\text{F} - 32)$	degree Celsius (°C)
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# HYDROLOGIC AND WATER-QUALITY DATA FOR THE EAST RIVER BASIN IN NORTHEASTERN WISCONSIN

*By Peter E. Hughes*

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## ABSTRACT

Hydrologic and precipitation data and water-quality samples were collected by the U.S. Geological Survey from rivers in the East River basin in northeastern Wisconsin during 1985-86. The Fox Valley Water Quality Planning Agency suspected that agricultural and urban nonpoint-source discharges were contributing significantly to the degradation of water quality in the basin.

Two continuous record streamflow and water-quality gaging stations were established: one on the East River at Monroe Street in Green Bay and the other on Bower Creek at Sunnyview Road near De Pere. Streamflow for the 1986 water year was greater than twice the long-term (1967-86) average and precipitation was 33 percent greater than the long-term (1951-80) average. Average daily streamflow at the East River during the 1986 water year was 185 cubic feet per second. Average daily streamflow at Bower Creek was 6 cubic feet per second.

Suspended-sediment yields were greatest in Bower Creek—264 tons per square mile per year; yields were 125 tons per square mile per year at the East River site. Total-phosphorus yields at the Bower Creek gage were 2,680 pounds per square mile per year; yields were 1,130 pounds per square mile per year at the East River site. The measured yields of suspended sediment and total phosphorus from the East River site, during the 1986 water year, were significantly larger than the estimated average yields for the Fox River at Wrightstown. During a year of normal streamflow, the East River would probably contribute a maximum of 10 percent of the total suspended sediment and 9 percent of the total-phosphorus load transported to the mouth of the Fox River.

Dissolved-oxygen concentrations tended to decrease upstream from the mouth of the East River. The daily mean dissolved-oxygen concentration was often less than 5 milligrams per liter at all three of the East River monitoring locations. Minimum dissolved-oxygen concentrations of 1 to 2 milligrams per liter were recorded at all sites.

The acceptable fecal coliform level for recreational water quality of 200 counts per 100 milliliters was exceeded at the three East River sites and Bower Creek in more than half of the samples. More samples collected at the downstream sites on the East River at Monroe Street in Green Bay and at the Allouez Avenue bridge at Allouez contained fecal-coliform/fecal-streptococcus ratios that exceeded 4.0, indicating that the bacteria was of human origin rather than of animal.

Mean concentrations for 5-day biochemical oxygen demand, total-phosphorus concentration, fecal-coliform counts, and fecal-streptococcus counts were higher at Bower Creek than any of the other sites monitored during 1985-86. Mean chlorophyll *a* concentrations were highest at the East River sites at Monroe Street in Green Bay and at Allouez Avenue bridge at Allouez.

## INTRODUCTION

### Background

The Brown County Land Conservation Department has recognized that serious water-quality problems exist in the East River basin. Excessive sedimentation from erosion of the heavy clay soils, nutrient loadings from both agricultural and urban runoff, and low dissolved-oxygen concentrations are adversely affecting on the stream's ecology

(Fox Valley Water Quality Planning Agency, 1985). In 1982, the Fox Valley Water Quality Planning Agency (FVWQPA) nominated the East River basin for inclusion in the Wisconsin Fund Program, which provides funding for implementation of best-management practices to control water-pollution problems. In an effort to provide the necessary data to support this nomination of the East River as a Priority Watershed, the FVWQPA entered into a cooperative study with the U.S. Geological Survey. Contributors to this study include the Fox Valley Water Quality Planning Agency, Green Bay Metropolitan Sanitary District, Brown County Conservation Alliance, Kress Foundation, Brown County Planning Commission, Brown County Land Conservation Department, city of Green Bay, and the U.S. Geological Survey.

## Purpose and Scope

The purpose of this report is to describe streamflow, precipitation, and water-quality conditions in the East River basin and the Bower Creek subbasin during the period March 1985 to October 1986. Specifically, the report describes (1) streamflow, (2) precipitation, (3) annual suspended-sediment and phosphorus loads, (4) water temperature and dissolved-oxygen concentrations, and (5) miscellaneous water-quality characteristics, including fecal-coliform and fecal-streptococcus count, 5-day biochemical oxygen demand (BOD-5), and chlorophyll *a* concentration.

Sampling stations to measure streamflow, precipitation, and water quality were installed in March 1985 at the East River at Monroe Street in Green Bay and at Bower Creek at Sunnyview Road near De Pere. Automatic water samplers were installed to collect samples during storm runoff for analyses of suspended-sediment and nutrient concentrations. Dissolved-oxygen meters and temperature probes were operated at four sites from June through October of 1985. The sampling sites (fig. 1) included East River at Monroe Street in Green Bay, Allouez Avenue bridge over the East River at Allouez, State Highway 32 near De Pere, and Bower Creek at Sunnyview Road near De Pere.

During the same period in 1986, only the East River gage at Monroe Street in Green Bay was instrumented to monitor dissolved-oxygen concen-

tration and temperature. During nonstorm periods, a local observer collected biweekly samples for sediment, nutrient, and chlorophyll *a* concentrations, and fecal-coliform and fecal-streptococcus counts at the three East River locations and at the Bower Creek gage. Precipitation records were obtained from the National Weather Service Station at Austin Straubel Field in Green Bay (fig. 1). A rain gage was located at the East River at Monroe Street streamflow-gaging station in Green Bay during nonfreezing periods.

## Physical Setting

The East River flows parallel to the lower Fox River in Brown County, through the city of Green Bay, and joins the Fox River approximately 2 mi (miles) upstream from the mouth of the Fox River at Green Bay (fig. 1). The sources of water to the East River are primarily runoff direct from precipitation over the 145-mi<sup>2</sup> (square mile) basin and ground-water discharge to the river. The lower part of the basin from the mouth to approximately 8 mi upstream is part of the Green Bay estuary and is directly affected by the seiche activity in the bay.

Bower Creek is a major tributary to the East River, comprising 29 percent of the 41.6 mi<sup>2</sup> East River drainage. Bower Creek was chosen for study because the Brown County Land Conservation Department believed it has significant agricultural improvement potential based on present land-use practices. The monitoring location selected within the Bower Creek watershed was at Sunnyview Road; at that location, the drainage area is 4.89 mi<sup>2</sup>.

## Acknowledgments

The U.S. Geological Survey conducted the study in cooperation with the Fox Valley Water Quality Planning Agency (FVWQPA). Mr. William Elman, Executive Director of the FVWQPA, focused the concerns of other agencies and actively pursued the initiation of this study. Mr. David Wentland (FVWQPA) provided suggestions and guidance during the study. Other contributors to this study include the Green Bay Metropolitan Sanitary District, Brown County Planning Commission, Brown County Conservation Alliance, Brown



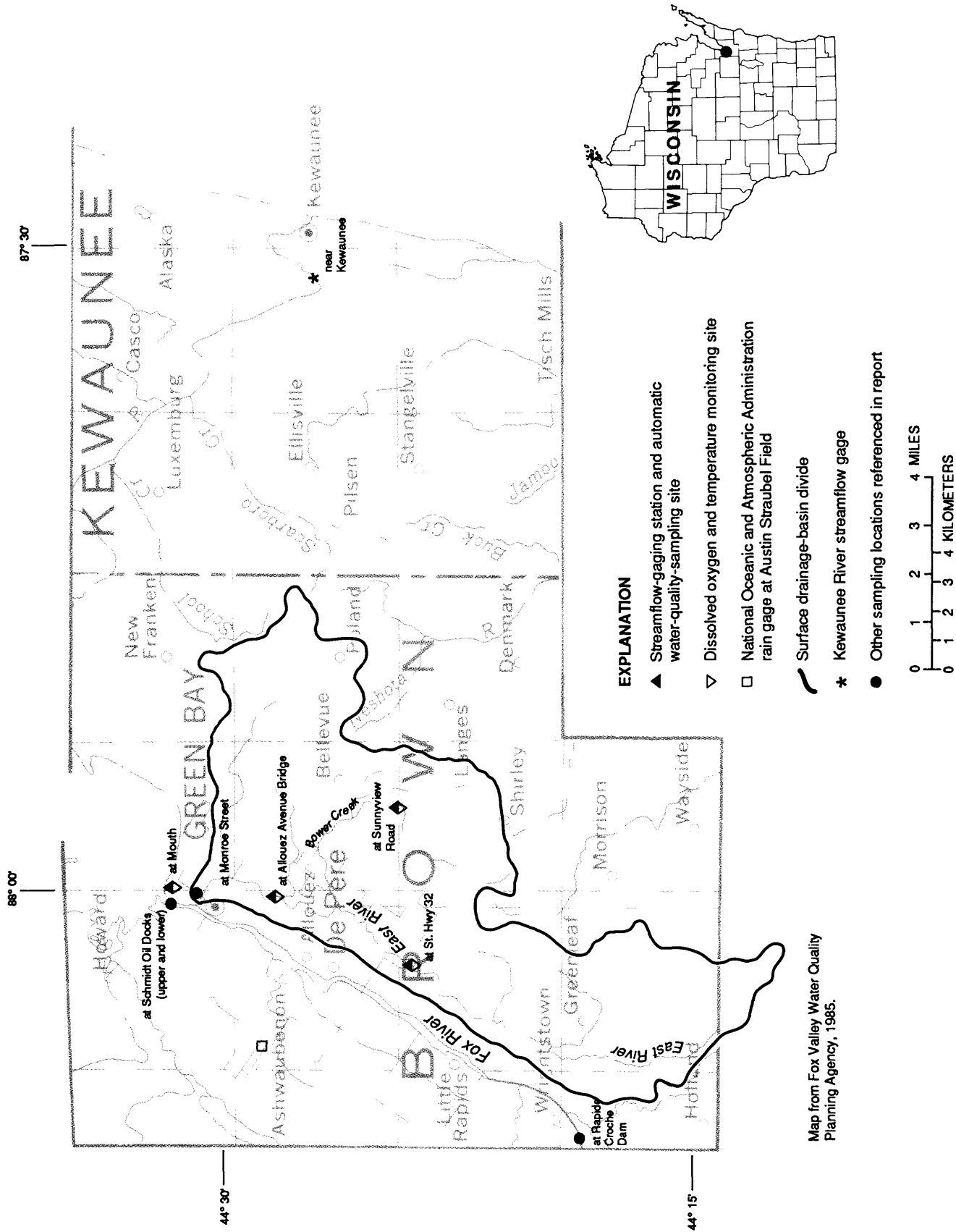


Figure 1. Monitoring-site locations in and near the East River basin in Wisconsin.

## HYDROLOGIC CONDITIONS DURING STUDY PERIOD

Hydrologic conditions in the basin were assessed to evaluate the water-quality data that were collected. Precipitation and streamflow are two important factors used to evaluate how the study period conditions related to long-term hydrologic conditions.

### Precipitation

Total precipitation recorded at Green Bay was 38.36 in. (inches) during 1985 and 31.33 in. during 1986 (National Oceanic and Atmospheric Administration, 1985, 1986). The annual mean precipitation in 1985 and 1986 exceeded the 30-year (1951-80) mean annual precipitation by 37 and 12 percent, respectively. In 1985, August (8.03 in.) was the wettest month and June (2.21 in.) the driest. The wettest month in 1986 was September (7.51 in.) and the driest was May (1.15 in.). The maximum daily precipitation was 2.20 in. on September 10 for 1986, and was 2.23 in. on November 1 for 1985. Table 1 shows the monthly precipitation totals and the departures from normal for the 2 years of the study. The daily precipitation data for 1985-86, recorded at the Austin Straubel Field in Green Bay, is tabulated in Appendix A and depicted in figure 2.

### Streamflow

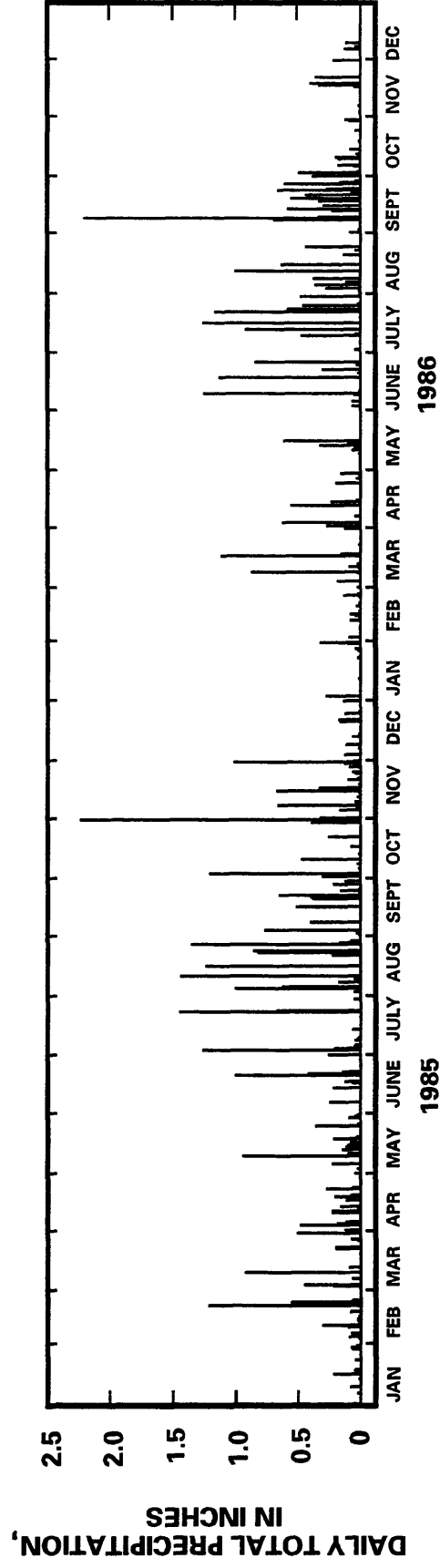
Continuous discharge records for the East River gage at Monroe Street and the Bower Creek gage at Sunnyview Road were required for computation of the daily sediment and phosphorus loads transported past these sites. A listing of the gaging stations and monitoring sites in the study is included in table 2. Discharge at the East River site was computed using velocity and stage data recorded at the gage (040851378) located 0.23 mi upstream from the mouth. Velocity was measured using an acoustic velocity meter (AVM). Velocities measured using the AVM were used directly, without verification, in the discharge computation. Discharge measurements at Bower Creek (04085118) were made to determine the relation of stream stage to discharge. This relation was used to translate the recorded stream stage to discharge (Rantz and others, 1982). Partial discharge records for the East River at State Highway 32 (04085110) were obtained using the stage to discharge method (Rantz and others, 1982). Daily streamflow data for the East River at Monroe Street in Green Bay and Bower Creek at Sunnyview Road near De Pere are listed in Appendix B for 1985-86 and are shown in figures 3 and 4. Daily streamflow data for the East River at State Highway 32 for June-October 1985 are also listed in Appendix B.

Streamflow characteristics for the 1986 water year for the East River at Monroe Street in Green Bay, Bower Creek at Sunnyview Road near De Pere, and the Kewaunee River near Kewaunee are summarized in table 3. Based upon the

**Table 1.--Monthly precipitation summary for Green Bay, 1985-86**

(National Oceanic and Atmospheric Administration, 1985, 1986)  
[all units are inches]

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1985 precipitation	0.86	2.55	2.70	2.24	2.58	2.21	4.03	8.03	3.65	2.72	4.96	1.83	38.36
Departure from normal 1951-80	-.33	1.50	.80	-.46	-.55	-.96	.78	4.87	.48	.62	3.20	.41	+10.36
1986 precipitation	.60	.83	2.48	2.26	1.15	4.06	4.95	3.85	7.51	1.89	1.27	.48	31.33
Departure from normal 1951-80	-.59	-.22	.58	-.44	-1.98	.89	1.70	.69	4.34	-.21	-.49	-.94	+3.33



**Figure 2.** Daily total precipitation at Austin Straubel Field in Green Bay, 1985-1986.

**Table 2.--Gaging stations and monitoring sites referenced in this report**

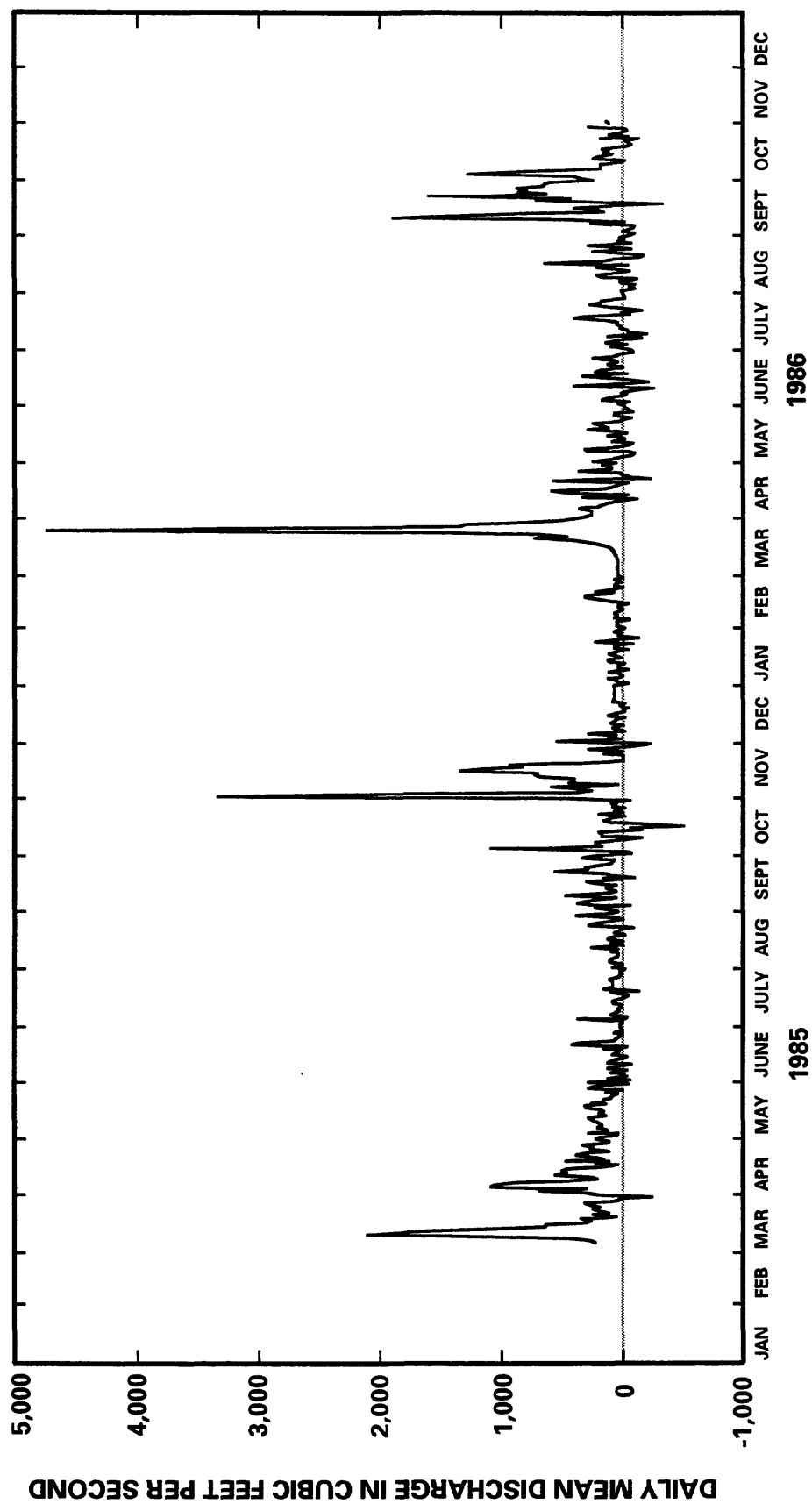
Stream	Location	Station number
Bower Creek	at Sunnyview Road near De Pere	04085118
East River	at Monroe Street in Green Bay	040851378
	at Allouez Avenue bridge at Allouez	04085129
	at State Highway 32 near De Pere	04085110
Fox River	at mouth at Green Bay	04085139
	at Rapide Croche Dam near Wrightstown	04084500
	at Schmidt Oil Dock at Green Bay (upper)	443217088000901
	at Schmidt Oil Dock at Green Bay (lower)	443217088000902
Kewaunee River	near Kewaunee	04085200

**Table 3.--Summary of streamflow characteristics for East River at Monroe Street in Green Bay, Bower Creek near De Pere, and Kewaunee River near Kewaunee**

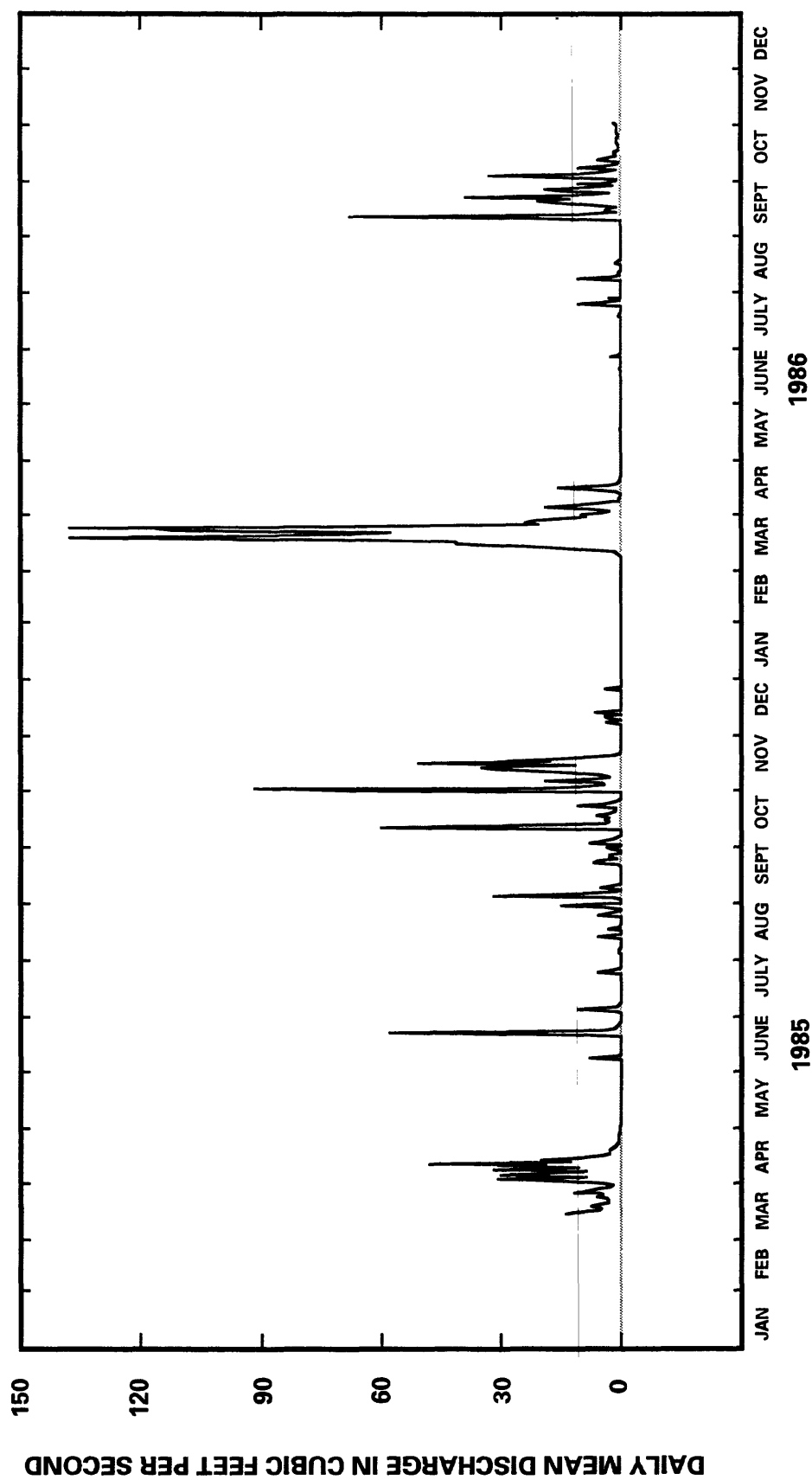
Streamflow characteristic	(040851378) East River at Monroe Street in Green Bay (1986 water year)	(04085118) Bower Creek at Sunnyview Road near De Pere (1986 water year)	(04085200) Kewaunee River near Kewaunee 1986 1967-86 water year	
Average discharge, in cubic feet per second	185	6.0	176	85.8
Inches of runoff	17.32	16.89	18.79	9.17
Minimum 7-day mean low flow, in cubic feet per second	--	--	20	6.3
Peak discharge, in cubic feet per second	4,740	138	5,550	6,500
Date of peak	3/26/86	3/19/86	3/26/86	3/30/60
2 year, 7-day low flow <sup>1</sup>	--	--	--	7.8
10 year, 7-day low flow <sup>1</sup>	--	--	--	12
2-year flood <sup>2</sup>	--	--	--	2,700
5-year flood <sup>2</sup>	--	--	--	4,400
10-year flood <sup>2</sup>	--	--	--	5,500

<sup>1</sup> The annual 7-day minimum flow will be less than or equal to the n-year 7-day low flow on the average once every n-years.

<sup>2</sup> The annual instantaneous peak discharge will be greater than or equal to the n-year flood on the average once every n-years.



**Figure 3.** Daily mean discharge for East River at Monroe Street in Green Bay, 1985-1986.



**Figure 4.** Daily mean discharge for Bower Creek at Sunnyview Road near De Pere, 1985-1986.

discharges for the Kewaunee River at Kewaunee (04085200) (Holmstrom and others, 1987), annual mean discharge for the 1986 water year was greater than twice the average for the 20-year period 1967-86. The maximum instantaneous discharge was slightly greater than a 10-year recurrence interval flood estimated by Conger (written commun., 1989).

The minimum 7-day low flow in 1986 was greater than the 2-year, 7-day low flow and was at about the 75 percent flow-duration level. In general, the annual minimum 7-day low flow will be less than or equal to the 2-year, 7-day low flow on average once every 2 years.

The use of an AVM for continuously measuring the velocity of the East River at Monroe Street in Green Bay was the only available method for determining the instantaneous discharge because of flow reversals. Accumulation of the water volume by a datalogger allowed flow proportional sampling for both downstream and upstream directions. A Westinghouse Model 801 Leading Edge Flow Meter<sup>1</sup> was used in this study. This instrument uses the time-of-travel method to determine the velocity between two points. One pair of 200 kilohertz transducers was securely mounted on opposite shores on a diagonal path 45 degrees to the centerline of the channel flow. A second pair of transducers was placed perpendicular to the first path. This crossed path was used to determine if an error in the angularity of the streamlines occurred during reverse flow in the channel (Laenen and Smith, 1983).

A major period of AVM interruption occurred during the March 1986 runoff. Submerged debris snagged the transducer cables and tore the cables from the transducers. Therefore, the discharge for the period from March 1 through April 10, 1986, was estimated from the daily discharge record of the Kewaunee River (04085200). The Kewaunee River was selected for comparison because it is close to the study area and has similar drainage-basin size (127 mi<sup>2</sup>).

## **WATER-QUALITY DATA**

### **Chemical and Physical Characteristics**

The chemical composition of suspended and dissolved solids and their discharge-weighted concentrations for samples taken in the East River and Bower Creek were measured as part of this study. A local observer collected daily water-quality samples from the East River at State Highway 32 near De Pere from May 1 through October 10, 1985. The samples were frozen until analysis. The samples were analyzed by the Robert E. Lee Labs in Green Bay for total phosphorus, BOD-5, and total suspended solids. Samples not used by Lee Labs were sent to the U.S. Geological Survey sediment lab in Iowa City, Iowa, for analysis of suspended sediment. Numerous samples were manually collected using the equal-width-increment method described by Guy and Norman (1970) to insure that the automatically collected samples represented average conditions in the stream cross section. Table 4 lists the ranges and means of constituent concentrations for each site for samples analyzed in 1985 and 1986. Data for the East River at Allouez Avenue bridge at Allouez and at State Highway 32 near De Pere are from the biweekly baseline sampling. Additional samples were collected daily from May 1 through October 1985 for the East River at State Highway 32 near De Pere. These samples were kept frozen until analysis by the University of Wisconsin-Green Bay. Data for the East River at Monroe Street in Green Bay and for Bower Creek at Sunnyview Road near De Pere include the baseline sample analyses and the event analyses. Bower Creek at Sunnyview Road near De Pere had the highest mean and high values for all constituents except chlorophyll *a*.

### **Total Phosphorus and Suspended Sediment**

Chemical data and suspended-sediment concentrations for all sites are listed in Appendix C. Daily suspended-sediment and total-phosphorus

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<sup>1</sup>Trade names are used for descriptive purposes only and do not constitute endorsement by the United States Geological Survey.

**Table 4.--Ranges and means of constituent concentrations for 1985 and 1986**

[mg/L, milligrams per liter; c/100 mL, count per 100 milliliters; mg/m<sup>3</sup>, milligrams per cubic meter; n, number of samples; --, no data available]

Constituent	Statistic	Site 1 East River at Monroe Street	Site 2 East River at Allouez Avenue Bridge	Site 3 East River at State Highway 32	Site 3 <sup>1</sup> East River at State Highway 32	Site 4 Bower Creek at Sunnyview Road
March-December 1985						
BOD-5 (mg/L)	n	96	19	19	--	84
	maximum	11	4.1	7.2	--	100
	mean	4.8	2.9	3.4	--	7.4
	minimum	2.1	1.7	1.5	--	1.2
Total phosphorus (mg/L)	n	144	18	18	76	132
	maximum	1.91	1.14	.936	1.15	2.18
	mean	.347	.419	.424	.340	.855
	minimum	.092	.304	.225	.081	.074
Fecal coliform (c/100 mL)	n	29	19	19	--	33
	maximum	1,400,000	6,300	72,000	--	2,700,000
	mean	57,000	1,600	9,200	--	150,000
	minimum	50	60	27	--	66
Fecal streptococcus (c/100 mL)	n	29	19	19	--	18
	maximum	530,000	5,400	91,000	--	650,000
	mean	21,000	880	7,900	--	110,000
	minimum	11	60	140	--	50
Chlorophyll a (mg/m <sup>3</sup> )	n	18	18	18	--	18
	maximum	71.5	45.6	42.4	--	91.6
	mean	35.2	17.4	11.4	--	15.3
	minimum	.2	.3	.2	--	.3
Total Kjeldahl nitrogen (mg/L)	n	--	--	--	76	--
	maximum	--	--	--	5.31	--
	mean	--	--	--	1.97	--
	minimum	--	--	--	.65	--
January-October 1986						
BOD-5 (mg/L)	n	164	2	--	--	66
	maximum	11	2.5	--	--	14
	mean	3.1	2.4	--	--	6
	minimum	.2	2.2	--	--	1.5



**Table 4.--Ranges and means of constituent concentrations for 1985 and 1986--Continued**

Constituent	Statistic	Site 1 East River at Monroe Street	Site 2 East River at Allouez Avenue Bridge	Site 3 East River at State Highway 32	Site 3 <sup>1</sup> East River at State Highway 32	Site 4 Bower Creek at Sunnyview Road
January-October 1986--Continued						
Total phosphorus (mg/L)	n	243	2	--	--	90
	maximum	.943	.272	--	--	6.58
	mean	.242	.230	--	--	.973
	minimum	.029	.188	--	--	.065
Fecal coliform (c/100 mL)	n	22	2	--	--	18
	maximum	22,000	100	--	--	720,000
	mean	3,900	89	--	--	50,000
	minimum	20	77	--	--	64
Fecal streptococcus (c/100 mL)	n	22	2	--	--	18
	maximum	730,000	44	--	--	730,000
	mean	54,000	42	--	--	100,000
	minimum	12	40	--	--	16
Chlorophyll <i>a</i> (mg/m <sup>3</sup> )	n	12	2	--	--	11
	maximum	98.7	25.4	--	--	122
	mean	51.0	16.2	--	--	26.8
	minimum	2.8	6.9	--	--	.8

<sup>1</sup>Analysis by UW Green Bay - samples frozen until analyzed.

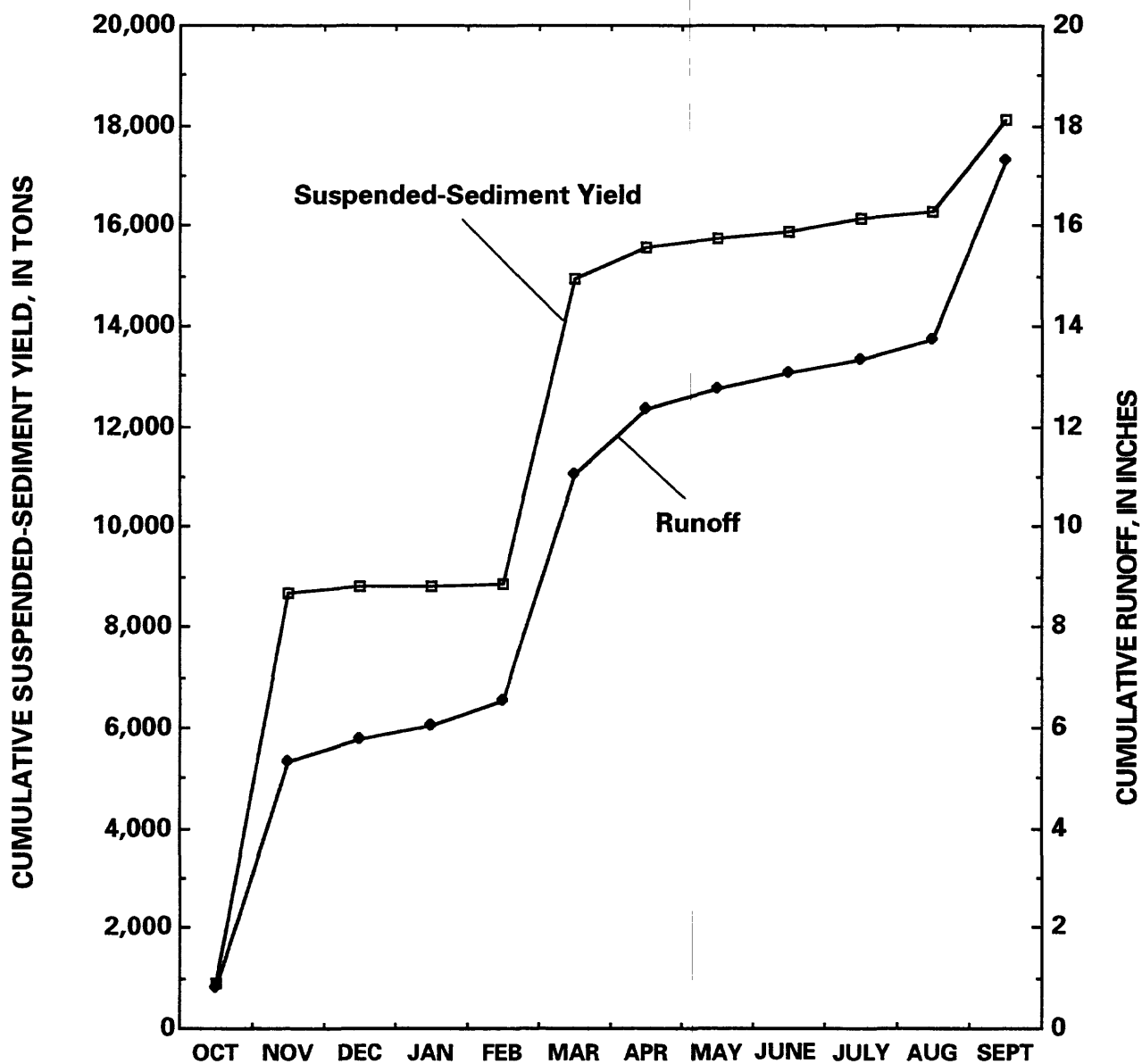
loads for the East River at Monroe Street in Green Bay and State Highway 32 near De Pere and Bower Creek at Sunnyview Road near De Pere (given in Appendix D) were computed by streamflow and concentration integration techniques described by Porterfield (1972).

The largest suspended-sediment and total-phosphorus loads were observed for the East River at Monroe Street in Green Bay during the periods November 1-4, 1985, and March 25-28, 1986. As measured at the gaging station, 27 and 55 percent of the suspended sediment and 21 and 37 percent of the total phosphorus were transported within those periods for 1985 and 1986, respectively. At Bower Creek at Sunnyview Road near De Pere, 31 percent of the suspended-sediment load for 1985 was transported during one storm from June 21-25, and 19 percent of the total-phosphorus load for 1985 was transported during a second storm (November 1-4). In 1986,

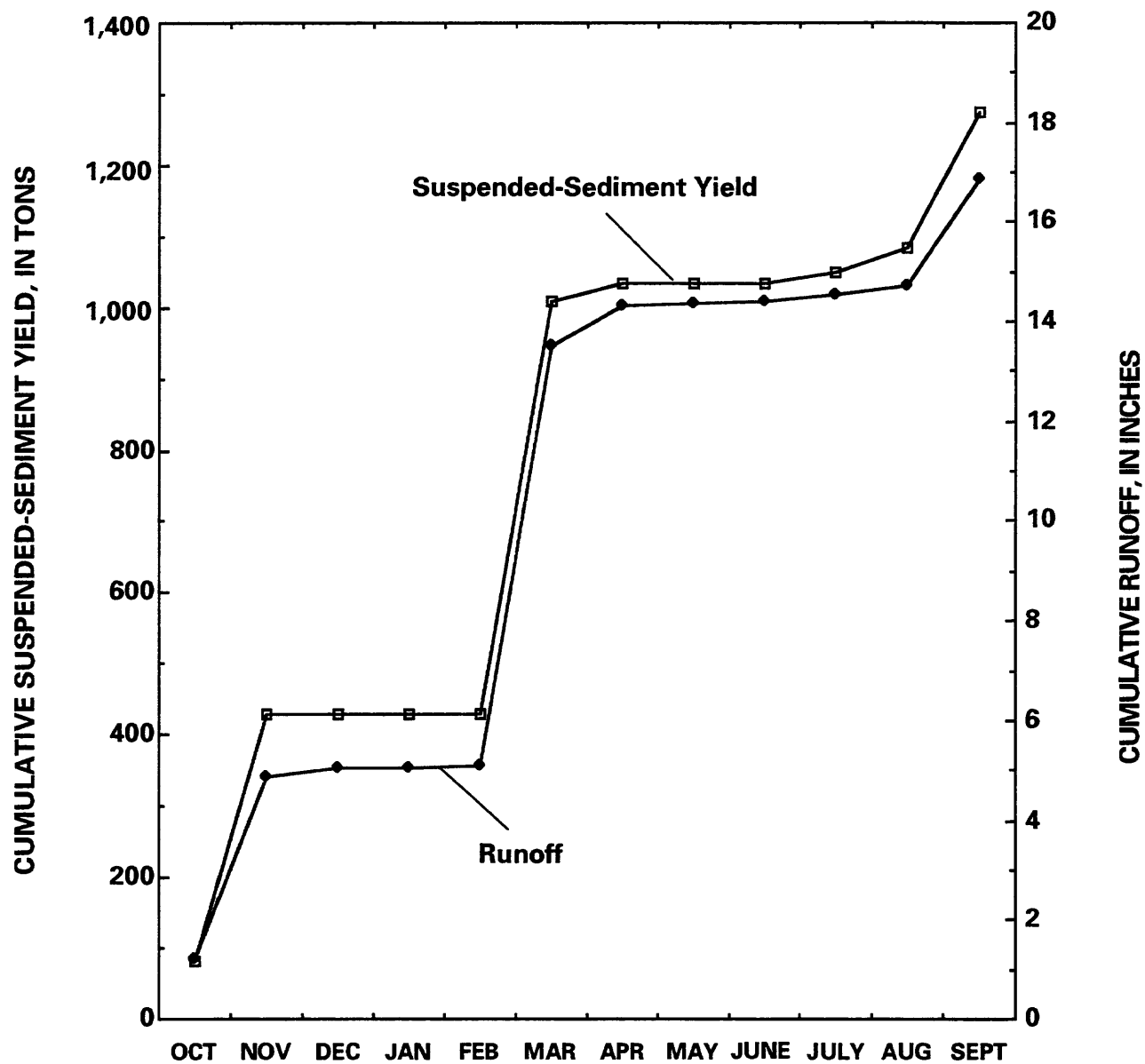
one storm (March 16-26) had 63 percent of the suspended sediment and 38 percent of the total phosphorus transported.

Graphs were constructed to analyze the 1986 water year loading characteristics for the East River at Monroe Street in Green Bay and Bower Creek at Sunnyview Road near De Pere. By plotting the cumulative monthly sediment and phosphorus yield (figs. 5-6) versus time, seasonal changes in loadings become apparent and comparisons can be made between stations. The curves for suspended sediment show a steeper slope for the Bower Creek data and highlight the major contributing period during March 1986. The slopes for total-phosphorus loading are somewhat similar except for the extremely steep segment on Bower Creek during July 1986.

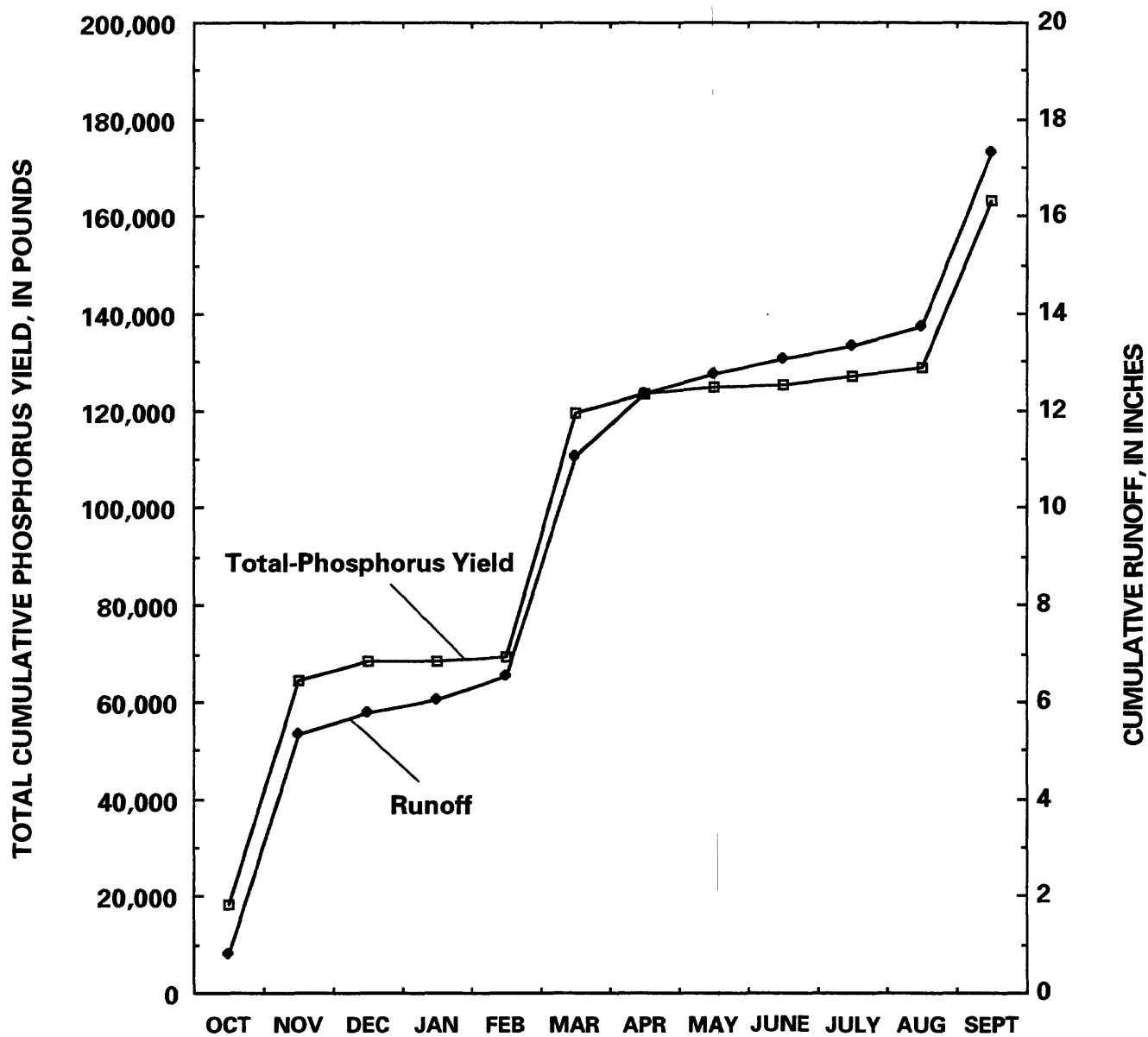
The particle-size distribution of the suspended sediments for the East River at Monroe Street in



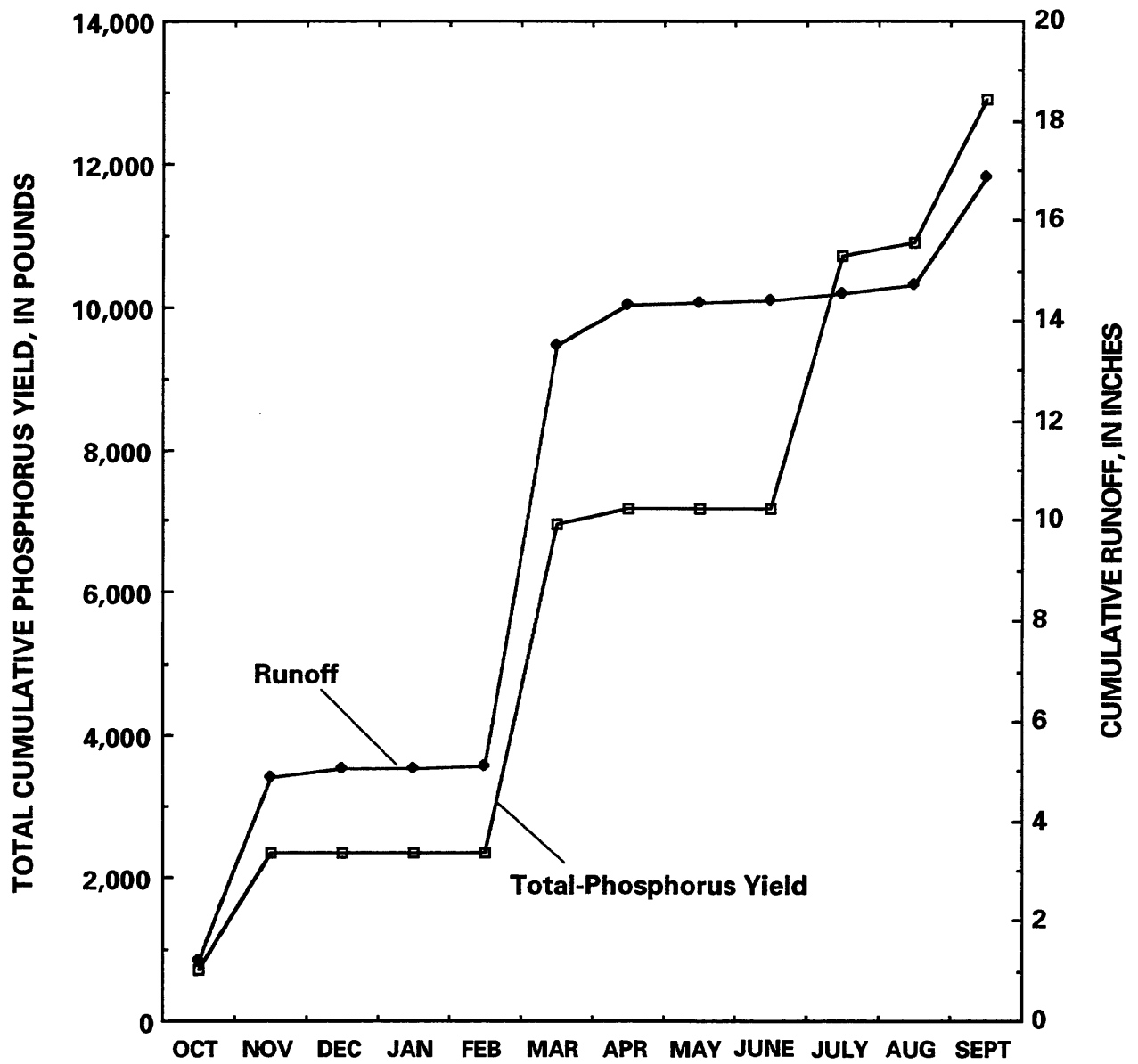
**Figure 5a.** Cumulative monthly runoff and total suspended-sediment yield for East River at Monroe Street in Green Bay, water year 1986.



**Figure 5b.** Cumulative monthly runoff and total suspended-sediment yield for Bower Creek at Sunnyview Road near De Pere, water year 1986.



**Figure 6a.** Cumulative monthly runoff and total-phosphorus yield for East River at Monroe Street in Green Bay, water year 1986.



**Figure 6b.** Cumulative monthly runoff and total-phosphorus yield for Bower Creek at Sunnyview Road near De Pere, water year 1986.

Green Bay shows no appreciable difference between samples taken during downstream flow and samples taken during upstream flow. Table 5 summarizes the data for the large volume composite samples that were taken during 1985. For the periods monitored, more than 98 percent

of the suspended sediment was less than 0.062 mm (millimeters) in size. Approximately 65 percent of the suspended sediment was less than 0.004 mm (considered within the clay-sized range of particles).

**Table 5.--Particle-size distribution of suspended sediment for East River at Monroe Street in Green Bay, 1985**

[mm, millimeter; --, not determined]

Period	Flow direction	Suspended sediment					
		Percent finer than 0.062 mm	Percent finer than 0.031 mm	Percent finer than 0.016 mm	Percent finer than 0.008 mm	Percent finer than 0.004 mm	Percent finer than 0.002 mm
4/1 - 5/20/85	Downstream	99	96	91	83	68	52
4/1 - 5/20/85	Upstream	99	--	89	--	64	47
7/1 - 8/1/85	Downstream	97	--	88	83	67	53
7/1 - 8/1/85	Upstream	98	--	90	--	65	48

A summary of the sediment and phosphorus yields for the East River at Monroe Street in Green Bay and the Bower Creek at Sunnyview Road

near De Pere subbasin for the 1986 water year and the 1974-81 average yields for the Fox River at Wrightstown is shown below.

Site	Suspended-sediment yield [(ton/mi <sup>2</sup> )/yr]	Total-phosphorus yield [(lb/mi <sup>2</sup> )/yr]
East River at Monroe Street in Green Bay	125	1,130
Bower Creek at Sunnyview Road near De Pere	264	2,680
Fox River at Rapide Croche Dam near Wrightstown	16	172

Previous estimates of 14.6 (ton/mi<sup>2</sup>)/yr (tons per square mile per year) for sediment and 111 (lb/mi<sup>2</sup>)/yr (pounds per square mile per year) for phosphorus (Fox Valley Water Quality Planning Agency, 1985) are significantly less than the values determined during this study. The computed sediment load (125 (ton/mi<sup>2</sup>)/yr) from the East River for water year 1986 is eight times larger than the estimated 16 (ton/mi<sup>2</sup>)/yr average yields (1974-81) for the Lower Fox River near Wrights-

town (Smith and others, 1982). The computed phosphorus load from the East River is seven times larger than the estimated average yield (1974-81) for the Fox River. Even though the discharge for the East River during 1986 was approximately twice that for an average year, the East River still contributes a disproportionately large share of the suspended-sediment and total-phosphorus yield to the Fox River basin when compared to the Fox River data available for the

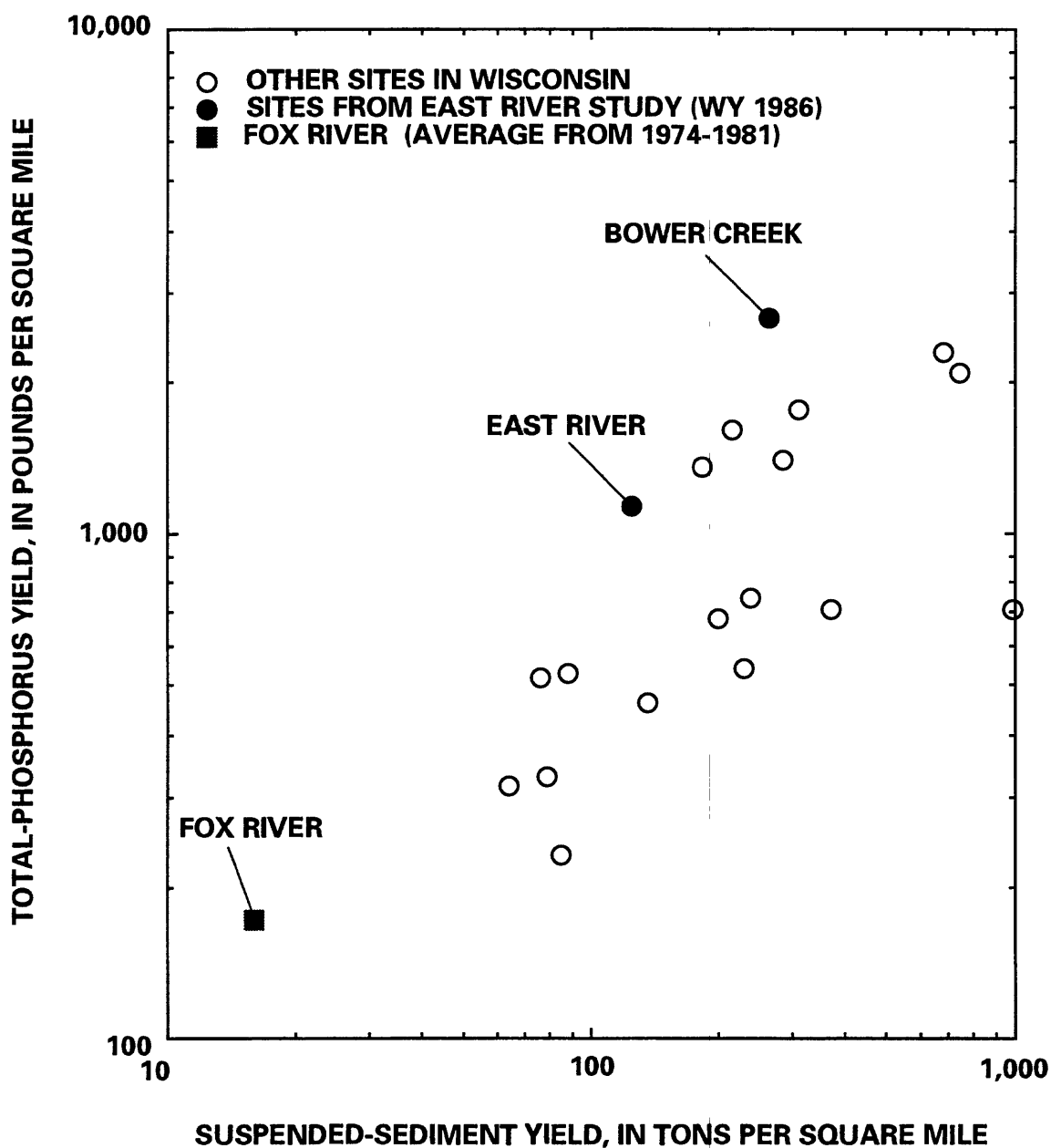
Wrightstown gaging station. East River sediment and phosphorus yields for water year 1986 and yields measured at other Wisconsin gaging stations (Field and Duerk, 1988) are shown in figure 7 and listed in table 6. The data plotted in figure 7 show that the Fox River near Wrightstown has

the lowest sediment and phosphorus yields of the listed sites but also has the largest total drainage area (6,010 mi<sup>2</sup>). The East River shows a slightly higher yield of total phosphorus when compared to the other sites. The highest total-phosphorus yield of all the listed sites was for Bower Creek.

**Table 6.--Suspended-sediment and total-phosphorus data for nonpoint-source gaging stations in Wisconsin**

[mi<sup>2</sup>, square mile; --, no data available]

Station	Drainage area (mi <sup>2</sup> )	Water year	Suspended sediment (tons per square mile)	Total phosphorus (pounds per square mile)
Steiner Branch	5.90	1978	369	707
		1979	85	231
Bruce Valley	10.10	1980	215	1,600
Elk Creek	99.70	1980	184	1,350
Onion River-Hingham	37.20	1979	79	331
		1980	64	317
Onion River-Sheboygan Falls	94.10	1979	88	528
		1980	76	517
Madden Branch	15.10	1981	239	749
		1982	684	2,290
Madden Branch tributary	2.83	1981	229	542
		1982	740	2,070
Pats Creek	5.40	1981	200	682
		1982	310	1,750
Apple River	9.30	1981	137	463
		1982	284	1,400
Yellowstone River	28.50	1978	220	--
		1979	54	--
White Creek	3.05	1982	983	710
Bower Creek	4.89	1986	264	2,680
East River	145.00	1986	125	1,130
Fox River-Wrightstown	6,050.00	1974-81	16	172



**Figure 7.** Relation of suspended-sediment and total-phosphorus yields for U.S. Geological Survey nonpoint-source gaging stations.



For the Bower Creek subbasin, the computed sediment yields are 2.1 times greater than those for the East River, and the phosphorus yields are 2.4 times greater. Smaller watersheds typically have higher yields on an areal unit basis (Field, 1985), and the relative areas of the two watersheds indicate that yields for the Bower Creek basin should be about twice as high as those for the East River.

Cropland erosion in the Bower Creek basin appears to be a more serious problem than in the East River basin. Soil Conservation Service (SCS) estimates indicate that 40 to 50 percent of the cropland in the Bower Creek basin has a high erosion potential (around 6 tons/acre)(Fox Valley Water Quality Planning Agency, 1985). Only 23 percent of the East River basin is estimated to have a similarly high erosion potential. Based on preliminary SCS observations (Fox Valley Water Quality Planning Agency, 1985), the Bower Creek basin appears to have problems with channel and stream-bank erosion.

## **Dissolved Oxygen and Water Temperature**

Dissolved-oxygen concentrations and water temperature were monitored at three locations in the East River, at Bower Creek, and at one site on the Fox River during the 1985 field season. Reliable data were not obtained at the Allouez site until after August 1, 1985, because of equipment malfunctions. The daily mean dissolved-oxygen concentrations at the gage at Monroe Street in Green Bay were 2 to 3 mg/L (milligrams per liter) higher than at either the Allouez Avenue bridge or the State Highway 32 locations throughout the June through October 1985 period. The lowest daily mean concentrations of 1.7 mg/L occurred in June and July when water temperatures exceeded 25°C. Figure 8 shows the daily mean dissolved oxygen concentrations for the three East River sites for the period June-October 1985. The figure shows that dissolved-oxygen concentrations decrease with increasing distance upstream from the mouth. Appendix E lists daily maximum, minimum, and mean dissolved-oxygen concentrations for all the sites, including Bower Creek at Sunnyview Road near De Pere and the Fox River at the Schmidt Oil Dock. The daily maximum, minimum, and mean water temperatures for all the

sites monitored during 1985 are listed in Appendix F. The daily mean temperatures for the period of record and the mean daily dissolved oxygen for all the sites are shown in figures 8 to 14.

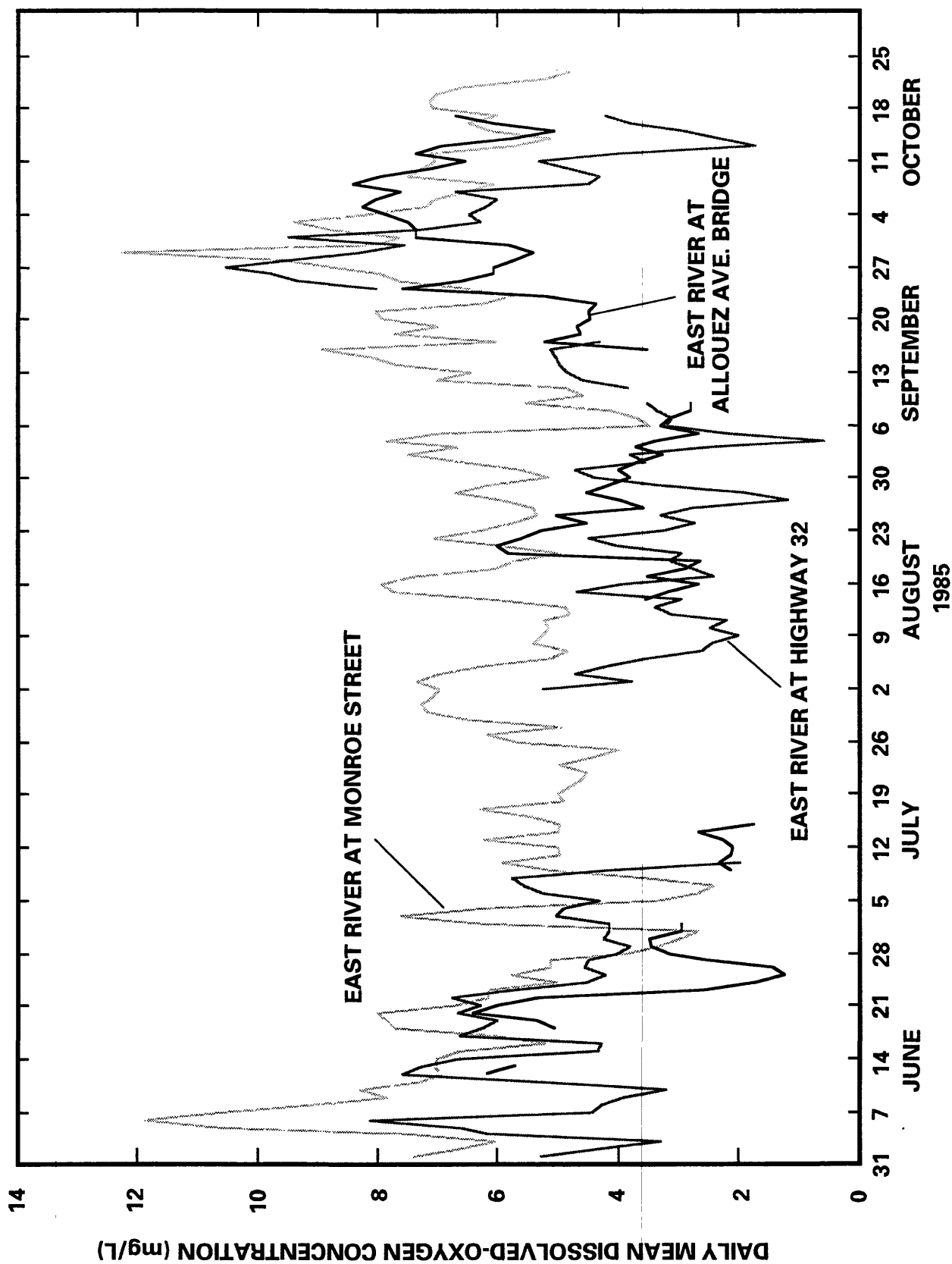
Dissolved oxygen and temperature were measured close to the top and bottom of the channel at the Schmidt Oil Dock near the mouth of the Fox River from August through October 1985. The daily mean dissolved oxygen for the upper site at the Schmidt Oil Dock and the East River at Monroe Street in Green Bay are shown in figure 15. It was expected that the ranges of concentrations would be similar between these sites because both locations are subject to reverse flow and are relatively close together. The daily mean dissolved-oxygen concentration for the East River prior to September was higher, and after September the Fox River concentration was higher.

Minimum instantaneous dissolved-oxygen concentrations in the East River at Monroe Street were commonly less than 5 mg/L throughout the study period; some concentrations were as low as 1 to 2 mg/L. Daily dissolved-oxygen concentrations fluctuated within as much as a 5 to 10 mg/L range between the minimum and maximum values. Dissolved-oxygen concentrations in Bower Creek at Sunnyview Road were also frequently less than 5 mg/L; the lowest concentrations were in the 1 to 2 mg/L range. The dissolved-oxygen sampling location on Bower Creek at Sunnyview Road was essentially a stagnant pool during periods of minimum discharge. Dissolved oxygen and temperature were measured at Bower Creek from June through October of 1985.

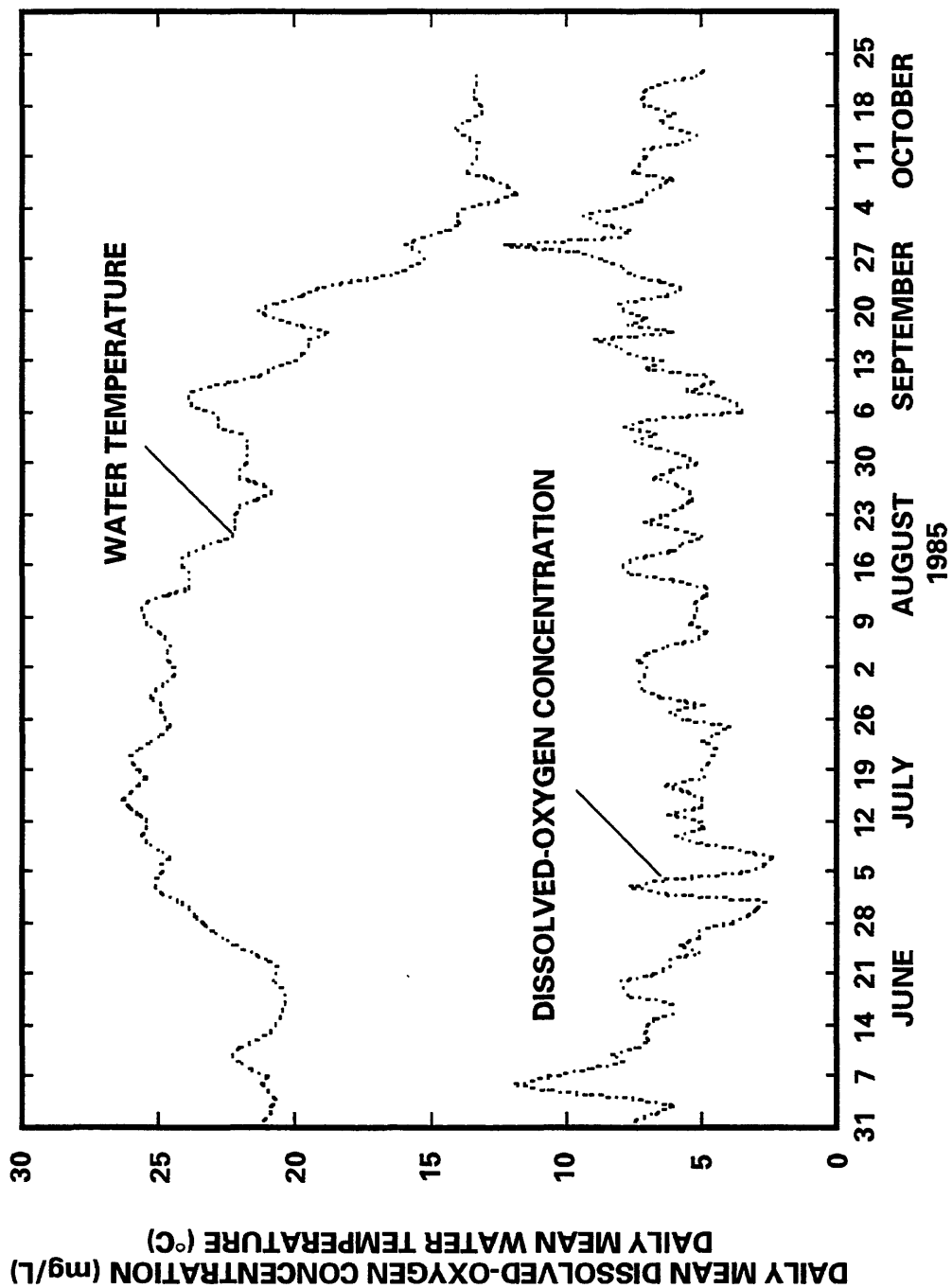
The only gaging station operated for dissolved-oxygen and temperature monitoring during 1986 was the East River at Monroe Street in Green Bay. The data for June-October 1986 is listed in Appendix E and F.

## **Bacteria**

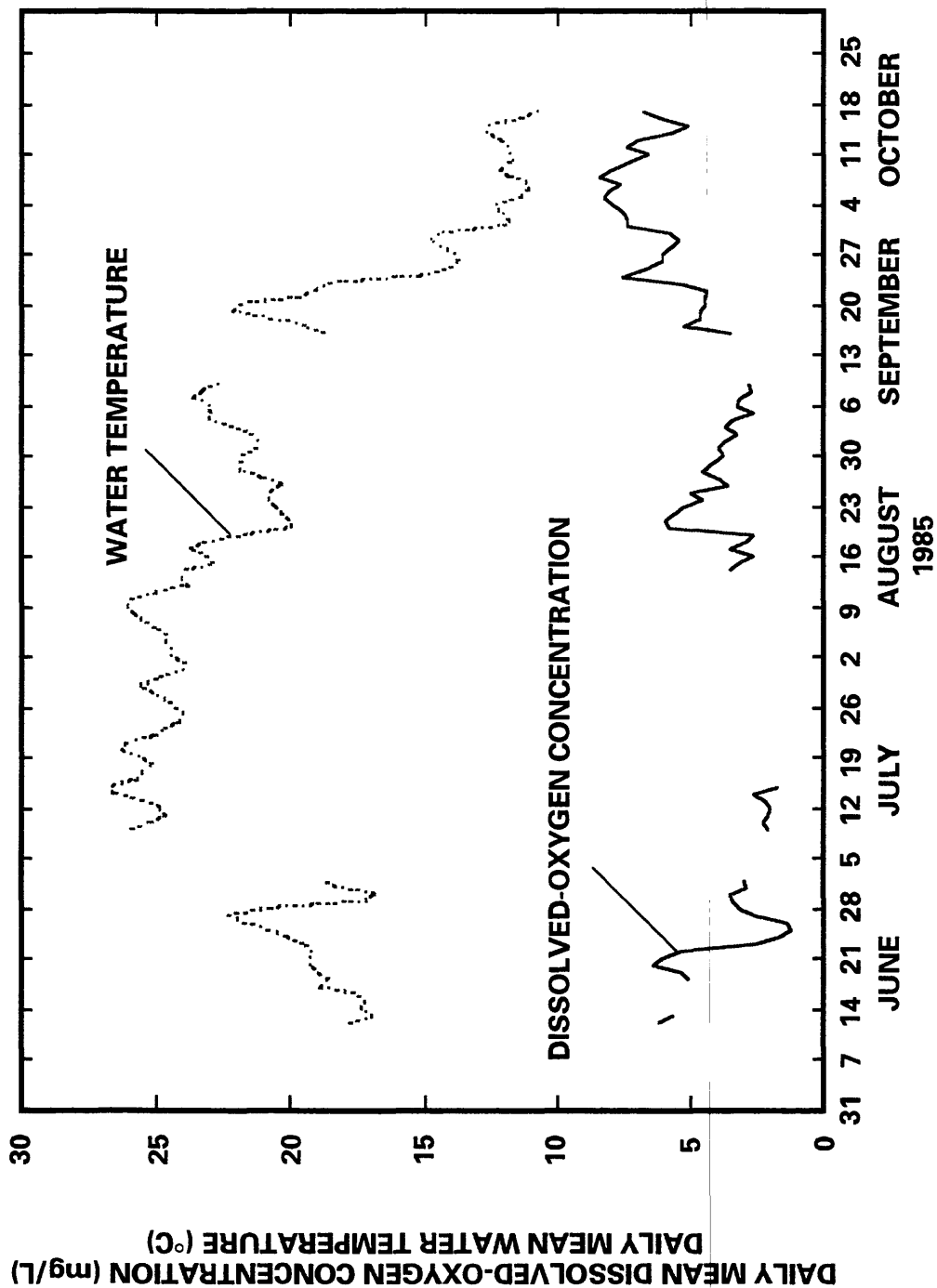
Fecal coliform and fecal streptococcus were monitored biweekly at the three East River locations and the Bower Creek at Sunnyview Road near De Pere location. The East River at Monroe Street in Green Bay and the Bower Creek sites also were sampled during some storm events.



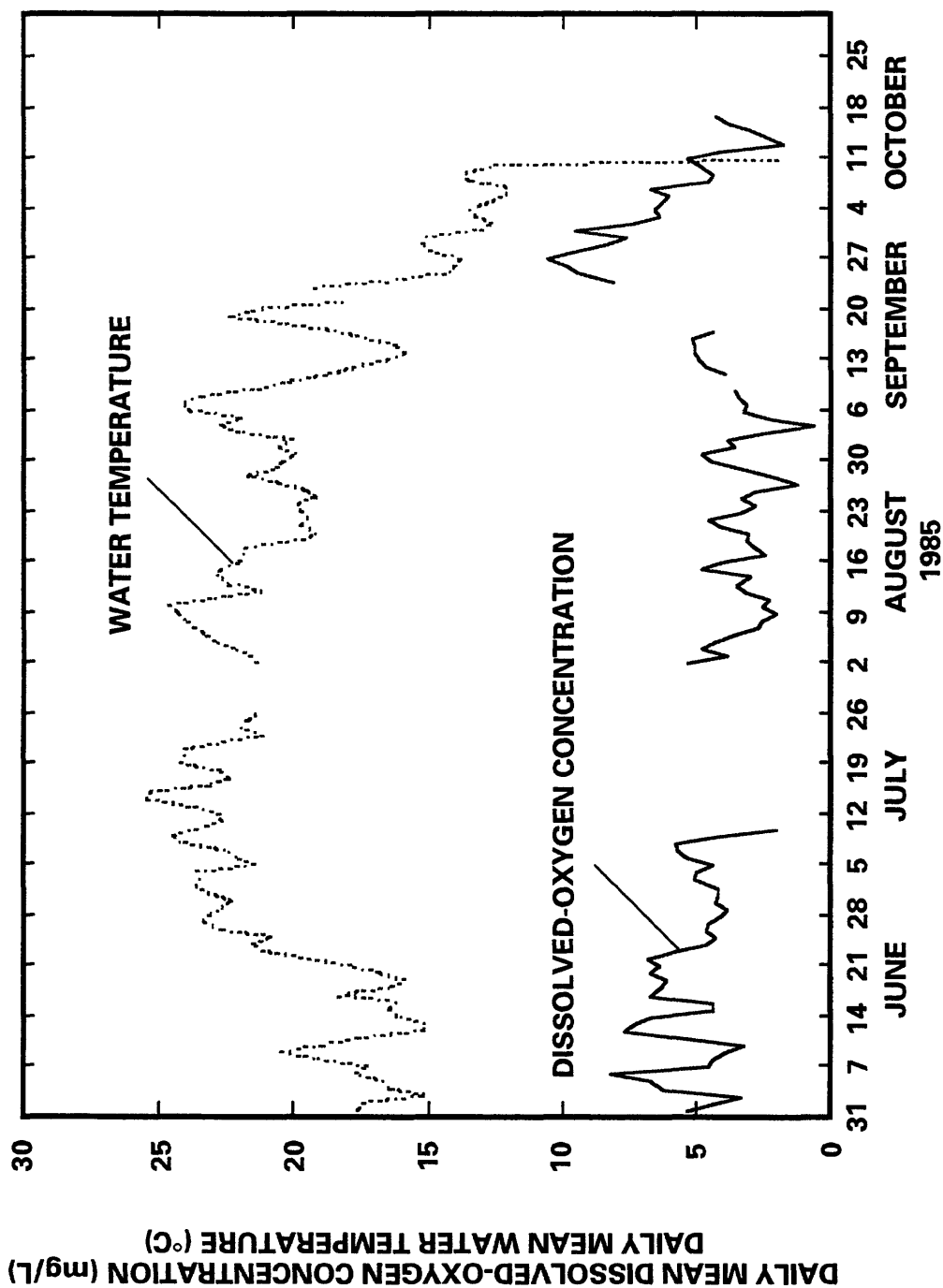
**Figure 8.** Daily mean dissolved-oxygen concentration for East River at Monroe Street in Green Bay, at Allouez Avenue bridge at Allouez, and at State Highway 32 near De Pere, June-October 1985.



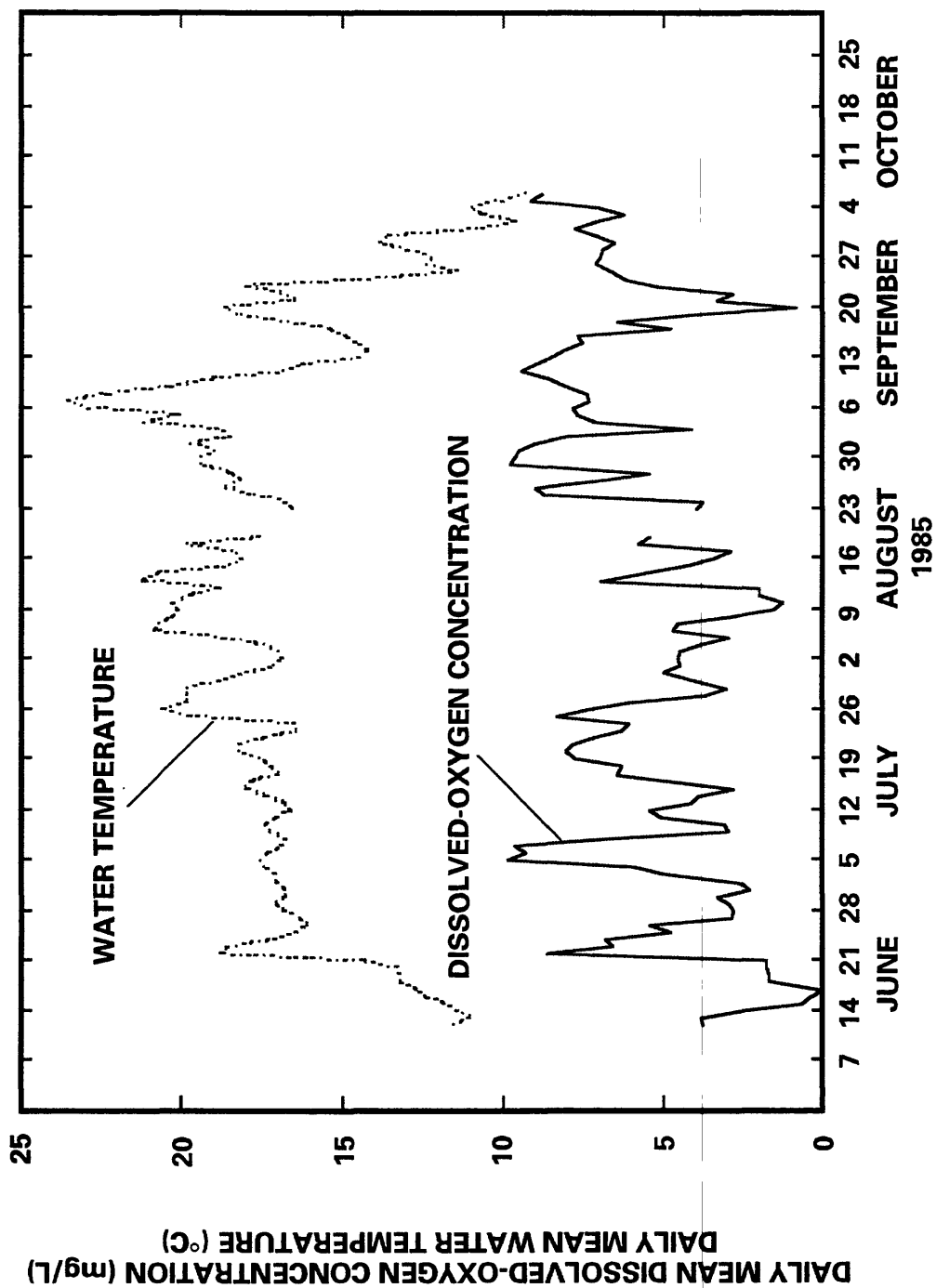
**Figure 9.** Daily mean dissolved-oxygen concentration and daily mean water temperature for East River at Monroe Street in Green Bay, June-October 1985.



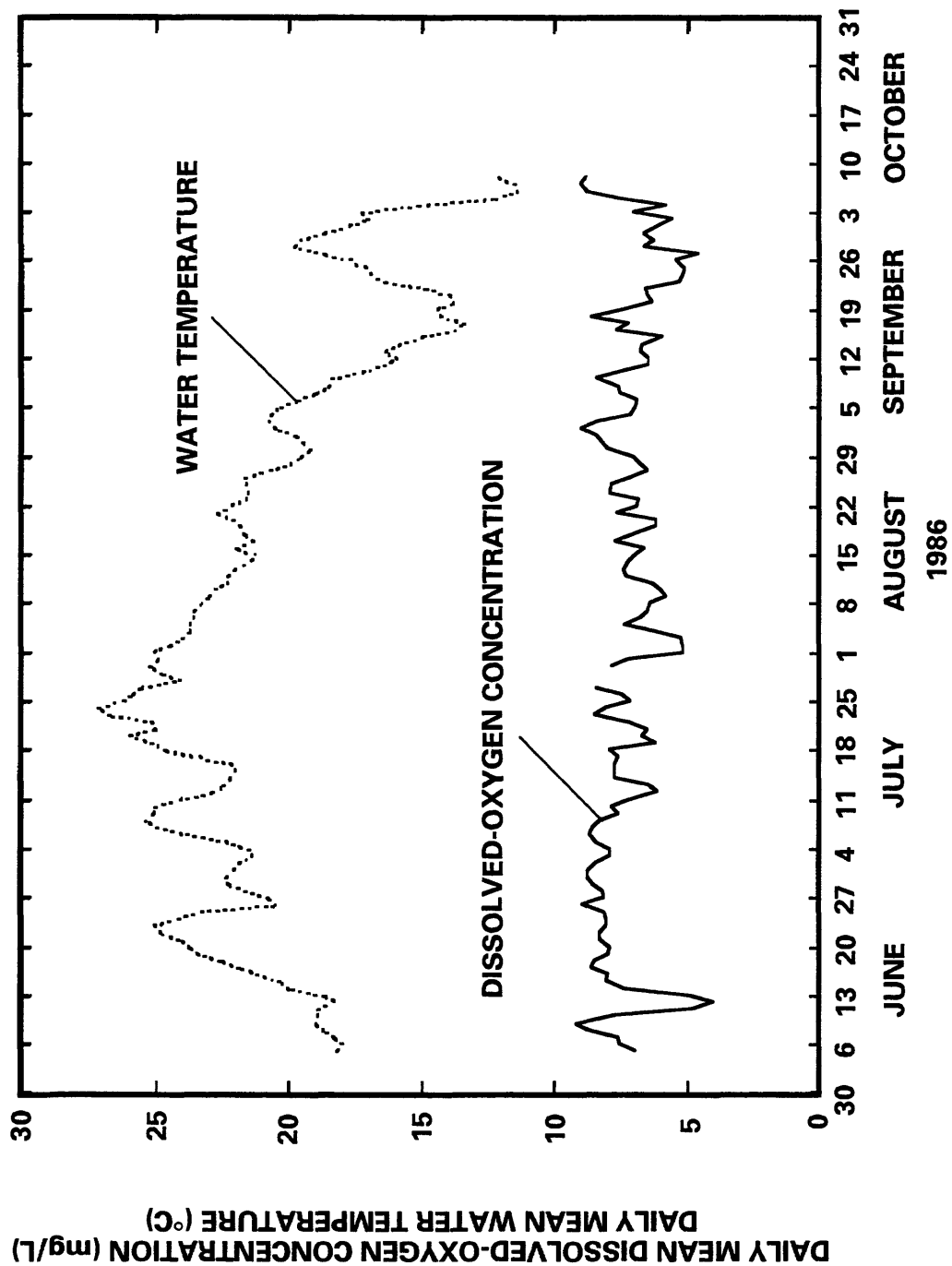
**Figure 10.** Daily mean dissolved-oxygen concentration and daily mean water temperature for East River at Allouez Avenue bridge at Allouez, June-October 1985.



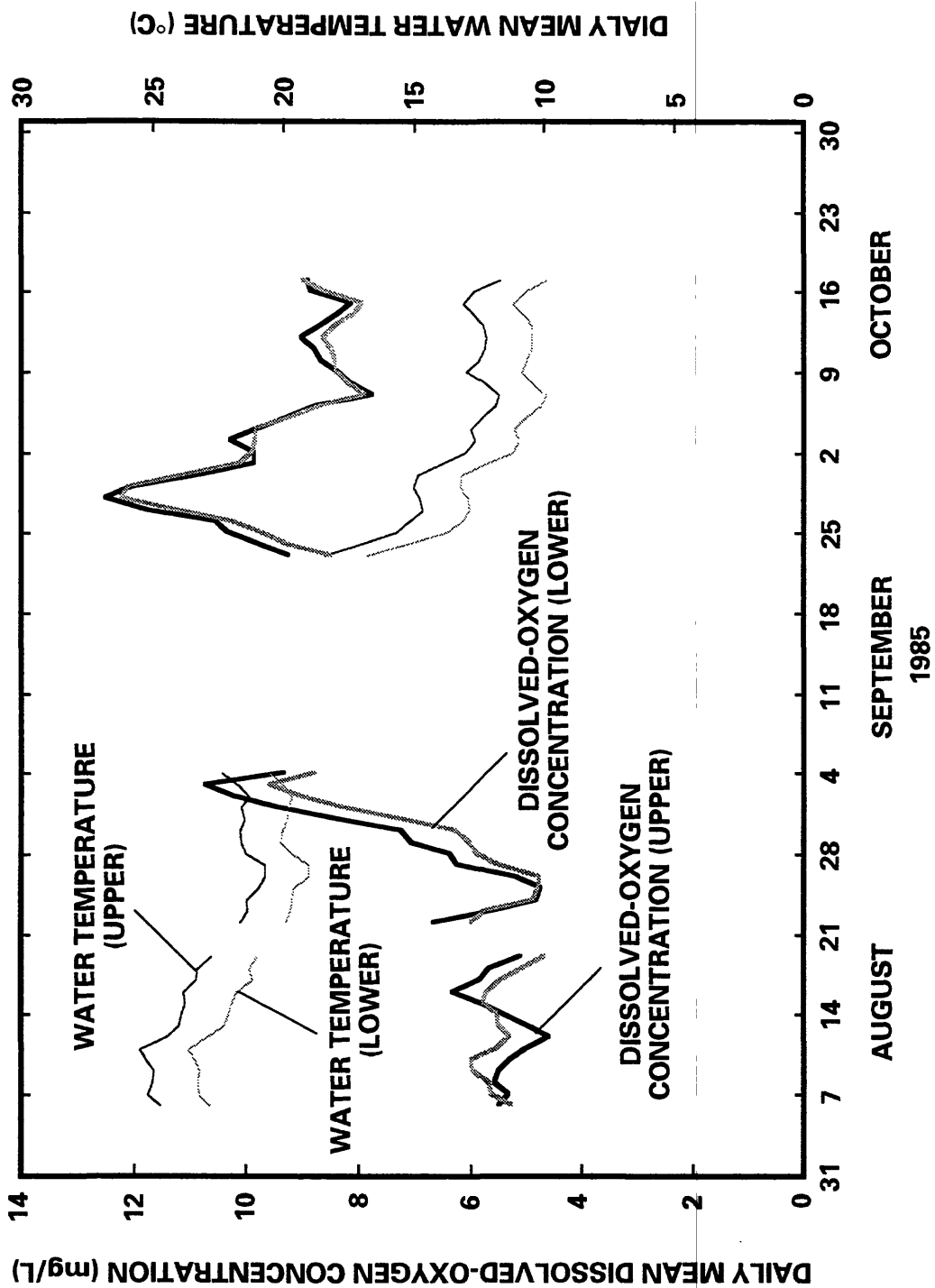
**Figure 11.** Daily mean dissolved-oxygen concentration and daily mean water temperature for East River at State Highway 32 near De Pere, June-October 1985.



**Figure 12.** Daily mean dissolved-oxygen concentration and daily mean water temperature for Bower Creek at Sunnyview Road near De Pere, June-October 1985.

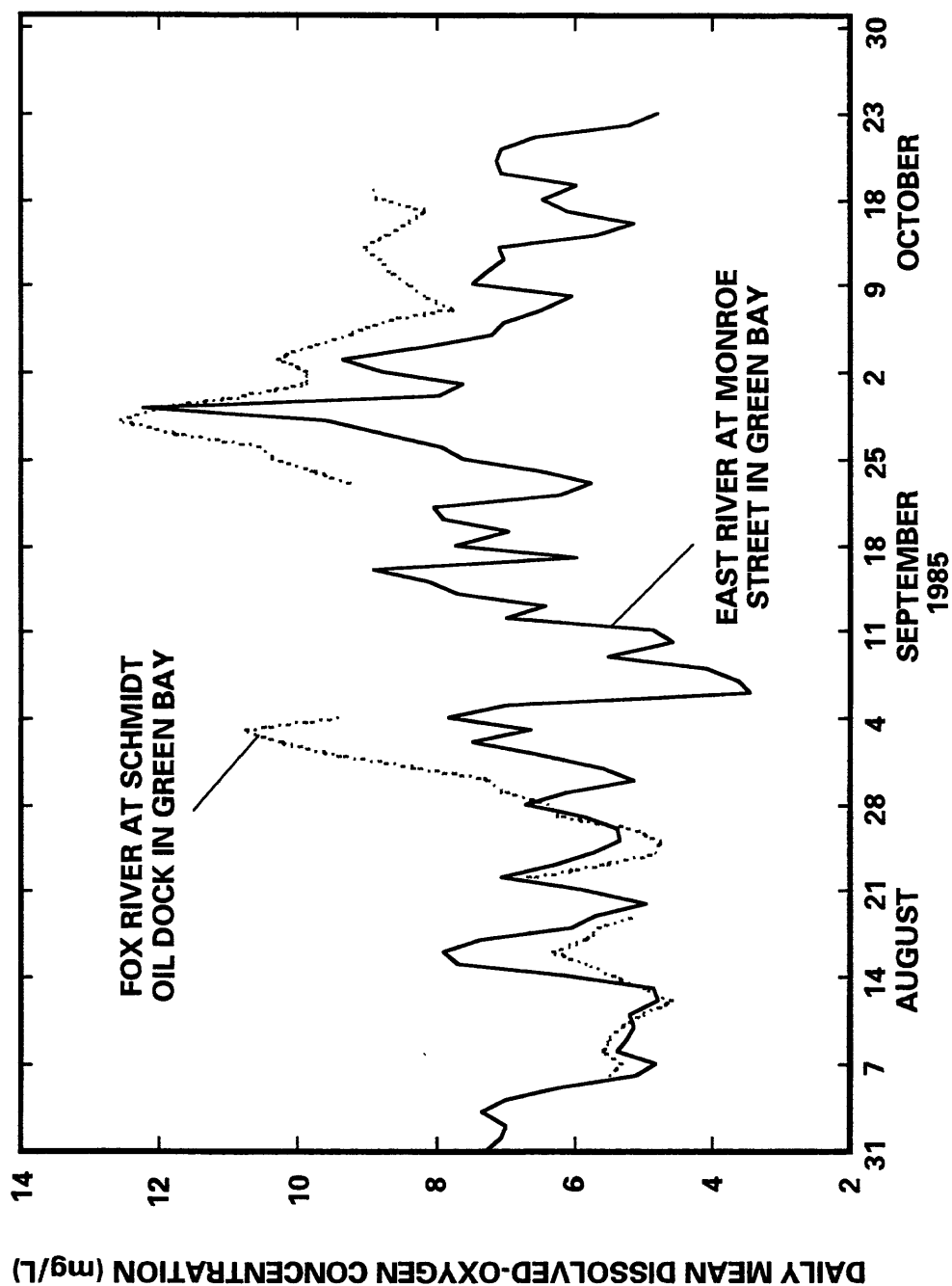


**Figure 13.** Daily mean dissolved-oxygen concentration and daily mean water temperature for East River at Monroe Street in Green Bay, June-October 1986.



**Figure 14.** Daily mean dissolved-oxygen concentration and daily mean water temperature for Fox River at Schmidt Oil Dock (upper and lower sites), in Green Bay, August-October 1985.





**Figure 15.** Daily mean dissolved-oxygen concentration for East River at Monroe Street in Green Bay and Fox River at Schmidt Oil Dock, upper site, in Green Bay, August-October 1985.

Samples from all four sites exceeded the acceptable fecal coliform level (Schuettpeiz, 1969) for recreational water quality of 200 counts per

100 mL for over 50 percent of the samples. A summary of the results follows:

Site	Number of observations	Percent of observations with fecal coliform counts greater than 200 counts/100 mL	Percent of observations with fecal coliform/fecal streptococcus ratio greater than 4.0
East River at Monroe Street in Green Bay	37	76	27
East River at Allouez Avenue bridge	20	65	20
East River at State Highway 32	19	89	11
Bower Creek at Sunnyview Road	46	91	13

The East River at State Highway 32 and Bower Creek had the highest percentage of samples that exceeded the recreational standard. The East River at Monroe Street in Green Bay and at Allouez Avenue bridge had the highest percentage of samples with fecal coliform/fecal streptococcus ratios greater than 4.0. A ratio greater than 4.0 suggests that the bacteria is human in origin, rather than animal (Schuettpeiz, 1967). Because the sites at Green Bay and Allouez are closer to the urbanized portion of Brown County, higher ratios at those sites can be expected. The bacteria concentration data and fecal coliform/fecal streptococcus ratios are listed in Appendix G.

### 5-day BOD and Chlorophyll *a*

Ranges and means of 5-day BOD and chlorophyll *a* concentrations are shown in table 4. Values given for individual sites cannot be readily compared to all other sites because sampling frequency and distribution varied between sites. All sites were sampled biweekly, but the East River at Monroe Street in Green Bay and Bower Creek at Sunnyview Road near De Pere were sampled during many storm events. During the 1985-86 study period, the samples from Bower Creek had the highest mean concentrations for all constituents except chlorophyll *a*, which was higher at the two most downstream East River sites, at Monroe Street and at Allouez Avenue bridge.

### SUMMARY

The U.S. Geological Survey, in cooperation with the Fox Valley Water Quality Planning Commission, collected streamflow and water-quality data from the East River basin in northeast Wisconsin during the period March 1985 through October 1986.

Streamflow for the 1986 water year was greater than twice the 20-year (1967-86) average determined from the gaging station record on the Kewaunee River near Kewaunee. Precipitation was 37 percent greater for 1985 and 12 percent greater for 1986 as determined from the long-term National Oceanic and Atmospheric Administration record at Green Bay (1951-80). Streamflow during the study period ranged from about the 75-percent duration flow at low flow to a peak flow which was greater than the 10-year flood recurrence interval.

The largest suspended-sediment and total-phosphorus loads were observed for the East River at Green Bay during the periods November 1-4, 1985, and March 25-28, 1986. As measured at the gaging station, 27 and 55 percent of the suspended sediment and 21 and 37 percent of the total phosphorus were transported within those periods for 1985 and 1986, respectively. At Bower Creek 31 percent of the suspended-sediment load for 1985 was transported during one storm (June 21-25) and 19 percent of the total-phosphorus load

for 1985 was transported during a second storm (November 1-4). In 1986, one storm (March 16-26) had 63 percent of the suspended sediment and 38 percent of the total phosphorus transported.

Even though the discharge for the East River during 1986 was approximately double that for an average year, the East River still contributes a disproportionately large share of the suspended-sediment and total-phosphorus yields to the Fox River basin when compared to the Fox River data available for the Wrightstown gaging station. Suspended-sediment and total-phosphorus yields from the Bower Creek basin were approximately twice those for the East River at Monroe Street in Green Bay.

Dissolved-oxygen concentrations tended to decrease upstream from the mouth of the East River. The mean daily dissolved-oxygen concentration was often less than 5 mg/L at all three of the East River monitoring locations. Minimum instantaneous dissolved-oxygen concentrations of 1 to 2 mg/L were recorded at all sites.

The acceptable fecal coliform level for recreational water quality (200 counts per 100 mL) was exceeded at all three of the East River sites and Bower Creek for more than half of the samples taken during the study. The downstream sites on the East River at Monroe Street in Green Bay and at Allouez Avenue bridge also had more samples with fecal-coliform/fecal-streptococcus ratios that exceeded 4.0, which indicates that the bacteria is human, rather than animal, in origin.

Bower Creek had the highest mean concentrations for BOD-5, total phosphorus, fecal coliform and fecal streptococcus of all the sites monitored during 1985-86. The East River sites at Monroe Street in Green Bay and at Allouez Avenue bridge had the highest mean chlorophyll *a* concentrations during the study period.

## REFERENCES CITED

- Field, S.J., and Duerk, M.D., 1988, Hydrology and water quality of Delavan Lake in southeastern Wisconsin: U.S. Geological Survey, Water-Resources Investigations Report 87-4168, 61 p.
- Fox Valley Water Quality Planning Agency, 1985, East River watershed study: 12 p.
- Guy, H.P., and Norman, V.W., 1970, Field methods for measurement of fluvial sediment: U.S. Geological Survey Techniques of Water-Resources Investigations, book 3, chap. C2, 59 p.
- Holmstrom, B.K., Kammerer, P.A., Jr., and Erickson, R.M., 1986, Water resources data for Wisconsin, water year 1985: U.S. Geological Survey Water-Data Report WI-85-1, 414 p.
- \_\_\_\_\_, 1987, Water resources data for Wisconsin, water year 1986: U.S. Geological Survey Water-Data Report WI-86-1, 402 p.
- Laenen, A. and Smith, W., Acoustic Systems for the measurement of streamflow, 1983: U.S. Geological Survey Water-Supply Paper 2213, 26 p.
- National Oceanic and Atmospheric Administration, 1985, Climatological data, annual summary—Wisconsin, 1985: Asheville, N.C., National Climatic Data Center, v. 90, no. 13.
- \_\_\_\_\_, 1986, Climatological data, annual summary—Wisconsin, 1986: Asheville, N.C., National Climatic Data Center, v. 91, no. 13.
- Porterfield, George, 1972, Computation of fluvial-sediment discharge: U.S. Geological Survey Techniques of Water-Resources Investigations, book 3, chap. C3, 66 p.
- Rantz, S.E., 1982, Measurement and computation of streamflow: U.S. Geological Survey Water-Supply Paper 2175, v. 1, 284 p.
- Schuettpelz, D.H., 1969, Fecal and total coliform tests in water quality evaluation: Wisconsin Department of Natural Resources Research Report 42, 21 p.
- Smith, R.A., Hirsch, R.M., and Slack, J.R., 1982, A study of trends in total phosphorus measurements at NASQAN stations: U.S. Geological Survey Water-Supply Paper 2190, 34 p.



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## **APPENDIXES A THROUGH G**

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# APPENDIX A

Daily total precipitation (inches) at Austin Straubel Field in Green Bay, 1985-86

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<u>1985</u>												
1	0.23	0.00	0.00	0.03	0.04	0.02	0.00	0.00	0.00	0.00	2.23	1.01
2	.00	.00	.00	.12	.00	.00	.25	.00	.01	.00	.32	.05
3	.00	.00	.21	.00	.00	.00	.00	.00	.03	.30	.00	.00
4	.00	.01	.45	.48	.02	.00	1.26	.05	.01	1.20	.00	.00
5	.00	.09	.00	.18	.00	.00	.20	1.00	.76	.00	.00	.12
6	.02	.02	.00	.11	.22	.00	.05	.62	.00	.00	.16	.00
7	.00	.07	.06	.00	.00	.24	.04	.00	.00	.01	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.01
9	.00	.00	.00	.00	.00	.00	.04	.17	.40	.02	.66	.00
10	.08	.10	.00	.00	.94	.00	.02	.05	.00	.00	.04	.11
11	.00	.30	.92	.22	.00	.00	.01	.00	.00	.00	.00	.00
12	.00	.01	.00	.22	.10	.00	.00	1.43	.00	.47	.00	.00
13	.00	.02	.09	.02	.00	.00	.00	.00	.00	.00	.02	.00
14	.01	.02	.00	.15	.14	.00	.00	.00	.00	.01	.00	.06
15	.00	.00	.00	.00	.11	.21	.06	.00	.00	.00	.01	.00
16	.21	.01	.00	.00	.10	.00	.00	.00	.00	.00	.67	.01
17	.02	.00	.00	.11	.08	.06	.00	1.24	.51	.00	.00	.00
18	.05	.08	.00	.00	.08	.12	.00	.00	.00	.07	.33	.00
19	.04	.00	.00	.20	.21	.00	.00	.00	.00	.00	.01	.00
20	.00	.00	.00	.07	.03	.00	.00	.00	.00	.00	.00	.00
21	.00	1.21	.00	.00	.00	1.00	.00	.00	.38	.00	.00	.00
22	.00	.00	.00	.00	.00	.42	.00	.00	.40	.00	.10	.16
23	.00	.55	.19	.27	.00	.14	.00	.22	.65	.25	.02	.17
24	.04	.06	.19	.06	.00	.00	1.44	.82	.01	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.67	.85	.15	.00	.04	.00
26	.00	.00	.00	.00	.36	.00	.00	.00	.01	.00	.06	.12
27	.00	.00	.02	.00	.02	.00	.00	.00	.00	.00	.00	.01
28	.00	.00	.07	.00	.00	.00	.00	1.35	.00	.00	.09	.00
29	.06	--	.00	.00	.00	.00	.00	.16	.21	.00	.05	.00
30	.07	--	.00	.00	.09	.00	.00	.07	.12	.00	.12	.00
31	.03	--	.50	--	.04	--	.05	.00	--	.39	--	.00
Total	.86	2.55	2.70	2.24	2.58	2.21	4.09	8.03	3.65	2.72	4.96	1.83
Calendar year 1985												Total 38.42

# APPENDIX A

Daily total precipitation (inches) at Austin Straubel Field in Green Bay, 1985-86--Continued

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<u>1986</u>												
1	0.00	0.32	0.00	0.12	0.00	0.00	0.00	0.48	0.00	0.00	0.12	0.00
2	.13	.00	.02	.00	.00	.00	.00	.01	.00	.38	.00	.21
3	.00	.00	.00	.26	.00	.00	.00	.01	.08	.16	.00	.00
4	.27	.09	.00	.03	.00	.06	.04	.00	.01	.49	.00	.00
5	.00	.00	.18	.62	.00	.00	.00	.27	.00	.02	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.06	.00	.36	.00	.05	.00	.00
8	.00	.00	.00	.04	.00	.00	.00	.11	.00	.17	.01	.12
9	.00	.00	.02	.00	.00	.00	.00	.00	.69	.00	.00	.04
10	.00	.00	.87	.00	.00	.05	.00	.37	2.20	.00	.00	.00
11	.00	.00	.00	.00	.01	1.25	.47	.00	.33	.17	.00	.11
12	.00	.00	.01	.00	.06	.01	.04	.00	.00	.19	.00	.00
13	.01	.08	.09	.00	.00	.00	.00	.00	.00	.01	.00	.00
14	.00	.01	.02	.55	.05	.00	.00	1.00	.22	.03	.00	.00
15	.00	.04	.00	.23	.32	.00	.92	.00	.58	.00	.00	.00
16	.00	.08	.00	.03	.10	.00	.00	.00	.00	.08	.00	.00
17	.00	.00	.00	.00	.61	.00	.00	.63	.29	.00	.00	.00
18	.00	.01	1.11	.00	.00	.00	1.26	.00	.00	.00	.05	.00
19	.00	.00	.15	.00	.00	1.13	.00	.00	.33	.00	.33	.00
20	.00	.03	.00	.00	.00	.00	.00	.00	.00	.01	.40	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.55	.00	.00	.00
22	.00	.01	.00	.00	.00	.02	.00	.13	.44	.00	.00	.00
23	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	.36	.00
24	.02	.00	.01	.00	.00	.00	1.16	.00	.07	.00	.00	.00
25	.01	.01	.00	.19	.00	.00	.58	.04	.66	.00	.00	.00
26	.00	.13	.00	.00	.00	.03	.00	.44	.26	.04	.00	.00
27	.00	.02	.00	.00	.00	.84	.46	.00	.00	.00	.00	.00
28	.02	.00	.00	.03	.00	.00	.02	.00	.60	.00	.00	.00
29	.04	--	.00	.01	.00	.00	.00	.00	.16	.00	.00	.00
30	.00	--	.00	.15	.00	.00	.00	.00	.04	.00	.00	.00
31	.10	--	.00	--	.00	--	.00	.00	--	.09	--	.00
TOTAL	.60	.83	2.48	2.26	1.15	3.75	4.95	3.85	7.51	1.89	1.27	.48
Calendar year 1986												Total 31.02

# APPENDIX B

Table 1.--Daily mean discharge (cubic feet per second) for East River  
at Monroe Street in Green Bay, 1985-86

[e, estimated record; --, no data available; negative discharge due to flow reversals]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1985												
1	--	--	--	197	227	280	28	-25	42	218	461	-239
2	--	--	--	315	199	-62	28	75	120	-70	3,340	533
3	--	--	--	684	51	118	-5.7	.31	223	-48	2,400	13
4	--	--	--	293	36	-32	2.9	9.5	-62	424	897	119
5	--	--	--	589	287	-5.5	363	57	205	1,080	403	54
6	--	--	--	1,090	121	-23	-22	114	367	619	252	47
7	--	--	219	1,050	142	99	-27	90	295	164	406	277
8	--	--	254	897	204	-27	93	47	206	220	586	-14
9	--	--	406	475	165	129	69	45	52	226	31	55
10	--	--	1,090	206	194	58	25	32	467	4.0	436	81
11	--	--	2,100	247	217	-70	44	95	148	-157	401	-8.7
12	--	--	1,890	554	249	124	8.7	42	54	164	393	92
13	--	--	1,590	457	282	81	13	252	91	173	664	66
14	--	--	1,010	498	137	-4.8	60	2.0	139	192	728	57
15	--	--	646	454	189	-41	86	100	58	-160	698	-21
16	--	--	629	196	153	81	14	-1.1	218	-62	1,340	130
17	--	--	305	34	181	39	-16	115	297	-506	1,140	35
18	--	--	254	223	302	21	-50	113	4.1	-173	827	-16
19	--	--	334	112	306	156	56	-26	154	97	922	-7.3
20	--	--	240	461	135	26	90	56	-101	155	543	-45
21	--	--	50	160	258	-28	-141	61	99	140	373	-20
22	--	--	234	224	146	405	158	28	143	97	-7.9	19
23	--	--	109	379	158	356	85	20	546	-15	-.47	-14
24	--	--	191	283	99	67	74	-93	276	195	-.47	80
25	--	--	246	105	84	51	84	278	316	2.7	-.47	e66
26	--	--	174	263	39	24	88	210	211	68	145	e66
27	--	--	267	242	134	-.88	102	130	97	-19	-7.9	e64
28	--	--	306	324	-6.8	68	37	1.5	76	88	285	e64
29	--	--	34	121	289	-11	10	58	70	51	15	e64
30	--	--	19	105	223	14	26	376	329	90	-163	e62
31	--	--	-249	--	-50	--	28	90	--	-68	--	e62
TOTAL	--	--	--	11,238	5,150.2	1,891.82	1,410.9	2,352.21	5,140.1	3,189.7	17,505.79	1,721.0
MEAN	--	--	--	375	166	63.1	45.5	75.9	171	103	584	55.5
MAX	--	--	--	1,090	306	405	363	376	546	1,080	3,340	533
MIN	--	--	--	34	-50	-70	-141	-93	-101	-506	-163	-239



# APPENDIX B

Table 1.--Daily mean discharge (cubic feet per second) for East River  
at Monroe Street in Green Bay, 1985-86--Continued

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<u>1986</u>												
1	e62	-26	e43	e378	47	-23	-80	-2.6	-54	236	111	--
2	-45	53	e43	e314	239	45	4.8	9.0	-105	332	141	--
3	37	31	e43	e248	77	-65	96	-99	1.3	390	--	--
4	e60	53	e45	e247	27	171	-31	-44	-55	1,270	--	--
5	130	54	e46	e252	-71	130	143	-103	-95	1,000	--	--
6	19	-65	e45	e350	-101	-4.4	30	11	-111	542	--	--
7	-8.5	65	e44	e286	-36	-29	-155	27	248	181	--	--
8	27	40	e43	e210	277	15	-111	-36	13	e179	--	--
9	105	69	e43	e165	306	-20	122	-112	-21	e176	--	--
10	-47	41	e44	e139	55	-139	-201	172	483	175	--	--
11	41	-6.6	e48	25	-50	-262	-47	214	1,890	22	--	--
12	41	30	e54	-117	-93	390	-37	45	e1,360	-25	--	--
13	-23	36	e62	329	77	-40	29	-60	842	236	--	--
14	90	-45	e70	-48	-16	-214	4.6	73	149	19	--	--
15	121	66	e80	408	-4.5	-61	46	210	192	73	--	--
16	11	174	e100	589	129	70	37	-49	400	152	--	--
17	51	315	e130	153	-29	321	113	638	115	113	--	--
18	110	311	e190	76	20	-42	398	173	-330	173	--	--
19	58	91	e270	17	288	222	308	55	226	-26	--	--
20	-8.8	64	e400	-50	111	166	-66	-150	712	-83	--	--
21	-56	217	e720	571	167	-12	4.2	-177	427	-55	--	--
22	64	99	e560	163	246	4.2	-161	71	1,610	-16	--	--
23	69	-2.3	e450	-234	33	86	8.6	163	1,100	-140	--	--
24	-93	72	e700	-63	27	125	15	236	620	77	--	--
25	229	48	e1,580	-12	-2.3	41	115	-77	862	-55	--	--
26	54	15	e4,740	29	-85	72	260	46	777	106	--	--
27	-134	70	e3,020	356	63	245	174	276	875	26	--	--
28	35	-.06	e1,350	87	61	56	167	-81	659	-29	--	--
29	8.1	--	e1,300	76	-97	22	-19	32	637	-26	--	--
30	70	--	e819	163	-50	-90	-25	-23	597	277	--	--
31	27	--	e503	--	-24	--	-1.7	19	--	--	--	--
TOTAL	1,103.8	1,869.04	17,585	5,107	1,591.2	1,179.8	1,140.5	1,456.4	14,024.3	--	--	--
MEAN	35.6	66.8	567	170	51.3	39.3	36.8	47.0	467	--	--	--
MAX	229	315	4,740	589	306	390	398	638	1,890	--	--	--
MIN	-134	-65	43	-234	-101	-262	-201	-177	-330	--	--	--

# APPENDIX B

**Table 2.--Daily mean discharge (cubic feet per second) for Bower Creek  
at Sunnyview Road near De Pere, 1985-86**

[e, estimated record; --, no data available]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>1985</b>												
1	--	--	--	4.9	0.49	0.00	0.00	0.00	0.00	3.7	67	0.03
2	--	--	--	14	.48	.00	.04	.00	.00	1.2	92	.04
3	--	--	--	31	.29	.00	.16	.00	.00	.00	20	.05
4	--	--	--	9.1	.25	.00	1.4	.00	2.4	8.1	8.7	.05
5	--	--	--	30	.16	.00	11	.71	32	4.8	4.5	.04
6	--	--	--	20	.15	.00	1.4	.90	10	2.4	5.0	.04
7	--	--	--	9.1	.17	.00	.72	.37	1.4	1.1	19	.03
8	--	--	--	32	.03	8.1	.34	.00	.00	.11	6.2	.02
9	--	--	--	11	.00	.74	.03	.00	5.2	.00	3.1	e3.6
10	--	--	--	31	.03	.02	.01	.00	2.7	.00	5.4	.01
11	--	--	--	19	.03	.00	.00	.00	.05	.00	13	e3.5
12	--	--	--	48	.08	.00	.00	.02	.00	60	22	e3.9
13	--	--	--	13	.03	.00	.00	5.8	.00	27	32	.07
14	--	--	--	20	.02	.00	.00	.60	.00	4.1	35	e6.6
15	--	--	14	10	.01	.00	.00	.02	.00	3.0	12	.12
16	--	--	12	4.7	.00	.00	.00	.00	.00	4.1	51	.10
17	--	--	5.8	2.8	.01	.00	.00	.12	.00	2.9	18	.09
18	--	--	5.3	3.0	.08	.00	.00	3.4	.00	2.9	31	.09
19	--	--	7.7	3.1	.09	.00	.00	.61	.00	6.3	18	.09
20	--	--	5.5	2.3	.11	.00	.00	.36	.00	3.4	10	.09
21	--	--	3.3	1.5	.00	10	.00	.13	.00	2.1	1.8	.09
22	--	--	3.3	1.2	.00	58	.00	.00	.73	1.7	.58	.08
23	--	--	3.6	1.0	.00	4.3	.00	.00	7.1	1.4	.12	.07
24	--	--	6.4	1.0	.00	1.8	.00	.00	5.7	11	.13	.04
25	--	--	4.8	.86	.00	1.1	5.7	5.7	1.3	4.3	.07	.04
26	--	--	5.9	.80	.00	.82	2.3	3.1	2.9	2.1	.07	.03
27	--	--	12	.76	.00	.53	.34	.80	2.9	.81	.05	e4.1
28	--	--	7.8	.70	.00	.21	.00	.22	.46	.00	.04	.03
29	--	--	6.0	.64	.00	.02	.00	4.4	.00	.00	.03	.04
30	--	--	2.8	.57	.00	.00	.00	15	2.6	.00	.03	.04
31	--	--	2.2	--	.00	--	.00	2.2	--	.00	--	.04
TOTAL	--	--	--	327.03	2.51	85.64	23.44	44.46	77.44	158.52	475.82	23.16
MEAN	--	--	--	10.9	.081	2.85	.76	1.43	2.58	5.11	15.9	.75
MAX	--	--	--	48	.49	58	11	15	32	60	92	6.6
MIN	--	--	--	.57	.00	.00	.00	.00	.00	.00	.03	.01

# APPENDIX B

Table 2.--Daily mean discharge (cubic feet per second) for Bower Creek  
at Sunnyview Road near De Pere, 1985-86--Continued

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>1986</b>												
1	0.04	0.01	0.01	10	0.21	0.07	0.10	0.10	0.07	2.1	1.3	--
2	.03	.01	.01	5.6	.24	.06	.09	.11	.06	1.2	2.1	--
3	.04	.01	.01	3.1	.25	.06	.08	.19	.05	13	--	--
4	.03	.01	.01	9.0	.26	.05	.08	.14	.05	33	--	--
5	.02	.01	.01	19	.23	.05	.07	.10	.03	10	--	--
6	.01	.01	.01	11	.26	.03	.06	.08	.01	4.3	--	--
7	.01	.01	.01	6.2	.17	.03	.03	.08	.01	1.7	--	--
8	.01	.01	.04	2.4	.15	.02	.01	11	.01	11	--	--
9	.01	.01	.11	.97	.14	.01	.01	1.4	.01	3.7	--	--
10	.01	.01	.37	.67	.12	.01	.01	.33	22	1.3	--	--
11	.01	.01	1.1	.48	.11	.03	.01	.86	68	.93	--	--
12	.01	.01	1.8	.36	.11	.11	.01	.25	9.8	6.0	--	--
13	.01	.01	8.7	.32	.11	.09	.01	.12	2.5	4.0	--	--
14	.01	.01	17	1.6	.11	.08	.01	.10	1.1	1.6	--	--
15	.01	.01	25	8.6	.11	.07	.01	.10	3.9	1.6	--	--
16	.01	.01	41	16	.17	.07	.01	.10	3.2	1.8	--	--
17	.01	.01	42	3.6	.21	.06	.01	1.4	1.2	2.1	--	--
18	.01	.01	65	1.2	.53	.05	.01	.90	8.6	.94	--	--
19	.01	.01	138	.75	.29	.11	.98	.22	17	.73	--	--
20	.01	.01	100	.51	.17	.33	.46	.11	21	.69	--	--
21	.01	.01	69	.39	.12	.23	.16	.10	13	1.0	--	--
22	.01	.01	58	.31	.11	.15	.09	.09	39	1.2	--	--
23	.01	.01	112	.27	.11	.12	.07	.09	9.3	1.2	--	--
24	.01	.01	117	.25	.10	.11	.07	.08	3.0	1.1	--	--
25	.01	.01	138	.24	.10	.09	11	.08	14	.96	--	--
26	.01	.01	67	.28	.10	.07	4.4	.09	19	.95	--	--
27	.01	.01	21	.26	.09	2.6	.56	.10	8.4	1.2	--	--
28	.01	.01	24	.22	.08	.94	2.9	.09	2.3	1.2	--	--
29	.01	--	22	.21	.08	.24	.24	.08	11	1.3	--	--
30	.01	--	15	.21	.08	.12	.12	.08	5.5	1.2	--	--
31	.01	--	9.0	--	.07	--	.10	.07	--	1.1	--	--
TOTAL	.42	.28	1,092.19	104.00	4.99	6.06	21.77	18.64	283.10	114.10	--	--
MEAN	.014	.010	35.2	3.47	.16	.20	.70	.60	9.44	3.68	--	--
MAX	.04	.01	138	19	.53	2.6	11	11	68	33	--	--
MIN	.01	.01	.01	.21	.07	.01	.01	.07	.01	.69	--	--

# APPENDIX B

**Table 3.--Daily mean discharge (cubic feet per second) for East River  
at State Highway 32 near De Pere, 1985**

[e, estimated record; --, no data available]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>1985</b>												
1	--	--	--	--	--	3.7	1.1	0.09	20	27	--	--
2	--	--	--	--	--	3.4	1.6	.01	10	26	--	--
3	--	--	--	--	--	2.9	.23	.01	6.3	18	--	--
4	--	--	--	--	--	1.9	2.7	.01	7.1	83	--	--
5	--	--	--	--	--	1.6	6.6	1.1	40	289	--	--
6	--	--	--	--	--	1.3	6.2	1.1	130	279	--	--
7	--	--	--	--	--	1.2	5.2	.88	98	74	--	--
8	--	--	--	--	--	.88	3.1	.01	33	49	--	--
9	--	--	--	--	--	.84	1.5	.01	31	39	--	--
10	--	--	--	--	--	.60	.81	.01	56	33	--	--
11	--	--	--	--	--	.14	.60	.01	33	29	--	--
12	--	--	--	--	--	.01	.46	.53	20	54	--	--
13	--	--	--	--	--	.01	.19	20	14	140	--	--
14	--	--	--	--	--	.01	.12	12	11	91	--	--
15	--	--	--	--	--	.02	.02	6.7	8.8	52	--	--
16	--	--	--	--	--	.18	.01	2.4	7.1	43	--	--
17	--	--	--	--	--	1.1	.01	1.4	15	--	--	--
18	--	--	--	--	--	1.2	.01	8.8	10	--	--	--
19	--	--	--	--	--	1.2	.01	9.0	9.7	--	--	--
20	--	--	--	--	--	1.1	.00	8.0	8.6	--	--	--
21	--	--	--	--	--	1.2	.00	3.3	7.9	--	--	--
22	--	--	--	--	--	91	.00	1.4	18	--	--	--
23	--	--	--	--	--	121	.00	.42	36	--	--	--
24	--	--	--	--	--	29	.10	.39	70	--	--	--
25	--	--	--	--	--	14	14	11	51	--	--	--
26	--	--	--	--	--	8.3	18	20	33	--	--	--
27	--	--	--	--	--	5.7	17	17	37	--	--	--
28	--	--	--	--	--	4.1	6.6	8.9	27	--	--	--
29	--	--	--	--	--	2.8	3.0	15	19	--	--	--
30	--	--	--	--	--	1.7	1.7	33	18	--	--	--
31	--	--	--	--	--	--	.85	38	--	--	--	--
TOTAL	--	--	--	--	--	302.09	91.72	220.48	885.5	--	--	--
MEAN	--	--	--	--	--	10.1	2.96	7.11	29.5	--	--	--
MAX	--	--	--	--	--	121	18	38	130	--	--	--
MIN	--	--	--	--	--	.01	.00	.01	6.3	--	--	--

# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86

[ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; µg/L, micrograms per liter; c/100 mL, colonies per 100 milliliters; --, no data available; EWI, equal width increment; negative discharge due to flow reversals]

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
03-11-85	1030	1,903.9	--	--	--	--	--	--	287	--
03-15-85	0815	645.7	--	--	--	--	--	--	148	--
03-15-85	0835	598.2	--	--	--	--	--	--	159	--
03-16-85	1130	1,224.9	--	--	--	--	--	--	147	--
03-18-85	1300	357.1	--	--	--	--	--	--	79	--
03-20-85	1020	717.9	--	--	--	--	--	--	68	--
03-22-85	1040	-31.7	--	--	--	--	--	--	60	--
03-23-85	1055	51.8	--	--	--	--	--	--	75	--
03-25-85	1405	468.2	--	--	--	--	--	--	68	--
03-27-85	1125	1,237.4	--	--	--	--	--	--	77	--
03-29-85	1005	-434.8	--	--	--	--	--	--	115	--
03-30-85	1330	-751.3	--	--	--	--	--	--	105	--
04-01-85	1200	-1,985.9	--	--	--	--	--	--	42	--
04-05-85	0945	1,707.9	2.9	.300	1,100	4,900	8.70	--	--	--
04-05-85	1045	1,512.5	--	--	--	--	--	--	126	--
04-17-85	1045	594.3	4.0	.380	260	480	.20	--	--	--
04-17-85	1130	372.7	--	--	--	--	--	--	157	--
04-20-85	0824	-1,920.0	4.5	.162	--	--	--	--	--	--
04-22-85	1305	1,242.8	--	.205	--	--	--	--	--	--
04-23-85	1236	1,119.3	5.9	.172	--	--	--	--	--	--
04-23-85	1906	55.1	5.6	.211	--	--	--	--	--	--
05-01-85	1105	1,185.2	4.9	.187	2,400	80	39.3	--	--	--
05-01-85	1155	656.9	--	--	--	--	--	--	85	--
05-03-85	0845	-341.9	--	--	--	--	--	--	81	--
05-06-85	0830	-1,269.0	--	--	--	--	--	--	84	--
05-08-85	0945	954.4	--	--	--	--	--	--	97	--
05-10-85	0930	1,400.7	--	--	--	--	--	--	63	--
05-13-85	1030	-748.4	--	--	--	--	--	--	75	--
05-15-85	1100	-200.5	4.0	.225	100	36	36.8	--	--	--
05-15-85	1200	741.2	--	--	--	--	--	--	83	--
05-17-85	1010	-854.8	--	--	--	--	--	--	157	--
05-18-85	1200	1,038.8	5.7	.095	--	--	--	--	--	--
05-18-85	1727	-452.9	5.4	.092	--	--	--	--	--	--
05-20-85	1020	-1,188.5	--	--	--	--	--	--	85	--
05-22-85	0945	-505.7	--	--	--	--	--	--	52	--
05-24-85	0945	740.5	--	--	--	--	--	--	89	--
05-24-85	1221	-1,150.9	--	--	--	--	--	--	41	--
05-26-85	2121	-279.5	--	--	--	--	--	--	53	--
05-27-85	0221	-165.2	--	--	--	--	--	--	49	--
05-27-85	1030	1,726.4	--	--	--	--	--	--	88	--
05-27-85	1412	-1,374.4	--	--	--	--	--	--	46	--
05-28-85	0500	436.7	--	--	--	--	--	--	81	--
05-28-85	0742	1,835.7	--	--	--	--	--	--	46	--
05-29-85	0403	1,234.8	--	--	--	--	--	--	57	--
05-29-85	1120	1,442.0	3.5	.146	300	22.3	22.25	--	--	--

# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	800-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <u>a</u> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
05-29-85	1155	1,175.1	--	--	--	--	--	--	74	--
05-29-85	2357	-740.6	--	--	--	--	--	--	72	--
05-30-85	0200	121.6	--	--	--	--	--	--	65	--
05-30-85	1700	-703.4	--	--	--	--	--	--	39	--
05-30-85	2021	692.6	--	--	--	--	--	--	43	--
05-31-85	0600	-754.3	--	--	--	--	--	--	39	--
06-01-85	1745	1,382.7	--	--	--	--	--	--	80	--
06-01-85	2103	-1,073.3	--	--	--	--	--	--	59	--
06-02-85	0257	1,683.6	--	--	--	--	--	--	69	--
06-03-85	0021	-1,770.3	--	--	--	--	--	--	31	--
06-03-85	0136	-442.9	--	--	--	--	--	--	39	--
06-03-85	0935	-1,261.6	--	--	--	--	--	--	78	--
06-03-85	1339	1,336.4	--	--	--	--	--	--	24	--
06-04-85	0718	-174.0	--	--	--	--	--	--	30	--
06-04-85	1436	1,288.4	--	--	--	--	--	--	30	--
06-05-85	0830	275.4	--	--	--	--	--	--	24	--
06-05-85	1621	1,057.9	--	--	--	--	--	--	36	--
06-05-85	1939	-917.9	--	--	--	--	--	--	28	--
06-06-85	1524	870.2	--	--	--	--	--	--	35	--
06-07-85	1030	869.5	--	--	--	--	--	--	38	--
06-08-85	1909	1,114.7	--	--	--	--	--	--	40	--
06-08-85	2136	-301.0	--	--	--	--	--	--	71	--
06-09-85	1003	890.5	--	--	--	--	--	--	48	--
06-09-85	1245	-568.7	--	--	--	--	--	--	71	--
06-10-85	0436	832.3	--	--	--	--	--	--	40	--
06-10-85	0809	-829.6	--	--	--	--	--	--	45	--
06-11-85	0909	327.6	--	--	--	--	--	--	48	--
06-11-85	1430	465.9	--	--	--	--	--	--	31	--
06-11-85	2115	-530.7	--	--	--	--	--	--	46	--
06-12-85	1015	806.2	--	--	--	--	--	--	31	--
06-13-85	1115	203.4	4.1	--	50	50	48.8	--	--	--
06-13-85	1145	101.1	--	--	--	--	--	--	--	63
06-16-85	1145	-432.2	--	--	--	--	--	--	--	49
06-18-85	1530	-179.1	--	--	--	--	--	--	--	88
06-19-85	1200	1,123.0	--	--	--	--	--	--	27	--
06-19-85	1927	-204.9	--	--	--	--	--	--	39	--
06-20-85	0915	-484.5	--	--	--	--	--	--	46	--
06-21-85	1503	230.0	4.7	.169	--	--	--	--	--	--
06-21-85	2039	-589.2	--	--	--	--	--	--	37	--
06-22-85	0200	292.3	--	--	--	--	--	--	91	--
06-22-85	0250	916.4	5.4	.375	--	--	--	--	--	--
06-22-85	0615	-253.3	--	--	--	--	--	--	64	--
06-22-85	0815	1,036.2	--	--	--	--	--	--	24	--
06-22-85	1010	1,199.1	4.0	.184	--	--	--	--	--	--
06-22-85	1030	1,090.6	--	--	--	--	--	--	289	--

# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
06-22-85	1557	1,092.2	--	--	--	--	--	--	67	--
06-23-85	0330	1,451.0	3.6	.261	--	--	--	--	--	--
06-23-85	0348	1,216.0	4.0	.251	--	--	--	--	--	--
06-23-85	1045	-1,487.9	--	--	--	--	--	--	75	--
06-23-85	1124	-1,347.3	--	--	--	--	--	--	62	--
06-23-85	1615	874.1	5.4	.254	--	--	--	--	--	--
06-23-85	1735	624.8	--	--	--	--	--	--	150	--
06-24-85	0603	1,375.1	--	--	--	--	--	--	163	--
06-24-85	2157	-1,324.9	5.9	.254	--	--	--	--	--	--
06-25-85	0000	1,091.7	--	--	--	--	--	--	44	--
06-25-85	0400	348.6	--	--	--	--	--	--	26	--
06-25-85	1610	-465.9	--	--	--	--	--	--	447	--
06-26-85	0412	-393.7	--	--	--	--	--	--	36	--
06-26-85	2327	-377.3	--	--	--	--	--	--	59	--
06-27-85	0615	1,048.0	--	--	--	--	--	--	41	--
06-27-85	0940	-441.8	4.7	.233	6,000	50	29.4	--	--	--
06-27-85	1015	-337.2	--	--	--	--	--	--	83	--
06-28-85	1930	649.4	--	--	--	--	--	--	76	--
06-28-85	2130	438.7	--	--	--	--	--	--	47	--
06-29-85	2315	175.9	--	--	--	--	--	--	75	--
06-30-85	0400	-47.1	--	--	--	--	--	--	50	--
06-30-85	0600	387.5	--	--	--	--	--	--	18	--
06-30-85	0900	245.1	--	--	--	--	--	--	105	--
06-30-85	0915	484.7	--	--	--	--	--	--	53	--
07-02-85	0750	-143.5	--	--	--	--	--	--	28	--
07-02-85	0830	-999.3	--	--	--	--	--	--	44	--
07-03-85	0815	-261.7	6.4	.251	140	30	71.5	--	--	--
07-03-85	0845	-311.7	--	--	--	--	--	--	40	--
07-04-85	0627	405.2	--	--	--	--	--	--	31	--
07-05-85	0039	1,580.2	--	--	--	--	--	--	48	--
07-05-85	1209	2,382.3	--	--	--	--	--	--	87	--
07-05-85	1545	-660.5	--	--	--	--	--	--	93	--
07-05-85	1633	-1,308.6	--	--	--	--	--	--	97	--
07-06-85	0333	1,541.1	--	--	--	--	--	--	51	--
07-06-85	1530	1,654.9	--	--	--	--	--	--	110	--
07-06-85	2215	-365.9	--	--	--	--	--	--	39	--
07-07-85	1021	-133.0	--	--	--	--	--	--	38	--
07-08-85	0642	-275.9	--	--	--	--	--	--	39	--
07-09-85	1500	980.3	--	--	--	--	--	--	65	--
07-11-85	1020	-661.6	5.1	.216	360	11	51.8	--	--	--
07-11-85	1100	-697.2	--	--	--	--	--	--	94	--
07-13-85	1050	-607.6	--	--	--	--	--	--	47	--
07-17-85	1242	317.9	--	--	--	--	--	--	64	--
07-17-85	1715	356.7	--	--	--	--	--	--	50	--
07-17-85	2021	-377.0	--	--	--	--	--	--	53	--

# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
07-19-85	0142	368.7	--	--	--	--	--	--	56	--
07-19-85	1025	268.2	--	--	--	--	--	--	93	--
07-19-85	1833	-1,124.1	--	--	--	--	--	--	47	--
07-20-85	1030	449.5	--	--	--	--	--	--	41	--
07-21-85	0400	-572.8	--	--	--	--	--	--	37	--
07-21-85	1909	-993.4	--	--	--	--	--	--	32	--
07-22-85	0051	634.2	--	--	--	--	--	--	36	--
07-22-85	1909	356.2	--	--	--	--	--	--	32	--
07-22-85	1935	638.9	--	--	--	--	--	--	44	--
07-22-85	1942	670.2	--	--	--	--	--	--	43	--
07-23-85	1409	-283.1	6.0	.203	--	--	--	--	--	--
07-24-85	1245	-668.4	--	--	--	--	--	--	47	--
07-24-85	1500	261.9	6.6	.184	--	--	--	--	--	--
07-24-85	1854	510.3	4.6	.269	--	--	--	--	--	--
07-24-85	2345	-280.0	3.9	.351	--	--	--	--	--	--
07-25-85	1027	197.9	5.5	.195	--	--	--	--	--	--
07-25-85	1505	-318.3	--	--	--	--	--	--	41	40
07-25-85	1520	-336.3	5.4	.203	70	85	28.2	--	--	--
07-25-85	1845	1,277.2	4.6	.231	--	--	--	37	--	--
07-26-85	0457	1,169.1	4.0	.251	--	--	--	--	--	--
07-26-85	1115	-97.6	--	--	1,100	180	--	--	--	--
07-26-85	1150	66.5	--	--	--	--	--	--	--	53
07-26-85	1621	-335.9	4.1	.192	--	--	--	27	--	--
07-26-85	2033	566.5	4.7	.182	--	--	--	--	28	--
07-27-85	0606	658.5	--	.615	--	--	--	48	44	--
07-27-85	0927	-349.7	--	.882	--	--	--	49	40	--
07-27-85	1120	-549.5	8.8	1.60	--	--	--	--	--	--
07-27-85	2324	712.6	--	.339	--	--	--	44	39	--
07-28-85	0933	-203.9	--	.207	--	--	--	19	18	--
07-28-85	1330	848.5	--	.246	--	--	--	33	35	--
07-28-85	1400	341.4	--	--	--	--	--	--	--	66
07-29-85	0139	-221.7	--	.255	--	--	--	40	--	--
07-29-85	0433	635.5	--	.180	--	--	--	35	--	--
07-29-85	1230	624.7	--	.213	--	--	--	39	--	--
07-31-85	1345	1,322.8	--	--	--	--	--	--	--	89
08-01-85	1615	690.8	2.8	.237	390	250	23.5	40	--	--
08-01-85	1645	330.1	--	--	--	--	--	--	--	82
08-04-85	1120	1,037.2	--	--	--	--	--	--	--	82
08-06-85	0254	603.6	4.0	.216	--	--	--	28	25	--
08-06-85	1600	358.4	--	--	90	100	--	--	--	--
08-06-85	1603	358.4	6.4	.188	--	--	--	36	--	--
08-06-85	1640	994.0	--	--	--	--	--	--	--	56
08-07-85	0200	564.7	4.1	.206	--	--	--	47	--	--
08-07-85	0500	-371.5	3.2	.231	--	--	--	43	--	--
08-07-85	1603	885.4	--	--	--	--	--	--	32	--



# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
08-07-85	1936	-432.0	--	--	--	--	--	--	32	--
08-08-85	0754	283.4	4.9	.200	--	--	--	30	--	--
08-08-85	0815	562.2	5.4	.206	430	50	59.1	32	--	--
08-08-85	1400	416.0	--	--	--	--	--	--	--	62
08-11-85	0700	617.8	--	--	--	--	--	--	--	68
08-12-85	2345	869.7	3.6	.185	--	--	--	51	--	--
08-13-85	0055	1,401.3	--	--	30,000	3,400	--	--	--	--
08-13-85	1020	656.1	5.0	.188	--	--	--	33	--	25
08-13-85	1045	934.7	--	--	--	--	--	--	--	70
08-13-85	1300	1,327.7	3.5	.256	--	--	--	68	--	76
08-13-85	2305	1,472.8	4.3	.297	--	--	--	66	--	--
08-13-85	2310	1,444.2	--	--	110,000	2,100	--	--	--	62
08-14-85	0830	743.3	3.8	.491	--	--	--	31	--	43
08-14-85	0850	675.1	--	--	--	--	--	--	--	81
08-15-85	1130	766.0	3.3	.239	2,900	1,000	52.0	46	--	--
08-15-85	1220	258.4	--	--	--	--	--	--	--	74
08-17-85	2142	1,518.8	5.1	.233	--	--	--	82	--	--
08-18-85	0010	605.9	--	--	2,700	5,300	--	--	--	--
08-18-85	0345	732.1	3.4	.257	--	--	--	56	--	--
08-18-85	0945	455.4	--	--	1,200	2,300	--	--	--	--
08-18-85	1000	202.7	--	--	--	--	--	--	--	95
08-18-85	1236	-645.1	5.5	.257	--	--	--	30	--	--
08-18-85	1551	855.7	4.1	.257	--	--	--	57	59	--
08-19-85	0309	671.5	4.2	.251	--	--	--	54	57	--
08-19-85	1057	-588.4	6.7	.311	--	--	--	67	--	--
08-20-85	1320	582.5	--	--	--	--	--	--	--	55
08-20-85	1333	570.8	6.2	.227	--	--	--	33	25	--
08-20-85	2400	41.6	6.1	.233	--	--	--	39	--	--
08-23-85	0930	986.6	--	--	--	--	--	--	--	63
08-24-85	1509	688.0	3.6	.195	--	--	--	28	--	--
08-24-85	1609	670.2	--	--	--	--	--	--	24	--
08-25-85	0209	-1,149.7	3.4	.188	--	--	--	36	32	--
08-25-85	0906	1,221.1	4.1	.185	--	--	--	38	--	--
08-25-85	1236	1,108.0	4.1	.207	--	--	--	46	42	--
08-25-85	1415	729.8	--	--	--	--	--	--	61	--
08-25-85	1435	608.1	--	--	1,500	3,800	--	33	--	--
08-25-85	1918	-295.5	2.8	.195	--	--	--	37	37	--
08-25-85	2112	718.5	3.1	.198	--	--	--	37	--	--
08-26-85	0127	517.8	2.1	.282	--	--	--	54	--	--
08-26-85	1035	994.9	--	--	1,100	2,000	--	37	--	--
08-26-85	1148	746.8	2.6	.240	--	--	--	40	--	--
08-26-85	1521	-904.5	3.6	.180	--	--	--	33	--	--
08-26-85	2324	693.1	3.2	.302	--	--	--	37	--	--
08-28-85	2327	868.0	5.0	.169	--	--	--	31	--	--
08-29-85	0700	-986.3	5.6	.189	--	--	--	33	--	--

# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
08-29-85	0945	995.5	5.5	.180	600	400	29.1	29	--	--
08-29-85	1027	712.1	5.1	.229	--	--	--	48	--	--
08-29-85	1035	712.1	--	--	--	--	--	--	--	64
08-29-85	2354	513.8	5.2	.188	--	--	--	42	--	--
08-30-85	0709	-696.9	4.4	.222	--	--	--	41	--	--
08-30-85	1118	1,198.6	4.1	.229	--	--	--	51	--	--
08-30-85	1230	1,137.6	--	--	--	--	--	--	--	113
08-30-85	1353	1,187.3	3.4	.307	--	--	--	73	--	--
08-31-85	1215	257.7	--	--	--	--	--	--	--	85
09-01-85	1010	1,373.8	--	--	--	--	--	--	--	75
09-03-85	0800	392.3	--	.386	--	--	--	51	--	--
09-03-85	2036	1,402.9	--	.236	--	--	--	46	--	--
09-04-85	0533	1,219.3	--	.195	--	--	--	46	--	--
09-04-85	1409	1,103.6	--	.185	--	--	--	31	--	--
09-04-85	1750	117.4	--	--	--	--	--	--	--	103
09-05-85	1339	386.7	--	.184	--	--	--	88	--	--
09-05-85	1809	424.7	--	.292	--	--	--	196	62	--
09-06-85	0209	1,241.6	--	.329	--	--	--	224	77	--
09-06-85	0930	945.2	--	--	--	--	--	--	--	87
09-09-85	1824	1,383.8	--	.182	--	--	--	35	31	--
09-09-85	2130	-1,935.1	--	.239	--	--	--	63	55	--
09-10-85	0203	1,502.1	--	.298	--	--	--	80	77	--
09-10-85	1012	1,861.5	--	.220	--	--	--	65	--	--
09-10-85	1018	1,861.5	--	--	--	--	--	--	54	--
09-10-85	1140	2,242.7	4.8	.305	--	--	--	96	--	--
09-10-85	1230	1,673.9	--	--	--	--	--	--	--	167
09-10-85	2121	2,311.3	6.0	.330	--	--	--	119	--	--
09-11-85	0609	940.0	--	.274	--	--	--	50	63	--
09-12-85	0750	764.0	4.3	.295	--	400	45.4	38	--	--
09-12-85	0810	488.5	--	--	--	--	--	--	--	107
09-12-85	1745	699.1	6.5	.332	--	--	--	52	61	--
09-14-85	1605	-491.1	--	--	--	--	--	--	--	120
09-17-85	0606	186.4	7.0	.393	--	--	--	52	54	--
09-17-85	1125	490.9	--	--	--	--	--	--	--	216
09-21-85	0336	1,132.6	5.2	.188	--	--	--	54	49	--
09-21-85	1215	1,158.7	--	--	--	--	--	--	--	71
09-23-85	0457	642.7	4.4	.264	--	--	--	62	62	--
09-23-85	1650	1,444.1	--	--	--	--	--	--	--	134
09-23-85	1854	1,786.4	--	.410	--	--	--	153	175	--
09-24-85	1225	1,207.6	--	--	--	--	--	64	59	--
09-24-85	1231	1,207.6	--	.540	--	--	--	--	--	--
09-25-85	0024	1,135.2	--	.880	--	--	--	83	93	--
09-26-85	1140	824.8	4.2	.175	350	420	63.46	37	--	--
09-27-85	0139	320.3	--	--	--	--	--	--	34	--
09-27-85	0433	-973.3	--	--	--	--	--	--	26	--

# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <sub>a</sub> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
09-27-85	1230	996.8	--	--	--	--	--	--	42	--
09-27-85	1450	626.6	--	--	--	--	--	--	--	99
10-03-85	0021	815.6	4.0	.150	--	--	--	29	--	--
10-04-85	1842	1,014.3	--	.719	--	--	--	55	--	63
10-05-85	0027	-2,113.4	--	.545	--	--	--	54	--	55
10-05-85	0303	2,663.5	--	.639	--	--	--	80	--	80
10-05-85	0618	2,147.2	--	1.910	--	--	--	178	--	221
10-05-85	1415	750.5	--	--	--	--	--	--	--	212
10-05-85	1830	1,408.3	--	--	--	--	--	118	--	205
10-05-85	1833	1,408.3	--	1.730	--	--	--	--	--	--
10-08-85	0833	835.8	--	.500	--	--	--	58	118	--
10-09-85	2115	611.4	--	.141	--	--	--	24	21	--
10-10-85	0745	1,067.6	2.1	.136	200	220	11.99	26	--	--
10-10-85	0800	1,241.5	--	--	--	--	--	--	--	65
10-12-85	1336	1,386.6	--	.320	--	--	--	40	56	--
10-14-85	1009	847.1	--	.606	--	--	--	96	167	--
10-18-85	0830	852.8	--	--	--	--	--	--	--	108
10-23-85	0715	674.1	2.2	.155	140	108	--	16	--	--
10-26-85	0230	751.2	--	--	--	--	--	--	85	--
10-26-85	0403	-437.7	--	--	--	--	--	--	84	--
10-27-85	0730	-395.8	--	--	--	--	--	--	26	--
10-27-85	1109	1,104.2	--	--	--	--	--	--	51	--
10-27-85	1145	1,082.7	--	--	--	--	--	--	--	136
10-28-85	1442	-569.2	--	--	--	--	--	--	42	--
10-30-85	0027	943.9	--	--	--	--	--	--	33	--
11-01-85	1400	1,045.0	4.2	.243	1,410,000	528,000	--	37	--	--
11-01-85	1930	676.6	3.3	.293	--	--	--	44	--	--
11-02-85	0145	2,440.0	4.1	.502	--	--	--	185	--	--
11-02-85	0424	3,319.1	11.0	1.040	--	--	--	532	--	--
11-02-85	0657	2,923.1	9.8	1.170	--	--	--	630	--	--
11-02-85	0927	3,318.2	8.8	.838	--	--	--	508	--	--
11-02-85	1142	3,639.3	8.6	.811	--	--	--	330	--	--
11-02-85	1320	3,815.0	--	--	25,000	61,000	--	--	--	--
11-02-85	1351	3,879.5	7.4	.864	--	--	--	356	--	--
11-02-85	1415	3,910.5	--	--	--	--	--	--	--	539
11-02-85	1551	4,003.8	--	.707	--	--	--	433	596	--
11-02-85	1806	3,345.9	--	--	--	--	--	--	524	--
11-02-85	2223	3,430.6	--	.838	--	--	--	306	450	--
11-03-85	0530	3,056.4	7.4	.710	--	--	--	209	--	--
11-03-85	1448	2,247.9	6.0	.583	--	--	--	110	--	--
11-03-85	1851	1,733.5	--	--	--	--	--	--	193	--
11-03-85	2345	1,452.0	--	--	--	--	--	--	212	--
11-04-85	0506	1,074.8	5.2	.480	--	--	--	72	--	--
11-04-85	1324	796.4	--	--	--	--	--	--	115	--
11-04-85	1530	843.9	--	--	--	--	--	--	--	118

# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
11-05-85	0042	999.6	--	.383	--	--	--	55	--	--
11-05-85	1657	1,009.3	--	--	--	--	--	--	105	--
11-06-85	1042	646.9	--	.346	--	--	--	42	--	--
11-07-85	2312	712.0	2.5	.203	--	--	--	31	--	--
11-09-85	1039	1,988.5	--	.106	--	--	--	31	--	--
11-10-85	2127	1,477.1	--	.106	--	--	--	26	--	--
11-12-85	1021	1,444.6	2.4	.250	--	--	--	25	--	--
11-16-85	1330	2,595.3	--	--	--	--	--	--	--	137
11-16-85	1400	2,828.3	--	--	--	--	--	--	103	--
11-16-85	1648	2,427.5	--	.383	--	--	--	88	--	--
11-17-85	0736	1,840.8	--	.503	--	--	--	80	--	--
11-18-85	1536	707.9	--	.446	--	--	--	44	--	--
11-20-85	0000	2,481.9	--	.397	--	--	--	106	--	--
11-22-85	0900	.1	4.8	.468	680	1,300	11.69	30	--	--
01-23-86	1452	499.1	--	--	--	--	--	--	9	--
01-23-86	1455	432.1	2.7	.030	--	--	3.65	1	--	--
01-30-86	1540	606.4	6.2	.140	--	108	--	12	34	--
02-06-86	0915	884.6	2.6	.064	20	--	--	5	9	--
02-12-86	1630	64.0	3.4	.073	26	22	--	6	--	--
02-12-86	1635	64.0	--	--	--	--	--	--	6	--
02-19-86	0835	376.1	3.3	.070	692	80	--	6	6	--
02-26-86	1045	136.6	2.4	.080	--	94	--	2	4	--
03-12-86	0930	54.0	3.1	.178	430	160	--	10	11	--
03-16-86	1450	100.0	--	--	--	--	--	--	16	--
03-16-86	1456	100.0	2.3	.226	--	213	--	22	--	--
03-18-86	1815	190.0	--	--	--	--	--	--	11	--
03-18-86	1939	190.0	--	.305	--	--	--	45	--	--
03-19-86	0206	270.0	--	--	--	--	--	--	92	--
03-19-86	0648	270.0	11.0	.364	--	--	--	58	--	--
03-19-86	1100	270.0	--	--	--	--	--	--	109	--
03-19-86	1125	270.0	--	--	17,200	17,600	--	--	--	--
03-19-86	1506	270.0	--	.618	--	--	--	125	--	--
03-19-86	2227	270.0	--	.756	--	--	--	121	--	--
03-20-86	0142	400.0	--	--	--	--	--	--	146	--
03-20-86	0715	400.0	--	.762	--	--	--	85	--	--
03-21-86	0518	720.0	--	.559	--	--	--	35	--	--
03-21-86	1142	720.0	--	.612	--	--	--	28	--	--
03-21-86	2109	720.0	--	.609	--	--	--	22	--	--
03-22-86	0706	560.0	--	.653	--	--	--	20	--	--
03-22-86	1433	560.0	--	.490	--	--	--	35	--	--
03-22-86	1909	560.0	--	.828	--	--	--	16	--	--
03-23-86	0515	450.0	--	.481	--	--	--	27	--	--
03-23-86	1620	450.0	--	--	--	--	--	--	--	118
03-23-86	1806	450.0	--	--	--	--	--	--	112	--
03-23-86	2100	450.0	--	.568	--	--	--	46	--	--

# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	800-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
03-24-86	0303	700.0	5.5	.468	--	--	--	89	--	--
03-24-86	0557	700.0	--	--	--	--	--	--	114	--
03-24-86	1400	700.0	--	--	--	294	--	--	--	--
03-24-86	1921	700.0	--	.429	--	--	--	72	--	--
03-24-86	2142	700.0	--	--	--	--	--	--	133	--
03-25-86	0006	1,580.0	--	.491	--	--	--	83	--	--
03-25-86	0500	1,580.0	--	.346	--	--	--	500	--	--
03-25-86	0724	1,580.0	--	--	--	--	--	--	114	--
03-25-86	0945	1,580.0	--	.420	--	--	--	71	--	--
03-25-86	1415	1,580.0	--	.364	--	--	--	150	--	--
03-25-86	1612	1,580.0	--	--	--	--	--	--	245	--
03-25-86	1803	1,580.0	--	.503	--	--	--	196	--	--
03-25-86	1951	1,580.0	--	--	--	--	--	--	408	--
03-25-86	2121	1,580.0	--	.616	--	--	--	246	--	--
03-25-86	2239	1,580.0	--	--	--	--	--	--	402	--
03-26-86	0131	4,740.0	--	--	--	--	--	--	675	--
03-26-86	0242	4,740.0	--	.852	--	--	--	469	--	--
03-26-86	0524	4,740.0	--	--	--	--	--	--	658	--
03-26-86	0803	4,740.0	--	.713	--	--	--	109	--	--
03-26-86	0920	4,740.0	--	--	360	1,148	--	--	--	--
03-26-86	1310	4,740.0	--	.943	--	--	--	333	--	--
03-26-86	2110	4,740.0	--	.499	--	--	213	--	--	--
03-27-86	0510	3,020.0	--	.559	--	--	144	--	--	--
03-27-86	1310	3,020.0	--	.371	--	--	88	--	--	--
03-27-86	2045	3,020.0	--	.527	--	--	82	--	--	--
03-28-86	0445	1,350.0	--	.293	--	--	80	--	--	--
03-28-86	1245	1,350.0	--	.412	--	--	62	--	--	--
03-29-86	1315	1,300.0	--	.229	--	--	49	--	--	--
03-30-86	1315	819.0	--	.330	--	--	63	--	--	--
04-02-86	0006	314.0	--	.233	--	--	--	102	--	--
04-02-86	0940	314.0	3.0	.238	34	240	14	106	--	168
04-02-86	1248	314.0	--	.064	--	--	--	21	--	--
04-03-86	0048	248.0	--	.122	--	--	--	36	--	--
04-03-86	1248	248.0	--	.138	--	--	--	30	--	--
04-03-86	2354	248.0	--	.080	--	--	--	15	--	--
04-04-86	1224	247.0	--	.159	--	--	--	72	--	--
04-05-86	0051	252.0	--	.177	--	--	--	36	--	--
04-05-86	1251	252.0	--	.208	--	--	--	66	--	--
04-06-86	0051	350.0	--	.196	--	--	--	64	--	--
04-07-86	1851	286.0	--	.129	--	--	--	24	--	--
04-08-86	2321	210.0	--	.129	--	--	--	36	--	--
04-10-86	0654	-1,126.8	--	.113	--	--	--	22	--	--
04-10-86	1306	-1,126.8	--	--	--	--	--	--	--	72
04-10-86	1854	610.3	--	.110	--	--	--	20	--	--
04-12-86	1445	666.2	--	.098	--	--	--	23	--	--

# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
04-13-86	1442	1,629.9	--	.236	--	--	--	60	--	--
04-14-86	1403	912.4	--	--	--	--	--	--	61	--
04-15-86	1839	2,866.7	--	.095	--	--	--	23	--	--
04-16-86	2124	1,052.2	--	.092	--	--	--	36	--	--
04-19-86	0024	784.9	--	.150	--	--	--	35	--	--
04-20-86	2124	-583.2	--	.034	--	--	--	38	--	--
04-21-86	1345	591.5	4.8	.284	--	--	25.95	60	--	--
04-21-86	1400	318.7	--	--	--	--	--	--	--	122
04-22-86	0809	1,698.5	--	.194	--	--	--	36	--	--
04-24-86	0809	1,503.0	--	--	--	--	--	--	45	--
04-25-86	0512	290.1	--	.110	--	--	--	26	--	--
04-28-86	0045	-92.6	--	.158	--	--	--	36	--	--
05-02-86	0012	904.9	--	.071	--	--	--	41	--	--
05-04-86	0815	879.1	--	--	--	--	--	--	58	--
05-06-86	2030	-1,508.1	--	.080	--	--	--	64	--	--
05-07-86	1020	615.6	5.3	.139	28	12	57.92	24	--	--
05-07-86	1045	1,388.4	--	--	--	--	--	--	--	62
05-11-86	2336	-123.0	--	.118	--	--	--	25	--	--
05-12-86	1515	190.4	5.5	.063	--	--	47.90	21	--	--
05-14-86	0421	649.2	--	--	--	--	--	--	59	--
05-15-86	0212	-1,055.1	--	.127	--	--	--	34	--	--
05-16-86	0745	100.5	--	--	--	--	--	--	105	--
05-18-86	0321	-805.6	--	.098	--	--	--	38	--	--
05-19-86	0321	1,634.4	--	.127	--	--	--	36	--	--
05-20-86	1200	-99.7	2.0	.188	--	--	--	36	--	--
05-22-86	1200	746.4	2.0	.238	--	--	--	25	--	--
05-22-86	1800	-111.8	2.0	.099	--	--	--	22	--	--
05-23-86	1200	871.1	3.0	.138	--	--	--	22	--	--
05-24-86	1200	-341.8	3.0	.082	--	--	--	17	--	--
05-25-86	1200	1,193.6	2.1	.069	--	--	--	17	--	--
05-26-86	1200	4.4	2.0	.029	--	--	--	14	--	--
05-27-86	1200	1,145.4	2.0	.059	--	--	--	13	--	--
05-28-86	1200	19.4	3.3	.066	--	--	--	18	--	--
05-29-86	1200	-526.2	3.0	.069	--	--	--	19	--	--
05-30-86	1200	309.6	2.0	.147	--	--	--	20	--	--
05-31-86	1200	-587.6	3.2	.102	--	--	--	26	--	--
06-01-86	1200	137.0	3.7	.095	--	--	--	26	--	--
06-02-86	1200	-689.7	3.5	.109	--	--	--	21	--	--
06-03-86	0900	853.1	--	--	--	--	--	--	--	35
06-03-86	1200	-882.3	2.0	.560	--	--	--	20	--	--
06-03-86	1330	-19.4	6.1	--	3,600	--	79.42	14	--	--
06-04-86	1200	21.5	2.0	.034	--	--	--	23	--	--
06-05-86	1200	718.8	.2	.053	--	--	--	23	--	--
06-07-86	1200	-281.6	2.7	.167	--	--	--	23	--	--
06-08-86	1350	798.4	--	--	--	--	--	--	--	80

# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
06-10-86	1200	-428.3	2.4	.102	--	--	--	15	--	--
06-11-86	1200	-615.3	2.0	.125	--	--	--	21	--	--
06-12-86	1200	799.3	2.3	.194	--	--	--	20	--	80
06-13-86	1200	1,014.6	3.0	.484	--	--	--	31	--	--
06-14-86	1200	69.3	4.0	.151	--	--	--	27	--	--
06-15-86	1200	-122.0	2.1	.171	--	--	--	20	--	--
06-16-86	1200	-1,505.3	2.0	.207	--	--	--	38	--	--
06-17-86	1200	915.4	2.6	.035	--	--	--	36	--	--
06-18-86	1200	75.0	2.4	.197	--	--	--	44	--	--
06-19-86	1200	-1,037.8	2.0	.181	--	--	--	36	--	--
06-20-86	1000	1,365.8	4.1	.069	22,000	56,000	98.7	57	--	--
06-21-86	1545	806.8	--	--	--	--	--	--	--	72
06-22-86	1200	419.0	2.0	.184	--	--	--	44	--	--
06-22-86	1800	-674.0	2.8	.207	--	--	--	37	--	--
06-23-86	1200	1,080.2	2.0	.194	--	--	--	27	--	--
06-23-86	1800	-276.5	2.8	.197	--	--	--	46	--	--
06-24-86	1200	-472.8	6.2	.076	--	--	--	51	--	--
06-25-86	1200	1,303.0	5.8	.042	--	--	--	40	--	--
06-26-86	1200	12.5	3.3	.125	--	--	--	40	--	--
06-26-86	1842	-971.3	--	.054	--	--	--	49	--	--
06-29-86	0942	-560.3	--	.061	--	--	--	41	--	--
07-02-86	2042	1,045.0	--	.072	--	--	--	33	--	--
07-05-86	0912	-897.4	--	.126	--	--	--	70	--	--
07-06-86	2151	573.9	--	.072	--	--	--	29	--	--
07-07-86	0900	56.1	4.0	.056	--	--	82.2	23	--	20
07-08-86	1200	27.6	4.0	.155	--	--	--	8	--	--
07-09-86	1200	367.9	3.4	.137	--	--	--	28	--	--
07-10-86	1200	-47.0	2.5	.165	--	--	--	30	--	--
07-11-86	1200	671.1	4.5	.149	--	--	--	34	--	--
07-12-86	1200	-247.1	3.2	.204	--	--	--	37	--	--
07-13-86	1200	173.2	2.7	.164	--	--	--	30	--	--
07-14-86	0900	37.9	--	--	--	--	--	--	--	33
07-14-86	1200	63.4	3.6	.172	--	--	--	22	--	--
07-15-86	1200	-250.6	3.7	.106	--	--	--	30	--	--
07-15-86	2145	1,507.0	--	--	--	--	--	--	--	46
07-16-86	1200	-347.9	2.5	.131	--	--	--	33	--	--
07-17-86	1200	616.4	2.5	.155	--	--	--	33	--	--
07-18-86	1200	98.9	5.1	.164	--	--	--	65	--	--
07-19-86	1200	338.0	4.0	.201	--	--	--	39	--	--
07-19-86	2230	112.7	2.8	.212	--	--	--	121	--	69
07-20-86	1200	-515.7	4.6	.216	--	--	--	50	--	--
07-21-86	1200	41.5	3.9	.182	--	--	--	40	--	--
07-22-86	1200	941.9	3.4	.118	--	--	--	35	--	--
07-22-86	1409	85.0	2.0	.241	--	--	--	45	--	--
07-23-86	1200	652.5	2.8	.140	--	--	--	30	--	--

# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <sub>a</sub> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
07-24-86	0539	101.7	2.0	.250	--	--	--	42	--	--
07-24-86	1200	-183.4	2.0	.140	--	--	--	47	--	--
07-24-86	1400	76.0	3.7	.112	--	--	--	48	--	--
07-25-86	0930	1,621.7	2.0	.241	--	--	--	52	--	--
07-26-86	0621	1,447.3	2.0	.316	--	--	--	58	--	--
07-28-86	0024	1,753.3	2.0	.376	--	--	--	78	--	--
07-28-86	0157	-53.6	2.0	.430	--	--	--	92	--	--
07-29-86	1200	370.1	3.8	.474	--	--	--	67	--	--
07-30-86	1200	113.2	3.4	.184	--	--	--	21	--	--
07-31-86	1200	-775.0	2.0	.260	--	--	--	38	--	--
08-01-86	1200	-25.1	2.0	.281	--	--	--	40	--	--
08-02-86	1200	590.5	3.4	.129	--	--	--	36	--	--
08-03-86	1200	535.4	2.3	.177	--	--	--	12	--	--
08-04-86	1200	161.7	2.0	.201	--	--	--	52	--	--
08-05-86	1135	600.2	--	--	--	--	--	--	47	--
08-05-86	1150	548.0	2.4	.206	120	--	65.9	46	--	--
08-05-86	1200	435.9	2.4	.246	--	--	--	--	--	--
08-08-86	1200	-189.4	4.2	.223	--	--	--	26	--	--
08-09-86	1200	185.0	3.9	.223	--	--	--	26	--	--
08-10-86	1200	-1,073.3	4.5	.198	--	--	--	36	--	--
08-11-86	1115	1,043.2	--	--	--	--	--	--	--	34
08-11-86	1200	900.5	3.6	.162	--	--	--	21	--	--
08-12-86	1200	-252.1	2.0	.139	--	--	--	26	--	--
08-13-86	1200	-726.3	2.6	.138	--	--	--	24	--	--
08-13-86	1400	-285.0	2.0	.141	--	--	--	28	--	--
08-14-86	1200	-230.0	2.5	.132	--	--	--	27	--	--
08-15-86	1200	-67.2	2.0	.143	--	--	--	24	--	--
08-17-86	1200	1,873.6	3.2	.277	--	--	--	55	--	--
08-18-86	1200	717.1	2.6	.232	--	--	--	40	--	--
08-19-86	1200	178.9	2.6	.196	--	--	--	38	--	--
08-20-86	1200	169.6	4.0	.175	--	--	--	28	--	--
08-21-86	1200	-338.1	3.8	.162	--	--	--	20	--	--
08-22-86	1200	561.1	4.3	.343	--	--	--	31	--	--
08-23-86	1200	663.9	4.1	.171	--	--	--	38	--	--
08-25-86	1200	-146.1	3.6	.142	--	--	--	18	--	--
08-26-86	1200	-721.7	5.2	.257	--	--	--	22	--	--
08-27-86	1200	196.8	5.5	.150	--	--	--	26	--	--
08-28-86	1200	-1,516.3	4.4	.140	--	--	--	24	--	--
08-29-86	1200	31.2	3.6	.146	--	--	--	14	--	--
08-30-86	1200	340.0	5.6	.073	--	--	--	36	--	--
08-31-86	1200	356.6	3.8	.175	--	--	--	16	--	--
09-01-86	1200	-12.2	4.1	.159	--	--	--	27	--	--
09-02-86	1200	-279.5	3.3	.139	--	--	--	17	--	--
09-03-86	1200	332.7	2.7	.156	--	--	--	23	--	--
09-03-86	1330	189.8	6.3	.214	--	30	82.2	29	--	--



# APPENDIX C

Table 1.--Water-quality data for East River at Monroe Street in Green Bay, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
09-04-86	1200	-326.3	3.2	.122	--	--	--	23	--	--
09-05-86	1200	-623.3	4.2	.158	--	--	--	21	--	--
09-06-86	1000	1,221.3	--	--	--	--	--	--	--	37
09-06-86	1200	118.8	3.7	.156	--	--	--	28	--	--
09-08-86	1200	-181.1	2.0	.106	--	--	--	10	--	--
09-08-86	1800	-1,049.9	2.6	.140	--	--	--	24	--	--
09-09-86	1200	-292.0	2.4	.128	--	--	--	22	--	--
09-10-86	0930	23.0	--	--	--	--	--	--	--	60
09-10-86	1200	-97.3	4.2	.265	--	--	--	39	--	--
09-11-86	1200	2,416.1	3.4	.533	--	--	--	39	--	--
09-11-86	1345	697.5	--	--	--	--	--	--	--	165
09-11-86	1400	673.7	5.1	.687	--	730,000	--	77	--	--
09-12-86	1200	1,970.5	3.5	.288	--	--	--	44	--	--
09-13-86	1200	2,115.6	2.0	.200	--	--	--	41	--	--
09-14-86	1200	256.3	2.0	.127	--	--	--	27	--	--
09-15-86	1200	57.3	3.0	.221	--	--	--	26	--	--
09-16-86	1200	1,030.0	2.7	.260	--	--	--	18	--	--
09-17-86	1200	697.8	2.0	.216	--	--	--	18	--	--
09-18-86	1200	-1,642.1	2.0	.290	--	--	--	26	--	--
09-18-86	1430	448.4	--	--	--	--	--	--	--	24
09-19-86	1200	847.7	2.0	.309	--	--	--	33	--	--
09-20-86	1200	1,187.2	2.0	.296	--	--	--	26	--	--
09-21-86	1200	-370.8	2.4	.495	--	--	--	62	--	--
09-24-86	1200	-36.8	2.0	.517	--	--	--	29	--	--
09-24-86	2215	83.5	--	--	--	--	--	--	--	84
09-25-86	1200	1,348.9	2.0	.512	--	--	--	45	--	--
09-26-86	1200	-28.4	2.0	.360	--	--	--	59	--	--
09-27-86	1200	362.9	2.3	.520	--	--	--	142	--	--
09-28-86	1200	188.0	2.6	.441	--	--	--	40	--	--
09-29-86	1000	2,116.8	2.0	.834	2,800	2,700	2.84	58	--	--
09-29-86	1015	2,010.6	--	--	--	--	--	--	--	118
09-29-86	1200	1,794.0	2.0	.471	--	--	--	35	--	--
09-30-86	1200	270.3	2.0	.465	--	--	--	43	--	--
10-01-86	1200	2,025.8	2.0	.374	--	--	--	60	--	--

# APPENDIX C

Table 2.--Water-quality data for East River at Allouez Avenue bridge at Allouez, 1985-86

[ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; µg/L, micrograms per liter; c/100 mL, colonies per 100 milliliter; --, no data available; EWI, equal width increment]

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phylla (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
04-04-85	1330	--	2.9	0.390	720	1,600	4.90	--	--	--
04-04-85	1350	--	--	--	--	--	--	--	255	--
04-12-85	1045	--	--	--	--	--	--	--	322	--
04-17-85	0835	--	4.0	.489	80	500	.30	--	--	--
04-17-85	0845	--	--	--	--	--	--	--	228	--
05-01-85	0845	--	3.3	.326	60	60	26.4	--	268	--
05-15-85	0845	--	3.6	.311	100	70	27.5	--	738	--
05-29-85	0900	--	2.0	.391	80	110	22.0	--	449	--
06-13-85	0900	--	3.1	--	140	140	45.6	--	--	--
06-13-85	0911	--	--	--	--	--	--	--	866	--
06-27-85	0750	--	3.2	.601	--	580	20.6	--	818	--
07-03-85	0640	--	4.1	.467	6,000	230	24.0	--	1,352	--
07-05-85	1240	--	--	--	--	--	--	--	802	--
07-11-85	0835	--	3.0	.429	1,100	250	16.4	--	1,348	--
07-25-85	1315	--	3.6	.329	760	1,900	12.6	--	--	--
07-25-85	1320	--	--	--	--	--	--	--	177	--
08-01-85	0940	--	1.8	.350	500	320	12.3	--	--	--
08-01-85	0945	--	--	--	--	--	--	74	--	136
08-08-85	0840	--	2.9	.351	1,400	1,200	30.0	79	--	128
08-15-85	0940	--	3.8	.371	6,300	640	36.4	--	--	--
08-15-85	0945	--	--	--	--	--	--	78	--	131
08-29-85	0745	--	2.5	.320	3,600	5,400	15.0	59	--	--
09-12-85	0835	--	1.9	1.14	1,300	1,500	7.51	--	--	--
09-12-85	0840	--	--	--	--	--	--	63	--	132
09-26-85	0905	--	2.7	.330	2,000	280	4.00	--	--	--
09-26-85	0910	--	--	--	--	--	--	74	--	118
10-10-85	0845	--	--	--	--	--	--	--	--	149
10-16-85	0830	--	1.7	.333	1,300	620	5.61	91	--	--
10-23-85	0745	--	2.3	.304	700	430	--	58	--	--
10-23-85	0845	--	--	--	--	--	--	--	160	--
11-21-85	0715	--	3.3	.318	3,100	860	2.45	42	--	--
04-02-86	1200	--	2.2	.188	100	44	6.92	123	--	--
04-14-86	1215	--	2.5	.272	77	40	25.4	78	--	--

# APPENDIX C

**Table 3.--Water-quality data for East River at State Highway 32 near De Pere, 1985**

[ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; µg/L, micrograms per liter; c/100 mL, colonies per 100 milliliters; --, no data available; EWI, equal width increment]

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
03-15-85	1220	--	--	--	--	--	--	--	257	--
04-04-85	1445	--	2.9	0.460	560	4,000	5.10	--	141	--
04-12-85	1130	--	--	--	--	--	--	--	254	--
04-17-85	0920	--	4.0	.314	27	220	.20	--	--	--
04-17-85	0930	--	--	--	--	--	--	--	119	--
05-01-85	0930	--	2.0	.317	250	140	5.50	--	--	--
05-01-85	0945	--	--	--	--	--	--	--	186	--
05-15-85	0930	--	3.3	.290	1,000	1,300	11.2	--	248	--
05-29-85	1000	--	1.7	.310	680	280	3.18	--	148	--
06-13-85	0945	0.1	1.6	--	300	440	8.00	--	87	--
06-27-85	0900	5.7	2.3	.400	6,000	1,100	8.12	--	--	--
06-27-85	0910	5.7	--	--	--	--	--	--	198	--
07-02-85	0745	1.5	2.6	.553	3,900	1,600	6.52	--	--	--
07-03-85	0745	2.0	--	--	--	--	--	--	157	--
07-05-85	1130	6.6	--	--	--	--	--	--	845	--
07-11-85	0945	.6	3.8	.305	1,800	1,000	22.4	--	181	--
07-25-85	1400	14.0	3.6	.321	6,500	15,000	14.3	--	--	--
07-25-85	1425	14.0	--	--	--	--	--	--	89	105
08-01-85	1100	.5	2.5	.347	2,100	900	19.4	33	--	49
08-08-85	1010	.6	2.3	.366	4,000	1,400	22.0	56	--	87
08-15-85	1055	6.6	4.7	.508	9,500	560	42.4	--	--	--
08-15-85	1100	6.6	--	--	--	--	--	83	--	86
08-29-85	0910	14.0	4.6	.577	52,000	91,000	8.69	76	--	120
09-12-85	0940	20.0	3.3	.685	200	1,300	3.76	40	--	66
09-26-85	1050	33.0	4.2	.936	72,000	24,000	7.36	--	--	--
09-26-85	1100	33.0	--	--	--	--	--	59	--	58
10-10-85	0945	33.0	1.5	.225	480	540	5.05	34	--	46
10-23-85	0900	--	7.2	.322	800	630	--	32	--	44
11-21-85	0745	--	7.2	.393	12,000	4,600	12.2	23	--	--

# APPENDIX C

Table 4.--Water-quality data for Bower Creek at Sunnyview Road near De Pere, 1985-86

[ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; µg/L, micrograms per liter; c/100 mL, colonies per 100 milliliter; --, no data available; EWI, equal width increment]

Date	Time	Discharge (ft <sup>3</sup> /s)	800-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll a (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
03-11-85	1200	--	--	--	--	--	--	--	293	--
03-16-85	1220	8.7	--	--	--	--	--	--	135	--
03-18-85	1345	3.2	--	--	--	--	--	--	73	--
03-20-85	1150	4.1	--	--	--	--	--	--	105	--
03-22-85	1135	2.8	--	--	--	--	--	--	46	--
03-23-85	1145	3.2	--	--	--	--	--	--	25	--
03-25-85	1315	2.7	--	--	--	--	--	--	73	--
03-27-85	1200	13.0	--	--	--	--	--	--	99	--
03-29-85	1035	7.9	--	--	--	--	--	--	38	--
03-30-85	1235	2.7	--	--	--	--	--	--	216	--
04-01-85	1115	3.2	--	--	--	--	--	--	97	--
04-04-85	1200	7.0	6.4	.620	--	--	--	--	--	--
04-04-85	1600	7.0	3.5	.340	207	900	8.90	--	--	--
04-04-85	1615	7.1	--	--	--	--	--	--	72	--
04-06-85	1615	18.0	--	--	--	--	--	--	98	--
04-08-85	0400	18.0	--	--	--	--	--	--	76	--
04-08-85	1200	46.0	--	--	--	--	--	--	215	--
04-08-85	1600	53.0	--	--	--	--	--	--	107	--
04-08-85	2000	29.0	--	--	--	--	--	--	744	--
04-09-85	1035	9.0	--	--	--	--	--	--	89	--
04-11-85	1340	13.0	--	--	--	--	--	--	87	--
04-12-85	1000	51.0	--	--	--	--	--	--	803	--
04-17-85	1000	2.6	4.0	.254	93	540	.30	--	75	--
04-19-85	1330	4.1	--	--	--	--	--	--	464	--
04-19-85	1540	4.5	--	--	--	--	--	--	267	--
04-22-85	1419	1.2	--	--	--	--	--	--	63	--
05-01-85	1030	.6	1.8	.074	66	50	10.40	--	61	--
05-10-85	1330	0	--	--	--	--	--	--	53	--
05-15-85	1018	0	4.6	.187	2,180	2,740	44.15	--	--	--
05-15-85	1030	0	--	--	--	--	--	--	32	--
05-29-85	1045	0	2.8	.188	260	110	11.44	--	61	--
06-09-85	1330	.6	--	1.550	--	--	--	--	653	--
06-09-85	1930	.4	--	1.520	--	--	--	--	--	--
06-09-85	2230	.2	--	1.580	--	--	--	--	--	--
06-11-85	2335	0	--	.263	--	--	--	158	--	--
06-12-85	1410	0	--	--	--	--	--	--	237	--
06-13-85	1030	0	3.7	--	2,000	1,190	9.10	--	126	--
06-19-85	0830	0	--	--	--	--	--	--	102	--
06-21-85	2315	76.0	--	--	--	--	--	--	3,151	--
06-21-85	2332	78.0	--	1.860	--	--	--	--	--	--
06-22-85	0100	105.0	--	--	--	--	--	--	2,556	--
06-22-85	0104	106.0	--	1.860	--	--	--	--	--	--
06-22-85	0245	113.0	--	--	--	--	--	--	2,895	--
06-22-85	0248	114.0	--	1.810	--	--	--	--	--	--
06-22-85	0335	125.0	--	--	--	--	--	--	3,298	--

# APPENDIX C

Table 4.--Water-quality data for Bower Creek at Sunnyview Road near De Pere, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <u>a</u> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
06-22-85	0345	125.0	--	1.770	--	--	--	--	--	--
06-22-85	0500	114.0	--	--	--	--	--	--	2,588	--
06-22-85	0505	113.0	--	1.550	--	--	--	--	--	--
06-22-85	0630	117.0	--	--	--	--	--	--	1,744	--
06-22-85	0640	117.0	--	1.670	--	--	--	--	--	--
06-22-85	0905	94.0	--	--	--	--	--	--	1,273	--
06-22-85	0910	92.0	--	1.600	--	--	--	--	--	--
06-22-85	1555	18.0	--	1.330	--	--	--	--	--	--
06-22-85	1600	18.0	--	--	--	--	--	--	602	--
06-22-85	2330	7.9	--	1.210	--	--	--	--	--	--
06-22-85	2335	7.9	--	--	--	--	--	--	299	--
06-23-85	1135	3.9	--	--	--	--	--	--	165	--
06-23-85	1140	3.9	--	1.090	--	--	--	--	--	--
06-23-85	2120	2.7	--	1.120	--	--	--	--	--	--
06-23-85	2125	2.7	--	--	--	--	--	--	136	--
06-24-85	0755	1.9	--	.742	--	--	--	--	--	--
06-24-85	1420	1.6	--	--	--	--	--	--	76	--
06-24-85	1755	1.5	--	.601	--	--	--	--	--	--
06-25-85	0852	1.1	--	.525	--	--	--	--	--	--
06-25-85	0856	1.1	--	--	--	--	--	--	63	--
06-27-85	0830	.6	2.7	.420	6,250	694	4.60	--	27	--
07-03-85	0715	0	2.4	.385	6,100	1,600	8.78	--	--	--
07-03-85	0720	0	--	--	--	--	--	--	24	--
07-05-85	0930	11.0	--	--	--	--	--	--	1,355	--
07-10-85	1350	0	--	--	--	--	--	--	90	--
07-11-85	0915	0	2.5	.366	2,800	860	8.04	--	--	--
07-25-85	0345	2.1	8.8	.707	--	--	--	--	--	--
07-25-85	0430	3.8	--	--	--	--	--	--	399	--
07-25-85	0725	5.9	6.7	.666	--	--	--	--	--	--
07-25-85	1025	7.9	--	--	--	--	--	--	265	--
07-25-85	1335	8.6	6.2	.595	10,000	396,000	11.47	--	--	309
07-25-85	1625	7.4	7.6	.704	--	--	--	--	--	--
07-25-85	2225	6.0	13.0	1.780	--	--	--	--	--	--
07-26-85	0425	3.9	--	--	--	--	--	--	145	--
07-26-85	1025	2.1	13.0	1.730	--	--	--	--	--	--
07-26-85	1040	2.0	--	--	57,000	650,000	--	--	--	--
07-26-85	1625	1.4	--	--	--	--	--	--	96	--
07-26-85	2225	.9	11.0	1.800	--	--	--	33	--	--
07-27-85	0425	.6	8.8	1.600	--	--	--	--	--	--
08-01-85	1015	0	5.8	.976	400	1,200	91.63	38	--	34
08-05-85	2030	0	--	--	142,000	190,000	--	--	--	251
08-05-85	2110	1.5	7.8	1.090	--	--	--	305	349	--
08-05-85	2130	3.5	--	--	--	--	--	--	301	--
08-05-85	2145	5.4	5.7	.880	--	--	--	304	--	--
08-06-85	0230	1.9	--	--	--	--	--	--	779	--

# APPENDIX C

Table 4.--Water-quality data for Bower Creek at Sunnyview Road near De Pere, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	800-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <u>a</u> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
08-06-85	0830	.7	--	--	--	--	--	286	362	--
08-06-85	0845	.7	--	--	39,000	85,000	--	--	--	--
08-06-85	0850	.7	--	--	--	--	--	--	--	318
08-06-85	1155	.5	5.8	.684	--	--	--	252	--	--
08-06-85	1225	.5	--	--	--	--	--	--	303	--
08-06-85	1250	.5	4.8	.645	--	--	--	258	274	--
08-07-85	0335	1.1	4.7	.561	--	--	--	229	--	--
08-07-85	1235	.2	--	--	--	--	--	--	259	--
08-07-85	1300	.1	--	--	3,000	6,500	--	--	--	--
08-07-85	1910	0	4.5	.628	--	--	--	326	--	--
08-08-85	0910	0	--	--	--	--	--	--	106	--
08-08-85	0920	0	3.4	.493	42,000	800	14.85	70	--	--
08-13-85	0010	.5	7.2	.664	--	--	--	234	256	--
08-13-85	0020	.6	--	--	119,000	150,000	--	--	--	--
08-13-85	0025	.6	--	--	--	--	--	--	--	257
08-13-85	0045	2.5	--	--	--	--	--	--	324	--
08-13-85	0105	4.6	5.7	.667	--	--	--	262	--	--
08-13-85	0140	9.1	7.0	.794	--	--	--	397	--	--
08-13-85	0410	12.0	--	--	--	--	--	--	342	--
08-13-85	0845	7.2	8.4	.820	--	--	--	438	473	--
08-13-85	0900	6.8	--	--	307,000	324,000	--	--	--	--
08-13-85	0925	6.7	--	--	--	--	--	--	--	461
08-13-85	1445	3.8	8.8	.582	--	--	--	143	--	--
08-13-85	1530	3.3	--	--	404,000	198,000	--	--	--	--
08-13-85	2045	1.9	--	--	--	--	--	--	190	--
08-14-85	0245	1.1	--	.476	--	--	--	98	--	--
08-14-85	1210	.6	--	--	--	--	--	--	115	--
08-14-85	1230	.5	--	.479	--	--	--	54	--	--
08-15-85	1020	0	4.6	.544	10,000	1,000	24.58	33	--	50
08-17-85	2315	.9	9.0	.873	--	--	--	205	--	237
08-17-85	2320	1.4	--	--	5,000	56,000	--	--	--	262
08-17-85	2335	2.2	--	--	--	--	--	--	214	--
08-18-85	0005	4.2	8.5	.921	--	--	--	240	294	--
08-18-85	0015	5.0	--	--	--	--	--	--	390	--
08-18-85	0125	6.4	9.9	1.170	--	--	--	380	447	--
08-18-85	0315	4.3	--	--	--	--	--	--	734	--
08-18-85	0515	7.3	8.0	1.100	--	--	--	476	557	--
08-18-85	0715	4.9	--	--	--	--	--	--	520	--
08-18-85	0725	4.8	7.9	1.090	--	--	--	388	468	--
08-18-85	0915	3.4	--	--	--	--	--	--	328	--
08-18-85	1140	2.9	--	--	59,500	178,000	--	--	--	--
08-18-85	1150	2.9	--	--	--	--	--	--	--	358
08-18-85	1255	2.7	5.1	.951	--	--	--	319	--	--
08-18-85	1325	2.6	--	--	--	--	--	--	368	--
08-18-85	1455	2.3	4.7	.783	--	--	--	237	--	--

# APPENDIX C

Table 4.--Water-quality data for Bower Creek at Sunnyview Road near De Pere, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <u>a</u> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
08-18-85	1925	1.6	4.5	.664	--	--	--	142	--	--
08-19-85	0125	.9	4.2	.623	--	--	--	108	198	--
08-25-85	0650	1.4	3.4	.523	--	--	--	55	--	--
08-25-85	0655	1.5	--	--	--	--	--	--	85	--
08-25-85	1010	3.2	5.0	.869	--	--	--	64	--	--
08-25-85	1050	4.5	--	--	--	--	--	--	104	--
08-25-85	1105	5.0	3.7	.304	--	--	--	75	--	--
08-25-85	1250	9.5	3.1	.742	--	--	--	142	--	--
08-25-85	1300	9.5	--	--	--	--	--	--	--	170
08-25-85	1315	9.6	--	--	29,000	38,000	--	118	--	--
08-25-85	1335	9.7	--	--	--	--	--	--	171	--
08-25-85	1520	12.0	4.9	.748	--	--	--	170	--	--
08-25-85	2120	8.3	--	--	--	--	--	--	269	--
08-26-85	0320	5.3	12.0	1.640	--	--	--	119	171	--
08-26-85	0920	3.2	--	--	--	--	--	--	133	--
08-26-85	0945	3.1	--	--	450,000	278,000	--	60	--	--
08-26-85	1520	2.2	7.9	1.800	--	--	--	47	--	--
08-27-85	0320	1.1	--	--	--	--	--	--	98	--
08-27-85	0920	.9	5.1	1.300	--	--	--	25	--	--
08-29-85	0235	1.4	4.4	.740	--	--	--	28	--	--
08-29-85	0515	3.0	--	--	--	--	--	--	70	--
08-29-85	0540	4.8	6.5	1.000	--	--	--	64	--	--
08-29-85	0615	6.9	--	--	--	--	--	--	120	--
08-29-85	0805	7.2	5.2	.773	--	--	--	--	--	--
08-29-85	0820	7.2	4.8	.675	15,000	31,000	15.52	104	--	124
08-29-85	1605	5.1	--	--	--	--	--	--	121	--
08-29-85	2005	3.5	11.0	1.810	--	--	--	148	--	--
08-30-85	0205	4.7	--	--	--	--	--	--	148	--
08-30-85	0250	7.1	11.0	1.630	--	--	--	131	--	--
08-30-85	0325	15.0	--	--	--	--	--	--	324	--
08-30-85	0340	19.0	8.8	2.180	--	--	--	720	--	--
08-30-85	0705	25.0	6.4	1.240	--	--	--	424	--	--
08-30-85	0905	25.0	--	--	--	--	--	--	482	--
08-30-85	1108	21.0	--	--	--	--	--	--	439	--
08-30-85	1305	17.0	12.0	1.640	--	--	--	296	--	--
08-30-85	1515	14.0	--	--	--	--	--	--	--	275
08-31-85	1305	1.6	--	--	--	--	--	--	--	135
09-04-85	1350	3.4	--	--	--	--	--	--	--	184
09-05-85	1100	17.0	--	--	--	--	--	--	--	236
09-05-85	1525	62.0	9.9	1.590	--	--	--	736	--	--
09-05-85	1600	69.0	--	--	--	--	--	--	811	--
09-05-85	1800	76.0	11.0	1.830	--	--	--	804	868	--
09-05-85	2000	68.0	--	--	--	--	--	--	661	--
09-05-85	2200	55.0	9.4	1.440	--	--	--	296	--	--
09-05-85	2330	40.0	--	--	--	--	--	--	328	--

# APPENDIX C

Table 4.--Water-quality data for Bower Creek at Sunnyview Road near De Pere, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	800-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <sub>a</sub> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
09-06-85	0110	27.0	7.9	1.380	--	--	--	152	--	--
09-06-85	0310	19.0	--	--	--	--	--	--	225	--
09-06-85	0705	12.0	7.2	1.190	--	--	--	184	189	--
09-06-85	0850	10.0	--	--	2,710,000	595,000	--	858	--	--
09-06-85	1505	6.5	--	--	--	--	--	--	162	--
09-06-85	2305	4.0	--	.813	--	--	--	70	--	--
09-08-85	0705	0	--	.672	--	--	--	54	60	--
09-09-85	0605	3.1	--	.631	--	--	--	62	--	--
09-09-85	0925	7.4	--	.644	--	--	--	165	196	--
09-09-85	1725	7.4	--	--	--	--	--	--	113	--
09-10-85	0925	3.2	--	.904	--	--	--	51	--	--
09-12-85	0910	0	1.6	.532	--	8,500	1.75	15	--	28
09-23-85	1100	5.3	--	--	--	--	--	--	--	183
09-26-85	1000	2.6	2.0	.571	13,000	7,000	4.36	21	--	28
09-30-85	0400	0	--	--	--	--	--	--	--	--
10-01-85	1355	3.6	--	--	--	--	--	--	62	--
10-02-85	0555	1.9	--	.597	--	--	--	27	27	--
10-03-85	0555	0	--	.441	--	--	--	20	10	--
10-05-85	1320	4.1	--	--	--	--	--	--	--	154
10-06-85	1000	2.5	--	--	--	--	--	--	--	89
10-10-85	0905	0	1.2	.222	300	240	2.50	12	--	--
10-10-85	0910	0	--	--	--	--	--	--	--	19
10-11-85	1145	0	--	--	--	--	--	--	696	--
10-12-85	0555	0	--	.477	--	--	--	129	136	--
10-12-85	1140	101.0	--	--	--	--	--	--	686	--
10-12-85	1142	101.0	--	1.760	--	--	--	660	--	--
10-12-85	1400	102.0	--	1.640	--	--	--	542	551	--
10-12-85	1605	98.0	--	--	--	--	--	--	390	--
10-13-85	0403	41.0	--	.891	--	--	--	--	--	--
10-13-85	0405	41.0	--	--	--	--	--	111	112	--
10-13-85	0845	30.0	--	--	--	--	--	--	85	--
10-14-85	0245	6.8	--	.578	--	--	--	51	55	--
10-16-85	1640	4.1	--	.322	--	--	--	19	--	--
10-18-85	1640	3.1	--	--	--	--	--	--	16	--
10-19-85	0945	7.1	--	.280	--	--	--	104	--	--
10-21-85	0945	2.0	--	.380	--	--	--	10	--	--
10-21-85	2145	2.1	--	--	--	--	--	--	15	--
10-23-85	0815	1.3	2.2	.292	140	335	--	11	--	--
10-23-85	0830	1.3	--	--	--	--	--	--	58	--
10-24-85	0055	3.3	--	.367	--	--	--	13	--	--
10-24-85	0610	11.0	--	.358	--	--	--	26	--	--
10-24-85	1010	15.0	--	.291	--	--	--	31	--	--
10-24-85	1610	13.0	--	.496	--	--	--	33	--	--
10-25-85	0825	4.4	--	.578	--	--	--	27	--	--
10-27-85	1200	.9	--	--	--	--	--	--	--	--



# APPENDIX C

Table 4.--Water-quality data for Bower Creek at Sunnyview Road near De Pere, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	800-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <sub>a</sub> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
11-01-85	0840	6.9	7.9	.761	--	--	--	46	--	--
11-01-85	0900	10.0	--	--	--	--	--	--	69	--
11-01-85	0955	20.0	10.9	.521	--	--	--	140	--	--
11-01-85	1130	54.0	11.0	.734	--	--	--	395	--	--
11-01-85	1240	73.0	--	--	--	--	--	--	386	--
11-01-85	1320	82.0	15.0	1.030	--	--	--	463	--	--
11-01-85	1325	83.0	--	--	1,480	10,000	--	--	--	--
11-01-85	1850	139.0	101.0	1.140	--	--	--	664	1,191	--
11-01-85	1955	153.0	--	--	--	--	--	--	765	--
11-02-85	0355	128.0	4.7	.906	--	--	--	276	466	--
11-02-85	0555	113.0	--	--	--	--	--	--	398	--
11-02-85	1155	97.0	6.1	.400	--	--	--	176	--	--
11-02-85	1215	96.0	--	--	360,000	450,000	--	--	--	--
11-02-85	1230	94.0	--	--	--	--	--	--	309	--
11-02-85	1355	90.0	--	--	--	--	--	--	293	--
11-02-85	1955	51.0	--	.923	--	--	--	160	348	--
11-02-85	2155	40.0	--	--	--	--	--	--	269	--
11-03-85	0155	29.0	--	.749	--	--	--	123	--	--
11-03-85	1155	18.0	5.5	.625	--	--	--	66	--	--
11-03-85	2355	13.0	4.3	.607	--	--	--	94	--	--
11-04-85	0155	12.0	--	--	--	--	--	--	140	--
11-04-85	1355	7.6	--	--	--	--	--	--	94	69
11-05-85	0550	5.1	--	--	--	--	--	--	40	--
11-06-85	1940	6.6	--	.303	--	--	--	34	--	--
11-06-85	2145	15.0	--	--	--	--	--	--	88	--
11-07-85	0310	30.0	--	--	--	--	--	--	162	--
11-07-85	0510	28.0	--	.595	--	--	--	151	--	--
11-07-85	1110	19.0	--	.526	--	--	--	80	--	--
11-07-85	1310	17.0	--	--	--	--	--	--	86	--
11-11-85	0450	11.0	--	--	--	--	--	--	182	--
11-11-85	1520	14.0	2.6	.125	--	--	--	38	--	--
11-12-85	1705	25.0	3.6	.296	--	--	--	44	--	--
11-12-85	1905	30.0	--	--	--	--	--	--	183	--
11-13-85	0525	36.0	5.8	.484	--	--	--	60	--	--
11-13-85	0830	33.0	--	--	--	--	--	--	62	--
11-13-85	1725	30.0	2.9	.459	--	--	--	36	--	--
11-14-85	0325	41.0	--	--	--	--	--	--	159	--
11-14-85	0725	42.0	4.6	.440	--	--	--	106	--	--
11-15-85	1925	9.1	--	.333	--	--	--	51	--	--
11-16-85	0405	12.0	--	--	--	--	--	--	97	--
11-16-85	0525	35.0	--	.928	--	--	--	460	--	--
11-16-85	0540	41.0	--	--	--	--	--	--	744	--
11-16-85	1125	75.0	--	.942	--	--	--	402	--	--
11-17-85	0605	21.0	4.8	.588	--	--	--	65	--	--
11-18-85	1315	42.0	--	--	--	--	--	--	212	--

# APPENDIX C

Table 4.--Water-quality data for Bower Creek at Sunnyview Road near De Pere, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
11-18-85	1345	49.0	4.9	.660	--	--	--	193	--	--
11-18-85	1430	55.0	--	--	--	--	--	--	272	--
11-19-85	0215	27.0	--	--	--	--	--	--	165	--
11-20-85	0725	13.0	--	.366	--	--	--	42	--	--
11-21-85	0815	1.7	2.6	.460	4,460	3,620	3.74	19	--	--
12-05-85	1345	0	--	--	--	--	--	--	59	--
02-05-86	1010	0	--	.187	--	--	--	6	--	--
03-13-86	1100	1.8	--	--	--	--	--	--	--	--
03-16-86	1400	45.0	1.8	.579	--	218	--	21	40	--
03-18-86	1745	74.0	--	.879	--	--	--	304	--	--
03-18-86	1750	75.0	--	--	--	--	--	--	128	--
03-19-86	1150	147.0	7.7	.542	1,650	20,500	--	56	--	--
03-19-86	1200	147.0	--	--	--	--	--	--	100	--
03-21-86	1635	67.0	--	--	--	--	--	--	92	--
03-22-86	1710	59.0	--	1.190	--	--	--	107	115	--
03-23-86	1420	96.0	--	1.030	--	--	--	269	--	--
03-23-86	1500	106.0	--	--	--	--	--	--	386	--
03-24-86	1430	100.0	6.6	.875	128	71,600	--	128	256	--
03-25-86	1830	204.0	6.3	1.270	180	1,472	--	346	516	--
03-25-86	2010	177.0	--	1.030	--	--	--	334	--	--
03-25-86	2150	149.0	--	--	--	--	--	--	471	--
03-26-86	0035	123.0	--	.603	--	--	--	369	--	--
03-26-86	0545	80.0	--	.583	--	--	--	308	--	--
03-26-86	0725	64.0	--	--	--	--	--	--	415	--
03-26-86	0930	52.0	6.0	.672	--	--	--	378	--	--
03-26-86	1010	50.0	--	--	--	--	--	--	426	--
03-26-86	1515	61.0	--	.459	--	--	--	275	--	--
03-26-86	2030	50.0	--	--	--	--	--	--	309	--
03-26-86	2220	40.0	--	.504	--	--	--	216	--	--
03-27-86	0435	22.0	--	.316	--	--	--	131	--	--
03-28-86	0435	17.0	--	.468	--	--	--	61	--	--
03-28-86	1510	25.0	--	--	--	--	--	--	133	--
03-28-86	1635	32.0	--	.376	--	--	--	133	--	--
03-30-86	1635	14.0	--	.463	--	--	--	68	--	--
03-31-86	1200	7.3	--	--	--	--	--	--	--	--
04-01-86	0315	8.6	--	--	--	--	--	--	71	--
04-02-86	1015	5.4	4.4	.270	848	780	3.79	30	74	--
04-04-86	1410	9.3	--	.337	--	--	--	60	--	--
04-05-86	0900	16.0	--	--	--	--	--	--	141	--
04-05-86	0930	22.0	--	.554	--	--	--	225	--	--
04-05-86	1145	29.0	--	.455	--	--	--	275	--	--
04-06-86	0815	12.0	--	--	--	--	--	--	61	--
04-06-86	2015	9.1	--	.343	--	--	--	24	--	--
04-14-86	1245	.3	1.5	.119	64	16	.77	4	44	--
04-16-86	0055	15.0	--	.425	--	--	--	57	--	--

# APPENDIX C

Table 4.--Water-quality data for Bower Creek at Sunnyview Road near De Pere, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <u>a</u> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
04-16-86	0410	21.0	--	.468	--	--	--	84	--	--
04-16-86	1130	18.0	--	--	--	--	--	--	132	--
04-16-86	1605	12.0	--	--	--	--	--	--	76	130
04-28-86	1000	.2	2.7	.113	1,400	23	2.83	4	95	--
05-12-86	1330	.1	5.5	.097	236	62	5.70	4	--	--
06-03-86	1445	.1	5.1	--	4,800	--	42.81	15	--	--
06-12-86	0930	.1	--	--	--	--	--	--	--	30
06-19-86	0910	.1	--	--	--	--	--	51	--	--
06-19-86	1425	.1	8.0	.241	550	200	37.72	47	--	--
06-27-86	0745	3.6	6.0	.257	--	--	--	67	--	--
06-27-86	1050	1.9	--	--	--	--	--	--	146	--
06-27-86	1105	1.8	11.0	.317	40,600	33,000	--	66	--	--
06-28-86	0700	1.2	--	--	--	--	--	--	--	--
07-07-86	1000	--	4.0	.109	--	--	19.15	11	--	--
07-19-86	0300	.1	--	--	--	--	--	--	--	--
07-19-86	1220	.4	--	--	--	--	--	--	--	169
07-19-86	1230	.6	3.2	.365	--	--	--	93	--	--
07-21-86	0400	.2	--	--	--	--	--	--	--	--
07-24-86	2200	.1	--	--	--	--	--	--	--	--
07-25-86	0605	6.0	12.3	1.040	--	--	--	675	--	--
07-25-86	1615	15.0	--	--	--	--	--	--	208	--
07-25-86	1620	15.0	--	--	--	--	--	--	--	280
07-25-86	1630	15.0	--	--	720,000	720,000	--	--	--	--
07-25-86	1815	16.0	10.1	1.130	--	--	--	204	--	--
07-26-86	0235	8.7	--	--	--	--	--	--	118	--
07-26-86	1100	3.9	--	--	--	--	--	--	--	164
07-26-86	1435	2.7	5.5	.851	--	--	--	51	--	--
07-27-86	1945	.3	--	.065	--	--	--	97	--	--
07-28-86	0200	5.1	--	--	--	--	--	--	200	--
07-28-86	0305	10.0	8.0	1.100	--	--	--	406	--	--
07-28-86	0945	3.2	12.0	.944	--	--	--	488	--	--
07-28-86	1230	1.6	--	--	--	--	--	--	--	209
07-29-86	2100	.2	--	--	--	--	--	--	--	--
08-05-86	1000	.1	2.0	.438	610	430	29.09	12	--	--
08-08-86	0450	8.7	4.3	1.490	--	--	--	544	--	--
08-08-86	0535	15.0	--	--	--	--	--	--	511	--
08-08-86	0630	21.0	2.0	4.560	--	--	--	3,387	--	--
08-08-86	1455	13.0	7.0	1.700	--	--	--	144	458	--
08-08-86	2115	6.0	--	2.380	--	--	--	196	--	--
08-11-86	0100	.6	--	--	--	--	--	--	--	--
08-17-86	0600	.1	--	--	--	--	--	--	--	--
08-17-86	0900	.9	--	--	--	--	--	--	--	--
08-17-86	2110	3.2	--	--	--	--	--	--	--	--
08-18-86	1600	.6	--	--	--	--	--	--	--	--
08-25-86	1415	.1	2.3	.550	340	--	20.18	7	--	15

# APPENDIX C

Table 4.--Water-quality data for Bower Creek at Sunnyview Road near De Pere, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
09-10-86	0950	7.0	5.0	1.190	--	--	--	224	--	--
09-10-86	1020	19.0	5.4	.983	--	--	--	386	--	--
09-10-86	1050	26.0	--	--	--	--	--	--	576	--
09-10-86	1120	28.0	--	--	--	--	--	--	--	728
09-10-86	1155	30.0	--	--	833	730,000	--	--	--	--
09-10-86	1220	33.0	12.0	1.840	--	--	--	5	--	--
09-10-86	2120	40.0	--	--	--	--	--	--	350	--
09-10-86	2225	47.0	--	--	--	--	--	--	400	--
09-10-86	2300	56.0	11.0	1.870	--	--	--	398	--	--
09-10-86	2330	64.0	--	--	--	--	--	--	583	--
09-11-86	0001	74.0	--	--	--	--	--	--	709	--
09-11-86	0050	90.0	12.0	6.580	--	--	--	754	--	--
09-11-86	0120	106.0	--	--	--	--	--	--	1,528	--
09-11-86	0145	124.0	--	--	--	--	--	--	1,641	--
09-11-86	0210	145.0	11.0	2.060	--	--	--	724	--	--
09-11-86	0605	121.0	--	--	--	--	--	--	558	--
09-11-86	0800	97.0	--	--	--	--	--	--	391	--
09-11-86	0820	91.0	--	--	--	--	--	--	--	307
09-11-86	0930	77.0	7.1	1.280	--	--	--	252	--	--
09-11-86	1220	51.0	--	--	--	--	--	--	245	--
09-11-86	1350	42.0	6.0	1.470	--	--	--	63	--	--
09-11-86	1435	38.0	--	--	--	--	--	--	--	99
09-11-86	2020	24.0	--	--	--	--	--	--	144	--
09-12-86	0220	16.0	2.0	1.110	--	--	--	71	--	--
09-12-86	1420	8.0	--	--	--	--	--	--	60	--
09-13-86	1420	2.0	2.6	.801	--	--	--	36	--	--
09-16-86	0355	4.9	2.3	.770	--	--	--	34	--	--
09-16-86	1310	2.7	5.9	1.100	--	--	--	77	--	--
09-18-86	0230	7.5	2.9	.678	--	--	--	36	--	--
09-18-86	1430	9.3	6.5	.955	--	--	--	63	--	--
09-19-86	0230	4.2	--	--	--	--	--	--	54	--
09-19-86	1430	5.6	4.3	.647	--	--	--	48	--	--
09-19-86	1515	11.0	--	--	--	--	--	--	84	--
09-19-86	1615	17.0	10.0	1.140	--	--	--	140	--	--
09-19-86	1715	24.0	--	--	--	--	--	--	205	--
09-19-86	1745	32.0	7.2	1.140	--	--	--	234	--	--
09-19-86	1935	46.0	7.8	1.080	--	--	--	315	--	--
09-20-86	0345	37.0	--	--	--	--	--	--	227	--
09-20-86	0605	27.0	6.9	.986	--	--	--	100	--	--
09-20-86	1005	18.0	--	--	--	--	--	--	128	--
09-20-86	1820	11.0	5.1	.955	--	--	--	40	--	--
09-21-86	1545	11.0	3.0	.801	--	--	--	48	46	--
09-21-86	1850	24.0	4.2	.770	--	--	--	86	--	--
09-21-86	1955	31.0	--	--	--	--	--	--	197	--
09-22-86	0400	38.0	9.8	1.290	--	--	--	301	--	--

# APPENDIX C

Table 4.--Water-quality data for Bower Creek at Sunnyview Road near De Pere, 1985-86--Continued

Date	Time	Discharge (ft <sup>3</sup> /s)	BOD-5 (mg/L)	Total phos- phorus (mg/L)	Fecal coliform (c/100 mL)	Fecal strepto- coccus (c/100 mL)	Chloro- phyll <i>a</i> (µg/L)	Total sus- pended solids (mg/L)	Suspended sediment, point sample (mg/L)	Suspended sediment, EWI sample (mg/L)
09-22-86	0530	45.0	--	--	--	--	--	--	296	--
09-22-86	0650	52.0	8.5	1.080	--	--	--	220	--	--
09-22-86	0955	60.0	--	--	--	--	--	--	232	--
09-22-86	1020	61.0	--	--	--	--	--	--	--	480
09-22-86	1115	63.0	--	--	--	34,400	--	--	--	--
09-22-86	1415	49.0	9.1	1.630	--	--	--	254	--	--
09-22-86	1545	39.0	--	--	--	--	--	--	154	--
09-22-86	1725	31.0	7.9	1.230	--	--	--	119	--	--
09-22-86	2030	22.0	--	--	--	--	--	--	91	--
09-23-86	0245	14.0	4.7	.955	--	--	--	50	--	--
09-23-86	1445	7.9	--	--	--	--	--	--	503	--
09-24-86	0245	4.2	2.6	.832	--	--	--	28	--	--
09-24-86	1445	3.0	--	--	--	--	--	--	41	--
09-25-86	0245	1.7	3.1	.268	--	--	--	14	--	--
09-25-86	0740	6.5	--	--	--	--	--	--	45	--
09-25-86	1045	12.0	5.6	.834	--	--	--	42	--	--
09-25-86	1135	17.0	--	--	--	--	--	--	119	--
09-25-86	1255	25.0	7.2	.805	--	--	--	115	--	--
09-25-86	1515	28.0	--	--	--	--	--	--	--	193
09-26-86	0710	8.6	5.2	1.120	--	--	--	41	--	--
09-26-86	1200	14.0	--	--	--	--	--	--	119	--
09-26-86	1400	27.0	--	--	--	--	--	--	138	--
09-26-86	2355	18.0	7.0	1.210	--	--	--	91	--	--
09-27-86	1820	5.2	3.3	.888	--	--	--	25	--	--
09-28-86	1820	1.8	--	--	--	--	--	--	32	--
09-29-86	0900	6.0	3.4	1.130	822	8,300	10.96	20	--	--
09-29-86	0905	6.5	6.1	.880	--	--	--	28	--	--
09-29-86	1350	23.0	--	--	--	--	--	--	--	--
09-30-86	2300	3.0	--	--	--	--	--	--	--	--
10-02-86	2200	.9	--	--	--	--	--	--	--	--
10-03-86	0640	6.5	--	.924	--	--	--	40	--	--
10-03-86	0810	17.0	2.6	1.280	--	--	--	126	--	--
10-04-86	0610	14.0	3.2	.745	--	--	--	75	--	--
10-04-86	0725	28.0	5.8	1.040	--	--	--	180	--	--
10-04-86	1735	40.0	5.7	1.580	--	--	--	100	--	--
10-08-86	1215	20.0	--	--	--	--	--	--	--	265
10-08-86	1935	11.0	--	--	--	--	--	--	169	--
10-08-86	2100	9.3	14.0	2.500	26,500	26,000	122.00	223	--	--
10-09-86	0735	4.4	--	.730	--	--	--	54	--	--
10-12-86	2355	8.2	--	--	--	--	--	--	60	--
10-13-86	1155	3.6	--	1.150	--	--	--	31	--	--
10-15-86	0855	1.8	--	.477	--	--	--	16	23	--
10-31-86	2300	1.1	--	--	--	--	--	--	--	--

# APPENDIX D

**Table 1.--Daily suspended-sediment load (tons per day) for East River at Monroe Street in Green Bay, March-December 1985**

[--, no data available; negative load due to flow reversals]

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	--	26	49	56	1.5	-14	7.4	29	83	-20
2	--	54	46	-8.0	3.3	17	22	-6.1	4,210	44
3	--	158	12	4.4	-.39	.37	31	-9.0	1,320	.47
4	--	88	8.9	-2.1	.62	2.2	-13	67	239	9.2
5	--	200	64	1.7	64	7.2	46	562	87	4.3
6	-782	381	27	-3.3	-.99	15	78	169	39	4.1
7	170	370	37	9.7	-2.8	9.2	55	36	38	23
8	195	322	52	-12	9.0	5.1	33	35	49	-1.1
9	320	174	39	18	11	7.1	1.0	20	2.4	4.6
10	845	78	34	6.6	3.9	5.5	132	6.3	32	6.2
11	1,590	95	39	-7.5	11	17	13	-26	28	-.19
12	1,270	217	47	13	.13	5.7	8.0	36	32	7.0
13	914	178	59	14	1.4	48	20	52	99	5.6
14	486	203	30	-1.7	8.2	1.7	42	83	155	4.9
15	269	187	42	-6.2	13	16	14	-63	197	-1.7
16	243	80	48	13	2.3	-.01	45	-24	377	10
17	92	15	73	6.3	-1.9	24	123	-167	232	3.1
18	57	95	111	5.7	-6.3	23	-.32	-47	117	-1.1
19	67	42	86	22	12	-5.2	52	24	211	-1.2
20	43	178	31	2.8	10	8.7	-20	31	139	-3.3
21	7.4	61	46	-.32	-14	7.5	18	19	60	-1.8
22	41	81	24	110	17	4.5	26	8.8	.01	1.6
23	22	126	35	100	10	2.7	200	-3.2	.01	-.53
24	37	96	21	45	9.0	-7.7	60	27	.01	6.4
25	45	35	9.1	-9.0	8.1	36	60	2.3	.01	-5.9
26	34	78	5.9	5.1	11	22	24	20	11	5.3
27	57	68	27	-5.7	15	12	18	3.9	-.64	5.2
28	81	88	-6.5	10	-.38	-.14	18	14	24	5.2
29	10	31	50	1.5	2.2	8.6	14	5.2	1.3	5.2
30	3.3	26	30	-2.0	6.1	73	55	7.6	-13	5.0
31	-53	--	-4.2	--	7.1	21	--	-6.5	--	5.0
TOTAL	--	3,831	1,172.2	386.98	210.09	373.02	1,182.08	906.3	7,769.10	128.55
MEAN	--	128	38	13	6.8	12	39	29	259	4.1
MAX	--	381	111	110	64	73	200	562	4,210	44
MIN	--	15	-6.5	-12	-14	-14	-20	-167	-13	-20

# APPENDIX D

**Table 2.--Daily suspended-sediment load (tons per day) for East River at  
Monroe Street in Green Bay, January-September 1986**

[negative load due to flow reversals]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-1.7	-1.6	.62	96	5.6	-2.0	-7.9	-.62	-3.3
2	-.95	3.4	.67	50	28	3.1	.46	-.02	-5.6
3	1.1	1.8	.73	20	13	-3.7	13	-4.7	.59
4	3.6	2.1	.82	47	5.0	12	-4.1	-2.1	-3.8
5	3.2	1.7	.90	43	-12	7.8	26	-13	-5.8
6	1.3	-1.8	.94	50	-17	.06	1.5	.46	-7.6
7	-.67	1.4	.98	24	-3.0	-2.6	-9.2	2.5	14
8	.45	1.0	1.0	18	41	.52	-3.8	-2.9	.68
9	2.2	1.4	1.1	14	36	-6.8	7.3	-8.3	-2.0
10	-1.3	.75	1.2	4.3	4.1	-7.9	-17	16	58
11	.14	-.12	1.3	1.3	-4.6	-14	-4.1	19	294
12	.41	.52	1.6	-10	-7.4	20	-3.6	3.9	189
13	-1.2	.58	2.0	45	6.6	.75	2.4	-4.5	103
14	2.0	-.77	2.5	-8.6	-3.5	-15	.53	5.3	15
15	3.6	1.1	3.2	37	-8.4	-3.2	6.3	15	11
16	1.1	2.8	4.3	49	34	9.4	3.5	-4.9	21
17	.96	5.1	6.1	15	-5.0	31	11	89	6.0
18	2.2	5.0	6.3	7.5	2.2	-4.8	61	19	-22
19	1.4	1.4	82	1.0	28	27	54	5.3	20
20	.17	.95	80	-4.3	11	27	-15	-12	59
21	-1.4	3.1	54	89	13	-4.6	1.3	-12	63
22	1.6	1.4	45	13	16	.94	-17	5.4	223
23	2.3	-.04	100	-26	2.2	8.7	1.3	15	121
24	-1.5	.86	179	-5.9	.92	15	3.4	18	78
25	5.8	.52	471	-1.6	.19	6.2	15	-3.7	122
26	2.1	.17	3,600	1.9	-3.6	7.8	43	1.9	117
27	-6.1	.78	783	32	2.0	31	37	27	107
28	1.4	-.02	232	8.6	3.2	6.6	34	-6.6	86
29	-.68	--	174	7.3	-4.9	2.7	-2.1	2.1	89
30	5.1	--	138	18	-3.0	-9.5	-2.5	-2.1	71
31	.45	--	106	--	-.80	--	1.2	.62	--
TOTAL	27.08	33.48	6,080.26	635.5	178.81	143.47	236.89	168.04	1,818.17
MEAN	.87	1.2	196	21	5.8	4.8	7.6	5.4	61
MAX	5.8	5.1	3,600	96	41	31	61	89	294
MIN	-6.1	-1.8	.62	-26	-17	-15	-17	-13	-22

# APPENDIX D

**Table 3.--Daily total-phosphorus load (pounds per day) for East River at  
Monroe Street in Green Bay, March-December 1985**

[--, no data available; negative load due to flow reversals]

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	--	318	217	227	38.1	-32.6	53.8	181	779	-614
2	--	506	214	-57.8	35.7	95.7	239	-51.1	15,100	1,370
3	--	1,110	55.6	107	-10.4	2.33	393	-208	8,450	14.8
4	--	475	42.1	-22.1	18.8	8.63	-70.1	1,470	2,220	286
5	--	954	305	-6.75	468	66.9	244	10,200	801	134
6	-1,630	1,820	124	-20.0	-25.7	122	614	4,640	480	127
7	355	1,770	164	80.9	-32.8	105	433	864	559	709
8	407	1,540	220	-30.6	101	52.4	275	650	524	-35.1
9	668	834	188	109	88.4	44.6	39.0	266	-2.67	143
10	1,770	373	216	54.7	29.5	31.6	780	3.85	255	194
11	3,400	458	248	-59.6	56.0	101	223	-195	360	-6.02
12	3,060	1,040	289	110	10.3	47.9	99.0	365	525	218
13	2,560	858	345	73.5	18.9	344	164	435	1,020	175
14	1,630	978	168	-5.91	66.0	30.6	276	607	1,220	152
15	1,040	903	219	-34.2	98.6	126	126	-464	1,290	-54.2
16	1,020	387	165	76.3	13.9	- .25	446	-180	2,850	327
17	485	79.8	148	29.8	-16.5	147	609	-1,240	2,950	97.6
18	412	375	178	28.3	-46.8	150	-1.56	-355	2,020	-33.5
19	552	144	161	138	56.2	-48.5	225	188	2,090	-36.8
20	385	442	75.8	23.9	100	77.4	-116	260	1,150	-103
21	70.7	162	142	-22.7	-161	77.1	113	188	879	-56.1
22	388	271	93.0	579	181	33.1	187	105	.30	50.8
23	183	422	107	495	89.7	19.4	1,120	-14.4	.29	-16.4
24	310	329	62.4	98.9	105	-93.9	1,040	180	.28	198
25	394	123	53.3	56.6	105	328	1,020	5.97	.30	-184
26	280	282	31.7	32.5	102	314	279	57.2	358	167
27	430	257	86.4	4.04	268	180	93.0	-10.1	-20.0	162
28	502	344	2.08	87.5	58.2	-13.9	67.9	95.8	739	162
29	56.1	128	225	-16.8	18.7	63.7	64.0	61.5	39.9	162
30	16.6	112	185	28.9	31.4	549	280	101	-408	157
31	-379	--	-45.9	--	40.4	161	--	-85.9	--	157
TOTAL	--	17,794.8	4,684.48	2,164.38	1,905.6	3,089.21	9,315.04	18,120.82	46,229.40	4,024.08
MEAN	--	593	151	72.1	61.5	99.7	311	585	1,540	130
MAX	--	1,820	345	579	468	549	1,120	10,200	15,100	1,370
MIN	--	79.8	-45.9	-59.6	-161	-93.9	-116	-1,240	-408	-614



# APPENDIX D

Table 4.--Daily total-phosphorus load (tons per day) for East River at  
Monroe Street in Green Bay, January-September 1986

[negative load due to flow reversals]

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-11.3	-13.9	23.5	516	23.9	-9.56	-29.7	-28.5	-48.3
2	-6.44	31.0	25.2	184	91.4	67.5	3.14	.04	-80.4
3	7.37	17.1	26.8	183	32.1	-186	50.2	-88.6	1.19
4	24.4	22.5	29.7	208	11.7	77.1	-16.8	-37.1	-44.1
5	21.7	22.1	32.1	280	-30.2	44.1	96.8	-122	-78.5
6	8.65	-24.2	33.2	336	-41.3	8.04	8.90	6.82	-89.0
7	-4.51	21.5	34.1	216	-27.1	-18.0	-58.0	38.7	186
8	3.04	16.8	34.9	146	200	11.9	-86.8	-48.7	11.0
9	15.1	25.5	36.6	109	215	-20.4	95.7	-128	-21.5
10	-8.58	15.3	39.1	219	33.5	-80.4	-172	184	775
11	.94	-2.21	44.4	10.6	-35.7	-196	-33.4	199	5,570
12	2.73	12.2	52.2	-86.6	-40.0	318	-39.2	47.9	3,100
13	-7.94	14.2	63.7	360	32.0	-102	26.0	-50.7	1,640
14	13.5	-18.7	76.2	-55.9	.01	-240	7.07	53.1	151
15	24.4	26.2	92.0	257	-8.09	-55.1	23.6	187	193
16	7.61	68.2	121	297	81.2	62.6	25.1	-56.1	550
17	6.47	121	181	91.6	-7.66	145	82.0	923	142
18	15.2	117	301	60.1	-1.97	5.66	403	216	-479
19	9.65	33.9	762	20.2	229	181	321	54.7	401
20	1.16	24.2	1,550	7.04	132	66.9	-69.3	-147	1,220
21	-9.61	85.7	2,380	657	198	-15.2	13.5	-212	1,060
22	10.7	41.6	1,650	153	243	12.8	-154	135	4,360
23	15.8	-.29	1,260	-211	32.3	95.3	15.7	172	3,030
24	-23.9	31.0	1,690	-45.8	5.97	62.6	10.0	194	1,720
25	69.4	19.3	3,340	-14.0	4.05	6.56	145	-74.1	2,280
26	21.9	7.21	22,800	15.3	-18.0	49.3	461	45.9	1,790
27	-57.3	32.1	6,490	282	14.9	72.2	366	291	2,140
28	12.7	-.52	2,920	67.3	23.2	15.6	333	-68.6	1,810
29	-4.64	--	1,670	52.1	-42.8	10.2	-36.4	17.2	2,050
30	42.4	--	1,430	92.9	-39.8	-30.3	-43.7	-4.14	1,460
31	3.27	--	794	--	-21.7	--	9.43	23.7	--
TOTAL	203.87	745.79	49,982.7	4,406.84	1,288.91	205.20	1,756.84	1,723.52	34,799.39
MEAN	6.58	26.6	1,610	147	41.6	6.84	56.7	55.6	1,160
MAX	69.4	121	22,800	657	243	318	461	923	5,570
MIN	-57.3	-24.2	23.5	-211	-42.8	-240	-172	-212	-479

# APPENDIX D

Table 5.--Daily suspended-sediment load (tons per day) for Bower Creek at Sunnyview Road near De Pere, March-December 1985

[--, no data available]

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	--	1.3	0.08	0.00	0.00	0.00	0.00	0.50	127	0.00
2	--	3.2	.08	.00	.00	.00	.00	.08	97	.00
3	--	6.9	.04	.00	.01	.00	.00	.00	11	.01
4	--	1.8	.04	.00	.25	.00	.89	1.2	2.4	.01
5	--	6.8	.02	.00	14	.73	51	1.5	.49	.01
6	--	5.1	.02	.00	.37	1.2	5.7	.59	.86	.01
7	--	2.1	.03	.00	.19	.26	.26	.19	5.7	.01
8	--	28	.00	47	.09	.00	.00	.01	.89	.00
9	--	3.7	.00	1.5	.01	.00	1.8	.00	.35	.00
10	--	7.3	.00	.03	.00	.00	.43	.00	1.7	.00
11	--	5.9	.00	.00	.00	.00	.01	.00	2.9	.00
12	--	74	.01	.00	.00	.01	.00	64	4.8	.00
13	--	17	.00	.00	.00	5.6	.00	7.2	5.4	.01
14	27	16	.00	.00	.00	.19	.00	.57	9.8	.02
15	4.9	5.2	.00	.00	.00	.00	.00	.30	2.1	.02
16	4.1	1.5	.00	.00	.00	.00	.00	.32	47	.01
17	1.6	.70	.00	.00	.00	.06	.00	.17	4.4	.01
18	1.1	1.5	.01	.00	.00	4.0	.00	.17	18	.01
19	1.8	2.7	.01	.00	.00	.29	.00	1.3	5.9	.01
20	1.5	1.1	.01	.00	.00	.12	.00	.44	1.1	.01
21	.62	.45	.00	57	.00	.03	.00	.12	.10	.01
22	.40	.22	.00	304	.00	.00	.10	.12	.03	.01
23	.28	.17	.00	2.3	.00	.00	2.8	.14	.01	.01
24	.77	.17	.00	.44	.00	.00	1.6	.86	.01	.01
25	.87	.14	.00	.17	4.2	3.0	.21	.31	.00	.00
26	1.3	.13	.00	.09	.84	1.3	.22	.12	.00	.00
27	3.0	.12	.00	.04	.08	.20	.21	.04	.00	.00
28	1.3	.11	.00	.01	.00	.05	.03	.00	.00	.00
29	.80	.10	.00	.00	.00	1.4	.00	.00	.00	.01
30	1.2	.09	.00	.00	.00	16	.25	.00	.00	.01
31	.86	--	.00	--	.00	.99	--	.00	--	.01
TOTAL	--	193.50	.35	412.58	20.04	35.43	65.51	80.25	348.94	.22
MEAN	--	6.4	.01	14	.65	1.1	2.2	2.6	12	.01
MAX	--	74	.08	304	14	16	51	64	127	.02
MIN	--	.09	.00	.00	.00	.00	.00	.00	.00	.00

# APPENDIX D

**Table 6.--Daily suspended-sediment load (tons per day) for Bower Creek at  
Sunnyview Road near De Pere, January-October 1986**

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	0.00	0.00	0.00	1.9	0.03	0.00	0.00	0.00	0.00	0.17
2	.00	.00	.00	1.1	.03	.00	.00	.00	.00	.10
3	.00	.00	.00	.57	.02	.00	.00	.01	.00	3.6
4	.00	.00	.00	1.6	.02	.00	.00	.00	.00	11
5	.00	.00	.00	9.3	.01	.00	.00	.00	.00	3.2
6	.00	.00	.00	1.8	.01	.00	.00	.00	.00	1.8
7	.00	.00	.00	.42	.01	.00	.00	.00	.00	.93
8	.00	.00	.00	.17	.00	.00	.00	36	.00	7.1
9	.00	.00	.00	.08	.00	.00	.00	.50	.00	.75
10	.00	.00	.01	.06	.00	.00	.00	.03	29	.20
11	.00	.00	.03	.04	.00	.00	.00	.05	92	.14
12	.00	.00	.04	.04	.00	.01	.00	.01	1.7	.96
13	.00	.00	.25	.04	.00	.01	.00	.01	.28	.44
14	.00	.00	.69	.21	.00	.01	.00	.01	.10	.11
15	.00	.00	1.6	1.2	.00	.01	.00	.01	.36	.08
16	.00	.00	4.6	4.6	.00	.01	.00	.01	.44	.08
17	.00	.00	11	1.2	.00	.01	.00	.19	.16	.09
18	.00	.00	39	.41	.01	.01	.00	.08	1.2	.04
19	.00	.00	37	.24	.00	.01	.18	.01	11	.03
20	.00	.00	26	.16	.00	.04	.04	.01	8.4	.03
21	.00	.00	17	.12	.00	.03	.00	.00	4.6	.04
22	.00	.00	18	.09	.00	.02	.00	.00	26	.04
23	.00	.00	87	.08	.00	.02	.00	.00	1.1	.04
24	.00	.00	93	.07	.00	.02	.00	.00	.25	.04
25	.00	.00	161	.07	.00	.01	9.2	.00	4.7	.03
26	.00	.00	60	.08	.00	.01	1.4	.00	5.2	.03
27	.00	.00	6.5	.07	.00	.38	.05	.00	1.2	.04
28	.00	.00	6.8	.05	.00	.04	2.7	.00	.18	.04
29	.00	--	5.4	.04	.00	.01	.02	.00	1.3	.04
30	.00	--	2.4	.03	.00	.00	.00	.00	.55	.03
31	.00	--	1.1	--	.00	--	.00	.00	--	.03
TOTAL	.00	.00	578.42	25.84	.14	.66	13.59	36.93	189.72	31.25
MEAN	.00	.00	19	.86	.00	.02	.44	1.2	6.3	1.0
MAX	.00	.00	161	9.3	.03	.38	9.2	36	92	11
MIN	.00	.00	.00	.03	.00	.00	.00	.00	.00	.03

# APPENDIX D

Table 7.--Daily total-phosphorus load (pounds per day) for Bower Creek at  
Sunnyview Road near De Pere, March-December 1985

[--, no data available]

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	--	8.87	0.20	0.00	0.00	0.00	0.00	11.9	374	0.02
2	--	24.9	.21	.00	.08	.00	.00	3.63	356	.03
3	--	57.6	.13	.00	.33	.00	.00	.00	72.3	.03
4	--	16.7	.12	.00	2.92	.00	21.1	16.8	25.7	.03
5	--	53.9	.08	.00	22.1	3.37	275	9.20	10.4	.03
6	--	35.9	.09	.00	2.82	3.62	67.0	4.22	9.57	.02
7	--	15.6	.10	.00	1.46	1.13	5.97	1.82	53.9	.02
8	--	53.3	.02	53.8	.69	.00	.00	.17	12.9	.02
9	--	17.4	.00	5.90	.05	.00	19.6	.00	4.41	.01
10	--	49.7	.03	.16	.03	.00	12.5	.00	5.12	.01
11	--	30.0	.02	.00	.00	.00	.19	.00	10.1	.01
12	--	73.9	.07	.00	.00	.06	.00	437	33.3	.02
13	--	19.1	.03	.00	.00	23.0	.00	120	79.5	.05
14	116	29.3	.02	.00	.00	1.57	.00	12.1	80.2	.09
15	23.7	14.6	.01	.00	.00	.05	.00	6.69	24.3	.08
16	20.5	6.58	.00	.00	.00	.00	.00	7.53	234	.06
17	10.1	3.82	.01	.00	.00	.57	.00	4.86	60.2	.06
18	9.25	3.72	.08	.00	.00	18.3	.00	4.61	105	.06
19	13.3	3.53	.09	.00	.00	2.03	.00	9.85	48.7	.06
20	9.64	2.41	.11	.00	.00	1.15	.00	6.01	21.3	.06
21	5.73	1.45	.00	100	.00	.42	.00	4.18	4.09	.06
22	5.87	1.04	.00	512	.00	.00	2.20	2.96	.84	.06
23	6.36	.84	.00	26.1	.00	.00	21.7	2.49	.09	.04
24	11.4	.74	.00	7.10	.00	.01	17.4	24.0	.08	.03
25	8.48	.58	.00	3.04	26.7	26.2	4.10	12.7	.05	.02
26	10.5	.49	.00	2.05	22.0	27.8	8.94	5.46	.04	.02
27	22.1	.43	.00	1.22	2.91	5.66	9.04	1.88	.03	.02
28	14.0	.36	.00	.46	.00	1.11	1.45	.01	.02	.02
29	10.8	.30	.00	.04	.00	26.1	.00	.00	.02	.02
30	5.08	.25	.00	.00	.00	123	8.17	.00	.02	.02
31	3.97	--	.00	--	.00	19.2	--	.00	--	.03
TOTAL	--	527.31	1.42	711.87	82.09	284.35	474.36	710.07	1,626.18	1.11
MEAN	--	17.6	.05	23.7	2.65	9.17	15.8	22.9	54.2	.04
MAX	--	73.9	.21	512	26.7	123	275	437	374	.09
MIN	--	.25	.00	.00	.00	.00	.00	.00	.02	.01

# APPENDIX D

Table 8.--Daily total-phosphorus load (pounds per day) for Bower Creek at  
Sunnyview Road near De Pere, January-October 1986

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	.03	.01	.01	18.6	.12	.06	.12	.04	.21	10.2
2	.03	.01	.01	8.48	.14	.05	.10	.08	.19	5.93
3	.04	.01	.01	5.13	.14	.05	.08	.20	.16	76.1
4	.03	.01	.01	16.9	.15	.05	.07	.22	.16	231
5	.02	.01	.01	45.6	.13	.04	.05	.22	.10	63.9
6	.01	.01	.02	22.9	.15	.03	.04	.20	.04	22.0
7	.01	.01	.02	10.6	.10	.03	.02	.19	.03	13.2
8	.01	.01	.05	3.54	.08	.02	.01	166	.03	133
9	.01	.01	.18	1.25	.08	.01	.01	8.66	.03	19.3
10	.01	.01	.58	.75	.07	.01	.00	.83	224	5.84
11	.01	.01	1.84	.47	.06	.04	.00	3.23	703	4.66
12	.01	.01	2.90	.31	.06	.12	.00	.80	55.1	34.3
13	.01	.01	14.5	.24	.06	.10	.00	.40	11.5	23.5
14	.01	.01	29.8	2.13	.06	.09	.00	.33	4.65	6.27
15	.01	.01	57.2	19.7	.06	.08	.00	.34	16.5	4.30
16	.01	.01	126	37.9	.10	.08	.00	.57	15.7	4.67
17	.01	.01	158	7.94	.13	.07	.00	6.49	5.45	5.35
18	.01	.01	285	2.39	.32	.06	.00	3.17	38.6	2.38
19	.01	.01	453	1.29	.18	.14	1.73	.71	91.8	1.85
20	.01	.01	373	.78	.11	.44	.40	.36	111	1.74
21	.01	.01	328	.53	.08	.30	.06	.32	59.5	2.51
22	.01	.01	348	.38	.07	.20	.06	.28	271	2.91
23	.01	.01	627	.29	.07	.16	.10	.27	46.5	2.91
24	.01	.01	585	.24	.07	.14	.25	.25	9.83	2.62
25	.01	.01	824	.21	.07	.12	102	.23	63.8	2.38
26	.01	.01	202	.21	.07	.10	3,400	.27	117	2.36
27	.01	.01	43.6	.18	.07	3.53	24.2	.30	47.7	2.91
28	.01	.01	52.5	.14	.06	1.22	13.6	.27	12.2	2.97
29	.01	--	47.9	.13	.07	.31	.15	.25	55.4	3.20
30	.01	--	35.5	.13	.06	.15	.04	.24	26.5	2.84
31	.01	--	16.5	--	.06	--	.04	.22	--	2.68
TOTAL	.41	.28	4,612.14	209.34	3.05	7.80	3,543.13	195.94	1,987.68	699.78
MEAN	.01	.01	149	6.98	.10	.26	114	6.32	66.3	22.6
MAX	.04	.01	824	45.6	.32	3.53	3,400	166	703	231
MIN	.01	.01	.01	.13	.06	.01	.00	.04	.03	1.74

# APPENDIX D

**Table 9.--Daily total-phosphorus load (pounds per day) for East River at State Highway 32 near De Pere, June-October 1985**

[--, no data available]

Day	June	July	Aug.	Sept.	Oct.
1	4.59	2.70	.14	55.6	91.3
2	3.52	3.70	.01	30.7	92.3
3	2.41	.51	.01	20.5	66.4
4	1.16	6.25	.01	24.9	339
5	.77	15.6	1.67	129	1,210
6	1.01	16.8	1.76	379	993
7	1.55	14.9	1.48	267	204
8	1.26	6.51	.01	85.0	104
9	.96	2.08	.01	104	65.4
10	.64	.89	.01	183	44.8
11	.14	.57	.01	98.4	38.4
12	.01	.51	.80	50.8	74.1
13	.01	.25	38.3	30.4	198
14	.02	.16	28.8	19.8	131
15	.04	.03	14.0	15.6	76.0
16	.36	.01	4.71	12.9	64.0
17	2.05	.01	2.56	29.0	64.3
18	1.35	.01	21.7	19.5	--
19	.99	.01	18.0	19.1	--
20	.80	.01	14.9	17.4	--
21	.88	.01	5.97	16.5	--
22	482	.00	2.57	39.6	--
23	379	.00	.78	80.0	--
24	70.9	.15	.86	159	--
25	32.2	23.4	31.6	118	--
26	19.6	33.7	54.0	80.3	--
27	13.5	39.4	41.8	94.7	--
28	8.94	15.5	21.2	74.4	--
29	5.52	5.89	33.7	54.4	--
30	3.19	2.99	81.4	57.7	--
31	--	1.42	101	--	--
TOTAL	1,039.37	193.97	523.77	2,366.2	--
MEAN	34.6	6.26	16.9	78.9	--
MAX	482	39.4	101	379	--
MIN	.01	.00	.01	12.9	--

# APPENDIX E

Table 1.--Maximum, minimum, and daily mean dissolved-oxygen data (mg/L) for East River at Monroe Street in Green Bay, June-October 1985 and June-October 1986

[--, no data available]

Day	June			July			August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
<u>1985</u>															
1	7.9	7.0	7.4	6.7	0.1	2.7	9.4	5.1	7.1	9.8	3.1	6.6	11.1	5.4	7.6
2	7.8	3.9	6.7	11.7	.5	6.3	8.8	5.4	7.0	11.4	3.7	7.5	10.6	5.6	8.8
3	8.0	2.4	6.0	15.5	3.2	7.6	9.0	5.1	7.3	10.6	3.3	6.7	11.5	5.9	9.4
4	10.9	.0	7.5	10.7	3.3	6.3	7.9	6.1	7.0	10.5	3.3	7.9	10.4	6.1	8.2
5	14.1	7.8	10.6	4.7	1.5	3.3	7.4	5.1	6.2	9.0	3.9	7.0	9.2	6.4	7.2
6	14.1	8.4	11.9	8.8	1.2	2.7	7.5	3.7	5.1	7.4	2.0	3.5	7.4	6.7	7.0
7	12.4	8.5	10.6	4.4	.8	2.4	6.0	3.6	4.9	6.8	1.7	3.7	9.0	5.3	6.5
8	12.8	6.5	9.1	8.1	1.0	3.6	7.8	4.0	5.4	5.8	1.2	4.1	7.6	5.0	6.1
9	10.5	4.8	7.9	8.4	.7	5.1	6.6	4.2	5.2	7.4	.0	5.5	8.5	5.6	7.5
10	9.3	6.6	8.3	11.1	1.9	5.9	6.0	4.1	5.2	6.3	2.5	4.6	8.5	5.6	7.3
11	9.4	5.8	7.3	11.6	2.7	4.9	6.4	4.6	5.2	8.3	2.0	4.9	8.9	5.5	7.1
12	8.9	.6	7.0	17.0	.9	5.0	5.2	4.4	4.8	11.1	2.0	7.0	8.9	5.5	7.1
13	10.3	5.1	7.1	12.1	2.4	6.2	5.5	4.2	4.9	11.3	1.7	6.4	8.6	3.3	5.7
14	9.9	5.4	7.0	9.4	1.2	5.0	18.0	.0	6.1	12.1	1.8	7.7	8.5	3.3	5.1
15	8.1	4.3	6.7	8.0	.4	5.0	12.7	.0	7.7	12.8	2.2	8.1	11.2	4.1	6.1
16	7.4	3.4	5.2	10.8	1.3	5.4	11.7	5.7	7.9	12.7	2.3	8.9	8.2	3.2	6.5
17	9.0	2.8	6.1	10.6	3.4	6.3	8.9	5.6	7.4	9.9	3.6	6.0	8.4	3.3	6.0
18	12.0	1.1	7.7	12.7	2.0	4.9	7.2	5.0	6.1	11.1	4.6	7.7	8.7	4.1	7.1
19	9.5	5.8	7.9	8.0	1.7	5.0	7.2	4.6	5.7	11.4	3.8	7.0	8.8	4.4	7.2
20	12.2	6.6	8.0	8.9	2.2	4.8	10.1	.0	5.0	10.4	4.1	7.9	8.8	4.4	7.1
21	8.8	3.8	6.7	7.6	1.4	4.6	10.1	3.6	5.9	9.1	6.4	8.0	9.3	3.9	6.6
22	7.7	4.4	6.2	6.7	1.3	4.5	15.0	4.5	7.1	8.7	4.6	6.2	8.2	2.4	5.2
23	7.7	3.1	6.2	11.7	1.2	5.0	7.6	4.5	6.3	10.6	4.1	5.8	7.8	.0	4.8
24	6.9	1.3	5.1	8.8	1.2	4.4	7.9	3.7	5.7	8.6	4.7	6.5	--	--	--
25	8.6	2.3	5.8	7.4	.0	4.0	5.8	4.9	5.4	9.1	5.0	7.6	--	--	--
26	7.0	2.8	5.1	10.5	2.1	5.7	7.0	4.6	5.4	9.8	5.6	8.0	--	--	--
27	6.8	2.2	5.1	9.3	2.9	6.2	10.5	3.5	5.9	12.3	5.1	8.7	--	--	--
28	6.9	.6	3.9	9.2	1.6	4.9	10.5	4.7	6.7	13.0	5.0	9.6	--	--	--
29	5.3	.9	3.3	9.0	3.9	6.5	7.3	4.1	6.1	13.6	9.2	12.2	--	--	--
30	5.2	1.0	3.0	8.9	6.0	7.2	7.6	3.6	5.2	12.2	5.2	8.0	--	--	--
31	--	--	--	10.6	5.2	7.3	9.0	3.1	5.6	--	--	--	--	--	--
MONTH	14.1	.0	6.9	17.0	.0	5.1	18.0	.0	6.0	13.6	.0	7.0	--	--	--

# APPENDIX E

Table 1.--Maximum, minimum, and daily mean dissolved-oxygen data (mg/L) for East River at Monroe Street in Green Bay, June-October 1985 and June-October 1986--Continued

Day	June			July			August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
<b>1986</b>															
1	--	--	--	9.6	7.4	8.8	7.4	3.4	5.2	9.8	7.2	8.5	10.5	3.4	6.1
2	--	--	--	9.7	7.1	8.5	6.3	3.4	5.2	9.9	8.5	9.1	10.5	3.6	5.6
3	--	--	--	9.7	6.5	8.0	7.2	2.9	5.3	9.3	7.3	8.4	10.2	3.9	7.1
4	--	--	--	9.7	5.4	8.0	8.9	2.5	6.3	8.3	6.2	7.2	8.3	4.7	5.8
5	7.1	6.9	7.0	9.6	5.7	8.5	9.2	4.4	7.4	8.5	6.1	7.0	9.7	5.5	7.5
6	8.8	6.4	7.6	9.3	8.2	8.7	8.1	4.6	6.8	8.4	5.9	7.0	10.5	7.5	8.8
7	9.8	6.2	7.6	9.2	8.1	8.6	8.6	4.7	6.6	9.1	5.7	7.6	10.9	7.6	9.0
8	10.1	7.2	8.8	9.1	7.2	8.4	8.2	3.9	6.4	9.4	5.3	7.6	10.1	8.1	8.9
9	10.1	7.9	9.2	8.9	6.7	7.7	8.4	3.8	5.9	10.0	7.7	8.5	--	--	--
10	10.0	6.0	7.7	8.9	6.8	7.9	7.4	4.1	6.1	8.9	6.4	7.6	--	--	--
11	7.9	2.7	4.9	8.2	6.4	7.3	7.8	4.2	6.4	7.9	5.4	6.5	--	--	--
12	5.4	3.2	4.1	8.2	5.2	6.2	9.1	5.4	7.4	7.1	5.6	6.5	--	--	--
13	7.0	3.8	5.0	8.7	4.8	6.5	9.4	5.3	7.4	10.3	5.3	6.8	--	--	--
14	9.9	4.5	7.4	9.6	6.4	7.7	8.5	5.9	7.2	9.8	4.8	6.7	--	--	--
15	9.8	6.9	8.1	9.6	5.4	7.8	9.1	5.8	7.0	8.3	4.2	6.0	--	--	--
16	9.8	6.6	8.0	9.6	5.0	7.8	9.5	5.2	6.7	10.3	5.2	7.7	--	--	--
17	9.8	6.5	8.6	9.2	6.1	7.6	9.4	6.6	7.8	11.1	5.1	7.3	--	--	--
18	9.4	7.5	8.5	9.2	6.1	8.0	9.3	6.0	7.1	10.7	5.8	8.7	--	--	--
19	9.3	6.4	8.0	8.3	4.1	6.3	8.6	3.3	6.3	9.6	5.7	7.6	--	--	--
20	9.3	6.7	8.0	8.8	4.1	6.7	9.2	3.9	6.2	9.1	5.4	6.4	--	--	--
21	9.3	6.8	8.4	8.8	4.4	6.6	9.4	6.3	7.7	8.2	5.5	6.6	--	--	--
22	9.1	7.5	8.4	9.1	4.6	7.2	8.0	5.7	6.9	8.9	5.3	6.6	--	--	--
23	9.1	7.2	8.1	9.0	7.9	8.5	8.7	5.5	6.9	6.6	4.3	5.4	--	--	--
24	8.9	7.6	8.1	8.9	7.2	8.1	9.7	6.4	8.0	7.0	4.4	5.2	--	--	--
25	9.7	6.2	8.2	8.8	5.7	7.2	9.5	6.4	7.9	6.9	4.2	5.2	--	--	--
26	9.8	7.4	9.0	8.6	7.0	7.5	9.0	6.4	7.2	8.0	4.4	5.5	--	--	--
27	9.4	6.4	8.2	9.0	8.1	8.5	7.6	6.0	6.6	6.7	3.4	4.7	--	--	--
28	9.6	6.2	8.2	--	--	--	9.8	5.1	6.9	9.1	3.9	6.7	--	--	--
29	9.6	6.9	8.6	--	--	--	10.1	5.3	7.1	9.6	4.9	6.3	--	--	--
30	9.6	7.1	8.8	9.1	6.6	7.9	10.1	6.2	8.0	10.0	3.2	6.7	--	--	--
31	--	--	--	8.6	6.3	7.3	10.0	6.9	8.3	--	--	--	--	--	--
MONTH	--	--	--	--	--	--	10.1	2.5	6.8	11.1	3.2	6.9	--	--	--



# APPENDIX E

Table 2.--Maximum, minimum, and daily mean dissolved-oxygen data (mg/L) for East River at Allouez Avenue bridge at Allouez, June-October 1985

[--, no data available]

Day	June			July			August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1	--	--	--	4.4	1.3	2.9	--	--	--	4.8	2.1	3.7	7.9	6.6	7.4
2	--	--	--	3.4	2.3	3.0	--	--	--	4.3	2.0	3.3	8.0	5.9	7.4
3	--	--	--	--	--	--	--	--	--	4.9	2.1	3.7	8.1	6.2	7.5
4	--	--	--	--	--	--	--	--	--	4.2	1.7	3.4	8.5	6.7	7.9
5	--	--	--	--	--	--	--	--	--	3.6	1.3	2.7	8.8	7.2	8.3
6	--	--	--	--	--	--	--	--	--	4.3	1.9	3.3	8.5	6.9	8.0
7	--	--	--	--	--	--	--	--	--	3.9	1.4	3.2	8.7	5.9	7.6
8	--	--	--	--	--	--	--	--	--	3.7	1.1	2.8	8.9	7.1	8.4
9	--	--	--	4.6	.0	2.1	--	--	--	4.7	1.4	2.8	8.7	6.9	8.0
10	--	--	--	4.5	.0	2.3	--	--	--	--	--	--	8.0	6.0	7.1
11	--	--	--	6.2	.0	2.1	--	--	--	--	--	--	7.8	5.6	6.6
12	7.6	4.5	6.2	7.5	.0	2.1	--	--	--	--	--	--	8.5	5.4	7.4
13	13.4	3.4	5.7	5.7	.0	2.2	--	--	--	--	--	--	8.2	5.1	7.0
14	--	--	--	7.4	.5	2.7	5.4	2.3	3.5	--	--	--	7.5	4.0	5.7
15	--	--	--	6.1	.0	1.7	4.6	1.8	3.2	--	--	--	6.3	4.0	5.1
16	--	--	--	--	--	--	4.8	1.2	2.7	5.1	.9	3.5	6.8	4.7	6.1
17	--	--	--	--	--	--	4.9	1.7	3.5	7.6	3.6	5.2	7.2	5.7	6.7
18	8.3	2.7	5.1	--	--	--	4.9	1.9	2.9	5.6	2.9	4.6	--	--	--
19	15.5	2.2	5.4	--	--	--	3.2	2.0	2.6	5.4	3.9	4.7	--	--	--
20	8.7	3.1	6.4	--	--	--	7.6	3.2	5.8	5.4	1.9	4.4	--	--	--
21	7.9	3.6	6.0	--	--	--	9.8	4.2	6.0	5.5	2.5	4.5	--	--	--
22	7.2	2.6	5.3	--	--	--	9.0	3.3	5.6	5.6	2.3	4.4	--	--	--
23	4.6	.7	2.6	--	--	--	6.4	3.7	5.3	13.1	1.9	5.2	--	--	--
24	3.3	.0	1.7	--	--	--	6.3	2.8	4.5	13.5	6.2	7.6	--	--	--
25	3.1	.0	1.2	--	--	--	6.0	3.4	5.0	7.4	5.4	6.6	--	--	--
26	4.6	.0	1.4	--	--	--	4.3	2.5	3.6	7.1	4.4	6.1	--	--	--
27	4.1	.9	2.5	--	--	--	6.4	2.1	4.0	6.8	4.7	6.1	--	--	--
28	6.1	.4	3.2	--	--	--	6.4	2.9	4.5	6.5	3.9	5.7	--	--	--
29	4.6	1.8	3.4	--	--	--	5.2	2.9	4.1	5.9	4.0	5.4	--	--	--
30	4.6	1.9	3.5	--	--	--	5.0	2.6	3.8	6.5	4.4	5.8	--	--	--
31	--	--	--	--	--	--	5.3	2.1	4.0	--	--	--	--	--	--

# APPENDIX E

Table 3.--Maximum, minimum, and daily mean dissolved-oxygen data (mg/L) for East River at State Highway 32 near De Pere, June-October 1985

[--, no data available]

Day	June			July			August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1	8.3	3.4	5.3	6.7	2.3	4.1	--	--	--	4.9	1.7	3.6	13.3	8.0	9.5
2	5.4	2.9	4.3	6.3	2.5	4.1	7.4	2.7	5.2	5.2	2.5	3.8	9.1	5.6	7.3
3	4.7	2.6	3.3	7.7	2.9	5.0	7.9	.1	3.8	4.3	.3	2.4	7.1	4.9	6.3
4	9.0	3.6	6.2	8.1	3.2	4.9	7.0	2.6	4.7	1.6	.0	.6	7.3	5.5	6.5
5	11.6	3.6	6.6	5.8	2.6	4.3	6.1	2.7	4.2	3.4	.1	2.2	6.6	5.0	6.2
6	11.5	4.9	8.1	7.7	3.5	5.3	7.7	1.4	3.5	3.4	2.8	3.2	6.4	5.1	6.0
7	6.9	1.8	4.4	8.2	3.8	5.6	4.6	.9	2.6	3.7	1.5	3.1	8.9	5.6	6.7
8	8.1	1.5	4.3	9.3	4.1	5.7	5.0	.7	2.4	4.3	1.1	3.3	5.6	3.8	4.5
9	5.9	1.3	3.9	5.9	2.6	4.1	3.7	.1	2.0	5.0	1.4	3.5	4.8	3.7	4.3
10	5.2	1.3	3.2	3.6	.9	2.0	4.3	1.0	2.5	--	--	--	5.1	4.1	4.8
11	8.1	2.9	5.3	--	--	--	3.6	.9	2.2	4.7	2.3	3.8	5.8	4.5	5.3
12	9.4	4.2	7.6	--	--	--	4.7	.2	3.1	5.1	3.8	4.6	5.3	3.3	4.0
13	9.4	5.3	7.3	--	--	--	5.5	2.0	3.4	5.7	3.8	4.8	3.5	.0	1.7
14	8.7	4.2	6.7	--	--	--	4.6	1.3	2.9	5.7	4.1	5.0	2.7	1.4	2.3
15	6.5	1.9	4.3	--	--	--	7.8	3.2	4.7	5.9	4.0	5.0	3.3	2.5	2.9
16	7.1	2.8	4.3	--	--	--	6.6	1.7	3.9	7.0	4.2	5.1	4.3	3.0	3.8
17	9.9	3.4	6.7	--	--	--	5.2	.0	2.4	6.2	.0	4.3	4.4	3.8	4.2
18	9.4	4.6	6.3	--	--	--	4.4	1.5	2.8	--	--	--	--	--	--
19	9.0	3.7	6.0	--	--	--	5.0	1.3	3.1	--	--	--	--	--	--
20	9.7	3.9	6.7	--	--	--	3.7	2.4	3.0	--	--	--	--	--	--
21	9.8	3.6	6.3	--	--	--	7.9	1.7	4.0	--	--	--	--	--	--
22	7.4	5.6	6.8	--	--	--	7.6	1.2	4.5	--	--	--	--	--	--
23	6.6	5.0	5.8	--	--	--	5.2	1.5	3.2	--	--	--	--	--	--
24	5.5	3.3	4.5	--	--	--	6.1	.4	2.7	8.7	7.4	8.0	--	--	--
25	5.5	3.3	4.2	--	--	--	4.2	2.3	3.3	9.8	8.4	9.4	--	--	--
26	5.4	3.8	4.6	--	--	--	3.7	1.6	2.7	10.2	9.3	9.8	--	--	--
27	5.9	3.6	4.5	--	--	--	2.7	.0	1.2	11.1	9.6	10.5	--	--	--
28	5.4	3.0	4.0	--	--	--	5.1	.0	1.9	10.7	7.6	9.4	--	--	--
29	6.2	2.4	3.8	--	--	--	5.5	1.1	3.3	9.0	7.5	8.3	--	--	--
30	7.0	2.5	4.2	--	--	--	5.1	1.4	4.4	8.5	6.1	7.6	--	--	--
31	--	--	--	--	--	--	5.7	.9	4.7	--	--	--	--	--	--
MONTH	11.6	1.3	5.3	--	--	--	--	--	--	--	--	--	--	--	--

# APPENDIX E

**Table 4.--Maximum, minimum, and daily mean dissolved-oxygen data (mg/L)  
for Bower Creek at Sunnyview Road near De Pere, June-October 1985**

[--, no data available]

Day	June			July			August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1	--	--	--	3.4	1.6	2.3	6.1	3.4	4.4	9.3	8.5	9.0	12.2	6.7	7.7
2	--	--	--	4.4	1.3	2.6	7.7	3.0	4.5	8.7	5.4	7.9	7.9	6.2	7.1
3	--	--	--	6.5	2.6	5.0	6.4	2.9	4.4	4.6	3.2	4.1	7.0	5.3	6.2
4	--	--	--	9.9	4.1	5.9	5.5	2.6	3.8	8.2	2.8	7.1	9.0	5.6	7.0
5	--	--	--	10.2	8.9	9.8	5.8	1.6	2.9	8.2	4.8	7.7	10.3	8.6	9.1
6	--	--	--	10.5	5.9	9.2	6.1	3.2	4.6	8.3	7.2	7.8	8.8	8.7	8.8
7	--	--	--	10.6	7.6	9.6	5.8	2.4	4.6	7.7	7.1	7.3	--	--	--
8	--	--	--	8.8	4.3	6.6	4.4	1.4	2.8	7.7	7.1	7.4	--	--	--
9	--	--	--	9.2	1.4	2.9	2.7	.9	1.6	8.4	7.4	7.9	--	--	--
10	--	--	--	7.9	1.4	3.1	4.0	.0	1.2	11.4	7.8	8.6	--	--	--
11	--	--	--	7.3	3.4	5.1	3.2	1.0	2.0	9.9	8.6	9.4	--	--	--
12	5.4	2.2	3.7	6.9	4.1	5.4	5.9	.7	2.0	9.5	8.1	9.0	--	--	--
13	4.9	2.3	3.8	5.4	3.2	4.1	7.9	3.7	6.9	9.1	6.0	8.5	--	--	--
14	4.4	1.0	2.5	5.5	2.4	3.9	6.2	3.8	5.4	8.9	5.6	8.0	--	--	--
15	1.2	.4	.7	5.2	1.4	2.7	5.0	2.6	4.2	8.9	4.8	7.5	--	--	--
16	1.3	.1	.4	8.5	2.1	4.6	4.5	1.9	3.3	12.1	5.0	7.7	--	--	--
17	.3	.0	.0	7.9	5.2	6.4	5.6	2.0	2.9	8.0	2.3	4.7	--	--	--
18	2.9	.0	1.7	7.9	4.9	6.3	6.2	5.3	5.8	8.9	2.3	6.4	--	--	--
19	2.9	.3	1.7	11.6	4.8	7.7	5.6	5.3	5.4	7.0	.0	4.0	--	--	--
20	3.1	.8	1.8	10.3	6.6	8.0	--	--	--	3.9	.0	.9	--	--	--
21	6.0	.1	1.8	10.2	6.3	7.8	--	--	--	4.2	1.2	3.3	--	--	--
22	16.7	5.4	8.6	8.6	5.6	7.1	--	--	--	4.9	.1	2.8	--	--	--
23	7.0	6.1	6.6	7.8	4.8	6.3	4.3	3.7	4.0	10.3	3.5	5.1	--	--	--
24	7.2	5.6	6.8	7.7	4.8	6.1	5.0	2.3	3.7	6.9	5.3	6.2	--	--	--
25	7.6	1.6	4.7	10.1	4.2	8.3	11.5	2.8	8.7	7.1	6.0	6.7	--	--	--
26	7.9	2.8	5.4	8.2	6.4	7.4	9.9	7.5	9.0	7.5	6.4	7.1	--	--	--
27	3.5	2.2	2.9	7.2	3.8	6.1	8.1	5.2	6.9	8.5	6.3	6.9	--	--	--
28	5.9	2.0	2.8	5.2	2.3	3.7	11.7	2.9	5.4	7.5	6.3	6.8	--	--	--
29	5.0	2.1	2.9	5.9	1.8	3.0	10.8	5.6	9.7	6.7	6.3	6.5	--	--	--
30	4.4	2.4	3.3	9.5	2.4	4.1	10.1	9.1	9.6	8.0	6.4	7.1	--	--	--
31	--	--	--	8.4	3.4	4.9	9.9	9.0	9.5	--	--	--	--	--	--
Month	--	--	--	11.6	1.3	5.7	--	--	--	12.1	.0	6.6	--	--	--

# APPENDIX E

Table 5.--Maximum, minimum, and daily mean dissolved-oxygen data (mg/L) for Fox River at Schmidt Oil Dock, upper site, in Green Bay, August-October 1985

[--, no data available]

Day	August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1	--	--	--	10.7	7.4	9.5	10.6	7.3	9.9
2	--	--	--	11.8	8.5	10.3	10.7	5.8	9.9
3	--	--	--	12.4	9.2	10.8	11.1	9.4	10.3
4	--	--	--	10.2	8.0	9.4	10.5	7.4	9.9
5	--	--	--	--	--	--	9.7	7.9	9.2
6	7.3	4.3	5.5	8.7	8.5	8.7	9.4	7.4	8.8
7	6.6	4.4	5.3	--	--	--	8.6	5.0	7.8
8	7.6	4.6	5.6	--	--	--	8.8	6.9	8.2
9	6.8	4.6	5.5	--	--	--	8.9	7.1	8.4
10	6.8	4.2	5.3	--	--	--	9.0	8.0	8.7
11	6.0	4.2	5.0	--	--	--	9.2	7.2	8.8
12	5.3	3.4	4.6	--	--	--	9.5	8.4	9.1
13	6.7	1.6	5.0	--	--	--	9.3	7.6	8.7
14	7.0	4.1	5.4	--	--	--	9.0	6.9	8.4
15	8.7	4.5	5.8	--	--	--	10.6	6.7	8.2
16	8.5	4.9	6.3	--	--	--	9.5	7.1	8.9
17	6.6	3.9	5.9	--	--	--	9.3	8.2	9.0
18	6.7	4.3	5.7	--	--	--	--	--	--
19	5.6	4.7	5.1	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--
22	8.2	5.2	6.7	--	--	--	--	--	--
23	6.3	4.4	5.6	10.2	6.7	9.3	--	--	--
24	5.7	3.9	4.8	10.9	8.9	9.8	--	--	--
25	5.6	2.9	4.8	11.5	8.8	10.4	--	--	--
26	6.1	3.1	5.2	12.0	9.2	10.6	--	--	--
27	8.3	3.8	6.3	13.7	10.2	11.8	--	--	--
28	8.1	5.1	6.4	13.8	11.2	12.6	--	--	--
29	8.1	5.8	7.1	12.7	10.7	12.1	--	--	--
30	8.7	5.2	7.3	11.8	8.8	10.8	--	--	--
31	9.7	7.1	8.4	--	--	--	--	--	--

# APPENDIX E

**Table 6.--Maximum, minimum, and daily mean dissolved-oxygen data (mg/L) for Fox River at Schmidt Oil Dock, lower site, in Green Bay, August-October 1985**

[--,no data available]

Day	August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1	--	--	--	9.9	6.8	8.3	10.8	9.5	10.2
2	--	--	--	10.0	7.9	9.1	11.1	9.0	9.9
3	--	--	--	10.9	8.6	9.6	10.2	9.2	9.9
4	--	--	--	9.6	8.3	8.8	10.6	9.0	9.9
5	--	--	--	--	--	--	9.7	8.5	9.2
6	6.1	4.2	5.3	7.4	7.3	7.3	9.1	7.6	8.7
7	6.4	5.0	5.6	--	--	--	8.8	7.5	7.9
8	8.2	4.9	5.7	--	--	--	8.9	7.1	8.2
9	6.7	5.3	6.0	--	--	--	8.9	7.9	8.5
10	8.3	4.9	6.0	--	--	--	8.8	7.8	8.4
11	6.4	4.7	5.6	--	--	--	9.0	7.9	8.5
12	5.9	4.1	5.3	--	--	--	9.1	8.3	8.7
13	7.3	2.7	5.5	--	--	--	8.9	7.6	8.5
14	6.8	4.8	5.5	--	--	--	8.6	7.5	8.1
15	6.9	4.5	5.8	--	--	--	8.9	6.4	8.0
16	6.5	4.9	5.7	--	--	--	9.2	7.6	8.7
17	6.3	4.6	5.4	--	--	--	9.4	7.6	9.0
18	6.4	3.2	5.1	--	--	--	--	--	--
19	5.8	3.9	4.7	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--
22	6.4	5.5	6.0	--	--	--	--	--	--
23	6.5	4.7	5.8	9.2	7.0	8.5	--	--	--
24	5.6	4.4	4.9	10.5	8.6	9.3	--	--	--
25	5.9	2.9	4.8	10.5	8.5	9.8	--	--	--
26	5.9	3.5	4.8	10.9	9.6	10.3	--	--	--
27	6.9	4.3	5.6	12.3	9.9	11.3	--	--	--
28	6.6	5.0	5.9	13.5	11.2	12.3	--	--	--
29	6.6	5.0	6.1	13.0	11.5	12.1	--	--	--
30	6.9	4.8	6.3	12.0	9.6	11.1	--	--	--
31	8.6	6.1	7.2	--	--	--	--	--	--

# APPENDIX F

Table 1.--Maximum, minimum, and daily mean water-temperature data (degrees Celsius) for East River at Monroe Street in Green Bay, June-October 1985 and June-October 1986

[--, no data available]

Day	June			July			August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
<u>1985</u>															
1	21.5	21.0	21.0	25.0	23.5	24.5	25.0	24.0	24.5	22.0	21.5	22.0	15.5	7.5	14.5
2	21.5	20.5	21.0	26.0	22.5	25.0	25.0	24.0	24.5	22.0	21.5	22.0	14.5	13.0	14.0
3	21.5	20.5	21.0	26.5	24.0	25.0	26.0	24.0	24.5	22.5	21.5	22.0	14.5	13.0	14.0
4	21.0	14.0	20.5	26.0	24.5	25.0	25.0	24.5	24.5	23.0	22.0	23.0	14.5	13.0	14.0
5	22.0	20.5	21.0	25.5	24.0	25.0	25.0	24.5	24.5	23.5	22.0	23.0	14.0	12.0	12.5
6	22.0	20.5	21.0	25.5	24.0	25.0	25.5	23.0	24.5	24.5	22.5	23.0	12.0	11.5	12.0
7	21.5	--	21.0	25.0	24.0	24.5	25.5	--	25.0	24.0	23.5	24.0	13.5	11.5	12.0
8	23.0	21.0	21.5	26.0	24.5	25.0	26.5	25.0	25.5	24.5	23.0	24.0	13.5	12.0	12.5
9	22.5	21.0	22.0	26.0	24.5	25.5	26.0	25.0	25.5	24.0	19.5	24.0	14.0	13.0	13.5
10	22.5	22.0	22.5	26.5	24.5	25.5	26.0	25.0	25.5	23.5	21.0	22.5	14.5	13.0	13.5
11	22.5	12.0	22.0	26.5	24.5	25.5	26.0	25.0	25.5	22.0	20.5	21.5	14.5	12.5	13.5
12	22.0	20.5	21.5	27.0	25.0	25.5	25.0	24.0	24.5	21.5	20.0	21.0	14.0	13.0	13.5
13	21.5	20.5	21.0	26.5	25.0	26.0	24.5	22.5	24.0	20.5	19.5	20.0	14.0	13.0	13.5
14	21.5	20.5	20.5	27.0	25.5	26.0	24.5	20.0	24.0	20.0	19.0	19.5	14.5	13.0	13.5
15	21.0	20.5	20.5	26.5	26.0	26.5	24.5	21.5	24.0	20.0	19.0	19.5	14.5	10.0	14.0
16	21.0	20.0	20.5	27.0	22.0	26.0	25.0	23.5	24.0	20.0	18.5	19.5	14.5	13.0	13.5
17	21.0	20.0	20.5	26.5	25.5	25.5	24.5	23.5	24.0	19.5	17.5	19.0	13.5	12.5	13.0
18	21.0	14.0	20.5	25.5	25.0	25.5	24.0	23.0	23.5	21.5	18.5	20.0	13.5	12.5	13.0
19	21.0	20.0	20.5	26.5	25.0	25.5	23.5	22.5	23.0	21.5	20.0	21.0	14.0	13.0	13.5
20	21.5	20.5	21.0	27.0	25.5	26.0	23.0	18.0	22.5	22.0	21.0	21.5	14.0	13.0	13.5
21	21.0	20.5	20.5	26.5	25.5	26.0	22.5	18.5	22.0	21.5	20.0	20.5	14.0	13.0	13.5
22	21.0	20.5	20.5	26.0	25.0	25.5	23.5	22.0	22.0	20.5	19.0	19.5	13.5	13.0	13.5
23	22.0	20.0	21.0	26.5	21.0	25.5	22.5	22.0	22.0	20.0	18.5	19.0	14.0	13.0	13.5
24	22.5	21.0	21.5	25.5	24.5	25.0	22.5	21.5	22.0	19.0	16.5	18.0	--	--	--
25	23.0	18.0	22.0	25.0	24.0	24.5	22.0	21.0	21.5	16.5	15.5	16.0	--	--	--
26	23.5	22.0	22.5	26.0	23.5	24.5	21.5	20.5	21.0	16.0	15.0	15.5	--	--	--
27	23.5	22.0	23.0	25.5	24.0	25.0	22.5	18.5	21.0	16.0	14.5	15.0	--	--	--
28	24.0	22.5	23.5	25.5	24.5	25.0	23.0	21.5	22.0	16.5	14.0	15.5	--	--	--
29	24.5	23.0	23.5	26.0	25.0	25.5	22.5	21.5	22.0	16.0	15.5	16.0	--	--	--
30	24.5	23.5	24.0	25.5	25.0	25.0	22.5	21.0	22.0	16.0	14.5	15.5	--	--	--
31	--	--	--	25.0	19.0	24.5	22.0	21.5	22.0	--	--	--	--	--	--
MONTH	24.5	--	21.5	27.0	19.0	25.5	26.5	--	23.5	24.5	14.0	20.0	--	--	--

# APPENDIX F

Table 1.--Maximum, minimum, and daily mean water-temperature data (degrees Celsius) for East River at Monroe Street in Green Bay, June-October 1985 and June-October 1986--Continued

Day	June			July			August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
<b>1986</b>															
1	--	--	--	22.5	21.5	22.0	26.0	18.0	25.0	20.5	19.5	20.0	19.0	17.5	18.0
2	--	--	--	23.0	21.5	22.0	25.0	24.0	24.5	21.5	20.0	20.5	17.5	16.5	17.0
3	--	--	--	22.0	14.0	21.5	24.5	23.5	24.0	21.0	20.5	21.0	18.0	16.5	17.5
4	22.0	21.0	21.5	24.5	23.0	23.5	21.5	20.0	20.5	17.0	13.0	15.0	--	--	--
5	18.5	18.0	18.0	23.0	21.5	22.5	24.5	23.0	23.5	20.5	20.0	20.5	15.0	10.5	12.0
6	18.5	17.5	18.0	24.5	23.0	23.5	24.0	23.5	23.5	20.0	19.5	19.5	14.0	9.5	11.5
7	18.5	18.0	18.5	26.5	24.0	25.0	24.0	19.0	23.5	19.5	18.0	19.0	14.0	9.5	11.5
8	19.5	18.0	18.5	26.0	24.5	25.5	23.5	22.5	23.5	19.0	17.5	18.5	13.5	11.0	12.0
9	20.0	18.5	19.0	26.5	24.5	25.0	24.0	22.0	23.0	18.5	18.0	18.5	--	--	--
10	19.5	16.5	19.0	25.5	24.5	25.0	23.0	22.0	23.0	18.5	16.5	17.5	--	--	--
11	19.0	18.5	19.0	25.0	23.0	24.0	22.5	21.5	22.5	17.0	16.0	16.5	--	--	--
12	19.0	17.0	18.5	24.0	22.0	23.0	23.0	21.5	22.5	16.0	15.5	16.0	--	--	--
13	20.0	17.5	18.5	23.0	22.0	22.5	23.0	21.5	22.0	17.0	16.0	16.5	--	--	--
14	21.0	18.5	20.0	23.0	21.5	22.0	22.0	21.0	21.5	16.5	15.5	16.0	--	--	--
15	21.0	20.0	20.5	22.5	21.5	22.0	22.5	20.5	21.5	16.0	13.5	15.0	--	--	--
16	22.0	20.0	21.0	22.5	21.5	22.0	23.0	21.5	22.0	15.0	13.0	14.0	--	--	--
17	23.0	21.0	22.0	24.5	22.5	23.5	22.5	19.5	21.5	14.5	12.5	13.5	--	--	--
18	23.5	22.0	22.5	26.5	23.5	24.5	22.5	21.0	21.5	15.5	13.0	14.5	--	--	--
19	24.0	22.5	23.5	26.0	24.0	25.0	23.0	21.0	22.0	15.0	13.5	14.5	--	--	--
20	24.5	23.0	23.5	27.0	24.5	26.0	23.0	21.0	22.0	15.0	13.5	14.0	--	--	--
21	25.0	23.5	24.0	26.0	23.5	25.0	23.5	22.0	22.5	15.0	13.5	14.0	--	--	--
22	25.5	24.5	25.0	27.0	23.0	25.0	22.5	21.5	22.0	15.5	14.0	15.0	--	--	--
23	26.0	24.5	25.0	27.5	25.5	26.5	22.5	20.5	21.5	17.0	15.5	16.5	--	--	--
24	25.0	23.0	24.0	29.0	26.5	27.0	22.5	20.5	21.5	17.5	16.5	17.0	--	--	--
25	24.5	20.0	23.5	27.0	25.5	26.0	22.5	21.0	21.5	17.5	16.5	17.0	--	--	--
26	21.5	20.0	20.5	26.5	25.0	26.0	22.0	21.5	21.5	20.0	17.0	17.5	--	--	--
27	21.5	20.0	21.0	26.0	25.0	25.5	21.5	19.5	21.0	19.5	18.0	18.5	--	--	--
28	23.0	21.0	21.5	25.0	23.0	24.0	21.0	18.5	20.0	20.0	19.5	20.0	--	--	--
29	23.0	21.5	22.5	26.5	22.5	25.0	20.5	19.0	19.5	20.0	18.5	19.5	--	--	--
30	23.5	21.5	22.5	26.0	24.0	25.0	20.0	18.5	19.0	19.5	15.0	18.5	--	--	--
31	--	--	--	26.0	23.5	25.0	20.5	19.0	19.5	--	--	--	--	--	--
MONTH	--	--	--	29.0	14.0	24.0	26.0	18.0	22.0	21.5	12.5	17.5	--	--	--

# APPENDIX F

Table 2.--Maximum, minimum, and daily mean water-temperature data (degrees Celsius) for  
East River at Allouez Avenue bridge at Allouez, June-October 1985

[--, no data available]

Day	June			July			August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1	--	--	--	20.5	17.5	18.5	25.5	23.0	24.0	22.0	21.0	21.0	12.5	10.5	12.0
2	--	--	--	19.0	18.5	19.0	26.5	23.5	24.5	22.5	20.5	21.5	12.5	11.0	12.0
3	--	--	--	--	--	--	27.0	23.5	24.5	23.0	21.5	22.0	13.0	11.5	12.5
4	--	--	--	--	--	--	26.0	23.5	24.5	24.0	22.5	23.0	13.0	12.0	12.5
5	--	--	--	--	--	--	25.5	24.0	24.5	23.5	23.0	23.0	12.0	11.0	11.5
6	--	--	--	--	--	--	26.5	24.0	25.0	24.0	22.0	23.0	11.5	10.5	11.0
7	--	--	--	--	--	--	26.5	24.5	25.5	24.0	23.5	23.5	12.5	10.5	11.0
8	--	--	--	--	--	--	27.0	25.0	26.0	23.5	23.0	23.5	12.5	11.5	12.0
9	--	--	--	27.0	24.5	26.0	27.0	25.5	26.0	23.0	22.5	22.5	12.5	12.0	12.0
10	--	--	--	26.5	24.5	25.5	26.5	25.5	26.0	--	--	--	13.0	11.5	12.0
11	--	--	--	26.5	24.0	24.5	25.5	24.5	25.0	--	--	--	13.5	11.0	12.0
12	18.5	17.0	18.0	27.5	24.0	25.0	24.5	23.0	24.0	--	--	--	12.5	11.5	12.0
13	18.5	13.0	17.0	27.0	24.5	25.5	25.0	23.0	24.0	--	--	--	13.0	11.5	12.0
14	19.0	16.5	17.5	28.5	25.5	26.5	25.0	22.5	24.0	--	--	--	13.5	12.0	12.5
15	17.5	17.0	17.0	27.0	26.0	26.5	24.0	22.0	23.0	--	--	--	13.0	12.0	12.5
16	18.5	16.5	17.5	28.0	24.0	25.5	24.5	22.5	23.0	20.0	17.5	19.0	12.0	10.5	11.5
17	20.0	18.0	19.0	27.0	24.5	25.5	24.5	23.0	24.0	20.5	18.5	19.5	11.0	10.5	10.5
18	19.5	18.0	18.5	25.5	23.5	25.0	24.0	22.5	23.0	22.5	19.5	20.5	--	--	--
19	20.0	18.0	19.0	27.5	24.5	25.5	22.5	21.0	22.0	23.5	21.0	22.0	--	--	--
20	21.0	18.0	19.5	29.0	25.5	26.5	21.0	19.5	20.0	22.5	21.0	22.0	--	--	--
21	20.0	18.5	19.5	27.0	25.5	26.0	22.0	19.0	20.0	21.0	19.0	19.5	--	--	--
22	19.5	19.0	19.0	26.5	24.0	25.0	22.0	19.5	20.5	19.5	18.5	19.0	--	--	--
23	21.0	18.5	19.5	26.5	23.5	24.5	21.0	20.5	20.5	19.5	10.5	18.5	--	--	--
24	21.5	19.0	20.0	24.5	23.5	24.0	21.5	20.5	21.0	16.5	10.5	15.0	--	--	--
25	22.0	19.5	21.0	24.5	23.5	24.0	21.5	20.0	21.0	15.0	13.5	14.0	--	--	--
26	24.0	20.5	21.5	26.0	23.5	24.0	21.0	20.0	20.5	14.0	13.5	14.0	--	--	--
27	23.5	21.5	22.5	26.5	24.0	24.5	23.0	20.0	21.0	15.0	13.0	14.0	--	--	--
28	22.5	18.5	21.0	26.0	24.0	25.0	23.5	21.5	22.0	15.5	13.5	14.5	--	--	--
29	18.5	16.5	17.5	27.0	25.0	25.5	22.5	21.5	22.0	15.0	14.5	15.0	--	--	--
30	18.0	16.0	17.0	25.5	24.5	25.0	22.5	21.5	22.0	15.0	13.5	14.5	--	--	--
31	--	--	--	24.5	23.5	24.0	22.0	20.5	21.5	--	--	--	--	--	--
MONTH	--	--	--	--	--	--	27.0	19.0	23.0	--	--	--	--	--	--



# APPENDIX F

**Table 3.--Maximum, minimum, and daily mean water-temperature data (degrees Celsius) for East River at State Highway 32 near De Pere, June-October 1985**

[--, no data available)

Day	June			July			August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1	21.0	14.5	17.5	25.5	21.0	23.0	--	--	--	21.5	19.5	20.5	14.0	11.5	13.0
2	19.0	16.0	17.5	25.0	22.0	23.5	22.5	19.0	21.5	21.5	18.5	20.0	14.0	11.5	12.5
3	17.0	14.0	15.0	25.5	21.5	23.5	23.5	19.5	21.5	24.0	20.5	22.0	14.5	12.0	13.0
4	17.5	10.5	16.5	25.5	22.0	23.5	23.0	21.0	22.0	23.5	22.0	22.5	14.0	13.0	13.5
5	19.5	14.5	16.5	22.0	21.0	21.5	24.0	22.0	23.0	22.5	21.5	22.0	13.0	12.5	12.5
6	20.5	15.0	17.5	24.5	20.5	22.0	25.0	22.0	23.5	24.0	23.5	24.0	12.5	11.5	12.0
7	19.0	16.0	17.5	25.0	20.5	22.5	25.0	22.0	23.5	24.5	23.5	24.0	13.5	11.0	12.0
8	22.0	17.0	19.0	27.5	22.0	24.0	25.5	22.5	24.0	24.0	22.5	23.5	14.5	13.0	13.5
9	21.5	19.0	20.5	26.0	22.5	24.5	25.5	23.5	24.5	22.5	19.5	21.5	14.0	13.0	13.5
10	20.5	17.5	19.0	25.0	22.0	23.5	25.5	23.5	24.5	20.5	19.0	20.0	13.0	12.5	12.5
11	19.0	16.5	17.5	24.5	21.0	22.5	24.5	22.5	23.0	19.5	17.5	18.5	--	--	--
12	16.5	14.0	15.0	25.0	20.5	22.5	22.5	20.5	21.0	19.0	16.5	17.5	--	--	--
13	16.5	13.5	15.0	25.0	22.5	24.0	24.5	20.5	22.5	17.5	15.0	16.5	--	--	--
14	18.0	14.5	16.0	27.5	24.0	25.5	23.5	21.5	23.0	17.0	14.5	16.0	--	--	--
15	17.5	15.5	16.5	27.0	24.0	25.5	24.5	21.0	22.5	17.5	14.5	16.0	--	--	--
16	18.0	15.0	16.0	24.5	21.5	23.0	23.5	20.5	22.0	19.0	15.5	17.5	--	--	--
17	20.0	16.5	18.5	23.5	21.0	22.5	23.5	20.5	22.0	19.5	17.0	18.5	--	--	--
18	18.5	15.0	16.5	23.5	22.0	22.5	23.0	20.5	21.5	22.0	19.0	20.5	--	--	--
19	17.5	14.5	16.0	26.0	22.5	24.0	21.0	18.5	19.5	23.5	21.0	22.5	--	--	--
20	19.0	15.0	17.0	25.0	23.0	24.0	19.5	18.5	19.0	23.0	19.5	21.5	--	--	--
21	19.0	17.0	18.0	25.5	23.0	24.0	21.0	18.5	19.5	19.5	17.5	18.0	--	--	--
22	20.5	18.0	19.5	24.0	21.5	22.5	21.5	17.5	19.5	--	--	--	--	--	--
23	22.0	20.0	21.0	22.0	20.5	21.0	20.5	19.0	19.5	20.0	18.0	19.0	--	--	--
24	23.5	20.0	21.5	22.5	21.5	22.0	20.5	19.0	20.0	18.0	15.5	16.5	--	--	--
25	22.5	18.5	21.0	23.0	21.0	21.5	20.0	19.0	19.0	15.5	14.0	14.0	--	--	--
26	25.5	20.0	22.5	22.0	21.0	21.5	21.0	18.5	19.5	14.5	13.5	14.0	--	--	--
27	25.0	22.0	23.5	--	--	--	22.5	18.5	20.5	15.0	13.0	14.0	--	--	--
28	26.0	21.0	23.0	--	--	--	23.0	20.5	21.5	16.5	13.5	15.0	--	--	--
29	25.0	21.0	22.5	--	--	--	21.0	20.0	20.5	15.5	15.0	15.0	--	--	--
30	25.0	20.0	22.5	--	--	--	21.5	19.5	20.5	15.5	14.0	15.0	--	--	--
31	--	--	--	--	--	--	21.0	19.0	20.0	--	--	--	--	--	--
MONTH	26.0	10.5	18.5	--	--	--	--	--	--	--	--	--	--	--	--

# APPENDIX F

Table 4.--Maximum, minimum, and daily mean water-temperature data (degrees Celsius) for  
Bower Creek at Sunnyview Road near De Pere, June-October 1985

[--, no data available]

Day	June			July			August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1	--	--	--	17.0	16.5	17.0	17.5	17.0	17.0	20.5	19.0	20.0	12.0	10.0	10.5
2	--	--	--	20.5	17.0	17.0	17.0	16.5	17.0	19.5	18.0	18.5	10.5	8.5	9.5
3	--	--	--	17.5	17.0	17.0	17.5	16.5	17.0	19.0	19.0	19.0	12.0	10.0	10.5
4	--	--	--	19.5	16.0	17.5	18.0	17.0	17.5	22.5	18.5	21.0	11.5	10.0	11.0
5	--	--	--	18.5	17.0	17.5	22.5	18.0	18.5	22.0	19.5	20.0	11.0	9.5	10.0
6	--	--	--	17.5	17.0	17.5	23.0	20.0	21.0	25.0	21.5	23.0	9.5	9.5	9.5
7	--	--	--	18.0	16.5	17.0	21.5	20.5	21.0	24.0	23.0	23.5	--	--	--
8	--	--	--	17.0	16.5	17.0	20.5	20.0	20.5	23.5	21.5	22.5	--	--	--
9	--	--	--	21.5	17.0	17.5	20.5	20.0	20.0	21.5	19.5	20.5	--	--	--
10	--	--	--	18.0	17.0	17.5	21.0	20.0	20.5	19.5	16.0	19.0	--	--	--
11	--	--	--	17.5	17.0	17.0	20.5	19.5	19.5	18.5	16.0	17.0	--	--	--
12	11.5	11.5	11.5	17.0	16.5	16.5	19.5	18.5	19.0	17.0	15.5	16.5	--	--	--
13	12.0	11.0	11.0	17.5	16.5	17.0	23.0	19.0	21.5	15.5	14.0	14.5	--	--	--
14	12.0	11.0	11.5	18.0	17.0	17.5	22.5	19.5	21.0	15.0	13.5	14.5	--	--	--
15	12.5	11.5	12.0	18.5	17.5	18.0	19.5	18.0	18.5	15.0	14.0	14.5	--	--	--
16	13.5	12.0	12.5	19.0	17.5	18.0	18.5	17.5	18.0	17.5	14.5	15.0	--	--	--
17	13.5	12.5	13.0	18.0	16.5	17.0	20.0	18.5	18.5	16.0	15.0	15.5	--	--	--
18	14.5	12.5	13.5	17.5	17.0	17.0	21.0	19.0	20.0	18.0	16.0	17.0	--	--	--
19	13.5	13.0	13.5	18.0	17.5	17.5	19.0	16.5	17.5	19.0	18.0	18.5	--	--	--
20	13.5	13.0	13.5	19.5	18.0	18.5	--	--	--	19.0	18.0	18.5	--	--	--
21	18.0	13.5	14.5	18.5	18.0	18.5	--	--	--	18.0	16.0	16.5	--	--	--
22	20.0	18.0	19.0	18.5	17.0	17.5	--	--	--	18.5	15.5	17.0	--	--	--
23	21.0	17.0	18.5	18.5	16.0	16.5	16.5	16.5	16.5	19.0	16.5	18.0	--	--	--
24	19.0	16.0	17.0	17.0	16.0	16.5	17.0	16.5	17.0	16.5	12.0	14.0	--	--	--
25	19.5	16.0	16.5	21.5	17.0	20.0	18.5	17.0	18.0	12.0	10.5	11.5	--	--	--
26	16.5	16.0	16.0	22.0	19.0	20.5	19.5	18.0	18.5	13.5	12.0	12.5	--	--	--
27	16.5	16.0	16.5	21.0	19.5	20.0	19.0	18.0	18.0	13.5	11.0	12.0	--	--	--
28	17.0	16.5	17.0	20.0	19.5	20.0	22.5	18.0	18.5	14.0	11.5	13.0	--	--	--
29	17.5	17.0	17.0	20.5	19.5	20.0	20.0	18.5	19.5	14.0	13.5	14.0	--	--	--
30	17.0	16.5	17.0	19.5	18.5	18.5	20.0	19.0	19.5	14.0	12.0	13.5	--	--	--
31	--	--	--	20.0	16.5	18.0	20.0	18.0	19.0	--	--	--	--	--	--
MONTH	--	--	--	22.0	16.0	18.0	--	--	--	25.0	10.5	17.0	--	--	--

# APPENDIX F

Table 5.--Maximum, minimum, and daily mean water-temperature data (degrees Celsius) for Fox River at Schmidt Oil Dock, upper site, in Green Bay, August-October 1985

[--, no data available]

Day	August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1	--	--	--	23.5	21.5	21.5	15.0	13.0	14.0
2	--	--	--	21.5	21.0	21.5	14.0	8.5	13.0
3	--	--	--	24.0	21.0	21.5	13.0	12.5	12.5
4	--	--	--	23.0	22.0	22.5	14.0	12.5	13.0
5	--	--	--	13.5	12.0	12.5	--	--	--
6	25.5	24.0	24.5	23.5	23.0	23.0	12.0	11.5	12.0
7	26.5	24.5	25.5	--	--	--	13.5	11.5	12.0
8	26.0	23.0	25.0	--	--	--	14.0	11.5	12.5
9	26.0	24.5	25.0	--	--	--	14.5	12.0	13.0
10	27.0	24.5	25.5	--	--	--	14.5	12.0	12.5
11	27.5	25.0	25.5	--	--	--	13.0	12.0	12.5
12	25.0	24.0	24.5	--	--	--	14.0	12.0	12.5
13	25.5	23.5	24.0	--	--	--	13.0	12.0	12.5
14	25.0	23.5	24.0	--	--	--	13.5	12.5	12.5
15	25.0	23.5	24.0	--	--	--	15.0	12.5	13.0
16	25.0	23.5	24.0	--	--	--	14.0	12.0	12.5
17	24.0	22.5	23.5	--	--	--	12.0	11.5	11.5
18	24.0	22.0	23.0	--	--	--	--	--	--
19	23.0	22.5	23.0	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--
22	22.0	21.5	21.5	--	--	--	--	--	--
23	22.0	21.0	21.5	19.5	17.5	18.5	--	--	--
24	23.0	21.0	21.5	19.0	16.0	17.0	--	--	--
25	22.0	20.5	21.0	17.5	15.0	15.5	--	--	--
26	22.0	20.0	20.5	17.0	14.5	15.5	--	--	--
27	21.5	20.0	20.5	15.5	14.5	14.5	--	--	--
28	23.5	20.5	21.5	16.5	14.0	15.0	--	--	--
29	22.5	21.5	21.5	16.0	14.5	15.0	--	--	--
30	23.0	21.5	21.5	16.5	14.5	15.0	--	--	--
31	22.0	21.5	21.5	--	--	--	--	--	--
MONTH	--	--	--	--	--	--	--	--	--

# APPENDIX F

Table 6.--Maximum, minimum, and daily mean water-temperature data (degrees Celsius) for Fox River at Schmidt Oil Dock, lower site, in Green Bay, August-October 1985

[--, no data available]

Day	August			September			October		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1	--	--	--	20.5	19.5	20.0	13.0	11.5	12.5
2	--	--	--	20.0	19.5	19.5	12.0	7.5	11.0
3	--	--	--	20.5	19.5	20.0	11.0	11.0	11.0
4	--	--	--	21.0	20.5	20.5	11.5	11.0	11.0
5	--	--	--	--	--	--	11.5	10.5	10.5
6	23.0	22.5	23.0	21.5	21.5	21.5	10.5	10.0	10.0
7	24.0	22.5	23.5	--	--	--	12.0	9.5	10.0
8	23.5	23.0	23.5	--	--	--	12.0	10.0	10.5
9	23.5	23.0	23.5	--	--	--	12.0	10.5	11.0
10	24.5	22.5	23.5	--	--	--	12.0	10.5	10.5
11	24.5	23.0	23.5	--	--	--	10.5	10.5	10.5
12	23.5	22.5	23.0	--	--	--	11.5	10.5	10.5
13	23.0	21.5	22.5	--	--	--	11.0	10.5	10.5
14	22.5	22.0	22.0	--	--	--	11.0	10.5	11.0
15	23.0	21.0	22.0	--	--	--	12.0	11.0	11.0
16	22.5	21.5	22.0	--	--	--	11.5	10.0	10.5
17	22.0	20.0	21.0	--	--	--	10.5	9.5	10.0
18	22.0	19.5	21.5	--	--	--	--	--	--
19	21.5	20.0	21.0	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--
22	20.5	19.5	20.0	--	--	--	--	--	--
23	20.0	19.0	20.0	17.5	16.0	17.0	--	--	--
24	20.5	19.0	19.5	17.5	14.0	15.5	--	--	--
25	20.5	19.0	19.5	15.0	13.0	14.0	--	--	--
26	19.5	19.0	19.0	14.0	13.0	13.0	--	--	--
27	19.5	18.5	19.0	13.5	12.5	13.0	--	--	--
28	20.5	19.0	19.5	13.5	12.5	13.0	--	--	--
29	20.5	20.0	20.0	14.0	13.0	13.5	--	--	--
30	20.5	20.0	20.0	13.5	13.0	13.0	--	--	--
31	20.0	19.5	20.0	--	--	--	--	--	--
MONTH	--	--	--	--	--	--	--	--	--

# APPENDIX G

**Table 1.--Fecal-coliform and fecal-streptococcus data for East River at  
Monroe Street in Green Bay, 1985-86**

[c/100 mL, colonies per 100 milliliters; --, no data available]

Date	Time	Fecal coliform (c/100 mL)	Fecal streptococcus (c/100 mL)	Ratio of fecal coliform to fecal streptococcus
04-05-85	0945	1,100	4,900	0.22
04-17-85	1045	260	480	.54
05-01-85	1105	2,400	80	30
05-15-85	1100	100	36	2.8
05-29-85	1120	300	37	8.1
06-13-85	1115	50	50	1.0
06-27-85	0940	6,000	50	120.0
07-03-85	0815	140	30	4.7
07-11-85	1020	360	11	33
07-25-85	1520	70	85	.82
07-26-85	1115	1,100	180	6.1
08-01-85	1615	390	250	1.6
08-06-85	1600	90	100	.90
08-08-85	0815	430	50	8.6
08-13-85	0055	30,000	3,400	8.8
08-13-85	2310	110,000	2,100	52
08-15-85	1130	2,900	1,000	2.9
08-18-85	0010	2,700	5,300	.51
08-18-85	0945	1,200	2,300	.52
08-25-85	1435	1,500	3,800	.39
08-26-85	1035	1,100	2,000	.55
08-29-85	0945	600	400	1.5
09-12-85	0750	--	400	--
09-26-85	1140	350	420	.83
10-10-85	0745	200	220	.91
10-23-85	0715	140	110	1.3
11-01-85	1400	1,400,000	530,000	2.6
11-02-85	1320	25,000	61,000	.41
11-22-85	0900	680	1,300	.52
01-30-86	1540	--	110	--
02-06-86	0915	20	--	--
02-12-86	1630	26	22	1.2
02-19-86	0835	690	80	8.6
02-26-86	1045	--	94	--
03-12-86	0930	430	160	2.7
03-16-86	1456	--	210	--
03-19-86	1125	17,000	18,000	.94
03-24-86	1400	290	--	--
03-26-86	0920	360	1,100	.33
04-02-86	0940	34	240	.14
05-07-86	1020	28	12	2.3
06-03-86	1330	3,600	--	--
06-20-86	1000	22,000	56,000	.39
08-05-86	1150	120	--	--
09-03-86	1330	--	30	--
09-11-86	1400	--	730,000	--
09-29-86	1000	2,800	2,700	1.0

# APPENDIX G

**Table 2.--Fecal-coliform and fecal-streptococcus data for East River at Allouez Avenue bridge at Allouez, 1985-86**

[c/100 mL, colonies per 100 milliliters; --, no data available]

Date	Time	Fecal coliform (c/100 mL)	Fecal streptococcus (c/100 mL)	Ratio of fecal coliform to fecal streptococcus
04-04-85	1330	720	1,600	0.45
04-17-85	0835	80	500	.16
05-01-85	0845	60	60	1.0
05-15-85	0845	100	70	1.4
05-29-85	0900	80	110	.73
06-13-85	0900	140	140	1.0
06-27-85	0750	--	580	--
07-03-85	0640	6,000	230	26
07-11-85	0835	1,100	250	4.4
07-25-85	1315	760	1,900	.40
08-01-85	0940	500	320	1.6
08-08-85	0840	1,400	1,200	1.2
08-15-85	0940	6,300	640	9.8
08-29-85	0745	3,600	5,400	.67
09-12-85	0835	1,300	1,500	.87
09-26-85	0905	2,000	280	7.1
10-16-85	0830	1,300	620	2.1
10-23-85	0745	700	430	1.6
11-21-85	0715	3,100	860	3.6
04-02-86	1200	100	44	2.3
04-14-86	1215	77	40	1.9

## APPENDIX G

**Table 3.--Fecal-coliform and fecal-streptococcus data for East River at  
State Highway 32 near De Pere, 1985**

[c/100 mL, colonies per 100 milliliters; --, no data available]

Date	Time	Fecal coliform (c/100 mL)	Fecal streptococcus (c/100 mL)	Ratio of fecal coliform to fecal streptococcus
04-04-85	1445	560	4,000	0.14
04-17-85	0920	27	220	.12
05-01-85	0930	250	140	1.8
05-15-85	0930	1,000	1,300	.77
05-29-85	1000	680	280	2.4
06-13-85	0945	300	440	.68
06-27-85	0900	6,000	1,100	5.5
07-02-85	0745	3,900	1,600	2.4
07-11-85	0945	1,000	1,040	1.8
07-25-85	1400	6,500	15,000	.43
08-01-85	1100	2,100	900	2.3
08-08-85	1010	4,000	1,400	2.9
08-15-85	1055	9,500	560	17
08-29-85	0910	52,000	91,000	.57
09-12-85	0940	200	1,300	.15
09-26-85	1050	72,000	24,000	3.0
10-10-85	0945	480	540	.89
10-23-85	0900	800	630	1.3
11-21-85	0745	12,000	4,600	2.6

# APPENDIX G

**Table 4.--Fecal-coliform and fecal-streptococcus data for Bower Creek at Sunnyview Road near De Pere, 1985-86**

[c/100 mL, colonies per 100 milliliters; --, no data available]

Date	Time	Fecal coliform (c/100 mL)	Fecal streptococcus (c/100 mL)	Ratio of fecal coliform to fecal streptococcus
04-04-85	1600	210	900	0.23
04-17-85	1000	93	540	.17
05-01-85	1030	66	50	1.3
05-15-85	1018	2,200	2,700	.82
05-29-85	1045	260	110	2.4
06-13-85	1030	2,000	1,200	1.7
06-27-85	0830	6,300	690	9.1
07-03-85	0715	6,100	1,600	3.8
07-11-85	0915	2,800	860	3.3
07-25-85	1335	10,000	400,000	.03
07-26-85	1040	57,000	650,000	.09
08-01-85	1015	400	1,200	.33
08-05-85	2030	140,000	190,000	.74
08-06-85	0845	39,000	85,000	.46
08-07-85	1300	3,000	6,500	.46
08-08-85	0920	42,000	800	53
08-13-85	0020	120,000	150,000	.80
08-13-85	0900	310,000	320,000	.97
08-13-85	1530	400,000	200,000	2.0
08-15-85	1020	10,000	1,000	10
08-17-85	2320	5,000	56,000	.09
08-18-85	1140	60,000	180,000	.33
08-25-85	1315	29,000	38,000	.76
08-26-85	0945	450,000	280,000	1.6
08-29-85	0820	15,000	31,000	.48
09-06-85	0850	2,700,000	600,000	4.5
09-12-85	0910	--	8,500	--
09-26-85	1000	13,000	7,000	1.9
10-10-85	0905	300	240	1.3
10-23-85	0815	140	340	.41
11-01-85	1325	1,500	10,000	.15
11-02-85	1215	360,000	450,000	.80
11-21-85	0815	4,500	3,600	1.3
03-16-86	1400	--	220	--
03-19-86	1150	1,700	21,000	.08
03-24-86	1430	130	72,000	.00
03-25-86	1830	180	1,500	.12
04-02-86	1015	850	780	1.1
04-14-86	1245	64	16	4.0
04-28-86	1000	1,400	23	61
05-12-86	1330	236	62	3.9
06-03-86	1445	4,800	--	--
06-19-86	1425	550	200	2.8
06-27-86	1105	41,000	33,000	1.2
07-25-86	1630	720,000	720,000	1.0



# APPENDIX G

**Table 4.--Fecal-coliform and fecal-streptococcus data for Bower Creek at  
Sunnyview Road near De Pere, 1985-86--Continued**

Date	Time	Fecal coliform (c/100 mL)	Fecal streptococcus (c/100 mL)	Ratio of fecal coliform to fecal streptococcus
08-05-86	1000	610	430	1.4
08-25-86	1415	340	--	--
09-10-86	1155	830	730,000	.00
09-22-86	1115	--	34,000	--
09-29-86	0900	820	8,300	.10
10-08-86	2100	27,000	26,000	1.0