



# LAKE MICHIGAN BASIN

STREAMS TRIBUTARY TO LAKE MICHIGAN

160

04085200 KEWAUNEE RIVER NEAR KEWAUNEE, WI

LOCATION.--Lat 44°27'30", long 87°33'23", in SE ¼ SW ¼ sec.14, T.23 N., R.24 E., Kewaunee County, Hydrologic Unit 04030102, on left bank just upstream from bridge on County Trunk Highway F, 2.3 mi west of Kewaunee, and about 7.0 mi upstream from mouth.

DRAINAGE AREA.--127 mi<sup>2</sup>.

PERIOD OF RECORD.--Annual maximum, water years 1958-65, and occasional low-flow measurements, water years 1963-64. September 1964 to June 1996, November 1997 to current year. No winter records for years 1965 and 1966.

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

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

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	15	48	46	e22	e230	213	54	1,900	69	32	24
2	14	15	38	44	e22	e1,200	161	52	840	61	30	22
3	16	17	38	e64	e22	1,740	130	49	400	57	33	21
4	17	57	36	e70	e22	850	111	47	241	63	30	20
5	17	65	33	e50	e22	989	97	45	171	67	27	20
6	15	48	32	e38	e22	1,810	96	45	139	70	26	22
7	14	35	30	e38	e22	787	97	48	119	75	25	26
8	14	28	31	e32	e22	573	94	125	108	67	24	24
9	14	25	31	e28	e23	425	92	296	609	59	25	22
10	13	24	e50	e26	e23	323	83	210	878	56	26	21
11	13	26	e76	e22	e23	352	77	145	615	52	24	20
12	15	28	e62	e21	e23	253	71	112	674	49	24	19
13	15	27	e56	e21	e23	198	67	156	513	48	23	19
14	17	25	53	e20	e23	184	65	177	490	145	23	18
15	17	24	45	e20	e24	182	62	219	358	141	22	19
16	16	23	46	e20	e24	170	62	165	228	98	21	20
17	16	22	46	e21	e24	150	64	118	307	67	21	17
18	16	27	46	e21	e25	132	66	99	404	52	21	17
19	15	31	38	e21	e26	128	65	86	245	46	22	17
20	15	31	33	e21	e28	220	60	168	160	42	22	16
21	15	28	36	e21	e28	274	70	223	126	42	21	15
22	15	26	34	e21	e30	183	74	261	112	40	20	14
23	16	178	32	e21	e30	144	66	603	98	37	19	14
24	15	350	29	e22	e32	127	60	2,060	96	34	19	14
25	15	242	29	e22	e32	140	65	1,080	94	33	25	14
26	15	138	27	e22	e31	234	74	496	82	31	27	14
27	15	89	29	e22	e34	333	68	297	76	30	42	14
28	16	69	38	e21	e40	276	64	211	78	29	44	15
29	15	58	75	e21	e50	726	60	162	73	30	32	15
30	15	51	68	e22	---	572	56	143	75	32	27	15
31	16	---	52	e22	---	310	---	392	---	34	25	---
TOTAL	471	1,822	1,317	881	772	14,215	2,490	8,344	10,309	1,756	802	548
MEAN	15.2	60.7	42.5	28.4	26.6	459	83.0	269	344	56.6	25.9	18.3
MAX	17	350	76	70	50	1,810	213	2,060	1,900	145	44	26
MIN	13	15	27	20	22	127	56	45	73	29	19	14
CFSM	0.12	0.48	0.33	0.22	0.21	3.61	0.65	2.12	2.71	0.45	0.20	0.14
IN.	0.14	0.53	0.39	0.26	0.23	4.16	0.73	2.44	3.02	0.51	0.23	0.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	42.9	61.8	49.4	34.6	60.3	249	195	87.2	92.0	39.9	31.8	50.6
MAX	221	458	226	265	314	567	450	354	483	342	113	454
(WY)	(1985)	(1986)	(1993)	(1973)	(1984)	(1986)	(1993)	(1973)	(1990)	(1993)	(1975)	(1986)
MIN	10.1	10.9	9.10	8.14	11.0	38.8	26.0	21.2	12.3	8.29	7.90	8.98
(WY)	(1967)	(1977)	(1977)	(2003)	(2003)	(2000)	(2000)	(1977)	(1988)	(1965)	(1970)	(1966)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1964 - 2004

ANNUAL TOTAL	16,848.0	43,727	
ANNUAL MEAN	46.2	119	82.9
HIGHEST ANNUAL MEAN			178
LOWEST ANNUAL MEAN			27.8
HIGHEST DAILY MEAN	976	Apr 17	2,060
LOWEST DAILY MEAN	5.8	Jan 24	13
ANNUAL SEVEN-DAY MINIMUM	(a)6.1	Jan 19	14
MAXIMUM PEAK FLOW			2,490
MAXIMUM PEAK STAGE			13.61
INSTANTANEOUS LOW FLOW			(d)9.9
ANNUAL RUNOFF (CFSM)	0.363		0.941
ANNUAL RUNOFF (INCHES)	4.94		12.81
10 PERCENT EXCEEDS	92		265
50 PERCENT EXCEEDS	20		38
90 PERCENT EXCEEDS	8.6		16

(a) Ice affected

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

(c) Backwater from ice

(d) Result of freezeup

(e) Estimated due to ice effect or missing record

## 442944087354100 DISCOVERY FARMS WATERWAY SITE NO. 1 NEAR KEWAUNEE, WI

LOCATION.--Lat 44°29'44", long 87°35'41", Kewaunee County, Hydrologic Unit 04030102, 1,700 ft west of intersection of Ryan Radio Rd. and County Hwy B, 700 ft south of Ryan Radio Rd. in waterway, 5.0 mi northwest of Kewaunee, WI.

DRAINAGE AREA.--to be determined.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 2003 to September 2004.

GAGE.--Water-stage recorder. Water levels are controlled by 2.5 ft H flume. Datum of gage is 740 ft above sea level, from topographic map.

REMARKS.--Records excellent. Note that discharge is the daily sum, in cubic feet.

DAILY SUM DISCHARGE, CUBIC FEET  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e0	0	0	0	32,880	0	0	0	0	0	0
2	---	e0	0	5,648	0	54,890	0	0	0	0	0	0
3	---	e0	0	0	0	549	0	0	0	0	0	0
4	---	e0	0	0	0	703	0	0	0	0	0	0
5	---	e0	0	0	0	68,520	0	0	0	0	0	0
6	---	e0	0	0	0	0	0	0	0	0	0	0
7	---	e0	0	0	0	4,469	0	0	0	0	0	0
8	---	e0	0	0	0	0	0	13,330	0	0	0	0
9	---	e0	0	0	0	0	0	0	39,560	0	0	0
10	---	e0	0	0	0	0	0	0	0	0	0	0
11	---	e0	0	0	0	0	0	0	1,907	0	0	0
12	---	e0	0	0	0	0	0	86	71	0	0	0
13	---	e0	0	0	0	0	0	116	187	0	0	0
14	---	e0	0	0	0	95	0	82	0	0	0	0
15	---	e0	0	0	0	0	0	0	0	0	0	0
16	---	e0	0	0	0	0	0	0	0	0	0	0
17	---	e0	0	0	0	0	0	0	4,855	0	0	0
18	---	e0	0	0	0	0	0	0	0	0	0	0
19	---	e0	0	0	0	0	0	0	0	0	0	0
20	---	e0	0	0	0	0	0	71	0	0	0	0
21	---	e0	0	0	0	0	0	51	0	0	0	0
22	---	0	0	0	0	0	0	27	0	0	0	0
23	---	681	0	0	0	0	0	95,260	0	0	0	0
24	---	0	0	0	0	0	0	19,150	0	0	0	0
25	---	0	0	0	0	0	0	0	0	0	0	0
26	---	0	0	0	0	0	0	0	0	0	0	0
27	---	0	0	0	0	0	0	0	0	0	0	0
28	---	0	0	0	0	89	0	0	0	0	0	0
29	---	0	0	0	128	0	0	0	0	0	0	0
30	---	0	0	0	---	0	0	0	0	0	0	0
31	---	---	0	0	---	0	---	29,130	---	0	0	---
TOTAL	---	681	0	5,648	128	162,195	0	157,303	46,580	0	0	0
MEAN	---	23	0	182	4	5,232	0	5,074	1,553	0	0	0
MAX	---	681	0	5,648	128	68,520	0	95,260	39,560	0	0	0
MIN	---	0	0	0	0	0	0	0	0	0	0	0

e Estimated

## WATER QUALITY RECORDS

PERIOD OF RECORD.--December 2003 to September 2004.

INSTRUMENTATION.--Water-quality sampler since December 2003.

REMARKS.--Chemical analyses by the Water and Environmental Analysis Lab (formerly the Environmental Task Force Lab) at the University of Wisconsin-Stevens Point. Samples with start and end dates/times are flow-composite samples which represent the event-mean concentration for the specified runoff period. Samples with only start dates/times are discrete samples collected by the same automatic point sampler. Runoff periods which were not sampled have zero subsamples. The sample runoff volume is the total flow that occurs between the start and end time of each flow-composite sample. The storm runoff volume is the total flow that occurs between the time that runoff starts and ends. In most cases, the sample runoff volume is slightly less than the storm runoff volume. A storm load (in pounds) can be computed by multiplying the storm runoff volume (in cubic feet) by the constituent concentration (in mg/L) and a factor of  $6.2428 \times 10^{-5}$ .

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DISCRETE SAMPLES

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue on evap. at 105degC wat unfiltered, mg/L (00500)	Residue total at 105 deg. C, suspended, mg/L (00530)	Residue volatile, suspended, mg/L (00535)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Hydrolyzable phosphorus, water, fltrd, mg/L (00672)	Nitrite + nitrate water fltrd, mg/L (00631)	Phosphorus, water, fltrd, mg/L (00666)
MAR													
14...	1138	.028	50	1.5	168	38	6	1.8	2.3	.6	.47	1.21	.35
14...	1208	.024	50	1.5	142	18	4	2.0	2.2	.6	.47	1.20	.458
JUN													
12...	0457	.030	50	6.5	390	26	11	1.97	2.40	.18	.56	.08	.742
13...	1408	.111	50	6.5	348	64	16	1.77	2.67	.22	.69	.21	.786

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)
MAR		
14...	.469	46
14...	.547	30
JUN		
12...	1.078	64
13...	1.084	96



442944087354100 DISCOVERY FARMS WATERWAY SITE NO. 1 NEAR KEWAUNEE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
COMPOSITE SAMPLES

Date	End date	Time	End time	Sam- pling method, code (82398)	Chlor- ide, water, fltrd, mg/L (00940)	Residue on evap. at 105degC wat unf mg/L (00500)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Residue vola- tile, sus- pended, mg/L (00535)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Hydro- lyzable phos- phorus, water, fltrd, mg/L (00672)	Nitrite + nitrate water fltrd, mg/L as N (00631)
NOV													
23-23	20031123	0726	0905	50	6.0	641	546	53	1.28	3.23	.15	1.68	.95
JAN													
02-02	20040102	1756	2204	50	1.5	413	306	43	2.58	4.30	.50	.873	3.33
MAR													
01-03	20040303	0926	0252	50	.5	80	25	11	2.4	2.3	1.6	.38	.82
MAR													
05-05	20040305	0512	0629	50	1.0	66	8	4	1.2	1.1	.4	.32	.73
MAR													
05-05	20040305	0512	1812	50	.5	65	10	2	8.2	8.4	.5	.21	.74
MAR													
05-05	20040305	0630	0829	50	.5	76	7	1	7.8	7.9	.4	.36	.74
MAR													
05-05	20040305	0830	1107	50	1.0	52	12	2	8.2	8.1	.3	.37	.84
MAR													
05-05	20040305	1108	1812	50	.5	82	14	4	8.7	9.3	.4	.49	.88
MAR													
07-07	20040307	0853	1711	50	.5	113	7	4	14.8	15.1	.6	.74	1.57
MAR													
28-28	20040328	1910	2018	50	4.0	296	75	11	1.6	2.4	.1	.67	.59
MAY													
08-08	20040508	1748	2201	50	<.5	514	408	43	1.26	2.48	.45	.807	1.01
MAY													
12-12	20040512	2023	2101	50	5.0	342	225	34	2.08	3.72	.22	1.08	1.37
MAY													
13-13	20040513	1741	1824	50	2.5	346	131	22	2.58	3.81	.48	.885	.71
MAY													
20-20	20040520	0152	0229	50	3.0	278	173	30	1.16	2.58	.20	.915	.86
MAY													
23-23	20040523	0558	1243	50	.5	260	124	14	.71	1.30	.14	.710	.34
MAY													
23-23	20040523	1727	2117	50	1.5	356	187	24	.98	1.77	.17	1.07	.44
MAY													
23-24	20040524	2232	0317	50	1.0	497	372	48	.40	2.02	.13	.665	.24
MAY													
31-31	20040531	0811	1202	50	1.5	316	83	13	1.54	5.37	.21	1.108	.61
MAY													
31-31	20040531	1408	1906	50	.5	216	82	12	1.06	1.43	.14	.902	.37
JUN													
09-09	20040609	0203	0608	50	2.0	266	135	14	1.33	2.40	.27	.804	.85
JUN													
11-11	20040611	0346	0942	50	2.5	272	40	7	1.56	2.07	.21	.91	.13
JUN													
17-17	20040617	0025	0335	50	5.5	565	81	14	1.74	3.15	.37	1.51	1.23

442944087354100 DISCOVERY FARMS WATERWAY SITE NO. 1 NEAR KEWAUNEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sample runoff volume, cubic feet (99906)
NOV 23-23	1.68	2.92	606	661
JAN 02-02	.975	1.644	323	5,618
MAR 01-03	.37	.40	26	88,083
MAR 05-05	1.80	1.93	12	7,272
MAR 05-05	2.12	2.31	14	68,510
MAR 05-05	1.91	2.02	12	21,003
MAR 05-05	1.98	2.28	19	24,130
MAR 05-05	2.42	2.71	18	15,627
MAR 07-07	3.39	3.49	10	4,441
MAR 28-28	.62	1.08	98	78
MAY 08-08	.800	1.46	425	13,263
MAY 12-12	1.125	1.815	176	74
MAY 13-13	.942	1.369	95	111
MAY 20-20	.903	1.497	195	66
MAY 23-23	.683	1.060	118	35,240
MAY 23-23	1.026	1.497	177	6,989
MAY 23-24	.639	1.115	370	72,174
MAY 31-31	1.115	1.964	98	3,559
MAY 31-31	.900	1.218	94	25,560
JUN 09-09	.914	1.28	158	39,560
JUN 11-11	1.035	1.229	62	1,894
JUN 17-17	1.753	1.997	51	4,847

**Discovery Farms Waterway Site No 1 near Kewaunee, WI****Station ID: 442944087354100**

Storm Beginning Date	Storm Beginning Time	Storm Ending Date	Storm Ending Time	Storm Runoff Volume, Cubic Feet	Peak Discharge (CFS)	Number of Subsamples
11-23-03	0715	11-23-03	0910	664	0.24	11
01-02-04	1752	01-02-04	2225	5632	1.00	24
02-29-04	1500	02-29-04	1900	128	0.01	0
03-01-04	0900	03-03-04	0400	88106	1.67	19
03-03-04	1500	03-03-04	1900	204	0.03	0
03-04-04	1357	03-04-04	1740	696	0.10	0
03-05-04	0511	03-05-04	0629	7272	3.24	2
03-05-04	0629	03-05-04	0829	21192	3.63	6
03-05-04	0829	03-05-04	1107	24280	2.78	6
03-05-04	1107	03-05-04	1900	15776	2.38	4
03-05-04	0511	03-05-04	1900	68520	3.63	18
03-07-04	0800	03-07-04	1800	4469	0.27	4
03-14-04	1121	03-14-04	1152	48	0.04	1
03-14-04	1152	03-14-04	1232	47	0.04	1
03-28-04	1900	03-28-04	2047	89	0.03	2
05-08-04	1700	05-08-04	2208	13330	2.11	24
05-12-04	2000	05-12-04	2115	86	0.05	5
05-13-04	1740	05-13-04	1838	116	0.09	4
05-14-04	1100	05-14-04	1400	82	0.01	0
05-20-04	0148	05-20-04	0240	68	0.05	4
05-21-04	1740	05-21-04	1852	51	0.02	0
05-22-04	0146	05-22-04	0242	20	0.01	0
05-23-04	0556	05-23-04	1256	35244	4.25	26
05-23-04	1725	05-23-04	2122	6991	1.08	9
05-23-04	2230	05-24-04	0326	72178	16.42	6
05-31-04	0806	05-31-04	1215	3564	0.61	12
05-31-04	1407	05-31-04	1915	25563	3.45	10
06-09-04	0202	06-09-04	0611	39561	7.52	15
06-11-04	0300	06-11-04	0955	1907	0.24	12
06-12-04	0431	06-12-04	0548	71	0.03	1
06-13-04	1400	06-13-04	1500	187	0.13	1
06-17-04	0021	06-17-04	0338	4855	0.93	13

442916087362600 DISCOVERY FARMS WATERWAY SITE NO. 2 NEAR KEWAUNEE, WI

LOCATION.--Lat 44°29'16", long 87°36'26", Kewaunee County, Hydrologic Unit 04030102, 1 mi west of intersection of Ryan Radio Rd. and County Hwy B, 3,500 ft south of Ryan Radio Rd. in waterway, 5.4 mi northwest of Kewaunee, WI.

DRAINAGE AREA.--to be determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 2003 to September 2004.

GAGE.--Water-stage recorder. Water levels are controlled by 2.5 ft H flume. Datum of gage is 750 ft above sea level, from topographic map.

REMARKS.--Records excellent. Note that discharge is the daily sum, in cubic feet.

DAILY SUM DISCHARGE, CUBIC FEET  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e0	0	0	0	19,900	0	0	0	0	0	0
2	---	e0	0	2,816	0	64,840	0	0	0	0	0	0
3	---	e0	0	15	0	9,048	0	0	0	0	0	0
4	---	e0	0	0	0	220	0	0	0	0	0	0
5	---	e0	0	0	0	25,450	0	0	0	0	0	0
6	---	e0	0	0	0	0	0	0	0	0	0	0
7	---	e0	0	0	0	1,652	0	0	0	0	0	0
8	---	e0	0	0	0	0	0	2,650	0	0	0	0
9	---	e0	0	0	0	0	0	0	21,250	0	0	0
10	---	e0	0	0	0	0	0	0	64	0	0	0
11	---	e0	0	0	0	0	0	0	2,821	0	0	0
12	---	e0	0	0	0	0	0	286	930	0	0	0
13	---	e0	0	0	0	0	0	1,544	1,068	0	0	0
14	---	e0	0	0	0	325	0	1,842	0	0	0	0
15	---	e0	0	0	0	0	0	0	0	0	0	0
16	---	e0	0	0	0	0	0	0	0	0	0	0
17	---	e0	0	0	0	0	0	0	3,465	0	0	0
18	---	e0	0	0	0	0	0	0	0	0	0	0
19	---	e0	0	0	0	0	0	0	0	0	0	0
20	---	e0	0	0	298	0	0	0	0	0	0	0
21	---	e0	0	0	0	0	0	453	0	0	0	0
22	---	0	0	0	0	68	0	877	0	0	0	0
23	---	150	0	0	0	125	0	42,780	0	0	0	0
24	---	0	0	0	0	0	0	20,040	0	0	0	0
25	---	0	0	0	0	0	0	0	0	0	0	0
26	---	0	0	0	0	0	0	0	0	0	0	0
27	---	0	0	0	0	0	0	0	0	0	0	0
28	---	0	194	0	0	2,478	0	0	0	0	0	0
29	---	0	0	0	2,292	0	0	0	0	0	0	0
30	---	0	0	0	---	189	0	0	0	0	0	0
31	---	---	0	0	---	0	---	12,570	---	0	0	---
TOTAL	---	150	194	2,831	2,590	124,295	0	83,042	29,598	0	0	0
MEAN	---	5	6	91	89	4,010	0	2,679	987	0	0	0
MAX	---	150	194	2,816	2,292	64,840	0	42,780	21,250	0	0	0
MIN	---	0	0	0	0	0	0	0	0	0	0	0

e Estimated

## 442916087362600 DISCOVERY FARMS WATERWAY SITE NO. 2 NEAR KEWAUNEE, WI

## WATER QUALITY RECORDS

PERIOD OF RECORD.--December 2003 to September 2004.

INSTRUMENTATION.--Water-quality sampler since December 2003.

REMARKS.--Chemical analyses by the Water and Environmental Analysis Lab (formerly the Environmental Task Force Lab) at the University of Wisconsin-Stevens Point. Samples with start and end dates/times are flow-composite samples which represent the event-mean concentration for the specified runoff period. Samples with only start dates/times are discrete samples collected by the same automatic point sampler. Runoff periods which were not sampled have zero subsamples. The sample runoff volume is the total flow that occurs between the start and end time of each flow-composite sample. The storm runoff volume is the total flow that occurs between the time that runoff starts and ends. In most cases, the sample runoff volume is slightly less than the storm runoff volume. A storm load (in pounds) can be computed by multiplying the storm runoff volume (in cubic feet) by the constituent concentration (in mg/L) and a factor of  $6.2428 \times 10^{-5}$ .

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DISCRETE SAMPLES

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue on evap. at 105degC wat unfltrd, mg/L (00500)	Residue total at 105 deg. C, suspended, mg/L (00530)	Residue volatile, suspended, mg/L (00535)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Hydrolyzable phosphorus, water, fltrd, mg/L (00672)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Phosphorus, water, fltrd, mg/L (00666)
FEB													
20...	1241	.012	50	3.5	74	12	4	2.73	3.57	1.7	.11	6.0	.09
20...	1411	.004	50	2.5	78	12	5	2.2	2.32	1.4	.19	5.6	.17

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)
FEB		
20...	.14	55
20...	.25	39

442916087362600 DISCOVERY FARMS WATERWAY SITE NO. 2 NEAR KEWAUNEE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
COMPOSITE SAMPLES

Date	End date	Time	End time	Sam- pling method, code (82398)	Chlor- ide, water, fltrd, mg/L (00940)	Residue on evap. at 105degC wat unf mg/L (00500)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Residue vola- tile, sus- pended, mg/L (00535)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Hydro- lyzable phos- phorus, water, fltrd, mg/L (00672)	Nitrite + nitrate water fltrd, mg/L as N (00631)
NOV													
23-23	20031123	0727	0813	50	5.0	2,188	2,122	191	.61	8.85	.06	.183	.38
FEB													
29-29	20040229	1238	2055	50	1.5	71	4	4	5.2	5.57	3.7	<.01	.61
FEB 29-													
MAR 01	20040301	1238	1124	50	3.0	65	8	7	14.1	14.3	9.1	<.01	.51
MAR													
01-01	20040301	0525	1724	50	1.0	101	4	3	8.4	8.43	5.7	<.01	.64
MAR													
01-02	20040302	1725	0724	50	.5	47	2	2	4.6	4.74	3.3	<.01	.55
MAR													
02-02	20040302	0725	1607	50	1.0	61	4	4	5.0	5.05	3.3	<.01	.65
MAR													
02-03	20040303	1608	0807	50	1.0	66	3	3	4.62	4.74	3.2	<.01	.66
MAR													
03-03	20040303	0808	2055	50	1.5	81	4	3	3.72	3.68	2.6	.09	.62
MAR													
05-05	20040305	0459	0624	50	.5	96	19	3	9.9	10.9	.8	<.03	.71
MAR													
05-05	20040305	0459	2059	50	.5	108	21	3	1.83	1.91	.7	.12	1.48
MAR													
05-05	20040305	0625	0837	50	1.0	112	7	1	10.3	10.6	.8	<.03	.77
MAR													
05-05	20040305	0838	1110	50	.5	111	26	5	11.4	11.3	.8	<.03	.89
MAR													
05-05	20040305	1111	2059	50	.5	112	12	1	12.8	12.7	.8	.11	1.02
MAR													
14-14	20040314	0934	1236	50	3.0	276	119	15	2.0	2.5	.8	.12	1.26
MAR													
28-28	20040328	1845	2319	50	6.0	696	490	50	1.3	3.0	.2	.19	1.10
MAR													
30-30	20040330	1637	1836	50	16.5	340	10	2	1.4	1.5	--	.176	1.06
MAY													
08-08	20040508	1824	2255	50	1.0	531	306	33	.82	1.75	.21	.214	.60
MAY													
12-12	20040512	2127	2325	50	6.0	308	124	14	1.24	1.93	.29	.322	.85
MAY													
13-13	20040513	1757	2200	50	5.5	427	229	23	1.14	2.06	.19	.161	.49
MAY													
14-14	20040514	1030	1753	50	6.5	368	64	9	1.17	1.64	.12	.153	.09
MAY													
21-21	20040521	1842	2150	50	8.5	331	65	10	1.23	1.86	.22	.165	.08
MAY													
22-22	20040522	0216	0634	50	8.0	389	74	12	1.50	2.07	.24	.13	.02
MAY													
22-22	20040522	0950	1437	50	8	361	22	5	1.27	1.56	.11	.124	<.02
MAY													
23-23	20040523	0617	1344	50	1.5	342	204	19	.64	1.29	.12	.072	.14
MAY													
23-23	20040523	1730	2212	50	2.0	442	280	30	.68	1.7	.08	.063	.17
MAY													
23-24	20040524	2213	1445	50	1.0	407	310	34	.41	1.32	.07	.052	.19
MAY													
31-31	20040531	0906	1215	50	4.0	298	96	14	1.27	1.85	.19	.093	.02
MAY													
31-31	20040531	1411	1836	50	2.0	246	104	12	.79	1.49	.26	.041	<.02
JUN													
09-09	20040609	0213	0558	50	1.5	90	34	9	.57	1.27	.07	.080	<.02
JUN													
11-11	20040611	0346	1306	50	9.0	264	21	5	1.53	1.87	.07	.044	.13
JUN													
12-12	20040612	0427	0726	50	8.5	328	28	8	1.04	1.83	.07	.095	<.02
JUN													
13-13	20040613	1418	1627	50	9.0	309	30	5	1.37	1.68	.07	.085	.1
JUN													
17-17	20040617	0040	0410	50	6.5	229	122	24	1.37	3.78	.29	.211	<.02

442916087362600 DISCOVERY FARMS WATERWAY SITE NO. 2 NEAR KEWAUNEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sample runoff volume, cubic feet (99906)
NOV 23-23	.175	3.37	2,077	99
FEB 29-29	<.01	<.01	21	96,047
FEB 29- MAR 01	<.01	<.01	17	3,483
MAR 01-01	<.01	<.01	21	10,349
MAR 01-02	<.01	<.01	31	15,208
MAR 02-02	<.01	<.01	28	39,622
MAR 02-03	<.01	<.01	30	23,398
MAR 03-03	.05	.03	33	3,843
MAR 05-05	.47	.76	18	3,919
MAR 05-05	.53	.80	28	25,415
MAR 05-05	.41	.60	7	7,015
MAR 05-05	.50	.84	33	7,679
MAR 05-05	.73	.94	17	6,639
MAR 14-14	.162	.362	212	306
MAR 28-28	.04	1.29	230	2,453
MAR 30-30	--	.19	20	161
MAY 08-08	.211	.744	290	2,637
MAY 12-12	.310	.721	132	261
MAY 13-13	.167	.642	194	1,504
MAY 14-14	.160	.358	92	1,818
MAY 21-21	.155	.383	6	432
MAY 22-22	.141	.319	107	498
MAY 22-22	.137	.239	41	315
MAY 23-23	.082	.452	236	17,233
MAY 23-23	.063	.589	323	4,282
MAY 23-24	.049	.517	332	41,271
MAY 31-31	.094	.341	125	2,643
MAY 31-31	.084	.393	117	9,904
JUN 09-09	.070	.257	73	21,242
JUN 11-11	.148	.247	33	2,812
JUN 12-12	.062	.208	42	918
JUN 13-13	.078	.230	52	1,045
JUN 17-17	.257	.728	130	3,444

**Discovery Farms Waterway Site No 2 near Kewaunee, WI****Station ID: 442916087362600**

Storm Beginning Date	Storm Beginning Time	Storm Ending Date	Storm Ending Time	Storm Runoff Volume, Cubic Feet	Peak Discharge (CFS)	Number of Subsamples
11-23-03	0721	11-23-03	0940	150	0.08	7
12-28-03	0400	12-28-03	0745	194	0.03	0
01-02-04	1725	01-03-04	0100	2829	0.34	0
02-20-04	0800	02-20-04	1325	260	0.03	1
02-20-04	1325	02-20-04	2204	37	0.01	1
02-29-04	1200	03-01-04	0524	3493	0.10	7
03-01-04	0524	03-01-04	1724	10352	0.42	6
03-01-04	1724	03-02-04	0724	15224	0.51	7
03-02-04	0724	03-02-04	1607	39645	1.91	4
03-02-04	1607	03-03-04	0807	23398	1.28	8
03-03-04	0807	03-03-04	2145	3864	0.18	5
02-29-04	1200	03-03-04	2145	96072	1.91	37
03-04-04	1100	03-04-04	1600	220	0.02	0
03-05-04	0457	03-05-04	0624	3920	1.29	2
03-05-04	0624	03-05-04	0837	7093	1.29	8
03-05-04	0837	03-05-04	1110	7725	0.97	6
03-05-04	1110	03-05-04	2330	6709	0.64	4
03-05-04	0457	03-05-04	2330	25447	1.29	20
03-07-04	0700	03-07-04	1800	1652	0.10	0
03-14-04	0905	03-14-04	1320	325	0.05	4
03-22-04	2000	03-23-04	0430	192	0.01	0
03-28-04	1830	03-28-04	2350	2478	0.48	10
03-30-04	1625	03-30-04	1940	186	0.03	3
05-08-04	1817	05-08-04	2335	2650	0.56	22
05-12-04	2110	05-13-04	0036	295	0.08	11
05-13-04	1753	05-13-04	2300	1534	0.47	11
05-14-04	1025	05-14-04	1900	1842	0.17	35
05-21-04	1838	05-21-04	2240	453	0.10	12
05-22-04	0207	05-22-04	0747	530	0.08	8
05-22-04	0937	05-22-04	1600	347	0.03	5
05-23-04	0616	05-23-04	1500	17256	2.42	18
05-23-04	1727	05-23-04	2212	4284	1.25	11
05-23-04	2212	05-24-04	1500	41278	9.24	13
05-31-04	0903	05-31-04	1240	2654	0.80	9
05-31-04	1408	05-31-04	1900	9914	1.88	9
06-09-04	0211	06-09-04	0630	21253	10.12	14
06-10-04	0213	06-10-04	0400	64	0.01	0
06-11-04	0343	06-11-04	1334	2821	0.25	16
06-12-04	0416	06-12-04	0748	927	0.24	6
06-13-04	1412	06-13-04	1650	1068	0.40	3
06-17-04	0035	06-17-04	0435	3460	1.09	12



## 443012087362500 DISCOVERY FARMS WATERWAY SITE NO. 3 NEAR KEWAUNEE, WI

LOCATION.--Lat 44°30'12", long 87°36'25", Kewaunee County, Hydrologic Unit 04030102, 1 mi west of intersection of Ryan Radio Rd. and County Hwy B, 2,400 ft north of Ryan Radio Rd. in waterway, 5.6 mi northwest of Kewaunee, WI.

DRAINAGE AREA.--to be determined.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 2003 to September 2004.

GAGE.--Water-stage recorder. Water levels are controlled by 2.5 ft H flume. Datum of gage is 740 ft above sea level, from topographic map.

REMARKS.--Records excellent. Note that discharge is the daily sum, in cubic feet.

DAILY SUM DISCHARGE, CUBIC FEET  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e0	0	0	0	39,500	0	0	0	0	0	0
2	---	e0	0	0	0	55,300	0	0	0	0	0	0
3	---	e0	0	0	0	7,290	0	0	0	0	0	0
4	---	e0	0	0	0	2,930	0	0	0	0	0	0
5	---	e0	0	0	0	57,700	0	0	0	0	0	0
6	---	e0	0	0	0	0	0	0	0	0	0	0
7	---	e0	0	0	0	10,300	0	0	0	0	0	0
8	---	e0	0	0	0	16	0	10,100	0	0	0	0
9	---	e0	0	0	0	0	0	0	29,700	0	0	0
10	---	e0	0	0	0	0	0	0	330	0	0	0
11	---	e0	0	0	0	0	0	0	5,010	0	0	0
12	---	e0	0	0	0	0	0	350	710	0	0	0
13	---	e0	0	0	0	0	0	250	1,020	0	0	0
14	---	e0	0	0	0	4,990	0	1,840	0	0	0	0
15	---	e0	0	0	0	0	0	0	0	0	0	0
16	---	e0	0	0	0	0	0	0	0	0	0	0
17	---	e0	0	0	0	0	0	0	6,410	0	0	0
18	---	e0	0	0	0	270	0	0	0	0	0	0
19	---	e0	0	0	0	410	0	0	0	0	0	0
20	---	e0	0	0	280	260	0	390	0	0	0	0
21	---	e0	0	0	0	0	0	550	0	0	0	0
22	---	0	0	0	0	0	0	940	0	0	0	0
23	---	710	0	0	0	0	0	65,500	0	0	0	0
24	---	0	0	0	0	0	0	5,630	0	0	0	0
25	---	0	0	0	0	0	0	0	0	0	0	0
26	---	0	0	0	0	0	0	0	0	0	0	0
27	---	0	0	0	0	0	0	0	0	0	0	0
28	---	0	0	0	76	1,910	0	0	0	0	0	0
29	---	0	0	0	3,480	0	0	0	0	0	0	0
30	---	0	0	0	---	280	0	0	0	0	0	0
31	---	---	0	0	---	0	---	27,800	---	0	0	---
TOTAL	---	710	0	0	3,836	181,156	0	113,350	43,180	0	0	0
MEAN	---	24	0	0	130	5,840	0	3,660	1,440	0	0	0
MAX	---	710	0	0	3,480	57,700	0	65,500	29,700	0	0	0
MIN	---	0	0	0	0	0	0	0	0	0	0	0

e Estimated

WATER QUALITY RECORDS

PERIOD OF RECORD.--December 2003 to September 2004.

INSTRUMENTATION.--Water-quality sampler since December 2003.

REMARKS.--Chemical analyses by the Water and Environmental Analysis Lab (formerly the Environmental Task Force Lab) at the University of Wisconsin-Stevens Point. Samples with start and end dates/times are flow-composite samples which represent the event-mean concentration for the specified runoff period. Samples with only start dates/times are discrete samples collected by the same automatic point sampler. Runoff periods which were not sampled have zero subsamples. The sample runoff volume is the total flow that occurs between the start and end time of each flow-composite sample. The storm runoff volume is the total flow that occurs between the time that runoff starts and ends. In most cases, the sample runoff volume is slightly less than the storm runoff volume. A storm load (in pounds) can be computed by multiplying the storm runoff volume (in cubic feet) by the constituent concentration (in mg/L) and a factor of  $6.2428 \times 10^{-5}$ .

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DISCRETE SAMPLES

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue on evap. at 105degC wat unfltrd, mg/L (00500)	Residue total at 105 deg. C, suspended, mg/L (00530)	Residue volatile, suspended, mg/L (00535)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Hydrolyzable phosphorus, water, fltrd, mg/L (00672)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Phosphorus, water, fltrd, mg/L (00666)
MAR 05...	0844	1.805	50	.5	81	21	5	8.8	9.6	.5	.11	.79	.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)
MAR 05...	.97	28

443012087362500 DISCOVERY FARMS WATERWAY SITE NO. 3 NEAR KEWAUNEE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
COMPOSITE SAMPLES

Date	End date	Time	End time	Sam- pling method, code (82398)	Chlor- ide, water, fltrd, mg/L (00940)	Residue on evap. at 105degC wat unf mg/L (00500)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Residue vola- tile, sus- pended, mg/L (00535)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Hydro- lyzable phos- phorus, water, fltrd, mg/L (00672)	Nitrite + nitrate water fltrd, mg/L as N (00631)
NOV													
23-23	20031123	0340	0600	50	4.0	412	214	28	1.28	3.52	.21	.488	.96
NOV													
23-23	20031123	0723	1016	50	3.5	584	514	53	.78	3.60	.13	.337	.66
FEB													
20-20	20040220	1125	2338	50	2.0	122	17	3	3.7	4.12	3.3	.25	6.5
FEB 29-													
MAR 01	20040301	1154	0602	50	1.5	84	9	4	6.8	7.35	5.4	.06	1.62
FEB 29-													
MAR 04	20040304	1154	2310	50	4.5	58	13	4	2.80	2.82	2.4	.12	1.04
MAR													
01-02	20040302	0603	0902	50	.5	50	13	3	3.5	3.74	2.7	.08	.81
MAR													
02-02	20040302	0903	1803	50	.5	50	18	3	2.4	2.21	1.6	.16	.47
MAR													
02-03	20040303	1804	1003	50	1.5	57	7	2	2.3	2.38	1.6	.18	.59
MAR													
03-04	20040304	1004	0852	50	1.0	73	2	<2	2.2	2.40	1.5	.2	.79
MAR													
04-04	20040304	0853	2310	50	1.0	79	6	2	1.81	1.88	1.1	.18	.84
MAR													
05-05	20040305	0436	0654	50	.5	79	28	3	8.7	9.6	.4	.12	.86
MAR													
05-05	20040305	0436	2036	50	.5	65	20	4	9.5	10.0	.5	.14	.89
MAR													
05-05	20040305	0655	0824	50	1.0	67	15	3	8.6	9.2	.4	.10	.8
MAR													
05-05	20040305	1003	2036	50	.5	117	14	4	10.4	11.0	.5	.17	.97
MAR													
14-14	20040314	0312	1609	50	2.0	134	26	5	1.9	2.1	.8	.12	1.40
MAR													
28-28	20040328	1759	2256	50	3.0	496	292	36	1.1	2.3	.1	.19	.62
MAR													
30-30	20040330	1502	1856	50	7.5	220	22	6	1.6	1.6	--	.152	1.25
MAY													
08-08	20040508	1745	2152	50	<.5	365	270	32	.97	1.92	.38	.160	.58
MAY													
12-12	20040512	2035	2151	50	3.0	202	91	14	2.17	3.19	.87	.320	1.00
MAY													
13-13	20040513	1803	1939	50	4.5	291	47	6	2.67	3.12	.64	.227	.69
MAY													
14-14	20040514	0929	1542	50	6.5	292	17	3	1.7	1.91	.06	.103	.29
MAY													
20-20	20040520	0145	0344	50	3.0	224	82	18	1.48	2.20	.41	.249	.65
MAY													
21-21	20040521	1758	2030	50	4.0	272	40	10	2.19	2.73	.36	.132	.51
MAY													
22-22	20040522	0145	0438	50	6.5	332	36	11	2.37	2.99	.36	.139	.27
MAY													
23-23	20040523	0554	1326	50	1.5	178	70	12	1.07	1.46	.21	.089	.35
MAY													
23-23	20040523	1731	2214	50	4.0	251	50	9	1.26	1.70	.15	.090	.35
MAY													
23-24	20040524	2217	0416	50	1.0	258	156	24	.69	1.65	.22	.088	.26
MAY													
31-31	20040531	0827	1155	50	4.0	234	40	10	1.55	2.23	.23	.082	.41
MAY													
31-31	20040531	1400	1942	50	2.5	174	51	9	1.11	1.52	.11	.066	.22
JUN													
09-09	20040609	0210	0833	50	2.0	119	54	12	1.17	2.38	.21	.058	.23
JUN													
11-11	20040611	0319	1232	50	5.0	280	37	7	1.70	2.28	.26	.080	.14
JUN													
12-12	20040612	0434	0722	50	8.5	298	26	6	1.78	2.15	.21	.072	.15
JUN													
13-13	20040613	1404	1624	50	9.0	294	25	7	2.53	2.68	.37	.073	.70
JUN													
17-17	20040617	0020	0335	50	5.0	171	78	16	1.76	3.20	.41	.158	.56

443012087362500 DISCOVERY FARMS WATERWAY SITE NO. 3 NEAR KEWAUNEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sample runoff volume, cubic feet (99906)
NOV 23-23	.514	1.25	347	155
NOV 23-23	.321	1.35	611	558
FEB 20-20	.22	.29	45	270
FEB 29- MAR 01	.04	.11	24	5,202
FEB 29- MAR 04	.08	.15	32	108,333
MAR 01-02	.06	.12	44	55,071
MAR 02-02	.15	.20	24	33,099
MAR 02-03	.25	.21	32	7,505
MAR 03-04	.18	.18	3	5,323
MAR 04-04	.16	.16	11	2,134
MAR 05-05	.57	.91	27	13,779
MAR 05-05	.71	.95	26	57,041
MAR 05-05	.61	.87	23	10,296
MAR 05-05	.83	1.09	18	21,027
MAR 14-14	.141	.206	36	4,933
MAR 28-28	.01	1.00	302	1,899
MAR 30-30	--	.18	21	254
MAY 08-08	.167	.637	286	10,062
MAY 12-12	.301	.608	119	327
MAY 13-13	.232	.412	81	239
MAY 14-14	.222	.291	24	1,828
MAY 20-20	.252	.514	116	388
MAY 21-21	.142	.304	49	547
MAY 22-22	.160	.315	62	612
MAY 23-23	.086	.264	107	34,987
MAY 23-23	.096	.249	76	3,801
MAY 23-24	.091	.450	180	32,272
MAY 31-31	.118	.289	73	5,597
MAY 31-31	.107	.266	54	22,194
JUN 09-09	.053	.350	89	29,656
JUN 11-11	.054	.230	56	5,001
JUN 12-12	.068	.235	55	702
JUN 13-13	.094	.294	98	1,008
JUN 17-17	.297	.510	75	6,405

**Discovery Farms Waterway Site No 3 near Kewaunee, WI**

Station ID: 443012087362500

Storm Beginning Date	Storm Beginning Time	Storm Ending Date	Storm Ending Time	Storm Runoff Volume, Cubic Feet	Peak Discharge (CFS)	Number of Subsamples
11-23-03	0336	11-23-03	0601	155	0.06	12
11-23-03	0719	11-23-03	1016	559	0.20	9
02-20-04	1035	02-20-04	2146	284	0.03	24
02-28-04	1315	02-28-04	1601	65	0.01	0
02-29-04	1148	03-01-04	0602	5203	0.14	9
03-01-04	0602	03-02-04	0902	55075	1.11	13
03-02-04	0902	03-02-04	1803	33130	1.52	4
03-02-04	1803	03-03-04	1003	7528	0.40	8
03-03-04	1003	03-04-04	0852	5323	0.18	10
03-04-04	0852	03-04-04	2310	2135	0.10	4
02-29-04	1148	03-04-04	2310	108394	1.52	48
03-04-04	2310	03-05-04	0654	13905	3.47	4
03-05-04	0654	03-05-04	0824	10415	2.22	5
03-05-04	0824	03-05-04	1002	11940	2.21	1
03-05-04	1002	03-05-04	2036	21287	2.29	5
03-04-04	2310	03-05-04	2338	57548	3.47	15
03-07-04	0500	03-08-04	0140	10314	0.52	0
03-14-04	0250	03-14-04	2202	4993	0.45	15
03-18-04	1211	03-18-04	1701	265	0.03	0
03-19-04	1014	03-19-04	2225	397	0.02	0
03-20-04	0832	03-20-04	1401	257	0.02	0
03-28-04	1753	03-28-04	2301	1902	0.34	9
03-30-04	1435	03-30-04	1905	268	0.04	3
05-08-04	1741	05-08-04	2157	10066	2.05	24
05-12-04	2015	05-12-04	2203	346	0.16	13
05-13-04	1800	05-13-04	1949	245	0.08	6
05-14-04	0916	05-14-04	1551	1836	0.18	20
05-20-04	0144	05-20-04	0401	393	0.14	10
05-21-04	1754	05-21-04	2031	550	0.13	13
05-22-04	0133	05-22-04	0450	620	0.13	11
05-22-04	0919	05-22-04	1235	317	0.06	0
05-23-04	0547	05-23-04	1354	35003	5.21	23
05-23-04	1730	05-23-04	2214	3801	0.74	10
05-23-04	2214	05-24-04	0500	32294	8.40	8
05-31-04	0824	05-31-04	1203	5602	1.18	11
05-31-04	1358	05-31-04	1945	22195	3.38	11
06-09-04	0209	06-09-04	0843	29661	11.19	14
06-10-04	0053	06-10-04	0415	322	0.04	0
06-11-04	0315	06-11-04	1255	5012	0.47	17
06-12-04	0428	06-12-04	0731	708	0.16	6
06-13-04	1400	06-13-04	1631	1013	0.28	5
06-17-04	0018	06-17-04	0347	6411	1.75	12

442954087355700 DISCOVERY FARMS WEATHER STATION NEAR KEWAUNEE, WI—Continued

## LAKE MICHIGAN BASIN

442954087355700 DISCOVERY FARMS WEATHER STATION NEAR KEWAUNEE, WI

LOCATION.--Lat 44°29'54", long 87°35'57", Kewaunee County, Hydrologic Unit 04030102, 2,700 ft west of intersection of Ryan Radio Rd. and County Hwy B, 50 ft north of Ryan Radio Rd., 5.3 mi northwest of Kewaunee, WI.

PERIOD OF RECORD.--November 2003 to September 2004.

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

REMARKS.--Gage established Nov. 21, 2003. Rainfall for Nov. 1-21 and Aug. 19-Sept. 14 estimated from National Weather Service gage in Green Bay, WI. Rainfall estimated to be 0.00 for Feb. 19 and Mar. 6 because recorded precipitation was interpreted as collector snowmelt.

EXTREMES FOR CURRENT PERIOD.--Maximum daily rainfall, 2.43 in., June 9.

PRECIPITATION, TOTAL, INCHES  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e0.00	0.00	0.00	0.00	0.38	0.00	0.01	0.03	0.00	0.09	e0.00
2	---	e0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.22	e0.00
3	---	e0.76	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	e0.00
4	---	e0.75	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.44	0.00	e0.00
5	---	e0.00	0.00	0.00	0.00	1.27	0.00	0.00	0.00	0.00	0.00	e0.00
6	---	e0.00	0.00	0.00	0.00	0.00	0.18	0.10	0.01	0.48	0.00	e0.26
7	---	e0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	e0.00
8	---	e0.00	0.00	0.00	0.00	0.00	0.14	2.38	0.00	0.00	0.22	e0.00
9	---	e0.00	0.17	0.00	0.00	0.00	0.01	0.04	2.43	0.00	0.00	e0.00
10	---	e0.16	0.72	0.00	0.00	0.06	0.00	0.02	0.18	0.00	0.00	e0.00
11	---	e0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.56	0.00	0.01	e0.00
12	---	e0.01	0.00	0.00	0.00	0.00	0.00	0.51	0.20	0.00	0.01	e0.00
13	---	e0.00	0.00	0.00	0.00	0.07	0.00	0.34	0.30	0.10	0.03	e0.00
14	---	e0.00	0.00	0.00	0.00	0.15	0.08	0.30	0.01	0.00	0.00	e0.15
15	---	e0.02	0.03	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.39
16	---	e0.00	0.04	0.00	0.00	0.00	0.01	0.00	0.03	0.15	0.00	0.00
17	---	e0.06	0.00	0.00	0.00	0.00	0.08	0.06	0.90	0.00	0.06	0.00
18	---	e0.46	0.00	0.00	0.00	0.05	0.07	0.01	0.00	0.00	0.02	0.00
19	---	e0.00	0.00	0.00	0.00	0.13	0.01	0.00	0.00	0.00	e0.00	0.00
20	---	e0.00	0.00	0.00	0.45	0.00	0.28	0.88	0.00	0.00	e0.00	0.00
21	---	e0.00	0.00	0.00	0.01	0.00	0.16	0.45	0.01	0.48	e0.00	0.00
22	---	0.04	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	e0.00	0.00
23	---	1.70	0.00	0.00	0.11	0.00	0.00	2.52	0.09	0.00	e0.00	0.00
24	---	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.00	0.00	e0.47	0.00
25	---	0.00	0.00	0.00	0.00	0.13	0.24	0.00	0.00	0.00	e0.08	0.00
26	---	0.00	0.00	0.00	0.00	0.14	0.12	0.00	0.00	0.00	e0.14	0.00
27	---	0.00	0.04	0.00	0.00	0.00	0.00	0.14	0.21	0.00	e0.64	0.12
28	---	0.01	0.22	0.00	0.00	0.81	0.14	0.00	0.01	0.00	e0.10	0.01
29	---	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.14	0.53	e0.00	0.00
30	---	0.00	0.00	0.00	---	0.26	0.08	0.41	0.00	0.12	e0.00	0.00
31	---	---	0.00	0.00	---	0.00	---	1.12	---	0.00	e0.00	---
TOTAL	---	3.98	1.22	0.43	0.57	3.73	1.71	9.56	5.11	2.33	2.09	0.93

e Estimated

04085395 SOUTH BRANCH MANITOWOC RIVER AT HAYTON, WI

LOCATION.--Lat 44°01'29", long 88°07'05", in SW ¼ SW ¼ sec.16, T.18 N., R.20 E., Calumet County, Hydrologic Unit 04030101, on left bank 100 ft downstream from Weeks Road bridge, at Hayton.

DRAINAGE AREA.--109 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Elevation of gage is 808 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	15	55	e27	e24	e110	171	54	809	87	44	22
2	9.0	17	63	e26	e25	e210	151	50	647	77	46	20
3	15	21	60	e24	e26	e260	134	47	501	72	40	18
4	15	77	49	e24	e25	301	124	43	416	90	35	16
5	13	92	46	e23	e26	585	114	40	370	91	30	15
6	11	79	44	e22	e26	772	107	40	335	90	26	19
7	12	60	40	e22	e27	708	100	37	302	87	24	17
8	11	42	40	22	e28	621	93	278	266	84	22	17
9	10	30	40	20	28	557	87	528	233	79	22	16
10	9.9	27	e58	19	28	468	79	379	216	74	22	16
11	11	32	e68	18	29	393	74	302	501	68	21	15
12	17	36	e56	19	29	296	68	262	946	64	20	13
13	19	36	e44	19	25	249	64	278	864	64	20	12
14	19	34	e40	19	29	207	60	322	744	61	19	12
15	17	34	38	20	27	164	56	328	650	56	18	16
16	15	33	41	19	28	143	53	279	575	52	17	16
17	14	33	41	e18	29	130	52	224	535	49	21	13
18	14	48	38	e17	29	116	90	182	501	46	18	12
19	13	55	34	17	29	110	92	148	435	44	17	11
20	14	49	29	e18	32	121	78	142	364	42	17	10
21	13	42	30	e18	29	126	91	172	306	40	16	13
22	15	38	29	e18	26	116	96	279	259	39	15	11
23	16	138	29	e19	25	107	84	519	219	36	14	8.1
24	16	154	26	e21	24	104	73	654	200	34	15	5.6
25	15	105	25	e20	23	109	78	592	178	30	18	5.0
26	15	82	23	e21	25	135	79	539	153	28	16	6.9
27	15	70	23	e22	28	139	72	497	132	27	42	10
28	17	65	33	e21	e32	152	66	445	122	25	41	10
29	16	59	45	e20	e60	205	58	388	111	28	31	8.3
30	16	63	39	e22	---	217	54	379	99	32	26	7.8
31	16	---	35	e23	---	195	---	614	---	36	24	---
TOTAL	437.9	1,666	1,261	638	821	8,126	2,598	9,041	11,989	1,732	757	391.7
MEAN	14.1	55.5	40.7	20.6	28.3	262	86.6	292	400	55.9	24.4	13.1
MAX	19	154	68	27	60	772	171	654	946	91	46	22
MIN	9.0	15	23	17	23	104	52	37	99	25	14	5.0
CFSM	0.13	0.51	0.37	0.19	0.26	2.40	0.79	2.68	3.67	0.51	0.22	0.12
IN.	0.15	0.57	0.43	0.22	0.28	2.77	0.89	3.09	4.09	0.59	0.26	0.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2004, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	18.2	25.3	18.7	13.1	39.6	111	120	92.4	96.9	55.2	21.4	24.0
MAX	40.0	55.5	40.7	21.6	86.7	262	328	292	400	232	49.4	137
(WY)	(2001)	(2004)	(2004)	(1997)	(1999)	(2004)	(2001)	(2004)	(2004)	(1993)	(1999)	(2000)
MIN	7.17	10.9	8.74	3.60	3.26	37.8	43.3	30.1	12.1	2.46	8.48	4.02
(WY)	(1995)	(1995)	(1995)	(2003)	(2003)	(2003)	(2003)	(1995)	(1995)	(1995)	(1995)	(1998)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1993 - 2004	
ANNUAL TOTAL	12,235.1		39,458.6			
ANNUAL MEAN	33.5		108		52.4	
HIGHEST ANNUAL MEAN					108 2004	
LOWEST ANNUAL MEAN					17.3 1995	
HIGHEST DAILY MEAN	378	May 12	946	Jun 12	946	Jun 12, 2004
LOWEST DAILY MEAN	2.6	Sep 7, 8	5.0	Sep 25	0.92	Jul 31, 1995
ANNUAL SEVEN-DAY MINIMUM	2.8	Sep 5	7.7	Sep 24	1.5	Jul 26, 1995
MAXIMUM PEAK FLOW			1,010	Jun 12	1,010	Jun 12, 2004
MAXIMUM PEAK STAGE			7.41	Jun 12	7.41	Jun 12, 2004
INSTANTANEOUS LOW FLOW			4.4	Sep 24, 25	0.89	(a)Jul 30, 1995
ANNUAL RUNOFF (CFSM)	0.308		0.989		0.481	
ANNUAL RUNOFF (INCHES)	4.18		13.47		6.54	
10 PERCENT EXCEEDS	66		311		120	
50 PERCENT EXCEEDS	19		39		24	
90 PERCENT EXCEEDS	3.1		15		7.3	

(a) Also occurred July 31 to Aug. 1, 1995  
(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085427 MANITOWOC RIVER AT MANITOWOC, WI

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

DRAINAGE AREA.--526 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1972 to September 1996, December 1997 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 610.12 ft above NGVD of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	31	409	e120	e58	e210	989	243	2,890	668	103	97
2	30	38	e290	e120	e58	e800	918	225	2,720	611	105	86
3	35	41	e300	e120	e58	e1,300	864	213	2,150	560	109	76
4	34	85	e290	e110	e58	e1,500	832	198	1,870	546	99	67
5	36	124	e260	e99	e58	e1,900	770	186	1,700	528	91	61
6	38	163	e210	e92	e58	e1,800	717	166	1,570	489	88	59
7	37	168	e210	e93	e58	e2,000	677	151	1,470	451	81	57
8	35	e150	172	e95	e58	e1,900	635	337	1,380	411	71	59
9	37	e140	157	e98	e58	e1,800	602	621	1,300	367	70	54
10	36	e130	196	e100	e58	e1,800	566	661	1,240	327	63	50
11	32	122	e210	e110	e58	1,860	520	676	1,340	292	66	49
12	32	116	e170	e110	e59	e1,500	478	693	1,560	256	61	47
13	32	127	e160	e100	e59	e1,500	439	767	1,580	248	54	47
14	42	119	e150	e98	e59	1,540	398	837	1,630	229	47	44
15	38	93	e160	e92	e58	1,460	356	870	1,540	198	45	43
16	39	94	e170	e85	e59	1,350	319	841	1,460	174	45	46
17	42	94	e160	e85	e63	1,270	298	817	1,450	155	49	50
18	124	104	e150	e80	e66	1,200	294	799	1,400	142	49	50
19	111	117	e140	e76	e66	1,150	303	766	1,320	131	56	42
20	65	141	e130	e73	e66	1,120	300	748	1,260	123	58	39
21	45	138	e130	e70	e62	1,110	319	759	1,200	108	52	36
22	40	129	e140	e67	e62	1,050	350	937	1,140	103	48	36
23	36	186	e130	e65	e65	988	347	1,270	1,080	100	46	37
24	32	352	e120	e63	e63	916	338	1,540	1,030	90	45	36
25	31	372	e110	e61	e61	881	341	1,760	982	81	48	34
26	30	414	e120	e60	e62	891	354	1,540	927	76	45	39
27	33	469	e130	e59	e64	880	351	1,450	877	72	115	36
28	35	465	e140	e58	e66	924	324	1,410	834	68	135	32
29	34	442	e150	e58	e70	1,200	300	1,340	781	68	125	30
30	35	424	e140	e58	---	1,160	264	1,410	725	84	119	32
31	36	---	e130	e58	---	1,100	---	2,690	---	93	106	---
TOTAL	1,291	5,588	5,534	2,633	1,768	40,060	14,563	26,921	42,406	7,849	2,294	1,471
MEAN	41.6	186	179	84.9	61.0	1,292	485	868	1,414	253	74.0	49.0
MAX	124	469	409	120	70	2,000	989	2,690	2,890	668	135	97
MIN	29	31	110	58	58	210	264	151	725	68	45	30
CFSM	0.08	0.35	0.34	0.16	0.12	2.46	0.92	1.65	2.69	0.48	0.14	0.09
IN.	0.09	0.40	0.39	0.19	0.13	2.83	1.03	1.90	3.00	0.56	0.16	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

MEAN	179	233	174	109	183	819	920	414	326	142	76.5	134
MAX	1,465	1,367	575	503	1,104	1,951	2,672	991	1,414	1,071	343	1,711
(WY)	(1987)	(1986)	(1983)	(1973)	(1984)	(1985)	(1979)	(1978)	(2004)	(1993)	(1986)	(1986)
MIN	18.8	23.1	16.3	20.4	20.1	219	181	53.8	18.1	13.6	13.7	14.9
(WY)	(1977)	(1977)	(1977)	(1977)	(2003)	(2003)	(2000)	(1977)	(1988)	(1988)	(1988)	(1976)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1972 - 2004

ANNUAL TOTAL	55,185											
ANNUAL MEAN	151											
HIGHEST ANNUAL MEAN										311		
LOWEST ANNUAL MEAN										728		1986
HIGHEST DAILY MEAN	1,550	May 11					2,890	Jun 1		82.7		1977
LOWEST DAILY MEAN	(a)13	Mar 10					29	Oct 1		8,000		Mar 31, 1979
ANNUAL SEVEN-DAY MINIMUM	(a)15	Mar 8					33	Oct 24		7.0		Oct 3, 1989
MAXIMUM PEAK FLOW							3,880	May 31		8.1		Sep 28, 1989
MAXIMUM PEAK STAGE							10.50	May 31		(b)8,280		Mar 31, 1979
INSTANTANEOUS LOW FLOW							27	Oct 1		(c)13.30		Mar 25, 1986
ANNUAL RUNOFF (CFSM)	0.287						0.792			6.8		(d)Jul 8, 1988
ANNUAL RUNOFF (INCHES)	3.90						10.78			0.592		
10 PERCENT EXCEEDS	389						1,340			8.04		
50 PERCENT EXCEEDS	79						130			825		
90 PERCENT EXCEEDS	19						39			117		

(a) Ice affected

(b) Gage height, 13.24 ft

(c) From floodmarks

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

(e) Estimated due to ice effect or missing record



STREAMS TRIBUTARY TO LAKE MICHIGAN

04085746 MULLET RIVER AT OLD WADE HOUSE AT GREENBUSH, WI

179

LOCATION.--Lat 43°46'39", long 88°05'07", in SE ¼ SE ¼ sec.10, T.15 N., R.20 E., Sheboygan County, Hydrologic Unit 04030101, on right bank about 300 ft upstream of Plank Road bridge in Greenbush, located in Old Wade House Historic site.

DRAINAGE AREA.--24.3 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 963.96 ft above NGVD of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11). Flow partly regulated by sawmill at Old Wade House, May-September. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	5.6	28	9.2	e2.9	24	50	12	121	33	14	8.2
2	1.5	6.1	22	11	e2.9	40	46	11	93	29	16	7.8
3	2.0	7.8	14	11	e3.1	47	43	9.7	78	27	17	7.1
4	2.2	44	8.3	7.6	e2.9	54	39	9.0	73	36	18	6.6
5	1.9	45	7.2	8.9	e3.1	84	35	8.3	71	31	16	6.3
6	1.8	33	6.7	8.3	e3.3	78	32	8.0	67	29	15	6.1
7	1.7	17	6.4	7.5	e3.4	75	27	7.4	63	27	13	5.7
8	1.6	13	6.7	7.3	e3.4	71	24	57	58	25	12	5.4
9	1.7	13	9.4	7.3	e3.5	65	21	74	54	24	11	5.3
10	1.6	13	23	7.4	e3.6	63	18	58	56	24	9.9	5.0
11	1.5	15	20	7.3	e3.7	63	16	55	137	23	9.3	4.8
12	2.6	17	14	6.3	e3.9	48	14	53	155	23	9.2	4.7
13	2.9	21	11	5.3	e3.9	48	13	53	111	22	8.7	4.4
14	2.9	23	10	4.9	e3.9	51	12	54	123	21	8.3	4.3
15	3.0	24	10	4.6	e3.8	43	11	52	140	20	7.9	4.4
16	2.8	25	11	4.5	e3.8	40	11	46	138	19	7.5	4.7
17	2.8	26	9.1	4.7	e3.9	36	11	42	133	17	10	4.3
18	3.2	29	9.6	4.6	e3.9	30	16	39	117	16	9.2	4.2
19	3.3	31	8.4	4.3	4.3	26	18	35	101	14	8.5	3.8
20	3.2	31	7.3	4.0	4.4	30	17	63	89	13	8.1	3.6
21	3.2	30	7.7	e3.9	4.5	29	21	63	81	12	7.6	3.5
22	3.3	29	8.3	e3.5	4.6	26	22	83	73	11	7.2	3.3
23	3.7	33	8.6	e3.3	4.8	28	21	103	67	9.9	6.8	3.1
24	3.8	35	7.6	e3.2	5.1	28	20	111	67	9.1	6.8	2.9
25	4.4	34	8.2	e3.1	5.3	30	21	91	64	8.5	8.0	3.2
26	4.3	33	7.6	e3.2	6.1	37	19	83	59	7.7	8.0	3.4
27	4.3	32	8.2	e3.2	7.0	42	18	80	55	7.0	10	1.6
28	4.6	31	11	e3.1	8.5	49	16	77	56	6.3	8.7	1.6
29	4.7	30	12	e3.1	12	60	15	75	49	6.0	9.1	1.6
30	4.6	30	10	e3.0	---	55	13	78	39	11	8.9	1.7
31	4.8	---	9.2	e2.9	---	53	---	119	---	11	8.5	---
TOTAL	91.7	756.5	340.5	171.5	129.5	1,453	660	1,709.4	2,588	572.5	318.2	132.6
MEAN	2.96	25.2	11.0	5.53	4.47	46.9	22.0	55.1	86.3	18.5	10.3	4.42
MAX	4.8	45	28	11	12	84	50	119	155	36	18	8.2
MIN	1.5	5.6	6.4	2.9	2.9	24	11	7.4	39	6.0	6.8	1.6
CFSM	0.12	1.04	0.45	0.23	0.18	1.93	0.91	2.27	3.55	0.76	0.42	0.18
IN.	0.14	1.16	0.52	0.26	0.20	2.22	1.01	2.62	3.96	0.88	0.49	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

	2001	2002	2003	2004
MEAN	7.32	14.3	10.1	4.64
MAX	11.3	25.2	14.1	6.14
(WY)	(2002)	(2004)	(2002)	(2002)
MIN	2.96	5.09	5.32	2.24
(WY)	(2004)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2001 - 2004

ANNUAL TOTAL	3,448.13	8,923.4		
ANNUAL MEAN	9.45	24.4	15.2	
HIGHEST ANNUAL MEAN			24.4	2004
LOWEST ANNUAL MEAN			7.71	2003
HIGHEST DAILY MEAN	50	May 11, 12	155	Jun 12, 2004
LOWEST DAILY MEAN	0.42	Sep 9	1.5	Oct 2, 11
ANNUAL SEVEN-DAY MINIMUM	0.46	Sep 3	1.7	Oct 5
MAXIMUM PEAK FLOW			197	Jun 11, 2004
MAXIMUM PEAK STAGE			5.67	Jun 11, 2004
ANNUAL RUNOFF (CFSM)	0.389		1.00	0.626
ANNUAL RUNOFF (INCHES)	5.28		13.66	8.51
10 PERCENT EXCEEDS	25		64	37
50 PERCENT EXCEEDS	4.4		11	8.2
90 PERCENT EXCEEDS	1.0		3.2	1.8

(e) Estimated due to ice effect of missing record





04085746 MULLET RIVER AT OLD WADE HOUSE AT GREENBUSH, WI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.1	11.0	12.4	---	---	---	---	---	---	---	---	---
2	14.9	11.8	13.0	---	---	---	---	---	---	---	---	---
3	13.5	11.4	12.2	---	---	---	---	---	---	---	---	---
4	14.6	11.1	12.6	---	---	---	---	---	---	---	---	---
5	15.0	11.9	12.9	---	---	---	---	---	---	---	---	---
6	15.0	11.7	12.9	---	---	---	---	---	---	---	---	---
7	14.0	9.4	11.6	---	---	---	---	---	---	---	---	---
8	13.1	8.3	10.0	---	---	---	---	---	---	---	---	---
9	13.4	8.0	9.8	---	---	---	---	---	---	---	---	---
10	13.8	7.8	9.8	---	---	---	---	---	---	---	---	---
11	13.4	6.4	9.1	---	---	---	---	---	---	---	---	---
12	10.8	5.4	7.2	---	---	---	---	---	---	---	---	---
13	12.2	6.2	8.6	---	---	---	---	---	---	---	---	---
14	11.0	7.1	8.5	---	---	---	---	---	---	---	---	---
15	12.9	8.2	10.1	---	---	---	---	---	---	---	---	---
16	14.4	9.2	11.3	---	---	---	---	---	---	---	---	---
17	15.7	10.7	12.6	---	---	---	---	---	---	---	---	---
18	14.5	10.3	11.8	---	---	---	---	---	---	---	---	---
19	15.3	10.1	11.9	---	---	---	---	---	---	---	---	---
20	15.3	9.5	11.7	---	---	---	---	---	---	---	---	---
21	13.5	8.8	10.2	---	---	---	---	---	---	---	---	---
22	13.9	8.8	10.6	---	---	---	---	---	---	---	---	---
23	13.6	9.8	11.0	---	---	---	---	---	---	---	---	---
24	14.9	10.2	11.6	---	---	---	---	---	---	---	---	---
25	13.8	9.7	11.3	---	---	---	---	---	---	---	---	---
26	14.0	10.3	11.6	---	---	---	---	---	---	---	---	---
27	15.1	11.0	12.4	---	---	---	---	---	---	---	---	---
28	13.6	10.9	11.6	---	---	---	---	---	---	---	---	---
29	14.7	10.8	12.1	---	---	---	---	---	---	---	---	---
30	15.1	10.0	12.0	---	---	---	---	---	---	---	---	---
31	11.1	8.5	9.9	---	---	---	---	---	---	---	---	---
MONTH	15.7	5.4	11.1	---	---	---	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	12.3	7.1	9.3
6	---	---	---	---	---	---	---	---	---	11.3	8.0	9.2
7	---	---	---	---	---	---	---	---	---	12.4	7.9	9.9
8	---	---	---	---	---	---	---	---	---	9.8	6.8	8.6
9	---	---	---	---	---	---	---	---	---	7.7	5.7	6.9
10	---	---	---	---	---	---	---	---	---	7.4	5.4	6.1
11	---	---	---	---	---	---	---	---	---	7.9	5.3	6.4
12	---	---	---	---	---	---	---	---	---	7.9	4.3	5.9
13	---	---	---	---	---	---	---	---	---	7.0	3.8	5.1
14	---	---	---	---	---	---	---	---	---	7.0	3.8	5.3
15	---	---	---	---	---	---	---	---	---	9.2	5.3	7.0
16	---	---	---	---	---	---	---	---	---	9.0	5.5	6.9
17	---	---	---	---	---	---	---	---	---	8.1	5.0	6.2
18	---	---	---	---	---	---	---	---	---	7.6	4.7	6.0
19	---	---	---	---	---	---	---	---	---	7.4	5.7	6.4
20	---	---	---	---	---	---	---	---	---	6.1	3.5	5.3
21	---	---	---	---	---	---	---	---	---	6.7	3.5	4.9
22	---	---	---	---	---	---	---	---	---	7.2	4.9	5.9
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	8.5	5.2	6.6
27	---	---	---	---	---	---	---	---	---	8.1	4.7	6.0
28	---	---	---	---	---	---	---	---	---	8.8	4.7	6.4
29	---	---	---	---	---	---	---	---	---	6.6	5.0	5.8
30	---	---	---	---	---	---	---	---	---	7.8	5.6	6.6
31	---	---	---	---	---	---	---	---	---	7.6	5.5	6.6
MONTH	---	---	---	---	---	---	---	---	---	12.4	3.5	6.6



## STREAMS TRIBUTARY TO LAKE MICHIGAN

## 04086000 SHEBOYGAN RIVER AT SHEBOYGAN, WI

LOCATION.--Lat 43°44'30", long 87°45'14", in SE 1/4 NW 1/4 sec.28, T.15 N., R.23 E., Sheboygan County, Hydrologic Unit 04030101, on left bank 0.5 mi upstream from bridge on State Highway 28, near west city limits of Sheboygan, and 3.9 mi upstream from mouth.

DRAINAGE AREA.--418 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1916 to September 1924 (published as "near Sheboygan"), October 1950 to current year. Monthly discharge for some periods published in WSP 1307, 1727.

REVISED RECORDS.--WSP 1307: 1917(M), 1919(M), 1921(M), 1923(M). WSP 1727: 1951. WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 580.49 ft, above NGVD of 1929. June 1916 to June 1924, nonrecording gage 0.4 mi downstream at different datum. November 1950 to June 1951, nonrecording gage near present site at different datum. July 1951 to September 1998, water-stage recorder at site 0.3 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges and Aug. 12 through Sept. 30, which are poor (see page 11). Diurnal fluctuation caused by numerous powerplants above station. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	69	232	e130	e120	e600	836	297	2,680	489	194	137
2	53	93	e140	e140	e120	e800	690	274	1,880	390	200	130
3	56	117	e130	e130	e120	e1,000	585	247	1,500	260	180	121
4	58	1,060	e140	e130	e120	e1,300	540	220	1,310	512	161	117
5	60	1,030	e130	e120	e120	2,850	494	165	1,290	639	158	110
6	60	734	e120	e140	e130	2,730	380	140	1,260	646	160	109
7	58	716	e120	e140	e130	2,300	328	144	1,190	558	150	108
8	55	523	e110	e130	e130	1,990	335	1,990	1,110	468	141	102
9	53	420	e120	e120	e130	1,690	360	2,260	1,060	397	142	98
10	52	395	e200	e120	e130	1,450	313	1,740	1,120	354	152	94
11	51	460	449	e110	e120	1,340	278	1,550	4,080	325	134	88
12	57	519	e310	e110	e120	1,080	213	1,220	6,340	308	121	84
13	53	301	e270	e110	e120	1,010	151	1,410	4,960	284	122	80
14	71	157	e260	e110	e130	975	135	2,360	3,250	234	118	76
15	70	142	e260	e110	e130	807	132	2,210	2,340	212	111	75
16	67	152	e260	e110	e140	751	185	1,670	1,910	196	105	76
17	65	156	e250	e110	e140	632	261	1,300	2,630	291	143	67
18	62	222	e240	e100	e140	496	289	1,120	1,930	379	138	66
19	58	447	e220	e100	e140	435	320	964	1,720	301	136	63
20	61	415	e220	e100	e150	485	338	2,240	1,680	228	127	59
21	59	279	e240	e100	e150	527	593	2,380	1,480	187	120	59
22	58	175	e230	e100	e150	471	636	3,810	1,340	184	118	59
23	61	182	e200	e100	e160	387	528	4,600	1,220	163	113	58
24	64	326	e190	e100	e180	369	430	5,180	1,210	149	114	57
25	68	372	e180	e100	e240	387	414	3,240	1,070	137	133	55
26	64	410	e170	e100	e280	441	434	2,470	1,230	128	134	54
27	63	369	e170	e110	e320	484	392	1,960	1,490	123	146	55
28	64	285	e180	e110	e380	529	378	1,680	1,050	120	189	57
29	66	257	e170	e110	e440	1,170	379	1,580	910	119	175	57
30	71	242	e150	e110	---	1,160	325	1,680	697	170	158	57
31	73	---	e140	e110	---	1,030	---	2,620	---	169	143	---
TOTAL	1,884	11,025	6,201	3,520	4,880	31,676	11,672	54,721	56,937	9,120	4,436	2,428
MEAN	60.8	368	200	114	168	1,022	389	1,765	1,898	294	143	80.9
MAX	73	1,060	449	140	440	2,850	836	5,180	6,340	646	200	137
MIN	51	69	110	100	120	369	132	140	697	119	105	54
CFSM	0.15	0.88	0.48	0.27	0.40	2.44	0.93	4.22	4.54	0.70	0.34	0.19
IN.	0.17	0.98	0.55	0.31	0.43	2.82	1.04	4.87	5.07	0.81	0.39	0.22

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2004, BY WATER YEAR (WY)

MEAN	152	202	163	117	188	674	711	332	254	121	117	138
MAX	741	1,372	505	370	887	2,052	1,994	1,765	1,898	607	1,433	1,143
(WY)	(1987)	(1986)	(1983)	(1960)	(1984)	(1918)	(1993)	(2004)	(2004)	(1993)	(1924)	(1986)
MIN	29.6	31.7	19.7	17.1	20.9	110	141	41.5	25.2	19.8	11.1	20.4
(WY)	(1958)	(1951)	(1959)	(1959)	(1958)	(1968)	(1970)	(1958)	(1958)	(1958)	(1958)	(1958)

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086000 SHEBOYGAN RIVER AT SHEBOYGAN, WI—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1916 - 2004	
ANNUAL TOTAL	59,019		198,500		264	
ANNUAL MEAN	162		542		542	
HIGHEST ANNUAL MEAN					2004	
LOWEST ANNUAL MEAN					1958	
HIGHEST DAILY MEAN	1,180	May 12	6,340	Jun 12	7,000	Aug 6, 1924
LOWEST DAILY MEAN	31	Sep 7	51	Oct 11	(a)1.0	Aug 27, 1922
ANNUAL SEVEN-DAY MINIMUM	(b)33	Jan 24	54	Oct 7	(a)5.3	Apr 7, 1958
MAXIMUM PEAK FLOW			6,860	Jun 12	7,820	Aug 6, 1998
MAXIMUM PEAK STAGE			10.40	Jun 12	(c)12.02	Aug 6, 1998
INSTANTANEOUS LOW FLOW			50	(d)Oct 3	(a)1.0	Aug 27, 1922
ANNUAL RUNOFF (CFSM)	0.387		1.30		0.632	
ANNUAL RUNOFF (INCHES)	5.25		17.67		8.59	
10 PERCENT EXCEEDS	316		1,520		619	
50 PERCENT EXCEEDS	84		183		120	
90 PERCENT EXCEEDS	37		66		38	

(a) Result of regulation

(b) Ice affected

(c) Datum then in use

(d) Also occurred Oct. 10, 11, Sept. 25-27

(e) Estimated due to ice effect or missing record

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086149 MILWAUKEE RIVER NEAR KEWASKUM, WI

LOCATION.--Lat 43°31'38", long 88°13'20", in NE ¼ NE ¼ sec. 9, T.12 N., R.19 E., Washington County, Hydrologic Unit 04040003, on right bank 1 mile upstream from Highway 28 bridge.

DRAINAGE AREA.--137.6 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to November 2004 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 940 ft above NGVD of 1929 from a topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e93	1,060	214	79	66
2	---	---	---	---	---	---	---	e93	1,130	188	87	63
3	---	---	---	---	---	---	---	e78	984	165	86	59
4	---	---	---	---	---	---	---	e74	774	197	102	56
5	---	---	---	---	---	---	---	e58	593	184	92	52
6	---	---	---	---	---	---	---	e56	476	172	82	48
7	---	---	---	---	---	---	---	52	382	166	74	44
8	---	---	---	---	---	---	---	79	310	160	70	41
9	---	---	---	---	---	---	---	152	296	155	72	39
10	---	---	---	---	---	---	---	192	837	152	80	38
11	---	---	---	---	---	---	---	233	1,810	145	104	38
12	---	---	---	---	---	---	---	236	2,420	140	130	36
13	---	---	---	---	---	---	---	264	2,250	133	130	34
14	---	---	---	---	---	---	---	316	1,840	127	113	32
15	---	---	---	---	---	---	---	291	1,450	118	96	32
16	---	---	---	---	---	---	---	261	1,100	105	83	30
17	---	---	---	---	---	---	---	224	919	103	108	28
18	---	---	---	---	---	---	---	216	711	98	105	27
19	---	---	---	---	---	---	---	184	565	92	131	26
20	---	---	---	---	---	---	---	382	463	87	117	24
21	---	---	---	---	---	---	---	482	393	83	105	23
22	---	---	---	---	---	---	---	911	337	79	94	22
23	---	---	---	---	---	---	---	1,230	e344	71	86	22
24	---	---	---	---	---	---	---	1,410	352	65	81	21
25	---	---	---	---	---	---	---	1,390	346	61	78	20
26	---	---	---	---	---	---	---	1,230	314	56	76	19
27	---	---	---	---	---	---	---	971	282	54	85	19
28	---	---	---	---	---	---	---	754	298	52	78	18
29	---	---	---	---	---	---	---	582	269	48	73	20
30	---	---	---	---	---	---	---	538	239	72	69	20
31	---	---	---	---	---	---	---	805	---	73	68	---
TOTAL	---	---	---	---	---	---	---	13,837	23,544	3,615	2,834	1,017
MEAN	---	---	---	---	---	---	---	446	785	117	91.4	33.9
MAX	---	---	---	---	---	---	---	1,410	2,420	214	131	66
MIN	---	---	---	---	---	---	---	52	239	48	68	18
CFSM	---	---	---	---	---	---	---	3.23	5.69	0.85	0.66	0.25
IN.	---	---	---	---	---	---	---	3.73	6.35	0.97	0.76	0.27

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2004, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	---	446	785	117	91.4	33.9
MAX	---	---	---	---	---	---	---	446	785	117	91.4	33.9
(WY)	---	---	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	---	---	---	---	---	---	---	446	785	117	91.4	33.9
(WY)	---	---	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)

FOR 2004 WATER YEAR  
(May - September)

## SUMMARY STATISTICS

ANNUAL TOTAL	44,847	
ANNUAL MEAN	293	
HIGHEST DAILY MEAN	2,420	Jun 12
LOWEST DAILY MEAN	18	Sep 28
ANNUAL SEVEN-DAY MINIMUM	20	Sep 24
MAXIMUM PEAK FLOW	2,480	Jun 12
MAXIMUM PEAK STAGE	11.32	Jun 12
INSTANTANEOUS LOW FLOW	18	Sep 26-30
ANNUAL RUNOFF (CFSM)	2.12	
ANNUAL RUNOFF (INCHES)	12.09	
10 PERCENT EXCEEDS	916	
50 PERCENT EXCEEDS	105	
90 PERCENT EXCEEDS	31	



04086149 MILWAUKEE RIVER NEAR KEWASKUM, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	58	---	---	---	---	---	---	---	---	---	---
2	23	71	---	---	---	---	---	---	---	---	---	---
3	22	72	---	---	---	---	---	---	---	---	---	---
4	21	75	---	---	---	---	---	---	---	---	---	---
5	24	75	---	---	---	---	---	---	---	---	---	---
6	24	69	---	---	---	---	---	---	---	---	---	---
7	24	60	---	---	---	---	---	---	---	---	---	---
8	30	55	---	---	---	---	---	---	---	---	---	---
9	32	57	---	---	---	---	---	---	---	---	---	---
10	31	54	---	---	---	---	---	---	---	---	---	---
11	32	55	---	---	---	---	---	---	---	---	---	---
12	31	50	---	---	---	---	---	---	---	---	---	---
13	31	46	---	---	---	---	---	---	---	---	---	---
14	29	44	---	---	---	---	---	---	---	---	---	---
15	29	e43	---	---	---	---	---	---	---	---	---	---
16	29	e42	---	---	---	---	---	---	---	---	---	---
17	30	e44	---	---	---	---	---	---	---	---	---	---
18	32	e45	---	---	---	---	---	---	---	---	---	---
19	33	e48	---	---	---	---	---	---	---	---	---	---
20	33	e65	---	---	---	---	---	---	---	---	---	---
21	33	e68	---	---	---	---	---	---	---	---	---	---
22	34	e55	---	---	---	---	---	---	---	---	---	---
23	48	e53	---	---	---	---	---	---	---	---	---	---
24	65	e50	---	---	---	---	---	---	---	---	---	---
25	61	e49	---	---	---	---	---	---	---	---	---	---
26	61	e46	---	---	---	---	---	---	---	---	---	---
27	59	e52	---	---	---	---	---	---	---	---	---	---
28	57	e76	---	---	---	---	---	---	---	---	---	---
29	58	e71	---	---	---	---	---	---	---	---	---	---
30	62	e60	---	---	---	---	---	---	---	---	---	---
31	59	---	---	---	---	---	---	---	---	---	---	---
TOTAL	1,158	1,708	---	---	---	---	---	---	---	---	---	---
MEAN	37.4	56.9	---	---	---	---	---	---	---	---	---	---
MAX	65	76	---	---	---	---	---	---	---	---	---	---
MIN	21	42	---	---	---	---	---	---	---	---	---	---
CFSM	0.27	0.41	---	---	---	---	---	---	---	---	---	---
IN.	0.31	0.46	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2005, BY WATER YEAR (WY)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
MEAN	37.4	56.9	---	---	---	---	446	785	117	91.4	33.9	
MAX	37.4	56.9	---	---	---	---	446	785	117	91.4	33.9	
(WY)	(2005)	(2005)	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)	
MIN	37.4	56.9	---	---	---	---	446	785	117	91.4	33.9	
(WY)	(2005)	(2005)	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)	

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR (May - November)	FOR 2005 WATER YEAR (October - November)	FOR 2006 WATER YEAR (October - November)	FOR 2007 WATER YEAR (October - November)	FOR 2008 WATER YEAR (October - November)	FOR 2009 WATER YEAR (October - November)	FOR 2010 WATER YEAR (October - November)	FOR 2011 WATER YEAR (October - November)	FOR 2012 WATER YEAR (October - November)	FOR 2013 WATER YEAR (October - November)	FOR 2014 WATER YEAR (October - November)	FOR 2015 WATER YEAR (October - November)
ANNUAL TOTAL	47,713	2,866										
ANNUAL MEAN	223	47.0										
HIGHEST ANNUAL MEAN												
LOWEST ANNUAL MEAN												
HIGHEST DAILY MEAN	2,420	76	2,420	76	2,420	76	2,420	76	2,420	76	2,420	76
LOWEST DAILY MEAN	18	21	18	21	18	21	18	21	18	21	18	21
ANNUAL SEVEN-DAY MINIMUM	20	23	20	23	20	23	20	23	20	23	20	23
MAXIMUM PEAK FLOW		(a)		(a)		(a)		(a)		(a)		(a)
MAXIMUM PEAK STAGE		(a)		(a)		(a)		(a)		(a)		(a)
INSTANTANEOUS LOW FLOW		20		20		20		20		20		20
ANNUAL RUNOFF (CFSM)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL RUNOFF (INCHES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 PERCENT EXCEEDS	652	71	652	71	652	71	652	71	652	71	652	71
50 PERCENT EXCEEDS	74	48	74	48	74	48	74	48	74	48	74	48
90 PERCENT EXCEEDS	28	24	28	24	28	24	28	24	28	24	28	24

(a) Unknown  
(e) Estimated

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May 6 to Nov. 15, 2004 (discontinued).

DISSOLVED OXYGEN: May 6 to Nov. 15, 2004 (discontinued).

SPECIFIC CONDUCTANCE: May 6 to Nov. 15, 2004 (discontinued).

INSTRUMENTATION.--Water-quality monitor since May 6, 2004.

REMARKS.--Temperature and specific conductance records good. Dissolved oxygen records fair except for the periods of May 6 to June 9, which are poor; June 9 to July 1, July 7-16, 24-30, and Oct. 8-15, which are unusable.

## EXTREMES FOR PERIOD MAY TO NOVEMBER 2004.--

WATER TEMPERATURE: Maximum, 26.5°C, July 20 and 22; minimum, 1.0°C, Nov. 13 and 14.

DISSOLVED OXYGEN: Maximum, 16.2 mg/L, Oct. 17; minimum, 0.8 mg/L, May 17, may have been the result of excessive fouling.

SPECIFIC CONDUCTANCE: Maximum, 759  $\mu$ S/cm, Oct. 6; minimum, 220  $\mu$ S/cm, June 10.TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	17.0	11.0	14.0
8	---	---	---	---	---	---	---	---	---	17.0	9.5	13.0
9	---	---	---	---	---	---	---	---	---	16.5	12.5	14.5
10	---	---	---	---	---	---	---	---	---	16.0	14.5	15.5
11	---	---	---	---	---	---	---	---	---	16.0	14.0	15.0
12	---	---	---	---	---	---	---	---	---	21.5	15.0	18.0
13	---	---	---	---	---	---	---	---	---	21.0	18.0	19.5
14	---	---	---	---	---	---	---	---	---	19.5	14.5	17.0
15	---	---	---	---	---	---	---	---	---	17.5	12.5	15.0
16	---	---	---	---	---	---	---	---	---	18.5	13.0	15.5
17	---	---	---	---	---	---	---	---	---	20.5	15.0	17.5
18	---	---	---	---	---	---	---	---	---	18.5	16.0	17.5
19	---	---	---	---	---	---	---	---	---	19.5	14.0	16.5
20	---	---	---	---	---	---	---	---	---	21.0	16.5	18.5
21	---	---	---	---	---	---	---	---	---	19.5	10.5	15.5
22	---	---	---	---	---	---	---	---	---	15.5	13.0	14.5
23	---	---	---	---	---	---	---	---	---	16.0	14.0	15.0
24	---	---	---	---	---	---	---	---	---	15.5	14.0	14.5
25	---	---	---	---	---	---	---	---	---	15.0	13.0	14.0
26	---	---	---	---	---	---	---	---	---	17.0	13.5	15.0
27	---	---	---	---	---	---	---	---	---	18.5	14.5	16.0
28	---	---	---	---	---	---	---	---	---	19.0	15.0	17.0
29	---	---	---	---	---	---	---	---	---	17.0	13.5	15.0
30	---	---	---	---	---	---	---	---	---	14.0	13.0	13.5
31	---	---	---	---	---	---	---	---	---	15.5	13.0	14.0
MONTH	---	---	---	---	---	---	---	---	---	21.5	9.5	15.6









## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086149 MILWAUKEE RIVER ABOVE DAM AT KEWASKUM, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, Defined Substr. Tech., water, MPN/100 mL (50468)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT													
09...	1900	32	50	43.3	3	--	--	--	--	.056	--	--	--
09...	2345	31	50	42.0	3	--	--	--	--	.059	--	--	--
10...	1238	30	50	43.1	<2	--	--	--	--	.058	--	--	--
10...	1900	32	50	43.3	<2	--	--	--	--	.054	--	--	--
11...	0630	31	50	42.9	4	--	--	--	--	.061	--	--	--
11...	1115	32	50	43.2	<2	--	--	--	--	.052	--	--	--
23...	1130	40	50	--	16	--	--	--	--	.080	--	--	--
23...	1845	41	50	39.9	15	--	--	--	--	.085	--	--	--
24...	0115	70	50	43.3	17	--	--	--	--	.103	--	--	--
24...	0745	67	50	41.1	19	--	--	--	--	.100	--	--	--
24...	1210	63	50	40.1	9	.84	.037	2.07	.036	.087	<3.0	--	430
24...	1213	63	50	--	9	--	--	--	--	--	--	--	--
24...	1214	63	40	--	11	--	--	--	--	--	--	--	--
24...	2049	63	50	40.6	10	--	--	--	--	.075	--	--	--
25...	0701	60	50	40.2	11	1.0	.044	1.99	.034	.077	<3.0	--	16
25...	1801	62	50	40.2	3	.96	.029	1.95	.027	.066	<3.0	--	100
26...	2245	60	50	38.3	15	--	--	--	--	.085	--	--	--
28...	0715	57	50	41.2	11	--	--	--	--	.071	--	--	--
28...	1501	57	50	50.2	4	.95	.033	1.64	.036	.070	<2.0	80	--
29...	1145	58	50	39.6	17	--	--	--	--	.082	--	--	--
30...	0130	63	50	40.2	9	--	--	--	--	.076	--	--	--
30...	1430	62	50	40.1	8	--	--	--	--	.075	--	--	--
31...	0230	58	50	40.2	4	--	--	--	--	.065	--	--	--
NOV													
01...	1350	58	50	41.0	<2	--	--	--	--	.063	--	--	--
01...	1920	60	50	40.9	<2	--	--	--	--	.061	--	--	--
02...	0200	67	50	39.6	4	--	--	--	--	.070	--	--	--
02...	0430	67	50	39.9	4	--	--	--	--	.071	--	--	--
02...	0830	70	50	38.9	7	--	--	--	--	.085	--	--	--
02...	1500	74	50	39.3	6	--	--	--	--	.088	--	--	--
03...	0400	72	50	39.0	6	--	--	--	--	.072	--	--	--
03...	1011	72	50	39.5	5	.88	.051	1.63	.039	.072	<2.0	--	90
03...	1030	72	50	40.3	3	--	--	--	--	.087	--	--	--
04...	0600	72	50	39.3	12	--	--	--	--	.105	--	--	--
04...	1431	72	50	39.2	6	.99	.032	1.63	.042	.087	<2.0	--	2,300
04...	2115	77	50	39.5	6	--	--	--	--	.074	--	--	--
05...	1015	74	50	39.8	4	--	--	--	--	.068	--	--	--
06...	1215	69	50	39.7	3	--	--	--	--	.086	--	--	--
07...	0115	63	50	39.5	7	--	--	--	--	.097	--	--	--
08...	0919	54	50	39.8	<5	.90	.021	1.66	.027	.060	<2.0	--	10
08...	1241	54	50	40.6	2	.79	.021	1.67	.032	.080	<2.0	--	<1

04086149 MILWAUKEE RIVER ABOVE DAM AT KEWASKUM, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Chloro- phyll a wat unfr. trichr. method, uncorr, ug/L (32210)	Copper, water, unfltrd recover- able, ug/L (01119)	Mercury water fltrd, ng/L (50287)	Zinc, water, unfltrd recover- able, ug/L (01094)	Mercury suspnd sedimnt total, ng/L (62976)	Methyl- mercury water fltrd, ng/L (50285)	Methyl- mercury suspnd sedimnt total, ng/L (62977)	Sus- pended sedi- ment concen- tration mg/L (80154)
OCT									
09...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	770	7.14	2	1.00	<20	1.21	.10	.030	9
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
25...	170	6.04	1	--	<20	--	--	--	10
25...	80	3.33	1	--	<20	--	--	--	<2
26...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	110	4.98	1	--	<20	--	--	--	3
29...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
NOV									
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
03...	190	2.27	<1	--	<20	--	--	--	3
03...	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--
04...	3,600	3.76	<1	--	<20	--	--	--	3
04...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
08...	50	2.82	<1	--	<20	--	--	--	<2
08...	20	2.18	<1	--	<20	--	--	--	<2



04086149 MILWAUKEE RIVER ABOVE DAM AT KEWASKUM, WI—Continued

WATER-QUALITY RECORDS

TEMPERATURE, WATER, DEGREES CELSIUS  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.0	12.5	14.5	10.0	8.5	9.0	---	---	---	---	---	---
2	14.5	10.5	12.5	8.5	8.0	8.5	---	---	---	---	---	---
3	14.5	9.0	11.5	10.0	8.0	9.0	---	---	---	---	---	---
4	13.5	9.5	11.5	9.0	6.5	8.5	---	---	---	---	---	---
5	12.0	7.0	9.5	8.0	5.0	6.5	---	---	---	---	---	---
6	15.0	8.5	11.5	9.0	5.5	7.0	---	---	---	---	---	---
7	16.0	11.0	13.5	9.0	5.5	7.5	---	---	---	---	---	---
8	17.0	14.0	15.0	6.5	4.0	5.0	---	---	---	---	---	---
9	16.5	12.0	14.0	7.5	5.0	6.0	---	---	---	---	---	---
10	15.0	10.0	12.5	8.0	5.5	6.5	---	---	---	---	---	---
11	14.5	9.0	11.5	7.5	4.0	6.0	---	---	---	---	---	---
12	14.5	10.0	12.0	4.5	2.0	3.5	---	---	---	---	---	---
13	15.0	10.0	12.5	5.0	1.0	3.0	---	---	---	---	---	---
14	13.0	10.0	11.0	4.5	1.0	3.0	---	---	---	---	---	---
15	10.5	9.0	10.0	---	---	---	---	---	---	---	---	---
16	9.0	6.0	7.5	---	---	---	---	---	---	---	---	---
17	9.5	5.0	7.0	---	---	---	---	---	---	---	---	---
18	8.5	8.0	8.0	---	---	---	---	---	---	---	---	---
19	9.0	7.5	8.5	---	---	---	---	---	---	---	---	---
20	10.0	8.5	9.0	---	---	---	---	---	---	---	---	---
21	12.0	8.0	9.5	---	---	---	---	---	---	---	---	---
22	11.0	9.5	10.5	---	---	---	---	---	---	---	---	---
23	14.0	11.0	12.0	---	---	---	---	---	---	---	---	---
24	13.5	11.0	12.0	---	---	---	---	---	---	---	---	---
25	13.5	9.5	11.5	---	---	---	---	---	---	---	---	---
26	11.5	10.0	10.5	---	---	---	---	---	---	---	---	---
27	10.5	10.0	10.5	---	---	---	---	---	---	---	---	---
28	12.0	9.5	10.5	---	---	---	---	---	---	---	---	---
29	15.5	11.5	13.5	---	---	---	---	---	---	---	---	---
30	15.5	11.0	13.5	---	---	---	---	---	---	---	---	---
31	11.5	9.5	10.5	---	---	---	---	---	---	---	---	---
MONTH	17.0	5.0	11.2	10.0	1.0	6.4	---	---	---	---	---	---

04086149 MILWAUKEE RIVER ABOVE DAM AT KEWASKUM, WI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	13.0	7.8	9.6	11.2	8.7	9.8	---	---	---	---	---	---
2	13.2	7.8	10.1	11.9	9.4	10.3	---	---	---	---	---	---
3	13.5	9.1	10.8	12.4	9.1	10.4	---	---	---	---	---	---
4	14.1	8.7	10.9	11.4	9.0	10	---	---	---	---	---	---
5	14.5	9.8	11.6	12.4	9.7	10.8	---	---	---	---	---	---
6	14.8	9.2	11.4	11.9	9.0	10.3	---	---	---	---	---	---
7	14.8	8.4	10.7	11.9	8.9	10.1	---	---	---	---	---	---
8	---	---	---	12.8	9.7	11.1	---	---	---	---	---	---
9	---	---	---	12.8	9.9	11.0	---	---	---	---	---	---
10	---	---	---	12.8	9.1	10.6	---	---	---	---	---	---
11	---	---	---	12.9	8.9	10.6	---	---	---	---	---	---
12	---	---	---	13.8	10.3	11.7	---	---	---	---	---	---
13	---	---	---	13.8	10.9	12.0	---	---	---	---	---	---
14	---	---	---	13.9	10.5	11.9	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	14.4	9.3	11.3	---	---	---	---	---	---	---	---	---
17	16.2	10.5	12.6	---	---	---	---	---	---	---	---	---
18	13.7	9.3	11.0	---	---	---	---	---	---	---	---	---
19	14.1	9.3	11.1	---	---	---	---	---	---	---	---	---
20	13.7	8.9	10.6	---	---	---	---	---	---	---	---	---
21	15.5	9.0	11.3	---	---	---	---	---	---	---	---	---
22	13.3	8.3	9.9	---	---	---	---	---	---	---	---	---
23	11.6	8.2	9.0	---	---	---	---	---	---	---	---	---
24	12.6	8.3	9.8	---	---	---	---	---	---	---	---	---
25	13.2	8.7	10.4	---	---	---	---	---	---	---	---	---
26	11.2	8.5	9.6	---	---	---	---	---	---	---	---	---
27	11.0	8.8	9.6	---	---	---	---	---	---	---	---	---
28	12.5	8.4	10.1	---	---	---	---	---	---	---	---	---
29	11.1	7.7	8.9	---	---	---	---	---	---	---	---	---
30	11.8	7.7	9.4	---	---	---	---	---	---	---	---	---
31	12.5	8.7	10.0	---	---	---	---	---	---	---	---	---
MONTH	16.2	7.7	10.4	13.9	8.7	10.8	---	---	---	---	---	---

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086149 MILWAUKEE RIVER ABOVE DAM AT KEWASKUM, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	749	708	735	724	703	717	---	---	---	---	---	---
2	730	704	716	711	702	707	---	---	---	---	---	---
3	745	713	731	718	708	713	---	---	---	---	---	---
4	745	710	731	716	689	704	---	---	---	---	---	---
5	754	726	742	711	701	707	---	---	---	---	---	---
6	759	720	743	711	699	706	---	---	---	---	---	---
7	755	720	740	710	696	705	---	---	---	---	---	---
8	745	667	705	724	703	713	---	---	---	---	---	---
9	744	704	725	731	716	724	---	---	---	---	---	---
10	735	710	719	733	719	728	---	---	---	---	---	---
11	747	713	732	733	720	727	---	---	---	---	---	---
12	743	715	731	741	723	733	---	---	---	---	---	---
13	743	711	730	743	727	737	---	---	---	---	---	---
14	743	730	737	745	730	740	---	---	---	---	---	---
15	746	719	737	---	---	---	---	---	---	---	---	---
16	739	725	732	---	---	---	---	---	---	---	---	---
17	749	725	739	---	---	---	---	---	---	---	---	---
18	753	740	746	---	---	---	---	---	---	---	---	---
19	749	732	742	---	---	---	---	---	---	---	---	---
20	754	739	747	---	---	---	---	---	---	---	---	---
21	755	726	743	---	---	---	---	---	---	---	---	---
22	756	738	747	---	---	---	---	---	---	---	---	---
23	745	690	712	---	---	---	---	---	---	---	---	---
24	730	676	705	---	---	---	---	---	---	---	---	---
25	726	704	718	---	---	---	---	---	---	---	---	---
26	721	716	718	---	---	---	---	---	---	---	---	---
27	721	717	718	---	---	---	---	---	---	---	---	---
28	722	713	719	---	---	---	---	---	---	---	---	---
29	721	708	715	---	---	---	---	---	---	---	---	---
30	716	698	708	---	---	---	---	---	---	---	---	---
31	723	711	717	---	---	---	---	---	---	---	---	---
MONTH	759	667	728	745	689	719	---	---	---	---	---	---

## STREAMS TRIBUTARY TO LAKE MICHIGAN

## 04086200 EAST BRANCH MILWAUKEE RIVER AT NEW FANE, WI

LOCATION.--Lat 45°33'01", long 88°11'18", in NW ¼ SE ¼ sec. 35, T.13 N., R.19 E., Fond du Lac County, Hydrologic Unit 04040003, on right bank 150 ft downstream of the County Trunk Highway S, 0.4 mi southwest of New Fane, and 6.0 mi upstream from mouth.

DRAINAGE AREA.--54.1 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1968 to September 1981, May 2004 to November 2004 (discontinued).

REVISED RECORDS.--WDR WI-71-1(M). WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Temporary nonrecording gage 0.4 mi upstream at different datum Jan. 21, 1972 to Aug. 2, 1973. Elevation of gage is 935 ft (revised) above NGVD of 1929 from a topographic map. Prior to Jan. 21, 1972, water-stage recorder at site 200 ft upstream at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e42	189	64	26	31
2	---	---	---	---	---	---	---	e42	193	59	31	30
3	---	---	---	---	---	---	---	e35	188	55	37	29
4	---	---	---	---	---	---	---	e35	172	59	41	28
5	---	---	---	---	---	---	---	e33	155	61	37	25
6	---	---	---	---	---	---	---	e31	141	61	33	23
7	---	---	---	---	---	---	---	e33	128	60	32	22
8	---	---	---	---	---	---	---	e36	118	57	35	23
9	---	---	---	---	---	---	---	e51	109	55	37	20
10	---	---	---	---	---	---	---	e68	144	53	40	16
11	---	---	---	---	---	---	---	e87	242	51	45	16
12	---	---	---	---	---	---	---	e88	332	50	47	15
13	---	---	---	---	---	---	---	e110	360	---	45	15
14	---	---	---	---	---	---	---	e134	358	47	40	15
15	---	---	---	---	---	---	---	e142	326	44	37	15
16	---	---	---	---	---	---	---	e136	270	41	34	15
17	---	---	---	---	---	---	---	e114	241	41	---	15
18	---	---	---	---	---	---	---	e109	199	41	e38	15
19	---	---	---	---	---	---	---	e104	163	40	e41	15
20	---	---	---	---	---	---	---	127	138	38	44	15
21	---	---	---	---	---	---	---	153	121	35	38	15
22	---	---	---	---	---	---	---	180	106	33	35	15
23	---	---	---	---	---	---	---	250	96	30	33	16
24	---	---	---	---	---	---	---	297	97	27	31	16
25	---	---	---	---	---	---	---	309	96	25	32	15
26	---	---	---	---	---	---	---	305	91	24	31	15
27	---	---	---	---	---	---	---	273	84	25	32	15
28	---	---	---	---	---	---	---	232	80	25	33	14
29	---	---	---	---	---	---	---	196	75	25	33	15
30	---	---	---	---	---	---	---	175	71	25	32	15
31	---	---	---	---	---	---	---	178	---	25	31	---
TOTAL	---	---	---	---	---	---	---	4,105	5,083	1,276	1,081	549
MEAN	---	---	---	---	---	---	---	132	169	42.5	36.0	18.3
MAX	---	---	---	---	---	---	---	309	360	64	47	31
MIN	---	---	---	---	---	---	---	31	71	24	26	14
CFSM	---	---	---	---	---	---	---	2.45	3.13	0.79	0.67	0.34
IN.	---	---	---	---	---	---	---	2.82	3.50	0.88	0.74	0.38

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2004, BY WATER YEAR (WY)

MEAN	21.2	23.0	23.5	19.6	20.8	72.4	79.6	48.8	39.4	19.9	19.3	23.9
MAX	76.0	38.5	38.4	42.4	44.1	138	151	132	169	48.6	60.5	75.9
(WY)	(1982)	(1973)	(1978)	(1975)	(1981)	(1975)	(1979)	(2004)	(2004)	(1978)	(1979)	(1981)
MIN	5.76	6.88	5.90	4.51	5.29	19.1	20.1	9.64	8.23	3.97	2.87	2.64
(WY)	(1977)	(1977)	(1977)	(1977)	(1977)	(1970)	(1970)	(1977)	(1977)	(1970)	(1970)	(1971)

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086200 EAST BRANCH MILWAUKEE RIVER AT NEW FANE, WI—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR		WATER YEARS 1968 - 2004	
	(May - September)			
ANNUAL TOTAL	12,094			
ANNUAL MEAN	80.1		34.2	
HIGHEST ANNUAL MEAN			80.1	2004
LOWEST ANNUAL MEAN			12.2	1970
HIGHEST DAILY MEAN	360	Jun 13	646	Mar 24, 1975
LOWEST DAILY MEAN	14	Sep 28	0.76	Sep 16, 1971
ANNUAL SEVEN-DAY MINIMUM	15	Sep 12	1.3	Sep 14, 1971
MAXIMUM PEAK FLOW	404	Jun 13	(a)743	Mar 24, 1975
MAXIMUM PEAK STAGE	6.47	Jun 13	6.47	Jun 13, 2004
INSTANTANEOUS LOW FLOW	14	(b)Sep 13		
ANNUAL RUNOFF (CFSM)	1.48		0.632	
ANNUAL RUNOFF (INCHES)	8.32		8.58	
10 PERCENT EXCEEDS	195		76	
50 PERCENT EXCEEDS	41		20	
90 PERCENT EXCEEDS	15		6.8	

(a) Gage height 5.44 ft (datum then in use)

(b) Also occurred Sept. 14, 15, 18-20, 26-30

(c) Estimated

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086200 EAST BRANCH MILWAUKEE RIVER AT NEW FANE, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	29	---	---	---	---	---	---	---	---	---	---
2	15	39	---	---	---	---	---	---	---	---	---	---
3	15	51	---	---	---	---	---	---	---	---	---	---
4	15	67	---	---	---	---	---	---	---	---	---	---
5	15	71	---	---	---	---	---	---	---	---	---	---
6	15	63	---	---	---	---	---	---	---	---	---	---
7	15	52	---	---	---	---	---	---	---	---	---	---
8	16	44	---	---	---	---	---	---	---	---	---	---
9	19	40	---	---	---	---	---	---	---	---	---	---
10	17	36	---	---	---	---	---	---	---	---	---	---
11	17	30	---	---	---	---	---	---	---	---	---	---
12	17	19	---	---	---	---	---	---	---	---	---	---
13	16	16	---	---	---	---	---	---	---	---	---	---
14	16	16	---	---	---	---	---	---	---	---	---	---
15	16	e17	---	---	---	---	---	---	---	---	---	---
16	16	e17	---	---	---	---	---	---	---	---	---	---
17	16	e18	---	---	---	---	---	---	---	---	---	---
18	16	e18	---	---	---	---	---	---	---	---	---	---
19	16	e19	---	---	---	---	---	---	---	---	---	---
20	16	e22	---	---	---	---	---	---	---	---	---	---
21	17	e23	---	---	---	---	---	---	---	---	---	---
22	17	e21	---	---	---	---	---	---	---	---	---	---
23	23	e20	---	---	---	---	---	---	---	---	---	---
24	33	e19	---	---	---	---	---	---	---	---	---	---
25	30	e19	---	---	---	---	---	---	---	---	---	---
26	29	e18	---	---	---	---	---	---	---	---	---	---
27	30	e20	---	---	---	---	---	---	---	---	---	---
28	28	e25	---	---	---	---	---	---	---	---	---	---
29	30	e25	---	---	---	---	---	---	---	---	---	---
30	33	e24	---	---	---	---	---	---	---	---	---	---
31	31	---	---	---	---	---	---	---	---	---	---	---
TOTAL	620	898	---	---	---	---	---	---	---	---	---	---
MEAN	20.0	29.9	---	---	---	---	---	---	---	---	---	---
MAX	33	71	---	---	---	---	---	---	---	---	---	---
MIN	15	16	---	---	---	---	---	---	---	---	---	---
CFSM	0.37	0.55	---	---	---	---	---	---	---	---	---	---
IN.	0.43	0.62	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

MEAN	21.1	23.5	23.5	19.6	20.8	72.4	79.6	48.8	39.4	20.3	19.4	24.0
MAX	76.0	38.5	38.4	42.4	44.1	138	151	132	170	48.6	60.5	75.9
(WY)	(1982)	(1973)	(1978)	(1975)	(1981)	(1975)	(1979)	(2004)	(2004)	(1978)	(1979)	(1981)
MIN	5.76	6.88	5.90	4.51	5.29	19.1	20.1	9.64	8.23	3.97	2.87	2.64
(WY)	(1977)	(1977)	(1977)	(1977)	(1977)	(1970)	(1970)	(1977)	(1977)	(1970)	(1970)	(1971)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR (May - November)		FOR 2005 WATER YEAR (October - November)		WATER YEARS 1968 - 2005	
ANNUAL TOTAL	13,934		1,520			
ANNUAL MEAN	65.1		24.9		34.1	
HIGHEST ANNUAL MEAN					81.1	
LOWEST ANNUAL MEAN					12.2	
HIGHEST DAILY MEAN	360	Jun 13	71	Nov 5	646	Mar 24, 1975
LOWEST DAILY MEAN	14	Sep 28	15	Oct 1-7	0.76	Sep 16, 1971
ANNUAL SEVEN-DAY MINIMUM	15	Sep 26	15	Oct 1	1.3	Sep 14, 1971
MAXIMUM PEAK FLOW			74	Nov 5	(a)743	Mar 24, 1975
MAXIMUM PEAK STAGE			4.54	Nov 5	6.47	Jun 13, 2004
INSTANTANEOUS LOW FLOW			(b)14	Oct 1		
ANNUAL RUNOFF (CFSM)	1.20		0.461		0.631	
ANNUAL RUNOFF (INCHES)	9.58		1.05		8.57	
10 PERCENT EXCEEDS	174		43		76	
50 PERCENT EXCEEDS	35		19		20	
90 PERCENT EXCEEDS	16		15		7.0	

(a) Gage height 5.44 ft (datum then in use)  
(b) Also occurred Oct. 2-6  
(c) Estimated







## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086200 EAST BRANCH MILWAUKEE RIVER AT NEW FANE, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	469	462	465	499	485	494	522	518	520
2	---	---	---	469	464	466	490	477	482	523	515	518
3	---	---	---	---	---	---	493	481	487	520	514	517
4	---	---	---	469	455	460	492	484	488	521	516	519
5	---	---	---	470	459	465	494	487	490	524	517	521
6	---	---	---	471	468	469	498	493	495	528	518	523
7	---	---	---	473	470	471	499	495	497	534	526	529
8	---	---	---	474	471	472	498	493	496	540	531	535
9	---	---	---	474	471	473	498	487	493	544	536	539
10	---	---	---	476	473	474	495	488	491	547	540	543
11	---	---	---	478	474	476	496	493	495	550	544	547
12	---	---	---	482	477	480	495	490	492	555	544	549
13	---	---	---	---	---	---	492	488	490	559	540	553
14	---	---	---	489	485	487	491	488	490	557	545	552
15	---	---	---	494	489	492	491	488	490	568	535	550
16	---	---	---	504	494	499	504	490	496	554	545	550
17	---	---	---	502	494	498	---	---	---	556	544	549
18	---	---	---	---	---	---	---	---	---	557	547	553
19	---	---	---	---	---	---	---	---	---	558	546	553
20	---	---	---	---	---	---	489	476	482	555	543	549
21	---	---	---	---	---	---	497	488	492	550	536	543
22	---	---	---	---	---	---	503	496	498	542	531	537
23	---	---	---	500	496	498	507	501	504	539	530	535
24	456	443	447	502	497	500	507	499	505	536	527	532
25	451	443	447	505	501	503	510	501	505	543	532	536
26	452	449	450	509	504	506	508	503	505	551	541	545
27	455	444	450	---	---	---	510	499	504	554	545	550
28	449	443	445	516	510	513	508	502	505	556	546	551
29	458	448	453	518	512	515	512	508	511	558	549	554
30	462	457	460	516	503	511	518	511	514	559	551	555
31	---	---	---	511	491	499	521	517	519	---	---	---
MONTH	462	443	450	518	455	487	521	476	497	568	514	540
YEAR	568	443	505									

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, m-TEC MF, water, col/100 mL (31633)
JUN													
30...	1115	69	40	16.5	7	.94	<.015	.100	.031	.052	.061	<2.0	--
AUG													
01...	1850	26	50	15.7	16	--	--	--	--	--	.057	--	--
02...	0650	29	50	15.5	12	--	--	--	--	--	.065	--	--
02...	1850	33	50	15.5	14	--	--	--	--	--	.071	--	--
03...	0650	35	50	16.3	12	--	--	--	--	--	.073	--	--
03...	1850	40	50	16.6	14	--	--	--	--	--	.077	--	--
04...	0650	41	50	16.7	11	--	--	--	--	--	.073	--	--
05...	0650	37	50	17.4	12	--	--	--	--	--	.064	--	--
06...	1850	31	50	17.6	10	--	--	--	--	--	.051	--	--
12...	1310	47	50	18.2	9	--	--	--	--	--	.037	--	--
21...	0932	39	50	18.1	11	--	--	--	--	--	.073	--	--
21...	1040	39	50	18.2	6	--	--	--	--	--	.036	--	--
21...	1240	39	50	18.4	8	--	--	--	--	--	.034	--	--
23...	0415	34	50	18.3	14	--	--	--	--	--	.043	--	--
SEP													
09...	0945	23	40	19.5	6	.83	<.015	.118	.012	--	.034	<2.0	90
16...	1240	15	50	--	--	--	--	--	--	--	--	<2.0	110

04086200 EAST BRANCH MILWAUKEE RIVER AT NEW FANE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Chloro- phyll a wat unfltrd method, uncorr, ug/L (32210)	Copper, water, unfltrd recover -able, ug/L (01119)	Zinc, water, unfltrd recover -able, ug/L (01094)	Mercury suspnd sedimnt total, ng/L (62976)	Methyl- mercury water fltrd, ng/L (50285)	Methyl- mercury suspnd sedimnt total, ng/L (62977)	Sus- pended sedi- ment concen- tration mg/L (80154)
JUN 30...	--	2.83	<1	<20	--	--	--	--
AUG 01...	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
SEP 09...	90	1.37	2	<20	.784	.26	.036	4
16...	90	--	--	--	--	--	--	--

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086200 EAST BRANCH MILWAUKEE RIVER AT NEW FANE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, Defined Substr. Tech., water, MPN/100 mL (50468)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT													
08...	1510	16	50	19.7	5	--	--	--	--	.023	--	--	--
08...	1906	18	50	19.6	7	--	--	--	--	.031	--	--	--
08...	2310	19	50	19.6	10	--	--	--	--	.030	--	--	--
09...	0310	19	50	19.5	10	--	--	--	--	.030	--	--	--
09...	0710	19	50	19.5	9	--	--	--	--	.030	--	--	--
09...	1910	19	50	20.0	8	--	--	--	--	.029	--	--	--
10...	0710	16	50	20.2	5	--	--	--	--	.025	--	--	--
10...	1510	18	50	20.2	<3	--	--	--	--	.023	--	--	--
11...	0310	16	50	20.5	5	--	--	--	--	.030	--	--	--
11...	1540	17	50	20.5	3	--	--	--	--	.025	--	--	--
12...	0445	16	50	20.5	7	--	--	--	--	.027	--	--	--
12...	0905	16	50	20.4	3	--	--	--	--	.032	--	--	--
12...	0941	16	50	--	3	--	--	--	--	--	--	--	--
12...	0942	16	40	--	3	--	--	--	--	--	--	--	--
24...	0340	34	50	19.1	14	--	--	--	--	.039	--	--	--
24...	1140	34	50	20.1	4	--	--	--	--	.028	--	--	--
24...	1315	34	50	--	6	--	--	--	--	--	--	--	--
24...	1316	34	40	--	5	--	--	--	--	--	--	--	--
24...	1335	34	50	20.5	4	.85	.057	.187	.005	.028	<3.0	--	10
24...	2034	31	50	20.2	13	--	--	--	--	.041	--	--	--
25...	0703	30	50	20.1	9	.84	.058	.186	.006	.033	<3.0	--	50
25...	1701	30	50	20.3	4	.84	.032	.175	.005	.025	<3.0	--	99
27...	0440	30	50	21.1	7	--	--	--	--	.027	--	--	--
28...	1421	28	50	21.4	5	.68	.042	.219	.007	.029	<2.0	12	--
29...	1910	31	50	20.3	8	--	--	--	--	.031	--	--	--
30...	0710	31	50	20.5	11	--	--	--	--	.038	--	--	--
30...	1910	33	50	20.2	9	--	--	--	--	.037	--	--	--
31...	0610	31	50	20.6	8	--	--	--	--	.039	--	--	--
31...	1815	30	50	20.5	7	--	--	--	--	.026	--	--	--
NOV													
01...	1330	29	50	20.2	4	--	--	--	--	.036	--	--	--
01...	1935	30	50	20.3	7	--	--	--	--	.031	--	--	--
02...	0135	34	50	20.0	6	--	--	--	--	.033	--	--	--
02...	0735	39	50	19.8	8	--	--	--	--	.033	--	--	--
02...	1335	41	50	19.9	6	--	--	--	--	.043	--	--	--
02...	1935	42	50	19.9	9	--	--	--	--	.033	--	--	--
03...	0745	48	50	20.0	7	--	--	--	--	.032	--	--	--
03...	0946	49	50	20.6	9	.96	.074	.220	.008	.035	<2.0	--	30
04...	1416	69	50	21.3	17	.99	.093	.200	.011	.045	<2.0	--	30
04...	1420	68	50	21.6	15	--	--	--	--	.049	--	--	--
05...	0220	72	50	21.6	11	--	--	--	--	.037	--	--	--
05...	1420	71	50	22.1	8	--	--	--	--	.036	--	--	--
06...	1420	63	50	22.3	6	--	--	--	--	.035	--	--	--
07...	1420	51	50	21.8	5	--	--	--	--	.029	--	--	--
08...	0220	46	50	21.7	9	--	--	--	--	.033	--	--	--
08...	0937	43	50	22.5	5	.74	.056	.239	.009	.030	<2.0	--	<1
08...	1306	45	50	22.1	4	.85	.050	.242	.008	.028	<2.0	--	10

04086200 EAST BRANCH MILWAUKEE RIVER AT NEW FANE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Chloro- phyll a wat unf trichr. method, uncorr, ug/L (32210)	Copper, water, unfltrd recover -able, ug/L (01119)	Zinc, water, unfltrd recover -able, ug/L (01094)	Sus- pended sedi- ment concen- tration mg/L (80154)
OCT					
08...	--	--	--	--	--
08...	--	--	--	--	--
08...	--	--	--	--	--
09...	--	--	--	--	--
09...	--	--	--	--	--
09...	--	--	--	--	--
10...	--	--	--	--	--
10...	--	--	--	--	--
11...	--	--	--	--	--
11...	--	--	--	--	--
12...	--	--	--	--	--
12...	--	--	--	--	--
12...	--	--	--	--	--
12...	--	--	--	--	--
24...	--	--	--	--	--
24...	--	--	--	--	--
24...	--	--	--	--	--
24...	--	--	--	--	--
24...	80	2.55	<1	<20	4
24...	--	--	--	--	--
25...	40	2.67	<1	<20	7
25...	30	1.59	1	<20	<2
27...	--	--	--	--	--
28...	10	2.72	<1	<20	2
29...	--	--	--	--	--
30...	--	--	--	--	--
30...	--	--	--	--	--
31...	--	--	--	--	--
31...	--	--	--	--	--
NOV					
01...	--	--	--	--	--
01...	--	--	--	--	--
02...	--	--	--	--	--
02...	--	--	--	--	--
02...	--	--	--	--	--
02...	--	--	--	--	--
03...	--	--	--	--	--
03...	40	2.38	<1	<20	8
04...	30	5.26	<1	<20	17
04...	--	--	--	--	--
05...	--	--	--	--	--
05...	--	--	--	--	--
06...	--	--	--	--	--
07...	--	--	--	--	--
08...	--	--	--	--	--
08...	20	2.74	<1	<20	<2
08...	100	2.17	4	<20	3

04086200 EAST BRANCH MILWAUKEE RIVER AT NEW FANE, WI—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.5	12.5	14.5	9.5	8.5	9.5	---	---	---	---	---	---
2	14.0	11.0	12.5	9.0	8.5	8.5	---	---	---	---	---	---
3	14.0	9.5	11.5	10.0	8.5	9.0	---	---	---	---	---	---
4	13.0	9.5	11.0	9.5	8.0	9.0	---	---	---	---	---	---
5	12.0	7.5	9.5	8.0	6.5	7.5	---	---	---	---	---	---
6	14.5	9.0	11.5	8.5	6.5	8.0	---	---	---	---	---	---
7	15.0	11.0	13.0	9.0	6.5	8.0	---	---	---	---	---	---
8	16.0	14.0	15.0	6.5	5.0	6.0	---	---	---	---	---	---
9	16.0	12.5	14.0	7.5	6.0	6.5	---	---	---	---	---	---
10	14.5	10.5	12.0	8.0	6.5	7.0	---	---	---	---	---	---
11	14.0	9.0	11.5	7.5	4.0	6.0	---	---	---	---	---	---
12	14.5	10.0	12.0	5.0	2.0	3.5	---	---	---	---	---	---
13	15.0	10.5	12.5	5.0	1.5	3.0	---	---	---	---	---	---
14	12.5	11.0	12.0	5.0	1.5	3.0	---	---	---	---	---	---
15	11.0	9.5	10.5	---	---	---	---	---	---	---	---	---
16	9.5	7.5	8.5	---	---	---	---	---	---	---	---	---
17	9.5	6.0	7.5	---	---	---	---	---	---	---	---	---
18	9.5	8.0	8.5	---	---	---	---	---	---	---	---	---
19	9.5	8.5	9.0	---	---	---	---	---	---	---	---	---
20	10.0	8.5	9.5	---	---	---	---	---	---	---	---	---
21	11.5	8.0	9.5	---	---	---	---	---	---	---	---	---
22	11.5	10.0	10.5	---	---	---	---	---	---	---	---	---
23	13.0	11.0	12.0	---	---	---	---	---	---	---	---	---
24	12.5	10.5	11.5	---	---	---	---	---	---	---	---	---
25	12.5	9.5	11.0	---	---	---	---	---	---	---	---	---
26	11.0	10.0	10.5	---	---	---	---	---	---	---	---	---
27	10.5	9.5	10.0	---	---	---	---	---	---	---	---	---
28	11.5	9.5	10.5	---	---	---	---	---	---	---	---	---
29	14.0	11.0	13.0	---	---	---	---	---	---	---	---	---
30	14.5	11.0	13.0	---	---	---	---	---	---	---	---	---
31	11.5	9.5	10.5	---	---	---	---	---	---	---	---	---
MONTH	16.5	6.0	11.2	10.0	1.5	6.8	---	---	---	---	---	---

04086200 EAST BRANCH MILWAUKEE RIVER AT NEW FANE, WI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.9	7.1	9.1	13.5	12.3	12.8	---	---	---	---	---	---
2	11.6	7.2	10.1	14.2	12.8	13.3	---	---	---	---	---	---
3	11.4	6.1	9.3	14.1	12.1	13.1	---	---	---	---	---	---
4	10.1	5.8	8.3	13.3	11.9	12.6	---	---	---	---	---	---
5	12.3	10.1	11.0	14.9	13.3	13.9	---	---	---	---	---	---
6	11.8	6.8	9.9	14.5	12.7	13.6	---	---	---	---	---	---
7	---	---	---	14.7	12.3	13.5	---	---	---	---	---	---
8	---	---	---	17.0	14.4	15.8	---	---	---	---	---	---
9	---	---	---	16.7	14.7	15.6	---	---	---	---	---	---
10	---	---	---	16.4	14.1	15.1	---	---	---	---	---	---
11	---	---	---	17.1	14.6	15.9	---	---	---	---	---	---
12	---	---	---	20.0	17.1	18.6	---	---	---	---	---	---
13	---	---	---	20.0	17.7	19.0	---	---	---	---	---	---
14	---	---	---	20.0	16.6	18.7	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	14.7	12.7	13.8	---	---	---	---	---	---	---	---	---
17	16.2	14.1	14.9	---	---	---	---	---	---	---	---	---
18	15.2	13.5	14.2	---	---	---	---	---	---	---	---	---
19	15.3	13.5	14.1	---	---	---	---	---	---	---	---	---
20	15.0	13.3	13.9	---	---	---	---	---	---	---	---	---
21	15.4	12.9	14.0	---	---	---	---	---	---	---	---	---
22	14.3	12.0	13.0	---	---	---	---	---	---	---	---	---
23	12.8	11.2	11.8	---	---	---	---	---	---	---	---	---
24	13.1	11.3	12.1	---	---	---	---	---	---	---	---	---
25	13.9	12.3	13.0	---	---	---	---	---	---	---	---	---
26	13.6	12.6	12.9	---	---	---	---	---	---	---	---	---
27	13.5	12.4	12.8	---	---	---	---	---	---	---	---	---
28	14.0	11.6	12.7	---	---	---	---	---	---	---	---	---
29	12.1	9.6	11.0	---	---	---	---	---	---	---	---	---
30	11.9	9.5	10.6	---	---	---	---	---	---	---	---	---
31	13.8	11.3	12.4	---	---	---	---	---	---	---	---	---
MONTH	16.2	5.8	12.0	20.0	11.9	15.1	---	---	---	---	---	---

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086200 EAST BRANCH MILWAUKEE RIVER AT NEW FANE, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	559	548	554	546	539	542	---	---	---	---	---	---
2	557	546	550	542	535	537	---	---	---	---	---	---
3	561	552	556	538	531	535	---	---	---	---	---	---
4	563	559	561	532	525	529	---	---	---	---	---	---
5	565	554	561	529	525	527	---	---	---	---	---	---
6	558	550	554	530	525	528	---	---	---	---	---	---
7	559	552	555	537	527	531	---	---	---	---	---	---
8	557	543	551	535	523	529	---	---	---	---	---	---
9	549	538	542	529	523	526	---	---	---	---	---	---
10	552	549	551	525	518	522	---	---	---	---	---	---
11	552	548	550	529	518	522	---	---	---	---	---	---
12	552	548	550	543	525	532	---	---	---	---	---	---
13	551	548	550	545	537	542	---	---	---	---	---	---
14	552	549	550	542	531	537	---	---	---	---	---	---
15	558	550	552	---	---	---	---	---	---	---	---	---
16	560	551	555	---	---	---	---	---	---	---	---	---
17	566	556	560	---	---	---	---	---	---	---	---	---
18	566	558	563	---	---	---	---	---	---	---	---	---
19	567	558	563	---	---	---	---	---	---	---	---	---
20	569	559	564	---	---	---	---	---	---	---	---	---
21	571	560	567	---	---	---	---	---	---	---	---	---
22	572	561	568	---	---	---	---	---	---	---	---	---
23	570	556	562	---	---	---	---	---	---	---	---	---
24	561	551	556	---	---	---	---	---	---	---	---	---
25	560	553	556	---	---	---	---	---	---	---	---	---
26	555	548	551	---	---	---	---	---	---	---	---	---
27	553	546	550	---	---	---	---	---	---	---	---	---
28	554	547	551	---	---	---	---	---	---	---	---	---
29	554	545	548	---	---	---	---	---	---	---	---	---
30	550	541	545	---	---	---	---	---	---	---	---	---
31	547	542	545	---	---	---	---	---	---	---	---	---
MONTH	572	538	555	546	518	531	---	---	---	---	---	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086265 MILWAUKEE RIVER AT CTH M NEAR NEWBURG, WI

LOCATION.--Lat 42°25'30", long 88°04'51", in NW ¼ NW ¼ sec. 14, T.11 N., R.20 E., Washington County, Hydrologic Unit 04040003, in Goede Park on left downstream bank of Highway M bridge.

DRAINAGE AREA.--259.8 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to November 2004.

GAGE.--Water-stage recorder. Elevation of gage is 850 ft above NGVD of 1929 from a topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e193	1,150	364	166	130
2	---	---	---	---	---	---	---	e187	1,350	329	173	129
3	---	---	---	---	---	---	---	e163	1,390	305	177	124
4	---	---	---	---	---	---	---	e159	1,300	417	201	117
5	---	---	---	---	---	---	---	e141	1,080	370	193	110
6	---	---	---	---	---	---	---	e131	872	328	174	105
7	---	---	---	---	---	---	---	129	713	302	162	99
8	---	---	---	---	---	---	---	175	597	276	153	92
9	---	---	---	---	---	---	---	250	533	266	166	91
10	---	---	---	---	---	---	---	315	543	270	160	90
11	---	---	---	---	---	---	---	383	1,350	259	163	89
12	---	---	---	---	---	---	---	390	2,680	275	187	85
13	---	---	---	---	---	---	---	474	3,190	246	209	81
14	---	---	---	---	---	---	---	611	3,110	229	203	76
15	---	---	---	---	---	---	---	616	2,670	215	189	73
16	---	---	---	---	---	---	---	554	2,150	207	173	72
17	---	---	---	---	---	---	---	480	1,800	204	173	74
18	---	---	---	---	---	---	---	485	1,420	196	185	75
19	---	---	---	---	---	---	---	457	1,130	194	197	72
20	---	---	---	---	---	---	---	564	881	191	204	71
21	---	---	---	---	---	---	---	808	719	186	189	68
22	---	---	---	---	---	---	---	1,250	614	182	173	68
23	---	---	---	---	---	---	---	1,630	545	170	165	69
24	---	---	---	---	---	---	---	1,860	e520	157	156	69
25	---	---	---	---	---	---	---	1,980	e510	156	149	68
26	---	---	---	---	---	---	---	1,910	484	152	147	65
27	---	---	---	---	---	---	---	1,710	452	143	171	66
28	---	---	---	---	---	---	---	1,410	451	136	151	66
29	---	---	---	---	---	---	---	1,130	430	129	147	61
30	---	---	---	---	---	---	---	972	398	130	137	62
31	---	---	---	---	---	---	---	1,080	---	163	136	---
TOTAL	---	---	---	---	---	---	---	22,597	35,032	7,147	5,329	2,517
MEAN	---	---	---	---	---	---	---	729	1,168	231	172	83.9
MAX	---	---	---	---	---	---	---	1,980	3,190	417	209	130
MIN	---	---	---	---	---	---	---	129	398	129	136	61
CFSM	---	---	---	---	---	---	---	2.80	4.49	0.89	0.66	0.32
IN.	---	---	---	---	---	---	---	3.23	5.01	1.02	0.76	0.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2004, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	---	729	1,168	231	172	83.9
MAX	---	---	---	---	---	---	---	729	1,168	231	172	83.9
(WY)	---	---	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	---	---	---	---	---	---	---	729	1,168	231	172	83.9
(WY)	---	---	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)

FOR 2004 WATER YEAR  
(May - September)

SUMMARY STATISTICS

ANNUAL TOTAL	72,622	
ANNUAL MEAN	475	
HIGHEST DAILY MEAN	3,190	Jun 13
LOWEST DAILY MEAN	61	Sep 29
ANNUAL SEVEN-DAY MINIMUM	65	Sep 24
MAXIMUM PEAK FLOW	3,280	Jun 13
MAXIMUM PEAK STAGE	7.58	Jun 13
INSTANTANEOUS LOW FLOW	57	Sep 29, 30
ANNUAL RUNOFF (CFSM)	1.83	
ANNUAL RUNOFF (INCHES)	10.39	
10 PERCENT EXCEEDS	1,350	
50 PERCENT EXCEEDS	194	
90 PERCENT EXCEEDS	74	



04086265 MILWAUKEE RIVER AT CTH M NEAR NEWBURG, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	104	---	---	---	---	---	---	---	---	---	---
2	71	119	---	---	---	---	---	---	---	---	---	---
3	63	118	---	---	---	---	---	---	---	---	---	---
4	64	120	---	---	---	---	---	---	---	---	---	---
5	60	123	---	---	---	---	---	---	---	---	---	---
6	63	123	---	---	---	---	---	---	---	---	---	---
7	65	119	---	---	---	---	---	---	---	---	---	---
8	88	106	---	---	---	---	---	---	---	---	---	---
9	84	98	---	---	---	---	---	---	---	---	---	---
10	83	90	---	---	---	---	---	---	---	---	---	---
11	82	88	---	---	---	---	---	---	---	---	---	---
12	78	79	---	---	---	---	---	---	---	---	---	---
13	80	68	---	---	---	---	---	---	---	---	---	---
14	77	63	---	---	---	---	---	---	---	---	---	---
15	73	e63	---	---	---	---	---	---	---	---	---	---
16	71	e63	---	---	---	---	---	---	---	---	---	---
17	69	e68	---	---	---	---	---	---	---	---	---	---
18	71	e73	---	---	---	---	---	---	---	---	---	---
19	73	e83	---	---	---	---	---	---	---	---	---	---
20	73	e98	---	---	---	---	---	---	---	---	---	---
21	73	e112	---	---	---	---	---	---	---	---	---	---
22	73	e114	---	---	---	---	---	---	---	---	---	---
23	95	e106	---	---	---	---	---	---	---	---	---	---
24	107	e100	---	---	---	---	---	---	---	---	---	---
25	115	e99	---	---	---	---	---	---	---	---	---	---
26	111	e94	---	---	---	---	---	---	---	---	---	---
27	110	e106	---	---	---	---	---	---	---	---	---	---
28	105	e140	---	---	---	---	---	---	---	---	---	---
29	106	e153	---	---	---	---	---	---	---	---	---	---
30	120	e147	---	---	---	---	---	---	---	---	---	---
31	108	---	---	---	---	---	---	---	---	---	---	---
TOTAL	2,573	3,037	---	---	---	---	---	---	---	---	---	---
MEAN	83.0	101	---	---	---	---	---	---	---	---	---	---
MAX	120	153	---	---	---	---	---	---	---	---	---	---
MIN	60	63	---	---	---	---	---	---	---	---	---	---
CFSM	0.32	0.39	---	---	---	---	---	---	---	---	---	---
IN.	0.37	0.43	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2005, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	83.0	101	---	---	---	---	---	729	1,168	231	172	83.9
MAX	83.0	101	---	---	---	---	---	729	1,168	231	172	83.9
(WY)	(2005)	(2005)	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	83.0	101	---	---	---	---	---	729	1,168	231	172	83.9
(WY)	(2005)	(2005)	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR (May - November)		FOR 2005 WATER YEAR (October - November)		WATER YEARS 2004 - 2005 (May 2004 - November 2004)	
ANNUAL TOTAL	78,242		5,610			
ANNUAL MEAN	366		92.0		366	
HIGHEST ANNUAL MEAN					475	
LOWEST ANNUAL MEAN					92.0	
HIGHEST DAILY MEAN	3,190	Jun 13	(e)153	Nov 29	3,190	Jun 13, 2004
LOWEST DAILY MEAN	60	Oct 5	60	Oct 5	60	Oct 5, 2004
ANNUAL SEVEN-DAY MINIMUM	63	Sep 29	64	Oct 1	63	Sep 29, 2004
MAXIMUM PEAK FLOW			(a)	Nov 29	3,280	Jun 13, 2004
MAXIMUM PEAK STAGE			(a)	Nov 29	7.58	Jun 13, 2004
INSTANTANEOUS LOW FLOW			55	Oct 5	55	Oct 5, 2004
ANNUAL RUNOFF (CFSM)	0.000		0.000		0.000	
ANNUAL RUNOFF (INCHES)	0.00		0.00		0.00	
10 PERCENT EXCEEDS	1,100		120		1,100	
50 PERCENT EXCEEDS	156		88		156	
90 PERCENT EXCEEDS	69		63		69	

(a) Unknown  
(e) Estimated





04086265 MILWAUKEE RIVER AT COUNTY TRUNK HIGHWAY M NEAR NEWBURG, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	767	660	728	748	708	733
2	---	---	---	---	---	---	764	726	745	762	727	749
3	---	---	---	---	---	---	760	728	746	765	727	750
4	---	---	---	---	---	---	748	650	710	763	724	746
5	---	---	---	---	---	---	723	688	710	771	729	752
6	---	---	---	---	---	---	730	692	711	772	740	756
7	---	---	---	---	---	---	728	695	712	784	739	767
8	---	---	---	---	---	---	736	699	715	779	740	765
9	---	---	---	---	---	---	736	653	707	788	747	770
10	---	---	---	---	---	---	726	696	711	796	753	779
11	---	---	---	---	---	---	725	694	711	803	753	779
12	---	---	---	---	---	---	717	686	700	799	761	784
13	---	---	---	---	---	---	696	656	673	812	775	798
14	---	---	---	---	---	---	668	631	645	832	778	806
15	---	---	---	---	---	---	655	626	637	838	794	819
16	---	---	---	---	---	---	685	641	657	860	801	835
17	---	---	---	653	621	639	692	616	666	851	799	830
18	---	---	---	657	617	634	684	651	669	843	792	823
19	---	---	---	659	624	645	679	645	664	845	789	817
20	---	---	---	690	639	662	673	645	662	849	803	831
21	---	---	---	703	665	684	683	636	657	860	808	840
22	---	---	---	725	683	703	685	652	665	864	815	845
23	---	---	---	733	699	719	693	658	678	869	820	852
24	---	---	---	744	710	726	713	658	691	878	819	855
25	---	---	---	744	707	724	731	696	713	867	810	843
26	---	---	---	745	709	726	741	707	727	866	800	833
27	---	---	---	754	721	739	742	597	699	861	803	834
28	---	---	---	767	741	756	721	693	710	867	804	842
29	---	---	---	792	763	776	718	671	696	856	795	832
30	---	---	---	806	767	789	726	690	711	853	794	830
31	---	---	---	791	741	762	742	700	721	---	---	---
MONTH	---	---	---	806	617	712	767	597	695	878	708	803
YEAR	878	597	741									

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, m-TEC MF, water, col/100 mL (31633)
JUL													
01...	1210	362	40	40.9	19	1.1	.031	.713	.076	.092	.136	<2.0	90
31...	1815	171	50	58.9	9	--	--	--	--	--	.105	--	--
AUG													
01...	1850	177	50	56.3	9	--	--	--	--	--	.115	--	--
03...	1830	179	50	59.4	6	--	--	--	--	--	.122	--	--
04...	1830	205	50	56.9	9	--	--	--	--	--	.132	--	--
05...	1830	194	50	54.8	11	--	--	--	--	--	.129	--	--
06...	1830	177	50	54.8	8	--	--	--	--	--	.129	--	--
07...	0630	160	50	57.4	11	--	--	--	--	--	.135	--	--
08...	0630	150	50	57.1	18	--	--	--	--	--	.128	--	--
12...	0845	179	50	54.8	14	--	--	--	--	--	.113	--	--
13...	2030	211	50	52.2	18	--	--	--	--	--	.135	--	--
19...	2000	211	50	52.7	14	--	--	--	--	--	.100	--	--
20...	0800	202	50	50.5	16	--	--	--	--	--	.104	--	--
20...	1417	202	50	44.9	11	--	--	--	--	--	.090	--	--
SEP													
09...	1345	91	40	72.9	4	.92	<.015	1.43	.039	--	.074	<2.0	40
16...	1200	72	50	--	--	--	--	--	--	--	--	<2.0	50

## 04086265 MILWAUKEE RIVER AT COUNTY TRUNK HIGHWAY M NEAR NEWBURG, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Chlorophyll a wat unfltrd method, uncorr, ug/L (32210)	Copper, water, unfltrd recover-able, ug/L (01119)	Mercury water fltrd, ng/L (50287)	Zinc, water, unfltrd recover-able, ug/L (01094)	Mercury suspnd sediment total, ng/L (62976)	Methylmercury water fltrd, ng/L (50285)	Methylmercury suspnd total, ng/L (62977)	Suspended sediment concentration mg/L (80154)
JUL									
01...	70	5.06	2	--	<20	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
AUG									
01...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
SEP									
09...	60	5.91	2	1.41	<20	1.07	.14	.015	<2
16...	80	--	--	--	--	--	--	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC (00310)	E coli, Defined Substr. Tech., water, MPN/100 mL (50468)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT													
08...	1445	106	50	87.8	4	--	--	--	--	.059	--	--	--
08...	1909	95	50	75.4	15	--	--	--	--	.106	--	--	--
09...	0115	86	50	84.3	13	--	--	--	--	.077	--	--	--
09...	0715	80	50	88.4	12	--	--	--	--	.073	--	--	--
09...	1430	84	50	81.4	5	--	--	--	--	.061	--	--	--
09...	2030	88	50	78.7	5	--	--	--	--	.060	--	--	--
10...	0230	84	50	88.5	8	--	--	--	--	.062	--	--	--
10...	1545	84	50	76.6	4	--	--	--	--	.049	--	--	--
10...	2145	86	50	80.1	5	--	--	--	--	.054	--	--	--
12...	1316	74	50	--	2	--	--	--	--	--	--	--	--
12...	1317	74	40	--	2	--	--	--	--	--	--	--	--
23...	1221	102	50	83.0	3	--	--	--	--	.044	--	--	--
24...	0030	102	50	68.3	11	--	--	--	--	.065	--	--	--
24...	1400	111	50	72.5	5	--	--	--	--	.058	--	--	--
24...	1432	111	40	--	5	--	--	--	--	--	--	--	--
24...	1433	111	50	--	5	--	--	--	--	--	--	--	--
24...	1440	111	50	69.6	5	.78	.034	1.70	.018	.056	<3.0	--	200
24...	2055	122	50	70.1	8	--	--	--	--	.060	--	--	--
25...	0656	113	50	70.9	6	.84	.045	1.79	.020	.056	<3.0	--	10
25...	1631	118	50	64.4	3	.72	.036	1.65	.021	.052	<3.0	--	20
26...	1500	113	50	73.1	11	--	--	--	--	.074	--	--	--
28...	1240	104	50	--	13	.82	.053	1.66	.026	.073	<3.0	51	--
NOV													
01...	1715	106	50	63.3	5	--	--	--	--	.062	--	--	--
01...	1925	113	50	67.4	5	--	--	--	--	.092	--	--	--
02...	0130	115	50	66.2	9	--	--	--	--	.093	--	--	--
02...	0730	120	50	66.4	6	--	--	--	--	.081	--	--	--
02...	1330	122	50	58.6	5	--	--	--	--	.084	--	--	--
02...	1930	120	50	67.3	8	--	--	--	--	.077	--	--	--
03...	0130	118	50	65.9	9	--	--	--	--	.069	--	--	--
03...	0657	115	50	67.5	8	--	--	--	--	.065	--	--	--
03...	1106	118	50	--	8	.71	.048	1.60	.037	.078	<2.0	--	190
03...	1115	118	50	64.2	5	--	--	--	--	.064	--	--	--
04...	0515	115	50	65.2	10	--	--	--	--	.072	--	--	--
04...	1331	122	50	59.2	10	1.1	.049	1.59	.032	.076	<2.0	--	210
04...	1945	125	50	58.6	10	--	--	--	--	.072	--	--	--
05...	0745	120	50	62.9	9	--	--	--	--	.084	--	--	--
06...	0145	125	50	56.7	5	--	--	--	--	.057	--	--	--
07...	0145	122	50	56.1	4	--	--	--	--	.060	--	--	--
08...	0535	108	50	60.1	9	.84	.039	1.42	.032	.070	<2.0	--	30
08...	1401	106	50	57.4	3	.85	.026	1.33	.022	.050	<2.0	--	10

04086265 MILWAUKEE RIVER AT COUNTY TRUNK HIGHWAY M NEAR NEWBURG, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Chloro- phyll a wat unfltrd method, uncorr, ug/L (32210)	Copper, water, unfltrd recover- able, ug/L (01119)	Zinc, water, unfltrd recover- able, ug/L (01094)	Sus- pended sedi- ment concentration mg/L (80154)
OCT					
08...	--	--	--	--	--
08...	--	--	--	--	--
09...	--	--	--	--	--
09...	--	--	--	--	--
09...	--	--	--	--	--
09...	--	--	--	--	--
10...	--	--	--	--	--
10...	--	--	--	--	--
10...	--	--	--	--	--
12...	--	--	--	--	--
12...	--	--	--	--	--
23...	--	--	--	--	--
24...	--	--	--	--	--
24...	--	--	--	--	--
24...	--	--	--	--	--
24...	240	6.38	2	<20	3
24...	--	--	--	--	--
25...	90	3.79	2	<20	4
25...	70	4.33	1	<20	<2
26...	--	--	--	--	--
28...	100	10.7	1	<20	10
NOV					
01...	--	--	--	--	--
01...	--	--	--	--	--
02...	--	--	--	--	--
02...	--	--	--	--	--
02...	--	--	--	--	--
02...	--	--	--	--	--
03...	--	--	--	--	--
03...	--	--	--	--	--
03...	230	4.81	1	<20	6
03...	--	--	--	--	--
04...	--	--	--	--	--
04...	330	4.60	1	<20	7
04...	--	--	--	--	--
05...	--	--	--	--	--
06...	--	--	--	--	--
07...	--	--	--	--	--
08...	60	3.40	1	<20	6
08...	10	2.14	<1	<20	3

04086265 MILWAUKEE RIVER AT COUNTY TRUNK HIGHWAY M NEAR NEWBURG, WI—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.5	14.5	15.5	11.0	9.5	10.0	---	---	---	---	---	---
2	15.5	12.5	13.5	9.5	9.0	9.0	---	---	---	---	---	---
3	13.5	11.0	12.5	9.5	8.5	9.0	---	---	---	---	---	---
4	13.5	11.0	12.0	9.5	8.0	9.0	---	---	---	---	---	---
5	11.5	9.0	10.5	8.0	6.5	7.0	---	---	---	---	---	---
6	13.5	10.0	12.0	8.5	6.0	7.5	---	---	---	---	---	---
7	14.5	12.5	13.5	8.5	6.5	7.5	---	---	---	---	---	---
8	16.0	14.5	15.0	6.5	5.0	6.0	---	---	---	---	---	---
9	15.5	13.0	14.5	7.0	5.5	6.0	---	---	---	---	---	---
10	14.5	11.5	13.0	8.0	5.5	7.0	---	---	---	---	---	---
11	13.5	11.0	12.5	7.5	5.5	6.5	---	---	---	---	---	---
12	14.0	11.5	12.5	5.5	3.5	4.5	---	---	---	---	---	---
13	14.0	11.5	13.0	4.5	2.5	4.0	---	---	---	---	---	---
14	14.0	11.5	12.5	4.5	2.5	3.5	---	---	---	---	---	---
15	11.5	10.0	10.5	---	---	---	---	---	---	---	---	---
16	10.0	7.5	9.0	---	---	---	---	---	---	---	---	---
17	9.0	6.5	8.0	---	---	---	---	---	---	---	---	---
18	9.0	8.5	8.5	---	---	---	---	---	---	---	---	---
19	9.5	8.5	9.0	---	---	---	---	---	---	---	---	---
20	9.5	9.0	9.5	---	---	---	---	---	---	---	---	---
21	11.0	8.5	9.5	---	---	---	---	---	---	---	---	---
22	11.0	10.0	10.5	---	---	---	---	---	---	---	---	---
23	13.0	11.0	12.0	---	---	---	---	---	---	---	---	---
24	13.0	11.5	12.5	---	---	---	---	---	---	---	---	---
25	13.0	10.5	12.0	---	---	---	---	---	---	---	---	---
26	13.0	11.0	11.5	---	---	---	---	---	---	---	---	---
27	11.0	10.5	11.0	---	---	---	---	---	---	---	---	---
28	11.5	10.0	11.0	---	---	---	---	---	---	---	---	---
29	15.0	11.5	13.5	---	---	---	---	---	---	---	---	---
30	15.0	12.5	13.5	---	---	---	---	---	---	---	---	---
31	12.5	11.0	11.5	---	---	---	---	---	---	---	---	---
MONTH	16.5	6.5	11.8	11.0	2.5	6.9	---	---	---	---	---	---

04086265 MILWAUKEE RIVER AT COUNTY TRUNK HIGHWAY M NEAR NEWBURG, WI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.2	7.9	10.2	10.9	9.5	10.3	---	---	---	---	---	---
2	13.0	7.9	10.3	11.7	10.0	10.8	---	---	---	---	---	---
3	14.6	8.8	11.4	12.4	10.6	11.5	---	---	---	---	---	---
4	14.4	8.6	11.5	12.1	10.6	11.4	---	---	---	---	---	---
5	14.8	10.0	12.3	13.5	11.4	12.5	---	---	---	---	---	---
6	15.1	9.5	12.1	13.3	12.0	12.7	---	---	---	---	---	---
7	14.3	8.7	11.5	13.5	11.5	12.5	---	---	---	---	---	---
8	11.6	8.0	9.1	14.8	12.3	13.6	---	---	---	---	---	---
9	12.3	7.5	9.9	14.8	12.5	13.7	---	---	---	---	---	---
10	13.3	8.3	11.0	14.4	12.3	13.4	---	---	---	---	---	---
11	13.3	8.6	11.3	15.0	11.6	13.3	---	---	---	---	---	---
12	13.3	8.7	11.3	16.2	13.3	14.7	---	---	---	---	---	---
13	13.2	8.4	11.1	16.3	14.1	15.2	---	---	---	---	---	---
14	12.5	8.1	9.7	16.7	14.4	15.6	---	---	---	---	---	---
15	12.2	8.4	10.4	---	---	---	---	---	---	---	---	---
16	12.8	9.2	11.4	---	---	---	---	---	---	---	---	---
17	14.8	10.2	12.7	---	---	---	---	---	---	---	---	---
18	14.1	9.6	11.5	---	---	---	---	---	---	---	---	---
19	12.2	9.4	11.1	---	---	---	---	---	---	---	---	---
20	11.9	9.2	10.7	---	---	---	---	---	---	---	---	---
21	13.5	9.4	11.8	---	---	---	---	---	---	---	---	---
22	13.0	8.7	10.1	---	---	---	---	---	---	---	---	---
23	10.1	8.0	8.6	---	---	---	---	---	---	---	---	---
24	10.0	7.2	8.6	---	---	---	---	---	---	---	---	---
25	11.5	7.8	9.8	---	---	---	---	---	---	---	---	---
26	10.4	8.4	9.5	---	---	---	---	---	---	---	---	---
27	10.1	8.8	9.4	---	---	---	---	---	---	---	---	---
28	10.9	9.2	10.1	---	---	---	---	---	---	---	---	---
29	10.1	8.6	9.4	---	---	---	---	---	---	---	---	---
30	9.5	7.8	8.6	---	---	---	---	---	---	---	---	---
31	11.1	8.7	9.9	---	---	---	---	---	---	---	---	---
MONTH	15.1	7.2	10.5	16.7	9.5	12.9	---	---	---	---	---	---



## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086265 MILWAUKEE RIVER AT COUNTY TRUNK HIGHWAY M NEAR NEWBURG, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	863	791	841	743	710	728	---	---	---	---	---	---
2	859	688	786	725	675	698	---	---	---	---	---	---
3	837	779	810	723	704	714	---	---	---	---	---	---
4	835	790	818	725	700	713	---	---	---	---	---	---
5	851	794	832	709	690	702	---	---	---	---	---	---
6	852	807	836	712	686	698	---	---	---	---	---	---
7	860	819	844	712	682	696	---	---	---	---	---	---
8	863	697	807	704	680	695	---	---	---	---	---	---
9	793	704	766	700	668	686	---	---	---	---	---	---
10	793	755	779	703	672	689	---	---	---	---	---	---
11	806	758	787	703	671	689	---	---	---	---	---	---
12	811	766	793	716	677	698	---	---	---	---	---	---
13	818	777	799	718	683	700	---	---	---	---	---	---
14	826	796	810	727	694	710	---	---	---	---	---	---
15	836	788	819	---	---	---	---	---	---	---	---	---
16	840	791	820	---	---	---	---	---	---	---	---	---
17	835	771	810	---	---	---	---	---	---	---	---	---
18	834	787	814	---	---	---	---	---	---	---	---	---
19	833	777	814	---	---	---	---	---	---	---	---	---
20	837	800	822	---	---	---	---	---	---	---	---	---
21	837	790	819	---	---	---	---	---	---	---	---	---
22	831	787	814	---	---	---	---	---	---	---	---	---
23	827	686	775	---	---	---	---	---	---	---	---	---
24	769	721	746	---	---	---	---	---	---	---	---	---
25	791	746	767	---	---	---	---	---	---	---	---	---
26	788	747	769	---	---	---	---	---	---	---	---	---
27	761	721	748	---	---	---	---	---	---	---	---	---
28	757	724	743	---	---	---	---	---	---	---	---	---
29	757	723	747	---	---	---	---	---	---	---	---	---
30	758	651	714	---	---	---	---	---	---	---	---	---
31	740	707	719	---	---	---	---	---	---	---	---	---
MONTH	863	651	793	743	668	701	---	---	---	---	---	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

220

04086340 NORTH BRANCH MILWAUKEE RIVER NEAR FILLMORE, WI

LOCATION.--Lat 43°28'58", long 88°03'39", in NW 1/4 NW 1/4 sec.25, T.12 N., R.20 E., Washington County, Hydrologic Unit 04040003, on right bank on the upstream side of Highway M bridge.

DRAINAGE AREA.--148 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1968 to September 1981, May 2004 to November 2004 (discontinued).

REVISED RECORDS.--WDR WI: 1971(M); WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 795 ft (revised) above NGVD of 1929 from a topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e108	529	162	85	e34
2	---	---	---	---	---	---	---	e105	502	136	98	e34
3	---	---	---	---	---	---	---	e92	464	122	104	e33
4	---	---	---	---	---	---	---	e89	400	159	108	e33
5	---	---	---	---	---	---	---	e78	330	204	100	e33
6	---	---	---	---	---	---	---	e75	274	246	89	e33
7	---	---	---	---	---	---	---	e83	224	272	81	e31
8	---	---	---	---	---	---	---	e103	181	261	76	e31
9	---	---	---	---	---	---	---	e151	172	238	75	e32
10	---	---	---	---	---	---	---	e193	290	215	75	e33
11	---	---	---	---	---	---	---	e216	936	190	76	32
12	---	---	---	---	---	---	---	e221	1,820	177	76	32
13	---	---	---	---	---	---	---	e246	1,810	159	71	31
14	---	---	---	---	---	---	---	353	1,400	144	e64	32
15	---	---	---	---	---	---	---	403	1,010	137	e57	32
16	---	---	---	---	---	---	---	396	752	128	e55	34
17	---	---	---	---	---	---	---	368	632	125	65	29
18	---	---	---	---	---	---	---	338	511	128	76	29
19	---	---	---	---	---	---	---	300	437	139	83	29
20	---	---	---	---	---	---	---	348	387	145	79	29
21	---	---	---	---	---	---	---	560	343	139	70	28
22	---	---	---	---	---	---	---	978	308	129	62	27
23	---	---	---	---	---	---	---	1,260	272	113	56	28
24	---	---	---	---	---	---	---	1,280	260	100	53	29
25	---	---	---	---	---	---	---	1,060	263	90	57	28
26	---	---	---	---	---	---	---	837	256	e76	61	27
27	---	---	---	---	---	---	---	651	238	e74	70	27
28	---	---	---	---	---	---	---	503	226	e72	70	26
29	---	---	---	---	---	---	---	406	209	e69	64	e27
30	---	---	---	---	---	---	---	369	186	e67	59	e28
31	---	---	---	---	---	---	---	500	---	79	54	---
TOTAL MEAN	---	---	---	---	---	---	---	12,670	15,622	4,495	2,269	911
MAX	---	---	---	---	---	---	---	409	521	145	73.2	30.4
MIN	---	---	---	---	---	---	---	1,280	1,820	272	108	34
CFSM IN.	---	---	---	---	---	---	---	75	172	67	53	26
	---	---	---	---	---	---	---	2.76	3.52	0.98	0.49	0.21
	---	---	---	---	---	---	---	3.18	3.93	1.13	0.57	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2004, BY WATER YEAR (WY)

	66.8	73.6	74.8	54.8	64.4	232	218	132	112	58.6	58.3	74.3
MEAN	66.8	73.6	74.8	54.8	64.4	232	218	132	112	58.6	58.3	74.3
MAX	278	120	140	132	136	409	372	409	521	145	180	188
(WY)	(1982)	(1973)	(1974)	(1973)	(1976)	(1979)	(1979)	(2004)	(2004)	(2004)	(1979)	(1980)
MIN	22.5	31.8	19.8	15.6	18.3	78.0	65.4	26.9	29.6	13.1	8.36	15.7
(WY)	(1972)	(1977)	(1977)	(1977)	(1977)	(1980)	(1970)	(1977)	(1977)	(1970)	(1970)	(1969)

SUMMARY STATISTICS

FOR 2004 WATER YEAR

WATER YEARS 1968 - 2004

ANNUAL TOTAL	35,967		
ANNUAL MEAN	235		101
HIGHEST ANNUAL MEAN			278
LOWEST ANNUAL MEAN			39.5
HIGHEST DAILY MEAN	1,820	Jun 12	2,630
LOWEST DAILY MEAN	26	Sep 28	3.2
ANNUAL SEVEN-DAY MINIMUM	27	Sep 22	4.8
MAXIMUM PEAK FLOW	2,030	Jun 12	(a)3,100
MAXIMUM PEAK STAGE	11.87	Jun 12	11.87
ANNUAL RUNOFF (CFSM)	1.59		0.683
ANNUAL RUNOFF (INCHES)	9.04		9.28
10 PERCENT EXCEEDS	522		230
50 PERCENT EXCEEDS	108		58
90 PERCENT EXCEEDS	31		22

(a) Gage height 8.21 ft (datum then in use)

(e) Estimated

04086340 NORTH BRANCH MILWAUKEE RIVER NEAR FILLMORE, WI--Continued

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e27	64	---	---	---	---	---	---	---	---	---	---
2	e26	71	---	---	---	---	---	---	---	---	---	---
3	29	74	---	---	---	---	---	---	---	---	---	---
4	28	74	---	---	---	---	---	---	---	---	---	---
5	e26	72	---	---	---	---	---	---	---	---	---	---
6	27	70	---	---	---	---	---	---	---	---	---	---
7	29	67	---	---	---	---	---	---	---	---	---	---
8	39	57	---	---	---	---	---	---	---	---	---	---
9	50	50	---	---	---	---	---	---	---	---	---	---
10	45	48	---	---	---	---	---	---	---	---	---	---
11	40	47	---	---	---	---	---	---	---	---	---	---
12	38	42	---	---	---	---	---	---	---	---	---	---
13	38	39	---	---	---	---	---	---	---	---	---	---
14	39	37	---	---	---	---	---	---	---	---	---	---
15	37	e38	---	---	---	---	---	---	---	---	---	---
16	35	e35	---	---	---	---	---	---	---	---	---	---
17	35	e37	---	---	---	---	---	---	---	---	---	---
18	37	e39	---	---	---	---	---	---	---	---	---	---
19	38	e43	---	---	---	---	---	---	---	---	---	---
20	41	e62	---	---	---	---	---	---	---	---	---	---
21	42	e62	---	---	---	---	---	---	---	---	---	---
22	44	e51	---	---	---	---	---	---	---	---	---	---
23	53	e49	---	---	---	---	---	---	---	---	---	---
24	65	e46	---	---	---	---	---	---	---	---	---	---
25	60	e45	---	---	---	---	---	---	---	---	---	---
26	57	e42	---	---	---	---	---	---	---	---	---	---
27	55	e51	---	---	---	---	---	---	---	---	---	---
28	54	e69	---	---	---	---	---	---	---	---	---	---
29	62	e65	---	---	---	---	---	---	---	---	---	---
30	71	e59	---	---	---	---	---	---	---	---	---	---
31	68	---	---	---	---	---	---	---	---	---	---	---
TOTAL	1,335	1,605	---	---	---	---	---	---	---	---	---	---
MEAN	43.1	53.5	---	---	---	---	---	---	---	---	---	---
MAX	71	74	---	---	---	---	---	---	---	---	---	---
MIN	26	35	---	---	---	---	---	---	---	---	---	---
CFSM	0.29	0.36	---	---	---	---	---	---	---	---	---	---
IN.	0.34	0.40	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

MEAN	65.1	72.1	74.8	54.8	64.4	232	218	132	112	58.6	58.3	74.3
MAX	278	120	140	132	136	409	372	413	521	145	180	188
(WY)	(1982)	(1973)	(1974)	(1973)	(1976)	(1979)	(1979)	(2004)	(2004)	(2004)	(1979)	(1980)
MIN	22.5	31.8	19.8	15.6	18.3	78.0	65.4	26.9	29.6	13.1	8.36	15.7
(WY)	(1972)	(1977)	(1977)	(1977)	(1977)	(1980)	(1970)	(1977)	(1977)	(1970)	(1970)	(1969)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR (May - November)	FOR 2005 WATER YEAR (October - November)	WATER YEARS 1968 - 2005
ANNUAL TOTAL	39,030	2,940	
ANNUAL MEAN	182	48.2	100
HIGHEST ANNUAL MEAN			278
LOWEST ANNUAL MEAN			39.5
HIGHEST DAILY MEAN	1,820	74	2,630
LOWEST DAILY MEAN	26	26	3.2
ANNUAL SEVEN-DAY MINIMUM	27	27	4.8
MAXIMUM PEAK FLOW		75	(a)3,100
MAXIMUM PEAK STAGE		6.15	11.87
ANNUAL RUNOFF (CFSM)	1.23	0.326	0.679
ANNUAL RUNOFF (INCHES)	9.81	0.74	9.22
10 PERCENT EXCEEDS	422	70	230
50 PERCENT EXCEEDS	72	45	57
90 PERCENT EXCEEDS	30	29	22

(a) Gage height 8.21 ft (datum then in use)  
(e) Estimated

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May 13 to Nov. 15, 2004 (discontinued).  
 DISSOLVED OXYGEN: May 13 to Nov. 15, 2004 (discontinued).  
 SPECIFIC CONDUCTANCE: May 13 to Nov. 15, 2004 (discontinued).

INSTRUMENTATION.--Water-quality monitor since May 13, 2004.

REMARKS.--Temperature and specific conductance records good. Dissolved oxygen records fair due to numerous corrections, except for the period Nov. 8-15, which is poor.

EXTREMES FOR PERIOD MAY TO NOVEMBER 2004.--

WATER TEMPERATURE: Maximum, 25.0°C, July 22; minimum, 1.5°C, Nov. 13 and 14.  
 DISSOLVED OXYGEN: Maximum, 15.0 mg/L, Nov. 14; minimum, 3.0 mg/L, July 7.  
 SPECIFIC CONDUCTANCE: Maximum, 803 µS/cm, Nov. 10 and 11; minimum, 621 µS/cm, July 6 and 7.

TEMPERATURE, WATER, DEGREES CELSIUS  
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	19.0	14.5	16.5
15	---	---	---	---	---	---	---	---	---	16.5	12.5	14.5
16	---	---	---	---	---	---	---	---	---	17.0	12.5	15.0
17	---	---	---	---	---	---	---	---	---	19.5	15.0	17.0
18	---	---	---	---	---	---	---	---	---	19.0	16.5	17.5
19	---	---	---	---	---	---	---	---	---	17.5	14.0	16.0
20	---	---	---	---	---	---	---	---	---	21.0	16.5	18.0
21	---	---	---	---	---	---	---	---	---	19.5	15.5	17.0
22	---	---	---	---	---	---	---	---	---	15.5	14.5	15.0
23	---	---	---	---	---	---	---	---	---	15.5	14.0	15.0
24	---	---	---	---	---	---	---	---	---	15.0	13.5	14.5
25	---	---	---	---	---	---	---	---	---	15.0	12.5	14.0
26	---	---	---	---	---	---	---	---	---	17.5	13.0	15.0
27	---	---	---	---	---	---	---	---	---	17.5	14.0	15.5
28	---	---	---	---	---	---	---	---	---	18.0	14.5	16.0
29	---	---	---	---	---	---	---	---	---	16.0	13.5	14.0
30	---	---	---	---	---	---	---	---	---	13.5	12.5	13.0
31	---	---	---	---	---	---	---	---	---	15.5	13.0	14.0
MONTH	---	---	---	---	---	---	---	---	---	21.0	12.5	15.4





## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086340 NORTH BRANCH MILWAUKEE RIVER NEAR FILLMORE, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	JUNE			JULY			AUGUST			SEPTEMBER		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	753	721	737	791	775	783			
2	---	---	---	733	712	722	723	712	717	787	779	782			
3	---	---	---	740	726	733	731	716	726	780	772	774			
4	---	---	---	731	679	697	730	721	725	774	765	769			
5	---	---	---	679	637	655	754	730	744	774	768	772			
6	---	---	---	637	621	628	763	754	759	774	758	765			
7	---	---	---	632	621	625	765	758	762	763	753	758			
8	---	---	---	653	632	644	769	759	763	766	752	758			
9	---	---	---	671	651	663	762	748	756	772	755	763			
10	---	---	---	685	671	679	759	752	756	767	755	762			
11	---	---	---	697	684	692	754	742	748	771	759	766			
12	---	---	---	702	690	697	747	740	743	774	757	767			
13	---	---	---	727	702	718	751	737	747	773	760	767			
14	---	---	---	722	704	711	760	749	754	771	758	766			
15	---	---	---	713	705	709	762	751	758	767	741	756			
16	---	---	---	722	712	719	767	757	764	762	749	755			
17	---	---	---	726	712	718	764	733	744	769	751	761			
18	---	---	---	727	678	711	748	713	738	785	752	772			
19	---	---	---	678	633	648	725	711	715	768	753	762			
20	---	---	---	655	633	641	739	725	736	763	753	760			
21	---	---	---	676	655	666	743	737	740	765	755	760			
22	---	---	---	705	676	688	738	733	735	771	755	765			
23	---	---	---	722	705	714	743	733	737	788	760	779			
24	---	---	---	732	720	728	750	743	746	799	772	786			
25	---	---	---	747	732	740	756	747	752	794	772	784			
26	---	---	---	753	743	749	761	747	755	789	764	780			
27	---	---	---	760	749	756	761	741	748	781	760	773			
28	---	---	---	772	760	765	763	749	757	776	760	770			
29	---	---	---	771	760	765	761	751	757	783	762	776			
30	---	---	---	765	747	757	771	760	766	788	766	780			
31	---	---	---	752	746	749	776	763	769	---	---	---			
MONTH	---	---	---	772	621	703	776	711	747	799	741	769			
YEAR	799	621	740												

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC (00310)	E coli, m-TEC MF, water, col/100 mL (31633)
JUN													
30...	1410	185	40	34.9	12	1.2	.018	1.40	.112	.127	.163	<2.0	--
AUG													
02...	0045	92	50	39.5	--	--	--	--	--	--	.128	--	--
02...	1245	100	50	38.8	--	--	--	--	--	--	.116	--	--
03...	0045	103	50	38.0	--	--	--	--	--	--	.142	--	--
03...	1145	103	50	36.6	--	--	--	--	--	--	.151	--	--
04...	0045	106	50	37.2	--	--	--	--	--	--	.152	--	--
04...	1145	108	50	36.1	--	--	--	--	--	--	.150	--	--
05...	0045	107	50	37.3	--	--	--	--	--	--	.173	--	--
05...	1146	101	50	38.5	--	--	--	--	--	--	.404	--	--
17...	2315	72	50	42.7	16	--	--	--	--	--	.096	--	--
18...	1115	75	50	42.4	15	--	--	--	--	--	.101	--	--
18...	2315	80	50	40.7	14	--	--	--	--	--	.093	--	--
19...	1115	80	50	41.2	19	--	--	--	--	--	.108	--	--
19...	2315	84	50	42.0	20	--	--	--	--	--	.110	--	--
20...	1115	79	50	43.4	17	--	--	--	--	--	.113	--	--
20...	2315	75	50	43.2	13	--	--	--	--	--	.098	--	--
21...	1115	70	50	42.9	15	--	--	--	--	--	.114	--	--
SEP													
09...	1230	44	40	47.8	10	.78	<.015	3.11	.045	--	.085	<2.0	390
16...	1215	35	50	--	--	--	--	--	--	--	--	<2.0	350

## 04086340 NORTH BRANCH MILWAUKEE RIVER NEAR FILLMORE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Chlorophyll a wat unfr. method, uncorr, ug/L (32210)	Copper, water, unfltrd recover-able, ug/L (01119)	Mercury water fltrd, ng/L (50287)	Zinc, water, unfltrd recover-able, ug/L (01094)	Mercury suspnd sedimnt total, ng/L (62976)	Methylmercury water fltrd, ng/L (50285)	Methylmercury suspnd total, ng/L (62977)	Suspended sediment concentration mg/L (80154)
JUN 30...	--	2.95	2	--	<20	--	--	--	--
AUG 02...	--	--	--	--	--	--	--	--	17
02...	--	--	--	--	--	--	--	--	15
03...	--	--	--	--	--	--	--	--	9
03...	--	--	--	--	--	--	--	--	13
04...	--	--	--	--	--	--	--	--	11
04...	--	--	--	--	--	--	--	--	12
05...	--	--	--	--	--	--	--	--	16
05...	--	--	--	--	--	--	--	--	16
17...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
SEP 09...	280	8.41	2	.70	<20	.777	.10	.017	7
16...	620	--	--	--	--	--	--	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC (00310)	E coli, Defined Substr. Tech., water, MPN/100 mL (50468)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 08...	1345	40	50	49.4	4	--	--	--	--	.053	--	--	--
08...	1918	48	50	48.6	8	--	--	--	--	.065	--	--	--
09...	0730	48	50	50.8	11	--	--	--	--	.082	--	--	--
09...	1930	51	50	51.0	6	--	--	--	--	.064	--	--	--
10...	0730	44	50	51.2	5	--	--	--	--	.065	--	--	--
10...	1900	46	50	50.3	<2	--	--	--	--	.054	--	--	--
11...	0100	42	50	49.5	3	--	--	--	--	.056	--	--	--
11...	0700	39	50	50.1	5	--	--	--	--	.056	--	--	--
11...	1300	40	50	48.4	<3	--	--	--	--	.068	--	--	--
11...	1900	40	50	46.4	6	--	--	--	--	.070	--	--	--
12...	0100	38	50	47.6	4	--	--	--	--	.060	--	--	--
12...	1221	37	50	--	2	--	--	--	--	--	--	--	--
12...	1222	37	40	--	<2	--	--	--	--	--	--	--	--
22...	0445	43	50	45.2	6	--	--	--	--	.057	--	--	--
24...	0030	67	50	45.6	7	--	--	--	--	.067	--	--	--
24...	1410	64	50	--	2	--	--	--	--	--	--	--	--
24...	1411	64	40	--	5	--	--	--	--	--	--	--	--
24...	1413	64	50	46.6	3	.79	.048	2.83	.032	.067	<3.0	--	260
24...	2057	63	50	46.5	4	--	--	--	--	.067	--	--	--
25...	0657	57	50	47.8	4	.74	.042	2.69	.033	.064	<3.0	--	20
25...	1617	61	50	47.9	<3	.69	.037	2.71	.031	.061	<3.0	--	20
25...	1630	62	50	48.0	<2	--	--	--	--	.058	--	--	--
28...	1402	54	50	45.6	5	.67	.042	2.46	.044	.075	<2.0	75	--
29...	1315	63	50	44.4	4	--	--	--	--	.081	--	--	--
30...	0015	69	50	43.8	11	--	--	--	--	.077	--	--	--
31...	0015	70	50	47.0	8	--	--	--	--	.083	--	--	--
31...	1215	67	50	46.6	4	--	--	--	--	.093	--	--	--
NOV 01...	0015	65	50	46.9	5	--	--	--	--	.075	--	--	--
01...	1250	64	50	45.8	2	--	--	--	--	.075	--	--	--
01...	1927	65	50	45.2	4	--	--	--	--	.075	--	--	--
02...	0130	67	50	44.8	3	--	--	--	--	.075	--	--	--
02...	0730	70	50	44.7	5	--	--	--	--	.077	--	--	--
03...	1046	73	50	46.5	4	.84	.064	2.28	.051	.089	<2.0	--	390
04...	1316	75	50	45.2	5	.79	.050	2.30	.040	.082	<2.0	--	290
04...	1330	75	50	45.2	4	--	--	--	--	.106	--	--	--
04...	1930	75	50	45.2	5	--	--	--	--	.101	--	--	--
08...	0930	56	50	46.2	3	--	--	--	--	.071	--	--	--
08...	1341	57	50	46.5	3	.90	.041	2.44	.033	.064	<2.0	--	30



## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086340 NORTH BRANCH MILWAUKEE RIVER NEAR FILLMORE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Chloro- phyll a wat unf trichr. method, uncorr, ug/L (32210)	Copper, water, unfltrd recover -able, ug/L (01119)	Zinc, water, unfltrd recover -able, ug/L (01094)	Sus- pended sedi- ment concentra- tion mg/L (80154)
OCT					
08...	--	--	--	--	--
08...	--	--	--	--	--
09...	--	--	--	--	--
09...	--	--	--	--	--
10...	--	--	--	--	--
10...	--	--	--	--	--
11...	--	--	--	--	--
11...	--	--	--	--	--
11...	--	--	--	--	--
11...	--	--	--	--	--
12...	--	--	--	--	--
12...	--	--	--	--	--
12...	--	--	--	--	--
22...	--	--	--	--	--
24...	--	--	--	--	--
24...	--	--	--	--	--
24...	--	--	--	--	--
24...	280	2.75	2	<20	3
24...	--	--	--	--	--
25...	40	1.76	2	<20	3
25...	30	1.93	1	<20	<2
25...	--	--	--	--	--
28...	80	4.02	<1	<20	2
29...	--	--	--	--	--
30...	--	--	--	--	--
31...	--	--	--	--	--
31...	--	--	--	--	--
NOV					
01...	--	--	--	--	--
01...	--	--	--	--	--
01...	--	--	--	--	--
02...	--	--	--	--	--
02...	--	--	--	--	--
03...	480	2.03	1	<20	4
04...	250	2.54	<1	<20	5
04...	--	--	--	--	--
04...	--	--	--	--	--
08...	--	--	--	--	--
08...	50	1.36	1	<20	2

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086340 NORTH BRANCH MILWAUKEE RIVER NEAR FILLMORE, WI—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.0	12.0	13.5	10.5	9.0	9.5	---	---	---	---	---	---
2	14.5	11.0	12.5	9.0	8.5	8.5	---	---	---	---	---	---
3	12.5	9.5	11.0	9.0	8.0	8.5	---	---	---	---	---	---
4	12.5	10.0	11.0	9.0	7.5	8.5	---	---	---	---	---	---
5	10.5	7.5	9.0	7.5	6.0	6.5	---	---	---	---	---	---
6	13.0	8.5	10.5	8.0	6.0	7.0	---	---	---	---	---	---
7	14.0	11.0	12.5	8.0	6.5	7.5	---	---	---	---	---	---
8	15.5	13.5	14.5	6.5	5.0	5.5	---	---	---	---	---	---
9	15.0	12.5	14.0	6.5	5.0	5.5	---	---	---	---	---	---
10	13.5	11.0	12.0	7.5	5.5	6.5	---	---	---	---	---	---
11	12.5	10.0	11.5	7.0	4.5	6.0	---	---	---	---	---	---
12	12.5	10.0	11.5	4.5	3.0	3.5	---	---	---	---	---	---
13	13.5	10.5	12.0	3.5	1.5	3.0	---	---	---	---	---	---
14	13.0	11.0	11.5	3.5	1.5	2.5	---	---	---	---	---	---
15	11.0	9.5	10.0	---	---	---	---	---	---	---	---	---
16	9.5	7.0	8.0	---	---	---	---	---	---	---	---	---
17	8.0	5.5	7.0	---	---	---	---	---	---	---	---	---
18	8.0	7.5	8.0	---	---	---	---	---	---	---	---	---
19	8.5	8.0	8.0	---	---	---	---	---	---	---	---	---
20	9.5	8.5	9.0	---	---	---	---	---	---	---	---	---
21	10.5	8.0	9.0	---	---	---	---	---	---	---	---	---
22	10.5	9.5	10.0	---	---	---	---	---	---	---	---	---
23	12.5	10.5	11.5	---	---	---	---	---	---	---	---	---
24	12.5	11.5	12.0	---	---	---	---	---	---	---	---	---
25	12.5	10.0	11.0	---	---	---	---	---	---	---	---	---
26	11.5	10.5	10.5	---	---	---	---	---	---	---	---	---
27	10.5	10.0	10.5	---	---	---	---	---	---	---	---	---
28	11.0	10.0	10.5	---	---	---	---	---	---	---	---	---
29	14.5	11.0	12.5	---	---	---	---	---	---	---	---	---
30	14.5	12.0	13.5	---	---	---	---	---	---	---	---	---
31	12.0	10.5	11.0	---	---	---	---	---	---	---	---	---
MONTH	15.5	5.5	10.9	10.5	1.5	6.3	---	---	---	---	---	---

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086340 NORTH BRANCH MILWAUKEE RIVER NEAR FILLMORE, WI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.9	8.1	9.4	8.5	7.1	7.8	---	---	---	---	---	---
2	10.7	7.6	9.1	9.1	7.8	8.5	---	---	---	---	---	---
3	11.4	8.7	10.1	9.4	8.1	8.7	---	---	---	---	---	---
4	11.6	8.4	10.1	9.1	8.0	8.5	---	---	---	---	---	---
5	11.6	9.5	10.7	10.6	8.6	9.6	---	---	---	---	---	---
6	10.8	8.3	9.7	10.5	9.2	9.8	---	---	---	---	---	---
7	9.8	7.9	9.0	10.0	8.6	9.3	---	---	---	---	---	---
8	9.6	6.7	7.3	11.6	9.1	10.5	---	---	---	---	---	---
9	9.2	6.2	7.4	12.0	10.3	11.2	---	---	---	---	---	---
10	10.5	7.4	8.8	11.9	10.2	11.0	---	---	---	---	---	---
11	10.3	8.0	9.2	11.8	9.6	10.9	---	---	---	---	---	---
12	10.2	7.9	9.0	13.8	11.4	12.8	---	---	---	---	---	---
13	9.6	7.5	8.6	14.5	13.1	13.8	---	---	---	---	---	---
14	8.9	6.7	7.6	15.0	13.4	14.2	---	---	---	---	---	---
15	10.2	6.9	8.3	---	---	---	---	---	---	---	---	---
16	11.3	8.1	9.9	---	---	---	---	---	---	---	---	---
17	12.7	9.7	11.3	---	---	---	---	---	---	---	---	---
18	12.0	9.3	10.5	---	---	---	---	---	---	---	---	---
19	10.5	8.8	9.7	---	---	---	---	---	---	---	---	---
20	10.0	8.3	9.2	---	---	---	---	---	---	---	---	---
21	10.8	8.3	9.7	---	---	---	---	---	---	---	---	---
22	10.0	7.7	8.7	---	---	---	---	---	---	---	---	---
23	8.0	6.9	7.4	---	---	---	---	---	---	---	---	---
24	7.6	6.5	7.0	---	---	---	---	---	---	---	---	---
25	8.9	6.7	7.8	---	---	---	---	---	---	---	---	---
26	8.2	6.9	7.6	---	---	---	---	---	---	---	---	---
27	7.5	6.8	7.2	---	---	---	---	---	---	---	---	---
28	8.3	6.6	7.5	---	---	---	---	---	---	---	---	---
29	7.6	6.1	6.9	---	---	---	---	---	---	---	---	---
30	6.9	5.5	6.3	---	---	---	---	---	---	---	---	---
31	8.2	6.6	7.3	---	---	---	---	---	---	---	---	---
MONTH	12.7	5.5	8.7	15.0	7.1	10.5	---	---	---	---	---	---

04086340 NORTH BRANCH MILWAUKEE RIVER NEAR FILLMORE, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	784	758	777	793	775	784	---	---	---	---	---	---
2	762	754	759	779	770	774	---	---	---	---	---	---
3	787	755	774	790	779	786	---	---	---	---	---	---
4	790	769	783	790	775	781	---	---	---	---	---	---
5	785	768	779	790	781	784	---	---	---	---	---	---
6	791	767	781	792	790	791	---	---	---	---	---	---
7	799	789	796	795	792	793	---	---	---	---	---	---
8	789	771	780	794	789	793	---	---	---	---	---	---
9	798	771	786	800	794	798	---	---	---	---	---	---
10	801	781	793	803	799	802	---	---	---	---	---	---
11	794	767	785	803	794	799	---	---	---	---	---	---
12	786	768	779	795	790	793	---	---	---	---	---	---
13	796	783	792	797	794	796	---	---	---	---	---	---
14	798	790	795	800	796	798	---	---	---	---	---	---
15	795	781	790	---	---	---	---	---	---	---	---	---
16	786	779	784	---	---	---	---	---	---	---	---	---
17	791	781	787	---	---	---	---	---	---	---	---	---
18	794	783	790	---	---	---	---	---	---	---	---	---
19	787	781	784	---	---	---	---	---	---	---	---	---
20	784	781	783	---	---	---	---	---	---	---	---	---
21	784	778	782	---	---	---	---	---	---	---	---	---
22	788	778	785	---	---	---	---	---	---	---	---	---
23	786	774	779	---	---	---	---	---	---	---	---	---
24	789	773	780	---	---	---	---	---	---	---	---	---
25	795	785	791	---	---	---	---	---	---	---	---	---
26	789	784	787	---	---	---	---	---	---	---	---	---
27	790	783	788	---	---	---	---	---	---	---	---	---
28	789	787	788	---	---	---	---	---	---	---	---	---
29	789	782	786	---	---	---	---	---	---	---	---	---
30	788	776	782	---	---	---	---	---	---	---	---	---
31	795	785	789	---	---	---	---	---	---	---	---	---
MONTH	801	754	784	803	770	791	---	---	---	---	---	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086360 MILWAUKEE RIVER AT WAUBEKA, WI

LOCATION.--Lat 43°28'22", long 87°59'23", in SW ¼ SE ¼ sec. 28, T.12 N., R.21 E., Ozaukee County, Hydrologic Unit 04040003, on right bank 300 ft downstream from Highway I bridge and 2.4 mi downstream from North Branch Milwaukee River.

DRAINAGE AREA.--432 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1968 to September 1981, October 1993 to September 1994, May 2004 to November 2004 (discontinued).

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 770 ft above NGVD of 1929 from a topographic map. Prior to Aug. 1, 1968, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e340	1,940	592	245	198
2	---	---	---	---	---	---	---	e328	2,080	524	261	190
3	---	---	---	---	---	---	---	e284	2,070	469	274	183
4	---	---	---	---	---	---	---	e271	1,950	678	298	176
5	---	---	---	---	---	---	---	e239	1,680	663	295	169
6	---	---	---	---	---	---	---	e227	1,370	650	262	162
7	---	---	---	---	---	---	---	e246	1,100	657	236	155
8	---	---	---	---	---	---	---	e315	901	633	223	e162
9	---	---	---	---	---	---	---	e486	805	574	224	e151
10	---	---	---	---	---	---	---	e618	e877	557	225	e150
11	---	---	---	---	---	---	---	e776	e2,220	512	229	e148
12	---	---	---	---	---	---	---	e802	4,520	500	251	e145
13	---	---	---	---	---	---	---	e1,010	5,140	456	279	e141
14	---	---	---	---	---	---	---	e1,310	e4,900	415	280	e135
15	---	---	---	---	---	---	---	e1,370	4,250	392	260	e130
16	---	---	---	---	---	---	---	e1,210	3,420	369	235	e123
17	---	---	---	---	---	---	---	e1,010	2,980	356	230	e125
18	---	---	---	---	---	---	---	e978	2,340	346	257	e126
19	---	---	---	---	---	---	---	e915	1,890	344	275	e120
20	---	---	---	---	---	---	---	1,070	e1,540	345	287	e119
21	---	---	---	---	---	---	---	1,600	1,260	329	269	e114
22	---	---	---	---	---	---	---	2,600	1,070	321	246	e111
23	---	---	---	---	---	---	---	3,320	936	285	228	e113
24	---	---	---	---	---	---	---	3,470	911	260	223	e111
25	---	---	---	---	---	---	---	3,310	874	247	214	e109
26	---	---	---	---	---	---	---	3,050	845	227	209	e108
27	---	---	---	---	---	---	---	2,710	786	214	223	e111
28	---	---	---	---	---	---	---	2,280	761	202	232	e107
29	---	---	---	---	---	---	---	1,840	722	191	231	e105
30	---	---	---	---	---	---	---	1,620	661	186	217	e102
31	---	---	---	---	---	---	---	1,990	---	219	207	---
TOTAL	---	---	---	---	---	---	---	41,595	56,799	12,713	7,625	4,099
MEAN	---	---	---	---	---	---	---	1,342	1,893	410	246	137
MAX	---	---	---	---	---	---	---	3,470	5,140	678	298	198
MIN	---	---	---	---	---	---	---	227	661	186	207	102
CFSM	---	---	---	---	---	---	---	3.11	4.38	0.95	0.57	0.32
IN.	---	---	---	---	---	---	---	3.58	4.89	1.09	0.66	0.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2004, BY WATER YEAR (WY)

	187	203	204	155	199	726	668	421	351	175	163	215
MEAN	187	203	204	155	199	726	668	421	351	175	163	215
MAX	514	395	351	459	420	1,364	1,329	1,342	1,893	410	476	596
(WY)	(1973)	(1973)	(1974)	(1973)	(1981)	(1975)	(1979)	(2004)	(2004)	(2004)	(1979)	(1972)
MIN	62.9	73.6	50.1	40.5	52.7	187	177	77.0	78.0	44.2	27.9	42.8
(WY)	(1977)	(1977)	(1977)	(1977)	(1977)	(1968)	(1970)	(1977)	(1994)	(1970)	(1970)	(1971)

SUMMARY STATISTICS

	FOR 2004 WATER YEAR (May - September)		WATER YEARS 1968 - 2004	
ANNUAL TOTAL	122,831			
ANNUAL MEAN	803		306	
HIGHEST ANNUAL MEAN			803	
LOWEST ANNUAL MEAN			110	
HIGHEST DAILY MEAN	5,140	Jun 13	6,740	Mar 23, 1975
LOWEST DAILY MEAN	(e)102	Sep 30	20	Aug 18, 1970
ANNUAL SEVEN-DAY MINIMUM	(e)108	Sep 24	22	Aug 16, 1970
MAXIMUM PEAK FLOW	5,180	Jun 13	6,990	Mar 23, 1975
MAXIMUM PEAK STAGE	10.61	Jun 13	11.35	Mar 23, 1975
INSTANTANEOUS LOW FLOW	(e)		19	Aug 18, 1970
ANNUAL RUNOFF (CFSM)	1.86		0.709	
ANNUAL RUNOFF (INCHES)	10.58		9.63	
10 PERCENT EXCEEDS	2,160		700	
50 PERCENT EXCEEDS	321		170	
90 PERCENT EXCEEDS	128		65	

(e) Estimated









## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086360 MILWAUKEE RIVER AT WAUBEKA, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	731	701	711	---	---	---
6	---	---	---	---	---	---	722	699	711	---	---	---
7	---	---	---	---	---	---	724	707	715	---	---	---
8	---	---	---	---	---	---	723	699	714	---	---	---
9	---	---	---	---	---	---	722	692	707	---	---	---
10	---	---	---	---	---	---	718	688	706	755	695	739
11	---	---	---	---	---	---	718	706	711	764	730	745
12	---	---	---	---	---	---	718	704	713	764	730	745
13	---	---	---	---	---	---	714	695	703	759	711	737
14	---	---	---	---	---	---	695	677	684	753	726	740
15	---	---	---	---	---	---	677	656	665	764	741	749
16	---	---	---	---	---	---	679	652	663	768	741	754
17	---	---	---	---	---	---	687	659	671	783	739	763
18	---	---	---	---	---	---	691	657	677	781	752	767
19	---	---	---	---	---	---	687	664	677	776	748	762
20	---	---	---	---	---	---	687	669	679	767	740	755
21	---	---	---	---	---	---	683	668	676	787	742	758
22	---	---	---	---	---	---	691	658	672	801	743	782
23	---	---	---	720	706	713	696	669	681	802	753	776
24	---	---	---	719	709	714	701	631	690	783	759	775
25	---	---	---	724	714	718	720	692	703	786	753	775
26	---	---	---	730	722	726	734	706	718	787	759	775
27	---	---	---	743	730	737	734	707	722	780	740	766
28	---	---	---	758	742	751	---	---	---	805	746	766
29	---	---	---	767	752	761	---	---	---	824	738	783
30	---	---	---	776	761	771	---	---	---	831	755	790
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	776	706	736	734	631	694	831	695	762
YEAR	831	631	728									

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, m-TEC MF, water, col/100 mL (31633)
JUL													
01...	1320	580	40	40.8	16	1.2	<.015	1.00	.079	.101	.134	<2.0	90
31...	1900	234	50	60.4	11	--	--	--	--	--	.120	--	--
AUG													
01...	1900	242	50	52.5	9	--	--	--	--	--	.118	--	--
02...	1900	265	50	51.7	18	--	--	--	--	--	.136	--	--
03...	1900	271	50	53.2	18	--	--	--	--	--	.207	--	--
04...	1900	307	50	52.5	17	--	--	--	--	--	.145	--	--
06...	0700	268	50	51.2	21	--	--	--	--	--	.156	--	--
07...	0700	239	50	51.2	23	--	--	--	--	--	.151	--	--
08...	0700	227	50	52.2	21	--	--	--	--	--	.148	--	--
21...	0830	273	50	46.9	11	--	--	--	--	--	.092	--	--
21...	0900	271	50	46.6	8	--	--	--	--	--	.085	--	--
21...	1015	271	50	46.2	7	--	--	--	--	--	.085	--	--
SEP													
09...	1445	142	40	65.0	4	.79	<.015	1.68	.028	--	.055	<2.0	80
16...	1130	125	50	--	--	--	--	--	--	--	--	<2.0	140

04086360 MILWAUKEE RIVER AT WAUBEKA, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Chlorophyll a wat unfltr method, uncorr, ug/L (32210)	Copper, water, unfltrd recover-able, ug/L (01119)	Mercury water fltrd, ng/L (50287)	Zinc, water, unfltrd recover-able, ug/L (01094)	Mercury suspnd sedimnt total, ng/L (62976)	Methylmercury water fltrd, ng/L (50285)	Methylmercury suspnd total, ng/L (62977)	Suspended sediment concentration mg/L (80154)
JUL 01...	40	8.65	2	--	<20	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
AUG 01...	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
SEP 09...	20	7.34	2	1.13	<20	.423	.10	<.010	<2
16...	180	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, Defined Substr. Tech., water, MPN/100 mL (50468)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 12...	1346	124	50	76.9	25	--	--	--	--	.050	--	--	--
12...	1347	124	40	72.1	<2	--	--	--	--	.030	--	--	--
23...	0630	146	50	72.8	3	--	--	--	--	.035	--	--	--
23...	1745	152	50	72.1	<2	--	--	--	--	.032	--	--	--
24...	0545	192	50	76.4	6	--	--	--	--	.048	--	--	--
24...	1145	181	50	75.6	7	--	--	--	--	.050	--	--	--
24...	1530	175	50	71.0	<2	.59	.029	2.08	.013	.040	<3.0	--	20
24...	1531	175	40	--	<2	--	--	--	--	--	--	--	--
24...	1532	175	50	--	<2	--	--	--	--	--	--	--	--
24...	2033	177	50	63.2	6	--	--	--	--	.044	--	--	--
25...	0315	194	50	68.8	7	--	--	--	--	.048	--	--	--
25...	0703	199	50	71.3	8	.92	.051	1.98	.015	.053	<3.0	--	20
25...	1541	196	50	66.0	<2	.73	.023	1.77	.016	.042	<3.0	--	<10
28...	1316	190	50	61.7	9	.83	.044	1.80	.022	.057	<2.0	62	--
NOV 01...	1430	205	50	58.1	<2	--	--	--	--	.072	--	--	--
01...	1445	203	50	57.8	<2	--	--	--	--	.058	--	--	--
01...	2045	205	50	60.8	2	--	--	--	--	.059	--	--	--
02...	0245	215	50	62.2	3	--	--	--	--	.065	--	--	--
02...	0845	229	50	60.6	<2	--	--	--	--	.059	--	--	--
02...	1445	232	50	59.5	2	--	--	--	--	.075	--	--	--
02...	2045	242	50	62.6	4	--	--	--	--	.083	--	--	--
03...	0245	239	50	62.0	5	--	--	--	--	.095	--	--	--
03...	0845	237	50	59.3	2	--	--	--	--	.066	--	--	--
03...	1141	237	50	58.5	3	.91	.034	1.55	.038	.074	<2.0	--	200
03...	1615	237	50	60.2	2	--	--	--	--	.061	--	--	--
04...	0415	237	50	62.0	11	--	--	--	--	.071	--	--	--
04...	1301	237	50	59.1	6	.99	.033	1.68	.033	.064	<2.0	--	70
05...	0100	242	50	61.3	4	--	--	--	--	.061	--	--	--
05...	1300	247	50	60.3	4	--	--	--	--	.062	--	--	--
06...	1300	247	50	60.4	4	--	--	--	--	.058	--	--	--
07...	1300	239	50	59.0	7	--	--	--	--	.061	--	--	--

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086360 MILWAUKEE RIVER AT WAUBEKA, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Chloro- phyll a wat unf trichr. method, uncorr, ug/L (32210)	Copper, water, unfltrd recover -able, ug/L (01119)	Zinc, water, unfltrd recover -able, ug/L (01094)	Sus- pended sedi- ment concen- tration mg/L (80154)
OCT					
12...	--	--	--	--	--
12...	--	--	--	--	--
23...	--	--	--	--	--
23...	--	--	--	--	--
24...	--	--	--	--	--
24...	--	--	--	--	--
24...	50	4.54	1	<20	<2
24...	--	--	--	--	--
24...	--	--	--	--	--
24...	--	--	--	--	--
25...	--	--	--	--	--
25...	40	7.00	2	<20	7
25...	20	3.44	1	<20	<2
28...	120	8.32	2	<20	8
NOV					
01...	--	--	--	--	--
01...	--	--	--	--	--
01...	--	--	--	--	--
02...	--	--	--	--	--
02...	--	--	--	--	--
02...	--	--	--	--	--
02...	--	--	--	--	--
03...	--	--	--	--	--
03...	--	--	--	--	--
03...	120	4.54	1	<20	3
03...	--	--	--	--	--
04...	--	--	--	--	--
04...	100	4.16	1	<20	5
05...	--	--	--	--	--
05...	--	--	--	--	--
06...	--	--	--	--	--
07...	--	--	--	--	--

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086360 MILWAUKEE RIVER AT WAUBEKA, WI—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	17.1	11.4	14.0	10.5	9.0	9.6	---	---	---	---	---	---
2	14.2	8.5	11.1	9.2	8.5	8.8	---	---	---	---	---	---
3	14.1	9.3	11.6	9.9	8.3	9.0	---	---	---	---	---	---
4	13.0	9.2	11.1	9.4	7.1	8.6	---	---	---	---	---	---
5	12.4	7.0	9.4	7.8	5.7	6.8	---	---	---	---	---	---
6	15.8	8.5	11.5	8.4	5.9	7.2	---	---	---	---	---	---
7	15.7	10.5	12.9	8.3	6.1	7.5	---	---	---	---	---	---
8	16.6	14.0	15.0	6.4	4.6	5.6	---	---	---	---	---	---
9	15.6	12.3	13.8	6.9	5.2	6.0	---	---	---	---	---	---
10	14.4	10.5	12.3	7.7	5.7	6.7	---	---	---	---	---	---
11	13.6	9.4	11.4	7.4	4.5	5.9	---	---	---	---	---	---
12	13.9	10.0	11.7	4.6	2.6	3.7	---	---	---	---	---	---
13	14.1	10.4	12.2	4.0	1.9	3.0	---	---	---	---	---	---
14	12.6	10.7	11.5	3.9	1.3	2.7	---	---	---	---	---	---
15	10.8	9.3	10.2	---	---	---	---	---	---	---	---	---
16	9.3	6.6	8.2	---	---	---	---	---	---	---	---	---
17	9.1	5.3	7.2	---	---	---	---	---	---	---	---	---
18	8.9	7.9	8.4	---	---	---	---	---	---	---	---	---
19	9.3	8.0	8.6	---	---	---	---	---	---	---	---	---
20	10.1	8.6	9.3	---	---	---	---	---	---	---	---	---
21	11.3	8.0	9.4	---	---	---	---	---	---	---	---	---
22	10.8	9.9	10.4	---	---	---	---	---	---	---	---	---
23	13.4	10.7	11.8	---	---	---	---	---	---	---	---	---
24	13.1	11.3	12.0	---	---	---	---	---	---	---	---	---
25	13.0	9.8	11.5	---	---	---	---	---	---	---	---	---
26	11.7	10.6	11.0	---	---	---	---	---	---	---	---	---
27	11.3	10.2	10.7	---	---	---	---	---	---	---	---	---
28	11.2	10.0	10.7	---	---	---	---	---	---	---	---	---
29	15.1	11.2	13.2	---	---	---	---	---	---	---	---	---
30	15.1	11.7	13.5	---	---	---	---	---	---	---	---	---
31	11.7	10.5	11.1	---	---	---	---	---	---	---	---	---
MONTH	17.1	5.3	11.2	10.5	1.3	6.5	---	---	---	---	---	---

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086360 MILWAUKEE RIVER AT WAUBEKA, WI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.6	8.3	11.5	12.9	9.8	11.0	---	---	---	---	---	---
2	19.4	8.5	12.6	14.8	10.5	12.1	---	---	---	---	---	---
3	17.8	9.3	12.5	15.4	10.9	12.5	---	---	---	---	---	---
4	18.3	8.9	12.8	14.6	10.8	12.3	---	---	---	---	---	---
5	18.5	10.5	13.6	16.6	12.0	13.7	---	---	---	---	---	---
6	17.5	9.8	12.8	16.0	12.0	13.6	---	---	---	---	---	---
7	17.8	8.8	11.9	15.7	11.5	13.2	---	---	---	---	---	---
8	13.3	7.3	9.2	18.0	12.8	14.8	---	---	---	---	---	---
9	13.8	7.2	9.7	17.6	13.3	14.8	---	---	---	---	---	---
10	14.8	8.1	10.7	17.9	12.4	14.5	---	---	---	---	---	---
11	16.2	8.8	11.5	17.8	12.1	14.5	---	---	---	---	---	---
12	15.8	8.7	11.4	19.7	14.2	16.6	---	---	---	---	---	---
13	16.3	8.3	11.3	20.3	15.5	17.3	---	---	---	---	---	---
14	12.7	7.9	9.8	20.9	15.9	17.6	---	---	---	---	---	---
15	15.1	8.6	11.2	---	---	---	---	---	---	---	---	---
16	16.8	9.7	12.7	---	---	---	---	---	---	---	---	---
17	19.0	11.6	14.5	---	---	---	---	---	---	---	---	---
18	16.6	10.6	13.0	---	---	---	---	---	---	---	---	---
19	17.2	10.5	13.2	---	---	---	---	---	---	---	---	---
20	17.0	10.1	12.6	---	---	---	---	---	---	---	---	---
21	19.5	10.6	14.0	---	---	---	---	---	---	---	---	---
22	14.2	9.7	11.7	---	---	---	---	---	---	---	---	---
23	15.4	9.2	11.0	---	---	---	---	---	---	---	---	---
24	14.9	8.9	11.0	---	---	---	---	---	---	---	---	---
25	15.5	9.5	11.7	---	---	---	---	---	---	---	---	---
26	14.0	9.2	11.1	---	---	---	---	---	---	---	---	---
27	13.1	9.4	10.8	---	---	---	---	---	---	---	---	---
28	14.0	9.8	11.3	---	---	---	---	---	---	---	---	---
29	13.8	8.4	10.4	---	---	---	---	---	---	---	---	---
30	12.7	7.5	9.6	---	---	---	---	---	---	---	---	---
31	14.0	9.2	10.9	---	---	---	---	---	---	---	---	---
MONTH	19.5	7.2	11.7	20.9	9.8	14.2	---	---	---	---	---	---

04086360 MILWAUKEE RIVER AT WAUBEKA, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	807	756	780	745	721	733	---	---	---	---	---	---
2	819	751	786	745	728	737	---	---	---	---	---	---
3	786	748	773	741	712	728	---	---	---	---	---	---
4	776	740	757	746	727	738	---	---	---	---	---	---
5	778	747	768	744	727	736	---	---	---	---	---	---
6	792	751	777	738	724	732	---	---	---	---	---	---
7	802	768	786	735	719	729	---	---	---	---	---	---
8	790	760	772	734	711	723	---	---	---	---	---	---
9	807	749	789	735	718	728	---	---	---	---	---	---
10	753	726	742	737	719	731	---	---	---	---	---	---
11	763	741	750	742	724	735	---	---	---	---	---	---
12	763	732	748	746	725	738	---	---	---	---	---	---
13	769	742	757	749	729	740	---	---	---	---	---	---
14	780	757	772	751	736	743	---	---	---	---	---	---
15	785	772	777	---	---	---	---	---	---	---	---	---
16	785	767	775	---	---	---	---	---	---	---	---	---
17	784	764	772	---	---	---	---	---	---	---	---	---
18	785	764	773	---	---	---	---	---	---	---	---	---
19	782	766	773	---	---	---	---	---	---	---	---	---
20	792	768	780	---	---	---	---	---	---	---	---	---
21	788	762	773	---	---	---	---	---	---	---	---	---
22	790	765	781	---	---	---	---	---	---	---	---	---
23	782	761	771	---	---	---	---	---	---	---	---	---
24	790	721	762	---	---	---	---	---	---	---	---	---
25	753	721	737	---	---	---	---	---	---	---	---	---
26	768	748	760	---	---	---	---	---	---	---	---	---
27	771	752	763	---	---	---	---	---	---	---	---	---
28	762	741	755	---	---	---	---	---	---	---	---	---
29	764	740	755	---	---	---	---	---	---	---	---	---
30	765	731	750	---	---	---	---	---	---	---	---	---
31	750	686	722	---	---	---	---	---	---	---	---	---
MONTH	819	686	766	751	711	734	---	---	---	---	---	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086500 CEDAR CREEK NEAR CEDARBURG, WI

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LOCATION.--Lat 43°19'23", long 87°58'43", in SE ¼ SW ¼ sec.14, T.10 N., R.21 E., Ozaukee County, Hydrologic Unit 04040003, on left bank 40 ft upstream from bridge on State Highway 60, 1.9 mi north of Cedarburg, and 6.6 mi upstream from mouth.

DRAINAGE AREA.--120 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1930 to September 1970, July 1973 to September 1981, August 1983 to September 1987, October 1990 to current year.

REVISED RECORDS.--WSP 1307: 1932-34(M), 1937(M), 1939(M), 1945(M), 1948-49(M). WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 795.33 ft above NGVD of 1929 (levels by Corps of Engineers). Nonrecording gage and crest-stage gage August 1930 to September 1970 at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	12	42	e27	e16	e130	241	93	642	100	29	32
2	9.4	20	41	e27	e16	e300	188	87	570	90	32	31
3	9.7	56	46	e27	e16	e420	157	78	441	85	31	30
4	11	156	44	e25	e16	e380	135	71	336	227	35	29
5	11	227	36	e25	e16	492	117	64	264	290	40	28
6	9.9	208	36	e25	e16	625	106	61	212	257	38	27
7	10	142	34	e25	e16	597	99	58	172	213	44	26
8	10	88	34	e24	e16	459	92	84	141	176	e57	26
9	9.8	62	35	e24	e16	354	85	209	131	148	e40	26
10	9.7	52	86	e24	e17	274	78	230	171	127	34	24
11	9.8	49	e170	e24	e17	217	73	324	400	111	34	23
12	11	49	e130	e25	e17	162	70	329	664	105	33	22
13	11	47	e150	e25	e17	141	67	477	734	104	32	21
14	14	43	e100	e25	e17	129	66	621	622	93	32	21
15	15	41	e80	e24	e17	122	61	727	472	84	31	20
16	16	40	e60	e24	e17	110	58	597	357	82	30	19
17	14	39	e44	e22	e18	105	62	439	352	94	30	19
18	13	49	e38	e20	e19	102	97	355	377	87	33	19
19	12	83	e37	e19	e19	100	114	314	334	77	31	18
20	12	75	e36	e19	e20	136	95	396	263	60	29	17
21	12	60	e34	e20	e20	152	281	803	206	55	27	17
22	12	52	e32	e20	e21	124	351	1,410	176	54	27	17
23	12	52	e30	e20	e24	108	302	1,970	152	49	27	16
24	12	66	e29	e19	e27	104	220	2,120	165	45	52	16
25	15	58	e29	e19	e28	116	201	1,450	186	43	47	15
26	18	52	e29	e18	e30	170	208	955	169	40	37	16
27	13	49	e28	e18	e34	218	176	671	142	37	37	16
28	12	48	e27	e18	e49	214	147	484	141	34	43	16
29	13	45	e27	e17	e70	318	121	361	133	32	40	16
30	12	43	e27	e17	---	347	98	336	e113	30	39	16
31	12	---	e27	e16	---	300	---	532	---	30	35	---
TOTAL	371.2	2,063	1,598	682	642	7,526	4,166	16,706	9,238	3,059	1,106	639
MEAN	12.0	68.8	51.5	22.0	22.1	243	139	539	308	98.7	35.7	21.3
MAX	18	227	170	27	70	625	351	2,120	734	290	57	32
MIN	9.4	12	27	16	16	100	58	58	113	30	27	15
CFSM	0.10	0.57	0.43	0.18	0.18	2.02	1.16	4.49	2.57	0.82	0.30	0.18
IN.	0.12	0.64	0.50	0.21	0.20	2.33	1.29	5.18	2.86	0.95	0.34	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)

MEAN	44.2	58.1	50.3	49.3	67.3	191	165	96.2	81.2	44.7	25.7	45.1
MAX	306	376	268	273	253	575	586	539	454	298	106	485
(WY)	(1955)	(1986)	(1992)	(1975)	(1984)	(1976)	(1993)	(2004)	(1996)	(1952)	(1960)	(1986)
MIN	5.65	6.66	4.92	3.74	5.32	19.9	38.9	14.0	3.34	1.40	1.45	2.48
(WY)	(1935)	(1938)	(1964)	(1940)	(1959)	(1940)	(1958)	(1958)	(1934)	(1936)	(1934)	(1932)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1930 - 2004

ANNUAL TOTAL	15,841.9	47,796.2	
ANNUAL MEAN	43.4	131	76.0
HIGHEST ANNUAL MEAN			168
LOWEST ANNUAL MEAN			(a)13.5
HIGHEST DAILY MEAN	589	May 12	3,320
LOWEST DAILY MEAN	7.3	Sep 7	0.20
ANNUAL SEVEN-DAY MINIMUM	(b)7.4	Jan 23	0.24
MAXIMUM PEAK FLOW			3,600
MAXIMUM PEAK STAGE			(c)12.25
INSTANTANEOUS LOW FLOW			0.20
ANNUAL RUNOFF (CFSM)	0.362		0.634
ANNUAL RUNOFF (INCHES)	4.91		8.61
10 PERCENT EXCEEDS	84		170
50 PERCENT EXCEEDS	19		34
90 PERCENT EXCEEDS	8.6		7.5

(a) Published erroneously at 7.16, 1930, in 1999-2001

(b) Ice affected

(c) From graph based on gage readings, backwater from ice

(e) Estimated due to ice effect or missing record

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086500 CEDAR CREEK NEAR CEDARBURG, WI—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.5	12.5	14.5	10.0	9.0	9.5	---	---	---	---	---	---
2	14.5	11.0	12.5	9.0	8.5	8.5	---	---	---	---	---	---
3	13.0	9.5	11.5	10.0	8.0	9.0	---	---	---	---	---	---
4	12.5	10.0	11.5	9.5	7.0	8.5	---	---	---	---	---	---
5	11.0	7.5	9.5	7.5	5.5	6.5	---	---	---	---	---	---
6	13.5	9.0	11.0	8.5	5.5	7.0	---	---	---	---	---	---
7	15.0	11.5	13.0	9.0	6.0	7.5	---	---	---	---	---	---
8	16.5	14.0	15.0	6.0	4.5	5.5	---	---	---	---	---	---
9	15.5	12.5	14.0	7.0	5.0	6.0	---	---	---	---	---	---
10	14.0	11.0	12.5	8.0	5.5	7.0	---	---	---	---	---	---
11	12.5	9.5	11.0	7.5	5.0	6.5	---	---	---	---	---	---
12	13.0	10.0	11.5	5.0	3.0	4.0	---	---	---	---	---	---
13	13.5	10.5	12.0	4.0	2.0	3.0	---	---	---	---	---	---
14	12.5	11.0	11.5	3.5	1.0	2.5	---	---	---	---	---	---
15	11.0	9.0	10.0	---	---	---	---	---	---	---	---	---
16	9.0	7.0	8.0	---	---	---	---	---	---	---	---	---
17	8.5	5.5	7.0	---	---	---	---	---	---	---	---	---
18	9.0	8.0	8.5	---	---	---	---	---	---	---	---	---
19	9.0	8.0	8.5	---	---	---	---	---	---	---	---	---
20	10.0	9.0	9.5	---	---	---	---	---	---	---	---	---
21	11.0	8.0	9.5	---	---	---	---	---	---	---	---	---
22	11.0	10.0	10.5	---	---	---	---	---	---	---	---	---
23	13.0	11.0	12.0	---	---	---	---	---	---	---	---	---
24	13.0	11.5	12.0	---	---	---	---	---	---	---	---	---
25	13.0	10.0	11.5	---	---	---	---	---	---	---	---	---
26	12.0	10.5	11.0	---	---	---	---	---	---	---	---	---
27	11.0	10.0	11.0	---	---	---	---	---	---	---	---	---
28	11.0	10.0	10.5	---	---	---	---	---	---	---	---	---
29	16.0	11.0	13.5	---	---	---	---	---	---	---	---	---
30	16.0	11.5	14.0	---	---	---	---	---	---	---	---	---
31	11.5	10.0	11.0	---	---	---	---	---	---	---	---	---
MONTH	16.5	5.5	11.3	10.0	1.0	6.5	---	---	---	---	---	---



## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086500 CEDAR CREEK NEAR CEDARBURG, WI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.5	7.9	10.7	11.7	8.4	9.9	---	---	---	---	---	---
2	14.9	7.7	10.6	14.1	9.2	11.3	---	---	---	---	---	---
3	15.7	9.2	11.7	15.1	9.8	11.8	---	---	---	---	---	---
4	15.3	8.6	11.4	14.5	9.4	11.5	---	---	---	---	---	---
5	16.1	10.0	12.4	16.7	10.6	13.1	---	---	---	---	---	---
6	15.6	9.6	11.9	16.3	10.9	12.9	---	---	---	---	---	---
7	15.4	8.1	11.0	16.3	9.8	12.6	---	---	---	---	---	---
8	13.1	6.7	9.3	18.6	11.3	14.3	---	---	---	---	---	---
9	13.8	7.4	9.9	17.9	11.6	14.2	---	---	---	---	---	---
10	14.6	8.2	10.8	18.3	11.2	13.9	---	---	---	---	---	---
11	16.1	9.0	11.9	18.3	10.2	13.9	---	---	---	---	---	---
12	15.8	9.3	12.1	19.9	12.4	15.6	---	---	---	---	---	---
13	16.0	8.7	11.8	20.2	13.9	16.5	---	---	---	---	---	---
14	12.6	8.4	10.5	20.5	14.6	16.9	---	---	---	---	---	---
15	14.1	8.8	11.2	---	---	---	---	---	---	---	---	---
16	14.9	9.6	12.1	---	---	---	---	---	---	---	---	---
17	17.0	11.1	13.6	---	---	---	---	---	---	---	---	---
18	14.0	9.9	11.9	---	---	---	---	---	---	---	---	---
19	13.4	9.5	11.4	---	---	---	---	---	---	---	---	---
20	13.3	8.9	10.8	---	---	---	---	---	---	---	---	---
21	16.0	9.4	12.3	---	---	---	---	---	---	---	---	---
22	11.5	8.5	10	---	---	---	---	---	---	---	---	---
23	11.0	7.3	8.8	---	---	---	---	---	---	---	---	---
24	12.0	7.0	8.9	---	---	---	---	---	---	---	---	---
25	14.3	7.7	10.2	---	---	---	---	---	---	---	---	---
26	11.8	7.8	9.5	---	---	---	---	---	---	---	---	---
27	11.2	7.9	9.3	---	---	---	---	---	---	---	---	---
28	12.3	8.3	10	---	---	---	---	---	---	---	---	---
29	13.2	7.3	9.4	---	---	---	---	---	---	---	---	---
30	11.8	5.5	8.3	---	---	---	---	---	---	---	---	---
31	14.2	7.7	10.3	---	---	---	---	---	---	---	---	---
MONTH	17.0	5.5	10.8	20.5	8.4	13.5	---	---	---	---	---	---

04086500 CEDAR CREEK NEAR CEDARBURG, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	809	766	794	---	---	---	---	---	---
2	---	---	---	768	746	755	---	---	---	---	---	---
3	---	---	---	765	740	750	---	---	---	---	---	---
4	---	---	---	774	750	764	---	---	---	---	---	---
5	---	---	---	780	758	769	---	---	---	---	---	---
6	---	---	---	784	757	767	---	---	---	---	---	---
7	---	---	---	767	750	758	---	---	---	---	---	---
8	---	---	---	761	743	751	---	---	---	---	---	---
9	874	856	863	760	741	749	---	---	---	---	---	---
10	863	815	843	755	738	747	---	---	---	---	---	---
11	831	807	820	754	735	745	---	---	---	---	---	---
12	857	785	829	759	745	751	---	---	---	---	---	---
13	836	754	800	757	744	749	---	---	---	---	---	---
14	819	756	794	757	745	752	---	---	---	---	---	---
15	875	819	853	---	---	---	---	---	---	---	---	---
16	881	871	877	---	---	---	---	---	---	---	---	---
17	881	869	875	---	---	---	---	---	---	---	---	---
18	882	867	874	---	---	---	---	---	---	---	---	---
19	882	867	873	---	---	---	---	---	---	---	---	---
20	891	867	878	---	---	---	---	---	---	---	---	---
21	874	856	865	---	---	---	---	---	---	---	---	---
22	881	859	874	---	---	---	---	---	---	---	---	---
23	876	842	853	---	---	---	---	---	---	---	---	---
24	854	842	850	---	---	---	---	---	---	---	---	---
25	842	795	810	---	---	---	---	---	---	---	---	---
26	849	816	835	---	---	---	---	---	---	---	---	---
27	851	834	841	---	---	---	---	---	---	---	---	---
28	842	828	837	---	---	---	---	---	---	---	---	---
29	835	824	830	---	---	---	---	---	---	---	---	---
30	829	814	822	---	---	---	---	---	---	---	---	---
31	820	807	815	---	---	---	---	---	---	---	---	---
MONTH	891	754	844	809	735	757	---	---	---	---	---	---





## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086500 CEDAR CREEK NEAR CEDARBURG, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	792	763	775	779	760	769
2	---	---	---	---	---	---	777	753	772	791	760	777
3	---	---	---	---	---	---	759	740	752	792	778	784
4	---	---	---	---	---	---	750	738	745	791	779	784
5	---	---	---	---	---	---	767	744	753	793	782	788
6	---	---	---	---	---	---	778	748	768	784	778	781
7	---	---	---	---	---	---	785	773	777	779	764	774
8	---	---	---	---	---	---	798	785	790	785	766	777
9	---	---	---	---	---	---	799	777	786	795	780	787
10	---	---	---	---	---	---	791	771	780	800	778	789
11	---	---	---	---	---	---	790	779	783	804	764	785
12	---	---	---	---	---	---	781	767	773	799	766	786
13	---	---	---	---	---	---	783	766	780	808	745	782
14	---	---	---	---	---	---	788	780	784	800	705	760
15	---	---	---	---	---	---	791	775	783	783	702	745
16	---	---	---	---	---	---	791	765	778	787	734	767
17	---	---	---	757	712	735	778	753	764	833	776	813
18	---	---	---	757	729	738	784	765	774	843	817	829
19	---	---	---	748	733	742	796	774	786	836	809	824
20	---	---	---	751	730	741	800	786	793	857	825	838
21	---	---	---	755	740	747	802	787	794	848	826	835
22	---	---	---	767	744	752	803	781	794	845	825	835
23	---	---	---	757	744	752	808	789	798	846	809	829
24	---	---	---	765	741	754	809	656	782	837	641	792
25	---	---	---	758	742	753	697	593	638	791	751	771
26	---	---	---	755	744	747	743	697	726	811	765	788
27	---	---	---	759	744	753	750	723	744	---	---	---
28	---	---	---	760	753	758	770	711	750	---	---	---
29	---	---	---	768	756	762	748	711	737	---	---	---
30	---	---	---	790	768	774	759	734	746	---	---	---
31	---	---	---	792	782	786	771	739	763	---	---	---
MONTH	---	---	---	792	712	753	809	593	767	857	641	792
YEAR	857	593	773									

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC (00310)	E coli, Defined Substr., water, MPN/100 mL (50468)
JUL													
01...	1530	97	40	51.9	6	1.1	.023	1.97	.036	.052	.070	<2.0	--
AUG													
05...	2115	40	50	66.4	6	--	--	--	--	--	.069	--	--
06...	2115	37	50	70.0	5	--	--	--	--	--	.062	--	--
07...	2115	48	50	68.9	4	--	--	--	--	--	.059	--	--
08...	1945	57	50	70.7	4	--	--	--	--	--	.058	--	--
09...	0230	40	50	71.1	7	--	--	--	--	--	.063	--	--
09...	0545	40	50	70.4	7	--	--	--	--	--	.063	--	--
09...	0700	40	50	69.1	5	--	--	--	--	--	.064	--	--
09...	0845	40	50	68.6	4	--	--	--	--	--	.061	--	--
20...	1339	29	50	74.1	3	--	--	--	--	--	.046	--	--
20...	1719	29	50	74.4	3	--	--	--	--	--	.043	--	--
21...	0527	28	50	74.0	4	--	--	--	--	--	.046	--	--
24...	0630	33	50	72.8	<3	--	--	--	--	--	.044	--	--
24...	0915	55	50	70.9	4	--	--	--	--	--	.047	--	--
24...	1529	68	50	71.9	5	--	--	--	--	--	.054	--	--
25...	0530	50	50	70.8	5	--	--	--	--	--	.058	--	--
25...	1200	46	50	57.6	11	.72	.061	1.50	.039	.052	.088	--	980
25...	1645	43	50	58.5	5	.85	.177	1.44	.036	.056	.086	--	130
26...	0345	40	50	62.2	5	.81	.044	1.44	.040	.056	.080	--	44
26...	2330	34	50	65.7	3	--	--	--	--	--	.079	--	--
27...	1000	36	50	66.4	<3	.50	.042	1.63	.051	.066	.085	--	110
27...	1007	36	50	--	<3	--	--	--	--	--	--	--	--
27...	1011	36	40	--	<3	--	--	--	--	--	--	--	--
SEP													
09...	1615	25	40	71.8	2	.48	<.015	1.54	.032	--	.050	<6.0	--
16...	1050	20	50	--	--	--	--	--	--	--	--	<2.0	--

## 04086500 CEDAR CREEK NEAR CEDARBURG, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Chloro- phyll a wat unfltrd trichr. method, uncorr, ug/L (32210)	Copper, water, unfltrd recover- able, ug/L (01119)	Mercury water fltrd, ng/L (50287)	Zinc, water, unfltrd recover- able, ug/L (01094)	Mercury suspnd sedimnt total, ng/L (62976)	Methyl- mercury water fltrd, ng/L (50285)	Methyl- mercury suspnd total, ng/L (62977)	Sus- pended sedi- ment concen- tration mg/L (80154)
JUL										
01...	120	80	3.60	2	--	<20	--	--	--	--
AUG										
05...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	1,500	4.61	2	--	<20	--	--	--	10
25...	--	160	5.34	2	--	30	--	--	--	7
26...	--	140	3.28	2	--	<20	--	--	--	5
26...	--	--	--	--	--	--	--	--	--	--
27...	--	120	2.34	3	--	<20	--	--	--	<2
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
SEP										
09...	120	180	.950	2	.92	<20	.020	.07	<.010	<2
16...	40	140	--	--	--	--	--	--	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Chlor- ide, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia + org-N, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)
OCT													
08...	1922	19	50	83.7	∅	--	--	--	--	.021	--	--	--
09...	1045	26	50	84.7	∅	--	--	--	--	.023	--	--	--
09...	1645	25	50	84.2	∅	--	--	--	--	.024	--	--	--
09...	2245	24	50	81.4	∅	--	--	--	--	.022	--	--	--
10...	0445	23	50	82.0	∅	--	--	--	--	.026	--	--	--
10...	1045	22	50	80.6	∅	--	--	--	--	.022	--	--	--
10...	1831	22	50	78.6	∅	--	--	--	--	.023	--	--	--
24...	1620	38	50	--	∅	--	--	--	--	--	--	--	--
24...	1621	38	40	--	∅	--	--	--	--	--	--	--	--
24...	1625	36	50	80.3	∅	.49	.021	1.97	.009	.033	<3.0	10	30
24...	1645	36	50	80.6	∅	--	--	--	--	.029	--	--	--
24...	2030	34	50	80.3	∅	--	--	--	--	.030	--	--	--
25...	0230	33	50	75.6	∅	--	--	--	--	.029	--	--	--
25...	0649	32	50	71.9	∅	.49	.016	1.70	.011	.030	<3.0	10	20
25...	1505	31	50	73.5	∅	.52	<.015	1.54	.011	.033	<3.0	36	10
NOV													
01...	1515	36	50	72.5	∅	--	--	--	--	.035	--	--	--
01...	1530	36	50	73.3	∅	--	--	--	--	.036	--	--	--
01...	1859	38	50	71.5	∅	--	--	--	--	.036	--	--	--
02...	0100	39	50	67.6	∅	--	--	--	--	.036	--	--	--
02...	0700	41	50	65.7	∅	--	--	--	--	.049	--	--	--
02...	1300	49	50	67.4	∅	--	--	--	--	.037	--	--	--
02...	1900	50	50	66.4	∅	--	--	--	--	.040	--	--	--
03...	0100	52	50	65.0	∅	--	--	--	--	.041	--	--	--
03...	0656	51	50	68.4	∅	--	--	--	--	.042	--	--	--
03...	1226	49	50	67.0	∅	.81	<.015	1.70	.022	.045	<2.0	70	100
03...	1245	49	50	65.9	∅	--	--	--	--	.050	--	--	--
04...	0045	43	50	66.8	∅	--	--	--	--	.056	--	--	--
04...	1151	43	50	71.8	∅	.67	<.015	1.59	.030	.057	<2.0	60	150
04...	1800	42	50	--	∅	--	--	--	--	.040	--	--	--
05...	0600	43	50	73.2	∅	--	--	--	--	.037	--	--	--
07...	1200	40	50	69.8	∅	--	--	--	--	.059	--	--	--
08...	0917	39	50	70.1	∅	.60	<.015	1.43	.025	.050	<2.0	20	30
08...	1541	36	50	70.3	∅	.52	<.015	1.37	.012	.030	<2.0	<1	30

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086500 CEDAR CREEK NEAR CEDARBURG, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chloro- phyll a wat unfltrd method, uncorr, ug/L (32210)	Copper, water, unfltrd recover -able, ug/L (01119)	Zinc, water, unfltrd recover -able, ug/L (01094)	Sus- pended sedi- ment concen- tration mg/L (80154)
OCT				
08...	--	--	--	--
09...	--	--	--	--
09...	--	--	--	--
09...	--	--	--	--
10...	--	--	--	--
10...	--	--	--	--
10...	--	--	--	--
24...	--	--	--	--
24...	--	--	--	--
24...	3.68	3	<20	<2
24...	--	--	--	--
24...	--	--	--	--
25...	--	--	--	--
25...	2.21	3	<20	<2
25...	2.74	2	<20	19
NOV				
01...	--	--	--	--
01...	--	--	--	--
01...	--	--	--	--
02...	--	--	--	--
02...	--	--	--	--
02...	--	--	--	--
02...	--	--	--	--
03...	--	--	--	--
03...	--	--	--	--
03...	2.03	2	<20	<2
03...	--	--	--	--
04...	--	--	--	--
04...	2.56	2	<20	<2
04...	--	--	--	--
05...	--	--	--	--
07...	--	--	--	--
08...	1.90	3	<20	<2
08...	2.22	1	<20	<2

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04086600 MILWAUKEE RIVER NEAR CEDARBURG, WI

LOCATION.--Lat 43°16'49", long 87°56'34", in NW ¼ NW ¼ sec.6, T.9 N., R.22 E., Ozaukee County, Hydrologic Unit 04040003, on right bank 60 ft downstream from Pioneer Road bridge, 2.6 mi southeast of Cedarburg, 1.0 mi west of I-43, and 26.25 mi upstream from mouth.

DRAINAGE AREA.--607 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 653.56 ft above NGVD of 1929 (Southeastern Wisconsin Regional Planning Commission bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	81	300	e230	e120	948	1,060	465	2,790	712	283	255
2	52	151	246	e230	e120	1,580	957	425	2,660	633	298	252
3	53	291	238	e220	e120	1,620	854	381	2,530	578	311	245
4	56	664	284	e210	e120	1,490	751	353	2,320	1,080	334	231
5	57	1,030	298	e210	e120	2,150	659	316	2,010	1,090	336	220
6	61	973	252	e210	e120	2,530	592	291	1,640	993	312	218
7	64	867	228	e200	e120	2,290	544	268	1,320	922	280	207
8	63	807	246	e200	e120	2,050	499	348	1,090	852	256	197
9	64	739	250	e190	e120	1,800	448	716	935	772	253	189
10	64	636	376	e190	e120	1,610	412	925	1,070	744	256	188
11	61	552	691	e190	e120	1,390	381	1,170	2,620	685	250	188
12	64	502	526	e200	e120	1,130	357	1,180	4,430	650	258	187
13	58	435	945	e210	e120	924	338	1,630	5,300	618	287	182
14	84	402	1,160	e200	e120	864	319	2,200	5,290	546	302	172
15	81	363	724	e190	e120	771	298	2,280	4,900	507	287	164
16	100	336	454	e190	e120	672	296	1,990	4,100	516	267	156
17	95	306	397	e180	e130	609	318	1,630	3,590	473	265	161
18	92	401	356	e150	e140	562	444	1,500	3,000	454	274	152
19	83	421	347	e140	e140	517	540	1,340	2,410	427	309	155
20	81	414	e340	e150	e150	563	536	1,650	1,950	422	319	152
21	77	371	e310	e150	e150	627	1,030	2,530	1,580	406	310	148
22	73	338	e290	e150	e160	615	1,230	4,020	1,330	383	298	144
23	73	337	261	e150	e190	584	1,100	5,170	1,160	356	286	145
24	83	367	e250	e140	e220	568	942	5,490	1,140	328	297	146
25	92	393	e250	e140	e240	587	914	4,860	1,090	333	307	139
26	90	385	e250	e130	e250	707	897	4,240	1,040	290	287	141
27	92	390	e240	e130	e300	802	799	3,660	968	269	304	143
28	77	383	e230	e130	e340	866	711	3,050	927	252	311	135
29	79	351	e230	e120	e600	1,180	620	2,470	888	235	298	133
30	83	326	e260	e120	---	1,230	516	2,230	803	223	287	129
31	86	---	e250	e120	---	1,150	---	2,800	---	229	265	---
TOTAL	2,285	14,012	11,479	5,370	4,930	34,986	19,362	61,578	66,881	16,978	8,987	5,274
MEAN	73.7	467	370	173	170	1,129	645	1,986	2,229	548	290	176
MAX	100	1,030	1,160	230	600	2,530	1,230	5,490	5,300	1,090	336	255
MIN	47	81	228	120	120	517	296	268	803	223	250	129
CFSM	0.12	0.77	0.61	0.29	0.28	1.86	1.06	3.27	3.67	0.90	0.48	0.29
IN.	0.14	0.86	0.70	0.33	0.30	2.14	1.19	3.77	4.10	1.04	0.55	0.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

MEAN	286	431	351	245	416	878	913	577	564	272	216	284
MAX	1,157	1,565	757	406	997	1,793	2,501	1,986	2,229	767	349	1,593
(WY)	(1987)	(1986)	(1983)	(1985)	(1984)	(1986)	(1993)	(2004)	(2004)	(1993)	(1987)	(1986)
MIN	73.7	121	120	81.6	89.4	270	328	219	89.5	69.7	69.5	73.5
(WY)	(2004)	(2003)	(1990)	(2003)	(2003)	(2003)	(2003)	(1988)	(1988)	(1988)	(1988)	(2003)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	89,124		252,122			
ANNUAL MEAN	244		689		453	
HIGHEST ANNUAL MEAN					720	
LOWEST ANNUAL MEAN					203	
HIGHEST DAILY MEAN	1,740	May 12	5,490	May 24	5,490	May 24, 2004
LOWEST DAILY MEAN	32	Sep 5	47	Oct 1	32	Sep 5, 2003
ANNUAL SEVEN-DAY MINIMUM	36	Sep 3	56	Oct 1	36	Sep 3, 2003
MAXIMUM PEAK FLOW			5,720	May 23	5,720	May 23, 2004
MAXIMUM PEAK STAGE			13.11	May 23	13.11	May 23, 2004
INSTANTANEOUS LOW FLOW			47	Oct 1	28	Sep 5, 2003
ANNUAL RUNOFF (CFSM)	0.402		1.13		0.746	
ANNUAL RUNOFF (INCHES)	5.46		15.45		10.13	
10 PERCENT EXCEEDS	492		1,630		980	
50 PERCENT EXCEEDS	130		318		279	
90 PERCENT EXCEEDS	53		120		117	

(e) Estimated due to ice effect or missing record



040869416 LINCOLN CREEK AT SHERMAN BOULEVARD AT MILWAUKEE, WI

LOCATION.--Lat 43°05'51", long 87°58'01", in SW ¼ SE ¼ NE ¼ sec.2, T79 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, on left bank at the corner of Sherman Boulevard and Congress Street.

DRAINAGE AREA.--9.56 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 2003 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 635 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated days, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.5	1.2	e1.9	e4.0	18	8.7	5.8	17	4.6	3.0	2.9
2	1.6	77	1.5	2.9	e4.7	10	5.8	3.5	11	4.8	2.8	2.0
3	6.7	77	1.9	2.6	e4.1	6.9	6.2	3.4	9.0	109	21	2.0
4	1.8	72	1.7	e2.1	e3.6	35	4.1	3.4	7.7	167	18	1.8
5	1.4	9.5	2.1	e1.8	e4.0	126	4.3	3.6	6.8	10	2.9	1.5
6	1.1	3.7	1.9	e1.6	e4.7	14	5.6	3.6	5.9	8.6	2.4	2.0
7	1.4	2.4	1.5	e1.8	e4.0	13	4.3	8.8	5.3	22	2.0	1.3
8	1.8	1.9	1.3	e2.1	e3.4	8.1	4.4	44	6.4	6.0	1.6	1.6
9	1.9	1.4	28	e2.1	e4.4	6.5	3.7	21	5.1	5.6	3.9	1.6
10	1.6	1.4	92	e2.1	e4.0	5.5	3.2	223	64	4.7	2.2	1.6
11	1.7	2.5	e8.3	e2.9	e5.0	5.1	3.4	51	71	92	2.1	1.4
12	4.8	1.6	e4.4	e3.4	e5.0	e4.5	3.3	16	30	57	2.9	1.2
13	2.1	1.4	3.0	e3.1	e4.7	3.9	3.2	174	9.2	20	2.4	1.3
14	25	1.5	3.1	e2.5	e4.7	9.8	3.3	225	14	8.0	2.1	1.5
15	3.2	1.5	2.7	e2.1	e3.3	4.1	3.2	40	7.7	6.5	1.5	5.9
16	1.7	1.4	6.5	e2.5	e3.3	3.7	3.2	18	6.0	10	1.6	3.9
17	1.5	1.5	2.9	e3.6	e4.2	7.6	27	33	17	6.2	16	2.1
18	1.3	61	2.4	e2.9	e7.9	9.3	8.1	55	6.1	4.7	2.5	1.5
19	1.0	5.9	e2.4	e2.4	e14	6.3	4.2	13	4.7	4.6	1.9	1.2
20	1.1	3.4	e2.6	e2.6	e19	e5.0	95	51	4.2	4.8	2.0	1.3
21	2.3	2.7	2.7	e3.4	e15	3.8	46	199	23	5.9	1.9	1.8
22	1.6	4.3	2.0	e2.6	e13	3.5	9.0	249	6.7	4.8	2.0	1.7
23	1.7	9.2	2.1	e2.9	e14	3.6	6.7	142	6.2	4.0	1.6	1.8
24	34	3.1	e2.4	e3.1	10	4.8	8.9	40	22	3.6	16	1.5
25	11	2.4	e2.0	e3.5	9.5	4.4	23	23	6.6	2.9	19	1.4
26	1.9	2.3	e2.0	e3.9	8.7	56	6.9	15	5.0	2.7	2.6	1.4
27	1.5	2.0	1.6	e3.4	8.1	7.5	5.1	13	13	2.6	40	1.5
28	3.3	1.4	14	e2.9	7.7	74	4.5	9.5	11	2.4	29	1.6
29	1.9	1.3	3.3	e2.5	8.2	26	4.2	15	5.0	2.5	8.9	1.6
30	2.2	1.3	2.4	e2.9	---	18	4.4	96	4.7	2.4	2.9	1.5
31	1.5	---	2.0	e3.3	---	8.9	---	40	---	2.2	2.4	---
TOTAL	127.3	359.5	207.9	83.4	206.2	512.8	322.9	1,837.6	411.3	592.1	221.1	55.4
MEAN	4.11	12.0	6.71	2.69	7.11	16.5	10.8	59.3	13.7	19.1	7.13	1.85
MAX	34	77	92	3.9	19	126	95	249	71	167	40	5.9
MIN	1.0	1.3	1.2	1.6	3.3	3.5	3.2	3.4	4.2	2.2	1.5	1.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	4.11	12.0	6.71	2.69	7.11	16.5	10.8	59.3	10.4	12.5	5.59	3.43
MAX	4.11	12.0	6.71	2.69	7.11	16.5	10.8	59.3	13.7	19.1	7.13	5.02
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)
MIN	4.11	12.0	6.71	2.69	7.11	16.5	10.8	59.3	7.08	5.85	4.04	1.85
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)	(2004)

SUMMARY STATISTICS

	FOR 2004 WATER YEAR		WATER YEARS 2003 - 2004	
ANNUAL TOTAL	4,937.5			
ANNUAL MEAN	13.5		13.5	
HIGHEST ANNUAL MEAN			13.5	
LOWEST ANNUAL MEAN			13.5	
HIGHEST DAILY MEAN	249	May 22	249	May 22, 2004
LOWEST DAILY MEAN	1.0	Oct 19	1.0	Oct 19, 2003
ANNUAL SEVEN-DAY MINIMUM	1.4	Sep 7	1.4	Sep 7, 2004
MAXIMUM PEAK FLOW	(a)1,900	Jul 4	(a)1,900	Jul 4, 2004
MAXIMUM PEAK STAGE	12.28	Jul 4	12.28	Jul 4, 2004
INSTANTANEOUS LOW FLOW	0.89	(b)Oct 20	0.89	(b)Oct 20, 2003
10 PERCENT EXCEEDS	28		28	
50 PERCENT EXCEEDS	3.9		3.9	
90 PERCENT EXCEEDS	1.5		1.5	

(a) From rating curve extended above 500 ft<sup>3</sup>/s  
(b) Also occurred Dec. 1, 2003  
(c) Estimated

040869416 LINCOLN CREEK AT SHERMAN BOULEVARD AT MILWAUKEE, WI—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 2003 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 2003 to current year.

SPECIFIC CONDUCTANCE: June 2003 to current year.

INSTRUMENTATION.--Continuous water temperature recorder and specific conductance recorder since June 2003. Sensor located near midstream.

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

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 30.5°C, Aug. 16 and 26, 2003; minimum, 0.0°C, many days during winter, 2004 water year.

SPECIFIC CONDUCTANCE: Maximum, 21,600 µS/cm, Feb. 6, 2004; minimum, 61 µS/cm, July 3 and 4, 2004.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 28.5°C, July 20, Aug. 1 and 3; minimum, 0.0°C, many days during winter.

SPECIFIC CONDUCTANCE: Maximum, 21,600 µS/cm, Feb. 6; minimum, 61 µS/cm, July 3 and 4.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	13.5	8.5	10.5	11.0	9.5	10.0	3.5	0.5	1.5	2.0	0.0	1.0
2	14.0	7.0	10.0	11.0	9.5	10.0	3.0	0.0	1.0	4.5	1.0	2.5
3	12.5	8.5	10.0	10.0	8.5	9.5	4.0	0.5	1.5	4.5	1.0	3.0
4	14.0	9.0	11.0	14.0	8.5	10.5	4.0	1.0	2.5	1.0	0.0	0.5
5	15.0	8.0	11.0	11.5	7.5	9.5	5.0	2.0	3.0	0.5	0.0	0.0
6	15.5	7.5	11.0	9.0	5.5	7.0	4.0	1.5	2.5	0.0	0.0	0.0
7	18.0	9.5	13.0	7.0	2.5	4.5	4.5	2.0	3.0	0.0	0.0	0.0
8	19.5	12.5	15.5	5.0	1.5	2.5	5.0	3.0	4.0	0.0	0.0	0.0
9	18.0	14.0	15.5	5.5	1.0	3.0	7.0	4.5	5.0	0.0	0.0	0.0
10	20.0	13.0	16.0	5.5	2.0	3.5	6.0	3.5	5.5	0.0	0.0	0.0
11	18.5	14.0	16.0	8.5	5.5	7.0	3.5	0.0	2.0	0.0	0.0	0.0
12	18.5	13.5	15.5	10.0	4.5	7.0	1.0	0.0	0.0	0.5	0.0	0.0
13	17.5	11.5	14.0	5.5	2.0	3.5	1.0	0.0	0.5	1.0	0.0	0.0
14	15.0	12.0	14.0	6.5	1.5	4.0	2.0	0.5	1.0	0.0	0.0	0.0
15	15.0	10.0	12.0	6.0	5.0	5.5	2.0	1.0	1.5	0.0	0.0	0.0
16	12.5	9.5	11.0	7.5	6.0	6.5	3.5	1.0	2.5	0.0	0.0	0.0
17	12.5	8.0	10.0	9.0	6.0	7.5	1.5	0.5	1.0	0.0	0.0	0.0
18	15.5	9.0	12.0	11.0	8.5	10.0	1.0	0.0	0.0	0.0	0.0	0.0
19	15.5	9.5	12.0	9.5	7.0	8.0	1.0	0.0	0.5	0.0	0.0	0.0
20	17.5	10.0	13.5	10.0	6.0	8.0	0.5	0.0	0.0	0.0	0.0	0.0
21	15.0	11.5	13.0	8.5	6.5	7.5	2.0	0.0	1.0	0.0	0.0	0.0
22	12.5	9.5	11.0	8.5	6.0	6.5	3.0	1.5	2.0	0.0	0.0	0.0
23	11.0	8.5	10.0	11.0	7.5	9.0	2.0	0.5	1.0	0.0	0.0	0.0
24	12.5	7.5	10.0	7.5	1.0	3.5	0.5	0.0	0.0	0.0	0.0	0.0
25	14.0	10.5	12.0	4.0	1.0	2.5	1.0	0.0	0.0	0.0	0.0	0.0
26	10.5	7.5	9.0	5.0	2.0	3.5	1.5	0.0	0.5	0.0	0.0	0.0
27	11.5	7.0	9.0	6.5	4.5	5.0	2.0	0.0	1.0	0.0	0.0	0.0
28	10.5	8.0	8.5	4.5	1.5	3.0	5.5	1.0	4.0	0.0	0.0	0.0
29	10.0	7.0	8.5	2.5	0.5	1.5	4.5	2.0	3.5	0.0	0.0	0.0
30	13.0	8.5	10.5	6.0	2.0	3.5	3.0	0.5	1.5	0.0	0.0	0.0
31	14.5	11.0	12.5	---	---	---	2.5	0.0	1.5	0.0	0.0	0.0
MONTH	20.0	7.0	11.9	14.0	0.5	6.1	7.0	0.0	1.8	4.5	0.0	0.2



040869416 LINCOLN CREEK AT SHERMAN BOULEVARD AT MILWAUKEE, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1,020	817	975	919	583	893	1,360	1,280	1,340	1,520	1,240	1,370
2	1,010	938	984	583	110	242	1,390	1,300	1,370	1,620	1,360	1,480
3	1,010	319	743	472	114	267	1,360	1,300	1,340	1,710	1,570	1,640
4	708	562	644	389	120	266	1,300	1,140	1,190	2,010	1,500	1,590
5	782	708	746	852	335	666	1,250	1,100	1,200	5,010	1,720	3,540
6	969	782	887	1,060	852	961	1,150	1,040	1,100	7,020	5,010	6,410
7	1,090	965	1,030	1,180	1,060	1,120	1,200	986	1,050	6,520	4,290	5,500
8	1,100	999	1,070	1,220	1,170	1,190	1,230	1,150	1,190	4,290	2,910	3,470
9	999	890	953	1,300	1,200	1,260	1,980	171	1,110	7,300	2,760	4,260
10	1,140	900	986	1,380	1,300	1,350	1,230	168	484	8,100	4,890	6,760
11	970	610	939	1,420	1,150	1,280	1,050	946	985	7,500	6,130	6,710
12	786	451	650	1,170	1,130	1,150	1,180	1,050	1,130	7,910	5,780	7,420
13	800	661	741	1,200	1,120	1,170	1,280	1,180	1,220	5,780	4,610	5,240
14	808	223	369	1,190	1,140	1,170	5,260	1,280	2,730	5,390	3,960	4,400
15	670	429	557	1,190	1,160	1,170	5,330	3,360	4,420	5,740	4,170	5,120
16	821	670	760	1,170	1,140	1,160	3,360	2,100	2,660	5,120	4,460	4,700
17	884	796	842	1,140	1,080	1,130	2,640	2,150	2,310	15,300	4,480	8,530
18	972	884	927	1,080	175	291	2,960	2,520	2,800	15,200	10,100	14,100
19	1,000	616	968	893	506	729	2,520	2,090	2,250	10,100	7,850	8,830
20	1,050	912	1,010	1,010	880	928	2,100	1,870	1,970	8,640	5,080	6,330
21	1,120	804	972	1,080	1,010	1,040	1,880	1,020	1,730	5,080	2,210	3,550
22	978	848	941	1,110	714	1,070	1,610	1,020	1,470	3,230	2,740	2,930
23	964	840	918	763	510	604	1,620	1,550	1,590	3,050	2,550	2,800
24	912	123	702	880	662	769	1,580	1,500	1,540	5,430	2,400	3,300
25	634	211	471	1,010	880	946	1,660	1,560	1,600	7,260	3,850	5,920
26	755	634	700	1,060	1,010	1,040	1,580	1,400	1,490	6,960	4,860	5,540
27	870	755	803	1,150	1,050	1,110	1,630	1,400	1,460	8,230	4,800	6,240
28	933	731	837	1,190	1,100	1,160	6,520	1,150	1,940	9,200	6,450	7,320
29	826	726	744	1,250	1,160	1,200	1,820	1,600	1,720	6,600	4,280	5,540
30	838	663	737	1,350	1,250	1,290	1,620	1,550	1,580	4,320	3,170	3,790
31	904	830	858	---	---	---	1,570	1,440	1,520	3,170	2,680	2,860
MONTH	1,140	123	821	1,420	110	954	6,520	168	1,660	15,300	1,240	5,070
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2,780	2,190	2,540	3,110	1,890	2,420	1,780	1,230	1,480	1,730	1,250	1,400
2	3,900	2,200	2,770	2,810	2,070	2,590	1,970	1,660	1,820	1,820	1,600	1,740
3	21,500	3,640	12,600	3,020	2,800	2,910	1,970	1,630	1,740	1,890	1,720	1,830
4	20,600	11,400	14,900	3,020	403	2,590	1,940	1,720	1,820	1,860	1,780	1,820
5	11,400	5,800	7,910	1,830	343	1,200	2,060	1,700	1,890	1,870	1,700	1,800
6	21,600	4,750	10,800	2,320	1,830	2,130	1,930	1,270	1,700	1,870	1,520	1,740
7	20,500	15,700	17,400	2,440	1,790	2,080	1,810	1,290	1,620	1,740	628	1,540
8	18,000	12,000	15,600	2,430	1,970	2,320	1,850	1,350	1,670	943	110	744
9	12,000	5,700	9,710	2,520	2,420	2,470	1,890	1,570	1,760	1,110	201	745
10	6,320	5,550	6,030	2,590	2,490	2,520	1,830	1,780	1,800	1,300	113	822
11	5,630	3,640	4,940	2,580	2,380	2,460	1,900	1,600	1,800	1,020	442	757
12	4,190	3,060	3,650	2,610	2,380	2,480	1,860	1,600	1,740	1,240	1,020	1,130
13	4,490	3,710	4,120	2,460	2,410	2,440	1,770	1,220	1,720	1,170	153	500
14	4,010	3,700	3,900	2,420	1,060	1,570	1,760	1,680	1,710	910	194	630
15	3,760	3,480	3,660	2,270	2,050	2,190	1,740	1,630	1,690	1,420	910	1,180
16	3,530	3,070	3,400	2,330	2,220	2,290	1,690	1,560	1,640	1,630	1,420	1,520
17	3,130	2,780	3,000	7,460	2,300	4,150	1,580	305	911	1,700	249	1,580
18	3,550	2,500	2,880	6,160	2,940	4,180	1,310	896	1,070	1,320	302	885
19	4,610	3,360	3,880	3,820	2,430	3,030	1,400	1,270	1,320	1,560	1,320	1,440
20	6,660	3,740	4,400	3,120	2,260	2,530	1,420	151	1,060	1,600	337	895
21	12,900	4,700	7,540	2,660	2,560	2,640	1,150	235	845	1,210	95	613
22	6,180	4,060	5,510	2,640	2,450	2,540	1,400	1,150	1,300	990	148	594
23	4,100	2,870	3,510	2,460	2,320	2,390	1,510	1,400	1,460	1,100	210	740
24	4,110	3,360	3,840	2,580	2,030	2,180	1,540	770	1,470	1,340	961	1,160
25	4,040	2,620	3,480	2,210	980	2,150	1,120	454	823	1,460	1,170	1,330
26	3,370	2,600	3,030	1,490	307	1,010	1,480	988	1,260	1,600	1,460	1,500
27	3,080	2,610	2,850	2,040	1,400	1,900	1,720	1,430	1,560	1,640	1,390	1,530
28	3,070	2,490	2,830	2,060	250	1,330	1,760	1,600	1,700	---	---	---
29	2,910	2,480	2,710	1,530	745	1,330	1,760	1,620	1,710	---	---	---
30	---	---	---	1,600	999	1,230	1,780	1,180	1,750	---	---	---
31	---	---	---	1,790	1,410	1,660	---	---	---	---	---	---
MONTH	21,600	2,190	5,980	7,460	250	2,290	2,060	151	1,530	1,890	95	1,190



## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI  
(NATIONAL WATER-QUALITY ASSESSMENT PROGRAM STATION)

LOCATION.--Lat 43°06'00", long 87°54'32", in NE ¼ NE ¼, sec.5, T.7 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, on left bank near northeast limits of Milwaukee in Estabrook Park, 2,000 ft downstream from Port Washington Road bridge and 6.6 mi upstream from mouth.

DRAINAGE AREA.--696 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1914 to current year. Published as "near Milwaukee" prior to 1936.

REVISED RECORDS.--WSP 564: 1918(M). WSP 924: 1940. WSP 1207: 1936(M). WSP 1337: 1915-17(M), 1918, 1919-21(M), 1922, 1923(M), 1924, 1925-33(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 607.23 ft above NGVD of 1929 (levels by U. S. Army Corps of Engineers). Prior to Apr. 6, 1929, nonrecording gage near present site at different datum. Apr. 6, 1929, to Jan. 8, 1934, nonrecording gage at bridge 0.5 mi upstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11). Occasional regulation caused by recreation dam approximately 1,200 ft upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	72	301	e200	e110	636	1,220	565	3,340	776	293	272
2	68	e148	281	e200	e110	892	1,080	523	e3,170	e729	326	261
3	84	e317	222	e190	e110	1,200	951	e464	2,920	754	358	252
4	81	e688	251	e180	e110	1,670	837	e430	2,700	e1,180	436	241
5	77	e1,040	280	e180	e110	2,990	735	e407	2,410	e1,200	374	228
6	78	930	258	e180	e110	3,140	661	398	2,010	e1,100	367	215
7	81	784	243	e170	e110	2,810	616	e356	e1,630	e1,020	336	210
8	77	708	235	e170	e110	2,490	571	e447	1,330	972	313	204
9	78	653	267	e170	e110	2,130	531	782	e1,280	e846	308	195
10	82	592	678	e160	e110	1,850	494	1,800	1,440	774	297	187
11	79	528	621	e160	e110	e1,600	467	1,810	e3,240	e729	296	182
12	85	462	531	e170	e110	1,330	443	e2,070	e4,810	e712	301	176
13	71	418	367	e180	e110	1,050	421	2,660	5,520	704	319	169
14	162	e388	430	e170	e110	944	405	3,690	6,160	625	340	163
15	104	343	519	e160	e110	865	390	3,280	5,900	569	338	164
16	90	314	475	e160	e110	759	369	2,610	5,070	e582	321	172
17	104	289	387	e150	e110	687	461	e2,030	4,250	573	349	148
18	98	507	334	e130	e120	654	457	e1,820	e3,610	518	e365	149
19	99	390	295	e120	e120	615	546	1,720	3,020	487	e392	142
20	e96	408	252	e130	e130	610	740	2,130	e2,510	473	e401	141
21	91	390	e240	e130	e130	665	1,350	e3,310	e2,010	459	e389	137
22	88	368	e230	e130	e140	673	1,460	5,460	1,610	447	e370	135
23	87	378	e220	e130	e170	649	1,300	6,130	1,350	416	e336	131
24	95	341	e210	e120	e200	631	1,090	7,050	e1,300	380	e338	124
25	e96	371	e210	e120	e210	625	1,070	6,280	e1,240	e380	e339	121
26	127	379	e210	e110	e230	919	1,020	5,190	1,150	328	301	119
27	84	377	e210	e110	e260	882	914	4,390	1,070	315	e337	119
28	75	365	e220	e110	e300	1,110	785	e3,680	1,020	298	365	121
29	67	352	e230	e110	475	1,520	697	e3,020	948	279	364	117
30	65	330	e220	e110	---	1,510	623	2,790	862	269	309	117
31	63	---	e210	e110	---	1,350	---	3,200	---	259	292	---
TOTAL	2,702	13,630	9,637	4,620	4,355	39,456	22,704	80,492	78,880	19,153	10,570	5,112
MEAN	87.2	454	311	149	150	1,273	757	2,597	2,629	618	341	170
MAX	162	1,040	678	200	475	3,140	1,460	7,050	6,160	1,200	436	272
MIN	63	72	210	110	110	610	369	356	862	259	292	117
CFSM	0.13	0.65	0.45	0.21	0.22	1.83	1.09	3.73	3.78	0.89	0.49	0.24
IN.	0.14	0.73	0.52	0.25	0.23	2.11	1.21	4.30	4.22	1.02	0.56	0.27

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2004, BY WATER YEAR (WY)

MEAN	276	349	298	252	391	1,032	967	541	436	233	211	266
MAX	1,316	1,956	981	864	2,200	3,545	3,024	2,597	2,629	1,200	2,936	2,304
(WY)	(1987)	(1986)	(1929)	(1916)	(1938)	(1929)	(1993)	(2004)	(2004)	(1952)	(1924)	(1938)
MIN	52.8	62.4	40.7	45.8	47.4	181	237	86.4	56.3	25.0	19.4	27.4
(WY)	(1947)	(1950)	(1964)	(1959)	(1959)	(1940)	(1958)	(1958)	(1934)	(1936)	(1934)	(1932)

## STREAMS TREIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1914 - 2004	
ANNUAL TOTAL	97,811		291,311			
ANNUAL MEAN	268		796		437	
HIGHEST ANNUAL MEAN					874	1986
LOWEST ANNUAL MEAN					112	1958
HIGHEST DAILY MEAN	1,870	May 12	7,050	May 24	14,800	Mar 20, 1918
LOWEST DAILY MEAN	49	Sep 7	63	Oct 31	(a)0.00	Sep 8, 1943
ANNUAL SEVEN-DAY MINIMUM	54	Sep 1	77	Oct 1	8.3	Aug 3, 1936
MAXIMUM PEAK FLOW			7,220	May 24	16,500	Jun 21, 1997
MAXIMUM PEAK STAGE			6.93	May 24	10.00	Jun 21, 1997
INSTANTANEOUS LOW FLOW			63	Oct 31	(a)0.00	Sep 8, 1943
ANNUAL RUNOFF (CFSM)	0.385		1.14		0.628	
ANNUAL RUNOFF (INCHES)	5.23		15.57		8.53	
10 PERCENT EXCEEDS	508		2,090		986	
50 PERCENT EXCEEDS	170		365		230	
90 PERCENT EXCEEDS	72		110		73	

(a) Result of regulation

(e) Estimated due to ice effect or missing record

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
OCT													
07...	1250	88	10	750	12.2	116	8.4	908	12.5	--	--	--	--
15...	1442	101	30	--	7.9	--	8.4	853	14.0	--	--	--	--
NOV													
04...	1220	688	10	743	11.4	100	7.8	630	8.6	--	--	--	--
DEC													
01...	1330	301	10	748	16.9	122	8.2	802	1.3	--	--	--	--
JAN													
06...	1105	180	40	758	18.8	129	8.1	1,160	-2	--	--	--	--
FEB													
03...	1110	110	40	750	14.4	100	7.8	1,440	-3	--	--	--	--
17...	1350	110	70	763	14.0	95	7.6	1,050	-2	87.9	45.2	4.06	73.3
MAR													
06...	1050	3,140	10	739	15.1	109	7.5	522	.9	47.5	22.8	4.38	31.0
APR													
07...	1145	612	10	750	12.4	112	8.1	747	9.8	--	--	--	--
MAY													
03...	1235	473	10	757	10.3	95	8.2	799	11.4	--	--	--	--
11...	1515	1,720	40	741	8.6	88	8.1	635	15.2	52.2	26.3	2.73	31.7
JUN													
01...	1220	3,110	10	741	9.3	95	7.6	501	15.2	--	--	--	--
JUL													
08...	1105	975	10	751	7.7	84	7.9	668	18.9	--	--	--	--
27...	1100	316	40	745	8.5	101	8.1	784	22.6	78.1	40.0	2.57	35.2
AUG													
05...	1015	371	10	--	--	--	--	--	--	72.6	40.1	2.66	37.1
12...	1105	300	10	754	7.6	83	7.9	801	18.9	--	--	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
OCT													
07...	--	231	254	13	133	--	--	45.0	--	--	<.04	.21	<.008
15...	--	--	--	--	--	--	--	--	--	.74	<.013	.410	--
NOV													
04...	--	160	193	<1	82.5	--	--	31.1	--	--	.17	.10	.022
DEC													
01...	--	238	283	4	71.1	--	--	68.4	--	--	E.02	1.65	E.006
JAN													
06...	--	268	319	4	178	--	--	64.4	--	--	.04	2.15	.009
FEB													
03...	--	312	373	3	257	--	--	52.1	--	--	.20	3.55	.022
17...	--	309	--	--	124	.2	12.1	52.5	603	--	.15	3.28	.014
MAR													
06...	149	142	171	1	60.5	<.2	7.87	33.4	325	--	.13	2.54	.064
APR													
07...	--	244	289	4	71.0	--	--	42.2	--	--	<.04	1.43	E.005
MAY													
03...	--	263	310	5	75.5	--	--	41.1	--	--	<.04	.78	E.006
11...	202	--	--	--	59.2	<.2	4.84	28.1	372	--	.04	1.17	.020
JUN													
01...	--	221	266	2	32.7	--	--	15.7	--	--	E.03	.56	.047
JUL													
08...	--	266	314	5	45.5	--	--	17.3	--	--	E.02	1.15	.008
27...	312	298	--	--	69.5	<.2	13.7	23.2	472	--	<.04	1.17	E.007
AUG													
05...	290	281	--	--	71.9	<.2	13.1	26.0	460	--	E.02	1.43	.010
12...	--	--	--	--	71.4	--	--	25.2	--	--	<.04	1.33	E.007



## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Particulate nitrogen, susp, water, mg/L (49570)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, water unfltrd, by analysis, mg/L (62855)	Total carbon, suspended sediment total, mg/L (00694)	Inorganic carbon, suspended sediment total, mg/L (00688)	Organic carbon, suspended sediment total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	COD, low level, water, unfltrd mg/L (00335)	Chlorophyll a water unfltrd, method, uncorr, ug/L (32210)	Iron, water, fltrd, ug/L (01046)
OCT 07...	.25	.006	--	.074	.89	1.6	<.1	1.6	5.8	--	--	--	--
15...	--	--	.045	.109	--	--	--	--	--	--	--	--	--
NOV 04...	.20	.025	--	.096	1.42	1.6	<.1	1.6	6.0	--	--	--	--
DEC 01...	.09	.030	--	.067	2.39	1.1	<.1	1.1	9.8	--	--	--	--
JAN 06...	.05	.027	--	.057	2.66	.6	<.1	.6	7.9	--	--	--	--
FEB 03...	.05	.072	--	--	--	.4	<.1	.4	4.8	--	--	--	--
17...	.05	.069	--	.094	3.66	.4	<.1	.4	4.6	<2.0	19	1.48	24
MAR 06...	.35	.062	--	.33	3.82	3.7	<.1	3.7	8.1	10.6	66	12.4	59
APR 07...	.17	.024	--	.086	2.22	2.0	<.1	2.0	10.6	--	--	--	--
MAY 03...	.17	.009	--	.046	1.64	1.3	<.1	1.3	9.9	--	--	--	--
11...	.16	.039	--	.158	2.16	1.2	<.1	1.2	8.7	2.4	34	29.8	31
JUN 01...	.27	.039	--	.140	1.72	2.7	<.1	2.7	11.5	--	--	--	--
JUL 08...	.11	.093	--	.161	2.15	1.3	<.1	1.2	14.1	--	--	--	--
27...	.16	.113	--	.044	1.89	1.6	<.1	1.6	10.1	2.0	47	7.98	17
AUG 05...	.13	.103	--	.162	2.03	1.2	<.1	1.2	--	<2.0	17	5.87	12
12...	.11	.102	--	.156	1.98	1.3	<.1	1.3	8.7	--	--	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ng/L (50287)	1,4-Dichloro-benzene, water, fltrd, ug/L (34572)	1-Methyl-naphthalene, water, fltrd, ug/L (62054)	1-Naphthol, water, fltrd, 0.7u GF ug/L (49295)	2,6-Di-ethyl-aniline, water, fltrd, 0.7u GF ug/L (82660)	2,6-Di-methyl-naphthalene, water, fltrd, ug/L (62055)	2-Chloro-2,6-diethyl acet-anilide, water, fltrd, ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl-6-methyl-aniline, water, fltrd, ug/L (61620)	2-Methyl-naphthalene, water, fltrd, ug/L (62056)	3,4-Di-chloro-aniline, water, fltrd, ug/L (61625)	3-beta-Coprostanol, water, fltrd, ug/L (62057)
OCT 07...	--	--	--	--	--	<.006	--	--	E.015	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	--	--	--	--	--	<.006	--	--	E.006	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	--	--	--	--	--	<.006	--	--	E.017	--	--	--	--
17...	6.4	--	<.5	<.5	--	--	<.5	--	--	--	<.5	--	M
MAR 06...	7.5	--	<.5	M	--	--	M	--	--	--	M	--	<2
APR 07...	--	--	--	--	--	<.006	--	--	E.015	--	--	--	--
MAY 03...	--	--	--	--	--	<.006	--	--	E.021	--	--	--	--
11...	4.0	--	E.1	M	<.09	<.006	<.5	<.005	E.046	<.004	M	<.004	<2
JUN 01...	--	--	--	--	--	<.006	--	--	E.042	--	--	--	--
JUL 08...	--	--	--	--	--	<.006	--	--	E.046	--	--	--	--
27...	6.9	.70	<.5	<.5	--	--	<.5	--	--	--	<.5	--	<2
AUG 05...	5.7	.87	<.5	<.5	<.09	<.006	<.5	<.005	E.021	<.004	<.5	.007	<2
12...	--	--	--	--	--	<.006	--	--	E.019	--	--	--	--

## 04087000 MILWAUKEE RIVER AT MILWAUKEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	3-Methyl-1H-indole, water, fltrd, ug/L (62058)	3-tert-Butyl-4-hydroxy-anisole, wat flt ug/L (62059)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)	4-Cumyl-phenol, water, fltrd, ug/L (62060)	4-Octyl-phenol, water, fltrd, ug/L (62061)	4-Nonyl-phenol, water, fltrd, ug/L (62085)	4-tert-Octyl-phenol, water, fltrd, ug/L (62062)	5-Methyl-1H-benzotriazole, wat flt ug/L (62063)	9,10-Anthraquinone, fltrd, ug/L (62066)	Aceto-chlor, water, fltrd, ug/L (49260)	Aceto-phenone, water, fltrd, ug/L (62064)	AHTN, water, fltrd, ug/L (62065)	Ala-chlor, water, fltrd, ug/L (46342)
OCT 07...	--	--	--	--	--	--	--	--	--	<.006	--	--	<.004
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	--	--	--	--	--	--	--	--	--	.009	--	--	<.005
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	--	--	--	--	--	--	--	--	--	<.006	--	--	<.005
17...	<1	<5	--	<1	<1	<5	<1	<2	<.5	--	<.5	E.1	--
MAR 06...	M	<5	--	<1	<1	M	<1	<2	E.1	--	E.1	E.1	--
APR 07...	--	--	--	--	--	--	--	--	--	<.006	--	--	<.005
MAY 03...	--	--	--	--	--	--	--	--	--	.012	--	--	<.005
11...	<1	<5	<.006	<1	<1	<5	<1	<2	E.1	.049	<.5	E.1	<.005
JUN 01...	--	--	--	--	--	--	--	--	--	.046	--	--	<.005
JUL 08...	--	--	--	--	--	--	--	--	--	.050	--	--	<.005
27...	<1	<5	--	<1	<1	<5	<1	<2	<.5	--	<.5	<.5	--
AUG 05...	<1	<5	E.004	<1	<1	<5	<1	<2	<.5	<.006	<.5	<.5	<.005
12...	--	--	--	--	--	--	--	--	--	<.006	--	--	<.005

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6, surrog, wat flt percent recovry (99995)	alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Anthra-cene, water, fltrd, ug/L (34221)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)	Azin-phos-methyl, water, fltrd, 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd, 0.7u GF ug/L (82673)	Benzo-[a]-pyrene, water, fltrd, ug/L (34248)	Benzo-phenone, water, fltrd, ug/L (62067)	beta-Sitos-terol, water, fltrd, ug/L (62068)	beta-Stigma-stanol, water, fltrd, ug/L (62086)	Bisphe-nol A, water, fltrd, ug/L (62069)
OCT 07...	<.005	--	106	--	.017	--	<.050	<.010	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	<.005	--	83.4	--	.014	--	<.050	<.010	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	<.005	--	107	--	.017	--	<.050	<.010	--	--	--	--	--
17...	--	--	--	M	--	--	--	--	<.5	<.5	<2	<2	<1
MAR 06...	--	--	--	<.5	--	--	--	--	<.5	E.1	<2	<2	<1
APR 07...	<.005	--	98.1	--	.018	--	<.050	<.010	--	--	--	--	--
MAY 03...	<.005	--	95.3	--	.053	--	<.050	<.010	--	--	--	--	--
11...	--	87.2	--	<.5	.137	<.02	<.050	E.004	<.5	<.5	<2	<2	M
JUN 01...	<.005	--	93.2	--	.312	--	<.050	<.010	--	--	--	--	--
JUL 08...	<.005	--	92.5	--	.516	--	<.050	<.010	--	--	--	--	--
27...	--	--	--	<.5	--	--	--	--	<.5	<.5	<20	<20	<1
AUG 05...	--	75.7	--	<.5	.037	<.07	<.050	<.010	<.5	<.5	<2	<2	<1
12...	<.005	--	90.2	--	.046	--	<.050	<.010	--	--	--	--	--

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Bisphenol A-d3 sur Sch 2033 & 8033, wat flt pct rcv (99583)	Bromacil, water, fltrd, ug/L (04029)	Butylate, water, fltrd, ug/L (04028)	Caffeine, water, fltrd, ug/L (50305)	Caffeine-13C sur Sch 2033 & 8033, wat flt pct rcv (99584)	Camphor water, fltrd, ug/L (62070)	Carbaryl, water, fltrd 0.7u GF (82680)	Carbazole, water, fltrd, ug/L (62071)	Carbofuran, water, fltrd 0.7u GF (82674)	Chlorpyrifos oxon, water, fltrd, ug/L (61636)	Chlorpyrifos water, fltrd, ug/L (38933)	Cholesterol, water, fltrd, ug/L (62072)	cis-Permethrin water fltrd 0.7u GF (82687)
OCT 07...	--	--	<.002	--	--	--	<.041	--	<.020	--	<.005	--	<.006
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	--	--	<.004	--	--	--	<.041	--	<.020	--	<.005	--	<.006
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	--	--	<.004	--	--	--	<.041	--	<.020	--	<.005	--	<.006
17...	59.1	<.5	--	E.1	105	<.5	<1	<.5	--	--	<.5	E1	--
MAR 06...	15.0	<.5	--	M	90.9	M	<1	M	--	--	<.5	M	--
APR 07...	--	--	<.004	--	--	--	<.041	--	<.020	--	<.005	--	<.006
MAY 03...	--	--	<.004	--	--	--	<.041	--	<.020	--	<.005	--	<.006
11...	126	<.5	--	E.1	117	M	E.010	M	--	<.06	<.005	<2	<.006
JUN 01...	--	--	<.004	--	--	--	E.027	--	<.020	--	<.005	--	<.006
JUL 08...	--	--	<.004	--	--	--	<.041	--	<.020	--	<.005	--	<.006
27...	130	<.5	--	<.5	104	<.5	<1	<.5	--	--	<.5	<20	--
AUG 05...	103	<.5	--	<.5	94.6	<.5	<.041	<.5	--	<.06	<.005	<2	<.006
12...	--	--	<.004	--	--	--	<.041	--	<.020	--	<.005	--	<.006

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Cotinine, water, fltrd, ug/L (62005)	Cyanazine, water, fltrd, ug/L (04041)	Cyfluthrin, water, fltrd, ug/L (61585)	Cypermethrin water, fltrd, ug/L (61586)	DCPA, water fltrd 0.7u GF (82682)	DecaF-biphenyl sur Sch 2033 & 8033, wat flt pct rcv (99585)	DEET, water, fltrd, ug/L (62082)	Desulf-inyl fipronil, water, fltrd, ug/L (62170)	Diazinon oxon, water, fltrd, ug/L (61638)	Diazinon, water, fltrd, ug/L (39572)	Diazinon-d10 surrog, wat flt percent recovery (99994)	Diazinon-d10 surrog, wat flt 0.7u GF percent recovery (91063)	Dicrotophos, water fltrd, ug/L (38454)
OCT 07...	--	<.018	--	--	<.003	--	--	<.004	--	.005	--	113	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	--	<.018	--	--	<.003	--	--	<.012	--	<.005	--	115	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	--	<.018	--	--	<.003	--	--	<.012	--	<.005	--	115	--
17...	<1.00	--	--	--	--	54.5	E.1	--	--	<.5	--	--	--
MAR 06...	<1.00	--	--	--	--	77.3	M	--	--	<.5	--	--	--
APR 07...	--	<.018	--	--	<.003	--	--	<.012	--	<.005	--	118	--
MAY 03...	--	<.018	--	--	<.003	--	--	<.012	--	<.005	--	100	--
11...	<1.00	--	<.008	<.009	<.003	82.6	M	<.012	<.01	E.005	97.8	--	<.08
JUN 01...	--	<.018	--	--	<.003	--	--	<.012	--	.006	--	112	--
JUL 08...	--	<.018	--	--	<.003	--	--	<.012	--	<.005	--	106	--
27...	<1.00	--	--	--	--	51.6	E.1	--	--	<.5	--	--	--
AUG 05...	<1.00	--	<.008	<.009	<.003	68.1	<.5	<.012	<.01	<.005	85.3	--	<.08
12...	--	<.018	--	--	<.003	--	--	<.012	--	<.005	--	111	--

## 04087000 MILWAUKEE RIVER AT MILWAUKEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Dieldrin, water, fltrd, ug/L (39381)	Di-ethoxy-nonyl-phenol, water, fltrd, ug/L (62083)	Di-ethoxy-octyl-phenol, water, fltrd, ug/L (61705)	Dimeth-oate, water, fltrd, 0.7u GF ug/L (82662)	Disul-foton, water, fltrd, 0.7u GF ug/L (82677)	D-Limo-nene, water, fltrd, ug/L (62073)	EPTC, water, fltrd, 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd, 0.7u GF ug/L (82663)	Ethion monoxon, water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Etho-prop, water, fltrd, 0.7u GF ug/L (82672)	Ethoxy-octyl-phenol, water, fltrd, ug/L (61706)	Fenami-phos sulfone, water, fltrd, ug/L (61645)
OCT 07...	<.005	--	--	--	<.02	--	<.002	<.009	--	--	<.005	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	<.009	--	--	--	<.02	--	<.004	<.009	--	--	<.005	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	<.009	--	--	--	<.02	--	<.004	<.009	--	--	<.005	--	--
17...	--	E2	<1	--	--	<.5	--	--	--	--	--	<1	--
MAR 06...	--	<5	<1	--	--	<.5	--	--	--	--	--	<1	--
APR 07...	<.009	--	--	--	<.02	--	<.004	<.009	--	--	<.005	--	--
MAY 03...	<.009	--	--	--	<.02	--	<.004	<.009	--	--	<.005	--	--
11...	<.009	<5	<1	<.006	--	<.5	--	--	<.03	<.004	--	<1	<.008
JUN 01...	<.009	--	--	--	<.02	--	<.004	<.009	--	--	<.005	--	--
JUL 08...	<.009	--	--	--	<.02	--	<.004	<.009	--	--	<.005	--	--
27...	--	<5	<1	--	--	<.5	--	--	--	--	--	<1	--
AUG 05...	<.009	<5	<1	<.006	--	<.5	--	--	<.0020	<.004	--	<1	<.049
12...	<.009	--	--	--	<.02	--	<.004	<.009	--	--	<.005	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Fenami-phos sulf-oxide, water, fltrd, ug/L (61646)	Fenami-phos, water, fltrd, ug/L (61591)	Desulf-inyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fluor-anthene water, fltrd, ug/L (34377)	Fluor-anthene -d10, sur Sch 20/8033 wat flt pct rcv (99586)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	HHCB, water, fltrd, ug/L (62075)	Hexa-zinone, water, fltrd, ug/L (04025)	Indole, water, fltrd, ug/L (62076)
OCT 07...	--	--	<.009	<.005	<.005	<.007	--	--	--	<.003	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	--	--	<.029	<.013	<.024	<.016	--	--	--	<.003	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	--	--	<.029	<.013	<.024	<.016	--	--	--	<.003	--	--	--
17...	--	--	--	--	--	--	M	105	--	--	E.1	--	<.5
MAR 06...	--	--	--	--	--	--	M	105	--	--	E.1	--	<.5
APR 07...	--	--	<.029	<.013	<.024	<.016	--	--	--	<.003	--	--	--
MAY 03...	--	--	<.029	<.013	<.024	<.016	--	--	--	<.003	--	--	--
11...	<.03	<.03	<.029	<.013	<.024	<.016	M	113	<.002	<.003	<.5	<.013	<.5
JUN 01...	--	--	<.029	<.013	<.024	<.016	--	--	--	<.003	--	--	--
JUL 08...	--	--	<.029	<.013	<.024	<.016	--	--	--	<.003	--	--	--
27...	--	--	--	--	--	--	M	127	--	--	<.5	--	<.5
AUG 05...	<.04	<.03	<.029	<.013	<.024	<.016	<.5	99.6	<.003	<.003	<.5	<.013	<.5
12...	--	--	<.029	<.013	<.024	<.016	--	--	--	<.003	--	--	--

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Ipro- dione, water, fltrd, ug/L (61593)	Isobor- neol, water, fltrd, ug/L (62077)	Isofen- phos, water, fltrd, ug/L (61594)	Iso- phorone water, fltrd, ug/L (34409)	Iso- propyl- benzene water, fltrd, ug/L (62078)	Iso- quin- oline, water, fltrd, ug/L (62079)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala- oxon, water, fltrd, ug/L (61652)	Mala- thion, water, fltrd, ug/L (39532)	Menthol water, fltrd, ug/L (62080)	Meta- laxyl, water, fltrd, ug/L (50359)	Meta- laxyl, water, fltrd, ug/L (61596)
OCT 07...	--	--	--	--	--	--	<.004	<.035	--	<.027	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	--	--	--	--	--	--	<.004	<.035	--	<.027	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	--	--	--	--	--	--	<.004	<.035	--	<.027	--	--	--
17...	--	<.5	--	<.5	<.5	<.5	--	--	--	--	<.5	<.5	--
MAR 06...	--	<.5	--	M	<.5	<.5	--	--	--	--	M	<.5	--
APR 07...	--	--	--	--	--	--	<.004	<.035	--	<.027	--	--	--
MAY 03...	--	--	--	--	--	--	<.004	<.035	--	<.027	--	--	--
11...	<1	<.5	<.003	<.5	<.5	<.5	--	--	<.008	<.027	<.5	<.5	<.005
JUN 01...	--	--	--	--	--	--	<.004	<.035	--	<.027	--	--	--
JUL 08...	--	--	--	--	--	--	<.004	<.035	--	<.027	--	--	--
27...	--	<.5	--	M	<.5	<.5	--	--	--	--	<.5	<.5	--
AUG 05...	<.387	<.5	<.003	<.5	<.5	<.5	--	--	<.030	<.027	<.5	<.5	<.005
12...	--	--	--	--	--	--	<.004	<.035	--	<.027	--	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Methi- alithion water, fltrd, ug/L (61598)	Methyl para- oxon, water, fltrd, ug/L (61664)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	Methyl salicy- late, water, fltrd, ug/L (62081)	Methyl- mercury water fltrd, ng/L (50285)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Moli- nate, water, fltrd 0.7u GF ug/L (82671)	Myclo- butanil water, fltrd, ug/L (61599)	Naphth- alene, water, fltrd, ug/L (34443)	Naprop- amide, water, fltrd 0.7u GF ug/L (82684)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, water, fltrd, ug/L (39542)
OCT 07...	--	--	<.006	--	--	E.006	<.006	<.002	--	--	<.007	<.003	<.010
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	--	--	<.015	--	--	E.009	<.006	<.003	--	--	<.007	<.003	<.010
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	--	--	<.015	--	--	<.013	<.006	<.003	--	--	<.007	<.003	<.010
17...	--	--	--	<.5	--	<.5	--	--	--	E.1	--	--	--
MAR 06...	--	--	--	<.5	--	E.1	--	--	--	M	--	--	--
APR 07...	--	--	<.015	--	--	E.009	<.006	<.003	--	--	<.007	<.003	<.010
MAY 03...	--	--	<.015	--	--	.016	<.006	<.003	--	--	<.007	<.003	<.010
11...	<.006	<.03	<.015	<.5	--	.037	<.006	--	<.008	M	--	--	--
JUN 01...	--	--	<.015	--	--	.206	<.006	<.003	--	--	<.007	<.003	<.010
JUL 08...	--	--	<.015	--	--	.096	.006	<.003	--	--	<.007	<.003	<.010
27...	--	--	--	<.5	.08	M	--	--	--	<.5	--	--	--
AUG 05...	<.006	<.03	<.015	<.5	.07	.014	<.006	--	<.008	<.5	--	--	--
12...	--	--	<.015	--	--	E.011	<.006	<.003	--	--	<.007	<.003	<.010

## 04087000 MILWAUKEE RIVER AT MILWAUKEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	p-Cresol, water, fltrd, ug/L (62084)	Pebulate, water, fltrd, 0.7u GF ug/L (82669)	Pendi-methalin, water, fltrd, 0.7u GF ug/L (82683)	Penta-chloro-phenol, water, fltrd, ug/L (34459)	Phenan-threne, water, fltrd, ug/L (34462)	Phenol, water, fltrd, ug/L (34466)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water fltrd, 0.7u GF ug/L (82664)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prome-ton, water, fltrd, ug/L (04037)	Prome-tryn, water, fltrd, ug/L (04036)	Propy-zamide, water, fltrd, 0.7u GF ug/L (82676)
OCT 07...	--	<.004	<.022	--	--	--	--	<.011	--	--	E.01	--	<.004
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	--	<.004	<.022	--	--	--	--	<.011	--	--	.01	--	<.004
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	--	<.004	<.022	--	--	--	--	<.011	--	--	.01	--	<.004
17...	<1	--	--	<2	M	.7	--	--	--	--	<.5	--	--
MAR 06...	M	--	--	M	M	E.3	--	--	--	--	<.5	--	--
APR 07...	--	<.004	<.022	--	--	--	--	<.011	--	--	<.01	--	<.004
MAY 03...	--	<.004	<.022	--	--	--	--	<.011	--	--	<.01	--	<.004
11...	<1	--	<.022	<2	M	.5	<.10	<.011	<.06	<.008	.01	<.005	<.004
JUN 01...	--	<.004	<.022	--	--	--	--	<.011	--	--	.01	--	<.004
JUL 08...	--	<.004	<.022	--	--	--	--	<.011	--	--	.01	--	<.004
27...	<1	--	--	<2	<.5	1.0	--	--	--	--	<.5	--	--
AUG 05...	<1	--	<.022	<2	<.5	<.5	<.10	<.011	--	--	.02	<.005	<.004
12...	--	<.004	<.022	--	--	--	--	<.011	--	--	.01	--	<.004

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd, 0.7u GF ug/L (82679)	Propar-gite, water, fltrd, 0.7u GF ug/L (82685)	Pyrene, water, fltrd, ug/L (34470)	Sim-a-zine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd, 0.7u GF ug/L (82670)	Terba-cil, water, fltrd, ug/L (82665)	Ter-bufos oxon sulfone water, fltrd, ug/L (61674)	Terbu-fos, water, fltrd, 0.7u GF ug/L (82675)	Ter-buthyl-azine, water, fltrd, ug/L (04022)	Tetra-chloro-ethene, water, fltrd, ug/L (34476)	Thio-bencarb water fltrd, 0.7u GF ug/L (82681)	Tri-allate, water, fltrd, 0.7u GF ug/L (82678)
OCT 07...	<.010	<.011	<.02	--	.009	<.02	<.034	--	<.02	--	--	<.005	<.002
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	<.025	<.011	<.02	--	.010	<.02	<.034	--	<.02	--	--	<.010	<.002
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	<.025	<.011	<.02	--	.007	<.02	<.034	--	<.02	--	--	<.010	<.002
17...	--	--	--	M	--	--	--	--	--	--	<.5	--	--
MAR 06...	--	--	--	M	--	--	--	--	--	--	M	--	--
APR 07...	<.025	<.011	<.02	--	.030	<.02	<.034	--	<.02	--	--	<.010	<.002
MAY 03...	<.025	<.011	<.02	--	.011	<.02	<.034	--	<.02	--	--	<.010	<.002
11...	--	--	--	M	.044	<.02	--	<.07	<.02	<.01	<.5	--	--
JUN 01...	<.025	<.011	<.02	--	.051	<.02	<.034	--	<.02	--	--	<.010	<.002
JUL 08...	<.025	<.011	<.02	--	.047	<.02	<.034	--	<.02	--	--	<.010	<.002
27...	--	--	--	M	--	--	--	--	--	--	<.5	--	--
AUG 05...	--	--	--	<.5	.013	<.02	--	<.07	<.02	<.01	<.5	--	--
12...	<.025	<.011	<.02	--	.013	<.02	<.034	--	<.02	--	--	<.010	<.002

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Tri-bromo-methane water, fltrd, ug/L (34288)	Tri-butyl phosphate, water, fltrd, ug/L (62089)	Triclo-san, water, fltrd, ug/L (62090)	Tri-ethyl citrate water, fltrd, ug/L (62091)	Tri-flur-alin, water, fltrd, ug/L (82661)	Tri-phenyl phosphate, water, fltrd, ug/L (62092)	Tris(2-butoxy-ethyl) phosphate, wat flt ug/L (62093)	Tris(2-chloro-ethyl) phosphate, wat flt ug/L (62087)	Tris(di-chloro-i-Pr) phosphate, wat flt ug/L (62088)	Di-chlor-vo-s, water fltrd, ug/L (38775)	Methyl-mercury suspnd total, ng/L (62977)	Sus-pended sedi-ment concen-tration mg/L (80154)
OCT 07...	--	--	--	--	<.009	--	--	--	--	--	--	72
15...	--	--	--	--	--	--	--	--	--	--	--	14
NOV 04...	--	--	--	--	--	--	--	--	--	--	--	47
DEC 01...	--	--	--	--	<.009	--	--	--	--	--	--	59
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	96
FEB 03...	--	--	--	--	<.009	--	--	--	--	--	--	115
17...	<.5	<.5	<1	E.1	--	M	E.1	E.1	E.1	<1.00	--	2
MAR 06...	<.5	E.1	<1	<.5	--	M	E.2	E.1	E.1	<1.00	--	124
APR 07...	--	--	--	--	<.009	--	--	--	--	--	--	89
MAY 03...	--	--	--	--	<.009	--	--	--	--	--	--	72
11...	<.5	<.5	<1	<.5	E.005	E.1	<.5	<.5	<.5	<.01	--	39
JUN 01...	--	--	--	--	<.009	--	--	--	--	--	--	86
JUL 08...	--	--	--	--	<.009	--	--	--	--	--	--	81
27...	<.5	<.5	<1	<.5	--	<.5	<.5	M	<.5	--	--	17
AUG 05...	<.5	<.5	<1	<.5	<.009	<.5	<.5	<.5	<.5	<.01	.035	13
12...	--	--	--	--	<.009	--	--	--	--	--	--	83

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instan-taneous dis-charge, cfs (00061)	Sam-pling method, code (82398)	Chlor-ide, water, fltrd, mg/L (00940)	Phos-phorus, water, unfltrd mg/L (00665)	Sus-pended sedi-ment concen-tration mg/L (80154)
JUN 01...	1315	3,350	50	--	.190	49
02...	0115	3,200	50	--	.157	34
02...	1500	3,030	50	--	.148	29
03...	0900	2,920	50	--	.144	28
04...	0300	2,630	50	32.2	.140	30
11...	2000	3,260	50	39.2	.147	21
12...	1145	4,550	50	27.8	.276	81
13...	1115	5,540	50	21.8	.219	60
14...	2015	6,230	50	20.0	.175	45
15...	2015	5,680	50	20.0	.177	35
16...	1231	5,050	50	20.0	.154	29
17...	0815	4,140	50	23.6	.194	29
18...	2015	3,470	50	27.8	.204	30
19...	2015	2,830	50	30.8	.205	26
23...	1315	1,330	50	41.3	.171	16
JUL 06...	1125	1,220	10	47.5	.159	23
06...	1215	1,220	50	45.7	.204	32
13...	1215	699	50	55.0	.137	15
AUG 17...	1235	338	50	75.3	.145	25
24...	2145	332	50	51.3	.217	132
24...	2315	332	50	53.7	.265	181
24...	2330	332	50	72.5	.200	32
SEP 16...	1005	173	50	88.7	.104	15

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087030 MENOMONEE RIVER AT MENOMONEE FALLS, WI

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LOCATION.--Lat 43°10'22", long 88°06'14", in SE ¼ NE ¼ sec.10, T.8 N., R.20 E., Waukesha County, Hydrologic Unit 04040003, on right bank, 150 ft upstream from Pilgrim Road (County Trunk Highway YY) bridge in Menomonee Falls, at mile 21.1.

DRAINAGE AREA.--34.7 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1974 to September 1977, July 1979 to current year.

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 755.51 ft above NGVD of 1929 (Wisconsin Department of Transportation benchmark). Prior to Aug. 20, 1996, water-stage recorder at present site at datum 2.01 ft lower.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11). Occasional regulation caused by dam in Menomonee Falls, about 1.0 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.7	12	15	e9.0	e59	82	31	214	19	7.0	4.9
2	1.6	31	11	16	e10	e80	62	28	184	16	6.9	4.4
3	2.3	54	11	17	e9.0	86	50	24	130	27	9.3	4.2
4	2.2	118	11	16	e8.0	85	42	22	79	84	11	4.2
5	2.2	99	11	e15	e8.0	195	37	20	52	84	7.8	3.8
6	2.1	57	10	e14	e8.0	210	35	18	43	78	6.3	3.5
7	1.9	34	9.9	e13	e8.0	184	33	18	37	64	5.6	3.7
8	1.8	23	10	e12	e8.0	147	32	24	32	47	5.1	3.1
9	1.7	17	16	e12	e8.0	108	29	41	36	37	5.6	3.0
10	1.7	15	e50	11	e8.0	76	26	127	63	32	5.2	3.6
11	1.9	16	e59	10	e8.0	60	25	186	137	27	5.4	3.3
12	2.9	15	e52	11	e8.0	46	23	173	180	24	5.3	3.1
13	2.2	13	e57	11	e8.0	39	22	276	180	20	4.9	3.0
14	5.1	12	43	10	e8.0	40	21	374	154	16	5.1	2.9
15	3.5	11	23	e10	e8.0	37	19	370	113	13	5.2	3.1
16	2.8	11	e22	e9.8	e8.0	34	19	286	72	12	4.8	3.2
17	2.8	11	e21	e9.4	e8.0	34	37	190	80	16	5.7	3.0
18	2.6	33	e19	e9.0	e8.2	35	41	144	94	15	5.0	2.9
19	2.4	30	e17	e9.0	e8.8	36	35	108	81	12	4.9	2.9
20	2.6	22	e15	e9.0	e9.6	45	50	125	61	9.4	4.3	3.3
21	2.2	18	e16	e9.0	e9.9	43	151	237	49	10	3.8	3.1
22	2.0	17	e14	e9.0	e11	37	148	510	44	9.6	3.6	2.7
23	2.1	23	e14	e9.0	e12	34	114	710	38	8.3	3.7	2.6
24	9.8	22	14	e8.4	e15	36	82	748	41	7.4	4.2	2.7
25	6.0	18	e14	e8.3	e15	37	79	556	43	6.8	4.3	3.0
26	4.1	15	e13	e8.2	e16	93	66	352	39	6.7	4.6	3.4
27	3.3	15	12	e8.0	e19	88	51	215	36	6.7	36	3.4
28	3.0	15	21	e8.0	e23	96	42	120	37	6.8	12	3.3
29	2.9	14	21	e8.0	e40	143	36	77	31	6.7	12	3.4
30	2.9	13	19	e8.0	---	131	32	112	23	6.8	7.2	3.4
31	2.6	---	17	e8.0	---	105	---	191	---	6.6	5.6	---
TOTAL	88.9	794.7	654.9	331.1	327.5	2,479	1,521	6,413	2,403	734.8	217.4	100.1
MEAN	2.87	26.5	21.1	10.7	11.3	80.0	50.7	207	80.1	23.7	7.01	3.34
MAX	9.8	118	59	17	40	210	151	748	214	84	36	4.9
MIN	1.6	2.7	9.9	8.0	8.0	34	19	18	23	6.6	3.6	2.6
CFSM	0.08	0.76	0.61	0.31	0.33	2.30	1.46	5.96	2.31	0.68	0.20	0.10
IN.	0.10	0.85	0.70	0.35	0.35	2.66	1.63	6.88	2.58	0.79	0.23	0.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

MEAN	18.9	26.7	22.6	17.3	32.6	57.4	63.4	41.1	34.5	18.8	14.0	18.1
MAX	94.3	137	70.4	72.8	95.9	124	193	207	142	86.1	34.9	151
(WY)	(1982)	(1986)	(1985)	(1988)	(2001)	(1976)	(1993)	(2004)	(1997)	(1994)	(1986)	(1986)
MIN	2.87	3.38	3.00	2.29	1.66	12.8	20.8	3.80	3.33	1.55	1.47	1.86
(WY)	(2004)	(1977)	(1977)	(1977)	(2003)	(2003)	(2003)	(1977)	(1988)	(1988)	(1988)	(1976)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1975 - 2004

ANNUAL TOTAL	5,946.0	16,065.4	
ANNUAL MEAN	16.3	43.9	30.3
HIGHEST ANNUAL MEAN			53.4
LOWEST ANNUAL MEAN			7.32
HIGHEST DAILY MEAN	202	May 12	748
LOWEST DAILY MEAN	(a)1.1	(b)Jan 20-25	1.6
ANNUAL SEVEN-DAY MINIMUM	(a)1.1	Feb 9	1.9
MAXIMUM PEAK FLOW			1,090
MAXIMUM PEAK STAGE			7.56
ANNUAL RUNOFF (CFSM)	0.469		1.26
ANNUAL RUNOFF (INCHES)	6.37		17.22
10 PERCENT EXCEEDS	40		113
50 PERCENT EXCEEDS	6.3		15
90 PERCENT EXCEEDS	1.4		3.1
			(c)1,500
			(d)8.31
			0.872
			11.85
			66
			14
			4.1

(a) Ice affected, except for Sept. 11

(b) Also occurred Feb. 9-16 and Sept. 11

(c) From rating curve extended above 717 ft<sup>3</sup>/s

(d) From floodmarks

(e) Estimated due to ice effect or missing record



04087030 MENOMONEE RIVER AT MENOMONEE FALLS, WI—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 2003 to September 2004.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January to September 2004 (discontinued).

INSTRUMENTATION.--Continuous specific conductance recorder from January to April 2004. Sensor located near the left edge of water.

REMARKS.--Records for specific conductance were faulty Feb. 19 to Mar. 17, and June 10, 12-14, 19-29.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,010 µS/cm, Feb. 7, 2004; minimum, 143 µS/cm, Aug. 27, 2004.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,010 µS/cm, Feb. 7; minimum, 143 µS/cm, Aug. 27.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	1,070	---	825	945	560	888	878	884
2	---	---	---	---	1,060	---	874	943	593	898	896	905
3	---	---	---	---	1,270	---	916	946	652	809	848	912
4	---	---	---	---	1,300	---	940	953	724	577	710	922
5	---	---	---	---	1,100	---	951	959	782	598	848	927
6	---	---	---	---	1,270	---	972	970	815	620	888	927
7	---	---	---	---	1,620	---	982	960	839	680	880	934
8	---	---	---	---	1,470	---	996	926	865	747	888	942
9	---	---	---	---	1,200	---	1,010	899	814	801	874	945
10	---	---	---	---	1,140	---	998	708	---	845	901	959
11	---	---	---	---	1,130	---	996	609	639	856	925	945
12	---	---	---	---	1,100	---	998	641	---	852	931	936
13	---	---	---	---	1,110	---	994	516	---	878	909	933
14	---	---	---	---	1,110	---	998	491	---	888	928	931
15	---	---	---	---	1,100	---	999	513	680	894	919	944
16	---	---	---	---	1,110	---	1,000	556	752	904	920	939
17	---	---	---	---	1,100	---	916	625	718	915	871	917
18	---	---	---	---	1,100	1,310	993	688	681	914	861	895
19	---	---	---	---	---	1,230	1,040	749	---	915	893	892
20	---	---	---	---	---	1,260	908	667	---	922	893	889
21	---	---	---	---	---	1,110	679	509	---	915	891	895
22	---	---	---	1,120	---	1,080	709	433	---	907	890	898
23	---	---	---	1,120	---	1,080	717	404	---	890	901	898
24	---	---	---	1,150	---	1,110	756	401	---	896	972	900
25	---	---	---	1,160	---	1,090	814	430	---	906	884	924
26	---	---	---	1,120	---	920	867	498	---	909	895	941
27	---	---	---	1,170	---	925	878	592	---	911	550	942
28	---	---	---	1,170	---	859	894	681	---	910	754	936
29	---	---	---	1,090	---	796	913	750	---	912	730	943
30	---	---	---	1,070	---	788	928	654	870	910	847	931
31	---	---	---	1,080	---	788	---	539	---	912	879	---
MEAN	---	---	---	---	---	---	915	682	---	851	866	923
MAX	---	---	---	--	--	--	1,040	970	--	922	972	959
MIN	---	---	---	--	--	--	679	401	--	577	550	884

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04087070 LITTLE MENOMONEE RIVER AT MILWAUKEE, WI

LOCATION.--Lat 43°07'25", long 88°02'37", in NW 1/4 SW 1/4 sec.27, T.8 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, on right bank about 250 ft downstream from bridge on U.S. Highway 41.

DRAINAGE AREA.--19.7 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1974 to September 1977, April to September 2004.

GAGE.--Water-stage recorder. Datum of gage is 700 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good (see page 11).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	28	11	108	7.9	4.4	1.6
2	---	---	---	---	---	---	24	9.1	85	6.8	3.7	1.3
3	---	---	---	---	---	---	21	8.0	57	29	3.8	1.3
4	---	---	---	---	---	---	15	8.4	38	197	15	1.4
5	---	---	---	---	---	---	15	7.4	27	81	3.9	1.2
6	---	---	---	---	---	---	17	6.5	23	57	3.2	1.3
7	---	---	---	---	---	---	16	6.8	24	48	2.4	1.1
8	---	---	---	---	---	---	13	18	20	35	2.3	1.1
9	---	---	---	---	---	---	12	28	18	29	2.6	0.91
10	---	---	---	---	---	---	11	113	33	23	2.4	0.93
11	---	---	---	---	---	---	9.2	164	102	25	2.2	0.82
12	---	---	---	---	---	---	8.5	99	123	56	2.1	0.70
13	---	---	---	---	---	---	8.7	185	124	20	2.1	0.73
14	---	---	---	---	---	---	8.6	320	97	14	1.9	1.2
15	---	---	---	---	---	---	8.3	229	66	10	1.5	2.7
16	---	---	---	---	---	---	7.9	143	42	10	1.4	5.9
17	---	---	---	---	---	---	21	89	52	10	6.2	1.3
18	---	---	---	---	---	---	18	108	45	8.3	2.0	0.61
19	---	---	---	---	---	---	11	67	36	7.8	1.6	0.36
20	---	---	---	---	---	---	27	92	27	7.2	1.6	0.30
21	---	---	---	---	---	---	107	238	27	7.5	1.3	0.37
22	---	---	---	---	---	---	61	449	24	6.5	1.1	0.28
23	---	---	---	---	---	---	34	378	19	5.6	1.1	0.24
24	---	---	---	---	---	---	22	360	24	5.1	2.2	0.08
25	---	---	---	---	---	---	34	226	22	4.6	2.8	0.26
26	---	---	---	---	---	---	26	148	18	4.4	1.4	0.18
27	---	---	---	---	---	---	21	106	14	4.1	22	0.13
28	---	---	---	---	---	---	16	68	19	4.0	10	0.25
29	---	---	---	---	---	---	13	47	12	3.7	13	0.21
30	---	---	---	---	---	---	11	90	9.1	3.8	2.7	0.14
31	---	---	---	---	---	---	---	116	---	3.6	2.0	---
TOTAL	---	---	---	---	---	---	645.2	3,938.2	1,335.1	734.9	125.9	28.90
MEAN	---	---	---	---	---	---	21.5	127	44.5	23.7	4.06	0.96
MAX	---	---	---	---	---	---	107	449	124	197	22	5.9
MIN	---	---	---	---	---	---	7.9	6.5	9.1	3.6	1.1	0.08
CFSM	---	---	---	---	---	---	1.09	6.45	2.26	1.20	0.21	0.05
IN.	---	---	---	---	---	---	1.22	7.44	2.52	1.39	0.24	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

	5.36	7.30	10.4	7.22	15.7	51.5	27.0	39.7	19.5	9.86	7.28	3.25
MEAN	5.36	7.30	10.4	7.22	15.7	51.5	27.0	39.7	19.5	9.86	7.28	3.25
MAX	11.2	12.8	23.9	19.4	39.0	76.5	37.2	127	44.5	23.7	15.9	6.13
(WY)	(1978)	(1978)	(1978)	(1975)	(1976)	(1976)	(1975)	(2004)	(2004)	(2004)	(1975)	(1977)
MIN	2.04	0.82	0.25	0.00	2.37	17.9	13.7	1.73	5.16	2.44	1.30	0.96
(WY)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1976)	(1976)	(1976)	(2004)

SUMMARY STATISTICS

	FOR 2004 WATER YEAR (April - September)		WATER YEARS 1975 - 2004	
ANNUAL TOTAL	6,808.20			
ANNUAL MEAN	37.2		16.8	
HIGHEST ANNUAL MEAN			37.2	
LOWEST ANNUAL MEAN			5.92	
HIGHEST DAILY MEAN	449	May 22	449	May 22, 2004
LOWEST DAILY MEAN	0.08	Sep 24	(a)0.00	Dec 31, 1976
ANNUAL SEVEN-DAY MINIMUM	0.18	Sep 24	0.00	Dec 31, 1976
MAXIMUM PEAK FLOW	581	May 22	(b)581	May 22, 2004
MAXIMUM PEAK STAGE	9.30	May 22	(c)10.35	Mar 4, 1976
ANNUAL RUNOFF (CFSM)	1.89		0.854	
ANNUAL RUNOFF (INCHES)	12.86		11.61	
10 PERCENT EXCEEDS	108		41	
50 PERCENT EXCEEDS	11		4.5	
90 PERCENT EXCEEDS	1.00		0.55	

(a) Also occurred Jan. 1 - Feb. 8, 1977

(b) Gage height, 9.30 ft

(c) Discharge, 467 ft<sup>3</sup>/s, datum then in use

04087088 UNDERWOOD CREEK AT WAUWATOSA, WI

LOCATION.--Lat 43°03'17", long 88°02'46", in SW 1/4 NW 1/4 sec.20, T.7 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, at U.S. Highway 45, on right bank, just downstream of the Chicago, Milwaukee, St. Paul and Pacific Railroad bridge, on Milwaukee County Park Commission property, at Wauwatosa, and 0.8 mi upstream from mouth.

DRAINAGE AREA.--18.2 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1974 to November 1979, July 1980 to current year. Unpublished daily discharge records from November 1974 to February 1975 in District files.

REVISED RECORDS.--WDR WI-77-1: Drainage area. WRD WI-85-1: 1984. WRD WI-94-1: 1993(M). WRD WI-98-1: 1978(M, date).

GAGE.--Water-stage recorder, crest-stage gage, and steel plate weir. Datum of gage is 683.78 ft above NGVD of 1929 (Southeastern Wisconsin Regional Planning Commission bench mark). Prior to Sept. 10, 1993, the orifice was located 10 ft downstream from Chicago, Milwaukee, St. Paul and Pacific Railroad bridge. The orifice was moved to 30 ft upstream from Chicago, Milwaukee, St. Paul and Pacific Railroad bridge on Sept. 10, 1993, and is at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	2.5	2.4	2.8	e2.1	21	14	9.2	29	6.1	4.4	3.9
2	2.9	58	2.5	3.4	e2.2	16	12	7.3	20	5.8	4.3	3.6
3	6.2	50	2.5	3.2	e2.2	10	10	6.9	16	73	72	3.4
4	2.6	83	2.3	e2.1	e2.2	30	8.7	6.5	13	189	36	3.2
5	2.4	23	2.4	e2.6	e2.2	135	7.8	6.2	12	22	11	3.1
6	2.3	8.7	2.2	e2.5	e2.2	35	8.1	6.5	11	18	7.4	2.9
7	2.3	5.6	2.1	e2.4	e2.2	23	7.0	6.0	10	34	6.4	2.8
8	2.2	4.3	2.1	e2.4	e2.2	17	6.6	15	9.0	13	5.5	2.9
9	2.3	3.7	21	e2.3	e2.2	13	6.2	26	8.9	11	14	2.9
10	2.2	3.5	87	e2.3	e2.2	11	5.9	41	52	9.3	4.9	2.9
11	2.6	3.4	20	e2.2	e2.2	10	5.6	35	71	34	4.4	2.9
12	5.0	3.2	9.2	e2.2	e2.2	8.6	5.3	17	34	22	4.1	2.9
13	2.3	3.3	8.5	e2.2	e2.2	7.6	5.6	125	20	11	3.9	2.7
14	18	3.2	6.1	e2.2	e2.2	15	5.4	228	97	8.5	3.8	3.0
15	3.8	2.9	4.7	e2.2	e2.7	7.7	5.0	91	28	7.4	3.5	4.3
16	2.5	2.9	7.0	e2.1	e3.8	7.0	4.8	42	26	7.0	3.5	5.4
17	2.3	3.0	4.6	e2.1	e5.0	9.5	21	32	49	6.6	4.0	3.3
18	2.3	43	3.8	e2.1	4.9	11	7.0	62	22	6.3	3.7	2.8
19	2.3	8.2	3.2	e2.1	6.0	8.7	5.5	28	15	6.2	4.1	2.8
20	2.2	5.3	3.5	e2.1	9.0	7.6	77	36	12	5.8	3.5	2.9
21	2.4	4.2	3.6	e2.2	6.1	6.4	71	123	39	12	3.3	2.4
22	2.3	5.3	3.3	e2.2	5.0	5.8	22	335	18	6.0	3.2	2.4
23	2.2	9.1	3.1	e2.2	11	5.6	14	214	14	5.1	3.2	2.4
24	22	4.6	2.8	e2.2	7.5	7.2	13	73	25	4.8	12	2.6
25	9.5	3.4	2.4	e2.2	7.2	6.3	25	43	13	4.6	21	2.4
26	3.1	3.1	2.7	e2.1	7.5	57	13	31	9.2	4.6	4.2	2.3
27	2.5	3.0	2.5	e2.1	7.5	16	10	24	11	4.8	21	2.3
28	2.6	2.8	13	e2.1	8.0	71	9.2	18	16	4.8	26	2.2
29	2.4	2.6	4.4	e2.1	9.8	49	8.2	20	7.7	4.7	9.8	2.2
30	2.8	2.7	3.5	e2.1	---	28	7.7	84	6.5	4.9	5.4	2.3
31	2.0	---	3.2	e2.1	---	18	---	49	---	4.7	4.4	---
TOTAL	125.3	361.5	241.6	71.1	131.7	674.0	421.6	1,840.6	714.3	557.0	317.9	88.1
MEAN	4.04	12.1	7.79	2.29	4.54	21.7	14.1	59.4	23.8	18.0	10.3	2.94
MAX	22	83	87	3.4	11	135	77	335	97	189	72	5.4
MIN	2.0	2.5	2.1	2.1	2.1	5.6	4.8	6.0	6.5	4.6	3.2	2.2
CFSM	0.22	0.66	0.43	0.13	0.25	1.19	0.77	3.26	1.31	0.99	0.56	0.16
IN.	0.26	0.74	0.49	0.15	0.27	1.38	0.86	3.76	1.46	1.14	0.65	0.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

MEAN	8.82	10.9	10.0	8.40	13.6	22.4	26.7	19.2	17.5	13.1	16.1	12.6
MAX	26.9	42.1	27.2	39.1	37.9	73.4	73.6	59.4	68.8	37.5	98.1	56.0
(WY)	(1987)	(1986)	(1983)	(1988)	(2001)	(1979)	(1993)	(2004)	(1997)	(1999)	(1998)	(1986)
MIN	2.43	1.81	1.57	0.03	1.83	6.74	6.24	2.28	4.80	3.29	3.49	2.94
(WY)	(1976)	(1977)	(1977)	(1977)	(1977)	(1981)	(1977)	(1977)	(1976)	(1976)	(1976)	(2004)

04087088 UNDERWOOD CREEK AT WAUWATOSA, WI—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1975 - 2004	
ANNUAL TOTAL	2,959.7		5,544.7			
ANNUAL MEAN	8.11		15.1		15.0	
HIGHEST ANNUAL MEAN					23.2	1993
LOWEST ANNUAL MEAN					4.21	1977
HIGHEST DAILY MEAN	98	May 9	335	May 22	1,420	Aug 6, 1998
LOWEST DAILY MEAN	2.0	Oct 31	2.0	Oct 31	0.00	(a)
ANNUAL SEVEN-DAY MINIMUM	(b)2.2	Jan 18	(b)2.1	Jan 26	0.00	Jan 11, 1977
MAXIMUM PEAK FLOW			2,630	Jul 4	(c)7,500	Aug 6, 1998
MAXIMUM PEAK STAGE			8.73	Jul 4	13.10	Aug 6, 1998
ANNUAL RUNOFF (CFSM)	0.446		0.832		0.823	
ANNUAL RUNOFF (INCHES)	6.05		11.33		11.18	
10 PERCENT EXCEEDS	18		34		31	
50 PERCENT EXCEEDS	3.8		5.4		7.0	
90 PERCENT EXCEEDS	2.3		2.2		3.1	

- (a) No flow on all or part of many days during 1977 winter period
- (b) Ice affected
- (c) From rating curve extended above 96 ft<sup>3</sup>/s based on slope-area measurement of peak flow
- (e) Estimated due to ice effect or missing record

04087119 HONEY CREEK AT WAUWATOSA, WI

LOCATION.--Lat 43°02'38", long 88°00'10", in NW ¼ NW ¼ sec.27, T.7 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, on right bank in Honey Creek Parkway, 150 ft west of intersection of Honey Creek Parkway and 72nd Street, at Wauwatosa, and 260 ft upstream from Menomonee River.

DRAINAGE AREA.--10.3 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1974 to December 1979, July 1980 through April 14, 1981, April to September 2004.

GAGE.--Water-stage recorder. Datum of gage is 635 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good, except those periods of discharge over 500 ft<sup>3</sup>/s, which are fair, and estimated daily discharges, which are poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e10	4.7	21	3.3	1.9	1.7
2	---	---	---	---	---	---	e8.7	2.3	7.1	3.4	2.0	1.5
3	---	---	---	---	---	---	e7.6	2.0	5.6	85	191	1.4
4	---	---	---	---	---	---	e5.6	2.0	5.0	234	48	1.3
5	---	---	---	---	---	---	e4.9	1.9	4.4	9.3	4.4	2.0
6	---	---	---	---	---	---	e4.9	2.0	4.1	6.5	2.3	1.4
7	---	---	---	---	---	---	e3.7	2.1	4.0	57	1.8	1.4
8	---	---	---	---	---	---	2.8	15	3.9	5.7	1.6	1.3
9	---	---	---	---	---	---	2.6	32	9.0	4.6	19	1.3
10	---	---	---	---	---	---	2.4	51	75	3.5	1.7	1.3
11	---	---	---	---	---	---	2.1	7.7	51	30	1.6	1.3
12	---	---	---	---	---	---	2.0	3.7	19	8.7	1.5	1.2
13	---	---	---	---	---	---	2.0	98	8.3	3.3	1.5	1.3
14	---	---	---	---	---	---	2.2	189	131	2.8	1.4	1.3
15	---	---	---	---	---	---	2.0	23	15	2.6	1.3	6.2
16	---	---	---	---	---	---	2.3	8.9	42	2.5	1.4	6.3
17	---	---	---	---	---	---	20	17	35	2.2	1.7	1.5
18	---	---	---	---	---	---	3.2	63	9.2	2.2	1.5	1.4
19	---	---	---	---	---	---	2.1	9.0	5.9	2.4	2.0	1.3
20	---	---	---	---	---	---	112	11	4.8	2.4	1.5	1.9
21	---	---	---	---	---	---	29	116	46	20	1.2	1.3
22	---	---	---	---	---	---	5.3	268	8.9	3.4	1.2	1.3
23	---	---	---	---	---	---	3.6	201	7.2	2.6	1.3	1.5
24	---	---	---	---	---	---	5.6	24	22	2.5	67	1.3
25	---	---	---	---	---	---	20	13	6.2	1.9	69	1.2
26	---	---	---	---	---	---	4.2	8.3	4.7	1.8	2.3	1.1
27	---	---	---	---	---	---	3.0	6.7	6.4	1.8	30	1.2
28	---	---	---	---	---	---	3.5	5.5	13	1.8	37	1.2
29	---	---	---	---	---	---	3.1	9.6	4.0	1.8	7.1	1.2
30	---	---	---	---	---	---	2.7	83	3.4	1.8	2.4	1.6
31	---	---	---	---	---	---	---	23	---	1.7	1.9	---
TOTAL	---	---	---	---	---	---	283.1	1,303.4	582.1	512.5	509.5	51.2
MEAN	---	---	---	---	---	---	9.44	42.0	19.4	16.5	16.4	1.71
MAX	---	---	---	---	---	---	112	268	131	234	191	6.3
MIN	---	---	---	---	---	---	2.0	1.9	3.4	1.7	1.2	1.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

	4.43	5.12	5.24	2.11	7.62	20.1	16.3	14.7	10.4	9.66	11.2	7.42
MEAN	4.43	5.12	5.24	2.11	7.62	20.1	16.3	14.7	10.4	9.66	11.2	7.42
MAX	6.32	7.92	8.91	6.83	16.4	45.0	32.7	42.0	19.4	16.5	17.6	20.6
(WY)	(1978)	(1976)	(1978)	(1975)	(1976)	(1979)	(1981)	(2004)	(2004)	(2004)	(1980)	(1978)
MIN	2.61	1.26	0.89	0.10	1.17	2.59	5.75	2.17	4.45	3.71	5.21	1.71
(WY)	(1976)	(1977)	(1977)	(1977)	(1978)	(1981)	(1977)	(1977)	(1976)	(1975)	(1976)	(2004)

SUMMARY STATISTICS

	FOR 2004 WATER YEAR (April - September)		WATER YEARS 1975 - 2004	
ANNUAL TOTAL	3,241.8			
ANNUAL MEAN	17.7		9.51	
HIGHEST ANNUAL MEAN			17.7	
LOWEST ANNUAL MEAN			6.26	
HIGHEST DAILY MEAN	268	May 22	304	Mar 4, 1976
LOWEST DAILY MEAN	1.1	Sep 26	0.02	Jan 16-19, 1977
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 23	0.02	Jan 15, 1977
MAXIMUM PEAK FLOW	2,640	Jul 4	(a)2,640	Jul 4, 2004
MAXIMUM PEAK STAGE	15.08	Jul 4	(b)15.84	Sep 9, 1980
10 PERCENT EXCEEDS	50		22	
50 PERCENT EXCEEDS	3.5		2.5	
90 PERCENT EXCEEDS	1.3		1.1	

(a) Gage height, 15.08 ft  
(b) Discharge, 1,240 ft<sup>3</sup>/s, datum then in use  
(c) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087120 MEMOMONEE RIVER AT WAUWATOSA, WI

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LOCATION.--Lat 43°02'44", long 87°59'59", in NE 1/4 NW 1/4 sec.27, T.7 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, on left bank near upstream side of 70th Street bridge in Wauwatosa, 800 ft downstream from Honey Creek, and at mile 6.2.

DRAINAGE AREA.--123 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 628.86 ft above NGVD of 1929. Prior to Nov. 1, 1974, nonrecording gage at present site and datum then in use. Prior to June 21, 1997 at 0320, datum was 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	15	28	35	e14	237	208	91	547	53	22	23
2	7.3	363	26	37	e14	275	161	75	418	47	24	21
3	22	414	25	e39	e14	226	128	67	304	211	261	20
4	16	674	25	e30	e14	267	104	63	208	1,270	185	19
5	10	365	25	e26	e14	1,100	90	59	145	352	42	18
6	9.0	181	24	e24	e14	629	88	56	115	261	30	16
7	8.7	98	23	e21	e14	471	81	56	98	303	25	15
8	6.2	63	23	e21	e14	353	74	116	87	158	22	16
9	7.8	46	102	e20	e14	259	67	253	92	123	50	15
10	8.6	39	620	e20	e14	187	62	504	298	104	23	14
11	7.7	40	306	e21	e13	152	58	1,000	600	168	20	15
12	20	36	145	e22	e13	113	54	481	535	199	20	14
13	12	32	97	e21	e13	97	52	1,190	455	88	20	14
14	101	29	78	e21	e13	132	50	1,730	569	69	19	15
15	29	28	61	e20	e13	93	48	1,160	321	54	18	26
16	14	27	75	e20	e13	82	47	714	249	47	18	34
17	11	26	59	e20	e14	92	159	507	339	46	33	17
18	9.9	298	48	e19	e16	101	100	641	246	41	23	14
19	9.4	105	44	e19	e19	96	81	362	194	39	21	13
20	9.1	65	33	e17	e40	101	343	426	150	37	19	13
21	8.8	49	41	e16	e50	99	655	974	237	63	17	12
22	9.2	45	38	e15	e45	84	381	2,400	141	39	15	12
23	9.0	76	36	e15	e80	73	272	1,980	110	33	15	13
24	101	55	32	e15	e77	78	202	1,530	169	30	89	12
25	103	43	28	e15	e70	77	276	1,110	123	27	123	11
26	26	37	31	e15	e80	439	189	779	97	25	22	11
27	17	35	30	e15	90	233	146	533	91	24	160	11
28	17	33	89	e14	100	437	119	332	129	24	139	11
29	15	31	53	e14	129	576	98	243	77	23	88	11
30	18	29	45	e14	---	390	86	540	63	23	36	11
31	14	---	41	e14	---	283	---	649	---	23	28	---
TOTAL	663.9	3,377	2,331	635	1,028	7,832	4,479	20,621	7,207	4,004	1,627	467
MEAN	21.4	113	75.2	20.5	35.4	253	149	665	240	129	52.5	15.6
MAX	103	674	620	39	129	1,100	655	2,400	600	1,270	261	34
MIN	6.2	15	23	14	13	73	47	56	63	23	15	11
CFSM	0.17	0.92	0.61	0.17	0.29	2.05	1.21	5.41	1.95	1.05	0.43	0.13
IN.	0.20	1.02	0.70	0.19	0.31	2.37	1.35	6.24	2.18	1.21	0.49	0.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	63.4	78.4	74.6	56.7	97.1	197	204	131	117	78.6	76.3	81.1
MAX	232	422	222	191	277	582	715	665	566	257	278	562
(WY)	(1982)	(1986)	(1988)	(1974)	(2001)	(1979)	(1993)	(2004)	(1997)	(1964)	(1998)	(1986)
MIN	7.15	11.9	4.65	4.45	4.18	17.5	28.7	17.1	12.6	10.6	10.5	6.50
(WY)	(1964)	(1963)	(1964)	(1963)	(1963)	(1968)	(1963)	(1977)	(1962)	(1963)	(1962)	(1963)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1962 - 2004

ANNUAL TOTAL	22,667.5	54,271.9	
ANNUAL MEAN	62.1	148	104
HIGHEST ANNUAL MEAN			195
LOWEST ANNUAL MEAN			24.0
HIGHEST DAILY MEAN	783	May 9	2,400
LOWEST DAILY MEAN	5.5	Sep 5	6.2
ANNUAL SEVEN-DAY MINIMUM	5.7	Sep 1	8.3
MAXIMUM PEAK FLOW			5,080
MAXIMUM PEAK STAGE			11.80
ANNUAL RUNOFF (CFSM)	0.505		1.21
ANNUAL RUNOFF (INCHES)	6.86		16.41
10 PERCENT EXCEEDS	139		397
50 PERCENT EXCEEDS	28		46
90 PERCENT EXCEEDS	7.2		14

(a) Ice affected

(b) From rating curve extended above 6,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow, gage height, 13.92 ft, datum then in use

(c) Also occurred June 21, 1997, discharge determined from rating curve extended above 9,430 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow

(d) High-water mark on gage-house door was 18.87 ft

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

040871473 WILSON PARK CREEK AT GMIA INFALL AT MILWAUKEE, WI

273

LOCATION.--Lat 42°56'42", long 87°53'10", in SW ¼ SW ¼ sec.27, T.6 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, 150 ft northwest of Grange Avenue gate on General Mitchell International Airport property, at Milwaukee.

DRAINAGE AREA.--0.89 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1996 to May 1997, November 1997 to current year.

REVISED RECORDS.--WDR WI-98-1: 1997 (M, February monthly).

GAGE.--Water-stage recorder. Elevation of gage is 665 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.02	0.04	0.05	e0.00	2.6	0.44	0.15	0.61	0.12	e0.05	0.06
2	0.00	5.0	0.02	0.29	e0.00	1.2	0.38	0.07	0.32	0.10	e0.05	0.06
3	0.17	4.8	0.03	0.16	e0.00	0.63	0.33	0.06	0.29	5.0	e2.8	0.06
4	0.03	1.8	0.03	0.05	0.00	2.6	0.24	0.06	0.20	7.0	7.6	0.05
5	0.00	0.38	0.05	e0.04	0.00	e10	0.21	0.06	0.16	0.42	0.19	0.05
6	0.00	0.10	0.03	e0.04	0.00	e1.6	0.30	0.05	0.12	0.32	0.11	0.05
7	0.01	0.07	0.03	e0.03	0.00	e0.80	0.20	0.03	0.12	2.1	0.09	0.04
8	0.00	0.03	0.04	e0.03	0.00	e0.50	0.16	0.32	0.12	0.29	0.08	0.03
9	0.00	0.03	1.9	e0.02	0.00	e0.40	0.15	2.7	0.13	0.34	0.07	0.03
10	0.00	0.04	7.9	e0.02	0.00	e0.30	0.12	0.83	5.3	0.24	0.06	0.03
11	0.00	0.06	0.51	e0.04	0.00	e0.26	0.11	0.21	4.7	1.8	0.07	0.03
12	0.09	0.04	0.20	e0.06	0.00	e0.24	0.09	0.20	2.8	3.7	0.07	0.03
13	0.00	0.02	0.13	e0.07	0.00	e0.20	0.09	7.0	0.64	0.30	0.06	0.04
14	2.0	0.03	0.16	e0.06	0.00	e0.60	0.09	19	5.3	0.26	0.06	0.03
15	0.07	0.03	0.14	0.06	0.00	e0.24	0.09	4.7	0.70	0.23	0.06	0.26
16	0.03	0.03	0.62	0.06	0.00	e0.20	0.09	0.54	0.49	1.2	0.06	0.41
17	0.00	0.06	0.13	0.07	0.00	e0.34	0.90	0.53	1.1	0.25	0.21	0.03
18	0.00	6.2	0.10	0.07	0.00	e0.50	0.12	3.1	0.42	0.17	0.13	0.03
19	0.00	0.30	0.08	0.03	0.00	e0.30	0.09	0.44	0.25	0.19	0.14	0.03
20	0.00	0.13	0.06	0.03	e0.01	e0.26	3.1	0.32	0.19	0.21	0.06	0.03
21	0.00	0.07	0.10	0.04	e0.20	e0.24	1.2	4.6	3.5	1.2	0.06	0.03
22	0.00	0.20	0.10	0.03	0.98	e0.20	0.20	12	0.41	0.18	0.06	0.02
23	0.00	1.0	0.08	e0.02	1.7	e0.18	0.16	20	1.8	0.11	0.06	0.00
24	1.9	0.12	0.05	e0.02	0.63	0.27	0.45	1.3	0.74	e0.09	1.4	0.01
25	0.62	0.06	0.03	e0.01	0.53	0.17	1.3	0.89	0.25	e0.08	1.5	0.00
26	0.02	0.06	0.03	e0.01	0.74	4.8	0.24	0.48	0.20	e0.08	0.09	0.00
27	0.00	0.06	0.05	e0.00	0.72	0.47	0.14	0.37	0.26	e0.07	0.68	0.01
28	0.05	0.04	0.79	e0.00	0.67	6.1	0.17	0.24	0.65	e0.07	2.7	0.00
29	0.01	0.04	0.11	e0.00	0.92	2.7	0.10	0.64	0.13	e0.06	0.51	0.00
30	0.05	0.04	0.06	e0.00	---	1.1	0.09	4.4	0.12	e0.06	0.12	0.01
31	0.01	---	0.06	e0.00	---	0.58	---	0.84	---	e0.05	0.07	---
TOTAL	5.06	20.86	13.66	1.41	7.10	40.58	11.35	86.13	32.02	26.29	19.27	1.46
MEAN	0.16	0.70	0.44	0.05	0.24	1.31	0.38	2.78	1.07	0.85	0.62	0.05
MAX	2.0	6.2	7.9	0.29	1.7	10	3.1	20	5.3	7.0	7.6	0.41
MIN	0.00	0.02	0.02	0.00	0.00	0.17	0.09	0.03	0.12	0.05	0.05	0.00
CFSM	0.18	0.78	0.50	0.05	0.28	1.47	0.43	3.12	1.20	0.95	0.70	0.05
IN.	0.21	0.87	0.57	0.06	0.30	1.70	0.47	3.60	1.34	1.10	0.81	0.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

MEAN	0.41	0.36	0.23	0.34	0.86	0.75	1.27	1.54	1.10	0.77	0.74	0.63
MAX	1.41	0.72	0.50	1.08	2.47	1.48	2.56	3.09	1.88	2.06	1.43	1.91
(WY)	(2002)	(1999)	(2002)	(1999)	(2001)	(1998)	(1999)	(2000)	(1999)	(2000)	(2000)	(2000)
MIN	0.16	0.09	0.08	0.02	0.05	0.27	0.37	0.63	0.24	0.17	0.03	0.05
(WY)	(2004)	(2000)	(2001)	(2003)	(2003)	(2003)	(2003)	(1998)	(2003)	(1998)	(2003)	(2004)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1997 - 2004

ANNUAL TOTAL	116.39	265.19		
ANNUAL MEAN	0.32	0.72		
HIGHEST ANNUAL MEAN			0.76	
LOWEST ANNUAL MEAN			1.04	2000
HIGHEST DAILY MEAN	7.9	Dec 10	20	May 23
LOWEST DAILY MEAN	0.00	many days	0.00	many days
ANNUAL SEVEN-DAY MINIMUM	0.00	many periods	0.00	many periods
MAXIMUM PEAK FLOW			30	May 14
MAXIMUM PEAK STAGE			14.79	May 14
INSTANTANEOUS LOW FLOW			0.00	many days
ANNUAL RUNOFF (CFSM)	0.358	0.814		0.855
ANNUAL RUNOFF (INCHES)	4.86	11.08		11.62
10 PERCENT EXCEEDS	0.74	1.8		1.5
50 PERCENT EXCEEDS	0.03	0.10		0.20
90 PERCENT EXCEEDS	0.00	0.00		0.00

(e) Estimated due to ice effect or missing record

## STREAMS TRIBUTARY TO LAKE MICHIGAN

040871473 WILSON PARK CREEK AT GMIA INFALL AT MILWAUKEE, WI—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1996 to May 1997, November 1997 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1996 to May 1997, November 1997 to current year.

INSTRUMENTATION.--Stage-activated water-quality sampler since November 1996. Continuous water-temperature recorder since November 1996.

REMARKS.--Chemical analyses are by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated. Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 31.5°C, July 4, 2003; minimum observed, 0.0°C, many days during winter.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 25.5°C, Aug. 3; minimum observed, 0.0°C, many days during winter.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.5	7.5	9.0	11.0	9.0	9.5	3.0	1.5	2.0	1.5	0.5	1.0
2	12.0	6.0	8.5	9.5	9.0	9.5	3.0	1.0	2.0	3.5	1.0	2.0
3	10.5	7.0	8.5	9.5	8.0	9.0	2.5	1.5	2.0	3.5	0.5	2.0
4	13.0	8.0	10.0	13.0	8.5	10.5	3.0	1.5	2.5	1.0	0.5	0.5
5	13.0	7.5	10.0	11.5	7.0	8.5	4.0	2.0	2.5	1.0	0.0	0.5
6	13.0	7.0	10.0	8.0	4.5	6.5	3.0	2.0	2.5	0.5	0.0	0.5
7	16.5	9.0	12.5	6.0	3.0	4.0	3.0	1.5	2.5	0.0	0.0	0.0
8	18.0	12.5	15.0	4.5	2.5	3.5	4.0	2.5	3.0	0.0	0.0	0.0
9	17.0	13.5	15.0	4.5	2.5	3.5	5.5	3.5	4.5	0.0	0.0	0.0
10	18.0	12.5	15.0	4.0	2.5	3.5	5.5	2.5	4.5	0.0	0.0	0.0
11	18.0	13.0	15.5	8.0	4.0	6.0	3.0	1.0	1.5	0.0	0.0	0.0
12	17.5	12.5	14.5	9.5	4.0	6.5	1.5	0.5	1.0	0.5	0.0	0.0
13	15.5	10.5	13.0	4.5	2.0	3.5	1.0	0.5	1.0	0.5	0.0	0.0
14	14.0	11.0	12.5	5.0	2.5	4.0	1.0	0.5	0.5	0.0	0.0	0.0
15	14.0	9.0	11.5	5.5	4.5	5.0	1.0	0.5	0.5	0.0	0.0	0.0
16	12.0	8.0	10.0	6.5	5.0	6.0	1.0	0.0	0.5	0.0	0.0	0.0
17	11.5	7.0	9.0	8.5	5.5	7.0	1.0	0.0	0.5	0.0	0.0	0.0
18	13.5	8.0	10.5	10.5	8.0	9.5	1.0	0.0	0.5	0.0	0.0	0.0
19	13.5	9.5	11.5	9.0	6.5	7.5	0.5	0.0	0.0	0.0	0.0	0.0
20	16.5	10.0	13.0	9.0	5.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0
21	14.0	11.5	12.5	7.5	5.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0
22	11.5	8.5	10.0	7.0	5.5	6.0	0.5	0.0	0.0	0.0	0.0	0.0
23	10.0	8.5	9.5	10.5	7.0	8.5	0.5	0.0	0.0	0.0	0.0	0.0
24	11.0	6.5	8.5	7.0	2.0	3.5	0.5	0.0	0.0	0.0	0.0	0.0
25	12.5	9.5	11.0	3.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
26	9.5	7.0	8.0	3.5	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
27	10.0	6.0	8.0	4.5	3.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0
28	9.5	6.5	7.5	3.5	1.0	2.0	0.5	0.0	0.0	0.0	0.0	0.0
29	9.0	6.0	7.5	2.0	1.0	1.5	1.0	0.0	0.5	0.0	0.0	0.0
30	12.0	7.5	10.0	4.0	1.5	2.5	2.0	0.0	1.0	0.0	0.0	0.0
31	14.5	11.0	12.5	---	---	---	2.5	0.5	1.5	0.0	0.0	0.0
MONTH	18.0	6.0	11.0	13.0	1.0	5.6	5.5	0.0	1.2	3.5	0.0	0.2





040871473 WILSON PARK CREEK AT GMIA INFALL AT MILWAUKEE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DISCRETE SAMPLES

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, uS/cm 25 degC (90095)	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (00417)	Chloride, water, fltrd, mg/L (00940)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	COD, low level, water, unfltrd mg/L (00335)	1,2-Propane-diol, water, unfltrd mg/L (91080)	1,2-Ethane-diol, water, unfltrd mg/L (91075)
MAR 23...	1700	.21	10	7.8	1,660	267	330	.92	.139	<60.0	56	<18.0	<18.0
SEP 22...	1812	.01	10	8.4	971	243	141	.45	<.015	<2.0	27	<18.0	<18.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
COMPOSITE SAMPLES

Date	End date	Time	End time	Sampling method, code (82398)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, uS/cm 25 degC (90095)	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (00417)	Chloride, water, fltrd, mg/L (00940)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	COD, low level, water, unfltrd mg/L (00335)	1,2-Propane-diol, water, unfltrd mg/L (91080)
JAN 04-05	20040105	1700	0335	50	8.2	1,250	245	199	.30	<.015	>44.1	110	25.0
JAN 17-17	20040117	0920	1505	50	8.1	2,120	255	498	.93	.140	<2.0	15	<18.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	1,2-Ethane-diol, water, unfltrd mg/L (91075)	Runoff volume, thousands of cubic feet (99904)
JAN 04-05	<18.0	1.7
JAN 17-17	<18.0	1.6

040871475 WILSON PARK CREEK AT GMIA OUTFALL #7 AT MILWAUKEE, WI

LOCATION.--Lat 42°57'24", long 87°54'25", in NW 1/4 NW 1/4 sec.28, T.6 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, 200 ft upstream of Howell Avenue culverts on General Mitchell International Airport property, at Milwaukee.

DRAINAGE AREA.--2.25 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1996 to May 1997, October 1997 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1996 to May 1997, October 1997 to current year.

DISSOLVED OXYGEN: October 1997 to November 1998 (discontinued).

INSTRUMENTATION.--Stage-activated water-quality sampler since November 1996. Continuous water-temperature recorder since November 1996.

REMARKS.--Chemical analyses are by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated. Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 27.5°C, Aug. 9, 2001; minimum observed, 0.0°C, many days during winter.

DISSOLVED OXYGEN: Maximum observed, 14.1 mg/L, Feb. 27, 1998; minimum observed, 0.0 mg/L, June 27 and July 7, 1998.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 24.0°C, July 21; minimum observed, 0.0°C, Feb. 20, 23.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.5	12.5	13.5	12.0	10.0	11.5	---	---	---	7.0	5.0	5.5
2	13.0	12.0	12.5	11.5	9.5	10.5	---	---	---	6.5	5.0	5.5
3	14.5	12.5	13.5	11.5	1.0	10.0	---	---	---	7.0	5.0	5.5
4	14.0	13.5	13.5	14.5	9.0	11.5	---	---	---	7.0	5.0	5.5
5	13.5	13.0	13.5	13.0	11.0	11.5	8.0	7.0	7.5	7.0	4.5	5.5
6	13.5	13.0	13.5	11.0	11.0	11.0	7.5	6.5	7.0	5.5	3.5	4.5
7	14.0	13.5	13.5	11.0	9.5	10.5	7.5	7.0	7.5	5.5	4.0	5.0
8	14.0	13.5	14.0	10.0	8.5	9.0	7.5	7.5	7.5	5.5	4.0	4.5
9	14.0	14.0	14.0	10.0	9.0	9.5	7.5	5.5	7.0	5.5	4.0	4.5
10	14.0	14.0	14.0	10.0	9.5	10.0	6.0	5.5	6.0	5.5	4.5	5.0
11	14.5	14.0	14.0	10.5	10.0	10.5	7.0	5.5	6.0	6.0	5.0	5.0
12	15.5	14.5	15.0	10.5	8.5	10.0	7.0	5.5	6.0	6.0	5.0	5.0
13	15.0	14.5	14.5	8.5	7.0	7.5	6.5	6.0	6.0	6.0	4.5	5.0
14	14.5	13.5	14.0	9.0	7.5	8.5	7.0	6.0	6.5	5.0	4.0	5.0
15	14.0	13.5	14.0	9.5	9.0	9.0	7.0	6.5	6.5	5.0	4.0	4.5
16	14.0	13.0	13.5	---	---	---	7.0	4.0	5.0	5.0	4.5	4.5
17	13.5	12.5	13.0	---	---	---	6.5	5.0	5.5	5.0	4.5	4.5
18	13.5	13.0	13.0	---	---	---	7.0	5.0	5.5	5.0	3.5	4.5
19	13.5	13.0	13.5	---	---	---	5.0	4.0	4.5	4.0	2.5	3.5
20	13.5	13.5	13.5	---	---	---	5.0	4.0	4.5	3.5	3.0	3.0
21	13.5	13.5	13.5	---	---	---	5.5	5.0	5.5	3.5	3.0	3.0
22	13.5	12.5	13.0	10.0	9.5	9.5	5.5	5.5	5.5	3.0	2.0	2.5
23	13.0	12.5	12.5	11.0	9.5	10.5	6.0	5.0	5.0	2.5	2.0	2.0
24	13.0	11.5	12.5	10.5	8.5	9.5	6.5	4.5	5.0	2.5	2.0	2.5
25	13.0	12.0	12.5	9.5	8.5	9.0	6.0	4.5	5.0	3.0	2.5	2.5
26	12.5	12.0	12.0	9.0	9.0	9.0	6.0	5.0	5.5	3.0	2.5	2.5
27	12.0	11.5	11.5	9.0	9.0	9.0	6.0	5.0	5.5	3.0	2.5	2.5
28	12.5	11.5	12.0	9.0	6.5	7.5	5.5	3.5	4.5	2.5	2.0	2.0
29	12.0	11.5	12.0	8.0	6.5	7.0	6.5	5.0	5.0	2.5	1.5	2.0
30	12.5	10.5	12.0	8.5	8.0	8.0	6.5	4.0	5.0	2.5	2.0	2.0
31	12.5	12.0	12.5	---	---	---	7.0	5.0	5.5	2.5	2.0	2.0
MONTH	15.5	10.5	13.2	14.5	1.0	9.6	8.0	3.5	5.8	7.0	1.5	3.9



## STREAMS TRIBUTARY TO LAKE MICHIGAN

040871475 WILSON PARK CREEK AT GMIA OUTFALL #7 AT MILWAUKEE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DISCRETE SAMPLES

Date	Time	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	COD, low level, water, unfltrd mg/L (00335)
FEB 06...	1117	.03	50	3,700
APR 06...	1010	.29	50	250



## STREAMS TRIBUTARY TO LAKE MICHIGAN

040871475 WILSON PARK CREEK AT GMIA OUTFALL #7 AT MILWAUKEE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	1,2-Ethane-diol, water, unfltrd mg/L (91075)
DEC 10-11	--
DEC 11-18	--
DEC 23-30	--
DEC 31 2003-	
JAN 03 2004	--
JAN 04-05	--
JAN 04-05	<18.0
JAN 06-06	--
JAN 10-11	--
JAN 12-13	--
JAN 14-16	--
JAN 16-19	--
JAN 17-18	<18.0
JAN 29-31	--
JAN 31-FEB 01	--
FEB 01-03	--
FEB 03-04	--
FEB 04-05	--
FEB 05-06	--
FEB 05-06	--
FEB 13-16	--
FEB 17-19	--
FEB 19-22	<18.0
FEB 19-20	--
FEB 20-20	--
FEB 20-20	--
FEB 21-21	--
FEB 21-21	--
FEB 22-22	--
FEB 22-22	--
FEB 22-23	--
FEB 23-23	--
FEB 23-26	--
FEB 26-MAR 03	--
MAR 04-04	--
MAR 04-05	--
MAR 05-05	--

040871475 WILSON PARK CREEK AT GMIA OUTFALL #7 AT MILWAUKEE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	End date	Time	End time	Sam- pling method, code (82398)	COD, low level, water, unfltrd mg/L (00335)
MAR 14-15	20040315	0044	0457	50	430
MAR 15-24	20040324	1927	1305	50	1,500
MAR 25-26	20040326	0547	1114	50	160
MAR 26- APR 03	20040403	1732	1147	50	120
APR 05-10	20040410	0213	0620	50	250
APR 17-17	20040417	0309	0956	50	180
APR 20-21	20040421	0700	0801	50	76
APR 24-25	20040425	2220	2013	50	94
MAY 08-13	20040513	2141	1206	50	72



STREAMS TRIBUTARY TO LAKE MICHIGAN

040871476 HOLMES AVENUE CREEK TRIB AT GMIA OUTFALL #1 AT MILWAUKEE, WI

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LOCATION.--Lat 42°56'40", long 87°54'37", in NE ¼ NE ¼ sec.32, T.6 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, 100 ft west of intersection at corner of Air Cargo Way and Howell Avenue, at Milwaukee.

DRAINAGE AREA.--0.03 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1996 through May 1997, November 1997 to current year.

GAGE.--Water-stage recorder in culvert. Elevation of gage is 695 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor (see page 13).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	0.08	0.00	0.01	0.00	0.52	0.01	0.02	0.01	0.00	0.01	0.01
2	0.00	1.0	0.00	0.10	0.01	0.17	0.00	0.00	0.00	0.00	0.01	0.01
3	0.07	0.76	0.00	0.03	0.04	0.10	0.00	0.00	0.00	0.87	1.1	0.01
4	0.01	0.38	0.00	0.01	0.02	0.68	0.00	0.00	0.00	0.25	0.20	0.01
5	0.00	0.02	0.01	0.02	0.00	0.89	0.00	0.00	0.00	0.01	0.01	0.01
6	0.00	0.00	0.00	0.01	0.04	0.07	0.05	0.00	0.00	0.01	0.01	0.01
7	0.01	0.00	0.00	0.01	0.03	0.08	0.01	0.00	0.00	0.31	0.01	0.01
8	0.01	0.00	0.00	0.01	0.01	0.03	0.01	0.16	0.00	0.01	0.01	0.01
9	0.01	0.00	0.49	0.03	0.01	0.02	0.00	0.32	0.00	0.01	0.01	0.01
10	0.01	0.00	0.86	0.02	0.02	0.03	0.00	0.15	0.64	0.01	0.01	0.01
11	0.02	0.01	0.02	0.02	0.02	0.03	0.00	0.00	0.37	0.37	0.01	0.01
12	0.04	0.01	0.00	0.02	0.01	0.01	0.00	0.08	0.20	0.04	0.01	0.01
13	0.01	0.00	0.00	0.03	0.01	0.00	0.00	0.48	0.00	0.01	0.01	0.01
14	0.38	0.00	0.01	0.02	0.01	0.20	0.00	1.1	0.43	0.01	0.01	0.01
15	0.01	0.00	0.01	0.01	0.01	0.02	0.01	0.00	0.00	0.01	0.01	0.11
16	0.01	0.00	0.11	0.01	0.00	0.01	0.01	0.00	0.00	0.04	0.01	0.01
17	0.01	0.09	0.01	0.06	0.02	0.16	0.18	0.11	0.10	0.01	0.06	0.01
18	0.01	0.83	0.00	0.02	0.02	0.18	0.01	0.29	0.00	0.01	0.05	0.01
19	0.01	0.02	0.00	0.01	0.05	0.05	0.01	0.00	0.00	0.01	0.01	0.01
20	0.01	0.01	0.00	0.01	0.25	0.05	0.58	0.01	0.00	0.01	0.01	0.01
21	0.01	0.00	0.01	0.01	0.19	0.02	0.14	0.53	0.33	0.15	0.01	0.01
22	0.01	0.07	0.01	0.00	0.24	0.00	0.00	1.1	0.00	0.01	0.01	0.00
23	0.01	0.17	0.01	0.00	0.30	0.00	0.00	0.57	0.19	0.01	0.01	0.00
24	0.37	0.01	0.00	0.02	0.20	0.06	0.15	0.00	0.04	0.01	0.31	0.00
25	0.03	0.00	0.00	0.02	0.22	0.08	0.12	0.01	0.00	0.01	0.02	0.00
26	0.01	0.00	0.00	0.02	0.24	0.62	0.00	0.00	0.00	0.01	0.01	0.00
27	0.01	0.00	0.00	0.03	0.24	0.03	0.00	0.00	0.01	0.01	0.19	0.00
28	0.03	0.01	0.19	0.02	0.25	0.64	0.00	0.00	0.00	0.01	0.57	0.00
29	0.03	0.00	0.03	0.00	0.27	0.05	0.00	0.09	0.00	0.01	0.02	0.00
30	0.01	0.00	0.01	0.00	---	0.15	0.01	0.48	0.00	0.01	0.01	0.00
31	0.01	---	0.01	0.00	---	0.02	---	0.08	---	0.01	0.01	---
TOTAL	1.17	3.47	1.79	0.58	2.73	4.97	1.30	5.58	2.32	2.25	2.74	0.31
MEAN	0.04	0.12	0.06	0.02	0.09	0.16	0.04	0.18	0.08	0.07	0.09	0.01
MAX	0.38	1.0	0.86	0.10	0.30	0.89	0.58	1.1	0.64	0.87	1.1	0.11
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
CFSM	1.26	3.86	1.92	0.62	3.14	5.34	1.44	6.00	2.58	2.42	2.95	0.34
IN.	1.45	4.30	2.22	0.72	3.39	6.16	1.61	6.92	2.88	2.79	3.40	0.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

MEAN	0.04	0.04	0.02	0.03	0.06	0.05	0.07	0.09	0.07	0.06	0.08	0.06
MAX	0.08	0.12	0.06	0.06	0.12	0.16	0.10	0.18	0.12	0.16	0.12	0.16
(WY)	(2002)	(2004)	(2004)	(1999)	(2001)	(2004)	(1999)	(2000)	(1999)	(2000)	(2001)	(2000)
MIN	0.01	0.01	0.00	0.00	0.01	0.00	0.04	0.03	0.02	0.02	0.01	0.01
(WY)	(2000)	(2000)	(2001)	(2003)	(2003)	(1999)	(2003)	(1998)	(2003)	(1998)	(2003)	(2004)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1997 - 2004

ANNUAL TOTAL	12.20	29.21	
ANNUAL MEAN	0.03	0.08	0.05
HIGHEST ANNUAL MEAN			0.08
LOWEST ANNUAL MEAN			0.02
HIGHEST DAILY MEAN	1.0	Nov 2	(a)1.1
LOWEST DAILY MEAN	0.00	Jan 1	May 14
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	many days
MAXIMUM PEAK STAGE			0.00
INSTANTANEOUS LOW FLOW			0.00
ANNUAL RUNOFF (CFSM)	1.11	2.66	(e)2.9
ANNUAL RUNOFF (INCHES)	15.13	36.22	Jul 2, 2000
10 PERCENT EXCEEDS	0.07	0.25	many days
50 PERCENT EXCEEDS	0.00	0.01	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

(a) Also occurred May 22 and Aug. 3

(e) Estimated due to ice effect or missing record

040871476 HOLMES AVENUE CREEK TRIB AT GMIA OUTFALL #1 AT MILWAUKEE, WI—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1996 to May 1997, November 1997 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1996 to May 1997, November 1997 to Sept. 6, 1999, November 2000 to September 2001.

INSTRUMENTATION.--Stage-activated water-quality sampler since November 1996. Continuous water-temperature recorder since November 1996.

REMARKS.--Chemical analyses are by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated. Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 29.5°C, July 20-21, 2001; minimum observed, 0.0°C, many days during winter.

EXTREMES FOR CURRENT YEAR.-- WATER TEMPERATURE; Maximum observed, 24.5°C, July 21; minimum observed, 0.0°C, many days during winter.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.5	11.0	13.0	13.0	6.5	11.0	11.0	8.0	9.0	9.5	7.5	8.0
2	13.5	11.5	12.5	12.5	7.0	8.5	9.5	7.0	8.0	10.0	4.0	8.0
3	17.0	8.5	12.0	11.5	5.5	7.5	10.0	7.5	8.5	9.0	5.5	7.5
4	14.0	12.0	13.0	15.5	6.5	10.0	10.0	8.0	9.0	8.5	5.5	6.5
5	14.0	10.5	12.0	12.5	10.5	11.0	10.5	6.0	8.0	7.5	0.0	4.5
6	13.5	11.5	12.0	12.5	10.0	11.0	10.0	7.0	8.0	8.5	6.0	7.0
7	14.0	12.5	13.0	12.0	8.0	10.5	10.5	7.5	8.5	8.0	6.5	7.5
8	15.0	13.0	13.5	10.0	7.0	8.5	10.5	9.0	9.5	7.5	6.0	6.5
9	14.5	13.5	14.0	10.5	8.5	9.5	11.0	3.0	7.5	6.0	0.0	4.0
10	14.5	13.5	13.5	11.5	8.5	10.0	6.0	3.0	4.0	6.5	1.5	5.5
11	15.5	13.5	14.0	12.0	10.5	11.0	9.0	4.5	7.0	8.0	6.0	6.5
12	15.5	13.5	14.0	12.0	9.5	11.0	10.0	7.5	9.0	8.5	6.5	7.0
13	14.5	13.0	13.5	10.5	7.5	9.0	9.5	8.0	8.5	8.5	7.0	7.0
14	14.5	10.0	12.5	11.0	9.0	10.0	10.0	3.5	7.5	8.5	5.0	6.5
15	14.5	13.0	13.5	11.0	8.5	10.0	10.5	8.0	9.0	7.5	5.5	6.0
16	14.0	11.0	12.0	11.0	9.5	10.0	10.5	0.0	5.5	8.0	5.5	6.5
17	14.0	12.0	13.0	11.5	8.0	10.5	9.0	2.0	7.0	8.0	0.0	3.5
18	13.5	12.0	12.5	12.5	7.5	10.0	10.0	8.0	9.0	6.5	5.0	6.0
19	13.0	11.5	12.0	12.0	10.5	11.0	8.5	7.5	8.0	7.0	5.0	5.5
20	14.0	12.5	13.5	12.5	11.0	11.5	9.5	7.5	8.0	7.5	5.5	6.5
21	13.5	12.0	12.5	12.5	7.5	9.5	10.0	6.5	8.5	6.5	5.0	6.0
22	12.5	10.5	11.0	11.5	6.5	9.0	10.0	8.5	9.0	6.0	4.5	5.0
23	13.5	11.0	12.0	12.5	8.0	10.0	9.0	7.0	8.5	5.0	4.5	4.5
24	14.0	9.0	11.5	11.5	10.0	10.5	8.5	7.5	8.0	5.0	0.0	2.0
25	13.5	9.5	12.0	11.5	9.5	10.0	9.5	7.5	8.5	4.5	2.5	3.5
26	13.5	11.5	12.0	11.0	9.5	10.0	9.0	7.5	8.0	4.5	0.0	2.5
27	13.0	11.5	12.0	12.0	9.5	10.5	10.0	8.0	8.5	4.5	0.0	2.0
28	13.5	8.0	11.5	11.0	9.0	10.0	10.0	1.5	5.5	4.0	0.5	2.5
29	13.0	8.0	11.5	10.5	8.5	9.5	9.5	7.0	8.0	4.5	2.0	3.0
30	13.0	9.5	11.5	11.5	9.0	9.5	10.0	8.0	8.5	4.5	3.0	3.5
31	13.5	12.0	12.5	---	---	---	10.0	8.0	8.5	4.0	3.0	3.5
MONTH	17.0	8.0	12.5	15.5	5.5	10.0	11.0	0.0	8.0	10.0	0.0	5.3



040871476 HOLMES AVENUE CREEK TRIB AT GMIA OUTFALL #1 AT MILWAUKEE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DISCRETE SAMPLES

Date	Time	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	COD, low level, water, unfltrd mg/L (00335)
FEB 06...	1117	.03	50	3,700
APR 06...	1010	.29	50	250

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
COMPOSITE SAMPLES

Date	End date	Time	End time	Sam- pling method, code (82398)	pH, water, unfltrd lab, std units (00403)	Specif. conduc- tance, wat unfl lab, uS/cm 25 degC (90095)	ANC, wat unfl fixed end pt, lab, mg/L as CaCO3 (00417)	Chlor- ide, water, fltrd, mg/L (00940)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	COD, low level, water, unfltrd mg/L (00335)	1,2- Propane -diol, water, unfltrd mg/L (91080)
DEC 10-10	20031210	1632	2351	50	--	--	--	--	--	--	--	260	--
DEC 28-28	20031228	0537	0857	50	--	--	--	--	--	--	--	540	--
JAN 02-02	20040102	1806	2341	50	--	--	--	--	--	--	--	410	--
JAN 04-04	20040104	1651	2309	50	7.4	2,410	743	168	4.3	2.65	1,080	1,400	<18.0
JAN 17-17	20040117	0858	2002	50	7.7	22,300	860	7,590	4.5	.746	9,200	19,000	12,000
JAN 26-27	20040127	1014	1027	50	--	--	--	--	--	--	--	1,200	--
FEB 03-03	20040203	1100	1749	50	--	--	--	--	--	--	--	9,800	--
FEB 06-11	20040211	1647	1753	50	--	--	--	--	--	--	--	17,000	--
FEB 19-20	20040220	1424	1328	50	--	--	--	--	--	--	--	11,000	--
FEB 20-22	20040222	1416	0441	50	7.8	2,730	490	412	4.4	.016	8,710	15,000	14,000
FEB 22-22	20040222	0856	2243	50	--	--	--	--	--	--	--	6,900	--
FEB 23-23	20040223	0113	1327	50	--	--	--	--	--	--	--	4,600	--
FEB 23-26	20040226	1755	1548	50	--	--	--	--	--	--	--	4,300	--
FEB 27- MAR 03	20040303	1358	1333	50	--	--	--	--	--	--	--	3,500	--
MAR 04-04	20040304	0554	2347	50	--	--	--	--	--	--	--	560	--
MAR 05-05	20040305	0018	0602	50	--	--	--	--	--	--	--	81	--
MAR 05-07	20040307	0711	0330	50	--	--	--	--	--	--	--	1,100	--
MAR 08-14	20040314	1218	1210	50	--	--	--	--	--	--	--	1,300	--
MAR 17-26	20040326	1122	0520	50	--	--	--	--	--	--	--	1,400	--
MAR 26-30	20040330	1721	0932	50	--	--	--	--	--	--	--	140	--
APR 17-22	20040422	0239	1244	50	--	--	--	--	--	--	--	130	--

## STREAMS TRIBUTARY TO LAKE MICHIGAN

040871476 HOLMES AVENUE CREEK TRIB AT GMIA OUTFALL #1 AT MILWAUKEE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	1,2- Ethane- diol, water, unfltrd mg/L (91075)	Runoff volume, thousands of cubic feet (99904)
DEC 10-10	--	3.1
DEC 28-28	--	6.9
JAN 02-02	--	4.9
JAN 04-04	<18.0	.07
JAN 17-17	<18.0	4.0
JAN 26-27	--	2.4
FEB 03-03	--	1.6
FEB 06-11	--	8.2
FEB 19-20	--	12
FEB 20-22	<18.0	29
FEB 22-22	--	14
FEB 23-23	--	12
FEB 23-26	--	54
FEB 27- MAR 03	--	120
MAR 04-04	--	54
MAR 05-05	--	54
MAR 05-07	--	21
MAR 08-14	--	25
MAR 17-26	--	93
MAR 26-30	--	71
APR 17-22	--	79

STREAMS TRIBUTARY TO LAKE MICHIGAN

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040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI

LOCATION.--Lat 42°59'23", long 87°57'07", in SE 1/4 SE 1/4 sec.12, T.6 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, on left bank 50 ft upstream from the Kinnickinnic River and 100 ft upstream of Kinnickinnic River Parkway bridge, at Milwaukee.

DRAINAGE AREA.--11.34 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1996 to May 1997, November 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 640 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor (see page 11).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	4.6	2.2	2.4	1.8	33	7.7	6.3	22	3.9	2.9	3.7
2	1.9	102	2.1	4.6	1.9	16	6.5	3.7	9.3	3.8	3.2	3.7
3	6.6	72	2.2	5.0	2.7	9.2	5.8	3.5	7.0	87	119	3.5
4	2.5	57	2.3	3.0	2.5	41	5.4	3.6	6.1	117	66	3.1
5	1.8	13	3.0	3.4	2.3	185	5.0	3.9	5.5	12	8.2	4.7
6	2.0	5.2	2.2	2.2	2.3	22	6.4	3.7	5.2	8.3	5.9	3.1
7	1.8	3.9	2.0	1.9	2.5	14	5.1	3.4	5.2	51	4.0	3.0
8	1.9	2.8	2.1	2.2	2.1	9.1	4.7	13	4.7	8.5	3.5	2.9
9	2.2	2.5	31	2.4	2.0	7.7	4.2	47	5.4	6.3	5.9	3.0
10	1.8	2.7	129	2.6	e2.0	6.3	4.0	30	78	5.4	3.5	3.1
11	1.8	3.2	14	2.6	e2.2	6.0	3.7	10	70	30	3.3	2.8
12	4.8	2.5	6.1	3.3	e2.3	5.2	3.5	7.0	51	27	3.4	2.7
13	1.9	2.4	4.4	3.0	2.4	4.9	3.6	93	13	6.1	3.4	3.0
14	33	2.4	4.3	3.0	2.5	14	3.2	212	106	5.0	3.1	3.0
15	3.5	2.1	3.7	2.5	2.3	5.4	3.1	34	18	4.4	2.9	11
16	2.4	2.2	11	2.6	2.2	4.8	3.3	18	15	9.8	3.0	8.7
17	2.2	2.7	4.6	4.7	2.5	9.5	22	21	26	5.6	4.7	3.3
18	1.8	89	3.6	2.4	2.6	11	4.1	81	10	3.7	4.3	2.8
19	1.9	8.4	3.0	e2.3	3.9	8.0	3.8	14	6.9	3.9	4.2	2.8
20	1.9	4.7	2.8	e2.2	14	6.3	63	11	5.9	4.3	3.0	2.7
21	2.2	3.5	3.0	e2.2	15	4.8	34	77	66	25	3.0	2.8
22	1.9	5.7	2.9	e2.1	12	4.3	6.8	208	38	6.7	2.6	2.6
23	2.1	15	2.9	e2.0	26	4.5	4.9	224	22	4.8	2.9	2.6
24	30	4.8	2.4	e1.9	17	6.2	8.4	28	22	4.6	26	2.6
25	13	3.2	2.2	e2.1	13	5.4	25	20	7.9	3.7	18	2.6
26	2.6	2.9	2.3	e2.2	12	87	6.2	13	5.8	3.8	4.4	2.6
27	2.3	2.7	2.3	e2.3	11	12	4.8	10	7.2	3.5	18	2.8
28	3.6	2.5	15	e2.2	11	83	4.4	8.3	16	3.8	61	2.8
29	2.5	2.3	4.0	e2.0	12	34	4.2	15	5.1	3.1	11	2.8
30	3.1	2.3	2.9	e1.9	---	19	4.7	70	4.3	3.4	4.3	2.8
31	1.9	---	2.8	1.8	---	10	---	27	---	2.9	4.0	---
TOTAL	144.8	430.2	278.3	81.0	188.0	688.6	271.5	1,319.4	664.5	468.3	412.6	103.6
MEAN	4.67	14.3	8.98	2.61	6.48	22.2	9.05	42.6	22.1	15.1	13.3	3.45
MAX	33	102	129	5.0	26	185	63	224	106	117	119	11
MIN	1.8	2.1	2.0	1.8	1.8	4.3	3.1	3.4	4.3	2.9	2.6	2.6
CFSM	0.41	1.26	0.79	0.23	0.57	1.96	0.80	3.75	1.95	1.33	1.17	0.30
IN.	0.48	1.41	0.91	0.27	0.62	2.26	0.89	4.33	2.18	1.54	1.35	0.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

	8.78	8.06	5.45	8.20	14.5	12.4	19.4	23.7	19.4	14.9	15.1	13.8
MEAN	8.78	8.06	5.45	8.20	14.5	12.4	19.4	23.7	19.4	14.9	15.1	13.8
MAX	20.6	14.3	8.98	21.9	31.7	22.3	39.6	42.6	37.0	35.3	21.7	34.4
(WY)	(2002)	(2004)	(2004)	(1999)	(2001)	(1998)	(1999)	(2004)	(1999)	(2000)	(1998)	(2000)
MIN	4.67	3.42	3.00	1.25	1.90	7.04	8.55	12.4	6.23	7.20	5.31	3.45
(WY)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(1997)	(2002)	(2003)	(2003)	(2003)	(2004)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1997 - 2004

ANNUAL TOTAL	2,780.60	5,050.8	
ANNUAL MEAN	7.62	13.8	13.7
HIGHEST ANNUAL MEAN			17.6
LOWEST ANNUAL MEAN			6.32
HIGHEST DAILY MEAN	129	Dec 10	224
LOWEST DAILY MEAN	(a)0.50	Jan 23	1.8
ANNUAL SEVEN-DAY MINIMUM	0.66	Jan 20	1.9
MAXIMUM PEAK FLOW			1,220
MAXIMUM PEAK STAGE			17.92
INSTANTANEOUS LOW FLOW			1.2
ANNUAL RUNOFF (CFSM)	0.672	1.22	1.21
ANNUAL RUNOFF (INCHES)	9.12	16.57	16.44
10 PERCENT EXCEEDS	16	30	27
50 PERCENT EXCEEDS	2.8	4.2	5.0
90 PERCENT EXCEEDS	1.5	2.2	2.2

(a) Result of freezeup

(b) Also occurred Oct. 7, 10, 11, 18, Jan. 31, Feb. 1

(c) Estimated due to ice effect or missing record

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1996 to April 1997, November 1997 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1996 to April 1997, November 1997 to current year.

DISSOLVED OXYGEN: November, 1996 to April 1997, November 1997 to current year.

SPECIFIC CONDUCTANCE: January 2001 to current year.

INSTRUMENTATION.--Stage-activated water-quality sampler since November 1996. Continuous water-temperature recorder since November 1996.

Dissolved-oxygen recorder since November 1996. Specific conductance recorder since January 2001.

REMARKS.--Chemical analyses are by the Wisconsin State Laboratory of Hygiene. Samples are point samples unless otherwise indicated. Dissolved-oxygen concentrations greater than 30 mg/L are out of calibration range of meter. Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum observed, 29.5°C, July 30, 1999; minimum observed, 0.0°C, many days during winter.

DISSOLVED OXYGEN: Maximum observed, 22.7 mg/L, Oct. 14, 2000; minimum observed, 0.0 mg/L, Feb. 24, 1997, May 9, 10, 2004.

SPECIFIC CONDUCTANCE: Maximum observed, 27,500 µS/cm, Feb. 4, 2004; minimum observed, 38 µS/cm, Aug. 13, 2002.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum observed, 26.5°C, Aug. 3; minimum observed, 0.0°C, many days during winter.

DISSOLVED OXYGEN: Maximum observed, 21.7 mg/L, Apr. 16; minimum observed, 0.0 mg/L, May 9, 10.

SPECIFIC CONDUCTANCE: Maximum observed, 27,500 µS/cm, Feb. 4; minimum observed, 79 µS/cm, Aug. 3.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.0	10.0	10.0	11.5	10.5	10.5	4.5	3.0	3.0	3.5	2.5	2.5
2	12.0	9.5	9.5	10.5	10.0	10.0	3.5	2.0	2.0	6.0	4.0	4.0
3	11.5	10.0	10.0	10.0	9.5	9.5	4.5	3.0	3.0	6.0	4.0	4.0
4	13.0	11.0	11.0	15.0	11.5	11.5	5.0	4.0	4.0	2.0	1.0	1.0
5	13.0	10.5	10.5	12.5	9.5	9.5	5.5	4.5	4.5	0.5	0.0	0.0
6	14.0	11.5	11.5	9.0	7.0	7.0	5.0	4.0	4.0	0.0	0.0	0.0
7	16.0	13.0	13.0	7.0	5.0	5.0	5.0	4.0	4.0	1.0	0.5	0.5
8	18.0	15.5	15.5	6.0	3.0	3.0	5.5	5.0	5.0	0.5	0.5	0.5
9	15.5	14.5	14.5	6.0	4.0	4.0	7.0	6.0	6.0	0.5	0.0	0.0
10	18.0	15.5	15.5	7.0	5.0	5.0	6.0	5.5	5.5	0.0	0.0	0.0
11	18.0	16.0	16.0	9.5	8.0	8.0	4.0	2.0	2.0	0.5	0.0	0.0
12	17.0	15.0	15.0	10.5	8.0	8.0	0.5	0.0	0.0	1.0	0.5	0.5
13	16.0	14.0	14.0	5.5	4.0	4.0	1.0	0.5	0.5	0.5	0.0	0.0
14	14.5	13.5	13.5	7.5	5.0	5.0	2.5	1.5	1.5	0.5	0.0	0.0
15	13.5	12.0	12.0	7.5	7.0	7.0	3.0	2.0	2.0	0.0	0.0	0.0
16	12.0	10.5	10.5	8.5	8.0	8.0	3.5	3.0	3.0	0.5	0.0	0.0
17	12.5	10.0	10.0	10.0	8.5	8.5	2.0	1.0	1.0	0.5	0.0	0.0
18	14.5	12.0	12.0	11.5	10.5	10.5	1.5	1.0	1.0	0.0	0.0	0.0
19	14.0	12.5	12.5	10.0	8.5	8.5	1.5	0.5	0.5	0.5	0.0	0.0
20	16.5	13.5	13.5	10.5	8.0	8.0	0.5	0.0	0.0	0.5	0.5	0.5
21	14.0	13.0	13.0	9.0	7.5	7.5	2.0	1.0	1.0	0.5	0.0	0.0
22	12.5	11.0	11.0	8.5	7.5	7.5	4.5	3.0	3.0	0.0	0.0	0.0
23	11.5	11.0	11.0	12.0	9.5	9.5	3.5	2.5	2.5	1.0	0.5	0.5
24	12.5	10.5	10.5	7.5	4.0	4.0	1.5	0.5	0.5	0.5	0.0	0.0
25	14.0	11.5	11.5	4.0	2.5	2.5	1.5	0.5	0.5	0.5	0.5	0.5
26	10.0	9.0	9.0	6.0	4.5	4.5	2.0	1.5	1.5	0.5	0.5	0.5
27	10.5	9.0	9.0	7.5	6.5	6.5	3.5	2.5	2.5	0.5	0.0	0.0
28	10.5	9.0	9.0	5.5	3.5	3.5	5.5	4.5	4.5	0.0	0.0	0.0
29	10.0	9.0	9.0	3.5	2.5	2.5	5.0	4.0	4.0	0.0	0.0	0.0
30	13.0	11.0	11.0	7.0	5.0	5.0	4.0	2.5	2.5	0.0	0.0	0.0
31	14.5	13.5	13.5	---	---	---	4.0	2.5	2.5	0.5	0.5	0.5
MONTH	18.0	9.0	11.9	15.0	2.5	6.8	7.0	0.0	2.5	6.0	0.0	0.5





## STREAMS TRIBUTARY TO LAKE MICHIGAN

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.7	10.3	11.4	13.0	9.0	10.7	15.6	12.0	13.7	15.4	9.1	11.7
2	13.2	10.5	11.7	10.2	9.2	9.7	16.9	12.9	14.2	16.0	7.0	10.7
3	12.2	8.4	10.3	10.0	8.7	9.3	17.0	12.8	14.2	12.4	6.3	8.9
4	13.5	8.4	10.9	9.8	6.8	8.5	16.4	11.9	13.6	13.2	9.7	11.1
5	13.1	9.4	11.0	11.8	7.7	9.7	17.5	11.0	12.9	---	---	---
6	15.5	9.8	11.3	13.8	9.8	11.2	16.2	12.1	13.3	---	---	---
7	12.4	7.9	10.3	13.3	10.5	11.8	17.0	11.7	13.6	16.0	9.8	12.0
8	11.9	8.3	9.9	13.9	11.6	12.5	16.3	11.7	13.1	13.7	9.7	11.2
9	11.9	8.3	9.9	13.8	11.2	12.3	14.0	10.3	12.0	10.9	9.8	10.2
10	11.2	8.6	9.7	13.9	9.1	11.7	12.5	11.7	12.1	12.1	9.4	10.5
11	10.5	7.4	9.3	12.3	8.9	10.1	16.2	12.1	14.1	11.9	9.5	10.4
12	12.1	5.9	8.8	12.7	9.3	10.4	17.4	14.1	15.3	12.1	9.1	10.2
13	12.1	8.0	9.6	12.8	10.4	11.4	17.8	14.2	15.3	12.4	9.1	10.5
14	9.8	7.8	8.5	14.6	10.8	12.3	17.3	13.2	14.5	11.3	9.5	10.3
15	13.6	8.4	10.6	---	---	---	16.5	12.2	13.9	11.8	8.6	10
16	13.9	9.3	11.2	---	---	---	12.8	11.0	11.5	12.3	9.5	10.7
17	14.0	9.8	11.5	---	---	---	15.7	11.3	12.9	12.4	9.0	10.5
18	12.2	9.1	10.4	---	---	---	15.8	11.1	12.9	---	---	---
19	12.2	9.1	10.3	---	---	---	15.8	11.1	12.8	12.4	7.2	9.1
20	11.7	8.5	9.8	---	---	---	15.3	10.0	12.4	12.0	7.6	9.2
21	11.8	8.5	10.0	---	---	---	14.7	8.9	11.9	12.7	7.9	10.1
22	12.2	9.4	10.5	12.9	8.7	10.8	15.3	9.1	11.9	13.9	10.4	11.4
23	12.3	9.6	10.5	9.6	7.3	8.4	---	---	---	12.6	10.2	11.2
24	12.8	8.9	10.7	14.9	9.1	12.2	---	---	---	13.2	11.4	12.1
25	14.1	8.3	10.1	15.0	11.7	13.1	---	---	---	12.9	11.2	12.1
26	13.5	9.5	11.1	15.4	11.1	12.7	---	---	---	11.9	10.8	11.3
27	13.7	9.5	11.3	15.6	10.2	11.8	---	---	---	11.4	10.4	10.9
28	12.8	8.8	10.1	15.4	11.2	12.9	---	---	---	11.2	10.2	10.6
29	12.9	8.2	10.5	16.0	12.0	13.6	---	---	---	12.2	9.6	11.0
30	13.1	7.9	9.6	15.6	11.6	12.9	---	---	---	12.6	9.7	11.0
31	12.0	8.0	9.4	---	---	---	14.7	9.5	11.4	12.3	9.0	10.6
MONTH	15.5	5.9	10.3	16.0	6.8	11.3	17.8	8.9	13.2	16.0	6.3	10.7
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.3	9.8	11.2	---	---	---	---	---	---	13.7	4.5	8.4
2	11.9	10.0	10.7	---	---	---	---	---	---	16.5	8.4	12.5
3	10.6	9.4	10.2	12.1	9.1	10.5	---	---	---	16.0	8.6	12.2
4	9.5	7.7	8.3	14.0	9.2	11.0	17.8	12.3	15.1	15.4	8.0	11.5
5	9.9	8.0	9.0	14.2	9.6	11.7	18.8	11.6	15.3	16.8	7.8	12.2
6	15.3	8.2	10.2	12.9	9.4	10.8	---	---	---	14.5	8.2	11.2
7	16.4	9.0	10.7	11.7	10.1	10.8	---	---	---	16.2	6.3	11.8
8	12.8	9.6	10.4	12.6	8.0	10.8	---	---	---	15.1	2.0	10.6
9	---	---	---	14.8	9.1	11.4	---	---	---	7.2	0.0	3.7
10	---	---	---	16.2	8.8	11.8	---	---	---	12.7	0.0	6.1
11	---	---	---	16.3	9.2	12.1	---	---	---	15.6	3.2	10.5
12	---	---	---	17.5	10.5	13.5	---	---	---	15.8	1.7	9.8
13	11.6	10.7	11.2	---	---	---	---	---	---	10.5	0.3	6.8
14	13.0	11.2	11.9	---	---	---	14.0	9.3	11.6	10.6	5.5	8.9
15	13.5	12.4	13.0	---	---	---	17.8	9.8	14.2	11.9	9.2	10.3
16	13.3	12.1	12.9	10.1	7.4	8.8	21.7	10.3	16.3	12.2	9.0	10.6
17	14.7	12.3	13.4	9.4	5.5	7.3	17.1	8.1	11.6	12.0	7.7	10.0
18	14.1	10.6	13.0	7.8	4.6	6.2	12.6	6.6	9.9	11.4	6.4	9.5
19	11.8	8.3	10.6	---	---	---	---	---	---	13.3	9.0	11.1
20	11.3	8.1	9.6	---	---	---	---	---	---	12.1	7.6	9.7
21	11.4	9.6	10.3	---	---	---	---	---	---	10.5	8.1	9.0
22	12.3	10.3	10.7	12.2	7.3	9.9	---	---	---	10.6	8.3	9.6
23	12.8	11.5	12.1	---	---	---	12.3	7.6	10.2	11.2	6.9	9.5
24	12.3	10.9	11.6	---	---	---	15.2	7.7	11.7	12.1	7.7	10.5
25	12.3	9.7	11.2	---	---	---	10.3	5.2	8.4	12.4	9.0	10.6
26	11.8	8.6	10.4	---	---	---	13.4	4.0	9.4	14.1	9.0	11.5
27	10.3	8.0	9.1	---	---	---	14.1	6.2	10.6	16.7	10.2	12.5
28	10.1	7.5	8.9	---	---	---	14.3	5.1	10	18.7	10.0	14.0
29	---	---	---	---	---	---	16.5	3.0	10.5	13.6	8.4	10.9
30	---	---	---	---	---	---	16.2	7.1	11.0	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	16.4	7.5	10.9	17.5	4.6	10.5	21.7	3.0	11.7	18.7	0.0	10.2



## STREAMS TRIBUTARY TO LAKE MICHIGAN

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1,010	903	955	773	144	708	1,020	933	966	---	---	---
2	1,040	974	1,000	392	114	191	1,020	923	969	---	---	---
3	1,060	306	755	448	163	282	1,000	943	968	---	---	---
4	888	585	781	559	136	364	985	712	889	---	---	---
5	977	863	911	798	361	642	770	552	687	---	---	---
6	1,000	606	858	893	797	839	731	552	647	---	---	---
7	929	848	883	902	841	875	774	676	722	---	---	---
8	1,060	895	935	910	849	874	809	744	777	---	---	---
9	1,080	515	805	930	859	901	1,320	120	631	15,600	2,220	7,850
10	899	747	836	940	881	913	689	121	327	16,900	8,460	12,100
11	843	430	774	920	853	886	799	655	701	8,460	5,300	6,780
12	954	320	629	861	787	822	892	799	849	6,120	3,860	5,010
13	854	737	797	841	794	823	932	870	896	4,160	3,100	3,580
14	855	145	401	828	650	740	3,740	929	2,470	6,820	2,640	3,630
15	912	587	787	695	650	665	3,720	1,480	2,270	5,470	2,850	4,160
16	967	876	920	702	684	693	3,080	1,250	1,510	3,830	2,720	3,110
17	934	869	906	706	203	678	5,510	1,360	3,340	27,400	2,760	14,800
18	949	819	884	411	110	212	5,240	1,870	2,840	---	---	---
19	957	789	873	623	411	538	1,870	1,500	1,630	---	---	---
20	908	810	848	717	618	662	1,660	1,420	1,530	---	---	---
21	868	613	734	719	647	695	1,570	1,340	1,450	4,130	1,430	2,490
22	719	631	689	739	285	671	1,480	1,300	1,390	---	---	---
23	772	681	725	440	197	342	1,730	1,040	1,480	1,700	925	1,540
24	717	118	549	738	440	622	2,060	1,600	1,770	10,800	1,310	4,360
25	651	194	475	808	735	780	1,970	1,530	1,700	8,880	3,260	6,000
26	749	651	698	841	794	819	1,580	1,110	1,490	7,580	5,130	6,190
27	772	711	744	886	824	852	1,540	1,390	1,430	17,800	6,980	11,300
28	802	485	624	922	870	892	9,080	1,320	2,270	12,300	7,190	9,230
29	654	419	595	975	908	932	1,960	1,380	1,840	7,700	4,340	6,480
30	784	554	640	979	929	954	---	---	---	4,340	2,480	3,250
31	751	689	716	---	---	---	---	---	---	2,480	2,070	2,270
MONTH	1,080	118	765	979	110	696	9,080	120	1,390	27,400	925	6,010
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3,720	2,230	2,770	---	---	---	---	---	---	---	---	---
2	10,900	2,600	4,640	---	---	---	---	---	---	---	---	---
3	26,100	7,190	18,400	3,350	2,970	3,180	---	---	---	---	---	---
4	27,500	7,620	16,200	3,340	601	2,770	---	---	---	---	---	---
5	7,620	4,220	5,550	1,990	568	1,200	---	---	---	---	---	---
6	19,300	4,000	11,900	2,440	1,980	2,260	---	---	---	---	---	---
7	20,100	11,700	15,800	2,660	2,370	2,490	---	---	---	---	---	---
8	12,500	6,200	9,470	2,610	2,470	2,560	---	---	---	---	---	---
9	---	---	---	2,600	2,090	2,420	---	---	---	---	---	---
10	---	---	---	2,610	2,370	2,510	---	---	---	---	---	---
11	---	---	---	2,520	2,380	2,440	---	---	---	---	---	---
12	---	---	---	2,630	2,280	2,460	---	---	---	---	---	---
13	4,290	3,050	3,680	2,440	2,110	2,360	---	---	---	---	---	---
14	3,310	2,500	2,930	2,650	962	1,730	---	---	---	---	---	---
15	3,080	2,280	2,740	2,430	2,160	2,340	---	---	---	---	---	---
16	3,080	2,210	2,700	2,360	2,080	2,250	---	---	---	---	---	---
17	3,170	1,990	2,430	8,240	2,270	4,260	---	---	---	---	---	---
18	3,690	2,710	3,100	4,030	2,350	2,990	---	---	---	---	---	---
19	5,880	3,420	4,490	3,340	2,240	2,790	---	---	---	---	---	---
20	8,500	4,800	6,090	4,680	2,380	3,350	---	---	---	---	---	---
21	12,400	6,300	9,360	---	---	---	---	---	---	---	---	---
22	7,330	3,960	6,400	---	---	---	---	---	---	---	---	---
23	4,960	3,860	4,350	---	---	---	---	---	---	---	---	---
24	4,780	4,090	4,440	---	---	---	---	---	---	---	---	---
25	4,730	3,360	4,200	---	---	---	---	---	---	---	---	---
26	4,850	2,950	3,690	---	---	---	---	---	---	---	---	---
27	3,700	2,940	3,450	---	---	---	---	---	---	---	---	---
28	3,580	2,720	3,270	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	27,500	1,990	6,340	8,240	568	2,580	---	---	---	---	---	---

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	JUNE			JULY			AUGUST			SEPTEMBER		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	1,570	1,450	1,500	1,410	1,300	1,370	1,290	1,160	1,220			
2	---	---	---	1,570	1,460	1,520	1,450	1,310	1,380	1,290	778	1,140			
3	---	---	---	1,580	106	1,180	1,420	79	1,070	1,290	1,170	1,240			
4	---	---	---	1,090	118	725	944	205	643	1,320	1,200	1,250			
5	---	---	---	1,340	1,050	1,210	1,240	944	1,110	1,320	494	1,120			
6	---	---	---	1,450	1,330	1,400	1,290	788	1,190	1,330	1,150	1,230			
7	---	---	---	1,440	140	758	1,380	1,240	1,320	1,370	1,220	1,290			
8	---	---	---	1,360	1,090	1,250	1,400	1,300	1,360	1,370	1,180	1,270			
9	1,610	809	1,490	1,400	1,350	1,380	1,390	189	1,180	1,350	1,210	1,290			
10	1,580	158	911	1,420	1,340	1,390	1,340	1,260	1,310	1,350	1,160	1,230			
11	1,000	290	610	1,460	164	1,280	1,400	1,270	1,330	1,280	1,130	1,180			
12	1,210	283	857	1,160	172	750	1,380	1,280	1,330	1,370	1,260	1,320			
13	1,450	1,080	1,340	1,360	1,100	1,270	1,360	1,270	1,330	1,400	1,240	1,340			
14	1,460	99	645	1,420	1,340	1,370	1,440	1,290	1,330	1,400	1,100	1,230			
15	1,320	893	1,140	1,420	1,280	1,350	1,460	1,360	1,420	1,310	185	1,030			
16	1,420	202	1,250	1,420	498	1,180	1,480	1,370	1,430	930	392	698			
17	1,260	419	881	1,310	554	1,000	1,480	875	1,180	1,250	930	1,050			
18	1,420	785	1,270	1,390	1,260	1,330	1,370	864	1,220	1,270	1,120	1,200			
19	1,530	1,410	1,450	1,420	1,240	1,350	1,200	932	1,040	1,360	1,250	1,300			
20	1,560	1,470	1,520	1,360	1,220	1,290	1,400	1,130	1,230	1,390	1,020	1,260			
21	1,600	210	941	1,340	133	965	1,340	1,180	1,230	1,470	1,220	1,350			
22	1,250	461	609	1,170	654	960	1,440	1,300	1,360	1,270	1,200	1,240			
23	1,440	279	1,110	1,280	1,170	1,210	1,450	1,320	1,400	1,330	1,230	1,280			
24	1,040	369	737	1,310	1,140	1,200	1,390	167	1,090	1,280	1,200	1,230			
25	1,400	1,040	1,260	1,340	1,200	1,280	947	157	616	1,270	1,210	1,250			
26	1,520	1,390	1,480	1,350	1,280	1,320	1,150	928	1,040	1,360	1,250	1,280			
27	1,550	410	1,480	1,340	1,220	1,280	1,160	201	654	1,420	1,220	1,360			
28	1,300	385	899	1,360	1,130	1,320	928	131	431	1,330	1,250	1,300			
29	1,460	1,300	1,410	1,390	889	1,250	1,080	297	740	---	---	---			
30	1,530	1,440	1,490	1,410	1,230	1,320	1,250	1,080	1,180	---	---	---			
31	---	---	---	1,400	1,270	1,320	1,270	967	1,170	---	---	---			
MONTH	1,610	99	1,130	1,580	106	1,220	1,480	79	1,150	1,470	185	1,220			
YEAR	27,500	79	2,020												

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DISCRETE SAMPLES

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, uS/cm 25 degC (90095)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (00417)	Chloride, water, fltrd, mg/L (00940)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	COD, low level, water, unfltrd mg/L (00335)	1,2-Propane-diol, water, unfltrd mg/L (91080)	1,2-Ethane-diol, water, unfltrd mg/L (91075)
JAN 29...	1912	2.4	10	7.7	4,760	215	1,420	.30	.056	<1,200	15	<18.0	<18.0
MAR 23...	1355	4.5	10	8.0	2,370	275	578	.61	<.015	<30.0	53	<18.0	<18.0
SEP 22...	2002	2.5	10	8.3	1,180	176	209	.40	.022	<2.0	30	<18.0	<18.0

## STREAMS TRIBUTARY TO LAKE MICHIGAN

040871488 WILSON PARK CREEK AT ST. LUKES HOSPITAL AT MILWAUKEE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
COMPOSITE SAMPLES

Date	End date	Time	End time	Sam- pling method, code (82398)	pH, water, unfltrd lab, std units (00403)	Specif. conduc- tance, wat unfl lab, uS/cm 25 degC (90095)	ANC, wat unfl fixed end pt, lab, mg/L as CaCO3 (00417)	Chlor- ide, water, fltrd, mg/L (00940)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	COD, low level, water, unfltrd mg/L (00335)	1,2- Propane -diol, water, unfltrd mg/L (91080)
JAN 04-05	20040105	1710	1113	50	8.1	6,180	229	1,900	.34	<.015	7.9	38	<18.0
JAN 05-05	20040105	1145	1505	50	--	--	--	--	--	--	--	44	--
JAN 17-18	20040118	0905	0450	50	7.7	20,600	176	7,730	1.0	.129	205	410	170
FEB 06-06	20040206	0030	1205	50	--	--	--	--	--	--	--	190	--
FEB 19-20	20040220	1946	1437	50	--	--	--	--	--	--	--	120	--
FEB 19-22	20040222	1946	1551	50	7.6	7,280	161	2,420	2.2	.036	252	440	300
FEB 20-20	20040220	1510	2008	50	--	--	--	--	--	--	--	470	--
FEB 20-21	20040221	2056	0822	50	--	--	--	--	--	--	--	520	--
FEB 21-21	20040221	0953	1748	50	--	--	--	--	--	--	--	750	--
FEB 22-22	20040222	0052	1551	50	--	--	--	--	--	--	--	580	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	1,2- Ethane- diol, water, unfltrd mg/L (91075)	Runoff volume, thousands of cubic feet (99904)
JAN 04-05	<18.0	200
JAN 05-05	--	51
JAN 17-18	<18.0	370
FEB 06-06	--	84
FEB 19-20	--	460
FEB 19-22	<18.0	3,100
FEB 20-20	--	540
FEB 20-21	--	510
FEB 21-21	--	530
FEB 22-22	--	470

## STREAMS TRIBUTARY TO LAKE MICHIGAN

## 04087159 KINNICKINNIC RIVER AT SOUTH 11TH STREET AT MILWAUKEE, WI

LOCATION.--Lat 42°59'51", long 87°55'35", in SW ¼ NW ¼ sec.8, T.6 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, on left bank 150 ft upstream from footbridge on South 11th Street, 3.2 mi upstream from mouth, at Milwaukee.

DRAINAGE AREA.--18.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1982 to current year. Low-flow records equivalent to records for Kinnickinnic River at Milwaukee, WI (04087160) September 1976 to January 1983 (discontinued). Discontinued gage was located 0.3 mi downstream from present gage.

REVISED RECORDS.--WDR WI-97-1: Drainage area.

GAGE.--Water-stage recorder and steel plate weir. Datum of gage is 588.88 ft above NGVD of 1929, from levels from the Southeast Wisconsin Regional Planning Commission.

REMARKS.--Records good except those for estimated daily discharges, which are poor, and those for discharges greater than 500 ft<sup>3</sup>/s, which are fair (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	8.4	4.3	4.6	e4.0	56	13	11	43	7.7	5.0	6.2
2	3.6	199	4.3	7.0	e3.9	24	11	6.2	15	7.3	5.6	6.1
3	14	125	4.3	7.4	e3.9	13	9.3	6.2	12	170	358	5.7
4	4.8	131	4.6	e5.6	e3.9	63	8.2	6.2	11	378	123	5.3
5	3.6	23	5.8	e5.0	e3.8	358	8.0	6.4	9.6	20	11	8.8
6	4.1	9.2	4.4	e4.0	e3.8	33	10	6.0	9.2	14	8.0	5.4
7	3.7	7.0	4.1	e3.8	e3.8	23	8.2	5.7	9.3	105	6.6	5.5
8	3.8	5.7	4.2	e4.0	e3.8	15	7.5	18	8.7	15	6.0	5.8
9	4.2	5.1	59	e4.4	e3.8	12	6.8	85	17	12	21	6.0
10	3.7	5.2	248	e4.6	e3.7	10	6.6	84	150	9.9	6.9	6.3
11	3.8	5.7	22	e4.7	e3.7	10	6.2	17	111	49	6.0	4.7
12	9.2	5.0	9.6	e5.5	e3.6	9.1	6.0	11	70	46	5.6	4.4
13	3.7	5.3	8.2	e5.5	e3.6	7.3	6.3	201	19	11	5.3	4.8
14	59	5.6	7.5	e5.0	e3.6	26	6.3	431	260	9.0	4.8	5.1
15	6.0	5.5	6.5	e4.5	e3.6	8.1	6.6	52	31	8.3	4.4	19
16	4.6	4.6	20	e4.8	e3.8	7.5	e16	26	45	14	4.7	17
17	4.3	5.8	7.6	e5.0	e4.2	16	e40	30	50	9.7	7.6	5.0
18	4.2	160	6.4	e4.0	e6.0	19	e9.0	151	17	7.2	6.5	4.3
19	3.5	13	5.4	e3.6	e10	12	e8.0	21	12	7.2	7.3	4.2
20	3.8	7.7	5.4	e3.8	e40	9.1	143	19	11	7.4	6.0	4.3
21	4.0	6.3	6.6	e4.0	e32	7.3	59	168	111	42	5.6	4.5
22	3.7	9.9	5.5	e4.0	18	7.1	12	396	54	9.9	5.4	4.2
23	4.1	26	5.4	e4.0	43	7.1	8.9	409	31	7.1	5.8	4.3
24	59	7.7	4.7	e4.0	23	10	14	47	44	6.8	6.2	4.4
25	24	6.1	4.3	e4.0	18	8.2	46	33	13	6.4	84	4.4
26	4.6	5.1	4.7	e4.0	17	169	10	20	10	6.2	7.9	4.5
27	4.2	5.0	5.0	e3.7	15	18	8.5	16	11	6.0	39	4.4
28	7.7	4.6	28	e3.7	15	169	7.5	13	31	6.5	95	4.3
29	5.1	4.6	6.4	e3.6	17	54	7.1	26	8.9	5.9	18	4.2
30	6.5	4.4	5.2	e3.4	---	33	7.3	136	8.0	6.2	7.0	4.4
31	4.3	---	4.9	e3.2	---	17	---	50	---	5.4	6.5	---
TOTAL	278.7	816.5	522.3	138.4	318.5	1,230.8	516.3	2,507.7	1,232.7	1,016.1	945.5	177.5
MEAN	8.99	27.2	16.8	4.46	11.0	39.7	17.2	80.9	41.1	32.8	30.5	5.92
MAX	59	199	248	7.4	43	358	143	431	260	378	358	19
MIN	3.5	4.4	4.1	3.2	3.6	7.1	6.0	5.7	8.0	5.4	4.4	4.2
CFSM	0.48	1.45	0.90	0.24	0.58	2.11	0.92	4.30	2.19	1.74	1.62	0.31
IN.	0.55	1.62	1.03	0.27	0.63	2.44	1.02	4.96	2.44	2.01	1.87	0.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

MEAN	19.4	23.5	16.7	14.2	20.8	24.6	34.3	29.8	30.5	28.5	34.6	24.9
MAX	60.5	67.8	48.9	43.7	56.3	44.9	104	80.9	81.6	66.8	82.3	69.5
(WY)	(1992)	(1986)	(1983)	(1988)	(2001)	(1993)	(1993)	(2004)	(1999)	(2000)	(1986)	(2000)
MIN	6.81	7.11	3.96	3.96	4.95	8.87	14.1	9.07	11.4	12.6	11.8	5.92
(WY)	(1995)	(2003)	(1990)	(2003)	(2003)	(1996)	(1989)	(1992)	(1985)	(1996)	(1999)	(2004)

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087159 KINNICKINNIC RIVER AT SOUTH 11TH STREET AT MILWAUKEE, WI—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	5,561.2		9,701.0			
ANNUAL MEAN	15.2		26.5		25.2	
HIGHEST ANNUAL MEAN					39.8	
LOWEST ANNUAL MEAN					13.1	
HIGHEST DAILY MEAN	248	Dec 10	431	May 14	1,630	Aug 6, 1986
LOWEST DAILY MEAN	3.5	(a)Jan 1	(b)3.2	Jan 31	(b)2.9	Dec 26, 1989
ANNUAL SEVEN-DAY MINIMUM	3.7	Jan 19	3.6	Jan 27	(b)3.0	Dec 23, 1989
MAXIMUM PEAK FLOW			4,600	Jul 4	(c)10,600	Aug 6, 1986
MAXIMUM PEAK STAGE			12.55	Jul 4	(d)14.41	Aug 6, 1986
ANNUAL RUNOFF (CFSM)	0.810		1.41		1.34	
ANNUAL RUNOFF (INCHES)	11.00		19.20		18.18	
10 PERCENT EXCEEDS	31		57		48	
50 PERCENT EXCEEDS	5.7		7.1		9.3	
90 PERCENT EXCEEDS	3.8		4.0		5.5	

(a) Also occurred Oct. 19

(b) Ice affected

(c) From rating curve extended above 600 ft<sup>3</sup>/s on basis of step-backwater analysis at peak gage height

(d) From inside gage, 16.01 ft, from floodmarks

(e) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04087204 OAK CREEK AT SOUTH MILWAUKEE, WI

LOCATION.--Lat 42°55'30", long 87°52'12", in SW 1/4 NW 1/4 sec.2, T.5 N., R.22 E., Milwaukee County, Hydrologic Unit 04040002, on left bank 25 ft downstream from 15th Avenue bridge in South Milwaukee and 2.8 mi upstream from mouth.

DRAINAGE AREA.--25.0 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR WI-80-1: 1979 (average discharge).

GAGE.--Water-stage recorder, phone modem and crest-stage gage. Datum of gage is 631.40 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Low flows may occasionally be affected by construction and activity at gravel pit upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.8	3.0	4.4	e2.5	49	29	9.9	41	8.8	4.0	4.3
2	1.1	50	2.9	5.4	e2.5	56	23	9.1	28	7.7	4.0	3.5
3	1.4	83	2.8	7.4	e2.4	31	20	8.3	21	30	24	3.5
4	1.8	81	2.6	5.7	e2.4	34	17	7.8	18	236	122	3.2
5	1.6	36	2.8	e4.8	e2.4	369	16	7.8	16	60	21	2.9
6	1.1	14	2.8	e4.8	e2.4	145	16	7.5	14	26	11	2.6
7	0.89	8.1	2.5	e4.8	e2.4	59	16	7.2	13	38	7.8	2.4
8	0.75	5.6	2.4	e4.7	e2.4	38	14	8.2	11	23	6.6	2.2
9	0.80	4.5	9.3	e4.6	e2.4	29	12	53	10	17	5.5	2.9
10	0.91	4.0	155	e4.5	e2.4	24	11	44	46	15	4.8	3.4
11	0.64	3.7	61	e4.4	e2.4	21	10	28	118	38	4.2	3.2
12	0.81	3.3	20	e4.2	e2.4	17	9.8	20	118	223	3.7	2.6
13	1.2	2.7	14	e3.9	e2.4	15	9.2	165	49	53	3.5	1.8
14	17	2.4	9.3	e3.7	e2.5	19	8.9	447	55	28	3.3	1.6
15	11	2.4	7.9	e3.4	e2.6	17	8.5	369	47	20	2.9	2.3
16	3.8	2.2	e7.5	e3.2	e2.8	14	8.6	96	23	18	2.6	6.0
17	2.3	2.7	e7.2	e3.1	e3.3	15	21	52	40	13	4.2	3.5
18	1.7	81	7.1	e2.9	3.6	18	13	152	29	11	4.5	2.3
19	1.4	36	6.0	e2.9	3.7	19	9.5	65	18	9.4	4.2	1.9
20	1.1	14	e5.7	e2.8	5.4	20	17	48	14	8.3	3.4	1.7
21	0.91	8.6	e4.7	e2.9	7.8	16	68	100	64	12	2.8	1.6
22	0.82	6.9	e4.7	e3.0	17	13	24	337	71	15	2.4	1.8
23	0.77	14	e4.5	e2.8	33	13	16	505	28	8.3	2.2	2.2
24	5.6	12	e4.1	e2.7	38	14	14	257	30	6.5	13	2.1
25	21	6.7	e4.0	e2.7	28	15	31	87	22	5.9	31	1.7
26	6.6	5.5	e3.8	e2.6	29	102	21	54	15	5.3	7.8	1.6
27	3.1	4.8	e3.4	e2.6	28	46	15	40	14	5.0	12	1.7
28	2.2	4.2	e9.0	e2.6	27	68	13	30	24	5.0	28	1.6
29	1.9	3.6	8.7	e2.5	30	176	11	29	14	4.8	25	1.7
30	2.2	3.4	6.1	e2.5	---	60	9.8	78	9.9	4.7	8.4	2.0
31	2.2	---	5.0	e2.5	---	40	---	82	---	4.5	5.4	---
TOTAL	99.70	508.1	389.8	115.0	293.1	1,572	512.3	3,203.8	1,020.9	960.2	385.2	75.8
MEAN	3.22	16.9	12.6	3.71	10.1	50.7	17.1	103	34.0	31.0	12.4	2.53
MAX	21	83	155	7.4	38	369	68	505	118	236	122	6.0
MIN	0.64	1.8	2.4	2.5	2.4	13	8.5	7.2	9.9	4.5	2.2	1.6
CFSM	0.13	0.68	0.50	0.15	0.40	2.03	0.68	4.13	1.36	1.24	0.50	0.10
IN.	0.15	0.76	0.58	0.17	0.44	2.34	0.76	4.77	1.52	1.43	0.57	0.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	11.8	17.1	18.1	14.2	25.0	46.3	48.0	28.2	24.1	15.9	14.2	17.2
MAX	48.4	85.3	65.3	77.3	84.5	149	151	103	85.8	95.8	52.7	110
(WY)	(1992)	(1986)	(1983)	(1974)	(2001)	(1979)	(1993)	(2004)	(1968)	(1969)	(1986)	(1972)
MIN	1.86	1.83	0.79	0.02	1.28	2.24	9.14	2.15	2.15	3.34	1.89	1.78
(WY)	(1976)	(1977)	(1977)	(1977)	(2003)	(1968)	(1968)	(1977)	(1988)	(1988)	(1970)	(1982)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1964 - 2004

ANNUAL TOTAL	3,608.43	9,135.90	
ANNUAL MEAN	9.89	25.0	23.3
HIGHEST ANNUAL MEAN			41.7
LOWEST ANNUAL MEAN			6.67
HIGHEST DAILY MEAN	184	May 9	855
LOWEST DAILY MEAN	0.44	Sep 7-9	0.00
ANNUAL SEVEN-DAY MINIMUM	0.46	Sep 4	0.00
MAXIMUM PEAK FLOW			732
MAXIMUM PEAK STAGE			7.90
INSTANTANEOUS LOW FLOW			0.00
ANNUAL RUNOFF (CFSM)	0.395	0.998	0.933
ANNUAL RUNOFF (INCHES)	5.37	13.59	12.67
10 PERCENT EXCEEDS	26	54	50
50 PERCENT EXCEEDS	3.4	7.8	7.9
90 PERCENT EXCEEDS	0.73	2.2	1.9

(a) Several days during 1977

(e) Estimated due to ice effect or missing record



04087204 OAK CREEK AT SOUTH MILWAUKEE, WI—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 2002 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January to September 2004.

INSTRUMENTATION.--Continuous specific conductance recorder from January to September 2004. Sensor located near left edge of water 30 ft downstream of gage.

REMARKS.--Records for specific conductance were faulty April 12-28 and August 20 to September 1.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 7,740  $\mu$ S/cm, Feb. 22, 2004; minimum, 90  $\mu$ S/cm, July 11, 2004.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 7,740  $\mu$ S/cm, Feb. 22; minimum, 90  $\mu$ S/cm, July 11.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	3,690	3,530	3,620
23	---	---	---	---	---	---	---	---	---	3,660	2,690	3,110
24	---	---	---	---	---	---	---	---	---	3,440	2,620	2,850
25	---	---	---	---	---	---	---	---	---	2,960	2,590	2,760
26	---	---	---	---	---	---	---	---	---	2,810	2,540	2,660
27	---	---	---	---	---	---	---	---	---	2,930	2,440	2,640
28	---	---	---	---	---	---	---	---	---	3,560	2,400	2,760
29	---	---	---	---	---	---	---	---	---	3,230	2,890	3,020
30	---	---	---	---	---	---	---	---	---	3,800	2,850	3,010
31	---	---	---	---	---	---	---	---	---	4,070	3,420	3,860
MONTH	---	---	---	---	---	---	---	---	---	4,070	2,400	3,030



## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087204 OAK CREEK AT SOUTH MILWAUKEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Dis-charge, cfs (00060)	Instan-taneous dis-charge, cfs (00061)	Sam-pling method, code (82398)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unfltrd uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)
OCT													
07...	0940	--	.92	70	751	10.6	93	7.2	1,260	8.8	84.1	34.9	4.59
NOV													
04...	0945	--	83	40	745	10.8	95	7.3	512	8.7	28.6	10.6	3.72
12...	0735	--	3.6	10	741	11.3	93	7.6	1,300	5.9	--	--	--
18...	1030	--	104	40	737	10.2	92	7.4	663	9.6	37.8	15.2	4.28
24...	1120	--	12	70	744	12.7	102	7.6	972	4.9	58.9	23.1	5.08
DEC													
01...	1000	--	3.1	70	757	14.9	109	7.7	1,420	2.0	99.0	40.9	4.28
JAN													
07...	1025	--	4.8	70	759	15.5	107	7.6	2,490	-2	120	49.9	5.29
21...	1130	--	2.9	70	--	--	--	--	--	--	--	--	--
FEB													
04...	1025	--	2.4	70	763	12.4	85	7.4	3,350	-4	107	44.2	5.39
04...	1145	--	2.4	70	--	--	--	--	--	--	--	--	--
11...	0710	2.4	--	70	750	14.2	100	7.5	5,150	-4	--	--	--
18...	0710	--	3.1	40	758	21.7	149	7.5	3,010	-3	111	44.8	5.06
MAR													
02...	1000	--	58	40	752	12.3	93	7.7	2,210	2.7	81.4	32.0	5.50
05...	1420	--	399	10	739	15.3	122	7.4	932	4.5	35.8	14.2	4.39
05...	1435	--	395	40	739	15.3	122	7.4	932	4.5	41.5	16.3	4.92
12...	0850	--	14	70	757	15.6	109	7.6	2,040	.2	117	48.0	4.06
APR													
07...	0940	--	15	70	750	12.6	110	7.6	1,840	8.2	105	47.7	4.38
13...	1430	--	9.5	40	752	15.3	136	8.1	1,810	9.3	--	--	--
28...	1025	--	12	10	--	--	--	--	--	--	--	--	--
MAY													
03...	0940	--	8.2	70	757	11.0	94	7.8	1,820	8.0	110	51.0	4.78
11...	1100	--	29	10	759	8.2	81	7.9	1,250	14.7	64.1	25.7	3.29
13...	1140	--	229	40	750	7.4	80	7.3	538	18.1	31.6	12.5	3.30
JUN													
01...	1010	--	42	70	740	8.2	83	7.4	1,040	14.5	85.4	35.4	3.44
10...	0935	--	9.9	70	--	--	--	--	--	--	--	--	--
16...	1215	--	22	10	754	8.3	89	7.5	1,100	18.0	--	--	--
29...	0650	--	15	70	--	--	--	--	--	--	--	--	--
JUL													
07...	1040	--	42	70	745	7.2	78	7.1	987	18.2	72.0	31.5	3.56
14...	1640	--	25	--	--	7.1	--	7.7	994	20.7	--	--	--
26...	1005	--	5.3	40	760	8.5	88	7.5	1,430	16.4	111	45.5	4.05
AUG													
02...	1015	--	3.6	70	752	8.3	95	7.6	1,520	20.9	109	51.0	4.01
04...	1050	--	155	10	741	6.1	70	7.2	393	21.2	25.5	8.01	3.39
04...	1055	--	154	10	--	6.1	--	7.2	393	21.2	26.3	8.26	3.29
18...	1700	--	4.1	--	--	--	--	--	--	--	--	--	--
18...	1705	--	4.1	--	--	9.8	--	7.9	1,080	19.5	--	--	--
SEP													
01...	1015	--	4.1	70	760	8.5	89	7.3	1,110	17.4	--	--	--
07...	0940	--	2.4	70	757	7.2	76	7.4	1,410	17.8	102	46.7	4.52

## 04087204 OAK CREEK AT SOUTH MILWAUKEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO <sub>3</sub> (00417)	Alka- linity, wat flt fxd end lab, mg/L as CaCO <sub>3</sub> (29801)	Alka- linity, wat flt inc tit field, mg/L as CaCO <sub>3</sub> (39086)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)
OCT 07...	121	--	211	--	--	--	212	--	--	90.7	--	.69	<.04
NOV 04...	56.1	--	87	--	--	--	84.5	--	--	32.6	--	.55	<.04
12...	--	--	--	231	280	<1	212	--	--	99.0	--	--	E.04
18...	71.0	--	98	--	--	--	114	--	--	39.3	--	1.6	.05
24...	93.1	--	155	--	--	--	166	--	--	69.2	--	1.5	.29
DEC 01...	124	--	221	--	--	--	229	--	--	109	--	.41	.11
JAN 07...	332	--	254	--	--	--	619	--	--	135	--	.47	.09
21...	--	--	--	--	--	--	1,160	--	--	--	--	--	--
FEB 04...	493	--	240	--	--	--	859	--	--	115	--	.78	.36
04...	--	--	--	--	--	--	833	--	--	--	--	--	--
11...	--	--	--	244	295	1	1,480	--	--	1,180	--	--	.28
18...	441	--	--	246	--	--	768	.6	6.61	101	1,630	--	.09
MAR 02...	302	--	159	--	--	--	540	--	--	78.7	--	.89	.15
05...	102	--	96	97	117	1	188	<.2	4.94	33.2	484	--	.10
05...	116	--	97	--	--	--	194	--	--	35.0	--	.80	.25
12...	232	--	221	--	--	--	438	--	--	135	--	.71	<.04
APR 07...	191	--	254	--	--	--	335	--	--	114	--	.52	<.04
13...	--	--	--	248	294	4	307	--	--	660	--	--	<.04
28...	--	240	--	--	--	--	312	--	--	--	--	--	--
MAY 03...	198	--	276	--	--	--	335	--	--	126	--	.46	<.04
11...	122	--	194	151	--	--	229	.3	4.18	69.8	710	--	.07
13...	56.0	--	104	--	--	--	88.7	--	--	23.8	--	.57	.04
JUN 01...	92.4	--	249	--	--	--	139	--	--	69.9	--	.76	.08
10...	--	283	--	--	--	--	225	--	--	--	--	--	--
16...	--	--	--	255	307	2	152	--	--	71.7	--	--	<.04
29...	--	198	--	--	--	--	147	--	--	--	--	--	--
JUL 07...	82.7	--	241	--	--	--	136	--	--	59.1	--	.58	.06
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	114	--	310	292	--	--	211	.4	8.51	117	841	--	<.04
AUG 02...	122	--	316	--	--	--	223	--	--	135	--	.31	E.02
04...	33.3	--	72	72	--	--	54.8	--	--	21.5	--	.48	<.04
04...	34.4	--	74	72	--	--	55.3	<.2	3.25	22.4	220	--	<.04
18...	--	280	--	--	--	--	230	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	--	--	--	204	245	2	155	--	--	92.9	--	--	.04
07...	120	--	296	--	--	--	208	--	--	118	--	.37	E.02

























04087204 OAK CREEK AT SOUTH MILWAUKEE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Tris(2-butoxyethyl) phosphate, wat flt ug/L (62093)	Tris(2-chloroethyl) phosphate, wat flt ug/L (62087)	Tris(di-chloro-i-Pr) phosphate, wat flt ug/L (62088)	Di-chloro-vos, water fltrd, ug/L (38775)	Methyl-mercury suspnd total, ng/L (62977)	Suspended sediment concentration mg/L (80154)
OCT						
07...	--	--	--	--	<.025	102
NOV						
04...	--	--	--	--	<.141	85
12...	--	--	--	<.01	--	157
18...	--	--	--	--	.500	149
24...	--	--	--	--	<.022	85
DEC						
01...	--	--	--	--	--	85
JAN						
07...	--	--	--	--	--	193
21...	--	--	--	--	--	--
FEB						
04...	--	--	--	--	--	209
04...	--	--	--	--	--	--
11...	--	--	--	<.01	--	426
18...	E.1	E.1	M	<1.00	--	--
MAR						
02...	--	--	--	--	.069	191
05...	<.5	<.5	E.1	<1.00	--	273
05...	--	--	--	--	.207	578
12...	--	--	--	--	<.028	183
APR						
07...	--	--	--	--	<.021	145
13...	--	--	--	<.01	--	183
28...	--	--	--	--	--	--
MAY						
03...	--	--	--	--	--	157
11...	E.4	E.1	E.1	<.01	--	13
13...	--	--	--	--	--	247
JUN						
01...	--	--	--	--	--	95
10...	--	--	--	--	--	--
16...	--	--	--	<.01	--	103
29...	--	--	--	--	--	--
JUL						
07...	--	--	--	--	--	117
14...	--	--	--	--	--	--
26...	<.5	M	<.5	--	--	19
AUG						
02...	--	--	--	--	--	148
04...	--	--	--	--	.168	130
04...	<.5	<.5	<.5	<.01	--	--
18...	--	--	--	--	--	--
18...	--	--	--	--	--	--
SEP						
01...	--	--	--	<.01	--	93
07...	--	--	--	--	--	134



04087214 ROOT RIVER AT GRANGE AVENUE AT GREENFIELD, WI

LOCATION.--Lat 42°56'42", long 88°00'51", in SW ¼ SE ¼ sec.28, T.6 N., R.21 E., Milwaukee County, Hydrologic Unit 04040002, on left bank 40 ft upstream from bridge on Grange Avenue, at Greenfield.

DRAINAGE AREA.-- 14.7 mi<sup>2</sup>.

PERIOD OF RECORD.--April to September 2004.

GAGE.--Water-stage recorder. Datum of gage is 705 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good (see page 11).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	13	5.5	51	3.8	1.6	2.3
2	---	---	---	---	---	---	11	3.4	22	2.9	1.6	2.2
3	---	---	---	---	---	---	8.2	3.0	14	37	45	1.8
4	---	---	---	---	---	---	6.6	3.0	11	324	171	1.7
5	---	---	---	---	---	---	5.8	2.6	8.5	29	12	2.3
6	---	---	---	---	---	---	6.2	2.5	6.9	19	6.4	1.7
7	---	---	---	---	---	---	5.3	2.3	5.8	60	4.6	1.5
8	---	---	---	---	---	---	4.7	5.7	4.6	14	3.5	1.4
9	---	---	---	---	---	---	4.0	42	13	9.2	22	1.3
10	---	---	---	---	---	---	3.6	31	51	7.1	4.3	1.1
11	---	---	---	---	---	---	3.4	22	78	13	3.2	1.1
12	---	---	---	---	---	---	3.1	7.3	40	27	2.9	1.0
13	---	---	---	---	---	---	3.0	82	21	6.8	2.5	0.97
14	---	---	---	---	---	---	3.0	212	131	5.0	2.2	1.0
15	---	---	---	---	---	---	2.9	56	40	4.0	1.9	4.6
16	---	---	---	---	---	---	3.1	26	28	3.4	1.8	4.0
17	---	---	---	---	---	---	20	22	43	3.1	2.6	0.99
18	---	---	---	---	---	---	4.1	94	18	2.8	2.6	0.81
19	---	---	---	---	---	---	3.2	26	11	2.6	2.9	0.79
20	---	---	---	---	---	---	32	17	8.4	2.4	1.7	0.72
21	---	---	---	---	---	---	97	81	42	17	1.7	0.77
22	---	---	---	---	---	---	18	426	21	4.3	1.7	0.72
23	---	---	---	---	---	---	9.4	257	13	2.5	1.7	0.74
24	---	---	---	---	---	---	9.3	55	30	2.1	16	0.84
25	---	---	---	---	---	---	26	36	12	2.0	58	1.3
26	---	---	---	---	---	---	8.3	26	7.2	1.8	4.3	1.2
27	---	---	---	---	---	---	5.9	19	7.3	1.8	24	0.93
28	---	---	---	---	---	---	5.0	13	17	1.8	33	0.87
29	---	---	---	---	---	---	4.2	17	5.1	1.7	17	0.72
30	---	---	---	---	---	---	3.8	76	4.7	1.7	3.9	0.73
31	---	---	---	---	---	---	---	47	---	1.7	2.8	---
TOTAL	---	---	---	---	---	---	333.1	1,718.3	765.5	614.5	460.4	42.10
MEAN	---	---	---	---	---	---	11.1	55.4	25.5	19.8	14.9	1.40
MAX	---	---	---	---	---	---	97	426	131	324	171	4.6
MIN	---	---	---	---	---	---	2.9	2.3	4.6	1.7	1.6	0.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2004, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	11.1	55.4	25.5	19.8	14.9	1.40
MAX	---	---	---	---	---	---	11.1	55.4	25.5	19.8	14.9	1.40
(WY)	---	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	---	---	---	---	---	---	11.1	55.4	25.5	19.8	14.9	1.40
(WY)	---	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)

SUMMARY STATISTICS

FOR 2004 WATER YEAR  
(April - September)

ANNUAL TOTAL	3,933.90
ANNUAL MEAN	21.5
HIGHEST DAILY MEAN	426
LOWEST DAILY MEAN	0.72
ANNUAL SEVEN-DAY MINIMUM	0.77
MAXIMUM PEAK FLOW	582
MAXIMUM PEAK STAGE	15.40
10 PERCENT EXCEEDS	49
50 PERCENT EXCEEDS	5.0
90 PERCENT EXCEEDS	1.2

May 22  
Sep 20, 22, 29  
Sep 18  
Jul 3  
Jul 3

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087220 ROOT RIVER NEAR FRANKLIN, WI

LOCATION.--Lat 42°52'25", long 87°59'45", in SW ¼ SE ¼ sec.22, T.5 N., R.21 E., Milwaukee County, Hydrologic Unit 04040002, on right bank 400 ft upstream from State Highway 100, 2.1 mi upstream from Root River Canal, 2.4 mi southeast of Franklin, 5.5 mi southeast of Hales Corners, and about 24 mi upstream from mouth.

DRAINAGE AREA.--49.2 mi<sup>2</sup>.

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

REVISED RECORD.--WDR WI-81-1: Drainage area. WDR WI-83-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 674.5 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Flow affected by urbanization in the drainage basin. Gage-height telemeter at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Mar. 30, 1960, reached a stage of 9.57 ft, discharge, 5,130 ft<sup>3</sup>/s, from rating curve extended above 2,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	6.6	7.2	11	e3.6	84	66	19	135	16	4.5	11
2	1.7	54	5.4	10	e3.6	123	52	17	83	14	4.2	9.2
3	1.7	132	4.5	e14	e3.5	71	41	14	51	15	4.6	7.6
4	2.4	161	4.1	e11	e3.5	53	34	13	37	583	237	6.0
5	2.6	184	5.3	e7.0	e3.4	440	28	13	30	345	129	5.4
6	2.5	67	6.1	e6.9	e3.4	409	27	12	26	95	28	7.1
7	1.9	35	5.9	e6.9	e3.4	135	26	11	22	152	19	5.7
8	2.3	22	5.2	e6.8	e3.3	86	23	11	20	102	14	4.3
9	2.6	15	6.2	e6.7	e3.3	62	20	50	18	53	16	4.9
10	3.2	12	191	e6.5	e3.3	52	19	55	35	42	20	4.2
11	4.2	12	275	e6.3	e3.3	46	17	75	190	35	11	3.7
12	2.7	9.8	85	e6.1	e3.3	38	16	39	213	73	12	3.3
13	4.0	8.2	57	e5.6	e3.3	30	17	158	96	38	7.7	3.7
14	15	8.1	31	e5.2	e3.5	35	14	363	124	27	6.2	3.0
15	31	6.2	24	e4.9	e3.8	38	13	527	227	21	5.1	2.8
16	9.0	7.8	e23	e4.6	e4.0	30	13	169	67	19	4.4	14
17	3.7	8.4	e21	e4.3	e4.3	28	25	89	105	17	4.7	6.5
18	2.5	74	19	e4.2	e5.0	33	26	249	96	15	6.0	4.0
19	2.2	105	15	e4.2	e6.0	35	15	196	50	14	5.7	3.3
20	3.6	40	e12	e4.2	e8.0	34	15	89	33	14	5.0	2.8
21	8.5	23	e10	e4.2	e18	31	186	99	55	13	3.8	2.6
22	10	15	e9.8	e4.1	e36	26	91	614	126	29	3.3	2.6
23	6.4	17	e9.5	e4.0	e44	23	43	1,040	57	13	3.2	2.7
24	5.6	25	e9.0	e3.9	e52	30	32	555	56	10	6.3	2.9
25	43	14	e8.6	e3.9	e55	31	50	214	47	8.5	77	2.5
26	20	11	e8.0	e3.8	e58	173	43	123	31	6.8	37	2.3
27	3.1	11	e6.3	e3.8	e59	168	30	82	24	6.0	28	2.2
28	1.2	8.9	13	e3.7	59	95	25	56	37	5.7	48	2.3
29	2.1	6.2	27	e3.6	62	342	21	47	29	7.3	51	2.2
30	3.6	6.1	20	e3.6	---	167	18	81	21	5.1	23	1.9
31	6.6	---	12	e3.6	---	98	---	223	---	5.0	16	---
TOTAL	210.7	1,105.3	936.1	178.6	521.8	3,046	1,046	5,303	2,141	1,799.4	840.7	136.7
MEAN	6.80	36.8	30.2	5.76	18.0	98.3	34.9	171	71.4	58.0	27.1	4.56
MAX	43	184	275	14	62	440	186	1,040	227	583	237	14
MIN	1.2	6.1	4.1	3.6	3.3	23	13	11	18	5.0	3.2	1.9
CFSM	0.14	0.75	0.61	0.12	0.37	2.00	0.71	3.48	1.45	1.18	0.55	0.09
IN.	0.16	0.84	0.71	0.14	0.39	2.30	0.79	4.01	1.62	1.36	0.64	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	23.4	30.6	34.2	30.3	47.4	89.8	87.1	50.6	46.5	28.6	26.2	30.8
MAX	95.5	151	118	190	161	315	316	171	164	142	72.3	214
(WY)	(1992)	(1986)	(1983)	(1974)	(1971)	(1979)	(1973)	(2004)	(1999)	(1969)	(1987)	(1972)
MIN	2.38	4.26	2.02	2.47	2.75	13.6	21.5	5.32	3.55	3.09	3.82	3.05
(WY)	(1964)	(1964)	(1964)	(1977)	(1977)	(1968)	(1977)	(1977)	(1988)	(1988)	(1971)	(1971)

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087220 ROOT RIVER NEAR FRANKLIN, WI—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	7,764.03		17,265.3			
ANNUAL MEAN	21.3		47.2		43.7	
HIGHEST ANNUAL MEAN					84.0 1974	
LOWEST ANNUAL MEAN					12.7 1977	
HIGHEST DAILY MEAN	301	May 9	1,040	May 23	2,390	Apr 21, 1973
LOWEST DAILY MEAN	0.94	Sep 6	1.2	Oct 28	0.44	Aug 9, 10, 1971
ANNUAL SEVEN-DAY MINIMUM	0.99	Sep 6	2.1	Oct 1	0.99	Sep 6, 2003
MAXIMUM PEAK FLOW			1,190	May 23	(a)3,700	Apr 21, 1973
MAXIMUM PEAK STAGE			8.60	May 23	(b)9.43	Jul 3, 2000
INSTANTANEOUS LOW FLOW			0.88	Oct 28, 29	0.38	Aug 10, 1971
ANNUAL RUNOFF (CFSM)	0.432		0.959		0.888	
ANNUAL RUNOFF (INCHES)	5.87		13.05		12.07	
10 PERCENT EXCEEDS	53		123		93	
50 PERCENT EXCEEDS	6.9		15		16	
90 PERCENT EXCEEDS	1.7		3.3		4.4	

(a) Gage height, 9.31 ft

(b) Discharge, 2,420 ft<sup>3</sup>/s

(c) Estimated due to ice effect or missing record

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087233 ROOT RIVER CANAL NEAR FRANKLIN, WI

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LOCATION.--Lat 42°48'55", long 87°59'40", in SE ¼ SE ¼ sec.10, T.4 N., R.21 E., Racine County, Hydrologic Unit 04040002, on right bank 10 ft downstream from highway bridge 3.5 mi upstream from mouth, 5.5 mi southeast of intersection U.S. 45 and State Highway 100 in Franklin, and 8.7 mi southeast of Hales Corners.

DRAINAGE AREA.--57.0 mi<sup>2</sup>.

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

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

GAGE.--Water-stage recorder. Elevation of gage is 670 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges and for flows over 500 cfs, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.90	8.6	9.6	21	e6.8	179	104	24	237	54	9.9	8.7
2	2.8	12	8.0	22	e6.7	254	80	22	141	49	8.6	7.6
3	4.5	28	7.3	28	e6.6	168	65	20	103	49	7.8	6.4
4	6.1	103	7.2	e25	e6.5	120	56	19	83	705	25	5.8
5	6.3	139	7.4	e20	e6.4	560	49	17	72	624	17	5.0
6	5.4	69	7.1	e18	e6.4	652	45	15	64	267	12	4.5
7	4.3	36	6.2	e16	e6.3	452	41	14	57	156	9.5	4.2
8	3.8	22	6.0	e15	e6.3	241	37	14	50	111	8.5	3.9
9	3.5	14	6.2	e14	e6.2	158	33	194	45	87	7.3	3.4
10	3.1	11	215	e14	e6.1	115	30	272	52	77	6.7	3.0
11	2.9	11	406	e14	e6.1	94	27	433	e130	66	6.2	3.1
12	3.6	9.6	194	e13	e6.1	73	25	227	e170	76	5.7	3.1
13	3.7	7.8	99	e12	e6.0	62	23	422	e100	59	5.4	3.0
14	4.7	6.8	73	e11	e6.2	60	22	848	e80	47	4.9	2.6
15	3.8	6.4	53	e10	e6.6	53	20	1,070	66	39	4.7	2.4
16	1.3	6.2	48	e9.7	e7.4	47	19	736	52	36	4.2	2.9
17	1.4	5.2	44	e9.0	e8.2	45	22	356	343	33	7.7	3.0
18	2.1	50	34	e8.5	e9.3	43	21	536	628	27	9.2	2.5
19	2.4	149	28	e8.0	e10	42	19	466	322	24	5.7	2.8
20	2.7	78	27	e7.9	e12	51	18	245	137	21	4.8	2.4
21	3.1	48	22	e7.8	e17	48	60	354	201	23	4.3	2.1
22	3.9	34	21	e7.7	e23	41	57	941	404	37	4.0	1.9
23	4.4	30	e20	e7.6	e34	38	40	1,350	186	25	3.6	1.9
24	4.7	28	e18	e7.5	e80	40	32	1,150	471	19	3.9	2.4
25	6.5	21	e16	e7.4	e90	51	48	645	295	16	38	2.4
26	7.8	18	e13	e7.2	e94	167	51	343	145	14	16	2.8
27	6.8	15	e12	e7.1	e100	179	40	217	101	13	11	2.4
28	6.9	14	20	e7.0	99	138	34	156	85	12	15	2.4
29	7.2	12	35	e6.9	115	394	28	126	71	11	31	2.2
30	7.7	11	30	e6.8	---	240	24	169	61	11	17	1.6
31	8.4	---	26	e6.8	---	145	---	300	---	10	11	---
TOTAL	136.70	1,003.6	1,519.0	375.9	794.2	4,950	1,170	11,701	4,952	2,798	325.6	102.4
MEAN	4.41	33.5	49.0	12.1	27.4	160	39.0	377	165	90.3	10.5	3.41
MAX	8.4	149	406	28	115	652	104	1,350	628	705	38	8.7
MIN	0.90	5.2	6.0	6.8	6.0	38	18	14	45	10	3.6	1.6
CFSM	0.08	0.59	0.86	0.21	0.48	2.80	0.68	6.62	2.90	1.58	0.18	0.06
IN.	0.09	0.65	0.99	0.25	0.52	3.23	0.76	7.64	3.23	1.83	0.21	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	22.6	34.5	41.0	33.1	61.2	106	104	64.5	52.0	25.9	19.6	30.5
MAX	120	154	200	219	193	352	312	377	165	141	138	212
(WY)	(2002)	(1993)	(1983)	(1974)	(2001)	(1979)	(1993)	(2004)	(2004)	(1978)	(1978)	(1972)
MIN	1.05	1.27	0.86	0.56	0.69	6.03	10.9	2.47	2.51	2.18	2.16	1.28
(WY)	(1964)	(1964)	(1964)	(1977)	(1977)	(1968)	(1977)	(1977)	(1977)	(1991)	(1999)	(1971)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1964 - 2004

ANNUAL TOTAL	7,896.63	29,828.40	
ANNUAL MEAN	21.6	81.5	49.4
HIGHEST ANNUAL MEAN			98.4
LOWEST ANNUAL MEAN			4.57
HIGHEST DAILY MEAN	406	Dec 11	1,350
LOWEST DAILY MEAN	0.90	Oct 1	0.90
ANNUAL SEVEN-DAY MINIMUM	(b)0.95	Jan 24	2.3
MAXIMUM PEAK FLOW			1,430
MAXIMUM PEAK STAGE			11.28
ANNUAL RUNOFF (CFSM)	0.380		1.43
ANNUAL RUNOFF (INCHES)	5.15		19.47
10 PERCENT EXCEEDS	54		220
50 PERCENT EXCEEDS	7.2		20
90 PERCENT EXCEEDS	1.3		3.8

(a) Result of freezeup

(b) Ice affected

(c) Gage height, 9.88 ft

(e) Estimated due to ice effect or missing record







## 04087233 ROOT RIVER CANAL NEAR FRANKLIN, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, Defined Substr. Tech., water, MPN/100 mL (50468)
JUN													
29...	1720	69	40	40.9	31	1.3	.110	5.51	.129	.175	.266	<2.0	--
JUL													
21...	1430	23	50	58.4	--	--	--	--	--	--	.279	--	--
21...	2030	27	50	61.0	--	--	--	--	--	--	.287	--	--
22...	0030	35	50	71.7	--	--	--	--	--	--	.292	--	--
22...	0630	42	50	65.7	--	--	--	--	--	--	.292	--	--
22...	0948	39	50	62.1	--	--	--	--	--	--	.316	--	--
AUG													
04...	0230	12	50	64.1	--	--	--	--	--	--	.245	--	--
04...	0645	19	50	58.6	--	--	--	--	--	--	.227	--	--
04...	1000	28	50	58.2	--	--	--	--	--	--	.250	--	--
04...	1600	33	50	60.1	--	--	--	--	--	--	.265	--	--
04...	2200	26	50	68.1	--	--	--	--	--	--	.274	--	--
05...	0400	20	50	87.0	--	--	--	--	--	--	.291	--	--
05...	1600	15	50	77.6	--	--	--	--	--	--	.260	--	--
06...	0400	13	50	75.6	--	--	--	--	--	--	.287	--	--
17...	0815	5.4	50	80.1	15	--	--	--	--	--	.207	--	--
17...	1415	8.4	50	77.8	14	--	--	--	--	--	.204	--	--
17...	2015	12	50	80.5	14	--	--	--	--	--	.204	--	--
18...	0215	12	50	105	18	--	--	--	--	--	.212	--	--
18...	0815	9.6	50	146	16	--	--	--	--	--	.192	--	--
18...	1415	8.4	50	106	27	--	--	--	--	--	.249	--	--
18...	1416	8.4	50	105	26	--	--	--	--	--	.250	--	--
18...	1429	8.4	50	117	19	--	--	--	--	--	.224	--	--
18...	1435	8.4	50	110	21	--	--	--	--	--	.215	--	--
19...	0000	6.3	50	154	21	--	--	--	--	--	.196	--	--
19...	0600	5.7	50	154	19	--	--	--	--	--	.195	--	--
19...	1200	5.9	50	152	20	--	--	--	--	--	.198	--	--
24...	1629	4.0	50	95.1	58	--	--	--	--	--	.413	--	--
25...	0430	34	50	74.9	65	--	--	--	--	--	.627	--	--
25...	0600	46	50	134	43	1.2	.104	6.27	.109	.129	.239	--	1,600
25...	1400	49	50	142	37	--	--	--	--	--	.247	--	--
26...	0230	21	50	135	30	--	--	--	--	--	.221	--	--
26...	0933	16	50	133	29	1.3	.125	5.91	.093	.116	.235	--	220
26...	1400	14	50	74.5	15	1.4	.129	3.72	.136	.158	.248	--	520
26...	1702	14	50	70.3	30	--	--	--	--	--	.277	--	--
27...	0640	11	50	80.3	20	1.2	.132	3.72	.135	.158	.256	--	770
28...	1515	17	50	77.7	26	--	--	--	--	--	.289	--	--
28...	2115	21	50	84.3	28	--	--	--	--	--	.287	--	--
29...	0315	29	50	80.1	29	--	--	--	--	--	.306	--	--
29...	0915	35	50	79.8	36	--	--	--	--	--	.384	--	--
29...	1515	34	50	92.8	44	--	--	--	--	--	.305	--	--
29...	2115	26	50	88.0	38	--	--	--	--	--	.304	--	--
30...	0315	21	50	93.9	37	--	--	--	--	--	.259	--	--
30...	1600	15	50	74.6	19	--	--	--	--	--	.269	--	--
SEP													
08...	1230	3.8	40	120	21	1.2	.079	6.51	.114	--	.220	<3.0	--
16...	0815	2.9	50	--	--	--	--	--	--	--	--	<2.0	--





04087233 ROOT RIVER CANAL NEAR FRANKLIN, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Chloro- phyll a wat unfltrd method, uncorr, ug/L (32210)	Copper, water, unfltrd recover -able, ug/L (01119)	Zinc, water, unfltrd recover -able, ug/L (01094)	Sus- pended sedi- ment concentration mg/L (80154)
OCT					
23...	--	--	--	--	--
23...	--	--	--	--	--
24...	--	--	--	--	--
24...	--	--	--	--	--
25...	140	1.48	3	<20	12
25...	160	2.06	3	<20	7
25...	--	--	--	--	--
25...	--	--	--	--	--
27...	90	2.15	3	<20	8
27...	60	--	--	--	--

04087233 ROOT RIVER CANAL NEAR FRANKLIN, WI—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.5	12.5	13.5	10.5	9.5	10.0	---	---	---	---	---	---
2	14.0	11.5	13.0	9.5	9.0	9.5	---	---	---	---	---	---
3	12.5	11.0	12.0	10.0	9.5	9.5	---	---	---	---	---	---
4	13.0	10.5	12.0	9.5	8.5	9.5	---	---	---	---	---	---
5	11.0	9.0	10.0	8.5	7.0	7.5	---	---	---	---	---	---
6	12.5	10.0	11.5	8.5	7.0	7.5	---	---	---	---	---	---
7	13.5	11.5	12.5	9.0	8.0	8.5	---	---	---	---	---	---
8	---	---	---	8.0	6.5	7.0	---	---	---	---	---	---
9	---	---	---	7.0	6.0	6.5	---	---	---	---	---	---
10	---	---	---	7.5	6.5	7.0	---	---	---	---	---	---
11	---	---	---	8.0	6.0	7.0	---	---	---	---	---	---
12	---	---	---	6.5	5.0	6.0	---	---	---	---	---	---
13	---	---	---	5.5	4.5	5.0	---	---	---	---	---	---
14	---	---	---	5.0	4.5	5.0	---	---	---	---	---	---
15	---	---	---	5.0	4.5	5.0	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	12.5	11.5	12.5	---	---	---	---	---	---	---	---	---
27	12.5	11.5	12.0	---	---	---	---	---	---	---	---	---
28	11.5	10.5	11.0	---	---	---	---	---	---	---	---	---
29	14.0	11.5	12.5	---	---	---	---	---	---	---	---	---
30	14.5	12.5	14.0	---	---	---	---	---	---	---	---	---
31	12.5	10.5	11.5	---	---	---	---	---	---	---	---	---
MONTH	14.5	9.0	12.2	10.5	4.5	7.4	---	---	---	---	---	---

04087233 ROOT RIVER CANAL NEAR FRANKLIN, WI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4.4	2.1	3.4	7.3	4.9	5.8	---	---	---	---	---	---	---		
2	6.1	4.3	5.3	9.8	5.8	8.0	---	---	---	---	---	---	---		
3	7.3	5.8	6.5	6.3	2.9	4.4	---	---	---	---	---	---	---		
4	7.9	4.8	6.8	8.6	3.9	6.7	---	---	---	---	---	---	---		
5	9.7	7.0	8.5	10.8	8.2	9.7	---	---	---	---	---	---	---		
6	8.9	6.4	8.0	10.9	6.0	9.1	---	---	---	---	---	---	---		
7	8.1	2.8	6.2	11.5	5.8	8.6	---	---	---	---	---	---	---		
8	---	---	---	12.9	7.5	10.4	---	---	---	---	---	---	---		
9	---	---	---	14.7	9.3	11.8	---	---	---	---	---	---	---		
10	---	---	---	13.5	8.0	11.3	---	---	---	---	---	---	---		
11	---	---	---	14.1	7.0	11.5	---	---	---	---	---	---	---		
12	---	---	---	12.9	6.3	10.1	---	---	---	---	---	---	---		
13	---	---	---	14.4	6.1	9.6	---	---	---	---	---	---	---		
14	---	---	---	15.0	5.9	10.1	---	---	---	---	---	---	---		
15	---	---	---	10.3	4.4	7.4	---	---	---	---	---	---	---		
16	---	---	---	---	---	---	---	---	---	---	---	---	---		
17	---	---	---	---	---	---	---	---	---	---	---	---	---		
18	---	---	---	---	---	---	---	---	---	---	---	---	---		
19	---	---	---	---	---	---	---	---	---	---	---	---	---		
20	---	---	---	---	---	---	---	---	---	---	---	---	---		
21	---	---	---	---	---	---	---	---	---	---	---	---	---		
22	---	---	---	---	---	---	---	---	---	---	---	---	---		
23	---	---	---	---	---	---	---	---	---	---	---	---	---		
24	---	---	---	---	---	---	---	---	---	---	---	---	---		
25	---	---	---	---	---	---	---	---	---	---	---	---	---		
26	7.4	4.2	6.7	---	---	---	---	---	---	---	---	---	---		
27	6.8	2.5	4.6	---	---	---	---	---	---	---	---	---	---		
28	5.9	4.4	5.3	---	---	---	---	---	---	---	---	---	---		
29	5.1	2.0	3.2	---	---	---	---	---	---	---	---	---	---		
30	5.6	2.0	4.5	---	---	---	---	---	---	---	---	---	---		
31	5.7	4.8	5.2	---	---	---	---	---	---	---	---	---	---		
MONTH	9.7	2.0	5.7	15.0	2.9	9.0	---	---	---	---	---	---	---		

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087233 ROOT RIVER CANAL NEAR FRANKLIN, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1,340	1,320	1,330	1,280	1,240	1,260	---	---	---	---	---	---
2	1,330	1,310	1,320	1,290	1,200	1,250	---	---	---	---	---	---
3	1,310	1,290	1,300	1,220	990	1,060	---	---	---	---	---	---
4	1,310	1,280	1,290	1,070	1,010	1,040	---	---	---	---	---	---
5	1,310	1,280	1,290	1,120	1,070	1,100	---	---	---	---	---	---
6	1,280	1,270	1,280	1,120	1,020	1,060	---	---	---	---	---	---
7	1,270	1,160	1,200	1,100	1,040	1,080	---	---	---	---	---	---
8	---	---	---	1,120	1,080	1,090	---	---	---	---	---	---
9	---	---	---	1,150	1,110	1,130	---	---	---	---	---	---
10	---	---	---	1,210	1,140	1,170	---	---	---	---	---	---
11	---	---	---	1,210	1,180	1,190	---	---	---	---	---	---
12	---	---	---	1,220	1,190	1,210	---	---	---	---	---	---
13	---	---	---	1,240	1,200	1,220	---	---	---	---	---	---
14	---	---	---	1,240	1,220	1,240	---	---	---	---	---	---
15	---	---	---	1,270	1,230	1,250	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	1,320	1,210	1,290	---	---	---	---	---	---	---	---	---
27	1,210	1,020	1,110	---	---	---	---	---	---	---	---	---
28	1,090	1,020	1,050	---	---	---	---	---	---	---	---	---
29	1,220	1,090	1,150	---	---	---	---	---	---	---	---	---
30	1,260	1,220	1,240	---	---	---	---	---	---	---	---	---
31	1,280	1,260	1,280	---	---	---	---	---	---	---	---	---
MONTH	1,340	1,020	1,240	1,290	990	1,160	---	---	---	---	---	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

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04087240 ROOT RIVER AT RACINE, WI

LOCATION.--Lat 42°45'05", long 87°49'25", in NW ¼ NE ¼ sec.6, T.3 N., R.23 E., Racine County, Hydrologic Unit 04040002, on left bank 30 ft downstream from State Highway 38 bridge in Racine, 350 ft downstream from Horlick Dam, and 5.2 mi upstream from mouth.

DRAINAGE AREA.--190 mi<sup>2</sup>, of which 1.24 mi<sup>2</sup> is probably noncontributing.

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

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

GAGE.--Water-stage recorder. Elevation of gage is 610 ft above NGVD of 1929, from topographic map. Prior to Feb. 5, 1964, nonrecording gage on bridge 30 ft upstream.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	8.4	27	51	e13	345	476	80	611	114	27	43
2	5.6	12	25	46	e12	512	309	78	528	97	25	31
3	5.3	69	23	46	e12	492	229	76	368	98	25	27
4	4.5	220	21	52	e12	509	174	72	246	414	45	23
5	3.5	260	20	48	e12	1,060	148	67	184	996	195	20
6	2.8	253	19	25	e12	1,250	134	65	156	1,310	166	20
7	2.4	160	20	e27	e12	1,360	123	62	138	778	71	18
8	2.5	84	20	e29	e12	1,030	114	63	119	416	47	15
9	2.6	56	22	e29	e12	595	104	146	106	310	37	15
10	2.7	44	122	e28	e12	371	93	495	108	198	31	14
11	2.7	35	433	e28	e12	281	84	712	179	154	35	13
12	1.9	34	589	e28	e12	224	79	649	342	272	30	12
13	1.7	29	447	e27	e12	178	76	845	397	254	26	10
14	2.2	25	263	e27	e11	156	73	1,380	320	158	23	9.4
15	1.0	22	138	e26	e11	150	68	2,060	246	118	20	9.4
16	3.9	19	107	26	e11	140	66	1,960	287	94	17	10
17	15	22	97	26	e11	124	68	1,560	365	84	18	9.1
18	17	34	90	25	11	119	78	1,260	577	75	17	11
19	13	160	72	24	11	120	84	970	758	64	17	11
20	9.5	249	44	23	12	132	71	979	603	56	18	9.9
21	6.9	135	65	19	14	135	106	849	403	57	17	8.8
22	4.3	82	53	e17	17	124	277	1,480	512	62	15	7.2
23	2.8	64	53	e14	34	110	232	2,130	624	76	13	5.7
24	2.3	58	49	e14	77	110	141	2,620	609	58	11	4.8
25	3.4	57	39	e14	130	117	129	2,430	558	45	13	3.9
26	7.2	46	43	e14	160	212	151	1,620	518	40	84	3.5
27	25	39	40	e14	179	402	138	894	292	36	78	3.2
28	26	35	40	e14	205	546	112	521	199	33	54	2.4
29	20	31	49	e14	237	709	99	366	174	32	84	2.0
30	14	29	69	e14	---	801	88	344	140	30	103	2.5
31	10	---	63	e14	---	769	---	485	---	29	64	---
TOTAL	228.3	2,371.4	3,162	803	1,288	13,183	4,124	27,318	10,667	6,558	1,426	374.8
MEAN	7.36	79.0	102	25.9	44.4	425	137	881	356	212	46.0	12.5
MAX	26	260	589	52	237	1,360	476	2,620	758	1,310	195	43
MIN	1.0	8.4	19	14	11	110	66	62	106	29	11	2.0
CFSM	0.04	0.42	0.54	0.14	0.24	2.25	0.73	4.67	1.88	1.12	0.24	0.07
IN.	0.04	0.47	0.62	0.16	0.25	2.60	0.81	5.38	2.10	1.29	0.28	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004, BY WATER YEAR (WY)

MEAN	66.7	102	120	93.9	173	329	342	206	155	88.8	64.1	87.5
MAX	335	454	568	401	641	1,149	1,071	881	493	485	237	683
(WY)	(1987)	(1986)	(1983)	(1974)	(2001)	(1979)	(1993)	(2004)	(1996)	(1969)	(1987)	(1972)
MIN	2.79	8.90	3.08	2.21	3.98	30.6	61.8	8.73	7.75	5.18	6.60	2.58
(WY)	(1964)	(1964)	(1964)	(1977)	(1977)	(1968)	(1977)	(1977)	(1988)	(1988)	(1971)	(1963)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1963 - 2004

ANNUAL TOTAL	21,829.4	71,503.5	152
ANNUAL MEAN	59.8	195	268
HIGHEST ANNUAL MEAN			1993
LOWEST ANNUAL MEAN			23.3
HIGHEST DAILY MEAN	750	May 11	4,010
LOWEST DAILY MEAN	1.0	Oct 15	0.00
ANNUAL SEVEN-DAY MINIMUM	(a)2.0	Jan 24	0.00
MAXIMUM PEAK FLOW			4,500
MAXIMUM PEAK STAGE			8.54
INSTANTANEOUS LOW FLOW			0.00
ANNUAL RUNOFF (CFSM)	0.317		0.807
ANNUAL RUNOFF (INCHES)	4.30		10.96
10 PERCENT EXCEEDS	138		399
50 PERCENT EXCEEDS	23		54
90 PERCENT EXCEEDS	3.5		9.4

(a) Ice affected

(e) Estimated due to ice effect or missing record









04087240 ROOT RIVER AT RACINE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Dis-charge, cfs (00060)	Sam-pling method, code (82398)	Chlor-ide, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, Defined Substr. Tech., water, MPN/ 100 mL (50468)
JUN													
29...	1500	196	40	48.2	35	.94	.072	3.66	.082	.094	.171	<2.0	--
JUL													
21...	1715	59	50	68.0	--	--	--	--	--	--	.134	--	--
21...	1915	59	50	61.3	--	--	--	--	--	--	.130	--	--
21...	2115	59	50	72.6	--	--	--	--	--	--	.149	--	--
21...	2330	59	50	60.2	--	--	--	--	--	--	.154	--	--
22...	0130	64	50	69.0	--	--	--	--	--	--	.159	--	--
22...	0330	64	50	61.9	--	--	--	--	--	--	.146	--	--
22...	0530	64	50	70.1	--	--	--	--	--	--	.166	--	--
22...	0830	64	50	61.1	--	--	--	--	--	--	.142	--	--
AUG													
04...	0445	47	50	57.3	--	--	--	--	--	--	.118	--	--
04...	0645	47	50	75.2	--	--	--	--	--	--	.180	--	--
04...	1045	47	50	64.6	--	--	--	--	--	--	.173	--	--
04...	1845	47	50	68.6	--	--	--	--	--	--	.108	--	--
04...	2045	47	50	59.9	--	--	--	--	--	--	.078	--	--
05...	0045	335	50	67.1	--	--	--	--	--	--	.122	--	--
05...	0645	335	50	52.7	--	--	--	--	--	--	.128	--	--
05...	1645	335	50	85.1	--	--	--	--	--	--	.111	--	--
18...	1301	18	50	90.7	12	--	--	--	--	--	.111	--	--
18...	1302	18	50	92.3	11	--	--	--	--	--	.111	--	--
18...	1304	18	50	91.5	20	--	--	--	--	--	.113	--	--
18...	1307	18	50	89.6	13	--	--	--	--	--	.107	--	--
18...	1310	18	50	90.5	13	--	--	--	--	--	.110	--	--
18...	1313	18	50	--	--	--	--	--	--	--	--	--	--
18...	1744	18	50	89.0	19	--	--	--	--	--	.110	--	--
18...	2200	18	50	87.2	32	--	--	--	--	--	.129	--	--
19...	0930	18	50	88.5	23	--	--	--	--	--	.115	--	--
19...	1630	18	50	81.4	11	--	--	--	--	--	.101	--	--
19...	2330	18	50	79.9	8	--	--	--	--	--	.100	--	--
20...	0630	19	50	74.0	16	--	--	--	--	--	.109	--	--
24...	1635	19	50	77.7	29	--	--	--	--	--	.138	--	--
25...	0345	14	50	78.5	19	--	--	--	--	--	.118	--	--
25...	1545	14	50	82.8	32	--	--	--	--	--	.145	--	--
26...	0345	142	50	80.9	34	--	--	--	--	--	.145	--	--
26...	0716	142	50	82.5	30	.56	.345	.190	.058	.074	.144	--	110
26...	1132	142	50	78.7	28	1.0	.340	.188	.054	.069	.131	--	140
26...	1716	142	50	97.9	22	--	--	--	--	--	.117	--	--
27...	0030	81	50	92.3	23	--	--	--	--	--	.110	--	--
27...	0630	81	50	91.2	81	1.4	.026	.091	.003	.016	.196	--	610
27...	0736	81	50	80.7	53	--	--	--	--	--	.152	--	--
27...	1322	81	50	103	47	--	--	--	--	--	.151	--	--
28...	0130	37	50	75.0	23	--	--	--	--	--	.094	--	--
28...	0813	37	50	94.7	55	--	--	--	--	--	.156	--	--
28...	2015	37	50	81.4	26	--	--	--	--	--	.105	--	--
29...	0815	87	50	104	54	--	--	--	--	--	.159	--	--
29...	2015	87	50	93.9	14	--	--	--	--	--	.098	--	--
30...	0815	107	50	83.1	24	--	--	--	--	--	.131	--	--
30...	0939	107	50	82.1	30	.77	.111	1.09	.063	.071	.145	--	--
30...	1243	107	50	80.7	30	--	--	--	--	--	.144	--	--
SEP													
08...	1030	16	40	97.6	40	1.5	.111	.457	.048	--	.220	4.0	--
16...	0905	10	50	--	--	--	--	--	--	--	--	<2.0	--



04087240 ROOT RIVER AT RACINE, WI—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Dis-charge, cfs (00060)	Sam-pling method, code (82398)	Chlor-ide, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, Defined Substr. Tech., MPN/ 100 mL (50468)	E coli, m-TEC MF, water, col/ 100 mL (31633)
OCT													
22...	2330	10	50	52.3	10	--	--	--	--	.104	--	--	--
23...	1830	15	50	87.9	16	--	--	--	--	.108	--	--	--
24...	0645	16	50	98.5	18	--	--	--	--	.110	--	--	--
24...	1845	16	50	87.0	14	--	--	--	--	.101	--	--	--
25...	0655	41	50	62.2	8	.73	.234	.373	.053	.092	<3.0	--	60
25...	1335	41	50	70.8	24	.74	.230	.353	.048	.121	<3.0	--	130
26...	2113	37	50	85.3	19	.80	.192	.373	.051	.111	<2.0	150	--
27...	0932	30	50	84.7	7	.79	.198	.394	.058	.099	<2.0	73	--
27...	0945	30	50	--	11	--	--	--	--	--	--	--	--
27...	0946	30	40	--	9	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Chloro-phyll a wat unfltrd, method, uncorr, ug/L (32210)	Copper, water, unfltrd recover-able, ug/L (01119)	Zinc, water, unfltrd recover-able, ug/L (01094)	Sus-pended sedi-ment concen-tration mg/L (80154)
OCT					
22...	--	--	--	--	--
23...	--	--	--	--	--
24...	--	--	--	--	--
24...	--	--	--	--	--
25...	90	.350	27	<20	7
25...	230	1.09	7	<20	26
26...	170	.900	6	<20	15
27...	60	.630	5	<20	7
27...	--	--	--	--	--
27...	--	--	--	--	--

04087240 ROOT RIVER AT RACINE, WI—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	20.0	10.5	14.0	10.5	9.0	9.5	---	---	---	---	---	---	---		
2	19.5	6.0	9.0	10.5	9.5	10.0	---	---	---	---	---	---	---		
3	21.5	6.0	10.0	10.0	9.5	9.5	---	---	---	---	---	---	---		
4	18.0	5.5	9.0	9.5	8.5	9.0	---	---	---	---	---	---	---		
5	13.0	5.0	7.5	8.5	7.5	8.0	---	---	---	---	---	---	---		
6	16.5	7.5	10.5	9.0	7.5	8.0	---	---	---	---	---	---	---		
7	17.5	9.5	12.0	9.5	7.0	8.0	---	---	---	---	---	---	---		
8	18.5	13.0	15.0	7.5	6.5	7.0	---	---	---	---	---	---	---		
9	17.5	11.0	13.0	9.0	6.5	7.0	---	---	---	---	---	---	---		
10	17.0	11.0	12.5	9.5	6.5	7.5	---	---	---	---	---	---	---		
11	17.0	10.0	12.5	8.5	5.5	7.0	---	---	---	---	---	---	---		
12	15.5	9.5	11.5	8.0	5.0	5.5	---	---	---	---	---	---	---		
13	14.5	10.5	12.5	8.5	5.0	6.0	---	---	---	---	---	---	---		
14	13.0	11.0	12.0	6.5	4.0	5.0	---	---	---	---	---	---	---		
15	11.5	9.5	10.5	6.0	5.0	5.5	---	---	---	---	---	---	---		
16	10.0	7.0	8.5	---	---	---	---	---	---	---	---	---	---		
17	11.5	5.5	7.5	---	---	---	---	---	---	---	---	---	---		
18	11.0	7.5	9.0	---	---	---	---	---	---	---	---	---	---		
19	10.5	9.0	9.5	---	---	---	---	---	---	---	---	---	---		
20	11.0	9.5	10.0	---	---	---	---	---	---	---	---	---	---		
21	14.0	9.5	11.0	---	---	---	---	---	---	---	---	---	---		
22	12.5	9.5	11.0	---	---	---	---	---	---	---	---	---	---		
23	15.0	11.5	12.5	---	---	---	---	---	---	---	---	---	---		
24	15.5	11.0	12.5	---	---	---	---	---	---	---	---	---	---		
25	13.5	10.5	12.0	---	---	---	---	---	---	---	---	---	---		
26	12.5	12.0	12.5	---	---	---	---	---	---	---	---	---	---		
27	12.5	12.0	12.0	---	---	---	---	---	---	---	---	---	---		
28	12.5	11.5	12.0	---	---	---	---	---	---	---	---	---	---		
29	15.5	12.5	14.0	---	---	---	---	---	---	---	---	---	---		
30	16.5	11.0	12.5	---	---	---	---	---	---	---	---	---	---		
31	11.5	9.0	10.5	---	---	---	---	---	---	---	---	---	---		
MONTH	21.5	5.0	11.2	10.5	4.0	7.5	---	---	---	---	---	---	---		

04087240 ROOT RIVER AT RACINE, WI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	8.8	1.0	4.5	---	---	---	---	---	---			
2	---	---	---	9.2	7.9	8.7	---	---	---	---	---	---			
3	---	---	---	9.1	8.5	8.9	---	---	---	---	---	---			
4	---	---	---	9.3	8.4	8.8	---	---	---	---	---	---			
5	---	---	---	9.7	8.9	9.3	---	---	---	---	---	---			
6	---	---	---	9.7	8.5	9.2	---	---	---	---	---	---			
7	---	---	---	9.9	9.1	9.5	---	---	---	---	---	---			
8	---	---	---	10.7	9.3	10.0	---	---	---	---	---	---			
9	9.3	5.0	6.8	10.3	8.6	9.6	---	---	---	---	---	---			
10	9.8	7.4	8.2	10.7	8.3	9.2	---	---	---	---	---	---			
11	10.1	6.7	8.3	11.3	7.1	9.5	---	---	---	---	---	---			
12	9.1	5.5	7.4	11.3	8.1	9.6	---	---	---	---	---	---			
13	8.9	4.8	6.8	10.4	7.4	9.0	---	---	---	---	---	---			
14	8.0	4.9	6.4	11.7	9.7	10.6	---	---	---	---	---	---			
15	7.6	0.9	5.2	11.9	10.4	11.1	---	---	---	---	---	---			
16	9.1	3.6	6.8	---	---	---	---	---	---	---	---	---			
17	8.4	3.5	6.5	---	---	---	---	---	---	---	---	---			
18	6.8	2.3	4.8	---	---	---	---	---	---	---	---	---			
19	8.7	5.8	7.1	---	---	---	---	---	---	---	---	---			
20	8.4	4.4	6.0	---	---	---	---	---	---	---	---	---			
21	8.5	2.5	5.1	---	---	---	---	---	---	---	---	---			
22	8.2	3.2	5.5	---	---	---	---	---	---	---	---	---			
23	8.7	3.3	6.1	---	---	---	---	---	---	---	---	---			
24	8.7	5.0	6.5	---	---	---	---	---	---	---	---	---			
25	9.3	5.5	8.2	---	---	---	---	---	---	---	---	---			
26	8.8	8.2	8.5	---	---	---	---	---	---	---	---	---			
27	8.6	7.8	8.2	---	---	---	---	---	---	---	---	---			
28	8.7	6.8	7.8	---	---	---	---	---	---	---	---	---			
29	8.3	1.9	6.0	---	---	---	---	---	---	---	---	---			
30	7.3	0.7	4.3	---	---	---	---	---	---	---	---	---			
31	5.4	1.4	3.5	---	---	---	---	---	---	---	---	---			
MONTH	10.1	0.7	6.5	11.9	1.0	9.2	---	---	---	---	---	---			

## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087240 ROOT RIVER AT RACINE, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	999	244	782	---	---	---	---	---	---
2	763	368	668	969	800	929	---	---	---	---	---	---
3	771	624	744	955	861	926	---	---	---	---	---	---
4	873	682	788	861	521	807	---	---	---	---	---	---
5	990	873	947	821	809	814	---	---	---	---	---	---
6	1,020	990	1,000	833	800	812	---	---	---	---	---	---
7	1,020	934	999	833	772	786	---	---	---	---	---	---
8	1,010	59	780	776	751	761	---	---	---	---	---	---
9	952	917	939	777	732	749	---	---	---	---	---	---
10	962	940	955	792	742	751	---	---	---	---	---	---
11	966	942	959	776	688	750	---	---	---	---	---	---
12	967	953	962	801	575	754	---	---	---	---	---	---
13	966	956	962	803	582	776	---	---	---	---	---	---
14	987	962	967	805	793	798	---	---	---	---	---	---
15	984	335	836	826	785	803	---	---	---	---	---	---
16	959	879	938	---	---	---	---	---	---	---	---	---
17	984	939	956	---	---	---	---	---	---	---	---	---
18	971	946	953	---	---	---	---	---	---	---	---	---
19	970	944	951	---	---	---	---	---	---	---	---	---
20	966	949	954	---	---	---	---	---	---	---	---	---
21	982	948	954	---	---	---	---	---	---	---	---	---
22	965	948	959	---	---	---	---	---	---	---	---	---
23	963	52	793	---	---	---	---	---	---	---	---	---
24	960	946	954	---	---	---	---	---	---	---	---	---
25	963	938	954	---	---	---	---	---	---	---	---	---
26	1,020	959	989	---	---	---	---	---	---	---	---	---
27	1,020	1,020	1,020	---	---	---	---	---	---	---	---	---
28	1,020	1,010	1,010	---	---	---	---	---	---	---	---	---
29	1,010	834	1,000	---	---	---	---	---	---	---	---	---
30	1,030	340	940	---	---	---	---	---	---	---	---	---
31	1,010	997	1,000	---	---	---	---	---	---	---	---	---
MONTH	1,030	52	928	999	244	800	---	---	---	---	---	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087242 ROOT RIVER NEAR MOUTH AT RACINE, WI

LOCATION.--Lat 42°44'02", long 87°47'04", in SE 1/4 NE 1/4 sec.9, T.3 N., R.23 E., Racine County, Hydrologic Unit 04040002, on left bank 300 ft upstream from South Main Street bridge in Racine, about 0.4 mi upstream from mouth.

DRAINAGE AREA.--197 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to November, 2004 (discontinued).

GAGE.--Water-stage recorder. Side-looking velocity meter system. Datum of gage is 620 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	e119	e28	e45
2	---	---	---	---	---	---	---	---	---	e101	20	e32
3	---	---	---	---	---	---	---	---	---	e102	26	e28
4	---	---	---	---	---	---	---	---	---	580	47	e24
5	---	---	---	---	---	---	---	---	---	1,270	335	e21
6	---	---	---	---	---	---	---	---	---	1,780	301	e21
7	---	---	---	---	---	---	---	---	---	1,080	74	e19
8	---	---	---	---	---	---	---	---	---	592	49	e16
9	---	---	---	---	---	---	---	---	---	e322	38	e16
10	---	---	---	---	---	---	---	---	---	e206	26	e15
11	---	---	---	---	---	---	---	---	---	e160	12	e14
12	---	---	---	---	---	---	---	---	---	e283	51	e12
13	---	---	---	---	---	---	---	---	---	e264	e27	e10
14	---	---	---	---	---	---	---	---	---	e164	e24	e10
15	---	---	---	---	---	---	---	---	---	e123	e21	e10
16	---	---	---	---	---	---	---	---	---	e98	e18	e10
17	---	---	---	---	---	---	---	---	---	e87	e19	e10
18	---	---	---	---	---	---	---	---	---	e78	e18	e11
19	---	---	---	---	---	---	---	---	---	e67	e18	e11
20	---	---	---	---	---	---	---	---	---	e58	e19	e10
21	---	---	---	---	---	---	---	---	---	e59	e18	e9.0
22	---	---	---	---	---	---	---	---	---	e64	e16	e6.0
23	---	---	---	---	---	---	---	---	---	e79	e14	e6.0
24	---	---	---	---	---	---	---	---	---	e60	e12	e5.0
25	---	---	---	---	---	---	---	---	---	e47	e14	e4.0
26	---	---	---	---	---	---	---	---	---	52	142	e4.0
27	---	---	---	---	---	---	---	---	---	27	e81	e3.0
28	---	---	---	---	---	---	---	---	---	e34	e37	e3.0
29	---	---	---	---	---	---	---	---	---	e33	e87	e2.0
30	---	---	---	---	---	---	---	---	---	e31	e107	e3.0
31	---	---	---	---	---	---	---	---	---	e30	e67	---
TOTAL	---	---	---	---	---	---	---	---	---	8,050	1,766	390.0
MEAN	---	---	---	---	---	---	---	---	---	260	57.0	13.0
MAX	---	---	---	---	---	---	---	---	---	1,780	335	45
MIN	---	---	---	---	---	---	---	---	---	27	12	2.0
CFSM	---	---	---	---	---	---	---	---	---	1.32	0.29	0.07
IN.	---	---	---	---	---	---	---	---	---	1.52	0.33	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2004, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	---	---	---	260	57.0	13.0
MAX	---	---	---	---	---	---	---	---	---	260	57.0	13.0
(WY)	---	---	---	---	---	---	---	---	---	(2004)	(2004)	(2004)
MIN	---	---	---	---	---	---	---	---	---	260	57.0	13.0
(WY)	---	---	---	---	---	---	---	---	---	(2004)	(2004)	(2004)

SUMMARY STATISTICS

ANNUAL TOTAL  
ANNUAL MEAN  
HIGHEST DAILY MEAN  
LOWEST DAILY MEAN  
ANNUAL SEVEN-DAY MINIMUM  
ANNUAL RUNOFF (CFSM)  
ANNUAL RUNOFF (INCHES)  
10 PERCENT EXCEEDS  
50 PERCENT EXCEEDS  
90 PERCENT EXCEEDS

FOR 2004 WATER YEAR  
(July - September)

10,206.0  
111  
1,780 Jul 6  
2.0 Sep 29  
3.4 Sep 24  
0.563  
1.93  
277  
28  
6.9



04087242 ROOT RIVER NEAR MOUTH AT RACINE, WI

LOCATION.--Lat 42°44'02", long 87°47'04", in SE ¼ NE ¼ sec.9, T.3 N., R.23 E., Racine County, Hydrologic Unit 04040002, on left bank 300 ft upstream from South Main Street bridge in Racine, about 0.4 mi upstream from mouth.

DRAINAGE AREA.--197 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to November, 2004 (discontinued).

GAGE.--Water-stage recorder. Side-looking velocity meter system. Datum of gage is 620 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor (see page 11). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.0	18	---	---	---	---	---	---	---	---	---	---
2	e4.0	e30	---	---	---	---	---	---	---	---	---	---
3	e4.0	75	---	---	---	---	---	---	---	---	---	---
4	e4.0	e75	---	---	---	---	---	---	---	---	---	---
5	e6.0	e45	---	---	---	---	---	---	---	---	---	---
6	e7.0	e45	---	---	---	---	---	---	---	---	---	---
7	e5.0	e35	---	---	---	---	---	---	---	---	---	---
8	e7.0	e26	---	---	---	---	---	---	---	---	---	---
9	e10	e21	---	---	---	---	---	---	---	---	---	---
10	e10	24	---	---	---	---	---	---	---	---	---	---
11	e8.0	e18	---	---	---	---	---	---	---	---	---	---
12	e8.0	e18	---	---	---	---	---	---	---	---	---	---
13	e8.0	20	---	---	---	---	---	---	---	---	---	---
14	e8.0	e20	---	---	---	---	---	---	---	---	---	---
15	e10	---	---	---	---	---	---	---	---	---	---	---
16	e9.0	---	---	---	---	---	---	---	---	---	---	---
17	e9.0	---	---	---	---	---	---	---	---	---	---	---
18	e8.0	---	---	---	---	---	---	---	---	---	---	---
19	e10	---	---	---	---	---	---	---	---	---	---	---
20	e11	---	---	---	---	---	---	---	---	---	---	---
21	9.7	---	---	---	---	---	---	---	---	---	---	---
22	e10	---	---	---	---	---	---	---	---	---	---	---
23	e15	---	---	---	---	---	---	---	---	---	---	---
24	e16	---	---	---	---	---	---	---	---	---	---	---
25	41	---	---	---	---	---	---	---	---	---	---	---
26	e37	---	---	---	---	---	---	---	---	---	---	---
27	e30	---	---	---	---	---	---	---	---	---	---	---
28	31	---	---	---	---	---	---	---	---	---	---	---
29	16	---	---	---	---	---	---	---	---	---	---	---
30	e15	---	---	---	---	---	---	---	---	---	---	---
31	e14	---	---	---	---	---	---	---	---	---	---	---
TOTAL	383.7	470	---	---	---	---	---	---	---	---	---	---
MEAN	12.4	33.6	---	---	---	---	---	---	---	---	---	---
MAX	41	75	---	---	---	---	---	---	---	---	---	---
MIN	3.0	18	---	---	---	---	---	---	---	---	---	---
CFSM	0.06	0.17	---	---	---	---	---	---	---	---	---	---
IN.	0.07	0.09	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2005, BY WATER YEAR (WY)

MEAN	12.4	33.6	---	---	---	---	---	---	---	260	57.0	13.0
MAX	12.4	33.6	---	---	---	---	---	---	---	260	57.0	13.0
(WY)	(2005)	(2005)	---	---	---	---	---	---	---	(2004)	(2004)	(2004)
MIN	12.4	33.6	---	---	---	---	---	---	---	260	57.0	13.0
(WY)	(2005)	(2005)	---	---	---	---	---	---	---	(2004)	(2004)	(2004)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR (July - September)		FOR 2005 WATER YEAR (October - November)		WATER YEARS 2004 - 2005 (July - November)	
ANNUAL TOTAL	11,059.7		853.7			
ANNUAL MEAN	80.7		19.0		80.7	
HIGHEST ANNUAL MEAN					111	2004
LOWEST ANNUAL MEAN					19.0	2005
HIGHEST DAILY MEAN	1,780	Jul 6	75	Nov 3	1,780	Jul 6, 2004
LOWEST DAILY MEAN	2.0	Sep 29	3.0	Oct 1	2.0	Sep 29, 2004
ANNUAL SEVEN-DAY MINIMUM	3.1	Sep 25	4.7	Oct 1	3.1	Sep 25, 2004
ANNUAL RUNOFF (CFSM)	0.410		0.096		0.410	
ANNUAL RUNOFF (INCHES)	2.09		0.16		5.57	
10 PERCENT EXCEEDS	146		43		146	
50 PERCENT EXCEEDS	21		14		21	
90 PERCENT EXCEEDS	6.0		4.6		6.0	

(e) Estimated due to ice effect or missing record







## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087242 ROOT RIVER NEAR MOUTH AT RACINE, WI—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Dis-charge, cfs (00060)	Sam-pling method, code (82398)	Chlor-ide, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, Defined Substr. Tech., water, MPN/ 100 mL (50468)
JUN													
29...	1500	196	40	48.2	35	.94	.072	3.66	.082	.094	.171	<2.0	--
JUL													
21...	1715	59	50	68.0	--	--	--	--	--	--	.134	--	--
21...	1915	59	50	61.3	--	--	--	--	--	--	.130	--	--
21...	2115	59	50	72.6	--	--	--	--	--	--	.149	--	--
21...	2330	59	50	60.2	--	--	--	--	--	--	.154	--	--
22...	0130	64	50	69.0	--	--	--	--	--	--	.159	--	--
22...	0330	64	50	61.9	--	--	--	--	--	--	.146	--	--
22...	0530	64	50	70.1	--	--	--	--	--	--	.166	--	--
22...	0830	64	50	61.1	--	--	--	--	--	--	.142	--	--
AUG													
04...	0445	47	50	57.3	--	--	--	--	--	--	.118	--	--
04...	0645	47	50	75.2	--	--	--	--	--	--	.180	--	--
04...	1045	47	50	64.6	--	--	--	--	--	--	.173	--	--
04...	1845	47	50	68.6	--	--	--	--	--	--	.108	--	--
04...	2045	47	50	59.9	--	--	--	--	--	--	.078	--	--
05...	0045	335	50	67.1	--	--	--	--	--	--	.122	--	--
05...	0645	335	50	52.7	--	--	--	--	--	--	.128	--	--
05...	1645	335	50	85.1	--	--	--	--	--	--	.111	--	--
18...	1301	18	50	90.7	12	--	--	--	--	--	.111	--	--
18...	1302	18	50	92.3	11	--	--	--	--	--	.111	--	--
18...	1304	18	50	91.5	20	--	--	--	--	--	.113	--	--
18...	1307	18	50	89.6	13	--	--	--	--	--	.107	--	--
18...	1310	18	50	90.5	13	--	--	--	--	--	.110	--	--
18...	1313	18	50	--	--	--	--	--	--	--	--	--	--
18...	1744	18	50	89.0	19	--	--	--	--	--	.110	--	--
18...	2200	18	50	87.2	32	--	--	--	--	--	.129	--	--
19...	0930	18	50	88.5	23	--	--	--	--	--	.115	--	--
19...	1630	18	50	81.4	11	--	--	--	--	--	.101	--	--
19...	2330	18	50	79.9	8	--	--	--	--	--	.100	--	--
20...	0630	19	50	74.0	16	--	--	--	--	--	.109	--	--
24...	1635	19	50	77.7	29	--	--	--	--	--	.138	--	--
25...	0345	14	50	78.5	19	--	--	--	--	--	.118	--	--
25...	1545	14	50	82.8	32	--	--	--	--	--	.145	--	--
26...	0345	142	50	80.9	34	--	--	--	--	--	.145	--	--
26...	0716	142	50	82.5	30	.56	.345	.190	.058	.074	.144	--	110
26...	1132	142	50	78.7	28	1.0	.340	.188	.054	.069	.131	--	140
26...	1716	142	50	97.9	22	--	--	--	--	--	.117	--	--
27...	0030	81	50	92.3	23	--	--	--	--	--	.110	--	--
27...	0630	81	50	91.2	81	1.4	.026	.091	.003	.016	.196	--	610
27...	0736	81	50	80.7	53	--	--	--	--	--	.152	--	--
27...	1322	81	50	103	47	--	--	--	--	--	.151	--	--
28...	0130	37	50	75.0	23	--	--	--	--	--	.094	--	--
28...	0813	37	50	94.7	55	--	--	--	--	--	.156	--	--
28...	2015	37	50	81.4	26	--	--	--	--	--	.105	--	--
29...	0815	87	50	104	54	--	--	--	--	--	.159	--	--
29...	2015	87	50	93.9	14	--	--	--	--	--	.098	--	--
30...	0815	107	50	83.1	24	--	--	--	--	--	.131	--	--
30...	0939	107	50	82.1	30	.77	.111	1.09	.063	.071	.145	--	--
30...	1243	107	50	80.7	30	--	--	--	--	--	.144	--	--
SEP													
08...	1030	16	40	97.6	40	1.5	.111	.457	.048	--	.220	4.0	--
16...	0905	10	50	--	--	--	--	--	--	--	--	<2.0	--



04087242 ROOT RIVER NEAR MOUTH AT RACINE, WI—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.0	15.0	15.5	12.5	11.5	12.0	---	---	---	---	---	---
2	15.5	15.0	15.5	12.0	11.0	11.5	---	---	---	---	---	---
3	15.0	14.5	15.0	11.0	10.0	10.5	---	---	---	---	---	---
4	14.5	14.0	14.0	10.0	9.5	10.0	---	---	---	---	---	---
5	14.0	13.5	14.0	9.5	9.0	9.0	---	---	---	---	---	---
6	14.0	13.5	13.5	9.0	8.0	8.5	---	---	---	---	---	---
7	14.5	13.5	14.0	8.5	8.0	8.5	---	---	---	---	---	---
8	16.0	14.5	14.5	8.0	7.5	8.0	---	---	---	---	---	---
9	15.5	14.5	15.0	8.5	8.0	8.0	---	---	---	---	---	---
10	15.5	14.5	15.0	8.5	7.5	8.0	---	---	---	---	---	---
11	15.5	14.5	15.0	8.0	7.5	8.0	---	---	---	---	---	---
12	15.5	14.5	15.0	8.0	7.0	7.5	---	---	---	---	---	---
13	15.0	15.0	15.0	7.5	7.0	7.5	---	---	---	---	---	---
14	15.0	14.5	14.5	8.0	7.0	7.5	---	---	---	---	---	---
15	14.5	14.0	14.0	---	---	---	---	---	---	---	---	---
16	14.0	12.5	13.5	---	---	---	---	---	---	---	---	---
17	12.5	12.0	12.0	---	---	---	---	---	---	---	---	---
18	12.0	11.0	11.5	---	---	---	---	---	---	---	---	---
19	11.0	11.0	11.0	---	---	---	---	---	---	---	---	---
20	11.0	10.5	11.0	---	---	---	---	---	---	---	---	---
21	11.5	10.5	11.0	---	---	---	---	---	---	---	---	---
22	11.0	11.0	11.0	---	---	---	---	---	---	---	---	---
23	12.0	11.0	11.5	---	---	---	---	---	---	---	---	---
24	12.5	11.5	12.0	---	---	---	---	---	---	---	---	---
25	12.5	11.5	12.0	---	---	---	---	---	---	---	---	---
26	12.5	12.0	12.5	---	---	---	---	---	---	---	---	---
27	13.0	12.5	13.0	---	---	---	---	---	---	---	---	---
28	13.0	12.5	13.0	---	---	---	---	---	---	---	---	---
29	14.0	12.5	13.0	---	---	---	---	---	---	---	---	---
30	14.0	13.0	13.5	---	---	---	---	---	---	---	---	---
31	13.0	12.0	13.0	---	---	---	---	---	---	---	---	---
MONTH	16.0	10.5	13.4	12.5	7.0	8.9	---	---	---	---	---	---

04087242 ROOT RIVER NEAR MOUTH AT RACINE, WI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.6	3.1	4.4	6.9	5.4	6.4	---	---	---	---	---	---
2	3.8	1.6	2.5	6.5	5.0	5.8	---	---	---	---	---	---
3	3.1	1.7	2.3	7.5	5.1	6.0	---	---	---	---	---	---
4	4.6	2.1	3.1	8.0	5.4	7.0	---	---	---	---	---	---
5	3.0	1.6	2.5	8.0	7.4	7.7	---	---	---	---	---	---
6	2.8	1.7	2.2	8.3	7.5	7.9	---	---	---	---	---	---
7	3.5	1.8	2.6	8.8	7.8	8.4	---	---	---	---	---	---
8	5.1	2.0	2.8	8.8	7.9	8.4	---	---	---	---	---	---
9	2.7	1.5	2.2	9.1	8.1	8.5	---	---	---	---	---	---
10	3.5	1.5	2.2	8.8	8.1	8.5	---	---	---	---	---	---
11	3.4	1.8	2.3	9.8	8.4	9.1	---	---	---	---	---	---
12	3.3	1.4	2.1	10.3	9.0	9.7	---	---	---	---	---	---
13	2.3	1.1	1.7	10.4	9.6	10.0	---	---	---	---	---	---
14	2.1	1.3	1.6	10.6	9.8	10.3	---	---	---	---	---	---
15	2.4	1.1	1.6	---	---	---	---	---	---	---	---	---
16	2.7	1.1	1.9	---	---	---	---	---	---	---	---	---
17	2.8	1.7	2.2	---	---	---	---	---	---	---	---	---
18	5.9	2.1	4.2	---	---	---	---	---	---	---	---	---
19	6.5	5.3	6.0	---	---	---	---	---	---	---	---	---
20	7.0	5.5	6.1	---	---	---	---	---	---	---	---	---
21	7.4	5.5	6.7	---	---	---	---	---	---	---	---	---
22	7.6	6.6	7.2	---	---	---	---	---	---	---	---	---
23	7.4	5.2	6.1	---	---	---	---	---	---	---	---	---
24	6.9	4.7	5.5	---	---	---	---	---	---	---	---	---
25	7.3	5.0	6.2	---	---	---	---	---	---	---	---	---
26	6.6	3.4	5.2	---	---	---	---	---	---	---	---	---
27	4.0	2.3	3.1	---	---	---	---	---	---	---	---	---
28	4.4	2.7	3.5	---	---	---	---	---	---	---	---	---
29	5.3	3.4	4.2	---	---	---	---	---	---	---	---	---
30	5.7	4.5	5.1	---	---	---	---	---	---	---	---	---
31	6.3	4.5	5.1	---	---	---	---	---	---	---	---	---
MONTH	7.6	1.1	3.7	10.6	5.0	8.1	---	---	---	---	---	---



## STREAMS TRIBUTARY TO LAKE MICHIGAN

04087242 ROOT RIVER NEAR MOUTH AT RACINE, WI—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	442	333	378	918	636	752	---	---	---	---	---	---
2	497	372	450	911	772	874	---	---	---	---	---	---
3	564	462	510	865	633	736	---	---	---	---	---	---
4	499	439	465	996	633	856	---	---	---	---	---	---
5	566	457	498	988	872	908	---	---	---	---	---	---
6	586	524	559	901	799	880	---	---	---	---	---	---
7	600	476	535	906	755	879	---	---	---	---	---	---
8	746	464	609	911	749	846	---	---	---	---	---	---
9	817	720	784	870	693	770	---	---	---	---	---	---
10	830	595	735	881	728	821	---	---	---	---	---	---
11	738	653	705	813	663	741	---	---	---	---	---	---
12	740	681	710	768	524	629	---	---	---	---	---	---
13	733	630	697	612	437	538	---	---	---	---	---	---
14	720	646	701	530	433	457	---	---	---	---	---	---
15	800	678	734	---	---	---	---	---	---	---	---	---
16	797	780	790	---	---	---	---	---	---	---	---	---
17	783	722	773	---	---	---	---	---	---	---	---	---
18	747	559	630	---	---	---	---	---	---	---	---	---
19	578	524	553	---	---	---	---	---	---	---	---	---
20	599	489	554	---	---	---	---	---	---	---	---	---
21	589	486	513	---	---	---	---	---	---	---	---	---
22	529	470	501	---	---	---	---	---	---	---	---	---
23	791	489	642	---	---	---	---	---	---	---	---	---
24	784	519	693	---	---	---	---	---	---	---	---	---
25	695	496	595	---	---	---	---	---	---	---	---	---
26	689	548	628	---	---	---	---	---	---	---	---	---
27	725	660	674	---	---	---	---	---	---	---	---	---
28	791	685	725	---	---	---	---	---	---	---	---	---
29	815	652	751	---	---	---	---	---	---	---	---	---
30	1,010	733	899	---	---	---	---	---	---	---	---	---
31	992	633	888	---	---	---	---	---	---	---	---	---
MONTH	1,010	333	641	996	433	763	---	---	---	---	---	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087257 PIKE RIVER NEAR RACINE, WI

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LOCATION.--Lat 42°38'49", long 87°51'38", in SE ¼ NE ¼ sec.11, T.2 N., R.22 E., Kenosha County, Hydrologic Unit 04040002, on right bank just downstream from unnamed tributary, 1.7 mi downstream from Pike Creek, 6.8 mi southwest of Racine Post Office and 9.0 mi upstream from mouth.

DRAINAGE AREA.--38.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1971 to current year.

REVISED RECORDS.--WDR WI-76-1: 1975. WDR WI-80-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 620.09 ft above NGVD of 1929 (Southeastern Wisconsin Regional Planning Commission).

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Low flows considerably affected by effluent discharge in upper portion of basin, and by occasional regulation of small recreation dam 1.1 mi upstream. Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	6.9	9.3	13	e7.5	131	55	21	148	28	12	12
2	12	78	9.1	14	e7.5	168	45	19	97	24	12	12
3	13	119	9.1	15	e7.5	97	38	18	68	30	13	11
4	13	112	8.7	14	e7.5	79	32	18	53	237	46	11
5	11	66	8.7	e13	e7.5	630	28	18	44	84	20	9.3
6	11	30	7.9	e13	e7.5	248	27	18	39	49	16	8.0
7	11	19	7.7	e12	e7.5	146	25	18	34	39	14	8.9
8	11	15	8.8	e12	e7.5	95	24	17	32	31	12	10
9	13	13	11	e11	e7.5	72	21	284	34	27	13	11
10	12	13	252	e10	e7.5	54	19	173	106	24	13	11
11	12	13	159	e9.8	e7.5	47	18	191	168	22	12	11
12	15	11	66	e9.4	e7.5	37	18	101	280	21	11	9.9
13	13	14	43	e8.7	e7.5	32	18	299	118	20	10	11
14	25	13	34	e8.4	e7.7	37	17	616	70	19	9.4	11
15	15	11	29	e8.0	e7.8	32	17	306	54	18	9.6	11
16	11	8.7	e27	e7.8	e8.2	30	17	145	44	18	11	19
17	9.2	8.7	e24	e7.7	e8.6	29	e17	97	487	18	26	12
18	9.0	50	e21	e7.7	e9.1	30	e17	375	210	15	18	10
19	9.2	39	e18	e7.6	e9.6	29	e17	143	88	15	14	8.3
20	9.7	21	e17	e7.6	e11	31	e22	211	58	15	12	8.4
21	8.8	16	e15	e7.6	e15	24	57	974	213	27	11	9.6
22	8.9	14	e14	e7.6	17	22	34	1,270	198	23	10	9.6
23	9.9	14	e13	e7.6	34	22	26	1,130	100	16	11	9.7
24	9.1	18	e12	e7.5	56	55	23	467	220	15	12	10
25	18	13	e11	e7.5	54	59	42	234	122	14	15	9.1
26	12	12	e11	e7.5	58	106	33	149	71	13	13	7.2
27	9.5	9.3	e11	e7.5	61	76	26	105	54	14	16	7.6
28	11	8.3	16	e7.5	65	99	23	72	45	14	18	9.0
29	11	8.3	18	e7.5	79	256	21	61	38	13	17	9.4
30	11	8.5	17	e7.5	---	123	21	162	32	13	13	8.6
31	8.2	---	15	e7.5	---	75	---	267	---	13	13	---
TOTAL	364.5	782.7	923.3	292.5	598.5	2,971	798	7,979	3,325	929	453.0	305.6
MEAN	11.8	26.1	29.8	9.44	20.6	95.8	26.6	257	111	30.0	14.6	10.2
MAX	25	119	252	15	79	630	57	1,270	487	237	46	19
MIN	8.2	6.9	7.7	7.5	7.5	22	17	17	32	13	9.4	7.2
CFSM	0.31	0.68	0.77	0.25	0.54	2.49	0.69	6.69	2.88	0.78	0.38	0.26
IN.	0.35	0.76	0.89	0.28	0.58	2.87	0.77	7.71	3.21	0.90	0.44	0.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

MEAN	19.6	29.1	31.9	25.8	38.5	69.2	71.0	52.2	41.0	21.4	20.1	26.1
MAX	91.3	126	101	97.1	109	258	185	257	150	129	92.5	131
(WY)	(2002)	(1986)	(1983)	(1974)	(2001)	(1979)	(1993)	(2004)	(2000)	(1978)	(1978)	(1986)
MIN	4.40	3.62	2.35	2.05	3.74	14.3	12.1	4.57	8.32	4.93	4.35	3.25
(WY)	(1972)	(1972)	(1977)	(1977)	(1977)	(1996)	(1977)	(1977)	(1988)	(1976)	(1976)	(1976)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1972 - 2004

ANNUAL TOTAL	7,913.6		19,722.1		
ANNUAL MEAN	21.7		53.9		37.1
HIGHEST ANNUAL MEAN					59.0
LOWEST ANNUAL MEAN					8.10
HIGHEST DAILY MEAN	252	Dec 10	1,270	May 22	1,270
LOWEST DAILY MEAN	(a)5.8	(b)Jan 23	6.9	Nov 1	0.35
ANNUAL SEVEN-DAY MINIMUM	(a)5.9	Feb 11	(a)7.5	Jan 24	1.7
MAXIMUM PEAK FLOW			1,650	May 23	(c)1,650
MAXIMUM PEAK STAGE			8.10	May 23	(d)9.14
ANNUAL RUNOFF (CFSM)	0.563		1.40		0.964
ANNUAL RUNOFF (INCHES)	7.65		19.06		13.09
10 PERCENT EXCEEDS	43		122		81
50 PERCENT EXCEEDS	13		16		16
90 PERCENT EXCEEDS	6.4		8.0		6.0

(a) Ice affected

(b) Also occurred Feb. 14-16

(c) Gage height, 8.10 ft

(d) Backwater from ice

(e) Estimated due to ice effect or missing record

UPPER MISSISSIPPI RIVER BASIN RECORDS