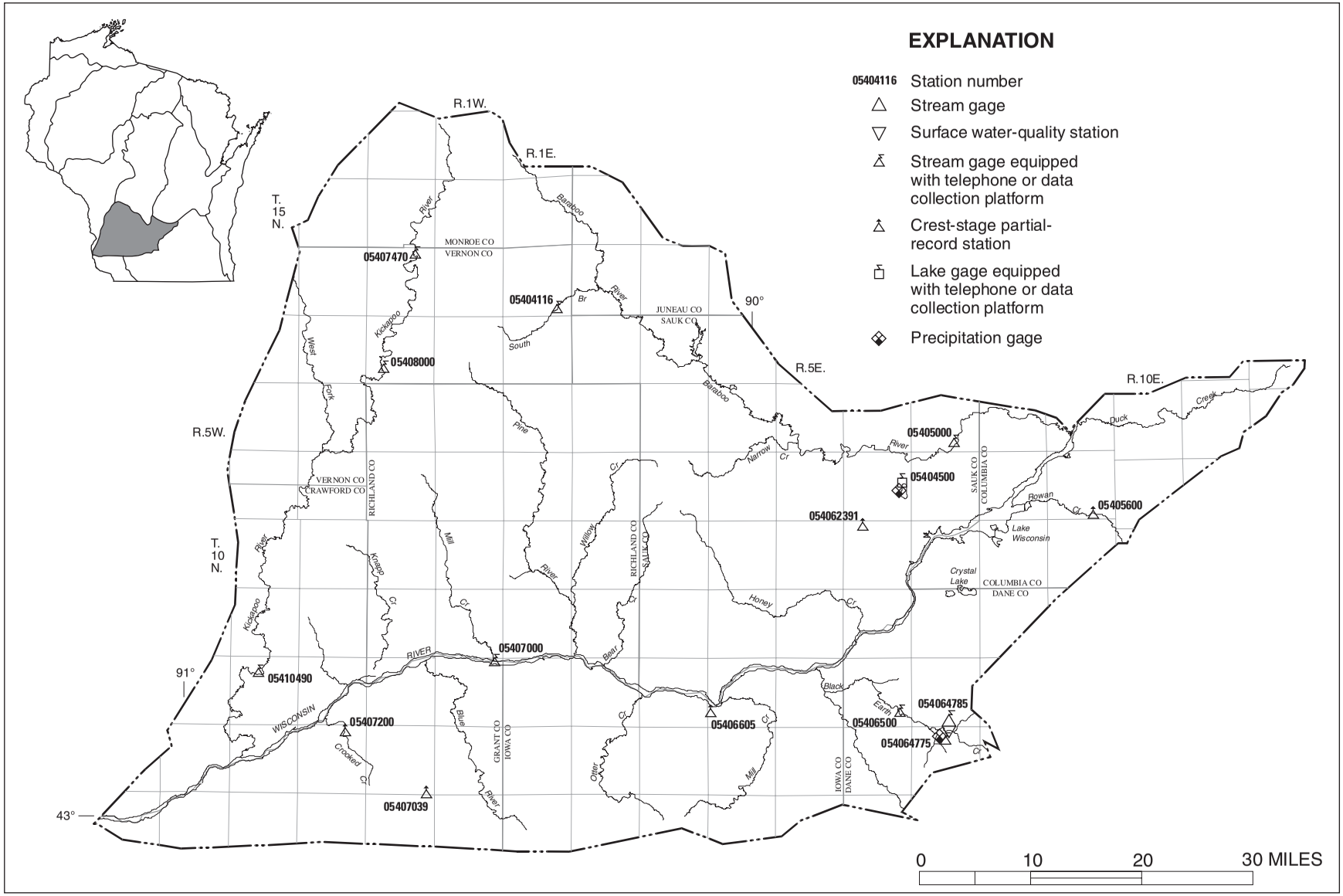

Base from U.S. Geological Survey 1:100,000 digital data; modified by Wisconsin Department of Natural Resources. Wisconsin Transverse Mercator projection.

LOWER WISCONSIN RIVER BASIN

05404116 SOUTH BRANCH BARABOO RIVER AT HILLSBORO, WI

LOCATION.--Lat 43°39'10", long 90°20'09", in NE ¼ NE ¼ sec.35, T.14 N., R.1 E., Vernon County, Hydrologic Unit 07070004, on left bank 220 ft upstream from County Highway FF at Hillsboro, and 6.3 mi upstream from mouth.

DRAINAGE AREA.--39.1 mi^2.

PERIOD OF RECORD.--July 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 927.28 ft above NGVD of 1929 (levels by Mid-State Associates, Baraboo, WI).

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flows are occasionally regulated by dam 0.35 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	9.5	9.6	11	12	e7.5	316	20	15	81	20	15	15
2	9.5	11	10	14	8.6	187	19	12	59	19	15	15
3	12	17	11	14	9.0	37	18	12	41	23	17	14
4	12	93	11	11	8.8	32	17	12	35	33	28	14
5	11	20	12	e9.5	9.0	596	17	11	33	24	16	14
6	11	15	11	e8.4	9.8	54	17	12	40	29	15	15
7	11	14	12	e8.4	9.4	28	17	11	32	27	15	14
8	10	12	12	e8.5	9.3	20	16	63	29	23	15	14
9	9.8	11	12	e8.8	9.5	19	16	82	54	32	16	13
10	9.7	12	15	9.3	9.5	20	15	50	242	25	15	13
11	10	13	12	10	9.4	21	15	27	522	22	15	13
12	12	14	10	11	9.5	16	15	61	147	22	15	13
13	10	13	9.5	11	9.5	16	15	199	174	20	14	13
14	12	12	11	10	9.5	23	14	56	66	19	14	13
15	10	13	12	9.4	9.1	16	15	30	51	18	14	17
16	9.2	13	13	9.6	9.1	16	15	25	34	18	15	17
17	9.1	12	12	10	9.1	17	16	21	98	17	18	14
18	9.2	14	11	9.1	9.3	21	28	20	41	17	16	14
19	9.0	13	11	7.8	10	22	21	18	33	17	15	13
20	9.1	12	9.8	7.8	12	26	19	191	29	20	14	13
21	8.9	12	11	8.0	12	19	27	480	28	22	14	13
22	8.8	12	12	7.4	12	16	18	537	29	20	14	13
23	8.8	22	12	6.6	13	17	16	291	26	17	14	13
24	9.1	17	11	6.5	18	20	14	112	29	16	16	14
25	9.2	13	10	e6.7	15	25	17	60	26	16	17	14
26	8.9	13	10	e7.0	21	78	17	48	23	15	16	13
27	9.3	13	13	e7.2	24	32	14	37	23	15	21	13
28	10	12	33	e7.2	44	44	14	23	25	15	16	13
29	9.9	12	17	e7.3	92	36	12	132	22	16	16	12
30	10	12	14	e7.3	---	25	13	340	21	16	16	13
31	10	---	13	e7.4	---	22	---	279	---	15	15	---
TOTAL	308.0	481.6	384.3	278.2	437.9	1,837	507	3,267	2,093	628	492	412
MEAN	9.94	16.1	12.4	8.97	15.1	59.3	16.9	105	69.8	20.3	15.9	13.7
MAX	12	93	33	14	92	596	28	537	522	33	28	17
MIN	8.8	9.6	9.5	6.5	7.5	16	12	11	21	15	14	12
CFSM	0.25	0.41	0.32	0.23	0.39	1.52	0.43	2.70	1.78	0.52	0.41	0.35
IN.	0.29	0.46	0.37	0.26	0.42	1.75	0.48	3.11	1.99	0.60	0.47	0.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2004, BY WATER YEAR (WY)

MEAN	15.1	17.3	14.0	13.3	18.5	35.0	33.9	30.8	34.6	18.6	16.1	20.8
MAX	26.1	28.6	22.9	26.8	31.5	59.3	70.9	105	75.3	52.3	28.2	95.3
(WY)	(1994)	(1993)	(1993)	(1996)	(1999)	(2004)	(1993)	(2004)	(1990)	(1993)	(1993)	(1992)
MIN	6.79	8.14	4.42	8.95	6.91	14.5	8.47	13.2	8.38	5.83	6.69	6.12
(WY)	(1990)	(1991)	(1990)	(1991)	(1989)	(2000)	(1990)	(1989)	(1989)	(1989)	(1988)	(1990)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1988 - 2004	
ANNUAL TOTAL	5,640.3		11,126.0			
ANNUAL MEAN	15.5		30.4		22.5	
HIGHEST ANNUAL MEAN					35.1	1993
LOWEST ANNUAL MEAN					13.0	1989
HIGHEST DAILY MEAN	154	May 11	596	Mar 5	1,190	Sep 16, 1992
LOWEST DAILY MEAN	(a)1.0	Sep 1	6.5	Jan 24	(a)1.0	Sep 1, 2003
ANNUAL SEVEN-DAY MINIMUM	6.5	Aug 18	(b)6.9	Jan 23	(c)1.4	Jul 22, 1994
MAXIMUM PEAK FLOW			1,390	May 21	(d)4,010	Jun 29, 1990
MAXIMUM PEAK STAGE			13.13	May 21	(f)15.60	Jun 29, 1990
ANNUAL RUNOFF (CFSM)	0.395		0.777		0.574	
ANNUAL RUNOFF (INCHES)	5.37		10.59		7.80	
10 PERCENT EXCEEDS	23		41		34	
50 PERCENT EXCEEDS	12		15		15	
90 PERCENT EXCEEDS	8.9		9.2		8.2	

(a) Result of gate regulation at dam 0.35 mi upstream
(b) Ice affected
(c) Result of closing dam gates to fill lake 0.35 mi upstream
(d) From rating curve extended above 1,100 ft^3/s, on basis of contracted-area measurement
(e) Estimated due to ice effect or missing record
(f) From floodmark on gage house

05404500 DEVILS LAKE NEAR BARABOO, WI

LOCATION.--Lat 43°25'35", long 89°43'40", in SW¼ SE¼ sec.13, T.11 N., R.6 E., Sauk County, Hydrologic Unit 07070004, in Devils Lake State Park, 3.5 mi south of Baraboo.

DRAINAGE AREA.--4.79 mi^2. Area of Devils Lake, 361 acres.

GAGE-HEIGHT RECORD

PERIOD OF RECORD.--June 1922 to August 1930, June to August 1932, June 1934 to September 1981 (fragmentary). October 1981 to September 1984, data unpublished in district files. October 1984 to current year.

REVISED RECORDS.--WDR WI-78-1: Drainage area.

GAGE.--Water-stage recorder installed July 17, 1991. Datum of gage is 955.00 ft, above NGVD of 1929.

REMARKS.--Lake has no surface outlet. Water removed from lake by siphon Oct. 1-8, June 18 to July 15, Aug. 19 to Sept. 3 and Sept. 7-30. Water diverted into lake (during runoff events) from Nov. 11 to Apr. 7.

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

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 11.87 ft, June 17 and 18; minimum recorded, 6.63 ft, Nov. 1 and 2.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.08	6.66	6.95	7.13	7.13	7.27	8.92	8.86	10.67	11.24	10.77	10.10
2	7.04	6.67	6.95	7.14	7.14	7.36	8.93	8.84	10.68	11.24	10.77	10.05
3	7.00	6.73	6.94	7.15	7.15	7.42	8.93	8.83	10.68	11.21	10.79	10.00
4	6.98	6.90	6.94	7.16	7.15	7.47	8.94	8.81	10.67	11.31	10.89	9.98
5	6.95	6.90	6.94	7.16	7.15	7.79	8.94	8.79	10.66	11.32	10.86	9.96
6	6.94	6.89	6.94	7.17	7.19	8.00	8.94	8.78	10.66	11.31	10.83	9.93
7	6.90	6.88	6.93	7.16	7.19	8.08	8.95	8.76	10.66	11.27	10.80	9.89
8	6.87	6.86	6.93	7.16	7.19	8.13	8.93	8.79	10.64	11.22	10.77	9.83
9	6.86	6.85	6.92	7.16	7.19	8.17	8.93	8.91	10.68	11.19	10.74	9.78
10	6.86	6.84	7.00	7.15	7.18	8.20	8.92	8.94	11.17	11.17	10.70	9.73
11	6.85	6.83	7.02	7.15	7.18	8.25	8.90	8.96	11.50	11.13	10.66	9.68
12	6.85	6.83	7.02	7.15	7.18	8.27	8.89	8.98	11.65	11.09	10.62	9.63
13	6.84	6.81	7.01	7.15	7.18	8.28	8.88	9.04	11.72	11.04	10.59	9.59
14	6.86	6.80	7.01	7.15	7.17	8.32	8.86	9.12	11.76	10.98	10.56	9.53
15	6.84	6.80	7.01	7.15	7.17	8.34	8.85	9.14	11.76	10.93	10.54	9.52
16	6.83	6.79	7.02	7.14	7.17	8.35	8.84	9.15	11.77	10.98	10.51	9.50
17	6.82	6.80	7.02	7.15	7.16	8.37	8.85	9.16	11.86	11.11	10.49	9.45
18	6.80	6.81	7.02	7.15	7.16	8.38	8.92	9.19	11.86	11.10	10.47	9.40
19	6.79	6.81	7.01	7.14	7.16	8.39	8.92	9.19	11.81	11.08	10.44	9.34
20	6.78	6.80	7.01	7.14	7.18	8.41	8.92	9.21	11.76	11.06	10.38	9.28
21	6.77	6.78	7.00	7.13	7.20	8.42	8.94	9.30	11.71	11.07	10.32	9.22
22	6.76	6.78	7.00	7.12	7.20	8.43	8.94	9.81	11.68	11.06	10.26	9.18
23	6.75	6.96	7.00	7.13	7.21	8.43	8.93	10.11	11.63	11.03	10.23	9.13
24	6.74	7.00	6.99	7.13	7.21	8.46	8.92	10.28	11.61	11.00	10.22	9.08
25	6.73	7.00	6.99	7.13	7.21	8.50	8.93	10.34	11.56	10.97	10.25	9.03
26	6.71	6.99	6.99	7.14	7.21	8.64	8.92	10.35	11.50	10.94	10.20	8.98
27	6.70	6.99	6.99	7.15	7.21	8.69	8.91	10.36	11.45	10.92	10.32	8.94
28	6.69	6.98	7.07	7.14	7.20	8.75	8.90	10.35	11.40	10.89	10.28	8.88
29	6.68	6.98	7.11	7.14	7.21	8.82	8.89	10.39	11.35	10.85	10.24	8.83
30	6.68	6.97	7.12	7.14	---	8.87	8.87	10.47	11.29	10.83	10.19	8.79
31	6.67	---	7.13	7.13	---	8.90	---	10.62	---	10.80	10.14	---
MEAN	6.83	6.86	7.00	7.14	7.18	8.26	8.91	9.41	11.33	11.08	10.51	9.47
MAX	7.08	7.00	7.13	7.17	7.21	8.90	8.95	10.62	11.86	11.32	10.89	10.10
MIN	6.67	6.66	6.92	7.12	7.13	7.27	8.84	8.76	10.64	10.80	10.14	8.79

05404500 DEVILS LAKE NEAR BARABOO, WI--CONTINUED

PRECIPITATION QUANTITY

PERIOD OF RECORD.-October 1996 to current year (non-frozen precipitation).

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

REMARKS.--Gage established on July 17, 1991. Prior to Oct. 1, 1996, record was not published. Rainfall estimated to be 0.00 for December 10, 12, 15, 16, 21, January 17 and 27 because recorded precipitation interpreted as snowmelt.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 5.01 in., June 1, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.98 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	0.00	0.01	0.00	0.00	0.00	0.30	0.00	0.01	0.00	0.86	0.07	0.07
2	0.00	0.42	0.00	0.10	0.00	0.00	0.00	0.01	0.04	0.00	0.32	0.00
3	0.06	1.97	0.00	0.00	0.00	0.03	0.00	0.00	0.00	1.13	1.85	0.00
4	0.00	0.63	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.63	0.02	0.00
5	0.00	0.00	0.10	0.00	0.00	0.90	0.00	0.00	0.22	0.12	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.02	0.04	0.24	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.03	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31	0.00	0.00	0.00	0.00
9	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	2.98	0.48	0.00	0.00
10	0.00	0.01	0.00	0.00	0.00	0.14	0.00	0.30	1.25	0.00	0.00	0.00
11	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00
12	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.25	0.29	0.02	0.00	0.00
13	0.21	0.00	0.00	0.00	0.00	0.20	0.00	0.77	0.34	0.00	0.00	0.00
14	0.23	0.02	0.00	0.00	0.00	0.03	0.00	0.28	0.00	0.00	0.00	0.00
15	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
16	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.91	1.85	0.03	0.00
17	0.00	0.00	0.00	0.00	0.00	0.10	0.18	0.30	0.07	0.00	0.00	0.00
18	0.00	0.25	0.00	0.00	0.00	0.06	0.55	0.01	0.00	0.00	0.03	0.00
19	0.00	0.01	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.45	0.01	0.30	0.36	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.07	0.00	0.08	2.84	0.25	0.27	0.00	0.00
22	0.00	0.58	0.00	0.00	0.16	0.00	0.00	0.54	0.01	0.00	0.00	0.00
23	0.00	1.39	0.00	0.00	0.02	0.00	0.00	1.22	0.29	0.00	0.28	0.05
24	0.12	0.00	0.00	0.00	0.00	0.20	0.14	0.00	0.23	0.00	0.93	0.00
25	0.00	0.00	0.00	0.00	0.00	0.75	0.10	0.03	0.00	0.00	0.01	0.00
26	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.93	0.00
27	0.03	0.00	0.68	0.00	0.00	0.04	0.00	0.00	0.22	0.00	0.93	0.00
28	0.02	0.00	0.01	0.00	0.00	0.36	0.00	0.00	0.01	0.00	0.18	0.00
29	0.06	0.00	0.00	0.00	0.08	0.00	0.00	0.56	0.00	0.03	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.03	0.06	1.46	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.11	---	0.00	0.00	---
TOTAL	0.96	5.33	1.07	0.10	0.78	3.91	1.47	10.73	7.58	5.66	5.58	0.76

WTR YR 2004 TOTAL 43.93

05405000 BARABOO RIVER NEAR BARABOO, WI

LOCATION.--Lat 43°28'51", long 89°38'09", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.35, T.12 N., R.7 E., Sauk County, Hydrologic Unit 07070004, on left bank 50 ft downstream from highway bridge, 0.3 mi downstream from Rowley Creek and 5.3 mi east of Baraboo.

DRAINAGE AREA.--609 mi^2.

PERIOD OF RECORD.--December 1913 to March 1922. September 1942 to current year.

REVISED RECORDS.--WSP 455: 1915. WSP 505: 1917(M). WSP 1438: 1914, 1915(M), 1916-17, 1918-20(M), 1944(M), 1949(M). WSP 1914: 1948, 1950, 1956. WDR WI-75-1: 1968. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 788.21 ft above NGVD of 1929. Dec. 18, 1913, to Mar. 31, 1922, nonrecording gage at bridge 2.3 mi upstream at datum 7.6 ft higher. Sept. 24, 1942, to June 10, 1963, nonrecording gage at present site and datum.

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

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Flood of Aug. 6, 1935, reached a stage of 15.8 ft from floodmarks, site and datum in use in 1922, discharge, 5,100 ft^3/s.

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	195	234	267	391	e170	1,130	686	278	1,990	433	303	365
2	194	252	255	334	e170	e1,440	556	272	1,890	560	299	341
3	197	287	245	326	e170	e1,660	476	269	1,750	437	341	326
4	193	550	231	253	e170	e1,980	424	263	1,660	637	859	308
5	202	729	229	e240	e170	e2,190	387	243	1,510	731	785	291
6	215	786	230	e200	e170	e2,490	360	234	1,210	813	654	278
7	219	752	232	e290	e170	e2,540	342	228	838	816	512	271
8	211	566	234	e270	e170	e2,370	332	251	662	731	384	274
9	203	366	238	e240	e170	e2,180	323	638	750	649	331	273
10	200	283	281	e220	e170	e1,980	313	744	2,950	712	313	268
11	198	255	300	213	e170	e1,570	300	901	3,390	713	301	261
12	202	261	265	213	e170	952	288	951	3,540	641	290	257
13	201	264	319	212	e170	558	276	973	3,240	570	282	252
14	242	267	338	215	e170	493	266	1,090	2,950	498	276	250
15	254	266	295	210	e170	461	260	1,100	2,780	435	269	266
16	268	261	263	199	e170	423	258	1,090	2,670	582	264	262
17	267	256	259	197	e170	392	266	1,110	2,560	1,090	264	277
18	253	268	262	188	e170	372	328	1,050	2,210	926	265	307
19	235	269	250	e190	e180	370	383	750	1,710	624	274	298
20	230	276	253	e180	e190	404	428	553	1,270	478	284	268
21	227	276	220	e170	206	447	478	746	904	431	274	253
22	225	261	221	e160	220	468	471	2,250	687	410	263	247
23	226	476	226	e150	235	436	451	3,160	599	392	264	244
24	222	597	228	e150	258	407	423	3,780	577	376	288	245
25	222	563	240	e150	289	420	385	3,930	547	354	350	248
26	217	472	227	e160	320	740	358	3,980	523	325	329	250
27	218	381	212	e160	364	982	348	3,710	498	306	879	254
28	221	320	536	e170	468	992	344	3,150	482	297	1,190	251
29	223	294	676	e170	693	1,050	323	2,520	455	289	966	248
30	229	280	621	e170	---	947	291	1,970	436	287	581	245
31	234	---	530	e170	---	824	---	2,060	---	294	419	---
TOTAL	6,843	11,368	9,183	6,561	6,483	33,668	11,124	44,244	47,238	16,837	13,353	8,178
MEAN	221	379	296	212	224	1,086	371	1,427	1,575	543	431	273
MAX	268	786	676	391	693	2,540	686	3,980	3,540	1,090	1,190	365
MIN	193	234	212	150	170	370	258	228	436	287	263	244
CFSM	0.36	0.62	0.49	0.35	0.37	1.78	0.61	2.34	2.59	0.89	0.71	0.45
IN.	0.42	0.69	0.56	0.40	0.40	2.06	0.68	2.70	2.89	1.03	0.82	0.50

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

MEAN	283	329	248	247	336	798	709	462	464	327	266	315
MAX	842	942	519	945	1,135	1,759	2,588	1,518	1,575	1,495	1,018	1,285
(WY)	(1973)	(1986)	(1993)	(1946)	(1966)	(1948)	(1993)	(1973)	(2004)	(1993)	(1980)	(1965)
MIN	117	116	76.2	78.3	89.3	170	253	138	112	112	95.8	100
(WY)	(1959)	(1959)	(1959)	(1959)	(1959)	(1964)	(1946)	(1958)	(1958)	(1965)	(1958)	(1958)

05405000 BARABOO RIVER NEAR BARABOO, WI—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1914 - 2004	
ANNUAL TOTAL	116,906		215,080			
ANNUAL MEAN	320		588		399	
HIGHEST ANNUAL MEAN					824	1993
LOWEST ANNUAL MEAN					158	1958
HIGHEST DAILY MEAN	1,340	May 13	3,980	May 26	7,540	Mar 26, 1917
LOWEST DAILY MEAN	152	Aug 24	(a)150	Jan 23-25	26	Oct 6, 1950
ANNUAL SEVEN-DAY MINIMUM	157	Aug 21	(a)157	Jan 21	(a)72	Dec 8, 1958
MAXIMUM PEAK FLOW			4,010	May 26	(b)7,900	Mar 26, 1917
MAXIMUM PEAK STAGE			19.67	May 26	22.78	Jul 18, 1993
ANNUAL RUNOFF (CFSM)	0.526		0.965		0.654	
ANNUAL RUNOFF (INCHES)	7.14		13.14		8.89	
10 PERCENT EXCEEDS	532		1,230		788	
50 PERCENT EXCEEDS	254		298		251	
90 PERCENT EXCEEDS	190		195		140	

(a) Ice affected
(b) Estimated gage height, 17.50 ft, site and datum then in use, from rating curve extended above 6,000 ft^3/s
(e) Estimated due to ice effect or missing record

054064775 BLACK EARTH CREEK TRIBUTARY AT COUNTY TRUNK HIGHWAY KP AT CROSS PLAINS, WI

LOCATION.--Lat 43°06'43", long 89°39'26" in SW ¼ NW ¼ sec.3, T.7 N., R.7 E., Dane County, Hydrologic Unit 07070005, 0.7 mi east of Garfoot Road and 0.2 mi west of Bourbon Road at Cross Plains.

DRAINAGE AREA.--0.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1998 to current year.

GAGE.--Water-stage recorder in a 2-ft H-flume. Elevation of gage is 873 ft, from topographic map. Unpublished discharge data from June 1998 to September 1999 available in district office.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 12). 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	0.00	0.00	0.00	0.00	0.00	e0.27	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	e0.17	0.00	0.00	0.00	e0.04	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	e1.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	e0.25	0.00
4	0.00	e2.2	0.00	0.00	0.00	e0.05	0.00	0.00	0.00	0.05	e0.17	0.00
5	0.00	e0.02	0.00	0.00	0.00	e0.85	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	e0.01	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	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	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	e0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.6	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e2.3	0.00	0.00	0.00	0.00
23	0.00	e1.4	0.00	0.00	0.07	0.00	0.00	e1.5	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	e0.05	0.00	0.00	e0.01	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	e0.03	e0.07	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	e0.10	e0.34	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	e0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	e0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	e0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.31	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.01	---	0.00	0.00	---
TOTAL	0.00	4.89	0.35	0.00	0.73	1.63	0.00	5.79	0.03	0.76	0.42	0.00
MEAN	0.00	0.16	0.01	0.00	0.03	0.05	0.00	0.19	0.00	0.02	0.01	0.00
MAX	0.00	2.2	0.35	0.00	0.21	0.85	0.00	2.3	0.03	0.67	0.25	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFSM	0.00	0.81	0.06	0.00	0.13	0.26	0.00	0.93	0.00	0.12	0.07	0.00
IN.	0.00	0.91	0.07	0.00	0.14	0.30	0.00	1.08	0.01	0.14	0.08	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2004, BY WATER YEAR (WY)

MEAN	0.00	0.03	0.00	0.00	0.02	0.01	0.01	0.08	0.04	0.01	0.05	0.01
MAX	0.01	0.16	0.01	0.00	0.03	0.05	0.02	0.19	0.18	0.02	0.29	0.06
(WY)	(2003)	(2004)	(2004)	(2001)	(2000)	(2004)	(2001)	(2004)	(2000)	(2003)	(2001)	(2001)
MIN	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1999)	(1999)	(1999)	(1999)	(2001)	(1999)	(2004)	(1999)	(2003)	(1998)	(2002)	(1998)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1998 - 2004	
ANNUAL TOTAL	9.28		14.60			
ANNUAL MEAN	0.03		0.04		0.02	
HIGHEST ANNUAL MEAN					0.04	2004
LOWEST ANNUAL MEAN					0.00	1999
HIGHEST DAILY MEAN	2.2	Nov 4	2.3	May 22	8.2	Aug 2, 2001
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Jun 26, 1998
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Jun 30, 1998
MAXIMUM PEAK FLOW					69	Mar 20, 1999
MAXIMUM PEAK STAGE					2.85	Mar 20, 1999
ANNUAL RUNOFF (CFSM)	0.127		0.199		0.112	
ANNUAL RUNOFF (INCHES)	1.73		2.72		1.53	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

(e) Estimated due to ice effect or missing record

054064775 BLACK EARTH CREEK TRIBUTARY AT COUNTY TRUNK HIGHWAY KP AT CROSS PLAINS, WI—Continued

PRECIPITATION QUANTITY

PERIOD OF RECORD.-July 1998 to current year.

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

REMARKS.--Gage established July 1998.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 6.52 in., Aug 2, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 3.67 in., May 21.

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	0.00	0.13	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.35	0.46
2	0.00	1.22	0.00	0.02	0.00	0.01	0.00	0.04	0.00	0.00	0.38	0.00
3	0.10	2.28	0.00	0.00	0.00	0.01	0.00	0.00	0.00	1.08	1.19	0.00
4	0.00	1.37	0.02	0.00	0.00	0.64	0.00	0.00	0.00	0.02	0.00	0.00
5	0.00	0.00	0.12	0.00	0.00	0.49	0.00	0.00	0.03	0.01	0.01	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	0.02	0.08	0.00	0.06
7	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.08	0.00	0.01	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00
9	0.00	0.00	0.52	0.00	0.00	0.02	0.00	0.13	0.12	0.17	0.00	0.01
10	0.00	0.00	0.65	0.00	0.00	0.11	0.00	0.45	0.83	0.00	0.00	0.00
11	0.25	0.01	0.00	0.00	0.09	0.00	0.00	0.01	0.12	0.05	0.00	0.00
12	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00
13	0.44	0.00	0.00	0.00	0.00	0.19	0.00	0.48	0.00	0.00	0.00	0.00
14	0.22	0.00	0.00	0.00	0.00	0.05	0.00	0.27	0.03	0.00	0.00	0.00
15	0.00	0.00	0.07	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.56
16	0.00	0.00	0.06	0.00	0.00	0.04	0.12	0.00	0.41	1.05	0.01	0.00
17	0.00	0.08	0.00	0.00	0.00	0.15	0.01	0.73	0.07	0.01	0.01	0.01
18	0.00	0.18	0.00	0.00	0.02	0.05	0.10	0.02	0.00	0.01	0.33	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.34	0.08	0.47	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.07	3.67	0.21	0.39	0.01	0.00
22	0.00	0.24	0.00	0.00	0.13	0.00	0.01	1.18	0.00	0.00	0.00	0.00
23	0.00	1.81	0.00	0.00	0.00	0.00	0.00	1.39	0.05	0.00	0.00	0.03
24	0.51	0.00	0.00	0.00	0.00	0.32	0.16	0.00	0.02	0.00	0.19	0.01
25	0.00	0.00	0.00	0.00	0.00	0.95	0.13	0.18	0.01	0.00	0.01	0.00
26	0.00	0.00	0.00	0.00	0.01	0.12	0.01	0.00	0.00	0.00	0.01	0.00
27	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.29	0.00
28	0.04	0.00	0.05	0.00	0.00	0.33	0.01	0.00	0.01	0.00	0.12	0.00
29	0.09	0.00	0.00	0.00	0.10	0.00	0.00	0.65	0.00	0.28	0.01	0.00
30	0.00	0.00	0.00	0.00	---	0.06	0.03	0.68	0.00	0.15	0.01	0.01
31	0.01	---	0.00	0.00	---	0.00	---	0.35	---	0.00	0.00	---
TOTAL	1.66	7.35	1.63	0.02	0.69	3.81	1.29	10.74	2.43	3.31	2.93	1.15

CAL YR 2003 TOTAL 31.07
WTR YR 2004 TOTAL 37.01

054064775 BLACK EARTH CREEK TRIBUTARY AT COUNTY TRUNK HIGHWAY KP AT CROSS PLAINS, WI—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1998 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: August 2000 to current year.

INSTRUMENTATION.--Continuous water temperature recorder August 2000 to current year.

REMARKS.--Water temperature recorder located near H-flume represent water temperature at sensor within 0.5°C. Unpublished water temperature data from August 2000 to September 2002 are available in the District Office.

EXTREMES FOR PERIOD OF RECORD.--
WATER TEMPERATURE: Maximum observed, 33.5°C, June 1, 2002; minimum observed, 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum observed, 28.0°C, June 8; minimum observed, 0.0°C on many days during winter period.

TEMPERATURE, WATER, 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	9.5	0.0	3.5	7.5	3.5	5.5	0.5	0.0	0.0	0.0	0.0	0.0
2	8.5	0.0	3.5	7.0	5.5	6.0	0.0	0.0	0.0	3.5	0.0	0.5
3	12.0	5.0	8.0	6.0	4.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0
4	12.5	1.0	6.0	6.0	3.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0
5	11.0	2.0	6.5	4.5	3.0	3.5	1.0	0.0	0.0	0.0	0.0	0.0
6	12.0	2.5	7.5	3.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
7	19.5	6.5	11.5	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
8	18.0	7.5	11.5	0.0	0.0	0.0	3.0	0.0	0.5	0.0	0.0	0.0
9	16.5	9.0	12.0	0.0	0.0	0.0	1.5	0.0	1.0	0.0	0.0	0.0
10	16.0	8.0	12.0	1.5	0.0	0.5	1.0	0.0	0.5	0.0	0.0	0.0
11	18.0	9.0	13.5	7.5	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
12	12.5	6.0	9.0	6.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
13	16.0	5.5	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	11.0	5.0	9.0	3.5	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
15	10.0	1.5	5.5	4.0	1.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0
16	8.5	0.5	4.0	5.5	2.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0
17	8.5	0.0	4.0	7.0	0.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0
18	15.0	5.0	8.5	10.5	2.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0
19	11.5	3.5	7.0	6.5	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
20	17.0	7.0	11.5	8.5	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0
21	14.5	7.0	10.0	3.5	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
22	11.5	1.0	6.0	3.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
23	11.0	1.5	5.5	5.0	2.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0
24	9.0	1.0	5.5	2.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
25	8.0	3.0	6.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	5.5	2.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	4.5	0.0	3.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	6.5	2.5	4.5	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
29	6.5	2.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	9.5	3.5	7.0	5.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
31	10.0	5.0	7.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	19.5	0.0	7.4	10.5	0.0	2.2	3.0	0.0	0.1	3.5	0.0	0.0

0054064775 BLACK EARTH CREEK TRIBUTARY AT COUNTY TRUNK HIGHWAY KP AT CROSS PLAINS, WI—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	0.0	0.0	3.0	0.0	0.5	6.5	0.0	2.0	12.5	4.0	8.0
2	0.0	0.0	0.0	1.5	0.0	0.5	9.0	0.0	3.0	12.0	0.5	6.0
3	0.0	0.0	0.0	0.5	0.0	0.0	8.5	0.0	3.5	11.0	0.0	5.0
4	0.0	0.0	0.0	1.0	0.0	0.0	8.0	0.0	2.5	18.5	5.5	11.0
5	0.0	0.0	0.0	2.0	0.0	0.5	8.0	0.0	3.0	16.0	2.5	9.5
6	0.0	0.0	0.0	1.5	0.0	0.5	17.0	3.5	8.5	18.5	10.5	13.5
7	0.0	0.0	0.0	1.0	0.0	0.0	13.0	0.5	7.0	15.0	7.5	10.5
8	0.0	0.0	0.0	0.0	0.0	0.0	10.5	0.5	6.5	18.0	7.0	12.0
9	0.0	0.0	0.0	2.0	0.0	0.0	11.5	0.0	5.0	18.5	11.5	14.5
10	0.0	0.0	0.0	1.5	0.0	0.5	9.5	0.0	4.5	17.0	12.0	14.0
11	0.0	0.0	0.0	0.0	0.0	0.0	8.5	0.0	2.5	18.0	10.5	14.0
12	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	2.0	19.5	13.0	16.0
13	0.0	0.0	0.0	2.0	0.0	0.0	10.0	0.0	3.5	18.0	12.5	16.0
14	0.0	0.0	0.0	0.0	0.0	0.0	16.0	0.0	6.5	12.5	7.5	11.0
15	0.0	0.0	0.0	0.0	0.0	0.0	14.5	1.0	8.0	11.5	9.5	10.5
16	0.0	0.0	0.0	1.5	0.0	0.0	20.5	8.0	12.5	14.5	6.0	11.0
17	0.0	0.0	0.0	2.0	0.0	0.5	15.5	10.0	12.0	20.5	11.5	16.0
18	0.0	0.0	0.0	1.0	0.0	0.0	17.0	9.5	13.5	17.0	13.0	15.5
19	0.0	0.0	0.0	3.0	0.0	1.5	14.5	5.0	11.0	18.5	8.5	14.0
20	0.0	0.0	0.0	7.0	0.0	2.0	11.0	4.0	7.5	24.0	15.0	19.5
21	0.0	0.0	0.0	0.0	0.0	0.0	10.5	3.5	8.5	19.5	6.5	14.5
22	0.0	0.0	0.0	1.5	0.0	0.0	11.0	2.0	6.0	19.0	14.0	15.5
23	0.0	0.0	0.0	7.0	0.0	1.5	12.5	0.0	6.0	17.5	14.0	15.5
24	0.0	0.0	0.0	9.0	1.5	4.0	11.0	2.0	6.0	14.5	12.0	13.0
25	0.0	0.0	0.0	10.5	5.0	7.0	11.5	3.5	7.0	14.5	12.5	13.5
26	0.0	0.0	0.0	10.0	8.5	9.5	10.0	2.0	6.0	14.0	12.5	13.0
27	0.0	0.0	0.0	9.0	6.5	7.5	9.5	0.0	4.0	16.0	12.0	14.0
28	0.0	0.0	0.0	8.5	7.5	8.0	18.5	4.5	11.0	17.5	10.0	13.0
29	1.5	0.0	0.0	8.0	4.5	6.5	19.0	11.5	15.0	14.0	9.5	12.0
30	---	---	---	8.0	2.5	5.0	12.0	6.5	8.0	18.0	13.0	15.0
31	---	---	---	6.5	0.0	3.0	---	---	---	17.5	14.0	15.5
MONTH	1.5	0.0	0.0	10.5	0.0	1.9	20.5	0.0	6.7	24.0	0.0	13.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	15.5	13.5	14.5	23.0	13.5	18.5	23.5	15.5	19.5	21.5	14.0	17.5
2	15.5	15.0	15.5	22.5	14.5	19.0	22.0	17.5	19.5	22.5	16.0	18.5
3	16.0	11.5	14.0	23.0	16.5	19.5	23.5	18.0	20.5	22.5	14.5	18.0
4	18.5	9.5	14.0	21.5	19.5	20.5	22.5	19.0	20.5	23.5	14.5	18.0
5	20.5	11.0	16.0	21.0	16.5	19.5	19.5	13.0	16.5	25.0	16.5	20.5
6	23.0	15.0	18.5	20.0	16.5	18.0	19.5	11.5	15.5	20.5	13.0	18.5
7	24.5	16.0	20.0	18.0	12.0	15.5	19.0	12.0	15.5	18.0	10.0	14.0
8	28.0	19.0	22.5	20.0	10.5	15.5	22.5	14.0	18.0	19.5	8.5	13.5
9	25.0	17.0	22.0	19.5	13.0	16.0	23.5	16.5	19.5	17.0	8.5	13.0
10	18.0	15.5	17.0	21.5	14.0	17.5	17.5	13.0	15.5	21.5	10.5	15.5
11	18.5	16.5	17.5	22.5	15.0	18.5	14.0	11.5	12.5	22.5	13.5	17.0
12	23.0	16.0	19.0	24.0	17.0	20.0	17.5	10.0	13.5	23.5	12.5	17.0
13	23.0	20.0	21.0	26.5	16.5	20.5	18.0	8.5	13.0	24.0	13.5	18.0
14	20.5	16.0	19.0	24.0	15.0	19.0	19.5	8.0	13.5	24.5	16.5	20.0
15	22.5	14.0	18.0	24.5	13.5	19.0	20.0	8.5	14.0	22.0	16.0	19.0
16	25.0	16.0	20.0	19.5	13.0	17.0	20.0	11.0	15.5	17.0	9.5	13.5
17	23.5	17.0	20.0	19.5	16.0	17.5	22.0	14.0	17.0	17.5	7.5	12.5
18	20.5	12.0	17.0	21.0	13.0	17.5	23.5	12.0	16.5	19.5	11.0	15.0
19	18.5	10.0	14.0	22.0	14.5	18.5	17.0	9.0	13.0	21.5	12.5	15.5
20	20.5	11.0	15.5	24.5	17.5	21.0	19.5	10.5	14.5	19.0	11.0	14.5
21	19.5	14.0	16.0	23.5	19.0	21.0	16.5	6.5	11.5	20.5	10.0	14.5
22	19.5	10.5	15.0	25.0	16.5	20.5	21.5	9.5	15.5	19.5	8.5	13.5
23	20.5	12.5	16.5	21.0	15.5	18.0	19.5	15.5	17.5	22.0	11.5	16.0
24	15.5	9.5	12.5	21.0	13.0	17.0	20.0	15.5	17.5	18.0	10.0	14.5
25	18.5	7.0	12.5	20.5	12.5	16.0	21.0	15.5	18.0	18.0	7.0	12.0
26	19.0	8.5	14.0	21.5	11.5	16.0	24.5	17.0	20.5	18.5	5.5	11.0
27	20.0	10.0	14.5	22.5	12.5	17.0	24.5	17.5	20.5	19.0	6.0	12.5
28	20.0	11.5	15.5	22.5	13.0	17.5	18.5	12.0	16.0	15.0	6.0	11.0
29	22.5	10.5	16.0	21.5	16.0	18.5	19.5	10.5	14.0	14.5	3.0	8.5
30	22.0	12.0	17.0	21.5	17.0	18.5	20.5	11.5	16.0	16.5	3.0	10.0
31	---	---	---	22.0	16.0	18.5	21.0	11.0	15.5	---	---	---
MONTH	28.0	7.0	16.8	26.5	10.5	18.3	24.5	6.5	16.3	25.0	3.0	15.1
YEAR	28.0	0.0	8.2									

05406500 BLACK EARTH CREEK AT BLACK EARTH, WI

LOCATION.--Lat 43°08'03", long 89°43'56" in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.8 N., R.6 E., Dane County, Hydrologic Unit 07070005, on right bank, 0.8 mi east of Black Earth and 2.1 mi upstream from Vermont Creek.

DRAINAGE AREA.--45.6 mi^2, of which 2.8 mi^2 probably is noncontributing.

PERIOD OF RECORD.--February 1954 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 812.95 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges and Oct. 1-14, Nov. 4-25, 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	22	e20	41	31	e25	52	40	30	92	42	51	46
2	22	e39	39	31	e25	48	38	30	78	42	52	42
3	23	e73	38	31	e25	40	36	30	71	44	57	41
4	23	225	35	30	25	38	34	28	66	71	112	41
5	23	72	35	29	25	124	33	27	63	53	66	40
6	22	49	34	e29	26	63	33	27	62	50	58	41
7	21	40	33	e29	26	49	32	27	59	50	55	41
8	20	36	32	29	25	43	32	28	57	49	53	40
9	20	33	32	29	25	40	31	32	56	51	52	40
10	19	32	62	29	26	38	31	33	60	54	51	39
11	19	32	52	29	26	38	31	33	74	51	49	38
12	20	33	44	29	25	35	30	32	86	49	49	38
13	19	33	40	29	25	34	29	36	71	48	48	38
14	22	33	38	29	25	35	29	45	65	48	44	38
15	e23	33	36	28	25	34	29	44	60	46	43	41
16	e22	33	36	28	24	34	30	40	57	79	42	40
17	e21	33	38	28	24	34	35	39	63	86	41	41
18	e21	34	38	28	24	34	33	49	59	61	42	40
19	e21	32	38	28	24	33	33	41	57	55	44	39
20	e21	29	37	27	30	33	34	40	55	53	40	40
21	e21	26	37	26	33	33	42	123	54	54	39	39
22	e21	25	37	e26	31	32	39	686	54	54	39	39
23	e21	125	37	e26	45	32	37	466	51	52	39	37
24	e21	85	36	e26	61	36	36	180	54	51	40	37
25	e22	61	32	e25	44	37	37	125	54	50	41	37
26	e22	49	31	e25	50	81	37	103	51	50	41	37
27	e20	48	31	e25	48	59	34	91	47	50	42	37
28	e20	46	33	e24	45	56	32	82	46	48	42	36
29	e20	44	34	e25	46	59	30	85	45	48	45	34
30	e21	43	33	e25	---	48	30	115	43	49	45	32
31	e20	---	33	e25	---	43	---	106	---	49	45	---
TOTAL	653	1,496	1,152	858	908	1,395	1,007	2,853	1,810	1,637	1,507	1,169
MEAN	21.1	49.9	37.2	27.7	31.3	45.0	33.6	92.0	60.3	52.8	48.6	39.0
MAX	23	225	62	31	61	124	42	686	92	86	112	46
MIN	19	20	31	24	24	32	29	27	43	42	39	32
CFSM	0.49	1.17	0.87	0.65	0.73	1.05	0.78	2.15	1.41	1.23	1.14	0.91
IN.	0.57	1.30	1.00	0.75	0.79	1.21	0.88	2.48	1.57	1.42	1.31	1.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)

MEAN	31.6	33.3	30.5	29.3	33.6	47.6	42.4	39.9	39.4	37.2	33.4	32.9
MAX	51.5	70.2	48.0	51.6	64.9	85.3	86.5	92.0	119	140	104	66.0
(WY)	(1999)	(1986)	(1988)	(1974)	(1994)	(1961)	(1993)	(2004)	(2000)	(1993)	(2001)	(1980)
MIN	15.9	16.1	14.8	15.1	16.0	16.9	22.5	18.7	14.4	14.0	15.5	15.3
(WY)	(1967)	(1967)	(1965)	(1959)	(1959)	(1968)	(1957)	(1965)	(1965)	(1965)	(1958)	(1958)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004	
ANNUAL TOTAL	11,520		16,445			
ANNUAL MEAN	31.6		44.9		36.0	
HIGHEST ANNUAL MEAN					61.0	1993
LOWEST ANNUAL MEAN					19.8	1964
HIGHEST DAILY MEAN	225	Nov 4	686	May 22	1,230	Aug 2, 2001
LOWEST DAILY MEAN	15	Sep 11	19	(a)Oct 10	12	(b)Feb 16-18, 1958
ANNUAL SEVEN-DAY MINIMUM	16	Sep 6	20	Oct 7	13	Jul 24, 1965
MAXIMUM PEAK FLOW			960	May 22	(c)1,750	Jul 3, 1954
MAXIMUM PEAK STAGE			5.72	May 22	7.08	Aug 2, 2001
INSTANTANEOUS LOW FLOW					(d)4.8	Nov 29, 1958
ANNUAL RUNOFF (CFSM)	0.737		1.05		0.841	
ANNUAL RUNOFF (INCHES)	10.01		14.29		11.43	
10 PERCENT EXCEEDS	41		61		52	
50 PERCENT EXCEEDS	29		38		31	
90 PERCENT EXCEEDS	21		24		19	

(a) Also occurred Oct. 11 and 13
(b) Also occurred July 26 and 29, 1965
(c) Gage height, 6.58 ft
(d) Result of freezeup
(e) Estimated due to ice effect or missing record

05407000 WISCONSIN RIVER AT MUSCODA, WI

LOCATION.--Lat 43°11'53", long 90°26'36", in SE $^1/_4$ NW $^1/_4$ sec.1, T.8 N., R.1 W., Grant County, Hydrologic Unit 07070005, on left bank at bridge on State Highway 80, 0.5 mi upstream from Eagle Mill Creek and 1.0 mi north of Muscoda.

DRAINAGE AREA.--10,400 mi^2.

PERIOD OF RECORD.--December 1902 to December 1903, gage height and discharge measurements only, October 1913 to current year. Monthly discharge for October and November 1913 published in WSP 1308. Gage-height records collected at same site November 1908 to December 1912 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 785: 1921(M). WSP 875: 1921. WSP 1308: 1915(M), 1917-18(M), 1920-21(M), 1924(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 666.77 ft above NGVD of 1929. Prior to Nov. 22, 1929, nonrecording gage on bridge 200 ft upstream at same datum. Nov. 22, 1929, to Mar. 15, 1930, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges and June 17, 18 and June 28 to July 1, which are fair (see page 11). Flow regulated by 24 reservoirs and many powerplants upstream from station. In 1938 when the maximum of record occurred, there were 21 reservoirs upstream from station, the two large reservoirs, Petenwell and Castle Rock were not yet in existence. Usually flows less than 20 ft^3/s were diverted out of the basin through Portage Canal to the Fox River throughout the year. Gage-height telemeter and data-collection platform at station.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,860	3,430	5,210	e5,000	e4,700	e7,200	22,500	8,700	24,100	10,300	5,460	6,590
2	3,440	3,530	4,960	e5,000	e5,500	e8,300	27,900	11,000	23,100	10,600	5,680	6,560
3	3,700	3,920	5,470	e5,100	e6,400	8,990	30,900	11,300	23,100	9,860	6,260	5,650
4	3,610	6,140	5,320	e5,700	e5,900	8,840	26,400	8,400	24,500	9,510	8,020	5,690
5	3,620	7,900	5,150	e4,500	e6,500	10,600	13,900	7,940	24,900	9,120	9,650	5,620
6	3,610	7,120	5,180	e4,600	e6,200	12,400	14,200	7,170	23,400	10,400	8,680	4,930
7	3,790	6,510	5,350	e4,700	e7,700	13,100	16,500	6,240	20,600	12,800	7,700	4,380
8	4,040	5,790	5,090	e4,600	e7,900	13,400	16,000	7,280	19,300	12,600	6,140	5,210
9	3,680	5,540	4,530	e5,700	e6,700	12,900	13,900	7,100	15,900	11,900	5,790	4,580
10	3,610	5,000	5,130	e5,600	e6,000	11,800	12,100	8,410	16,000	11,800	4,990	4,520
11	2,960	4,630	5,750	e5,800	e6,000	11,400	12,400	8,080	20,500	10,900	5,500	4,570
12	2,990	4,600	e3,300	e5,800	e7,000	10,400	12,600	9,240	23,100	11,300	5,370	4,270
13	3,580	4,590	e2,800	e7,200	e8,300	10,800	12,600	11,700	27,700	10,900	6,580	4,730
14	3,440	5,190	e2,600	e7,700	e7,800	10,200	11,300	13,200	32,800	8,850	6,090	4,280
15	3,460	4,740	e4,000	e6,200	e7,700	9,960	9,060	13,400	37,400	9,040	4,690	4,750
16	3,900	4,460	e5,700	e6,300	e5,600	9,200	8,330	15,900	39,100	8,790	4,910	4,420
17	4,150	4,440	e6,000	e5,900	e6,000	8,560	8,950	17,500	40,200	9,810	4,840	5,630
18	3,760	4,830	e5,500	e7,000	e5,700	8,580	8,760	18,800	40,500	10,100	4,930	6,910
19	3,590	4,930	e5,100	e8,000	e4,500	8,100	7,740	18,000	38,800	8,930	4,740	6,330
20	3,970	4,720	e5,500	e4,600	e5,300	7,850	8,580	16,000	32,000	8,020	5,260	6,720
21	3,250	4,690	e5,700	e5,300	e5,800	7,660	9,580	14,700	28,500	7,110	5,710	5,250
22	3,400	4,850	e5,000	e5,400	e5,800	7,890	10,700	18,800	23,700	6,480	5,630	5,150
23	3,390	6,030	e5,200	e5,500	e5,200	7,330	9,850	24,200	19,000	7,480	4,690	5,090
24	3,410	6,660	e5,700	e4,700	e6,000	8,020	10,800	26,700	17,700	6,710	5,430	4,580
25	3,340	6,480	e4,000	e5,200	e6,600	6,790	12,200	25,800	17,700	6,270	5,050	4,070
26	3,410	6,840	e3,200	e5,500	e6,000	8,350	11,300	25,100	15,400	6,450	5,280	4,660
27	3,690	6,360	e5,200	e7,000	e5,500	10,300	10,900	26,100	14,200	6,300	5,720	4,680
28	3,700	5,590	e4,200	e4,200	e5,600	10,400	8,230	28,700	13,500	5,680	6,560	4,590
29	3,370	5,480	e5,800	e5,600	e6,200	11,100	8,390	30,200	11,300	5,780	6,610	4,170
30	3,450	5,340	e5,500	e4,800	---	12,600	8,740	30,500	10,200	5,600	8,120	4,160
31	3,520	---	e5,300	e5,300	---	17,600	---	27,100	---	5,610	8,610	---
TOTAL	110,690	160,330	152,440	173,500	180,100	310,620	395,310	503,260	718,200	275,000	188,690	152,740
MEAN	3,571	5,344	4,917	5,597	6,210	10,020	13,180	16,230	23,940	8,871	6,087	5,091
MAX	4,150	7,900	6,000	8,000	8,300	17,600	30,900	30,500	40,500	12,800	9,650	6,910
MIN	2,960	3,430	2,600	4,200	4,500	6,790	7,740	6,240	10,200	5,600	4,690	4,070

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

MEAN	7,338	7,683	6,524	6,097	6,637	10,670	16,780	12,020	10,790	7,369	5,961	7,144
MAX	25,460	17,130	13,100	11,400	12,020	30,400	37,650	32,270	28,840	17,780	11,610	31,280
(WY)	(1987)	(1986)	(1966)	(1973)	(1966)	(1973)	(1922)	(1960)	(1993)	(1978)	(1924)	(1938)
MIN	2,638	2,662	2,616	3,209	3,113	3,501	4,788	4,621	3,091	2,754	2,567	2,651
(WY)	(1977)	(1977)	(1977)	(1924)	(1924)	(1934)	(1964)	(1977)	(1988)	(1988)	(1988)	(1976)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1914 - 2004	
ANNUAL TOTAL	2,611,070		3,320,880			
ANNUAL MEAN	7,154		9,073		8,747	
HIGHEST ANNUAL MEAN					16,030	1973
LOWEST ANNUAL MEAN					4,145	1977
HIGHEST DAILY MEAN	40,500	May 17	40,500	Jun 18	79,500	Sep 16, 1938
LOWEST DAILY MEAN	2,560	Sep 9	(a)2,600	Dec 14	1,460	Jul 3, 1988
ANNUAL SEVEN-DAY MINIMUM	3,150	Sep 6	3,390	Oct 9	1,900	Aug 13, 1988
MAXIMUM PEAK FLOW			41,300	Jun 18	80,800	Sep 16, 1938
MAXIMUM PEAK STAGE			8.20	Jun 18	11.48	Sep 16, 1938
10 PERCENT EXCEEDS	12,700		18,200		15,300	
50 PERCENT EXCEEDS	5,400		6,300		6,920	
90 PERCENT EXCEEDS	3,590		3,990		3,970	

(a) Ice affected
(e) Estimated due to ice effect or missing record

05407470 KICKAPOO RIVER AT HWY 33 AT ONTARIO, WI

LOCATION.--Lat 43°43'18", long 90°35'15", IN SW ¼ NW ¼ sec.2, T.14 N., R.2 W., Vernon County, Hydrologic Unit 07070006, on right bank 85 ft downstream from Highway 33 bridge at Ontario.

DRAINAGE AREA.--117 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 850 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Recorded gage heights are available from June 15, 2001 to Sept. 30, 2001. Sediment loads are available from November 1972 to Sept. 1973. 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	35	43	43	e46	e32	788	69	60	159	61	50	46
2	35	42	43	e43	e34	643	65	55	105	62	57	45
3	39	47	42	e42	e35	127	63	55	79	64	88	44
4	39	111	41	e42	e35	93	61	55	70	77	113	43
5	37	62	42	e40	e35	899	60	54	67	70	58	42
6	37	50	42	e38	e38	229	60	56	68	98	53	48
7	38	45	42	e37	e39	122	59	55	64	75	53	45
8	37	43	43	e38	e39	68	58	85	61	69	54	42
9	38	45	43	e39	e39	61	56	74	100	83	52	42
10	37	44	e42	e40	e39	68	55	103	408	83	51	42
11	40	46	e38	e40	e39	109	54	76	775	69	52	41
12	52	48	e39	e39	e39	55	53	70	237	66	52	41
13	42	51	e40	e38	e39	52	52	165	178	63	49	41
14	44	47	e42	e37	e37	88	52	109	123	59	47	41
15	42	48	e42	e36	e37	51	53	87	97	58	46	113
16	40	48	e42	e34	e37	50	54	76	86	57	47	55
17	39	48	e42	e34	e38	54	54	73	172	61	54	47
18	39	52	e41	e34	e39	63	67	71	95	56	50	45
19	38	50	e41	e34	e40	74	67	66	81	58	51	43
20	39	46	e41	e36	e41	81	63	75	75	59	46	42
21	39	45	e41	e37	e41	60	82	161	73	70	45	42
22	38	47	e40	e36	e40	50	67	476	71	63	44	41
23	38	64	e40	e33	e41	51	61	410	69	56	45	41
24	38	55	e41	e33	e41	62	58	204	78	53	46	46
25	39	52	e40	e32	e42	76	64	133	71	53	48	44
26	39	49	e40	e31	e55	123	64	108	67	52	47	42
27	40	47	e41	e30	e66	88	59	98	66	52	136	42
28	41	45	e60	e31	e90	118	58	89	74	51	55	41
29	42	43	e50	e31	185	103	56	180	65	51	49	40
30	42	45	e47	e32	---	80	57	275	62	52	52	41
31	46	---	e45	e32	---	73	---	477	---	51	48	---
TOTAL	1,229	1,508	1,316	1,125	1,352	4,659	1,801	4,131	3,796	1,952	1,738	1,368
MEAN	39.6	50.3	42.5	36.3	46.6	150	60.0	133	127	63.0	56.1	45.6
MAX	52	111	60	46	185	899	82	477	775	98	136	113
MIN	35	42	38	30	32	50	52	54	61	51	44	40
CFSM	0.34	0.43	0.36	0.31	0.40	1.28	0.51	1.14	1.08	0.54	0.48	0.39
IN.	0.39	0.48	0.42	0.36	0.43	1.48	0.57	1.31	1.21	0.62	0.55	0.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

MEAN	53.3	52.8	49.7	44.1	56.7	116	76.1	92.7	89.1	58.8	51.8	46.2
MAX	62.4	58.4	58.1	53.3	72.3	150	95.1	133	127	66.3	56.1	53.4
(WY)	(2003)	(2002)	(2002)	(2002)	(2002)	(2004)	(2002)	(2004)	(2004)	(2002)	(2004)	(2002)
MIN	39.6	49.8	42.5	36.3	46.6	89.0	60.0	69.8	42.7	47.0	44.3	39.5
(WY)	(2004)	(2003)	(2004)	(2004)	(2004)	(2002)	(2004)	(2002)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2002 - 2004	
ANNUAL TOTAL	20,051		25,975			
ANNUAL MEAN	54.9		71.0		65.7	
HIGHEST ANNUAL MEAN					71.0	2004
LOWEST ANNUAL MEAN					57.4	2003
HIGHEST DAILY MEAN	869	Mar 15	899	Mar 5	899	Mar 5, 2004
LOWEST DAILY MEAN	29	Aug 22, 23	(a)30	Jan 27	29	Aug 22, 23, 2003
ANNUAL SEVEN-DAY MINIMUM	30	Aug 18	(a)31	Jan 25	30	Aug 18, 2003
MAXIMUM PEAK FLOW			1,440	Mar 1	(b)1,950	Mar 15, 2003
MAXIMUM PEAK STAGE			16.95	Mar 1	(c)16.95	Mar 1, 2004
INSTANTANEOUS LOW FLOW					28	(d)Jan 10, 2003
ANNUAL RUNOFF (CFSM)	0.470		0.607		0.562	
ANNUAL RUNOFF (INCHES)	6.38		8.26		7.63	
10 PERCENT EXCEEDS	68		99		88	
50 PERCENT EXCEEDS	43		50		53	
90 PERCENT EXCEEDS	35		38		38	

(a) Ice affected
(b) Gage height 16.24 ft
(c) Discharge 1440 cfs
(d) Also occurred Sept. 4, 2002, result of bridge construction
(e) Estimated due to ice effect or missing record

05408000 KICKAPOO RIVER AT LA FARGE, WI

LOCATION.--Lat 43°34'27", long 90°38'35", in NE ¼ SW ¼ sec.29, T.13 N., R.2 W., Vernon County, Hydrologic Unit 07070006, on left bank 10 ft upstream from bridge on State Highway 82, in La Farge, 0.3 mi upstream from Otter Creek, and 1.3 mi downstream from powerplant.

DRAINAGE AREA.--266 mi^2.

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1388: 1951(M), 1954(M). WSP 1438: 1944-45(M), 1946, 1948, 1950(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 781.54 ft above NGVD of 1929. Prior to Dec. 4, 1939, nonrecording gage on highway bridge 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	97	112	120	e130	e100	e800	175	142	643	166	135	137
2	97	112	112	e120	e110	1,820	165	131	418	169	142	133
3	104	123	124	e120	e110	541	158	126	328	165	172	129
4	110	323	123	e120	e110	283	152	124	277	222	353	126
5	105	242	119	e110	e110	1,290	148	121	250	197	185	123
6	102	156	119	e100	e110	1,590	147	122	247	246	153	127
7	101	135	119	e98	e110	366	145	122	230	241	144	131
8	100	120	122	e98	e110	259	144	276	212	201	147	122
9	98	121	124	e98	e110	203	141	378	219	198	144	120
10	99	135	136	e100	e110	196	137	255	696	254	138	120
11	102	122	e110	e100	e110	244	135	244	1,500	199	138	117
12	129	123	e100	e100	e110	173	133	194	1,120	187	140	114
13	126	132	e130	e100	e110	170	133	423	554	178	135	113
14	122	122	e120	e100	e110	201	132	351	468	169	130	113
15	119	121	e120	e100	e100	181	130	253	343	160	128	167
16	114	122	e120	e100	e98	154	133	205	291	157	127	208
17	111	120	e120	e100	e100	156	131	183	430	166	148	136
18	110	123	e120	e100	e110	163	149	174	322	157	140	126
19	111	131	e120	e100	e120	188	159	162	264	154	138	121
20	110	122	e110	e100	e120	183	153	305	235	164	131	118
21	109	117	e120	e100	e130	180	193	609	224	195	126	117
22	108	116	e120	e97	e130	144	174	1,940	222	209	124	118
23	108	145	e120	e97	e140	142	152	1,290	204	165	125	116
24	109	170	e110	e97	e150	153	142	840	211	153	126	123
25	110	127	e110	e98	e150	181	148	471	212	149	132	127
26	109	148	e120	e100	e160	305	161	359	191	146	131	120
27	111	128	e140	e100	e180	237	145	299	183	144	243	119
28	116	124	e160	e98	e210	243	139	259	200	140	189	118
29	119	121	e190	e95	e300	285	133	367	183	140	145	116
30	118	122	e160	e95	---	214	131	647	171	142	141	117
31	116	---	e140	e97	---	190	---	1,590	---	141	144	---
TOTAL	3,400	4,135	3,878	3,168	3,728	11,435	4,418	12,962	11,048	5,474	4,694	3,792
MEAN	110	138	125	102	129	369	147	418	368	177	151	126
MAX	129	323	190	130	300	1,820	193	1,940	1,500	254	353	208
MIN	97	112	100	95	98	142	130	121	171	140	124	113
CFSM	0.41	0.52	0.47	0.38	0.48	1.39	0.55	1.57	1.38	0.66	0.57	0.48
IN.	0.48	0.58	0.54	0.44	0.52	1.60	0.62	1.81	1.55	0.77	0.66	0.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	145	153	133	127	159	299	272	200	199	164	144	159
MAX	317	337	336	421	499	761	723	580	445	838	446	539
(WY)	(1960)	(1983)	(1985)	(1946)	(1966)	(1961)	(1965)	(1973)	(1947)	(1978)	(1980)	(1965)
MIN	73.4	78.5	62.0	61.3	62.2	114	126	80.4	80.9	77.8	60.4	72.7
(WY)	(1959)	(1940)	(1959)	(1959)	(1959)	(1957)	(1942)	(1958)	(1958)	(1958)	(1958)	(1940)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	54,234		72,132			
ANNUAL MEAN	149		197		179	
HIGHEST ANNUAL MEAN					282	1993
LOWEST ANNUAL MEAN					97.1	1958
HIGHEST DAILY MEAN	(a)1,100	Mar 16	1,940	May 22	7,730	Feb 9, 1966
LOWEST DAILY MEAN	90	Aug 19, 20	(a)95	Jan 29, 30	36	Nov 3, 1939
ANNUAL SEVEN-DAY MINIMUM	92	Aug 14	(a)98	Jan 24	(a)49	Jan 3, 1968
MAXIMUM PEAK FLOW			2,130	Mar 6	14,300	Jul 1, 1978
MAXIMUM PEAK STAGE			10.87	Mar 6	14.92	Jul 1, 1978
ANNUAL RUNOFF (CFSM)	0.559		0.741		0.675	
ANNUAL RUNOFF (INCHES)	7.58		10.09		9.17	
10 PERCENT EXCEEDS	212		287		261	
50 PERCENT EXCEEDS	120		135		135	
90 PERCENT EXCEEDS	100		101		88	

(a) Ice affected
(e) Estimated due to ice effect or missing record

05410490 KICKAPOO RIVER AT STEUBEN, WI

LOCATION.--Lat 43°10'58", long 90°51'30", in NE ¼ SW ¼ sec.9, T.8 N., R.4 W., Crawford County, Hydrologic Unit 07070006, on right bank at upstream corner of town road bridge at Steuben and 18.6 mi upstream from mouth.

DRAINAGE AREA.--687 mi^2.

PERIOD OF RECORD.--May 1933 to current year. Prior to October 1982, all records published under station number 05410500.

REVISED RECORDS.--WSP 855: Drainage area. WSP 1438: 1933-38. WDR WI-79-1: 1978(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 657.00 ft above NGVD of 1929. May 1933 to Oct. 19, 1938, nonrecording gage at same site at datum 1.7 ft higher. Oct. 20, 1938 to September 1982, recording gage at site 1.2 mi downstream at datum 0.36 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Data-collection platform and 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	308	349	382	e330	e280	e600	557	409	1,700	537	463	457
2	306	355	378	e320	e290	e1,100	521	407	1,880	524	465	452
3	307	369	369	e310	e290	1,440	497	404	2,090	526	471	445
4	313	478	365	e300	e290	1,520	480	392	2,170	559	568	437
5	322	567	377	e280	e290	1,670	465	386	1,450	601	647	432
6	320	593	375	e280	e290	1,730	456	383	899	609	622	431
7	314	466	373	e290	e290	1,760	450	378	783	630	509	431
8	310	412	373	e300	e290	1,800	444	384	712	642	487	434
9	309	389	374	e300	e290	1,740	436	965	984	632	482	432
10	308	363	387	e300	e290	920	429	956	1,270	680	477	427
11	309	383	390	e300	e290	667	422	783	1,540	659	471	422
12	320	395	e370	e300	e290	603	415	718	1,730	648	465	420
13	331	387	e340	e300	e290	589	411	686	1,870	593	462	417
14	353	384	e370	e300	e290	538	407	833	1,940	561	457	414
15	347	388	e400	e300	e290	529	404	885	1,970	538	449	418
16	339	384	e370	e300	e280	540	401	751	1,840	521	444	427
17	333	383	e360	e300	e270	496	406	663	1,300	522	446	490
18	328	388	e370	e290	e270	487	460	626	1,070	515	457	464
19	327	390	e360	e290	e270	489	454	589	960	506	479	428
20	328	392	e360	e290	e270	500	464	569	794	498	463	418
21	328	391	e360	e280	e290	504	482	964	723	525	450	413
22	328	384	e360	e280	e290	496	489	2,130	688	560	439	409
23	327	398	e360	e280	e320	475	494	2,230	660	584	436	407
24	328	415	e350	e280	e320	460	459	2,150	645	528	439	406
25	330	434	e340	e280	e350	470	442	2,360	628	494	445	407
26	331	422	e340	e290	e360	597	439	2,660	615	479	449	408
27	332	394	e340	e290	e370	656	445	2,380	586	471	516	406
28	337	401	e340	e280	e390	684	437	1,620	574	466	529	399
29	344	392	e340	e270	e440	650	421	1,140	571	464	573	393
30	351	387	e380	e260	---	670	414	1,090	560	468	490	391
31	352	---	e340	e270	---	619	---	1,450	---	466	463	---
TOTAL	10,120	12,233	11,293	9,040	8,830	25,999	13,501	32,341	35,202	17,006	15,013	12,735
MEAN	326	408	364	292	304	839	450	1,043	1,173	549	484	424
MAX	353	593	400	330	440	1,800	557	2,660	2,170	680	647	490
MIN	306	349	340	260	270	460	401	378	560	464	436	391
CFSM	0.48	0.59	0.53	0.42	0.44	1.22	0.66	1.52	1.71	0.80	0.70	0.62
IN.	0.55	0.66	0.61	0.49	0.48	1.41	0.73	1.75	1.91	0.92	0.81	0.69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2004, BY WATER YEAR (WY)

MEAN	421	438	385	362	425	765	699	541	533	491	430	453
MAX	798	858	781	846	1,276	1,856	1,748	1,415	1,480	1,901	1,180	1,331
(WY)	(1973)	(1983)	(1985)	(1946)	(1966)	(1946)	(1959)	(1973)	(2000)	(1978)	(1935)	(1938)
MIN	206	222	172	172	184	252	351	228	223	189	188	199
(WY)	(1959)	(1938)	(1959)	(1959)	(1959)	(1934)	(1942)	(1934)	(1934)	(1936)	(1936)	(1937)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1933 - 2004	
ANNUAL TOTAL	152,300		203,313			
ANNUAL MEAN	417		556		496	
HIGHEST ANNUAL MEAN					792	1993
LOWEST ANNUAL MEAN					273	1958
HIGHEST DAILY MEAN	1,400	Mar 18	2,660	May 26	12,600	Jul 3, 1978
LOWEST DAILY MEAN	296	Aug 24	(a)260	Jan 30	(a)165	(b)Dec 10-20, 1958
ANNUAL SEVEN-DAY MINIMUM	300	Aug 19	(a)277	Jan 25	(a)165	Dec 10, 1958
MAXIMUM PEAK FLOW			2,730	May 26	16,500	Jul 3, 1978
MAXIMUM PEAK STAGE			12.80	May 26	(c)14.81	Jul 3, 1978
INSTANTANEOUS LOW FLOW					(c)161	Aug 9, 1936
ANNUAL RUNOFF (CFSM)	0.607		0.809		0.722	
ANNUAL RUNOFF (INCHES)	8.25		11.01		9.81	
10 PERCENT EXCEEDS	553		957		747	
50 PERCENT EXCEEDS	380		430		412	
90 PERCENT EXCEEDS	319		290		265	

(a) Ice affected
(b) Also occurred Jan. 4-9, Feb. 5-7, 1959, ice affected
(c) Site and datum then in use
(e) Estimated due to ice effect or missing record

The 24 reservoirs listed below are used to stabilize the flow of the Wisconsin and Tomahawk Rivers for power generation and are also used for recreational purposes. The first 21 reservoirs are owned and operated by the Wisconsin Valley Improvement Co., which furnishes the gage heights and capacity tables. Revised capacity tables for all 21 reservoirs were received from the Company in April 1957 and were used to compute month-end usable contents beginning Sept. 30, 1955. Another revised capacity table for Burnt Rollways Reservoir was used to compute month-end usable contents beginning Sept. 30, 1964. Lake Dubay is owned by the Consolidated Water Power Co. Petenwell and Castle Rock are owned and operated by the Wisconsin River Power Co., which furnished the gage heights and capacity tables for those two reservoirs. Month-end contents are computed by the U.S. Geological Survey. The usable capacity of these reservoirs is usually less in summer than in winter because the allowable summer drawdown is limited by the Department of Natural Resources in the interest of riparian property owners. There are occasionally formal or informal changes in capacity and in minimum drawdown levels. Usable capacity figures listed below are for winter regulation.

05390100 Lac Vieux Desert on Wisconsin River, lat 46°07'18", long 89°09'07", in SE 1/4 NW 1/4 sec.17, T.42 N., R.11 E., Vilas County, 4.8 mi northwest of Phelps, used as a reservoir since 1908, has a usable capacity of 652,000,000 ft^3. Drainage area, 34.4 mi^2.

05390150 Twin Lakes on Twin River, lat 46°01'20", long 89°10'05", in SW 1/4 NE 1/4 sec.19, T.41 N., R.11 E., Vilas County, 5.0 mi southwest of Phelps, used as a reservoir since 1908, has a usable capacity of 313,000,000 ft^3. Drainage area, 26 mi^2.

05390200 Buckatahpon Lakes on Buckatabon Creek, lat 46°01'18", long 89°18'40", in SE 1/4 NE 1/4 sec.24, T.41 N., R.9 E., Vilas County, 3.3 mi southwest of Conover, used as a reservoir since 1908, has a usable capacity of 130,000,000 ft^3. Drainage area, 16.9 mi^2.

05390250 Sevenmile Lake on Sevenmile Creek, lat 45°52'30", long 89°04'07", in SE 1/4 NE 1/4 sec.11, T.39 N., R.11 E., Oneida County, 9.1 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 93,000,000 ft^3. Drainage area, 12.1 mi^2.

05390300 Lower Ninemile Lake on Ninemile Creek, lat 45°53'37", long 89°07'15", in NE 1/4 NW 1/4 sec.4, T.39 N., R.11 E., Oneida County, 6.6 mi southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 121,000,000 ft^3. Drainage area, 28.8 mi^2.

05390350 Burnt Rollways Reservoir on Eagle River, lat 45°53'40", long 89°08'28", in NE 1/4 NW 1/4 sec.5, T.39 N., R.11 E., Oneida County, 5.3 mi southeast of town of Eagle6 River, used as a reservoir since 1908, has a usable capacity of 779,000,000 ft^3. This reservoir includes 18 lakes controlled by the same dam. Drainage area, 142 mi^2.

05390400 Long Lake on Deerskin River, lat 46°02'37", long 89°02'44", in NW 1/4 SE 1/4 sec.7, T.41 N., R.12 E., Vilas County, 2.5 mi southeast of Phelps, used as a reservoir since 1908, has a usable capacity of 400,000,000 ft^3. Drainage area, 22.9 mi^2.

05390600 Deerskin Lake on Little Deerskin River, lat 45°59'07", long 89°09'40", in SE 1/4 sec.31, T.41 N., R.ll E., Vilas County, 6.3 mi northeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 22,000,000 ft^3. Drainage area, 2.47 mi^2.

05390650 Sugar Camp Reservoir on Sugar Camp Creek, lat 45°52'19", long 89°23'40", in NE 1/4 sec.17, T.39 N., R.9 E., Oneida County, 7.6 mi southwest of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 471,000,000 ft^3. Drainage area, 48.4 mi^2.

05390700 Little St. Germain Lake on Little St. Germain Creek, lat 45°53'55", long 89°27'10", in SE 1/4 sec.35, T.40 N., R.8 E., Vilas County, 9.6 mi west of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 79,000,000 ft^3. Drainage area, 19 mi^2.

05390750 Big St. Germain Lake on St. Germain River, lat 45°55'06", long 89°31'55", in SE 1/4 sec.30, T.40 N., R.8 E., Vilas County, 5.0 mi south of Sayner, used as a reservoir since 1908, has a usable capacity of 202,000,000 ft^3. Drainage area, 73.1 mi^2.

05390800 Pickerel Lake on St. Germain River, lat 45°52'22", long 89°31'47", in NE 1/4 sec.18, T.39 N., R.8 E., Oneida County, 5.0 mi northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 338,000,000 ft^3. Drainage area, 86.2 mi^2.

05390900 Rainbow Lake on Wisconsin River, lat 45°50'02", long 89°32'42", in SW 1/4 sec.30, T.39 N., R.8 E., Oneida County, 800 ft upstream from U.S. Geological Survey river gaging station, 2.7 mi northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 2,181,000,000 ft^3. Drainage area, 744 mi^2.

05391100 South Pelican Lake on Pelican River, lat 45°31'37", long 89°12'24", in S 1/2 sec.11, T.35 N., R.10 E., Oneida County, 2.8 mi northwest of town of Pelican Lake, used as a reservoir since 1909, has a usable capacity of 305,000,000 ft^3. Drainage area, 19.8 mi^2.

05391300 North Pelican Lake (includes Moen Lakes) on North Branch Pelican River, lat 45°38'05", long 89°14'38", in SE 1/4 sec.4, T.36 N., R.10 E., Oneida County, 0.2 mi below Twin Lakes Creek and 8.0 mi east of Rhinelander city limits, used as a reservoir since 1908, has a usable capacity of 218,000,000 ft^3. Drainage area, 95 mi^2.

05392100 Minocqua Lake on Tomahawk River, lat 45°52'35", long 89°43'38", on line between secs.10 and 15, T.39 N., R.6 E., Oneida County, 1.0 mi west of Minocqua, used as a reservoir since 1910, has a usable capacity of 628,000,000 ft^3. Drainage area, 72.5 mi^2.

05392200 Squirrel Lake on Squirrel River, lat 45°50'37", long 89°54'13", in NE 1/4 sec.30, T.39 N., R.5 E., Oneida County, 9.4 mi west of Minocqua, used as a reservoir since 1908, has a usable capacity of 182,000,000 ft^3. Drainage area, 15.2 mi^2.

05392300 Willow Reservoir on Tomahawk River, lat 45°42'45", long 89°50'38", in NE 1/4 sec.10, T.37 N., R.5 E., Oneida County, 8.8 mi southwest of Hazelhurst, used as a reservoir since 1927, has a usable capacity of 3,302,000,000 ft^3. Drainage area, 310 mi^2.

05392500 Lake Nokomis on Tomahawk River, lat 45°32'20", long 89°44'48", in NW 1/4 sec.9, T.35 N., R.6 E., Lincoln County, at U.S. Geological Survey river gaging station, 0.5 mi east of Bradley, used as a reservoir since 1912, has a usable capacity of 1,808,000,000 ft^3. Drainage area, 544 mi^2.

05393600 Spirit River Flowage on Spirit River, lat 45°26'18", long 89°44'30", in NE 1/4 sec.16, T.34 N., R.6 E., Lincoln County, 2.0 mi south of Tomahawk, used as a reservoir since 1923, has a usable capacity of 756,000,000 ft^3. Drainage area, 158 mi^2.

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

05400295 Lake Dubay on Wisconsin River, lat 44°39'54", long 89°39'03", in sec.10, T.25 N., R.7 E., Wood County, 1.5 mi downstream of Little Eau Pleine River and 10.5 mi northwest of Stevens Point, has a usable capacity of 2,117,000,000 ft^3. Drainage area, 4,900 mi^2.

05401400 Petenwell Flowage on Wisconsin River, lat 44°03'26", long 90°01'18", in SE 1/4 sec.4, T.18 N., R.4 E., Adams County, 5.2 mi upstream from Roche a Cri Creek, 2.4 mi west of Strongs Prairie, and 3.5 mi northeast of Necedah, used as a reservoir since 1950, has a total capacity of 19,880,000,000 ft^3. Drainage area, 5,970 mi^2.

05403200 Castle Rock Flowage on Wisconsin River, lat 43°51'48", long 89°57'38", in sec.13, T.16 N., R.4 E., Adams County, 4.5 mi upstream from Duck Creek, and 2.0 mi south of Germantown, and 7.0 mi northeast of Mauston, used as a reservoir since 1950, has a total capacity of 7,630,000,000 ft^3. Drainage area, 7,056 mi^2.

MONTH-END CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

	LAC VIEUX DESERT	TWIN LAKES	BUCKATAHPON LAKE	SEVENMILE LAKE	LOWER NINEMILE LAKE	BURNT ROLLWAYS RESERVOIR	LONG LAKE	DEERSKIN LAKE
Sept. 30	171	229	116	40	98	530	89	12
Oct. 31	183	217	111	32	91	530	62	10
Nov. 30	147	186	95	24	52	383	87	8
Dec. 31	92	70	74	0	22	0	105	6
Jan. 31	61	0	59	0	22	0	116	5
Feb. 29	40	2	51	41	33	37	126	5
Mar. 31	88	30	69	18	84	264	161	10
Apr. 30	297	167	115	63	98	575	258	17
May 31	285	223	115	68	102	568	242	18
June 30	236	220	115	62	100	524	222	17
July 31	228	214	115	56	101	6	194	15
Aug.31	203	211	114	43	97	536	148	14
Sept. 30	211	217	110	40	99	533	114	16

	SUGAR CAMP RESERVOIR	LITTLE ST. GERMAIN LAKE	BIG ST. GERMAIN LAKE	PICKEREL LAKE	RAINBOW LAKE	SOUTH PELICAN LAKE	NORTH PELICAN LAKE	MINOCQUA LAKE
Sept. 30	336	60	167	279	785	286	137	436
Oct. 31	318	58	143	271	821	271	122	414
Nov. 30	197	49	107	252	1,484	231	103	272
Dec. 31	208	39	78	235	1,764	182	3	172
Jan. 31	161	30	54	224	1,326	133	0	102
Feb. 29	155	21	17	217	814	127	34	70
Mar. 31	151	32	91	254	936	185	107	162
Apr. 30	420	76	173	278	2,149	295	135	343
May 31	405	78	167	276	2,140	298	134	454
June 30	342	67	156	277	1,845	271	133	459
July 31	366	61	156	274	1,362	261	133	448
Aug. 31	359	62	158	275	1,006	249	126	442
Sept. 30	363	64	156	276	848	246	129	442

	SQUIRREL LAKE	WILLOW RESERVOIR	LAKE NOKOMIS	SPIRIT RIVER FLOWAGE	BIG EAU PLEINE RESERVOIR	LAKE DUBAY	PETENWELL FLOWAGE	CASTLE ROCK FLOWAGE
Sept. 30	151	1,111	788	265	1,779	4,119	17,298	5,613
Oct. 31	154	926	548	218	1,581	4,175	17,219	5,536
Nov. 30	91	1,446	897	300	1,570	4,153	17,333	5,890
Dec. 31	39	1,518	913	230	1,414	3,906	17,606	5,876
Jan. 31	4	1,275	754	118	1,177	3,243	15,974	5,876
Feb. 29	6	976	576	113	952	2,872	14,805	4,868
Mar. 31	56	1,236	770	592	3,922	3,478	16,900	4,585
Apr. 30	151	2,535	1,722	736	4,265	4,432	18,240	6,377
May 31	174	3,172	1,768	693	4,487	4,386	18,143	6,506
June 30	163	3,011	1,627	634	4,382	4,110	17,562	5,844
July 31	161	2,292	1,187	433	3,828	4,150	17,632	5,903
Aug. 31	161	1,547	965	346	3,276	4,141	17,588	5,818
Sept. 30	166	1,232	806	316	2,414	4,128	17,571	5,786