



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

CHIPPEWA RIVER BASIN

CHIPPEWA RIVER BASIN

05356000 CHIPPEWA RIVER AT BISHOPS BRIDGE, NEAR WINTER, WI

LOCATION.--Lat 45°50'57", long 91°04'44", in SW 1/4 NE 1/4 sec.23, T.39 N., R.6 W., Sawyer County, Hydrologic Unit 07050001, on right bank 15 ft upstream from highway bridge on County Trunk Highway G, 3.2 mi downstream from Lake Chippewa Dam, and 3.7 mi northwest of Winter.

DRAINAGE AREA.--790 mi².

PERIOD OF RECORD.--February 1912 to current year. March, April, 1912, and December 1912 to April 1913, monthly discharge only published in WSP 1308. Unpublished daily discharges stored from February 1912 to April 1913 from District records.

REVISED RECORDS.--WSP 1438: 1913(M), 1915-18(M), 1919, 1920-23(M), 1924, 1925(M), 1927(M), 1928, 1929-30(M), 1939(M). WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,256.78 ft above NGVD of 1929 (levels by Wilhelm Engineering Co.). See WSP 1708 or 1728 for history of changes prior to July 23, 1930.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow regulated by Moose Lake and Lake Chippewa. 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	312	303	e300	299	547	814	445	1,450	2,260	469	465	435
2	317	303	e300	299	546	815	298	1,450	2,250	469	464	435
3	313	303	e300	299	540	815	305	1,450	2,400	469	602	435
4	313	304	300	299	541	815	301	1,450	2,700	472	685	435
5	315	305	301	e300	535	817	297	1,450	2,700	469	683	461
6	317	305	301	e300	535	815	294	1,110	2,700	469	682	455
7	316	304	303	300	535	814	292	918	2,690	469	685	441
8	317	303	303	299	535	813	293	919	2,400	469	692	525
9	317	304	302	299	650	813	414	921	1,910	469	690	532
10	317	305	303	299	855	815	754	883	1,650	469	690	679
11	320	307	e300	299	855	813	954	712	909	469	691	678
12	317	306	e300	299	849	811	1,030	576	921	469	689	678
13	317	305	303	299	845	810	1,670	499	912	468	687	671
14	315	304	303	298	841	810	1,830	498	912	465	686	672
15	317	304	301	299	839	803	1,840	491	919	465	686	703
16	317	304	299	299	837	803	1,280	487	749	461	690	526
17	317	307	299	299	830	802	563	493	469	457	689	356
18	315	312	299	e300	830	800	534	487	468	458	688	356
19	317	307	299	299	829	800	1,250	487	468	459	689	355
20	317	306	299	381	829	798	2,600	487	469	457	687	362
21	315	303	299	550	825	795	5,870	486	469	458	690	443
22	317	303	299	552	825	795	5,990	723	469	455	693	692
23	316	306	299	547	820	799	5,970	928	470	455	689	697
24	317	305	301	547	817	642	5,950	1,530	469	456	690	697
25	317	e300	299	547	816	511	5,570	1,810	469	457	688	693
26	305	303	299	547	815	520	4,400	1,790	469	456	550	691
27	304	303	299	547	813	532	2,800	1,800	469	457	452	689
28	311	303	300	547	812	615	1,920	1,790	469	460	452	686
29	304	303	299	547	811	611	1,900	1,790	469	467	448	575
30	309	303	299	547	---	579	1,630	1,790	469	470	439	376
31	307	---	299	547	---	568	---	1,920	---	465	438	---
TOTAL	9,745	9,133	9,307	12,090	21,557	23,163	59,244	33,575	35,547	14,377	19,449	16,429
MEAN	314	304	300	390	743	747	1,975	1,083	1,185	464	627	548
MAX	320	312	303	552	855	817	5,990	1,920	2,700	472	693	703
MIN	304	300	299	298	535	511	292	486	468	455	438	355

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2004, BY WATER YEAR (WY)

	673	825	961	892	760	450	588	807	798	680	618	694
MEAN	673	825	961	892	760	450	588	807	798	680	618	694
MAX	2,896	1,884	1,910	1,770	1,550	1,097	3,453	2,823	2,950	2,122	2,235	3,769
(WY)	(1986)	(1992)	(1992)	(1983)	(1928)	(1920)	(1922)	(1954)	(1939)	(1996)	(1972)	(1941)
MIN	43.6	143	234	201	194	117	20.0	24.2	39.8	40.3	146	140
(WY)	(1925)	(1925)	(2000)	(1922)	(1918)	(1923)	(1925)	(1923)	(1925)	(1925)	(1970)	(1970)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1912 - 2004

ANNUAL TOTAL	223,263	263,616	
ANNUAL MEAN	612	720	728
HIGHEST ANNUAL MEAN			1,174
LOWEST ANNUAL MEAN			258
HIGHEST DAILY MEAN	5,470	May 13	7,520
LOWEST DAILY MEAN	239	Aug 15	14
ANNUAL SEVEN-DAY MINIMUM	273	Feb 27	15
MAXIMUM PEAK FLOW			7,520
MAXIMUM PEAK STAGE			11.05
INSTANTANEOUS LOW FLOW			14
10 PERCENT EXCEEDS	1,020		1,400
50 PERCENT EXCEEDS	320		580
90 PERCENT EXCEEDS	277		174

(a) Also occurred May 1-5, 1925

(b) Also occurred April 2, and April 5-9

(c) Estimated

CHIPPEWA RIVER BASIN

05356500 CHIPPEWA RIVER NEAR BRUCE, WI

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LOCATION.--Lat 45°27'06", long 91°15'40", in SE ¼ SW ¼ SE ¼ sec.5, T.34 N., R.7 W., Rusk County, Hydrologic Unit 07050001, on right bank 1.0 mi east of Bruce and 1.0 mi downstream from Thornapple River.

DRAINAGE AREA.--1,650 mi².

PERIOD OF RECORD.--December 1913 to current year.

REVISED RECORDS.--WSP 875: 1936-38. WSP 1308: 1922, 1937(M). WSP 1508: 1914-26(M), 1927, 1928-31(M), 1932, 1933(M), 1934-36, 1938. WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,059.62 ft above NGVD of 1929. Prior to May 28, 1935, nonrecording gage at railroad bridge 0.8 mi upstream at datum 2.30 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Flow from 48 percent of the drainage area regulated by Moose Lake and Lake Chippewa. 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	e520	686	e670	e550	e800	e1,200	4,850	2,670	8,020	778	843	685
2	e520	667	e700	e530	e790	e1,200	4,350	2,460	7,540	779	793	710
3	e520	648	e700	e530	e780	e1,200	4,050	2,320	5,930	774	784	683
4	524	662	e700	e520	e780	e1,200	4,010	2,190	4,930	794	830	617
5	530	690	e700	e500	e800	e1,300	3,390	2,130	4,420	861	944	738
6	527	677	e650	e480	e800	e1,300	3,030	2,070	4,540	863	937	1,490
7	514	e640	e630	e480	e800	e1,300	2,950	1,540	4,350	840	911	1,260
8	513	e700	e600	e490	e800	e1,200	2,510	1,550	3,960	842	970	1,020
9	493	e800	e600	e510	e790	e1,300	2,320	1,500	3,820	816	1,040	953
10	478	e700	e600	e540	e870	e1,400	2,020	1,680	3,970	782	1,030	992
11	499	672	e600	e530	e1,000	e1,400	2,210	1,640	3,130	760	1,050	1,020
12	694	619	e600	e530	e1,100	e1,300	2,150	1,470	2,430	794	1,080	989
13	682	e570	e600	e540	e1,100	e1,400	2,120	1,730	2,580	755	989	972
14	631	e600	e610	e540	e1,100	e1,400	2,610	2,890	2,230	781	980	930
15	603	e600	e660	e540	e1,100	e1,500	2,620	2,910	1,980	840	949	1,170
16	569	593	e700	e540	e1,100	e1,500	2,540	2,270	1,830	806	980	1,470
17	572	599	e660	e550	e1,100	e1,600	1,630	1,900	1,450	776	1,120	1,180
18	562	691	e630	e550	e1,100	e1,600	1,370	1,850	1,180	760	1,010	903
19	555	812	e620	e530	e1,200	e1,500	2,670	1,610	1,080	774	982	859
20	545	775	e610	e550	e1,200	e1,500	5,330	1,430	1,030	792	953	748
21	537	723	e600	e550	e1,200	e1,500	6,740	1,320	974	786	927	692
22	553	687	e600	e780	e1,200	e1,500	8,700	1,560	947	772	918	801
23	562	683	e600	e800	e1,200	1,510	8,340	2,550	926	780	898	916
24	550	e620	e600	e770	e1,200	1,140	7,720	4,230	887	744	898	907
25	455	e600	e600	e800	e1,200	952	7,520	4,580	853	687	903	966
26	574	e700	e600	e830	e1,200	938	7,090	3,750	828	680	884	954
27	576	e750	e600	e840	e1,200	1,410	5,660	3,630	818	684	767	971
28	592	e710	e620	e800	e1,200	3,350	3,660	4,320	830	676	714	1,000
29	642	e700	e630	e780	e1,200	6,640	3,200	3,790	808	726	649	886
30	679	e700	e600	e770	---	7,030	3,080	3,330	790	826	652	775
31	694	---	e580	e780	---	5,850	---	5,310	---	867	630	---
TOTAL	17,465	20,274	19,470	19,030	29,910	59,120	120,440	78,180	79,061	24,195	28,015	28,257
MEAN	563	676	628	614	1,031	1,907	4,015	2,522	2,635	780	904	942
MAX	694	812	700	840	1,200	7,030	8,700	5,310	8,020	867	1,120	1,490
MIN	455	570	580	480	780	938	1,370	1,320	790	676	630	617

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

MEAN	1,277	1,405	1,366	1,180	1,059	1,461	2,781	2,006	1,749	1,269	1,051	1,348
MAX	5,666	3,662	2,842	2,200	2,100	3,964	8,007	5,971	7,483	3,990	2,915	7,423
(WY)	(1986)	(1992)	(1992)	(1942)	(1971)	(1973)	(1916)	(1954)	(1943)	(1968)	(1972)	(1941)
MIN	296	459	442	356	338	404	590	390	411	317	364	338
(WY)	(1934)	(1990)	(1990)	(1922)	(1918)	(1923)	(1987)	(1925)	(1949)	(1925)	(1964)	(1976)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1914 - 2004

ANNUAL TOTAL	499,442	523,417	
ANNUAL MEAN	1,368	1,430	1,493
HIGHEST ANNUAL MEAN			2,290
LOWEST ANNUAL MEAN			666
HIGHEST DAILY MEAN	14,700	May 13	8,700
LOWEST DAILY MEAN	400	Aug 16	455
ANNUAL SEVEN-DAY MINIMUM	502	Aug 30	(a)501
MAXIMUM PEAK FLOW			8,790
MAXIMUM PEAK STAGE			9.84
INSTANTANEOUS LOW FLOW			430
10 PERCENT EXCEEDS	2,670	3,240	2,720
50 PERCENT EXCEEDS	753	848	1,100
90 PERCENT EXCEEDS	527	552	502

- (a) Ice affected
- (b) From rating curve extended above 25,100 ft³/s, gage height 18.12 ft
- (c) From floodmarks
- (e) Estimated due to ice effect or missing record

LOCATION.--Lat 46°01'26", long 89°39'10" (revised), in NW¼ NW¼ sec.20, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07050002, on right bank approximately 400 ft downstream from County Trunk Highway M, 6.1 mi south of Boulder Junction.

DRAINAGE AREA.--8.43 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,620 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good 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	15	20	e27	e9.0	e8.8	e10	18	18	14	e21	e11	e6.4
2	15	20	e23	e8.9	e9.0	e10	17	17	13	e27	e11	e6.0
3	16	20	e21	e8.9	e9.3	e10	16	15	13	e18	e12	e6.7
4	15	20	e19	e8.9	e9.9	e10	16	15	13	e15	e12	e6.3
5	14	19	e18	e8.9	e9.2	e11	15	14	12	e13	e13	e6.6
6	12	18	e17	e8.9	e8.9	e11	15	14	12	e11	e13	e8.0
7	11	17	e16	e8.9	e8.6	e11	15	13	e11	e9.0	e13	e8.0
8	7.9	17	e15	e8.9	e8.6	e11	16	12	e9.8	e12	e15	e8.1
9	8.3	15	e17	e8.9	e8.5	e11	16	11	e9.2	e8.9	e17	e7.4
10	8.5	16	e18	e8.8	e8.6	e11	15	12	e8.9	e8.9	e19	e8.0
11	12	15	e18	e8.8	e8.6	e13	15	12	e9.1	e9.0	e20	e10
12	17	14	e17	e8.8	e8.7	e15	13	12	e12	e8.2	e21	e8.9
13	19	14	e16	e8.8	e8.7	e16	13	15	e14	e9.4	e19	e8.1
14	18	13	e16	e10	e8.7	e15	13	15	e15	e12	e18	e9.5
15	18	13	e15	e9.9	e8.7	e15	12	14	e13	e8.5	e18	e11
16	14	15	e14	e9.7	e8.6	e15	11	13	e10	e8.5	e15	e11
17	13	14	e13	e9.5	e8.5	e14	11	13	e9.8	e10	e14	e10
18	13	21	e13	e9.3	e8.6	e14	19	12	e9.4	e9.3	e13	e9.4
19	14	23	e12	e9.1	e9.8	e14	40	11	e9.0	e12	e15	e8.3
20	14	23	e11	e9.1	e11	e14	39	11	e8.4	e12	e14	e8.1
21	15	22	e10	e9.1	e11	e14	39	11	e8.4	e9.9	e12	e7.8
22	16	e20	e9.6	e9.1	e11	e14	33	10	e8.5	e9.9	e9.5	e7.4
23	16	e20	e9.4	e8.9	e11	e14	27	12	e9.7	e9.4	e9.2	e7.0
24	17	e20	e9.3	e8.9	e11	14	25	12	e11	e9.4	e8.2	e6.5
25	18	e19	e9.3	e8.9	e11	14	24	11	e14	e9.4	e7.5	e6.3
26	18	e17	e9.3	e8.9	e11	16	23	11	e11	e11	e7.3	e6.1
27	18	e17	e9.3	e8.9	e11	17	21	12	e11	e11	e6.8	e5.8
28	20	e16	e9.2	e8.8	e11	18	20	11	e11	e10	e6.4	e5.5
29	20	e22	e9.2	e8.7	e11	20	19	11	e11	e11	e6.0	e5.4
30	20	e33	e9.1	e8.7	---	20	19	11	e16	e12	e6.2	e5.3
31	20	---	e9.1	e8.8	---	18	---	13	---	e11	e6.5	---
TOTAL	472.7	553	438.8	279.7	278.3	430	595	394	337.2	356.7	388.6	228.9
MEAN	15.2	18.4	14.2	9.02	9.60	13.9	19.8	12.7	11.2	11.5	12.5	7.63
MAX	20	33	27	10	11	20	40	18	16	27	21	11
MIN	7.9	13	9.1	8.7	8.5	10	11	10	8.4	8.2	6.0	5.3
CFSM	1.81	2.19	1.68	1.07	1.14	1.65	2.35	1.51	1.33	1.36	1.49	0.91
IN.	2.09	2.44	1.94	1.23	1.23	1.90	2.63	1.74	1.49	1.57	1.71	1.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	11.9	12.8	11.5	10.2	10.0	11.4	14.9	12.5	11.0	11.9	9.66	9.37		
MAX	22.7	20.2	14.5	14.9	12.8	15.8	19.8	19.3	14.9	17.1	12.5	14.8		
(WY)	(1992)	(1992)	(1998)	(1998)	(1998)	(1997)	(2004)	(1996)	(1993)	(1997)	(2004)	(1994)		
MIN	4.84	8.55	8.36	8.77	8.80	8.53	9.50	6.75	6.53	7.52	6.91	4.53		
(WY)	(2000)	(1999)	(2000)	(2002)	(1992)	(1999)	(1999)	(2000)	(2001)	(2003)	(1998)	(1999)		

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1991 - 2004

ANNUAL TOTAL	4,444.2	4,752.9		
ANNUAL MEAN	12.2	13.0	11.4	
HIGHEST ANNUAL MEAN			14.4	1997
LOWEST ANNUAL MEAN			9.15	2001
HIGHEST DAILY MEAN	(a)33	Nov 30	40	Apr 19
LOWEST DAILY MEAN	(b)1.4	Aug 2	(c)5.3	Sep 30
ANNUAL SEVEN-DAY MINIMUM	(b)1.8	Jul 28	(c)5.8	Sep 24
MAXIMUM PEAK FLOW			(d)44	Apr 20
MAXIMUM PEAK STAGE			(c)2.63	Sep 15
INSTANTANEOUS LOW FLOW			(g)	0.69
ANNUAL RUNOFF (CFSM)	1.44	1.54		1.36
ANNUAL RUNOFF (INCHES)	19.61	20.97		18.41
10 PERCENT EXCEEDS	19	19		16
50 PERCENT EXCEEDS	12	12		11
90 PERCENT EXCEEDS	6.8	8.5		7.4

(a) Ice affected

(c) Backwater from beaver dam

(e) Estimated due to beaver activity, ice effect, or missing record

(g) Unknown

(b) Due to storage from beaver dam upstream of gage

(d) Gage height, 1.93 ft

(f) Gage height, 2.36 ft

(h) Ice jam

CHIPPEWA RIVER BASIN

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05357225 STEVENSON CREEK, AT COUNTY TRUNK HIGHWAY M, NEAR BOULDER JUNCTION, WI

LOCATION.--Lat 46°03'41", long 89°38'50" (revised), in NW ¼ SE ¼ sec.5, T.41 N., R.7 E., Vilas County, Hydrologic Unit 07050002, at County Highway M, 3.6 mi south of Boulder Junction.

DRAINAGE AREA.--7.96 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,620 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). There is a small dam 2.5 miles upstream of the gage which occasionally affects discharge.

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	e4.0	2.3	e3.1	e2.8	e2.0	e3.2	3.6	2.1	4.8	9.9	2.7	4.0
2	e2.6	2.4	e3.1	e2.8	e2.0	e3.2	3.7	2.0	3.8	5.9	2.9	3.9
3	e2.8	2.4	e3.1	e2.7	e2.0	e3.1	3.4	1.9	3.0	5.1	3.1	3.8
4	e1.9	2.6	e3.1	e2.6	e2.0	3.0	3.3	1.9	2.6	4.9	3.8	3.8
5	e1.5	2.6	e3.2	e2.5	e2.1	2.8	3.5	1.9	2.6	4.6	3.8	3.9
6	e1.2	2.4	e3.2	e2.5	e2.1	2.7	4.0	2.0	2.5	4.4	3.7	4.7
7	e1.1	2.4	e3.2	e2.4	e2.1	2.7	3.7	1.9	2.8	4.4	3.8	4.2
8	e1.0	2.4	e3.2	e2.3	e2.1	2.6	5.0	1.9	2.8	3.7	3.8	4.1
9	e1.0	2.4	e3.2	e2.2	e2.1	2.6	3.9	2.0	2.6	3.3	4.1	3.9
10	e1.0	2.5	e3.2	e2.2	e2.1	2.6	3.5	2.0	2.4	3.1	6.7	3.8
11	0.93	2.6	e3.2	e2.2	e2.1	2.7	3.4	1.8	2.3	2.8	7.3	3.8
12	1.1	2.6	e3.1	e2.2	e2.1	2.6	3.2	3.6	2.7	2.5	7.0	3.7
13	0.90	2.5	e3.2	e2.2	e2.1	2.6	3.2	4.9	3.1	2.4	6.7	3.6
14	1.0	2.5	e3.2	e2.2	e2.1	2.6	3.3	3.5	3.7	2.0	6.2	3.6
15	1.1	2.7	e3.2	e2.2	e2.1	2.6	3.6	2.9	3.1	1.9	5.8	5.6
16	0.95	2.7	e3.2	e2.2	e2.3	2.5	4.0	2.6	2.5	2.4	5.8	5.2
17	0.74	2.8	e3.4	e2.1	e2.4	2.5	3.4	2.5	2.4	2.8	5.8	4.7
18	0.69	5.3	e3.4	e2.1	e2.5	2.5	7.5	2.3	2.4	2.6	5.8	4.7
19	0.67	3.5	e3.5	e2.1	e2.6	2.5	12	2.1	2.2	2.3	5.6	4.4
20	0.66	3.1	e3.5	e2.1	e2.7	2.5	4.2	2.2	2.1	2.0	5.1	4.2
21	0.65	2.9	e3.5	e2.0	e2.8	2.4	3.6	2.1	2.1	2.7	4.9	4.1
22	0.67	2.9	e3.4	e2.0	e2.8	2.4	3.2	2.2	2.2	2.7	4.8	4.0
23	0.73	3.0	e3.4	e2.0	e2.9	2.4	2.8	3.0	2.6	2.5	4.5	3.9
24	0.73	2.9	e3.4	e2.0	e3.0	2.5	2.5	3.6	7.8	2.7	4.5	4.0
25	0.73	e2.9	e3.5	e2.0	e3.0	2.7	2.6	3.1	30	3.0	4.6	4.0
26	0.75	e2.9	e3.5	e2.0	e3.1	3.6	2.5	3.0	35	3.0	4.5	3.9
27	0.83	e2.9	e3.4	e2.0	e3.1	3.6	2.2	3.4	34	3.0	4.3	3.8
28	0.99	e2.9	e3.3	e2.0	e3.1	6.2	2.2	2.9	32	2.9	4.2	3.8
29	1.0	e2.9	e3.2	e2.0	e3.2	4.8	2.4	2.6	30	3.2	4.0	3.7
30	1.2	e3.0	e3.0	e2.0	---	3.6	2.5	2.7	25	2.9	4.0	3.6
31	1.4	---	e2.9	e2.0	---	3.4	---	4.5	---	3.0	4.0	---
TOTAL	36.52	83.9	101.0	68.6	70.6	91.7	111.9	81.1	257.1	104.6	147.8	122.4
MEAN	1.18	2.80	3.26	2.21	2.43	2.96	3.73	2.62	8.57	3.37	4.77	4.08
MAX	4.0	5.3	3.5	2.8	3.2	6.2	12	4.9	35	9.9	7.3	5.6
MIN	0.65	2.3	2.9	2.0	2.0	2.4	2.2	1.8	2.1	1.9	2.7	3.6
CFSM	0.15	0.35	0.41	0.28	0.31	0.37	0.47	0.33	1.08	0.42	0.60	0.51
IN.	0.17	0.39	0.47	0.32	0.33	0.43	0.52	0.38	1.20	0.49	0.69	0.57

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	2.92	3.42	2.87	2.57	2.71	2.96	3.37	3.34	3.70	3.63	3.42	3.94		
MAX	4.02	6.28	4.12	3.53	3.87	4.34	5.28	6.18	8.57	7.50	4.84	6.85		
(WY)	(1996)	(1994)	(2003)	(1998)	(1998)	(1992)	(2002)	(1997)	(2004)	(2003)	(1997)	(1992)		
MIN	1.18	1.24	1.65	1.93	1.70	1.58	1.29	1.34	1.47	2.27	1.62	2.53		
(WY)	(2004)	(2000)	(2001)	(1999)	(1997)	(1995)	(1995)	(2000)	(1992)	(1998)	(1994)	(1995)		

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1991 - 2004

ANNUAL TOTAL	1,260.42	1,277.22		
ANNUAL MEAN	3.45	3.49		
HIGHEST ANNUAL MEAN			3.20	
LOWEST ANNUAL MEAN			3.79	2003
HIGHEST DAILY MEAN	24	Jul 3	(a)35	Jun 26
LOWEST DAILY MEAN	0.65	Oct 21	0.65	Oct 21
ANNUAL SEVEN-DAY MINIMUM	0.69	Oct 18	0.69	Oct 18
MAXIMUM PEAK FLOW			(a)35	Jun 27
MAXIMUM PEAK STAGE			(a)9.55	Jun 27
INSTANTANEOUS LOW FLOW			0.57	Oct 20
ANNUAL RUNOFF (CFSM)	0.434	0.438		
ANNUAL RUNOFF (INCHES)	5.89	5.97		
10 PERCENT EXCEEDS	5.0	4.7		
50 PERCENT EXCEEDS	3.1	2.9		
90 PERCENT EXCEEDS	1.8	2.0		

- (a) Small dam failure 2.5 miles upstream of gage
- (b) Gage height, 9.62 ft
- (c) Beaver dams
- (e) Estimated due to ice effect or missing record

CHIPPEWA RIVER BASIN

05357245 TROUT RIVER AT TROUT LAKE NEAR BOULDER JUNCTION, WI

369

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

DRAINAGE AREA.--46.2 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,620 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, 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	15	23	36	32	31	35	42	78	67	39	22	10
2	14	23	36	32	33	36	42	75	67	37	22	10
3	14	24	36	32	34	36	41	72	70	36	22	10
4	14	27	36	31	34	36	41	68	69	36	20	10
5	14	26	35	31	34	39	40	67	66	e36	18	e10
6	14	25	35	31	34	40	40	65	67	e36	17	e11
7	14	24	35	30	34	42	40	62	66	e35	16	e11
8	14	23	35	30	33	41	43	59	66	34	16	e12
9	15	22	37	29	33	41	43	59	67	32	15	e12
10	15	23	40	29	34	40	42	61	66	32	17	e11
11	15	23	41	30	34	42	41	58	e62	32	19	e11
12	17	23	40	30	34	41	41	62	e61	32	19	e12
13	17	23	40	30	33	42	40	80	61	32	18	e13
14	17	23	39	32	33	44	40	81	63	32	18	e14
15	16	23	39	33	32	43	39	79	63	31	e17	e16
16	15	24	40	33	32	42	40	77	53	30	e15	16
17	15	25	40	33	31	42	39	76	50	29	e13	16
18	15	33	39	33	31	42	53	73	46	28	e14	15
19	15	35	37	33	31	41	81	e71	43	27	13	15
20	15	35	36	32	34	40	83	e69	40	27	12	14
21	15	34	36	33	35	39	85	67	39	27	11	13
22	15	35	35	33	35	38	87	66	36	26	11	13
23	16	36	35	32	37	37	84	69	37	24	11	13
24	16	37	35	32	37	36	83	70	36	23	11	13
25	17	37	34	32	36	37	84	66	35	21	11	13
26	17	36	33	32	36	38	84	e64	36	22	11	12
27	17	37	33	32	35	39	82	66	36	21	11	12
28	19	37	33	32	35	42	80	64	36	20	11	11
29	20	36	33	31	35	44	79	62	36	20	11	11
30	22	37	33	31	---	44	81	65	37	21	10	10
31	23	---	32	31	---	43	---	66	---	22	10	---
TOTAL	497	869	1,124	977	980	1,242	1,740	2,117	1,577	900	462	370
MEAN	16.0	29.0	36.3	31.5	33.8	40.1	58.0	68.3	52.6	29.0	14.9	12.3
MAX	23	37	41	33	37	44	87	81	70	39	22	16
MIN	14	22	32	29	31	35	39	58	35	20	10	10
CFSM	0.35	0.63	0.78	0.68	0.73	0.87	1.26	1.48	1.14	0.63	0.32	0.27
IN.	0.40	0.70	0.91	0.79	0.79	1.00	1.40	1.70	1.27	0.72	0.37	0.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)

MEAN	30.5	35.4	38.2	37.9	36.6	36.8	46.5	52.6	45.1	42.5	32.4	27.6
MAX	46.9	55.4	58.1	60.1	47.9	44.9	62.2	74.5	59.6	57.0	49.7	44.4
(WY)	(2003)	(1997)	(1992)	(1997)	(1997)	(1992)	(2002)	(2002)	(1996)	(1996)	(1996)	(1997)
MIN	12.2	16.2	22.5	25.8	28.1	23.8	31.9	27.6	28.4	29.0	14.9	12.3
(WY)	(2000)	(2000)	(2000)	(1999)	(1999)	(1999)	(1999)	(2000)	(2000)	(2004)	(2004)	(2004)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1991 - 2004

ANNUAL TOTAL	12,758	12,855	
ANNUAL MEAN	35.0	35.1	38.3
HIGHEST ANNUAL MEAN			49.8
LOWEST ANNUAL MEAN			29.2
HIGHEST DAILY MEAN	84	May 12	96
LOWEST DAILY MEAN	14	(a)Sep 25	10
ANNUAL SEVEN-DAY MINIMUM	14	Oct 2	10
MAXIMUM PEAK FLOW			89
MAXIMUM PEAK STAGE			1.89
INSTANTANEOUS LOW FLOW			9.4
ANNUAL RUNOFF (CFSM)	0.757	0.760	0.828
ANNUAL RUNOFF (INCHES)	10.27	10.35	11.26
10 PERCENT EXCEEDS	53	66	55
50 PERCENT EXCEEDS	33	34	37
90 PERCENT EXCEEDS	17	13	22

(a) Also occurred additional days

(b) Also occurred Aug. 30, 2004

(c) Estimated due to ice effect or missing record

CHIPPEWA RIVER BASIN

370

05357254 TROUT RIVER AT COUNTY TRUNK HIGHWAY H NEAR BOULDER JUNCTION, WI

LOCATION.--Lat 46°02'02", long 89°46'21", in SE ¼ NW ¼ sec.17, T.41 N., R.6 E., Vilas County, Hydrologic Unit 07050002, on left bank 18 ft upstream from County Trunk Highway H, 8.3 mi southwest of Boulder Junction.

DRAINAGE AREA.--58.9 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,610 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges and periods of variable backwater, June 5 to Sept. 30, 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	33	31	e40	e30	e44	e50	60	90	74	54	35	50
2	31	29	e40	e30	e46	e50	59	85	69	54	34	53
3	32	29	e42	e30	e44	e48	57	81	65	56	34	53
4	32	32	e44	e30	e42	e46	54	78	63	59	34	55
5	35	37	e44	e32	e44	e44	53	74	62	57	32	56
6	34	e38	e44	e34	e46	e44	58	70	65	57	31	63
7	24	e36	e46	e34	e46	e44	58	67	62	56	30	59
8	28	e34	e44	e36	e46	e42	67	64	62	56	30	58
9	24	e32	e42	e36	e46	e44	64	64	63	56	30	59
10	20	e30	e40	e38	e46	e46	60	68	61	56	31	57
11	23	28	e40	e38	e46	e48	57	65	59	55	32	53
12	21	27	e40	e38	e48	e48	55	67	61	54	32	51
13	24	26	e38	e38	e48	e50	52	99	60	54	31	49
14	25	e26	e36	e40	e48	e50	50	103	60	55	30	45
15	25	25	e36	e40	e46	e50	48	97	59	54	29	48
16	24	26	e36	e40	e46	e52	49	90	59	54	29	48
17	27	28	e34	e40	e46	e52	49	86	59	55	31	45
18	25	45	e36	e42	e46	e54	82	82	57	55	32	41
19	22	49	e36	e42	e44	e56	169	77	56	55	32	38
20	21	45	e36	e42	e44	e56	142	75	53	55	30	33
21	31	43	e34	e42	e44	e58	125	74	52	51	30	e30
22	44	42	e34	e44	e44	e58	114	72	50	50	31	e23
23	27	43	e34	e44	e44	e58	104	78	50	47	30	27
24	27	e42	e34	e44	e44	e60	96	81	50	43	29	26
25	27	e40	e34	e44	e44	e62	96	76	48	41	29	25
26	28	e42	e34	e44	e44	e64	95	70	49	39	30	26
27	24	e44	e36	e44	e46	e66	90	72	48	38	30	27
28	25	e42	e36	e46	e48	e70	88	69	49	36	30	26
29	26	e42	e34	e46	e50	e78	90	65	50	36	33	25
30	31	e42	e32	e46	---	70	97	65	52	35	40	25
31	31	---	e30	e44	---	64	---	73	---	36	46	---
TOTAL	851	1,075	1,166	1,218	1,320	1,682	2,338	2,377	1,727	1,559	987	1,274
MEAN	27.5	35.8	37.6	39.3	45.5	54.3	77.9	76.7	57.6	50.3	31.8	42.5
MAX	44	49	46	46	50	78	169	103	74	59	46	63
MIN	20	25	30	30	42	42	48	64	48	35	29	23
CFSM	0.47	0.61	0.64	0.67	0.77	0.92	1.32	1.30	0.98	0.85	0.54	0.72
IN.	0.54	0.68	0.74	0.77	0.83	1.06	1.48	1.50	1.09	0.98	0.62	0.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

	30.8	37.8	36.6	37.3	42.8	49.6	67.3	66.0	59.8	66.6	57.2	42.4
MEAN	30.8	37.8	36.6	37.3	42.8	49.6	67.3	66.0	59.8	66.6	57.2	42.4
MAX	50.3	63.9	46.5	42.0	48.4	54.3	91.8	94.1	74.6	83.8	85.3	54.0
(WY)	(2003)	(2003)	(2003)	(2001)	(2000)	(2004)	(2002)	(2002)	(2002)	(2000)	(2001)	(2002)
MIN	20.0	23.2	27.2	32.9	36.7	40.5	49.1	41.3	49.4	50.3	31.8	27.6
(WY)	(2000)	(2000)	(1999)	(1999)	(2003)	(1999)	(1999)	(2000)	(1999)	(2004)	(2004)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1999 - 2004

ANNUAL TOTAL	17,231	17,574	
ANNUAL MEAN	47.2	48.0	49.5
HIGHEST ANNUAL MEAN			57.3
LOWEST ANNUAL MEAN			41.9
HIGHEST DAILY MEAN	137	169	169
LOWEST DAILY MEAN	20	20	16
ANNUAL SEVEN-DAY MINIMUM	23	23	17
MAXIMUM PEAK FLOW		(a)180	(a)180
MAXIMUM PEAK STAGE		(b)6.78	6.98
ANNUAL RUNOFF (CFSM)	0.801	0.815	0.841
ANNUAL RUNOFF (INCHES)	10.88	11.10	11.43
10 PERCENT EXCEEDS	71	70	75
50 PERCENT EXCEEDS	40	44	46
90 PERCENT EXCEEDS	27	28	29

(a) Gage height, 6.20 ft

(b) Ice affected

(c) Estimated

CHIPPEWA RIVER BASIN

05357335 BEAR RIVER NEAR MANITOWISH WATERS, WI

371

LOCATION.--Lat 46°02'56", long 89°59'04", in SE 1/4 NW 1/4 sec.10, T.41 N., R.4 E., Iron County, Hydrologic Unit 07050002, on right bank 10 ft upstream from East River Trail bridge, 2.3 mi upstream from Little Bear Creek, 7.7 mi southwest of Manitowish Waters, and 5.3 mi upstream from mouth.

DRAINAGE AREA.--81.3 mi².

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

GAGE.--Water-stage recorder and Doppler velocity meter. Elevation of gage is 1,580 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair 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	13	15	e19	e25	e32	e35	e130	146	148	46	e30	20
2	12	15	e19	e25	e31	e34	e130	139	145	45	e30	20
3	11	15	e19	e26	e31	e34	e130	133	136	43	e30	19
4	10	15	e19	e25	e31	e34	e120	122	126	42	e30	19
5	9.3	16	e19	e25	e31	e34	e120	113	121	43	e29	19
6	8.4	17	e19	e27	e32	e34	e120	105	121	43	e28	22
7	7.1	17	e19	e28	e33	e33	e120	100	120	42	e27	23
8	3.9	17	e21	e28	e34	e33	e133	97	111	42	e26	24
9	1.9	16	e22	e29	e35	e34	e139	100	111	41	e27	25
10	0.98	16	e23	e30	e35	e36	e133	102	111	40	e27	25
11	0.72	16	e24	e30	e36	e36	e121	106	105	38	e28	26
12	3.2	16	e25	e30	e37	e37	e113	110	106	38	e28	26
13	4.5	15	e26	e30	e37	e38	e104	126	99	38	e27	26
14	4.7	16	e26	e30	e37	e38	e98	136	93	39	e26	25
15	3.8	17	e26	e31	e37	e38	e98	139	86	38	e25	31
16	3.6	18	e26	e31	e38	e40	e97	136	80	37	e25	37
17	4.3	e18	e26	e32	e38	e42	e98	128	76	37	e26	38
18	5.1	e19	e26	e32	e37	e44	134	120	73	37	e28	37
19	6.1	e18	e27	e31	e37	e45	227	116	71	37	e28	37
20	5.6	e18	e28	e30	e36	e46	254	109	67	37	28	35
21	4.7	e18	e28	e30	e35	e47	251	106	63	37	27	32
22	5.2	e18	e27	e30	e35	e48	240	103	58	37	27	30
23	7.0	e18	e27	e31	e34	e51	223	107	59	36	26	28
24	8.0	e18	e27	e32	e33	e54	206	122	59	36	25	27
25	8.5	e18	e27	e32	e33	e59	193	125	57	36	24	25
26	8.6	e19	e27	e32	e33	e72	184	120	55	e35	23	23
27	8.9	e20	e27	e31	e34	e78	176	121	54	e34	23	22
28	10	e20	e25	e31	e35	e97	168	119	52	e33	22	22
29	11	e19	e25	e31	e36	e140	155	116	49	e32	21	21
30	13	e19	e25	e31	---	e130	153	119	48	e32	21	21
31	14	---	e25	e32	---	e130	---	139	---	e31	21	---
TOTAL	218.10	517	749	918	1,003	1,651	4,568	3,680	2,660	1,182	813	785
MEAN	7.04	17.2	24.2	29.6	34.6	53.3	152	119	88.7	38.1	26.2	26.2
MAX	14	20	28	32	38	140	254	146	148	46	30	38
MIN	0.72	15	19	25	31	33	97	97	48	31	21	19
CFSM	0.09	0.21	0.30	0.36	0.43	0.66	1.87	1.46	1.09	0.47	0.32	0.32
IN.	0.10	0.24	0.34	0.42	0.46	0.76	2.09	1.68	1.22	0.54	0.37	0.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

MEAN	54.4	63.5	56.6	47.6	52.6	75.4	137	119	84.2	75.7	62.9	50.4
MAX	130	151	118	105	110	187	275	230	129	131	198	159
(WY)	(1995)	(1992)	(2002)	(1992)	(1992)	(1992)	(2002)	(2002)	(1993)	(2001)	(2001)	(1994)
MIN	6.13	8.52	8.20	7.92	12.2	26.6	44.1	36.9	54.4	38.1	8.08	4.60
(WY)	(1999)	(1999)	(1999)	(1999)	(1999)	(1999)	(1999)	(1998)	(1992)	(2004)	(1998)	(1998)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1992 - 2004

ANNUAL TOTAL	19,749.10	18,744.10	
ANNUAL MEAN	54.1	51.2	73.4
HIGHEST ANNUAL MEAN			107
LOWEST ANNUAL MEAN			34.3
HIGHEST DAILY MEAN	314	May 13	570
LOWEST DAILY MEAN	(a)0.72	Oct 11	(a)0.72
ANNUAL SEVEN-DAY MINIMUM	(a)2.8	Oct 9	(a)2.8
MAXIMUM PEAK FLOW		(b)260	(c)589
MAXIMUM PEAK STAGE		(d)3.17	3.62
ANNUAL RUNOFF (CFSM)	0.666	0.630	0.902
ANNUAL RUNOFF (INCHES)	9.04	8.58	12.26
10 PERCENT EXCEEDS	121	123	140
50 PERCENT EXCEEDS	31	32	58
90 PERCENT EXCEEDS	12	16	21

(a) Result of beaver dam upstream

(b) Gage height, 3.04 ft

(c) Gage height, 3.47 ft

(d) Ice affected

(e) Estimated due to ice effect or missing record

05358170 BUTTERNUT CREEK AT CUTOFF ROAD NEAR BUTTERNUT, WI

LOCATION.--Lat 45°59'47", long 90°03'11", in SW ¼ SE ¼ SW ¼ sec.28, T.41 N., R.1 W., Ashland County, Hydrologic Unit 07050002, on left bank downstream side of bridge on Cutoff Road.

DRAINAGE AREA.--28.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 2002 to October 2004 (discontinued).

GAGE.--Water-stage recorder. Side-looking velocity meter system. Elevation of gage is 1,490 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair 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	12	18	e9.8	e7.7	e8.2	e8.8	194	44	89	10	13	6.6
2	e6.0	7.1	e9.6	e7.7	e8.7	e9.0	146	39	83	10	10	7.3
3	e6.2	13	e9.5	e7.5	e8.9	e9.2	142	33	62	9.1	6.7	6.9
4	e6.5	14	e9.4	e7.4	e9.0	e9.3	130	27	42	16	5.3	7.1
5	e6.2	14	e9.2	e7.4	e8.9	e9.3	120	26	35	18	7.0	18
6	e6.4	18	e9.0	e7.4	e8.8	e9.4	118	22	43	15	5.1	37
7	6.6	11	e9.5	e7.2	e8.8	e9.4	128	22	48	17	3.9	39
8	6.5	8.0	e10	e7.1	e8.9	e9.3	149	20	36	14	6.8	30
9	e5.8	7.9	e10	e7.1	e8.8	e9.0	164	20	30	12	7.0	21
10	9.0	e7.3	e10	e7.2	e8.6	e9.8	162	20	30	10	9.0	11
11	19	e7.1	e10	e7.1	e8.6	e10	138	18	27	8.6	17	8.8
12	e14	6.8	e10	e7.6	e8.6	e9.7	106	18	28	12	18	7.9
13	12	7.8	e9.8	e7.6	e8.6	e9.4	81	37	25	9.9	17	11
14	5.6	e7.0	e9.6	e7.5	e8.5	e9.2	70	72	21	8.3	14	6.2
15	7.5	e6.8	e9.4	e7.4	e8.5	e9.0	69	74	17	9.6	11	16
16	11	9.4	e9.4	e7.4	e8.4	e8.8	76	53	14	8.6	10	28
17	e8.0	15	e9.0	e7.3	e8.4	e8.6	85	42	12	6.5	8.8	23
18	e7.2	39	e8.8	e7.3	e8.4	e8.4	140	37	11	6.8	10	21
19	e6.8	53	e7.8	e7.3	e8.7	e8.3	413	32	9.9	7.7	7.4	17
20	11	51	e7.2	e7.3	e8.8	e8.3	513	28	11	24	4.9	15
21	9.4	35	e7.0	e7.3	e8.9	e8.2	325	28	8.9	21	5.9	7.6
22	8.1	26	e6.9	e7.2	e8.9	e8.2	226	24	8.6	12	5.5	11
23	6.9	e18	e6.6	e7.2	e9.0	e8.2	168	35	9.1	8.9	3.6	8.7
24	7.9	e15	e6.5	e7.2	e8.6	e8.1	128	68	10	12	2.3	5.5
25	12	e14	e6.4	e7.1	e8.0	e11	106	77	8.5	6.3	4.1	7.0
26	8.4	e13	e6.7	e7.1	e7.6	e19	95	64	8.4	7.0	7.7	7.8
27	16	e12	e7.0	e7.1	e7.9	e24	86	54	6.8	5.0	6.9	8.5
28	e17	e11	e7.4	e7.1	e8.1	e43	72	49	8.8	4.4	8.7	7.4
29	e14	e10	e7.5	e7.1	e8.4	e140	62	45	8.0	8.6	9.3	7.4
30	15	e9.8	e7.6	e7.1	---	e160	53	47	6.8	11	8.5	2.8
31	23	---	e7.7	e7.7	---	e170	---	81	---	15	7.3	---
TOTAL	311.0	485.0	264.3	226.7	248.5	781.9	4,465	1,256	757.8	344.3	261.7	411.5
MEAN	10.0	16.2	8.53	7.31	8.57	25.2	149	40.5	25.3	11.1	8.44	13.7
MAX	23	53	10	7.7	9.0	170	513	81	89	24	18	39
MIN	5.6	6.8	6.4	7.1	7.6	8.1	53	18	6.8	4.4	2.3	2.8
CFSM	0.35	0.56	0.30	0.25	0.30	0.87	5.15	1.40	0.87	0.38	0.29	0.47
IN.	0.40	0.62	0.34	0.29	0.32	1.01	5.75	1.62	0.98	0.44	0.34	0.53

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

MEAN	10.0	15.7	8.40	4.98	5.33	15.1	114	73.3	23.0	9.85	7.85	10.4
MAX	10.0	16.2	8.53	7.31	8.57	25.2	149	106	25.3	11.1	8.44	13.7
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(2004)	(2004)	(2004)
MIN	10.0	15.3	8.27	2.65	1.98	5.01	79.7	40.5	20.7	8.58	7.26	7.03
(WY)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2003 - 2004

ANNUAL TOTAL	8,355.06	9,813.7										
ANNUAL MEAN	22.9	26.8									26.8	
HIGHEST ANNUAL MEAN											26.8	2004
LOWEST ANNUAL MEAN											26.8	2004
HIGHEST DAILY MEAN	608	May 12					513	Apr 20		608	May 12, 2003	
LOWEST DAILY MEAN	0.66	Sep 11					2.3	Aug 24		0.66	Sep 11, 2003	
ANNUAL SEVEN-DAY MINIMUM	(a)1.6	Jan 23					4.8	Aug 19		(a)1.6	Jan 23, 2003	
ANNUAL RUNOFF (CFSM)	0.792						0.928			0.928		
ANNUAL RUNOFF (INCHES)	10.75						12.63			12.61		
10 PERCENT EXCEEDS	50						69			69		
50 PERCENT EXCEEDS	8.3						9.4			9.4		
90 PERCENT EXCEEDS	1.8						6.8			6.8		

(a) Ice affected

(e) Estimated due to ice effect or missing record

05358170 BUTTERNUT CREEK AT CUTOFF ROAD NEAR BUTTERNUT, 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	8.0	---	---	---	---	---	---	---	---	---	---	---
2	18	---	---	---	---	---	---	---	---	---	---	---
3	18	---	---	---	---	---	---	---	---	---	---	---
4	18	---	---	---	---	---	---	---	---	---	---	---
5	9.4	---	---	---	---	---	---	---	---	---	---	---
6	11	---	---	---	---	---	---	---	---	---	---	---
7	9.6	---	---	---	---	---	---	---	---	---	---	---
8	9.3	---	---	---	---	---	---	---	---	---	---	---
9	8.6	---	---	---	---	---	---	---	---	---	---	---
10	9.5	---	---	---	---	---	---	---	---	---	---	---
11	8.2	---	---	---	---	---	---	---	---	---	---	---
12	8.5	---	---	---	---	---	---	---	---	---	---	---
13	6.7	---	---	---	---	---	---	---	---	---	---	---
14	6.6	---	---	---	---	---	---	---	---	---	---	---
15	5.7	---	---	---	---	---	---	---	---	---	---	---
16	7.2	---	---	---	---	---	---	---	---	---	---	---
17	9.7	---	---	---	---	---	---	---	---	---	---	---
18	11	---	---	---	---	---	---	---	---	---	---	---
19	11	---	---	---	---	---	---	---	---	---	---	---
20	e12	---	---	---	---	---	---	---	---	---	---	---
21	e13	---	---	---	---	---	---	---	---	---	---	---
22	e15	---	---	---	---	---	---	---	---	---	---	---
23	18	---	---	---	---	---	---	---	---	---	---	---
24	26	---	---	---	---	---	---	---	---	---	---	---
25	26	---	---	---	---	---	---	---	---	---	---	---
26	20	---	---	---	---	---	---	---	---	---	---	---
27	e17	---	---	---	---	---	---	---	---	---	---	---
28	14	---	---	---	---	---	---	---	---	---	---	---
29	e29	---	---	---	---	---	---	---	---	---	---	---
30	e38	---	---	---	---	---	---	---	---	---	---	---
31	e36	---	---	---	---	---	---	---	---	---	---	---
TOTAL	458.0	---	---	---	---	---	---	---	---	---	---	---
MEAN	14.8	---	---	---	---	---	---	---	---	---	---	---
MAX	38	---	---	---	---	---	---	---	---	---	---	---
MIN	5.7	---	---	---	---	---	---	---	---	---	---	---
CFSM	0.51	---	---	---	---	---	---	---	---	---	---	---
IN.	0.59	---	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

	MEAN	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.4	15.7	8.40	4.98	5.33	15.1	114	73.3	23.0	9.85	7.85	10.4
MAX	14.8	16.2	8.53	7.31	8.57	25.2	149	106	25.3	11.1	8.44	13.7
(WY)	(2005)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(2004)	(2004)	(2004)
MIN	10.0	15.3	8.27	2.65	1.98	5.01	79.7	40.5	20.7	8.58	7.26	7.03
(WY)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR (January - October)		FOR 2005 WATER YEAR (October)		WATER YEARS 2003 - 2005	
ANNUAL TOTAL	9,211.4		458.0			
ANNUAL MEAN	30.2		14.8		25.0	
HIGHEST ANNUAL MEAN					26.8	
LOWEST ANNUAL MEAN					14.8	
HIGHEST DAILY MEAN	513	Apr 20	38	Oct 30	608	May 12, 2003
LOWEST DAILY MEAN	2.3	Aug 24	5.7	Oct 15	0.66	Sep 11, 2003
ANNUAL SEVEN-DAY MINIMUM	4.8	Aug 19	7.5	Oct 10	(a)1.6	Jan 23, 2003
ANNUAL RUNOFF (CFSM)	1.05		0.511		0.865	
ANNUAL RUNOFF (INCHES)	11.86		0.59		11.76	
10 PERCENT EXCEEDS	79		28		54	
50 PERCENT EXCEEDS	9.6		11		9.3	
90 PERCENT EXCEEDS	7.0		6.8		3.3	

(e) Estimated due to ice effect or missing record

05358170 BUTTERNUT CREEK AT CUTOFF ROAD NEAR BUTTERNUT, WI—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 2002 to October 2004 (discontinued).

PERIOD OF DAILY RECORD.--

TOTAL-PHOSPHORUS DISCHARGE: November 2002 to October 2004 (discontinued).

INSTRUMENTATION.--Automatic, pumping, and refrigerated water sampler.

REMARKS.--Total-phosphorus loads generally are good. For periods during which discharge records were estimated, load estimates are fair to poor.

EXTREMES FOR PERIOD OF RECORD.--

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 131 lb, Apr. 20, 2004; minimum daily, 0.18 lb, Mar. 10, 2003.

EXTREMES FOR CURRENT PERIOD (OCTOBER 2003 TO OCTOBER 2004).--

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 131 lb, Apr. 20; minimum daily, 0.66 lb, Aug. 24.

PHOSPHORUS, WATER, UNFILTERED, POUNDS PER DAY
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.21	3.42	e2.39	e1.50	e2.49	e1.81	53.4	5.65	19.6	4.09	4.03	2.04
2	e1.59	1.33	e2.37	e1.52	e2.68	e1.85	36.7	5.04	15.3	4.10	3.11	2.28
3	e1.60	2.52	e2.37	e1.50	e2.79	e2.12	32.1	4.28	10.6	3.56	2.03	2.17
4	e1.65	2.66	e2.38	e1.50	e2.86	e2.14	26.5	3.45	7.56	6.35	1.59	2.27
5	e1.55	2.66	e2.36	e1.53	e2.87	e1.98	25.4	3.33	6.48	6.88	2.07	5.84
6	e1.57	3.32	e2.34	e1.55	e2.88	e1.97	26.0	2.82	8.28	5.82	1.50	11.9
7	1.60	2.13	e2.50	e1.53	e2.92	e1.94	27.6	2.89	9.65	6.31	1.16	12.8
8	1.54	1.52	e2.67	e1.53	e3.00	e1.89	27.0	2.61	7.61	5.21	1.98	10.0
9	e1.34	1.49	e2.67	e1.55	e3.01	e1.81	27.5	2.62	6.67	4.42	2.05	7.10
10	2.07	e1.38	e2.56	e1.59	e2.98	e1.94	27.6	2.59	6.85	3.68	2.59	3.86
11	4.22	e1.35	e2.43	e1.59	e3.03	e1.95	25.7	2.33	6.54	3.16	4.78	2.97
12	e3.09	1.29	e2.31	e1.73	e3.07	e1.86	19.2	2.34	6.97	4.21	5.25	2.71
13	2.74	1.49	e2.15	e1.76	e3.12	e1.78	14.6	8.76	6.48	3.57	4.81	3.68
14	1.21	e1.35	e2.01	e1.76	e3.12	e1.71	12.8	23.5	5.77	2.99	4.01	2.17
15	1.58	e1.30	e1.87	e1.76	e3.17	e1.98	12.7	19.1	4.89	3.42	3.02	5.51
16	2.35	1.80	e1.78	e1.78	e3.18	e1.92	14.1	12.3	4.03	3.04	2.79	9.89
17	e1.63	3.31	e1.62	e1.79	e3.23	e1.94	16.2	8.96	3.71	2.27	2.46	8.40
18	e1.44	13.1	e1.50	e1.81	e3.27	e2.00	40.4	7.80	3.69	2.34	2.84	7.48
19	e1.34	21.7	e1.28	e1.84	e3.44	e1.98	128	6.31	3.34	2.63	2.05	6.11
20	2.21	11.7	e1.18	e1.86	e3.53	e1.99	131	5.15	3.75	8.01	1.37	5.44
21	1.79	7.53	e1.17	e1.89	e3.62	e1.97	67.4	4.79	3.24	6.93	1.67	2.83
22	1.52	5.57	e1.17	e1.89	e3.68	e1.98	39.5	3.79	3.27	4.00	1.56	4.22
23	1.27	e3.95	e1.13	e1.92	e3.77	e1.98	24.2	5.43	3.63	2.94	1.02	3.23
24	1.46	e3.34	e1.13	e1.95	e3.47	e2.15	17.4	11.9	4.23	3.76	0.66	2.06
25	2.30	e3.15	e1.13	e1.95	e1.75	e3.39	15.6	12.4	3.51	2.02	1.21	2.61
26	2.33	e2.97	e1.20	e1.98	e1.56	e6.70	13.0	9.71	3.43	2.23	2.26	2.89
27	2.97	e2.77	e1.27	e2.01	e1.62	e9.25	11.1	8.06	2.78	1.59	2.05	3.17
28	e3.14	e2.58	e1.36	e2.04	e1.66	e18.0	9.31	7.12	3.56	1.40	2.61	2.76
29	e2.60	e2.37	e1.40	e2.07	e1.72	e62.5	8.09	6.42	3.21	2.67	2.81	2.73
30	2.77	e2.36	e1.44	e2.10	---	e66.2	6.81	7.44	2.69	3.28	2.58	1.03
31	4.23	---	e1.48	e2.31	---	58.0	---	16.1	---	4.46	2.23	---
TOTAL	65.91	117.41	56.62	55.09	83.49	270.68	936.91	224.99	181.32	121.34	76.15	142.15
WTR YR	2004	TOTAL	2,332.06									

e Estimated

05358170 BUTTERNUT CREEK AT CUTOFF ROAD NEAR BUTTERNUT, 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)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)
OCT						
23...	1215	--	9.3	50	--	.034
NOV						
18...	1345	--	43	50	.039	.064
19...	1530	--	52	50	--	.086
20...	0915	--	56	50	--	.039
DEC						
09...	1015	10	--	50	--	.050
19...	1300	7.8	--	70	.019	.030
JAN						
21...	1415	7.3	--	50	.033	.048
FEB						
24...	1640	8.6	--	50	--	.079
25...	0720	8.0	--	50	.031	.038
MAR						
03...	0130	9.2	--	50	--	.038
04...	0130	9.3	--	50	--	.049
04...	1330	9.3	--	50	--	.040
15...	1100	9.0	--	50	--	.034
15...	1110	9.0	--	50	.029	.049
16...	2300	8.8	--	50	--	.037
17...	1600	8.6	--	70	--	.044
26...	0845	19	--	50	--	.065
29...	1435	140	--	50	.034	.085
31...	1230	170	--	10	--	.067
31...	1235	170	--	50	--	.068
31...	1900	170	--	50	--	.051
APR						
01...	1115	--	240	50	--	.052
02...	1115	--	159	50	--	.047
04...	1215	--	131	50	--	.037
06...	1745	--	115	10	--	.042
06...	1750	--	115	50	.024	.040
07...	1215	--	128	50	--	.041
08...	1215	--	151	50	--	.033
10...	0015	--	167	50	--	.030
11...	1215	--	134	50	--	.035
13...	0015	--	94	50	--	.033
17...	1815	--	87	50	--	.035
18...	1815	--	170	50	--	.060
19...	1815	--	494	50	--	.057
20...	1430	--	487	10	--	.046
20...	1435	--	488	50	--	.046
20...	1815	--	471	50	--	.042
21...	1815	--	307	50	--	.037
22...	1300	--	218	50	--	.032
24...	0100	--	142	50	--	.024
25...	1300	--	103	50	--	.028
27...	0100	--	97	50	--	.024
MAY						
11...	0745	--	15	50	--	.024
13...	2045	--	66	50	--	.072
15...	0845	--	72	50	--	.048
17...	1745	--	40	50	.024	.038
17...	1800	--	43	50	--	.041
24...	2130	--	78	50	--	.032
25...	1530	--	74	50	--	.029
26...	0930	--	67	50	--	.028
30...	2230	--	65	50	--	.033
JUN						
01...	1030	--	88	50	--	.043
02...	2230	--	73	50	--	.031
24...	1350	--	13	50	.033	.077
JUL						
15...	1030	--	2.0	50	.047	.066
30...	1515	--	13	50	--	.057
AUG						
19...	1005	--	6.8	50	.038	.051
SEP						
21...	1440	--	14	50	.044	.069
28...	0940	--	9.3	50	--	.069

05358170 BUTTERNUT CREEK AT CUTOFF ROAD NEAR BUTTERNUT, WI—Continued

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

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT					
05...	0950	3.7	50	--	.047
11...	0745	22	50	--	.040
25...	1300	26	50	--	.046
27...	1445	17	50	.021	.037
29...	1000	29	50	--	.042
29...	1005	29	10	.026	.042

CHIPPEWA RIVER BASIN

05358180 SPILLER CREEK AT COUNTY HIGHWAY B NEAR BUTTERNUT, WI

377

LOCATION.--Lat 45°58'44", long 90°31'48", in SE 1/4 NE 1/4 NE 1/4 sec.6, T.40 N., R.1 W., Price County, Hydrologic Unit 07050002, on right bank approximately 200 ft upstream of culvert on County Highway B, and approximately 2,000 ft upstream of Butternut Lake.

DRAINAGE AREA.--9.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 2002 to October 2004 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is approximately 1,495 ft above NGVD, 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	2.5	5.5	e4.2	e3.4	e3.0	e1.8	58	13	53	2.7	3.9	2.5
2	2.5	4.3	e4.0	e3.3	e3.0	e2.0	55	11	39	2.5	3.9	2.3
3	2.8	3.7	e3.9	e3.2	e3.0	e2.2	58	9.0	22	3.3	3.6	2.2
4	3.5	4.1	e3.7	e3.1	e3.0	e2.4	58	8.3	14	4.7	3.0	2.2
5	2.4	4.5	e3.5	e2.9	e2.9	e2.4	56	7.3	12	4.8	3.0	5.7
6	2.7	4.5	e3.4	e2.8	e2.9	e2.4	60	6.6	17	4.3	2.4	13
7	3.8	e4.2	e3.5	e2.7	e2.9	e2.4	62	5.9	13	4.4	2.6	17
8	1.7	e4.0	e3.6	e2.7	e2.9	e2.4	61	5.7	9.0	4.1	3.4	10
9	2.0	e3.8	e3.6	e2.7	e2.9	e2.3	55	5.4	10	3.6	3.5	4.5
10	2.9	e3.6	e3.5	e2.7	e2.9	e2.2	44	6.0	10	3.3	4.7	3.1
11	4.1	e3.4	e3.4	e2.9	e2.8	e3.1	34	5.3	7.8	3.3	4.6	2.8
12	5.9	e3.4	e3.4	e3.2	e2.7	e3.2	26	5.4	9.5	4.4	5.2	2.4
13	4.9	e3.4	e3.4	e3.2	e2.5	e3.1	21	19	8.7	6.1	4.4	2.2
14	4.1	e3.3	e3.3	e3.1	e2.2	e3.0	19	47	7.1	5.9	3.7	2.1
15	4.0	3.1	e3.3	e3.0	e1.9	e2.9	19	33	6.1	4.7	3.1	4.2
16	3.1	3.6	e3.3	e3.0	e1.9	e2.9	22	19	5.4	3.8	3.1	8.9
17	2.9	4.5	e3.3	e3.0	e2.0	e2.8	22	16	5.0	3.2	3.2	6.1
18	3.1	13	e3.2	e2.9	e2.1	e2.6	49	15	4.6	2.9	3.0	4.1
19	2.6	16	e3.2	e2.9	e2.1	e2.4	167	11	4.0	2.8	3.0	3.2
20	3.4	11	e3.2	e2.8	e2.1	e2.2	125	9.7	3.7	3.2	2.8	3.6
21	1.9	8.1	e3.2	e2.8	e1.9	e2.2	83	8.7	4.0	3.4	2.5	2.1
22	2.0	6.7	e3.0	e2.8	e1.7	e2.2	64	7.8	4.2	3.2	2.4	2.0
23	2.1	6.1	e3.0	e2.8	e1.7	2.2	45	14	3.5	2.8	2.2	1.9
24	2.3	e6.0	e2.9	e2.8	e1.6	2.2	31	32	3.9	2.5	2.3	2.2
25	2.1	e5.8	e2.9	e2.8	e1.5	2.9	31	26	3.9	2.4	2.3	2.3
26	2.4	e5.4	e3.0	e2.8	e1.4	7.7	32	16	4.3	2.3	2.6	2.9
27	2.2	e5.1	e3.1	e2.8	e1.5	20	25	16	3.1	2.2	2.7	2.1
28	3.3	e4.7	e3.3	e2.8	e1.6	69	21	15	2.7	2.2	2.7	2.1
29	3.5	e4.5	e3.4	e2.8	e1.7	85	18	11	2.8	3.3	2.3	2.1
30	4.7	e4.4	e3.4	e2.8	---	69	16	17	2.7	3.3	2.6	2.0
31	6.2	---	e3.4	e2.9	---	63	---	50	---	4.0	2.3	---
TOTAL	97.6	163.7	104.5	90.4	66.3	376.1	1,437	472.1	296.0	109.6	97.0	123.8
MEAN	3.15	5.46	3.37	2.92	2.29	12.1	47.9	15.2	9.87	3.54	3.13	4.13
MAX	6.2	16	4.2	3.4	3.0	85	167	50	53	6.1	5.2	17
MIN	1.7	3.1	2.9	2.7	1.4	1.8	16	5.3	2.7	2.2	2.2	1.9
CFSM	0.35	0.60	0.37	0.32	0.25	1.33	5.26	1.67	1.08	0.39	0.34	0.45
IN.	0.40	0.67	0.43	0.37	0.27	1.54	5.87	1.93	1.21	0.45	0.40	0.51

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

	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
MEAN	3.15	5.07	3.17	2.40	2.02	8.32	36.9	22.8	8.53	3.06	2.54	3.06
MAX	3.15	5.46	3.37	2.92	2.29	12.1	47.9	30.4	9.87	3.54	3.13	4.13
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(2004)	(2004)	(2004)
MIN	3.15	4.69	2.96	1.88	1.75	4.51	25.8	15.2	7.20	2.58	1.95	1.99
(WY)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2003 - 2004

ANNUAL TOTAL	2,744.7	3,434.1		
ANNUAL MEAN	7.52	9.38		
HIGHEST ANNUAL MEAN			9.38	2004
LOWEST ANNUAL MEAN			9.38	2004
HIGHEST DAILY MEAN	192	May 12	167	Apr 19
LOWEST DAILY MEAN	1.2	Sep 3	(a)1.4	Feb 26
ANNUAL SEVEN-DAY MINIMUM	(a)1.3	Feb 10	(a)1.6	Feb 22
MAXIMUM PEAK FLOW			185	Apr 19
MAXIMUM PEAK STAGE			9.92	Apr 19
INSTANTANEOUS LOW FLOW			(a)	1.0
ANNUAL RUNOFF (CFSM)	0.826	1.03		1.03
ANNUAL RUNOFF (INCHES)	11.22	14.04		14.01
10 PERCENT EXCEEDS	16	21		21
50 PERCENT EXCEEDS	3.1	3.3		3.3
90 PERCENT EXCEEDS	1.6	2.2		2.2

(a) Ice affected

(e) Estimated due to ice effect or missing record

05358180 SPILLER CREEK AT COUNTY HIGHWAY B NEAR BUTTERNUT, 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	2.8		---	---	---	---	---	---	---	---	---	---
2	4.4		---	---	---	---	---	---	---	---	---	---
3	4.1	---	---	---	---	---	---	---	---	---	---	---
4	3.3	---	---	---	---	---	---	---	---	---	---	---
5	3.0	---	---	---	---	---	---	---	---	---	---	---
6	2.6	---	---	---	---	---	---	---	---	---	---	---
7	2.4	---	---	---	---	---	---	---	---	---	---	---
8	2.6	---	---	---	---	---	---	---	---	---	---	---
9	2.5	---	---	---	---	---	---	---	---	---	---	---
10	2.4	---	---	---	---	---	---	---	---	---	---	---
11	2.3	---	---	---	---	---	---	---	---	---	---	---
12	2.4	---	---	---	---	---	---	---	---	---	---	---
13	2.3	---	---	---	---	---	---	---	---	---	---	---
14	2.5	---	---	---	---	---	---	---	---	---	---	---
15	2.5	---	---	---	---	---	---	---	---	---	---	---
16	2.5	---	---	---	---	---	---	---	---	---	---	---
17	2.4	---	---	---	---	---	---	---	---	---	---	---
18	2.4	---	---	---	---	---	---	---	---	---	---	---
19	2.3	---	---	---	---	---	---	---	---	---	---	---
20	2.3	---	---	---	---	---	---	---	---	---	---	---
21	2.2	---	---	---	---	---	---	---	---	---	---	---
22	2.3	---	---	---	---	---	---	---	---	---	---	---
23	5.4	---	---	---	---	---	---	---	---	---	---	---
24	10	---	---	---	---	---	---	---	---	---	---	---
25	7.6	---	---	---	---	---	---	---	---	---	---	---
26	5.4	---	---	---	---	---	---	---	---	---	---	---
27	4.2	---	---	---	---	---	---	---	---	---	---	---
28	5.0	---	---	---	---	---	---	---	---	---	---	---
29	13	---	---	---	---	---	---	---	---	---	---	---
30	15	---	---	---	---	---	---	---	---	---	---	---
31	14	---	---	---	---	---	---	---	---	---	---	---
TOTAL MEAN	138.1	---	---	---	---	---	---	---	---	---	---	---
MAX	4.45	---	---	---	---	---	---	---	---	---	---	---
MIN	15	---	---	---	---	---	---	---	---	---	---	---
CFSM	2.2	---	---	---	---	---	---	---	---	---	---	---
IN.	0.49	---	---	---	---	---	---	---	---	---	---	---
	0.56	---	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

MEAN	3.80	5.17	3.17	2.40	2.02	8.32	36.9	22.8	8.53	3.06	2.54	3.06
MAX	4.45	8.20	3.37	2.92	2.29	12.1	47.9	30.4	9.87	3.54	3.13	4.13
(WY)	(2005)	(2005)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(2004)	(2004)	(2004)
MIN	3.15	4.69	2.96	1.88	1.75	4.51	25.8	15.2	7.20	2.58	1.95	1.99
(WY)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

WATER YEARS 2003 - 2005

ANNUAL TOTAL	3,222.8											
ANNUAL MEAN	10.5										8.46	
HIGHEST ANNUAL MEAN											9.38	2004
LOWEST ANNUAL MEAN											4.68	2005
HIGHEST DAILY MEAN	167	Apr 19					15	Oct 30		192		May 12, 2003
LOWEST DAILY MEAN	1.4	Feb 26					2.2	Oct 21		1.2		Sep 3, 2003
ANNUAL SEVEN-DAY MINIMUM	1.6	Feb 22					2.3	Oct 16		1.3		Feb 10, 2003
MAXIMUM PEAK FLOW										229		May 12, 2003
MAXIMUM PEAK STAGE										10.29		May 12, 2003
INSTANTANEOUS LOW FLOW										1.0		Aug 15, 2003
ANNUAL RUNOFF (CFSM)	1.15						0.514			0.930		
ANNUAL RUNOFF (INCHES)	13.17						0.63			12.63		
10 PERCENT EXCEEDS	27						12			19		
50 PERCENT EXCEEDS	3.2						2.6			3.2		
90 PERCENT EXCEEDS	2.2						2.3			1.8		

05358180 SPILLER CREEK AT COUNTY HIGHWAY B NEAR BUTTERNUT, WI—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 2002 to October 2004 (discontinued).

PERIOD OF DAILY RECORD.--

TOTAL-PHOSPHORUS DISCHARGE: November 2002 to October 2004 (discontinued).

INSTRUMENTATION.--Automatic, pumping, refrigerated water sampler.

REMARKS.--Total-phosphorus loads generally good. For periods during which discharge records were estimated, load estimates are fair to poor.

EXTREMES FOR PERIOD OF RECORD.--

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 82.2 lb, May 11, 2003; minimum daily, 0.17 lb, Mar. 10 and 12, 2003.

EXTREMES FOR CURRENT PERIOD (OCTOBER 2003 TO OCTOBER 2004).--

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 60.9 lb, Apr. 19; minimum daily, 0.25 lb, Oct. 8 and 21, 2003.

PHOSPHORUS, WATER, UNFILTERED, POUNDS PER DAY
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.36	0.80	e0.64	e0.69	e0.61	e0.39	18.7	4.04	10.4	0.81	0.78	0.31
2	0.37	0.57	e0.60	e0.67	e0.60	e0.44	16.5	3.34	7.14	0.78	0.76	0.30
3	0.41	0.49	e0.59	e0.64	e0.59	e0.49	15.2	2.81	4.04	1.02	0.67	0.29
4	0.50	0.54	e0.55	e0.62	e0.58	e0.55	14.3	2.57	2.66	1.47	0.54	0.33
5	0.34	0.59	e0.52	e0.58	e0.55	e0.56	13.4	2.24	2.35	1.53	0.53	1.46
6	0.39	0.59	e0.50	e0.56	e0.54	e0.57	14.4	2.01	3.27	1.36	0.42	3.34
7	0.56	e0.55	e0.52	e0.53	e0.53	e0.58	14.3	1.79	2.50	1.41	0.43	4.24
8	0.25	e0.53	e0.53	e0.53	e0.53	e0.59	12.0	1.70	1.81	1.34	0.54	2.34
9	0.28	e0.50	e0.53	e0.53	e0.54	e0.58	10.7	1.62	2.14	1.19	0.55	0.88
10	0.41	e0.47	e0.52	e0.53	e0.54	e0.56	8.38	1.79	2.21	1.10	0.71	0.58
11	0.59	e0.45	e0.51	e0.56	e0.52	e0.79	6.36	1.57	1.68	1.09	0.68	0.55
12	0.83	e0.45	e0.52	e0.63	e0.50	e0.79	4.80	1.58	2.10	1.47	0.73	0.47
13	0.68	e0.45	e0.53	e0.64	e0.47	e0.74	3.84	8.82	1.96	2.06	0.60	0.45
14	0.56	e0.44	e0.52	e0.64	e0.41	e0.69	3.49	13.2	1.64	2.03	0.49	0.43
15	0.55	0.41	e0.53	e0.63	e0.36	e0.64	3.73	6.39	1.43	1.60	0.39	0.88
16	0.43	0.48	e0.54	e0.65	e0.36	e0.62	4.42	3.62	1.29	1.28	0.38	1.97
17	0.40	0.61	e0.55	e0.66	e0.38	e0.58	5.20	3.37	1.23	1.04	0.39	1.44
18	0.41	4.11	e0.54	e0.66	e0.40	e0.54	25.6	3.57	1.15	0.92	0.36	1.02
19	0.35	5.18	e0.55	e0.67	e0.40	e0.50	60.9	2.58	1.03	0.86	0.34	0.84
20	0.46	2.32	e0.56	e0.67	e0.40	e0.46	31.8	2.26	0.98	0.94	0.32	1.01
21	0.25	1.47	e0.57	e0.68	e0.37	e0.46	17.0	1.99	1.06	0.98	0.29	0.62
22	0.27	1.17	e0.55	e0.67	e0.33	e0.46	11.3	1.75	1.15	0.87	0.28	0.58
23	0.27	1.02	e0.56	e0.66	e0.33	0.45	6.57	4.63	0.99	0.75	0.26	0.53
24	0.29	e0.97	e0.55	e0.65	e0.31	0.47	4.62	10.2	1.13	0.64	0.27	0.60
25	0.26	e0.91	e0.56	e0.64	e0.30	0.61	4.72	6.06	1.12	0.60	0.27	0.60
26	0.29	e0.84	e0.59	e0.63	e0.28	1.64	4.43	3.85	1.25	0.55	0.31	0.73
27	0.26	e0.79	e0.62	e0.62	e0.31	10.3	3.93	3.72	0.91	0.51	0.33	0.52
28	0.38	e0.72	e0.67	e0.61	e0.33	55.1	3.90	3.39	0.80	0.50	0.33	0.51
29	0.41	e0.69	e0.70	e0.60	e0.36	40.6	4.03	2.47	0.84	0.73	0.29	0.49
30	0.66	e0.67	e0.69	e0.59	---	24.6	4.29	4.75	0.81	0.71	0.33	0.48
31	0.98	---	e0.69	e0.60	---	21.6	---	14.3	---	0.83	0.29	---
TOTAL	13.45	29.78	17.60	19.24	12.73	167.95	352.81	127.98	63.07	32.97	13.86	28.79
WTR YR	2004	TOTAL	880.23									

e Estimated

05358180 SPILLER CREEK AT COUNTY HIGHWAY B NEAR BUTTERNUT, 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)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)
OCT						
07...	0645	--	5.7	50	--	.027
23...	1145	--	2.1	50	--	.024
29...	0730	--	3.3	50	--	.021
31...	0700	--	6.1	50	--	.030
NOV						
18...	1000	--	12	50	.030	.067
18...	1001	--	12	10	--	.065
25...	0745	5.8	--	50	--	.029
DEC						
09...	1045	3.6	--	50	--	.027
19...	0915	3.2	--	50	.023	.032
29...	0700	3.4	--	50	--	.038
JAN						
12...	0230	3.2	--	50	--	.036
21...	1115	2.8	--	50	.036	.045
FEB						
07...	1145	2.9	--	50	--	.034
24...	1545	1.6	--	50	.040	.036
MAR						
11...	0700	3.1	--	50	--	.048
17...	1510	2.8	--	70	--	.038
27...	2330	--	34	50	--	.157
28...	0615	--	53	50	--	.181
28...	1230	--	72	50	--	.163
28...	1745	--	92	50	--	.131
29...	0245	--	91	50	--	.103
29...	0930	--	86	50	--	.087
29...	1745	--	81	10	--	.080
29...	1800	--	81	50	.048	.083
30...	0245	--	75	50	--	.068
30...	1145	--	64	50	--	.069
31...	0115	--	66	50	--	.058
31...	1230	--	59	50	--	.067
APR						
01...	1045	--	64	50	--	.060
02...	1515	--	57	50	--	.056
03...	0400	--	58	50	--	.046
03...	1615	--	59	50	--	.050
04...	0630	--	59	50	--	.046
05...	0200	--	56	50	--	.045
06...	0215	--	59	50	--	.044
07...	1318	--	61	50	.028	.044
07...	1325	--	61	10	--	.044
08...	0615	--	62	50	--	.036
09...	0645	--	58	50	--	.036
14...	0745	--	20	50	--	.033
18...	0745	--	30	50	--	.118
18...	1200	--	51	50	--	.140
18...	2015	--	71	50	--	.073
19...	0545	--	167	50	--	.078
19...	2215	--	168	50	--	.056
20...	1030	--	128	50	--	.047
20...	1845	--	103	10	--	.042
20...	1900	--	104	50	--	.040
21...	1115	--	84	50	--	.038
22...	1200	--	64	50	--	.033
23...	0430	--	50	50	--	.027
24...	0515	--	34	50	--	.027
25...	1900	--	33	50	--	.029
26...	1130	--	33	50	--	.024
MAY						
01...	0745	--	13	50	--	.059
13...	1700	--	32	50	--	.142
13...	2100	--	44	50	--	.072
14...	1330	--	48	50	--	.049
15...	0600	--	38	50	--	.035
17...	1400	--	16	10	.025	.034
17...	1415	--	16	50	--	.046
24...	1415	--	33	50	--	.062
24...	2300	--	31	50	--	.044
31...	1445	--	54	50	--	.044
31...	1500	--	55	50	--	.055
31...	2300	--	55	50	--	.040

CHIPPEWA RIVER BASIN

05358180 SPILLER CREEK AT COUNTY HIGHWAY B NEAR BUTTERNUT, WI—Continued

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

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
JUN					
01...	1530	53	50	--	.035
01...	2345	49	50	--	.035
02...	1615	36	50	--	.033
24...	1455	4.0	50	.038	.053
JUL					
15...	1125	4.8	50	.043	.064
AUG					
19...	1045	3.1	50	.007	.021
SEP					
21...	1620	2.0	50	.039	.056
28...	0915	2.0	50	--	.044

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

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT					
05...	0915	2.9	50	--	.032
25...	1705	6.8	50	.026	.036

CHIPPEWA RIVER BASIN

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05358190 BUTTERNUT CREEK AT COUNTY HIGHWAY B NEAR PARK FALLS, WI

LOCATION.--Lat 45°56'20", long 90°32'18", in SE 1/4 SW 1/4 SE 1/4 sec.18, T.40 N., R.1 W., Price County, Hydrologic Unit 07050002, on right bank approximately 20 ft downstream of bridge on County Highway B, and approximately 1,000 ft downstream of Butternut Lake.

DRAINAGE AREA.--47.6 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is approximately 1,490 ft above NGVD, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, 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	12	28	27	18	12	14	196	98	129	17	17	5.9
2	10	29	25	18	14	15	197	86	140	15	18	5.1
3	9.6	30	24	18	15	16	198	73	133	14	18	5.1
4	8.9	30	22	17	15	17	194	65	117	21	16	4.7
5	8.8	28	21	17	14	20	186	56	103	23	13	10
6	8.4	26	20	16	15	20	183	53	99	24	12	29
7	8.4	25	19	15	14	22	182	47	91	25	9.5	38
8	7.7	23	19	14	13	21	192	43	88	23	9.9	39
9	6.6	22	e20	13	14	20	196	41	86	22	10	36
10	6.2	21	e19	13	14	19	194	44	79	21	13	30
11	7.1	21	e19	12	14	22	184	39	68	21	14	27
12	11	21	e18	12	13	21	165	38	62	22	15	24
13	12	20	e18	12	13	21	142	51	60	22	16	21
14	13	18	e18	14	13	22	123	73	57	23	15	19
15	12	18	18	14	12	21	108	86	51	21	14	24
16	12	18	18	14	12	20	100	88	46	20	14	30
17	12	19	18	14	11	20	96	88	41	19	14	32
18	12	30	17	e12	11	19	114	84	36	16	13	32
19	11	46	17	e12	12	18	257	75	30	15	11	30
20	11	55	16	e12	14	18	462	71	25	17	9.7	27
21	11	55	16	e11	14	18	514	64	23	19	7.9	26
22	11	55	16	e11	14	16	445	60	21	20	6.9	25
23	11	53	16	e11	15	16	357	64	22	18	6.5	23
24	11	47	15	e11	14	16	282	73	22	17	5.4	22
25	11	42	15	e11	13	16	232	82	21	15	5.3	20
26	12	39	14	12	13	20	195	86	20	14	5.2	18
27	11	36	14	12	13	26	165	92	19	12	5.7	16
28	16	34	16	12	12	52	142	88	18	10	5.7	14
29	17	31	17	e11	12	107	126	83	18	12	5.6	12
30	20	29	18	e11	---	156	111	85	16	13	5.6	10
31	24	---	18	e11	---	183	---	106	---	16	5.6	---
TOTAL	354.7	949	568	411	385	1,012	6,238	2,182	1,741	567	337.5	654.8
MEAN	11.4	31.6	18.3	13.3	13.3	32.6	208	70.4	58.0	18.3	10.9	21.8
MAX	24	55	27	18	15	183	514	106	140	25	18	39
MIN	6.2	18	14	11	11	14	96	38	16	10	5.2	4.7
CFSM	0.24	0.66	0.38	0.28	0.28	0.69	4.37	1.48	1.22	0.38	0.23	0.46
IN.	0.28	0.74	0.44	0.32	0.30	0.79	4.88	1.71	1.36	0.44	0.26	0.51

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

	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
MEAN	11.4	31.4	20.4	13.4	12.5	30.2	158	108	45.9	16.6	8.34	12.9
MAX	11.4	31.6	22.4	13.6	13.3	32.6	208	145	58.0	18.3	10.9	21.8
(WY)	(2004)	(2004)	(2003)	(2003)	(2004)	(2004)	(2004)	(2003)	(2004)	(2004)	(2004)	(2004)
MIN	11.4	31.1	18.3	13.3	11.8	27.7	109	70.4	33.8	14.9	5.80	4.03
(WY)	(2004)	(2003)	(2004)	(2004)	(2003)	(2003)	(2003)	(2004)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2003 - 2004

ANNUAL TOTAL	13,003.6	15,400.0	
ANNUAL MEAN	35.6	42.1	42.1
HIGHEST ANNUAL MEAN			42.1
LOWEST ANNUAL MEAN			42.1
HIGHEST DAILY MEAN	563	May 13	563
LOWEST DAILY MEAN	1.4	Sep 11	1.4
ANNUAL SEVEN-DAY MINIMUM	1.6	Sep 5	1.6
MAXIMUM PEAK FLOW		541	631
MAXIMUM PEAK STAGE		6.08	6.41
INSTANTANEOUS LOW FLOW		3.9	1.0
ANNUAL RUNOFF (CFSM)	0.748	0.884	0.884
ANNUAL RUNOFF (INCHES)	10.16	12.04	12.01
10 PERCENT EXCEEDS	64	104	104
50 PERCENT EXCEEDS	16	19	19
90 PERCENT EXCEEDS	5.6	11	11

(e) Estimated due to ice effect or missing record

05358190 BUTTERNUT CREEK AT COUNTY HIGHWAY B NEAR PARK FALLS, 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	10		---	---	---	---	---	---	---	---	---	---
2	12		---	---	---	---	---	---	---	---	---	---
3	11	---	---	---	---	---	---	---	---	---	---	---
4	11	---	---	---	---	---	---	---	---	---	---	---
5	8.2	---	---	---	---	---	---	---	---	---	---	---
6	7.2	---	---	---	---	---	---	---	---	---	---	---
7	5.9	---	---	---	---	---	---	---	---	---	---	---
8	6.2	---	---	---	---	---	---	---	---	---	---	---
9	6.1	---	---	---	---	---	---	---	---	---	---	---
10	8.6	---	---	---	---	---	---	---	---	---	---	---
11	10	---	---	---	---	---	---	---	---	---	---	---
12	8.9	---	---	---	---	---	---	---	---	---	---	---
13	7.8	---	---	---	---	---	---	---	---	---	---	---
14	5.8	---	---	---	---	---	---	---	---	---	---	---
15	5.2	---	---	---	---	---	---	---	---	---	---	---
16	5.3	---	---	---	---	---	---	---	---	---	---	---
17	4.7	---	---	---	---	---	---	---	---	---	---	---
18	4.4	---	---	---	---	---	---	---	---	---	---	---
19	4.6	---	---	---	---	---	---	---	---	---	---	---
20	4.9	---	---	---	---	---	---	---	---	---	---	---
21	5.1	---	---	---	---	---	---	---	---	---	---	---
22	5.1	---	---	---	---	---	---	---	---	---	---	---
23	11	---	---	---	---	---	---	---	---	---	---	---
24	19	---	---	---	---	---	---	---	---	---	---	---
25	24	---	---	---	---	---	---	---	---	---	---	---
26	26	---	---	---	---	---	---	---	---	---	---	---
27	26	---	---	---	---	---	---	---	---	---	---	---
28	29	---	---	---	---	---	---	---	---	---	---	---
29	39	---	---	---	---	---	---	---	---	---	---	---
30	52	---	---	---	---	---	---	---	---	---	---	---
31	76	---	---	---	---	---	---	---	---	---	---	---
TOTAL	460.0		---	---	---	---	---	---	---	---	---	---
MEAN	14.8		---	---	---	---	---	---	---	---	---	---
MAX	76		---	---	---	---	---	---	---	---	---	---
MIN	4.4		---	---	---	---	---	---	---	---	---	---
CFSM	0.31		---	---	---	---	---	---	---	---	---	---
IN.	0.36		---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

	20.2	33.1	20.4	13.4	12.5	30.2	158	108	45.9	16.6	8.34	12.9
MEAN	20.2	33.1	20.4	13.4	12.5	30.2	158	108	45.9	16.6	8.34	12.9
MAX	51.2	84.0	22.4	13.6	13.3	32.6	208	145	58.0	18.3	10.9	21.8
(WY)	(2003)	(2005)	(2003)	(2003)	(2004)	(2004)	(2004)	(2003)	(2004)	(2004)	(2004)	(2004)
MIN	11.4	31.1	18.3	13.3	11.8	27.7	109	70.4	33.8	14.9	5.80	4.03
(WY)	(2004)	(2003)	(2004)	(2004)	(2003)	(2003)	(2003)	(2004)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

WATER YEARS 2003 - 2005

ANNUAL TOTAL	14,156.3	628.0	
ANNUAL MEAN	46.1	19.0	39.5
HIGHEST ANNUAL MEAN			42.1
LOWEST ANNUAL MEAN			19.0
HIGHEST DAILY MEAN	514	Apr 21	563
LOWEST DAILY MEAN	4.4	Oct 18	1.4
ANNUAL SEVEN-DAY MINIMUM	4.9	Oct 16	1.6
MAXIMUM PEAK FLOW			631
MAXIMUM PEAK STAGE			6.41
INSTANTANEOUS LOW FLOW			1.0
ANNUAL RUNOFF (CFSM)	0.969	0.400	0.830
ANNUAL RUNOFF (INCHES)	11.06	0.49	11.27
10 PERCENT EXCEEDS	118	66	88
50 PERCENT EXCEEDS	19	8.9	19
90 PERCENT EXCEEDS	8.5	4.8	6.8

05358190 BUTTERNUT CREEK AT COUNTY HIGHWAY B NEAR PARK FALLS, WI—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 2002 to October 2004 (discontinued).

PERIOD OF DAILY RECORD.--

TOTAL-PHOSPHORUS DISCHARGE: November 2002 to October 2004 (discontinued).

REMARKS.--Water sampled manually. Total-phosphorus loads generally good. For periods during which discharge records were estimated, load estimates are fair to poor.

EXTREMES FOR PERIOD OF RECORD.--

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 173 lb, Apr. 21, 2004; minimum daily, 0.30 lb, Sept. 11, 2003.

EXTREMES FOR CURRENT PERIOD (OCTOBER 2003 TO OCTOBER 2004).--

TOTAL-PHOSPHORUS DISCHARGE: Maximum daily, 173 lb, Apr. 21; minimum daily, 0.99 lb, Oct. 18, 2004.

PHOSPHORUS, WATER, UNFILTERED, POUNDS PER DAY
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.35	5.73	5.11	2.76	1.66	2.04	44.3	26.0	28.9	4.18	4.03	1.37
2	2.00	6.09	4.69	2.74	1.96	2.22	44.7	22.4	31.8	3.73	4.40	1.19
3	1.93	6.15	4.37	2.76	2.21	2.30	45.4	18.7	30.2	3.59	4.27	1.18
4	1.79	6.28	4.06	2.69	2.10	2.50	44.8	16.6	26.6	5.32	3.85	1.10
5	1.77	5.93	3.79	2.56	2.02	2.97	43.3	14.1	23.6	5.85	3.19	2.43
6	1.70	5.47	3.54	2.42	2.08	3.01	43.1	13.2	22.8	6.07	2.85	6.80
7	1.70	5.30	3.35	2.27	2.05	3.29	43.2	11.5	21.1	6.31	2.26	8.80
8	1.55	4.88	3.35	2.14	1.93	3.18	45.6	10.3	20.4	5.89	2.37	8.98
9	1.33	4.56	e3.52	2.00	1.96	3.01	46.5	9.62	20.1	5.47	2.49	8.29
10	1.24	4.48	e3.32	1.90	1.94	2.91	46.1	10.4	18.5	5.24	3.05	6.99
11	1.44	4.37	e3.29	1.86	1.94	3.38	43.7	9.03	16.0	5.21	3.33	6.33
12	2.17	4.37	e3.09	1.84	1.92	3.31	39.2	8.62	14.8	5.51	3.55	5.62
13	2.35	4.12	e3.06	1.83	1.84	3.38	33.8	11.4	14.3	5.54	3.65	4.77
14	2.58	3.81	e3.04	2.08	1.83	3.51	29.4	16.0	13.6	5.72	3.61	4.36
15	2.42	3.83	3.04	2.09	1.76	3.39	25.8	18.7	12.3	5.23	3.32	5.48
16	2.37	3.85	3.06	2.05	1.68	3.23	23.9	18.8	11.0	5.04	3.24	6.86
17	2.35	3.97	2.97	2.03	1.62	3.24	22.9	18.6	9.95	4.68	3.34	7.37
18	2.38	6.36	2.85	e1.77	1.58	3.15	27.7	17.7	8.67	4.11	3.13	7.36
19	2.32	9.59	2.77	e1.76	1.64	2.99	73.6	15.9	7.31	3.83	2.64	6.85
20	2.30	11.4	2.64	e1.75	2.00	2.96	155	15.1	6.11	4.25	2.26	6.35
21	2.30	11.4	2.57	e1.60	1.95	2.87	173	13.8	5.64	4.64	1.84	6.14
22	2.19	11.1	2.49	e1.60	1.94	2.69	141	12.9	5.12	4.89	1.61	5.86
23	2.28	10.7	2.50	e1.60	2.04	2.60	107	13.8	5.42	4.43	1.51	5.32
24	2.20	9.44	2.42	e1.60	1.95	2.58	82.7	15.8	5.43	4.12	1.25	5.00
25	2.31	8.40	2.36	e1.60	1.89	2.70	67.1	17.8	5.17	3.71	1.24	4.65
26	2.42	7.67	2.28	1.79	1.85	3.33	55.5	18.9	5.08	3.42	1.22	4.09
27	2.36	7.11	2.24	1.79	1.80	4.41	46.3	20.3	4.78	3.04	1.33	3.71
28	3.25	6.55	2.47	1.77	1.78	9.39	39.4	19.5	4.54	2.54	1.33	3.29
29	3.53	5.96	2.65	e1.59	1.79	21.5	34.3	18.3	4.38	2.93	1.29	2.82
30	4.21	5.55	2.77	e1.59	---	34.3	29.9	18.9	4.09	3.24	1.30	2.35
31	4.98	---	2.77	e1.59	---	41.0	---	23.8	---	3.96	1.29	---
TOTAL	72.07	194.42	96.43	61.42	54.71	187.34	1,698.2	496.47	407.69	141.69	80.04	151.71
WTR YR	2004	TOTAL	3,642.19									

e Estimated

CHIPPEWA RIVER BASIN

05358190 BUTTERNUT CREEK AT COUNTY HIGHWAY B NEAR PARK FALLS, WI—Continued

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

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Phosphorus, water, unfltrd mg/L (00665)
OCT				
21...	1755	11	10	.038
NOV				
18...	0925	30	10	.039
DEC				
19...	0805	17	10	.030
JAN				
21...	0825	11	10	.027
FEB				
24...	1335	14	10	.026
MAR				
17...	1355	20	10	.030
30...	1025	154	10	.041
APR				
07...	1520	181	10	.044
20...	1720	494	10	.065
MAY				
17...	1200	87	10	.039
JUN				
23...	1615	21	10	.046
JUL				
15...	1150	21	10	.047
AUG				
18...	1210	13	10	.043
SEP				
22...	1535	24	10	.043

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

Date	Time	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Phosphorus, water, unfltrd mg/L (00665)
OCT				
25...	1335	25	10	.041

CHIPPEWA RIVER BASIN

05360500 FLAMBEAU RIVER NEAR BRUCE, WI

LOCATION.--Lat 45°22'21", long 91°12'34", in Lot 7 of SE 1/4 NW 1/4 sec.2, T.33 N., R.7 W., Rusk County, Hydrologic Unit 07050002, on right bank 2.5 mi downstream from Thornapple Powerplant, 6.0 mi upstream from mouth, and 7.0 mi southeast of Bruce.

DRAINAGE AREA.--1,860 mi².

PERIOD OF RECORD.--August 1951 to current year.

REVISED RECORDS.--WDR WI-78-1: 1971. WDR WI-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,056.34 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow regulated by several powerplants above station and by Rest Lake and Flambeau Flowage Reservoirs. 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	574	898	1,050	e760	e760	e1,100	5,750	3,810	6,460	818	809	644
2	575	809	727	e730	e680	e1,200	4,840	2,720	6,170	992	802	662
3	628	763	765	e730	e640	e1,300	3,980	3,040	4,680	874	733	605
4	588	797	793	e680	e570	e1,100	5,020	2,910	4,090	754	663	585
5	451	817	930	e470	e700	e1,200	5,130	1,950	3,320	768	735	595
6	396	1,090	974	e450	e730	e1,100	4,530	1,430	3,210	793	754	1,030
7	581	856	600	e510	e730	e1,100	5,020	1,840	3,270	945	825	1,510
8	511	564	620	e520	e700	e1,000	4,020	1,580	2,750	816	738	988
9	646	561	735	e540	e730	e1,100	4,100	1,680	3,880	1,030	797	1,170
10	575	730	769	e540	e750	e1,300	4,150	2,270	3,580	812	962	1,070
11	523	804	e720	e540	e690	e1,200	4,030	1,640	3,340	927	930	915
12	740	752	e600	e380	e700	e1,100	3,850	1,670	2,870	830	1,070	939
13	532	680	e630	e380	e710	e1,100	2,730	2,140	2,930	672	1,070	669
14	472	601	e770	e370	e730	e1,100	2,350	3,790	3,020	614	902	580
15	532	792	e890	e480	e710	e1,100	2,320	4,200	2,670	671	988	809
16	601	665	e830	e600	e830	e1,200	2,220	3,800	1,950	721	796	1,230
17	653	718	e980	e640	e750	e1,200	2,280	3,040	1,910	737	794	1,010
18	583	1,070	e800	e730	e780	e1,300	2,250	2,860	1,530	740	806	812
19	537	1,220	e690	e810	e790	1,130	4,030	2,780	1,120	677	1,140	1,000
20	590	1,390	e730	e770	e810	1,300	8,920	2,550	1,060	768	746	987
21	560	1,600	e950	e650	e840	1,540	9,910	1,890	1,230	723	680	860
22	511	1,220	e830	e580	e800	1,500	9,470	2,780	912	663	679	737
23	537	1,250	e720	e610	e870	1,240	8,360	3,050	885	663	658	708
24	565	1,190	e750	e410	e1,000	1,020	7,340	3,390	1,050	657	634	725
25	475	828	e700	e460	e860	1,520	5,730	3,880	1,110	593	628	747
26	566	642	e680	e720	e840	2,420	5,150	3,750	949	565	642	682
27	510	938	e760	e700	e860	2,680	5,970	3,140	847	640	650	641
28	589	1,070	e930	e680	e870	4,240	5,040	3,220	833	578	710	610
29	739	832	e860	e650	e930	7,570	3,560	2,960	812	652	673	573
30	635	765	e870	e750	---	8,420	3,150	2,990	959	722	628	550
31	784	---	e800	e830	---	7,240	---	5,760	---	825	630	---
TOTAL	17,759	26,912	24,453	18,670	22,360	62,620	145,200	88,510	73,397	23,240	24,272	24,643
MEAN	573	897	789	602	771	2,020	4,840	2,855	2,447	750	783	821
MAX	784	1,600	1,050	830	1,000	8,420	9,910	5,760	6,460	1,030	1,140	1,510
MIN	396	561	600	370	570	1,000	2,220	1,430	812	565	628	550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

MEAN	1,732	1,622	1,277	1,119	1,134	1,692	3,705	2,659	2,043	1,610	1,438	1,760
MAX	5,616	4,404	2,542	2,006	2,411	5,490	7,379	6,082	6,066	4,339	3,765	5,089
(WY)	(1986)	(1992)	(1992)	(1973)	(1969)	(1973)	(2002)	(1954)	(1968)	(1968)	(1972)	(1994)
MIN	363	430	382	451	474	971	1,013	758	572	596	553	420
(WY)	(1977)	(1977)	(1977)	(1977)	(1977)	(1959)	(1990)	(1987)	(1988)	(1988)	(1998)	(1998)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951 - 2004	
ANNUAL TOTAL	534,388		552,036			
ANNUAL MEAN	1,464		1,508		1,813	
HIGHEST ANNUAL MEAN					2,900	
LOWEST ANNUAL MEAN					993	
HIGHEST DAILY MEAN	16,000	May 13	9,910	Apr 21	23,200	Sep 16, 1994
LOWEST DAILY MEAN	396	Oct 6	(a)370	Jan 14	(a)190	Dec 23, 1998
ANNUAL SEVEN-DAY MINIMUM	511	Sep 8	(a)461	Jan 9	309	Sep 8, 1998
MAXIMUM PEAK FLOW			10,400	Mar 30	24,100	Sep 16, 1994
MAXIMUM PEAK STAGE			8.07	Mar 30	12.44	Sep 16, 1994
10 PERCENT EXCEEDS	2,840		3,790		3,390	
50 PERCENT EXCEEDS	833		822		1,340	
90 PERCENT EXCEEDS	557		575		739	

(a) Ice affected

(e) Estimated due to ice effect or missing record

05362000 JUMP RIVER AT SHELDON, WI

LOCATION.--Lat 45°18'29", long 90°57'23", in SE ¼ SW ¼ sec.26, T.33 N., R.5 W., Rusk County, Hydrologic Unit 07050004, on right bank just downstream from highway bridge in Sheldon, 1,500 ft upstream from Shoulder Creek and 11 mi upstream from mouth.

DRAINAGE AREA.--576 mi².

PERIOD OF RECORD.--July 1915 to current year.

REVISED RECORDS.--WSP 975: 1938. WSP 1438: 1916-17(M), 1919(M), 1920, 1921(M), 1922, 1923-26(M), 1927, 1928-31(M), 1932, 1933-37(M), 1945-46(M), 1948-50(M). WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,092.75 ft above NGVD of 1929. Prior to Feb. 9, 1939, Sept. 1, 1941, to Apr. 1, 1953, and Feb. 18, 1954, to Sept. 27, 1964, nonrecording gage at same site and datum. Apr. 2, 1953, to Feb. 18, 1954, nonrecording gage in creamery wellhouse 400 ft upstream at same datum. Feb. 9, 1939, to Aug. 31, 1941, and from Sept. 27, 1964, water-stage recorder at present site and datum.

REMARKS.--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	76	132	e150	e140	e42	e88	4,770	646	4,120	104	43	46
2	75	129	e140	e120	e42	e92	4,050	570	3,590	95	44	45
3	73	109	e120	e120	e43	e98	3,610	485	2,660	84	46	43
4	69	108	e120	e110	e42	e100	3,170	427	1,720	85	47	42
5	67	116	e130	e90	e42	e110	2,690	383	1,170	87	46	46
6	68	e130	e120	e81	e44	e130	2,340	351	1,080	109	44	57
7	71	e140	e120	e71	e47	e140	2,160	321	939	106	42	58
8	74	e120	e120	e60	e50	e160	1,980	299	740	98	46	89
9	69	e110	e110	e53	e52	e150	1,800	304	1,460	93	45	94
10	61	e100	e100	e53	e52	e150	1,540	375	2,400	88	86	81
11	59	107	e96	e56	e52	e150	1,260	557	1,720	82	153	70
12	82	102	e100	e60	e51	e140	1,050	542	1,760	79	132	62
13	101	e110	e110	e57	e51	e150	875	784	1,880	79	114	56
14	119	e100	e120	e54	e50	e150	768	1,430	1,350	77	102	51
15	111	e100	e110	e50	e50	e150	717	1,460	963	72	88	75
16	110	113	e110	e50	e50	e140	656	1,190	728	64	86	158
17	108	107	e110	e53	e50	e140	593	909	571	57	84	255
18	106	138	e110	e50	e52	e130	613	724	466	54	92	204
19	107	289	e110	e50	e53	e130	1,270	595	377	52	96	158
20	105	359	e110	e50	e58	e130	2,220	508	308	49	88	127
21	101	307	e110	e50	e60	e120	2,130	461	262	50	79	105
22	103	261	e110	e48	e70	e110	1,930	452	222	79	69	90
23	104	232	e110	e47	e80	e110	1,580	611	185	64	62	80
24	104	e200	e100	e48	e82	e120	1,230	1,770	159	57	58	74
25	103	e150	e94	e50	e83	e160	1,070	2,140	146	51	56	68
26	102	e180	e91	e50	e84	e500	1,190	1,670	135	48	54	68
27	102	e200	e90	e48	e85	e1,600	1,070	1,280	126	47	50	65
28	108	e170	e100	e46	e85	e6,000	933	1,160	118	43	48	61
29	116	e150	e110	e42	e85	10,200	860	937	112	44	46	58
30	126	e150	e120	e40	---	8,700	734	915	104	44	46	54
31	133	---	e140	e41	---	5,730	---	4,070	---	47	47	---
TOTAL	2,913	4,719	3,491	1,938	1,687	35,978	50,859	28,326	31,571	2,188	2,139	2,540
MEAN	94.0	157	113	62.5	58.2	1,161	1,695	914	1,052	70.6	69.0	84.7
MAX	133	359	150	140	85	10,200	4,770	4,070	4,120	109	153	255
MIN	59	100	90	40	42	88	593	299	104	43	42	42
CFSM	0.16	0.27	0.20	0.11	0.10	2.01	2.94	1.59	1.83	0.12	0.12	0.15
IN.	0.19	0.30	0.23	0.13	0.11	2.32	3.28	1.83	2.04	0.14	0.14	0.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2004, BY WATER YEAR (WY)

MEAN	423	429	183	102	105	732	1,840	862	662	264	241	442
MAX	1,897	2,022	1,092	392	620	3,184	4,126	2,514	3,442	1,293	1,916	4,145
(WY)	(2003)	(1992)	(1992)	(1946)	(1984)	(1973)	(1982)	(1973)	(1943)	(1968)	(1941)	(1941)
MIN	27.5	35.3	34.7	25.6	21.4	61.2	360	134	54.6	17.5	21.9	25.4
(WY)	(1949)	(1977)	(1934)	(1917)	(1924)	(1940)	(1946)	(1987)	(1934)	(1936)	(1933)	(1976)

05362000 JUMP RIVER AT SHELDON, WI—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1915 - 2004	
ANNUAL TOTAL	164,856		168,349			
ANNUAL MEAN	452		460		523	
HIGHEST ANNUAL MEAN					923	
LOWEST ANNUAL MEAN					214	
HIGHEST DAILY MEAN	11,200	May 12	10,200	Mar 29	40,800	Aug 31, 1941
LOWEST DAILY MEAN	36	Sep 11	(a)40	Jan 30	(b)11	Dec 18, 1943
ANNUAL SEVEN-DAY MINIMUM	37	Sep 5	(a)42	Jan 29	14	(c)Jan 25, 1924
MAXIMUM PEAK FLOW			10,600	Mar 29	(d)46,000	Aug 31, 1941
MAXIMUM PEAK STAGE			11.19	Mar 29	(f)18.80	Aug 31, 1941
INSTANTANEOUS LOW FLOW			(a)		(b)11	Dec 18, 1943
ANNUAL RUNOFF (CFSM)	0.784		0.799		0.907	
ANNUAL RUNOFF (INCHES)	10.65		10.87		12.33	
10 PERCENT EXCEEDS	919		1,270		1,300	
50 PERCENT EXCEEDS	110		108		158	
90 PERCENT EXCEEDS	45		48		47	

(a) Ice affected

(b) Result of freezeup

(c) Jan. 25, 1924, ice-affected, also occurred July 11, 1936

(d) From rating curve extended above 13,000 ft³/s on basis of contracted-opening measurement of peak flow

(e) Estimated due to ice effect or missing record

(f) From floodmark

05365500 CHIPPEWA RIVER AT CHIPPEWA FALLS, WI

LOCATION.--Lat 44°55'37", long 91°24'33", in Lot 1, NE ¼ NE ¼ sec.12, T.28 N., R.9 W., Chippewa County, Hydrologic Unit 07050005, on right bank at Chippewa Falls, 1.0 mi downstream from Duncan Creek.

DRAINAGE AREA.--5,650 mi².

PERIOD OF RECORD.--June 1888 to September 1983, October 1986 to current year. Monthly discharge for some periods published in WSP 1308.

REVISED RECORDS.--WSP 785: 1934(M). WSP 1508: 1897, 1905, 1918(M), 1924(M). WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 798.46 ft above NGVD of 1929. Prior to January 1914, nonrecording gage, and January 1914 to June 19, 1932, water-stage recorder at site 1 mi upstream at different datum. June 19, 1932, to current year, water-stage recorder at present site and datum.

REMARKS.--Records good (see page 11). Considerable regulation by Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota Reservoirs. Diurnal fluctuation caused by hydroelectric plant 1.1 mi upstream. Gage-height telemeter at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--A stage of 26.94 ft occurred Sept. 10, 1884, site and datum in use June 1932.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,470	2,260	1,900	2,250	1,920	2,740	27,000	8,000	30,100	2,100	2,660	1,300
2	1,480	2,290	1,930	2,220	1,920	3,190	18,800	8,040	29,100	2,110	1,930	1,300
3	1,490	2,400	2,230	2,140	1,920	3,230	18,200	7,970	25,000	2,130	1,930	1,400
4	1,500	2,180	2,170	2,030	1,880	3,250	17,600	7,080	17,000	2,140	2,000	1,500
5	1,490	2,120	2,480	1,710	1,870	3,800	17,400	6,870	14,300	2,120	1,730	1,500
6	1,530	2,190	2,980	1,480	1,960	3,580	13,600	5,090	8,680	2,130	1,500	2,270
7	1,510	2,260	2,200	1,380	1,960	2,730	10,800	4,740	9,870	2,180	1,510	3,790
8	1,450	2,260	2,190	1,280	1,950	2,240	12,200	4,160	12,400	2,190	1,880	3,500
9	1,340	2,200	2,000	1,230	1,960	3,290	12,000	4,110	11,400	2,190	2,650	2,810
10	1,340	1,890	1,800	1,200	1,930	4,550	11,600	5,290	12,300	2,190	2,620	2,100
11	1,610	1,860	1,670	1,230	1,920	4,260	11,000	5,750	13,100	2,200	2,640	2,110
12	2,230	1,850	1,410	1,360	1,930	2,950	9,630	5,670	13,100	2,180	2,590	1,810
13	1,740	1,760	1,370	1,350	1,940	2,370	6,450	6,660	9,420	2,180	3,060	2,220
14	1,370	1,720	1,340	1,350	1,930	2,670	6,490	11,000	7,570	2,140	2,200	2,240
15	1,370	1,800	1,390	1,400	1,960	4,490	7,410	14,700	8,520	1,990	2,160	4,060
16	1,580	1,780	2,030	1,660	2,600	4,370	7,390	13,000	8,360	1,940	2,180	4,010
17	1,830	1,840	2,180	1,530	3,170	3,870	7,150	8,930	5,740	1,720	2,200	3,240
18	1,970	2,440	2,460	1,480	2,210	3,450	5,840	6,840	4,500	1,340	2,210	3,240
19	1,640	3,240	2,180	1,500	2,660	3,270	8,190	6,950	4,130	1,320	2,210	2,080
20	1,530	4,310	1,980	1,520	2,500	3,250	16,700	6,480	3,110	1,300	2,200	1,930
21	1,620	3,970	1,850	1,540	1,900	2,450	22,200	5,800	2,180	1,360	2,200	1,930
22	1,610	3,180	1,540	1,530	2,260	3,510	21,700	4,840	2,180	1,390	2,100	1,930
23	1,600	2,840	1,710	1,520	3,450	4,440	21,800	7,100	2,760	1,460	1,920	1,760
24	1,600	2,980	1,900	1,570	2,970	4,970	21,400	10,700	3,370	1,470	1,920	1,700
25	1,600	2,240	1,510	1,570	3,490	5,520	18,500	15,800	3,160	1,440	1,960	1,970
26	1,480	2,230	1,450	1,540	3,090	10,800	15,700	15,200	2,220	1,290	1,950	1,970
27	1,410	2,240	1,520	1,910	2,030	15,000	15,400	9,490	2,180	1,440	1,470	1,860
28	1,540	2,260	1,860	1,580	1,820	28,400	15,100	8,610	2,170	1,470	1,510	1,770
29	1,990	2,880	2,230	1,940	1,830	40,500	10,400	12,800	2,170	1,490	1,370	1,730
30	1,990	2,330	2,240	1,950	---	42,400	7,920	12,200	2,160	1,510	1,300	2,280
31	1,870	---	2,270	1,920	---	35,000	---	19,600	---	1,520	1,300	---
TOTAL	49,780	71,800	59,970	49,870	64,930	260,540	415,570	269,470	272,250	55,630	63,060	67,310
MEAN	1,606	2,393	1,935	1,609	2,239	8,405	13,850	8,693	9,075	1,795	2,034	2,244
MAX	2,230	4,310	2,980	2,250	3,490	42,400	27,000	19,600	30,100	2,200	3,060	4,060
MIN	1,340	1,720	1,340	1,200	1,820	2,240	5,840	4,110	2,160	1,290	1,300	1,300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1888 - 2004, BY WATER YEAR (WY)

MEAN	4,245	4,185	3,004	2,578	2,641	5,378	11,852	8,614	6,880	4,299	3,401	4,411
MAX	15,570	15,990	7,897	5,305	6,569	17,630	28,900	22,700	30,570	13,620	9,805	23,030
(WY)	(1901)	(1992)	(1992)	(1973)	(1969)	(1973)	(1916)	(1903)	(1943)	(1968)	(1900)	(1941)
MIN	798	800	950	831	800	1,210	2,210	1,688	1,162	1,172	1,124	929
(WY)	(1977)	(1890)	(1893)	(1917)	(1895)	(1890)	(1895)	(1987)	(1988)	(1988)	(1894)	(1976)

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1888 - 2004
ANNUAL TOTAL	1,698,600	1,700,180	
ANNUAL MEAN	4,654	4,645	5,120
HIGHEST ANNUAL MEAN			8,833
LOWEST ANNUAL MEAN			2,453
HIGHEST DAILY MEAN	53,900	May 13	42,400
LOWEST DAILY MEAN	1,160	Aug 23	1,200
ANNUAL SEVEN-DAY MINIMUM	1,170	Aug 17	1,290
MAXIMUM PEAK FLOW			44,600
MAXIMUM PEAK STAGE			16.88
10 PERCENT EXCEEDS	9,580		12,200
50 PERCENT EXCEEDS	2,170		2,190
90 PERCENT EXCEEDS	1,350		1,470

CHIPPEWA RIVER BASIN

390

05365707 NORTH FORK EAU CLAIRE RIVER NEAR THORP, WI

LOCATION.--Lat 44°58'25", long 90°50'57", in NW 1/4 NE 1/4 sec.27, T.29 N., R.4 W., Clark County, Hydrologic Unit 07050006, on left bank 15 ft downstream from town road, 0.3 mi downstream from Goggle-Eye Creek, and 2.6 mi northwest of Thorp.

DRAINAGE AREA.--51.0 mi².

PERIOD OF RECORD.--April 1986 to December 2003 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,115 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	1.4	3.2	e3.6	---	---	---	---	---	---	---	---	---
2	1.3	3.2	e2.7	---	---	---	---	---	---	---	---	---
3	1.6	3.3	e2.2	---	---	---	---	---	---	---	---	---
4	1.7	5.0	2.1	---	---	---	---	---	---	---	---	---
5	1.5	5.6	2.2	---	---	---	---	---	---	---	---	---
6	1.5	4.9	2.3	---	---	---	---	---	---	---	---	---
7	1.5	4.3	2.5	---	---	---	---	---	---	---	---	---
8	1.4	3.6	2.8	---	---	---	---	---	---	---	---	---
9	1.2	3.2	4.0	---	---	---	---	---	---	---	---	---
10	1.0	3.2	e4.5	---	---	---	---	---	---	---	---	---
11	1.3	3.5	e3.7	---	---	---	---	---	---	---	---	---
12	3.1	3.7	e3.1	---	---	---	---	---	---	---	---	---
13	3.6	4.1	e2.7	---	---	---	---	---	---	---	---	---
14	4.4	4.4	e3.2	---	---	---	---	---	---	---	---	---
15	4.0	4.3	e3.6	---	---	---	---	---	---	---	---	---
16	3.5	4.3	e4.0	---	---	---	---	---	---	---	---	---
17	3.0	5.0	e3.8	---	---	---	---	---	---	---	---	---
18	2.1	13	e3.5	---	---	---	---	---	---	---	---	---
19	1.5	16	e3.4	---	---	---	---	---	---	---	---	---
20	2.2	12	e3.4	---	---	---	---	---	---	---	---	---
21	2.7	9.1	e3.5	---	---	---	---	---	---	---	---	---
22	2.8	7.8	e3.6	---	---	---	---	---	---	---	---	---
23	2.8	e7.7	e3.6	---	---	---	---	---	---	---	---	---
24	2.8	e6.6	e3.1	---	---	---	---	---	---	---	---	---
25	2.8	e5.7	e2.9	---	---	---	---	---	---	---	---	---
26	2.8	e5.0	e2.9	---	---	---	---	---	---	---	---	---
27	2.8	4.1	e3.0	---	---	---	---	---	---	---	---	---
28	3.2	4.3	e3.0	---	---	---	---	---	---	---	---	---
29	3.4	3.8	e3.1	---	---	---	---	---	---	---	---	---
30	3.4	3.7	e2.7	---	---	---	---	---	---	---	---	---
31	3.3	---	e2.4	---	---	---	---	---	---	---	---	---
TOTAL	75.6	167.6	97.1	---	---	---	---	---	---	---	---	---
MEAN	2.44	5.59	3.13	---	---	---	---	---	---	---	---	---
MAX	4.4	16	4.5	---	---	---	---	---	---	---	---	---
MIN	1.0	3.2	2.1	---	---	---	---	---	---	---	---	---
CFSM	0.05	0.11	0.06	---	---	---	---	---	---	---	---	---
IN.	0.06	0.12	0.07	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2004, BY WATER YEAR (WY)

	29.4	40.6	14.3	5.54	12.9	97.0	133	57.0	70.3	20.2	46.1	45.8
MEAN	29.4	40.6	14.3	5.54	12.9	97.0	133	57.0	70.3	20.2	46.1	45.8
MAX	149	262	79.7	31.4	86.6	181	332	184	338	49.4	172	420
(WY)	(2003)	(1992)	(1992)	(1997)	(1998)	(1989)	(2001)	(1993)	(1993)	(1986)	(2002)	(1986)
MIN	2.17	3.57	0.56	0.28	0.45	9.95	25.9	5.29	1.34	0.31	0.37	0.81
(WY)	(1990)	(1990)	(1990)	(1990)	(1990)	(1996)	(1987)	(1987)	(1988)	(1988)	(1988)	(1988)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR
(October - December)

WATER YEARS 1986 - 2004

ANNUAL TOTAL	13,006.77		
ANNUAL MEAN	35.6		46.4
HIGHEST ANNUAL MEAN			93.0
LOWEST ANNUAL MEAN			23.0
HIGHEST DAILY MEAN	1,180	May 11	3,670
LOWEST DAILY MEAN	0.12	Sep 11	0.03
ANNUAL SEVEN-DAY MINIMUM	0.18	Sep 5	0.07
MAXIMUM PEAK FLOW			18
MAXIMUM PEAK STAGE			1.90
INSTANTANEOUS LOW FLOW			0.98
ANNUAL RUNOFF (CFSM)	0.699		0.909
ANNUAL RUNOFF (INCHES)	9.49		12.35
10 PERCENT EXCEEDS	63		96
50 PERCENT EXCEEDS	3.2		9.4
90 PERCENT EXCEEDS	0.50		1.6

(a) From rating curve extended above 2,500 ft³/s on basis of step-backwater measurement of peak flow
(e) Estimated due to ice effect or missing record

053674464 YELLOW RIVER AT BARRON, WI

LOCATION.--Lat 45°23'43", long 91°49'48", in SE ¼ SE ¼ sec.27, T.34 N., R.12 W., Barron County, Hydrologic Unit 07050007, on left bank 1.0 mi southeast of intersection of U.S. Highway 8 and State Highway 25 in Barron, 0.5 mi downstream from Quaderer Creek, in Becker Park, and 7.3 mi upstream from mouth.

DRAINAGE AREA.--153 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 1,090 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow is regulated occasionally at small dam 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	85	95	84	74	77	85	215	111	233	69	137	78
2	84	90	77	86	75	89	256	103	229	70	112	74
3	85	89	82	82	73	90	181	100	225	76	97	74
4	85	94	82	69	e72	90	200	95	156	242	93	73
5	84	97	81	e68	73	92	189	92	151	214	88	115
6	84	93	81	69	74	93	178	91	149	154	84	169
7	82	88	82	68	76	91	168	82	143	108	84	168
8	85	81	85	69	74	86	158	84	134	94	98	133
9	84	79	88	69	75	88	145	90	147	85	113	106
10	81	86	85	69	75	89	132	105	149	80	156	96
11	89	88	73	73	74	90	125	95	136	84	149	88
12	102	93	79	76	75	83	118	94	135	87	119	80
13	105	89	80	76	74	89	111	127	132	82	113	82
14	89	86	81	76	73	87	110	166	119	73	105	86
15	87	87	84	74	e74	82	105	154	102	71	95	140
16	85	88	85	75	75	82	105	131	102	70	97	147
17	85	89	84	76	74	88	102	131	99	68	97	130
18	86	106	82	e76	75	88	114	129	97	67	97	105
19	85	107	81	e72	77	79	171	120	91	90	90	97
20	90	95	74	e70	80	84	174	116	90	121	82	92
21	83	86	82	e72	79	80	169	106	90	115	79	85
22	83	86	81	e70	79	80	163	118	90	83	77	83
23	84	90	81	73	79	84	149	257	82	77	75	84
24	85	85	72	70	79	95	130	281	85	72	72	87
25	86	83	77	70	78	100	140	353	86	68	73	85
26	86	94	78	71	77	389	145	241	79	69	93	82
27	86	91	81	71	76	903	132	203	77	70	105	80
28	93	87	86	e70	77	1,970	126	317	77	68	91	80
29	101	85	87	e70	79	1,440	125	350	74	100	84	80
30	101	85	84	e72	---	685	118	256	69	118	90	77
31	100	---	80	e74	---	352	---	238	---	159	80	---
TOTAL	2,730	2,692	2,519	2,250	2,198	7,923	4,454	4,936	3,628	3,004	3,025	2,956
MEAN	88.1	89.7	81.3	72.6	75.8	256	148	159	121	96.9	97.6	98.5
MAX	105	107	88	86	80	1,970	256	353	233	242	156	169
MIN	81	79	72	68	72	79	102	82	69	67	72	73
CFSM	0.58	0.59	0.53	0.47	0.50	1.67	0.97	1.04	0.79	0.63	0.64	0.64
IN.	0.66	0.65	0.61	0.55	0.53	1.93	1.08	1.20	0.88	0.73	0.74	0.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)

MEAN	104	112	85.6	77.9	91.7	152	245	143	121	103	111	105
MAX	204	184	112	90.5	179	256	587	272	222	146	170	191
(WY)	(1996)	(2001)	(2002)	(2003)	(2000)	(2004)	(2001)	(2003)	(1993)	(2000)	(1995)	(2002)
MIN	74.4	74.2	72.0	63.2	64.0	84.6	99.9	85.7	73.9	80.6	67.5	75.1
(WY)	(1992)	(1995)	(2000)	(1995)	(1995)	(2001)	(2000)	(1998)	(1994)	(1994)	(1994)	(1998)

053674464 YELLOW RIVER AT BARRON, WI—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1991 - 2004	
ANNUAL TOTAL	45,508		42,315		120	
ANNUAL MEAN	125		116		158	
HIGHEST ANNUAL MEAN					2001	
LOWEST ANNUAL MEAN					1994	
HIGHEST DAILY MEAN	1,330	May 12	1,970	Mar 28	1,970	Mar 28, 2004
LOWEST DAILY MEAN	59	Aug 13	67	Jul 18	(a)23	Sep 11, 15, 1993
ANNUAL SEVEN-DAY MINIMUM	66	Sep 5	(b)69	Jan 4	55	Aug 18, 1994
MAXIMUM PEAK FLOW			2,660	Mar 28	2,660	Mar 28, 2004
MAXIMUM PEAK STAGE			7.98	Mar 28	7.98	Mar 28, 2004
INSTANTANEOUS LOW FLOW			(a)41	Aug 25	(a)7.3	Sep 11, 1993
ANNUAL RUNOFF (CFSM)	0.815		0.756		0.786	
ANNUAL RUNOFF (INCHES)	11.06		10.29		10.68	
10 PERCENT EXCEEDS	193		157		173	
50 PERCENT EXCEEDS	90		86		89	
90 PERCENT EXCEEDS	75		73		70	

(a) Result of regulation

(b) Ice affected

(c) Estimated due to ice effect or missing record

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1991 to current year.

INSTRUMENTATION.--Continuous water temperature recorder since Aug. 30, 1991.

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

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum temperature, 29.0°C, July 25, 30, 1999; minimum, 0.0°C, for many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum temperature, 25.5°C, July 16; minimum, 0.0°C, on many days.

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	8.0	6.5	7.0	4.5	3.5	4.0	1.5	0.5	1.0	1.0	0.5	0.5
2	7.5	6.0	6.5	5.0	4.0	4.5	1.5	0.5	1.0	1.0	0.5	1.0
3	7.5	6.5	7.0	4.5	3.5	4.0	2.0	1.0	1.5	1.0	0.0	0.5
4	8.0	6.5	7.0	3.5	3.0	3.5	2.0	1.0	1.5	1.0	0.0	0.5
5	8.5	7.0	7.5	3.0	2.0	2.5	2.0	1.0	1.5	0.5	0.0	0.0
6	9.5	7.5	8.5	2.0	1.0	1.5	1.5	1.5	1.5	0.5	0.0	0.0
7	10.5	8.5	9.5	1.5	0.5	1.0	1.5	1.0	1.5	1.0	0.0	0.5
8	11.5	10.0	10.5	2.0	0.5	1.5	2.0	1.0	1.5	1.0	0.0	0.5
9	13.0	11.5	12.0	3.0	1.5	2.0	1.5	1.0	1.5	1.0	0.0	0.5
10	14.0	13.0	13.5	2.5	2.0	2.5	1.5	0.5	1.0	1.0	0.5	0.5
11	14.0	13.0	13.5	3.0	2.0	2.5	1.0	0.5	1.0	0.5	0.5	0.5
12	13.0	12.0	12.5	2.5	1.5	2.0	1.0	0.5	0.5	0.5	0.5	0.5
13	12.5	11.5	12.0	2.0	1.0	1.5	1.0	0.5	0.5	0.5	0.0	0.5
14	12.0	10.5	11.5	3.0	1.5	2.5	1.0	0.5	1.0	0.5	0.0	0.5
15	10.5	9.5	10.0	3.0	2.5	2.5	1.0	0.5	1.0	0.5	0.0	0.5
16	9.5	8.5	9.0	3.0	2.5	3.0	1.0	0.5	0.5	0.5	0.0	0.5
17	9.0	8.0	8.5	3.5	2.5	3.0	1.0	0.5	0.5	1.0	0.0	0.5
18	9.5	8.0	8.5	4.5	3.5	4.0	1.0	0.5	0.5	0.5	0.0	0.0
19	10.0	8.5	9.0	5.0	4.0	4.5	1.0	0.0	0.5	0.5	0.0	0.0
20	10.5	9.0	10.0	5.5	4.0	4.5	1.0	0.0	0.5	0.5	0.0	0.0
21	11.0	9.5	10.0	4.5	3.5	4.0	1.0	0.5	0.5	0.5	0.0	0.0
22	10.5	9.0	9.5	3.5	2.5	3.0	1.5	0.5	0.5	0.5	0.0	0.0
23	10.0	8.5	9.0	2.5	1.0	2.0	1.0	0.0	0.5	0.5	0.0	0.0
24	9.0	7.5	8.0	1.0	0.0	0.5	1.0	0.0	0.5	0.5	0.0	0.0
25	7.5	7.0	7.0	1.5	0.5	1.0	1.0	0.0	0.5	0.5	0.0	0.0
26	7.0	5.5	6.0	2.0	0.5	1.0	1.0	0.5	0.5	0.5	0.0	0.0
27	6.0	5.0	5.5	1.5	1.0	1.5	1.0	1.0	1.0	0.5	0.0	0.0
28	5.0	4.5	5.0	1.0	1.0	1.0	1.5	0.5	1.0	0.5	0.0	0.0
29	4.5	4.0	4.5	1.5	0.5	1.0	1.0	0.5	1.0	0.5	0.0	0.0
30	4.5	4.0	4.0	1.5	0.5	1.0	1.0	0.5	0.5	0.5	0.0	0.0
31	4.5	4.0	4.5	---	---	---	0.5	0.0	0.5	0.5	0.0	0.0
MONTH	14.0	4.0	8.6	5.5	0.0	2.4	2.0	0.0	0.9	1.0	0.0	0.3

CHIPPEWA RIVER BASIN

395

05368000 HAY RIVER AT WHEELER, WI

LOCATION.--Lat 45°02'52", long 91°54'39", in SW ¼ SW ¼ sec.25, T.30 N., R.13 W., Dunn County, Hydrologic Unit 07050007, on right bank 25 ft downstream from highway bridge in Wheeler, 1.8 mi upstream from Otter Creek, and 2.4 mi downstream from South Fork Hay River.

DRAINAGE AREA.--418 mi².

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 889.30 ft above NGVD of 1929. Prior to Mar. 25, 1951, nonrecording gage.

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

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Maximum stage since 1915, 16.6 ft April 1934, from floodmarks.

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	229	246	e230	e270	e200	249	904	341	702	257	448	228
2	229	241	e210	e260	e190	263	755	325	687	252	372	233
3	230	240	e210	e250	e200	285	669	314	580	250	337	234
4	237	247	e210	e240	e210	296	608	309	474	800	310	225
5	235	262	e220	e220	e210	321	548	302	430	912	293	225
6	233	255	e220	e210	e220	319	511	295	416	407	279	339
7	231	244	e220	e210	e230	308	484	288	400	379	274	347
8	230	228	e220	e220	e230	296	460	282	380	345	292	290
9	229	250	e230	e230	e240	289	436	282	444	320	297	274
10	227	248	e220	e240	e240	288	412	309	609	307	291	262
11	230	240	e210	e240	e240	310	394	304	489	311	296	251
12	260	242	e200	e240	e240	298	379	299	489	338	282	238
13	262	242	e190	e240	e240	312	367	335	505	314	279	229
14	250	236	e190	e240	e240	309	358	489	434	304	270	231
15	243	236	e210	e240	e230	288	348	456	389	292	263	372
16	239	237	e230	e240	e220	281	334	376	366	285	271	645
17	237	238	e240	e240	e220	282	325	354	352	278	292	414
18	236	261	e250	e220	e220	282	322	359	339	272	274	342
19	235	277	e260	e220	e230	282	490	346	325	289	264	305
20	234	263	e270	e220	e230	282	626	343	318	545	254	285
21	234	264	e280	e210	e230	286	528	339	313	389	240	272
22	233	254	e280	e210	e230	281	603	336	306	346	237	260
23	233	249	e280	e210	e230	284	496	452	300	309	235	256
24	232	244	e270	e210	e230	313	423	733	298	291	233	261
25	233	238	e280	e200	e230	526	440	786	293	281	233	256
26	233	255	e290	e200	e230	1,510	533	565	287	275	234	248
27	233	245	e300	e190	e230	3,350	445	500	282	271	234	244
28	238	240	e310	e190	e240	3,750	400	519	277	264	233	239
29	245	236	e290	e180	247	3,700	380	492	269	310	231	236
30	247	e230	e270	e200	---	2,630	358	516	262	329	232	234
31	249	---	e260	e200	---	1,500	---	606	---	343	232	---
TOTAL	7,346	7,388	7,550	6,890	6,577	23,970	14,336	12,552	12,015	10,865	8,512	8,475
MEAN	237	246	244	222	227	773	478	405	400	350	275	282
MAX	262	277	310	270	247	3,750	904	786	702	912	448	645
MIN	227	228	190	180	190	249	322	282	262	250	231	225
CFSM	0.57	0.59	0.58	0.53	0.54	1.85	1.14	0.97	0.96	0.84	0.66	0.68
IN.	0.65	0.66	0.67	0.61	0.59	2.13	1.28	1.12	1.07	0.97	0.76	0.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

	268	264	229	203	230	487	641	375	354	277	270	285
MEAN	268	264	229	203	230	487	641	375	354	277	270	285
MAX	637	704	470	412	657	1,021	2,054	792	778	667	568	762
(WY)	(2003)	(1971)	(1966)	(1981)	(1981)	(1983)	(1965)	(2003)	(1993)	(1979)	(2001)	(1986)
MIN	139	138	122	97.2	85.2	155	166	153	153	135	126	141
(WY)	(1959)	(1959)	(1959)	(1959)	(1959)	(1956)	(1959)	(1958)	(1959)	(1964)	(1964)	(1958)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1951 - 2004

ANNUAL TOTAL	138,630	126,476	
ANNUAL MEAN	380	346	324
HIGHEST ANNUAL MEAN			433
LOWEST ANNUAL MEAN			152
HIGHEST DAILY MEAN	2,680	Apr 18	3,750
LOWEST DAILY MEAN	(a)190	Dec 13	(a)180
ANNUAL SEVEN-DAY MINIMUM	(a)207	Dec 9	(a)193
MAXIMUM PEAK FLOW			4,020
MAXIMUM PEAK STAGE			11.35
INSTANTANEOUS LOW FLOW			(a)
ANNUAL RUNOFF (CFSM)	0.909	0.827	0.775
ANNUAL RUNOFF (INCHES)	12.34	11.26	10.52
10 PERCENT EXCEEDS	618	489	498
50 PERCENT EXCEEDS	263	270	244
90 PERCENT EXCEEDS	220	220	154

(a) Ice affected (b) From rating curve extended above 9,000 ft³/s
(c) Result of freezeup (e) Estimated due to ice effect or missing record

CHIPPEWA RIVER BASIN

05369000 RED CEDAR RIVER AT MENOMONIE, WI

396

LOCATION.--Lat 44°53'02", long 91°55'57", in NW 1/4 NW 1/4 sec.26, T.28 N., R.13 W., Dunn County, Hydrologic Unit 07050007, on right bank at Menomonie, 900 ft downstream from powerplant of Northern States Power Co., and 1,000 ft downstream from Wilson Creek.

DRAINAGE AREA.--1,770 mi².

PERIOD OF RECORD.--June 1907 to September 1908, May 1913 to current year. Monthly discharge only for June 1907 to September 1908, published in WSP 1308. Unpublished daily discharge from June 1907 to September 1908 in District files.

REVISED RECORDS.--WDR WI-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 780.00 ft above NGVD of 1929 (Northern States Power Co. bench mark). Prior to Sept. 3, 1908, nonrecording gage at site 1 mi downstream at different datum. May 9, 1913, to Sept. 30, 1923, water-stage recorder at same site at datum 0.42 ft lower than present datum.

REMARKS.--Records good (see page 11). Flow regulated by powerplants at Menomonie and Cedar Falls. 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	972	1,190	1,120	985	794	1,180	4,840	1,440	2,970	1,210	1,980	996
2	976	1,090	836	1,070	903	1,160	4,190	1,710	3,040	870	1,600	1,010
3	953	1,120	967	1,070	887	1,270	3,440	1,270	3,320	1,180	1,310	1,010
4	1,030	1,150	1,130	909	872	1,450	3,080	1,430	2,840	2,530	1,310	974
5	984	1,230	1,150	778	872	1,430	2,860	1,510	2,670	2,990	1,220	995
6	971	1,250	1,120	718	908	1,270	2,740	1,460	2,570	2,560	978	1,250
7	1,040	1,100	1,160	678	922	1,350	2,380	1,390	1,990	1,770	1,120	1,420
8	980	1,060	1,160	755	918	1,320	2,270	1,170	1,920	1,590	1,270	1,500
9	1,050	861	1,170	871	912	1,180	2,320	1,430	2,250	1,480	1,450	1,430
10	962	1,270	1,140	936	871	1,220	1,990	1,560	2,590	1,480	1,400	1,210
11	1,130	1,170	694	974	918	1,280	1,920	1,170	2,180	1,570	1,480	1,220
12	1,120	997	644	995	899	1,110	1,660	1,550	2,060	1,390	1,370	1,180
13	1,340	1,030	612	974	945	1,220	1,210	1,540	2,050	1,340	1,360	1,150
14	1,420	1,070	839	908	906	1,240	1,210	1,860	1,910	1,290	1,430	1,350
15	1,240	1,030	1,100	941	855	1,220	1,210	1,970	1,770	1,280	1,280	1,730
16	1,130	1,080	1,200	920	910	1,150	1,210	1,840	1,650	1,210	1,550	2,130
17	1,060	1,200	1,120	954	914	1,030	1,290	1,730	1,520	1,030	1,380	2,170
18	1,070	1,330	1,060	922	915	1,230	1,350	1,870	1,410	971	1,200	1,780
19	992	1,160	1,040	838	934	1,110	2,000	1,850	1,460	1,190	1,110	1,510
20	1,050	1,210	1,010	819	943	1,110	2,350	1,540	1,330	1,450	1,060	1,160
21	932	1,080	996	895	910	999	2,330	1,420	1,340	1,550	1,060	1,260
22	1,160	1,200	1,060	888	1,000	1,090	2,310	1,790	1,270	1,460	1,180	1,120
23	936	1,260	1,090	881	1,020	1,080	2,490	2,120	1,100	1,220	1,050	1,250
24	959	1,190	993	826	974	1,290	2,220	2,720	1,110	1,070	977	1,260
25	985	809	944	808	1,030	2,420	2,460	3,050	1,090	1,020	1,090	1,170
26	1,100	1,250	962	839	956	4,780	2,310	2,630	1,130	1,020	1,000	1,170
27	974	1,260	1,060	917	1,050	6,930	2,180	2,700	991	1,070	1,020	1,220
28	961	1,240	1,130	927	984	10,600	1,620	2,350	956	1,000	1,050	1,060
29	1,130	1,060	1,110	874	1,060	11,500	1,740	3,030	1,060	1,110	1,110	1,100
30	1,110	1,140	1,130	847	---	11,000	1,560	2,330	806	1,180	1,120	1,190
31	1,170	---	968	836	---	7,000	---	2,810	---	1,320	962	---
TOTAL	32,887	34,087	31,715	27,553	26,982	83,219	66,740	58,240	54,353	43,401	38,477	38,975
MEAN	1,061	1,136	1,023	889	930	2,684	2,225	1,879	1,812	1,400	1,241	1,299
MAX	1,420	1,330	1,200	1,070	1,060	11,500	4,840	3,050	3,320	2,990	1,980	2,170
MIN	932	809	612	678	794	999	1,210	1,170	806	870	962	974

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 2004, BY WATER YEAR (WY)

MEAN	1,159	1,174	990	906	974	1,925	2,355	1,536	1,496	1,142	1,003	1,206
MAX	2,806	2,521	2,316	1,317	2,047	4,142	6,819	3,423	3,702	2,926	2,237	3,091
(WY)	(1969)	(1992)	(1966)	(1973)	(1966)	(1973)	(1965)	(2003)	(1943)	(1968)	(1995)	(1938)
MIN	528	566	541	532	536	921	664	612	425	421	383	493
(WY)	(1933)	(1937)	(1933)	(1959)	(1959)	(1956)	(1930)	(1934)	(1934)	(1934)	(1934)	(1933)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1907 - 2004

ANNUAL TOTAL	574,363	536,629	
ANNUAL MEAN	1,574	1,466	1,321
HIGHEST ANNUAL MEAN			2,016
LOWEST ANNUAL MEAN			711
HIGHEST DAILY MEAN	9,830	May 13	11,500
LOWEST DAILY MEAN	612	Dec 13	612
ANNUAL SEVEN-DAY MINIMUM	827	Sep 4	806
MAXIMUM PEAK FLOW			13,000
MAXIMUM PEAK STAGE			7.85
10 PERCENT EXCEEDS	2,780		2,320
50 PERCENT EXCEEDS	1,120		1,170
90 PERCENT EXCEEDS	898		909

(a) From rating curve extended above 27,000 ft³/s on basis of computed flow over Cedar Falls Dam, 6 mi upstream

(b) From floodmarks

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI

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LOCATION.--Lat 44°37'42", long 91°58'08"(revised), in SE ¼ SW ¼ sec.21, T.25 N., R.13 W., Pepin County, Hydrologic Unit 07050005, on left bank in Durand, 75 ft downstream from bridge on U.S. Highway 10, and 9.5 mi downstream from Red Cedar River.

DRAINAGE AREA.--9,010 mi².

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 785: 1930, 1934(M). WSP 875: 1930 (monthly and yearly runoff). WSP 925: 1938. WSP 1508: 1929(M), 1932. WDR WI-82-1: Drainage area. WDR WI-99-1: 1995(m).

GAGE.--Water-stage recorder. Datum of gage is 694.59 ft above NGVD of 1929. Prior to Dec. 9, 1930, nonrecording gage at bridge 400 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair (see page 11). Flow regulated by powerplants, Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota on Chippewa and Flambeau Rivers. Gage-height telemeter and data-collection platform at station.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,170	4,070	4,140	e4,600	e3,300	e3,800	46,900	11,400	30,400	4,670	4,460	3,040
2	3,220	3,980	3,620	e4,700	e3,300	e4,500	34,000	11,400	40,200	4,520	5,230	3,050
3	3,110	4,240	3,380	e4,300	e3,300	e5,400	25,900	11,100	40,600	4,400	4,550	3,040
4	3,180	4,460	3,820	e4,300	e3,300	e5,800	23,600	11,000	32,400	6,170	4,330	3,040
5	3,290	4,150	4,000	e4,100	e3,400	e6,200	23,200	9,800	22,900	6,160	4,100	3,120
6	3,200	4,210	4,240	e3,600	e3,400	e6,500	21,700	9,590	18,900	6,540	3,620	3,410
7	3,240	4,110	4,660	e3,200	e3,600	e6,200	16,900	8,010	14,000	5,810	3,520	4,360
8	3,230	4,070	4,030	e2,700	e3,600	e5,400	16,300	7,450	15,700	5,220	3,770	5,650
9	3,230	3,850	4,070	e2,700	e3,600	e4,800	16,700	6,950	16,700	5,130	4,430	5,300
10	3,160	3,870	3,920	e2,700	e3,600	e5,400	16,100	7,680	17,700	5,030	4,760	4,680
11	3,090	3,890	e3,600	e2,800	e3,600	7,510	15,200	8,410	20,600	5,050	4,900	4,130
12	3,640	3,770	e2,900	e2,900	e3,600	6,620	14,200	9,390	22,000	4,970	4,920	3,980
13	3,970	3,720	e2,600	e2,900	e3,600	5,680	12,400	10,000	19,400	4,830	4,810	3,680
14	4,050	3,540	e2,700	e3,000	e3,600	5,500	9,250	12,200	15,300	4,670	5,110	4,140
15	3,610	3,510	e2,900	e3,100	e3,500	5,450	9,620	17,000	14,200	4,540	4,430	5,680
16	3,320	3,360	e3,300	e3,100	e3,500	7,210	10,300	18,200	13,200	4,430	4,460	6,650
17	3,160	3,560	e4,000	e3,200	e4,100	6,410	10,300	16,200	12,300	4,180	4,930	6,990
18	3,710	4,130	e4,100	e3,100	e4,800	6,150	9,890	11,600	9,090	3,760	4,350	6,350
19	3,650	4,590	e4,200	e3,000	e4,200	5,880	10,200	11,000	8,410	3,580	4,190	5,770
20	3,570	5,060	e4,300	e3,000	e4,300	5,930	12,600	10,300	7,740	4,020	4,050	4,620
21	3,440	6,100	e4,400	e3,000	e4,400	5,680	22,200	9,810	6,580	4,380	4,010	4,180
22	3,350	5,230	e3,800	e3,100	e4,200	5,420	24,100	9,160	5,760	3,970	4,130	4,050
23	3,150	5,120	e3,900	e3,100	e4,300	6,240	24,500	9,200	5,530	3,860	3,950	3,990
24	3,200	4,820	e4,000	e3,200	e5,300	7,280	24,500	12,500	5,630	3,540	3,720	3,980
25	3,140	4,810	e3,700	e3,200	e5,100	10,400	24,000	17,800	6,280	3,450	3,750	3,780
26	3,160	4,140	e3,700	e3,100	e5,500	16,700	21,500	20,100	5,630	3,380	3,780	3,790
27	3,210	4,160	e3,900	e3,200	e5,100	24,400	18,800	19,000	5,100	3,390	3,660	3,960
28	3,030	4,100	e4,300	e3,300	e3,700	33,000	19,000	13,400	4,680	3,340	3,380	3,750
29	3,220	4,090	e4,700	e3,200	e3,700	45,000	17,400	15,100	4,870	3,380	3,360	3,390
30	3,700	4,560	e4,600	e3,300	---	54,400	12,700	17,700	4,480	3,470	3,310	3,530
31	3,750	---	e4,600	e3,300	---	56,300	---	17,700	---	3,620	3,120	---
TOTAL	104,150	127,270	120,080	102,000	114,500	381,160	563,960	380,150	446,280	137,460	129,090	129,080
MEAN	3,360	4,242	3,874	3,290	3,948	12,300	18,800	12,260	14,880	4,434	4,164	4,303
MAX	4,050	6,100	4,700	4,700	5,500	56,300	46,900	20,100	40,600	6,540	5,230	6,990
MIN	3,030	3,360	2,600	2,700	3,300	3,800	9,250	6,950	4,480	3,340	3,120	3,040

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2004, BY WATER YEAR (WY)

	2003	2004	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	6,575	6,814	5,381	4,768	5,060	9,635	16,230	10,720	9,486	6,344	5,194	6,981																																																																	
MAX	20,360	20,190	11,600	8,181	11,160	25,120	34,170	28,220	37,730	19,070	12,180	27,950																																																																	
(WY)	(1986)	(1992)	(1966)	(1984)	(1984)	(1973)	(1967)	(1954)	(1943)	(1968)	(1995)	(1941)																																																																	
MIN	2,103	2,209	2,335	2,289	2,404	3,645	4,718	3,336	2,699	2,271	2,026	1,954																																																																	
(WY)	(1977)	(1977)	(1934)	(1934)	(1990)	(1931)	(1931)	(1931)	(1934)	(1934)	(1934)	(1948)																																																																	

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1928 - 2004

ANNUAL TOTAL	2,762,250	2,735,180				
ANNUAL MEAN	7,568	7,473	7,758			
HIGHEST ANNUAL MEAN			11,550			
LOWEST ANNUAL MEAN			3,992			
HIGHEST DAILY MEAN	62,400	May 14	56,300	Mar 31	117,000	Apr 2, 1967
LOWEST DAILY MEAN	(a)2,600	Dec 13	(a)2,600	Dec 13	1,100	Nov 24, 1950
ANNUAL SEVEN-DAY MINIMUM	2,830	Sep 7	(a)2,810	Jan 8	1,580	Oct 28, 1948
MAXIMUM PEAK FLOW			58,000	Mar 31	123,000	Apr 2, 1967
MAXIMUM PEAK STAGE			12.85	Mar 31	16.93	Apr 2, 1967
INSTANTANEOUS LOW FLOW			(a)		1,020	Nov 24, 1950
10 PERCENT EXCEEDS	14,900	17,100	14,500			
50 PERCENT EXCEEDS	4,130	4,340	5,600			
90 PERCENT EXCEEDS	3,100	3,190	3,000			

(a) Ice affected

(e) Estimated due to ice effect or missing record

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI

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

DRAINAGE AREA.--64.0 mi².

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

REVISED RECORDS.--WDR WI-67-1: 1966. WDR WI-81-1: Drainage area. WDR WI-92-1: 1975-79(M), 1977, 1978. WDR WI-01-1: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and rock v-notch sharp-crested weir. Datum of gage is 900.00 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to July 31, 1957, nonrecording gage at site 850 ft downstream at datum of 912.45 ft above NGVD of 1929. Aug. 1, 1957, to June 6, 1966, nonrecording gage at downstream site at datum of 910.45 ft above NGVD of 1929. June 7, 1966, to Oct. 31, 1968, nonrecording gage at downstream site at datum of 909.45 ft above NGVD of 1929. Nov. 1, 1968 to Sept. 3, 2003, water-stage recorder, crest-stage gage, and metal v-notch sharp-crested weir at wite 400 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor (see page 11). Low flow slightly regulated and high flow completely regulated by flood-control dam 770 ft upstream. Data-collection platform and gage-height telemeter at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Maximum stage since at least 1894, that of Sept. 18, 1942, 19.98 ft, with datum at 909.45 ft above NGVD of 1929, from floodmarks, discharge, 33,000 ft³/s estimated by U.S. Army Corps of Engineers on basis of slope-area measurement by Geological Survey of peak discharge of 39,000 ft³/s at Elmwood, drainage area, 91.9 mi².

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	17	17	16	15	15	18	30	20	86	19	25	e14
2	17	17	16	16	16	43	27	19	53	19	23	e14
3	18	18	16	16	16	102	25	18	30	20	22	e14
4	17	19	16	15	15	82	24	18	22	23	21	e14
5	17	18	16	15	15	65	23	17	20	20	20	e14
6	18	18	16	14	15	37	22	46	19	19	19	e19
7	18	18	17	15	16	35	21	22	19	20	20	e20
8	18	17	18	15	15	28	20	16	18	19	21	15
9	18	17	20	15	15	24	18	16	64	18	22	14
10	18	17	20	15	15	23	19	18	118	18	20	14
11	19	18	18	15	15	24	20	15	38	19	19	14
12	20	19	16	15	15	25	20	17	49	20	19	14
13	19	18	16	15	15	28	20	25	38	22	18	14
14	18	18	17	15	14	25	19	61	25	25	18	16
15	17	18	17	15	14	22	20	30	21	25	18	28
16	17	18	17	15	14	20	19	20	20	26	20	41
17	17	18	17	14	14	20	19	18	19	26	20	25
18	18	20	16	14	14	21	18	18	19	25	18	19
19	18	19	16	14	15	23	20	18	18	25	16	17
20	18	18	16	14	17	28	28	17	18	25	16	17
21	18	17	16	14	15	36	31	17	19	24	17	16
22	18	17	16	14	15	33	40	18	18	24	17	16
23	18	18	16	14	15	29	30	23	19	23	17	17
24	18	18	15	14	15	166	24	58	19	22	17	17
25	18	17	16	14	14	585	31	34	19	21	17	17
26	18	17	16	15	15	922	44	22	19	21	17	17
27	18	17	16	15	15	345	32	27	19	20	16	31
28	19	17	17	14	15	201	27	32	19	20	15	22
29	19	17	17	14	15	107	24	32	19	23	15	6.0
30	18	17	16	14	---	48	22	73	19	22	16	11
31	18	---	15	14	---	35	---	125	---	21	15	---
TOTAL	557	532	513	453	434	3,200	737	910	903	674	574	527.0
MEAN	18.0	17.7	16.5	14.6	15.0	103	24.6	29.4	30.1	21.7	18.5	17.6
MAX	20	20	20	16	17	922	44	125	118	26	25	41
MIN	17	17	15	14	14	18	18	15	18	18	15	6.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2004, BY WATER YEAR (WY)

MEAN	27.1	26.9	18.8	15.5	22.1	74.3	68.6	40.0	44.3	27.7	28.8	30.3
MAX	104	86.2	39.7	23.0	71.6	164	258	104	148	94.1	90.1	153
(WY)	(2003)	(1971)	(1978)	(1997)	(1981)	(1989)	(2001)	(2003)	(1980)	(1978)	(1995)	(1986)
MIN	10.4	7.24	4.22	5.21	5.77	10.1	16.6	12.4	11.6	12.5	5.95	9.81
(WY)	(1970)	(1969)	(1969)	(1969)	(1969)	(1970)	(2000)	(1977)	(1969)	(1988)	(1969)	(1969)

CHIPPEWA RIVER BASIN

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1969 - 2004	
ANNUAL TOTAL	14,188		10,014.0			
ANNUAL MEAN	38.9		27.4		35.4	
HIGHEST ANNUAL MEAN					56.1	2001
LOWEST ANNUAL MEAN					21.2	1988
HIGHEST DAILY MEAN	898	May 11	922	Mar 26	2,190	Mar 28, 1989
LOWEST DAILY MEAN	13	Sep 17	6.0	Sep 29	(a)0.00	Aug 12-16, 1971
ANNUAL SEVEN-DAY MINIMUM	15	Sep 11	14	Jan 17	(b)0.91	Sep 15, 1969
MAXIMUM PEAK FLOW			1,420	Mar 26	(c)3,030	Jun 7, 1980
MAXIMUM PEAK STAGE			17.19	Mar 26	(c)19.90	Jun 7, 1980
INSTANTANEOUS LOW FLOW			3.8	Sep 28	(a)0.00	Aug 11-16, 1971
10 PERCENT EXCEEDS	52		31		49	
50 PERCENT EXCEEDS	19		18		19	
90 PERCENT EXCEEDS	17		15		12	

- (a) Flow shut off at flood-control dam upstream due to request by Wisconsin Department of Natural Resources for eradication of rough fish to improve sport fishing
- (b) Result of work at dam
- (c) Peak discharge and stage prior to construction of flood-control reservoir occurred Apr. 15, 1954, and was 7,000 ft³/s and 12.50 ft (datum then in use), respectively
- (d) Unknown
- (e) Estimated due to ice effect or missing record