

CROW WING RIVER BASIN

05247500 CROW WING RIVER NEAR PILLAGER, MN

LOCATION.--Lat 46° 18'18", long 94° 22'38", in SW¼NE¼ sec. 30, T. 133 N., R. 29 W., Cass County, Hydrologic Unit 07010106, at Sylvan dam power plant of Minnesota Power Co., 3.6 mi above mouth and 4.9 mi southeast of Pillager.

DRAINAGE AREA.--3,520 mi², approximately,

PERIOD OF RECORD.--October 1968 to September 1986, October 1987 to current year. Records for August 1924 to September 1968 available in files of the Minnesota District Office.

GAGE.--Water stage recorder. Datum of gage is 1,151.00 ft, adjustment of 1912. Prior to January 16, 1991, staff gage attached to retaining wall approximately 20 ft below the turbine outlet bays. Datum of staff gage is 1,150.00 ft, adjustment of 1912.

REMARKS.--Records good except those for estimated daily discharges, which are fair to poor. Discharge computed on the basis of power plant records prior to January 16, 1991. Records for Oct. 1, 1968 to Sept. 30, 1975, were adjusted for storage change in the Sylvan dam reservoir. Flow partly regulated by power plants and Gull Lake (station 05246500).

COOPERATION.--Records collected by Minnesota Power Company prior to February 1991, in connection with a Federal Power Commission project.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum daily discharge since 1924, 18,300 ft³/s, Apr. 14, 1965.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
1	972	2140	1640	e900	e1130	1290	2890	3850	1820
2700	1770	1310							
2	943	2010	1590	e870	e1160	1200	4500	3730	1970
2670	1760	1200							
3	780	2170	1470	e860	e1220	1160	5930	3570	1740
2830	1730	1140							
4	856	2720	1550	e850	e1200	1230	8450	3550	1700
2980	1800	1130							
5	879	2510	1590	e840	e1120	1200	12100	3960	1590
3020	1810	1130							
6	873	2300	1550	e830	e1160	1190	14300	2400	1350
2930	1730	1120							

7	840	2290	1510	e830	e1200	1180	16100	1430	1210
2920	1700	1080							
8	888	2390	1460	e840	e1150	1260	15800	2480	1240
2910	1600	1140							
9	869	2370	1460	e880	e1130	1180	15200	2650	1180
2700	1620	1130							
10	796	2120	1460	e900	e1100	1160	14000	2290	1130
2500	1570	1120							
11	786	1630	1450	e970	e1150	1160	12100	2390	942
2510	1500	1030							
12	782	1290	1360	e1040	e1170	1220	10400	2440	901
2640	1420	1020							
13	783	1100	1380	e1040	e1150	1230	9560	2340	895
2600	1340	1010							
14	775	1270	1350	e1130	e1150	1180	8330	2310	806
2640	1330	1020							
15	795	1300	1300	e1080	e1140	1140	7670	2330	917
2770	1420	1050							
16	784	1320	e1250	e1120	e1140	1190	6910	2180	834
2790	1310	1040							
17	1100	1620	e1230	e1150	e1130	1220	6830	2130	897
2610	1260	1040							
18	1310	1660	e1200	e1120	e1150	1120	6720	2090	893
2550	1570	1020							
19	1510	1710	e1150	e1090	e1150	1150	6430	2050	872
2560	1440	1020							
20	1800	1780	e1100	e1100	e1140	1220	6260	1970	993
2570	1320	1020							
21	1640	1660	e1000	e1110	e1130	1200	5870	1770	982
2510	1410	1020							
22	1630	1660	e980	e1120	1130	1130	5600	1810	858
2300	1500	1020							
23	1550	1650	e940	e1130	1210	1120	5280	2180	1130
2230	1500	1010							
24	1540	1660	e920	e1120	1200	1280	5110	2570	1390
2320	1490	1010							
25	1500	1600	e900	e1100	1290	1250	4860	2410	1660
2370	1190	926							
26	1490	1400	e860	e1060	1290	1200	4760	2230	1600
2220	1530	911							
27	1450	1400	e840	e1110	1140	1330	4620	2390	1670
2140	1580	928							
28	1420	1430	e800	e1130	1250	1440	4510	2480	2170
2200	1300	833							
29	1470	1500	e820	e1180	---	2100	4260	2240	2440
2050	1250	943							
30	1830	1650	e830	e1180	---	2910	4050	1950	2660
1730	1200	1020							
31	2250	---	e860	e1140	---	1680	---	1940	---
1740	1230	---							

TOTAL	36891	53310	37800	31820	32680	40520	239400	76110	40440
78210	46180	31391							
MEAN	1190	1777	1219	1026	1167	1307	7980	2455	1348
2523	1490	1046							
MAX	2250	2720	1640	1180	1290	2910	16100	3960	2660
3020	1810	1310							
MIN	775	1100	800	830	1100	1120	2890	1430	806
1730	1190	833							
AC-FT	73170	105700	74980	63110	64820	80370	474800	151000	80210
155100	91600	62260							
CFSM	.36	.54	.37	.31	.35	.40	2.42	.74	.41
.76	.45	.32							
IN.	.42	.60	.43	.36	.37	.46	2.70	.86	.46
.88	.52	.35							

o e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
MEAN	1217	1189	821	679	686	1347	3386	2344	1607
1374	979	915							
MAX	3771	3674	1544	1188	1167	2996	7980	5671	3625
3295	3520	3309							
(WY)	1974	1972	1972	1986	1997	1972	1997	1986	1993
1972	1972	1986							
MIN	215	215	199	218	255	548	882	545	447
206	120	161							
(WY)	1977	1977	1977	1977	1977	1981	1981	1977	1988
1988	1976	1976							

<i>SUMMARY STATISTICS</i>	<i>FOR 1996 CALENDAR YEAR</i>	<i>FOR 1997 WATER YEAR</i>	<i>WATER YEARS 1969 - 1997</i>
ANNUAL TOTAL	680322	744752	
ANNUAL MEAN	1859	2040	1380
HIGHEST ANNUAL MEAN			
2564	1972		
LOWEST ANNUAL MEAN			
446	1977		
HIGHEST DAILY MEAN	13900	Apr 15	16600
12 1969			Apr
LOWEST DAILY MEAN	616	Sep 1	60
10 1976			Aug
ANNUAL SEVEN-DAY MINIMUM	642	Aug 26	68
Aug 9 1976			
ANNUAL RUNOFF (AC-FT)	1349000	1477000	999400
ANNUAL RUNOFF (CFSM)	.56	.62	.42
ANNUAL RUNOFF (INCHES)	7.67	8.40	5.68
10 PERCENT EXCEEDS	3240	2950	2860
50 PERCENT EXCEEDS	1220	1340	926
90 PERCENT EXCEEDS	783	899	425