

05129115 VERMILION RIVER NEAR CRANE LAKE, MN

LOCATION.--Lat 48°15'53", long 92°33'57", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T.67 N., R.17 W., St. Louis County, Hydrologic Unit 09030002, in Superior National Forest, on left bank 350 ft downstream from bridge on Forest Route 491, 3.5 mi upstream from mouth, and 3.5 mi west of city of Crane Lake.

DRAINAGE AREA.-- 905 mi².

PERIOD OF RECORD.--August 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,180 ft above sea level (from topographic map).

REMARKS.--Records good.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 1979 reached a stage of 15.15 ft, from high-water mark, discharge approximately 4,600 ft³/s.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	500	373	415	322	272	223	954	1,510	1,760	604	252	98
2	490	374	405	325	284	226	1,090	1,450	1,850	580	237	100
3	476	363	404	323	290	226	1,290	1,420	1,840	569	223	99
4	463	356	399	311	286	226	1,460	1,370	1,770	689	209	97
5	450	358	395	302	282	229	1,570	1,320	1,690	719	197	102
6	434	344	385	293	285	228	1,650	1,270	1,620	643	187	154
7	412	334	380	291	286	228	1,770	1,220	1,610	586	178	173
8	398	318	378	291	290	229	2,040	1,180	1,630	542	175	186
9	392	307	373	288	294	229	2,280	1,150	1,610	509	179	198
10	387	317	363	288	288	230	2,370	1,100	1,560	485	181	203
11	380	324	350	291	279	230	2,350	1,050	1,500	588	186	197
12	412	330	337	297	268	226	2,220	1,090	1,460	651	180	184
13	433	329	332	297	259	230	2,080	1,200	1,400	634	175	180
14	441	327	335	297	250	237	1,960	1,220	1,330	614	170	172
15	435	327	333	295	235	238	1,860	1,190	1,270	582	164	182
16	419	327	336	297	231	237	1,810	1,150	1,260	547	158	321
17	405	344	335	300	238	239	1,780	1,150	1,240	515	157	402
18	395	399	333	297	244	239	1,770	1,210	1,180	493	168	421
19	386	441	330	289	248	237	1,860	1,210	1,110	473	156	417
20	374	461	327	280	248	237	1,960	1,200	1,050	451	145	401
21	358	457	327	283	245	234	2,020	1,170	996	429	134	396
22	351	438	325	283	241	231	2,040	1,130	955	405	126	383
23	344	419	322	280	238	230	2,000	1,080	893	386	118	375
24	349	382	318	282	237	229	1,940	1,060	852	364	117	408
25	347	413	315	280	234	238	1,860	1,090	803	346	115	440
26	339	430	313	290	228	287	1,790	1,150	764	328	110	436
27	334	431	311	288	224	332	1,730	1,210	731	310	105	410
28	345	429	317	293	219	417	1,670	1,230	697	298	98	381
29	357	424	320	289	219	606	1,610	1,200	665	297	93	359
30	359	425	321	e283	---	737	1,560	1,190	637	280	93	344
31	368	---	327	273	---	849	---	1,470	---	266	94	---
TOTAL	12,333	11,301	10,761	9,098	7,442	9,014	54,344	37,640	37,733	15,183	4,880	8,219
MEAN	398	377	347	293	257	291	1,811	1,214	1,258	490	157	274
MAX	500	461	415	325	294	849	2,370	1,510	1,850	719	252	440
MIN	334	307	311	273	219	223	954	1,050	637	266	93	97
AC-FT	24,460	22,420	21,340	18,050	14,760	17,880	107,800	74,660	74,840	30,120	9,680	16,300
CFSM	0.44	0.42	0.38	0.32	0.28	0.32	2.00	1.34	1.39	0.54	0.17	0.30
IN.	0.51	0.46	0.44	0.37	0.31	0.37	2.23	1.55	1.55	0.62	0.20	0.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2004, BY WATER YEAR (WY)

MEAN	547	532	414	286	233	283	1,181	1,363	949	753	527	464
MAX	1,436	1,138	872	476	374	574	2,286	3,012	2,234	1,609	2,225	1,880
(WY)	(1996)	(1983)	(1983)	(1996)	(1997)	(1995)	(2001)	(2001)	(2001)	(1985)	(2001)	(1988)
MIN	110	132	106	84.4	63.9	89.5	294	363	205	113	60.0	69.1
(WY)	(1998)	(2003)	(2003)	(2003)	(2003)	(1988)	(2003)	(2003)	(1980)	(1980)	(1980)	(1998)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1979 - 2004	
ANNUAL TOTAL	100,127		217,948		630	
ANNUAL MEAN	274		595		213	
HIGHEST ANNUAL MEAN					1,132	2001
LOWEST ANNUAL MEAN					213	2003
HIGHEST DAILY MEAN	718	Sep 22	2,370	Apr 10	4,300	Apr 25, 1985
LOWEST DAILY MEAN	53	Mar 11	93	Aug 29,30	38	Aug 13, 1980
ANNUAL SEVEN-DAY MINIMUM	54	Mar 5	96	Aug 29	40	Aug 10, 1980
MAXIMUM PEAK FLOW			2,390	Apr 10	4,360	Apr 25, 1985
MAXIMUM PEAK STAGE			12.03	Apr 10	15.20	Apr 25, 1985
INSTANTANEOUS LOW FLOW			89	Aug 31	38	Aug 13, 1980
ANNUAL RUNOFF (AC-FT)	198,600		432,300		456,400	
ANNUAL RUNOFF (CFSM)	0.303		0.658		0.696	
ANNUAL RUNOFF (INCHES)	4.12		8.96		9.46	
10 PERCENT EXCEEDS	463		1,520		1,430	
50 PERCENT EXCEEDS	294		356		420	
90 PERCENT EXCEEDS	67		186		154	

e Estimated.

