

RAINY RIVER BASIN--Continued

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 except those for estimated daily discharges, which are fair.

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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	444	852	927	561	330	233	193	673	582	698	334	272
2	423	858	885	549	324	228	191	652	563	657	319	270
3	403	831	856	539	323	220	188	628	544	620	310	272
4	394	804	846	538	319	214	186	619	522	583	305	268
5	380	782	896	524	322	216	184	615	492	607	292	275
6	366	e765	1100	515	320	212	182	616	469	642	285	274
7	353	e750	1180	501	317	205	191	616	449	620	284	271
8	355	e725	1180	495	313	205	212	613	419	605	287	262
9	382	698	1120	492	307	214	218	653	403	587	283	250
10	423	e675	1090	489	303	220	248	671	404	572	293	246
11	573	e660	1030	480	298	230	271	686	448	559	305	238
12	674	e650	992	476	296	230	412	695	523	540	302	234
13	736	e635	945	467	288	231	637	694	613	511	296	225
14	784	625	895	457	285	229	959	697	750	491	286	215
15	777	614	856	449	284	223	1150	699	807	474	293	205
16	746	599	841	442	281	219	1240	668	778	459	297	196
17	703	591	841	435	275	216	1310	646	704	442	313	190
18	673	577	829	421	273	213	1270	626	629	422	309	183
19	638	563	797	413	271	212	1260	605	595	409	308	193
20	600	550	755	408	270	208	1210	590	594	396	300	197
21	572	540	720	403	266	201	1130	581	552	386	292	189
22	555	531	689	401	260	198	1070	571	546	367	285	178
23	565	528	683	398	257	195	1000	552	622	352	279	167
24	580	532	658	389	255	192	947	530	761	342	271	160
25	611	750	642	383	252	185	874	514	929	348	262	152
26	635	926	636	376	246	184	798	505	941	348	253	146
27	667	915	626	366	242	183	754	483	900	345	249	137
28	694	820	613	358	239	187	732	477	854	355	252	135
29	715	846	598	353	---	193	717	484	793	351	258	134
30	731	907	587	343	---	197	693	531	747	344	257	132
31	775	---	569	334	---	195	---	584	---	337	267	---
TOTAL	17927	21099	25882	13755	8016	6488	20427	18774	18933	14769	8926	6266
MEAN	578	703	835	444	286	209	681	606	631	476	288	209
MAX	784	926	1180	561	330	233	1310	699	941	698	334	275
MIN	353	528	569	334	239	183	182	477	403	337	249	132
AC-FT	35560	41850	51340	27280	15900	12870	40520	37240	37550	29290	17700	12430
CFSM	0.64	0.78	0.92	0.49	0.32	0.23	0.75	0.67	0.70	0.53	0.32	0.23
IN.	0.74	0.87	1.06	0.57	0.33	0.27	0.84	0.77	0.78	0.61	0.37	0.26

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	570	556	430	295	239	290	1192	1413	961	782	556	478
MAX	1436	1138	872	476	374	574	2286	3012	2234	1609	2225	1880
(WY)	1996	1983	1983	1996	1997	1995	2001	2001	2001	1985	2001	1988
MIN	110	152	116	97.8	94.1	89.5	627	507	205	113	60.0	69.1
(WY)	1998	1988	1988	1988	1988	1988	1987	1980	1980	1980	1980	1998

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1979 - 2002

ANNUAL TOTAL		431915		181262								
ANNUAL MEAN		1183		497					650			
HIGHEST ANNUAL MEAN									1132			2001
LOWEST ANNUAL MEAN									280			1998
HIGHEST DAILY MEAN				3690	May 27		1310	Apr 17	4300		Apr 25	1985
LOWEST DAILY MEAN				194	Mar 30		132	Sep 30	38		Aug 13	1980
ANNUAL SEVEN-DAY MINIMUM				197	Mar 25		142	Sep 24	40		Aug 10	1980
MAXIMUM PEAK FLOW							1320	Apr 17	4360		Apr 25	1985
MAXIMUM PEAK STAGE							9.60	Apr 17	15.20		Apr 25	1985
INSTANTANEOUS LOW FLOW							132	Sep 28,30	38		Aug 13	1980
ANNUAL RUNOFF (AC-FT)			856700				359500		470600			
ANNUAL RUNOFF (CFSM)			1.31				0.55		0.72			
ANNUAL RUNOFF (INCHES)			17.75				7.45		9.75			
10 PERCENT EXCEEDS			2970				846		1450			
50 PERCENT EXCEEDS			733				469		444			
90 PERCENT EXCEEDS			222				207		162			

e Estimated.

