

# UPPER MISSISSIPPI RIVER MAIN STEM

## 05244000 CROW WING RIVER AT NIMROD, MN

LOCATION.--Lat 4638'25", long 9452'44", in SE 1 / 4 NW 1 / 4 sec. 32, T. 137 N., R. 33 W., Wadena County, Hydrologic Unit 07010106, on right bank 200 ft upstream from highway bridge, 0.2 mi north of Nimrod, and 0.7 mi upstream from Cat River.

DRAINAGE AREA.--1,030 mi<sup>2</sup> (revised).

PERIOD OF RECORD.--April 1910 to September 1914, July 1930 to September 1981, October 1991 to current year (winter records incomplete prior to 1940). October 1981 to September 1987, annual maximums only.

REVISED RECORDS.--WSP 1508: 1910-11, 1913-14, 1937, 1942(M), 1944(M).

GAGE.--Water-stage recorder. Datum of gage is 1,313.27 ft above sea level (levels by Wadena County Highway Department from Minnesota Department of Transportation bench mark). Apr. 15, 1910 to Sept. 30, 1914, nonrecording gage at same site, at datum 2.2 ft lower. July 28, 1930 to Nov. 4, 1949, nonrecording gages at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow affected by natural storage in many lakes.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

### DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	446	428	e820	e500	e425	805	713	459	772	831	474	349
2	444	444	e810	e495	e425	801	734	438	800	805	449	328
3	443	445	e780	e490	e425	781	749	410	771	799	430	322
4	436	450	e760	e485	e425	754	744	407	748	805	435	321
5	442	455	e740	e480	e425	725	737	402	748	850	414	321
6	440	456	e730	e475	e430	735	731	420	707	883	400	309
7	440	469	e710	e470	e430	729	736	423	663	1020	394	306
8	446	475	e700	e465	e435	716	787	431	625	1190	402	305
9	465	464	e690	e465	e435	691	799	413	572	1040	398	303
10	456	456	e680	e460	e440	e660	787	384	535	949	386	299
11	485	454	e670	e460	e440	e630	774	397	582	887	382	281

12	537	438	e660	e455	e440	e600	759	417	647	858	377	279
13	652	477	e650	e455	e440	e590	760	450	688	829	371	309
14	671	506	e640	e450	e440	603	766	456	639	811	362	357
15	669	554	e635	e450	e445	651	789	529	635	812	344	343
16	674	536	e630	e445	e450	620	793	1240	659	780	334	349
17	685	514	e620	e445	e455	567	776	1170	662	753	325	356
18	694	621	e610	e440	e465	509	737	1070	685	727	321	364
19	703	680	e600	e440	e480	504	707	946	760	696	338	364
20	701	665	e590	e440	e495	497	692	848	780	668	371	359
21	689	681	e580	e435	e510	494	664	804	748	700	368	338
22	668	610	e570	e435	e540	486	632	774	722	686	388	306
23	646	e580	e560	e430	e580	476	589	746	729	686	393	281
24	620	e570	e550	e430	e620	472	564	702	748	661	365	268
25	593	e560	e540	e430	e700	476	546	663	805	634	360	255
26	573	e640	e530	e430	e780	503	540	628	818	602	358	281
27	557	e720	e525	e425	799	509	537	583	863	578	354	296
28	464	e780	e520	e425	796	515	541	579	903	558	352	309
29	413	e790	e515	e425	---	562	521	562	870	541	339	327
30	404	e800	e510	e425	---	654	498	690	844	522	338	360
31	415	---	e505	e425	---	679	---	829	---	498	338	---
TOTAL	16971	16718	19630	13980	14170	18994	20702	19270	21728	23659	11660	9545
MEAN	547	557	633	451	506	613	690	622	724	763	376	318
MAX	703	800	820	500	799	805	799	1240	903	1190	474	364
MIN	404	428	505	425	425	472	498	384	535	498	321	255
AC-FT	33660	33160	38940	27730	28110	37670	41060	38220	43100	46930	23130	18930
CFSM	.54	.55	.63	.45	.50	.61	.68	.62	.72	.76	.37	.32

e Estimated

# STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	412	404	343	301	304	407	759	669	573	448	375	382
MAX	1463	871	633	462	506	780	1624	1615	1354	1124	1452	929
(WY)	1974	1972	1998	1966	1998	1995	1966	1950	1965	1997	1944	1944
MIN	137	146	131	125	170	171	202	181	149	84.0	74.3	131
(WY)	1937	1937	1940	1940	1940	1940	1911	1911	1934	1936	1936	1934

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1910 - 1998		
ANNUAL TOTAL	239408		207027				
ANNUAL MEAN	656		567		479		
HIGHEST ANNUAL MEAN					719		1966
LOWEST ANNUAL MEAN					230		1940
HIGHEST DAILY MEAN	2020	Apr 6	1240	May 16	3580	Oct 10	1973
LOWEST DAILY MEAN	345	Feb 19	255	Sep 25	45	Aug 7	1936
ANNUAL SEVEN-DAY MINIMUM	349	Feb 15	285	Sep 22	55	Aug 3	1936
INSTANTANEOUS PEAK FLOW			1290	May 16	3700	Oct 10	1973
INSTANTANEOUS PEAK STAGE			5.78a	Nov 24	7.64a	Apr 20	1950
INSTANTANEOUS LOW FLOW			253	Sep 25	45	Aug 7	1936
ANNUAL RUNOFF (AC-FT)	474900		410600		346800		
ANNUAL RUNOFF (CFSM)	.65		.56		.47		
10 PERCENT EXCEEDS	1190		797		798		
50 PERCENT EXCEEDS	531		537		380		

90 PERCENT EXCEEDS	375		358		200		
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a Backwater from ice.

