

UPPER MISSISSIPPI RIVER MAIN STEM--Continued

05243725 STRAIGHT RIVER NEAR PARK RAPIDS, MN

LOCATION.--Lat 46°52'30", long 95°03'56", in NW¹/₄NE¹/₄ sec. 11, T. 139 N., R. 35 W., Hubbard County, Hydrologic Unit 07010106, upstream from culvert on U.S. Highway 71, 3.2 mi south of Park Rapids.

DRAINAGE AREA.--53.2 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1970-71, 1973, 1975-76. October 1986 to current year (no winter records in 1987, 1990-91). May 1988 through August 1989, records of hourly water temperature (available in files of the Geological Survey).

GAGE.--Water-stage recorder. Datum of gage is 1,399.55 ft above sea level (NGVD of 1929, levels by Minnesota Department of Natural Resources).

REMARKS.--Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	76	74	e66	e65	71	69	65	64	62	56	58
2	75	76	74	e65	e65	70	69	64	63	61	56	60
3	75	76	74	e65	e66	69	69	63	63	60	57	62
4	77	75	74	e64	e66	69	68	63	63	59	56	62
5	77	76	74	e64	e67	69	68	63	62	63	55	61
6	75	75	e73	e64	e67	70	69	63	60	65	55	62
7	75	76	73	e65	e67	72	68	64	59	64	55	63
8	79	76	73	e65	e68	78	67	76	58	63	55	61
9	81	76	73	e66	e68	82	67	75	57	61	53	60
10	82	75	72	e66	e69	78	66	72	56	60	54	59
11	81	75	72	e67	e68	74	67	73	56	60	53	60
12	81	75	72	e67	e68	72	66	75	56	63	56	58
13	81	75	72	e67	e67	71	64	73	56	63	52	58
14	80	75	72	e68	e67	70	64	70	63	61	56	57
15	79	75	73	e68	e66	71	65	68	65	59	57	56
16	79	74	e72	e67	e66	e70	64	69	72	58	58	55
17	79	74	e71	e67	e65	e69	64	67	70	57	58	54
18	79	74	e70	e66	e65	68	65	66	73	58	56	54
19	79	78	e69	e66	e66	68	64	65	70	55	56	57
20	79	82	e69	e66	e66	67	69	64	75	54	56	59
21	79	80	e70	e67	e67	67	68	64	80	55	55	57
22	79	78	e71	e67	e67	67	66	64	78	54	54	61
23	78	77	e74	e68	e68	68	65	64	77	54	54	66
24	76	76	e75	e67	68	76	65	63	75	54	55	65
25	76	76	e76	e67	71	77	64	61	78	56	56	63
26	75	76	e76	e66	78	75	64	59	79	58	55	61
27	75	76	e75	e66	75	73	64	60	74	58	55	61
28	75	75	e74	e66	73	72	63	64	69	57	57	59
29	75	e75	e72	e65	73	70	61	62	67	57	56	57
30	75	74	e70	e65	---	69	63	64	64	57	56	57
31	76	---	e68	e65	---	69	---	65	---	57	58	---
TOTAL	2408	2277	2247	2048	1972	2211	1975	2048	2002	1823	1721	1783
MEAN	77.7	75.9	72.5	66.1	68.0	71.3	65.8	66.1	66.7	58.8	55.5	59.4
MAX	82	82	76	68	78	82	69	76	80	65	58	66
MIN	75	74	68	64	65	67	61	59	56	54	52	54
AC-FT	4780	4520	4460	4060	3910	4390	3920	4060	3970	3620	3410	3540
CFSM	1.46	1.43	1.36	1.24	1.28	1.34	1.24	1.24	1.25	1.11	1.04	1.12
IN.	1.68	1.59	1.57	1.43	1.38	1.55	1.38	1.43	1.40	1.27	1.20	1.25

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	64.2	65.3	62.1	56.8	57.3	64.0	72.0	66.7	60.3	59.2	56.3	60.1
MAX	83.1	77.6	74.5	77.7	69.8	76.8	101	86.6	76.1	81.5	81.2	81.4
(WY)	1996	1998	1995	1999	1998	1995	1997	1999	1999	1997	1999	1999
MIN	42.2	47.4	46.0	41.9	44.8	50.9	56.1	46.2	41.9	39.5	35.9	38.7
(WY)	1993	1989	1989	1992	1992	1989	1991	1992	1992	1988	1990	1990

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1987 - 2000
ANNUAL TOTAL	28521	24515	
ANNUAL MEAN	78.1	67.0	63.3
HIGHEST ANNUAL MEAN			78.3
LOWEST ANNUAL MEAN			48.0
HIGHEST DAILY MEAN	111	Apr 4	144
LOWEST DAILY MEAN	63	Feb 10	28 ^b
ANNUAL SEVEN-DAY MINIMUM	63	Feb 22	34
INSTANTANEOUS PEAK FLOW			149
INSTANTANEOUS PEAK STAGE			3.08 ^c
INSTANTANEOUS LOW FLOW			25 ^b
ANNUAL RUNOFF (AC-FT)	56570	48630	45860
ANNUAL RUNOFF (CFSM)	1.47	1.26	1.19
ANNUAL RUNOFF (INCHES)	19.94	17.14	16.17
10 PERCENT EXCEEDS	91	76	78
50 PERCENT EXCEEDS	76	67	62
90 PERCENT EXCEEDS	66	56	45

a Also occurred Nov. 20 and Mar. 9.
 b Estimated, result of freezeup.
 c Backwater from ice.
 e Estimated.

