

## 05243725 STRAIGHT RIVER NEAR PARK RAPIDS, MN

LOCATION.--Lat 46°52'30", long 95°03'56", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

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. Diurnal fluctuations in flow due to ground-water withdrawals.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	76	e64	e54	e55	e56	70	56	62	69	50	54
2	58	73	e61	e53	e56	e56	68	56	61	67	51	51
3	56	71	e64	e52	e56	e57	68	55	60	63	52	50
4	56	68	62	e52	e57	e57	68	55	63	61	51	53
5	54	66	56	e52	e57	57	69	54	70	59	50	48
6	55	65	60	e51	e57	57	68	55	76	55	48	54
7	56	64	e62	e51	e57	57	67	55	71	52	47	51
8	56	63	61	e51	e56	56	66	55	69	51	46	53
9	55	62	61	e50	e56	e55	66	57	68	50	52	55
10	55	62	61	e50	e56	e55	67	57	68	49	53	56
11	55	61	61	e50	e57	55	70	57	68	50	53	53
12	55	61	58	e50	e58	e55	80	57	70	55	52	55
13	57	60	e57	e49	e59	e55	80	60	73	53	52	58
14	59	60	e57	e49	e59	e54	75	60	75	52	52	57
15	58	60	e57	e49	e58	e54	71	59	72	50	52	55
16	58	60	e56	e49	e58	e54	69	58	68	49	51	54
17	58	61	e56	e50	e59	54	66	57	66	49	53	54
18	57	61	e55	e50	e59	54	64	58	63	49	54	54
19	57	61	e54	e51	e59	54	63	58	61	48	56	55
20	57	62	e53	e51	e60	54	62	58	62	46	56	52
21	58	63	e53	e51	e60	54	61	62	60	45	57	53
22	59	62	e53	e51	e60	54	60	68	59	45	57	54
23	70	62	e52	e51	e60	54	60	66	57	47	55	53
24	79	e60	e52	e52	e60	55	59	64	57	47	54	54
25	78	e62	e52	e52	e60	55	58	70	55	49	55	56
26	76	61	e52	e53	e59	56	57	79	58	51	57	56
27	73	61	e53	e53	e59	57	56	75	60	50	56	56
28	71	e61	e53	e54	e58	60	56	72	60	51	56	57
29	72	e60	e54	e54	---	65	55	70	65	51	55	56
30	77	e62	e54	e55	---	70	55	69	71	50	53	55
31	80	---	e55	e55	---	69	---	65	---	50	54	---
TOTAL	1,924	1,891	1,759	1,595	1,625	1,755	1,954	1,897	1,948	1,613	1,640	1,622
MEAN	62.1	63.0	56.7	51.5	58.0	56.6	65.1	61.2	64.9	52.0	52.9	54.1
MAX	80	76	64	55	60	70	80	79	76	69	57	58
MIN	54	60	52	49	55	54	55	54	55	45	46	48
AC-FT	3,820	3,750	3,490	3,160	3,220	3,480	3,880	3,760	3,860	3,200	3,250	3,220
CFSM	1.17	1.18	1.07	0.97	1.09	1.06	1.22	1.15	1.22	0.98	0.99	1.02
IN.	1.35	1.32	1.23	1.12	1.14	1.23	1.37	1.33	1.36	1.13	1.15	1.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2005, BY WATER YEAR (WY)

MEAN	62.1	62.8	59.0	54.6	55.2	61.1	69.4	65.9	60.5	57.2	54.6	58.4
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	46.2	39.7	39.2	42.1	48.8	48.8	46.2	41.9	39.5	35.9	38.0
(WY)	(1993)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(1992)	(1992)	(1988)	(1990)	(2003)

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SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1987 - 2005	
ANNUAL TOTAL	18,526		21,223			
ANNUAL MEAN	50.6		58.1		60.8	
HIGHEST ANNUAL MEAN					78.3	1999
LOWEST ANNUAL MEAN					46.3	2004
HIGHEST DAILY MEAN	84	Sep 24	80	Oct 31, Apr 12,13	144	Apr 6, 1997
LOWEST DAILY MEAN	36	Aug 21	45	Jul 21,22	a28	Jan 9, 1992
ANNUAL SEVEN-DAY MINIMUM	38	Jan 18	47	Jul 18	34	Aug 5, 1990
MAXIMUM PEAK FLOW			b85	Apr 13	149	Apr 6, 1997
MAXIMUM PEAK STAGE			c2.54	Dec 15	c3.42	Mar 15, 2003
INSTANTANEOUS LOW FLOW			d36	Mar 12	d21	Nov 23, 2003
ANNUAL RUNOFF (AC-FT)	36,750		42,100		44,040	
ANNUAL RUNOFF (CFSM)	0.951		1.09		1.14	
ANNUAL RUNOFF (INCHES)	12.95		14.84		15.53	
10 PERCENT EXCEEDS	63		69		78	
50 PERCENT EXCEEDS	48		57		60	
90 PERCENT EXCEEDS	39		51		44	

- a Estimated, result of freezeup.
- b Gage height, 1.78 ft.
- c Backwater from ice.
- d Result of freezeup.
- e Estimated.

