

**ROOT RIVER BASIN**

**05385000 ROOT RIVER NEAR HOUSTON, MN**

LOCATION.--43° 46"07", long 91°34'11", in SW¼NW¼ sec. 33, T.104 N., R.6 W., Houston County, Hydrologic Unit 07040008, on right bank 0.2 mi north of Houston and 1.6 mi upstream from South Fork and 18.2 mi upstream from mouth.

DRAINAGE AREA.--1,270 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--May 1909 to September 1917, May to November 1929, March 1930 to 1983, 1991 to current year. Operated as high-flow partial-record station October 1983 to September 1990. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 895: Drainage area. WSP 1508: 1911-12. WSP 1628: 1948(P).

GAGE.--Water-stage recorder. Datum of gage is 667.00 ft above mean sea level. May 28, 1909 to Sept. 30, 1917, nonrecording gage at site 1.3 mi downstream at different datum. May 4, 1929 to Sept. 27, 1933, nonrecording gage and Sept. 28, 1933 to June 26, 1980, recording gage at site 0.9 mi upstream at datum 671.86 ft.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Slight diurnal fluctuation at low flows caused by power plants above station.

EXTREME FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft<sup>3</sup>/s and maximum (\*).

**DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997**

**DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
1	420	423	504	e450	e450	e535	2650	974	784
1130	1430	995							
2	419	417	459	e460	e445	e530	2390	1040	758
981	1290	999							
3	417	403	490	e460	e430	e520	2240	1110	737
861	1220	897							
4	405	398	e520	e450	e450	e520	2070	1170	726
796	1140	828							
5	399	400	e550	e450	e460	e525	1930	1240	727
749	1020	792							
6	403	401	e560	e450	e460	e530	1860	1200	753
713	951	781							
7	408	403	e560	e450	e460	536	1900	1140	747
674	899	753							

8	407	398	e555	e455	e445	539	1770	1140	729
668	856	727							
9	406	393	e555	e450	e440	617	1530	1120	706
668	818	773							
10	404	386	e545	e435	e450	1000	1400	1070	688
639	788	720							
11	401	382	e540	e430	e445	2240	1320	1030	675
625	760	689							
12	401	361	e530	e430	e430	4170	1260	992	664
620	753	670							
13	399	358	520	e435	e430	4300	1190	953	656
651	752	658							
14	401	347	520	e430	e430	2650	1140	924	641
719	736	648							
15	399	391	517	e435	e430	1690	1090	901	641
743	831	638							
16	397	608	474	e450	e460	1440	1050	873	644
854	836	648							
17	399	701	465	e450	e510	1370	1020	851	629
882	801	693							
18	399	700	455	e430	e531	1280	998	837	616
853	760	676							
19	393	696	e460	e430	e540	1170	1020	830	605
1220	735	658							
20	390	639	e460	e430	e530	1080	1040	810	606
1440	759	637							
21	390	587	e450	e457	e518	1200	1020	785	638
1440	796	617							
22	402	539	e450	e460	e502	3600	986	757	633
1330	818	611							
23	481	524	e450	e460	e510	6430	959	745	612
1610	811	632							
24	485	513	e440	e460	e520	6010	928	748	634
1450	924	630							
25	467	457	e430	e450	e540	3960	904	810	714
2160	794	624							
26	449	383	e430	e450	e550	2810	875	823	762
2840	757	611							
27	429	e420	e430	e450	e550	3690	850	824	717
2380	737	605							
28	413	e500	e420	e440	e540	6530	836	807	681
2270	715	599							
29	416	e580	e415	e440	---	6370	835	801	694
2210	697	593							
30	450	e530	e425	e445	---	3910	856	810	790
2040	740	584							
31	437	---	e435	e450	---	3110	---	802	---
1630	873	---							
TOTAL	12886	14238	15014	13822	13456	74862	39917	28917	20607
37846	26797	20986							

MEAN	416	475	484	446	481	2415	1331	933	687
1221	864	700							
MAX	485	701	560	460	550	6530	2650	1240	790
2840	1430	999							
MIN	390	347	415	430	430	520	835	745	605
620	697	584							
AC-FT	25560	28240	29780	27420	26690	148500	79180	57360	40870
75070	53150	41630							
CFSM	.33	.37	.38	.35	.38	1.90	1.05	.73	.54
.96	.68	.55							
IN.	.38	.42	.44	.40	.39	2.19	1.17	.85	.60
1.11	.78	.61							

o e Estimated

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1997, BY WATER YEAR (WY)**

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
MEAN	512	512	430	409	483	1415	1187	822	886
783	641	567							
MAX	1465	1494	1671	1152	1427	3512	4963	2440	2803
3252	2257	2105							
(WY)	1974	1983	1992	1973	1966	1961	1965	1973	1974
1978	1993	1938							
MIN	193	218	189	172	168	251	274	234	261
236	231	243							
(WY)	1934	1934	1934	1959	1959	1931	1931	1934	1934
1964	1958	1933							

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS	
1910 - 1997						
ANNUAL TOTAL	261232		319348			
ANNUAL MEAN	714		875		727	
HIGHEST ANNUAL MEAN	1590		1993			
LOWEST ANNUAL MEAN	294		1931			
HIGHEST DAILY MEAN	6310	Mar 25	6530	Mar 28	31100	
Apr 1 1952						
LOWEST DAILY MEAN	347	Nov 14	347	Nov 14	82	Nov
28 1937						
ANNUAL SEVEN-DAY MINIMUM	374	Nov 9	374	Nov 9	113	Dec
25 1933						
INSTANTANEOUS PEAK FLOW			7750	Mar 29	37000	
Apr 1 1952						
INSTANTANEOUS PEAK STAGE			12.24	Mar 29	18.32a	
Mar 2 1965						
INSTANTANEOUS LOW FLOW			331	Nov 14	65b	Dec
26 1933						
ANNUAL RUNOFF (AC-FT)	518200		633400		526300	
ANNUAL RUNOFF (CFSM)	.56		.69		.57	

ANNUAL RUNOFF (INCHES)	7.65	9.35	7.77
10 PERCENT EXCEEDS	1120	1430	1280
50 PERCENT EXCEEDS	546	644	460
90 PERCENT EXCEEDS	403	417	262

o a Backwater from ice.

b Also occurred Feb. 25, 1935.