

RED RIVER OF THE NORTH BASIN

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN

LOCATION.--Lat 47°21'10", long 96°50'50", sec.25, T.145 N., R.49 W., Traill County, Hydrologic Unit 09020107, on left bank on downstream side of highway bridge, 0.5 mi west of Halstad, MN, 2.5 mi downstream from Wild Rice River, and at mile 375.2.

DRAINAGE AREA.--21,800 mi², approximately, including 3,800 mi² in closed basins.

PERIOD OF RECORD.--April 1936 to June 1937 (no winter records), April 1942 to September 1960 (spring and summer months only), June 1961 to current year.

REVISED RECORDS.--WSP 1388: 1936, 1950. WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 826.65 ft above National Geodetic Vertical Datum of 1929. Prior to July 17, 1961, nonrecording gage at same site and datum.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1897 reached a stage of about 38.5 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	271	379	e380	e370	e305	e420	11,000	2,000	8,170	1,980	1,370	509
2	264	377	e370	e370	e305	e445	8,950	1,870	9,970	1,900	1,190	465
3	259	380	e360	e385	e310	e475	7,240	1,780	10,700	1,780	e1,100	441
4	259	401	e350	e390	e315	e510	6,260	1,700	10,500	1,690	e1,030	430
5	256	409	e350	e390	e315	e540	5,720	1,580	9,960	1,690	e950	421
6	261	444	e340	e390	e320	e560	5,520	1,450	9,490	1,630	e930	977
7	286	471	e340	e390	e325	e570	5,450	1,370	9,010	1,760	e1,100	4,220
8	299	446	e330	e390	e330	e600	5,300	1,310	8,300	1,970	1,280	6,310
9	308	439	e330	e375	e330	e670	5,200	1,290	7,540	1,860	1,380	6,040
10	311	432	e320	e360	e330	e735	5,160	1,270	6,740	1,870	1,340	5,240
11	333	445	e300	e355	e330	e750	5,190	1,290	6,010	2,250	1,280	4,300
12	364	e460	e295	e355	e330	e760	5,160	1,960	5,470	4,400	1,230	3,520
13	483	e495	e290	e360	e330	e790	5,080	2,880	5,170	6,800	1,190	3,050
14	434	e525	e290	e360	e325	e850	5,020	3,310	5,010	7,180	1,160	2,690
15	e375	e560	e285	e355	e325	e950	4,930	3,190	4,920	6,310	e1,090	2,340
16	e370	e595	e285	e350	e325	e1,040	4,860	2,980	4,850	5,310	e1,000	2,070
17	e360	e628	e280	e340	e330	e1,140	4,800	2,800	4,720	4,520	e910	1,920
18	e370	e650	e285	e330	e330	e1,250	4,750	2,650	4,560	4,060	e845	1,730
19	e380	e650	e290	e325	e335	e1,350	4,740	2,570	4,370	3,610	e800	1,600
20	e390	e660	e295	e325	e340	e1,550	4,790	2,550	4,200	3,150	e700	1,550
21	389	e665	e300	e325	e340	e1,750	4,800	2,540	3,920	2,890	e660	1,670
22	407	e510	e305	e325	e350	e2,610	4,620	2,410	3,570	2,680	e640	1,740
23	410	e415	e310	e325	e355	e3,350	4,150	2,240	3,320	2,550	e680	1,690
24	416	e365	e320	e325	e365	e4,900	3,650	2,110	3,060	2,410	e755	1,960
25	403	e420	e330	e325	e370	e6,200	3,350	2,030	2,840	2,260	e720	2,740
26	388	e475	e340	e320	e380	e9,600	3,140	1,980	2,620	2,080	707	3,530
27	377	e475	e350	e320	e385	e12,100	2,940	1,890	2,430	1,900	683	4,110
28	371	e445	e360	e315	e395	e16,800	2,710	1,820	2,270	1,740	696	4,420
29	372	e410	e365	e310	e405	e18,000	2,460	1,770	2,130	1,660	720	4,440
30	383	e400	e370	e305	---	15,100	2,190	1,960	2,050	1,660	641	4,160
31	374	---	e370	e305	---	12,900	---	5,050	---	1,580	550	---
TOTAL	10,923	14,426	10,085	10,765	9,830	119,265	149,130	67,600	167,870	89,130	29,327	80,283
MEAN	352	481	325	347	339	3,847	4,971	2,181	5,596	2,875	946	2,676
MAX	483	665	380	390	405	18,000	11,000	5,050	10,700	7,180	1,380	6,310
MIN	256	365	280	305	305	420	2,190	1,270	2,050	1,580	550	421
AC-FT	21,670	28,610	20,000	21,350	19,500	236,600	295,800	134,100	333,000	176,800	58,170	159,200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

MEAN	878	898	669	528	563	2,617	7,922	4,002	3,208	3,078	1,226	918
MAX	2,875	5,707	2,413	1,240	1,952	9,444	38,460	15,570	10,480	20,060	11,700	4,705
(WY)	(1995)	(2001)	(2001)	(2001)	(1998)	(1995)	(1997)	(1997)	(2000)	(1975)	(1993)	(1999)
MIN	61.5	92.3	51.2	32.1	45.9	249	705	449	242	153	59.5	38.4
(WY)	(1977)	(1977)	(1977)	(1977)	(1977)	(1962)	(1981)	(1977)	(1977)	(1988)	(1977)	(1976)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	561,006		758,634		2,223	
ANNUAL MEAN	1,537		2,073		6,028	
HIGHEST ANNUAL MEAN					214	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	11,800	Jun 29	18,000	Mar 29	69,900	Apr 19, 1997
LOWEST DAILY MEAN	225	Sep 12	256	Oct 5	10	Sep 2, 1976
ANNUAL SEVEN-DAY MINIMUM	245	Sep 7	265	Oct 1	17	Aug 28, 1976
MAXIMUM PEAK FLOW			a18,200	Mar 29	71,500	Apr 19, 1997
MAXIMUM PEAK STAGE			b24.75	Mar 29	40.74	Apr 19, 1997
INSTANTANEOUS LOW FLOW					5.4	Oct 8, 1936
ANNUAL RUNOFF (AC-FT)	1,113,000		1,505,000		1,611,000	
10 PERCENT EXCEEDS	3,730		5,180		4,940	
50 PERCENT EXCEEDS	628		822		910	
90 PERCENT EXCEEDS	296		320		235	

a About
 b Backwater from ice
 c Estimated

