

RED RIVER OF THE NORTH BASIN--Continued

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN

LOCATION.--Lat 47°21'10", long 96°50'50", on line between secs.24 and 25, T.145 N., R.49 W., Traill County, ND, Hydrologic Unit 09020107, on left bank on upstream 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), May 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 sea level. Prior to July 17, 1961, nonrecording gage at same site and datum.

REMARKS.--Records good except for periods of estimated discharge, 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	880	2100	e1800	e840	e900	e1000	16700	4810	4320	3410	2600	1750
2	914	2130	e1850	e840	e880	e1100	16500	4640	4070	3190	2480	1890
3	877	2100	e1900	e820	e860	e1150	16300	4470	3930	3090	2290	2920
4	867	1960	e1900	e820	e840	e1250	16200	4280	3880	3200	2090	4900
5	911	1810	e1900	e820	e820	e1350	16400	4190	3970	4820	1970	7180
6	986	1720	e1900	e820	e810	e1600	16200	4220	4270	5950	1920	8470
7	1010	1670	e1910	e820	e800	e2000	15600	4480	4560	5580	1700	9120
8	973	1620	e1920	e820	e780	e2400	14900	5020	4750	4910	1470	9500
9	946	1590	e1900	e820	e760	e2700	14100	5860	5120	4550	1340	9470
10	938	1630	e2000	e840	e740	e2800	13100	6900	5550	4690	1300	8790
11	958	1780	e2200	e860	e740	e2800	12000	11200	6120	4770	1440	7510
12	1040	e1700	e2300	e880	e740	e2800	10900	14000	6310	4540	1770	6410
13	1270	e1600	e2200	e900	e740	e2750	9950	14700	5840	4160	2220	5700
14	1260	e1450	e2100	e920	e740	e2600	9220	14600	5380	3780	2680	5220
15	1190	e1300	e1900	e950	e740	e2600	8650	14200	5210	3480	2930	4890
16	1150	e1200	e1700	e970	e760	e2700	8160	13700	5160	3240	3540	4650
17	1360	e1100	e1500	e980	e760	e2900	7820	13200	5060	3100	4210	4400
18	2500	e1100	e1300	e980	e760	e3300	7550	12600	4830	3110	4480	4120
19	4170	e1050	e1200	e1000	e760	e3700	7300	11900	4520	3070	4280	3820
20	4800	e1000	e1050	e1050	e780	e5000	7030	11100	4200	2940	3710	3550
21	4360	e1000	e1000	e1050	e800	e7000	6760	10200	3900	2840	3180	3320
22	3730	e1000	e960	e1050	e810	e10000	6480	9320	3680	2820	2850	3140
23	3290	e1100	e920	e1000	e820	e13000	6230	8500	3600	2790	2680	2980
24	3010	e1200	e850	e1000	e830	e15000	6020	7730	3580	2720	2620	2830
25	2750	e1350	e840	e1000	e850	e15500	5850	7000	3640	2640	2500	2680
26	2540	e1450	e840	e1000	e880	e16500	5680	6290	4010	2610	2540	2570
27	2330	e1500	e850	e990	e900	e17000	5480	5750	4360	2670	2480	2480
28	2160	e1600	e840	e980	e950	e17500	5320	5350	4330	2720	2300	2370
29	2060	e1750	e840	e950	---	17900	5140	5080	4040	2680	2090	2310
30	2020	e1800	e850	e930	---	17300	4970	4840	3700	2620	1920	2210
31	2100	---	e840	e920	---	17100	---	4590	---	2620	1810	---
TOTAL	59350	45360	46060	28620	22550	212300	302510	254720	135890	109310	77390	141150
MEAN	1915	1512	1486	923	805	6848	10080	8217	4530	3526	2496	4705
MAX	4800	2130	2300	1050	950	17900	16700	14700	6310	5950	4480	9500
MIN	867	1000	840	820	740	1000	4970	4190	3580	2610	1300	1750
AC-FT	117700	89970	91360	56770	44730	421100	600000	505200	269500	216800	153500	280000

e Estimated

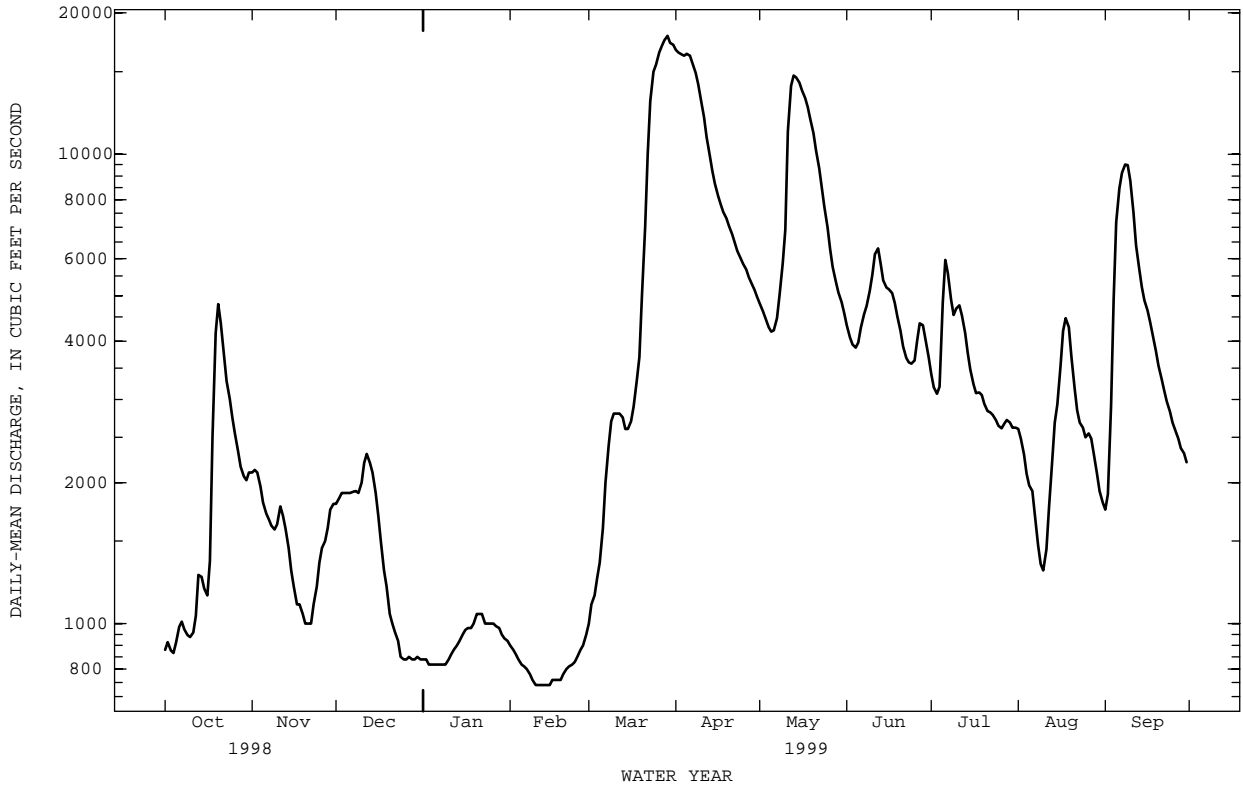
05064500 RED RIVER OF THE NORTH AT HALSTAD, MN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	839	747	591	489	536	2587	7881	3926	2761	2806	1176	831
MAX	2875	1843	1486	1023	1952	9444	38460	15570	10310	20060	11700	4705
(WY)	1995	1995	1999	1987	1998	1995	1997	1997	1962	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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1961 - 1999
ANNUAL TOTAL	1469440	1435210	
ANNUAL MEAN	4026	3932	2112
HIGHEST ANNUAL MEAN			6028
LOWEST ANNUAL MEAN			214
HIGHEST DAILY MEAN	19200	May 20	69900
LOWEST DAILY MEAN	658	Sep 27	10
ANNUAL SEVEN-DAY MINIMUM	789	Sep 25	17
INSTANTANEOUS PEAK FLOW			71500
INSTANTANEOUS PEAK STAGE			40.74
INSTANTANEOUS LOW FLOW			5.4
ANNUAL RUNOFF (AC-FT)	2915000	2847000	1530000
10 PERCENT EXCEEDS	10300	9380	4720
50 PERCENT EXCEEDS	2100	2620	832
90 PERCENT EXCEEDS	920	846	221

a Gage height, 28.21 ft.
b Backwater from ice.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-67, 1972 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1997 to current year.

SPECIFIC CONDUCTANCE: October 1997 to current year.

INSTRUMENTATION.--Water-quality sensors since October 1997.

REMARKS.--Records fair. Interruptions in daily record are due to recorder malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 28.7°C, July 24, 1999; minimum recorded, 0.2°C, on many days.

SPECIFIC CONDUCTANCE: Maximum recorded, 1,120 microsiemens/cm, Dec. 31, 1998; minimum recorded, 329 microsiemens/cm, Feb. 25, 1998.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 28.7°C, July 24; minimum recorded, 0.7°C, on many days.

SPECIFIC CONDUCTANCE: Maximum recorded, 1,120 microsiemens/cm, Dec. 31; minimum recorded, 500 microsiemens/cm, Mar. 23-24.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT											
23...	1315	3290	--	--	--	660	--	8.9	--	--	--
DEC											
11...	1215	--	2240	--	--	1000	3.0	1.5	--	--	--
FEB											
10...	1245	740	--	--	--	744	--	1.2	--	--	--
11...	1015	--	706	--	--	425	-7.0	.5	--	--	--
MAR											
02...	1400	1100	--	--	--	643	--	.8	--	--	--
24...	1130	--	14800	8.2	396	380	11.0	.0	160	36	17
APR											
15...	1200	8650	--	--	--	684	--	9.3	--	--	--
MAY											
10...	1000	6900	--	--	--	783	--	12.1	--	--	--
24...	1100	7730	--	--	--	833	--	17.6	--	--	--
JUN											
15...	0900	5210	--	--	--	681	--	21.4	--	--	--
JUL											
16...	0800	3240	--	--	--	697	--	26.4	--	--	--
AUG											
20...	1600	3710	--	--	--	--	--	21.0	--	--	--
SEP											
15...	1100	4890	--	--	--	748	--	14.9	--	--	--
21...	0945	--	3400	8.3	767	784	10.0	13.0	360	75	43

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 23...	--	--	--	--	--	--	--	--	--	--
DEC 11...	--	--	--	--	--	--	--	--	--	--
FEB 10...	--	--	--	--	--	--	--	--	--	--
FEB 11...	--	--	--	--	--	--	--	--	--	--
MAR 02...	--	--	--	--	--	--	--	--	--	--
MAR 24...	6.5	.5	15	14	118	9.5	.10	68	10300	257
APR 15...	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--
MAY 24...	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--
JUL 16...	--	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--	--	--
SEP 15...	--	--	--	--	--	--	--	--	--	--
SEP 21...	8.2	.8	17	35	246	18	.20	180	5040	549

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)
OCT 23...	--	--	--	--	--	--	--	--	--	--
DEC 11...	--	--	--	--	--	--	--	--	--	--
FEB 10...	--	--	--	--	--	--	--	--	--	--
FEB 11...	--	--	--	--	--	--	--	--	--	--
MAR 02...	--	--	--	--	--	--	--	--	--	--
MAR 24...	222	3	40	<1.0	20	60	<.1	<1.0	1	200
APR 15...	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--
MAY 24...	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--
JUL 16...	--	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--	--	--
SEP 15...	--	--	--	--	--	--	--	--	--	--
SEP 21...	507	4	20	1.0	40	30	<.1	1.0	<1	360

RED RIVER OF THE NORTH BASIN--Continued

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.4	14.0	14.7	---	---	---	2.1	1.5	1.8	1.2	1.2	1.2
2	14.6	13.1	13.8	---	---	---	2.1	1.7	1.9	1.2	1.2	1.2
3	13.7	12.5	13.1	---	---	---	2.2	1.9	2.0	1.2	1.2	1.2
4	13.3	12.4	12.7	---	---	---	2.0	1.8	1.9	1.2	1.2	1.2
5	12.5	11.9	12.2	---	---	---	2.0	1.8	1.9	1.2	1.2	1.2
6	12.5	12.2	12.3	---	---	---	1.9	1.6	1.8	1.2	1.2	1.2
7	12.9	11.6	12.3	---	---	---	1.6	1.3	1.4	1.2	1.2	1.2
8	13.1	11.6	12.4	---	---	---	1.4	1.3	1.3	1.2	1.2	1.2
9	13.8	12.1	12.9	---	---	---	1.4	1.3	1.3	1.2	1.2	1.2
10	13.6	12.9	13.2	3.6	2.4	3.0	1.5	1.4	1.4	1.2	1.2	1.2
11	13.3	12.7	13.0	2.4	1.7	2.1	---	---	---	1.2	1.2	1.2
12	12.7	11.1	11.8	1.7	.9	1.1	---	---	---	1.2	1.2	1.2
13	11.1	10.1	10.5	1.3	.7	1.0	---	---	---	1.2	1.2	1.2
14	10.2	9.7	10.0	1.4	1.2	1.3	---	---	---	1.2	1.1	1.1
15	10.3	9.6	10.0	1.3	1.1	1.1	---	---	---	1.1	1.1	1.1
16	10.4	10.2	10.3	1.4	1.0	1.2	---	---	---	1.1	1.1	1.1
17	10.4	8.8	9.7	1.6	1.2	1.4	---	---	---	1.1	1.1	1.1
18	8.8	8.2	8.5	1.2	.8	1.0	---	---	---	1.1	1.1	1.1
19	8.6	8.2	8.4	1.0	.8	.9	---	---	---	1.1	1.1	1.1
20	8.2	7.7	8.0	.9	.8	.9	---	---	---	1.1	1.1	1.1
21	8.1	7.6	7.9	.9	.9	.9	---	---	---	1.1	1.1	1.1
22	8.8	8.0	8.3	.9	.9	.9	1.4	1.4	1.4	1.1	1.1	1.1
23	---	---	---	1.0	.9	1.0	1.4	1.4	1.4	1.1	1.1	1.1
24	---	---	---	1.1	1.0	1.0	1.4	1.4	1.4	1.1	1.1	1.1
25	---	---	---	1.1	1.0	1.0	1.4	1.4	1.4	1.1	1.1	1.1
26	---	---	---	1.1	1.0	1.0	1.4	1.4	1.4	1.1	1.1	1.1
27	---	---	---	1.2	1.0	1.1	1.4	1.4	1.4	1.1	1.0	1.1
28	---	---	---	1.2	1.1	1.1	1.4	1.4	1.4	1.0	1.0	1.0
29	---	---	---	1.3	1.1	1.2	1.4	1.4	1.4	1.0	1.0	1.0
30	---	---	---	1.8	1.2	1.5	1.4	1.4	1.4	1.0	1.0	1.0
31	---	---	---	---	---	---	1.4	1.4	1.4	1.0	1.0	1.0
MONTH	---	---	---	---	---	---	---	---	---	1.2	1.0	1.1
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1.0	1.0	1.0	.8	.8	.8	6.2	6.0	6.1	16.4	14.9	15.7
2	1.0	1.0	1.0	.8	.8	.8	6.1	5.5	5.9	16.9	15.6	16.3
3	1.0	1.0	1.0	.8	.8	.8	5.5	4.6	5.0	17.1	16.2	16.7
4	1.0	1.0	1.0	.8	.8	.8	4.8	4.4	4.6	17.6	16.8	17.2
5	1.0	1.0	1.0	.8	.8	.8	5.2	4.6	4.8	18.0	17.3	17.6
6	1.0	1.0	1.0	.8	.8	.8	6.0	5.2	5.6	18.0	17.5	17.8
7	1.0	1.0	1.0	.8	.8	.8	7.1	6.0	6.5	17.5	15.2	16.2
8	1.0	1.0	1.0	.8	.8	.8	8.3	7.1	7.6	15.2	14.1	14.5
9	1.0	1.0	1.0	.8	.8	.8	9.2	8.3	8.6	14.1	12.6	13.0
10	1.0	.9	.9	.8	.8	.8	9.2	8.9	9.0	12.6	11.8	12.4
11	.9	.9	.9	.8	.8	.8	9.2	8.7	8.9	11.9	11.1	11.5
12	.9	.9	.9	.8	.8	.8	9.4	8.6	9.0	12.3	11.8	12.0
13	.9	.9	.9	.8	.8	.8	10.3	9.1	9.7	12.7	12.3	12.5
14	.9	.9	.9	.8	.8	.8	10.8	10.1	10.4	13.2	12.6	12.9
15	.9	.9	.9	.8	.8	.8	10.5	9.7	10.2	14.2	13.1	13.5
16	.9	.9	.9	.8	.8	.8	9.7	8.4	9.0	15.5	14.2	14.7
17	.9	.9	.9	.8	.8	.8	8.4	7.4	7.8	16.3	15.4	15.8
18	.9	.9	.9	.8	.8	.8	7.6	6.9	7.3	16.9	15.8	16.3
19	.9	.9	.9	.8	.8	.8	7.8	7.1	7.4	17.4	16.4	16.9
20	.9	.9	.9	.9	.8	.8	7.8	7.5	7.6	18.4	17.1	17.7
21	.9	.9	.9	.8	.7	.8	8.3	7.2	7.8	18.9	17.8	18.3
22	.9	.9	.9	.8	.7	.8	8.9	7.9	8.4	19.1	18.3	18.7
23	.9	.8	.9	.9	.7	.8	10.1	8.5	9.2	18.8	18.1	18.4
24	.8	.8	.8	.9	.7	.8	11.3	9.5	10.3	18.3	17.8	18.0
25	.8	.8	.8	1.0	.7	.8	12.6	10.7	11.6	18.2	17.1	17.7
26	.8	.8	.8	2.0	.8	1.3	13.1	12.0	12.6	18.9	17.6	18.2
27	.8	.8	.8	2.2	1.9	2.1	13.3	12.6	12.9	19.6	18.1	18.8
28	.8	.8	.8	2.7	2.1	2.4	13.9	12.6	13.2	20.5	18.8	19.6
29	---	---	---	3.7	2.7	3.2	14.6	13.3	13.9	21.4	19.8	20.5
30	---	---	---	5.1	3.6	4.2	15.7	14.1	14.8	21.3	20.7	20.9
31	---	---	---	6.2	5.1	5.6	---	---	---	20.7	19.6	20.0
MONTH	1.0	.8	.9	6.2	.7	1.3	15.7	4.4	8.9	21.4	11.1	16.5

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	19.6	18.8	19.1	23.3	22.1	22.7	---	---	---	22.2	20.4	21.3
2	19.6	18.2	18.8	23.8	22.7	23.3	---	---	---	20.4	19.4	20.0
3	19.9	19.3	19.6	24.6	23.1	23.8	---	---	---	19.4	17.1	18.2
4	21.0	19.5	20.2	24.8	24.0	24.4	---	---	---	17.1	16.2	16.6
5	21.9	20.4	21.0	24.7	24.2	24.5	---	---	---	16.5	16.0	16.2
6	23.1	21.5	22.3	24.8	23.6	24.2	---	---	---	16.8	15.9	16.3
7	23.8	22.3	23.0	25.1	24.0	24.5	---	---	---	17.3	16.6	16.9
8	24.5	23.2	23.8	24.9	24.2	24.4	---	---	---	17.2	16.9	17.1
9	24.8	23.9	24.3	24.2	23.2	23.6	---	---	---	17.0	16.5	16.7
10	24.7	24.1	24.3	23.3	22.4	22.9	---	---	---	16.7	16.1	16.3
11	24.3	23.5	23.9	23.9	22.6	23.2	---	---	---	16.3	15.7	15.8
12	24.2	23.3	23.7	24.9	23.4	24.1	---	---	---	15.7	15.2	15.4
13	23.9	23.1	23.4	25.9	24.4	25.1	---	---	---	15.3	14.7	14.9
14	23.2	22.3	22.8	26.9	25.5	26.1	---	---	---	14.7	14.2	14.4
15	22.7	21.7	22.1	27.0	26.2	26.7	---	---	---	14.6	13.9	14.2
16	22.1	21.2	21.7	26.8	26.1	26.5	---	---	---	14.9	13.9	14.4
17	22.2	21.0	21.6	26.3	25.4	25.9	---	---	---	15.5	14.3	14.8
18	22.0	21.1	21.5	25.9	25.1	25.4	---	---	---	15.9	15.0	15.4
19	21.7	20.9	21.2	26.1	24.9	25.5	---	---	---	15.9	15.2	15.4
20	21.7	20.6	21.1	26.5	25.4	25.9	---	---	---	15.2	14.4	14.7
21	22.1	21.2	21.6	27.5	25.9	26.7	22.7	21.5	22.1	14.7	13.7	14.3
22	23.1	21.9	22.4	27.5	26.7	27.2	23.3	22.1	22.6	15.2	14.1	14.6
23	23.9	22.7	23.2	28.3	26.8	27.5	23.1	22.6	22.8	15.4	14.7	15.1
24	24.1	23.0	23.6	28.7	27.5	28.1	23.1	22.1	22.6	15.4	14.8	15.2
25	24.8	23.5	24.1	28.5	27.8	28.1	23.6	22.4	23.0	15.3	15.0	15.2
26	24.9	24.4	24.7	---	---	---	24.4	23.1	23.6	15.0	14.3	14.8
27	24.7	24.1	24.3	---	---	---	24.8	23.6	24.2	14.4	13.7	14.1
28	24.1	23.3	23.6	---	---	---	24.6	23.9	24.3	14.0	13.2	13.6
29	23.3	22.3	22.7	---	---	---	23.9	22.8	23.2	13.4	12.7	13.0
30	23.0	21.9	22.4	---	---	---	22.8	21.1	21.9	12.9	11.7	12.3
31	---	---	---	---	---	---	22.4	20.7	21.4	---	---	---
MONTH	24.9	18.2	22.4	---	---	---	---	---	---	22.2	11.7	15.6

RED RIVER OF THE NORTH BASIN--Continued

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	769	691	721	---	---	---	890	877	882	1060	1030	1040
2	772	753	769	---	---	---	901	879	891	1040	1010	1030
3	753	668	710	---	---	---	881	863	871	1030	1020	1020
4	749	667	696	---	---	---	878	864	870	1050	1030	1040
5	779	689	740	---	---	---	884	876	880	1030	928	964
6	689	665	671	---	---	---	893	883	887	928	900	909
7	680	641	662	---	---	---	924	889	907	905	875	887
8	641	613	628	---	---	---	965	916	942	875	869	871
9	675	640	657	831	828	829	964	945	953	880	870	874
10	671	664	667	835	831	833	982	959	974	898	880	887
11	673	662	670	836	827	832	1000	979	995	899	895	898
12	685	670	675	840	829	834	---	---	---	895	888	891
13	682	662	673	845	824	836	---	---	---	896	885	892
14	678	626	650	836	819	824	---	---	---	885	853	865
15	661	631	645	865	836	849	---	---	---	853	833	841
16	685	660	671	883	864	870	---	---	---	833	821	827
17	685	661	669	901	883	894	---	---	---	821	807	812
18	670	625	645	899	867	891	---	---	---	808	805	806
19	651	592	629	867	840	859	---	---	---	811	804	808
20	618	592	602	853	603	662	---	---	---	809	799	802
21	597	541	556	755	697	724	---	---	---	807	797	802
22	625	566	590	744	734	740	972	937	945	804	794	797
23	660	625	650	744	721	731	983	972	977	794	784	787
24	---	---	---	797	744	780	989	976	983	787	781	783
25	---	---	---	834	796	813	1000	988	992	781	769	773
26	---	---	---	852	832	842	1010	1000	1010	770	762	765
27	---	---	---	877	849	867	1010	998	1010	762	755	758
28	---	---	---	856	841	848	998	947	977	801	755	778
29	---	---	---	864	843	854	947	902	925	775	750	759
30	---	---	---	879	858	869	1060	903	965	771	754	757
31	---	---	---	---	---	---	1120	1060	1090	756	738	749
MONTH	---	---	---	---	---	---	---	---	---	1060	738	854
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	743	731	737	680	646	664	625	607	612	741	735	738
2	747	738	742	673	639	648	642	624	634	747	738	742
3	749	738	743	644	635	640	668	641	654	746	741	745
4	753	741	746	649	620	637	676	668	673	744	737	740
5	767	752	760	634	603	619	675	663	670	751	744	746
6	772	761	765	634	624	629	671	661	665	762	751	756
7	771	750	757	658	627	638	672	665	668	770	757	764
8	754	743	748	685	658	676	682	667	675	784	770	777
9	754	744	749	708	685	701	693	682	687	797	784	790
10	751	740	745	706	661	678	710	693	701	808	797	803
11	772	749	757	764	664	714	725	710	719	811	808	810
12	775	764	770	805	764	789	727	722	724	809	787	800
13	806	766	788	831	805	818	731	727	728	787	744	764
14	809	779	794	842	830	836	731	729	730	744	724	728
15	781	747	757	854	842	847	734	730	733	766	729	746
16	761	735	741	854	829	847	733	730	732	807	766	787
17	748	738	743	829	724	786	730	725	728	841	807	824
18	750	743	746	724	677	707	725	720	722	868	841	855
19	754	743	748	677	618	656	735	720	726	891	868	878
20	768	752	759	618	588	602	743	735	740	892	880	889
21	782	762	774	594	551	580	743	722	728	880	857	867
22	762	737	751	551	507	528	722	721	721	857	846	849
23	769	735	743	523	500	507	722	718	720	872	847	859
24	771	746	761	522	500	505	721	717	719	900	872	885
25	789	746	768	525	503	514	720	717	718	932	900	916
26	800	767	786	542	525	533	722	718	720	955	931	942
27	778	738	758	573	542	561	720	717	719	955	937	944
28	738	646	684	576	572	574	727	717	722	946	915	939
29	---	---	---	573	565	569	732	725	728	915	866	881
30	---	---	---	595	572	588	736	731	733	866	862	864
31	---	---	---	609	594	602	---	---	---	863	817	844
MONTH	809	646	754	854	500	651	743	607	705	955	724	822

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	817	808	812	725	711	717	---	---	---	703	699	701
2	822	811	816	725	709	716	---	---	---	716	701	705
3	811	801	808	720	702	709	---	---	---	716	640	696
4	803	779	792	709	685	697	---	---	---	640	585	602
5	783	747	767	685	538	613	---	---	---	585	549	562
6	747	731	735	539	506	522	---	---	---	550	520	534
7	755	732	744	606	531	574	---	---	---	556	529	544
8	764	738	755	647	606	622	---	---	---	560	552	556
9	738	733	734	661	646	656	---	---	---	588	559	571
10	741	725	731	656	599	621	---	---	---	595	587	590
11	740	703	719	631	609	622	---	---	---	617	595	605
12	703	667	681	638	628	633	---	---	---	640	617	629
13	667	654	656	669	632	646	---	---	---	665	640	654
14	679	655	665	696	669	688	---	---	---	681	663	671
15	699	679	686	706	683	691	---	---	---	695	681	688
16	737	699	717	729	706	722	---	---	---	700	695	698
17	766	737	753	743	727	738	---	---	---	703	699	701
18	763	741	751	732	712	722	---	---	---	715	701	708
19	745	737	740	712	700	708	---	---	---	716	708	711
20	761	745	752	706	698	701	---	---	---	714	705	708
21	770	761	764	733	702	719	600	569	582	724	708	716
22	780	770	775	746	728	738	623	600	611	729	724	726
23	773	760	767	767	741	759	629	623	625	737	729	734
24	779	761	771	767	757	763	651	626	633	739	729	735
25	761	734	747	762	748	759	678	651	671	741	735	739
26	756	732	743	---	---	---	704	678	694	745	737	740
27	798	748	782	---	---	---	704	693	700	745	738	741
28	777	687	712	---	---	---	693	680	685	743	736	739
29	747	719	738	---	---	---	681	678	679	736	720	726
30	733	708	718	---	---	---	680	678	679	727	720	724
31	---	---	---	---	---	---	699	680	689	---	---	---
MONTH	822	654	744	---	---	---	---	---	---	745	520	672