

RED RIVER OF THE NORTH BASIN--Continued

05069000 SAND HILL RIVER AT CLIMAX, MN

LOCATION.--Lat 47°36'43", long 96°48'52", in NE¹/₄NE¹/₄ sec. 30, T.148 N., R.48 W., Polk County, Hydrologic Unit 09020301, on left bank 25 ft upstream from bridge on U.S. Highway 75 in Climax and 3.7 mi upstream from mouth.

DRAINAGE AREA.--420 mi².

PERIOD OF RECORD.--March 1943 to September 1984, June 1985 to current year (winter records incomplete prior to 1947). Monthly discharge only for some periods, published in WSP 1308 and 1728. October 1984 to May 1985, operated as a high-flow partial-record station.

REVISED RECORDS.--WSP 1388: 1943(M), 1944, 1947(M). WSP 1728: 1951(M), 1960 (average discharge).

GAGE.--Water-stage recorder. Datum of gage is 820.10 ft above sea level (NGVD or 1929, levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1966, nonrecording gage at site 3.2 mi upstream at datum 12.78 ft higher. Oct. 1, 1966 to Sept 5, 1989, nonrecording gage at present site and datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	152	e100	e38	e36	e31	e240	e315	166	48	110	22
2	60	167	e94	e38	e36	e31	e260	e290	183	44	94	22
3	56	174	e90	e38	e36	e31	e300	e260	164	46	82	21
4	48	203	e82	e38	e35	e32	e360	e240	138	45	59	21
5	43	213	e70	e38	e35	e32	e440	e220	119	41	48	20
6	41	270	e63	e38	e34	e32	e600	207	106	41	41	22
7	41	663	e58	e38	e34	e32	e1000	213	98	42	41	152
8	50	878	e52	e38	e34	e32	e1500	201	89	41	39	204
9	49	589	e46	e38	e34	e32	e2500	189	83	39	44	140
10	45	488	e43	e37	e34	e32	e3400	176	76	36	48	88
11	41	457	e42	e37	e34	e31	e2400	165	71	33	42	66
12	39	420	e41	e37	e34	e31	e1600	154	68	33	37	55
13	39	397	e40	e37	e34	e31	e940	145	67	32	40	47
14	44	e360	e39	e37	e33	e31	e520	138	77	34	45	42
15	58	e320	e39	e37	e32	e32	e530	132	89	30	49	38
16	63	e280	e38	e37	e32	e33	e620	125	82	31	54	35
17	69	e260	e38	e36	e32	e34	e760	116	76	29	43	33
18	65	e240	e38	e36	e32	e36	e640	109	73	29	38	33
19	68	e235	e38	e36	e32	e38	e600	103	76	30	37	30
20	68	e220	e38	e36	e32	e40	e580	99	79	43	35	30
21	63	e205	e38	e36	e32	e45	e570	96	75	39	32	30
22	58	e190	e38	e36	e32	e50	e560	92	72	39	30	31
23	55	e175	e38	e36	e32	e59	e550	97	66	64	28	28
24	53	e170	e38	e36	e32	e65	e520	102	62	54	25	28
25	55	e160	e38	e36	e32	e80	e500	110	61	41	25	26
26	63	e145	e38	e36	e32	e100	e460	114	58	35	23	26
27	60	e130	e38	e36	e32	e120	e440	122	55	34	24	26
28	56	e125	e38	e36	e31	e155	e400	151	51	36	26	24
29	57	e115	e38	e36	---	e170	e360	156	51	35	26	23
30	59	e110	e38	e36	---	e195	e340	153	50	33	25	22
31	62	---	e38	e36	---	e220	---	143	---	51	23	---
TOTAL	1683	8511	1507	1141	930	1913	24490	4933	2581	1208	1313	1385
MEAN	54.3	284	48.6	36.8	33.2	61.7	816	159	86.0	39.0	42.4	46.2
MAX	69	878	100	38	36	220	3400	315	183	64	110	204
MIN	39	110	38	36	31	31	240	92	50	29	23	20
AC-FT	3340	16880	2990	2260	1840	3790	48580	9780	5120	2400	2600	2750
CFSM	.13	.68	.12	.09	.08	.15	1.94	.38	.20	.09	.10	.11
IN.	.15	.75	.13	.10	.08	.17	2.17	.44	.23	.11	.12	.12

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	38.7	34.9	20.1	14.7	17.3	95.2	387	134	103	83.1	40.3	33.4
MAX	223	284	58.0	36.8	183	610	1568	1156	596	478	426	374
(WY)	1972	2001	1999	2001	1998	1999	1997	1950	1984	1997	1993	1999
MIN	9.43	8.64	5.11	2.02	3.55	5.81	25.3	23.7	11.5	8.95	6.30	6.49
(WY)	1977	1956	1964	1962	1962	1948	1981	1958	1980	1980	1961	1955

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1943 - 2001
ANNUAL TOTAL	38092	51595	
ANNUAL MEAN	104	141	83.7a
HIGHEST ANNUAL MEAN			249
LOWEST ANNUAL MEAN			18.4
HIGHEST DAILY MEAN	878	Nov 8	3400
LOWEST DAILY MEAN	22	Feb 15	20
ANNUAL SEVEN-DAY MINIMUM	22	Feb 12	22
MAXIMUM PEAK FLOW			3400b
MAXIMUM PEAK STAGE			26.05d
ANNUAL RUNOFF (AC-FT)	75560	102300	60620
ANNUAL RUNOFF (CFSM)	.25	.34	.20
ANNUAL RUNOFF (INCHES)	3.37	4.57	2.71
10 PERCENT EXCEEDS	224	317	169
50 PERCENT EXCEEDS	58	46	25
90 PERCENT EXCEEDS	29	31	9.1

- a Median of annual mean discharges is 65 ft³/s.
- b Estimated daily-mean discharge.
- c Gage-height, 17.81 ft., site and datum then in use.
- d Backwater from Red River of the North.
- e Estimated.

