

MINNESOTA RIVER BASIN--Continued

05319500 WATONWAN RIVER NEAR GARDEN CITY, MN

LOCATION.--Lat 44°02'47", long 94°11'43", in SW¹/₄NE¹/₄ sec. 28, T.107 N., R.28 W., Blue Earth County, Hydrologic Unit 07020010, on left bank 25 ft downstream from bridge on County Highway 13, 1.5 miles west of Garden City, 7.3 mi upstream from mouth, and 9.2 mi downstream from Perch Creek.

DRAINAGE AREA.--851 mi².

PERIOD OF RECORD.--March 1940 to September 1945, September 1976 to current year. 1953, 1960, 1961, and 1969 (one or more discharge measurements each year).

REVISED RECORDS.--WDR MN-78-2: 1977. WRIR 97-4249: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 905.05 ft above sea level (NGVD of 1929). Prior to September 30, 1945, nonrecording gage at site 200 ft upstream and at datum 0.17 ft higher.

REMARKS.--Records fair except those for the periods of estimated daily discharge, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 7, 1965, reached a stage of 18.89 ft at datum 0.17 ft higher, from floodmarks, discharge, 19,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 19	1100	*1000	*3.59	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	26	27	e16	e15	e52	38	33	531	222	91	34
2	31	29	27	e16	e16	e52	37	31	721	223	82	33
3	29	30	31	e16	e16	58	37	30	588	299	74	36
4	32	27	32	e16	e16	60	38	29	492	398	67	34
5	30	27	32	e16	e16	63	37	27	454	367	66	34
6	30	28	26	e16	e15	61	34	e31	425	334	67	31
7	30	26	e26	e16	e15	59	36	e36	385	286	68	29
8	31	26	e29	e16	e15	64	36	51	351	241	120	26
9	28	27	e27	e16	e15	74	34	56	309	211	130	25
10	28	27	e26	e16	e15	78	33	51	267	235	137	25
11	27	27	e28	e16	e15	78	35	e73	239	547	159	24
12	26	33	e27	e16	e15	68	34	96	213	781	135	21
13	25	26	e26	e16	e15	64	34	85	201	875	120	20
14	24	26	e26	e15	e16	61	34	71	203	925	106	19
15	25	26	e26	e15	e16	60	33	61	208	790	92	17
16	26	26	e19	e15	e16	59	35	71	211	646	81	16
17	25	24	e19	e15	e16	54	37	154	209	542	84	15
18	26	24	e18	e15	e16	52	37	600	189	507	82	14
19	28	27	e18	e15	e16	53	40	975	177	441	79	14
20	29	27	e17	e15	e17	52	44	834	330	380	72	14
21	27	27	e15	e14	e17	50	50	623	255	327	64	14
22	26	28	e13	e14	e18	48	51	458	209	276	60	16
23	26	33	e13	e14	e24	47	49	367	192	234	56	16
24	26	35	e13	e14	e42	52	46	304	377	202	53	20
25	26	31	e13	e14	e49	53	43	247	581	178	50	14
26	26	31	e14	e14	e53	55	39	207	498	294	48	13
27	27	31	e14	e14	e54	52	38	206	406	209	44	13
28	27	30	e15	e14	e53	49	37	249	355	159	42	14
29	27	27	e15	e13	e52	46	35	319	309	133	39	12
30	31	26	e16	e14	---	43	34	324	262	116	37	13
31	28	---	e16	e15	---	40	---	326	---	102	35	---
TOTAL	855	838	664	467	674	1757	1145	7025	10147	11480	2440	626
MEAN	27.6	27.9	21.4	15.1	23.2	56.7	38.2	227	338	370	78.7	20.9
MAX	32	35	32	16	54	78	51	975	721	925	159	36
MIN	24	24	13	13	15	40	33	27	177	102	35	12
AC-FT	1700	1660	1320	926	1340	3490	2270	13930	20130	22770	4840	1240
CFSM	.03	.03	.03	.02	.03	.07	.04	.27	.40	.44	.09	.02
IN.	.04	.04	.03	.02	.03	.08	.05	.31	.44	.50	.11	.03

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	195	242	144	70.4	108	596	871	610	852	483	242	194
MAX	686	826	530	319	626	2105	2696	2025	4494	2389	1095	819
(WY)	1993	1993	1992	1992	1983	1992	1993	1993	1993	1993	1979	1993
MIN	5.37	7.69	3.76	2.70	2.39	19.3	33.7	16.1	17.3	8.27	6.56	3.63
(WY)	1990	1977	1990	1977	1977	1940	1990	1940	1989	1940	1989	1976

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1940 - 2000
ANNUAL TOTAL	134440	38118	
ANNUAL MEAN	368	104	395
HIGHEST ANNUAL MEAN			1330
LOWEST ANNUAL MEAN			43.7
HIGHEST DAILY MEAN	2630	Apr 13	975
LOWEST DAILY MEAN	13	Dec 22	12
ANNUAL SEVEN-DAY MINIMUM	14	Dec 21	14
INSTANTANEOUS PEAK FLOW			1000
INSTANTANEOUS PEAK STAGE			3.59
INSTANTANEOUS LOW FLOW			11
ANNUAL RUNOFF (AC-FT)	266700	75610	286500
ANNUAL RUNOFF (CFSM)	.43	.12	.46
ANNUAL RUNOFF (INCHES)	5.88	1.67	6.31
10 PERCENT EXCEEDS	1060	320	1050
50 PERCENT EXCEEDS	90	34	140
90 PERCENT EXCEEDS	26	15	13

e Estimated.

