05476000 DES MOINES RIVER AT JACKSON, MN

Des Moines Basin
Des Moines Headwaters Subbasin

LOCATION.--Lat 43°37′06″, long 94°59′05″ referenced to North American Datum of 1927, in SE ¼ SW ¼ sec.24, T.102 N., R.35 W., Jackson County, MN, Hydrologic Unit 07100001, on right bank 1000 ft below White St. bridge in Jackson.

DRAINAGE AREA.--1,250 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1909 to December 1913, August 1930 to current year (winter record incomplete prior to 1936). Published as "Des Moines River near Jackson", 1930-35, as "West Fork Des Moines River near Jackson", 1936-44, and as "West Fork Des Moines River at Jackson", 1945-69.

REVISED RECORDS.--WSP 1115: 1942. WSP 1175: Drainage area. WSP 1238: 1950. WSP 1308: 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 1,287.75 ft above sea level (NGVD of 1929). May 31, 1909 to Dec. 20, 1913, non-recording gage at site 0.6 mi downstream at datum 0.99 ft lower. Aug. 22, 1930 to Sept. 30, 1944, non-recording gage at site 7 mi upstream at datum 17.10 ft higher. Oct. 1, 1944 to Oct. 26, 1949, non-recording gage at site 600 ft upstream at datum 10.64 ft higher. Oct. 27, 1949 to Dec. 15, 1965, water-stage recorder 200 ft downstream at present datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Regulation at times from Yankton, Long, Shetek, and Heron Lakes.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 540 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 13	1630	728	5.39
Jun 23	1315	767	5.45
Jul 10	0400	*1,230	*6.86

Minimum discharge, 13 ft^3/s, Oct. 5, gage height, 2.67 ft.

05476000 DES MOINES RIVER AT JACKSON, MN—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	18	146	e119	e60	e30	e290	e717	603	284	609	292	85
2	16	137	e120	e59	e29	e276	e690	569	269	576	280	82
3	17	142	e115	e57	e29	e260	661	572	251	544	262	79
4	16	143	e104	e55	e29	e247	645	562	235	529	248	79
5	21	145	e102	e55	e30	e247	643	581	232	510	218	75
6	18	153	e98	e53	e32	e296	620	595	232	483	201	69
7	32	168	e98	e51	e34	e376	582	601	231	478	195	66
8	34	158	e112	e51	e45	e417	609	611	345	490	196	64
9	41	134	e107	e49	e160	e417	604	640	466	543	186	62
10	47	103	e105	e47	e540	e420	588	682	482	988	169	63
11	46	106	e112	e47	e710	e243	e520	697	472	846	159	60
12	40	134	e104	e46	e892	e294	e505	698	497	823	149	55
13	46	153	e118	e44	e941	e291	e494	711	544	825	144	55
14	53	182	e117	e42	e825	e282	e492	690	577	805	133	55
15	69	192	e106	e39	e695	e304	e486	618	562	806	124	61
16	55	168	e100	e37	e570	e356	e472	613	559	784	136	57
17	37	164	e95	e36	e494	e422	e467	558	582	742	150	53
18	41	135	e93	e35	e410	e540	e461	556	604	732	127	51
19	36	133	e88	e35	e350	e575	e469	525	623	720	120	47
20	34	149	e85	e34	e362	e555	e466	488	685	708	150	44
21	39	115	e81	e32	e359	e565	e455	473	731	683	191	47
22	71	e97	e78	e32	e347	e571	e444	406	751	653	154	45
23	113	e94	e75	e31	e325	e704	426	397	753	558	130	52
24	166	e104	e73	e31	e309	e805	481	385	736	422	128	55
25	178	e93	e70	e30	e324	e940	448	367	725	418	127	93
26	175	e108	e74	e30	e345	e947	447	365	716	395	139	90
27	172	e104	e66	e29	e327	e917	532	348	718	374	130	74
28	157	e114	e65	e29	e305	e861	541	316	720	357	122	77
29	121	e108	e65	e29	---	e819	546	313	688	333	110	77
30	136	e126	e63	e29	---	e776	588	304	640	319	97	76
31	142	---	e62	e32	---	e751	---	290	---	302	87	---
Total	2,187	4,008	2,870	1,266	9,848	15,764	16,099	16,134	15,910	18,355	5,054	1,948
Mean	70.5	134	92.6	40.8	352	509	537	520	530	592	163	64.9
Max	178	192	120	60	941	947	717	711	753	988	292	93
Min	16	93	62	29	29	243	426	290	231	302	87	44
Ac-ft	4,340	7,950	5,690	2,510	19,530	31,270	31,930	32,000	31,560	36,410	10,020	3,860
Cfsm	0.06	0.11	0.07	0.03	0.28	0.41	0.43	0.42	0.42	0.47	0.13	0.05
In.	0.07	0.12	0.09	0.04	0.29	0.47	0.48	0.48	0.47	0.55	0.15	0.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	193	189	114	57.0	77.5	458	1,110	715	674	538	225	177
Max	1,808	1,833	792	503	519	2,250	6,045	3,923	4,892	6,018	2,192	2,243
(WY)	(2006)	(1980)	(1980)	(2006)	(2006)	(1983)	(1969)	(1993)	(1993)	(1993)	(1993)	(1942)
Min	0.00	0.00	0.00	0.00	0.00	11.8	9.37	2.59	3.76	1.04	0.13	0.00
(WY)	(1956)	(1956)	(1956)	(1956)	(1936)	(1959)	(1959)	(1934)	(1931)	(1931)	(1955)	(1931)

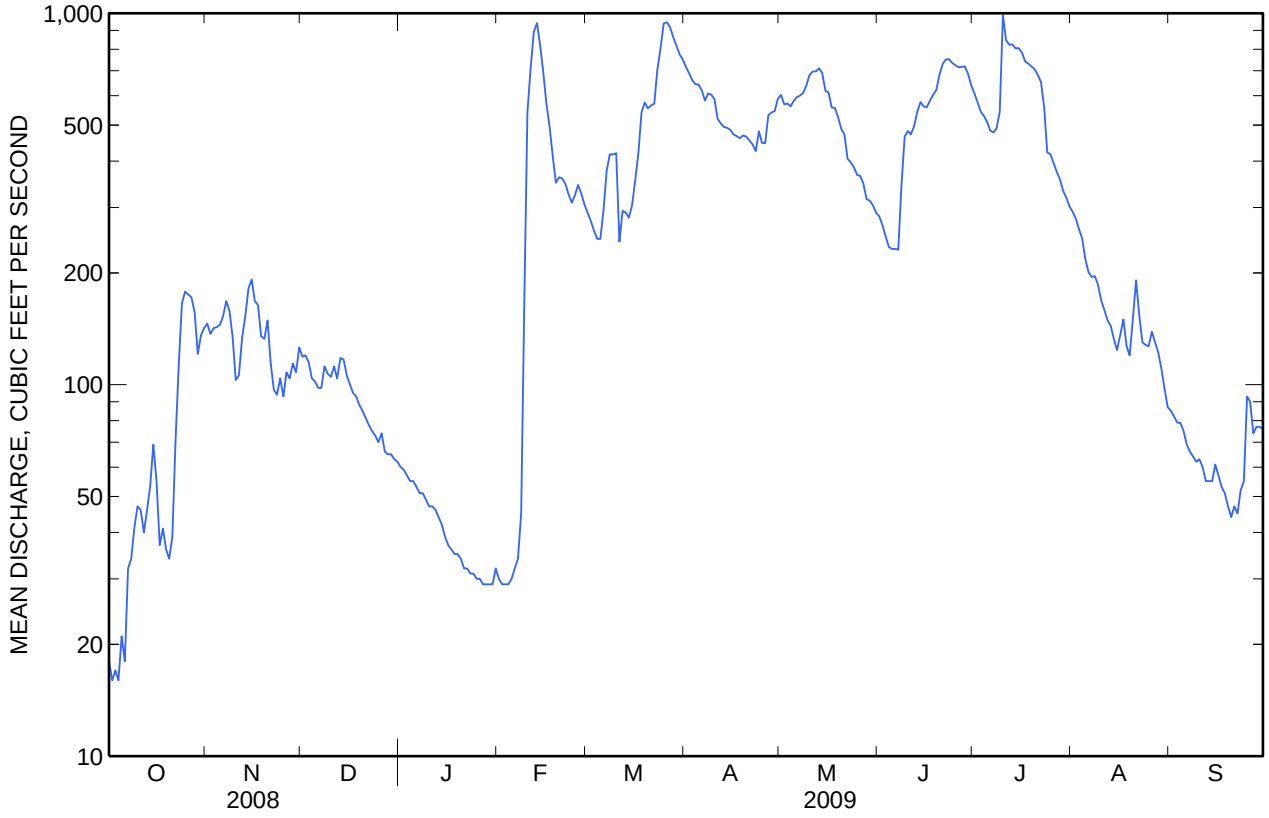
05476000 DES MOINES RIVER AT JACKSON, MN—Continued

SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1930 - 2009	
Annual total	174,064		109,443			
Annual mean	476		300		[a]397	
Highest annual mean					2,098	1993
Lowest annual mean					15.1	1956
Highest daily mean	2,560	Jun 13	988	Jul 10	15,500	Apr 11, 1969
Lowest daily mean	16	Oct 2	16	Oct 2,4	[b]0.00	Jul 19, 1931
Annual seven-day minimum	18	Sep 30	20	Oct 1	0.00	Jul 19, 1931
Maximum peak flow			1,230	Jul 10	15,500	Apr 11, 1969
Maximum peak stage			6.86	Jul 10	19.45	Apr 11, 1969
Instantaneous low flow			13	Oct 5	[b]0.00	Jul 19, 1931
Annual runoff (ac-ft)	345,300		217,100		287,300	
Annual runoff (cfsm)	0.380		0.240		0.317	
Annual runoff (inches)	5.18		3.26		4.31	
10 percent exceeds	1,440		696		1,100	
50 percent exceeds	136		186		104	
90 percent exceeds	37		40		4.9	

[a] Median of annual mean discharges is 300 ft³/s.

[b] Many days, several years.



WATER-QUALITY RECORDS

REMARKS.--This site is part of a statewide sediment study. The objectives of this study are to describe sediment concentrations and load and turbidity as a function of streamflow and season at selected stream sites. Secondly to describe relations between mean cross-sectional suspended sediment concentrations and point measurements of water transparency. Also to provide training about sediment transport processes and sediment sampling techniques to Minnesota Pollution Control Agency's (MPCA) staff.

COOPERATION.--The Minnesota Pollution Control Agency (MPCA) is a cooperator on this project.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 1 of 2

Date	Time	Medium name	Temperature, air, deg C (00020)	Instantaneous discharge, ft³/s (00061)	Specif. conductance, wat unf lab, µS/cm @ 25 degC (90095)	Specific conductance, wat unf µS/cm @ 25 degC (00095)	Temperature, water, deg C (00010)	Transparency wat unf transparency tube, cm (65225)	Turbdty white light, det ang 90+/-30 degrees NTU (63675)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)
Oct										
23...	0800	Surface water	--	--	764	--	7.1	--	--	--
30...	1130	Surface water	--	143	--	614	9.0	35	22	22
30...	1143	Surface water	--	143	--	--	9.0	--	--	--
30...	1147	Surface water	--	143	--	--	9.0	--	--	--
30...	1159	Surface water	--	143	--	--	9.0	--	--	--
Apr										
02...	1430	Surface water	--	693	--	--	--	--	--	--
02...	1446	Surface water	--	--	--	--	--	--	--	--
02...	1502	Surface water	--	--	--	--	--	--	--	--
May										
15...	1201	Surface water	18.3	--	805	--	11.3	--	--	--
15...	1204	Surface water	18.3	--	--	--	11.3	--	--	--
15...	1227	Surface water	18.3	--	790	--	11.3	--	--	--
15...	1230	Surface water	18.3	--	--	876	11.3	17	27	27
Jun										
24...	1645	Surface water	--	754	805	--	--	--	--	--
24...	1659	Surface water	--	--	--	--	--	--	--	--
24...	1700	Surface water	--	754	--	775	26.0	16	65	54
24...	1812	Surface water	--	--	--	--	--	--	--	--
Jul										
21...	1137	Surface water	--	688	--	--	--	--	--	--
21...	1141	Surface water	--	--	--	--	--	--	--	--
21...	1211	Surface water	--	--	--	--	--	--	--	--
21...	1230	Surface water	24.9	688	--	828	21.2	10	68	61
29...	0000	Surface water	--	--	--	--	22.8	--	--	--
29...	1030	Surface water	--	--	738	--	22.8	--	--	--
Aug										
11...	1445	Surface water	--	--	696	--	26.3	--	--	--
20...	1515	Surface water	--	--	703	--	22.7	--	--	--
31...	1415	Surface water	--	--	--	--	19.6	--	--	--
31...	1445	Surface water	--	--	725	--	19.6	--	--	--
Sep										
03...	1340	Surface water	--	81	738	686	20.4	14	64	64
03...	1346	Surface water	--	81	--	686	20.4	14	64	64
03...	1405	Surface water	--	81	732	686	20.4	14	64	64
24...	0950	Surface water	--	--	713	--	18.5	--	--	--

05476000 DES MOINES RIVER AT JACKSON, MN—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 2 of 2

Date	Sampler type, code (84164)	Suspnd. sedimnt sieve diametr percent <0.0625 mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)
Oct			
23...	Sampler US D-74	--	43
30...	Weighted-bottle	--	--
30...	Sampler US D-74	--	--
30...	Weighted-bottle	--	--
30...	Sampler US D-74	--	--
Apr			
02...	Sampler US D-74	94	99
02...	Sampler US D-74	98	103
02...	Sampler US D-74	98	124
May			
15...	Sampler US D-74	--	98
15...	Sampler US DH-59	84	98
15...	Sampler US D-74	--	125
15...	Weighted-bottle	--	--
Jun			
24...	Sampler US D-74	--	440
24...	Sampler US D-74	98	113
24...	Weighted-bottle	--	--
24...	Sampler US D-74	--	--
Jul			
21...	Sampler US D-74	--	--
21...	Sampler US DH-59	--	--
21...	Sampler US D-74	--	--
21...	Weighted-bottle	--	--
29...	Sampler US D-74	--	--
29...	Sampler US D-74	--	35
Aug			
11...	Sampler US D-74	--	25
20...	Sampler US D-74	--	32
31...	Sampler US D-74	--	--
31...	Sampler US D-74	--	28
Sep			
03...	Weighted-bottle	--	19
03...	Weighted-bottle	99	23
03...	Weighted-bottle	--	39
24...	Sampler US D-74	--	20