Water-Data Report 2013

05481650 Des Moines River near Saylorville, IA

Des Moines Basin
Middle Des Moines Subbasin

LOCATION.--Lat 41°40′50″, long 93°40′05″ referenced to North American Datum of 1927, in SW ¼ NE ¼ NE ¼ sec.5, T.79 N., R.24 W., Polk County, IA, Hydrologic Unit 07100004, on left bank 5 ft upstream from Fisher Bridge on County Highway R6F, 2.0 mi west of Saylorville, 2.1 mi downstream from Rock Creek, 2.3 mi downstream from Saylorville Dam, 2.2 mi upstream from Beaver Creek, and 203.0 mi upstream from mouth.

DRAINAGE AREA.--5,841 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records from October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 787.42 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to August 6, 1970, non-recording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Saylorville Lake (station 05481630), 2.3 mi upstream, since April 12, 1977. U.S. Geological Survey data collection platform with satellite telemetry and City of Des Moines alert radio system at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Since at least 1893, no flood outside the period of record exceeded the June 24, 1954, stage of 24.50 ft, from high-water mark, discharge 60,000 ft^3/s.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--Maximum discharge, 47,400 ft^3/s, April 10, 1965, gage height 24.02 ft; minimum daily discharge, 13 ft^3/s, January 25, 1977.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	206	220	207	199	203	177	4,530	3,270	12,500	12,400	929	243
2	205	218	207	198	194	176	4,040	3,870	12,600	12,200	778	239
3	210	217	207	201	186	177	3,310	4,360	12,300	11,700	660	241
4	211	216	203	202	180	178	2,360	5,770	12,200	10,900	662	226
5	216	219	199	202	180	179	1,920	8,260	12,300	10,200	660	213
6	215	217	200	201	180	178	1,520	10,800	12,300	9,580	724	213
7	216	215	199	202	182	178	1,260	12,000	12,200	9,040	760	213
8	217	223	199	201	179	180	1,260	11,600	12,000	8,720	662	214
9	215	232	199	202	180	217	1,270	11,100	12,000	8,080	522	215
10	217	236	194	203	186	234	2,700	10,100	11,900	7,570	485	213
11	219	239	195	208	183	222	3,550	8,080	11,800	7,270	485	213
12	215	214	198	211	182	198	3,390	5,590	12,000	6,880	484	213
13	225	199	199	199	183	190	3,850	5,260	12,200	6,440	571	212
14	227	184	198	196	185	196	4,250	4,880	12,200	5,920	640	213
15	222	210	201	195	181	973	4,260	4,200	12,400	5,300	551	214
16	223	208	199	233	179	2,590	4,120	3,780	12,400	4,810	473	212
17	222	207	199	215	181	3,150	4,140	3,310	12,400	4,610	462	215
18	224	207	198	198	183	3,190	4,490	3,130	12,300	4,550	464	215
19	223	207	199	204	e179	3,150	5,200	3,750	12,200	2,670	471	221
20	224	205	e201	199	e176	2,960	7,410	4,780	12,100	1,830	409	215
21	228	206	e201	193	e176	1,910	7,510	6,980	12,000	1,880	518	209
22	229	207	e205	187	e178	1,740	6,610	8,650	11,900	1,690	516	207
23	228	200	e204	194	e175	1,970	5,320	8,160	11,500	1,640	456	208
24	230	200	e201	192	177	1,820	4,680	7,620	11,200	1,510	376	206
25	224	200	e200	195	176	1,720	4,450	7,170	11,500	1,250	375	207
26	217	198	e203	195	178	1,530	4,890	7,760	12,400	1,160	337	208
27	221	203	e205	196	178	1,270	4,910	10,500	12,400	1,120	312	208
28	220	205	e209	198	177	1,270	4,310	12,800	12,400	932	307	207
29	219	206	e205	201	---	2,370	3,830	12,700	12,300	842	273	206
30	218	209	e204	199	---	3,760	3,230	12,100	12,300	843	247	208
31	219	---	201	199	---	4,510	---	12,200	---	896	244	---
Total	6,805	6,327	6,239	6,218	5,077	42,563	118,570	234,530	364,200	164,433	15,813	6,447
Mean	220	211	201	201	181	1,373	3,952	7,565	12,140	5,304	510	215
Max	230	239	209	233	203	4,510	7,510	12,800	12,600	12,400	929	243
Min	205	184	194	187	175	176	1,260	3,130	11,200	842	244	206
Ac-ft	13,500	12,550	12,380	12,330	10,070	84,420	235,200	465,200	722,400	326,200	31,370	12,790
Cfsm	0.04	0.04	0.03	0.03	0.03	0.24	0.68	1.30	2.08	0.91	0.09	0.04
In.	0.04	0.04	0.04	0.04	0.03	0.27	0.76	1.49	2.32	1.05	0.10	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2,001	1,980	1,512	927	1,520	4,347	6,704	6,843	7,792	6,531	3,002	1,907
Max	9,476	6,210	5,345	3,605	6,591	13,800	17,790	18,170	23,610	32,820	15,440	13,450
(WY)	(2008)	(1987)	(1983)	(1983)	(1984)	(1983)	(1993)	(1993)	(2008)	(1993)	(1993)	(1993)
Min	194	190	201	190	181	362	365	741	877	254	212	199
(WY)	(1990)	(1990)	(2013)	(1991)	(2013)	(1981)	(2000)	(2000)	(1988)	(1988)	(1989)	(2003)

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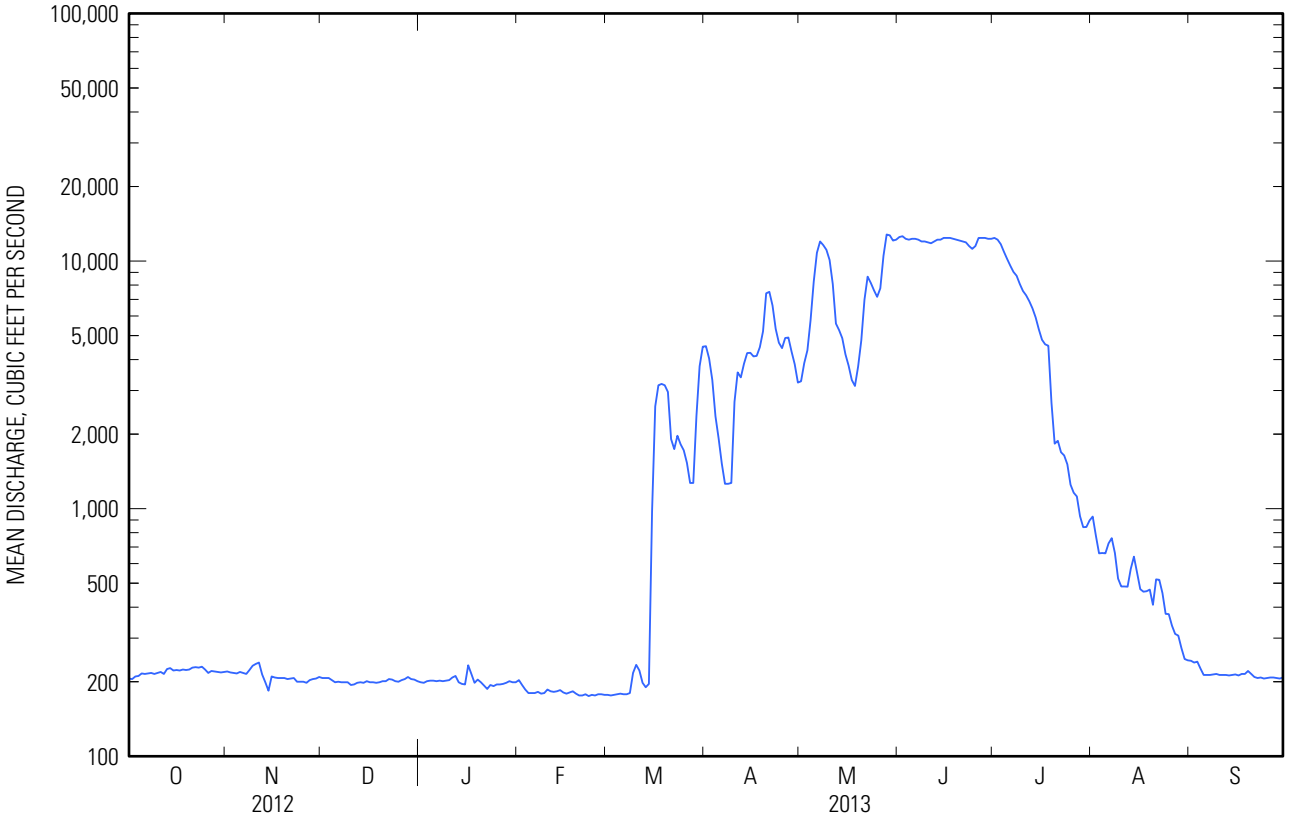
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1978 - 2013[a]	
Annual total	374,665		977,222			
Annual mean	1,024		2,677		3,763	
Highest annual mean					11,320	1993
Lowest annual mean					487	1989
Highest daily mean	5,810	May 10	12,800	May 28	49,700	Jun 13, 2008
Lowest daily mean	183	Jan 21	175	Feb 23	144	Nov 29, 1977
Annual seven-day minimum	189	Feb 6	177	Feb 20	165	Mar 5, 1978
Maximum peak flow			14,200	May 29	50,500	Jun 13, 2008
Maximum peak stage			12.83	May 29	24.22	Jul 11, 1993
Instantaneous low flow			141	Nov 14		
Annual runoff (ac-ft)	743,100		1,938,000		2,726,000	
Annual runoff (cfsm)	0.175		0.458		0.644	
Annual runoff (inches)	2.39		6.22		8.75	
10 percent exceeds	3,360		11,500		11,000	
50 percent exceeds	234		227		1,810	
90 percent exceeds	199		189		228	

[a] Post regulation.