Water-Data Report 2007

05451500 IOWA RIVER AT MARSHALLTOWN, IA

Iowa Basin
Middle Iowa Subbasin

LOCATION.--Lat 42°03′57″, long 92°54′27″ referenced to North American Datum of 1927, in SE ¼ SE ¼ sec.23, T.84 N., R.18 W., Marshall County, IA, Hydrologic Unit 07080208, on right bank 10 ft downstream from bridge on State Highway 14, 1,500 ft upstream from Burnett Creek, 2.2 mi upstream from Linn Creek, and 212.7 mi upstream from mouth.

DRAINAGE AREA.--1,532 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1902 to September 1903, October 1914 to September 1927, October 1932 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1558: 1915-18, 1919 (M), 1920, 1921-23 (M), 1924-27, 1933, 1934 (M), 1936, 1938, 1947 (M).

GAGE.--Water-stage recorder. Datum of gage is 853.10 ft above NGVD of 1929. See WSP 1728 for history of changes prior to September 21, 1934.

REMARKS.--Records are considered good, except for those estimated daily discharges, which are poor. U.S. Army Corps of Engineers rain gage and data collection platform with satellite telemetry at station. Precipitation records are available online at the U.S. Army Corps of Engineers website: www2.mvr.usace.army.mil/WaterControl/datamining2.cfm.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	596	624	e961	2,400	e447	e1,120	5,340	5,630	4,750	e1,760	360	2,470
2	557	596	e802	2,760	e431	e1,340	5,320	4,830	6,680	e1,560	345	2,040
3	534	579	e630	2,500	e351	e1,260	5,270	4,080	5,650	e1,440	330	1,730
4	517	558	e548	2,220	e319	e1,100	6,570	3,490	4,440	e1,320	331	1,520
5	499	502	e396	2,010	e295	e879	6,280	3,090	3,520	e1,190	401	1,340
6	479	477	e378	1,800	e313	e801	5,480	3,020	2,990	1,140	468	1,210
7	467	495	e298	1,640	e304	e829	4,700	3,990	2,890	1,050	635	e1,190
8	459	513	e378	1,510	e295	e900	4,010	4,360	2,730	978	1,100	e1,160
9	450	509	e537	1,410	e304	e1,010	3,440	4,000	2,340	906	917	e1,040
10	441	510	e674	1,270	e292	e1,310	2,920	3,640	2,060	868	694	e940
11	454	504	e710	1,230	e304	e2,270	2,790	3,310	1,890	802	545	e915
12	463	486	e736	1,150	e339	e3,940	3,040	3,000	1,720	739	463	e872
13	451	499	676	985	e356	e7,160	3,320	2,720	1,550	695	402	e818
14	435	518	627	e858	e352	9,110	3,500	2,510	1,470	654	360	e740
15	422	558	612	e703	e339	8,420	3,280	2,360	1,380	610	341	e661
16	428	585	596	e576	e330	7,400	2,990	2,200	1,310	573	405	e595
17	446	584	584	e519	e356	6,140	2,820	e2,100	1,250	547	362	e547
18	495	567	566	e623	e377	5,160	2,680	e2,030	1,210	535	370	e514
19	546	542	555	e703	e416	4,670	2,550	e1,990	1,240	645	1,170	e526
20	586	523	608	e659	e544	4,120	2,380	1,970	1,160	607	4,330	e517
21	627	510	764	e623	e758	3,660	2,170	1,800	1,130	576	6,570	e547
22	649	507	1,240	e599	e1,150	3,390	2,010	1,730	e2,860	532	7,820	e603
23	650	497	1,640	e583	e1,290	3,010	2,100	1,700	e11,100	560	8,870	e611
24	629	479	1,560	e543	e1,230	2,800	2,220	3,440	e15,400	522	9,740	e644
25	601	475	1,370	e499	e1,100	2,750	6,260	5,220	e9,800	491	9,130	e731
26	616	469	1,230	e503	e1,190	2,670	12,300	e4,630	6,720	449	7,420	e812
27	674	468	1,100	e559	e1,030	2,550	12,700	e4,420	4,430	503	5,500	799
28	782	582	1,020	e531	e929	2,370	9,590	e3,420	3,140	498	4,290	801
29	722	1,150	946	e503	---	2,230	7,930	e2,890	2,430	429	4,020	833
30	695	1,160	914	e487	---	2,390	6,700	e3,410	2,040	393	3,580	825
31	667	---	1,020	e447	---	3,790	---	4,270	---	375	2,950	---
Total	17,037	17,026	24,676	33,403	15,741	100,549	142,660	101,250	111,280	23,947	84,219	28,551
Mean	550	568	796	1,078	562	3,244	4,755	3,266	3,709	772	2,717	952
Max	782	1,160	1,640	2,760	1,290	9,110	12,700	5,630	15,400	1,760	9,740	2,470
Min	422	468	298	447	292	801	2,010	1,700	1,130	375	330	514
Ac-ft	33,790	33,770	48,940	66,250	31,220	199,400	283,000	200,800	220,700	47,500	167,000	56,630
Cfsm	0.36	0.37	0.52	0.70	0.37	2.12	3.10	2.13	2.42	0.50	1.77	0.62
In.	0.41	0.41	0.60	0.81	0.38	2.44	3.46	2.46	2.70	0.58	2.05	0.69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	486	485	359	306	618	1,546	1,535	1,425	1,821	1,045	581	490
Max	2,721	2,593	2,139	2,231	3,424	4,206	6,796	5,559	7,619	8,389	7,062	3,362
(WY)	(1987)	(1973)	(1983)	(1973)	(1915)	(1973)	(1965)	(1991)	(1918)	(1993)	(1993)	(1993)
Min	39.2	46.2	31.0	10.2	20.9	98.4	99.3	49.9	16.0	41.8	35.9	27.5
(WY)	(1940)	(1940)	(1990)	(1977)	(1940)	(1934)	(1934)	(1934)	(1934)	(1977)	(1934)	(1939)

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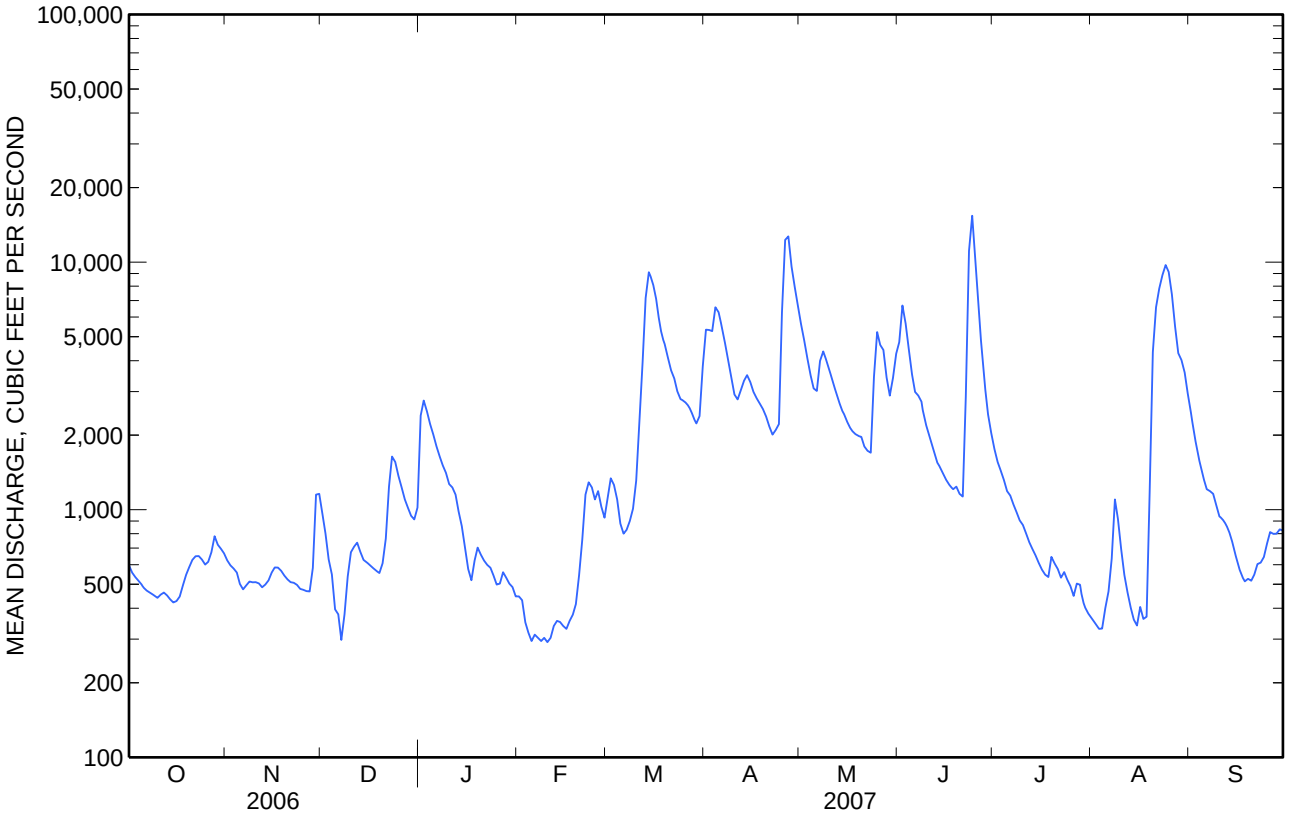
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1903 - 2007	
Annual total	275,252		700,339			
Annual mean	754		1,919		891	
Highest annual mean					3,456	1993
Lowest annual mean					77.3	1934
Highest daily mean	3,500	May 2	15,400	Jun 24	39,400	Jun 4, 1918
Lowest daily mean	129	Sep 9	292	Feb 10	4.7	Jan 25, 1977
Annual seven-day minimum	149	Sep 3	301	Feb 5	5.2	Jan 20, 1977
Maximum peak flow			16,900	Jun 24	42,000	Jun 4, 1918
Maximum peak stage			20.13	Jun 24 [a]	20.77	Aug 17, 1993
Annual runoff (ac-ft)	546,000		1,389,000		645,800	
Annual runoff (cfsm)	0.492		1.25		0.582	
Annual runoff (inches)	6.68		17.01		7.91	
10 percent exceeds	1,490		4,680		2,190	
50 percent exceeds	562		917		400	
90 percent exceeds	298		429		79	

[a] From highwater mark.