Water-Data Report 2011

05454500 Iowa River at Iowa City, IA

Iowa Basin
Lower Iowa Subbasin

LOCATION.--Lat 41°39′24″, long 91°32′27″ referenced to North American Datum of 1927, in NE ¼ NE ¼ NE ¼ sec.16, T.79 N., R.6 W., Johnson County, IA, Hydrologic Unit 07080209, on right bank 25 ft downstream from the University of Iowa Hydraulics Laboratory in Iowa City, 175 ft downstream from University dam, 0.8 mi upstream from Ralston Creek, 3.6 mi downstream from Clear Creek, and 72.3 mi upstream from mouth.

DRAINAGE AREA.--3,271 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1903 to current year. Prior to April 1918, monthly mean discharge for some periods published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 29.00 ft above Iowa City datum and 617.27 ft above National Geodetic Vertical Datum of 1929. October 1, 1934, to September 30, 1972, at datum 10.00 ft higher. See WSP 1708 for history of changes prior to October 1, 1934.

REMARKS.--Records good except for estimated daily discharges, which are poor. Slight fluctuation at low stages caused by power plant upstream. Flow regulated by Coralville Lake (station 05453510), 9.1 mi upstream, since September 17, 1958. U.S. Army Corps of Engineers rain gage and data collection platform with satellite telemetry and U.S. Geological Survey data collection platform with telephone modem backup at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 17, 1881, reached a stage of 21.1 ft, from floodmarks, at site and datum in use from 1913-1921, from information by local resident, discharge 51,000 ft^3/s. Maximum stage since at least 1850 occurred in June 1851, about 3 ft higher than that of July 17, 1881, discharge about 70,000 ft^3/s.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--Maximum discharge, 42,500 ft^3/s, June 8, 1918, gage height 19.6 ft, from graph based on gage readings, at site and datum then in use; minimum daily discharge, 29 ft^3/s, October 21, 22, 1916, regulated.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 05454500, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/05454500.2011.pdf

05454500 Iowa River at Iowa City, IA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3,870	937	1,910	2,230	915	3,940	3,740	6,440	6,740	6,120	1,190	475
2	3,460	940	1,610	2,170	1,220	3,910	3,400	6,450	6,820	6,120	1,060	487
3	3,080	809	1,480	2,140	1,120	3,890	3,100	6,450	6,740	6,130	1,050	650
4	2,770	860	1,480	1,970	895	3,650	2,960	6,430	6,610	6,160	1,030	715
5	2,670	1,020	1,380	1,810	827	3,350	2,900	6,400	6,540	6,070	1,010	417
6	2,650	1,010	1,120	1,680	825	2,940	2,810	6,380	6,490	6,000	963	303
7	2,500	1,020	1,050	1,560	779	2,750	2,540	6,320	6,430	5,920	979	252
8	2,250	836	1,040	1,540	730	2,660	2,700	6,330	6,360	5,860	1,020	230
9	2,140	917	947	1,390	728	3,560	2,720	6,400	6,940	5,370	1,140	256
10	2,130	856	864	1,250	763	3,900	2,570	6,320	4,980	4,650	1,060	257
11	2,120	1,130	964	1,250	798	4,030	2,480	5,970	2,630	4,270	956	257
12	2,050	992	1,230	1,240	802	3,840	2,430	5,270	4,300	3,830	860	256
13	1,950	1,390	1,480	1,240	812	3,400	2,290	4,520	6,690	2,930	752	253
14	1,230	1,740	1,230	1,140	884	2,640	2,140	4,280	6,730	2,290	750	250
15	1,970	1,230	1,040	1,050	1,840	2,530	1,910	4,350	5,600	2,270	753	254
16	1,930	957	1,150	1,050	2,580	2,520	2,170	4,200	4,040	2,250	712	261
17	1,810	1,220	1,240	1,060	4,500	2,380	2,670	4,110	5,410	2,110	659	263
18	1,670	2,720	1,190	1,050	6,270	2,360	2,750	3,950	6,450	1,900	660	263
19	1,590	3,100	1,140	1,000	4,800	2,290	2,370	3,740	6,410	1,730	664	263
20	1,590	3,310	1,140	871	5,260	2,300	1,520	3,620	6,760	1,550	661	254
21	1,580	3,300	1,140	952	7,390	2,660	1,350	3,620	6,590	1,450	663	256
22	1,520	2,340	1,140	1,030	8,150	3,030	1,370	3,740	6,460	1,550	609	265
23	1,510	974	1,140	1,030	7,150	3,620	1,370	4,380	6,410	2,170	509	290
24	1,720	2,740	1,150	976	6,650	3,880	1,300	4,820	6,340	2,500	477	298
25	1,750	2,530	1,140	926	7,350	4,160	1,300	5,460	6,320	2,050	476	298
26	1,800	2,500	1,210	926	7,350	4,810	2,450	5,960	6,300	2,050	483	315
27	1,740	2,500	1,280	926	6,560	4,630	4,720	6,470	6,380	2,040	480	310
28	1,580	2,300	1,270	926	5,030	4,600	6,050	6,630	6,280	1,780	479	308
29	1,040	2,150	1,220	924	---	4,480	6,410	7,100	6,210	1,540	480	301
30	948	2,140	1,240	921	---	4,290	6,440	6,130	6,170	1,560	525	298
31	940	---	1,910	919	---	4,060	---	5,560	---	1,440	485	---
Total	61,558	50,468	38,525	39,147	92,978	107,060	84,930	167,800	183,130	103,660	23,595	9,555
Mean	1,986	1,682	1,243	1,263	3,321	3,454	2,831	5,413	6,104	3,344	761	318
Max	3,870	3,310	1,910	2,230	8,150	4,810	6,440	7,100	6,940	6,160	1,190	715
Min	940	809	864	871	728	2,290	1,300	3,620	2,630	1,440	476	230
Ac-ft	122,100	100,100	76,410	77,650	184,400	212,400	168,500	332,800	363,200	205,600	46,800	18,950
Cfsm	0.61	0.51	0.38	0.39	1.02	1.06	0.87	1.65	1.87	1.02	0.23	0.10
In.	0.70	0.57	0.44	0.45	1.06	1.22	0.97	1.91	2.08	1.18	0.27	0.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,219	1,502	1,471	1,109	1,780	3,509	3,878	3,631	4,167	3,746	2,236	1,491
Max	4,903	6,085	5,312	5,381	5,789	7,988	9,764	9,763	22,900	22,220	20,060	13,760
(WY)	(2008)	(2010)	(2010)	(1973)	(1973)	(1971)	(1979)	(1993)	(2008)	(1993)	(1993)	(1993)
Min	135	121	130	141	125	366	348	184	99.1	72.8	162	147
(WY)	(1990)	(1967)	(1989)	(1990)	(1977)	(1977)	(1989)	(1977)	(1977)	(1977)	(1989)	(1976)

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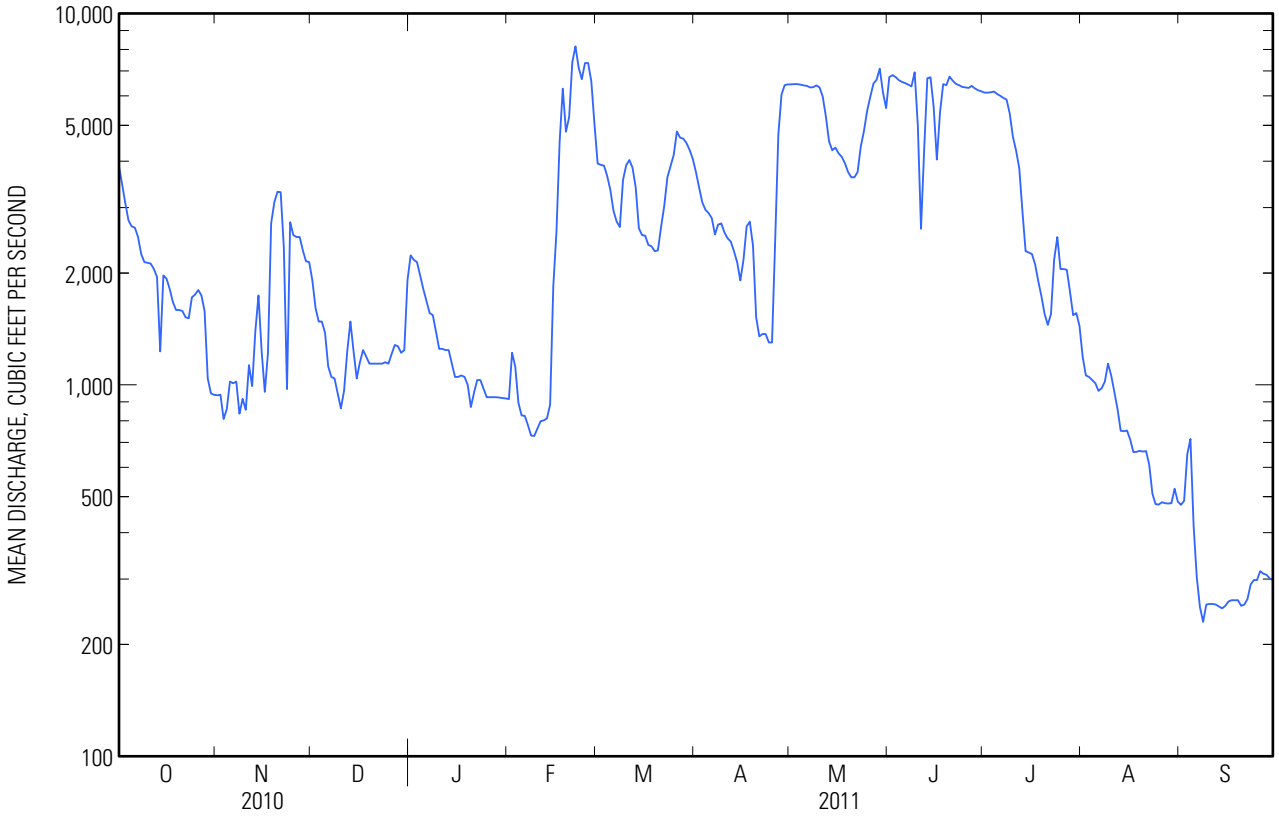
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1959 - 2011[a]	
Annual total	1,813,541		962,406			
Annual mean	4,969		2,637		2,480	
Highest annual mean					8,502	1993
Lowest annual mean					304	1989
Highest daily mean	11,300	Mar 16	8,150	Feb 22	40,900	Jun 15, 2008
Lowest daily mean	809	Nov 3	230	Sep 8	49	Aug 1, 1977[b]
Annual seven-day minimum	922	Oct 30	251	Sep 8	50	Jul 31, 1977
Maximum peak flow			8,500	Feb 22	41,100	Jun 15, 2008
Maximum peak stage			18.08	Feb 22	31.53	Jun 15, 2008
Annual runoff (ac-ft)	3,597,000		1,909,000		1,797,000	
Annual runoff (cfsm)	1.52		0.806		0.758	
Annual runoff (inches)	20.62		10.95		10.30	
10 percent exceeds	10,400		6,370		6,220	
50 percent exceeds	3,790		1,910		1,390	
90 percent exceeds	1,230		519		248	

[a] Post regulation.
[b] Also Aug 2, 1977.