Water-Data Report 2012

05449500 Iowa River near Rowan, IA

Iowa Basin
Upper Iowa Subbasin

LOCATION.--Lat 42°45'35.9", long 93°37'17.9" referenced to North American Datum of 1927, in NW ¼ NE ¼ NE ¼ sec.25, T.92 N., R.24 W., Wright County, IA, Hydrologic Unit 07080207, on left bank 10 ft downstream from bridge on County Highway C38, 3.8 mi northwest of Rowan, 0.9 mi downstream from Drainage Ditch 123, 10.7 mi downstream from confluence of East and West Branches, and 313.5 mi upstream from mouth.

DRAINAGE AREA.--429 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records from October 1940 to September 1976, June 1977 to current year.

REVISED RECORDS.--WSP 1308: 1942-43 (M). WSP 1438: Drainage area. WDR IA-80-1: 1978.

GAGE.--Water-stage recorder. Datum of gage is 1,143.35 ft above National Geodetic Vertical Datum of 1929. Prior to October 14, 1948, non-recording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers rain gage and U.S. Geological Survey data collection platform with satellite telemetry at station.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	24	24	26	e33	e45	115	48	113	75	49	19	7.8
2	22	23	24	e19	e47	164	45	286	74	44	18	7.9
3	23	26	28	e18	e48	110	39	362	70	40	16	7.3
4	24	25	25	e26	e47	72	37	363	67	38	16	9.6
5	24	25	29	e27	e44	81	33	395	63	34	14	9.8
6	23	23	e21	e31	e45	79	31	389	59	33	14	9.4
7	24	25	e22	e26	e43	75	30	445	55	29	15	9.0
8	23	27	27	e19	e36	79	31	374	54	26	14	9.6
9	24	26	e17	e25	e37	65	30	286	51	26	14	10
10	25	24	e20	e24	e32	61	29	238	48	24	11	9.5
11	26	25	e21	e21	e20	58	27	203	44	22	13	8.9
12	29	25	e23	e21	e24	59	26	173	40	21	11	6.7
13	41	25	31	e19	e26	62	28	153	38	21	15	9.6
14	40	26	39	e16	e31	64	31	142	38	22	15	11
15	37	27	40	e27	e32	58	56	132	37	22	15	9.7
16	30	24	36	e30	e33	56	61	119	51	21	14	11
17	26	22	41	e29	e30	54	67	112	58	20	12	8.5
18	25	22	34	e26	e34	51	55	102	57	19	11	8.1
19	26	20	34	e24	e32	48	65	99	49	18	10	7.7
20	26	25	29	e22	e34	52	218	89	43	17	11	7.1
21	26	21	32	e13	39	56	251	87	105	17	11	6.6
22	26	22	e19	e14	41	55	203	82	152	19	11	6.7
23	25	30	e17	e16	44	52	174	79	129	20	11	5.9
24	25	31	e19	e17	e41	50	151	73	114	19	10	7.3
25	26	28	e24	e27	e31	46	131	80	96	18	9.1	7.3
26	23	29	e23	e37	e34	42	111	91	80	28	14	6.7
27	23	28	e24	e33	e28	39	94	96	72	18	11	6.2
28	22	30	e23	e36	43	37	86	90	64	15	12	6.8
29	22	28	32	e34	73	38	90	81	53	19	11	7.0
30	23	24	35	e40	---	44	102	74	51	21	10	6.2
31	22	---	39	e43	---	44	---	72	---	20	9.0	---
Total	805	760	854	793	1,094	1,966	2,380	5,480	1,987	760	397.1	244.9
Mean	26.0	25.3	27.5	25.6	37.7	63.4	79.3	177	66.2	24.5	12.8	8.16
Max	41	31	41	43	73	164	251	445	152	49	19	11
Min	22	20	17	13	20	37	26	72	37	15	9.0	5.9
Ac-ft	1,600	1,510	1,690	1,570	2,170	3,900	4,720	10,870	3,940	1,510	788	486
Cfsm	0.06	0.06	0.06	0.06	0.09	0.15	0.18	0.41	0.15	0.06	0.03	0.02
In.	0.07	0.07	0.07	0.07	0.09	0.17	0.21	0.48	0.17	0.07	0.03	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	144	137	89.2	60.3	120	403	508	427	539	310	162	132
Max	720	695	588	298	931	1,646	2,439	1,793	2,529	1,922	1,684	1,213
(WY)	(1987)	(1993)	(1983)	(1983)	(1984)	(2010)	(1965)	(1991)	(2008)	(1993)	(1979)	(1965)
Min	8.14	9.49	5.62	3.63	3.54	23.9	32.4	44.3	19.2	5.36	5.14	3.98
(WY)	(1990)	(1990)	(1990)	(1959)	(1959)	(1968)	(1957)	(1989)	(1989)	(1977)	(1977)	(1977)

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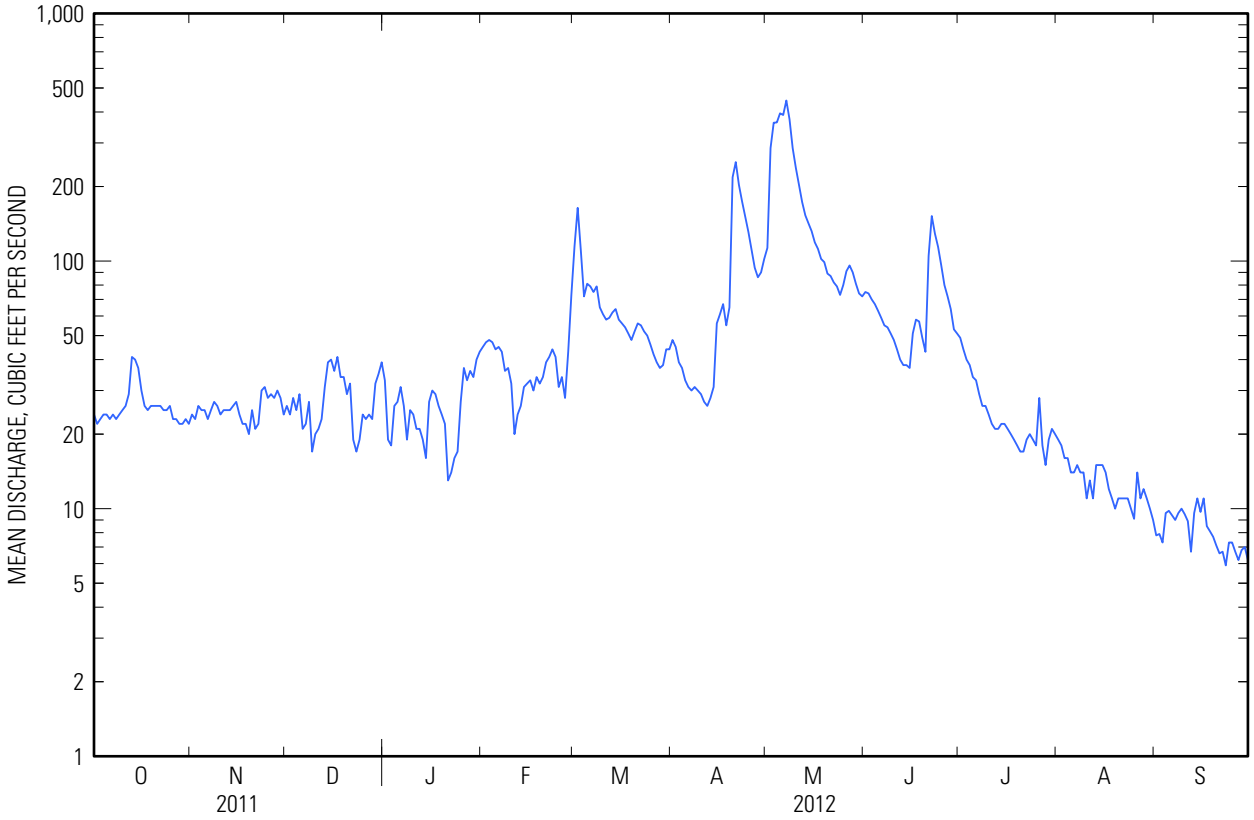
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1941 - 2012	
Annual total	114,115		17,521.0			
Annual mean	313		47.9		253	
Highest annual mean					869	1993
Lowest annual mean					30.4	1956
Highest daily mean	1,620	Mar 24	445	May 7	7,640	Jun 21, 1954[a]
Lowest daily mean	17	Dec 9	5.9	Sep 23	2.2	Sep 11, 1977
Annual seven-day minimum	21	Dec 22	6.7	Sep 21	2.9	Sep 8, 1977
Maximum peak flow			460	May 7	8,460	Jun 21, 1954
Maximum peak stage			5.90	May 7	15.89	Jun 9, 2008
Instantaneous low flow			4.2	Sep 23	2.2	Sep 11, 1977
Annual runoff (ac-ft)	226,300		34,750		183,600	
Annual runoff (cfsm)	0.729		0.112		0.591	
Annual runoff (inches)	9.90		1.52		8.03	
10 percent exceeds	987		95		659	
50 percent exceeds	96		28		92	
90 percent exceeds	24		11		19	

[a] Also Jun 10, 2008.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-1962, 2001-2004, 2009-2010, 2012.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Daily instantaneous values collected in conjunction with suspended-sediment samples, October 1957 to September 1962, records fragmentary.

SUSPENDED-SEDIMENT CONCENTRATION AND DISCHARGE: October 1957 to September 1962.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 760 mg/L, July 2, 1962; minimum daily mean, 2 mg/L, January 16, February 12, 15, November 27, and December 25, 1958.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,020 tons/day, March 26, 1961; minimum daily, 0.1 tons/day, many days in 1958, 1959, and 1961.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

[N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius]

Sample date-time	Temperature, air, °C (00020)	Discharge, instantaneous, ft³/s (00061)	Temperature, water, °C (00010)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, unfiltered, analytically determined, mg/L (62855)
08-13-2012 1130	16.1	17	17.2	0.189	0.863	0.023	0.103	0.106	1.32