Water-Data Report 2012

05437500 ROCK RIVER AT ROCKTON, IL

Rock Basin
Lower Rock Subbasin

LOCATION.--Lat 42°26′55″, long 89°04′11″ referenced to North American Datum of 1927, in SW ¼ NE ¼ sec.24, T.46 N., R.1 E., Winnebago County, IL, Hydrologic Unit 07090005, on right bank 750 ft downstream from State Highway 75 in Rockton, 1.0 mi downstream from Pecatonica River, and at mile 156.1.

DRAINAGE AREA.--6,363 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.—
SURFACE-WATER DISCHARGE AND STAGE
DISCHARGE: June 1903 to July 1906, October 1906 to November 1907, January 1908 to March 1909, July 1914 to September 1919, October 1939 to current year. Published as "below mouth of Pecatonica River at Rockton" 1903-9; as "at Rockford" 1914-19. Monthly discharge only for some periods for 1903-1950, published in WSP 1308.
STAGE: Water years 1994 to current year.
SURFACE-WATER QUALITY
CHEMICAL: Water years 1978-91 and 2009 to current year.

REVISED RECORDS.--WSP 325: 1903-9. WSP 895: 1904(M). WSP 1508: 1915, 1916-17(M). WDR IL-75-1: Drainage area. WDR IL-97-1: 1996 (Dec. 10-23).

GAGE.--Water-stage recorder, U.S. Army Corps of Engineers satellite telemeter, and crest-stage gage. Datum of gage is 707.94 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers) (707.75 ft NAVD 1988). Prior to Oct. 1, 1906, nonrecording gage at site 800 ft upstream at datum about 1.0 ft higher. Oct. 1, 1906 to Mar. 31, 1909, nonrecording gage at site 800 ft upstream at datum about 2.0 ft higher. July 30, 1914 to Apr. 30, 1919, nonrecording gage at site at Rockford about 21 mi downstream, at different datum. Oct. 1, 1939 to Aug. 10, 1973, at site 800 ft upstream at same datum.

REMARKS.--Discharge records good except for estimated daily discharges, which are poor. Low flow regulated by powerplant upstream from station.

EXTREMES FOR PERIOD OF RECORD.--
SURFACE-WATER DISCHARGE AND STAGE: Maximum discharge, 32,500 ft^3/s, Mar. 30, 1916, gage height, 13.06 ft, site and datum then in use; minimum daily, 501 ft^3/s, Sept. 14, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--
SURFACE-WATER DISCHARGE AND STAGE: Flood in February 1937 reached a stage of 14.6 ft (backwater from ice), from floodmark.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 05437500, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/05437500.2012.pdf

05437500 ROCK RIVER AT ROCKTON, IL—Continued

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	3,630	2,940	3,960	4,410	3,690	4,010	5,340	4,310	3,700	1,660	1,650	1,390
2	3,510	2,840	3,950	4,180	3,870	4,470	5,490	4,330	3,620	1,560	1,620	1,410
3	3,360	3,250	4,020	3,520	3,980	4,850	5,520	4,340	3,390	1,520	1,620	1,490
4	3,400	3,500	4,450	3,730	3,990	5,020	5,450	4,440	3,330	1,610	1,620	1,340
5	3,150	3,500	4,910	3,820	3,960	4,980	5,300	4,570	3,260	1,430	1,610	1,390
6	2,990	3,520	5,190	3,980	3,890	4,810	5,120	4,680	3,090	1,560	1,610	1,490
7	2,850	3,480	5,190	3,950	3,870	4,800	4,850	4,970	2,930	1,590	1,580	1,400
8	2,500	3,570	5,100	3,930	3,840	5,110	4,630	5,230	2,840	1,480	1,560	1,510
9	2,470	4,750	4,890	3,850	3,760	5,690	4,500	5,630	2,310	1,330	1,630	1,510
10	2,580	5,930	4,470	3,770	3,720	5,980	4,350	5,870	2,070	1,470	1,650	1,410
11	2,710	6,000	4,210	3,710	3,500	6,080	4,280	5,910	1,920	1,450	1,630	1,420
12	2,690	6,060	e4,150	e3,630	3,230	6,500	4,190	5,810	2,100	1,450	1,600	1,390
13	2,920	6,100	4,220	e3,490	3,250	6,520	4,070	5,750	2,070	1,340	1,550	1,350
14	3,130	6,110	4,480	e3,310	3,490	6,640	3,990	5,580	1,940	1,500	1,570	1,360
15	3,060	6,040	4,880	3,160	3,590	6,540	4,250	5,420	2,030	1,380	1,550	1,390
16	2,910	5,570	5,110	3,370	3,660	6,370	4,930	5,220	1,970	1,380	1,670	1,390
17	3,100	5,160	5,320	3,580	3,590	6,210	5,100	5,220	1,950	1,410	1,620	1,360
18	3,070	4,880	5,260	3,170	3,550	6,040	5,060	4,990	1,850	1,320	1,650	1,330
19	3,370	4,700	5,120	2,880	3,500	5,980	4,870	4,770	1,750	1,740	1,640	1,450
20	3,490	4,660	5,010	e2,630	3,450	5,950	4,930	4,570	1,790	1,660	1,620	1,220
21	3,300	4,610	4,870	e2,880	3,440	5,980	4,800	4,370	1,750	1,580	1,620	1,330
22	3,650	4,400	4,770	e3,570	3,380	6,040	4,600	4,290	1,750	1,450	1,580	1,530
23	3,480	4,230	4,660	3,880	3,430	6,130	4,580	4,120	1,760	1,570	1,550	1,450
24	3,360	4,080	4,670	3,740	3,510	6,150	4,490	3,890	1,800	1,660	1,490	1,320
25	3,150	3,990	4,510	3,660	3,420	6,000	4,430	3,720	1,760	1,620	1,450	1,310
26	3,250	4,030	4,460	3,640	3,370	5,890	4,400	3,810	1,750	1,610	1,490	1,470
27	3,210	4,170	4,310	3,600	3,360	5,660	4,310	3,890	1,670	1,660	1,450	1,510
28	3,220	4,180	4,290	3,490	3,370	5,330	4,330	3,760	1,610	1,680	1,470	1,360
29	3,150	4,160	4,200	3,410	3,580	5,390	4,340	3,720	1,590	1,660	1,460	1,320
30	2,930	4,110	4,270	3,340	---	5,450	4,360	3,680	1,610	1,630	1,400	1,420
31	3,010	---	4,350	3,390	---	5,390	---	3,780	---	1,650	1,360	---
Total	96,600	134,520	143,250	110,670	104,240	175,960	140,860	144,640	66,960	47,610	48,570	42,020
Mean	3,116	4,484	4,621	3,570	3,594	5,676	4,695	4,666	2,232	1,536	1,567	1,401
Max	3,650	6,110	5,320	4,410	3,990	6,640	5,520	5,910	3,700	1,740	1,670	1,530
Min	2,470	2,840	3,950	2,630	3,230	4,010	3,990	3,680	1,590	1,320	1,360	1,220
Cfsm	0.49	0.70	0.73	0.56	0.56	0.89	0.74	0.73	0.35	0.24	0.25	0.22
In.	0.56	0.79	0.84	0.65	0.61	1.03	0.82	0.85	0.39	0.28	0.28	0.25

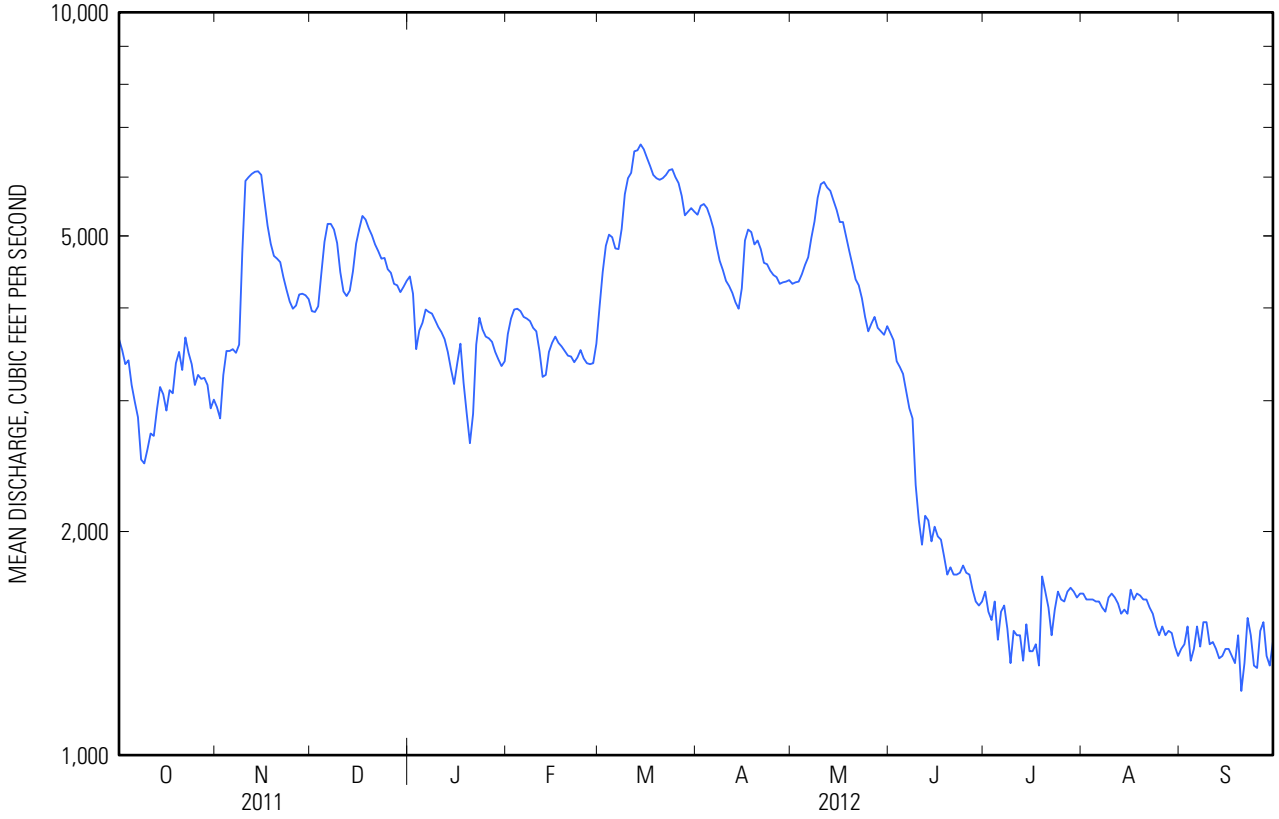
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	3,185	3,600	3,434	3,385	4,007	7,417	7,599	5,700	4,970	3,973	3,145	3,002
Max	13,340	11,320	9,049	9,432	8,889	14,780	18,650	17,770	20,340	17,000	11,700	9,219
(WY)	(1987)	(1986)	(1983)	(1960)	(2005)	(2009)	(2008)	(1973)	(2008)	(1993)	(2010)	(2007)
Min	857	1,100	1,004	800	1,000	1,692	2,476	1,103	1,248	1,056	793	780
(WY)	(1965)	(1940)	(1959)	(1940)	(1940)	(1954)	(1958)	(1958)	(1977)	(1965)	(1958)	(1958)

05437500 ROCK RIVER AT ROCKTON, IL—Continued

SUMMARY STATISTICS

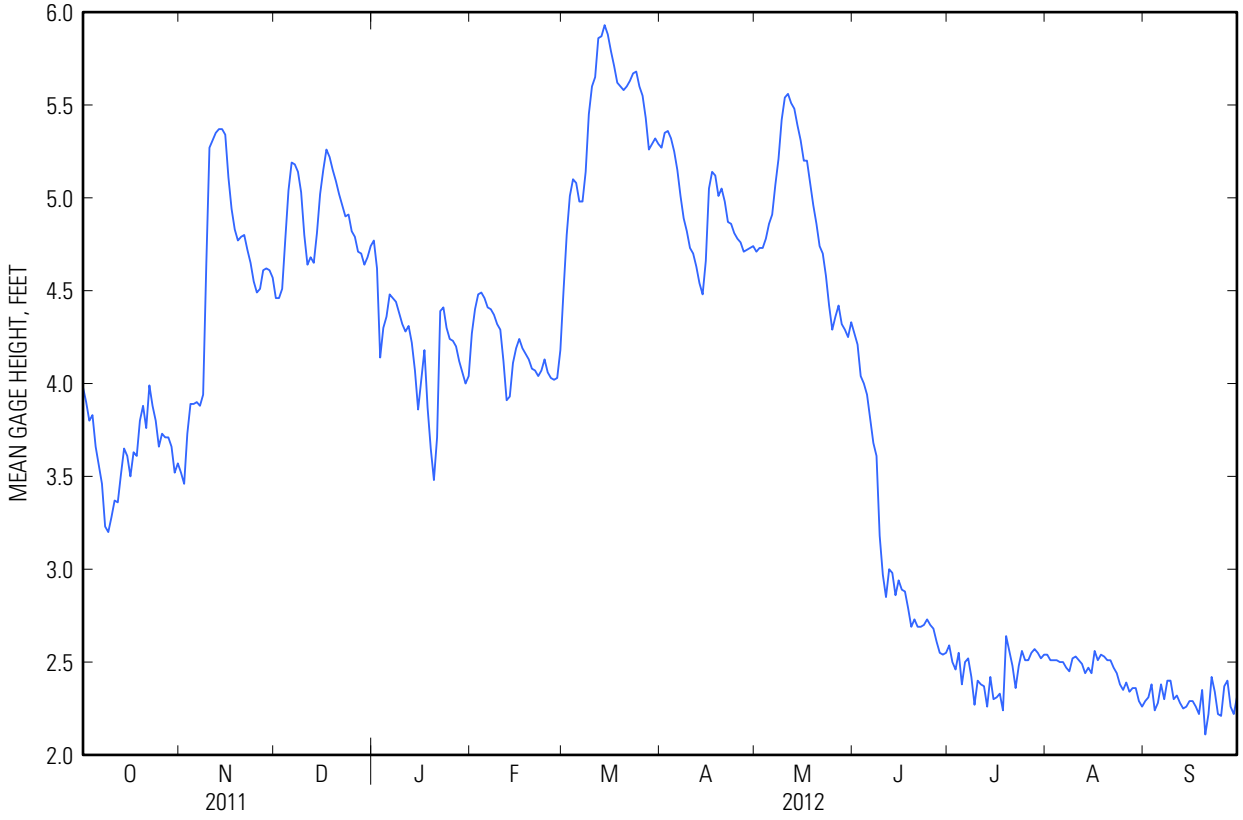
	Calendar Year 2011		Water Year 2012		Water Years 1940 - 2012	
Annual total	2,091,740		1,255,900			
Annual mean	5,731		3,431		4,451	
Highest annual mean					9,827	2008
Lowest annual mean					1,568	1958
Highest daily mean	13,700	Mar 27	6,640	Mar 14	29,700	Mar 25, 1975
Lowest daily mean	2,050	Sep 22	1,220	Sep 20	501	Sep 14, 1958
Annual seven-day minimum	2,250	Sep 19	1,350	Sep 15	622	Oct 2, 1958
Maximum peak flow			6,860	Mar 14	30,000	Mar 25, 1975
Maximum peak stage			6.03	Mar 14	15.54	Mar 25, 1975
Instantaneous low flow			1,000	Sep 20		
Annual runoff (cfsm)	0.901		0.539		0.699	
Annual runoff (inches)	12.23		7.34		9.50	
10 percent exceeds	10,900		5,430		8,780	
50 percent exceeds	4,510		3,540		3,410	
90 percent exceeds	2,900		1,450		1,360	



05437500 ROCK RIVER AT ROCKTON, IL—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.98	3.52	4.46	4.77	4.27	4.50	5.27	4.71	4.27	2.59	2.54	2.29
2	3.90	3.46	4.46	4.62	4.40	4.80	5.35	4.73	4.21	2.50	2.51	2.31
3	3.80	3.73	4.51	4.14	4.48	5.01	5.36	4.73	4.04	2.46	2.51	2.38
4	3.83	3.89	4.78	4.30	4.49	5.10	5.32	4.78	4.00	2.55	2.51	2.24
5	3.66	3.89	5.04	4.36	4.46	5.08	5.25	4.86	3.94	2.38	2.50	2.28
6	3.56	3.90	5.19	4.48	4.41	4.98	5.15	4.91	3.81	2.50	2.50	2.38
7	3.46	3.88	5.18	4.46	4.40	4.98	5.01	5.07	3.68	2.52	2.47	2.30
8	3.23	3.94	5.14	4.44	4.37	5.14	4.89	5.21	3.61	2.42	2.45	2.40
9	3.20	4.64	5.03	4.38	4.32	5.45	4.82	5.42	3.18	2.27	2.52	2.40
10	3.28	5.27	4.80	4.32	4.29	5.60	4.73	5.54	2.97	2.40	2.53	2.30
11	3.37	5.31	4.64	4.28	4.12	5.65	4.70	5.56	2.85	2.38	2.51	2.32
12	3.36	5.35	4.68	4.31	3.91	5.86	4.63	5.51	3.00	2.37	2.49	2.28
13	3.51	5.37	4.65	4.22	3.93	5.87	4.54	5.48	2.98	2.26	2.44	2.25
14	3.65	5.37	4.81	4.07	4.11	5.93	4.48	5.39	2.86	2.42	2.47	2.26
15	3.61	5.34	5.02	3.86	4.19	5.88	4.66	5.31	2.94	2.30	2.44	2.29
16	3.50	5.11	5.15	4.02	4.24	5.79	5.05	5.20	2.89	2.31	2.56	2.29
17	3.63	4.94	5.26	4.18	4.19	5.71	5.14	5.20	2.88	2.33	2.51	2.26
18	3.61	4.83	5.22	3.87	4.16	5.62	5.12	5.08	2.79	2.24	2.54	2.22
19	3.80	4.77	5.15	3.65	4.13	5.60	5.01	4.96	2.69	2.64	2.53	2.35
20	3.88	4.79	5.09	3.48	4.08	5.58	5.05	4.86	2.73	2.56	2.51	2.11
21	3.76	4.80	5.02	3.71	4.07	5.60	4.98	4.74	2.69	2.48	2.51	2.22
22	3.99	4.72	4.96	4.39	4.04	5.63	4.87	4.70	2.69	2.36	2.47	2.42
23	3.88	4.65	4.90	4.41	4.07	5.67	4.86	4.58	2.70	2.48	2.44	2.34
24	3.80	4.55	4.91	4.30	4.13	5.68	4.81	4.42	2.73	2.56	2.38	2.22
25	3.66	4.49	4.82	4.24	4.06	5.60	4.78	4.29	2.70	2.51	2.35	2.21
26	3.73	4.51	4.79	4.23	4.03	5.55	4.76	4.36	2.68	2.51	2.39	2.37
27	3.71	4.61	4.71	4.20	4.02	5.43	4.71	4.42	2.61	2.55	2.34	2.40
28	3.71	4.62	4.70	4.12	4.03	5.26	4.72	4.32	2.55	2.57	2.36	2.26
29	3.66	4.61	4.64	4.06	4.18	5.29	4.73	4.29	2.54	2.55	2.36	2.22
30	3.52	4.57	4.68	4.00	---	5.32	4.74	4.25	2.55	2.52	2.29	2.31
31	3.57	---	4.74	4.04	---	5.29	---	4.33	---	2.54	2.26	---
Mean	3.64	4.58	4.88	4.19	4.19	5.43	4.92	4.88	3.09	2.45	2.46	2.30
Max	3.99	5.37	5.26	4.77	4.49	5.93	5.36	5.56	4.27	2.64	2.56	2.42
Min	3.20	3.46	4.46	3.48	3.91	4.50	4.48	4.25	2.54	2.24	2.26	2.11

	Calendar Year 2011	Water Year 2012
Mean	5.14	3.92
Max	8.98	5.93
Min	2.90	2.11

05437500 ROCK RIVER AT ROCKTON, IL—Continued