Water-Data Report 2011

05484500 Raccoon River at Van Meter, IA

Des Moines Basin
North Raccoon Subbasin

LOCATION.--Lat 41°32′02″, long 93°56′59″ referenced to North American Datum of 1927, in SE ¼ SW ¼ SW ¼ sec.22, T.78 N., R.27 W., Dallas County, IA, Hydrologic Unit 07100006, on right bank 160 ft downstream from bridge on County Highway R16, 0.3 mi northeast of Van Meter, 0.7 mi upstream from small left bank tributary, 1.2 mi downstream from confluence of North and South Raccoon Rivers, and 29.3 mi upstream from mouth.

DRAINAGE AREA.--3,441 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1915 to current year. Prior to October 1933, monthly mean discharge for some periods published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1927 (M). WSP 1438: Drainage area. WSP 1508: 1915 (M), 1925 (M), 1926, 1933 (M), 1939 (M), 1947 (M), 1949 (M).

GAGE.--Water-stage recorder. Datum of gage is 841.16 ft above National Geodetic Vertical Datum of 1929. Prior to October 1, 1915, nonrecording gage at same site at datum 2.00 ft higher. October 1, 1915, to May 30, 1923, nonrecording gage, May 31, 1923, to September 30, 1927, water-stage recorder, and October 1, 1927, to August 8, 1934, nonrecording gage, all 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.

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 05484500, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/05484500.2011.pdf

05484500 Raccoon River at Van Meter, IA—Continued

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

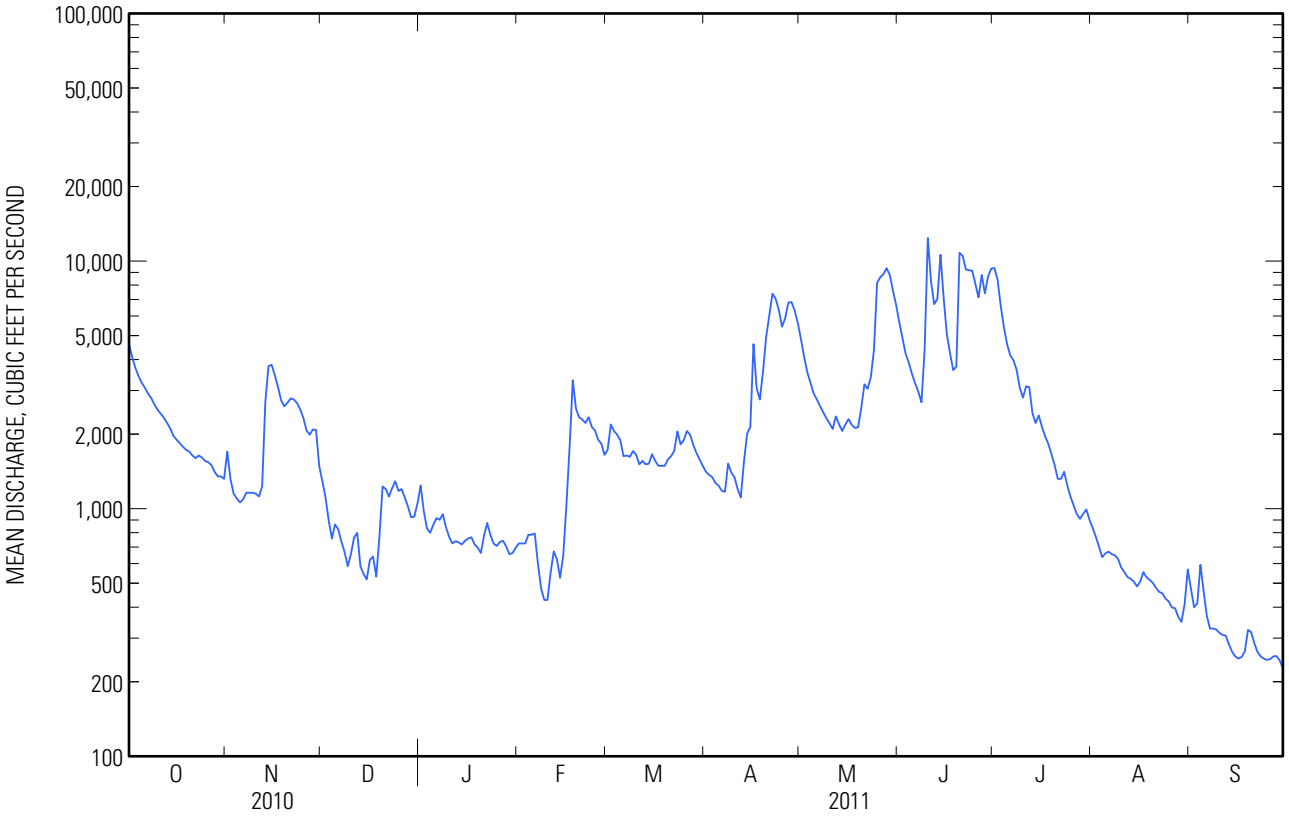
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4,630	1,700	e1,290	e1,240	e724	e1,730	1,410	4,830	5,650	9,380	837	475
2	4,100	1,320	e1,110	e977	e724	2,190	1,370	4,090	4,890	8,420	770	400
3	3,710	1,150	e895	e833	e724	2,060	1,340	3,550	4,220	6,580	702	414
4	3,440	1,100	e758	e799	e785	1,990	1,270	3,220	3,890	5,410	637	593
5	3,230	1,060	e863	e861	e785	1,890	1,240	2,920	3,500	4,620	660	465
6	3,080	1,090	e825	e916	e794	1,630	1,180	2,760	3,210	4,160	671	370
7	2,920	1,160	e737	e902	e600	1,640	1,170	2,600	2,970	3,980	656	328
8	2,800	1,160	e669	e950	e477	1,620	1,520	2,450	2,690	3,640	648	328
9	2,640	1,160	e586	e840	e428	1,710	1,400	2,320	4,430	3,080	627	325
10	2,510	1,150	e655	e770	e428	1,650	1,340	2,210	12,400	2,810	579	315
11	2,420	1,120	e765	e724	e551	1,510	1,200	2,100	8,280	3,120	554	309
12	2,330	1,230	e799	e739	e673	1,560	1,110	2,360	6,700	3,100	529	307
13	2,220	2,690	e586	e731	e624	1,510	1,550	2,190	7,030	2,430	521	283
14	2,110	3,770	e545	e717	e526	1,520	2,010	2,060	10,600	2,220	507	264
15	1,970	3,810	e518	e742	e649	1,660	2,140	2,190	7,080	2,380	485	253
16	1,900	3,460	e621	e758	e1,040	1,560	4,620	2,300	5,070	2,140	508	248
17	1,840	3,100	e641	e767	e1,780	1,490	3,070	2,180	4,250	1,960	554	252
18	1,780	2,740	e532	e719	e3,300	1,490	2,760	2,120	3,630	1,830	528	265
19	1,730	2,590	e772	e696	e2,540	1,490	3,570	2,130	3,750	1,660	516	324
20	1,700	2,680	e1,230	e662	e2,340	1,580	4,940	2,550	10,800	1,500	501	317
21	1,640	2,790	e1,200	e778	e2,290	1,630	6,050	3,180	10,500	1,320	478	286
22	1,600	2,760	e1,120	e875	e2,220	1,710	7,390	3,050	9,250	1,320	461	264
23	1,640	2,670	e1,210	e785	e2,340	2,050	7,050	3,390	9,190	1,410	455	253
24	1,610	2,520	e1,290	e724	e2,140	1,820	6,350	4,370	9,150	1,240	433	248
25	1,560	2,330	e1,180	e707	e2,070	1,890	5,430	8,170	8,090	1,120	422	245
26	1,540	2,070	e1,200	e733	e1,900	2,060	5,890	8,600	7,140	1,030	399	247
27	1,500	1,990	e1,110	e742	e1,830	1,990	6,800	8,870	8,790	951	396	253
28	1,410	2,090	e1,020	e703	e1,650	1,810	6,830	9,360	7,410	910	366	254
29	1,350	2,080	e923	e655	---	1,680	6,310	8,800	8,670	954	349	244
30	1,350	e1,490	e929	e662	---	1,580	5,610	7,590	9,330	993	411	227
31	1,320	---	e1,050	e696	---	1,490	---	6,650	---	902	568	---
Total	69,580	62,030	27,629	24,403	36,932	53,190	103,920	125,160	202,560	86,570	16,728	9,356
Mean	2,245	2,068	891	787	1,319	1,716	3,464	4,037	6,752	2,793	540	312
Max	4,630	3,810	1,290	1,240	3,300	2,190	7,390	9,360	12,400	9,380	837	593
Min	1,320	1,060	518	655	428	1,490	1,110	2,060	2,690	902	349	227
Ac-ft	138,000	123,000	54,800	48,400	73,250	105,500	206,100	248,300	401,800	171,700	33,180	18,560
Cfsm	0.65	0.60	0.26	0.23	0.38	0.50	1.01	1.17	1.96	0.81	0.16	0.09
In.	0.75	0.67	0.30	0.26	0.40	0.58	1.12	1.35	2.19	0.94	0.18	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	883	811	583	509	989	2,676	2,724	2,901	3,596	2,048	1,107	884
Max	6,840	4,774	3,085	3,461	5,438	11,080	10,630	9,409	16,830	17,260	10,790	7,222
(WY)	(1974)	(1973)	(1983)	(1932)	(1984)	(2010)	(1983)	(2007)	(2008)	(1993)	(2010)	(1926)
Min	48.6	51.5	31.0	17.2	31.5	146	125	121	112	68.1	28.1	43.1
(WY)	(1940)	(1938)	(1938)	(1940)	(1940)	(1931)	(1956)	(1934)	(1977)	(1936)	(1936)	(1939)

05484500 Raccoon River at Van Meter, IA—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1916 - 2011	
Annual total	1,972,209		818,058			
Annual mean	5,403		2,241		1,644	
Highest annual mean					5,717	1993
Lowest annual mean					166	1956
Highest daily mean	25,700	Jun 28	12,400	Jun 10	57,500	Jul 10, 1993
Lowest daily mean	518	Dec 15	227	Sep 30	10	Jan 22, 1940 [a]
Annual seven-day minimum	602	Dec 13	245	Sep 24	10	Jan 22, 1940
Maximum peak flow			16,600	Jun 20	70,100	Jul 10, 1993
Maximum peak stage			13.82	Jun 20	26.34	Jul 10, 1993
Instantaneous low flow			220	Sep 30		
Annual runoff (ac-ft)	3,912,000		1,623,000		1,191,000	
Annual runoff (cfsm)	1.57		0.651		0.478	
Annual runoff (inches)	21.32		8.84		6.49	
10 percent exceeds	15,300		5,630		4,160	
50 percent exceeds	3,200		1,500		647	
90 percent exceeds	1,000		446		123	

[a] Also Jan 23-31, 1940.