

02029000 JAMES RIVER AT SCOTTSVILLE, VA

James Basin
Middle James-Buffalo Subbasin

LOCATION.--Lat 37°47'50", long 78°29'30" referenced to North American Datum of 1927, Albemarle County, VA, Hydrologic Unit 02080203, on left bank 900 ft downstream from bridge on State Highway 20 at Scottsville, 6.8 mi upstream from Hardware River, and at mile 188.6.

DRAINAGE AREA.--4,581 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 727: 1931(M). WSP 972: 1936(M), 1940(M). OFR 2006-1308: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 252.47 ft NAVD of 1988. Prior to Nov. 28, 1928, nonrecording gage at present site and datum.

REMARKS.--Records good. Large diurnal fluctuation caused by powerplants upstream from station. Flow regulated since December 1979 by Lake Moomaw (station 02011795) 197.5 mi upstream; since October 1984 by Back Creek Lake 225.5 mi upstream; and since January 1985 by Little Back Creek Lake 228.6 mi upstream, amount unknown. Statistics of monthly mean data and summary statistics for water years 1925 - 1979 (unregulated flow) are available in previous data books, water years 1991 - 1998. Maximum discharge, 301,000 ft³/s, from rating curve extended above 120,000 ft³/s on basis of slope-conveyance study. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1870 reached a stage of 30.7 ft, discharge, about 215,000 ft³/s, and flood in November 1877 reached a stage of 27.9 ft, discharge, about 160,000 ft³/s, from information by local resident. Flood in March 1913 reached a stage of 25.16 ft, from floodmarks, discharge, about 121,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 35,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 1	1000	54,600	17.76
May 9	0415	*65,100	*19.39

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,360	1,320	1,020	2,330	50,800	5,190	5,070	4,460	3,390	4,280	2,960	3,600
2	1,430	1,290	968	2,240	24,700	5,090	5,210	4,510	3,070	3,990	3,010	2,820
3	1,560	1,160	982	2,110	14,000	4,600	5,250	4,400	3,160	5,540	2,750	2,700
4	1,640	1,190	983	1,940	10,300	4,150	5,460	4,090	3,260	9,340	2,600	2,310
5	1,570	1,100	966	1,830	8,290	3,850	5,900	3,830	2,800	26,800	2,510	1,900
6	1,770	1,080	996	1,810	6,940	4,210	6,200	3,760	2,830	18,700	2,450	2,270
7	1,450	1,070	937	1,770	5,920	5,510	6,620	10,300	21,600	11,800	3,330	1,810
8	1,230	1,050	994	1,740	5,380	5,560	7,660	52,400	16,800	8,730	2,390	1,660
9	1,190	1,040	986	1,480	5,000	5,430	6,780	54,700	11,000	7,680	2,390	1,610
10	1,140	1,030	973	1,430	4,470	5,360	6,230	33,800	10,300	7,160	2,830	1,240
11	1,160	1,030	965	1,540	4,180	5,540	5,690	23,200	18,700	7,380	2,980	1,490
12	1,080	1,030	956	1,530	3,980	7,600	5,640	17,600	30,200	19,700	4,230	1,490
13	1,060	1,050	911	1,300	3,710	19,100	10,400	14,600	20,600	14,300	2,910	1,580
14	1,040	1,190	922	1,580	3,560	20,500	15,100	11,300	15,200	11,100	2,690	1,420
15	989	1,310	924	2,190	3,440	14,200	11,400	8,940	12,400	8,400	2,350	1,440
16	997	1,300	953	6,050	3,330	11,700	10,100	7,750	10,100	6,860	2,540	1,380
17	1,020	1,240	992	16,100	3,290	10,000	10,100	6,910	8,400	5,910	2,090	1,370
18	1,000	1,260	1,040	23,300	3,000	8,850	9,590	6,690	8,780	5,780	2,140	1,130
19	1,050	1,280	978	14,800	2,820	9,480	8,790	6,620	11,300	5,150	4,340	1,260
20	1,140	1,170	982	10,500	2,830	9,700	9,530	6,250	13,200	4,660	3,480	1,180
21	1,030	1,170	1,180	8,060	2,710	9,760	11,200	6,290	11,200	4,860	2,800	1,260
22	966	1,150	1,570	6,800	2,650	9,270	11,700	6,700	8,520	5,160	2,460	1,360
23	924	1,130	1,470	5,900	2,520	8,270	9,390	6,190	6,930	5,380	2,430	1,580
24	934	1,100	1,320	5,100	2,440	7,310	8,180	6,470	5,930	6,510	2,770	1,520
25	899	1,080	1,330	4,350	2,380	6,900	7,120	7,620	5,350	6,430	3,000	1,570
26	942	1,070	1,950	3,900	2,300	6,840	6,330	6,410	5,140	4,900	2,410	1,460
27	926	1,020	3,600	3,520	3,990	6,400	5,680	5,660	5,090	4,270	2,080	1,640
28	922	1,030	3,430	3,220	4,730	5,890	5,110	4,880	4,610	3,970	1,960	1,370
29	912	1,040	3,290	3,120	---	5,550	4,800	4,430	4,090	3,880	1,960	1,150
30	1,330	983	3,040	3,130	---	5,260	4,730	4,060	3,810	3,630	2,100	1,150
31	1,480	---	2,610	21,400	---	4,960	---	3,720	---	3,150	2,180	---
Total	36,141	33,963	44,218	166,070	193,660	242,030	230,960	348,540	287,760	245,400	83,120	49,720
Mean	1,166	1,132	1,426	5,357	6,916	7,807	7,699	11,240	9,592	7,916	2,681	1,657
Max	1,770	1,320	3,600	23,300	50,800	20,500	15,100	54,700	30,200	26,800	4,340	3,600
Min	899	983	911	1,300	2,300	3,850	4,730	3,720	2,800	3,150	1,960	1,130
Cfsm	0.25	0.25	0.31	1.17	1.51	1.70	1.68	2.45	2.09	1.73	0.59	0.36
In.	0.29	0.28	0.36	1.35	1.57	1.97	1.88	2.83	2.34	1.99	0.67	0.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2,765	4,293	5,363	6,443	6,993	9,288	8,773	6,566	4,664	2,562	2,133	2,872
Max	11,990	25,090	14,640	18,230	22,960	23,820	28,930	18,230	16,030	7,916	7,934	13,180
(WY)	(1980)	(1986)	(2010)	(1996)	(1998)	(1993)	(1987)	(1989)	(2003)	(2013)	(1984)	(1996)
Min	866	883	1,318	1,165	1,274	1,961	2,493	2,297	1,028	981	800	754
(WY)	(2009)	(2002)	(1981)	(1981)	(2002)	(1981)	(1995)	(2006)	(2002)	(1999)	(2002)	(2002)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1980 - 2013	
Annual total	1,363,285		1,961,582			
Annual mean	3,725		5,374		5,214	
Highest annual mean					8,819	2003
Lowest annual mean					1,852	2002
Highest daily mean	24,200	Mar 3	54,700	May 9	199,000	Nov 6, 1985
Lowest daily mean	^a 899	Oct 25	^a 899	Oct 25	452	Sep 14, 2002
Annual seven-day minimum	923	Oct 23	923	Oct 23	499	Sep 9, 2002
Maximum peak flow			65,100	May 9	^b 243,000	Nov 6, 1985
Maximum peak stage			19.39	May 9	^b 31.77	Nov 6, 1985
Instantaneous low flow			^a 835	Oct 25	^c 418	Sep 13, 2002 ^d
Annual runoff (cfsm)	0.813		1.17		1.14	
Annual runoff (inches)	11.07		15.93		15.46	
10 percent exceeds	7,500		11,200		11,000	
50 percent exceeds	2,020		3,390		3,090	
90 percent exceeds	1,020		1,030		1,080	

^a Result of regulation.

^b Prior to regulation, 1925-79, maximum peak flow, 301,000 ft³/s, June 22, 1972, gage height, 34.02 ft, from floodmarks.

^c Prior to regulation, 1925-79, instantaneous low flow, 302 ft³/s, Oct. 1, 1930, probably lower during period of doubtful record in September 1966.

^d Also Sept. 14, 2002.

