



Water-Data Report 2009

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD

Potomac Basin
Middle Potomac-Catoctin Subbasin

LOCATION.--Lat 39°16'24.9", long 77°32'35.2" referenced to North American Datum of 1983, Frederick County, MD, Hydrologic Unit 02070008, on left bank at downstream side of bridge on U.S. Highway 15 at Point of Rocks, 0.3 mi downstream from Catoctin Creek (Virginia), 6 mi upstream from Monocacy River, and at mile 159.5.

DRAINAGE AREA.--9,651 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--February 1895 to current year.

REVISED RECORDS.--WSP 192: 1895-1905. WSP 1432: 1899, 1901-2, 1904-5, 1912, 1914(M), 1915, 1917(M), 1918, 1919(M), 1920, 1921-23(M), 1924, 1925-28(M), 1930(M).

GAGE.--Water-stage recorder. Datum of gage is 200.63 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1929, nonrecording gage at same site. Prior to Sept. 2, 1902, at datum about 0.45 ft higher.

REMARKS.--Records good except those for estimated daily discharges (ice effect, missing record), which are fair. Low flow affected slightly from 1913 to July 1981 by Stony River Reservoir; since December 1950 by Savage River Reservoir (see station 01597500); and since July 1981 by Jennings Randolph Lake. Low flow affected extensively at times by run-of-the-river hydroelectric plants. National Weather Service gage-height telemeter at station. U.S. Geological Survey satellite collection platform at station. 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 of June 2, 1889, reached a stage of 40.2 ft, from floodmarks, discharge, about 460,000 ft³/s from rating curve extended as explained in footnotes.

EXTREMES 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)
May 6	0145	*100,000	*17.50
No other peak greater than base discharge			

Minimum discharge, 1,360 ft³/s, Sept. 21-23.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	7,450	2,060	2,420	8,180	5,550	4,470	12,800	9,540	10,000	4,330	3,520	2,050
2	5,160	2,040	2,470	7,370	5,550	4,530	11,200	11,300	8,470	4,230	3,770	1,900
3	4,080	2,000	2,600	6,590	6,020	4,420	10,700	12,700	7,700	4,090	4,830	1,840
4	3,380	1,860	2,710	6,240	6,490	4,290	12,600	14,700	7,570	3,840	4,440	1,820
5	2,990	1,860	2,680	5,840	6,250	4,070	20,600	65,200	9,420	3,670	4,000	1,760
6	2,710	1,900	2,610	5,620	5,500	3,930	22,400	90,300	20,600	3,530	3,310	1,730
7	2,460	1,870	2,500	6,410	4,770	3,900	17,800	66,600	29,000	3,340	3,160	1,650
8	2,290	1,850	2,440	9,930	5,130	3,920	14,700	60,000	21,800	3,150	3,050	1,630
9	2,220	1,830	2,120	23,600	5,380	3,930	12,300	46,700	15,800	2,990	2,800	1,640
10	2,110	1,790	2,300	23,600	6,370	3,860	10,400	34,600	12,900	2,960	2,690	1,610
11	2,030	1,780	2,760	18,100	7,450	3,810	9,380	26,300	13,100	2,850	2,700	1,590
12	1,960	1,800	7,470	14,800	8,760	3,760	9,100	21,100	13,100	2,880	2,570	1,600
13	1,860	1,820	22,400	13,800	10,400	3,590	10,500	17,400	11,800	e2,990	2,460	1,670
14	1,830	2,190	22,700	13,100	10,300	3,540	9,960	15,100	9,740	e2,800	2,300	1,710
15	1,810	2,370	17,200	11,400	9,410	3,450	9,030	13,200	8,610	e2,690	2,280	1,670
16	1,800	2,740	12,900	9,890	8,580	3,440	8,990	11,900	7,550	2,530	2,280	1,740
17	1,750	2,720	11,500	8,150	7,820	3,560	10,400	11,500	6,850	2,420	2,100	2,450
18	1,700	2,940	12,300	6,670	7,220	3,580	14,100	13,400	8,260	2,480	1,960	1,780
19	1,670	2,890	16,400	e6,340	6,410	3,760	13,600	14,300	18,700	2,570	1,910	1,570
20	1,640	2,850	23,200	e6,260	6,110	3,950	12,800	12,200	18,600	2,460	2,250	1,510
21	1,630	2,580	28,400	e6,200	6,110	4,160	20,300	10,100	14,000	2,510	2,230	1,440
22	1,600	2,400	20,200	6,140	5,870	4,210	29,300	8,800	12,900	2,440	2,420	1,400
23	1,590	2,240	15,800	5,990	5,590	4,110	29,100	7,810	12,000	2,450	2,420	1,390
24	1,600	2,200	12,200	5,920	5,290	3,940	24,100	7,070	9,850	2,670	2,460	1,430
25	1,790	2,160	11,200	5,810	4,960	3,800	20,400	7,120	7,940	2,820	2,310	1,530
26	2,330	2,240	13,300	5,210	4,730	3,740	17,500	7,750	6,750	3,070	2,300	1,470
27	2,510	2,170	12,600	4,920	4,630	3,800	15,000	8,200	6,100	3,060	2,250	1,670
28	2,680	2,100	11,800	4,900	4,560	4,280	12,900	8,550	5,580	2,900	2,240	1,870
29	2,450	2,230	11,500	4,620	---	5,500	11,000	9,610	5,030	2,760	2,280	1,920
30	2,440	2,220	10,300	4,740	---	8,420	9,870	11,600	4,600	2,820	2,270	1,950
31	2,240	---	9,200	5,370	---	12,900	---	11,600	---	3,030	2,110	---
Total	75,760	65,700	330,180	271,710	181,210	136,620	442,830	666,250	344,320	93,330	83,670	50,990
Mean	2,444	2,190	10,650	8,765	6,472	4,407	14,760	21,490	11,480	3,011	2,699	1,700
Max	7,450	2,940	28,400	23,600	10,400	12,900	29,300	90,300	29,000	4,330	4,830	2,450
Min	1,590	1,780	2,120	4,620	4,560	3,440	8,990	7,070	4,600	2,420	1,910	1,390
Cfsm	0.25	0.23	1.10	0.91	0.67	0.46	1.53	2.23	1.19	0.31	0.28	0.18
In.	0.29	0.25	1.27	1.05	0.70	0.53	1.71	2.57	1.33	0.36	0.32	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	5,001	5,816	8,757	11,390	14,110	19,520	16,520	12,420	8,085	4,477	4,194	4,014
Max	37,030	39,000	32,610	42,160	47,870	68,360	43,840	41,970	40,400	16,000	23,580	38,300
(WY)	(1943)	(1986)	(1973)	(1996)	(1998)	(1936)	(1993)	(1924)	(1972)	(1949)	(1955)	(1996)
Min	706	840	1,253	1,703	1,982	4,407	4,368	3,276	1,932	1,056	771	834
(WY)	(1931)	(1931)	(1966)	(1981)	(2002)	(2009)	(1915)	(1930)	(1969)	(1966)	(1930)	(1930)

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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1895 - 2009	
Annual total	3,373,040		2,742,570			
Annual mean	9,216		7,514		9,511	
Highest annual mean					18,750	1996
Lowest annual mean					4,015	2002
Highest daily mean	89,800	May 13	90,300	May 6	434,000	Mar 19, 1936
Lowest daily mean	1,580	Aug 27	1,390	Sep 23	540	Sep 10, 1914
Annual seven-day minimum	1,630	Oct 18	1,450	Sep 20	593	Sep 6, 1966
Maximum peak flow			100,000	May 6	^a 480,000	Mar 19, 1936
Maximum peak stage			17.50	May 6	41.03	Mar 19, 1936
Instantaneous low flow			1,360	Sep 21 ^b	530	Sep 11, 1966 ^c
Annual runoff (cfsm)	0.955		0.779		0.985	
Annual runoff (inches)	13.00		10.57		13.39	
10 percent exceeds	20,500		15,000		20,700	
50 percent exceeds	5,220		4,280		5,400	
90 percent exceeds	1,960		1,820		1,700	

^a From rating curve extended above 300,000 ft³/s, on basis of adjustment of figure of peak flow at station near Washington for inflow and storage, and slope-area measurement of peak flow.

^b Sept. 21-23.

^c Sept. 11, 12, 1966.

