



Water-Data Report 2010

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), 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)
Dec 11	0500	55,100	11.61
Dec 27	2245	51,600	11.10
Jan 26	2300	134,000	21.42
Mar 15	0215	*172,000	*25.52
Mar 30	1145	55,200	11.63

Minimum discharge, 993 ft³/s, Sept. 11, 12.

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2,290	6,190	5,620	16,800	17,900	16,200	31,800	7,040	9,440	2,090	1,290	1,400
2	2,150	5,380	5,310	14,600	15,900	16,300	25,300	6,500	7,680	1,960	1,250	1,820
3	2,110	4,500	5,630	e13,100	14,900	17,300	21,200	6,410	7,000	1,900	1,250	1,710
4	2,000	3,990	6,770	e11,700	13,600	17,900	18,400	9,720	6,960	1,770	1,410	1,360
5	1,830	3,950	9,670	10,600	12,500	18,200	16,200	12,300	6,270	1,790	1,390	1,200
6	1,720	3,660	12,700	9,320	e12,100	18,300	14,600	10,200	5,870	1,760	1,450	1,120
7	1,640	3,360	12,000	8,880	e11,500	18,300	13,300	8,600	6,870	1,680	1,500	1,100
8	1,590	3,140	9,650	8,180	10,800	18,200	12,200	7,500	6,310	1,860	1,430	1,100
9	1,600	2,940	12,100	8,290	e10,600	19,100	11,600	6,610	6,790	1,720	1,470	1,070
10	1,610	2,780	27,200	6,990	e10,200	21,100	10,800	6,000	7,220	1,720	1,510	1,050
11	1,550	2,710	51,000	6,200	9,910	23,800	10,300	5,820	6,150	1,910	1,450	1,010
12	1,530	2,930	33,600	6,050	9,480	33,600	9,610	5,730	5,390	2,110	1,480	1,080
13	1,500	2,980	23,200	6,070	9,470	82,100	9,120	5,850	5,180	2,740	1,750	1,150
14	1,790	3,390	19,100	5,730	9,220	148,000	8,650	6,360	4,960	2,560	1,700	1,180
15	2,310	6,700	18,000	5,730	8,940	154,000	8,080	6,370	4,540	2,410	1,650	1,170
16	2,050	7,480	18,600	5,580	8,600	82,900	7,770	6,050	4,220	2,970	1,510	1,320
17	2,130	6,740	17,600	5,770	8,310	54,200	8,000	5,980	4,120	3,190	1,470	1,530
18	2,650	5,700	15,700	8,340	8,580	42,400	7,400	5,870	3,710	2,830	1,510	1,620
19	2,880	5,020	14,200	26,900	8,670	35,200	7,070	6,880	3,550	2,240	1,510	1,550
20	2,860	4,760	13,200	29,100	8,880	28,600	6,900	9,960	3,470	1,980	1,560	1,550
21	2,650	5,470	12,000	24,600	9,750	24,700	6,670	10,500	3,270	1,850	1,470	1,570
22	2,540	7,900	10,900	21,700	10,100	22,200	6,520	9,560	3,050	1,760	1,500	1,480
23	2,290	8,340	9,870	20,300	11,700	20,400	6,390	10,900	2,920	1,660	1,460	1,400
24	2,220	7,780	8,710	20,100	14,800	22,000	6,130	19,600	2,720	1,600	1,370	1,360
25	2,410	7,430	8,080	30,200	18,800	20,900	6,200	17,900	2,610	1,540	1,340	1,340
26	4,280	7,420	14,800	105,000	21,700	18,300	7,590	12,900	2,320	1,560	1,350	1,250
27	5,330	7,390	38,400	109,000	20,300	16,800	8,880	10,600	2,430	1,510	1,420	1,230
28	5,300	7,140	45,400	54,000	17,700	16,000	10,300	9,200	2,380	1,450	1,410	1,480
29	5,630	6,770	33,800	36,500	---	24,500	9,060	8,460	2,290	1,460	1,540	1,810
30	6,440	6,120	25,400	27,400	---	51,800	7,720	8,130	2,180	1,420	1,530	2,540
31	6,350	---	20,000	21,500	---	43,100	---	10,500	---	1,350	1,410	---
Total	85,230	160,060	558,210	684,230	344,910	1,146,400	333,760	274,000	141,870	60,350	45,340	41,550
Mean	2,749	5,335	18,010	22,070	12,320	36,980	11,130	8,839	4,729	1,947	1,463	1,385
Max	6,440	8,340	51,000	109,000	21,700	154,000	31,800	19,600	9,440	3,190	1,750	2,540
Min	1,500	2,710	5,310	5,580	8,310	16,000	6,130	5,730	2,180	1,350	1,250	1,010
Cfsm	0.28	0.55	1.87	2.29	1.28	3.83	1.15	0.92	0.49	0.20	0.15	0.14
In.	0.33	0.62	2.15	2.64	1.33	4.42	1.29	1.06	0.55	0.23	0.17	0.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	4,982	5,812	8,837	11,480	14,100	19,670	16,470	12,390	8,056	4,455	4,171	3,992
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)

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD—Continued

SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1895 - 2010	
Annual total	3,074,430		3,875,910			
Annual mean	8,423		10,620		9,520	
Highest annual mean					18,750	1996
Lowest annual mean					4,015	2002
Highest daily mean	90,300	May 6	154,000	Mar 15	434,000	Mar 19, 1936
Lowest daily mean	1,390	Sep 23	1,010	Sep 11	540	Sep 10, 1914
Annual seven-day minimum	1,450	Sep 20	1,080	Sep 6	593	Sep 6, 1966
Maximum peak flow			172,000	Mar 15	^a 480,000	Mar 19, 1936
Maximum peak stage			25.52	Mar 15	41.03	Mar 19, 1936
Instantaneous low flow			993	Sep 11 ^b	530	Sep 11, 1966 ^c
Annual runoff (cfsm)	0.873		1.10		0.986	
Annual runoff (inches)	11.85		14.94		13.40	
10 percent exceeds	17,700		21,700		20,700	
50 percent exceeds	5,500		6,350		5,420	
90 percent exceeds	1,910		1,460		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. 11, 12.

^c Sept. 11, 12, 1966.

