

POTOMAC RIVER BASIN

01646500 POTOMAC RIVER NEAR WASHINGTON, DC

LOCATION.--Lat 38°56'58", long 77°07'40", Montgomery County, Hydrologic Unit 02070008, on left bank just upstream from Little Falls Dam, 1 mi upstream from District of Columbia boundary line, 1.2 mi upstream from Chain Bridge, 1.8 mi east of Langley, Fairfax County, and at mile 117.4.

DRAINAGE AREA.--11,560 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1930 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WDR MD-DE-75-1: 1973-74(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 37.95 ft above sea level. Prior to June 7, 1930, nonrecording gage, and June 7, 1930, to Jan. 22, 1965, water-stage recorder at site 1 mi upstream on right bank at same datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Diversions at Great Falls through aqueducts, and since June 1959, from gage pool at Little Falls Dam, for municipal supply of Washington, D.C.; since October 1958, at Rockville Filtration Plant, for municipal supply of city of Rockville; since April 1961, at Potomac Filtration Plant for water supply of Washington Suburban Sanitary District; since October 1961, at Fairfax Water Treatment Plant for water supply of city of Fairfax (from Goose Creek); since April 1964, at Violets Lock to Chesapeake and Ohio Canal; and since October 1985, at Fairfax County Water Authority Treatment Plant for water supply of the county. Low flow affected slightly prior 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. National Weather Service gage-height telemeter at station. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, was of approximately the same magnitude as that of March 19, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 45,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 20	1015	*46,400	*6.51	No other peak greater than base discharge.			

Minimum discharge, 141 ft³/s, Aug 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	1410	1180	1210	7560	4450	11300	7390	2370	1080	438	1230
2	1270	1230	1210	1130	7210	4460	11600	6620	2180	1100	478	1270
3	1320	1220	1240	2360	7100	4460	11100	6090	2220	972	424	1190
4	1350	1560	1100	3490	7160	6000	10500	5740	2210	1180	431	1230
5	1300	1470	1240	2780	6460	9660	10600	5470	2200	1250	374	2100
6	1290	1340	1150	2170	5970	14700	11400	5250	2090	865	487	2380
7	1490	1470	1100	1940	5710	12100	11300	4830	1850	724	486	2170
8	2630	1480	1140	2180	5380	11600	10100	5580	1600	680	401	2800
9	3390	1300	1490	2350	5500	10600	9230	5740	1520	649	476	10500
10	2770	1240	1480	2440	5600	10100	9200	9940	1340	488	379	14300
11	2410	1640	1470	2230	5770	9570	14200	8540	1370	517	281	9350
12	2090	1770	1650	2440	6320	8800	26000	7100	1270	377	288	6480
13	1930	1620	1650	2790	6430	8640	33200	6370	1320	451	174	4710
14	2020	1460	1400	3230	5700	8580	28900	5800	1480	402	304	3680
15	1900	1390	1670	4910	5350	10500	22100	5710	1600	284	479	3110
16	1810	1290	1490	5010	4900	12500	17700	4940	1280	383	358	7160
17	1590	1180	1210	5180	4570	13500	15200	4530	1470	287	274	9140
18	1580	1180	1300	5860	5760	16200	14000	4570	1500	234	260	10300
19	1320	1230	1390	12300	6330	29800	12300	5200	1380	424	270	7320
20	1380	1320	1390	12500	6110	44700	10900	4710	1620	428	685	5350
21	1450	1340	1340	8890	5230	36200	9790	4110	1870	441	595	5710
22	1260	1270	1240	7960	5020	30700	9410	3710	1620	295	568	6100
23	1370	1190	1350	8040	4950	35300	9550	3840	1400	358	464	4610
24	1400	1240	1310	12600	4640	32800	11000	4060	1190	344	799	4980
25	1330	1220	1280	29100	4310	26400	11400	4140	1120	440	1460	4780
26	1240	1390	1250	28400	4010	22100	12900	3640	1080	725	2300	4020
27	1340	1400	1210	21900	3860	19000	12200	3590	900	762	2000	3380
28	1220	1410	1140	16500	4020	16600	10800	3360	803	746	1670	3300
29	1340	1320	1030	12700	---	14700	9540	3260	1170	679	1830	3440
30	1270	1280	987	10300	---	13300	8270	2940	1070	516	1550	12000
31	1390	---	1230	8730	---	12000	---	2650	---	490	1360	---
TOTAL	50660	40860	40317	243620	156930	510020	405690	159420	46093	18571	22343	158090
MEAN	1634	1362	1301	7859	5605	16450	13520	5143	1536	599	721	5270
MAX	3390	1770	1670	29100	7560	44700	33200	9940	2370	1250	2300	14300
MIN	1210	1180	987	1130	3860	4450	8270	2650	803	234	174	1190
(†)	607	597	605	610	582	583	604	689	780	791	708	581
MEAN≠	2242	2959	2907	8471	6187	17040	14130	5832	2316	1391	1429	5854
CFSM≠	0.19	0.17	0.16	0.73	0.54	1.47	1.22	0.50	0.20	0.12	0.12	0.51
IN≠	0.22	0.19	0.19	0.85	0.56	1.70	1.36	0.58	0.22	0.14	0.14	0.57

† Diversions, in cubic feet per second, for municipal supply of Washington, D.C., Washington Suburban Sanitary District, city of Rockville, city of Fairfax (from Goose Creek), Fairfax County, and the Chesapeake and Ohio Canal (insignificant diversion to canal during current water year). Records provided by U.S. Army Corps of Engineers, Washington Suburban Sanitary Commission, city of Rockville, city of Fairfax, and Fairfax County Water Authority.
≠ Adjusted for diversion.

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1958, BY WATER YEAR (WY) (UNREGULATED)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6120	6496	9843	13570	16660	21060	19120	13610	7960	5135	5804	4419
MAX	44100	21040	30900	37190	36790	76510	36430	27780	19090	21040	28210	19940
(WY)	1943	1933	1951	1937	1939	1936	1933	1932	1951	1949	1955	1945
MIN	583	700	1536	2527	2982	6505	7202	3953	2867	1284	569	679
(WY)	1931	1931	1944	1956	1934	1931	1947	1930	1930	1930	1930	1930

SUMMARY STATISTICS

WATER YEARS 1930 - 1958

ANNUAL MEAN	10790
HIGHEST ANNUAL MEAN	16100 1949
LOWEST ANNUAL MEAN	4525 1930
HIGHEST DAILY MEAN	426000 Mar 19 1936
LOWEST DAILY MEAN	448 Aug 25 1930
ANNUAL SEVEN-DAY MINIMUM	499 Aug 21 1930
INSTANTANEOUS PEAK FLOW	484000 Mar 19 1936
INSTANTANEOUS PEAK STAGE	(a) 28.10 Mar 19 1936
INSTANTANEOUS LOW FLOW	430 Aug 24 1930
ANNUAL RUNOFF (CFSM)	.93
ANNUAL RUNOFF (INCHES)	12.68
10 PERCENT EXCEEDS	23600
50 PERCENT EXCEEDS	6440
90 PERCENT EXCEEDS	1810

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1999, BY WATER YEAR (WY) (REGULATED, UNADJUSTED)

MEAN	6008	7848	11490	14430	17870	25530	20790	15370	9312	4735	4063	4768
MAX	36790	42030	37630	52890	61040	67370	57850	40410	46630	17160	21720	44620
(WY)	1977	1986	1997	1996	1998	1994	1993	1989	1972	1972	1996	1996
MIN	908	1097	1038	1682	5605	7403	5810	3921	1536	599	538	791
(WY)	1964	1966	1966	1981	1999	1990	1995	1969	1999	1999	1966	1964

SUMMARY STATISTICS

FOR 1998 CALENDAR YEAR

FOR 1999 WATER YEAR

WATER YEARS 1959 - 1999

ANNUAL TOTAL	6650717	1852614	
ANNUAL MEAN	18220	5076	11820
ANNUAL MEAN#	18830	5722	12323
HIGHEST ANNUAL MEAN			23760 1996
HIGHEST ANNUAL MEAN#			24370 1996
LOWEST ANNUAL MEAN			4900 1969
LOWEST ANNUAL MEAN#			5306 1969
HIGHEST DAILY MEAN	140000 Mar 22	44700 Mar 20	334000 Jun 24 1972
LOWEST DAILY MEAN	987 Dec 30	174 Aug 13	(b) 121 Sep 9 1966
LOWEST DAILY MEAN#	1810 Sep 9	1860 Oct 24	(c) 601 Sep 10 1966
ANNUAL SEVEN-DAY MINIMUM	1160 Dec 25	303 Aug 13	181 Sep 7 1966
INSTANTANEOUS PEAK FLOW		46400 Mar 20	359000 Jun 24 1972
INSTANTANEOUS PEAK STAGE		6.51 Mar 20	22.03 Jun 24 1972
INSTANTANEOUS LOW FLOW		141 Aug 13	66 Sep 9 1966
ANNUAL RUNOFF (CFSM)	1.58	.44	1.02
ANNUAL RUNOFF (CFSM)#	1.63	.49	1.03
ANNUAL RUNOFF (INCHES)	21.40	5.96	13.89
ANNUAL RUNOFF (INCHES)#	22.12	6.72	14.48
10 PERCENT EXCEEDS	50900	12100	27100
50 PERCENT EXCEEDS	6070	2170	6480
90 PERCENT EXCEEDS	1270	506	1550

a At previous site, 1 mi upstream at same datum.

Adjusted for diversion.

b Minimum daily discharge observed at gaging station, does not include diversion of 489 ft³/s.

c Includes diversion of 449 ft³/s for municipal use.

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