01643000 MONOCACY RIVER AT JUG BRIDGE NEAR FREDERICK, MD

Potomac Basin
Monocacy Subbasin

LOCATION.--Lat 39°24'10.2", long 77°21'57.9" referenced to North American Datum of 1983, Frederick County, MD, Hydrologic Unit 02070009, on right bank 500 ft downstream from Interstate 70 highway bridge, 0.4 mi downstream from Linganore Creek, 2.0 mi east of Frederick, and 16.9 mi upstream from mouth.

DRAINAGE AREA.--817 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for October, November 1929, published in WSP 1302.

REVISED RECORDS.--WSP 711: 1930.

GAGE.--Water-stage recorder and crest-stage gage. Nonrecording gage at site 0.2 mile downstream. Datum of gage is 231.92 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges (missing record), which are poor. Occasional regulation at low and medium flows since September 1972 by Linganore Reservoir, total capacity, 883,200,000 gal, 2.8 mi upstream from station. U.S. Geological Survey satellite data-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 in June 1889 reached a stage of 30 ft, from floodmarks, discharge, 56,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,800 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 23	2245	*25,900	*20.25
Dec 8	1345	13,200	13.68
Jun 2	1345	10,900	12.25
Sep 19	1015	12,300	13.12

Minimum discharge, 143 ft^3/s, Sept. 17, 18.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 01643000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/01643000.2012.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,300	2,090	1,910	1,380	1,220	5,200	756	497	1,180	264	229	194
2	3,420	1,640	1,510	1,270	1,140	2,370	776	501	9,150	277	286	187
3	2,760	1,340	1,340	1,160	1,040	2,270	850	512	2,680	220	248	219
4	1,640	1,170	1,210	978	968	1,950	700	548	1,500	209	239	321
5	1,250	1,030	1,140	932	993	1,410	639	552	1,170	193	228	824
6	998	894	1,150	955	976	1,190	587	477	952	183	260	409
7	840	826	1,870	942	891	1,070	553	445	813	176	279	292
8	743	787	10,500	919	845	1,000	520	450	734	e165	274	302
9	668	752	3,750	852	857	965	501	528	638	e715	226	314
10	609	720	2,550	800	854	880	487	588	556	320	217	427
11	571	725	2,000	771	862	801	468	480	501	219	243	289
12	559	688	1,680	3,660	896	763	460	415	634	195	351	234
13	915	636	1,510	3,250	769	748	443	373	1,260	180	282	203
14	4,160	599	1,390	2,070	736	730	429	425	868	173	231	188
15	3,330	582	1,330	1,380	742	682	423	957	564	191	297	177
16	1,510	751	1,290	1,130	745	653	420	1,510	472	196	484	164
17	1,090	1,920	1,180	1,190	860	630	408	749	418	204	310	150
18	913	1,400	1,080	1,490	848	604	399	559	389	192	253	2,020
19	979	923	997	1,230	730	591	417	483	386	326	242	8,770
20	4,860	801	952	1,010	679	1,150	414	434	374	1,440	266	1,490
21	2,330	921	930	975	644	1,090	401	569	342	1,330	299	819
22	1,400	2,510	947	938	629	842	495	2,050	317	867	427	599
23	1,140	20,200	2,890	906	634	744	1,660	1,300	327	504	316	487
24	1,000	13,900	2,240	1,220	726	849	1,450	1,990	314	385	252	416
25	913	3,520	1,390	2,160	849	2,980	834	1,250	272	360	222	367
26	832	2,600	1,220	1,550	701	1,660	645	901	256	294	235	338
27	792	2,110	1,550	3,010	613	1,130	615	760	239	285	369	341
28	779	1,800	5,490	3,500	587	966	717	803	223	292	432	1,980
29	1,050	1,790	2,270	1,830	1,050	974	580	837	212	249	316	1,460
30	2,710	3,070	1,700	1,500	---	851	530	1,370	445	225	256	642
31	2,900	---	1,550	1,320	---	778	---	1,020	---	212	223	---
Total	48,961	72,695	62,516	46,278	24,084	38,521	18,577	24,333	28,186	11,041	8,792	24,623
Mean	1,579	2,423	2,017	1,493	830	1,243	619	785	940	356	284	821
Max	4,860	20,200	10,500	3,660	1,220	5,200	1,660	2,050	9,150	1,440	484	8,770
Min	559	582	930	771	587	591	399	373	212	165	217	150
Cfsm	1.93	2.97	2.47	1.83	1.02	1.52	0.76	0.96	1.15	0.44	0.35	1.00
In.	2.23	3.31	2.85	2.11	1.10	1.75	0.85	1.11	1.28	0.50	0.40	1.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	538	751	1,111	1,212	1,431	1,831	1,524	1,022	734	444	386	534
Max	3,943	2,504	3,606	4,159	4,062	5,851	4,533	3,773	6,826	2,571	3,233	5,165
(WY)	(1977)	(1933)	(1997)	(1996)	(1984)	(1993)	(1983)	(1989)	(1972)	(1949)	(1933)	(1975)
Min	46.8	65.1	108	123	155	435	375	296	152	64.5	36.4	59.9
(WY)	(1931)	(1931)	(1966)	(1981)	(2002)	(2009)	(2002)	(1963)	(1999)	(1966)	(1966)	(1963)

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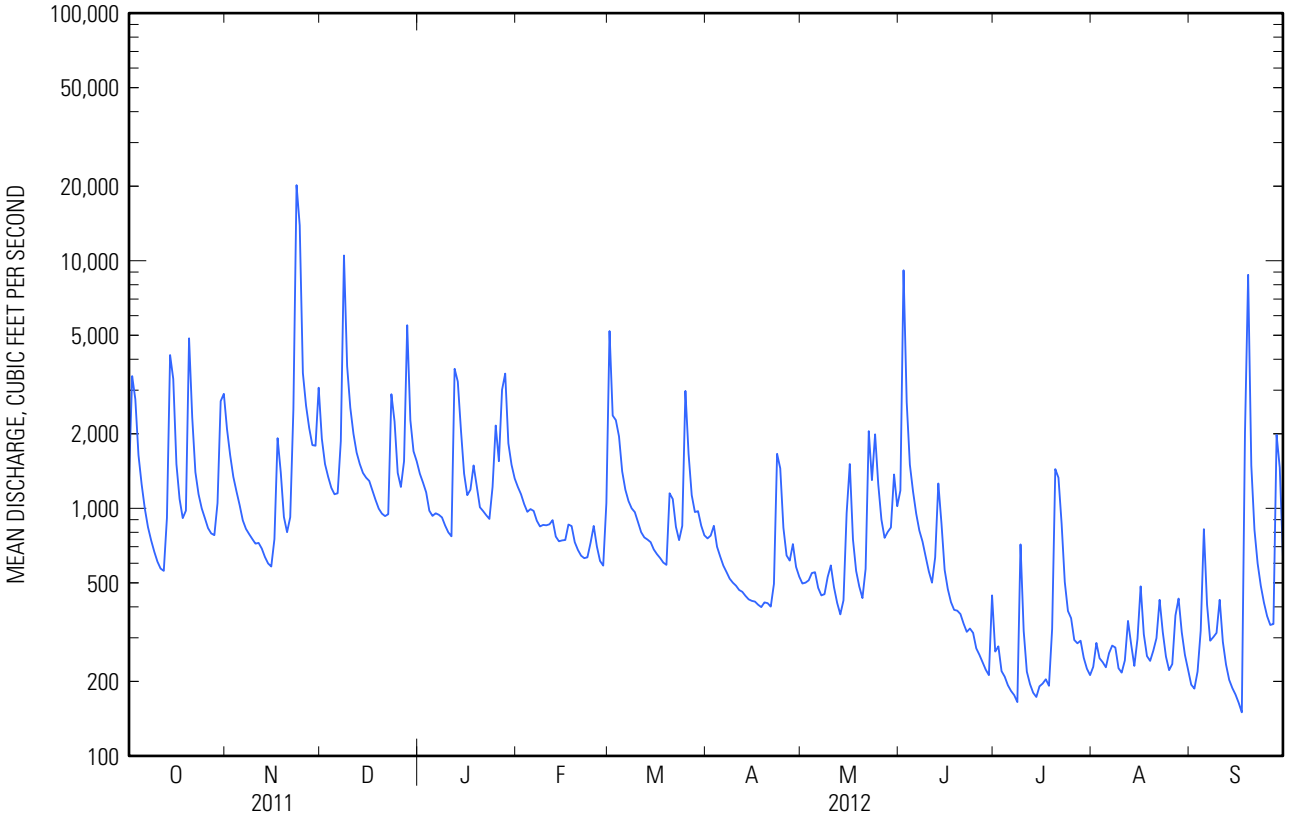
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1930 - 2012	
Annual total	564,113		408,607			
Annual mean	1,546		1,116		957	
Highest annual mean					1,834	1972
Lowest annual mean					212	2002
Highest daily mean	20,800	Apr 17	20,200	Nov 23	74,000	Jun 23, 1972
Lowest daily mean	88	Aug 3	150	Sep 17	19	Sep 7, 1966 [a]
Annual seven-day minimum	99	Aug 1	190	Jul 12	19	Sep 7, 1966
Maximum peak flow			25,900	Nov 23	81,600	Jun 23, 1972
Maximum peak stage			20.25	Nov 23	[b] 35.90	Jun 23, 1972
Instantaneous low flow			143	Sep 17 [c]	17	Sep 11, 1966 [d]
Annual runoff (cfsm)	1.89		1.37		1.17	
Annual runoff (inches)	25.69		18.60		15.92	
10 percent exceeds	3,160		2,060		2,020	
50 percent exceeds	923		770		482	
90 percent exceeds	155		239		122	

[a] Sept. 7-13, 1966.
[b] From floodmarks.
[c] Sept. 17, 18.
[d] Sept. 11, 13, 1966.