

01617800 MARSH RUN AT GRIMES, MD

Potomac Basin
 Conococheague-Opequon Subbasin

LOCATION.--Lat 39°30'52.4", long 77°46'38.0" referenced to North American Datum of 1983, Washington County, MD, Hydrologic Unit 02070004, on right bank 220 ft upstream from bridge on Sprecher Road, 0.1 mi downstream from unnamed tributary, 0.5 mi southwest of Grimes, 1.5 mi upstream from mouth, and 2.2 mi southwest of Fairplay.

DRAINAGE AREA.--18.9 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 354.72 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are poor. Low flows affected at times by withdrawals from unknown source upstream of station. The station is located in a unique type of geologic setting known as Karst which may affect conditions relating to runoff characteristics. 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 FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 11	0300	60	1.91
Apr 16	2245	102	2.33
Apr 19	2115	64	1.94
Apr 28	1100	*145	*2.60
May 19	0030	67	1.96

Minimum discharge, 1.2 ft³/s, Jan. 13.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	9.2	5.0	22	4.0	2.3	11	18	36	18	9.3	5.5	4.9
2	4.0	5.0	15	6.8	8.5	10	17	34	17	9.0	5.3	5.0
3	4.1	5.1	11	6.7	10	9.3	16	31	16	11	5.9	4.8
4	4.6	7.7	10	6.6	8.7	9.0	15	37	16	11	6.2	4.6
5	4.4	7.1	9.5	6.7	8.9	8.9	17	30	16	10	5.5	5.3
6	4.1	5.7	9.0	6.4	10	15	16	27	15	9.1	5.9	11
7	4.1	5.4	8.8	6.4	11	24	15	25	15	8.7	6.4	21
8	3.8	5.1	8.7	6.4	10	17	16	23	15	11	6.0	13
9	3.8	5.1	e8.3	13	7.8	15	18	22	15	10	6.4	16
10	3.5	5.0	6.3	e9.5	7.3	26	16	21	14	9.0	6.1	16
11	3.5	5.0	4.3	e3.6	8.9	44	16	20	14	8.5	5.3	10
12	3.3	4.8	5.5	e1.9	8.5	29	21	19	14	8.8	4.9	9.3
13	3.3	4.8	7.4	1.7	8.6	26	31	21	14	8.6	5.0	8.4
14	4.7	4.9	11	e3.3	9.0	22	26	22	13	8.0	6.7	7.7
15	4.7	4.9	24	5.8	7.1	21	22	24	13	7.3	8.6	8.3
16	4.2	6.1	e10	5.8	5.5	21	43	24	13	7.3	5.9	8.1
17	3.9	8.4	e8.1	5.6	7.0	19	65	37	13	7.0	5.2	7.2
18	4.0	6.7	e6.9	6.0	8.8	19	38	46	13	6.9	5.5	7.1
19	4.3	6.0	e6.8	6.1	8.3	18	45	51	12	6.7	11	6.8
20	4.1	5.8	e6.7	5.5	8.2	17	48	38	13	7.3	6.7	6.8
21	4.2	5.6	e4.7	3.6	8.5	18	34	32	12	6.9	5.9	6.7
22	4.2	5.6	3.3	e6.3	8.8	17	31	30	12	6.6	5.2	6.9
23	4.2	5.6	5.1	e3.1	8.1	20	33	28	12	7.4	5.0	6.7
24	4.4	5.3	7.1	e1.9	7.6	26	34	26	12	6.9	4.9	6.8
25	4.4	5.8	6.8	e2.1	9.6	20	28	24	11	6.7	5.2	6.5
26	4.8	5.7	6.7	e2.2	11	18	25	23	11	6.7	5.1	6.3
27	6.6	5.4	6.9	e2.7	9.5	17	24	26	11	6.2	4.9	6.6
28	5.3	5.3	13	e2.0	11	17	97	24	11	6.1	8.2	6.8
29	4.9	5.1	6.4	e2.0	---	16	56	21	9.9	6.1	6.2	6.6
30	5.0	6.1	4.4	e2.0	---	16	40	19	9.5	5.8	5.2	6.4
31	5.1	---	2.4	e2.1	---	17	---	18	---	5.8	4.8	---
Total	138.7	169.1	266.1	147.8	238.5	583.2	921	859	400.4	245.7	184.6	247.6
Mean	4.47	5.64	8.58	4.77	8.52	18.8	30.7	27.7	13.3	7.93	5.95	8.25
Max	9.2	8.4	24	13	11	44	97	51	18	11	11	21
Min	3.3	4.8	2.4	1.7	2.3	8.9	15	18	9.5	5.8	4.8	4.6
Cfsm	0.24	0.30	0.45	0.25	0.45	1.00	1.62	1.47	0.71	0.42	0.32	0.44
In.	0.27	0.33	0.52	0.29	0.47	1.15	1.81	1.69	0.79	0.48	0.36	0.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	7.54	7.80	10.8	12.4	14.5	18.9	19.0	15.8	13.4	9.41	7.24	6.86
Max	39.5	29.3	39.9	30.1	34.2	48.6	49.8	36.2	48.2	32.4	24.2	36.7
(WY)	(1977)	(1997)	(1997)	(1979)	(2004)	(1994)	(1984)	(1972)	(1972)	(1972)	(1996)	(2003)
Min	0.66	1.12	1.24	1.28	1.27	2.26	2.16	1.90	1.49	0.67	0.35	0.39
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

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SUMMARY STATISTICS

	Calendar Year 2010	Water Year 2011	Water Years 1964 - 2011	
Annual total	3,676.72	4,401.7		
Annual mean	10.1	12.1	12.0	
Highest annual mean			23.9	1972
Lowest annual mean			1.23	2002
Highest daily mean	72 Jan 25	97 Apr 28	233 Sep 4, 2003	
Lowest daily mean	0.09 Sep 24	1.7 Jan 13	^a 0.00 Oct 1, 1977	
Annual seven-day minimum	0.63 Aug 26	2.1 Jan 24	0.04 Aug 17, 2002	
Maximum peak flow		145 Apr 28	^b 459 Feb 12, 1985	
Maximum peak stage		2.60 Apr 28	4.45 Feb 12, 1985	
Instantaneous low flow		1.2 Jan 13	^a 0.00 Oct 1, 1977	
Annual runoff (cfsm)	0.533	0.638	0.633	
Annual runoff (inches)	7.24	8.66	8.60	
10 percent exceeds	23	25	25	
50 percent exceeds	6.7	8.2	8.8	
90 percent exceeds	1.5	4.3	2.7	

^a Result of regulation caused by construction work upstream from station.

^b From rating curve extended above 220 ft³/s.

