

Water-Data Report 2011

0158175320 WHEEL CREEK NEAR ABINGDON, MD

Upper Chesapeake Basin
Gunpowder-Patapsco Subbasin

LOCATION.--Lat 39°28'54.2", long 76°20'25.9" referenced to North American Datum of 1983, Harford County, MD, Hydrologic Unit 02060003, on right bank, 60 feet downstream from wooden foot bridge along walking path in Harford Glen Park, 2.4 miles northwest of Abingdon, 4.3 miles south of Bel Air, and approximately 400 feet upstream of confluence with Atkisson Reservoir.

DRAINAGE AREA.--0.66 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 2009 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges (ice effect), which are poor. U.S. Geological Survey satellite collection platform at station. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 581 ft³/s, Sept. 10, gage height, 6.77 ft; minimum discharge, 0.20 ft³/s, July 24, 27, 28, 31, Aug. 1, 12, 13.

0158175320 WHEEL CREEK NEAR ABINGDON, MD—Continued

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	17	0.58	11	0.55	0.47	0.96	1.3	0.82	0.43	0.26	0.50	0.78
2	0.80	0.51	1.1	e0.54	6.4	0.76	0.82	0.79	0.42	0.26	0.44	0.78
3	0.59	0.52	0.74	0.53	1.4	0.68	0.74	0.76	0.40	0.31	1.1	0.73
4	2.2	5.8	0.64	0.51	0.79	0.67	0.74	2.8	0.70	0.27	0.41	0.71
5	0.80	0.62	0.61	0.50	1.7	0.68	2.3	0.98	0.91	0.25	0.31	7.2
6	0.71	0.43	0.61	0.50	1.5	12	0.94	1.2	0.48	0.25	0.45	23
7	0.59	0.42	0.61	e0.50	1.1	3.6	0.79	1.1	0.43	0.84	1.5	19
8	0.46	0.44	0.61	e0.50	0.96	1.0	2.2	0.80	0.41	5.0	0.45	18
9	0.42	0.45	0.59	0.50	0.70	0.83	1.3	0.73	0.39	0.90	0.31	3.6
10	0.38	0.45	0.59	0.50	0.64	26	0.87	0.71	0.38	0.45	0.28	23
11	0.37	0.45	0.61	0.51	0.61	3.8	0.80	0.68	0.41	1.3	0.25	4.6
12	0.35	0.45	7.2	0.56	0.58	1.3	1.9	0.66	1.1	0.82	0.23	2.0
13	0.33	0.45	1.6	0.52	0.57	1.0	2.7	0.67	0.55	0.42	1.00	1.3
14	2.4	0.45	0.85	0.53	0.85	0.90	1.1	0.71	0.41	0.36	19	1.1
15	0.77	0.47	0.64	0.51	0.68	0.83	0.86	1.3	0.37	0.32	2.3	1.0
16	0.64	0.78	0.55	0.48	0.61	3.6	11	0.87	0.80	0.31	0.53	1.0
17	0.61	0.85	0.55	0.45	0.65	0.99	3.6	0.75	0.76	0.30	0.42	1.0
18	0.62	0.46	0.52	1.6	0.72	0.85	1.5	0.91	0.41	0.29	3.5	0.98
19	1.7	0.44	0.50	1.1	0.68	0.75	2.0	1.5	0.37	0.29	4.3	0.95
20	0.68	0.43	0.50	0.65	0.63	0.70	1.5	1.2	0.34	0.29	1.4	0.93
21	0.66	0.40	0.49	0.65	0.66	1.2	1.1	0.78	0.35	0.28	0.94	0.96
22	0.65	0.43	0.50	0.52	0.89	0.83	1.0	0.65	0.42	0.26	0.56	1.2
23	0.61	0.44	0.49	e0.50	0.74	3.4	1.5	0.64	0.34	0.26	0.46	15
24	0.58	0.40	0.52	e0.50	0.77	2.0	1.6	0.59	0.33	0.24	0.42	2.8
25	0.60	0.68	0.53	0.50	6.1	1.00	1.3	0.56	0.30	0.37	2.3	1.6
26	0.65	0.47	0.53	2.8	1.2	0.88	0.97	0.54	0.30	0.28	0.88	1.0
27	2.8	0.44	0.52	2.5	0.85	0.82	0.93	0.53	0.31	0.22	16	0.98
28	0.69	0.45	0.52	0.89	1.7	0.77	1.1	0.54	0.31	0.86	25	1.4
29	0.59	0.45	0.52	0.64	---	0.74	0.86	0.51	0.29	0.54	2.8	1.3
30	0.64	0.51	0.53	0.56	---	0.76	0.80	0.47	0.27	0.27	1.0	0.93
31	0.61	---	0.55	0.46	---	0.97	---	0.44	---	0.23	0.86	---
Total	41.50	20.12	36.32	22.56	35.15	75.27	50.12	26.19	13.69	17.30	89.90	138.83
Mean	1.34	0.67	1.17	0.73	1.26	2.43	1.67	0.84	0.46	0.56	2.90	4.63
Max	17	5.8	11	2.8	6.4	26	11	2.8	1.1	5.0	25	23
Min	0.33	0.40	0.49	0.45	0.47	0.67	0.74	0.44	0.27	0.22	0.23	0.71
Cfsm	2.03	1.02	1.78	1.10	1.90	3.68	2.53	1.28	0.69	0.85	4.39	7.01
In.	2.34	1.13	2.05	1.27	1.98	4.24	2.82	1.48	0.77	0.98	5.07	7.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2010 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1.56	1.12	2.21	1.06	1.40	2.36	1.40	0.75	0.46	0.62	1.74	3.40
Max	1.79	1.57	3.24	1.39	1.54	2.43	1.67	0.84	0.47	0.68	2.90	4.63
(WY)	(2010)	(2010)	(2010)	(2010)	(2010)	(2011)	(2011)	(2011)	(2010)	(2010)	(2011)	(2011)
Min	1.34	0.67	1.17	0.73	1.26	2.30	1.13	0.66	0.46	0.56	0.59	2.18
(WY)	(2011)	(2011)	(2011)	(2011)	(2011)	(2010)	(2010)	(2010)	(2011)	(2011)	(2010)	(2010)

0158175320 WHEEL CREEK NEAR ABINGDON, MD—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 2010 - 2011	
Annual total	428.32		566.95			
Annual mean	1.17		1.55		1.51	
Highest annual mean					1.55	2011
Lowest annual mean					1.46	2010
Highest daily mean	58	Sep 30	26	Mar 10	58	Sep 30, 2010
Lowest daily mean	0.09	Sep 5 ^a	0.22	Jul 27	0.09	Sep 5, 2010 ^a
Annual seven-day minimum	0.10	Sep 4	0.27	Jun 30	0.10	Sep 4, 2010
Maximum peak flow			b581	Sep 10	b581	Sep 10, 2011
Maximum peak stage				6.77 Sep 10	6.77	Sep 10, 2011
Instantaneous low flow				0.20 Jul 24 ^c	0.06	Sep 4, 2010 ^d
Annual runoff (cfsm)	1.78		2.35			2.28
Annual runoff (inches)	24.14		31.96			31.03
10 percent exceeds	1.9		2.3			2.5
50 percent exceeds	0.60		0.67			0.71
90 percent exceeds	0.19		0.35			0.27

^a Sept. 5, 9, 2010.^b From rating curve extended above 80 ft³/s on basis of slope-area measurement at gage height of 6.30 ft.^c July 24, 27, 28, 31, Aug. 1, 12, 13.^d Sept. 4, 5, 8, 9, 2010.