

## Water-Data Report 2011

**01580700 SWAN CREEK AT SWAN CREEK, MD**

 Upper Chesapeake Basin  
 Gunpowder-Patapsco Subbasin

LOCATION.--Lat 39°31'21", long 76°08'33" referenced to North American Datum of 1927, Harford County, MD, Hydrologic Unit 02060003, on left bank at downstream side of State Highway 40 bridge, 100 ft upstream from railroad overpass, 0.3 mi west of Swan Creek, 0.85 mi east of Aberdeen, 2.1 mi upstream of confluence with Gasheys Creek, and 4 mi upstream from mouth.

DRAINAGE AREA.--13.2 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 2007 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.  
 Previously operated as a low-flow partial-record station during water years 1956-59, 1962, 1963, 1966 at same location.

REMARKS.--Records good below 500 ft<sup>3</sup>/s and fair above 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.--Peak discharges greater than base discharge of 375 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 1	0045	1,890	8.80
Dec 1	1200	725	6.05
Mar 6	2000	700	5.97
Mar 10	1830	863	6.47
Apr 16	1900	646	5.79
Aug 14	1145	1,640	8.31
Aug 28	0200	*2,060	*9.12
Sep 6	0315	729	6.06
Sep 6	1830	812	6.32
Sep 7	1515	388	5.05
Sep 7	2145	534	5.46
Sep 8	1000	607	5.66
Sep 23	1830	1,410	7.83

Minimum discharge, 0.29 ft<sup>3</sup>/s, Aug. 12, 13.

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01580700 SWAN CREEK AT SWAN CREEK, 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	417	4.0	178	5.9	8.8	30	24	9.1	2.9	1.4	1.8	9.3
2	13	4.0	28	7.8	158	17	17	9.3	2.6	1.2	5.4	7.7
3	6.8	4.3	13	6.9	56	14	14	8.9	2.2	1.3	1.5	6.7
4	15	37	9.9	5.9	26	12	13	49	2.2	1.6	1.2	6.4
5	16	17	8.1	5.7	26	12	30	17	3.6	1.5	1.1	54
6	8.1	6.8	7.0	5.4	45	189	19	11	2.9	1.2	0.86	432
7	6.3	4.6	6.3	e5.2	33	153	14	12	2.4	2.0	1.1	245
8	4.5	4.5	5.6	e4.9	43	30	42	9.1	2.2	16	2.8	224
9	3.8	3.9	5.1	e4.6	23	21	45	7.7	2.0	8.6	1.3	43
10	3.3	3.7	5.1	e4.4	15	476	20	6.9	1.8	2.6	1.2	25
11	3.3	3.5	5.3	e4.4	12	125	17	6.3	2.9	2.0	0.62	19
12	3.2	3.2	120	e4.4	12	39	25	6.0	47	2.2	0.39	15
13	3.0	3.4	58	e4.4	12	27	44	5.8	13	1.5	8.6	13
14	9.0	3.4	16	e4.5	46	21	24	6.1	4.3	1.3	178	11
15	8.2	3.5	11	e4.7	33	19	16	11	3.2	1.0	21	11
16	4.0	4.1	8.5	e4.8	18	92	158	9.5	2.9	0.91	11	9.3
17	3.3	7.9	e7.9	e4.8	21	29	119	8.4	10	0.83	7.2	8.7
18	3.2	5.3	e7.3	e10	22	22	27	9.7	4.0	0.76	13	8.6
19	6.7	4.4	e7.0	25	16	18	27	36	3.0	0.73	16	8.0
20	4.3	4.2	e6.7	19	11	15	31	24	2.6	0.66	11	8.1
21	3.7	3.9	e6.4	14	11	23	18	13	2.7	0.59	9.5	8.2
22	3.3	3.8	e6.2	9.4	12	19	15	8.6	8.5	0.57	7.2	9.5
23	2.9	4.0	e6.0	7.3	11	49	21	7.5	5.7	0.51	5.1	294
24	2.9	3.9	5.8	6.0	12	63	29	6.4	3.6	0.47	4.6	78
25	3.0	3.6	5.9	6.5	186	23	20	5.4	2.7	2.4	28	23
26	3.5	4.5	5.8	8.2	40	18	15	4.7	2.2	1.5	13	17
27	11	3.9	5.8	18	22	16	13	4.2	2.1	0.68	177	15
28	8.0	3.3	5.4	15	41	14	12	3.9	2.9	0.58	520	15
29	4.7	3.0	5.4	12	---	14	11	3.7	2.5	1.5	23	25
30	4.2	3.3	e5.4	11	---	13	9.6	3.6	1.7	1.0	13	13
31	4.3	---	5.6	9.4	---	15	---	3.1	---	0.55	11	---
<b>Total</b>	593.5	169.9	577.5	259.5	971.8	1,628	889.6	326.9	152.3	59.64	1,096.47	1,662.5
<b>Mean</b>	19.1	5.66	18.6	8.37	34.7	52.5	29.7	10.5	5.08	1.92	35.4	55.4
<b>Max</b>	417	37	178	25	186	476	158	49	47	16	520	432
<b>Min</b>	2.9	3.0	5.1	4.4	8.8	12	9.6	3.1	1.7	0.47	0.39	6.4
<b>Cfsm</b>	1.45	0.43	1.41	0.63	2.63	3.98	2.25	0.80	0.38	0.15	2.68	4.20
<b>In.</b>	1.67	0.48	1.63	0.73	2.74	4.59	2.51	0.92	0.43	0.17	3.09	4.69

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2008 - 2011, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	13.4	9.00	31.2	13.9	26.7	33.7	23.9	14.3	6.77	3.88	12.9	24.0
<b>Max</b>	28.0	22.8	69.3	26.7	34.7	54.2	36.4	23.5	10.8	7.41	35.4	55.4
(WY)	(2010)	(2010)	(2010)	(2010)	(2011)	(2010)	(2009)	(2009)	(2008)	(2009)	(2011)	(2011)
<b>Min</b>	1.75	2.61	17.4	8.37	7.60	8.52	11.4	5.67	2.05	1.83	0.72	4.32
(WY)	(2009)	(2008)	(2008)	(2011)	(2009)	(2009)	(2008)	(2010)	(2010)	(2010)	(2008)	(2008)

**01580700 SWAN CREEK AT SWAN CREEK, MD—Continued****SUMMARY STATISTICS**

	<b>Calendar Year 2010</b>	<b>Water Year 2011</b>	<b>Water Years 2008 - 2011</b>	
<b>Annual total</b>	6,061.37	8,387.61		
<b>Annual mean</b>	16.6	23.0	17.7	
<b>Highest annual mean</b>			23.1	2010
<b>Lowest annual mean</b>			11.0	2008
<b>Highest daily mean</b>	417 Oct 1	520 Aug 28	524 Dec 26, 2009	
<b>Lowest daily mean</b>	0.11 Aug 11	0.39 Aug 12	0.10 Sep 4, 2008 <sup>a</sup>	
<b>Annual seven-day minimum</b>	0.24 Sep 6	0.61 Jul 18	0.15 Oct 1, 2007	
<b>Maximum peak flow</b>		b2,060 Aug 28	b2,060 Aug 28, 2011	
<b>Maximum peak stage</b>		9.12 Aug 28	9.12 Aug 28, 2011	
<b>Instantaneous low flow</b>		0.29 Aug 12 <sup>c</sup>	0.09 Sep 3, 2008 <sup>d</sup>	
<b>Annual runoff (cfsm)</b>	1.26	1.74	1.34	
<b>Annual runoff (inches)</b>	17.08	23.64	18.27	
<b>10 percent exceeds</b>	34	39	33	
<b>50 percent exceeds</b>	5.4	8.1	6.4	
<b>90 percent exceeds</b>	0.47	1.9	0.79	

<sup>a</sup> Sept. 4, 5, 2008.<sup>b</sup> From rating curve extended above 570 ft<sup>3</sup>/s on basis of contracted-opening indirect measurement of peak flow at gage height 8.88 ft.<sup>c</sup> Aug. 12, 13.<sup>d</sup> Sept. 3-5, 2008, Aug. 11, 12, 2010.