

## Water-Data Report 2011

**01585100 WHITEMARSH RUN AT WHITE MARSH, MD**

 Upper Chesapeake Basin  
 Gunpowder-Patapsco Subbasin

LOCATION.--Lat 39°22'13.9", long 76°26'45.3" referenced to North American Datum of 1983, Baltimore County, MD, Hydrologic Unit 02060003, on right wing wall on downstream side of bridge on State Highway 7, 1.0 mi southwest of White Marsh, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--7.61 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--February 1959 to September 1989, March 1992 to current year.

REVISED RECORDS.--WDR MD-DE-73-1: 1960(M), 1967-68, 1969(M). WDR MD-DE-79-1: 1965-66(M). WRD-US-2010: 2006-07(P).

GAGE.--Water-stage recorder and rock control. Datum of gage is 34.52 ft above National Geodetic Vertical Datum of 1929. Prior to June 12, 2002, water-stage recorder at site on left bank upstream side of Route 7 bridge at datum 4.44 ft higher. June 12, 2002 to September 30, 2004, water-stage recorder at site 2,500 ft upstream on left downstream side of Interstate 95 box culvert at datum 4.44 ft higher.

REMARKS.--Records fair except those for estimated daily discharges (ice effect, missing record), which are poor. Flows affected by construction upstream of gage throughout the water year. Low flow affected by operations of sand and gravel plant in vicinity of gage. 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 750 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 1	0030	2,030	12.93
Mar 10	1730	921	9.42
May 19	1730	1,190	10.73
Aug 14	1145	1,030	10.05
Aug 18	1830	975	9.74
Aug 19	1900	1,530	11.91
Aug 28	0100	1,340	11.37
Sep 6	1700	767	8.47
Sep 7	1445	883	9.20
Sep 8	0200	1,250	11.00
Sep 9	0700	1,660	12.24
Sep 23	1630	*3,830	15.50

Minimum discharge, 0.84 ft<sup>3</sup>/s, Aug. 2, 3.

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**01585100 WHITEMARSH RUN AT WHITE MARSH, MD—Continued**

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

<b>Day</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>1</b>	248	2.1	95	2.3	4.1	11	12	4.3	2.3	1.3	1.0	2.0
<b>2</b>	15	2.0	8.3	2.7	126	6.5	4.9	4.1	2.2	1.2	1.0	1.8
<b>3</b>	8.4	2.1	4.6	2.2	19	5.3	4.0	3.3	2.1	16	7.1	1.8
<b>4</b>	35	77	3.6	2.0	9.0	4.9	4.1	38	2.2	1.6	28	1.8
<b>5</b>	12	10	3.1	2.0	28	4.8	23	5.7	9.5	1.5	1.2	59
<b>6</b>	8.9	4.6	2.7	2.0	25	109	5.1	8.0	6.2	1.5	7.2	225
<b>7</b>	6.0	3.6	2.6	2.1	16	44	4.1	6.9	2.3	1.3	7.7	229
<b>8</b>	5.0	3.4	2.8	e2.0	14	11	20	3.7	2.0	40	1.2	255
<b>9</b>	4.4	3.2	2.5	e1.9	6.8	7.7	10	3.2	2.1	3.9	4.8	255
<b>10</b>	3.9	3.0	2.4	e1.6	5.2	411	5.5	2.9	2.7	1.5	2.8	17
<b>11</b>	3.5	2.8	2.5	e1.6	e4.4	44	4.9	2.8	2.1	19	1.1	8.9
<b>12</b>	3.2	2.7	87	e2.0	e4.2	13	22	2.7	58	10	1.1	10
<b>13</b>	2.8	5.9	18	1.9	4.3	8.0	24	3.2	10	1.8	62	4.0
<b>14</b>	36	2.7	5.7	e1.6	7.4	6.1	7.8	3.9	2.8	1.6	139	3.6
<b>15</b>	7.6	2.5	4.4	1.7	5.7	5.2	5.1	26	2.3	1.5	8.3	3.6
<b>16</b>	3.7	5.3	3.7	1.8	4.0	58	97	11	8.8	1.4	2.6	3.3
<b>17</b>	3.1	7.1	3.7	1.6	4.0	8.0	29	10	5.5	1.4	1.6	3.1
<b>18</b>	3.0	3.0	3.4	19	4.2	5.7	9.1	61	2.2	1.3	123	3.0
<b>19</b>	20	2.6	3.4	9.6	3.6	4.4	15	211	2.0	3.8	175	3.0
<b>20</b>	3.7	2.5	3.3	4.4	3.1	3.5	8.5	31	1.9	9.6	19	3.2
<b>21</b>	2.7	2.5	2.9	5.6	3.6	13	5.4	9.9	2.3	1.4	72	3.4
<b>22</b>	2.2	2.5	2.8	e2.7	11	4.7	6.3	6.1	2.0	1.3	10	11
<b>23</b>	2.2	2.5	2.7	e2.1	7.3	57	14	5.0	1.9	1.3	3.2	638
<b>24</b>	2.2	2.4	2.6	e1.8	7.6	21	10	3.9	1.8	1.3	3.0	46
<b>25</b>	2.0	5.0	2.6	2.4	98	7.4	7.8	3.4	2.1	12	49	11
<b>26</b>	2.1	3.2	2.6	e15	13	5.7	4.9	3.5	1.6	1.8	6.7	6.7
<b>27</b>	29	2.7	e3.0	19	8.1	5.0	4.4	3.2	1.5	1.4	214	5.1
<b>28</b>	5.2	2.5	2.2	10	29	4.5	8.7	3.2	1.9	1.3	335	9.3
<b>29</b>	2.9	2.5	2.1	6.4	---	4.0	4.1	2.8	1.5	1.3	12	12
<b>30</b>	2.4	3.0	2.1	5.2	---	4.6	3.4	2.6	1.3	1.1	4.5	4.5
<b>31</b>	2.3	---	2.1	4.7	---	7.5	---	2.4	---	1.1	3.2	---
<b>Total</b>	488.4	176.9	290.4	140.9	475.6	905.5	384.1	488.7	147.1	146.5	1,307.3	1,840.1
<b>Mean</b>	15.8	5.90	9.37	4.55	17.0	29.2	12.8	15.8	4.90	4.73	42.2	61.3
<b>Max</b>	248	77	95	19	126	411	97	211	58	40	335	638
<b>Min</b>	2.0	2.0	2.1	1.6	3.1	3.5	3.4	2.4	1.3	1.1	1.0	1.8
<b>Cfsm</b>	2.07	0.77	1.23	0.60	2.23	3.84	1.68	2.07	0.64	0.62	5.54	8.06
<b>In.</b>	2.39	0.86	1.42	0.69	2.32	4.43	1.88	2.39	0.72	0.72	6.39	8.99

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 – 1989, 1992 – 2011, BY WATER YEAR (WY)**

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	9.53	10.7	14.5	13.8	15.7	17.5	13.6	11.8	11.2	9.73	10.2	13.1
<b>Max</b>	37.7	31.8	48.8	45.2	42.7	43.2	43.5	43.7	69.4	45.4	90.1	61.3
(WY)	(2006)	(1973)	(2004)	(1978)	(1979)	(1993)	(1983)	(1989)	(2006)	(1989)	(1971)	(2011)
<b>Min</b>	1.91	1.82	1.69	1.82	2.40	3.78	4.35	2.24	2.01	1.34	1.18	0.79
(WY)	(2001)	(1966)	(1966)	(1981)	(2002)	(2006)	(1985)	(1969)	(1986)	(1966)	(1962)	(2005)

**01585100 WHITEMARSH RUN AT WHITE MARSH, MD—Continued****SUMMARY STATISTICS**

	<b>Calendar Year 2010</b>	<b>Water Year 2011</b>	<b>Water Years 1959 – 1989, 1992 – 2011</b>	
<b>Annual total</b>	4,717.73	6,791.5		
<b>Annual mean</b>	12.9	18.6	12.7	
<b>Highest annual mean</b>			29.3	2003
<b>Lowest annual mean</b>			4.27	1969
<b>Highest daily mean</b>	1,100	Sep 30	638	Sep 23
<b>Lowest daily mean</b>	0.39	Sep 9	1.0	Aug 1 <sup>a</sup>
<b>Annual seven-day minimum</b>	0.45	Sep 5	1.2	Jul 27
<b>Maximum peak flow</b>			3,830	Sep 23
<b>Maximum peak stage</b>			15.50	Sep 23
<b>Instantaneous low flow</b>			0.84	Aug 2 <sup>c</sup>
<b>Annual runoff (cfsm)</b>	1.70		2.45	1.67
<b>Annual runoff (inches)</b>	23.06		33.20	22.71
<b>10 percent exceeds</b>	23		30	24
<b>50 percent exceeds</b>	3.4		4.0	4.1
<b>90 percent exceeds</b>	1.0		1.7	1.4

<sup>a</sup> Aug. 1, 2.<sup>b</sup> From rating curve extended above 1,300 ft<sup>3</sup>/s on the basis of a culvert measurement at gage height of 10.04 ft and on the basis of culvert and flow-over-road measurement of peak flow (prior to June 12, 2002 at previous location at upstream side of bridge and culvert).<sup>c</sup> Aug. 2, 3.<sup>d</sup> Result of construction work upstream from station.