



Water-Data Report 2011

**01589312 DEAD RUN NEAR CATONSVILLE, MD**

Upper Chesapeake Basin  
Gunpowder-Patapsco Subbasin

LOCATION.--Lat 39°17'45.2", long 76°44'38.7" referenced to North American Datum of 1983, Baltimore County, MD, Hydrologic Unit 02060003, on right bank at upstream side of culvert on Black Friars Road, 1.1 mi north of Catonsville, 1.7 mi southwest of Woodlawn, and 1.8 mi west of Baltimore City.

DRAINAGE AREA.--0.79 mi<sup>2</sup>, of which about 0.20 mi<sup>2</sup> is partly or entirely noncontributing.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--November 2007 to current year. Gage-height records collected at this location 2008-10 are published in WDR-US-2009 and WDR-US-2010.

GAGE.--Water stage recorder. Elevation of gage is 410 ft above National Geodetic Vertical Datum of 1929, from topographic map.

COOPERATION.--Records were provided by the University of Maryland, Baltimore County, Center for Urban Environmental Research and Education.

REMARKS.--Records fair except those for estimated daily discharges (missing record, ice effect) which are poor. University of Maryland, Baltimore County, Center for Urban Environmental Research and Education gage-height telemeter at station. Several measurements of water temperature were made during the year.

EXTREMES FOR 2008 WATER YEAR.--Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jul 9	1700	167	3.67
Jul 23	Unknown	*704	*7.90
Aug 2	0415	213	4.18
Sep 27	0720	251	4.56
Sep 27	1300	218	4.23

Minimum discharge, 0.01 ft<sup>3</sup>/s, Aug. 26, 27, Sept. 3-5.

**01589312 DEAD RUN NEAR CATONSVILLE, MD—Continued**

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
**DAILY MEAN VALUES**  
[*e*, estimated]

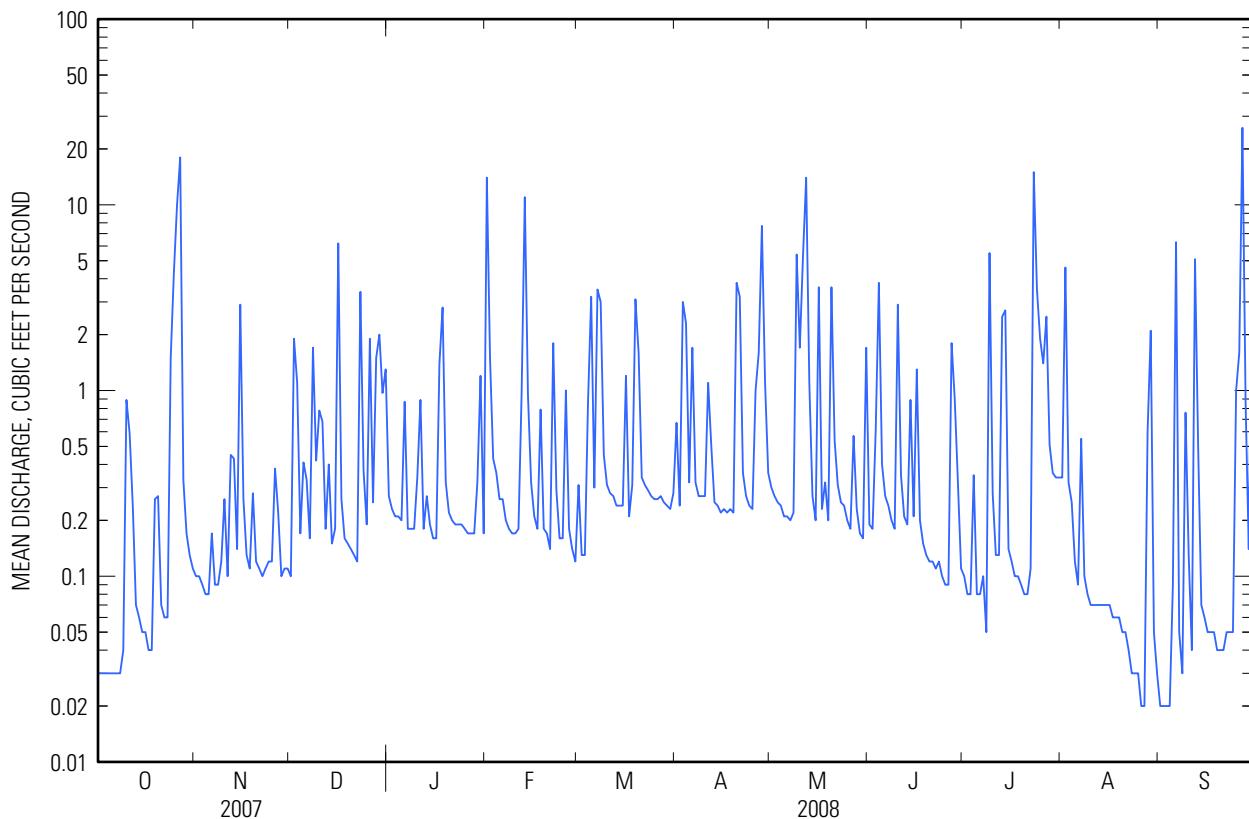
<b>Day</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>1</b>	e0.03	e0.10	0.10	0.27	14	0.31	0.67	0.30	0.19	0.10	e0.34	0.02
<b>2</b>	e0.03	e0.10	1.9	0.23	1.5	0.13	0.24	0.27	0.18	0.08	4.6	0.02
<b>3</b>	e0.03	e0.09	1.1	0.21	0.43	0.13	3.0	0.25	0.61	0.08	0.32	0.02
<b>4</b>	e0.03	e0.08	0.17	0.21	0.36	0.87	2.3	0.24	3.8	0.35	0.25	0.02
<b>5</b>	e0.03	e0.08	0.41	0.20	0.26	3.2	0.32	0.21	0.40	0.08	0.12	0.09
<b>6</b>	e0.03	e0.17	0.33	0.87	0.26	0.30	1.7	0.21	0.27	0.08	0.09	6.3
<b>7</b>	e0.03	e0.09	0.16	0.18	0.20	3.5	0.32	0.20	0.24	0.10	0.55	0.05
<b>8</b>	e0.03	e0.09	1.7	0.18	0.18	3.0	0.27	0.22	0.20	0.05	0.10	0.03
<b>9</b>	e0.04	e0.12	0.42	0.18	0.17	0.45	0.27	5.4	0.18	5.5	0.08	0.76
<b>10</b>	e0.89	e0.26	0.78	0.34	0.17	0.31	0.27	1.7	2.9	0.28	0.07	0.13
<b>11</b>	e0.59	e0.10	0.68	0.89	0.18	0.28	1.1	5.3	0.35	0.13	0.07	0.04
<b>12</b>	e0.24	e0.45	0.18	0.18	0.97	0.27	0.50	14	0.21	0.13	0.07	5.1
<b>13</b>	e0.07	e0.43	0.40	0.27	11	0.24	0.25	1.1	0.19	2.5	0.07	0.49
<b>14</b>	e0.06	e0.14	0.15	0.19	0.95	0.24	0.24	0.27	0.89	2.7	0.07	0.07
<b>15</b>	e0.05	e2.9	0.18	0.16	0.32	0.24	0.22	e0.20	0.21	0.14	0.07	0.06
<b>16</b>	e0.05	e0.26	6.2	0.16	0.21	1.2	0.23	3.6	1.3	0.12	0.07	0.05
<b>17</b>	e0.04	e0.13	0.26	1.4	0.18	0.21	0.22	0.23	0.20	0.10	0.06	0.05
<b>18</b>	e0.04	e0.11	0.16	2.8	0.79	0.31	0.23	0.32	0.15	0.10	0.06	0.05
<b>19</b>	e0.26	e0.28	0.15	0.32	0.18	3.1	0.22	e0.20	0.13	0.09	0.06	0.04
<b>20</b>	e0.27	e0.12	0.14	0.22	0.17	1.6	3.8	3.6	0.12	0.08	0.05	0.04
<b>21</b>	e0.07	e0.11	0.13	e0.20	0.14	0.34	3.2	0.54	0.12	0.08	0.05	0.04
<b>22</b>	e0.06	e0.10	0.12	e0.19	1.8	0.31	0.36	0.31	0.11	0.11	0.04	0.05
<b>23</b>	e0.06	e0.11	3.4	e0.19	0.29	0.29	0.27	0.25	0.12	15	0.03	0.05
<b>24</b>	e1.5	e0.12	0.37	0.19	0.16	0.27	0.24	0.24	0.10	3.5	0.03	0.05
<b>25</b>	e4.3	e0.12	0.19	0.18	0.16	0.26	0.23	0.20	0.09	1.9	0.03	1.0
<b>26</b>	e10	e0.38	1.9	0.17	1.0	0.26	1.0	0.18	0.09	e1.4	0.02	1.6
<b>27</b>	e18	e0.22	0.25	0.17	0.18	0.27	1.6	0.57	1.8	2.5	0.02	26
<b>28</b>	e0.33	0.10	1.5	0.17	0.14	0.25	7.7	0.23	0.90	0.51	0.60	0.86
<b>29</b>	e0.17	0.11	2.0	0.32	0.12	0.24	1.1	0.17	0.32	e0.36	2.1	0.14
<b>30</b>	e0.13	0.11	0.97	1.2	---	0.23	0.36	0.16	0.11	e0.34	0.05	5.5
<b>31</b>	e0.11	---	1.3	0.17	---	0.28	---	1.7	---	e0.34	0.03	---
<b>Total</b>	37.57	7.58	27.70	12.61	36.47	22.89	32.43	42.37	16.48	38.83	10.17	48.72
<b>Mean</b>	1.21	0.25	0.89	0.41	1.26	0.74	1.08	1.37	0.55	1.25	0.33	1.62
<b>Max</b>	18	2.9	6.2	2.8	14	3.5	7.7	14	3.8	15	4.6	26
<b>Min</b>	0.03	0.08	0.10	0.16	0.12	0.13	0.22	0.16	0.09	0.05	0.02	0.02
<b>Cfsm</b>	1.53	0.32	1.13	0.51	1.59	0.93	1.37	1.73	0.70	1.59	0.42	2.06
<b>In.</b>	1.77	0.36	1.30	0.59	1.72	1.08	1.53	2.00	0.78	1.83	0.48	2.29

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEAR 2008, 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>	1.21	0.25	0.89	0.41	1.26	0.74	1.08	1.37	0.55	1.25	0.33	1.62
<b>Max</b>	1.21	0.25	0.89	0.41	1.26	0.74	1.08	1.37	0.55	1.25	0.33	1.62
(WY)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)
<b>Min</b>	1.21	0.25	0.89	0.41	1.26	0.74	1.08	1.37	0.55	1.25	0.33	1.62
(WY)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)

**01589312 DEAD RUN NEAR CATONSVILLE, MD—Continued****SUMMARY STATISTICS**

<b>Water Year 2008</b>		
<b>Annual total</b>	333.82	
<b>Annual mean</b>	0.91	
<b>Highest daily mean</b>	26	Sep 27
<b>Lowest daily mean</b>	0.02	Aug 26 <sup>a</sup>
<b>Annual seven-day minimum</b>	0.03	Oct 1
<b>Maximum peak flow</b>	b704	Jul 23
<b>Maximum peak stage</b>	c7.90	Jul 23
<b>Instantaneous low flow</b>	0.01	Aug 26 <sup>d</sup>
<b>Annual runoff (cfsm)</b>	1.15	
<b>Annual runoff (inches)</b>	15.72	
<b>10 percent exceeds</b>	2.2	
<b>50 percent exceeds</b>	0.22	
<b>90 percent exceeds</b>	0.05	

<sup>a</sup> Aug. 26, 27, Sept. 1-4.<sup>b</sup> From rating curve extended above 15 ft<sup>3</sup>/s on basis of Culvert Type IV measurement of peak flow at gage height 7.90 ft.<sup>c</sup> From floodmarks.<sup>d</sup> Aug. 26, 27, Sept. 3-5.

**01589312 DEAD RUN NEAR CATONSVILLE, MD—Continued**EXTREMES FOR 2009 WATER YEAR--Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s and (or) maximum (\*):

	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
	Jun 3	2145	*218	*4.23
	Aug 28	0220	180	3.82

Minimum discharge, 0.02 ft<sup>3</sup>/s, July 19.

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**  
**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>	0.92	0.18	1.2	0.21	0.60	0.57	0.29	0.67	0.31	0.89	0.08	0.25
<b>2</b>	0.28	0.18	0.21	0.22	0.56	0.74	0.28	0.59	0.30	0.08	0.32	0.25
<b>3</b>	0.20	0.18	0.17	0.21	0.55	0.35	14	5.0	8.0	0.06	0.06	0.24
<b>4</b>	0.18	0.29	0.17	0.21	0.38	0.28	1.3	9.8	2.8	0.06	0.05	0.24
<b>5</b>	0.15	0.28	0.16	0.20	0.35	0.33	0.77	3.7	7.8	0.05	0.06	0.21
<b>6</b>	0.14	0.30	0.17	1.4	0.35	0.36	1.5	4.3	0.45	0.05	0.14	0.21
<b>7</b>	0.13	0.21	0.12	8.8	0.30	0.34	0.52	5.6	0.19	0.05	0.06	0.75
<b>8</b>	0.14	0.23	0.10	0.83	0.38	0.35	0.45	1.3	0.15	0.04	0.06	0.23
<b>9</b>	0.14	0.21	0.10	0.35	0.29	0.31	0.42	0.96	0.83	0.04	0.06	0.19
<b>10</b>	0.14	0.19	1.5	0.53	0.29	0.28	0.39	0.72	0.79	0.04	2.6	0.18
<b>11</b>	0.13	0.18	12	0.68	0.38	0.30	5.7	0.72	0.19	0.05	0.12	11
<b>12</b>	0.14	0.18	2.5	0.27	0.48	0.31	0.69	0.55	0.13	0.05	0.13	0.45
<b>13</b>	0.14	3.3	0.33	0.27	0.31	0.22	0.66	0.49	0.60	0.05	2.0	0.14
<b>14</b>	0.14	0.29	0.22	0.23	0.31	0.20	1.3	1.5	0.48	0.04	0.08	0.12
<b>15</b>	0.14	3.9	0.21	0.21	0.30	0.24	9.7	0.53	0.10	0.03	0.08	0.12
<b>16</b>	0.14	0.31	2.0	e0.21	0.28	0.26	1.6	1.1	0.09	0.03	0.07	0.84
<b>17</b>	0.14	0.19	2.5	e0.20	0.28	0.49	0.81	1.1	0.52	0.04	0.07	0.17
<b>18</b>	0.14	0.17	0.30	e0.22	0.86	0.19	0.64	0.42	3.7	0.04	0.08	0.13
<b>19</b>	0.14	0.15	3.3	e0.24	0.32	0.39	0.57	0.40	0.15	0.03	0.50	0.13
<b>20</b>	0.12	0.14	0.47	e0.21	0.27	0.18	17	0.39	1.3	0.03	0.07	0.13
<b>21</b>	0.12	0.14	0.37	e0.20	0.24	0.15	4.4	0.35	0.12	0.04	1.9	0.13
<b>22</b>	0.12	0.14	0.22	e0.20	0.28	0.15	1.7	0.30	0.10	1.2	2.0	0.14
<b>23</b>	0.12	0.14	0.18	e0.20	0.23	0.16	0.88	0.29	0.09	1.4	0.12	0.14
<b>24</b>	0.12	0.42	0.21	e0.21	0.22	0.15	0.64	0.29	0.08	0.34	0.07	0.16
<b>25</b>	4.1	0.40	0.20	e0.20	0.19	0.15	0.61	2.3	0.08	1.1	0.06	0.18
<b>26</b>	0.21	0.11	0.18	e0.20	0.20	1.7	0.56	6.8	0.08	0.07	0.04	4.4
<b>27</b>	0.47	0.10	0.48	e0.26	0.33	0.71	0.53	0.67	0.07	0.05	0.04	2.5
<b>28</b>	2.0	0.09	0.23	2.0	0.42	4.3	0.49	1.4	0.07	0.05	4.6	0.76
<b>29</b>	0.67	0.12	0.20	0.97	---	1.5	1.2	4.8	0.07	0.09	1.4	0.13
<b>30</b>	0.15	3.3	0.20	0.50	---	0.38	0.44	0.72	1.4	0.09	0.36	0.11
<b>31</b>	0.16	---	0.21	0.31	---	0.31	---	0.94	---	2.1	0.29	---
<b>Total</b>	12.03	16.02	30.41	20.95	9.95	16.35	70.04	58.70	31.04	8.28	17.57	24.63
<b>Mean</b>	0.39	0.53	0.98	0.68	0.36	0.53	2.33	1.89	1.03	0.27	0.57	0.82
<b>Max</b>	4.1	3.9	12	8.8	0.86	4.3	17	9.8	8.0	2.1	4.6	11
<b>Min</b>	0.12	0.09	0.10	0.20	0.19	0.15	0.28	0.29	0.07	0.03	0.04	0.11
<b>Cfsm</b>	0.49	0.68	1.24	0.86	0.45	0.67	2.96	2.40	1.31	0.34	0.72	1.04
<b>In.</b>	0.57	0.75	1.43	0.99	0.47	0.77	3.30	2.76	1.46	0.39	0.83	1.16

## 01589312 DEAD RUN NEAR CATONSVILLE, MD—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2008 - 2009, BY WATER YEAR (WY)

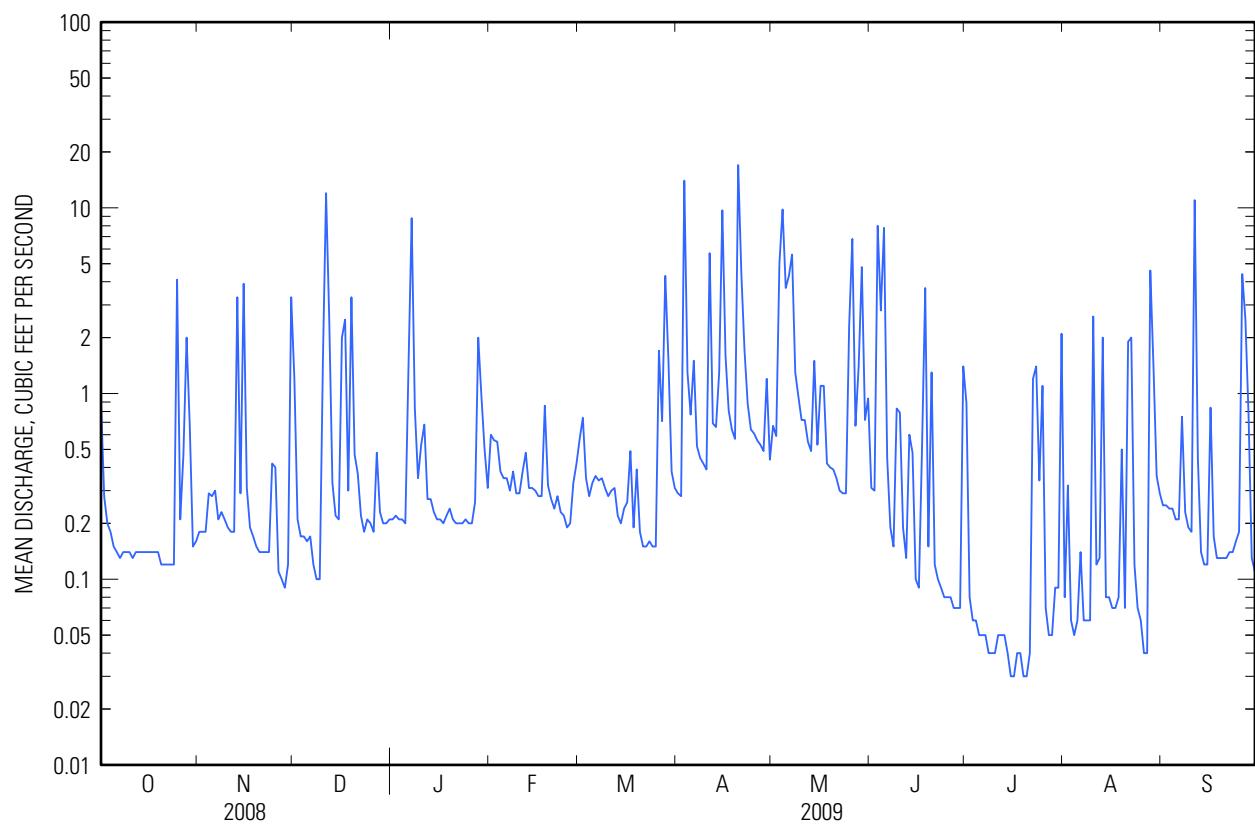
	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	0.80	0.39	0.94	0.54	0.81	0.63	1.71	1.63	0.79	0.76	0.45	1.22
<b>Max</b>	1.21	0.53	0.98	0.68	1.26	0.74	2.33	1.89	1.03	1.25	0.57	1.62
(WY)	(2008)	(2009)	(2009)	(2009)	(2008)	(2008)	(2009)	(2009)	(2009)	(2008)	(2009)	(2008)
<b>Min</b>	0.39	0.25	0.89	0.41	0.36	0.53	1.08	1.37	0.55	0.27	0.33	0.82
(WY)	(2009)	(2008)	(2008)	(2008)	(2009)	(2009)	(2008)	(2008)	(2008)	(2009)	(2008)	(2009)

## SUMMARY STATISTICS

	<b>Calendar Year 2008</b>		<b>Water Year 2009</b>		<b>Water Years 2008 - 2009</b>	
<b>Annual total</b>	319.43		315.97			
<b>Annual mean</b>	0.87		0.87		0.89	
<b>Highest annual mean</b>					0.91	2008
<b>Lowest annual mean</b>					0.87	2009
<b>Highest daily mean</b>	26	Sep 27	17	Apr 20 <sup>b</sup>	26	Sep 27, 2008
<b>Lowest daily mean</b>	0.02	Aug 26 <sup>a</sup>	0.03	Jul 15 <sup>b</sup>	0.02	Aug 26, 2008 <sup>a</sup>
<b>Annual seven-day minimum</b>	0.03	Aug 21	0.03	Jul 14	0.03	Oct 1, 2007
<b>Maximum peak flow</b>			c218	Jun 3	c704	Jul 23, 2008
<b>Maximum peak stage</b>			4.23	Jun 3	d7.90	Jul 23, 2008
<b>Instantaneous low flow</b>			0.02	Jul 19	0.01	Aug 26, 2008 <sup>f</sup>
<b>Annual runoff (cfsm)</b>	1.10		1.10		1.13	
<b>Annual runoff (inches)</b>	15.04		14.88		15.29	
<b>10 percent exceeds</b>	2.5		2.0		2.0	
<b>50 percent exceeds</b>	0.21		0.26		0.23	
<b>90 percent exceeds</b>	0.07		0.07		0.06	

<sup>a</sup> Aug. 26, 27, Sept. 1-4, 2008.<sup>b</sup> July 15, 16, 19, 20.<sup>c</sup> From rating curve extended above 15 ft<sup>3</sup>/s on basis of Culvert Type IV measurement of peak flow at gage height 7.90 ft.<sup>d</sup> From floodmarks.<sup>f</sup> Aug. 26, 27, Sept. 3-5, 2008.

**01589312 DEAD RUN NEAR CATONSVILLE, MD—Continued**



**01589312 DEAD RUN NEAR CATONSVILLE, MD—Continued**

EXTREMES FOR 2010 WATER YEAR--Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s and (or) maximum (\*):

		Discharge (ft <sup>3</sup> /s)	Gage height (ft)
	Date	Time	
	Mar 13	1130	244
	Jul 13	2330	178
	Jul 29	1240	*467
	Sep 30	0430	207
			4.49
			3.80
			*6.33
			4.12

Minimum discharge, 0.01 ft<sup>3</sup>/s, June 25-27, 29, 30, July 1-5.

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**  
**DAILY MEAN VALUES**  
[*e*, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.11	2.2	0.46	1.3	0.37	1.6	0.32	0.19	0.08	0.02	0.22	0.08
2	0.12	0.57	3.2	0.55	0.39	1.4	0.31	0.19	0.14	0.01	0.57	0.07
3	0.13	0.50	3.8	0.47	0.73	1.8	0.31	1.2	0.05	0.01	0.18	0.09
4	0.11	0.51	0.47	0.44	0.44	1.2	0.28	0.18	0.05	0.01	0.32	0.07
5	0.11	0.53	2.5	0.41	0.61	0.96	0.25	0.16	0.05	0.01	0.17	0.07
6	0.12	0.53	0.77	0.38	e0.58	0.81	0.25	0.17	0.22	0.02	0.18	0.06
7	0.12	0.50	0.55	0.38	e0.57	0.81	0.24	0.16	0.04	0.03	0.17	0.06
8	0.10	0.49	0.74	0.43	e0.56	0.79	2.1	0.16	0.04	0.02	0.16	0.06
9	0.13	0.50	14	0.37	0.51	0.73	0.89	0.16	0.71	0.02	0.19	0.05
10	0.10	0.49	0.64	0.35	0.65	0.67	0.20	0.15	0.06	1.3	0.18	0.06
11	0.10	2.1	0.43	0.34	0.81	0.74	0.20	1.0	0.04	0.03	0.17	0.06
12	0.10	3.7	0.38	0.36	0.69	7.3	0.20	0.95	0.04	5.6	5.2	2.4
13	0.11	2.3	5.3	0.35	0.58	35	0.25	0.16	0.04	6.3	2.3	0.09
14	0.10	1.2	0.68	0.35	e0.55	3.3	0.18	1.8	0.03	5.4	0.16	0.08
15	3.1	0.57	0.52	0.38	0.53	1.1	0.19	0.15	0.04	0.24	3.3	0.08
16	1.9	0.51	0.46	0.38	e0.52	0.65	0.19	0.12	0.62	0.14	0.21	0.16
17	11	0.48	0.44	5.8	0.50	0.52	0.18	0.25	0.04	0.14	0.15	0.38
18	6.6	0.55	0.42	0.87	0.88	0.49	0.18	1.0	0.03	0.24	2.3	0.08
19	0.35	3.5	0.94	0.50	1.2	0.46	0.18	0.13	0.03	0.32	0.15	0.07
20	0.24	2.9	0.63	0.43	1.1	0.43	0.18	0.12	0.03	3.9	0.12	0.07
21	0.24	0.54	e0.58	0.41	1.3	0.42	0.90	0.11	0.03	0.35	0.11	0.07
22	0.20	0.47	0.54	0.81	2.8	2.5	0.18	0.16	0.03	0.22	0.25	0.08
23	0.22	1.2	0.37	0.39	4.1	0.41	0.17	0.73	0.02	0.14	0.09	0.07
24	1.7	5.6	0.34	1.9	3.1	0.40	0.17	0.14	0.02	0.13	0.09	0.07
25	0.26	1.7	6.3	6.3	1.7	0.44	8.9	0.11	0.02	1.3	0.09	0.07
26	0.21	0.67	19	0.62	1.1	2.9	3.1	0.10	0.02	0.09	0.08	0.50
27	4.3	0.62	1.4	0.48	1.0	0.37	0.40	1.1	0.02	0.09	0.08	2.9
28	9.9	0.51	0.75	0.44	1.2	2.3	0.28	2.2	0.49	0.08	0.08	0.22
29	0.69	0.47	0.58	0.39	---	1.1	0.25	0.07	0.02	8.0	0.08	0.15
30	0.58	1.1	0.50	0.39	---	1.1	0.20	0.06	0.02	0.30	0.09	23
31	0.58	---	1.4	0.44	---	0.38	---	0.05	---	0.20	0.08	---
<b>Total</b>	43.63	37.51	69.09	27.41	29.07	73.08	21.63	13.23	3.07	34.66	17.52	31.27
<b>Mean</b>	1.41	1.25	2.23	0.88	1.04	2.36	0.72	0.43	0.10	1.12	0.57	1.04
<b>Max</b>	11	5.6	19	6.3	4.1	35	8.9	2.2	0.71	8.0	5.2	23
<b>Min</b>	0.10	0.47	0.34	0.34	0.37	0.37	0.17	0.05	0.02	0.01	0.08	0.05
<b>Cfsm</b>	1.78	1.58	2.82	1.12	1.31	2.98	0.91	0.54	0.13	1.42	0.72	1.32
<b>In.</b>	2.05	1.77	3.25	1.29	1.37	3.44	1.02	0.62	0.14	1.63	0.82	1.47

**01589312 DEAD RUN NEAR CATONSVILLE, MD—Continued****STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2008 - 2010, BY WATER YEAR (WY)**

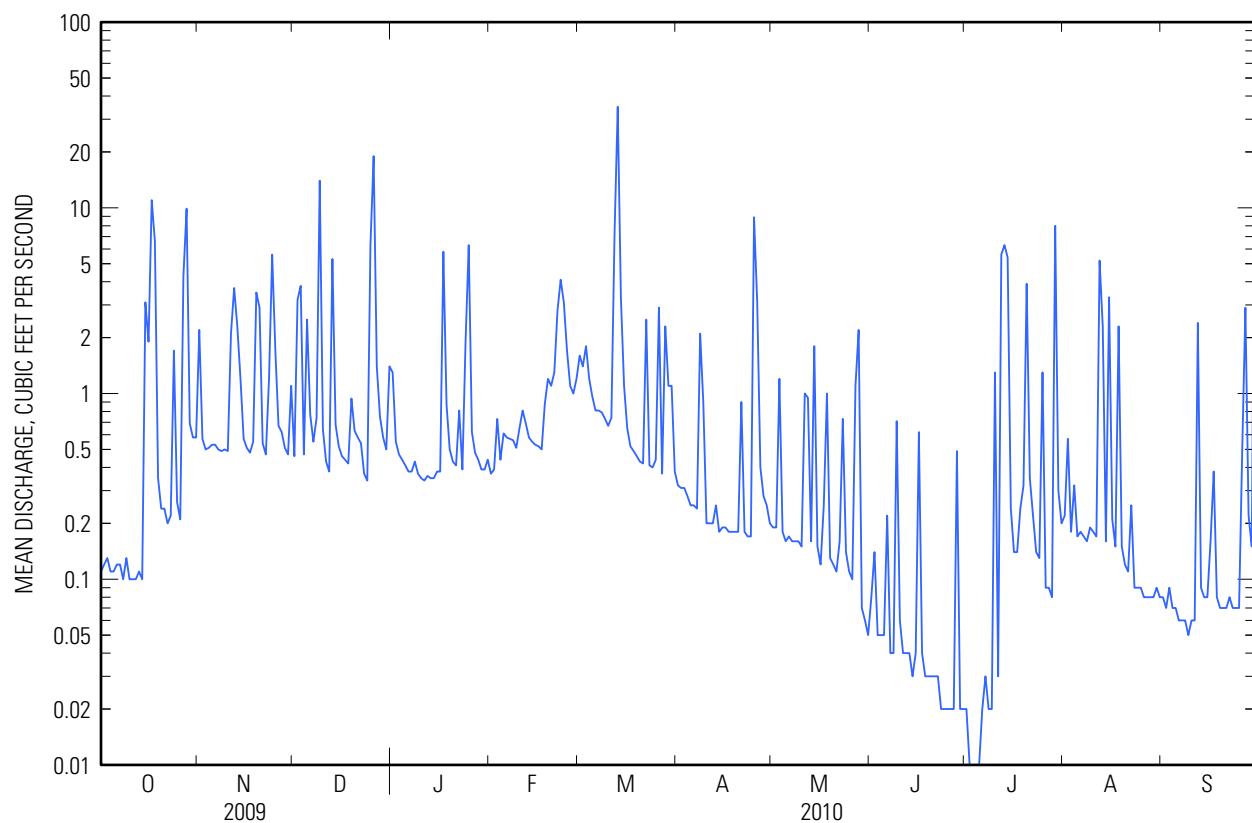
	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	1.00	0.68	1.37	0.66	0.89	1.21	1.38	1.23	0.56	0.88	0.49	1.16
<b>Max</b>	1.41	1.25	2.23	0.88	1.26	2.36	2.33	1.89	1.03	1.25	0.57	1.62
(WY)	(2010)	(2010)	(2010)	(2010)	(2008)	(2010)	(2009)	(2009)	(2009)	(2008)	(2009)	(2008)
<b>Min</b>	0.39	0.25	0.89	0.41	0.36	0.53	0.72	0.43	0.10	0.27	0.33	0.82
(WY)	(2009)	(2008)	(2008)	(2008)	(2009)	(2009)	(2010)	(2010)	(2010)	(2009)	(2008)	(2009)

**SUMMARY STATISTICS**

	<b>Calendar Year 2009</b>		<b>Water Year 2010</b>		<b>Water Years 2008 - 2010</b>	
<b>Annual total</b>	407.74		401.17			
<b>Annual mean</b>	1.12		1.10		0.96	
<b>Highest annual mean</b>					1.10	
<b>Lowest annual mean</b>					0.87	
<b>Highest daily mean</b>	19	Dec 26	35	Mar 13	35	Mar 13, 2010
<b>Lowest daily mean</b>	0.03	Jul 15 <sup>a</sup>	0.01	Jul 2 <sup>b</sup>	0.01	Jul 2, 2010 <sup>b</sup>
<b>Annual seven-day minimum</b>	0.03	Jul 14	0.01	Jun 29	0.01	Jun 29, 2010
<b>Maximum peak flow</b>			c467	Jul 29	c704	Jul 23, 2008
<b>Maximum peak stage</b>				6.33	Jul 29	d7.90 Jul 23, 2008
<b>Instantaneous low flow</b>				0.01	Jun 25 <sup>f</sup>	0.01 Aug 26, 2008 <sup>g</sup>
<b>Annual runoff (cfsm)</b>	1.41		1.39		1.21	
<b>Annual runoff (inches)</b>	19.20		18.89		16.49	
<b>10 percent exceeds</b>	2.7		2.5		2.3	
<b>50 percent exceeds</b>	0.36		0.38		0.25	
<b>90 percent exceeds</b>	0.07		0.06		0.06	

<sup>a</sup> July 15, 16, 19, 20.<sup>b</sup> July 2-5.<sup>c</sup> From rating curve extended above 15 ft<sup>3</sup>/s on basis of Culvert Type IV measurement of peak flow at gage height 7.90 ft.<sup>d</sup> From floodmarks.<sup>f</sup> June 25-27, 29, 30, July 1-5.<sup>g</sup> Aug. 26, 27, Sept. 3-5, 2008, June 25-27, 29, 30, July 1-5, 2010.

**01589312 DEAD RUN NEAR CATONSVILLE, MD—Continued**



**01589312 DEAD RUN NEAR CATONSVILLE, MD—Continued**EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s and (or) maximum (\*):

		Discharge (ft <sup>3</sup> /s)	Gage height (ft)
	Date	Time	
	Jun 10	1810	434 6.09
	Aug 14	0915	365 5.56
	Aug 21	1415	185 3.88
	Sep 7	1125	*772 *8.30

Minimum discharge, 0.02 ft<sup>3</sup>/s, July 24, 31, Aug. 1.

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

<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>	2.5	0.15	4.8	0.16	0.29	0.52	0.83	0.27	0.14	0.07	0.30	1.5
<b>2</b>	0.30	0.14	0.26	0.23	7.6	0.40	0.21	0.16	0.14	0.07	0.33	2.0
<b>3</b>	1.3	0.15	0.20	0.15	0.84	0.34	0.25	0.16	0.14	1.1	1.7	1.4
<b>4</b>	3.4	6.0	0.17	0.14	0.49	0.31	0.19	3.5	0.14	0.08	0.29	1.4
<b>5</b>	0.32	0.37	0.17	0.14	2.1	0.32	2.0	0.17	0.15	0.07	0.05	4.2
<b>6</b>	0.25	0.23	0.16	0.14	1.4	5.8	0.22	0.21	0.14	0.07	3.2	9.3
<b>7</b>	0.20	0.19	0.15	0.14	0.99	1.1	0.21	0.16	0.14	1.8	1.5	61
<b>8</b>	0.19	0.19	0.16	0.15	0.89	0.42	2.5	0.15	0.14	1.1	0.11	14
<b>9</b>	0.20	0.18	0.15	0.14	0.41	0.36	0.26	0.14	0.14	0.09	0.13	3.8
<b>10</b>	0.18	0.17	0.15	0.14	0.35	28	0.22	0.14	7.7	0.07	0.08	0.67
<b>11</b>	0.18	0.17	0.16	0.14	0.33	1.6	0.22	0.14	1.1	0.16	0.08	0.76
<b>12</b>	0.17	0.16	7.1	0.23	0.31	0.30	1.3	0.14	2.3	0.09	0.07	0.37
<b>13</b>	0.17	0.16	0.41	0.16	0.34	0.21	1.6	0.15	0.14	0.14	1.3	0.25
<b>14</b>	5.6	0.16	0.21	0.15	0.89	0.17	0.25	2.2	0.11	0.06	14	0.22
<b>15</b>	0.23	0.17	0.18	0.16	0.38	0.49	0.22	2.8	0.10	0.05	3.2	0.30
<b>16</b>	0.19	1.3	0.18	0.16	0.35	2.8	7.7	0.21	0.13	0.05	0.35	0.18
<b>17</b>	0.17	1.6	0.20	0.15	0.42	0.20	0.77	0.46	0.12	0.06	0.28	0.18
<b>18</b>	0.18	0.21	0.15	1.7	0.43	0.19	0.28	2.6	0.15	0.06	0.27	0.17
<b>19</b>	1.4	0.20	0.15	0.72	0.34	0.16	1.9	0.92	0.14	0.06	0.26	0.18
<b>20</b>	0.18	0.17	0.15	0.24	0.31	0.15	0.29	0.21	0.17	0.06	0.25	0.20
<b>21</b>	0.15	0.17	0.16	0.37	0.34	0.98	0.23	0.17	0.19	0.06	7.8	0.18
<b>22</b>	0.14	0.17	0.15	0.21	1.1	0.16	0.78	0.15	0.10	0.05	0.76	1.9
<b>23</b>	0.14	0.18	0.15	0.23	0.52	1.5	1.0	0.15	0.10	0.19	0.59	6.5
<b>24</b>	0.15	0.17	0.16	0.21	0.88	0.24	3.2	0.17	0.10	0.04	0.57	0.48
<b>25</b>	0.16	0.19	0.15	0.20	7.6	0.15	0.40	0.17	0.09	2.2	1.1	0.32
<b>26</b>	0.15	0.17	0.15	2.1	1.2	0.14	0.25	0.16	0.09	0.06	0.58	0.29
<b>27</b>	2.8	0.16	0.15	2.6	0.96	0.13	0.42	0.33	0.09	0.04	13	0.28
<b>28</b>	0.22	0.15	0.15	0.61	3.6	0.13	1.1	0.16	0.10	0.04	13	1.9
<b>29</b>	0.17	0.15	0.15	0.33	---	0.12	0.20	0.16	0.08	0.04	2.0	0.36
<b>30</b>	0.16	0.94	0.15	0.30	---	0.33	0.19	0.14	0.10	0.04	1.6	0.25
<b>31</b>	0.16	---	0.15	0.25	---	0.26	---	0.15	---	0.04	1.5	---
<b>Total</b>	21.71	14.52	16.93	12.75	35.66	47.98	29.19	16.80	14.47	8.11	70.25	114.54
<b>Mean</b>	0.70	0.48	0.55	0.41	1.27	1.55	0.97	0.54	0.48	0.26	2.27	3.82
<b>Max</b>	5.6	6.0	7.1	2.6	7.6	28	7.7	3.5	7.7	2.2	14	61
<b>Min</b>	0.14	0.14	0.15	0.14	0.29	0.12	0.19	0.14	0.08	0.04	0.05	0.17
<b>Cfsm</b>	0.89	0.61	0.69	0.52	1.61	1.96	1.23	0.69	0.61	0.33	2.87	4.83
<b>In.</b>	1.02	0.68	0.80	0.60	1.68	2.26	1.37	0.79	0.68	0.38	3.31	5.39

**01589312 DEAD RUN NEAR CATONSVILLE, MD—Continued****STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2008 - 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>	0.93	0.63	1.16	0.59	0.98	1.29	1.28	1.06	0.54	0.72	0.93	1.83
<b>Max</b>	1.41	1.25	2.23	0.88	1.27	2.36	2.33	1.89	1.03	1.25	2.27	3.82
(WY)	(2010)	(2010)	(2010)	(2010)	(2011)	(2010)	(2009)	(2009)	(2009)	(2008)	(2011)	(2011)
<b>Min</b>	0.39	0.25	0.55	0.41	0.36	0.53	0.72	0.43	0.10	0.26	0.33	0.82
(WY)	(2009)	(2008)	(2011)	(2008)	(2009)	(2009)	(2010)	(2010)	(2010)	(2011)	(2008)	(2009)

**SUMMARY STATISTICS**

	<b>Calendar Year 2010</b>		<b>Water Year 2011</b>		<b>Water Years 2008 - 2011</b>		
<b>Annual total</b>	304.10		402.91				
<b>Annual mean</b>	0.83		1.10		1.00		
<b>Highest annual mean</b>					1.10		
<b>Lowest annual mean</b>					0.87		
<b>Highest daily mean</b>	35	Mar 13	61	Sep 7	61	Sep 7, 2011	
<b>Lowest daily mean</b>	0.01	Jul 2 <sup>a</sup>	0.04	Jul 24 <sup>b</sup>	0.01	Jul 2, 2010 <sup>a</sup>	
<b>Annual seven-day minimum</b>	0.01	Jun 29	0.06	Jul 14	0.01	Jun 29, 2010	
<b>Maximum peak flow</b>			c772	Sep 7	c772	Sep 7, 2011	
<b>Maximum peak stage</b>				8.30 Sep 7	8.30	Sep 7, 2011	
<b>Instantaneous low flow</b>				0.02 Jul 24 <sup>d</sup>	0.01	Aug 26, 2008 <sup>f</sup>	
<b>Annual runoff (cfsm)</b>	1.05		1.40		1.26		
<b>Annual runoff (inches)</b>	14.32		18.97		17.11		
<b>10 percent exceeds</b>	1.8		2.1		2.2		
<b>50 percent exceeds</b>	0.19		0.20		0.24		
<b>90 percent exceeds</b>	0.06		0.10		0.07		

<sup>a</sup> July 2-5, 2010.<sup>b</sup> July 24, 27-31.<sup>c</sup> From rating curve extended above 15 ft<sup>3</sup>/s on basis of Culvert Type IV measurement of peak flow at gage height 7.90 ft.<sup>d</sup> July 24, 31, Aug. 1.<sup>f</sup> Aug. 26, 27, Sept. 3-5, 2008, June 25-27, 29, 30, July 1-5, 2010.

**01589312 DEAD RUN NEAR CATONSVILLE, MD—Continued**

