



Water-Data Report 2011

01581649 JAMES RUN NEAR BELCAMP, MD

Upper Chesapeake Basin
Gunpowder-Patapsco Subbasin

LOCATION.--Lat 39°29'31.9", long 76°15'32.8" referenced to North American Datum of 1983, Harford County, MD, Hydrologic Unit 02060003, on downstream side of bridge on MD Route 543, 1.5 miles northwest of Belcamp, and 1.8 miles upstream from confluence with Bynum Run.

DRAINAGE AREA.--9.15 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 2004 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.-- Records good except those above 125 ft³/s, which are fair, and those for estimated daily discharges (ice effect), which are poor. Occasional regulation at low flow from unknown sources upstream from station. 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 1,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 1	0030	2,440	7.34
Aug 28	0200	*2,510	*7.40
Sep 6	1815	1,110	5.95
Sep 7	2045	1,470	6.41
Sep 8	0815	1,810	6.77

Minimum discharge, 0.96 ft³/s, July 27, 28.

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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	376	3.7	117	4.2	5.5	16	16	7.9	3.8	2.9	1.7	7.6
2	11	3.8	18	4.7	72	9.9	13	7.6	3.8	1.8	1.8	7.4
3	7.1	2.9	9.3	4.4	34	8.1	10	7.6	3.8	2.2	1.8	7.7
4	11	26	7.6	4.1	13	7.5	9.1	33	4.2	2.3	1.7	7.7
5	11	16	6.6	4.0	14	7.3	17	14	5.0	2.4	1.5	23
6	6.9	6.1	e5.8	3.9	26	119	13	10	4.7	2.4	1.6	330
7	6.0	4.8	e5.2	e3.8	20	94	9.2	10	4.1	3.9	2.6	461
8	5.7	4.0	e4.7	e3.6	20	17	23	8.3	3.2	49	2.8	341
9	5.8	3.2	e4.3	e3.5	13	12	31	7.9	2.8	15	2.5	36
10	5.2	3.1	4.0	e3.4	8.9	385	14	7.0	2.3	5.5	1.5	26
11	4.6	3.0	3.8	e3.4	e7.5	95	13	5.4	2.5	4.0	1.2	27
12	4.1	3.5	64	e3.6	e7.1	29	18	4.7	42	3.4	1.2	19
13	4.7	4.0	38	e3.5	7.4	20	31	6.1	13	3.1	2.9	14
14	8.8	4.3	10	e3.5	28	17	18	6.8	5.3	2.1	79	12
15	8.5	3.6	7.5	e3.6	20	13	14	8.4	3.8	2.6	8.1	11
16	5.6	2.9	6.5	3.8	10	59	146	8.7	4.0	2.1	5.1	10
17	5.0	3.7	5.5	4.0	11	20	82	6.9	7.8	2.2	3.5	10
18	4.7	3.9	e5.1	e7.3	13	17	22	6.4	5.8	2.2	3.7	10
19	6.2	4.1	e4.8	15	9.7	14	20	14	4.9	2.1	7.0	11
20	5.8	4.3	e4.6	13	7.4	12	24	16	3.9	1.4	6.8	11
21	5.1	4.2	4.6	8.5	7.1	16	14	11	3.3	1.3	5.1	12
22	4.6	4.3	4.5	6.3	7.8	13	12	7.9	7.3	1.6	4.0	15
23	3.5	4.7	4.4	e5.4	e7.2	31	16	6.3	4.6	1.6	2.9	181
24	3.5	4.3	4.2	e4.8	7.3	43	18	5.3	3.5	1.6	2.0	44
25	3.9	3.8	e4.2	e4.9	110	18	14	4.9	3.1	1.8	8.1	16
26	4.7	4.2	e4.1	6.1	22	14	11	4.5	2.8	2.1	6.5	12
27	7.5	4.1	e4.0	11	12	12	10	4.8	2.5	1.1	120	11
28	7.8	3.9	4.0	8.2	20	10	11	5.1	2.7	1.2	492	9.6
29	5.3	3.7	4.0	6.9	---	9.8	10	4.9	3.0	1.6	18	28
30	3.9	3.5	4.0	6.1	---	10	8.3	4.6	3.0	1.4	11	9.8
31	3.8	---	4.1	5.7	---	9.9	---	4.5	---	1.4	8.4	---
Mean	18.0	5.05	12.2	5.62	19.3	37.4	22.3	8.40	5.55	4.17	26.3	57.4
Max	376	26	117	15	110	385	146	33	42	49	492	461
Min	3.5	2.9	3.8	3.4	5.5	7.3	8.3	4.5	2.3	1.1	1.2	7.4
Cfsm	1.96	0.55	1.33	0.61	2.11	4.08	2.43	0.92	0.61	0.46	2.88	6.27
In.	2.27	0.62	1.54	0.71	2.20	4.71	2.71	1.06	0.68	0.53	3.32	7.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2005 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	19.4	14.0	23.9	15.4	16.6	24.3	19.2	9.50	13.2	9.13	8.54	18.8
Max	54.2	30.8	73.2	24.2	23.7	50.1	28.7	18.7	55.2	28.8	26.3	57.4
(WY)	(2006)	(2007)	(2010)	(2010)	(2010)	(2010)	(2005)	(2009)	(2006)	(2006)	(2011)	(2011)
Min	2.70	3.59	12.2	5.62	6.45	6.10	9.41	5.31	2.69	2.07	1.87	0.91
(WY)	(2009)	(2008)	(2011)	(2011)	(2009)	(2006)	(2008)	(2006)	(2006)	(2007)	(2008)	(2007)

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	Calendar Year 2010		Water Year 2011		Water Years 2005 - 2011	
Annual mean		14.8		18.4		16.0
Highest annual mean						22.6
Lowest annual mean						8.71
Highest daily mean	399	Mar 13 ^a	492	Aug 28	e800	Oct 8, 2005
Lowest daily mean	0.73	Sep 10	1.1	Jul 27	0.53	Sep 29, 2007
Annual seven-day minimum	0.92	Sep 9	1.5	Jul 27	0.58	Sep 28, 2007
Maximum peak flow			b2,510	Aug 28	b2,510	Aug 28, 2011
Maximum peak stage				7.40	Aug 28	7.40
Instantaneous low flow				0.96	Jul 27 ^c	0.50
Annual runoff (cfsm)		1.62		2.01		1.75
Annual runoff (inches)		21.97		27.33		23.76
10 percent exceeds		27		26		25
50 percent exceeds		5.2		6.4		6.5
90 percent exceeds		1.6		2.6		2.0

^a March 13, Sept. 30.^e Estimated.^b From rating curve extended above 400 ft³/s on basis of slope-area measurement at gage height of 7.34 ft.^c July 27, 28.^d Sept. 29, Oct. 7, 2007.