

**Internal Only****01583580 BAISMAN RUN AT  
BROADMOOR, MD****Responsible Office**

U.S. Geological Survey  
**BALTIMORE**  
8987 Yellow Brick Road  
Baltimore, MD 21237  
410-238-4200

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## Station Description

**Most recent revision:** 6/21/2007

**Revised by:** jpsulliv

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**LOCATION.**--Lat 39°28'46.1", long 76°40'40.9" referenced to North American Datum of 1983, Baltimore County, MD, Hydrologic Unit 02060003, on right bank at upstream side of bridge on Ivy Hill Road, 0.3 mi upstream from mouth, 0.6 mi southwest of Broadmoor, and 1.8 mi west of Cockeysville.

**ROAD LOG.**--Gaging station may be reached from intersection of I-83 and Shawan Road at Hunt Valley as follows:

Proceed westbound on Shawan Road 1.0 mile to the intersection of Shawan Road and Beaver Dam Road.

Turn left on Beaverdam Road and proceed 1.05 miles to the intersection of Beaver Dam Road and Ivy Hill

Road.

Turn right on Ivy Hill Road and proceed 0.55 mile to gage on right. Park vehicle in shoulder area on opposite

side of road.

See map for route to gage.

**DRAINAGE AREA.**--1.47 mi<sup>2</sup>.

**ESTABLISHMENT AND HISTORY.**--August 1, 1964. Continuous-record station discontinued at end of water year 1969. Station operated as crest-stage partial-record station during water years 1970-76. Station re-established for partial-record stage-discharge measurements on July 10, 1998 at new datum, 200 feet downstream of bridge. Continuous-record station re-established at previous location and datum, November 1, 1999.

Continuous-record streamflow-gaging station operated in same location at same datum from August 1, 1964 to September 30, 1969. Operated as a crest-stage partial-record station during water years 1970-76. Station re-established for partial-record stage-discharge measurements July 1998--October 1999 at new datum, 200 feet downstream of bridge. Station 01583575, Baisman Run at Shawan, Md., drainage area of 0.15 mi<sup>2</sup>, was operated during 1964-66, as part of a study to evaluate the sediment budget in a small watershed with emphasis on sediment yield and delivery rate.

**GAGE.**--Elevation of gage is 330 ft above National Geodetic Vertical Datum of 1929, from topographic map.

3 ft. by 3 ft. by 1 ft. galvanized, rainproof, electrical pull box mounted to pair of 4" by 4" pressure-treated lumber posts at right, upstream wingwall of bridge. Posts are anchored to the right upstream wingwall at the base.

A gas purge line is carried down to the base of the right bank in 2" PVC pipe and attached to the concrete along the right, upstream wingwall. The line is carried along the downstream side of the concrete control at the upstream side of the bridge opening, below the level of the notch. The line is carried out along the downstream face of the control to the center of the channel in 2" PVC pipe. The line is then carried up and over the top of the control and down to a standard 2" galvanized orifice fitting in the pooled area on the upstream side of the control.

| Pertinent elevations:                    | Gage Height (feet) |
|--|--------------------|
| Bottom of gage shelter (streamward side) | 10.054             |
| Top of gage shelter (streamward side)    | 13.034             |

**CONTROL.**--Channel is relatively straight for about 150 feet above the gage and then curves to the left. The downstream channel is relatively straight for about 250 feet and then curves to the right. The right bank is relatively steep upstream and not subject to overflow. Left bank will overflow at about 5 feet. Streambed is composed of sand, gravel, and small/medium rocks that are subject to slight shifting.

Low stage control is notch of aluminum weir plate bolted to concrete notch at upstream side of bridge opening. Medium and high stage control is crest of concrete control on upstream side of bridge opening. The bridge becomes the control at extremely high stages.

**DISCHARGE MEASUREMENTS.**--For low and medium stages, good wading measurements can be made approximately 200 feet downstream of the bridge, in the vicinity of the staff gage used for partial-record stage-discharge measurements. High water measurements can be made from the downstream side of the bridge at the gage. Fair to good measurements should be obtained at all stages.

**FLOODS.**--Flood of June 22, 1972 reached a gage height of 6.08 feet (from USGS flood mark on crest-stage gage). Flood of September 10, 1968 reached a gage height of 5.43 feet (from USGS flood marks).

**POINT OF ZERO FLOW.**--0.94 feet, gage datum (based on levels from 04/29/04)

**WINTER FLOW.**--Stage-discharge relation affected by ice during extended cold periods.

**REGULATION AND DIVERSIONS.**--Occasional regulation by pond above station

Diversion - None

**ACCURACY.**--Good records should be obtained

**COOPERATION.**--Small Watersheds Research Program (U.S. Geological Survey/Maryland Geological Survey)

**REFERENCE MARKS.**-- RM = Reference Mark RP = Reference Point BM = Bench Mark

RM-1 (1964)--destroyed during bridge replacement, August 1998.

RM-2 (1964)--Spike with washers in root of 18" poplar tree, 50 feet shoreward and 10 feet downstream from downstream edge of bridge on left bank. Elevation 4.579 ft, gage datum.

RM-3 (1964)--destroyed during bridge replacement, August 1998.

RM-4 (1998, Basic)--Lag bolt in base of downstream end of phone pole (C+P 1) on left overbank, 39 feet shoreward of left bank and 8 feet upstream of road. Elevation 6.481 ft, gage datum.

RM-5 (1998)--Lag bolt in landward side of tree on left overbank, 70 feet shoreward of left bank and 26 feet upstream of road. Elevation 8.062 ft, gage datum.

RM-6 (1998)--Lag bolt in shoreward side of phone pole (C + P 12) on left overbank, 42 feet downstream of downstream end of bridge and roadway. Elevation 5.295 ft, gage datum.

RM-7 (1998)--Downstream streamward corner of brick monument (housing for residential mail box) at edge of roadway on downstream right overbank. Elevation 10.580 ft, gage datum.

RM-8 (1998)--Lag bolt in streamward face of 20" tree on right, downstream overbank, 8 feet shoreward of right bank and 50 feet downstream of rear of house. Elevation 0.876 ft, gage datum.

RM-9 (1999)--Chiseled square in top center of upstream concrete bridge parapet, 9.5 feet streamward of left abutment. Elevation 8.844 ft, gage datum.

RM-10 (1999)--Chiseled square on top of left, downstream corner of bridge parapet at connection to left downstream wingwall. Elevation 8.866 ft, gage datum.

RM-11 (2007)--Bolt in side of OSSP at 4.00 mark. Elevation 4.016 at datum.

RP-1 (1964)--destroyed during bridge replacement, August, 1998.

Datum of staff gage on downstream, left bank 200 ft below bridge = gage datum minus 4.697 feet.

**PHOTOGRAPHS.**--See station files.

**DESCRIPTION OF EQUIPMENT.**--Design Analysis Water Log H350/355 non-submersible pressure transducer and combination smart gas system with instrument mounting panel (15 minute log interval). System is powered with a 12 Volt, 26 ampere-hour battery that are recharged by a Solarex, MSX-20, 20 watt solar panel. The solar panel is mounted above the gage shelter on galvanized pipe that is bracketed on the rear of the left shelter support.

Lower vertical enameled staff gage (0.0 - 3.34 ft) and upper vertical enameled staff gage (3.34 - 6.74 ft) attached to a 2" x 6" pressure treated lumber backing, bolted to flat concrete face adjacent to left abutment of bridge.

Standard USGS crest-stage gage (2.97 - 11.94 ft) is attached at center of upstream left wingwall of bridge.

| Pertinent elevations:                     | Gage Height (feet) |
|---|--------------------|
| Crest-stage gage base                     | 2.986              |
| RM-11 (on OSSP at 4.00)                   | 4.016              |
| Top of OG backer board                    | 7.590              |
| Top of crest-stage gage pipe (w/ cap off) | 11.939             |

**DATE OF LAST LEVELS.--**

Last run: May 08, 2007; Next run: May 07, 2010; Frequency: 3 years

No Remarks

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Page Contact Information: [GS-W\\_ADRDEV@usgs.gov](mailto:GS-W_ADRDEV@usgs.gov)

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