Internal Only

01589352 GWYNNS FALLS AT WASHINGTON BLVD AT BALTIMORE, MD

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

Station Description

Most recent revision: 2/12/2007
Revised by: rwsaffer

LOCATION.--Lat 39°16'17.4", long 76°38'54.8" referenced to North American Datum of 1983, Baltimore City, MD, Hydrologic Unit 02060003, on left bank at Carroll Park Municipal Golf Course, 350 ft upstream from bridge on Washington Boulevard, 0.9 mi northwest of Morrell Park, and approximately 1.6 mi upstream from mouth.

ROAD LOG.--Gaging station may be reached from the I-695/I-95 interchange near Arbutus. Proceed north on I-95 toward downtown Baltimore, approximately two miles. Exit at Washington Boulevard, exit 51 (accessible from northbound I-95 only). At bottom of ramp turn left. Past signal for I-95 southbound ramp, turn left into the entrance for the Carroll Park Municipal Golf Course. Gage is near the end of the parking lot immediately on the left, near the tree line and left bank and approximately 350 feet upstream of bridge on Washington Boulevard.

See map for route to gage.

DRAINAGE AREA.--65.9 mi^2.

ESTABLISHMENT AND HISTORY.--October 27, 1998. The Baltimore City Department of Public Works has operated a flood warning gage at this location. No previous station has been operated by U.S.G.S. at this location.

GAGE.--Elevation of gage is 10 feet (from U.S.G.S. topographic maps and local construction plans).

Equipment is housed in a 30"x 30" x 12" galvanized rainproof electrical box with pulloff front. A gaspurge line is carried down to the stream under the upper embankment and under the asphalt path. The gas linethen surfaces and is carried along the face of the gabion baskets lining the lower bank. At the gage and under theupper embankment, the gas line is run through combinations of 2" PVC pipe and 1" flexible plastic tubing. Along the lower bank, the gas line is housed in a combination of 2" galvanized pipe and 1" flexible plastic tubing. The line is carried to a standard 2" orifice fitting at the left bank.

Pertinent elevations: Gage Height (feet)

Base of Right Shelter Support (ground)	21.51
Bottom of Gage Shelter (right side)	24.77
Top of Gage Shelter (right side)	27.27
Top of Right Shelter Support (6x6)	27.32

CONTROL.--The low-water channel is about 70 ft. wide in the vicinity of the gage, and narrows to about 55 ft. in width about 500 to 600 ft. upstream of the gage. Channel is relatively straight in the immediate vicinity of the gage. Channel begins bending slightly to the right above the gage and bends to left slightly about 200 feet below bridge on Washington Boulevard. Banks are lined with gabion baskets near the gage. Left bank is subject to initial overflow (onto asphalt bike path) at a gage height of approximately 12 feet. Overflow onto grass area adjacent to golf course occurs near the gage at a gage height of approximately 20 feet. Right bank has no lower break in slope and is subject to overflow at a gage height of approximately 20 feet.

Stream bed is composed mainly of large gravel and cobbles and is subject to shifting. Low stage control

is a gravel/cobble riffle about 50 feet below gage. Channel control at medium and high stages.

DISCHARGE MEASUREMENTS.--For gage heights of approximately 3.0 feet and below, good measurements can be made by wading about 500 to 600 feet upstream from the gage (in vicinity of vertical concrete retaining wall on shoreward side of access road). Higher measurements can be made from the upstream side of the bridge on Washington Boulevard, approximately 350 feet below the gage.

FLOODS.--Flood of August 26, 1999 reached a recorded stage of 20.02 ft, with a discharge of 23,800 cfs.

POINT OF ZERO FLOW.--Varies due to shifting control features.

WINTER FLOW.--Channel and control have remained free of ice throughout the period of record.

REGULATION AND DIVERSIONS.--Irregular fluctuations caused by input from Gwynns Run, about 1500 ft upstream of station.

Diversion - None.

ACCURACY.--Good records should be obtained.

COOPERATION.--Baltimore Ecosystem Study, Long-Term Ecological Research.

REFERENCE MARKS.--

RM = Reference Mark RP = Reference Point BM = Bench Mark

RM-1 (1999, Basic) Top of nail in landward side of 14" diameter locust tree at top of left embankment, 3.2 feet above ground surface, 19.5 feet to right of gage shelter. Elevation 24.224 feet, gage datum.

RP-1 (1999) Top of nail in right upstream side of shelter support (wooden 6x6), 2.75 feet above ground surface.

Elevation 24.338 feet, gage datum.

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 (5 minute log interval). System is powered with two 26

amp-hour batteries.

Lower vertical enamel staff gage (0.0 ft. - 3.34 ft.) mounted on 2" x 6" backer board and set in concrete form, flush

with gabion baskets along left bank adjacent to orifice. Upper vertical enamel staff gage (3.34 ft. - 6.74 ft.) mounted on 2" x 6" backer board and anchored to reinforced concrete bridge pier on right side of channel, across from orifice location.

Standard USGS crest-stage gage is attached to reinforced concrete bridge pier, next to upper staff gage.

Pertinent elevations: Gage Height (feet)

Top of lower OG backing	3.43
Maximum recordable stage	24.50 (approximately)

DATE OF LAST LEVELS.--
Last run: Jun 23, 2004; Next run: Jun 23, 2007; Frequency: 3 years

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