

Internal Only**01589340 ROGNEL HGTS STORM SEWER
OUTFALL 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:** 6/5/2007**Revised by:** rwsaffer

LOCATION.--Lat 39°17'59.5", long 76°41'24.5" referenced to North American Datum of 1983, Baltimore City, MD, Hydrologic Unit 02060003, on left wingwall of culvert at downstream side of storm sewer outfall on Seminole Avenue, 0.3 mi upstream from confluence with Dead Run, 0.6 mi southeast of Leakin Park, and 1.5 mi southwest of Walbrook.

ROAD LOG.--Gaging station may be reached from intersection of Edmondson Avenue and Hilton Parkway as follows:

Follow Edmondson Avenue westbound past Hilton Parkway, turn right onto Wildwood Parkway.

Follow Wildwood Parkway for approximately 0.4 miles, turn left onto Rokeby Road.

Follow Rokeby Road for approximately 0.5 miles. Bear right at split in road onto Seminole Avenue.

Follow Seminole Avenue approximately 0.2 miles, park van on right side of road at first storm sewer drain.

Walk across grass berm to cut path in brush at edge of woods. Follow path down embankment to gage on left wingwall of concrete culvert

See map for route to gage.

DRAINAGE AREA.--0.03 mi².

ESTABLISHMENT AND HISTORY.--November 25, 1998 No other gages have been operated on this stream.

GAGE.--Datum of gage is Approximately 318 feet above National Geodetic Vertical Datum of 1929 (NGVD), based on Baltimore City DPW sewer plans and USGS 7.5 minute topographic maps.

2 ft. by 2 ft. by 1 ft. galvanized, rainproof electrical pull box mounted to top of left downstream wingwall of culvert. Probe cable is protected by 2.5 inch PVC pipe. Pipe is capped at outlet to prevent debris and rodents from entering pipe.

Pertinent elevations:	Gage Height (feet)
Invert of pipe just upstream of probe	0.0
Top of pipe (inside diameter)	3.5

Equipment -ISCO 4150 Area/Velocity Meter (5 minute measurement interval), with standard probe (area-velocity sensor) mounted to circular ISCO mounting rings at outfall of 42 inch concrete storm sewer pipe.

CONTROL.--Channel is a 42 inch concrete sewer pipe that is straight for about 61 feet above the outfall.

Low stage control is the concrete pipe. PVC pipe that houses probe cable will affect low flows up to a stage of approximately 0.25 ft., gage datum. Medium and high stage control is the pipe outlet. At extreme high stages, the concrete invert outside the pipe will become the control. Some minor backwater can be detected from small amounts of debris catching on PVC pipe and metal track, or from sand/gravel deposits on the floor of the pipe between the sensor and the metal track.

Pipe outlet was patched and reformed with hydraulic cement and quikrete on 3/29-3/30/99. A small, rectangular section of sheet metal was set into the form at the pipe outlet and protrudes approximately 0.5 ft. out from the pipe outlet. The sheet metal section contracts low flows at the outlet for volumetric discharge measurements. The metal track was reset in the pipe outlet in February 2001, September 2004, and in November 2005.

DISCHARGE MEASUREMENTS.--For gage heights less than 0.13 ft., measurements can be made volumetrically at the outfall. For gage heights of 0.13 ft. to 0.25 ft., wading measurements can be made in the concrete invert at the outfall if the flow can be adequately confined. For stages of 0.25 ft. to 0.50 ft., wading measurements can be made in the channel below the concrete invert, but is only recommended with a field crew of 2 or more. In June of 2000, a slope-area reach was set up in the channel about 200 feet below the concrete invert to indirectly measure higher flows.

FLOODS.--The storm of July 7, 2004 reached an approximate stage of 1.62 ft. based on flood marks in the pipe outlet.

POINT OF ZERO FLOW.--Approximately 0.06 ft, gage datum (based on control conditions after patching/reforming pipe outlet)

WINTER FLOW.--During winter months, gage pool is subject to freezing during periods of extended cold. Source water may freeze and thaw, causing sudden drops and increases in stage.

ACCURACY.--Stage-discharge relationship is good to fair above 0.33 ft with direct use of the area/velocity meter.

Probe is capable of measuring mean velocity at stages of 0.33 ft. or greater. Meter provides only approximations of velocity at stages below 0.33 ft. Volumetric measurements of discharge at lower stages provides greater accuracy at the low end of the rating.

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

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

PHOTOGRAPHS.--Available in office files

DATE OF LAST LEVELS.--

Last run: ; Next run: ; Frequency: 3 years

Levels are determined by reference to the minimum elevation of the pipe at the location of the gage. No stable reference points independent of the pipe and concrete invert are available. It is possible that this structure or parts of it, e.g. pipe sections, may move or settle slightly over time. Any changes are incorporated into the ratings and variable shifts.

[back to top](#)

[U.S. Geological Survey Intranet](#)

URL: <http://simsmd.er.usgs.gov/field/sqlsims/>

Page Contact Information: GS-W_ADRDEV@usgs.gov

Page Last Modified: June 8, 2004
