

On September 15, 2011, staff with MDNR's Monitoring and Non-Tidal Assessment Division (MANTA) deployed a HOBO U24 conductivity logger in Salt Block Run, a tributary to the Youghiogheny River in Garrett County (Figure 1 and Map 1). This instrument was deployed in response to a permitted Marcellus Shale gas well (permittee: Chief Oil and Gas) in Cranesville, West Virginia, approximately 700 feet west of the MD/WV border. The conductivity logger is currently recording conductivity and stream water temperature every hour. This monitoring effort will allow MDNR to define baseline conditions and variability of stream conductivity prior to the permitted upstream Marcellus Shale drilling and hydraulic fracturing activities. Conductivity is a good surrogate water quality parameter for detecting discharges of salts and some chemical by-products that may be introduced into surface waters from gas well drilling activities, well pad runoff or wastewater discharges. In addition to this monitoring site in Salt Block Run, MANTA deployed conductivity loggers at 11 other stream sites in western Maryland in June 2011 (Map 2). Information from the Maryland Geological Survey about the geology of the Marcellus shale region can be found on a fact sheet at this web address: <http://www.mgs.md.gov/geo/pub/MarcellusShaleGeology.pdf>

Figure 1: Salt Block Run at Cranesville Road



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Map 1: Approximate location of conductivity logger in Salt Block Run, Garrett County, Maryland



Map 2: Locations and streams where conductivity monitoring was initiated in June, 2011

