Presenter	Blaine Linkous WBCM, LLC
Type	oral presentation
Category	**Policy and Regulation Changes**
Title	*Determination of an Event-based Sediment Delivery Ratio for a Small, Piedmont Watershed in Suburban Maryland*
Abstract	Significant effort and resources are allocated to control the sediment produced from stormwater erosion. This sediment is viewed as a pollutant and is regulated as such by Federal, State, and Local ordinances. Sediment delivery ratios (SDRs) are calculated to quantify the fraction of sediment produced from the watershed that is observed at the outlet as sediment yield. Despite its agricultural heritage, the Universal Soil Loss Equation (USLE) and its derivatives the Revised Universal Soil Loss Equation (RUSLE) and the Modified Universal Soil Loss Equation (MUSLE) have been widely used to determine sediment yield on the watershed scale. Hollywood Branch is a second-order tributary to Paint Branch in suburban Montgomery County, Maryland. The 1.60 square mile Hollywood Branch Watershed is approximately 94% residential with the remaining land use being forested parklands. The majority of this residential development occurred prior to the year 1996. A Geographic Information Systems (GIS) model was constructed for the watershed. This model was used to calculate input parameters for MUSLE calculations. MUSLE was then applied to the drainage area on a subwatershed basis to determine a detailed estimate of upland sediment production for a single bankfull event in November of 2006. This estimate was compared to field measurements taken during the storm. These field measurements were used to calibrate a sediment rating curve for the reach using the Meyer-Peter and Muller Relation. The resulting SDR was found to be 0.43. This value agrees well with work done on similar watersheds in the region, but is highly sensitive to small changes in input parameters.