



USDA-CSREES 2007 National Water Quality Conference

Assessing Water Quality in the Indian Creek and Huntsville Spring Branch Watersheds

An evaluation of two rapidly growing watersheds in North Alabama has been performed to assess the current state of in-stream water quality conditions. This project is critical because of the lack of information concerning proper management for existing resources within these two watersheds. To date, the Indian Creek and Huntsville Spring Branch watersheds, which are located in Madison, Alabama, are facing an enormous loss of forests and agricultural lands. Notably, urbanization exerts heavy ecological, environmental and climatic pressures on surrounding lands. Therefore, an influx of urban infrastructure to an already vulnerable environment could potentially cause detrimental changes to the aquatic and riparian ecosystems within these watersheds. A multidisciplinary approach was used to evaluate the potential effects of urbanization on the water quality of these two watersheds. In-stream water quality data was collected to assess trends in heavy metal and nutrient concentrations, as well as indicator parameters like, pH, dissolved oxygen and temperature. The impact of landuse/landcover was evaluated through the application of a combination of GIS and Remote Sensing. To date, there is significant variability among the parameters observed within the watersheds. Intensified rainfall and variation in land use cover type also had a significant impact on the observations. These findings will provide vital information on trends in water quality for these watersheds.

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