USDA-CSREES 2006 National Water Quality Conference

Exposing High School Scholars to Geospatial Information Technologies and Water Quality Management

Twenty high school students, grades 10-12, participated in a two-week Internship at the University of Maryland Eastern Shore. Interns received intensive training in water quality management and geo-spatial information technologies (GIT). Students were from high schools in Maryland, New Jersey, Pennsylvania, and Washington, D.C. Interns were separated into five groups, and were responsible for preparing poster presentations highlighting their experiences during the internship. GIT activities included mapping drainage ditches using GIS and GPS, testing soil and water samples collected from darinage ditches for nitrogen, potassium, phosphorus, sulfur, and pH. Additionally, water samples were analyzed for electrical conductivity, salinity, and suspended sediments.

All interns were required to keep journals, develop and present scientific posters on their assigned GIS and water quality management projects. Interns also participated in an intense Environmental Systems Research Institute (ESRI) workshop where they were Introduced to ArcGIS – I taught an ESRI Authorized Instructor. This was followed by a lecture and hands - on training on GPS. Interns also participated in a rainfall demontration to learn about the effects of rainfall on soil erosion. The level of erosion was tested using dowel lengths of the ditch bottoms. Interns also classified the different soil strata in a ten-foot pit based on texture and color differences. A major objective of this internship was to provide high school scholars, especially minorities, with experiences on GIT and water quality management, and provide a forum for recruitment.

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