ABSTRACT
At present, little data are available concerning the overall quality of small aquatic ecosystems in South Carolina. A study of small wadeable streams in South Carolina is currently being conducted as part of a larger study to better understand the overall impact of land use on stream health. The overall goal of this work is to assess overall ecosystem quality in order to provide information needed for improved land management strategies. The project proposes five populations and methods in addition performs measurements of stream characteristics, chemical contaminants present, and their impact to the aquatic environment. This presentation focuses on several contaminants found in water and sediment in 2006 and 2007 and relationship between metals and land use in the wadeable streams in wadeable streams. Results were analyzed with selected metal species, which served as the basis for determining the land use type. Results were analyzed using ICP-MS, ICP-AES, and polished metal additions. Among the metals of interest are chromium, cadmium, copper, and lead. A significant number of metals were observed for agricultural and forest land use. Studies indicate that changes in land use can contribute to changes in metal concentrations. The strongest relationships were observed for agricultural and forest land use. This report describes the results of a study and provides information needed for the development of effective strategies to protect, conserve, and restore the aquatic resources of the State of South Carolina.

SITE SELECTION
SOUTH CAROLINA AND LAND USE CHARACTERISTICS

OBJECTIVE
To support South Carolina Department of Natural Resources in their goal to design an implement an effective strategy to protect, conserve, and restore the aquatic resources of the State of South Carolina.

METALS ANALYSIS

AQUEOUS RESULTS

SEDIMENT RESULTS

GEOGRAPHIC DISTRIBUTIONS

DISCUSSION
• Results strongly indicate the presence of metals in the water column and in sediments, with several sites at concentrations above the EPA Constant Contaminant Concentration (CNC), Contaminant Maximum Concentration (CMC), and sediment risk thresholds.
• Significant trends between metal concentrations and land use within the watersheds are evident.

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