STUDY OF THE SCIENCE, ECONOMICS, AND PERCEPTIONS RELATED TO IMPLEMENTATION OF TRADITIONAL AND INNOVATIVE STORMWATER BEST MANAGEMENT PRACTICES IN COASTAL SOUTH CAROLINA

John P. Martin, Dan Tufford, Ph.D., Braxton Davis, Ph.D., and Dwayne Porter, Ph.D.

Introduction
There are many types of innovative stormwater best management practices (BMPs) in use nationally, but few are implemented in residential areas in South Carolina. The goal of this project is to expand knowledge in the area of innovative BMP implementation in coastal SC, and to understand why innovative BMPs are not more widely utilized. The main objective is to understand the obstacles that hinder implementation of innovative BMPs in coastal SC. The study proposes to address this issue by investigating the perceptions held by professionals involved in stormwater management in coastal SC. Three groups of professionals were selected to be interviewed: developers and builders, regulatory managers, and private sector professionals (e.g., engineers and stormwater BMP manufacturers).

Methods
A survey was developed and administered by telephone or in person. The techniques used in the interviews combine the schedule-structured interview approach and the focused interview approach. In order to get a representative sample, a non-proportional quota sampling method was employed. This method specifies the minimum number of sampled units one wants in each category. A minimum of ten people from each group were surveyed. The Likert scaling method was used to score each question and the results were statistically analyzed. In addition, the open-ended question responses were coded using an inductive coding method into generalized responses. The use of the scaling and coding methods enabled the author to conduct non-parametric statistical analysis. Lastly, a Frequency Distribution Table was created to show areas of central tendency and dispersion and a contingency table along with a Chi Square test was performed to show statistically significant relationships among the variables.

Results

Recommendations:
I. Regulatory changes that emphasize water quality are needed in SC.
II. More funding is needed to aid stormwater management programs. The permitting process needs to be streamlined for innovative BMPs.
III. Public outreach and education is needed to inform both the regulated community and the general public of the importance of stormwater management, especially source controls.
IV. The regulated and regulatory communities need to improve communication channels and forge relationships that will engender cooperation in efforts to implement innovative stormwater management.

Contact Information: John P. Martin, (P) 843-898-4550; (E) martinj1@dhec.sc.gov