A STUDY OF THE ROLES OF GEOMORPHOLOGY AND PERCEPTION IN THE IMPLEMENTATION OF STREAM RESTORATION PROJECTS

Claire Ruffing

Dr. Michael A. Urban, Thesis Advisor

ABSTRACT

Stream restoration is a popular management technique for addressing degraded freshwater resources in the United States. The implementation of restoration projects has created the need for administrative structures at the local and regional scale which influence public and scientific contributions in the planning process. This study uses a dual approach to investigate the dynamics between scientific contributions and public participation within the framework of stream restoration projects. The first component addresses the motivations behind restoration projects and the ways in which restoration projects are carried out. The history of restoration and the legislative structures define a role for geomorphic contributions in restoration science however; actual disciplinary contributions have been limited to channel specific investigations. Geomorphology has the potential to make greater contributions by incorporating a coupled human-environment system approach in restoration studies. The second component is a case study which relies on a questionnaire to investigate the perceptions of the public members of a local watershed partnership in southwest Missouri to better understand their awareness and support for restoration projects. The findings indicate that specific perceptions are heavily influenced by group characteristics such as residence area, length of residence in the watershed and level of stream-centered interaction. Group differences are an essential aspect of studying the relationship between streams and environmental perception because they strongly influence common ground between the public and scientists and environmental managers.