POSTER

Determining the effectiveness of aquatic ecosystem restoration, conservation, and management practices. Nathan J. Smucker and Naomi E. Detenbeck. U.S. EPA, ORD, NHEERL, Atlantic Ecology Division, 27 Tarzwell Dr., Narragansett, RI 02882.

The science of aquatic ecosystem restoration and management is still in its infancy, largely because most projects are inadequately tracked and monitored for assessing their success. Historically, evaluating the effectiveness of best management practices (BMPs) has relied heavily on calculating reductions in loads or concentrations of pollutants. Considerably less effort and resources have been devoted to evaluating effectiveness with regards to biological endpoints and ecological integrity. Given the limitations of scarce monitoring and of little replication, we seek to synthesize data from multiple projects, surveys, and published literature to provide a better understanding of the effectiveness of various management practices. Our objectives are to document the types of BMPs being implemented and their purposes, develop methods to quantify BMP effectiveness, examine spatio-temporal scales of recovery, compare protective versus restorative BMPs, and identify potential causes for among and within BMP effectiveness. We also present concepts for setting management goals, enacting BMPs, and identifying underlying factors that may contribute to their success or failure. The ultimate goal is to provide a stronger scientific basis to support management decisions pertaining to the protection and restoration of watersheds and aquatic ecosystems by linking management actions with measurable protection of ecosystem integrity.