WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2004DE40B

Title: Monitoring and Assessing the Water Quality Status and Overall Health of Freshwater Wetlands

Project Type: Research

Focus Categories: Wetlands, Water Quality, Nutrients

Keywords: wetland health, nutrients, monitoring strategies

Start Date: 06/01/2004

End Date: 02/28/2005

Federal Funds Requested: $1,750

Non-Federal Matching Funds Requested: $3,500

Congressional District: At-large

Principal Investigator:
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Abstract

Before we can effectively monitor wetlands for compliance with water quality standards, a number of questions must be addressed: (I) What are reasonable baseline levels for N and P in freshwater wetlands? (II) What is the relationship between water quality (nutrient enrichment) and overall ecological health of a wetland? (III) Taking into account the seasonal variability in hydrology and water quality in wetlands, are traditional procedures for evaluating nutrient levels in surface waters appropriate for wetlands? (IV) In lieu of directly monitoring N and P levels in wetlands, are there other indicators of water quality that could be used in rapid assessment procedures? Therefore, the objectives of this research are: (I) To develop an understanding of the nutrient dynamics in freshwater wetlands. (II) To establish baseline levels for N and P. (III) To develop monitoring protocols for N and P. (IV) To determine the relationship between disturbance and nutrient enrichment. (V) To determine the relationship between water quality, and biotic and abiotic characteristics of wetlands. (VI) To identify robust indicators of nutrient enrichment and overall ecological health for potential rapid assessment procedures. (VII) To evaluate the capacity of these wetlands to improve water quality.