



## WATER RESOURCES RESEARCH GRANT PROPOSAL

**Project ID:** 2002ND15B

**Title:** Northern Forest Wetlands: Characteristics and Influences on Invertebrate and Amphibian Community Structure

**Project Type:** Research

**Focus Categories:** Wetlands, Water Quality, Ecology

**Keywords:** Forest wetlands, Silviculture, Biodiversity

**Start Date:** 05/15/2002

**End Date:** 12/31/2003

**Federal Funds:** \$10,605

**Non-Federal Matching Funds:** \$21,485

**Congressional District:** 1

**Principal Investigator:**

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**Abstract**

Because timber harvesting, especially clear cutting, dramatically modifies vegetation and local patterns of hydrology, it is likely that biotic communities, productivity, and physical features of wetlands adjacent to harvested areas are influenced by that activity. Best Management Practices (BMPs) have been developed as guidelines for timber harvesting for protecting water quality in wetlands. Unfortunately, these general BMP guidelines were developed without the benefit of ecological data derived from these wetland types and enlightened future refinements will be impossible without empirical data. Macroinvertebrates and amphibians are very sensitive to water quality characteristics and monitoring these populations is likely to provide key insights on impacts from forest harvesting, ecological recovery of impacted areas, and usefulness of BMPs. Lack of such information limits conducive efforts of wildlife and forest managers and may compel them to rely upon paradigms from studies of prairie potholes or other systems that may not be comparable to northern forest wetlands. The goal of the proposed project is to provide relevant data and synthesis improving basic understanding and allowing development of management guidelines (such as future BMPs) conducive to maintaining wildlife habitat and biodiversity in forested landscapes.