



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2002NJ8B

Title: Salt Marsh Macrophyte Rhizosphere Effects on Sediment Microbial Community Catabolic Response Profiles

Project Type: Research

Focus Categories: Wetlands, Sediments, Methods

Keywords: polynuclear aromatic hydrocarbons, PAH, organohalide, nutrient pollutants, New York Bight, phragmites, spartina, rhizosphere, microbial, catabolic response profiles, CRP

Start Date: 03/01/2002

End Date: 03/01/2003

Federal Funds: \$4,000

Non-Federal Matching Funds: \$8,673

Congressional District: 6th

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Abstract

Due to their high assimilative capacities salt marshes may act as a sink for introduced compounds, retaining substances transported by terrestrial and tidal inflows, and often changing the chemical composition of transported substances through transformations that occur within the estuarine system. Of concern are polynuclear aromatic hydrocarbons (PAHs), halogenated organics and metals which are manufacturing byproducts which can threaten human health.

This study will use catabolic response profiles (CRP) to characterize differences in substrate utilization by microbial communities associated with *Spartina alterniflora* and *Phragmites australis* vegetation in contaminated and non-contaminated systems.