



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: NJ1102

Title: The effects of water quality and habitat modification on benthic macroinvertebrates in urban forested wetlands in northeastern New Jersey

Focus Categories: Wetlands, Water Quality

Keywords: channel morphology, substrate morphology, ecological integrity, benthic macroinvertebrates, anthropogenic disturbance, anthropogenic effects, urban watersheds, New Jersey, wetlands, urban wetlands, macroinvertebrates, water quality

Start Date: 03/01/2001

End Date: 02/28/2002

Federal Funds: \$847

Non-Federal Matching Funds: \$7,001

Congressional District: 6

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Abstract

As New Jersey population increases, urban landscapes and watersheds experience an increase in degradative anthropogenic affects. The issue to be addressed concerns ecological integrity in urban forested wetlands, almost completely overlooked. As benthic macroinvertebrate abundance and diversity directly affect the presence of larger organisms, ecological integrity is affected. The hypothesis to be explored opines that heterogeneity within wetland water channels, and substrate morphology combined with organic input from riparian vegetation can provide near optimum habitat for benthic macroinvertebrates despite degraded water quality and anthropogenic channel modifications.

Baseline data about physical and water quality parameters will be gathered; seasonal dynamics of the benthic macroinvertebrate community in wetland channels will be analyzed. Macroinvertebrate abundance and diversity will be correlated with channel morphology, substrate heterogeneity and water quality.