



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2004NY47B

Title: Innovative management of stormwater on under-utilized urban surfaces

Project Type: Research

Focus Categories: Non Point Pollution, Treatment

Keywords: Urban stormwater, Combined sewer systems, Impermeable surfaces, Storage and treatment, Ecohydrological approach

Start Date: 03/01/2004

End Date: 02/28/2005

Federal Funds: \$2,337

Non-Federal Matching Funds: \$27,201

Congressional District: 26

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Abstract

The management of stormwater runoff in densely urbanized areas with substantial impermeable surfaces presents a major design challenge. Large volumes of runoff are generated from extensive impermeable surfaces, yet few locations exist within the urban watershed for its storage and treatment using conventional stormwater best management practices (BMPs). The proposed work will evaluate urban ecological stormwater filtration systems designed using natural treatment systems technology and adaptable to a variety of applications on underutilized surfaces in densely populated urban areas. The overall goal of the project is to create prototype structures that function ecologically and hydrologically in a stormwater treatment context, but that also aesthetically enhance

urban environments. The specific goals are to: 1) test several prototypes constructed from a range of materials; and 2) develop a conceptual stormwater treatment system, incorporating successful prototypes, to treat runoff generated on the Triborough Bridge and on Randall's Island. The research will be divided into three phases: 1) laboratory experimentation on individual prototypes; 2) design of a stormwater treatment system on Randall's Island to capture and treat stormwater runoff from the Triborough Bridge and Randall's Island; and 3) hosting an exhibition displaying the designs developed and treatment efficiency results obtained.