



## WATER RESOURCES RESEARCH GRANT PROPOSAL

**Project ID:** CT601

**Title:** Rain Garden Demonstration and Workshop

**Focus Categories:** Education, Surface Water

**Keywords:** rain garden, nonpoint source pollution, education, storm water management

**Start Date:** 03/01/2001

**End Date:** 02/28/2002

**Federal Funds:** \$6,055

**Non-Federal Matching Funds:** \$12,007

**Congressional District:** 2nd

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**Abstract**

In the U.S., nonpoint sources of pollution have been reported to result in use impairments in 37% of the rivers, 40% of the lakes, and 39% of estuary areas (U.S. EPA, 1998). Nationally, urban runoff and storm sewers are responsible for 13% of impaired rivers, 21% of impaired lakes, and 46% of impaired estuaries. In Connecticut, 28% of rivers, 36% of lake areas and 53% of estuary areas do not support drinking, fishing, and swimming uses. The primary causes of impairments in Connecticut are bacteria, PCBs, metals, oxygen demanding wastes, ammonia, nutrients, and habitat alteration (U.S. EPA, 1998). Sources of these pollutants include urban runoff and storm sewers, industrial discharges, municipal sewage treatment plants, and in-place contaminants. Hypoxia is a widespread problem in Long Island Sound (CT DEP, 1989; LISS, 1990). The Long Island Sound is a critical resource to the State which provides annually, a fishery for one million anglers and recreation for 20 million beach goers (Altobello, 1989). Several practices have been recommended to reduce pollutants in storm water runoff (U.S. EPA, 1993). One such practice is the use of a rain garden, which is a small, shallow depression intended to treat the first flush of runoff from impervious surfaces (U.S. EPA, 1999). Although this practice is in use elsewhere, planning officials and design engineers in Connecticut are not aware of how to design and apply rain gardens to new and existing urban and suburban developments.

The proposed workshop will transfer relatively recent technology to an audience in Connecticut that is primarily responsible for planning and regulating the treatment of storm water runoff. This project will also support development of workshop materials and create a demonstration site at a central Connecticut

location. The rain garden has numerous applications as a low technology best management practice in Connecticut and elsewhere.

The overall objective is to develop and conduct a one-day workshop on the design and construction of rain gardens for storm water treatment. A secondary objective would be to construct a demonstration rain garden at the Connecticut Cooperative Extension System Center in Haddam, CT This workshop is needed because engineers and local officials are unaware of how to design and construct rain gardens and where they are applicable. The actual construction of a rain garden will give a demonstration site for future workshops.