



# UNIVERSITY OF NEW HAMPSHIRE STORMWATER CENTER

Dedicated to the protection of water resources through effective stormwater management.



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The UNH Stormwater Center studies stormwater-related water quality and quantity issues. One unique feature is the field facility to evaluate and verify the performance of stormwater management devices and technologies. Thirty six different management systems have been tested, or are currently undergoing side-by-side comparison under strictly controlled conditions. This on-campus evaluation facility enables the Center to offer technology demonstrations and workshops, and also specialized training opportunities. In addition to the primary field facility, the Center has other sites available to study approaches that need more space or present unique conditions.

Under new Clean Water Act Phase II rules, the Environmental Protection Agency requires local governments to develop stormwater programs. In response, many organizations have or are now developing plans and actions to achieve desirable water quality and storm volume reduction. Although many of the stormwater management devices are based on sound theory, there is no requirement that they undergo independent, third-party scientific testing. Perhaps as a result, a three-year study of nine seacoast sites in New Hampshire showed that traditional stormwater technologies failed in reducing at least one water quality parameter two-thirds of the time.

## MISSION

The UNH Stormwater Center is dedicated to the protection of water resources through effective stormwater management. (i) the function of the center is 2 parts: (i) Research and development of stormwater treatment systems, (ii) To provide resources to stormwater communities currently involved in design and implementation of Phase II requirements.

## OUTREACH, EDUCATION & PARTNERING

Outreach efforts include routine Stormwater Technology Demonstration Workshops, hosting annual meeting for professional associations, government agencies, and others. Educational activities include publication of a Biennial Data Report on stormwater system

performance, presentations at regional and national venues, website resources, municipal stormwater management and regulatory guidance, and publications in refereed journals. The Stormwater Center partners involve a range of participants. Our Technical Advisory Board provides advice and expertise, and includes academics, state and federal regulators, local government officials, and industry representatives.

## FIELD FACILITY & STORMWATER CONTROL TECHNOLOGIES

The Center is comprised of multiple sites on the UNH Durham campus. The primary field facility at the west edge parking lot is where the majority of research activities take place. In addition there are numerous porous pavement and bioretention facilities throughout campus and the town. Stormwater controls currently being tested include: subsurface treatment wetlands, infiltration devices, filtration devices, detention ponds, manufactured devices, tree box filters, inlet inserts, and a range of porous pavement technologies. The contributing drainage area is almost completely impervious and generates stormwater flows and pollutant loads typical of commercial land uses.

## PROJECT TIMELINE

Full site operation began in August 2004. Six full years of monitoring were completed in Fall 2010. To date, the UNH Stormwater Center has tested over 36 treatment strategies and conducted nearly 15,000 hours of instruction for over 2,400 water resource professionals.

## FUNDING

Funding has largely been provided by the Cooperative Institute for Coastal and Estuarine Environmental Technology and the National Oceanic and Atmospheric Administration. The Stormwater Center is part of the Environmental Research Group at UNH.



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