

A Low Impact Development Manual for Coastal South Carolina

A NERRS SCIENCE COLLABORATIVE GRANT PROJECT

PROJECT AT A GLANCE

Location

South Carolina Coastal Counties

Project Team Partners

ACE Basin NERR/SCDNR
North Inlet-Winyah Bay NERR
Center for Watershed Protection
S.C. Sea Grant Consortium

Additional Members of the Manual Planning Team

Carolina Clear
S.C. Department of Health and Environmental Control (SCDHEC)
NOAA Restoration Institute

Letters of Support from Local Governments

Beaufort County
Waccamaw Regional Council of Governments

Timeline

September 2012 to 2014

Contacts

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Background

Coastal development, stormwater runoff, and changing climatic conditions threaten water resources in South Carolina's coastal zone. Swimming advisories and shellfish-bed closures are just some of the short-term effects on coastal waters, but sustained water quality impairment could have an immense impact on the coast's natural resources and economies. As development continues rapidly along many portions of South Carolina's coast, stormwater runoff volumes and pollutant loadings are expected to increase.

Many coastal decision-makers, including, but not limited to, engineers, developers, and planners, are now considering and some have attempted the use of low impact development (LID) measures to mitigate stormwater impacts to receiving waterbodies. Through a number of Coastal Training Program and partner workshops, facilitated meetings, and a formal needs assessment, a variety of coastal decision-makers have identified multiple barriers to LID implementation, including a lack of South Carolina specific resources. To help communities overcome these barriers, an LID guidance document that is specific to coastal South Carolina is underway.

About the Project

The overall goal of this project is to develop an interdisciplinary, user-defined *Low Impact Development Manual for Coastal South Carolina*; thereby removing barriers to implementation of LID practices on the community level, neighborhood scale, and site scale. The ACE Basin and North Inlet-Winyah Bay Coastal Training Programs are coordinating development of the document and other collaborative efforts. The applied science efforts, including the generation of stormwater engineering models and stormwater specifications for the South Carolina coast are being led by the Center for Watershed Protection. Collaboration assistance and climate change science expertise is being provided by the S.C. Sea Grant Consortium.

The project is centered around a series of collaborative focus group meetings with applied science researchers and engineers, planners and landscape architects, and climate researchers. The end product will be an LID guidance document, defined and vetted by end-users. The *Low Impact Development Manual for Coastal South Carolina* will be debuted through end-user workshops and will continue to be used as a resource and highlight of future LID training programs.



Recent LID Training Programs Hosted by the Project Team Partners

2008

- *Design & Development: Stormwater & Your Bottom Line*, Georgetown
- *LID Stormwater Management Practices: Design and Installation Demonstrations*, North Charleston

2009

- *Stormwater Management in Coastal SC: A Focused Seminar on Ponds and LID Practices*, Charleston
- *Sustainable Development in Coastal South Carolina*, Beaufort
- *Using Cistern Technology in the Lowcountry: A Demonstration on Rainwater Harvesting*, Charleston
- *How to Upkeep and Improve Landscape Features*
- *Permeable Pavers: Design and Installation*, North Myrtle Beach
- *Bioretention Systems: Design and Installation*, Myrtle Beach
- *Wetland Carpet Installation*, Surfside Beach
- *Stormwater, Water Quality, and Life in Pawleys Island*
- *LID in Practice: Case Studies from Hobcaw Barony*, Georgetown

2010

- *Rainwater Harvesting: Stewardship of a Priceless Resource*, Bluffton
- *Beyond Pipe and Pond: Research Based Stormwater System Design Workshop*, Beaufort and Georgetown
- *Stormwater on Wheels*, Conway, North Myrtle Beach, and Myrtle Beach
- *SC Coastal Low Impact Development Manual: Needs, Use, and Lessons Learned*, Beaufort, Conway, and Charleston
- *LID in Practice: Case Studies from Hobcaw Barony*, Georgetown

2011

- *Addressing Bacterial Contamination Through Stormwater BMPs*, Ridgeland
- *Rainwater Harvesting and Watersmart Landscaping*, Conway

Examples of Relevant Project Team Research

- **Drescher, S.R.**, M.J. Messersmith, B.C Davis, and D.M. Sanger. 2007. State of the Knowledge Report: Stormwater Ponds in the Coastal Zone. SCDHEC-OCRM
- D.J. Hirshman, D.D. Caraco, and **S.R. Drescher**. 2011. Linking Stormwater and Climate Change: Retooling for Adaptation. The Wastershed Science Bulletin. Spring 2011.
- **Sutley, L.** 2011. *Content Assessment for a South Carolina Coastal Low Impact Development (LID) Manual*. Internship Report for College of Charleston, Maters of Environmental Studies.
- **Vandiver, L.**, Hernandez, D. 2009. *Assessment of Stormwater Management in Coastal South Carolina: A focus on Stormwater Ponds and Low Impact Development (LID) Practices*. University of South Carolina, Arnold School of Public Health.

