Advancing Low Impact Development in Coastal South Carolina

Project Location

ACE Basin National Estuarine Research Reserve, South Carolina

North Inlet-Winyah Bay National Estuarine Research Reserve, South Carolina

Project Lead

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Targeted End Users and Products

- Low Impact Development in Coastal South Carolina: A Planning and Design Guide
- Compliance Calculator, Maintenance Checklist, and Rainwater Harvesting Calculator
- Final Report

Project Partners

- ACE Basin Reserve
- North Inlet-Winyah Bay Reserve
- Ashley Cooper Stormwater Education Consortium
- Baruch Institute
- Beaufort County
- Carolina Clear
- Center for Watershed Protection
- Hobcaw Barony: The Belle W. Baruch Foundation
- South Carolina Department of Natural Resources
- South Carolina Sea Grant Consortium
- University of South Carolina

About the Science Collaborative
The National Estuarine Research Reserve System's Science Collaborative supports collaborative research that addresses coastal management problems important to the reserves. Learn more at *www.nerrs.noaa.gov.*

Overview

Known for its beautiful beaches and marshlands, coastal South Carolina has seen a 20 percent population increase over the past decades, which in turn has led to an increase in land covered by impervious surfaces such as roads and parking lots. This has led to higher volumes of stormwater runoff, which heightens flood risk and degrades water quality. Climate change will only make this problem worse. To address these challenges, South Carolina decision makers will need locally relevant information and guidance to help them implement innovative low impact development techniques that mimic natural landscapes and hydrologic processes. The ACE Basin and North Inlet-Winyah Bay Reserves collaborated with stakeholders and partners to address the barriers that keep communities from embracing this approach.

Project Benefits

- Specific implementation barriers were identified and prioritized.
- A low impact development manual was developed, which includes case studies, tools, design specifications, maintenance checklists, and a calculator to assess compliance with state stormwater rules.
- One-hundred-fifty people received low impact development training.
- Several South Carolina municipalities officially adopted low impact development guidance into their local stormwater design manuals. Engineering and design firms, cooperative extension training programs, and local universities are also using the results of this project.
- The team distributed the low impact development manual, and the approach to sharing it, throughout the reserve system and beyond.

Project Approach

- Collaboration with Users: The project team used a collaborative learning approach to engage local stormwater decision makers to understand their needs and the challenges associated with implementing low impact development practices. The collaborative process offered different opportunities for stakeholders and researchers to engage with each other.
- Manual Development: The low impact development manual design and content integrated end-user suggestions.
- Training: The reserves held trainings to convey how to use these tools to incorporate low impact development in local decisions and designs.