CWSEC
Stormwater Public Education & Involvement

Lisa Swanger,
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CWSEC Goal

To develop and implement effective, outcomes-based stormwater education and outreach programs to meet federal requirements and satisfy local environmental and economic needs.
National Pollution Discharge Elimination System (NPDES) Permit Program

- Regulates point sources discharging pollutants into US waters
  - Variety of municipal and industrial operations (e.g., treated wastewater, stormwater runoff from drainage systems)
- Phase I (1990)
  - Medium & large MS4s, construction, industry
- Phase II (1999)
  - Small MS4 located in Urbanized Areas
  - SC has 70+ regulated SMS4s
Municipal Stormwater Permit

- SCDHEC administers permit within South Carolina
- Current permit became effective January 1, 2014
- MS4 Stormwater Management Plan (SWMP)
- Minimum Control Measures

1. Public education and outreach on stormwater impacts
2. Public involvement/participation
3. Illicit discharge detection and elimination
4. Construction site stormwater runoff control
5. Post-construction stormwater management
6. Pollution prevention/good housekeeping
Participating Communities

- Horry County
- City of Conway
- Town of Atlantic Beach
- Town of Briarcliffe Acres
- City of Myrtle Beach
- City of North Myrtle Beach
- South Carolina
- Surfside Beach
- The City of North Myrtle Beach
- The Black Pearl
- The City of Myrtle Beach
- Town of Briarcliffe Acres
- Town of Surfside Beach
- Horry & Georgetown Counties
- Atlantic Ocean
- North Inlet
- Winyah Bay
- Conways
- North Myrtle Beach
- Atlantic Beach
- Briarcliffe Acres
- Myrtle Beach
- Surfside Beach
- Great Pee Dee River
- Little Pee Dee River
- Waccamaw River Subbasin
- Coastal Subbasin
- Intracoastal Waterway
- Waccamaw River
- Intercoastal Waterway
- North Carolina
- South Carolina
- Georgia
Core Education Providers

Coastal Carolina University, Waccamaw Watershed Academy

SC Sea Grant Extension Program

Clemson University, Carolina Clear Program

Waccamaw Riverkeeper

North Inlet-Winyah Bay National Estuarine Research Reserve Coastal Training & Public Education Program

Murrells Inlet 2020
MCM 1 - Public Education and Outreach Example Activities

Workshops & Seminars:
Getting to Know Your Stormwater System
HOA Workshop, November 2015

Conferences:
Annual Waccamaw Conference, March 2016

Best Management Practices:
Master Pond Manager Course, October 2015

Outreach Programs:
Grand Strand Canines for Clean Water, December 2015
MCM 1 - Public Education and Outreach
Example Activities Continued

Public Events:
Hurricane Awareness Tour
May 2015

Educational Giveaways:
Blessing of the Fleet
April 2015

Television & Billboards:
Carolina Clear 2015 Media Campaign
www.clemson.edu/carolinacl ear
MCM 2 - Public Participation & Involvement

Example Activities

River & Beach Clean-ups

Volunteer Water Quality Monitoring
www.coastal.edu/wwa/

Storm Drain Marking Program
Activity Highlight: Rain Garden Installations

Rain gardens are landscape features designed to manage stormwater runoff and allow the runoff to slowly infiltrate into the ground. Rain gardens help to reduce flooding by helping stormwater to percolate into the ground rather than runoff. Rain gardens also allow nature to play a role in cleaning the water by promoting natural filtration and assimilating nutrients, slowing soil erosion, and improving water quality. The plants and soil in rain gardens work to filter and remove pollutants that could harm the rivers and lakes down stream. Because of their beneficial structures, rain gardens attract butterflies, birds, and other attractive wildlife, helping to beautify the landscape.
What Is a Rain Garden?

A bowl-shaped, landscaped feature designed to capture stormwater runoff and allow the water to slowly infiltrate to the ground.

Benefits:
1. Help protect water resources by trapping sediment and filtering pollutants carried by stormwater (e.g., pathogens, metals, oil, excess nutrients, chemicals)
2. Reduce localized flooding events
3. Provide a habitat for native species (e.g., birds, bees, butterflies)
4. Attractive feature for properties
5. Education
Installation Process General Overview

- **Site Selection:** Area where rain water typically flows (often installed down slope of the downspout and at least 10 feet away from the home / building).

- **Garden Sizing:** Dependent on the area that runs off into the garden, volume of water it temporarily stored, and soil type. The Center for Watershed Protection recommends the garden area to be 20-30% of drainage area directed to the garden.

- **Site Preparation:** Sandy loam / loamy sand is the recommended mix for a permeability rate of 1-6 inches per hour.

- **Plant:** The fun part! Full - partial sun areas will provide more plant options.

- **Maintenance:** Drainage, sediment erosion, debris accumulation, weeds, plant care.
Recommended Rain Garden Resources

• Carolina Clear, Clemson University Extension
  www.clemson.edu/carolinaclear

• The Carolina Rain Garden Initiative
  http://www.clemson.edu/extension/raingarden/index.html

• South Carolina Native Plant Society
  www.scnps.org

• USDA PLANTS Database
  http://plants.usda.gov

Rain Gardens for Professionals Workshop coming soon to the area!
To Learn More About CWSEC

Visit us online! cwsec-sc.org

Join our e-newsletter listserv!
Thank You

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