Watersheds and Coastal Communities

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Some of the issues

- Water quality
  - Impaired waterways (fecal coliform, nutrients, toxics, etc)
- Water quantity
  - Flooding
  - Water supply
- Ecosystem degradation
  - Shellfish, aquatic vegetation, and fisheries
Root Cause: PEOPLE
Lawn Care Chemicals
Fertilizer
BOATS with flush toilets
PETS with inconsiderate owners

PLEASE PICK UP MY POOP.

Cleaning up pet waste is good for your health and the environment! Seriously. Pet waste left on the ground, especially near streets and sidewalks, gets washed into storm drains and drainage ditches which flow to your local waterway...without being treated! Bacteria, parasites, and viruses found in pet waste can be harmful to water quality and human health. Not only is picking up after your pooch the neighborly thing to do, it’s the healthy thing to do... for you and the environment!

Know what’s grosser than picking up dog poop?

Stepping in it. Know what’s even grosser than that? Swimming in, fishing from, and drinking water that has dog poop in it! Please pick up after your pooch.

For more information, please visit our Informed Consumer section at www.eenorthcarolina.org

Source: Office of Environmental Education, NC Dept. of Environmental & Natural Resources
Residential Development
Residential Development with Geese
LARGE AREAS OF IMPERVIOUS

Source: (clockwise from top left) www.freeholdracewaymall.com; http://mallofamerica.blogspot.com; www.google.com
Transport Mechanism

Stormwater runoff
Solutions

- Regulatory Programs
  - NJ Stormwater Management Regulations
  - Local Ordinances
- New Programs
  - Stormwater Utilities
- Voluntary Programs
  - Education programs
  - Hunting season for geese
Ordinances

- Stormwater Control Ordinance
- Low/No Phosphorus Fertilizer Ordinance
- Coal Tar Reduction Ordinance
- Avoid the “Day After Tomorrow” Ordinance (a.k.a., global warming ordinance)
- Knock Down – Rebuild Ordinance
Stormwater Management Regulations

- Targets new development
- Addresses water quantity, water quality and groundwater recharge
- Provides requirements for Municipal and Regional Stormwater Management Plans
- Nonstructural Best Management Practices
Stormwater Utility

Voluntary programs are great but not always effective

+ A stormwater utility provides a dedicated revenue stream to address stormwater issues

- A fee would need to be assessed on property owners, which could be viewed as a new tax
Education

• Use readily available educational programs
• Engage local stakeholders to participate in programs and take ownership of programs
• Change behavior of stakeholders of all ages
• Demonstration projects to provide hands-on education and impact
1. Rutgers Cooperative Extension’s Stormwater Management in Your Backyard Program

2. Rutgers Cooperative Extension’s Environmental Stewardship Program

3. Rutgers Cooperative Extension’s Restore-A-Waterway Program

4. Community-Project-Based Learning Educational Program

5. Best Management Practices in Landscaping (under development)
Rain Gardens

Grass Buffer: This surrounds a rain garden and reduces runoff velocities, filtering out particulates.

Depression: The depression stores runoff awaiting treatment, presetting particulates that have not been filtered out by the grass buffer.

Ponding: Surface must be level for maximum infiltration.

Organic or Mulch Layer: This layer acts as a filter for pollutants, protects the soil from eroding, and provides an environment for microorganisms to degrade petroleum-based products and other pollutants.

Sand Bed: A sand bed further slows runoff, spreading the water over the basin. The sand helps to prevent anaerobic conditions in the planting soil and enhances exfiltration from the basin.

Planting Soil Layer: The soils provide needed nutrients while absorbing heavy metals, hydrocarbons, and other pollutants.

Plants: Plants are selected on their ability to cycle and assimilate nutrients, pollutants, and metals.
For More Information

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or check out our web site:
www.water.rutgers.edu

or check out the Regional Water Coordination Project Web Site:
http://rwqp.rutgers.edu