City of Monroe
Public Education and Outreach Program

Stormwater Management – Everyone’s job
Outline

- General Information
- Public Education
- Educational Material
- Public Outreach
- Regional Stormwater Partnership of the Carolinas
General Information

- County seat of Union County
- Population: 35,000 ±
- Size - 24.9 Sq. miles
- Watersheds
  - Stewarts Creek
  - Bearskin Creek
  - Richardson Creek
- NPDES Permit No.
  NCS000482
Stormwater Utility Program

Purpose:
- Meet EPA’s NPDES, Phase II requirements
- To enhance existing stormwater system
- To protect water resources
  - Protect our streams/creeks
  - Water supplies
  - Recreation use
  - Future generation

Programs:
- Program Administration
- NPDES, Phase II Compliance
- Stormwater Operation/Maintenance
- Stormwater Capital Improvement Projects
- Stormwater Inventory
- Stormwater Master Planning/Water Quality
Stormwater Utility Fee Schedule

**Budget:**
- FY18: $2,102,835
- FY19: $2,185,186
- FY20: $2,185,186 (Proposed)
- Fund Balance: $1,293,000 (reserve)

**Residential Rate – Single Family Detached/ Mobile Homes**
- Tier – Impervious Area (square feet)
  - 0 to 2,010 - $3.15/month
  - 2,011 to 3,289 - $4.50/month
  - 3,288 and beyond - $6.30/month

**Other Residential Units**
- Town Homes - $2.25/month
- Multifamily - $2.70/month
- Condominiums - $2.25/month

**Non-Residential Rate**
- 1 Equivalent Residential Unit (ERU) per Impervious Area - $4.50/ERU/month
- 1 ERU equal to 2,618 square feet of impervious surface

**Began collecting stormwater fees in January 2009**
Public Education

- Classroom Presentation
  - Middle School
  - After School Programs
  - Enviroscape
  - PowerPoint Presentation
- Local schools
  - 8th Science Teachers
  - Email or Letter
- Documentation
  - Number of Students
  - Location
- Future: Environmental Educator
Water Quality Monitoring Program

Water Quality Monitoring
- Middle School
- Hands Activities

Parameters
- Water Temperatures
- Dissolved Oxygen
- pH
- Turbidity

Group Discussion

Results
- Earth Echo
- www.MonitorWater.org

Documentation
- Number of Students
- Location
Educational Material

💧 Brochure
💧 Yard Waste
💧 Used Oil
💧 Household Hazardous Waste
💧 Pet Waste
💧 Illicit Discharge
💧 English and Spanish

💧 Door hangers
💧 Residential Area
💧 Brochure for issue reported in the area
💧 Include a magnet with hotline number

💧 Documentation
Educational Promo Items

- **Budget**: $6,000 to $8,000
- **Purchase in July**
- **Typical promo items:**
  - Fish and flamingo pens
  - Sunglasses
  - Tote/cooler bags
  - Pencil
  - Refrigerator magnets
  - Crayons
  - Stickers
  - Cooling towels
  - Stress fish
- **Documentation**
Public Outreach

💧 Public Events
   ☁ Neighborhood Meetings
   ☁ Union County Heritage Festival
   ☁ Water Week
   ☁ Health and Wellness Expo

💧 Booths
   ☁ Enviroscapes
   ☁ Catch Basin Model
   ☁ Prize Wheel

💧 Volunteers

💧 Documentation
**FREE EnviroScape® Classroom Demonstration**

**Stormwater / Environmental Education**

We all live in a watershed, with water pollution coming from many sources. The EnviroScape is a two-foot square, three-dimensional watershed model that is an interactive educational tool. The model shows the impact of water pollution and how we can reduce water pollutants using Best Management Practices. Demonstrations are **FREE** and can be customized for all ages. Presentation can be tailored to run from 30 minutes up to 2 hours.

**What concepts are covered with the EnviroScape?**
- What is a watershed?
- What is a storm drain?
- What is erosion and how it can be controlled?
- Function and importance of vegetation
- Benefits and adverse impact of pesticides and fertilizers
- What makes algae grow and impacts on aquatic life
- What is point and nonpoint source pollution

**Typical Demonstration Outline**
- What is stormwater?
- What is stormwater pollution?
- Types of stormwater pollution & environmental impacts.
- What are the impacts to our creeks and lakes?
- What about impacts to wildlife?
- What can we do about stormwater pollution?
- What are some ways we can reduce stormwater pollution around our community?

For **FREE** classroom demonstrations or additional information about the Adopt-A-Stream, Storm drain Marking, and Water Quality Monitoring field programs, please contact Carol Hambridge | 704-282-4535 | Email: Chambridge@monroenc.org

---

**EarthEcho Water Challenge**

Global Participation through Local Water Quality Monitoring Program

The EarthEcho Water Challenge is offered by the City of Monroe as part of our Stormwater Pollution Prevention Public Participation Program. Stormwater runoff is the leading cause of impairment of our nation’s lakes and streams. The program is an education and awareness activity that connects communities members with their local water bodies and promotes watershed protection.

**Suggested participants**
- Children Ages 8 through adults
- Student classrooms
- Civic organizations
- Community Groups
- Environmental Clubs
- Scouting groups
- Neighborhoods

**Easy-to-use test kits**
- Kits and field instruction provided by the City of Monroe Engineering Department – Stormwater Education Program.
- Core set of water quality parameters include: Temperature, pH (acidity / alkalinity), Turbidity (clarity), Dissolved oxygen (DO)
- Results are then shared with participating communities around the globe through the WWMC Web site. [www_MONITOR WATER.org](http://www_MONITOR WATER.org)

**Monitor local water bodies**
- Lake Twitty
- Lake Lee
- Lake Monroe
- Bearskin Creek
- Stewarts Creek
- Richardson Creek
- Local ponds

To schedule a **FREE** Water Quality Monitoring field event or to receive additional information about Adopt-A-Stream, Storm Drain Marking, or an EnviroScape tabletop model classroom demonstration, please contact Carol Hambridge | 704-282-4535 | Email: Chambridge@monroenc.org

City of Monroe, Engineering Department
Public Outreach

💧 Bill Insert
💧 2 stormwater messages per year
💧 No cost to stormwater program

💧 Social Media
💧 Facebook
💧 Stormwater events

💧 Stormwater Hotline

💧 Documentation

💧 Future:
💧 Science Center
💧 Activity Station
💧 Topobox Sand Model
Public Outreach

💧 Commercial Outreach
- Site visit
- Talk with staff
- Send letter and brochure information
- Follow up site inspection

💧 Typical Issue
- Restaurant good housekeeping
- Trash and debris around dumpsters
- Mobile car wash
- Illicit discharge
- Construction activities
- Outdoor grilling / washing
Regional Stormwater Partnership of the Carolinas
18 Municipality Partners

Promote stormwater issues
- Radio Ads
- Internet
- Television Commercials
- Television Interviews
  - WCCB – News Rising Spotlight
  - Carolina Insight

Workshops
- Elected Officials
- Tech Talks
- Quarterly Meeting

Webpage
- www.regionalstormwater.org
- Section for Educator
The Regional Stormwater Partnership of the Carolinas requests your presence at:

**Stormwater Workshop for Elected Officials**

Learn how understanding stormwater issues can help you become a better-informed leader in your community!

**SAVE THE DATE**

**FEBRUARY 28, 2019**

8:30 - 9 a.m. Registration & light breakfast
9 a.m. - 12:30 p.m. Workshop & lunch

MECKLENBURG COUNTY LUESA BUILDING
2145 SUTTLE AVE., CHARLOTTE
FRASIER FIR TRAINING ROOM, 4TH FLOOR

**PLEASE REGISTER AT:**
HTTPS://REGIONALSTORMWATER.ORG/STORMWATER-WORKSHOP-REGISTRATION

FOR MORE INFO, CONTACT REGINA C. GUYER
REGINA.GUYER@RISINGSOLUTIONSPLLC.COM
704-701-2270

**WORKSHOP TOPICS**

- Stormwater Basics - Our Goals and Objectives and the Importance of Partnerships
- Clean Water Act and Municipal Stormwater Permit Requirements
- Stormwater Utility Fees and Aging Stormwater Infrastructure
- Importance of Stream Buffers and Stormwater Control Measures
- Lunch and Interactive Discussion
STORMWATER

Work collaboratively on local stormwater issues

The Regional Stormwater Partnership of the Carolinas (RSPC) educates and brings awareness to the public, local businesses and education centers of our region about stormwater issues and their impact on water quality and our environment. We further aim to unite local stormwater programs by sharing information and ideas in order to discuss and address similar stormwater issues on a regional level.

RSPC Members

Belmont
Bessemer City
Charlotte
China Grove
Cramerton
Dallas
Harrisburg
Lake Park
Gastonia
Lowell
Mecklenburg Co
Monroe
Mooresville
Mount Holly
Shelby
Stallings
Town of Stanley
Statesville

RSPC Actions

1. Outreach and Education
   Campaigns to promote awareness of stormwater issues across internet, TV, and radio marketing and expanding to outreach for schools and citizen groups.

2. Tech Talks
   Workshops and seminars for members that focus on stormwater, stormwater management, and water quality.

3. Elected Officials Workshop
   Seminar focusing on the importance of stormwater management and the role that local officials play in complying with state mandated stormwater regulations.

Benefits

- "The benefits are the outreach, education, public information that RSPC provides that would be very expensive if one agency had to spearhead it all by itself." - Derek Slocum, Public Works Director Statesville
- The benefits of the RSPC include a network of professionals to share similar experiences and work through similar issues and problems to find common solutions, a regional approach to storm water management... working together to improve conditions, a cost effective way to maintain compliance with NPDES storm water permit requirements, education, potential grant opportunities through partnership, and networking / making great contacts - David Caldwell, Environmental Supervisor Charlotte-Mecklenburg Storm Water Services Water Quality Program
- "RSPC provides members with opportunities to see what others in your region are doing with storm water and get updated on the latest information from the State." - Josh Watkins, Planning Director Town of Cramerton
- "The RSPC allows us and other member municipalities to leverage our combined resources, monetary and otherwise, to fulfill MS4 permit requirements that we might not otherwise be able to accomplish on our own. This is just one of a number of wonderful benefits that we receive as part of being a member of the partnership." - Craig Miller, City of Charlotte NPDES Program Supervisor

http://regionalstormwater.org  regina.guyer@risingsolutionspllc.com
Questions?

Chris Costner, P.E., CSM
Stormwater Engineer
ccostner@monroenc.org
704-282-4537