

# Municipal Separate Stormsewer System (MS4) permitting

## What does it mean to Beaufort County and to you?

A Presentation to the  
N4CW Pond Conference  
October 22, 2015



# Why do we care about stormwater?

- Flooding
- Loss of recreational use
- Loss of aquatic life - food source, economic benefits
- Loss of drinking water source
- Threat of federal program non-compliance



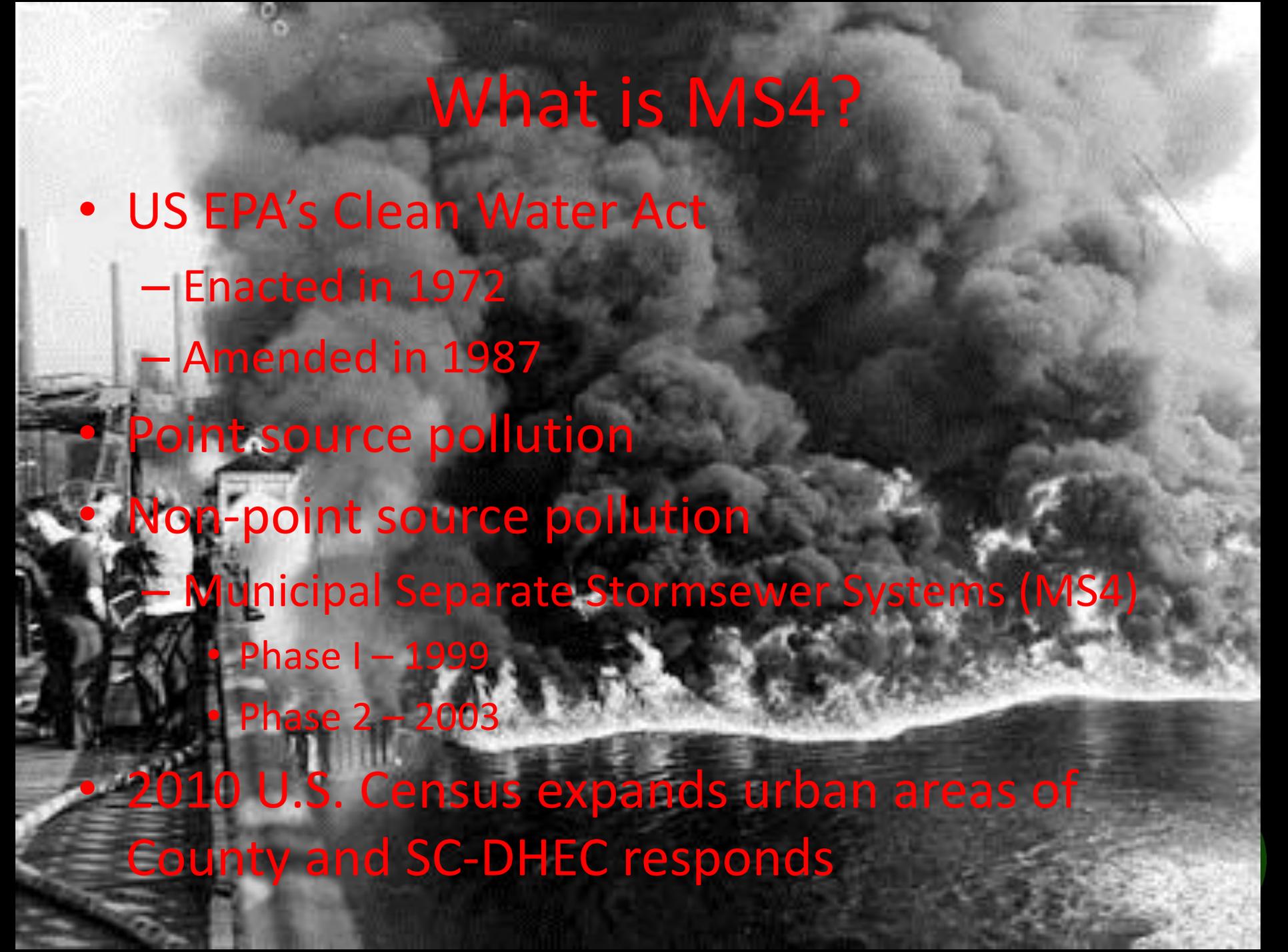
# Theory of watershed pollutants from urban use

- Impervious Cover effects streams (10-15% cover degrades streams)
- Oil, grease, brake dust (metals)
- Fertilizers
- Pet waste
- Thermal pollution from hard surface - urban heat islands
- Why is fresh water into saltwater a bad thing?
  - shellfish, plant life

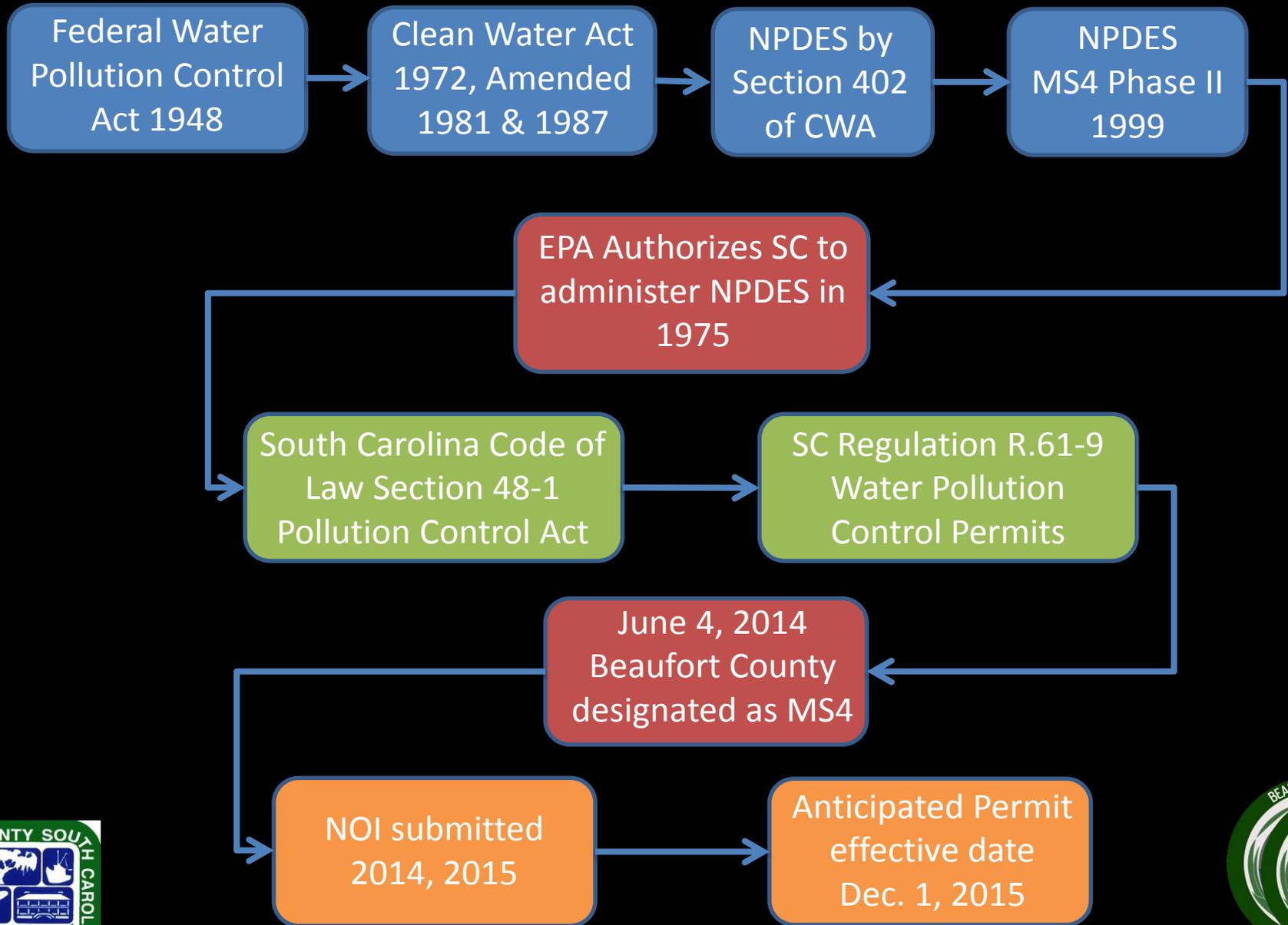


# What is MS4?

- US EPA's Clean Water Act
  - Enacted in 1972
  - Amended in 1987
- Point source pollution
- Non-point source pollution
  - Municipal Separate Stormsewer Systems (MS4)
    - Phase I – 1999
    - Phase 2 – 2003
- 2010 U.S. Census expands urban areas of County and SC-DHEC responds



# STORMWATER UTILITY MS4 PROGRAM

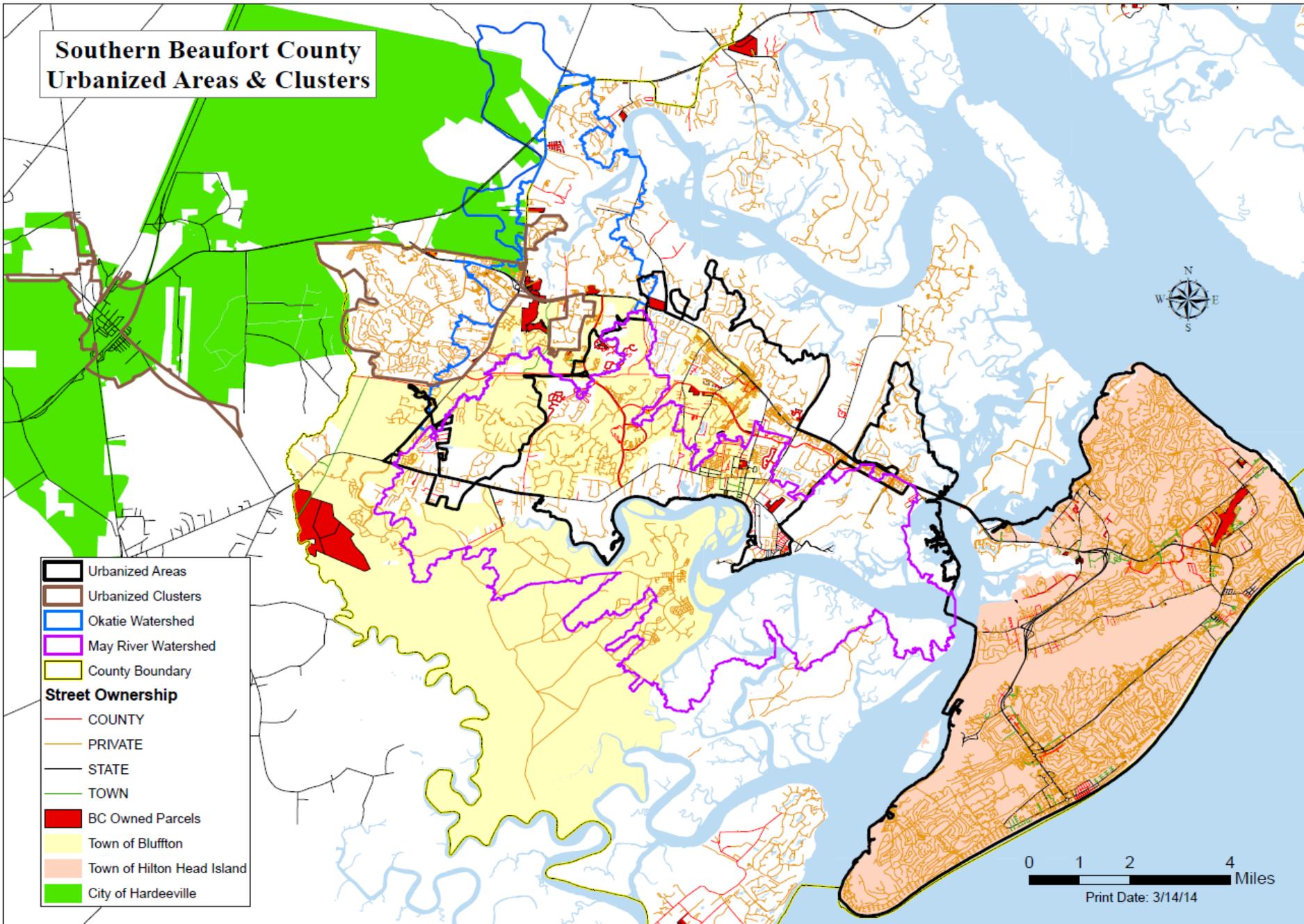


# Where is the MS4(s)?

- The Urbanized Area of southern Beaufort County
- Urban Clusters north of the Broad River not included
- Significant overlap between the Towns of Hilton Head Island and Bluffton and unincorporated areas of the County within the Urbanized Area



# Southern Beaufort County Urbanized Areas & Clusters

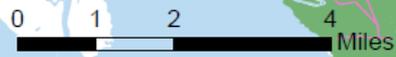


- Urbanized Areas
- Urbanized Clusters
- Okatie Watershed
- May River Watershed
- County Boundary
- Street Ownership**
- COUNTY
- PRIVATE
- STATE
- TOWN
- BC Owned Parcels
- Town of Bluffton
- Town of Hilton Head Island
- City of Hardeeville

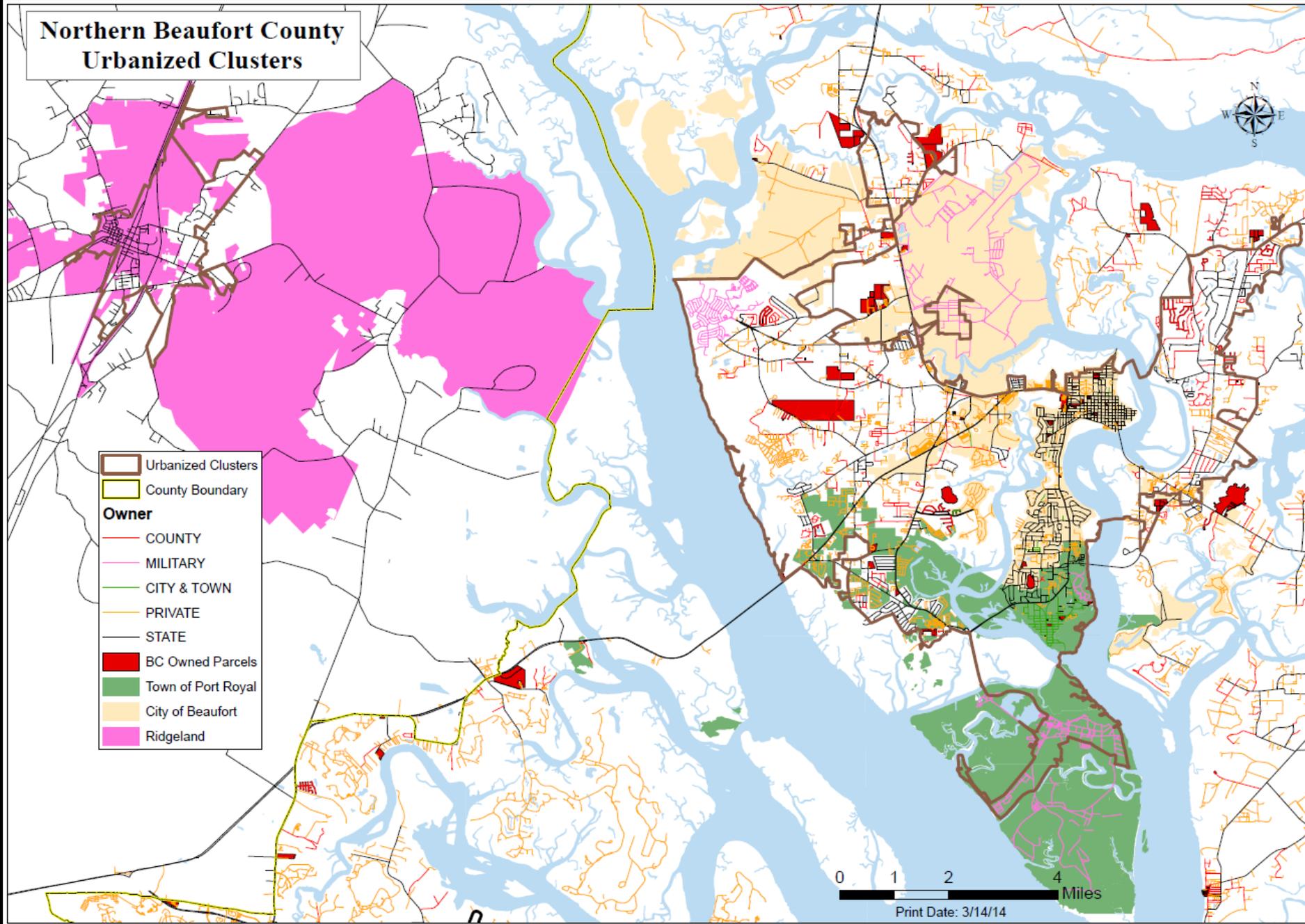
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# Northern Beaufort County Urbanized Clusters

- Urbanized Clusters
- County Boundary
- Owner**
- COUNTY
- MILITARY
- CITY & TOWN
- PRIVATE
- STATE
- BC Owned Parcels
- Town of Port Royal
- City of Beaufort
- Ridgeland



Print Date: 3/14/14



# What does MS4 mean to us?

- We will expand our scope of services
- Regulations will get tougher
- MS4 Requirements will dictate more effort & resources
- Our focus going forward will change even though core values won't
- Cost savings can be found through partnerships



# The MS4 Program Elements

- Minimum Control Measures (MCM)
  1. Public Education
  2. Public Outreach and Involvement
  3. Illicit Discharge, Detection, and Elimination (IDDE)
  4. Construction Run-Off
  5. Post – Construction Best Management Practices (PC-BMP)
  6. Good Housekeeping in Municipal Operations



# MCM1 - Public Education

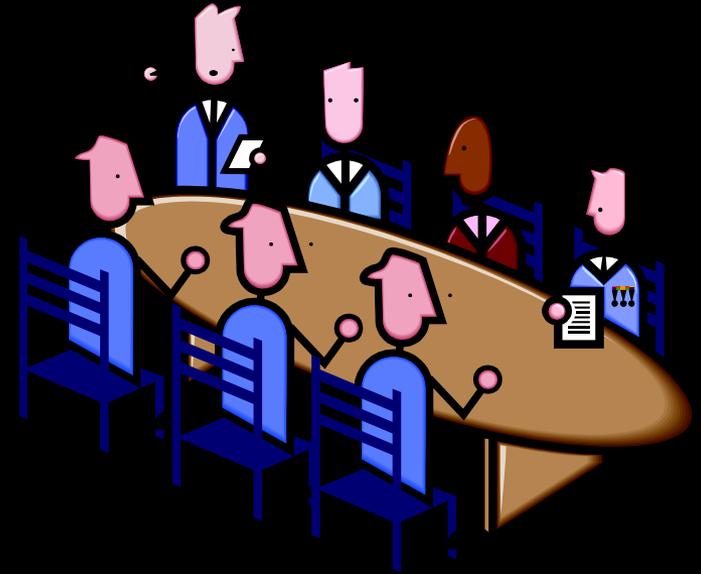
- Permit requires:
  - Identify target audiences
  - Develop focused messages
- Goal = Continue past efforts and grow the program with an unified message
- Our greatest opportunity for partnerships among municipalities

[Neighborsforcleanwater.org](http://Neighborsforcleanwater.org)

- Includes employee training in all six MCMs



# MCM 2 – Public Outreach and Involvement



- Permit requires
  - Development of informal advisory groups
  - Create involvement opportunities
    - Storm drain marking
    - Stream clean up
    - Volunteer stream monitoring programs
  - Speaking / Exhibiting at public events
  - Educating students via school curriculum



# MCM 3 - IDDE

- Permit requires
  - System map
  - Ordinance prohibiting non-stormwater flows
  - Inspection program
  - Enforcement
- Pushes DHEC authority to the local level
- Consistent countywide regulation is needed



# System Mapping

- All County, Town, and City owned (and a majority of private owned) ditches, pipes, and catch basins will need to be mapped
- Elements to be inventoried:
  - County, Town, and City owned Best Management Practices (stormwater basins, porous pavements, etc.)
  - Private owned systems and BMPs
  - State owned systems and BMPs



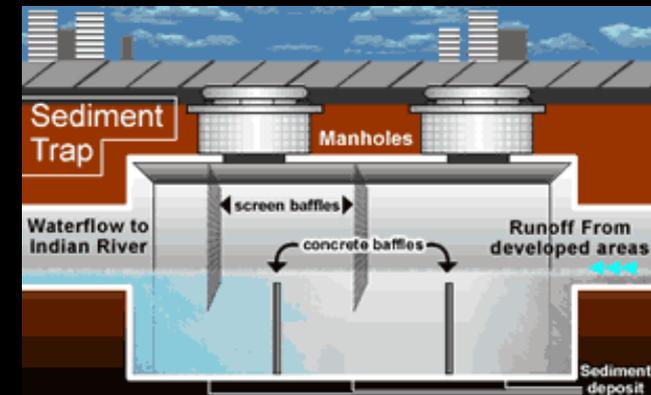
# MCM 4 – Construction Run Off

- Permit requires
  - Ordinance requiring local erosion control program, including Stormwater Pollution Prevention Plans (SWPPP)
  - Inspection
  - Enforcement
- Like IDDE, a consistent program is needed as DHEC jurisdiction is delegated to multiple municipalities in the County



# MCM 5 – PC-BMP

- Permit requires
  - Ordinance requiring PC-BMPs
  - Plan review and inspection (public AND private)
  - Enforcement
- Our stormwater management plans will include revisiting the Volume Control program and BMP Manual
  - Add the program components not in place



# MCM6 – Good Housekeeping

- Permit requires
  - Inventory and assessment of the “MS4”
    - Buildings and facilities, stormsewers, BMPs
  - Identify high priority areas
  - Inspect annually
  - Have plan to prevent pollution in ALL maintenance activities
  - Have a program to maintain the “MS4”
- Goal = Assess our “Assets” and develop a strategy for long term maintenance and operations that protects water quality



# Monitoring

- Permit requires
  - Identification of Outfalls (See IDDE)
  - Wet and Dry Weather screening
  - Constituents for testing will grow from our current list
  - Lab and field analysis
- TMDL requires additional effort



# Next Steps?

- Permits became effective on December 1, 2015
- Within 12 months
  - Develop a Stormwater Management Plan
  - Develop program and Identify priority areas for MCM 3
- Within 18 months
  - Develop the MCM 4 and MCM 5 program
- Within 24 months
  - Stormwater Ordinances in place to enforce SWMP
  - Develop a municipal facility assessment plan for MCM 6
  - TMDL monitoring plan
- Annual reporting



# STORMWATER UTILITY RATE STUDY

## Cost drivers

- Municipal Separate Stormsewer System (MS4) program
- Capital projects
- Operations and Maintenance needs



# STORMWATER UTILITY RATE STUDY

Current utility rates across the County:

- Town of Hilton Head Island \$108.70 / SFU
- City of Beaufort \$105 / SFU
- Town of Bluffton \$98 / SFU
- Town of Port Royal \$50 / SFU

In addition, rate payers in municipalities will pay a Countywide Infrastructure fee (CWI)

- Town of Hilton Head Island \$ 5.52/ SFU
- City of Beaufort \$ 5.15/ SFU
- Town of Bluffton \$ 18.13/ SFU
- Town of Port Royal \$ 3.88/ SFU



# STORMWATER UTILITY RATE STUDY

- Unincorporated County rates
  - Fixed charge per year: \$12.00 per parcel/account
  - Impervious charge: \$65.00 per SFU
  - Gross area charge: \$10.00 per acre, declining blocks

Typical single family residence (Tier 2) on 2 acres or less will pay \$87.00 per year.



# STORMWATER UTILITY RATE STUDY

Declining block rates for gross area charges in the unincorporated County rate structure:

- First 2 acres: \$10.00 per year
- Next 8 acres: \$5.00 per acre per year
- Next 90 acres: \$4.00 per acre per year
- All acres > 100: \$3.00 per acre per year



# After the Utility Rate Study...

## Utilize the Credits Program more effectively

- Promote its use
- Expand credit options
- Provide incentive programs will encourage private retrofits



# Moving Forward

- Update of the 2006 Beaufort County Stormwater Management Plan
  - On-lot Volume Control and MS4 have changed the direction of stormwater management in the County
  - System inventory will likely identify new needs
  - Revisiting our capital needs will set the course for the Utility going forward



# Summary

- Permit requirements will expand our scope of services
  - Requirements will dictate more effort, manpower, activities, resources
- CIP and O&M are as important as MS4
- Our future will not look the same as the past
- Cost saving are being realized with partnerships with other departments, other MS4s, and volunteers
- **Beaufort County can continue to lead the State and Nation**



# Questions?

Thank you for your time!

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