

# MS4 Stormwater Programs

## Making it All Work



Kentucky Stormwater Association  
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# Overview

- The Four Stages of Learning
- Regulations in Context of an MS4
- Know Yourself
- Goals: The Big Picture of Water Quality

# The Four Stages of Learning

- Stage 1: Unconscious Incompetence

“Not knowing that you don’t know something”



# The Four Stages of Learning

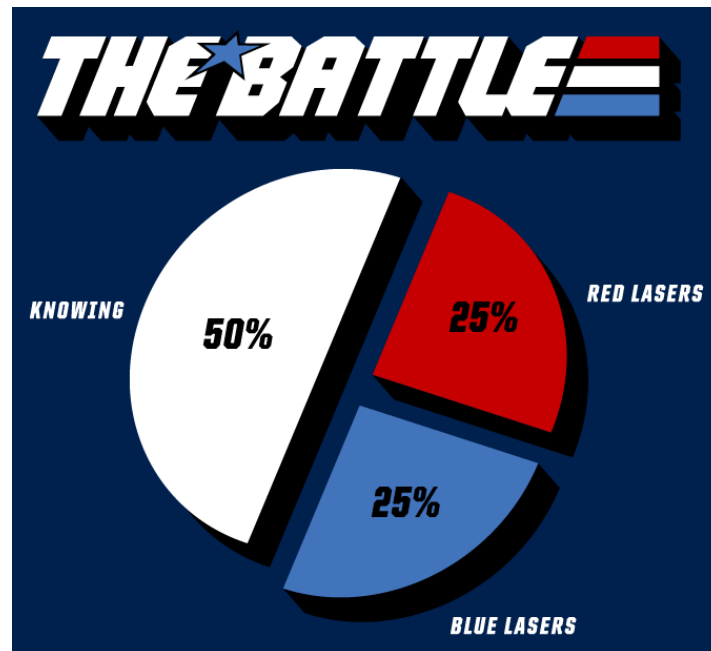
- Stage 2: Conscious Incompetence  
“Knowing that you don’t know...”



# The Four Stages of Learning

- Stage 3: Conscious Competence

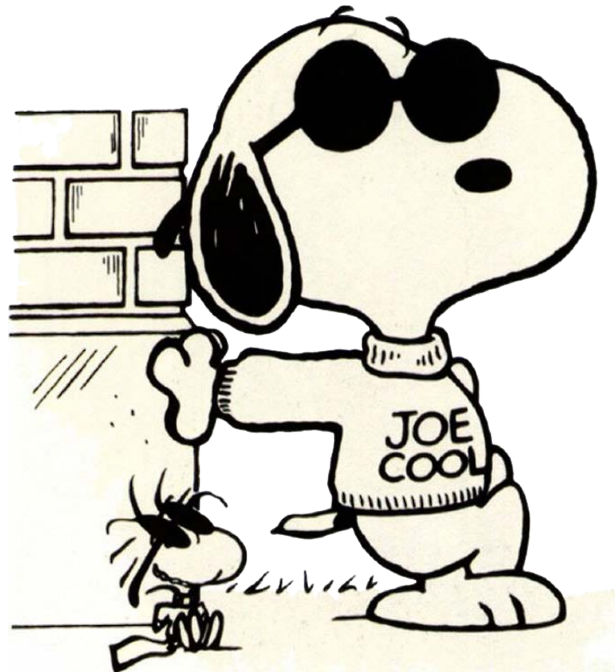
“Steadily learning and working with your new knowledge...”



# The Four Stages of Learning

- Stage 4: Unconscious Competence

“You no longer have to think about what you’re doing...”



# Regulations in Context of an MS4



Clean Water Act



- I've read all the instructions
- I have all my documentation
- I meet all the requirements
- I'm ready to apply!** 

Endangered  
Species Act



# The Clean Water Act

- **Section 401** of the CWA addresses water quality (**Section 303** – impaired waters)
- **Section 402** of the CWA mandates a permit for discharge of pollutants
  - a.k.a. **N**ational **P**ollutant **D**ischarge **E**limination **S**ystem permits (NPDES)
- **Section 404** of the CWA addresses discharges of dredged or fill material into waters of the United States (U.S. Army Corps of Engineers)



# Commonwealth of Kentucky

## Municipal Separate Storm Sewer Systems (MS4s):

### Large MS4 (250,000+ Population)

- Louisville and Jefferson County MSD
- Lexington-Fayette County Urban Government

### Small MS4 (>10,000 – 100,000 Population)

- 100 Phase II MS4s covered under the Permit

# KYG200000 Phase III General Permit

Issued March 30, 2018 (effective May 1, 2018)

Expires April 30, 2023

Basic Elements Include:

- Develop SWMP
- Implement 6 Minimum Control Measures (MCMs)
- Annual reporting
- Monitoring
- Training

# Other Relevant Regulations

- Exception/High Quality Waters
- Impaired waters / TMDLs
- FEMA - County Floodplain Development permit for construction
- Threatened / Endangered Species – Protection of state and federally protected species and habitat.
- Historic Preservation – State and/or local antiquities protection
- Dredge and Fill Permits – US Army Corps of Engineers

# *Know Yourself*

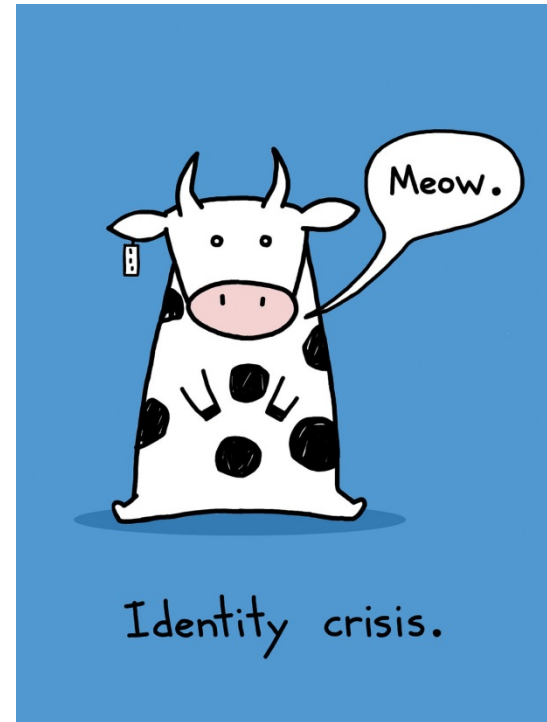


Inscribed on the Temple walls at Delphi,  
ancient Greeks offered the wisdom,  
“Know Yourself!”

# Make it all work

MS4 Departments act more or less independently:

- Public Works
- Parks and Rec
- Development Services
- Community Planning
- Office of Sustainability
- Utilities
- Transportation
- Elected officials
- Environmental



# Know Yourself

City Section	Construction Site Runoff Controls	Illicit Discharge Detection & Elimination	Pollution Prevention & Good Housekeeping	Post Construction Runoff Controls	Public Education & Outreach	Public Involvement	TMDLs
Public Works	X	X	X	X	X	X	X
Parks & Rec	X	X	X	X	X	X	X
Development	X	X		X	X	X	X
Comm. Planning	X	X		X	X	X	X
Sustainability	X	X		X	X	X	X
Utilities	X	X	X	X	X	X	X
Transportation	X	X	X	X	X	X	X
Environmental	X	X	X	X	X	X	X

# Know Yourself

- Understand the potential problem areas
  - MS4 construction
  - Developer construction
  - MS4 fleet, solid waste, landscaping (services)
  - Impaired waterways
  - Litter
  - Pet waste
  - Commercial grease traps
  - Car washes

# Know Yourself

- Evaluate the work already being done
  - Plan reviews
  - Inspections/Enforcement
  - Water quality monitoring
  - Spill response
  - Water quality initiatives
  - Litter pick up, street sweeping
  - Public outreach



# MCM: Construction Site Runoff Control

## How do you work?

- CIP Projects Versus Private Development:
  - MS4 is the permittee and the regulator
  - MS4 is the regulator
- Who reviews the SWPPPs?
  - Are they trained?
  - Follow a checklist?
- How do you inform CIP and Development about:
  - Impaired waters, TMDLs, Economic growth zones, regional plans?
- Inspections versus MS4 Audits
  - What is the difference?
  - Are you doing both?

# MCM: Construction Site Runoff Control

- Extend outreach to Developers
  - Provide a carrot and a stick approach
  - Select BMPs to meet water quality goals
  - Give information in writing
    - At Plan review and acceptance
  - Give information verbally
    - At kickoff meetings
    - During inspections and corrective actions
  - Documentation should be specific, accurate, and concise
    - Build a legal case for compliance

# MCM: Construction Site Runoff Control

- Caught between economic growth & compliance?
  - Extend outreach to public officials
    - Economic value of clean water
    - Public safety during recreation
  - Inform public officials about risks of non-compliance
    - Financial penalties
    - Poor performers get more “bad” attention
  - Educate public officials on MCMs
    - Demonstrate overlapping departments
    - Point to missed opportunities or synergies

# MCM: Construction Site Runoff Control

- MS4s are at risk for:
  - Inadequate process for review/approval of SWP3s
  - Failure to conduct and document inspections/audits
  - Failure to require corrective actions
  - Failure to enforce for significant or repeated non-compliance
  - Inadequate records of our efforts to gain compliance

# MS4 Stormwater Management Plans

- SWMP Program Areas:
  - Construction site runoff control
  - Illicit Discharge Detection & Elimination (IDDE)
  - Pollution Prevention / Good Housekeeping
  - Post-construction runoff control
  - Public Education and Outreach
  - Public Involvement / Participation
  - Program Effectiveness
  - Water Quality Goals / TMDLs

# *Establishing Goals: The BIG Picture*



Agricultural Supply



Drinking Water



Industrial Supply



Fishing



Contact Recreation

# Establishing Goals: The BIG Picture

- To be of “Beneficial Use” water is tested and compared to a list of chemicals
- Impaired waters exceed one or more concentration threshold(s) of its designated beneficial use.
- TMDLs are written to improve water quality in impaired waters.
- MS4s contribute to the Implementation Plan (I-Plan) for streams within their jurisdiction

# Establishing Goals: The BIG Picture

MS4 operators represent the needs of a diverse community

- Seek out common goals
- Evaluate opposition
- Educate your stakeholders
- Select options that make economic sense
- Communicate goals and milestones



# Reach for the big picture



# Reach for the big picture

- Focus on goals that “speak” to your audience:
  - Recreation (swimming, boating, and fishing)
  - Public safety (bacteria, toxic chemicals)
  - Tourism (floatables and trash, color, odor)
- Connect the dots between actions and goals
  - Stormwater is not treated
  - Connection to drinking water
- Speak to your audience at their level of competence
- Work from where you are to get where you want to go!

# Questions?



FREQUENTLY

ASKED

QUESTIONS

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