When It’s Not Raining...
Prioritizing Stormwater Outfall Screening During Dry Weather Periods for MS4 Requirements

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Overview

Prioritizing Stormwater Outfall Screening

• MS4 Permit requirement / purpose
• Assessing the stormwater system / watershed
• Selecting high priority outfalls
• Prioritization approaches
• Implementation
• Documentation / tools
Minimum Control Measures (Program Areas)

- Six Minimum Control Measures have been established
  - Public Education and Outreach on Storm Water Impacts
  - Public Involvement / Participation
  - Illicit Discharge Detection and Elimination
  - Construction Site Storm Water Runoff Control
  - Post-Construction Storm Water Management in New Development and Redevelopment
  - Pollution Prevention/Good Housekeeping for Municipal Operations

- BMPs with measurable goals must be developed for each minimum control
Permit Requirement

- Develop, implement, and enforce a program to detect and eliminate illicit connections or discharges into the permittee's small MS4
- Conduct periodic inspections of the storm sewer outfalls in dry weather conditions for detection of non-storm water discharges and illegal dumping
- Establish a prioritization plan for inspection of outfalls, placing priority on outfalls with the greatest potential for non-storm water discharges. Major/high priority outfalls shall be inspected at least annually
Assessing the System / Watershed

- Local water quality impairments
  - IEPA 303d list
- Pollutants of Concern
  - Sediment
  - Nutrients
  - Metals
  - Other pollutants / toxins
- TMDLs
- Local water quality goals
  - Water supply
  - Recreational areas
  - Tourist areas
Selecting High Priority Outfalls

- Location, location, location
  - Impaired / TMDL waterbodies
  - Recreation / tourist areas
  - Industrial / commercial land use
  - Complaint areas
  - History of illicit discharges
  - Local priorities
- Safety considerations
  - Accessibility
Prioritization Approaches

- Evaluate your program resources
- How many inspections can you do in a year?
- One or two people?
- Staff time available, or contractor
  - Summer intern?
- What would your MS4 inspector say is your MEP?
- Must document your inspection prioritization
Implementation

• Example 1:
  • Community has twelve stormwater outfalls
    - Two in industrial areas
    - Ten in residential areas
    - Five tributary to impaired river reach listed for sediment, nutrients

• How many high priority outfalls?
Implementation

• Example 1:
  • Community has twelve stormwater outfalls
    - Two in industrial areas
    - Ten in residential areas
    - Five tributary to impaired river reach listed for sediment, nutrients

• How many high priority outfalls?

• Answer: 12
  • Would be considered easily implementable for most MS4 communities
Implementation

• Example 2:
  • Community has 200 stormwater outfalls
    - 12 to impaired waters
    - 8 in the downtown area
    - 10 near public recreation areas
    - 20 in heavy industrial areas
    - 150 in commercial / residential area

• How many high priority outfalls?
Implementation

• Example 2:
  • Community has 200 stormwater outfalls
    - 12 to impaired waters
    - 8 in the downtown area
    - 10 near public recreation areas
    - 20 in heavy industrial areas
    - 150 in commercial / residential area

• How many high priority outfalls?

• Answer: Depends on local resources, goals
  • Possibly 12, 22, 50, 200?
  • 200 would be beyond what the typical community would be expected to do annually
• Example 3:
  • Community has no stormwater outfalls
    - Storm sewer system drains to other communities’ systems
    - Nothing daylights

• How many high priority outfalls?
Example 3:
- Community has no stormwater outfalls
  - Storm sewer system drains to other communities’ systems
  - Nothing daylighted

How many high priority outfalls?

Answer: 0, no outfalls, but...
- Could pop manholes in high priority areas and inspect
- Could inspect runoff during storm events in areas of concern
- Do something
Implementation

• But what about all the non-high priority outfalls?
• Permit is silent, implies you can’t ignore them completely
• Local program decision
  • Again, what resources do you have?
  • Every other year?
  • Once per permit term, 5 year schedule is generally accepted
Documentation / Tools

- Paper forms
- Pros
  - Straight forward
  - Field notes
  - Batteries don’t go dead
- Limitations
  - Retrieving information
  - Determining past issues
  - Photos cumbersome to link / manage
• Collector for ArcGIS
• Easier to find outfalls
  – Zooms
Collector for ArcGIS – Benefits

• **Pros:**
  – Easier to find outfalls
  – Improved efficiency with record keeping
  – Instant history
  – Easily link photographs
  – Up-to-date mapping

• **Limitations**
  – Licenses and costs
  – Staff technical capabilities
  – Batteries...
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Questions & Discussion