SOURCE CONTROL 101: IN-DEPTH APROACH

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Overview of Process

1. Identify Pollutant of Concern
2. Identify Sources
3. Quantify and Prioritize Sources
4. Identify Potential Source Controls for High Priority Sources
5. Estimate Pollutant Reductions and Prioritize Source Controls for Implementation

1) Identify Pollutant of Concern

- NPDES Permit Requirement
- 303(d) Listing
- Review/Analysis of Monitoring Data
- POC Identification Process

All of these provide clues as to sources and potential points of control

2) Identify Sources

- Brainstorming
- Literature Review
- Review Monitoring Data
- Create A Conceptual Model

Remember: it's stormwater - and specifically urban runoff

Source must have exposure to runoff – and connect to storm drain

Source ID Considerations

- Original source (e.g., factory) vs. local source (application of chemical to urban landscape)
- Form of pollutant (e.g., dissolved vs. suspended)
- Spatial variation: localized vs. dispersed
- Temporal variation: seaonality
- Transport pathways: rainfall, irrigation, or both?

Create a Conceptual Model

- Helps to organize sources and pathways
- Can be easily modified as thinking/knowledge changes

3) Quantify and Prioritize Sources

- Assess literature data
- Assess monitoring data
- Employ a model
  - Simple spreadsheet model
  - Sophisticated urban runoff model

Quantification/Prioritization Is Important

- You can’t address everything
- Results in a categorized/prioritized list of sources
- Control strategy will depend on targeted sources

4) Identify Potential Source Controls

- Focus on high-priority sources
- Goal is to prevent pollutant from entering storm drain – not engineering treatment

Identifying True Source Controls

- Behavior Change (Outreach/Education)
- Advocacy
- Legislation
- Regulatory Action (Local/State/Federal)

Behavior Change Is Often Needed

Develop Matrix of Potential Controls from Prioritized Source List

- Review literature
- Brainstorm
- Compile and summarize potential pollutant reductions
- (Incorporate into urban runoff model)

5) Prioritize Source Controls for Implementation

- Based on estimated pollutant reductions achievable for various combinations of sources and controls
- Phased/iterative approach typically
- Provide for effectiveness assessment
- Revisit control options matrix and update as new information becomes available

COMMENTS/QUESTIONS

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