Best Practices in Addressing NPDES and Other Water Quality Issues in Highway System Management

NCHRP 20-68A, Scan 08-03
DOMESTIC SCAN PROGRAM

Scan Overview
Purpose: Technology transfer

Approach

- Develop ‘study’ questions and review the programs at high-performing agencies
- Develop education materials for public dissemination
  - Summary Report
  - Presentation
  - Final Scan Report

Implementation
Implementation Outcomes

► Report / catalogue of ready to implement technologies, methods and processes

► Applied Studies to examine specific practices in greater depth

► Influence on agency business practices

► Suggestions for national regulatory and stormwater program development
Scan 08-03 Team

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Scan Sites

- Buffalo, NY
- Washington, DC
- Baltimore, MD
- Raleigh, NC
- Austin, and College Station, TX
- Orlando, FL
Scan Focused on Four Topic Areas

1. Total Maximum Daily Loads (TMDLs)
2. Best Management Practices (BMPs)
3. DOT Practices/Procedures
4. Regulatory
DOTs are Different

DOTs have unique challenges in implementing an NPDES stormwater program as well as in responding to TMDL requirements. DOTs:

- Cross multiple watersheds and jurisdictional boundaries
- Control a very small portion of the watershed
- Have safety as a high priority
- Are passive and uniform
Other Findings

► Implementation Approaches

- Commitment from the top
- Continued dialogue
- Partnerships and communication
- Evaluate programs based on cost / benefit
- Incorporate stormwater early in project delivery process
Scan Recommendations

► TS4 Permit
  - Create a model permit for use by states

► National Guidance on DOT TMDL Application
  - Credit trading

► New Emphasis on Source Control

► Integrate Stormwater Program Responsibility with the DOT
Scan Recommendations (Con’t)

► Invest in pooled-fund studies
► Collect Cost Data for Stormwater Program Elements
► Invest in BMPs for Highway Maintenance Activities
Topic A: TMDLs

TMDL Implementation
- TMDLs in MS4 Permits
- DOT implementation strategies
  - Source control
  - BMP retrofit

Water Quality Credit Trading
- Credit trading for TMDL compliance
- Impervious area credit trading
Topic B: BMPs

► Water Quality Traditional and Innovative Best Management Practices (BMPs)
  - Construction and post-construction emerging BMPs
  - LID for highways – what are the opportunities
  - Jurisdictional wetland issues and treatment devices

► Non-structural and Source Control Management Options
  - Source of pollutants within the ROW and relative load
  - Source control programs
Topic C: DOT Practices/Procedures

► Agency Maintenance and Operations Practices
  ▪ Tracking and maintaining treatment BMPs
  ▪ O&M processes that improve water quality

► Program compliance reporting and tracking
  ▪ Program reporting
  ▪ Incident reporting
  ▪ Compliance reporting
  ▪ Program effectiveness assessment
Topic D: Regulatory

► Coordination with Local and Federal Regulators
  - Approach to communication with regulators
  - Structure of DOT staff vs. regulatory agency