Watershed Restoration and Protection Plans in New Jersey

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Bureau of Watershed Planning

• Responsibilities
  - Watershed Restoration and Protection Plans
  - Regional Stormwater Management Plans
  - Non-Point Source Implementation
  - 319H & 604B Grant Administration
  - Volunteer Monitoring Coordination
  - AmeriCorp Watershed Ambassadors
  - Publications/Training
NJ’s 20 Watershed Management Areas
2004 Integrated Water Quality Monitoring and Assessment

- 2,870 assessed non-tidal river miles
  - 2,187 miles (76%) did not meet SWQS
- 119 public lakes assessed for trophic status
  - 50 lakes assessed as eutrophic
- Basis and driver for development of watershed-based plans
- 2006 list is available online

http://www.nj.gov/dep/wmm/sgwqt/wat/
Summary of Watershed Management

Water Quality Standards

Monitor/Assess WQS Attainment

List Impaired Waters

TMDL
  • WLAs to individual point sources
  • LA to nonpoint Sources
  • Showing that LA is “reasonably achievable”

Integrated Watershed Plan

Point Source
NPDES Permits

Control
Nonpoint Sources

Continuing Planning Process
Watershed Restoration

• Develop detailed watershed restoration plans building on TMDLs
• Identify priority segments for restoration
• Implement restoration projects using
  – 319H
  – CBT
  – Other Available Funds
EPA’s 319 Funding Guidelines

- “Incremental Funds” must be used to develop and implement **WATERSHED - BASED PLANS** that are designed to achieve water quality standards

** Where TMDL’s have been developed, the plans incorporate them and go from there
Watershed Plans in NJ
Watershed Planning Paradigm Shift

- The traditional paradigm for 319, EQIP, etc. has not enabled us to achieve our WQ goals

- Until you have quantitative knowledge of:
  - (a) the nature and source of the WQ problem,
  - (b) the pollutant load reductions needed to meet WQS,
  - (c) the BMP’s that will achieve that pollutant load reduction,

  you’re not ready to implement BMP’s that will solve the problem.

- (unless you are very lucky)
“Watershed-Based Plans”

• EPA’s Section 319 Program and Grants Guidelines identify 9 Components that must be included in each “Watershed-Based Plan” to restore impaired waters

• Before a State funds a 319 restoration project, it must be in a watershed-based restoration plan
9 Minimum Plan Components

1. Identification of the pollutants
2. An estimate of the load reductions expected
3. A description of the NPS management measures that will need to be implemented to achieve the load reductions estimated and an identification of the critical locations in which those measures will be needed to implement this plan.
4. An estimate of technical and financial assistance needed
5. Outreach/education component
6. Schedule for implementing
7. Description of interim, measurable milestones
8. Criteria that can be used to determine whether loading reductions are being achieved over time
9. A monitoring component to evaluate the effectiveness of the implementation efforts
Watershed Plan Goal

• To identify realistic Non-Point Source management measures that when implemented will provide the most effective means to accelerate the achievement of water quality standards.
“Everything starts with a dream…with some luck and appreciation and a bit of application it may evolve into an idea. But to develop the idea into a plan and to bring that plan to reality requires an enormous amount of skills, dedication and hard work” Richard Pound
Answers You Should Know

• 1. What are the designated uses of the waterbody?
• 2. What are the problems in the waterbody?
• 3. What are the pollutants and/or habitat factors degrading the waterbody?
• 4. What are the sources of the pollutants?
• 5. What are the goals for reducing pollutant loads and changing other factors?
• 6. What management alternatives will achieve the goals?
• 7. What did the implementation of the practices improve in the waterbody?
Nonpoint Source and Stormwater Runoff Pollutant Sources

Construction: land development, roads, bridges
Urban Runoff: storm sewers, pets, lawn care, surface runoff, and storm sewer interconnections
Agriculture: crop production, feedlots, animal holding, and farmland erosion
Land Disposal: landfills, on-site wastewater systems
Hydromodification and Habitat Modification: streambank destabilization, flow modification, removal of riparian vegetation, loss of forests and open space
Marinas and Recreational Boating: siting and design of marinas, boat activities, maintenance, waste discharge
Ground water loads/withdrawal: septic systems, loss of base flow, lawn care, stormwater recharge, sewer line leakage, agriculture
Contaminated sediments: land fills, contaminated sites, underground storage tanks, brownfields
Air Deposition: regional and local sources
Wildlife: geese, deer
Best Tools

- Available data and information
- Models: Level of detail is important consideration for the model. Ability to transfer the model to the township is another consideration. Is the model applicable for the pollutant of concern?
- Sampling: through an approved QAPP
- Remote sensing
- Historical information
- Visual assessments
Implementation
Implementation
Plans

- Not another plan on the shelf
Making Watershed Management Work

• Need the “long view” – success takes time
• Avoid expectations of instant gratification
• Need clear objectives – keep focused
• Perhaps not appropriate for all watersheds

• Don’t do it unless you can implement it!!!
Plans to move forward with---
Questions?