Watersheds Know No Political Boundaries: A Look Into the Benefits and Challenges of Watershed-Based Stormwater Permitting in Southeastern Wisconsin

2014 Government Affairs Seminar
February 27, 2014

Michael Hahn, P.E., P.H.
Chief Environmental Engineer
Southeastern Wisconsin Regional Planning Commission
mhahn@sewrpc.org
(262) 953-3243

#216265
What is Watershed-Based Permitting?

☑ It’s the connection of known:
  ○ Water Resource Impacts
  ○ Pollutants
  ○ Sources
  ○ Delivery methods
  ○ Hydrologically defined geographic areas

. . . all through NPDES permitting
NPDES “Minimum Control Measures”

- Construction Site Pollutant Control
- Post Construction Storm Water Management
- Public Involvement and Participation
- Public Education and Outreach
- Illicit Discharge Detection and Elimination
- Pollution Prevention

MS4 Minimum Control Measures
Benefits

- Improves opportunities for public participation
- Allows permittees to work together and share resources
- Helps regulators & stakeholders focus on watershed issues
- Promotes coordinated planning and implementation
- Possibility of TMDL execution without trading limitations
Why Watershed-Based?

- Experience
- Resource-focused
- Integrates management plans and permit schedules
- Shared accountability
- Cost-effective
- Collaborate on existing and future projects such as green infrastructure
Watershed-Based Permit Types

- Coordinated IndividualPermits
- Multi-Party Permit
- Watershed General Permit
- Single Entity Permit
Specific vs. General Approaches

- Can target specific watershed conditions
  - Pollutants
  - Dischargers
  - Impairments
  - Management approaches

- Can apply more generally
  - Address the aggregated cause and effect
  - Start from data collection or planning stage
Watershed-Based Permit Pilot Projects

- Ramsey Washington Pilot
- Middle Rio Grande, NM Watershed Pilot
- Menomonee River, WI Watershed-Based MS4 Permit
Menomonee River WBP

- 135 square-mile drainage area
- Four counties
- 17 cities, villages, and towns (15 with MS4 permits)
Menomonee River WBP

MAJOR SUBWATERSHEDS IN THE MENOMONEE RIVER WATERSHED

- Over 50 stream miles of impaired waterways
  - 64% Urban
  - 36% Rural

Milwaukee River TMDL
- TSS
- TP
- Bacteria
EPA’s Watershed-Based Permit Development Process

✅ Navigator Elements:
1. Create Watershed and Source Data Inventories

2. Apply a Watershed Permitting Analytical Approach

3. Construct an NPDES Watershed Framework
Menomonee River Watershed-Based Permit Framework Process

- Work began in July 2011
- Multiple group meetings
- Review of source data inventories (SEWRPC)
- Built from existing group permit
- Introduced watershed projects concept
- Documented in framework document
Stakeholder Involvement

- Series of working group meetings facilitated by SEWRPC and City of Brookfield
- Municipalities within the watershed
- USEPA
- MMSD, Sweet Water, WDNR, 1,000 Friends of Wisconsin, and Midwest Environmental Advocates (MEA)
Framework Development

✔ Past and continuing SEWRPC water quality planning work

✔ Updated analysis of water quality data for Menomonee and adjacent watersheds

✔ Identified water quality stressors (total suspended solids, phosphorus, fecal coliform bacteria)
Framework Development

✓ Identification and resolution of potential issues
✓ Series of questions related to:
  ✓ Multiple watersheds
  ✓ Future TMDLs
  ✓ Modifications to monitoring and illicit discharge detection and elimination requirements
  ✓ Economic benefits and water quality “trading”
  ✓ Synchronizing individual MS4 permit cycles
Framework Development

☑ Development of annotated permit
  ☑ Began with current group permit
  ☑ Added to and modified as necessary during eight group meetings over one year
  ☑ Sought and achieved consensus
Watershed Projects

- Alternative means of compliance
- Structural and non-structural projects
- Targets pollutant, source, or geographic area
- Projects are proposed, reviewed, approved, and evaluated
- Projects implemented on a watershed-scale
- Flexibility to adapt to new information
Incentives for Participation in WBP

• Collaborative watershed projects that could reduce costs and meet multiple permit conditions

• Flexibility in addressing total maximum daily load (TMDL) wasteload allocations in multiple-municipality stream reaches

• Development of a joint analysis procedure for prioritizing and targeting outfalls for IDDE monitoring

• Joint report on public education and outreach

• Address reductions in pollutant loads at a watershed level without executing water quality trades
Incentives for Participation in WBP

- Options for cooperative public education and outreach (also available under a group permit)

- **Possibility** of participant(s) in a watershed-based permit receiving substantive additional points on State Urban Nonpoint Source and Storm Water Management grants

- **Possibility** of stable (rather than increasing) permit fees

- Grant applications for collaborative projects may be assigned higher priorities by public and private grant institutions
Challenges

☑ MS4s in multiple watersheds
☑ Maintain six minimum control measures
☑ Multiple permits?
☑ My tax dollars are going where?
☑ Statutory Obstacles
☑ Momentum
Resources

Watershed-based National Pollutant Discharge Elimination System (NPDES) Permitting Technical Guidance
August 2007

http://www.sewrpc.org/SEWRPC/Environment/RecentPublications.htm


DEVELOPMENT OF A FRAMEWORK FOR A WATERSHED-BASED MUNICIPAL STORMWATER PERMIT FOR THE MENOMONEE RIVER WATERSHED