

A map of Southeastern Wisconsin showing various watersheds. The map is overlaid with a grid. The watersheds are color-coded: a large area in the north and west is colored orange, a central area is light green, and a small area in the south is dark blue. The background of the map is a topographic relief map showing elevation changes.

Watersheds Know No Political Boundaries:

A Look Into the Benefits and Challenges of
Watershed-Based Stormwater Permitting in
Southeastern Wisconsin

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What is Watershed-Based Permitting?

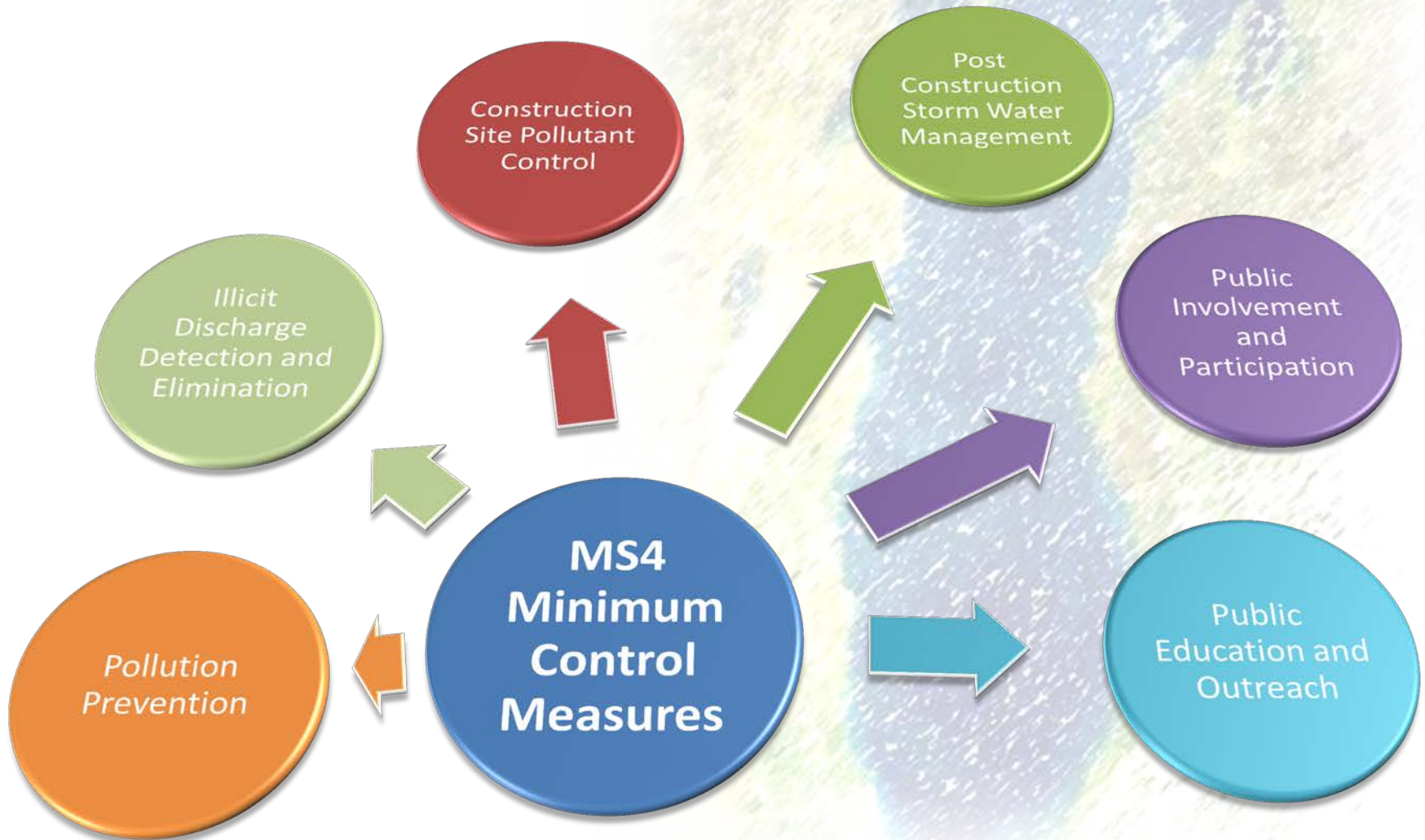
✔ It's the connection of known:

- Water Resource Impacts
- Pollutants
- Sources
- Delivery methods
- Hydrologically defined geographic areas

... all through NPDES permitting



NPDES “Minimum Control Measures”



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 Individual Permits

✓ Multi-Party Permit

✓ Watershed General Permit

✓ Single Entity Permit



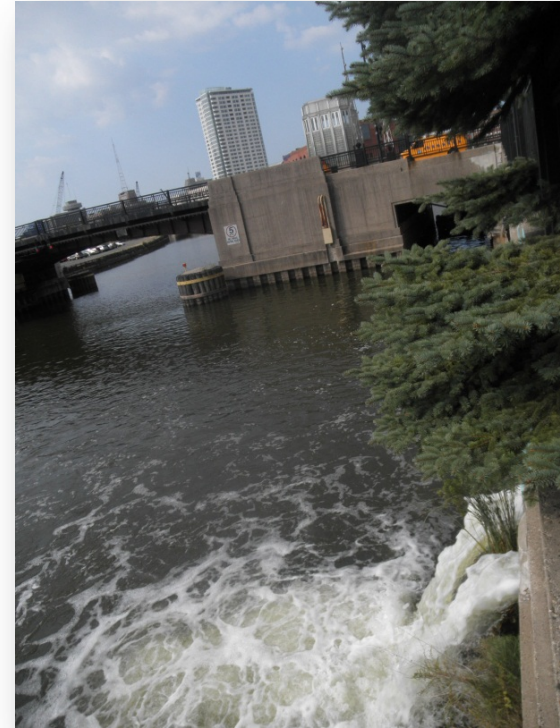
Specific vs. General Approaches

✔ 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

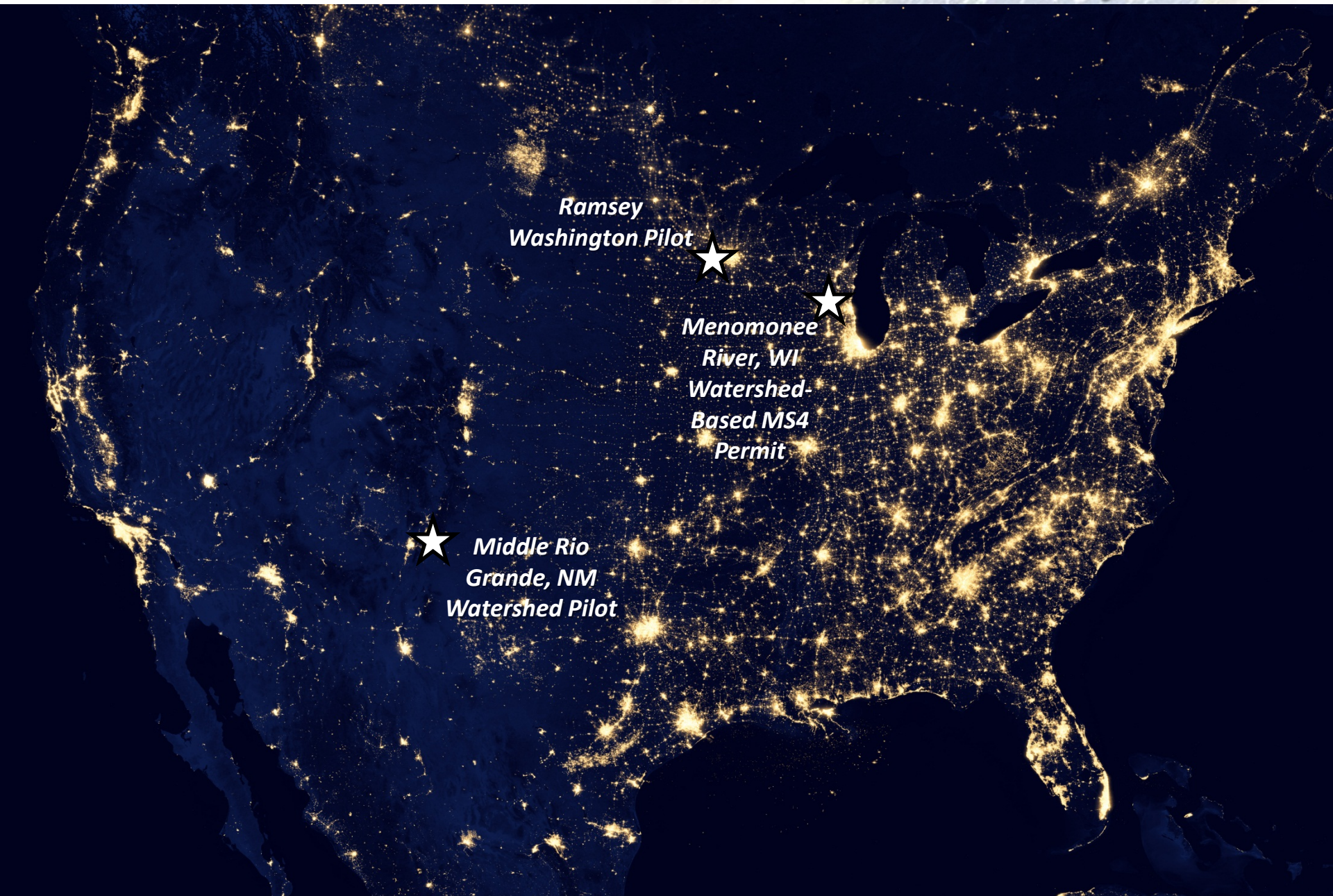
*Ramsey
Washington Pilot*



*Menomonee
River, WI
Watershed-
Based MS4
Permit*



*Middle Rio
Grande, NM
Watershed Pilot*



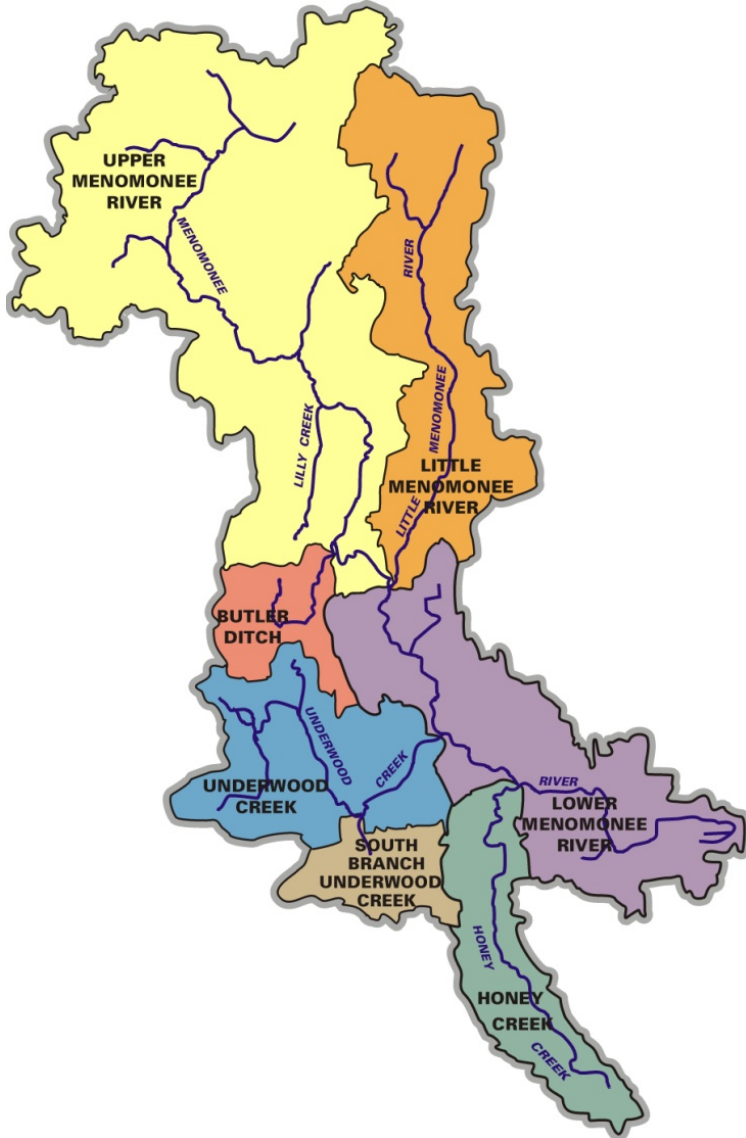
Menomonee River WBP

- ✓ 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

- ④ Identification and resolution of potential issues
- ④ Series of questions related to:
 - ④ Multiple watersheds
 - ④ Future TMDLs
 - ④ Modifications to monitoring and illicit discharge detection and elimination requirements
 - ④ Economic benefits and water quality “trading”
 - ④ 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

- ① MS4s in multiple watersheds
- ① Maintain six minimum control measures
- ① Multiple permits?
- ① My tax dollars are going where?
- ① Statutory Obstacles
- ① Momentum

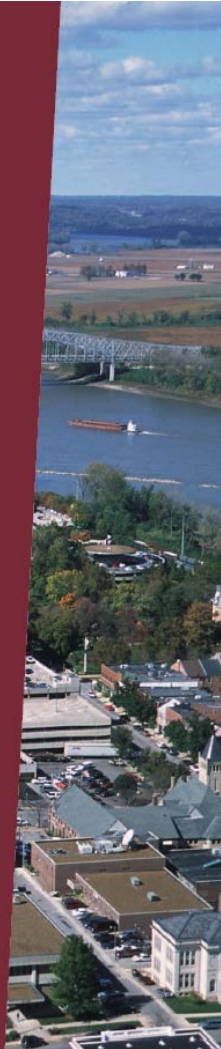


Watershed-based National
Pollutant Discharge Elimination
System (NPDES) Permitting
Technical Guidance

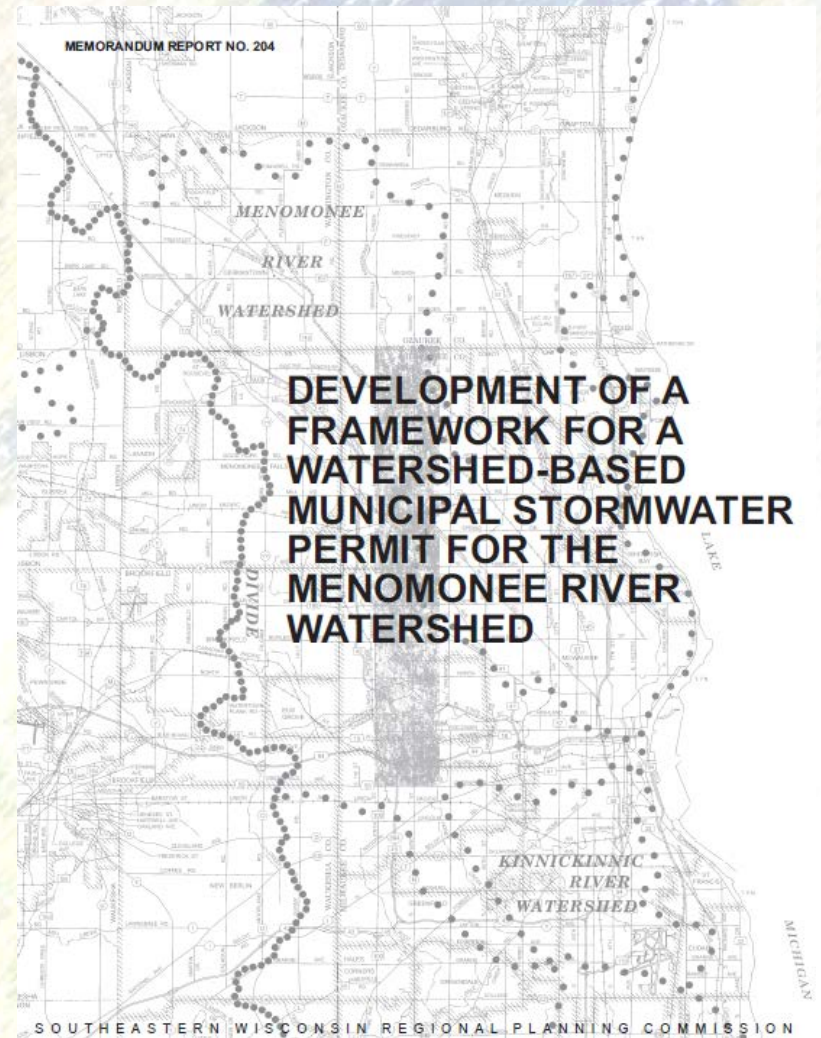
August 2007

U.S. Environmental Protection Agency
Office of Wastewater Management
Water Permits Division
1200 Pennsylvania Avenue, NW
Washington, DC 20460

EPA 833-B-07-004



Resources



http://www.epa.gov/npdes/pubs/watershed_techguidance.pdf

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