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Science, Engineering & Construction

**Storm Water, TMDLs, MS4s
(and a few additional items)**

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Symbiont

Central States WI Section GAC Chair

Outline

- Storm Water rule updates
- MS4 - TMDL incorporation
- Integrated Permitting
- Recreational water quality criteria

Storm Water Permitting Revision Background

- U.S. EPA directed to update and revise storm water permitting requirements by court order
- Chesapeake Bay urban storm water contribution to nutrient issues
- September 15, 2011
- December 15, 2011
- January 31, 2012 – set a schedule
- “In a meeting of municipal water organizations this week, EPA Office of Water officials stated that they are looking for additional data to support their ongoing cost-benefit analysis associated with the stormwater rulemaking effort. Additionally, these officials indicated that the release of the proposed rule is likely to occur in late (post-Presidential election) 2012 or early 2013. EPA has targeted March 16 to release a detailed schedule for the rulemaking” WEF – This Week in Washington - Feb 10 2012.

Storm Water Regulation Update

- Develop performance standards from newly developed and redeveloped sites to better address stormwater management as projects are built;
- Explore options for expanding the protections of the municipal separate storm sewer systems (MS4) program;
- Evaluate options for establishing and implementing a municipal program to reduce discharges from existing development;
- Evaluate establishing a single set of minimum measures requirements for regulated MS4s. However, industrial requirements may only apply to regulated MS4s serving populations of 100,000 or more;
- Explore options for establishing specific requirements for transportation facilities; and
- Evaluating additional provisions specific to the Chesapeake Bay watershed.

Develop Performance Standards

- New Development - Redevelopment
 - Retention on site for a specified precipitation event
 - Flow control as a surrogate for TSS - and nutrients
 - EPA will ask for comments on the approach and what level of event should be managed
- Existing Systems
 - Retrofit sewer systems
 - Improved control measures in the drainage area

Expansion of MS4 Program

- Expand area covered by MS4
- Counties
- Watersheds
- Exurban development

Common Requirements for All MS4s

- Eliminate distinction between Phase I and Phase II communities

Transportation Facilities

- Specific MS4 for roads, streets, highways

Construction Performance Standards

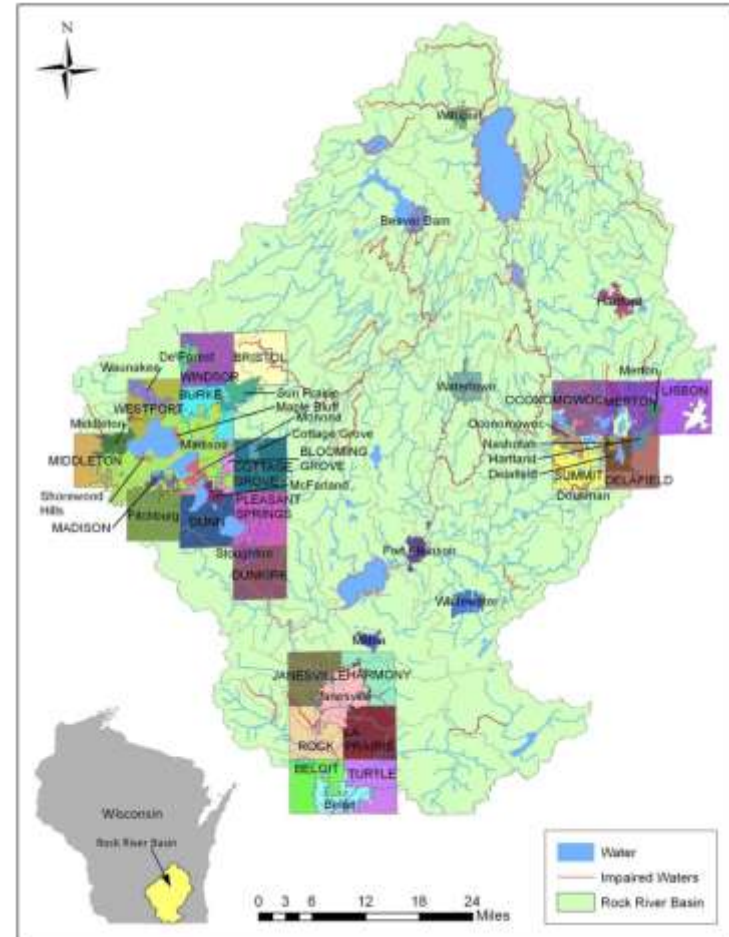
- Turbidity effluent guideline published and withdrawn – 2009
- Revised rule to OMB December 2010 – also withdrawn
- Seeking additional performance data for construction and development sites
- Federal Register Notice requesting performance data – January 3, 2012
 - [EPA-HQ-OW-2010-0884, FRL-9615-3] Effluent Limitations Guidelines and Standards for the Construction and Development Point Source Category
- Comments due March 5, 2012

How does this relate to TMDLs?

- Nov 10, 2010 Jim Hanlon memo
 - Numeric WQBELs in storm water permits can clarify permit requirements and improve accountability and enforceability. For the purpose of this memorandum, numeric WQBELs use numeric parameters such as pollutant concentrations, pollutant loads, or numeric parameters acting as surrogates for pollutants, such as storm water flow volume or percentage or amount of Impervious cover.
 - If the State or EPA has established a TMDL for an impaired water that includes WLAs for storm water discharges, permits for either industrial storm water discharges or MS4 discharges must contain effluent limits and conditions consistent with the requirements and assumptions of the WLAs in the TMDL

Rock River TMDL – MS4

- Baseline loads from each of the following source categories are equal to the lesser of
 - 1) current loads or
 - 2) loads that would result from full regulatory compliance (the endpoint of “delayed compliance schedules,” where applicable) by permit holders:
- MS4s: Per-acre loading rates from SLAMM simulations, adjusted to represent compliance with 40% TSS reduction target (equals 27% TP reduction) in NR 216



MS4 P Contribution to Rock River Loadings

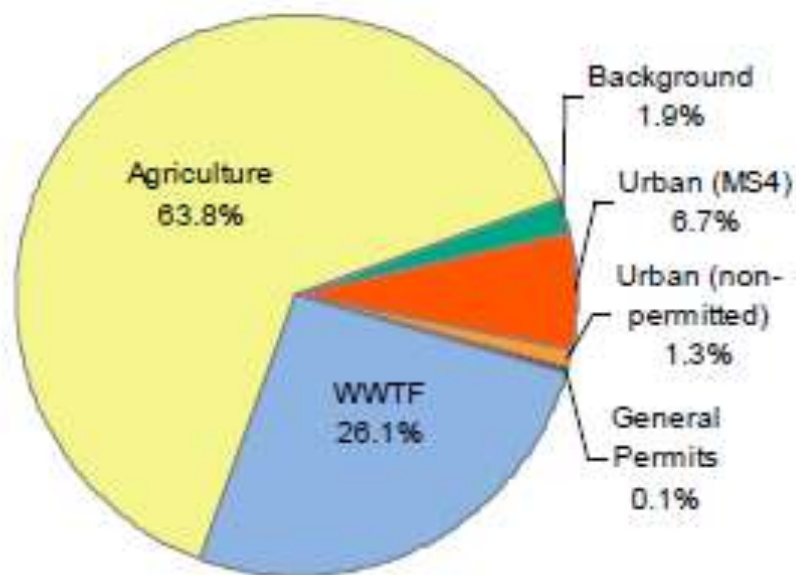


Figure 11. Average annual distribution of baseline TP sources in the Rock River Basin.

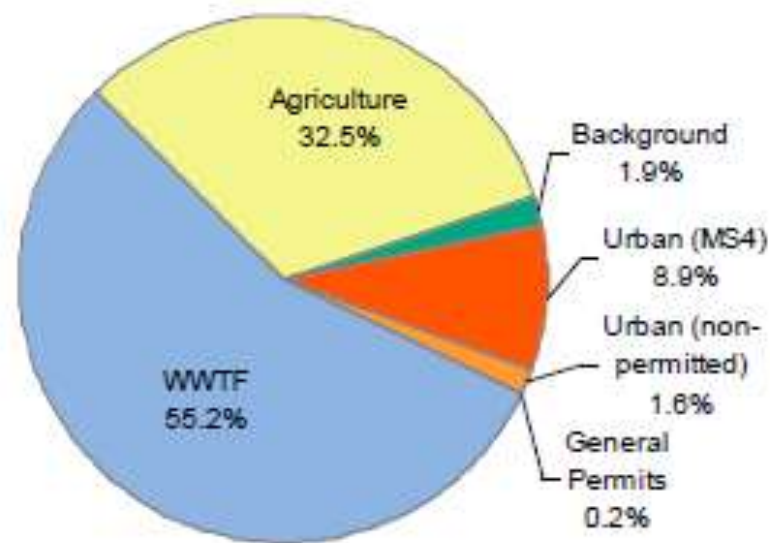


Figure 12. Average monthly distribution of baseline TP sources in the Rock River Basin.

MS4 TSS Contributions to Rock River Loadings

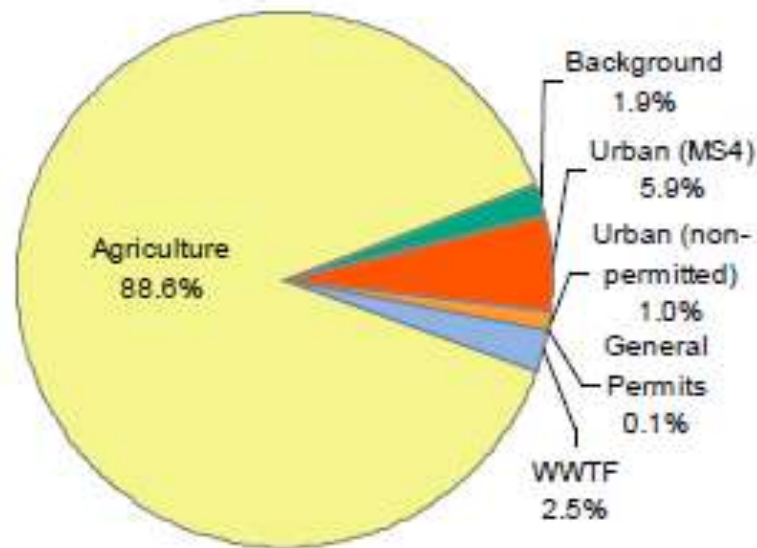


Figure 13. Average annual distribution of baseline TSS sources in the Rock River Basin.

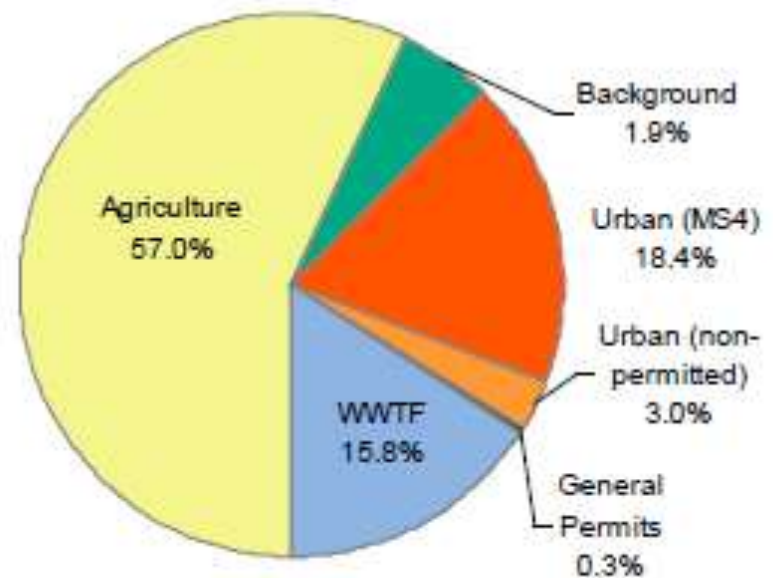


Figure 14. Average monthly distribution of baseline TSS sources in the Rock River Basin.

WPDES Permits

- Municipal and Industrial WPDES limits consistent with TMDL allocations
- Guidance for MS4 and CAFOs
- Enforceable compliance dates for MS4 NR 151
TSS reduction requirements removed by Budget Bill

TMDL Comment

-, the TMDL as written would imply that the City will be required to implement practices to reduce the TSS loads beyond the 40% already factored into the baseline loads. With regard to reach 62, even new development standards under NR 151 are insufficient to achieve this reduction rate. It is understood that the City has the ability to change its ordinance to require higher TSS reduction rates for new development within its limits. However, the watershed tributary to Pheasant Branch extends far beyond the City limits. Will the WDNR be requiring additional TSS reduction in new developments in non-MS4 areas?

....If development in the watershed, but outside the City's limits, is allowed to continue under current regulations, it would seem that Middleton, which is at the downstream end of the watershed, will be playing catch-up indefinitely. **Sonnentag, City of Middleton**

Integrated Planning/Permitting

- Responsible CWA permittee(s) could prioritize responsibilities
- Sanitary Districts, municipalities, storm water utilities
- Target area (watershed, utility total service area, multiple municipalities)
- CSOs, SSOs, nutrient removal, conventional wastewater treatment, storm water
- Prioritize projects - environmental benefits

Elements of an Integrated Plan

- Water Quality, Human Health, Regulatory Issues
- Existing Wastewater & Storm Water systems/performance
- Process for Alternative Identification, Evaluation, Selection and Implementation Scheduling
- Metrics for Measuring Success

Implementation

- Permits
- Compliance Schedules – Potential Enforcement
- Green Infrastructure/Sustainability Considerations
- Water Quality Trading
- <http://cfpub.epa.gov/npdes/integratedplans.cfm>

Recreational Criteria

Publication October 2012

- E. coli
- Geometric mean
 - 126 cfu/100 ml
 - 30 - 90 days
- Statistical Threshold Level
 - 75th Percentile
 - 30 – 90 days
 - 235 cfu/100 ml
- Enterococci
- Geometric Mean
 - 33 cfu/100 ml
 - 30 - 90 days
- Statistical Threshold Level
 - 75th percentile
 - 30 – 90 days
 - 61 cfu/100 ml

USEPA will strongly urge States to Adopt these Updated Criteria

<http://water.epa.gov/scitech/swguidance/standards/criteria/health/recreation/index.cfm>

Questions?

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