



MS4s in TMDLs

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Why Is This So Challenging?

- TMDL is about ambient water quality
- MS4 permit is about granting permission to pollute

**Meeting Requirements in MS4 Permit
≠
Meeting the TMDL**



MS4 Realities

- Sources of pollutant are often diffuse:
 - Spread over large areas
 - With a large number of outfalls
 - Difficult to determine specific causative effects or the level of control needed to address a specific use impairment
- Many impairments caused by effects of land use
 - tools to manage and regulate urbanized effects still being developed



MS4 Realities (Continued)

- Lack of large-scale monitoring efforts + difficulty of using monitoring to characterize MS4 loadings

TMDL=load/day --- MS4 doesn't translate well → have to express differently

- Hard to design stormwater BMPs to reduce specific concentration for a pollutant
 - Related difficulties in estimating stormwater effluent quality after BMP construction
- Need for long-term attainment schedules
 - Especially for impairments caused by developed areas that require retrofits



Legal Framework (MEP: Maximum Extent Practicable)

MS4s are treated differently from all other point sources under the CWA

- MS4s are subject to the “MEP” standard
- Permit controls must *“reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.”* (CWA, Section 402(p)(3)(B)(iii))
- For Phase II MS4s, permit requirements must be established *“to reduce the discharge of pollutants to the MS4 to the maximum extent practicable, to protect water quality, and to satisfy the water quality requirements of the CWA”*

The “MEP” standard does not relieve the NPDES authority of the responsibility to address applicable TMDLs



In TMDL Land

- Maximum Extent Practicable (MEP) is challenging
 - Need to consider creative approaches to allow MS4s to meet TMDL (e.g. compliance schedules, trading, ?)



TMDL Land (continued)

- In a TMDL, NPDES regulations say permits must have effluent limits and conditions consistent with WLAs in the TMDL (122.44(d)(1)(vii)(B))
 - Phase II regulations say permits must include “*any more stringent effluent limits...including permit requirements that modify, or are in addition to, the minimum control measures based on an approved TMDL or equivalent analysis.*”
- In a TMDL with WLAs for stormwater sources, the permit should include effective, measurable WQBELs to achieve the WLA - via:
 - Numeric effluent limitations, or
 - BMP-type limits with clear, specific, and measurable elements
- EPA has advocated an “iterative approach” that emphasizes adaptive management of stormwater controls to meet water quality goals for MS4s



The Municipalities Guide to MS4s where TMDLs also occur.

- Ask: Is it impaired?
 - Make a list of all waterbodies into which your outfalls discharge.
 - Determine if any of these waterbodies are impaired and have assigned TMDL by referring to the State's 303(d) list.
 - Know what impairments impact MS4.
 - If a receiving stream is impaired, form a work group to see what you can do to get it delisted.
- If a TMDL is being developed – GET INVOLVED!
- ANTICIPATE – DON'T JUST REACT!



Summary

- A variety of approaches exist to translate WLAs into MS4 permit conditions
 - Requirements related to WLA attainment don't have to be numeric, but they must follow assumptions/requirements of the TMDL
 - Requirements in the permit that give MS4 specific actions to do in the permit term to make reasonable progress to WLA attainment
 - Requiring the MS4 to better describe details of TMDL implementation for review/approval, with annual updates/reporting
- Long-term schedules (15-30 years) can be incorporated into NPDES permits – to allow for adaptive or integrated management.



Longest lake name EVER

Lake Chargoggagoggmanchauggagoggchaubunagungamaugg



Webster, MA

