



UPDATE ON EPA EFFORTS TO SUPPORT TRANSLATING TMDLS INTO STORMWATER PERMIT REQUIREMENTS

ELI NATIONAL TRAINING WORKSHOP FOR CWA 303(D) & TMDL STAFF, JUNE 3, 2016

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REGULATORY CONSIDERATIONS

- MS4S ARE TREATED DIFFERENTLY FROM ALL OTHER POINT SOURCES UNDER THE CWA
 - MS4S ARE SUBJECT TO WHAT IS REFERRED TO AS 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.”
 - HOWEVER, THE “MEP” STANDARD DOES NOT RELIEVE THE NPDES AUTHORITY OF THE RESPONSIBILITY TO ADDRESS APPLICABLE TMDLS
 - WHERE A TMDL INCLUDES WLAS FOR MS4S, PERMIT REQUIREMENTS MUST BE ESTABLISHED THAT ARE CONSISTENT WITH THE ASSUMPTIONS AND REQUIREMENTS OF THESE WLAS
- EPA HAS ADVOCATED AN “ITERATIVE APPROACH” THAT EMPHASIZES ADAPTIVE MANAGEMENT OF STORMWATER CONTROLS TO MEET WATER QUALITY GOALS FOR MS4S
 - THE OBJECTIVE OF NPDES PERMITS IS TO ENSURE REASONABLE FURTHER PROGRESS TOWARDS ATTAINMENT OF WQS UTILIZING AN ITERATIVE BMP PROCESS

PRACTICAL CONSIDERATIONS

- **MS4 REALITIES**

- SOURCES OF POLLUTANT IMPAIRMENTS ARE OFTEN DIFFUSE AND SPREAD OVER LARGE AREAS, WITH A LARGE NUMBER OF OUTFALLS – ALSO DIFFICULT TO DETERMINE SPECIFIC CAUSATIVE EFFECTS OR THE LEVEL OF CONTROL NEEDED TO ADDRESS A SPECIFIC USE IMPAIRMENT
 - MANY IMPAIRMENTS CAUSED BY FACTORS RELATING TO THE PHYSICAL EFFECTS OF URBANIZING WATERSHEDS (E.G., THE EROSION EFFECTS OF HIGHER VOLUME FLOWS FROM HEAVILY DEVELOPED AREAS) – THE TOOLS TO REGULATE THESE EFFECTS ARE STILL BEING DEVELOPED
- LACK OF LARGE-SCALE MONITORING EFFORTS, COMBINED WITH DIFFICULTY OF USING MONITORING TO CHARACTERIZE MS4 LOADINGS
- DIFFICULTIES OF DESIGNING STORMWATER BMPs TO PRODUCE A SPECIFIC CONCENTRATION FOR A POLLUTANT OF CONCERN – RELATED DIFFICULTIES IN ESTIMATING STORMWATER EFFLUENT QUALITY AFTER TREATMENT BY BMPs
- NEED FOR LONG-TERM ATTAINMENT SCHEDULES – ESPECIALLY FOR IMPAIRMENTS CAUSED BY DEVELOPED AREAS THAT REQUIRE RETROFITS

WHAT WE'RE DOING

- **REGULATORY/POLICY**

- 2014 STORMWATER-TMDL MEMO: *REVISIONS TO THE NOVEMBER 22, 2002 MEMORANDUM "ESTABLISHING TOTAL MAXIMUM DAILY LOAD (TMDL) WASTELOAD ALLOCATIONS (WLAS) FOR STORMWATER SOURCES AND NPDES PERMIT REQUIREMENTS BASED ON THOSE WLAS"*
- MS4 REMAND RULE

- **PERMITTING TECHNICAL ASSISTANCE**

- *POST-CONSTRUCTION PERFORMANCE STANDARDS & WATER QUALITY-BASED REQUIREMENTS: A COMPENDIUM OF PERMITTING APPROACHES*

- **TMDL TECHNICAL ASSISTANCE**

- TMDL AND PERMIT WRITER TRAINING MODULES
- TMDL TO PERMIT INTEGRATION WORKGROUP
- 2008 DRAFT TMDL TO STORMWATER PERMITS HANDBOOK

WHAT WE'RE DOING: 2014 STORMWATER-TMDL MEMO

PERMITTING COMPONENTS: PERMITTING WITH WLAS

- WHERE THE STATE HAS ESTABLISHED A TMDL, NPDES REGULATIONS REQUIRE PERMITS TO CONTAIN EFFLUENT LIMITS AND CONDITIONS CONSISTENT WITH THE ASSUMPTIONS AND REQUIREMENTS OF THE WLAS IN THE TMDL (122.44(D)(1)(VII)(B))
- WHERE THE TMDL INCLUDES WLAS FOR STORMWATER SOURCES, THE PERMIT SHOULD INCLUDE EFFECTIVE, MEASURABLE WQBELS TO ACHIEVE THE WLA – THESE REQUIREMENTS CAN TAKE THE FORM OF:
 - NUMERIC EFFLUENT LIMITATIONS, OR
 - BMP-TYPE LIMITS WITH CLEAR, SPECIFIC, AND MEASURABLE ELEMENTS
- WHETHER OR NOT TO USE A NUMERIC OR BMP-TYPE LIMIT WILL DEPEND ON:
 - THE WAY IN WHICH THE WLA IS EXPRESSED
 - NATURE OF THE STORMWATER DISCHARGE
 - AVAILABLE DATA, MODELING RESULTS, AND OTHER RELEVANT INFORMATION

WHAT WE'RE DOING: 2014 STORMWATER MEMO

TMDL COMPONENTS: DISAGGREGATING STORMWATER SOURCES IN A WLA

- AGENCY POSITION IS UNCHANGED FROM 2002.
- THE EPA STILL RECOGNIZES THAT DECISIONS ABOUT ALLOCATIONS OF POLLUTANT LOADS WITHIN A TMDL ARE DRIVEN BY QUANTITY AND QUALITY OF EXISTING AND READILY AVAILABLE WATER QUALITY DATA.
- IN GENERAL, THE EPA ENCOURAGES TMDL AND PERMIT WRITERS TO COORDINATE EFFORTS TO IDENTIFY STORMWATER CONTRIBUTIONS FROM SPECIFIC SOURCES DURING TMDL DEVELOPMENT TO FACILITATE PERMIT IMPLEMENTATION.

WHAT WE'RE DOING: 2014 STORMWATER MEMO

TMDL COMPONENTS: TMDL LANGUAGE FOR NEWLY PERMITTED STORMWATER SOURCES

- PERMITTING AUTHORITIES CAN RESIDUALLY DESIGNATE SOURCES OF STORMWATER TO PROTECT WATER QUALITY. THESE PREVIOUSLY UNPERMITTED SOURCES ARE USUALLY CHARACTERIZED IN A TMDL'S LOAD ALLOCATION.
- "TMDL WRITER SHOULD CONSIDER INCLUDING LANGUAGE IN THE TMDL EXPLAINING THAT THE ALLOCATION FOR THE STORMWATER SOURCE IS EXPRESSED IN THE TMDLS AS A 'LOAD ALLOCATION' CONTINGENT ON THE SOURCE REMAINING UNPERMITTED, BUT THAT THE 'LOAD ALLOCATION' WOULD LATER BE DEEMED A 'WASTELOAD ALLOCATION' IF THE STORMWATER DISCHARGE FROM THE SOURCE WERE REQUIRED TO OBTAIN NPDES PERMIT COVERAGE."
- HELPS ENSURE THAT THE ALLOCATION IS PROPERLY CHARACTERIZED BY THE PERMIT WRITER SHOULD THE SOURCE'S REGULATORY STATUS CHANGE.

WHAT WE'RE DOING: TECHNICAL ASSISTANCE

TMDL TO PERMIT INTEGRATION WORKGROUP:

- WORKGROUP CONVENED IN JANUARY 2013 AFTER REGIONS IDENTIFIED EXISTING CHALLENGES WITH IMPLEMENTING TMDLS INTO PERMITS
- WORKGROUP PARTICIPANTS INCLUDE EPA HQ AND REGIONAL TMDL AND NPDES STAFF, AND GENERAL COUNSEL
- OBJECTIVES:
 - TO FIND WATER QUALITY PROTECTIVE SOLUTIONS FOR THESE CHALLENGES THAT GENERALLY DO NOT REQUIRE REVISING A TMDL; AND
 - ENSURE THE FUTURE DEVELOPMENT OF “PERMIT-FRIENDLY” TMDLS THROUGH IMPROVED COLLABORATIONS AMONG PROGRAMS
- ACTIVITIES:
 - MONTHLY FORUM TO DISCUSS AND SHARE SOLUTIONS FOR ADDRESSING TMDL IMPLEMENTATION CHALLENGES IN PERMITS
 - FAQ WEBSITE WITH RECOMMENDATIONS ON HOW TO ADDRESS CERTAIN “CONUNDRUMS” ASSOCIATED WITH IMPLEMENTING WLAS IN PERMITS AND HOW TO ACCESS AVAILABLE TMDL AND PERMIT DATA IN EPA DATABASES
 - TRAINING WORKSHOP FOR STATES AND EPA REGIONS AT THE JULY 2013 PERMIT WRITERS CONFERENCE
 - REGION 9 ‘HELPFUL PRACTICES’ DOCUMENT FOR DEVELOPING PERMIT-FRIENDLY TMDLS AND EFFECTIVELY INCORPORATING WLAS INTO PERMITS [WITH SPECIAL CONSIDERATIONS FOR STORMWATER]

WHAT WE'RE DOING: TECHNICAL ASSISTANCE

- **DRAFT 2008 TMDL TO STORMWATER PERMITS HANDBOOK**
 - FOSTER A BETTER UNDERSTANDING OF CROSS-PROGRAM REGULATORY REQUIREMENTS AND PROGRAMMATIC PROCESSES FOR TMDL AND PERMIT WRITERS
 - OFFER TECHNICAL OPTIONS FOR DEVELOPING STORMWATER TMDLS AND HOW TO LINK STORMWATER PERMITS WITH THOSE TMDLS
- **SERIES OF 3 TMDL AND PERMIT WRITER TRAINING MODULES:**
 - MODULE 1: *UNDERSTANDING TMDLS: A PRIMER FOR NPDES PERMIT WRITERS*
 - MODULE 2: *UNDERSTANDING WLAS IN PERMITS: A PRIMER FOR TMDL DEVELOPERS*
 - MODULE 3: *UNDERSTANDING TMDLS WITH STORMWATER SOURCES AND THE NPDES STORMWATER PERMITTING PROCESS*

WHAT WE'RE DOING: TECHNICAL ASSISTANCE

- **NEIWPCC WEBINARS:**

- EPA AND NEIWPCC COOPERATIVE AGREEMENT FOR STATE ENGAGEMENT & TRAINING
- FIRST WEBINAR TOPIC (MAY 26TH): *MODELING APPLICATIONS FOR INTEGRATING TMDLS INTO MS4 PERMITS*
- AUDIENCE: STATE AND EPA TMDL AND PERMIT WRITERS

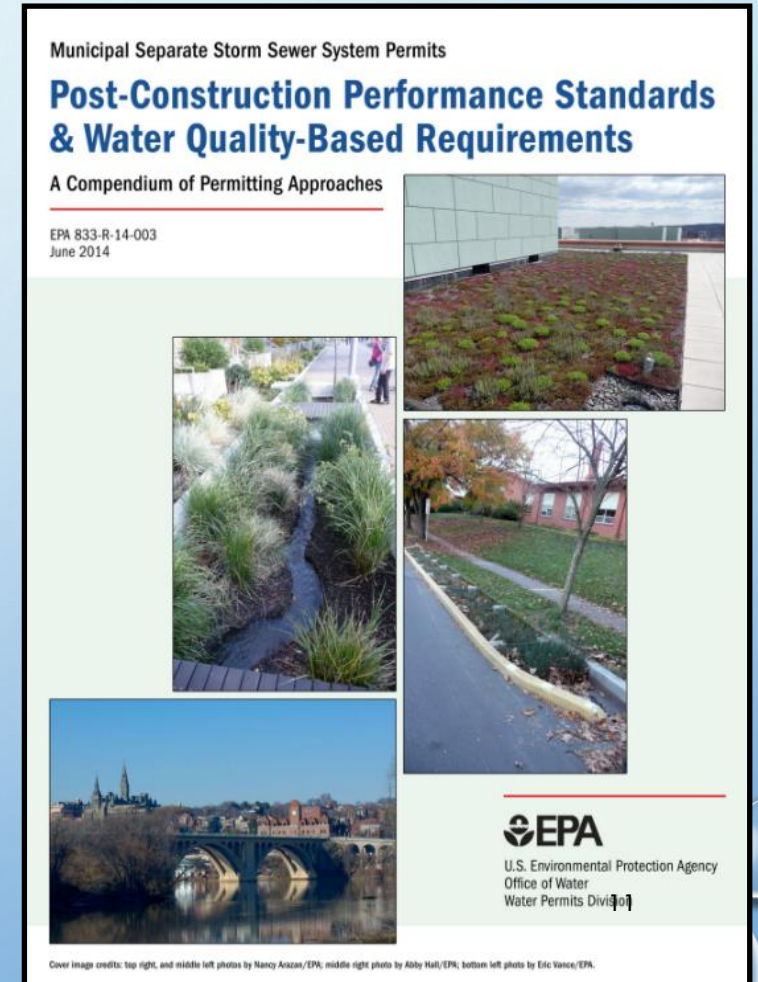
- **OPTI-TOOL: SPREADSHEET-BASED BMP OPTIMIZATION TOOL**

- PLANNING LEVEL ANALYSIS (USING EPA REGION 1 BMP PERFORMANCE CURVES)
- IMPLEMENTATION LEVEL ANALYSIS (EPA SUSTAIN BMP SIMULATION AND OPTIMIZATION ENGINE)
- CUSTOMIZED FOR EPA REGION 1

WHAT WE'RE DOING: TECHNICAL ASSISTANCE

COMPENDIUM OF PERMIT EXAMPLES

- **NUMERIC EXPRESSIONS OF THE WQBEL**
 - MS4 PERMIT INCLUDES A SPECIFIC, QUANTIFIABLE PERFORMANCE REQUIREMENT THAT MUST BE ACHIEVED WITHIN A SET TIMEFRAME
- **NON-NUMERIC EXPRESSIONS OF THE WQBEL**
 - MS4 PERMIT ESTABLISHES INDIVIDUALIZED, WATERSHED-BASED REQUIREMENTS FOR EACH AFFECTED MS4 TO IMPLEMENT SPECIFIC BMPS WITHIN SPECIFIED TIMEFRAMES
 - ADMINISTRATIVE RECORD OF THE PERMIT DOCUMENTS HOW BMP IMPLEMENTATION IS CONSISTENT WITH WLA
- **OTHER APPROACHES**
 - PERMITTING AUTHORITY REVIEW AND APPROVAL OF TMDL PLANS
 - OUTFALL MONITORING
 - ANNUAL REPORTS



COMPENDIUM EXAMPLE: WESTERN WASHINGTON

Name of TMDL	Snohomish River Tributaries
EPA Approved Document(s) for TMDL	<p><i>Water Quality Assessment of Tributaries to the Snohomish River and Nonpoint Source Pollution TMDL</i>, September 1997, Ecology Publication No. 97-334. www.ecy.wa.gov/biblio/97334.html</p> <p><i>Snohomish River Tributaries Fecal Coliform Total Maximum Daily Load Submittal Report</i>, June 2001, Ecology publication No. 00-10-087. www.ecy.wa.gov/biblio/0010087.html</p> <p><i>Lower Snohomish River Tributaries Fecal Coliform Bacterial Total Maximum Daily Load: Detailed Implementation Plan</i>, June 2003, Ecology Publication No. 03-10-031. www.ecy.wa.gov/biblio/0310031.html</p>
Location of Original 303(d) Listings	WA-07-1012, WA-07-015, WA-07-1052, WA-07-1163WA-07-1163, WA-07-1030 and WA-07-040
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees' municipal stormwater permit and draining to the WASWIS segment number, and all upstream tributaries within the jurisdiction of the Permittee and within the geographic area covered by this permit contributing to waterbodies: Allen Creek, YT94RF: Quilceda Creek, TH58TS: French Creek, XZ24XU: Woods Creek, FZ74HO: Pilchuck River, NF79WA: Marshland Watershed, XW79FQ.
Parameter	Fecal Coliform
EPA Approval Date	August 9, 2001
MS4 Permittee	Phase I Permit: Snohomish County Phase II Permit: Granite Falls, Lake Stevens, Monroe, Snohomish, Marysville, Arlington, Everett

Required MS4 Actions

- **Business Inspections:** Inspect commercial animal handling areas and composting facilities to ensure implementation of source control BMPs for bacteria. Facilities with bacteria source control problems must be inspected once every 3 years.
- **Operation & maintenance:** Install and maintain animal waste collection and/or education stations at municipal parks and other permittee owned and operated lands
- **Illicit Discharge Detection & Elimination:** Screen for bacteria sources in subbasins which discharge to surface waters in the TMDL area
- **Targeted Source Identification:** Review the fecal coliform data collected under the 2007 Permit in order identify a minimum of one high priority area (such as a tributary or a stream segment) that will be the focus of source identification and elimination efforts during this permit cycle. Stormwater quality sampling for bacteria sources is required as part of this focused source identification and elimination effort
- **Surface Water Monitoring:** Each Permittee shall review the fecal coliform data collected under the 2007 Permit and select surface water monitoring location(s) as appropriate for continued characterization and long term trends evaluation of fecal coliform

WHAT WE'RE DOING: MS4 REMAND RULE

- TO BE FINALIZED BY NO LATER THAN NOVEMBER 2016
- PROPOSED RULE ECHOES THE 2014 STORMWATER-TMDL MEMO
 - EMPHASIZES NEED FOR MS4 PERMITS TO ESTABLISH “CLEAR, SPECIFIC, AND MEASURABLE” EFFLUENT LIMITS, INCLUDING REQUIREMENTS ADDRESSING APPROVED TMDLS
- PROPOSED RULE PRESENTS SEVERAL OPTIONS FOR STATE PERMITTING AUTHORITIES TO MEET THIS REQUIREMENT UNDER GENERAL PERMITS