



Edited Phase I MS4 Existing Permit to Frederick County (Permit No. 11-DP-3321)
MD0068357 to Include Nutrient Trading:

Restoration Plans and Total Maximum Daily Loads

In compliance with §402(p)(3)(B)(iii) of the CWA, MS4 permits must require stormwater controls to reduce the discharge of pollutants to the MEP. By regulation at 40 CFR §122.44, BMPs and programs implemented pursuant to this permit must be consistent with applicable WLAs developed under EPA approved TMDLs.

Frederick County shall annually report on restoration plans, opportunities for public participation, and TMDL compliance status to MDE. As required below, watershed assessments and restoration plans shall include a thorough water quality analysis, TMDL documents and other resources when available, identification of water quality improvement opportunities, and a schedule for BMP and programmatic implementation to meet stormwater WLAs included in EPA approved TMDLs. A list of EPA approved TMDLs for Frederick County in the permit area is included in Attachment B of the permit.

1. Watershed Assessments

- a. By the end of the permit term Frederick County shall complete watershed assessments for the entire County. Watershed assessments conducted during previous permit cycles may be used to comply with this requirement, provided the assessments include all of the items listed in Part IV.E.1.b below. Assessments shall be performed at an appropriate watershed scale (E.G. Maryland's hierarchical eight or twelve digit sub basins) and be based on MDE's TMDL analysis or an equivalent and comparable County water quality analysis.
- b. Watershed assessments shall:
 - i. Determine current water quality conditions;
 - ii. Include the results of visual inspections targeting Frederick County rights-of-way and facilities conducted in areas identified as priority for restoration;
 - iii. Identify and rank water quality problems for restoration associated with Frederick County rights-of-way and facilities;
 - iv. Using the watershed assessments established under section a. above to achieve water quality goals by identifying all structural

- and nonstructural water quality improvement projects to be implemented; and
- v. Specify pollutant load reduction benchmarks and deadlines that demonstrate progress toward meeting all applicable stormwater WLAs.

2. Restoration Plans

- a. Within one year of permit issuance, Frederick County shall submit an impervious surface area assessment consistent with the methods described in the MDE document “Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits” (MDE, August 2014 or subsequent versions). Upon approval by MDE, this impervious surface area assessment shall serve as the baseline for the restoration efforts required in this permit.

By the end of this permit term, Frederick County shall commence and complete the implementation of restoration efforts for twenty percent of Frederick County’s impervious surface area consistent with the methodology described in the MDE document cited in PART IV.E.2.a. that has not already been restored to the MEP. Equivalent acres restored of impervious surfaces, through new retrofits or the retrofit of pre-2002 structural BMPs, shall be based upon the treatment of the WQv criteria and associated list of practices defined in the *2000 Maryland Stormwater Design Manual*. For alternate BMPs, the basis for calculation of equivalent impervious acres restored is based upon the pollutant loads from forested cover.

- b. Within one year of permit issuance, Frederick County shall submit to MDE for approval a restoration plan for each stormwater WLA approved by EPA prior to the effective date of the permit. The County shall submit restoration plans for subsequent TMDL WLAs within one year of EPA approval. Upon approval by MDE, these restoration plans will be enforceable under this permit. As part of the coordinated TMDL restoration plan, Frederick County shall:
 - i. Include the final date for meeting applicable WLAs and a detailed schedule for implementing all structural and nonstructural water quality improvement projects, enhanced stormwater management programs, and alternative stormwater control initiatives necessary for meeting applicable WLAs;
 - ii. Provide detailed cost estimates for individual projects, programs, controls, and plan implementation;
 - iii. Evaluate and track the implementation of the restoration plans through monitoring or modeling to document the progress toward

- meeting established benchmarks, deadlines, and stormwater WLAs; and
- iv. Develop an ongoing, iterative process that continuously implements structural and nonstructural restoration projects, program enhancements, new and additional programs, and alternative BMPs where EPA approved TMDL stormwater WLAs are not being met according to the benchmarks and deadlines established as part of the Frederick County's watershed assessments.

3. Nutrient Trading

Frederick County may acquire total nitrogen (TN), total phosphorus (TP), and total suspended solids (TSS) credits, in accordance with the requirements of the Maryland Water Quality Trading and Offset Program, COMAR, 26.08.11, to meet its 20 percent impervious surface area restoration requirement in this permit. The basis for an equivalent impervious acre restored through trading is the difference in pollutant loads between urban and forest stormwater runoff according to MDE's "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits" (MDE, 2014, or the most recent version). On an annual basis, until reissuance of this permit, the permittee shall report to the Department:

- a. The cumulative impervious acres restored achieved through the installation of BMPs during the permit compliance period;
- b. The equivalent impervious acres restored achieved through credit acquisition during the permit compliance period; and
- c. Documentation required to verify credits acquired and to be used for impervious surface restoration during the permit compliance period.

4. Public Participation

Frederick County shall provide continual outreach to the public regarding the development of its watershed assessments and restoration plans. Additionally, the County shall allow for public participation in the TMDL process, solicit input, and incorporate any relevant ideas and program improvements that can aid in achieving TMDLs and water quality standards. Frederick County shall provide:

- a. Notice in a local newspaper and Frederick County's website outlining how the public may obtain information on the development of watershed assessments and stormwater watershed restoration plans and opportunities for comment;
- b. Procedures for providing copies of watershed assessments and stormwater watershed restoration plans to interested parties upon request;

- c. A minimum 30 day comment period before watershed assessments and stormwater watershed restoration plans; and
- d. A summary in each annual report of how Frederick County addressed or will address any material comment received from the public.

5. TMDL Compliance

Frederick County shall evaluate and document its progress toward meeting all applicable stormwater WLAs included in EPA approved TMDLs. An annual TMDL assessment report with tables shall be submitted to MDE. This assessment shall include complete descriptions of the analytical methodology used to evaluate the effectiveness of Frederick County's restoration plans and how these plans are working toward achieving compliance with EPA approved TMDLs. Frederick County shall further provide:

- a. Estimated net change in pollutant load reductions from all completed structural and nonstructural water quality improvement projects, enhanced stormwater management programs, and alternative stormwater control initiatives;
- b. A comparison of the net change in pollutant load reductions detailed above with the established benchmarks, deadlines, and applicable stormwater WLAs;
- c. Itemized costs for completed projects, programs, and initiatives to meet established pollutant reduction benchmarks and deadlines;
- d. Cost estimates for completing all projects, programs, and alternatives necessary for meeting applicable stormwater WLAs; and
- e. A description of a plan for implementing additional watershed restoration actions that can be enforced when benchmarks, deadlines, and applicable stormwater WLAs are not being met or when projected funding is inadequate.