MS4 Guidance and FAQs

MS4 Permit Process

Phosphorus Baseload

Phosphorus Crediting

---

1. What triggers the need for an amendment to an MS4 authorization?

The MS4 General Permit, in Part 3.8, outlines three conditions that require an MS4 to amend its authorization:

1. *Submittal of TMDL and Water Quality Remediation Plan (WQRP) implementation plans, including Stormwater Flow Restoration Plans (FRP) and Phosphorus Control Plans (PCP), and submittal of phases or components of those plans.*

All MS4s required to develop FRPs have submitted plans that have been approved by the Secretary. The FRPs are now a component of the Stormwater Management Program (SWMP) plan and amendments to the FRP follow the guidelines in #2, below. MS4s are currently developing the PCPs and submittal of components of those plans require an amendment to the MS4 authorization. The submittal of the REI on April 1, 2020 and the complete PCP on April 1, 2021 will require an amendment.

2. *Modifications of the SWMP that require technical review.*

As MS4s begin to implement the FRPs, some planned projects in the approved FRP may change. A couple of examples that will require technical review and a permit amendment include:

- A planned project is replaced with a new project in a different sub-watershed
- The location of the project has changed significantly (ie, different lot - and could affect model)

3. *The incorporation of stormwater permits previously issued under 10 V.S.A. § 1264.*

(ie, 9015, 9010, 1-XXXX, 2-XXXX)

If a previously permitted stormwater system is upgraded prior to MS4 incorporation, the *previous permit* does not need a permit amendment. The MS4 should keep the final plans and HydroCAD files detailing the upgrade so that the upgrade can be credited to a Flow Restoration Plan when a BMPDSS model run is requested.

2. Requesting a Flow Restoration Plan Model Run

Processing an FRP Model Run is a time-consuming task, so MS4s are asked to submit requests for model runs as batches and to limit the requests to once per permit term. Model runs can occur on a case by case basis with consultation with Emily Schelley. As FRP projects are implemented, the MS4 must save the following documents to be submitted with the MS4 permit renewal.

<u>Information required as part of a Model Run request</u>

a. BMP Information
   i. Preferred Format: HydroCAD file of the project (.hcp)
   ii. Alternate Format: Output from HydroCAD or other model with information consistent with what is found on the HydroCAD
b. Drainage Area Information
   i. Preferred Format: GIS shapefile of the drainage area to the stormwater treatment practices.
   ii. Alternate Format: Map clearly delineating the drainage are to the practice.
c. Impervious Surface Information (New Development Only): If the stormwater treatment practice is being constructed in conjunction with new impervious surfaces, those surfaces will also need to be added to the model.
   i. Preferred Format: GIS shapefile with new impervious
   ii. Alternate Format: Site plan clearly delineating new impervious surfaces.
d. Additional Information
   i. Final plan sets
   ii. Which practice, if any, the new treatment practice is replacing.
   iii. General path of outflow to the stream, particularly if different than a previous practice design at the same location.
   iv. If the treatment practice is in series with another practice.

3. Incorporating Permits and "3 acre" sites

- MS4s may incorporate previously permitted impervious surface and developed pervious into the MS4 authorization. The MS4 shall establish a legal authority to access and maintain the BMPs on site. (To assume "full legal responsibility" a permittee must have legal control of the stormwater system, including a legal right to access the stormwater system, a legal duty to properly maintain the stormwater system, and a legal duty to repair and replace the stormwater system when it no longer adequately protects waters of the State.) If the site is not a designated '3-acre' site, then the area of this impervious does not need to be added to the P baseload calculation. The BMPs associated with the incorporated permit shall be included in the BMP tracking table and inspections and/or upgrades of these systems shall be reported on with the annual report.
- MS4s may incorporate non-previously permitted (sub-jurisdictional) impervious surface and developed pervious into the MS4 authorization. The MS4 shall establish a maintenance agreement with the property owner(s) to ensure long-term maintenance of the BMP(s). The maintenance agreement can be conditions in a local permit, or part of a municipally-approved plan. This impervious surface does not need to be added to the P baseload calculation.

  Question: We have asked for confirmation that a DRB approval associated with a site or subdivision plan that prescribes maintenance procedures is acceptable per Section 8.2.A.4.c of the 2018 MS4 permit.

  Answer: The DRB approval may be sufficient provided that the municipality is able to accurately report whether the site is being maintained. There should be some requirement for the site to report to the MS4 and/or an inspection program to verify the practices are present and well-functioning. The annual report will include an area in which the MS4 will need to report on maintenance. Generally, the DRB approval alone isn't enough to ensure compliance long term.

- For "3-acre" designated sites, if a municipality incorporates the property into the MS4 authorization, the phosphorus reduction target is 35% for that area of impervious surface. This is calculated by multiplying to the 50% Water Quality Volume requirement by time 70%, which is the average reduction expected by practices in the 2017 Vermont Stormwater Management Manual. Section 8.2 of the MS4 permit did state that the required reduction was 50%, but that was based on a draft of the standards for the three acre sites and has since changed.

4. Permit Fees

- Under the current Fee Statute the following fees apply to MS4s:
- Application review fee for original application: $2400. All MS4s have submitted this fee and have received an "original application."

- Annual operating fee: $10/impervious acre. This amount was calculated based on the impervious acreage within the census designated urbanized area of the MS4, or if there is no UA within the municipality, the impervious area within the stormwater impaired watershed. This area is currently set and will not change based on permit incorporations or new impervious development by the MS4.
- Flow Monitoring fee: This is an annual fee to cover the cost of stormwater impaired waters flow monitoring to assess compliance with the stormwater TMDLs. The amount each municipality pays is set in the Memorandum of Agreement with DEC.
- There is not a fee to amend the MS4 authorization.

5. Annual Report

The Annual Report is due on April 1st of every year and is comprised of both the Annual Report Workbook and the BMP Tracking Table. Projects that are built, upgraded, or incorporated into the MS4 shall be entered into the BMP Tracking Table annually.

6. Determining Phosphorus Baseload

See "MS4 Baseload and Reduction Target Calculations" for specific guidance.

7. Loading rates for roads

Question: What is the amount of phosphorus reduction that can be expected from upgrading hydrologically connected roadway segments to MRGP standards?

- For Class 1-3 roads, the percent reductions are based on an 80% reduction for segments that go from does not meet standards to fully meeting standards. When a road segment is moved from does not meet to partially meeting standards or from partially to fully meeting standards, then the reduction is equal to 40% of the load of segment that does not meet. For Class 4 roads, the reduction is 40% if three or more cubic yards of erosion is remediated, 20% if less than three cubic yards is remediated.

- These reductions are baked into the loading rates I have so far complete for unpaved roads as attached. If one takes the difference between the pre-fix loading rate and the post-fix loading rate, the percent will be equal to what I have explained above. As I may have mentioned previously, I have broken out these different loading rates based on connectivity, compliance status, and slope, from the TMDL modeling which had more lumped loading rates. I used information from road erosion inventories that has thus far been submitted to DEC, and we hadn't received much data for paved roads. I have only recently gotten my hands on the data from CCRPC, so I am hopeful that I will have enough paved road data to start that analysis soon.

- Link to Catch basin Outlet interim methodology

8. Future Growth

a. Future Growth Calculations

i. The future growth was calculated as a percent of the load of the MS4. That percent was calculated based on the original TMDL modeling by divided the projected phosphorous load growth over 20 years by the base load from the TMDL for each lake segment. For more information on how the future growth load was calculated, please see Appendix A of the TMDL. Scroll down to TMDL document and appendices and click on Appendix A (PDF). https://www.epa.gov/tmdl/lake-champlain-phosphorus-tmdl-commitment-clean-water

b. Future Growth Crediting

i. An MS4 may get credit towards the target treatment on sub-jurisdictional impervious surfaces built after 2010. At present the cutoff is 1 acre, although statute states that this will drop to ½ acre on July 1, 2022. Calculation of credit will be the same as other structural practices.

ii. When the TMDL targets were based on the load of the entire town, rather than municipally owned and controlled areas, there had been some question whether changes to development regulations or zoning laws that would otherwise cause less impervious to be built than would otherwise have been might be creditable. It was left that that would be the responsibility of the MS4 to develop the methodology and undertake the analysis.

iii. The future growth analysis should include tracking of how much new impervious is added.

9. Tracking and Accounting SOP

Link to Interim SOP for Tracking and Accounting for MS4 and Operational STPs

10. Using the STP Calculator

Link to STP Calculator Instructions

11. Phosphorus reductions for street sweeping and catch basin cleaning