Guidance to New Hampshire MS4 permittees on aspects of the NH MS4 permit that reference the NH Department of Environmental Services

The Federal Water Quality Act of 1987 (a/k/a the Clean Water Act) recognized that runoff from urban areas and industrial sites pollutes surface waters, and required the U.S. Environmental Protection Agency (EPA) to address stormwater discharges with National Pollutant Discharge Elimination System (NPDES) permits. Phase I of the program focused on large cities, while Phase II of that program regulates discharges in urbanized areas from any small municipal separate storm sewer system (MS4), stormwater discharge associated with small construction activity, and some discharges associated with certain other public facilities.

Because the New Hampshire Department of Environmental Services (NHDES) is not delegated to implement the federal NPDES program, EPA regulates MS4 stormwater discharges through the MS4 permit. The original MS4 general permit for New Hampshire was issued in 2003 and is currently in effect. EPA issued a renewal MS4 general permit on January 18, 2017 with an effective date of July 1, 2018. See EPA's website for the small MS4 general permit.

While NHDES does not issue the permit, it does provide technical assistance and funding to MS4 communities to help them comply with the permit. Such assistance includes providing public outreach materials, GIS data mapping, water quality monitoring and evaluation, funding for necessary infrastructure improvements through the state revolving loan program, and other technical guidance including information about stormwater utilities. In addition, the NH MS4 permit requires the participation of the NHDES in a number of provisions, and encourages permittees to seek guidance from NHDES. This document serves as the guidance for NH MS4 communities to comply with those provisions.

The guidance has four sections related to the NH MS4 permit. These include:

- Antidegradation Provisions (see NH MS4 permit at 2.1.2, 5.1.4 and 6.4)
- Off-ramps for Delistings (see NH MS4 permit Appendix H)
- Monitoring Requirements (see NH MS4 permit Appendix G)
- Alternative Pollutant Reduction Plans (see NH MS4 permit at 1.7.2)

Contact Information: No guidance can cover every situation. If additional information or clarification of this document is needed, contact Ted Diers, NHDES Watershed Management Bureau Administrator, at ted.diers@des.nh.gov or (603) 271-3289.

Antidegradation Provisions

Antidegradation is included in NH Code Admin. Rules Env-Wq 1700, the NH water quality standards, specifically at Env-Wq 1708. Antidegradation prevents waters that meet standards from being polluted and helps to address waters that already fail to meet those standards. The NH MS4 permit, like all federal permits and activities, must comply with the state antidegradation provisions. Compliance is obtained by passing the requirement on to the MS4 permittees. The guidance below outlines how an MS4 permittee can comply with antidegradation requirements.

2.1.2 Increased Discharges (NH MS4 p. 18)

a. Any increased discharge (including increased pollutant loadings) through the MS4 to waters of the United States is subject to New Hampshire antidegradation regulations. The permittee shall comply with … Env-Wq 1708.04 and 1708.06 including information submittal requirements and obtaining authorization for increased discharges where appropriate. Any authorization of an increased discharge by NHDES shall be incorporated into the permittee's SWMP. If an applicable NHDES approval specifies additional conditions or requirements, then those requirements are incorporated into this permit by reference. The permittee must comply with all such requirements.

The best way to demonstrate that the state antidegradation provisions have been met is to avoid increased stormwater runoff and its accompanying pollutants. Many Best Management Practices (BMPs) for infiltration and treatment are available to reduce and treat runoff. Many of those BMPs are listed in the MS4 permit or other guidance documents, so they are not discussed here.

If a project within an MS4 area is subject to and meets the applicable NHDES Alteration of Terrain (AoT) requirements (Env-Wq 1500, as amended), then the project will be considered to have met the antidegradation provisions. The same would apply for smaller projects that may not trigger the need to obtain an AoT permit, provided the permittee can demonstrate that the requirements related to impaired waters described under Env-Wq 1503.11 and the permanent, post-construction water quality protection requirements as described in Env-Wq 1507 and Env-Wq 1508 have been met.

Any project subject to AoT requirements, and those disturbing one or more acres, must also comply with the following other state and federal regulations as applicable:

Compliance with Wetland Permits. The project shall comply with conditions in all NHDES Wetlands permits issued for the project including any amendments.

Construction Stormwater Pollution Prevention Plan (CSWPPP). Prior to construction of each phase of the project, the MS4 shall prepare a CSWPPP that addresses the elements required in SWPPPs prepared for the NPDES Construction General Permit (CGP). The MS4 shall then implement the CSWPPP.

NPDES Construction General Permit and NPDES Remediation Permit. When applicable, the Applicant shall comply with requirements of the NPDES Construction General Permit and the NPDES Remediation General Permits.

Stormwater Best Management Practices (BMPs). Temporary and permanent stormwater BMPs shall be designed and constructed in accordance with the NHDES Alteration of Terrain regulations (Env-Wq 1500).

Shoreland Water Quality Protection Act. The “shoreland” permit issued under RSA 483-B covers impervious areas within a certain distance of larger bodies of water and watercourses.

Multi-sector General Permit (MSGP). For facilities covered by this general permit, the stormwater is already addressed.

If the permittee cannot demonstrate compliance with the above for a discharge that is "significant" as described in Env-Wq 1708.09, the applicant should either contact NHDES for additional guidance or submit the information required under Env-Wq 1708.10. Unless otherwise notified by NHDES, small projects that disturb less than 1 acre are considered "insignificant" for antidegradation considerations. Although considered "insignificant" for antidegradation, the projects may be subject to a permit by rule under Env-Wq 1503. In any event, NHDES strongly encourages owners of small projects disturbing less than 1 acre to comply with the permanent stormwater control BMPs in Env-Wq 1507 and Env-Wq 1508 or the equivalent.

Applicants and owners also should check and comply with local regulations since they may be more stringent than those mentioned above and may regulate smaller development projects.

Off-ramp for Delistings

For discharges to waters listed as impaired for nitrogen, phosphorus, bacteria, chlorides, metals, or solids/ oils/ greases, the NH MS4 permit allows for relief from the additional requirements described in Appendix H once the water body in question is no longer impaired. Note that waterbodies with an approved Total Maximum Daily Load (TMDL) are automatically removed from the 303(d) list.

> *Appendix H* [The permit includes the same language for nitrogen, phosphorus, bacteria, chlorides, metals, and solids/ oils/ greases]
>
> *2. At any time during the permit term the permittee may be relieved of additional requirements in Appendix H part I.1. applicable to it when in compliance with this part.*
>
> *a. The permittee is relieved of its additional requirements as of the date when one of the following criteria are met:*
>
> *i. The receiving water and all downstream segments are determined to no longer be impaired due to* [pollutant] *by NHDES and EPA concurs with such determination.*
>
> *ii. An EPA approved TMDL for the receiving water or downstream receiving water indicates that no additional stormwater controls for the control of* [pollutant] *are necessary for the permittee's discharge based on wasteload allocations as part of the approved TMDL.*

The NH 303d/305(b) Integrated Report includes lists of water bodies that are not meeting state quality standards. Given the large number of water bodies in the state and the resource limitations of the entities that gather the data used to make the assessments, often the data necessary to reassess an impairment may be incomplete. In addition, actions may have been taken to address the causes of those impairments. In those cases, additional monitoring may provide the data needed to support removal of an impairment. The information needed for a delisting is essentially the same as what was needed for the original listing. The challenge is that the data needs to be gathered under similar conditions (temperature, flow, time of year, time of day, *etc.*). As such, it is important to scrutinize the original assessment information.

NHDES has prepared a separate guidance document that fully described the process and information needs for delistings. The document entitled "Removal of Water Quality Impairments: Data and Documentation Considerations" can be found on NHDES's website.

NHDES strongly suggests that anyone interested in conducting water quality monitoring for the purpose of delisting a certain parameter first examine the data collection and quality assurance guidance described in the latest Consolidated Assessment Listing Methodology (CALM) manual and the data entry requirements of the Environmental Monitoring Database (EMD), with special focus on monitoring methods and quality assurance. NHDES is available to review monitoring plans prepared by MS4 permittees.

Additionally, should new data show that the impairment has been corrected, the chances of successfully delisting the parameter is improved if NHDES is made aware of any changes in the development or use of the surrounding watershed that could have contributed to improved water quality (e.g. installation of BMPs). These actions should be described in a letter to NHDES.

For any questions about this process, or to request assistance, contact Ken Edwardson, Senior Scientist, Watershed Management Bureau, at kenneth.edwardson@des.nh.gov or (603) 271-8864.

Monitoring Requirements

The following monitoring parameters are noted in Appendix G with the designation "Contact NHDES Watershed Management Bureau for requirements."

Parameter	NHDES monitoring suggestions
Benthic-Macroinvertebrate Bioassessments (Streams)	Monitoring should initially focus on other impairments in the same waterbody that could adversely impact the benthic macroinvertebrate community, and should be done as specified in Appendix G. If no other impairments exist, then no additional monitoring is required until such time as the impairment has been corrected as demonstrated by implementation of BMPs or other improvements to the watershed). NHDES will make the benthic macroinvertebrate sampling protocol available so the stream can be reassessed.
Fishes Bioassessments (Streams)	Monitoring should initially focus on other impairments in the same waterbody that could adversely impact the resident fish, and should be done as specified in Appendix G. If no other impairments exist, then no additional monitoring is required until such time as the impairment has been corrected as demonstrated by implementation of BMPs or other improvements to the watershed). NHDES will make the fish bioassessment sampling protocol available so that the stream can be reassessed.
Foam/Flocs/Scum/Oil Slicks	Currently only one MS4 community has this impairment, and the cause is unrelated to the MS4. Contact NHDES for specific monitoring suggestions for any future impairment.
Habitat Assessment (Streams)	Habitat Assessment impairments are based on an index of the following: epifaunal substrate/available cover, pool substrate characterization, pool variability, sediment deposition, channel flow status, channel alteration, channel sinuosity, bank stability, vegetative protection and riparian vegetative zone width. These impairments are linked to Benthic-

	macroinvertebrate bioassessment impairment; therefore see the monitoring requirements for that impairment above.
Physical substrate habitat alterations	There are no physical substrate habitat alteration impairments within the NH MS4 area. Contact NHDES for specific monitoring suggestions for any future impairment.

Alternative Pollutant Reduction Plans

MS4 permittees have the option of developing an Alternative Pollutant Reduction Plan rather than complying with the BMP requirements stated for TMDL implementation in Appendix F. The Alternative Pollutant Reduction Plan must be approved by NHDES. Similar language is used in the permit for chlorides, bacteria/pathogens, and phosphorus.

1.7.2 Notice of Intent

b. Operators of Small MS4s that have developed Alternative Pollutant Reduction Plan(s) to meet TMDL Waste Load Allocations in accordance with Appendix F Part I.2, II.2, and/or III.2 shall attach their proposed NHDES-approved Alternative Pollutant Reduction Plan(s) to their NOI.

Appendix F (Example for Bacteria/Pathogens)

2. The MS4 operator shall work with NHDES to develop an Alternative Bacteria/Pathogens Reduction Plan consistent with the applicable TMDL. The MS4 operator shall submit a NHDES-approved Alternative Bacteria/Pathogens Reduction Plan that is consistent with the TMDL Implementation Plan and includes schedules and milestones to meet applicable Waste Load Allocations, with their Notice of Intent (NOI) as an alternative to the requirements described in Appendix F Part II.1. above.

a. The Alternative Bacteria/Pathogens Reduction Plan shall be subject to EPA review and the public comment period consistent with the NOI procedures at Part 1.7.4.b. of the permit.

b. The permittee shall keep the written plan (hardcopy or electronic) as part of their SWMP.

c. The permittee shall implement all operator-specific permit requirements included in the permittee's authorization letter from EPA based on the Alternative Bacteria/Pathogens Reduction Plan.

d. Unless the operator-specific permit requirements related to the Alternative Bacteria/Pathogens Reduction Plan are authorized by EPA, the permittee is subject to the requirements described in Appendix F Part II.1. above.

The suggestions of what to include in an Alternative Pollutant Reduction Plan, described below, are the same basic elements of watershed management plans required under Section 319 of the Clean Water Act. Alternative Pollutant Reduction Plans should include the following components:

a. An identification of the causes and sources that will need to be controlled to achieve the load reductions estimated in the TMDL. Sources that need to be controlled should be identified at the significant subcategory level (eg. Number of septic systems, miles of roads, acres of impervious surfaces) with estimates of the extent to which they are present in the MS4 area.

b. An estimate of the load reductions that are needed based on the sources within the MS4 area.

c. A description of the management measures that will need to be implemented to achieve the load reductions estimated in (b) above.

d. A schedule for implementing the management measures identified in this plan that is reasonably expeditious. The schedule should coincide with the schedules described in the MS4 permit.

e. A description of interim, measurable milestones for determining whether the management measures or other control actions are being implemented.

f. A set of criteria that can be used to determine whether loading reductions identified in (b) above are being achieved over time and substantial progress is being made towards attaining water quality standards and, if not, the criteria for determining if the plan needs to be revised.

g. The criteria established in f. above should account for any load increases due to new development or redevelopment.

h. A monitoring component to evaluate the effectiveness of the implementation efforts over time.

These components are based on Watershed Based Plans which contain the nine (9) elements required under Section 319 of the Clean Water Act. Examples of approved Watershed Based Plans for New Hampshire can be found at NHDES's website on the Watershed Assistance page.

Plans should be submitted to:

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Water Division – Watershed Management Bureau
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