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Checklist for Evaluating Your Municipal Stormwater Bylaw under the 2016 EPA Massachusetts Small MS4 General Permit

Originally prepared by:
Neponset River Watershed Association and
Metropolitan Area Planning Council

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Neponset Stormwater Partnership
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Introduction

A well drafted and effectively administered municipal stormwater management bylaw is one of the most important tools for addressing polluted stormwater runoff, flooding, and stream flow issues in your community.

This checklist is designed to help municipalities evaluate their existing local stormwater management bylaws and regulations in light of the new requirements in the 2016 EPA Massachusetts Small Municipal Separate Storm Sewer System Permit (MS4 Permit). Now that the updated permit is in effect, virtually all communities must update their existing bylaws by **June 30, 2020**.

In addition to highlighting the key requirements of the new MS4 Permit, the checklist recommends provisions which may not be explicitly required by the 2016 MS4 Permit, but which will help communities achieve compliance with water quality standards and their overall MS4 obligations. They also encourage consistency with the treatment of upland projects and wetland projects subject to the MA Wetlands Act and Stormwater Management Standards. The checklist clearly differentiates between items which are required by the 2016 MS4 Permit and those that are recommended by the authors.

The checklist was developed with the communities of the Neponset River Watershed in mind, and contains several comments that are specific to these communities. In spite of this original focus, the checklist is designed to be comprehensive and should be useful to all small MS4 communities.

The checklist notes a number of provisions from the 2003 EPA MS4 Permit. Communities subject to the 2003 Permit should already have a stormwater management bylaw with these provisions in place.

Throughout the checklist, the required or recommended answer to each question is always "yes." The checklist is organized into several sections that group together questions that address similar issues. Text in italics has been quoted directly from the 2016 MS4 Permit. Text in square brackets ("[ ]") are comments or additions by the authors.

This checklist works in conjunction with the attached Model Stormwater Management Bylaw, Model Stormwater Management Regulations, and Bacteria TMDL Guidance. The models may be used in their entirety, or may provide example language for updating your existing rules. The checklist references the model documents where appropriate.

Most of the questions below refer to a town's stormwater management "bylaw," however in practice most of these provisions need not be in the bylaw itself, but may be included in the bylaw, the town's stormwater management regulations, or in some cases, another non-stormwater bylaw. Additionally, some of the questions and recommendations refer to or assume there exists a local stormwater management permit (*i.e.*, issuing a local permit before certain development and redevelopment projects can begin); this is the recommended enforcement mechanism for local stormwater regulation. (For more on this, please see the Model Stormwater Management Bylaw and Model Stormwater Management Regulations.)

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Section A: Regulatory Thresholds for New Development and Redevelopment Projects

Questions in this section address the MS4 requirement that certain construction projects must be regulated by towns. The authors recommend using the common practice of creating a local stormwater management permit through which to regulate development and redevelopment pursuant to the MS4.

Y□ N□ Q1 (required by §§ 2.3.5.a and 2.3.6.a)

Does your stormwater management bylaw apply to all new development and redevelopment projects of one acre or more, and to projects of less than one acre when part of a larger common plan of development that would disturb one or more acres?

> Discussion: The 2016 MS4 permit requires that all projects of one acre "or more" be covered by the local stormwater management bylaw or other regulation, whereas the 2003 permit required coverage for projects of "more than one acre." The local bylaw must also cover projects of less than one acre when part of a larger development plan of one or more acres. Refer to question 3 below regarding recommended project size as opposed to required project size. See also Model Stormwater Management Regulations § 5.

Y□ N□ Q2 (required by 2.3.5.a/recommended)

Are your stormwater requirements triggered by the size of *"land disturbing activities,"* and have you clearly defined "land disturbing activity"?

> Discussion: Under both the 2003 and 2016 MS4 permits, your bylaw must be triggered by the size of land disturbance rather than (or in addition to) the amount of impervious cover. The authors also recommend that you revisit your bylaw's definition of "land disturbing activity" to ensure it clearly includes all the activities commonly found in other municipal stormwater bylaws and under the Wetlands Act. See Model Stormwater Management Bylaw Article I, Section 2 and Model Stormwater Management Regulation § 2 for a model definition and § 5 for implementation.

Y□ N□ Q3 (recommended)

Does your bylaw apply to new development and redevelopment projects of less than an acre?

> Discussion: The 2016 MS4 Permit requires municipal stormwater bylaw or other regulation cover projects of an acre or more, but there are good reasons to impose stormwater management regulations on smaller projects. The Stormwater Management Permits in a number of area towns already apply to smaller projects, including Canton (5,000 square feet), Dedham (effectively 500 square feet), and Westwood (0.5 acre). The authors recommend that you adopt a size threshold significantly smaller than one acre.

The permit requires that *"there shall be no increased discharges, including increased pollutant loading(s) from the MS4 to impaired waters … unless the [MS4] demonstrates that there is no net increase in loading..." (§ 2.1.2.b)* Furthermore the permit requires towns to track and report changes in the impervious cover in each outfall catchment area. (§ 2.3.4.9)

Over time, there are likely to be significant numbers of projects involving less than an acre of land disturbing activities, which will cumulatively create significant additional impervious cover. By excluding these projects altogether from the permitting process, a town is effectively taking responsibility for building BMPs at its own expense to address pollutants generated by these smaller private development projects.

In weighing how large of a threshold to set, towns should balance administrative feasibility (the number of applications) against environmental impacts and the cost of assuming responsibility for increased pollution loads from unregulated private development. See Model Stormwater Management Regulation § 7(A) for suggested language applying permit requirements to development projects of ½ acre or more.

Some communities have also adopted a two-tiered approach to their stormwater rules, where a more limited review is required for smaller projects. Depending on how low your permitting threshold is set, this two tiered approach may make sense. Refer to questions 29-31 and Model Stormwater Management Regulation § 6 for more information on and suggested language for this approach.

Y□ N□ Q4 (recommended)

Is your bylaw's definition of "redevelopment" consistent with, and preferably clearer than, the definition of redevelopment under the Wetlands Protection Act?

Discussion: In the interest of consistency between upland and wetland projects, the authors recommend that you revisit the definition of "redevelopment" under your bylaw to ensure it is consistent with, and if possible clearer than, the definition used for projects under the Wetlands Protection Act. See Model Stormwater Management Bylaw Article I, § 2 and Model Stormwater Management Regulation § 2 for model definition.

Y□ N□ Q5 (recommended)

Does your bylaw and its performance standards apply to discharges from new development and redevelopment that discharge directly to wetlands or surface waters without passing through your MS4?

Discussion: The 2016 Draft MS4 Permit only requires local stormwater bylaws to regulate discharges to the MS4, not those that go directly to wetlands or waterways. However, the authors recommend that your stormwater bylaw apply to all stormwater discharges not just those going to the MS4.

Uniformly regulating all stormwater discharges will create a fair permitting process, increase administrative efficiency, and reduce costs for the municipality. Discharges directly to wetlands and waterways are regulated under the Wetlands Protection Act, which has different performance requirements than those required under the MS4 Permit. Having a single set of rules that apply uniformly to all stormwater discharges (both upland and wetland) will ensure a clearer, more predictable, and arguably more fair permitting process for applicants.

Furthermore, inadequately treated direct discharges have the same negative water quality impacts as those coming from the MS4. If private discharges are allowed to cause or contribute to a violation of the MA Surface Water Quality Standards, any municipally-owned discharges to the same waterway will be subject to much more stringent and expensive requirements under the MS4 Permit. Controlling all sources of runoff is especially important in areas subject to TMDLs which includes all Neponset Watershed towns. See Model Stormwater Management Bylaw Article II, § 1 and Model Stormwater Management Regulation § 5(A) for model language implementing this recommendation.

Y□ N□ Q6 (recommended)

Does your bylaw contain only “appropriate” exemptions and avoid exempting categories of activities that should comply with stormwater management requirements? Typical exemptions include:

- Projects that develop or redevelop less than [your minimum size threshold, suggested 1,000] square feet of impervious surface
- Projects that alter less than [your minimum size threshold, suggested 5,000] square feet. of land without creating [your minimum size threshold, suggested 1,000] square feet or more of impervious surface or altering pre-development drainage patterns so as to impact immediately abutting properties
- Normal maintenance and improvement of land in agricultural use as defined in Sec. 10.02 of the Wetlands Protection Regulations

- Maintenance of existing landscaping, gardens or lawn areas associated with a single family dwelling
- Repair or replacement of an existing roof of a single-family dwelling
- Construction of any fence that will not alter existing terrain or drainage patterns
- Construction of utilities other than drainage which will not alter terrain, ground cover or drainage patterns
- Emergency repairs to stormwater management facility or practice that poses a threat to the public health or safety or as deemed necessary by the stormwater permitting authority
- Any work or projects for which all necessary approvals and permits have been issued before the effective date of this bylaw.

Discussion: Excessive exemptions can undermine the effectiveness of a stormwater bylaw. The authors recommend that you revisit each of your exemptions carefully and eliminate any that go beyond those typically included in local stormwater bylaws. You might also consider changing certain exemptions into an activity eligible for a case by case waiver (see question 10) or require something less than a full permit for that activity (see question 29-31). See Model Stormwater Management Regulation § 5(B).

Y□ N□ Q7 (recommended)

Are projects that obtain an order of conditions under the Wetlands Act, and which meet the requirements of the MA Stormwater Standards and the substantive requirements of your stormwater bylaw, exempt from the requirement to obtain a separate stormwater permit?

Discussion: As discussed further below, under the 2016 MS4 permit, the performance standards for stormwater management systems are somewhat different from those required by the MA Stormwater Standards. In the interest of consistency, efficiency and fairness, the authors recommend that you apply the same performance standards to both upland and wetland stormwater projects. If your Stormwater Authority is not the Conservation Commission, consider allowing projects that require a wetlands permit to bypass a separate stormwater permit review so long as the substantive performance standards of your bylaw are met. See Model Stormwater Management Regulation § 5(B)(5) for model language.

Y□ N□ Q8 (recommended)

Do projects classified as hotspots or "land uses with higher potential pollutant loads" under the Wetlands Protection Act, have to obtain stormwater permits even if they are smaller than the default permitting size thresholds?

Discussion: Many local bylaws require that activities with high pollution potential obtain a permit even if they are smaller than the standard size thresholds. In these cases, it is the nature of the land use, rather than just the size, that determines pollution potential.

The Wetlands Protection Act regulations include the following as land uses with higher potential pollutant loads: auto salvage yards, auto fueling facilities, commercial parking lots, gas stations, exterior fleet storage and vehicle service and equipment cleaning areas, marinas and boat yards, and confined disposal facilities and disposal sites. See Model Stormwater Management Regulation § 5(B)(5).

Y□ N□ Q9 (recommended)

Does the bylaw authorize the Stormwater Permitting Authority to require a permit for projects that normally are exempt, if such project is causing or can reasonably be expected to cause a violation of state water quality standards?

Discussion: The authors recommend that all bylaws contain a provision enabling the Stormwater Permitting Authority to respond proactively to unanticipated problems. This is analogous to the Wetlands Protection Act provision that allows Conservation Commissions to take jurisdiction over upland projects if they are causing harm to a wetland resource area. The authors recommend expanding this principle to projects that "can reasonably be expected" to violate a water quality standard. One example might include a large area of loose soil on a steep slope above a catch basin that was exempt from regulation as a residential landscaping project. See Model Stormwater Management Regulation § 5(A)(3).

Y□ N□ Q10 (recommended)

If your bylaw or regulation includes a waiver provision, is it limited to projects that are consistent with the purpose and intent of the bylaw, in the public interest, and allowed by federal state and local rules?

Discussion: To ensure that waiver provisions are not abused, the authors recommend limiting waivers to projects which meet some established basic criteria. See Model Stormwater Management Bylaw Article I, § 5 and Model Stormwater Management Regulation § 4(B).

Section B. Performance Standards for New Development and Redevelopment

Y□ N□ Q11 (required by 2.3.6.a.ii.3.g)
Does your bylaw or regulation require stormwater management systems on newly developed sites to meet the following performance standards?

[The stormwater management system shall r]etain the volume of runoff equivalent to, or greater than, one (1) inch multiplied by the total post-construction impervious surface area on the site AND/OR…[r]emove 90% of the average annual load of Total Suspended Solids (TSS) generated from the total post-construction impervious area on the site AND 60% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site. Pollutant removal shall be calculated consistent with EPA Region 1's BMP Performance Extrapolation Tool….

Discussion: These are new requirements of the 2016 MS4 Permit which are generally more protective than existing performance standards under the Wetlands Protection Act. Note that this performance standard applies to all impervious surfaces on a parcel of land (*i.e*., the entire site), not just the portion of the parcel that the project will disturb.

Additionally, the BMPs used to meet the TSS and TP retention requirements must be consistent with EPA Region 1's BMP Performance Extrapolation Tool (or, in certain circumstances, other federally or state approved tool). The EPA Performance Extrapolation tool calculates pollutant removal for nitrogen, phosphorus, zinc and TSS. Where other pollutants are at issue, such as for the bacteria TMDL in the Neponset River Watershed, EPA has indicated verbally that pollutant-appropriate BMPs are still required, though precise pollution reductions need not be calculated.

Refer to § 8(C)(3) of the Model Stormwater Management Regulation for language implementing these requirements.

Y□ N□ **Q12 (required/recommended) (§ 2.3.6.a.ii.4.b)**
Does your bylaw or regulation require stormwater management systems on redeveloped sites to meet the following performance standards?

[The stormwater management system shall r]etain the volume of runoff equivalent to, or greater than, 0.80 inch multiplied by the total post-construction impervious surface area on the site AND/OR … [r]emove 80% of the average annual post-construction load of Total Suspended Solids (TSS) generated from the total post-construction impervious area on the site AND 50% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site. Pollutant removal shall be calculated consistent with EPA Region 1/s BMP Performance Extrapolation Tool…"

Discussion: These are new requirements of the 2016 MS4 Permit. Note that this performance standard applies to all impervious surfaces on a parcel of land (*i.e*.,

the entire site), not just the portion of the parcel that the project will disturb. Note that the BMPs used to meet the TSS and TP retention requirements must be consistent with EPA Region 1's BMP Performance Extrapolation Tool (or, in certain circumstances, other federally or state approved tool). The EPA Performance Extrapolation tool calculates pollutant removal for nitrogen, phosphorus, zinc and TSS. Where other pollutants are at issue, such as for the bacteria TMDL in the Neponset River Watershed, EPA has indicated verbally that pollutant-appropriate BMPs are still required, though precise pollution reductions need not be calculated.

The Authors recommend that redevelopment projects be required to meet the same standards as new development projects (*i.e*., retain at least 1 inch and/or remove 90% TSS and 60% TP across all impervious surface area on site). Not only does this help the MS4 meet its obligations under the permit, but having one set of standards also makes administering the bylaws easier.

Note that the 2016 permit allows MS4s to offer "offsite mitigation" for any portion of the retention/removal requirements not met on the redevelopment project site. Setting up an offsite mitigation program can be complicated, and the authors recommend reviewing *Guidance for Developing an Off-site Stormwater Compliance Program for Redevelopment Projects in Massachusetts* prepared by the Center for Watershed Protection (June 2018). Additionally, we have included sample language in the Model Stormwater Management Regulations at § 8(D).

Refer to § 8(C)(3) of the Model Stormwater Regulation for language implementing redevelopment project requirements.

Y□ N□ Q13 (recommended)

Does your bylaw make clear how projects discharging to impaired waters or TMDL waters should select BMPs and determine pollutant load reductions when the pollutant at issue is not covered by the EPA Region 1 BMP Performance Extrapolation Tool?

Discussion: The 2016 MS4 permit requires the use of the EPA Region 1 BMP Performance Extrapolation Tool to determine the adequacy of pollutant load removal (§§ 2.3.6.a.ii.3.g and 2.3.6.ii.4.b). However, this Tool does not cover key pollutants such as bacteria and chloride, which some towns are required to address.

The authors recommend that towns handle this problem by referencing the pollutant removal efficiencies in the MA Stormwater Handbook and in any local guidance documents which may be developed. See Model Stormwater Management Regulation § 8(C)(5) for suggested language. Refer also to

NepRWA's *Guidance for Permit Applicants Regarding Best Management Practices for Reducing Pathogen (Bacteria) Pollution in Stormwater.*

Y□ N□ Q14 (required) (§ 2.2; Appendix H § II.1.a.i.2)

For towns with discharges to waters impaired for phosphorous, does your bylaw require that BMPs be *"optimized"* for phosphorous removal?

Discussion: This applies to all Neponset River Watershed municipalities, including those who are not subject to the Charles River Watershed nutrient TMDL. The 2016 MS4 Permit is unclear on what it means to be "optimized" for phosphorous. The permit requires the use of EPA Region 1 BMP Performance Extrapolation Tool for other BMPs, and the tool may be useful to determine which BMPs are optimal for phosphorous removal. See Model Stormwater Management Regulations § 8(C)(4).

Y□ N□ Q15 (required) (§ 2.2; Appendix H §1.a.i.2)

For towns with discharges to waters impaired for nitrogen, does your bylaw require that BMPs be *optimized* for nitrogen removal?

Discussion: In the Neponset River Watershed, this applies only to Foxborough, Sharon and Stoughton. The 2016 MS4 Permit is unclear on what it means to be "optimized" for nitrogen. The permit requires the use of EPA Region 1 BMP Performance Extrapolation Tool for other BMPs, and the tool may be useful to determine which BMPs are optimal for nitrogen removal. See Model Stormwater Management Regulations § 8(C)(4).

Y□ N□ Q16 (required) (§ 2.2; Appendix H § IV.4.b)

For towns with discharges to waters impaired for chloride, do you have a bylaw or other regulatory mechanism *"requiring measures to prevent exposure of any salt stockpiles to precipitation and runoff at all commercial and industrial properties within the regulated area,"* and have you established new development and redevelopment projects *"procedures and requirements to minimize salt usage and require the use of salt alternatives where [the town] deems necessary?"*

Discussion: This provision does not currently apply to any Neponset Watershed communities.

Y□ N□ Q17 (required) (§ 2.2; Appendix H § V.2.a.i)

For towns with discharges to waters impaired for solids, oil and grease (hydrocarbons), or metals, does your bylaw require that:

Stormwater management systems designed on commercial and industrial land use area draining to the water quality limited waterbody shall incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill or other unexpected event. EPA also encourages the permittee to require any stormwater management system designed to infiltrate stormwater on commercial or industrial sites to provide the level of pollutant removal equal to or greater than the level of pollutant removal provided through the use of biofiltration of the same volume of runoff to be infiltrated, prior to infiltration.

Discussion: This provision does not currently apply to any Neponset Watershed communities.

Y□ N□ Q18 (required/recommended) (§§ 2.3.6.a.ii.3 and 2.3.6.a.ii.4.a)

Does your stormwater bylaw require regulated projects to comply with the MA Stormwater Standards AND the MA Stormwater Handbook?

Discussion: The 2016 permit requires new development and redevelopment projects design stormwater management systems to comply with certain MA Stormwater Standards and Handbook provisions. Redevelopment projects must comply with those standards to the "maximum extent feasible." The authors recommend that applicants be required to comply with all of the MA Stormwater Standards and Handbook, even when outside areas of Wetlands Protection Act jurisdiction. Having a single, uniform set of rules that apply to all stormwater discharges (both upland and wetland) will ensure a clearer, more predictable, and arguably more fair permitting process for applicants. It will also increase administrative efficiency for the municipality and ensure consistent environmental protections. See Model Stormwater Management Regulations § 8(C)(2).

Y□ N□ Q19 (recommended)

Are your stormwater bylaws and regulations free of provisions that contradict or are weaker than DEP Stormwater Standards?

Discussion: The authors urge municipalities to review their existing stormwater bylaws and eliminate any outdated provisions that conflict with, or are weaker than, the requirements under the MA Stormwater Standards. For example, some local bylaws accept a 40% reduction of existing impervious surface as compliance with redevelopment performance standards, which is not consistent with the requirements in the MA Stormwater Standards or the MS4 Permit.

Y□ N□ Q20 (required) (§ 2.3.6.a.ii.2)
Does your bylaw require that "*the design of treatment and infiltration practices…follow the guidance in Volume 2 of the Massachusetts Stormwater Handbook, as amended, or other federally or State approved BMP design guidance*"?

Discussion: The MS4 Permit requires that all BMPs be designed in accordance with the MA Stormwater Handbook. The authors further recommend that municipalities require BMPs to be "selected and constructed" in accordance with the handbook. See Model Stormwater Management Regulations § 8(C)(2).

Y□ N□ Q21 (recommended)
Does your stormwater bylaw specifically require the implementation of BMPs that are "consistent with" any applicable Total Maximum Daily Loads?

Discussion: The MA Stormwater Handbook requires BMPs to be "consistent" with any applicable TMDLs. The authors recommend that municipalities specifically include a similar provision in their bylaw. This will ensure consistency between the treatment of upland and wetland projects, and, while not specifically required by the MS4 Permit, will help facilitate compliance with the overall TMDL provisions of the MS4 Permit. See Model Stormwater Management Regulations Section 8(B) for suggested language. Refer also to NepRWA's *Guidance for Permit Applicants Regarding Best Management Practices for Reducing Pathogen (Bacteria) Pollution in Stormwater*.

Y□ N□ Q22 (recommended)
If your town has local construction standards for stormwater infrastructure, are they consistent with the BMP design criteria contained in Vol. 2, Ch. 2 of the MA Stormwater Handbook?

Discussion: The authors recommend that municipalities review any local stormwater design guidelines and construction standards to ensure that they complement the MA Stormwater Handbook requirements, and attempt to eliminate any conflicting provisions.

Y□ N□ Q23 (recommended)
Does your bylaw require that stormwater management systems shall be designed to avoid disturbance of areas susceptible to erosion and sediment loss?

Discussion: This requirement was included in the Draft MS4, but eliminated from the final version. Nevertheless, the authors recommend that your bylaw or regulations specifically define the areas that are considered susceptible to erosion and sediment loss including thickly forested areas, steep slopes (*e.g.*, 15% or greater) and areas within floodplains. See Model Stormwater Regulations § 8(E).

Section C. Sedimentation and Erosion Controls

Y□ N□ Q24 (required) (§ 2.3.5.c)

Does your bylaw contain the following requirements for construction site stormwater runoff?

- Projects must implement erosion and sediment controls including best management practices appropriate to site conditions, and efforts to minimize the area of land disturbance;
- Projects must control wastes, including discarded building materials, concrete truck wash-out, chemicals, litter, and sanitary wastes; and
- The permitting authority must be empowered to inspect sites and implement sanctions to ensure compliance.

Discussion: These provisions were required under the 2003 MS4 permit and should already be included in your bylaw. Refer to Model Stormwater Management Regulation § 9(E) and Model Stormwater Management Bylaw Article III, § 8(D)

Section D. Operation & Maintenance Requirements

Y□ N□ Q25 (required) (§ 2.3.6.a.iii)

Does your bylaw or regulations require the development of a plan to ensure the *"long term operation and maintenance of stormwater management practices that are put in place after the completion of a construction project"?* Have you considered the following strategies in connection with the maintenance program?

- *use of dedicated funds or escrow accounts for development projects;*
- *acceptance of ownership by [the town] of all privately owned BMPs;*
- *development of maintenance contracts between the owner of the BMP and the [town]; and/or*
- *submission of an annual certification documenting the work that has been done over the last 12 months to properly operate and maintain the stormwater control measures.*

Discussion: This is a requirement of the 2016 MS4 Permit and should include adequate authority for the town to inspect BMPS on private land or require annual certification from the permittee that the BMP is functioning according to manufacturer or design specifications. Similar, though less specific language was included in the 2003 MS4 Permit and as such should already be part of your bylaw. See Model Stormwater Management Regulation §10(B)(6) and refer also to the recommended O&M provisions discussed in the next two questions.

Many communities already require annual reporting (*i.e*. certification) of O&M activities by private property owners. Note that the 2016 MS4 Permit also

requires that towns "*report in the annual report on the measures that they have utilized to meet this requirement."*

The authors recommend that towns incorporate all these potential methods into your bylaw or regulations and give the Stormwater Authority discretion to determine which procedure or combination of procedures should be applied on a case by case basis as part of the permitting process. See Model Stormwater Management Regulations § 10(B)(6) for suggested language for implementing this approach.

Y□ N□ Q26 (recommended)

Does your bylaw or regulation require that the O&M plan be recorded at the registry of deeds, require submission of O&M reports on a form specified by the Stormwater Authority (including potentially an electronic form), and empower the Stormwater Authority to establish a reasonable annual reporting fee to cover the cost of administering ongoing O&M reporting and enforcement requirements?

Discussion: The authors recommend all municipalities adopt these provisions. At least one Neponset Watershed community already requires the full O&M plan to be recorded at the registry so that new owners are placed on notice when a property changes hands. Given the increasing obligation of towns to demonstrate that private parties are performing required O&M activities, the authors also recommend that towns reserve the right require that reports be submitted through an electronic reporting system and to set up an annual reporting fee to cover ongoing administration costs. See Model Stormwater Management Regulations § 10(B)(6)(f) for suggested language.

Section E. Prohibition of Illicit Discharges and Illicit Connections

Y□ N□ Q27 (required) (§§ 2.3.4.1 and 2.3.4.2)

Does your stormwater bylaw or other regulation prohibit non-stormwater discharges to your MS4 and enable you to take enforcement action against any such "illicit" discharge or connection?

Discussion: This basic language on illicit discharge bylaw provisions is included in the 2003 MS4 permit, and should already be reflected in your existing bylaw.

Y□ N□ Q28 (required) (§ 2.3.4.a)
Does your stormwater bylaw or other regulation provide *"adequate legal authority to:*

- *Prohibit illicit discharges to the MS4;*
- *Investigate suspected illicit discharges*
- *Eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4…;*
- *Implement appropriate enforcement procedures and actions."?*

Discussion: The 2016 MS4 permit has more detailed requirements for bylaw provisions regarding illicit discharges than did the 2003 MS4 Permit. The authors recommend that all communities revisit the illicit discharge language in their bylaws and make sure it clearly addresses the above points. See Model Stormwater Management Bylaw Article II, § 2 for suggested language. Also see Model Stormwater Management Bylaw Article I, § 7 regarding enforcement.

Section F. Limited Review of Smaller Projects

Y□ N□ Q29 (recommended)
Does the town impose conditions on projects that are too small to need a full stormwater permit?

Discussion: As discussed in question 3 above, it will be extremely difficult for towns to comply with the MS4 permit as a whole if significant numbers of smaller projects areconstructed without BMPs, thus shifting the responsibility to construct those BMPs to the town. If the size thresholds for requiring a full stormwater permit are set relatively high (*i.e*. >10,000 square feet), it may be important to require at least some reduced level of review and approval for smaller projects. Several towns in the Neponset River watershed already impose some stormwater requirements for projects that don't need a full stormwater permit.

The authors recommend that some limited level of review and approval be required of that disturb 5,000 square feet or more of land or which develop or redevelop 1,000 square feet or more of impervious surface. See Model Stormwater Management Regulation § 5(A)(1) for suggested language.

Y□ N□ Q30 (recommended)

If the town imposes stormwater requirements on projects that fall below the threshold for a full stormwater permit, is there a clearly defined process for how such projects are reviewed?

Discussion: The bylaw and/or regulations should clearly define a streamlined review process for smaller projects that are required to comply with stormwater regulations but do not require a stormwater permit. The authors recommend that the review process for smaller projects include the following at a minimum:

- The public hearing is waived and the review and approval will be completed by one or more individuals designated by the Stormwater Authority
- A sketch plan (not stamped by and engineer) showing
    - existing conditions and areas of proposed land disturbance
    - disconnected impervious cover and directly connected impervious cover
    - proposed stormwater management BMPs
    - basic erosion and sedimentation controls
- A simple operation & maintenance plan for any BMPs on site
- A reduction or waiver of permit application fees
- A reduction or waiver of O&M reporting requirements
- The approving individual should have the ability to require a full permit if needed

However, your small project requirements may need to be more extensive depending on the size and type of projects covered by your small project reviews. For example, the suggestions above would not be appropriate if your small project review includes commercial projects of just under an acre. See Model Stormwater Management Regulation §§ 6(A) and 6(B)(1) for suggested language.

Y□ N□ Q31 (recommended)

If the town imposes stormwater requirements on projects that fall below the threshold for a full stormwater permit, are there specific design or performance standards for such projects?

Discussion: If your bylaw provides for limited review of smaller projects, the bylaw or regulations should also clearly define the performance standards such projects should meet.

At a minimum, the authors recommend that these smaller project standards should include:

- Provide basic sediment and erosion controls
- Minimize the creation of impervious cover and area of soil disturbance

- Disconnect impervious cover consistent with the requirements for LID credits in the MA Stormwater Handbook to the extent possible
- Retain the first 1 inch of runoff from all directly connected impervious surfaces on site or, if that is not possible due to site constraints, comply with the state Stormwater Standards to the "maximum extent practicable"

See Model Stormwater Management Regulation § 6(B)(2) for precise language to use.

G. Miscellaneous Bylaw/Regulatory Provisions

Y□ N□ Q32 (recommended)
Does your stormwater bylaw authorize the Stormwater Authority to issue regulations?

Discussion: The authors recommend that bylaws should authorize the Stormwater Authority to adopt regulations more detailed than the bylaw itself. Many of the recommendations in this document don't need to be included in a bylaw (which should generally be kept short) if the bylaw authorizes the Stormwater Authority to flesh out the details in regulations. See Model Stormwater Management Bylaw Article I, § 6 and Model Stormwater Management Regulations § 3.

Y□ N□ Q33 (recommended)
If your stormwater bylaw authorizes issuance of regulations, have you adopted any?

Discussion: See Model Stormwater Management Regulations for suggested language.

Y□ N□ Q34 (recommended)
Does your bylaw provide credits or other incentives for use of Low Impact Development or green infrastructure techniques, as outlined in the Massachusetts Stormwater Handbook or based on other criteria?

Discussion: The authors recommend adopting provisions that give projects "credit" for reducing the area of impervious cover, disconnecting impervious cover from the closed drainage system, and utilizing other Low Impact Development techniques. These approaches have both environmental and cost savings benefits. The MA Stormwater Handbook provides an existing framework for a system of credits which can be easily referenced. See Model Stormwater Management Regulation § 8(E)(3).

Y□ N□ Q35 (recommended)
Do the permit application filing requirements under your bylaw or regulations include at a minimum all the information and materials (other than those specific to wetlands) listed on the MassDEP Stormwater Checklist forms?

Discussion: The MassDEP Wetlands Program has comprehensive permit application forms, including an excellent Stormwater Checklist. Towns may wish to use MassDEP forms in conjunction with a short local permit application cover form. See Model Stormwater Management Regulations § 8(B)(6).

Y□ N□ Q36 (required) (§ 2.3.6.a.iii)
Does your bylaw require *"at a minimum, the submission of as-built drawings no later than two years after completion of construction projects…[that] depict all on site controls, both structural and non-structural, designed to manage the stormwater associated with the completed site"?*

Discussion: This is a requirement of the 2016 MS4 Permit. See Model Stormwater Management Regulations § 8(F).

Y□ N□ Q37 (recommended)
Does your bylaw or regulation require a certificate of compliance and if so, must it be recorded at the registry of deeds?

Discussion: Under the Wetlands Protection Act, a certificate of compliance must be issued and recorded at the registry to ensure that projects have actually been built as permitted. The authors recommend replicating this practice under your stormwater bylaw. See Model Stormwater Management Regulations § 15.

Y□ N□ Q38 (required/recommended) (§ 2.3.6.a)
Does your stormwater bylaw or other municipal ordinance provide the authority to enforce and issue fines for violation of the stormwater bylaw or regulations?

Discussion: The 2016 Final MS4 continues to require that your bylaw establish the authority to enforce your bylaw and regulations. In addition, though not explicitly required by the MS4 Permit, the authors recommend that your bylaw (or another town regulation) also establish the authority to issue fines as an enforcement tool. See Model Stormwater Management Bylaw Article I § 7.

Y□ N□ Q39 (recommended)
Does your bylaw or other municipal ordinance provide authority to require surety bonds to guarantee performance of the work as permitted?

Discussion: The authors recommend adopting the authority to require surety bonds, as another tool to ensure that the work performed is the same as the work permitted. Surety bonds may not be necessary in many cases, but they are useful for large projects or for developers who have violated their permit in the past. See Model Stormwater Management Bylaw Article III § 6.

Y□ N□ Q40 (recommended)
Does your bylaw or another municipal regulation authorize you to collect application and/or consultant fees?

Discussion: Application fees and consultant fees are common features of many stormwater bylaws. Application fees should be established at a rate adequate to offset town costs of administering its stormwater permitting program. Consultant fees give the Stormwater Authority the ability to obtain outside expertise to assist with complex or unusual projects when needed. See Model Stormwater Management Regulations §§ 6(G) and 7(E). See also the discussion of annual reporting fees under Question 26 above.

Y□ N□ Q41 (recommended)
Does your bylaw or other regulation require that pet waste be picked up and properly disposed? If so, does the town impose fines for violating these rules?

Discussion: Many towns have adopted formal rules regarding pet waste management. Pet waste requirements are especially helpful in towns that are subject to bacteria TMDLs. Pet waste is a significant source of bacteria in stormwater runoff and some aspects of proper dog waste management are covered in both the existing and proposed MS4 permits (though they do not require adoption of a dog waste ordinance). See MS4 Permit §§ 2.3.2.d.i and 2.3.7.a.ii.1. See also Model Stormwater Management Bylaw Article II, § 3.

Section H. Internal Coordination

Y□ N□ Q 42 (recommended)
Is there a single stormwater permitting authority in town (*i.e.*, authorized department or board that makes decisions in areas of wetlands jurisdiction and another in upland areas?

> Discussion: In some communities, upland projects are decided by the Board of Selectmen while wetland projects are decided by the Conservation Commission. In the interest of consistency and efficiency, the authors recommend that towns establish a single Stormwater Authority for all projects. See Model Stormwater Bylaw Article I, § 2 (definition of "Stormwater Authority").

Y□ N□ Q43 (recommended)
Is there a single set of stormwater rules and/or performance standards in your town?

> Discussion: In some communities, there is one set of stormwater rules and performance standards for wetland projects, and a different set for upland projects. In other cases both a planning board and a conservation commission in the same town may have separate rules and performance standards. In still others, a project in a wetland area may require two stormwater permits: one under the Wetlands Act and a second under the stormwater bylaw. The authors recommend that each community have one set of performance standards for stormwater management, and that each applicant be required to obtain one approval for their proposed stormwater management system.

Y□ N□ Q44 (recommended)
Do you consider there to be a good level of coordination and cooperation among the stormwater permitting authority and other local boards and officials whose permits may impact stormwater management?

> Discussion: Establishing a close level of cooperation among the various town boards who have an interest in stormwater management is not something that can be directly addressed in a bylaw. It is essential, however, that there exist broad agreement about what should be included in a bylaw, and that bylaw requirements don't contradict or duplicate other rules.
>
> To help facilitate a smooth permitting process, Towns may want to consider a provision to the effect of the following: "Persons required to obtain a stormwater permit under this bylaw (or related regulation) shall obtain such permit before receiving any other building, grading or other development permit."

We also recommend that you consider:

- Creating a form or other mechanism for all town boards to indicate whether they have jurisdiction, comments, or no interest in each project requiring a stormwater permit
- Providing (or requiring applicants to provide) copies of stormwater permit applications to all other relevant town boards, commissions, departments and officers, and giving them a reasonable amount of time to comment before a public hearing is held;
- Having a single staff person or consultant with stormwater expertise working with all the relevant town boards and staff; and/or
- Establishing a committee of relevant town board members and employees to set consistent permitting rules and procedures.