



MASSACHUSETTS Rivers Alliance

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February 26, 2015

Newton Tedder
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Re: Comments on Draft Massachusetts Small MS4 Permit

Dear Mr. Tedder:

Thank you for this opportunity to comment on EPA's Draft General Permit for Small MS4s in Massachusetts. The Massachusetts Rivers Alliance is a private non-profit 501(c)(3) organization dedicated to the protection and restoration of rivers in Massachusetts. We have 57 organizational members, including watershed and conservation groups around the state, as well as a growing membership of about 500 individuals and families. This permit addresses issues of great concern to our members, and we encourage prompt issuance of the final permit.

Stormwater remains a major impediment river health in Massachusetts: Polluted runoff from roads, parking lots and other impervious surfaces is a substantial contributor to violations of water quality standards in most Massachusetts rivers, streams, and lakes. EPA NPDES stormwater programs have been in place for Phase I and Phase II municipalities, construction sites, and industrial stormwater dischargers since the early 2000s. The Phase II MS4 permit took effect in 2003, and covers stormwater impacts from urban land uses and municipal practices covering a large portion of the land area in Massachusetts. However, compliance has been mixed during the extended first permit term, with insufficient progress in reducing impairments of water bodies for stormwater pollutants.

At the same time, Massachusetts has experienced significant flooding and pollution problems associated with stormwater in recent years, and scientists expect the cycles of flooding and drought to become more pronounced as climate change progresses. Massachusetts communities need to take on the difficult task of addressing these problems and upgrading their aging infrastructures to meet this challenge. **This permit is an important step in promoting these urgently-needed changes, and we strongly support its promulgation.**

General Comments

The draft permit represents a significant improvement over the 2003 permit, and is likely to be much more effective in reducing pollution, flooding and erosion caused by stormwater in urbanized areas. The draft permit generally strikes a reasonable balance between prescriptive requirements and flexibility. More specific deadlines and requirements for Illicit Discharge Detection and Elimination (IDDE), municipal pollution prevention and good housekeeping, and other requirements clarify what is expected of MS4s and should improve rates of compliance. At the same time, the permit appropriately requires MS4s to develop their own plans for many aspects of the permit. Allowing MS4s to tailor their programs to local circumstances is good practice, given the variation in land use characteristics and current stormwater impacts. This flexibility will encourage communities to prioritize the most urgent problems and the most cost-effective solutions.

- The permit provides **more specific requirements and deadlines** in many cases, which should result in better compliance than was achieved under 2003 permit.
- The permit incorporates **water-quality requirements** that directly address the pollutants discharged in urban stormwater and that will invigorate efforts to correct long-standing exceedances of water quality standards.
- The permit gives permittees **adequate time and substantial flexibility** in choosing approaches to compliance that are most appropriate for local conditions. In response to comments on the 2010 proposed permit, EPA eliminated some requirements that permittees felt were overly prescriptive. In general, the permit emphasizes good planning, implementation and evaluation by permittees, and minimizes the use of rigid, one-size-fits-all approaches.
- **Permit requirements for greater public access and opportunities to comment** on towns' stormwater management programs will increase public support for these programs. Greater public scrutiny will also encourage more effective plans and more consistent implementation.
- **The post-construction requirements will curb land use practices that have led to our current problems in urban areas, and will begin to reverse the effects of many decades of poor stormwater management approaches.** EPA has chosen a balanced and effective strategy, by setting a high standard for infiltration for both new development and redevelopment and providing a safety valve where site conditions make meeting that standard infeasible.

The permit requirements challenge municipalities and their residents and businesses to do better monitoring and planning, to improve implementation, to raise public awareness of stormwater issues, and to design and maintain better stormwater management measures. If communities can meet these challenges, the permit **will result in a sea change in the management of urban stormwater in Massachusetts.**

Ten years into implementation of national stormwater standards, we have now had enough experience with urban stormwater management across the country that the *costs, difficulty and uncertainty associated with urban stormwater programs have been substantially reduced.*

- **Contractors have gained experience** with stormwater programs under the 2003 permit and the Massachusetts Stormwater Policy, and are better able to support their clients in complying with the new permit.
- Several **regional stormwater consortiums** have been funded by the state under the Community Innovation Challenge Grants program. The Central Massachusetts Regional Stormwater Coalition, for example, has developed numerous shared resources for its member communities that provide training and support compliance with SWPPP, public education and many other permit requirements. These resources are publicly available on their website.
- There have been major investments **in new stormwater approaches** in many cities, including well-documented pilot projects, which have provided valuable information on the effectiveness and costs of various BMPs. These innovative programs have particularly demonstrated the value of Low Impact Development and Green Infrastructure methods in stormwater management.
- There are numerous **professional training programs**, including EPA's webinars, to help permittees understand and comply with the new requirements.
- EPA has also **encouraged or supported a variety of methods to reduce compliance costs** – including guidance, templates, tools, and encouraging collaboration in meeting requirements.

The permit puts **substantial responsibility on permittees to develop, implement and report on plans** for a variety of activities. Many of the requirements simply represent good municipal management practices. Some municipalities' current practices may not be up to these standards, however, and some permittees may therefore struggle to meet all the requirements for plan development and implementation on the proposed schedules. Other municipalities should be able to meet the permit schedules without a problem, especially those that made good efforts to comply with the 2003 permit requirements. **We urge that EPA provide model plans and links to resources for all of the MEP and Water Quality-based planning requirements**, as well as for the Public Outreach and Education requirements, to support compliance with these requirements.

Permittees can take steps to reduce compliance costs and to fund the required investments in stormwater programs and infrastructure. They can take advantage of many support services provided by EPA, MassDEP, local watershed groups and regional planning agencies and others, cooperate with neighboring communities where appropriate, and ensure that developers and other private parties are bearing their fair share of the burden both for preventing and for reducing stormwater pollution. Municipalities can fund their stormwater programs by

establishing stormwater utilities, and by taking advantage of new funding that will be provided by the Water Infrastructure Financing Act.

We applaud the emphasis on LID in the post-construction requirements. The state-of-the-art for LID and Green Infrastructure approaches has advanced significantly, as municipalities, developers, and consultants gain more experience with these techniques. Costs have come down, and practitioners have a better understanding of performance potential and design, build and maintenance practices required to make these techniques effective.¹ The time has come to take advantage of these advances, and strongly encourage use of these more sustainable and cost-effective approaches to achieve stormwater management goals.

While we strongly endorse the overall approach and requirements of this permit, **we have identified some areas where improvements are needed.**

- **The stormwater bylaw requirements should apply to projects as small as a quarter or half an acre.** Most urbanized towns, at least in the Boston area, have very few large development and redevelopment projects, and projects under an acre would not be required to employ *any* stormwater management measures unless they are located in wetland resource areas. This will make it exceedingly difficult for many towns to comply with the proposed prohibition against new and increased stormwater discharges from MS4s. MS4s have the flexibility to provide for simplified permitting where appropriate for smaller projects or projects with lower impacts. Simply excluding all projects less than one acre would allow too much new development and redevelopment to proceed without adequate stormwater management.
- In addition to conducting an annual evaluation of BMP compliance and effectiveness, **permittees should be required to take corrective action** where the evaluation shows that goals and objectives are not being met. An effective iterative approach to improving stormwater management requires that problems be addressed, and not simply identified.
- **MS4s discharging to waters impaired for bacteria or pathogens should be subject to additional requirements.** This includes requiring new development and redevelopment projects as well as retrofits on town-owned properties to implement BMPs that are most effective at reducing bacteria where the waters they discharge to (via an MS4) do not meet bacteria Water Quality Standards. These requirements are consistent with the proposed enhanced BMP requirements for other stormwater pollutants.
- **The compliance schedule for the Charles River Phosphorus TMDL is too long,** requiring only planning during the first five-year permit term. We recommend that the permit require TMDL compliance within 10 years. In addition, some basic pollution prevention, good housekeeping and new development/redevelopment requirements

¹ We believe that the language in the permit Fact Sheet, p. 35, incorrectly suggests that maintenance of LID controls may be more expensive or difficult than maintenance required for traditional stormwater controls.

² U.S. EPA, Office of Water, Water Permits Division, Summary of State Stormwater Standards, June 30, 2011 draft.

³ The 2013 Western Kentucky University Stormwater Utility Survey lists over 1,400 stormwater utilities nationwide. Six states have more than 100 utilities each, and they have been adopted in communities of all sizes. Massachusetts

should be implemented during the first five years, to prevent things getting worse while MS4s develop more extensive plans to reverse problems at existing development.

- **We strongly recommend additional requirements to reduce widespread chloride pollution:** There is a growing body of evidence that widespread and increasing use of salt is contributing to high levels of chloride in our rivers, causing significant ecological harm. We recommend that requirements for development of a Salt Reduction Plan, tracking salt use and addressing application of salt on private development be required of all permittees, and not just for the limited number of waters that have been assessed for chloride impairments.

More detailed discussion of these recommendations and additional comments on specific sections of the permit are provided in an Attachment to this letter.

Massachusetts is falling behind many other states in tackling our urban stormwater problems. EPA's 2011 survey of state stormwater standards shows that a number of states have already adopted quantitative retention and treatment standards for all MS4s.² Currently, such standards only apply statewide in Massachusetts to sites in wetlands resource areas, through the state's Stormwater Policy. Compared with many other regions, we are only just beginning to adopt stormwater fees and utilities here – an important method for funding the investments required to manage urban stormwater effectively.³ It is time for Massachusetts to catch up with best practices in its stormwater regulations.

We appreciate the careful work EPA has done to improve on the 2003 permit and the 2010 proposals, based on experience with the 2003 permit and comments on the 2010 proposals. However, the process has taken a very long time. **We strongly support prompt issuance of the final permit**, to end a long period of drift and uncertainty associated with delay in issuing this permit. We urge EPA to work quickly to respond to comments and complete a final permit at the earliest possible date

Thank you for considering our comments on this very important permit.

Sincerely,



Julia Blatt
Executive Director

Cc: Fred Civian, MassDEP

² U.S. EPA, Office of Water, Water Permits Division, Summary of State Stormwater Standards, June 30, 2011 draft.

³ The 2013 Western Kentucky University Stormwater Utility Survey lists over 1,400 stormwater utilities nationwide. Six states have more than 100 utilities each, and they have been adopted in communities of all sizes. Massachusetts currently has only 6 stormwater utilities, despite the passage of state legislation explicitly authorizing local utilities.

Attachment: Comments on Specific Permit Provisions

1.7.2 Notice of Intent

We support the provision for electronic submission and the provision of a standard template. Many NOIs submitted for the 2003 permit were incomplete or uninformative, and did not provide measurable goals.

- We recommend adding a statement that applicants not submitting an NOI using the electronic template be required to use the template for its written NOI or otherwise provide all of the information required by the template, to maintain consistency across permittees in the types of information and level of detail required.
- We support the provision that allows any interested person to petition to have an MS4 be required to submit an individual permit or alternative NPDES general permit.
- An additional section is needed to describe plans for addressing water-quality limited waters without a TMDL, to the extent not covered in the MEP requirements.
- We recognize that some aspects of the SWMP will be difficult to specify within the time allowed for NOI submission. Where components of the SWMP cannot yet be determined, steps to be taken to design those elements should be described in the NOI.

1.10 Stormwater Management Plan (SWMP)

We support the requirement that the SWMP be made readily available to the public, including posting online unless the permittee does not have a website. This requirements should apply to all plans, monitoring results and annual reports as well. Any MS4s that cannot post these documents to a website should be required to make them available at a public library or other easily-accessed place. Requiring that all permit compliance documents be easily accessed by the public is an important factor in making the permit effective. Local environmental groups, watershed groups, and interested citizens can play an important role in encouraging effective plans and monitoring performance.

We support requirements for measurable goals for each BMP, including milestones and timeframes for implementation, defined qualitative or quantitative endpoints, and associated measure of assessment. These specific goals will support more effective monitoring of progress and compliance, by EPA and MassDEP, by the public and by the permittee itself.

We support encouraging permittees to maintain adequate funding sources for implementation of the program. We further **recommend that some description of plans for funding be required in SWMP,** including general description of planned or expected funding sources, any plans to develop a stormwater utility, and a schedule for resolving funding uncertainties.

We support the requirement for an annual evaluation of the SWMP, including evaluation of BMP implementation and effectiveness. This evaluation is critical to encouraging an interactive approach to improving stormwater management. **It is also necessary to specify steps to be taken if the evaluations show that some permit goals and objectives are not being achieved.**

Where ambient water quality and outfall monitoring shows persistent problems with bacteria pollution, where tracking Directly Connected Impervious Area and Impervious Area (DCIA and IA) shows little progress or even increased IA, where annual self-evaluations are not informative or persuasive, or there is other evidence of lack of effort or progress, it is critical that permittees be challenged to step up performance. In addition to the annual evaluation, **we recommend that permittees be required to correct any deficiencies identified.** Annual reports should (1) identify permit requirements that the permittee is not currently in compliance with, (2) identify any Best Management Practices (BMPs) that are not achieving the planned outcomes, and (3) describe planned changes in BMPs or other actions to correct course. Clearly, not every BMP will perform as expected, and implementation may fall short for a variety of reasons. The permit needs to encourage honest self-evaluation and iterative improvements, by asking for corrective actions as well as for evaluation. We concur with the permit language changes suggested in comments submitted by the Neponset River Watershed Association, which address the need for such corrective action.

We also recommend that EPA provide detailed guidance on methods for evaluating the effectiveness of each type of BMP, and examples of corrective actions that must be taken where BMPs are not achieving their goals and objectives. The BMPs involved in stormwater management vary widely in their characteristics, from those that have a direct and observable impact on water quality (e.g. IDDE requirements) to those that are very important but less easily evaluated in terms of their ultimate effect on stormwater impacts (e.g. Public Outreach and Education). A catalog of appropriate outcome measures for each BMP requirement, and a checklist of BMP improvements that must be considered where BMPs are not achieving the desired objectives, would be very helpful to permittees in initial development of their SWMPs and in their annual evaluations.

2.1 Water Quality Based Effluent Limitations

2.1.1 Requirement to Meet Water Quality Standards

The current draft permit language provides an overly-broad shield against requirements to comply with water quality standards. Section permit (2.1.1.d) appropriately requires that permittees eliminate conditions found to be causing or contributing to violation of an applicable water quality standard as expeditiously as possible, but no later than 60 days of becoming aware of situation. **This requirement is undermined,** however, by the language in Section 2.1.1 which states that a MS4 is deemed to be in compliance with this general requirement if it is complying with TMDL (2.1.1(c), 2.2.2 and Appendix H) or impaired waters requirements (2.1.1, 2.2.1(b) and Appendix F) of the permit. Plans approved to address discharges of stormwater pollutants to waters with a TMDL or impairment may not be sufficient to address a newly-discovered discharge. Instead of being provided a blanket exemption, the permittee should be required to, if feasible, eliminate the condition within 60 days OR review the existing SWMP provisions related to the pollutant of concern, determine whether additional activities or BMPs are required to address the newly-discovered discharge, and revise the relevant SWMP provisions (BMPs and goals) as needed, within 60 days.

2.1 Water Quality-Based Effluent Limitations

We support the addition of the water-quality based requirements to this permit. This approach provides much-needed attention, guidance and clarity to the existing requirement that MS4 discharges not cause or contribute to violations of the Massachusetts Water Quality Standards.

Waters with TMDLs (2.1.1, 2.2.1(b) and Appendix F)

We recommend requiring that these requirements apply to any discharges to waters that become subject to new TMDLs during the permit term. Compliance plans should be developed and SWMPs revised to include the new requirements within the first two years after the effective date of any new TMDL.

We recommend accelerating the schedule for discharges to waters subject to the Charles River TMDL for phosphorus. Appendix F sets a very lengthy compliance period for the Charles River phosphorus TMDL, which requires only *planning* for the entire 5 years of the permit. This means many years would pass before any actual reductions in phosphorus loadings from MS4s would be required. We strongly recommend that the permit require compliance with the TMDL within 10 years and that the milestones for Phases 1 – 3 be adjusted accordingly. Specifically, the Additional Enhanced BMPs described in Appendix H for phosphorus-impaired waters related to Public Outreach and Education, Stormwater Management for New Development and Redevelopment, and Good Housekeeping and Pollution Prevention for Permittee-Owned Operations should be required during the first two years of the permit period for MS4s discharging to waters with phosphorus TMDLs. A lengthy planning period is not required to implement these basic provisions. We concur with recommendations by the Charles River Watershed Association for changes in the Phosphorus Control Plan schedules and milestones.

We recommend strengthening the additional requirements for permittees discharging to waters with a TMDL for bacteria, to include:

- Revising post-construction bylaws or ordinances to require retention of 1” of runoff from all impervious areas for smaller projects, e.g. those disturbing ½ acre or more (or other extension to smaller developments/redevelopments.
- Requiring that new developments and redevelopments prioritize effective BMPs for controlling pathogens in stormwater discharges.
- Emphasizing retrofit opportunities for BMPs that are effective in reducing bacteria in stormwater in inventories of permittee-owned properties.

We concur with comments submitted by the Neponset River Watershed Association that provide detailed recommendations for strengthening the requirements for waters with bacteria/pathogen TMDLs.

Impaired Waters without TMDLs (2.1.1(c), 2.2.2 and App H)

Monitoring of urban stormwater has shown the consistent presence of certain pollutants in urban stormwater, which are targeted in this permit. EPA rightly notes that waters classified as

impaired for a particular pollutant do not have capacity for additional loadings of that pollutant, and that any loadings contributed by the MS4 cannot be authorized under the permit. **We support requiring that extra measures be taken to control individual stormwater pollutants for MS4s discharging to water-quality limited waters.** This is a sensible way to direct efforts at the most serious water pollution problems in individual waterways.

We recommend that the Proposed 2014 MA Integrated List of Waters be used instead of Final 2012 list, if it has been approved by the effective date of the permit.

We support allowing rebuttal of the presumption that specific pollutants are present in MS4 discharges. Where permittees can demonstrate that the target pollutant is not present in their discharges, it is reasonable to provide permittees a mechanism to exempt themselves from the additional requirements of Appendix F.

The specific Appendix F requirements to address each pollutant are generally reasonable. The permit defines additional requirements that are targeted to address the relevant stormwater pollutant of concern. These include additional public outreach and education messages, requirements that the pollutant be prioritized in post-construction stormwater management BMPs and in inventories of retrofit opportunities on permittee-owned properties, and other pollutant-specific practices. In addition, permittees are required in some cases to develop a source identification report and define specific plans to reduce levels of the targeted pollutant in discharges.

We recommend strengthening the additional Appendix H Part III requirements for permittees discharging to waters that are impaired for bacteria/pathogens, to include the additional MEP requirements suggested above for waters with TMDLs for bacteria/pathogens.

We recommend making some requirements for chloride pollutant reduction more broadly applicable. Application of salt in Massachusetts has expanded dramatically during the past two decades – the state now applies a greater tonnage of salt than any other in the United States. There has been no coordinated study on chloride and conductivity in Massachusetts' streams, and the listing of only six streams as impaired for chloride in the Massachusetts Year 2014 Integrated List of Waters vastly underestimates the number of streams impaired by chloride. The few rivers that have long-term records on conductivity (e.g. Charles, Mystic) show significant increases of conductivity associated with salt application during the past decade. Research from outside of Massachusetts is shedding greater light on the problem.⁴ Given the broad application and well-documented toxicity of this pollutant, we recommend that all MS4s be subject to the Appendix H chloride requirements, unless they demonstrate the lack of chloride in their discharges through monitoring. Appendix H Part IV requirements for chloride should be included in the standard Good Housekeeping requirements in 2.3.7 and also be incorporated as requirements in post-construction bylaws in 2.3.6. See specific recommendations for Sections 2.3.6 and 2.3.7 below.

⁴ Kaushal et al. (2005) highlights that urbanized streams of Baltimore with >35% impervious cover are consistently reaching chronic toxicity levels of 230 mg/l chloride – implications are that cities further north with greater snowfall are likely even more impaired at the same impervious cover. (Corsi et al. 2014) assessed 30 monitoring sites on 19 streams from throughout the United States and found that 29% of sites exceeded the US-EPA chronic water-quality criteria on an average of more than 100 days per year.

2.1.2 Increased discharges

This section notes that any increased discharges must be authorized under the Massachusetts antidegradation regulations 314 CMR 4.04 and that associated conditions must be incorporated in the MS4 permit by reference. **We recommend that any such conditions or requirements also be documented in SWMPs and evaluated in annual reports.**

2.3 Maximum Extent Practicable (MEP) Requirements

We support the provision allowing shared implementation of one or more of the minimum control measures (2.3.1.b), with the stipulation that the permittee remains responsible for compliance with all permit obligations. There are many areas in which collaboration among MS4s can reduce the cost of or improve the effectiveness of stormwater management activities, including joint outreach and education and sharing monitoring equipment.

2.3.2 *Public Outreach and Education*

We support the more specific requirements for outreach and education for specific target audiences. Requirements for municipalities to begin a public outreach campaign targeting not just their residents, but also commercial businesses, institutions and industries, will help all parties realize the role they can play in reducing stormwater pollution. Requiring evaluation of the effectiveness of specific measures, before subsequent outreach to the same target audience, will encourage permittees to make incremental improvements over the permit period.

2.3.3 *Public Participation*

We recommend clarifying that there should be opportunities for the public to review and comment on the NOI, on the SWMP and on annual reports, including self-evaluations, as well as opportunities for the public to participate in implementation through volunteer monitoring, clean up days, etc. The permit should require that all permit-related documents be readily available to the public, and should encourage public input on the SWMP, the results of annual self-evaluations, and other components of the annual report. The goal of public participation is to involve residents and local businesses actively in developing and taking a role in implementing the SWMP, which goes beyond occasional involvement in one or more isolated implementation activities. This involvement will encourage more effective programs, better performance, and stronger public support for SWMPs.

2.3.4 *Illicit Discharge Detection and Elimination (IDDE)*

We support the more detailed IDDE requirements in this permit. Requirements to prioritize, investigate and eliminate the very serious problem of illicit connections to storm drains (such as illegal tie-ins of sanitary sewer pipes) will reduce dangerous pathogen levels and help restore designated uses such as swimming and boating. The draft permit:

- Recognizes that different catchments present different threats to water quality, and reflects the need to prioritize investigations and remedial actions.

- Ultimately requires investigation in every catchment. This ensures that contamination throughout the system is identified and corrected. Some contamination may be contributing to pollution of groundwater or otherwise not showing up in outfall monitoring. Investigations should therefore not be limited to catchments for “problem” outfalls, although outfall monitoring provides valuable information for prioritizing investigations.
- Sets deadlines for investigating catchments. These deadlines will help ensure continued progress.

We recommend requiring that system maps be provided in GIS format (2.3.4.6.b), unless the permittee certifies that they lack access to GIS mapping capability at reasonable cost. Maps provided in GIS format are much more useful to EPA and to outside parties, as well as to the permittee itself, and are easier to update.

We recommend that MS4 managers be encouraged to incorporate water quality data from other agencies and environmental groups in their prioritization of catchments (2.3.4.7.c), as suggested in comments submitted by the Mystic River Watershed Association.

We recommend that permittees be required to provide in annual reports any screening data completed under the 2003 permit that supports request for exemption from 2.3.4.8.a screening/sampling requirements

Where a permittee is currently under an enforcement order from EPA or MassDEP and has an approved IDDE plan under that order, **the permit should clarify that that the permittee is required to meet all the new requirements of Section 2.3.4, or to describe in their SWMP how their current approved plan is as effective or more effective** than the requirements of Section 2.3.4.

2.3.5 Construction

We recommend that permittees be required to update their existing ordinances or regulatory mechanisms or create new ordinances/regulatory mechanisms within 2 years of the permit effective date, as needed to incorporate all of the requirements of this Part.

We endorse the Section 2.3.5(c)v requirement for procedures for receiving and considering information from the public during site plan reviews.

We recommend that some of the requirements of Section 2.3.5(c)v be moved to the Section 2.3.6 requirements for Post-Construction, or be repeated in both Sections 2.3.5 and 2.3.6.. These include requirements for site plan review and evaluation of opportunities to use LID and green infrastructure. These requirements are highly relevant to the design of effective post-construction stormwater management.

2.3.6 Stormwater Management in New Development and Redevelopment

We endorse the requirement for retention of 1” of runoff for all development and redevelopment sites, and the application of that requirement to the entire site area. This provision is critical to preventing future development and redevelopment from making conditions worse. This requirement ensures that the first flush, which contains the highest pollutant levels, is retained. It will increase the rate of infiltration, which will maintain underground water levels and base flow. This approach appropriately encourages redevelopers to evaluate their entire site and to treat site stormwater holistically and comprehensively to improve existing conditions. This is critical if redevelopment is to result in significant reductions in stormwater runoff and pollutant loadings – often the only opportunity for real improvements in many densely-developed areas.

Some concerns have been expressed about differences between the current MA Stormwater Policy Requirements and the 1” retention requirement in the draft permit. Critics note that municipalities and developers are now used to applying the MA Stormwater Policy requirements, and they oppose going beyond those requirements in the MS4 permit. This is not a good argument for halting progress in regulatory requirements. We note that there was substantial opposition to the MA Stormwater Policy at the time it was adopted, with critics arguing that the infiltration and other requirements would be impossible to meet. Yet as is so often the case with new regulations, a new standard of practice was established by the MA Stormwater Policy and the costs of meeting standards came steadily down with experience. The MA Stormwater Policy has played an important role in advancing stormwater management in Massachusetts, but it has not adequately addressed the problem of urban stormwater pollution. The 1” standard is now required by the Boston Water & Sewer Commission and the Town of Franklin, among others, and very few exceptions have been necessary.

We also endorse the provision that allows for treatment equivalent to that provided by retention, where specific site conditions make compliance with the 1” requirement infeasible. Infrequently, it may be infeasible to achieve a 1” retention standard, due to soil conditions, high groundwater levels, or contamination. It makes sense to provide an alternative compliance path for these sites, rather than to preclude new development entirely or discourage redevelopment, thereby freezing in place the poor stormwater management practices of the past. **Section 2.3.6.a.ii(a) should make it clear that treatment in lieu of 1” retention is allowed only if specific site conditions make full 1” retention not feasible, and retention should be used to the maximum extent feasible before relying on treatment.** We concur with the revisions suggested by the Charles River Watershed Association for this section.

We also suggest that EPA allow offsite compliance options for MS4s subject to nutrient TMDLs as alternatives where site conditions make full compliance with the 1” retention standard infeasible. Developing an effective trading system and mitigation provisions will require careful design to ensure true equivalence in the level of pollution and runoff control provided. However, allowing more options for meeting performance standards can result in substantially better environmental results at lower cost. We recommend that EPA develop guidance for offsite mitigation, and for permit requirements that address a single pollutant (e.g. phosphorus) with an aggregate load requirement, watershed-wide trading rules.

EPA has chosen an overall effective approach, by setting a high performance standard and providing offsite alternatives and requiring treatment when site conditions make meeting that standard infeasible. The permit should require 1” retention to the maximum extent feasible; allow for offsite mitigation or trading for the volumes that cannot be feasibly retained onsite; and finally, provide for equivalent treatment only where a combination of onsite retention, offsite mitigation or trading cannot meet the full 1” retention requirement. This is a far better approach than setting a lower standard for all sites where some but not all sites would have difficulty meeting the standard, and simply waiving requirements where site conditions make full compliance with the 1” infeasible.

The Section 2.3.6.a.ii(b) prohibition on infiltration BMPs at industrial sites is too broad.

We recommend that this restriction be limited to industrial sites where there is processing or materials storage outdoors that might be exposed to precipitation or result in spills that would be exposed to precipitation.

We recommend a requirement that bylaws include pollution prevention requirements for new development and redevelopment. These should include requirements similar to those specified for permittee-owned facilities in Section 2.3.7. They **should also include source-reduction requirements to reduce chloride pollution**, including descriptions of winter deicing practices, prohibiting disposal of snow in surface waters, and prohibiting exposed (uncovered) storage of salt or deicing chemicals.

We recommend that EPA provide additional guidance on how BMPs should be chosen and constructed. EPA’s BMP Performance Extrapolation Tool (PET) covers only some of the pollutants found in stormwater – Total Phosphorus, TSS and Zinc (with Total Nitrogen to be added). Additional guidance is needed on selection of methods for verifying equal to or greater treatment performance for other stormwater-related pollutants (bacteria, oil and grease (hydrocarbons) chloride, and metals). In addition, the permit should allow for use of other resources for demonstrating performance, with the proviso that the applicant verify that any guidelines used that are not consistent with EPA’s BMP PET are more up-to-date or relevant to the specific site-conditions than those incorporated in the BMP PET.

We support requiring permittees to assess local practices and requirements that affect impervious cover (2.3.6.b) and use of green roofs, infiltration BMPs, and water capture/reuse (2.3.6.c), as well as opportunities to modify or retrofit the permittee’s property and infrastructure to reduce impervious area (2.3.6.d). These requirements will remove local barriers to more cost-effective approaches to stormwater management and will promote more proactive management of municipal stormwater. **We recommend that all assessments, recommendations and schedules be included in the SWMP as well as in the annual reports**, or otherwise be made publicly available. In the current draft permit, only the 2.3.6.b report on local street design and parking lot requirements that affect impervious cover is required to be included in the SWMP.

We request that EPA provide training, technical assistance, guidance or model reports and methodologies for these evaluations, including by working with watershed associations and regional planning agencies. The quality and effectiveness of these assessments will be substantially enhanced by strong technical support.

We also support requiring tracking of IA and DCIA (2.3.6.d). Tracking these aggregate results will help permittees and EPA assess whether their programs are in fact resulting in a decrease in DCIA. The adage that “We manage what we measure” applies to this requirement – without such tracking metrics, it would be difficult to assess the overall effectiveness of a permittee’s SWMP.

2.3.7 Good Housekeeping

We support the requirements for enhanced stormwater management and pollution prevention for municipal facilities and operations. Many of the requirements of this section are based on good asset management and operating practices for any municipal function. Where permittees are required by the permit to upgrade their normal infrastructure planning, inspection, maintenance, pollution prevention and other good housekeeping practices, they will experience the improved overall functioning as a side benefit.

We recommend that some of the chloride reduction requirements described in Appendix H be made part of the Good Housekeeping MEPs, rather than being limited to MS4s discharging to waters classified as impaired for chloride. Specifically, the standard Good Housekeeping requirements should include tracking and reporting of types and amounts of salt used for all permittee-owned and maintained surfaces; training for staff and contractors on appropriate application rates and best practices; and preventing exposure of salt storage piles to stormwater.

4.0 Program Evaluation, Record Keeping, and Reporting

See comments on Section 1.10 regarding recommendations for making program evaluations more effective.