CONNECTICUT RIVER WATERSHED COUNCIL
Protecting the Connecticut River Since 1952
15 Bank Row, Greenfield, MA 01301

December 1, 2005

Thelma Murphy
U.S. Environmental Protection Agency
Mail Code CIP
1 Congress St., Suite 1100
Boston, MA 02114-2023

Subject: **Massachusetts Highway Department NPDES Phase II MS4 Notice of Intent**
Public Notice Number: MA-004-06

Dear Ms. Murphy,

On behalf the Connecticut River Watershed Council ("CRWC"), I am submitting comments on the Notice of Intent ("NOI") filed by the Massachusetts Highway Department ("MassHighway") as a regulated small municipal separate storm sewer system ("MS4") under Phase II of the National Pollutant Discharge Elimination System ("NPDES") permitting program for storm water discharges. CRWC is the principal nonprofit environmental advocate for protection, restoration, and sustainable use of the Connecticut River and its watershed. CRWC takes a specific interest in EPA's enforcement of the Clean Water Act ("CWA") requirement that dischargers like MassHighway "reduce the[ir] discharge of pollutants to the maximum extent practicable, including management practices . . . and such other provisions as [EPA] determines appropriate. . ." 33 U.S.C. § 1342(p)(3)(B).

MassHighway maintains several roads within the Springfield CT-MA Urbanized Area, and these are located in the Connecticut River watershed. The entire Connecticut River in Massachusetts is listed as an impaired water body in need of a total maximum daily load ("TMDL") for several different pollutants. The section of the river within the urbanized area has world-class shad fishing and is very popular for striped bass fishing as well. There are three state-owned boat launches on the Connecticut River within the urbanized area, several privately-owned boat and yacht clubs, and the river is widely used for boating, rowing, sailing, paddling, fishing, and swimming. This part of the river is habitat to the federally-endangered shortnose sturgeon, and there are nesting bald eagles in West Springfield near the confluence of the Westfield and Connecticut Rivers. Millions of federal dollars have helped re-introduce Atlantic salmon into the watershed. In the spring of 2005, 131 salmon passed above the Holyoke fish lift in this section of the river. We are particularly interested in improving water quality in the Connecticut River such that it can one day meet Class B water quality standards.

For the reasons set forth below, the CRWC requests a public hearing on the issuance of this permit, consistent with CWA §§ 301 and 402, 33 U.S.C. §§ 1311, 1342. CRWC believes that this NOI is not in keeping with the requirements of the CWA, EPA regulations on NPDES permitting, or the New England Region's General Permit.

1. The purpose of the measurable goals requirements in implementing the "maximum extent practicable" ("MEP") standard was to incorporate into any general permit "interim milestones" that could serve as reference points for the permittee and the public in verifying that progress toward the

standard is being made. *See* U.S. Environmental Protection Agency, Final Rule, National Pollutant Discharge Elimination System—Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges, 64 Fed. Reg. 68722, 68762 (1999). Yet, in the MassHighway NOI, the complete lack of any specificity in the measurable goals assigned to each best management practice (BMP) renders them virtually unenforceable, precisely what EPA said they should not be. *See* Id. ("The submitted BMPs and measurable goals become enforceable according to the terms of the permit."). Moreover, many of MassHighway's measurable goals are to "continue" an existing program as is. This cannot be consistent with the CWA. As EPA explained in justifying this overall approach to storm water dischargers, "[a]t a minimum, the required measurable goals should describe specific actions taken by the permittee to implement each BMP and the frequency and the dates for such actions. Id. at 68763. In proposing to continue the status quo, MassHighway has ignored its obligation under the Clean Water Act to "reduce pollutant discharges to the maximum extent practicable."

For example, MassHighway's approach to the critical issue of water quality effects from road de-icing shows a distinct bias against providing definitive milestones in actually implementing the CWA's maximum extent practicable standard. A recent study has shown that chloride pollution may be pervasive across seasons and large geographic areas of the northeastern United States (Kaushal et al., 2005. Online at http://www.lternet.edu/news/images/spring05/Kaushaletal.pdf) In fact, the study predicts that baseline chloride concentrations will exceed 250 mg/liter in the next century, "thereby becoming toxic to sensitive freshwater life and not potable for human consumption." According to a 2001 article in Stormwater magazine, Massachusetts has the highest rate of annual road-salt loadings in the United States (page 2 of http://www.forester.net/sw_0107_environmental.html). From the face of its NOI, the public has no indication what the MassHighway intends to do about this serious threat to water quality from stormwater. In the NOI, BMP 6A-3, Source Control, the measurable goal is, "Continue to support Deicing and Reduced Salt Areas Programs." BMP 6B-3, Employee Training, the measurable goal is, "Continue Snow and Ice Program." These are not measurable goals and it will be impossible for the public to track any progress toward meeting the substantive standards for this permit.

EPA has been very clear about the nature of measurable goals throughout its implementation of the Phase II program. EPA's guidance on measurable goals (http://cfpub.epa.gov/npdes/stormwater/measurablegoals/part2.cfm) provide, in relevant part, that

> Measurable goals are described in the Phase II rule as BMP design objectives or goals that quantify the progress of program implementation and the performance of your BMPs. They are objective markers or milestones that you (and the permitting authority) will use to track the progress and effectiveness of your BMPs in reducing pollutants to the MEP. EPA recommends that you develop a program with a variety of short- and long-term goals. At a minimum, your measurable goals should contain descriptions of actions you will take to implement each BMP, what you anticipate to be achieved by each goal, and the frequency and dates for such actions to be taken. Also, EPA recommends that you use your BMPs and measurable goals to help establish a baseline against which future progress at reducing pollutants to the MEP can be measured.

Most of MassHighway's goals lack frequencies, dates, and will not help establish baseline conditions. Other MS4s in Massachusetts have set more numerical measurable goals; for example, the City of Easthampton's BMP ID #23 is, "Easthampton will send a minimum of 5 public works employees annually to training seminars sponsored by MassHighway, Bay State Roads, and other relevant agencies or vendors." MassHighway should establish goals that can be used to quantify progress.

CRWC notes that MassHighway has addressed environmental issues related to deicing programs through the Generic Environmental Impact Report ("GEIR"). *See* Storm Water Management Plan ("SWMP") pp. 3-23. We are pleased to see that MassHighway says they have reduced the amount of sand applied to state roadways by more than 50% over the last two years. We have not reviewed the GEIR and have not been able to determine whether the GEIR has been submitted to the Massachusetts Executive Office of Environmental Affairs' MEPA office yet. However, this document does not appear to be available for public viewing, and it is difficult to evaluate its potential effectiveness. It is critical that MassHighway establish BMPs with numerical measurable goals that will help reduce chloride pollution statewide, especially in the Connecticut River watershed.

2. According to Part I(C) of EPA Region I's General Permit for Storm Water Discharges From Small MS4s (http://www.epa.gov/NE/npdes/permits/permit_final_ms4.pdf) ("the Permit"), the permittee must determine whether storm water discharges from any part of the MS4 contribute, either directly or indirectly to a CWA § 303(d) listed water body. Table 6-1 of the SWMP indicates that MassHighway plans to map the drainage discharges and review inventoried discharges for discharges that drain into impaired waterbodies between Winter 2005-06 and Winter 2007-08. That a permittee would be allowed to only *begin* the process of determining contribution to a 303(d) listed water body two years after Phase II has begun is an unacceptable amount of lead time. Furthermore, there is nothing in the SWMP that indicates how MassHighway will reduce pollutants of concern in impaired water bodies. For example, the Connecticut River between the Holyoke dam and the Connecticut state line (which falls within an urbanized area) is impaired and will require a TMDL for suspended solids, among other pollutants. It is not known when EPA or DEP will develop TMDLs for the mainstem of the Connecticut River. But it will not take complex mapping for MassHighway to discover that roads such as I-91 and Route 5 contribute either directly or indirectly to this part of the Connecticut River. It seems evident both from the EPA regulations and from Region I's General Permit that it is incumbent upon MassHighway to institute plans to *reduce* pollutant loadings to impaired water bodies like this one at the time EPA grants the general permit, *i.e.*, in the NOI.

3. EPA has said that the filing of a NOI constitutes the applicant's certification to EPA that the applicant fulfills the conditions of an applicable general permit. *See* National Pollutant Discharge Elimination System (NPDES) Storm Water Program Questions and Answers 4 (Jan. 21, 2004) ("By signing and submitting the NOI, the operator is certifying that . . . the discharge meets all of the conditions specified in the General Permit, and that the operator intends to continue to meet those requirements."). EPA has made very clear that it "strongly encourages partnerships and the watershed approach" as a management framework to protect and restore aquatic ecosystems and protect public health. 40 C.F.R. § 122.30(d). Region I's General Permit is specific to MassHighway in directing that it "should identify interconnections within [its] system" and that "[c]ooperation between interconnected municipal separate storm sewer systems is encouraged." General Permit at 32. MassHighway's drainage systems are very likely to be interconnected with other MS4s. CRWC could find no mention in the NOI or the SWMP of MassHighway's cooperation with the municipalities of the affected area.

With all due respect, CRWC believes MassHighway is missing a unique opportunity to work with the affected communities to map the storm drainage systems in the urbanized areas of the Connecticut River watershed. For example, Hadley's BMP 3-A is "Partnership with MHD" with a measurable goal of "mapping of drainage system of Route 9 corridor, year one." Unfortunately, MassHighway (aka MHD) does not have a similar goal and has not committed to completing its mapping for many years.

4. MassHighway's cover letter to the NOI dated March 28, 2005 lists BMP ID 3B-2 as, "Complete field program mapping discharges from roads within urbanized areas," with a target date of 2008. This differs from the SWMP Table 6-1 dated May 23, 2005, which says, "Map drainage discharges within urbanized areas." We are uncertain which BMP is "current," but CRWC prefers the BMP in the SWMP. It is important that MassHighway identify a target date for completion of mapping, not just completion of the field component of the mapping.

5. Part F of the NOI, Storm Water Management Time Frames, is missing. Although an equivalent table is included in the Storm Water Management Plan (SWMP), why is it missing from the NOI?

6. Many of the programs and documents listed as BMPs and measureable goals in MassHighway's NOI and SWMP are located in separate documents. In the case of the Storm Water Management Handbook, this document is no longer found at the web site cited by MassHighway in their March 28, 2005 cover letter. Repeated attempts to view this file at the new location were unsuccessful (too large a file for one .pdf?).

Thank you for an opportunity to comment on this NOI.

Sincerely,

Andrea F. Donlon

Andrea F. Donlon, M.S.
River Steward

cc: Paul Hogan, MA DEP
Alice Rojko, MA DEP

Charles River Watershed Association

December 1, 2005

Received 12-12-05

Thelma Murphy
Regional Stormwater Coordinator
U.S. Environmental Protection Agency, Region 1
One Congress St.
Boston, MA 02114

Re: Small MS4 Notice of Intent Submissions by the Massachusetts Highway Department

Dear Ms. Murphy:

The Conservation Law Foundation ("CLF") and the Charles River Watershed Association ("CRWA") appreciate the opportunity to comment on the Stormwater Management Plan ("SWMP") and Notice of Intent ("NOI") submitted by the Massachusetts Highway Department ("MassHighway") seeking coverage under the Environmental Protection Agency's ("EPA") National Pollutant Discharge Elimination System ("NPDES") General Permit for Storm Water Discharges from Municipal Separate Storm Sewer Systems ("General Permit" and "Small MS4s," respectively). Our comments are based on MassHighway's February 28, 2005 "NPDES Storm Water Management Plan for MassHighway Owned and Operated Highways,"[1] the attached NOI,[2] and the annual report for Permit Year 2.[3] As a preliminary matter, we would like to request a public hearing for this NOI. Given the size of its holdings, the MassHighway's MS4 is a significant contributor of stormwater pollution to Massachusetts's waters. MassHIghway's NOI and stormwater plan does not adequately control that pollution or meet the requirements of the General Permit and accompanying regulations. Accordingly, a public hearing is warranted.

Founded in 1966, CLF works to solve the problems threatening our natural resources and communities in Massachusetts and throughout New England. CLF works to promote effective regulations and strategies to reduce and minimize the significant impacts of stormwater pollution. CRWA is the nation's leading research and advocacy watershed organization, using science, law, and advocacy to protect and restore the Charles River and its watershed. For the past decade, CRWA has tracked pollution to the river from polluted stormwater and has focused on technical and policy issues related to stormwater management.

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[1] *Id.*

[2] MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, BRP WM 08A NPDES STORMWATER GENERAL PERMIT NOTICE OF INTENT FOR DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4S) (Feb. 2005) (completed by MassHighway) [hereinafter *MassHighway NOI*].

[3] MASSACHUSETTS HIGHWAY DEPARTMENT, NPDES PHASE II SMALL MS4 GENERAL PERMIT MASSHIGHWAY PERMIT YEAR 2 ANNUAL REPORT (April 28, 2005) [hereinafter *Year 2 Annual Report*]..

Charles River Watershed Association, 48 Woerd Avenue, Waltham, 02453
T: (781) 788-0007, F: (781) 788-0057, Website: www.charlesriver.org, Email: crwa@crwa.org

Conservation Law Foundation, 62 Summer Street, Boston, Massachusetts 02110-1016
Phone: 617-350-0990 • Fax: 617-350-4030 • www.clf.org

It is widely acknowledged that stormwater runoff is one of the most significant sources of water pollution in the nation, at times "comparable to, if not greater than, contamination from industrial and sewage sources."[4] Stormwater runoff is the most significant source of pollution to the Charles River watershed, causing severe degradation of water quality which in turn affects fisheries, habitat, aquatic flora, recreational uses, and the aesthetic beauty of the Charles River watershed. Long-term water quality monitoring conducted during or immediately after storm events by CRWA demonstrates that water quality in the river suffers from illicit connections and pollutant-laden stormwater runoff. Carried either over land or through pipes to the river and its tributaries, stormwater causes widespread violations of the Massachusetts Surface Water Quality Standards.

MassHighway manages a vast amount of holdings. By MassHighway's own estimate, it operates 4,132 road miles.[5] These roadways and their attendant facilities have an enormous potential to impact the surrounding water resources. Proper implementation of the Small-MS4 regulations is critical to protecting valuable surface water resources from the proven adverse impacts of stormwater runoff and creating a model for sustainable water use. Properly implemented, the Small-MS4 regulations and the General Permit have the potential to achieve significant gains at the local level that are critical to the achievement of the goals of the CWA.

We note that many of the BMPs proposed in the NOI are commendable. Also, MassHighway has made good efforts to comply with TMDLs. Nevertheless, the current NOI still contains deficiencies, which must be corrected in order to comply with the terms of the General Permit.[6] First, many of its BMPs are inadequate, and there is also a general failure to list measurable goals. As noted by EPA, "[m]easurable goals, which are required for each minimum control measure, are intended to gauge permit compliance and program effectiveness."[7] Second, MassHighway fails to propose a plan that "specifically identif[ies] control measures and BMPs that will collectively control the discharge of pollutants of concern" into waters impaired for those pollutants, as required under Part I.C of the General Permit,[8] or to adequately address priority resource areas as required under Part IX. In fact, it has not yet identified many receiving waters that are impaired, or such resource areas. We are also concerned about MassHighway's failure to commit to incorporating low-impact development ("LID") techniques on a system-wide basis.

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[4] Environmental Defense Center v. EPA, 344 F.3d 832, 840 (9th Cir. 2003) [hereinafter *EDC*] (citing Richard G. Cohn-Lee and Diane M. Cameron, *Urban Stormwater Runoff Contamination of the Chesapeake Bay: Sources and Mitigation*, 14 ENVTL. PROF. 10 (1992)).

[5] *See* MASSACHUSETTS HIGHWAY DEPARTMENT, NPDES STORM WATER MANAGEMENT PLAN FOR MASSHIGHWAY OWNED AND OPERATED HIGHWAYS 1-1 (February 28, 2005) [hereinafter *MassHighway SWMP*].

[6] ENVIRONMENTAL PROTECTION AGENCY, NEW ENGLAND, NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (April 18, 2003) [hereinafter *General Permit*].

[7] *See* ENVIRONMENTAL PROTECTION AGENCY, STORMWATER PHASE II COMPLIANCE ASSISTANCE GUIDE (March 2000) [hereinafter *Stormwater Compliance Assistance Guide*].

[8] *General Permit*, Part I.C.

I. EPA Must Conduct a Thorough and Substantive Review of All NOIs to Ensure Compliance with the Clean Water Act.

In *Environmental Defense Center v. Browner* ("*EDC*"), the U.S. Court of Appeals for the Ninth Circuit recently addressed the type of review required for NOIs submitted by Small MS4s seeking coverage under a general permit.[9] Certain petitioners in *EDC* challenged the Small-MS4 regulations on the grounds that they failed to require EPA to review the substance of NOI submissions to ensure compliance with the CWA, and that absent such a review the Small-MS4 program would amount to little more than a "paper tiger." In addressing this critical issue, the *EDC* Court held that the CWA imposes certain substantive requirements that must, consistent with the clear intent of Congress, be satisfied by Small MS4s seeking coverage under a general permit. Specifically, the Court found "the plain language of § 402(p) of the CWA, 33 U.S.C. § 1342(p), expresses unambiguously Congress's intent that EPA issue no permits to discharge from municipal storm sewers unless those permits 'require controls to reduce the discharge of pollutants to the maximum extent practicable.'"[10]

In light of the unambiguous requirements of the CWA, the *EDC* Court concluded in no uncertain terms that EPA must review the substance of NOIs to ensure compliance. As the Court explained:

> According to the Phase II Rule, the operator of a small MS4 has complied with the requirement of reducing discharges to the "maximum extent practicable" when it implements its stormwater management program, *i.e.*, when it implements its Minimum Measures. . . . Nothing in the Phase II regulations requires that NPDES permitting authorities review these Minimum Measures to ensure that the measures that any given operator of a small MS4 has decided to undertake will *in fact* reduce discharges to the maximum extent practicable . . . Therefore, under the Phase II Rule, nothing prevents the operator of a small MS4 from misunderstanding or misrepresenting its own stormwater situation and proposing a set of minimum measures for itself that would reduce discharges by far less than the maximum extent practicable.
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> In fact, under the Phase II Rule, in order to receive the protection of a general permit, the operator of a small MS4 needs to do nothing more than decide for itself what reduction in discharges would be the maximum extent practical reduction. No one will review that operator's decision to make sure that it was reasonable, or even good faith. Therefore, as the Phase II Rule stands, EPA would allow permits to issue that would do less than *require* controls to reduce the discharge of pollutants to the maximum extent practicable. . . . We therefore must reject this aspect of the Phase II Rule as contrary to the clear intent of Congress.[11]

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[9] 344 F.3d 832 (9th Cir. 2003).

[10] *Id.* at 854. In addition to the "maximum extent practicable" requirement, the CWA and its regulations contain other important mandates, including the requirements (1) that discharges not cause or contribute to water quality violations, *see* discussion in Section II, below, and (2) that the Phase II stormwater regulations (of which the Small-MS4 regulations are a part) constitute a comprehensive program designed "to protect water quality." *Id.* at 844 (*citing* 33 U.S.C. § 1342(p)(6)).

[11] *Id.* at 855 (citations omitted).

As a result of the *EDC* decision (which the U.S. Supreme Court declined to review on *certiorari*), EPA must, as a matter of law, engage in a meaningful review of the NOI submissions in order to ascertain compliance with the CWA and applicable standards. Pursuant to *EDC,* EPA must substantively review each NOI (after taking public comments into account) to ensure that it fully complies with the CWA and applicable standards and regulations, including the requirements that the SWMP include: controls to reduce the discharge of pollutants to the maximum extent practicable; controls that ensure that discharges will not cause in-stream exceedances of water quality standards; and the specific identification of control measures, BMPs and measurable goals that will control pollutants of concern.

II. EPA Must Determine Whether MassHighway Has Met Its Burden of Demonstrating that Its Discharges Will Not Cause or Contribute to State Water Quality Violations and that Its Stormwater Management Program will Control Pollutants of Concern and Ensure No In-Stream Exceedances of Water Quality Standards.

A central tenet of the CWA, as well as the Small-MS4 program, is the requirement that NPDES permits ensure compliance with water quality standards ("WQS"). This requirement is reiterated in the CWA, its regulations, case law, and the Small MS4 General Permit.

In enacting the CWA, one of Congress' principal goals was to "recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, [and] to plan the development and use (including restoration, preservation, and enhancement) of land and water resources."[12] In accordance with this goal, the CWA and its regulations require that all provisions in an NPDES permit must comply with state WQS.[13] Pursuant to Section 401 of the CWA, EPA has an independent obligation to ensure such compliance prior to issuing the permit.[14] The requirement that permits comply with state WQS allows no exceptions for cost or technological feasibility.[15] The requirement that the permit must comply with WQS is reiterated in regulations promulgated pursuant to the CWA,[16] including the Phase II stormwater regulations pertaining to Small-MS4s, which explicitly state that an NPDES MS4 permit:

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[12] 33 U.S.C. § 1251(b) (2000).

[13] *See* 40 C.F.R § 122.4(d) (2004) ("No permit may be issued: . . . (d) When the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States"); 40 C.F.R § 122.44(d)(1) ("[E]ach NPDES permit shall include conditions meeting the following requirements when applicable: . . . (d) any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under sections 301, 304, 306, 307, 318, and 404 of CWA necessary to: . . . (1) [a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality . . . ."); 40 C.F.R § 122.44 (d)(4). *See also* 33 U.S.C. § 1370 (2000) (allowing state WQS to be more stringent than federal technology-based standards).

[14] 33 U.S.C. § 1341(a) (2000) (requiring compliance with WQS in both the state where the discharge originates and in any state affected by the discharge).

[15] *In re* City of Fayetteville, Ark., 2 E.A.D. 594, 600 – 01 (CJO 1988) (interpreting Section 301(b)(1)(C) to require "unequivocal compliance with applicable water quality standards," and prohibiting "exceptions for cost or technological feasibility"), *aff'd sub nom.* Arkansas v. Oklahoma, 503 U.S. 91 (1992).

[16] *See supra* note 13.

> will require *at a minimum* that [an operator of a Small MS4] develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from [its] MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act.[17]

Consistent with the above requirements, the General Permit makes clear, as a threshold matter, that "[d]ischarges that would cause or contribute to instream exceedance of water quality standards" are not eligible for coverage.[18] The General Permit further mandates that stormwater discharge programs "must include a description of the BMPs that will be used to *ensure* that [exceedances of instream water quality standards] will not occur."[19] Part I.C of the General Permit, entitled "Discharges to Water Quality Impaired Waters," further states:

1. The permittee must determine whether storm water discharges from any part of the MS4 contribute, either directly or indirectly, to a 303(d) listed water body.

2. The storm water management program must include a section describing how the program will control the discharge of the pollutants of concern and *ensure* that the discharges will not cause an instream exceedance of the water quality standards. This discussion must *specifically identify* control measures and BMPs that will collectively control the discharge of the pollutant(s) of concern. Pollutant(s) of concern refer to the pollutant identified as causing the impairment.[20]

EPA's Response to Comments reiterates the importance of specifically addressing discharges to impaired waters: "Part I.C.2 is intended to address the situation where waters have been identified as impaired by a pollutant which the MS4 will discharge. In such situations, *more aggressive* storm water strategies would likely be necessary than in the situation where the waters are not impaired."[21] In the event that stormwater discharges authorized under the General Permit are shown to have reasonable potential to cause or contribute to a violation of a water

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[17] 40 C.F.R. § 122.34(a) (2004) (emphasis added).
[18] *General Permit*, Part I.B.2 (k)
[19] *Id.* (emphasis added).
[20] *Id.* at Part I.C (emphasis added). In addressing pollutants of concern, NOIs must address pollutants that secondarily cause or contribute to impairments. *See* EPA's Response to Comments on Draft Small-MS4 General Permit 6 [hereinafter *EPA Response*], stating:

> If there is an impaired water, the pollutant causing the impairment is usually listed. If the permittee discharges the pollutant which causes the impairment, the storm water management program must include best management practices (BMPs) designed to address such pollutant. In situations where a specific pollutant isn't listed, but rather an effect such as "low DO", is listed, the permittee should attempt to determine the secondary cause which produces the effect listed as the impairment. The permittee should attempt to address the secondary cause in the storm water management program, if possible.

It should be noted that CLF disagrees with EPA's use of the word "attempt" in the third and fourth sentences of the above-quoted paragraph. Owners and operators of Small-MS4s have a mandatory duty to *ensure* that their discharges will not cause an instream exceedance and, therefore, in "addressing" pollutants of concern must *actually implement* actions necessary to prevent discharges from causing or contributing to water quality impairments.
[21] *See EPA Response*, at 6.

quality standard, the permittee may be required to operate under an individual NPDES permit or face permit modification.[22]

Similarly, Part V of the General Permit, which provides conditions specific to Transportation MS4s, reiterates that the permittee must develop an enforceable program that satisfies both federal and state WQS.[23] Further, Part IX of the General Permit[24] specifically requires that the permittee comply with state WQS, including 314 CMR 3.00 and 4.00.[25] Part IX additionally directs that, in Massachusetts, the permittee comply with state water quality statutes, regulations, and policies.[26] Finally, the General Permit requires that the permittee identify discharges to impaired waters and other resource areas as a priority and indicate in its program how storm water controls will be implemented.[27]

III. The NOIs Submitted by MassHighway Fail to Properly Address Whether Its MS4 Discharges are Eligible for Coverage Under the General Permit.

A. The General Permit Does Not Authorize Discharges that Cause or Contribute to Instream Exceedance of Water Quality Standards.

The General Permit explicitly states that it does not authorize "[d]ischarges that would cause or contribute to instream exceedance of water quality standards."[28] However, the NOI submitted by MassHighway fail to address this issue. Indeed, given that many of the receiving waters for the MassHighway roadways and holdings are impaired for pollutants associated with stormwater, it appears likely that stormwater discharges do indeed cause or contribute to exceedances of WQS.[29] Accordingly, MassHighway must address this issue in more detail, including identifying those discharges that cause an instream exceedance of water quality standards and "a description of the BMPs that will be used to ensure that this will not occur."[30]

B. The General Permit Does Not Authorize Discharges that Do Not Comply with the Terms of the Endangered Species Act.

According to the terms of Part I.B.2(e) of the General Permit, the applicant must comply with several requirements with regard to impacts of discharges on endangered or threatened species.[31] As part of these requirements, the applicant must demonstrate its eligibility under the terms of the General Permit's endangered species provisions "prior to the submission of the

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[22] *General Permit*, Part VIII (emphasis added).
[23] *Id.*, Part V.A.
[24] *Id.*, Part IX. Part IX is entitled "Massachusetts Water Quality Certification Requirements."
[25] *Id.*
[26] *Id.*
[27] *Id.*, Part IX.A, D.
[28] *Id.*, Part I.B.2(k).
[29] *MassHighway SWMP*, at Fig. 4-3.
[30] *General Permit*, Part I.B.2(k).
[31] *See id.*, Part I.B.2(3)(ii).

NOI."[32] Based on a review of MassHighway's SWMP and NOI, it appears that that MassHighway has not demonstrated its eligibility under Part I.B.2(e).

In order to demonstrate eligibility, an applicant must meet one of five criteria for the entire term of the permit. Under Criterion A, "[n]o endangered or threatened species or critical habitat are in proximity to the MS4 or the point where authorized discharges reach the receiving waters."[33] Based on a review of MassHighway's SWMP, this criterion does not appear to have been met.[34] Under Criterion B, the applicant must have engaged in and concluded consultation with a federal wildlife agency, and the outcome of this consultation reveals either a "no jeopardy" opinion or a "not likely to adversely affect" concurrence.[35] MassHighway offers no evidence that such a consultation has occurred. Under Criterion C, the activities are authorized under Section 10 of the Endangered Species Act ("ESA").[36] Again, MassHighway offers no evidence to this effect. Under Criterion E, the impacts on endangered species are already addressed in another operator's certification.[37] MassHighway does not offer any evidence on this criterion either.

Thus, the only criterion that could apply to MassHighway's situation is Criterion D, which requires that:

> Using best judgment and knowledge, the effects of the storm water discharges, allowable non-storm water discharges, and discharge related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by the permittee that there is no reason to believe that the storm water discharges, allowable non-storm water discharges, and discharge related activities will jeopardize the continued existence of any species or result in the adverse modification or destruction of critical habitat.[38]

MassHighway does not appear to have met the above requirements. Under MassHighway's "Endangered Species Habitat Certification" heading,[39] MassHighway notes that it is "not currently aware of any discharges impacting ...endangered species habitat."[40] This is insufficient. MassHighway should document the efforts it has made to make that determination, and is responsible for determining its impacts on threatened species as well. Accordingly, MassHighway's discharges that may impact endangered or threatened species are not eligible for coverage under the General Permit.

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[32] *Id.*
[33] *Id.*
[34] *MassHighway SWMP*, at Fig. 4-1.
[35] *General Permit*, Part I.B.2(e).
[36] *Id.*, Part I.B.2(e)(iii).
[37] *Id.*
[38] *Id.*
[39] *MassHighway SWMP*, at 4-7 – 4-8.
[40] *Id.* at 4-8.

IV. The NOIs Submitted by the MassHighway Fail to Provide Sufficient Information to Meet the Requirements Set Forth by the General Permit, and State and Federal Stormwater Regulations.

A. MassHighway's Roadways Potentially Discharge into Impaired Waterbodies and Therefore It Must Treat these Waterbodies as a Priority and Specifically Identify Control Measures that will Control Pollutants of Concern.

MassHighway manages a large number of roads that it has determined to potentially discharge into waterbodies listed as impaired by the Commonwealth of Massachusetts.[41] Accordingly, "more aggressive storm water strategies" are merited.[42] Section IX of the General Permit requires that permittees identify discharges to both public water supplies and impaired segments as well as other resource areas as a priority, and specifically indicate how stormwater controls will be implemented in these areas. Nevertheless, MassHighway fails to list any receiving waters, let alone identify those that are impaired, stating that "outfalls will be inventoried by the end of the permit term."[43] While the 2005 annual report lists certain impaired waters that have a TMDL, it does not even cite impaired waters, let alone provide a plan showing how MassHighway will specifically control the discharge of the pollutants of concern and ensure that the discharges will not cause an instream exceedance of the water quality standards, as required by Part I.C of the General Permit.[44] MassHighway should first immediately identify all discharges into impaired waters, and then amend its plan to provide for a specific schedule that commits to taking specific actions to control these discharges. Given that so many of MassHighway's discharges are into impaired water bodies, MassHighway needs to address this issue without further delay.

B. Part V of the General Permit Expressly Applies to All Transportation MS4s, and Not Only Those in Urbanized Areas.

We are pleased to see that MassHighway intends to "address storm water on a statewide basis instead of just in the areas currently designated as urbanized."[45] The reason given by MassHighway is the rapid urbanization of the Commonwealth, but we believe that this statewide approach is required under the General Permit in any event.

Part V of the General Permit, entitled "Transportation MS4 – Storm Water Management Program,"[46] states specifically that it applies to "state and county agencies who maintain roadways, highways, and other thoroughfares," including the "Massachusetts Highway Department."[47] Nowhere in Part V does the General Permit indicate that a "Transportation MS4" is subject to regulation only within urbanized areas. Furthermore, the "eligibility criteria" for coverage under the Permit, which are set out in Part I, only require that "a *municipality* [not a

[41] *MassHighway SWMP*, at Fig. 4-3.
[42] *EPA Response*, at 6.
[43] *MassHighway NOI*, at 2.
[44] *General Permit*, Part I.C.2.
[45] *MassHighway SWMP*, at 2-5.
[46] *General Permit*, Part V.
[47] *Id.*

permittee] is located fully or partially in an urbanized area."[48] Clearly, MassHighway is not a municipality, but rather a state entity that maintains Transportation MS4s that do not stop and start at the boundaries of urbanized areas. Instead, the General Permit logically regulates a Transportation MS4 as it operates in the real world – as an interconnected system whose stormwater impacts are not necessarily less in a non-urbanized area. Thus, it is clear that the entire MassHighway system, and not merely those sections within urbanized areas, is subject to the terms of the General Permit.

V. MassHighway Should Incorporate Principles of Low-Impact Development Throughout Its Stormwater Management Plan and NOI.

As Massachusetts is entering an era of increasing pressure on its water resources, LID techniques should clearly be the stormwater management tool of choice. LID techniques reduce runoff at the source through on-site filtration controls that mimic predevelopment hydrology by decreasing impervious surface areas and promoting infiltration and storage of runoff on site, as opposed to conveying and treating stormwater at large, expensive end-of-pipe facilities, which ultimately leads to the depletion of water supply. The widespread adoption of LID techniques by MassHighway is important both from an environmental perspective, given MassHighway's extensive holdings, and from an educational perspective, as incorporation of LID techniques by MassHighway would serve to showcase these techniques to the many people using its roadways and properties. Further, EPA has recommended application of LID principles and techniques to the management of stormwater and polluted runoff, and has aggregated a large quantity of information on LID.[49] Accordingly, we feel that an aggressive strategy to incorporate LID techniques throughout MassHighway's stormwater management system would be the best way to promote these techniques.

Areas in which MassHighway could incorporate LID include MCMs 1 (Public Education and Outreach), 4 (Construction Site Runoff Control), 5 (Post-Construction Runoff Control), and 6 (Pollution Prevention/Good Housekeeping), which would all benefit from the application of LID techniques. For MCM 1, such techniques could include public education programs and posts on the MassHighway website. As the Massachusetts Executive Office of Environmental Affairs already has an informative website on LID, the MassHighway website simply could include a link to the EOEA site.[50] For MCMs 4 and 5, MassHighway could work to incorporate more LID practices into construction and post-construction controls. For MCM 6, techniques could include plans and procedures to apply LID development techniques to MassHighway facilities such as roadways and rest areas. For example, MassHighway could commit to replacing certain portions of its impervious paving areas with porous paving, or to adding vegetated buffers in order to reduce surface runoff to its water bodies. Additionally, before spending money to repair pipes, MassHighway should consider LID alternatives to such repairs. As MassHighway owns and/or controls sizable areas of open space around its roadways, these

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[48] *Id.*, Part I.B.1(c).
[49] *See* Environmental Protection Agency, Low-Impact Development Page, *at* http://www.epa.gov/owow/nps/lid/ (last visited November 15, 2005).
[50] Massachusetts Executive Office of Environmental Affairs, Low-Impact Development, *at* http://www.mass.gov/envir/lid/default.htm (last visited November 15, 2005).

areas could be used much more effectively to remove pollutants before stormwater is discharged into wetland and water resource areas.

VI. MassHighway Must Amend Its Best Management Practices and Measurable Goals in Order to Comply with the Six Required Minimum Control Measures.

A. The NOIs Submitted by MassHighway Must be Amended to Include Appropriate BMPs, Measurable Goals, and, Where Appropriate, Interim Milestones.

Phase II requires small MS4 operators to identify BMPs for each of the six required control measures, measurable goals for each BMP, and a schedule for expected implementation, including where appropriate, the months and years in which operators will undertake required actions, and "interim milestones and the frequency of the action."[51] 314 CMR 3.02 defines BMPs as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the Commonwealth. BMPs include treatment requirements, operating procedures, structures, devices, and/or practices to control plant site runoff, spillage, or leaks, sludge or waste disposal, or drainage from raw material storage." EPA states that "[m]easurable goals, which are required for each minimum control measure, are intended to gauge permit compliance and program effectiveness."[52] EPA provides a complete guidance for defining and selecting measurable goals on its website.[53] EPA

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[51] See 40 C.F.R. §122.34(d)(1), which states:

> In your permit application (either a notice of intent for coverage under a general permit or an individual permit application), you must identify and submit to your NPDES permitting authority the following information . . . (i) The best management practices (BMPs) that you or another entity will implement for each of the storm water minimum control measures at paragraphs (b)(1) through (b)(6) of this section; [and], (ii) The measurable goals for each of the BMPs including, as appropriate, the months and years in which you will undertake required actions, including interim milestones and the frequency of the action.

[52] *See Stormwater Compliance Assistance Guide.*

[53] Environmental Protection Agency, Measurable Goals Guidance for Phase II Small MS4s, *at* http://cfpub.epa.gov/npdes/stormwater/measurablegoals/index.cfm (last visited November 29, 2005). According to EPA's guidance:

> Measurable goals are described in the Phase II rule as BMP design objectives or goals that quantify the progress of program implementation and the performance of your BMPs. They are objective markers or milestones that you (and the permitting authority) will use to track the progress and effectiveness of your BMPs in reducing pollutants to the MEP. EPA recommends that you develop a program with a variety of short- and long-term goals. At a minimum, your measurable goals should contain descriptions of actions you will take to implement each BMP, what you anticipate to be achieved by each goal, and the frequency and dates for such actions to be taken. Also, EPA recommends that you use your BMPs and measurable goals to help establish a baseline against which future progress at reducing pollutants to the MEP can be measured. For example, information on current water quality conditions, numbers of BMPs already implemented, and the public's current knowledge/awareness of storm water management would be useful in setting this baseline.

Id.

has provided "appropriate measurable goals" as guidance for each of the six required control measures in their "Stormwater Phase II Compliance Assistance Guide" (March 2000). EPA recommends that the permittee include specific information about when each element of each individual control measure will be implemented, and what specific program or compliance goals are anticipated. For example, the EPA provides four "Appropriate Measurable Goals" for complying with the requirements of MCM 1 ("Public Education"). Two of the four identify specific compliance rate and program performance percentages.[54] EPA makes similar recommendations for the other five minimum control measures.[55]

B. Minimum Control Measure 1: Public Education and Outreach

Under MCM 1, the main deficiency is a lack of measurable goals. The goals that MassHighway has listed are definite, but they lack any sort of timeline to track their success. For example, the goal for BMP 1D-2[56] is simply "Conduct workshop for MassHighway personnel." In order to comply with the terms of the General Permit, MassHighway must include timeframes in its goals. An acceptable goal, as discussed *supra* in Part VI.A of these comments, would be to "Do X by March, 2006," or "Provide Y three times a year."

In addition to this addressing this deficiency, MassHighway would do well to include more of a public education component under MCM 1. The webpage is a good beginning, but some sort of interactive program or mailing would do more to educate and reach out to the public. An area in which MassHighway should be commended is in the variety of educational opportunities for highway and municipal professionals.[57] Finally, we note that MassHighway's "Municipal/MH Drainage Tie-in Review"[58] is a positive development.

C. Minimum Control Measure 2: Public Participation/Involvement

Under MCM 2, MassHighway's proposals appear largely to have met the requirements of the General Permit. One area of this MCM that is troubling, however, is in the area of notification of the public and solicitation of public comment. In BMP 2A, MassHighway provides for such notification and solicitation for projects subject to certain statutory schemes.[59] MassHighway indicates that "[a]lmost all" of its projects are subject to at least one of the listed

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[54] For example, "certain percentage of restaurants no longer dumping grease" or "certain percentage reduction in litter or animal waste detected in discharges." *See Stormwater Compliance Assistance Guide*, at 4-22.
[55] For example, under MCM 3 ("Illicit Discharge Detection and Elimination"), appropriate measurable goals for Year 2 include: ordinance in place; training for public employees completed; a certain percentage of sources of illicit discharges determined. Appropriate measurable goals for Year 3 include: A certain percentage of: illicit discharges detected; illicit discharges eliminated; and households participating in quarterly household hazardous waste special collection days. *See Stormwater Compliance Assistance Guide*, at 4-29.
[56] *MassHighway NOI*, at 3.
[57] *MassHighway SWMP*, at 3-2 – 3-3.
[58] *Id.* at 3-3.
[59] *Id.* at 3-4.

regulations, but it does not indicate which and how many projects are not.[60] Our concern under this MCM is that MassHighway provide for public participation for those other projects.

D. Minimum Control Measure 3: Illicit Discharge Detection and Elimination

The timeline set forth under MCM 3 is inadequate. In BMP 3B-2, MassHighway proposes to "[c]omplete field program mapping of drainage outfalls within urbanized areas and develop maps" by March 2008.[61] Under this schedule, MassHighway will not be able to implement its program by the end of the permit term, ore ensure com;oiance with water quality standards.

Another concern arises under BMP 3D.[62] In that BMP, MassHighway proposes an Illicit Detection Review process under which it will "[r]eview twenty discharges each year for potential illicit connections."[63] We believe that this number is far too small. Based on MassHighway's own account, it is clear that this represents a very small percentage of its drains. Under the heading "Current MassHighway Programs," and the subheading "A. Lower Charles River Discharge Inventory and Illicit Connection Review," MassHighway notes that, between 1997 and 2000, it undertook a detailed mapping and inspection of 299 storm drains on the lower Charles River Watershed.[64] Of these 299 storm drains, the MassHighway crews observed dry weather flows at twenty-seven discharges, or 9% of the total number of storm drains.[65] Using these numbers, the proposed twenty discharges per year in BMP 3D represent approximately 7% of storm drains on the Lower Charles, and a much smaller, indeterminate percentage of MassHighway's total number of storm drains on all its properties. Accordingly, we believe that MassHighway should review many more discharges annually in order to cover a larger percentage of its total holdings.

MassHighway additionally neglects to comply with two other areas of the General Permit. First, the General Permit requires that an illicit discharge plan must contain "[p]rocedures to identify priority areas.... [including] areas suspected of having illicit discharges, ... and areas of high recreational value or high environmental value such as beached and drinking water sources."[66] MassHighway's current illicit discharge plan does not identify any such areas as a priority. Secondly, the General Permit requires that the permittee "must inform users of the system and the general public of hazards associated with illegal discharges and improper waste disposal."[67] MassHighway's SWMP and NOI have presented no such effort to inform users and the general public.

Finally, we note Roger Frymire's November 29, 2005 comments on MassHighway's SWMP and NOI.[68] In those comments, Mr. Frymire noted the problem of "significant bacterial

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[60] *Id.*
[61] *Id.* at 3-11.
[62] *Id.* at 3-10 – 3-11.
[63] *Id.* at 3-11.
[64] *Id.* at 3-7.
[65] *Id.*
[66] General Permit, Part V.B.3(c).
[67] *Id.*, Part V.B.3(d).
[68] *See* E-mail from Roger Frymire to Ann Herrick, Environmental Protection Agency (Nov. 29, 2005).

concentrations in outfalls from Routes 1 and 145 in Revere."[69] We echo this concern, and urge MassHighway to address this problem without further delay.

E. Minimum Control Measure 4: Construction Site Runoff Control

MassHighway's current regulatory programs and proposed BMPs seem to meet many of the requirements of the General Permit for construction site stormwater runoff control. We note two areas of concern with MassHighway's current proposal, however. First, MassHighway neglects to include any reference to public information and comment in the development of construction projects. Per the General Permit, the program for construction site stormwater runoff control must include "[p]rocedures for receipt and consideration of information submitted by the public... includ[ing] opportunities for public comment during the project development process."[70] In order to comply with the General Permit, MassHighway must provide for the receipt and consideration of such public comment. Secondly, in setting out the regulatory mechanisms of its construction site stormwater runoff control program, MassHighway tends more toward guidance and informational approaches rather than the requirements, enforcement, and sanctions required by the General Permit.[71]

F. Minimum Control Measure 5: Post-Construction Runoff Control

We are particularly interested to hear about the development of the BMP Maintenance Manual (BMP 5F-1), and the Southeast Expressway BMP Effectiveness Project (no BMP number listed).[72] We note, however, two concerns. First, MassHighway has not indicated any timeline for the development of the BMP Maintenance Manual in the NOI,[73] the SWMP,[74] or the most recent annual report.[75] As noted above, MassHighway must include measurable goals for all of its BMPs, and these measurable goals must include some reference to a timeline. Our second concern is that MassHighway has neglected to include any reference to an enforceable regulatory mechanism. Though MassHighway provides ample guidance and information in its BMPs, it neglects the General Permit's requirement that the program include "a regulatory mechanism to address post construction runoff from new development and redevelopment."[76] MassHighway must amend its SWMP and NOI to include such a mechanism. As stated above, this MCM provides an important opportunity to incorporate LID techniques, and these should be required where appropriate.

G. Minimum Control Measure 6: Pollution Prevention/Good Housekeeping

Under MCM 6, MassHighway has listed a large amount of BMPs, but these BMPs do not manage to fulfill all of the General Permits requirements. First, at the outset, we note that some of the programs that MassHighway has listed are not directly applicable to the goals of pollution

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[69] *Id.*
[70] *Id.*, Part V.B.4(f).
[71] *Id.*, Part V.B.4(a), (b).
[72] *See MassHighway SWMP*, at 3-18, 3-21.
[73] *MassHighway NOI*, at 8.
[74] *MassHighway SWMP*, at 3-21.
[75] *Year 2 Annual Report*, at 14.
[76] General Permit, Part V.B.5(a).

prevention and good housekeeping.[77] Programs should directly address the goals of each particular MCM and should not be listed simply to demonstrate a greater quantity of programs.

Another area of concern under MCM 6 is with regard to the General Permit's maintenance requirements. First, MassHighway does not list any BMPs for the General Permit requirement of "maintenance activities for ... rest areas along interstates; weigh stations; material storage yards; [and] new construction and land disturbance."[78] In order to comply with the terms of the General Permit, MassHighway must propose BMPs for those requirements. With regard to catch basin inspection and maintenance, MassHighway mentions throughout the SWMP and NOI that it regularly inspects and cleans its catch basins, but it gives no indication as to the frequency or details of this program. Accordingly, MassHighway should provide more details regarding its program for inspection and cleaning of catch basins, including individual BMPs and measurable goals.

Relatedly, it has come to our attention that, for the purpose of preventing the accumulation of leaf debris in catch basins, MassHighway recently cut down an undeveloped, tree-covered parcel along Route 9 in Brookline. Though this would have the immediate impact of preventing the accumulation of leaf debris, this cutting also has the unfortunate long-term impact of increased erosion and more stormwater runoff. As we noted above, applications of LID techniques can be as effective as – if not more effective than – traditional techniques in the prevention of stormwater runoff. For this reason, we would discourage MassHighway from similar actions in the future.

With regard to snow storage areas (also known as snow dumps), MassHighway does not indicate whether water quality protection designs are in place to prevent untreated snowmelt from entering waterbodies. Though MassHighway notes that handbooks have been developed for each of its 139 material storage yards,[79] MassHighway does not state whether these handbooks implement such controls. If such controls are in place in the handbooks, we encourage MassHighway to list these controls in its SWMP and NOI as BMPs with measurable goals. If such controls do not exist, MassHighway should develop and implement them. In addition, MassHighway must propose a BMP for managing stormwater runoff from its vehicle washing facilities.

For its street sweeping BMP, MassHighway notes that it sweeps "roadways on an annual basis after winter deicing applications."[80] We believe that annual street sweeping is far too infrequent, and we urge MassHighway to sweep its roadways more regularly, particularly with a priority on those roadways with outfalls to impaired waters, public drinking water supplies, or public recreation waters.

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[77] For example, under the heading of "Source Control," MassHighway has listed the "Highway Emergency Locator Program (HELP)." *MassHighway SWMP*, at 3-24. Though HELP may be a valuable program, MassHighway does not indicate how it will meet the goals of pollution prevention and good housekeeping.
[78] *General Permit*, Part V.B.6(b).
[79] *MassHighway SWMP*, at 3-27.
[80] *Id.* at 3-26.

Finally, recent research has indicated that, in the Northeast, chloride concentrations are increasing at a rate that threatens freshwater in the region.[81] Indeed, a 2001 article in *Stormwater* magazine ranked Massachusetts as having the highest annual road salt loadings in the United States. Though we note that MassHighway states that it is undertaking BMPs to reduce the amount of road salt runoff,[82] we encourage MassHighway to further its efforts to prevent such runoff.

VII. Conclusion

CLF and CRWA appreciate the opportunity to comment on MassHighway's NOIs. We welcome the opportunity to work with EPA and MassHighway to ensure that this program achieves its full potential in protecting the state's valuable water resources and fulfilling the requirements and ultimate goals of the CWA.

Sincerely,

Carol Lee Rawn (dga)

Carol Lee Rawn
Conservation Law Foundation

Kate Bowditch (dga)

Kate Bowditch
Charles River Watershed Association

cc: John Cogliano, MHD
Henry Barbaro, MHD
David Gray, EPA
David Webster, EPA
Linda Murphy, EPA

[81] Susay S. Kaushal et al., *Increased salinization of fresh water in the northeastern United States*, 102 ECOLOGY __ (2005) (forthcoming), *available at* http://www.pnas.org/cgi/content/abstract/102/38/13517.
[82] *See MassHighway SWMP*, at 3-23 – 3-24 ("Deicing Programs and Reduced Salt Areas").

Charles River Watershed Association

December 1, 2005

Thelma Murphy
Regional Stormwater Coordinator
U.S. Environmental Protection Agency, Region 1
One Congress St.
Boston, MA 02114

Re: Small MS4 Notice of Intent Submissions by the Massachusetts Turnpike Authority

Dear Ms. Murphy:

The Conservation Law Foundation ("CLF") and the Charles River Watershed Association ("CRWA") appreciate the opportunity to comment on the Stormwater Management Plan ("SWMP") and Notice of Intent ("NOI") submitted by the Massachusetts Turnpike Authority ("MTA") seeking coverage under the Environmental Protection Agency's ("EPA") National Pollutant Discharge Elimination System ("NPDES") General Permit for Storm Water Discharges from Municipal Separate Storm Sewer Systems ("General Permit" and "Small MS4s," respectively). As a preliminary matter, we would like to request a public hearing for this NOI. Given the size of its holdings, the MTA's MS4 is a significant contributor of stormwater pollution to Massachusetts's waters. MTA's NOI and stormwater plan is inadequate to control that pollution or meet the requirements of the General Permit and accompanying regulations. Accordingly, a public hearing is warranted.

Founded in 1966, CLF works to solve the problems threatening our natural resources and communities in Massachusetts and throughout New England. CLF works to promote effective regulations and strategies to reduce and minimize the significant impacts of stormwater pollution. CRWA is the nation's leading research and advocacy watershed organization, using science, law, and advocacy to protect and restore the Charles River and its watershed. For the past decade, CRWA has tracked pollution to the river from polluted stormwater and has focused on technical and policy issues related to stormwater management.

It is widely acknowledged that stormwater runoff is one of the most significant sources of water pollution in the nation, at times "comparable to, if not greater than, contamination from industrial and sewage sources."[1] Stormwater runoff is the most significant source of pollution to the Charles River watershed, causing severe degradation of water quality which in turn affects

[1] Environmental Defense Center v. EPA, 344 F.3d 832, 840 (9th Cir. 2003) [hereinafter *EDC*] (citing Richard G. Cohn-Lee and Diane M. Cameron, *Urban Stormwater Runoff Contamination of the Chesapeake Bay: Sources and Mitigation*, 14 ENVTL. PROF. 10 (1992)).

Charles River Watershed Association, 48 Woerd Avenue, Waltham, 02453
T: (781) 788-0007, F: (781) 788-0057, Website: www.charlesriver.org, Email: crwa@crwa.org

Conservation Law Foundation, 62 Summer Street, Boston, Massachusetts 02110-1016
Phone: 617-350-0990 • Fax: 617-350-4030 • www.clf.org

fisheries, habitat, aquatic flora, recreational uses, and the aesthetic beauty of the Charles River watershed. Long-term water quality monitoring conducted during or immediately after storm events by CRWA demonstrates that water quality in the river suffers from illicit connections and pollutant-laden stormwater runoff. Carried either over land or through pipes to the river and its tributaries, stormwater causes widespread violations of the Massachusetts Surface Water Quality Standards.

MTA manages hundreds of miles of roads, numerous tunnels and multiple interchange facilities, service areas and storm water pump stations.[2] These roadways and their attendant facilities have an enormous potential to impact the surrounding water resources. Proper implementation of the Small-MS4 regulations is critical to protecting valuable surface water resources from the proven adverse impacts of storm water runoff and creating a model for sustainable water use. Properly implemented, the Small-MS4 regulations and the General Permit have the potential to achieve significant gains at the local level that are critical to the achievement of the goals of the CWA.

Our comments are based on MTA's July 30, 2003 "NPDES Storm Water Management Plan for Coverage Under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)."[3] Unfortunately, this NOI contains deficiencies, which must be corrected in order to comply with the terms of the General Permit.[4] First, in many cases, proposed BMPs are inadequate, and measurable goals are not provided. As noted by EPA, "[m]easurable goals, which are required for each minimum control measure, are intended to gauge permit compliance and program effectiveness."[5] Second, MTA fails to propose a plan that "specifically identif[ies] control measures and BMPs that will collectively control the discharge of pollutants of concern" into waters impaired for those pollutants, as required under Part I.C of the General Permit,[6] or to adequately address priority resource areas, as required by Section IX. We are also concerned about MTA's failure to commit to incorporating low-impact development ("LID") techniques on a system-wide basis.

I. EPA Must Conduct a Thorough and Substantive Review to Ensure Compliance with the Clean Water Act.

The decision by the U.S. Court of Appeals for the Ninth Circuit in *Environmental Defense Center v. Browner*[7] ("*EDC*") recently addressed the type of review required for NOIs submitted by Small MS4s seeking coverage under a general permit. Specifically, the court found

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[2] See Massachusetts Turnpike Authority, Stormwater Management Program, Section 3 Regulated Entities.
[3] *See* MASSACHUSETTS TURNPIKE AUTHORITY, NOTICE OF INTENT STORMWATER MANAGEMENT PROGRAM FOR MS4 DISCHARGES (July 2003) [hereinafter *MTA SWMP*].
[4] ENVIRONMENTAL PROTECTION AGENCY, NEW ENGLAND, NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (April 18, 2003) [hereinafter *General Permit*].
[5] *See* ENVIRONMENTAL PROTECTION AGENCY, STORMWATER PHASE II COMPLIANCE ASSISTANCE GUIDE (March 2000) [hereinafter *Stormwater Compliance Assistance Guide*].
[6] *General Permit*, Part I.C.
[7] 344 F.3d 832 (9th Cir. 2003).

that "the plain language of § 402(p) of the CWA, 33 U.S.C. § 1342(p), expresses unambiguously Congress's intent that EPA issue no permits to discharge from municipal storm sewers unless those permits 'require controls to reduce the discharge of pollutants to the maximum extent practicable.'"[8]

The court went on to discuss the details of the required review, ultimately arriving at the principle that EPA must, as a matter of law, engage in meaningful review of the NOI submissions in order to ascertain compliance with the CWA and applicable standards. This review must take public comments into account, and must ensure that the NOI complies with all applicable requirements, including: controls to reduce the discharge of pollutants to the maximum extent practicable; controls that ensure that discharges will not cause instream exceedances of water quality standards; and the specific identification of control measures, BMPs, and measurable goals that will control pollutants of concern. We urge EPA to conduct such a meaningful review of MTA's current NOI.

II. EPA Must Determine Whether MTA Has Met Its Burden of Demonstrating that Its Discharges Will Not Cause or Contribute to State Water Quality Violations and that Its Stormwater Management Program will Control Pollutants of Concern and Ensure No In-Stream Exceedances of Water Quality Standards.

A central tenet of the CWA, as well as the Small-MS4 program, is the requirement that NPDES permits ensure compliance with water quality standards ("WQS"). This requirement is reiterated in the CWA, its regulations, case law, and the Small MS4 General Permit.

In enacting the CWA, one of Congress' principal goals was to "recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, [and] to plan the development and use (including restoration, preservation, and enhancement) of land and water resources."[9] In accordance with this goal, the CWA and its regulations require that all provisions in an NPDES permit must comply with state WQS.[10] Pursuant to Section 401 of the CWA, EPA has an independent obligation to ensure such compliance prior to issuing the permit.[11] The requirement that permits comply with state WQS

[8] *EDC*, 344 F.3d at 854.
[9] 33 U.S.C. § 1251(b) (2000).
[10] *See* 40 C.F.R § 122.4(d) (2004) ("No permit may be issued: . . . (d) When the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States"); 40 C.F.R § 122.44(d)(1) ("[E]ach NPDES permit shall include conditions meeting the following requirements when applicable: . . . (d) any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under sections 301, 304, 306, 307, 318, and 404 of CWA necessary to: . . . (1) [a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality . . . ."); 40 C.F.R § 122.44 (d)(4). *See also* 33 U.S.C. § 1370 (2000) (allowing state WQS to be more stringent than federal technology-based standards).
[11] 33 U.S.C. § 1341(a) (2000) (requiring compliance with WQS in both the state where the discharge originates and in any state affected by the discharge).

allows no exceptions for cost or technological feasibility.[12] The requirement that the permit must comply with WQS is reiterated in regulations promulgated pursuant to the CWA,[13] including the Phase II stormwater regulations pertaining to Small-MS4s, which explicitly state that an NPDES MS4 permit:

> will require *at a minimum* that [an operator of a Small MS4] develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from [its] MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act.[14]

Consistent with the above requirements, the General Permit makes clear, as a threshold matter, that "[d]ischarges that would cause or contribute to instream exceedance of water quality standards" are not eligible for coverage.[15] The General Permit further mandates that stormwater discharge programs "must include a description of the BMPs that will be used to *ensure* that [exceedances of instream water quality standards] will not occur."[16] Part I.C of the General Permit, entitled "Discharges to Water Quality Impaired Waters," further states:

1. The permittee must determine whether storm water discharges from any part of the MS4 contribute, either directly or indirectly, to a 303(d) listed water body.

2. The storm water management program must include a section describing how the program will control the discharge of the pollutants of concern and *ensure* that the discharges will not cause an instream exceedance of the water quality standards. This discussion must *specifically identify* control measures and BMPs that will collectively control the discharge of the pollutant(s) of concern. Pollutant(s) of concern refer to the pollutant identified as causing the impairment.[17]

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[12] *In re* City of Fayetteville, Ark., 2 E.A.D. 594, 600 – 01 (CJO 1988) (interpreting Section 301(b)(1)(C) to require "unequivocal compliance with applicable water quality standards," and prohibiting "exceptions for cost or technological feasibility"), *aff'd sub nom.* Arkansas v. Oklahoma, 503 U.S. 91 (1992).
[13] *See supra* note 10.
[14] 40 C.F.R. § 122.34(a) (2004) (emphasis added).
[15] *General Permit*, Part I.B.2 (k)
[16] *Id.* (emphasis added).
[17] *Id.* at Part I.C (emphasis added). In addressing pollutants of concern, NOIs must address pollutants that secondarily cause or contribute to impairments. *See* EPA's Response to Comments on Draft Small-MS4 General Permit 6 [hereinafter *EPA Response*], stating:

> If there is an impaired water, the pollutant causing the impairment is usually listed. If the permittee discharges the pollutant which causes the impairment, the storm water management program must include best management practices (BMPs) designed to address such pollutant. In situations where a specific pollutant isn't listed, but rather an effect such as "low DO", is listed, the permittee should attempt to determine the secondary cause which produces the effect listed as the impairment. The permittee should attempt to address the secondary cause in the storm water management program, if possible.

It should be noted that CLF disagrees with EPA's use of the word "attempt" in the third and fourth sentences of the above-quoted paragraph. Owners and operators of Small-MS4s have a mandatory duty to *ensure* that their

EPA's Response to Comments reiterates the importance of specifically addressing discharges to impaired waters: "Part I.C.2 is intended to address the situation where waters have been identified as impaired by a pollutant which the MS4 will discharge. In such situations, *more aggressive* storm water strategies would likely be necessary than in the situation where the waters are not impaired."[18] In the event that stormwater discharges authorized under the General Permit are shown to have reasonable potential to cause or contribute to a violation of a water quality standard, the permittee may be required to operate under an individual NPDES permit or face permit modification.[19]

Similarly, Part II of the General Permit, which provides conditions specific to Massachusetts permit holders, reiterates that the permittee must develop an enforceable program that satisfies both federal and state WQS.[20] Further, Part IX of the General Permit[21] specifically requires that the permittee comply with state WQS, including 314 CMR 3.00 and 4.00.[22] Further, Part IX directs that, in Massachusetts, the permittee must comply with state water quality statutes, regulations, and policies.[23] Finally, the permittee is required to identify discharges to impaired waters and other resource areas as a priority and indicate in its program how storm water controls will be implemented.[24]

III. The NOIs Submitted by MTA Fail to Properly Address Whether Its MS4 Discharges are Eligible for Coverage Under the General Permit.

A. The General Permit Does Not Authorize Discharges that Cause or Contribute to Instream Exceedance of Water Quality Standards.

The General Permit explicitly states that it does not authorize "[d]ischarges that would cause or contribute to instream exceedance of water quality standards."[25] MTA's SWMP, however, states that many of the waterbodies receiving stormwater runoff are impaired.[26] For example, the NOI acknowledges that the Massachusetts Turnpike runs through Westfield, Massachusetts where an impaired receiving stream, Powder Mill Brook, is "currently known to receive storm water discharges from the MS4."[27] MTA acknowledges that the pollutants of concern, "siltation, pathogens, suspended solids and turbidity... [may come from] winter road maintenance materials."[28] Accordingly, it is highly likely that the storm water runoff is carrying

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discharges will not cause an instream exceedance and, therefore, in "addressing" pollutants of concern must *actually implement* actions necessary to prevent discharges from causing or contributing to water quality impairments.

[18] *See EPA Response*, at 6.
[19] *General Permit*, Part VIII (emphasis added).
[20] *General Permit*, Part II.A.
[21] *Id.*, Part IX. Part IX is entitled "Massachusetts Water Quality Certification Requirements."
[22] *Id.*
[23] *Id.*
[24] *General Permit*, IX.A, D.
[25] *General Permit*, Part I.B.2(k).
[26] *See MTA SWMP*, Appendices.
[27] *Id.*, Appendix B at 1.
[28] *Id.*, Appendix B at 2.

these pollutants from MTA's MS4s into impaired waterbodies. These discharges are not authorized under the General Permit.

B. The General Permit Does Not Authorize Discharges that Do Not Comply with the Terms of the Endangered Species Act.

According to the terms of Part I.B.2(e) of the General Permit, the applicant must comply with several requirements with regard to impacts of discharges on endangered or threatened species. As part of these requirements, the applicant must demonstrate its eligibility under the terms of the General Permit's endangered species provisions "prior to the submission of the NOI."[29] Based on a review of MTA's SWMP and NOI, it appears that that MTA has not even attempted to demonstrate its eligibility under Part I.B.2(e). MTA must address this issue in order to comply with the General Permit.

C. The General Permit Does Not Authorize Discharges that Do Not Comply with the Massachusetts Antidegradation Policy.

The General Permit makes clear that it does not authorize discharges prohibited under 40 C.F.R. Section 122.4, including "discharges not in compliance with the state's antidegradation policy."[30] In turn, 314 CMR 4.04(1) requires that "in all cases existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." The CWA clearly establishes that under no conditions may a State authorize a discharge that results in the degradation of an existing use of a receiving waterbody. The U.S. Supreme Court has recognized that State antidegradation implementation shall, *at minimum*, maintain existing instream water uses and the water quality necessary to protect such uses.[31] The Supreme Court affirmed EPA's determination that "no activity is allowable . . . which could *partially or completely* eliminate any existing use."[32] In the present case, the permittee has failed to show, and EPA and DEP have failed to ensure, that existing uses will be maintained and protected with the permittee's stormwater discharge.[33]

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[29] *General Permit*, Part I.B.2(e)(iii).
[30] *General Permit*, Part I.B.2(i).
[31] PUD No. 1 v. Washington Dep't of Ecology, 511 U.S. 700, 718 – 19 (1994).
[32] *Id.* (emphasis added); *see also* Advance Notice of Proposed Rulemaking, 63 Fed. Reg. 36,742, 36, 781 (proposed July 7, 1998) (to be codified at 40 C.F.R. Part 131):

> Section 131.12 (a)(1) of the antidegradation policy contained in the water quality standards regulation requires that existing uses and the water quality necessary to protect them be maintained and protected. *This provision, in effect, establishes the floor of water quality in the U.S.* It also protects the environment where the existing use of a water body happens to be better than the use designated by the State or Tribe. An existing use as defined in 40 C.F.R. 131.3 can be established by demonstrating that a use has actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur, whether or not such uses are designated uses for the water body in question. *All waters of the U.S. are subject to tier 1 protection.* [emphasis added].

[33] 314 CMR 4.04.

IV. The NOIs Submitted by MTA Fail to Provide Sufficient Information to Meet the Requirements Set Forth by the General Permit, and State and Federal Stormwater Regulations.

A. MTA's Lands and Roadways Discharge into Impaired Waterbodies and Waterbodies and Therefore it Must Treat these Waterbodies as a Priority and Indicate How Stormwater Controls will be Implemented to Control Pollutants of Concern in These Areas.

The MTA controls the Massachusetts Turnpike which discharges storm water into waterbodies listed as impaired by the Commonwealth of Massachusetts, including the Sudbury River, the Chicopee River and the Blackstone River. Accordingly, "more aggressive storm water strategies" are merited with regard to these discharges.[34] Section IX of the General Permit further requires that permittees identify discharges to both public water supplies and impaired segments as well as other resource areas as a priority, and indicate how stormwater controls will be implemented in these areas. MTA's proposed BMPs in this area[35] are inadequate in that they lack the requisite specificity.

In all instances where the MTA has identified a receiving water body as impaired MTA's response is simply that "the Stormwater Management Program includes many BMPs to address reduction of contaminants from these sources under all Six Minimum Control categories."[36] For instance, in Appendix G for Palmer, Massachusetts, the Quaboag River is listed as an impaired receiving waterbody.."[37] The pollutant of concern is metals, but the SWMP does not specifically identify control measures or BMPs that will address the discharge of metals into the Quaboag River. MTA should amend its plan to provide for a specific schedule that commits to addressing specific pollutants of concern.

In addition to failing to identify specific control measures for storm water runoff into an impaired water body, the MTA shifts responsibility to the local city or town to implement these inadequate BMPs. Specifically, the SWMP states "the City will implement these BMPs under the responsible department and timeframes as described in Section 6 of this submittal."[38] While the General Permit does provide that "implementation of one or more of the minimum measures may be shared with another entity, or the entity may fully implement the measure," provided that there is a "legally binding written acceptance" by the other entity which is part of the storm water management plan.[39] MTA's SWMP provides no evidence of such an agreement by any of the city or towns that MTA says will implement the BMPs. Furthermore, the plan does not provide any information that may be used to assess the adequacy of such BMPs.

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[34] *EPA Response*, at 6.
[35] *MTA SWMP*, at 5-1 – 5-5
[36] *See, e.g.*, *MTA SWMP*, Appendix D at 2 (Chicopee, Massachusetts).
[37] *See, e.g.*, *MTA SWMP*, Appendix D at 2.
[38] *See, e.g.*, *MTA SWMP*, Appendix B at 2 (Westfield, Massachusetts).
[39] *See General Permit*, Part II.A.3

B. All Transportation MS4s Which Are Controlled by State or County Agencies Are Covered by the General Permit; Accordingly, MTA Must Submit Notices of Intent for Transportation MS4s on All of Its Roadways.

Part V of the General Permit is entitled "Transportation MS4- Storm water management program" and, states specifically that this includes state agencies "who maintain roadways, highways and other thoroughfares." MTA clearly falls under this category, and therefore must submit and NOI and SWMP for all of its Transportation MS4s. MTA's SWMP appears to misunderstand this requirement. Repeatedly, the SWMP states that "the municipal separate storm sewer systems (MS4s) of this town is automatically designated as being regulated by NPDES Phase II. The Massachusetts Turnpike Authority operates within this MS4 and, therefore, must comply within the Urbanized Area."[40] This statement is incorrect for two reasons. First, the MTA's MS4s, not the town's MS4s, are being regulated by Part V of the General Permit. The town's MS4 obligations are not relevant to the MTA's independent obligation as a permittee to ensure that the MTA's MS4s are in compliance with the NPDES Phase II requirements. Second, Part V of the General Permit does not indicate anywhere that a "Transportation MS4" is subject to regulation only within "urbanized areas." Furthermore, in Part I, the "eligibility criteria" for coverage under the permit are listed, and they only require that "a municipality [not a permittee] is located fully or partially in an urbanized area." Clearly, MTA is not a municipality, but rather a state entity that maintains Transportation MS4s that do not stop and start at the boundary of an urbanized area. Instead, the General Permit logically regulates a Transportation MS4 as it operates in the real world; as an interconnected system whose storm water impacts are not necessarily less in a non-urbanized area. Thus, it is clear that the entire MTA system, not merely those sections within urbanized areas, is subject to the General Permit. We note that DEP has requested that the MTA's NOI and SWMP cover the entire Turnpike and all regulated entities operated by the MTA.[41]

V. MTA Should Incorporate Principles of Low-Impact Development Throughout Its Stormwater Management Plan and NOI.

As Massachusetts is entering an era of increasing pressure on its water resources, low-impact development ("LID") techniques should clearly be the stormwater management tool of choice. LID techniques reduce runoff at the source through on-site filtration controls that mimic predevelopment hydrology by decreasing impervious surface areas and promoting infiltration and storage of runoff on site, as opposed to conveying and treating stormwater at large, expensive end-of-pipe facilities, which ultimately leads to the depletion of water supply. The widespread adoption of LID techniques by MTA is important both from an environmental perspective, given MTA's extensive holdings, and from an educational perspective; MTA incorporation of LID techniques would serve to showcase these techniques to the many people who drive the Massachusetts Turnpike and other MTA roadways. Further, EPA has

[40] *See, e.g., MTA SWMP*, Appendix B at 1.
[41] *MTA SWMP*, at 1-3.

recommended application of LID principles and techniques to the management of stormwater and polluted runoff, and has aggregated a large quantity of information on LID.[42]

For example, MTA should incorporate LID into MCM 5.5, and MCM 5.6." MTA could commit to replacing certain portions of its impervious paving areas with porous paving, or to adding swales and vegetated buffers in order to reduce surface runoff to its water bodies. Additionally, before spending money to repair infrastructure, MTA should consider LID alternatives, which are often less expensive than traditional stormwater infrastructure. . We note further that LID techniques are especially important in MTA properties and abut and support highways, such as maintenance facilities and rest areas. Moreover, as MTA owns and/or controls sizable areas of open space around the Massachusetts Turnpike, these areas could be used much more effectively to remove pollutants before stormwater is discharged into wetland and water resource areas.

Finally, we believe MTA should begin to work with the City of Boston to find opportunities to recharge stormwater in the City's groundwater overlay districts. These are areas that the City has identified as having problems with deteriorating foundation pilings due to falling groundwater levels. The City consequently requires new development in these areas to recharge the groundwater. As the Massachusetts Turnpike runs through at least one of these overlay districts, so we recommend that MTA work with the City to improve groundwater recharge in those areas.

VI. MTA Must Amend Its Best Management Practices and Measurable Goals in Order to Comply with the Six Required Minimum Control Measures.

A. The NOIs Submitted by MTA Must be Amended to Include Appropriate BMPs, Measurable Goals, and, Where Appropriate, Interim Milestones.

Phase II requires MS4 operators to identify BMPs for each of the six required control measures, measurable goals for each BMP, and a schedule for expected implementation, including where appropriate, the months and years in which operators will undertake required actions, and "interim milestones and the frequency of the action."[43] 314 CMR 3.02 defines BMPs as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the Commonwealth. BMPs include treatment requirements, operating procedures, structures, devices, and/or practices to

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[42] *See* Environmental Protection Agency, Low-Impact Development Page, *at* http://www.epa.gov/owow/nps/lid/ (last visited November 15, 2005).

[43] See 40 C.F.R. §122.34(d)(1), which states:

> In your permit application (either a notice of intent for coverage under a general permit or an individual permit application), you must identify and submit to your NPDES permitting authority the following information . . . (i) The best management practices (BMPs) that you or another entity will implement for each of the storm water minimum control measures at paragraphs (b)(1) through (b)(6) of this section; [and], (ii) The measurable goals for each of the BMPs including, as appropriate, the months and years in which you will undertake required actions, including interim milestones and the frequency of the action.

control plant site runoff, spillage, or leaks, sludge or waste disposal, or drainage from raw material storage." The EPA states that "[m]easurable goals, which are required for each minimum control measure, are intended to gauge permit compliance and program effectiveness."[44]

The EPA provides a complete guidance for defining and selecting measurable goals on its website.[45] The EPA has provided "appropriate measurable goals" as guidance for each of the six required control measures in their "Stormwater Phase II Compliance Assistance Guide" (March 2000). EPA recommends that the permittee include specific information about when each element of each individual control measure will be implemented, and what specific program or compliance goals are anticipated. For example, the EPA provides four "Appropriate Measurable Goals" for complying with the requirements of Minimum Control Measure ("MCM") 1 ("Public Education"). Two of the four identify specific compliance rate and program performance percentages.[46] EPA makes similar recommendations for the other five minimum control measures.[47]

B. Minimum Control Measure 1: Public Education and Outreach

For this MCM, MTA has listed only three Best Management Practices ("BMPs"), which include educational displays, informational pamphlets and a website.[48] The proposal to post one display per year in a rest area is inadequate. Additionally, as we do with the MCM below, we recommend that MTA begin to label catch basins, especially those in rest areas.

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[44] *See Stormwater Compliance Assistance Guide.*

[45] Environmental Protection Agency, Measurable Goals Guidance for Phase II Small MS4s, *at* http://cfpub.epa.gov/npdes/stormwater/measurablegoals/index.cfm (last visited November 29, 2005). According to EPA's guidance:

> Measurable goals are described in the Phase II rule as BMP design objectives or goals that quantify the progress of program implementation and the performance of your BMPs. They are objective markers or milestones that you (and the permitting authority) will use to track the progress and effectiveness of your BMPs in reducing pollutants to the MEP. EPA recommends that you develop a program with a variety of short- and long-term goals. At a minimum, your measurable goals should contain descriptions of actions you will take to implement each BMP, what you anticipate to be achieved by each goal, and the frequency and dates for such actions to be taken. Also, EPA recommends that you use your BMPs and measurable goals to help establish a baseline against which future progress at reducing pollutants to the MEP can be measured. For example, information on current water quality conditions, numbers of BMPs already implemented, and the public's current knowledge/awareness of storm water management would be useful in setting this baseline.

Id.

[46] For example, "certain percentage of restaurants no longer dumping grease" or "certain percentage reduction in litter or animal waste detected in discharges." *See Stormwater Compliance Assistance Guide*, at 4-22.

[47] For example, under MCM 3 ("Illicit Discharge Detection and Elimination"), appropriate measurable goals for Year 2 include: ordinance in place; training for public employees completed; a certain percentage of sources of illicit discharges determined. Appropriate measurable goals for Year 3 include: a certain percentage of: illicit discharges detected; illicit discharges eliminated; and households participating in quarterly household hazardous waste special collection days. *See Stormwater Compliance Assistance Guide*, at 4-29.

[48] *See MTA SWMP*, at 5-1.

C. Minimum Control Measure 2: Public Participation/Involvement

Under MCM 2, the terms of the General Permit require that "[t]he permittee must provide opportunity for the public to participate in the implementation and review of the storm water management program."[49] To this end, MTA has proposed only two BMPs. Itis difficult to understand how "trash pick-up" by MTA employees will promote public participation in the implementation and review of the SWMP. MTA should amend the BMPs for this MCM to include, among others, water quality monitoring and public meetings to discuss annual reports and revisions to SWMP. Further, the MTA website should post the NOI and SWMP, annual reports, and a contact person for addressing stormwater problem. Additionally, in the amended BMPs, MTA needs to specify measurable goals, as required by the General Permit.

A final BMP that MTA should add under MCM 2 is a phone number or web link by which the public may report road flooding, clogged catch basins, and other such stormwater issues. This would be an important element under MCM 2 in that it increases public involvement in stormwater management and increases MTA's alertness and efficiency in locating and remedying stormwater and safety problems.

D. Minimum Control Measure 3: Illicit Discharge Detection and Elimination

The four BMPs listed to achieve this MCM are necessary and appropriate, but more detail is necessary. Our major concerns lies with the time frames laid out for each BMP. For example, BMP 3A Mapping Stormwater Outfalls states that "25% of the outfalls will be field inspected each year for Years 2-5."[50] Under this schedule, the mapping will not be complete until the last year of the permit. Similarly, the Non-Stormwater Discharge Program and the Illicit Discharge Plan will not be complete until Year Three. This time table is much too slow, and virtually guarantees noncompliance with the permit requirement that the program be fully implemented by the end of the permit term.

Additionally, the BMPs for MCM 3 do not comply with two other requirements of the General Permit. First, the General Permit requires that an illicit discharge plan must contain "[p]rocedures to identify priority areas.... [including] areas suspected of having illicit discharges, ... and areas of high recreational value or high environmental value such as beached and drinking water sources."[51] MTA's vague description of its illicit discharge plan does not identify any such areas as a priority. Secondly, the General Permit requires that the permittee "must inform users of the system and the general public of hazards associated with illegal discharges and improper waste disposal."[52] MTA's SWMP and NOI have presented no such effort to inform users and the general public.

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[49] *General Permit*, Part II.B.2(a).
[50] *See MTA SWMP*, at 5-2 ("3A Mapping Stormwater Outfalls").
[51] *General Permit*, Part V.B.3(c).
[52] *Id.*, Part V.B.3(d).

Finally, MTA should incorporate a GIS-mapping BMP into its IDDE program. Such mapping of facilities and resources is important for effective stormwater management, especially as such mapping relates to the pipes and other stormwater conveyances in the system.

E. Minimum Control Measure 4: Construction Site Runoff Control

Under MCM 4, MTA has proposed two BMPs to implement the goal of construction site runoff control. As with the previously discussed BMPs, the timeline for the "Construction Runoff Program" and the "Construction Plan Review" is too extended.[53] These programs and plans should be in place by Year 1 or Year 2, at the latest,. Also, the BMPs do not indicate adequate measurable goals nor do they not offer any details as to enforcement or sanctions for non-compliance with the requirements. Furthermore, MTA neglects to include any reference to public information and comment in the development of construction projects. Per the General Permit, the program for construction site stormwater runoff control must include "[p]rocedures for receipt and consideration of information submitted by the public... includ[ing] opportunities for public comment during the project development process."[54] In order to comply with the General Permit, MTA must provide for the receipt and consideration of such public comment.

F. Minimum Control Measure 5: Post-Construction Runoff Control

Once again, the three BMPs for MCM 5 lack sufficient detail and should be expedited.[55] The Post Construction Runoff Program, Site Plan Review and Stormwater System Maintenance Plan should all be in place within the first year of the permit period. Also, MTA should describe in the BMPs an enforceable regulatory mechanism for post-construction runoff control. All entities seeking to tie into MTA's system should be required to comply with the post-construction runoff control requirements. Finally, as was noted above, MTA should work to incorporate LID measures more uniformly and consistently throughout its proposed BMPs, especially post-construction control, which offers many opportunities to incorporate these measures.

G. Minimum Control Measure 6: Pollution Prevention/Good Housekeeping

The BMPs listed for MCM 6 are not sufficient. As with the BMPs discussed above, the dates are too far out and the BMPs are insufficiently aggressive. As an example, the "initial training for employees will be given in Year 2."[56] This training should be given in Year 1. Moreover, MTA "will sweep all streets ... once a year."[57] This is wholly inadequate. Rather, priority areas should be swept monthly if not weekly. The importance of the frequency of this BMP has been highlighted by recent news. It has come to our attention that, in the Northeast, chloride concentrations are increasing at a rate that threatens freshwater in the region.[58] Indeed, a 2001 article in *Stormwater* magazine ranked Massachusetts as having the highest annual road

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[53] *See MTA SWMP*, at 5-3.
[54] *General Permit*, Part V.B.4(f).
[55] *See MTA SWMP*, at 5-3 – 5-4.
[56] *See MTA SWMP*, at 5-4 – 5-5.
[57] *Id.*
[58] Susay S. Kaushal et al., *Increased salinization of fresh water in the northeastern United States*, 102 ECOLOGY __ (2005) (forthcoming), *available at* http://www.pnas.org/cgi/content/abstract/102/38/13517.

salt loadings in the United States. Other BMPs, such as salt distribution and road maintenance should also address this issue. In this vein, the BMPs are substantively inadequate as well, and additional BMPs should be included to achieve this MCM such as the creation of a Maintenance Tracking System. Further, as discussed above, MTA should take advantage of this opportunity to incorporate LID techniques.

Some examples of new BMPs to include are, first, a more defined schedule and program for catch basin cleaning. Currently, MTA simply states that it will "develop a program with prioritized areas for catch basins located in urbanized areas in Year 1."[59] MTA does not, however, indicate any substantive details for how it will go about inspecting or cleaning the catch basins. We urge it to do so. Second, MTA fails to note whether and how it covers and prevents runoff from its sand and salt stockpiles. Protection of material stockpiles from runoff is an important component in prevention of stormwater pollution, and MTA must develop a BMP to this end. Third, MTA does not indicate whether its snow storage areas (also known as snow dumps) have water quality protection designs to prevent untreated snowmelt from entering nearby waterbodies. This is another BMP that MTA must develop under MCM 6. Fourth, MTA must demonstrate a BMP for how it manages stormwater runoff from its vehicle washing facilities. Fifth, under MTA's employee training BMP, BMP 6A,[60] MTA should include more details, including how it plans to train its employees in managing stormwater swales, and how it plans to train its contractors in stormwater management practices.

VIII. Conclusion.

While aspects of the MTA's SWMP and NOI are adequate, several deficiencies exist that must be corrected. These include a failure to specifically address pollutants of concern, a failure to adequately prioritize and develop a plan for priority resource areas, lack of robust implementation of LID, a lack of measurable goals for several BMPs, a lack of public participation opportunities for some MCMs, and failures to discuss enforcement mechanisms and sanctions for the construction and post-construction MCMs. In order to ensure that its NOI meets the requirements of the CWA, the General Permit, and the underlying regulations, the MTA must amend these deficiencies.

Sincerely,

Carol Lee Rawn (dcya)

Carol Lee Rawn
Conservation Law Foundation

Kate Bowditch (dcya)

Kate Bowditch
Charles River Watershed Association

cc: Rick McCullough, MTA
Matthew Amorello, MTA
David Gray, EPA
David Webster, EPA
Linda Murphy, EPA

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[59] *See MTA SWMP*, at 5-4.
[60] *Id.* at 5-4.

Charles River Watershed Association

December 1, 2005

Thelma Murphy
Regional Stormwater Coordinator
U.S. Environmental Protection Agency, Region 1
One Congress St.
Boston, MA 02114

Re: Small MS4 Notice of Intent Submissions by the Massachusetts Department of Conservation and Recreation

Dear Ms. Murphy:

The Conservation Law Foundation ("CLF") and the Charles River Watershed Association ("CRWA") appreciate the opportunity to comment on the Stormwater Management Plan ("SWMP") and Notice of Intent ("NOI") submitted by the Department of Conservation and Recreation ("DCR") seeking coverage under the Environmental Protection Agency's ("EPA") National Pollutant Discharge Elimination System ("NPDES") General Permit for Storm Water Discharges from Municipal Separate Storm Sewer Systems ("General Permit" and "Small MS4s," respectively).

Our comments are based on DCR's October 20, 2005 "NPDES Storm Water Management Plan for Coverage Under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s),"[1] along with an updated NOI, which is a revised version of DCR's August 11, 2005 SWMP and NOI. On February 15, 2005, CLF submitted comments on DCR's initial July 30, 2003 NOI, stating that it was clearly inadequate. On April 25, 2005, CLF filed a Notice of Intent to Sue under the Clean Water Act ("CWA") based on DCR's discharge of stormwater without a permit. Subsequently, CLF, CRWA and DCR negotiated a Memorandum of Understanding ("MOU"),[2] dated August 18, 2005, under which DCR committed to certain measures in its stormwater management program, some of which are reflected in the current NOI.

We note at the outset that DCR has an enormous task in reforming its stormwater management, and has made substantial progress since its original July 30, 2003 NOI. In the last

[1] *See* DEPARTMENT OF CONSERVATION AND RECREATION, NPDES STORM WATER MANAGEMENT PLAN FOR COVERAGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4S) (Revised October 20, 2005) [hereinafter *October SWMP*].

[2] *See* Memorandum of Understanding by and among the Department of Conservation and Recreation, Charles River Watershed Association, and Conservation Law Foundation (August 18, 2005) [hereinafter *MOU*].

Charles River Watershed Association, 48 Woerd Avenue, Waltham, 02453
T: (781) 788-0007, F: (781) 788-0057, Website: www.charlesriver.org, Email: crwa@crwa.org

Conservation Law Foundation, 62 Summer Street, Boston, Massachusetts 02110-1016
Phone: 617-350-0990 • Fax: 617-350-4030 • www.clf.org

six months, DCR has made significant and noteworthy efforts to upgrade its stormwater management program. For example, DCR designated a competent, fulltime stormwater manager and addressed some of the more egregious stormwater problems, including cleaning over 5,000 catch basins, eliminating many illegal hookups to sewer lines, and repairing failing infrastructure. Further, many of the BMPs proposed in the NOI are commendable, and the NOI itself is vastly improved. Nevertheless, the current NOI still contains deficiencies, which must be corrected in order to comply with the terms of the General Permit.[3] Of greatest concern is DCR's failure to propose a plan that "specifically identif[ies] control measures and BMPs that will collectively control the discharge of pollutants of concern" into waters impaired for those pollutants, as required under Part I.C of the General Permit,[4] and to adequately address priority resource areas. We are also concerned about DCR's failure to commit to incorporating LID techniques on a system-wide basis.

I. EPA Must Conduct a Thorough and Substantive Review to Ensure Compliance with the Clean Water Act.

As CLF and CRWA noted in our February 15, 2005 comments on DCR's initial NOI submission, the decision by the U.S. Court of Appeals for the Ninth Circuit in *Environmental Defense Center v. Browner*[5] ("*EDC*") recently addressed the type of review required for NOIs submitted by Small MS4s seeking coverage under a general permit.[6] Specifically, the court found that "the plain language of § 402(p) of the CWA, 33 U.S.C. § 1342(p), expresses unambiguously Congress's intent that EPA issue no permits to discharge from municipal storm sewers unless those permits 'require controls to reduce the discharge of pollutants to the maximum extent practicable.'"[7]

The court went on to discuss the details of the required review,[8] ultimately arriving at the principle that EPA must, as a matter of law, engage in meaningful review of the NOI submissions in order to ascertain compliance with the CWA and applicable standards. This review must take public comments into account, and must ensure that the NOI complies with all applicable requirements, including: controls to reduce the discharge of pollutants to the maximum extent practicable; controls that ensure that discharges will not cause instream exceedances of water quality standards; and the specific identification of control measures, BMPs, and measurable goals that will control pollutants of concern. We urge EPA to conduct such a meaningful review of DCR's current NOI.

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[3] ENVIRONMENTAL PROTECTION AGENCY, NEW ENGLAND, NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (April 18, 2003) [hereinafter *General Permit*].
[4] We note that DCR has committed to specifically address pollutants of concerns in the August 18, 2005 MOU between DCR, CLF and CRWA.
[5] 344 F.3d 832 (9th Cir. 2003).
[6] Letter from Carol Lee Rawn, Conservation Law Foundation, and Margaret Van Deusen, Charles River Watershed Association, to Thelma Murphy, Regional Stormwater Coordinator, Environmental Protection Agency 3 – 5 (Feb. 15, 2005) [hereinafter *February Comments*].
[7] *EDC*, 344 F.3d at 854.
[8] *February Comments*, at 3 – 4.

II. EPA Must Determine Whether DCR Has Met Its Burden of Demonstrating that Its Discharges Will Not Cause or Contribute to State Water Quality Violations and that Its Stormwater Management Program will Control Pollutants of Concern and Ensure No In-Stream Exceedances of Water Quality Standards.

A central tenet of the CWA, as well as the Small-MS4 program, is the requirement that NPDES permits ensure compliance with water quality standards ("WQS"). This requirement is reiterated in the CWA, its regulations, case law, and the Small MS4 General Permit.

In enacting the CWA, one of Congress' principal goals was to "recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, [and] to plan the development and use (including restoration, preservation, and enhancement) of land and water resources."[9] In accordance with this goal, the CWA and its regulations require that all provisions in an NPDES permit must comply with state WQS.[10] Pursuant to Section 401 of the CWA, EPA has an independent obligation to ensure such compliance prior to issuing the permit.[11] The requirement that permits comply with state WQS allows no exceptions for cost or technological feasibility.[12] The requirement that the permit must comply with WQS is reiterated in regulations promulgated pursuant to the CWA,[13] including the Phase II stormwater regulations pertaining to Small-MS4s, which explicitly state that an NPDES MS4 permit:

> will require *at a minimum* that [an operator of a Small MS4] develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from [its] MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act.[14]

Consistent with the above requirements, the General Permit makes clear, as a threshold matter, that "[d]ischarges that would cause or contribute to instream exceedance of water quality

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[9] 33 U.S.C. § 1251(b) (2000).
[10] *See* 40 C.F.R § 122.4(d) (2004) ("No permit may be issued: . . . (d) When the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States"); 40 C.F.R § 122.44(d)(1) ("[E]ach NPDES permit shall include conditions meeting the following requirements when applicable: . . . (d) any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under sections 301, 304, 306, 307, 318, and 404 of CWA necessary to: . . . (1) [a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality . . . ."); 40 C.F.R § 122.44 (d)(4). *See also* 33 U.S.C. § 1370 (2000) (allowing state WQS to be more stringent than federal technology-based standards).
[11] 33 U.S.C. § 1341(a) (2000) (requiring compliance with WQS in both the state where the discharge originates and in any state affected by the discharge).
[12] *In re* City of Fayetteville, Ark., 2 E.A.D. 594, 600 – 01 (CJO 1988) (interpreting Section 301(b)(1)(C) to require "unequivocal compliance with applicable water quality standards," and prohibiting "exceptions for cost or technological feasibility"), *aff'd sub nom.* Arkansas v. Oklahoma, 503 U.S. 91 (1992).
[13] *See supra* note 10.
[14] 40 C.F.R. § 122.34(a) (2004) (emphasis added).

standards" are not eligible for coverage.[15] The General Permit further mandates that stormwater discharge programs "must include a description of the BMPs that will be used to *ensure* that [exceedances of instream water quality standards] will not occur."[16] Part I.C of the General Permit, entitled "Discharges to Water Quality Impaired Waters," further states:

1. The permittee must determine whether storm water discharges from any part of the MS4 contribute, either directly or indirectly, to a 303(d) listed water body.

2. The storm water management program must include a section describing how the program will control the discharge of the pollutants of concern and *ensure* that the discharges will not cause an instream exceedance of the water quality standards. This discussion must *specifically identify* control measures and BMPs that will collectively control the discharge of the pollutant(s) of concern. Pollutant(s) of concern refer to the pollutant identified as causing the impairment.[17]

EPA's Response to Comments reiterates the importance of specifically addressing discharges to impaired waters: "Part I.C.2 is intended to address the situation where waters have been identified as impaired by a pollutant which the MS4 will discharge. In such situations, *more aggressive* storm water strategies would likely be necessary than in the situation where the waters are not impaired."[18] In the event that stormwater discharges authorized under the General Permit are shown to have reasonable potential to cause or contribute to a violation of a water quality standard, the permittee may be required to operate under an individual NPDES permit or face permit modification.[19]

Similarly, Part II of the General Permit, which provides conditions specific to Massachusetts permit holders, reiterates that the permittee must develop an enforceable program that satisfies both federal and state WQS.[20] Further, Part IX of the General Permit[21] specifically

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[15] *General Permit*, Part I.B.2 (k)
[16] *Id.* (emphasis added).
[17] *Id.*, Part I.C (emphasis added). In addressing pollutants of concern, NOIs must address pollutants that secondarily cause or contribute to impairments. *See* EPA's Response to Comments on Draft Small-MS4 General Permit 6 [hereinafter *EPA Response*], stating:

> If there is an impaired water, the pollutant causing the impairment is usually listed. If the permittee discharges the pollutant which causes the impairment, the storm water management program must include best management practices (BMPs) designed to address such pollutant. In situations where a specific pollutant isn't listed, but rather an effect such as "low DO", is listed, the permittee should attempt to determine the secondary cause which produces the effect listed as the impairment. The permittee should attempt to address the secondary cause in the storm water management program, if possible.

It should be noted that CLF disagrees with EPA's use of the word "attempt" in the third and fourth sentences of the above-quoted paragraph. Owners and operators of Small-MS4s have a mandatory duty to *ensure* that their discharges will not cause an instream exceedance and, therefore, in "addressing" pollutants of concern must *actually implement* actions necessary to prevent discharges from causing or contributing to water quality impairments.
[18] *See EPA Response*, at 6.
[19] *General Permit*, Part VIII (emphasis added).
[20] *General Permit*, Part II.A.
[21] *Id.*, Part IX. Part IX is entitled "Massachusetts Water Quality Certification Requirements."."

requires that the permittee comply with state WQS, including 314 CMR 3.00 and 4.00.[22] Further, Part IX directs that, in Massachusetts, the permittee must comply with state water quality statutes, regulations, and policies. Finally, the permittee is required to identify discharges to impaired waters and other resource areas as a priority and indicate in its program how storm water controls will be implemented.[23]

III. The NOIs Submitted by DCR Fail to Properly Address Whether Its MS4 Discharges are Eligible for Coverage Under the General Permit.

A. The General Permit Does Not Authorize Discharges that Cause or Contribute to Instream Exceedance of Water Quality Standards.

The General Permit explicitly states that it does not authorize "[d]ischarges that would cause or contribute to instream exceedance of water quality standards."[24] However, the NOIs submitted by the DCR fail to address this issue. Indeed, given that many of the receiving waters for the DCR lands and parkways are impaired, it appears likely that stormwater discharges do indeed cause or contribute to exceedances of WQS. For example, DCR controls the Fenway, the Riverway, and the Jamaicaway, all of which discharge stormwater into the Muddy River, the most polluted tributary to the lower Charles basin. Wet weather water quality sampling in the Muddy River indicates violations of water quality standards for many parameters. It is highly likely that stormwater from DCR lands, facilities, and parkways contributes significantly to these violations. In addition, sediment accumulation in the Muddy River is so severe that a dredging and restoration project, estimated at over $90 million, is needed to restore the river's conveyance capacity and to prevent flooding.

Field observations of DCR's storm drainage structures along these parkways have identified a significant number of catch basins that do not function as designed; curbing that has collapsed, thereby allowing stormwater runoff to flow overland directly into the river; and significant areas of eroding pavement that is being washed into the river. We note that DCR has conducted an assessment of these areas and is working to correct some of these problems. However, there is no identified schedule for these repairs, and it is unclear whether these repairs alone are sufficient to meet water quality standards. In addition, proposed operation and maintenance programs for these stormwater structures are inadequate.

B. The General Permit Does Not Authorize Discharges that Do Not Comply with the Terms of the Endangered Species Act.

According to the terms of Part I.B.2(e) of the General Permit, the applicant must comply with several requirements with regard to impacts of discharges on endangered or threatened

[22] Part IX requires compliance with the Massachusetts Clean Waters Act, Surface Water Quality Standards, and the Surface Water Discharge Program.
[23] *General Permit*, IX.A, D.
[24] *General Permit*, Part I.B.2(k).

species.[25] As part of these requirements, the applicant must demonstrate its eligibility under the terms of the General Permit's endangered species provisions "prior to the submission of the NOI."[26] Based on a review of DCR's October SWMP and NOI, it appears that that DCR has not demonstrated its eligibility under Part I.B.2(e).

In order to demonstrate eligibility, an applicant must meet one of five criteria for the entire term of the permit. Under Criterion A, "[n]o endangered or threatened species or critical habitat are in proximity to the MS4 or the point where authorized discharges reach the receiving waters."[27] Based on DCR's own admission, this criterion is not met.[28] Under Criterion B, the applicant must have engaged in and concluded consultation with a federal wildlife agency, and the outcome of this consultation reveals either a "no jeopardy" opinion or a "not likely to adversely affect" concurrence.[29] DCR offers no evidence that such a consultation has occurred. Under Criterion C, the activities are authorized under Section 10 of the Endangered Species Act ("ESA").[30] Again, DCR offers no evidence to this effect. Under Criterion E, the impacts on endangered species are already addressed in another operator's certification.[31] DCR does not offer any evidence on this criterion either.

Thus, the only criterion that could apply to DCR's situation is Criterion D, which requires that:

> Using best judgment and knowledge, the effects of the storm water discharges, allowable non-storm water discharges, and discharge related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by the permittee that there is no reason to believe that the storm water discharges, allowable non-storm water discharges, and discharge related activities will jeopardize the continued existence of any species or result in the adverse modification or destruction of critical habitat.[32]

DCR does not appear to have met the above requirements. Of the three BMPs DCR proposes (BMPs 7-1 through 7-3), none offers any evidence that DCR has conducted any such evaluation.[33] All three BMPs are prospective, and propose only future actions. As noted by the General Permit, this is inadequate, as the applicant's eligibility must be determined *prior to* the submission of the BMP. Thus, DCR's discharges that may impact endangered or threatened species are not eligible for coverage under the General Permit.

C. The General Permit Does Not Authorize Discharges that Do Not Comply with the Massachusetts Antidegradation Policy.

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[25] *See General Permit*, Part I.B.2(e).
[26] *Id.*, Part I.B.2(e)(iii).
[27] *Id.*
[28] *See October SWMP*, at 3-3. *See also id.* at Figure 4.
[29] *See General Permit*, Part I.B.2(e)(iii).
[30] *Id.*
[31] *Id.*
[32] *Id.*
[33] *October SWMP*, at 3-3.

The General Permit makes clear that it does not authorize discharges prohibited under 40 C.F.R. Section 122.4, including "discharges not in compliance with the state's antidegradation policy."[34] In turn, 314 CMR 4.04(1) requires that "in all cases existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." The CWA clearly establishes that under no conditions may a State authorize a discharge that results in the degradation of an existing use of a receiving waterbody. The U.S. Supreme Court has recognized that State antidegradation implementation shall, *at minimum*, maintain existing instream water uses and the water quality necessary to protect such uses.[35] The Supreme Court affirmed EPA's determination that "no activity is allowable . . . which could *partially or completely* eliminate any existing use."[36] In the present case, the permittee has failed to show, and EPA and DEP have failed to ensure, that existing uses will be maintained and protected with the permittee's stormwater discharge.[37]

IV. The NOIs Submitted by the DCR Fail to Provide Sufficient Information to Meet the Requirements Set Forth by the General Permit, and State and Federal Stormwater Regulations.

A. DCR's Lands and Roadways Discharge into Impaired Waterbodies and Therefore It Must Treat these Waterbodies as a Priority and Indicate How Stormwater Controls will be Implemented in These Areas.

The DCR manages recreation and conservation lands and parkways that discharge into waterbodies listed as impaired by the Commonwealth of Massachusetts, including the Charles River, the Mystic River and the Neponset River. Accordingly, "more aggressive storm water strategies" are merited.[38] Section IX of the General Permit further requires that permittees identify discharges to both public water supplies and impaired segments as well as other resource areas as a priority, and indicate how stormwater controls will be implemented in these areas. DCR's proposed BMPs in this area (p. 3-14) are inadequate in that they lack the requisite specificity. DCR should amend its plan to provide for a specific schedule that commits to taking

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[34] *General Permit*, Part I.B.2(i).
[35] PUD No. 1 v. Washington Dep't of Ecology, 511 U.S. 700, 718 – 19 (1994).
[36] *Id.* (emphasis added); *see also* Advance Notice of Proposed Rulemaking, 63 Fed. Reg. 36,742, 36, 781 (proposed July 7, 1998) (to be codified at 40 C.F.R. Part 131):

> Section 131.12 (a)(1) of the antidegradation policy contained in the water quality standards regulation requires that existing uses and the water quality necessary to protect them be maintained and protected. *This provision, in effect, establishes the floor of water quality in the U.S.* It also protects the environment where the existing use of a water body happens to be better than the use designated by the State or Tribe. An existing use as defined in 40 C.F.R. 131.3 can be established by demonstrating that a use has actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur, whether or not such uses are designated uses for the water body in question. *All waters of the U.S. are subject to tier 1 protection*. [emphasis added].

[37] 314 CMR 4.04.
[38] *EPA Response*, at 6.

given actions at a particular time. Given that so many of DCR's discharges are into priority resource areas, DCR should develop a hierarchy within its priority plan. Finally, DCR should commit to funding project implementation on a schedule that is more aggressive than two projects per year.

B. All Small-MS4s Which Are State-owned, Located Within the Commonwealth of Massachusetts, and Controlled by DCR, Are Covered by the General Permit; Accordingly, DCR Must Submit Notices of Intent for All of its Small-MS4s.

All of DCR's small MS4s, and not just those within urbanized areas, are subject to the General Permit. Part I.B of the General Permit, entitled "Eligibility Criteria," states: "[t]his permit authorizes the discharge of storm water from small MS4s defined at 40 CFR § 122.26(b)(16). This includes small MS4s designated under 40 CFR §122.32(a)(1) and 40 CFR §122.32(a)(2)."[39]

Section 122.26(b)(16), which describes those small MS4s regulated by the General Permit, never refers to urbanized areas. Rather, it states that the separate storm sewers are (i) operated by United States, a State...., or other public body (created by State law) having jurisdiction over ...storm water and (ii) not defined as a large or medium municipal system. DCR is clearly a public body created by State law and its sewer systems are not large or medium. The third part of § 122.26(b)(16)[40] states that

> [t]his term includes systems *similar to* separate storm sewer systems *in municipalities*, such as systems at military bases, large hospitals or prison complexes, and highways and *other thoroughfares*. The term does not include separate storm sewers in very discrete areas, such as individual buildings. (emphasis added).

Thus, the plain language of Section 122.26(b)(16) indicates that separate storm sewer systems not in urbanized areas are covered under the General Permit.

Furthermore, the General Permit states in the second sentence of Part I.B.1. that the definition of 122.26(b)(16) "includes" the small MS4s designated under 122.32(a)(1)[41] and (2)[42] (referring to MS4s that are in "urbanized areas" and "designated by the NPDES permitting authority," respectively). But, the General Permit is clear that the definition of MS4s is not limited to these two sections. Thus, the General Permit's definition of a covered "small MS4" does not include a requirement to be in an urbanized area.

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[39] *General Permit*, Part I.B.

[40] This exact language is reiterated in the General Permit under the definition heading that "[s]mall municipal separate storm sewer system means all separate storm sewers that are," and subsection (c) of this heading. *See General Permit*, Part I.B.

[41] Section 122.32(a)(1) refers to small MS4s that are in "urbanized area as determined by the Decennial Census by the Bureau of the Census."

[42] Section 122.32(a)(2) refers to small MS4s that are "designated by the NPDES permitting authority."

Finally, as the Department of Conservation and Recreation is a State entity that owns small MS4s within the Commonwealth of Massachusetts, it is subject to Part IV of the General Permit. Part IV is entitled "NON-TRADITIONAL SMALL MS4- STORM WATER MANAGEMENT PROGRAM." The General Permit explicitly states that Part IV "covers federal, county, or state owned small MS4s located in any of the areas described in Part I.A. of this permit." In turn, Part I.A states that the "(a)rea of coverage" includes "[the] Commonwealth of Massachusetts." Thus, all of DCR's small MS4s that are state-owned and located within the Commonwealth of Massachusetts are covered by Part IV of the General Permit.

In sum, for the purposes of coverage under the General Permit, a "small MS4" is not defined as a separate storm system within an urbanized area but rather a storm system similar to a "municipal" storm system. If a "small MS4" is state-owned and is within the area of coverage (i.e. the Commonwealth), then it is covered by the Non-Traditional MS4 section (Section IV) of the General Permit. Accordingly, since DCR's properties and the MS4s contained therein are state-owned and located within the Commonwealth of Massachusetts, DCR must submit Notices of Intent for all of its small-MS4s.

We understand from verbal communications on August 8, 2005, and again in early September, that EPA does not agree with our interpretation and was planning to issue a written opinion on this issue. However, we are not aware of any written determination at this time. We look forward to a clarification of EPA's view on this issue.

V. DCR Should Incorporate Principles of Low-Impact Development Throughout Its Stormwater Management Plan and NOI.

As Massachusetts is entering an era of increasing pressure on its water resources, low-impact development ("LID") techniques should clearly be the stormwater management tool of choice. LID techniques reduce runoff at the source through on-site filtration controls that mimic predevelopment hydrology by decreasing impervious surface areas and promoting infiltration and storage of runoff on site, as opposed to conveying and treating stormwater at large, expensive end-of-pipe facilities, which ultimately leads to the depletion of water supply. The widespread adoption of LID techniques by DCR is important both from an environmental perspective, given DCR's extensive holdings, and from an educational perspective; DCR incorporation of LID techniques would serve to showcase these techniques to the many people using DCR parks and properties. Further, EPA has recommended application of LID principles and techniques to the management of stormwater and polluted runoff, and has aggregated a large quantity of information on LID.[43] We are aware that EOEA, DEP and DCR are all seeking to promote LID as well. However, we feel that an aggressive strategy to incorporate LID techniques throughout DCR's stormwater management system would be the best way to promote these techniques.

In its amended SWMP and NOI, DCR has incorporated LID principles and techniques into several of its BMPs. For this, DCR should be commended. Though DCR's efforts in this

[43] *See* Environmental Protection Agency, Low-Impact Development Page, *at* http://www.epa.gov/owow/nps/lid/ (last visited November 15, 2005).

direction are positive developments, DCR should go much further to incorporate LID principles and techniques into its SWMP and NOI. DCR currently proposes to incorporate LID techniques through several BMPs under MCM 5. In BMP 5-2, DCR proposes the creation of a Storm Water Handbook with design criteria for highway and facility projects, including criteria for LID practices.[44] In BMPs 5-5 and 5-6, DCR proposes demonstration projects at Silver Lake that will use LID techniques such as porous paving materials and the addition of landscaped areas to retain storm water.[45] Though a good start, this limited application of LID is inadequate, as LID principles and techniques should be incorporated into *all* aspects of stormwater management.

Other areas in which DCR could incorporate LID include MCMs 1 (Public Education and Outreach) and 6 (Pollution Prevention/Good Housekeeping), which would both benefit from the application of LID techniques. For MCM 1, such techniques could include public education programs and posts on the DCR website. As the Massachusetts Executive Office of Environmental Affairs already has an informative website on LID, the DCR website simply could include a link to the EOEA site.[46] For MCM 6, techniques could include plans and procedures to apply LID development techniques to DCR facilities. For example, DCR could commit to replacing certain portions of its impervious paving areas with porous paving, or to adding vegetated buffers in order to reduce surface runoff to its water bodies. Additionally, before spending scarce resources to replace pipes, DCR should consider LID alternatives, which are often cheaper, to such traditional sotmrwater infrastructure.

In sum, DCR has made a good start in beginning to implement principles of LID in its stormwater management programs. CLF and CRWA encourage this effort, but urge DCR to go much further in its incorporation of LID throughout its SWMP.

VI. DCR Must Amend Its Best Management Practices and Measurable Goals in Order to Comply with the Six Required Minimum Control Measures.

A. The NOIs Submitted by DCR Must be Amended to Include Appropriate BMPs, Measurable Goals, and, Where Appropriate, Interim Milestones.

Phase II requires small MS4 operators to identify BMPs for each of the six required control measures, measurable goals for each BMP, and a schedule for expected implementation, including, where appropriate, the months and years in which operators will undertake required actions, and "interim milestones and the frequency of the action."[47] 314 CMR 3.02 defines

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[44] *October SWMP*, at 2-25.
[45] *Id.* at 2-26.
[46] Massachusetts Executive Office of Environmental Affairs, Low-Impact Development, *at* http://www.mass.gov/envir/lid/default.htm (last visited November 15, 2005).
[47] See 40 C.F.R. §122.34(d)(1), which states:

> In your permit application (either a notice of intent for coverage under a general permit or an individual permit application), you must identify and submit to your NPDES permitting authority the following information . . . (i) The best management practices (BMPs) that you or another entity will implement for each of the storm water minimum control measures at paragraphs (b)(1) through (b)(6) of this section; [and], (ii) The measurable goals for each of the BMPs including, as

BMPs as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the Commonwealth. BMPs include treatment requirements, operating procedures, structures, devices, and/or practices to control plant site runoff, spillage, or leaks, sludge or waste disposal, or drainage from raw material storage." EPA states that "[m]easurable goals, which are required for each minimum control measure, are intended to gauge permit compliance and program effectiveness."[48] EPA provides a complete guidance for defining and selecting measurable goals on its website.[49] EPA has provided "appropriate measurable goals" as guidance for each of the six required control measures in their "Stormwater Phase II Compliance Assistance Guide" (March 2000). EPA recommends that the permittee include specific information about when each element of each individual control measure will be implemented, and what specific program or compliance goals are anticipated. For example, EPA provides four "Appropriate Measurable Goals" for complying with the requirements of Minimum Control Measure ("MCM") 1 ("Public Education"). Two of the four identify specific compliance rate and program performance percentages.[50] EPA makes similar recommendations for the other five minimum control measures.[51]

B. Minimum Control Measure 1: Public Education and Outreach

For this MCM, DCR has listed nineteen Best Management Practices ("BMPs"), which propose a variety of programs, including cleanups, educational programs, and a website. At the

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> appropriate, the months and years in which you will undertake required actions, including interim milestones and the frequency of the action.

[48] *See* ENVIRONMENTAL PROTECTION AGENCY, STORMWATER PHASE II COMPLIANCE ASSISTANCE GUIDE (March 2000) [hereinafter *Stormwater Compliance Assistance Guide*].

[49] Environmental Protection Agency, Measurable Goals Guidance for Phase II Small MS4s, *at* http://cfpub.epa.gov/npdes/stormwater/measurablegoals/index.cfm (last visited November 29, 2005). According to EPA's guidance:

> Measurable goals are described in the Phase II rule as BMP design objectives or goals that quantify the progress of program implementation and the performance of your BMPs. They are objective markers or milestones that you (and the permitting authority) will use to track the progress and effectiveness of your BMPs in reducing pollutants to the MEP. EPA recommends that you develop a program with a variety of short- and long-term goals. At a minimum, your measurable goals should contain descriptions of actions you will take to implement each BMP, what you anticipate to be achieved by each goal, and the frequency and dates for such actions to be taken. Also, EPA recommends that you use your BMPs and measurable goals to help establish a baseline against which future progress at reducing pollutants to the MEP can be measured. For example, information on current water quality conditions, numbers of BMPs already implemented, and the public's current knowledge/awareness of storm water management would be useful in setting this baseline.

Id.

[50] For example, "certain percentage of restaurants no longer dumping grease" or "certain percentage reduction in litter or animal waste detected in discharges." *See Stormwater Compliance Assistance Guide*, at 4-22.

[51] For example, under MCM 3 ("Illicit Discharge Detection and Elimination"), appropriate measurable goals for Year 2 include: ordinance in place; training for public employees completed; a certain percentage of sources of illicit discharges determined. Appropriate measurable goals for Year 3 include: A certain percentage of: illicit discharges detected; illicit discharges eliminated; and households participating in quarterly household hazardous waste special collection days. *See Stormwater Compliance Assistance Guide*, at 4-29.

outset, we note that this public education and outreach MCM is targeted at stormwater, and the educational programs and activities cited in this section should all have a stormwater component rather than simply a general focus on water resources.

While many of the listed BMPs are commendable, DCR fails to propose a unified program in coordination with the Massachusetts Executive Office of Environmental Affairs, as recommended by EPA.[52] Each of the individual programs is useful, but they do not contain "a unified educational message."[53] Such a message could address "elements relevant to the user public at state park facilities....[such as], where appropriate, control of pet waste, littering, and erosion of bike riding."[54] Additional appropriate measures could include the posting of stormwater outfalls in priority areas (including swimming beaches); using existing movable electronic signboards to post information, especially during wet weather (e.g. "reduce flooding: keep catch basins clean"); and supporting the creation of stormwater education public service announcements for television and radio.

C. Minimum Control Measure 2: Public Participation/Involvement

Under MCM 2, the terms of the General Permit require that "[t]he permittee must provide opportunity for the public to participate in the implementation and review of the storm water management program."[55] To this end, DCR has proposed eight BMPs, but its proposal ultimately falls short in providing adequate opportunities for public participation and involvement. Of the eight BMPs presented, BMP 2-3 ("Public NPDES Meetings to Discuss Annual Report") is the only one aimed at directly involving the general public in the implementation and review of the stormwater management program.[56] That BMP, however, is overly general in describing the format and the specific involvement of the public. DCR should clarify the purpose and format of the meetings, and should further provide additional forums for public involvement.

An example of a BMP that could be more fully exploited to provide for public involvement is BMP 2-6 ("DCR Stewardship Council"). As it stands, DCR lists as the measurable goal to "[l]ook for opportunities to use this forum to provide public participation and interaction for this permit on an agency wide basis."[57] DCR should identify and specify what these opportunities are, in order that the public is involved as soon as possible. For example, DCR's SWMP and its annual reports should be sent to the Stewardship Council. Further, stormwater management should be on the Stewardship Council's agenda at least twice per year (especially during budget discussions).

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[52] Letter from Linda Murphy, Director, Office of Ecosystem Protection, Environmental Protection Agency, to Stephen R. Pritchard, Acting Commissioner, Department of Conservation and Recreation 7, 10 (May 12, 2005) [hereinafter *EPA Letter*].
[53] *Id.* at 7.
[54] *Id.* at 10.
[55] *General Permit*, Part II.B.(2)(a).
[56] *October SWMP*, at 2-10.
[57] *Id.* at 2-11.

BMP 2-1 states that the MOU provides that the parties will not take legal action provided that "the DCR maintains a strong commitment to its stormwater management program."[58] In order to accurately reflect the MOU, this sentence should continue "and complies with the terms of the MOU."

D. Minimum Control Measure 3: Illicit Discharge Detection and Elimination

In the latest revision to the SWMP and NOI, DCR has made vast strides in complying with the terms of MCM 3. In particular, the revised version of BMP 3-5 ("Illicit Connection Sampling Program") is a great improvement over the previous version, with detailed discussion of DCR's IDDE procedure. The timeline of BMP 3-5, however, is troubling. According to the BMP, DCR will implement its IDDE program in four phases.[59] Phase I will involve mapping the storm sewer infrastructure, and Phase II will involve prioritization of the drainage area and outfalls for illicit discharge review.[60] The problem with the timing lies in the fact that Phase II will not begin until Permit Year 4, and actual detection will not start until this prioritization list is complete.[61] While this would not prove as much of problem if DCR had an interim plan for detection in place, DCR has no such plan and, accordingly, does not intend to begin any actual detection until Permit Year 4. This is unacceptable. In order for DCR to remedy this deficiency, it must either begin detection of illicit connections much sooner in its permitted term, or it must institute an interim plan for detection until it is able to implement its finalized process. Additionally, IDDE staff should be trained to look for and identify "bacterial plaque," which is buildup that can be the result of persistent intermittent sanitary flows.

The drainage inventory referenced under BMP 3-1 should be made public. DCR should post an interactive map on the stormwater web page with a link for the public to report problems. In addition, under the illicit drainage connection policy referenced in BMP 3-3, DCR should commit to removing connections and then collecting a fee; programs in many municipalities have discovered this as the only effective method to get connections removed.

We also recommend that DCR choose a greater frequency for the mailed flyers in BMP 3-6 ("Illicit Discharge Flyers"). Currently, DCR proposes to mail informational flyers to the public every two years.[62] We believe that a frequency of one year is more appropriate, especially given the constant influx of new residents to Massachusetts. Additionally, under BMP 3-7, the Standard Operating Practice for new stormwater tie-ins should be more comprehensive, requiring a Construction Site Runoff Control Plan, and a Post Construction Runoff Control Plan (including a maintenance schedule), requiring clean-out of catch basins that are impacted by construction activities, requiring LID, and minimizing new discharges.

E. Minimum Control Measure 4: Construction Site Runoff Control

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[58] *Id.* at 2-9 – 2-10.
[59] *Id.* at 2-16.
[60] *Id.* at 2-16 – 2-17.
[61] *Id.* at 2-17.
[62] *Id.* at 2-20.

Under MCM 4, DCR has proposed eight BMPs to implement the goal of construction site runoff control. These BMPs, however, fail to address several issues raised by EPA in its May 12, 2005 letter to DCR. For one, DCR has not directly addressed EPA's requirements for an enforceable regulatory mechanism to require erosion and sediment control at all sites.[63] The closest DCR gets to this requirement is in two of its BMPs. In BMP 4-1, DCR commits to review all future projects and submit all NOI permit applications for projects that disturb more than one acre.[64] In BMP 4-4, DCR proposes staffing each construction project with a Resident Engineer or an Inspector.[65] These proposed BMPs, however, do not offer any details as to enforcement or sanctions for non-compliance with the requirements. EPA has stated this concern prior to the amended SWMP,[66] and additionally notes the concern that DCR does not provide for receipt and consideration of information submitted by the public.[67] DCR must address and correct these shortcomings, and must state in measurable goals how it plans to comply with EPA's requirements. Further, DCR should ensure that all projects tying into DCR's system comply with the construction site runoff control requirements.

F. Minimum Control Measure 5: Post-Construction Runoff Control

Although DCR appears to have met many of EPA's and the General Permit's requirements in this area, there are a few major deficiencies. First, as mentioned by EPA, DCR neglects to "propose a regulatory mechanism to address post-construction runoff or to describe procedures to ensure long-term operation and maintenance of BMPs."[68] In short, DCR must describe an enforceable regulatory mechanism for post-construction runoff control. Further, all entities seeking to tie into DCR's system should be required to comply with the post-construction runoff control requirements.

Second, as was noted above, DCR should work to incorporate LID more uniformly and consistently throughout its proposed BMPs. The demonstration projects noted in BMPs 5-5 and 5-6 are a positive development,[69] and DCR is to be commended for this effort. However, the two demonstration projects cited appear to have begun well before the submission of this plan. Accordingly, the plan should identify additional LID projects that will be implemented under this plan. In any event, LID should not be limited to such discrete, educational demonstrations. Rather, LID should be at the core of all proposals that aim to manage polluted stormwater runoff.

G. Minimum Control Measure 6: Pollution Prevention/Good Housekeeping

EPA commented that DCR's proposals were missing inspection procedures and schedules for long-term structural controls,[70] but DCR has since amended its BMPs to address this requirement. Since DCR has yet to develop an agency-wide policy on street sweeping, it must adopt more stringent interim standards. The current schedule of sweeping parkways once

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[63] *EPA Letter*, at 8.
[64] *October SWMP*, at 2-22.
[65] *Id.* at 2-23.
[66] *EPA Letter*, at 8.
[67] *Id.*
[68] *Id.* at 8 – 9.
[69] *October SWMP*, at 2-26.
[70] *EPA Letter*, at 9, 11 – 12.

every two months is entirely inadequate and out of step with the practices of municipalities in the areas of DCR's urban system. This is especially important given the ongoing problems with leaves and debris clogging drains and catch basins. DCR should sweep parkways at least once every two weeks, and more frequently in the spring to collect sand built up over the winter, as well as in the fall to collect leaves.

Other BMPs do appear to be effective, including BMP 6-13, the Roadway and Drainage Infrastructure Assessment; BMP 6-14, the Catch Basin Repair/Discharge Pipe Cleaning Needs Assessment; and BMP 6-17, the Maintenance Tracking System.

VII. DCR Must Amend Its Proposed BMPs for Discharges to Water Quality Impaired Waters and Waterbodies with an Approved TMDL.

While DCR has identified impaired waters to which it is discharging, it does not "specifically identify control measures and BMPs that will collectively control the discharge of the pollutants of concern," as required under Part I.C of the General Permit. Only two actions are listed. The first, ensuring that new construction and redevelopment projects comply with the DEP Stormwater Management Policy and the future Handbook, does not address the existing, serious problems. The second, to continue to identify outfalls and develop appropriate measures to address pollution, is not sufficient. The lack of any specific control measures or control plans is unacceptable. This must be made a major priority of DCR. Specific outfalls are already known to be contributing impairments. For example, drains into Leverett Pond and the Riverway (Muddy River) are contributing sediment loads. DCR should already be undertaking strategies to reduce these pollutant loads.

Additionally, Section 3.6 of the SWMP ("Discharge to Waterbodies with an Approved TMDL") fails to include the Neponset TMDL for Bacteria, which was approved by EPA in 2002.[71]

VIII. Conclusion.

DCR's amended NOI is a vast improvement over its July 30, 2003 NOI. DCR has described most of its BMPs in more detail, amended its BMPs to include more measurable goals, and added BMPs to comply with the requirements of the MCMs. For these amendments, DCR should be commended. There are still, however, several deficiencies in DCR's SWMP and NOI that must be corrected. These include a failure to specifically address pollutants of concern, a failure to adequately prioritize and develop a plan for priority resource areas, a lack of robust implementation of LID, a lack of measurable goals for several BMPs, a lack of public participation opportunities for some MCMs, and failures to discuss enforcement mechanisms and sanctions for the construction and post-construction MCMs. In order to ensure that its NOI meets the requirements of the CWA, the General Permit, and the underlying regulations, DCR must amend these deficiencies.

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[71] MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, TOTAL MAXIMUM DAILY LOADS OF BACTERIA FOR NEPONSET RIVER BASIN (May 31, 2002). The TMDL report was approved by EPA on June 21, 2002.

Sincerely,

Carol Lee Rawn (dga)

Carol Lee Rawn
Conservation Law Foundation

Kate Bowditch (dga)

Kate Bowditch
Charles River Watershed Association

cc: Stephen Burrington, DCR
Tom LaRosa, DCR
Nicholas Vontzalides, DCR
Robert Lowell, DCR
Mary Griffin, EOEA
Kathleen Woodward, EPA
Linda Murphy, EPA
David Webster, EPA
David Gray, EPA

The TOWN OF DEDHAM
COMMONWEALTH OF MASSACHUSETTS
CONSERVATION COMMISSION

February 15, 2006

Mr. David J. Gray, P.E.
Office of Ecosystem Protection
U.S. Environmental Protection Agency, Region 1
1 Congress Street, Suite 1100 (CIP)
Boston, MA 02114-2023

RE: Response to Public Notice MA-014-06; MS4 General Permit, Massachusetts Highway Department (MassHighway)

Dear Mr. Gray:

The Dedham Conservation Commission is pleased to provide comment on MassHighway's Notice of Intent, pursuant to their seeking a General Permit for Storm water discharge from Municipal Separate Storm Sewer Systems.

The Commission has recent experience with MassHighway, under the Wetlands Protection Act procedures for a portion of the so called Route 128 Add-A-Lane Project.

The Commission originally assumed that MassHighway would take the opportunity, given the extent of the Route 128 rebuilding project, to comply with MS4 General Permit design requirements to reduce the discharge of pollutants to the maximum extent practicable.

Unfortunately, MassHighway took the position that the MS4 Program was unrelated to the Wetlands Protection Act, foregoing any opportunity to measurably improve the discharge water quality to receiving waters. Accordingly, the Commission urges EPA to require MassHighway to significantly "beef-up" its commitment to provide BMPs under Minimum Control Measures 5 and 6, as they relate to compliance with Massachusetts' Water quality Standards, 314 CMR 4.00.

The Add-A-Lane public hearing process allowed the Commission to conclude that MassHighway had little understanding, or concern, of the project's impact to the Class B standards of Dedham waters to which it was discharging.

As you are undoubtedly aware, the Class B standards for solids (which are generated in significant quantities from usage of roadways), require the receiving waters to be free from floating, suspended and settleable solids in concentrations and combinations that:
(1) would impair any use assigned to Class B waters.
(2) would cause aesthetically objectionable conditions
(3) would impair the benthic biota or
(4) degrade the chemical composition of the bottom.

26 Bryant Street, P.O. Box 306, Dedham, MA 02027-0306 Phone (781) 751-9210 Fax (781) 751-9109

Field inspections that the undersigned conducted under the Wetlands Protection Act process indicated existing violations of Class B standards for solids. The aesthetically objectionable discharge areas were cluttered with everything from cigarette butts, candy wrappers, banana peels, to soiled diapers, all derived presumably from occupants of motor vehicles using the roadway system draining to the observed discharge locations.

Nevertheless, MassHighway would only agree to installation of floatables traps within catch basins on portions of the roadway being upgraded, when the roadway directly abutted areas of commercial development.

Accordingly, we urge the EPA to require MassHighway, in all instances to (1) identify the use classification of the receiving waterbody, (2) to recognize the impacts attributable to construction, usage, and maintenance of its infrastructure, and to (3)emplace BMPs that would not allow violations of the applicable standards to occur.

These requirements should certainly run to maintenance of MassHighway's roadway system. In the recent Add-A-Lane hearing process, we were advised that Mass Highway had significantly reduced the quantity of sand used during winter snow and ice operations. This was to avoid the costs associated with cleaning of accumulated sediments within catch basins and pipe systems. As a result, highway sweeping along Route 128 was not accomplished in 2003, 2004 or 2005. (Presumable, everything else deposited upon the highway system was washed through to the receiving waters, rather than being swept up.)

A representative of MassHighway conceded that salt usage was up significantly as a result of the decision to use less sand for ice control. Salt (sodium chloride) usage by MassHighway is of significant concern to the Commission and to the purveyor of water in our community, the Dedham Westwood Water District.

The District maintains that the excessive use of salt by MassHighway is adversely affecting the quality of its product, in both high levels of sodium and chlorides.

The Commission also is concerned that the excessive usage of salt by MassHighway constitutes a violation of Class B water quality standards within the receiving waters in the Town of Dedham.

The Commission believes that MassHighway's intractable position on exclusive usage of sodium chloride (at even higher levels to save on maintenance costs) violates the Anti-Degradation Provisions of Massachusetts' Surface Water Quality Standards.

Observations by the undersigned at outfall locations from MassHighway facilities indicate significant changes in the benthic communities and fisheries populations. The salt content of the receiving waters clearly limits their suitability for irrigation or agricultural uses.

Accordingly, the Commission urges EPA to require MassHighway to address alternatives to the usage of sodium chloride for roadway maintenance purposes, particularly, as in the case of Dedham, where discharge to water courses is subsequently recharged to underlying aquifers in use for water supply purposes.

Finally, let me note that the Commission has reviewed the joint December 1, 2005 comment letter of the Conservation Law Foundation and the Charles River Watershed Association, relative to MassHighway's Notice of Intent for coverage under the MS4 General Permit.

The Commission urges the EPA to embrace the comments and suggestions made therein, as our experience indicates MassHighway to be, even in this day of environmental awareness, narrowly focused, and needing "encouragement" to design and operate their facilities in a more environmentally respectful fashion.

For the Dedham Conservation Commission

Donald A. Yonika
Conservation Agent

26 Brvant Street. P.O. Box 306. Dedham. MA 02027-0306 Phone (781) 751-9210 Fax (781) 751-9109

MYSTIC RIVER WATERSHED ASSOCIATION
20 ACADEMY STREET, SUITE 203
ARLINGTON, MA 02476

December 1, 2005

Stephen S. Perkins, Director
Office of Environmental Stewardship
United States Environmental Protection Agency
One Congress Street
Boston, MA 02114

RE: MassHighway
NPDES Storm Water Management Plan

Dear Mr. Perkins:

The Mystic River Watershed Association (MyRWA), a grassroots organization dedicated to the protection and restoration of the Mystic River, its tributaries and related natural resources throughout the watershed's 21 communities, submits the following comments on the NPDES Notice of Intent and Stormwater Management Plan (SWMP) for the Massachusetts Highway Department (MassHighway).

The preparation of the SWMP is an important step in protecting, maintaining, and upgrading the stormwater management infrastructure associated with MassHighway's network of roadways. Their proper upkeep is critical to protecting downstream water quality and quantity. Within the heavily urbanized Mystic River Watershed, the MassHighway owns several major roadways, including Route 2, Interstate 93, and Interstate 95. These roadways often cross or parallel major waterbodies.

We recommend that MassHighway increase its illicit connection sampling program beyond the noted twenty discharges per year. The total number of dry weather flows has not yet been identified. If a large number of dry weather flows are discovered, it may take a long period of time to investigate each of them. Perhaps inspecting a percentage (20 percent) of dry weather flows identified per year would be a better metric.

MassHighway owns many local "highways" that are located in densely populated areas and are more characteristic of local roadways than interstate highways (for example, portions of Route 2A in Arlington). These roads have higher sediment loadings, additional debris, and are located immediately adjacent to residential, commercial, and industrial uses. It is not clear whether MassHighway is responsible for inspection and maintenance of these roadways, or whether local municipalities have this responsibility. If the latter is the case, then MassHighway should have a

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PHONE: 781-316-3438 • FAX: 781-641-2103 • EMAIL: GIPERREZ@EARTHLINK NET

formal agreement with each municipality to perform such services.

While inspection and maintenance frequencies do vary, we recommend that MassHighway adopt minimum inspection and maintenance timelines for each type of stormwater management element. For example, catch basins should be cleaned annually, with catch basins in critical areas or subject to higher loadings cleaned more frequently. The plan should also identify typical inspection and maintenance routines for best management practices, such as detention ponds, that are now being constructed as part of new highway projects. In addition, the plan should commit to the use of Low Impact Development techniques, such as bioretention and vegetated swales, wherever feasible to filter and infiltrate stormwater.

Thank you for the opportunity to comment.

Sincerely,

Nancy Hammett

Nancy Hammett
Executive Director

Cc: Luisa Paiewonsky, Commissioner, MassHighway

MYSTIC RIVER WATERSHED ASSOCIATION
20 ACADEMY STREET, SUITE 203
ARLINGTON, MA 02476

December 1, 2005

Stephen S. Perkins, Director
Office of Environmental Stewardship
United States Environmental Protection Agency
One Congress Street
Boston, MA 02114

RE: Department of Conservation and Recreation
NPDES Storm Water Management Plan

Dear Mr. Perkins:

The Mystic River Watershed Association (MyRWA), a grassroots organization dedicated to the protection and restoration of the Mystic River, its tributaries and related natural resources throughout the watershed's 21 communities, submits the following comments on the NPDES Notice of Intent and Stormwater Management Plan (SWMP) for the Massachusetts Department of Conservation and Recreation (DCR).

The preparation of the SWMP is an important step in protecting, maintaining, and upgrading the stormwater management infrastructure associated with the DCR's system of state parks, forests, parkways, beaches, and other facilities. The proper upkeep of these areas and their infrastructure is critical to protecting downstream water quality and quantity.

Within the heavily urbanized Mystic River Watershed, the DCR holdings immediately adjacent to the Alewife Brook, the Mystic River, and the Aberjona River provide open space, habitat, and recreational space, creating a relatively uninterrupted buffer zone that protect and enhance each waterway. An intricate system of parkways traverse these buffer zones, with road runoff often discharged directly into the adjacent waterways. The proper maintenance of these roadways helps to protect both the buffer areas and waterways.

We also note that the DCR owns and maintains a significant amount of open space within the watershed, including large holdings such as the Middlesex Fells Reservation and Alewife Brook Reservation.

We have the following comments on the DCR's SWMP:

Public Education and Outreach

BMP 1-2: Lower Charles River Middle School Educational Program. We recommend that the DCR expand this program to include communities in the Lower Mystic River Watershed

20 ACADEMY STREET, SUITE 203 • ARLINGTON, MA • 02476
PHONE: 781-316-3438 • FAX: 781-641-2103 • EMAIL: GIPERE2@EARTHLINK.NET

(Somerville, Everett, Malden, Chelsea, Cambridge). Many of these areas are environmental justice communities where children have limited access and exposure to the watershed resources located so nearby.

BMP 1-3: Catch Basin Stenciling/Plaques. As many of the DCR's parkways are located in critical areas adjacent to waterways, are subject to heavy vehicular and pedestrian traffic, and also contain commercial, industrial, and residential uses adjacent to the roadways, we recommend that the catch basin stenciling program be expanded to include the DCR's parkway systems. Where feasible, stenciling can be performed by students or other volunteer groups. For example, the Tufts WaterWatch group has done volunteer stenciling within the City of Somerville.

BMP 1-6: Speed Limit Signs
MyRWA recommends these BMPs be implemented within the Mystic River basin, in addition to the Lower Charles River basin.

BMP 1-8: Charles River Conservancy Clean Up Program.
We encourage the DCR to sponsor one of our seasonal Mystic River clean-ups. MyRWA typically performs two cleanups along the Lower Mystic in conjunction with the City of Somerville. We note that DCR has been instrumental in our previous success by providing in-kind services (such as trash removal) for these clean-ups. This should be formally noted within the SWMP.

BMP 1-9: Charles River Reservation School Program.
This program could easily be implemented in Mystic River watershed schools in conjunction with BMP 1-2. DCR may be able to team up with the City of Everett to provide boat tours of the lower Mystic Basin.

Public Participation/Involvement

BMP 2-1: Formalize Partnerships with CRWA and CLF.
MyRWA would welcome the opportunity to partner with DCR, and looks forward to exploring specific opportunities.

BMP 2-2: Water Quality Monitoring.
MyRWA has a well-established volunteer water quality monitoring program, than includes monthly baseline monitoring at 10 fixed sites and monthly "hot spot" monitoring at different sites each month. In addition, we are adding the capability to do wet weather and timely follow-up monitoring for bacteria with the purchase of laboratory equipment funded by a CZM grant. We would welcome the opportunity to explore a collaborative approach to monitoring with the DCR, which at a minimum might include sharing monitoring results and further might include coordinated monitoring at locations affected by DCR properties.

BMP 2-4: Annual Newsletter to Members in Partnership and Friends Database
MyRWA would like to be included as an interested group in this database.

BMP 2-5: Storm Water Related Concerns Reported on DCR Web Page
Although this is one way to solicit information from the public, this BMP falls short of the EPA's recommended BMP of establishing a hotline. We recommend DCR place signage at parks and critical/highly visible outfalls to inform the public of the presence of such outfalls (as a public education BMP), and provide a phone number (such as a maintenance department), to report problems or concerns.

Additional BMP Recommendation:
DCR is a valuable partner in achieving MyRWA's goals of protecting and restoring clean water and related natural resources within the Mystic River basin. Because DCR owns extensive, sensitive lands within the watershed and its stormwater management efforts have a significant effect on the river's condition, we recommend the SWMP include plans for a formal relationship with local advocacy groups like MyRWA. Ideally, this would be in the form of a designated liaison appointed to act as a point person for our concerns.

Illicit Discharge Detection and Elimination

The SWMP should address one-time illegal dumping that can occur in DCR storm drains and on DCR property, in general. Although the storm drain marking BMP (BMP 1-3) partially addresses this, we would like to see, for example, DCR train its rangers to monitor for and deter illegal dumping. DCR could also partner with local police departments and the State Police to provide additional awareness on their parts during routine patrols of local parkways.

Construction Site Stormwater Runoff Control

BMP 4-1: NPDES Storm Water Construction General Permit
BMP 4-2: Contract Bid Item and Special Provisions
BMP 4-3: Construction Storm Water Pollution Prevention Plan (SWPPP) Template
BMP 4-4: Construction Site Monitoring
These BMPs should be a requirement for all projects located within a state-regulated resource area or its buffer zone, regardless of the size of the disturbance. Such smaller disturbances have greater risks of impacts to waterways, given their proximity immediately adjacent to them. These BMPs would enhance and ensure compliance with the MA DEP Stormwater Management Policy (BMP 5-1).

Post-Construction Site Runoff Control

BMP 5-2: DCR Storm Water Handbook. MyRWA will submit comments separately on the DCR Storm Water Handbook when the draft is completed.

BMP 5-4: BMP Long-Term Operation and Maintenance. MyRWA applauds DCR for committing $1.9 million dollars a year in their budget for drainage system operation and maintenance for the next three years. Nevertheless, there is no indication of whether this allocation is sufficient to cover the expenses of implementation of the SWMP. We are particularly concerned, given the State's history of underfunding DCR budget. We urge the DCR

to provide a comprehensive estimate of the funding required to meet the requirements of this plan.

Pollution Prevention/Good Housekeeping

BMP 6-18: Maintenance Activity Schedule. Table 5 provides a starting point for providing routinely scheduled maintenance activities of DCR stormwater management infrastructure. As more information is collected about the infrastructure through the implementation of this SWMP, site specific maintenance plans should be adopted based on proximity to resource areas, sediment loading, vehicular traffic, etc. This information could be added to the data included in the maintenance tracking system (BMP 6-17).

Additional Comments

1. DCR should address pet wastes within the SWMP. This could be in the form of public education, working with local municipalities, developing a pet waste collection program, and implementing a policy with fines for failure to pick up pet waste, if one is not already in place. Where kiosks are provided at public lands, information about pet waste should be provided.

2. The DCR should develop a comprehensive snow and snowmelt management program, in conjunction with DEP's Snow Management Policy. The program should address the use of deicers, including special provisions for sensitive areas, designated snow storage locations, particularly located away from resource areas and their buffers, as well as employee training.

3. Regarding BMP 7-6, Review of Drainage Outfalls which Drain to Impaired Waterbodies, we are concerned about relying on the "outfalls per receiving body" metric for prioritization purposes. For rivers, a modified metric of "outfalls per river mile" would provide a better picture and ensure that smaller rivers and tributaries are not overlooked. Nevertheless, such metrics should not be used as a substitute for site-specific investigations of water quality and environmental hazards associated with individual outfalls.

Thank you for the opportunity to comment.

Sincerely,

Nancy Hammett

Nancy Hammett
Executive Director

Cc: Stephen H. Burrington, Commissioner, DCR

Commonwealth of Massachusetts

RIVERWAYS PROGRAM

Building Partnerships, Protecting Rivers

1 December, 2005

Thelma Murphy
U.S. EPA
One Congress Street, Suite 1100 (CIP)
Boston, MA 02114-2023

Received
DEC 06 2005

Dear Ms. Murphy,

The staff of the Riverways Program has reviewed the Storm Water Management Plan, (SWMP) prepared by the Massachusetts Highway Department (MHD) as part of their NPDES Phase II compliance efforts. The NPDES program is an important tool in addressing the potential for degradation and unintended impacts from discharges into our waterways. The initial permitting of Phase II communities and areas will begin the important and challenging work of remediating and eventually eliminating nonpoint source pollutant impacts to our rivers, wetlands and coastal waters. Given the geographic range, carrying capacity, length, and stature of MHD and its roadways, their SWMP will not only determine the best management and other practices to be put in place by the agency, it will also serve as a benchmark for other Phase II permit holders.

We are pleased to see the recent efforts MHD has instituted to improve their roadways, construction practices and maintenance protocols. It is important to continue pro-active, innovative and preventive actions if real headway is to be made in restoring the water quality of our waterways and wetlands. The design manual and stormwater pollution prevention plans are critical documents in this effort and we hope MHD will revisit these manuals and protocols with some frequency to keep current with new technologies and research. MHD can be a leader in this respect and provide valuable guidance and demonstrations for other regulated entities.

As the SWMP indicates, the MHD roadways pass through numerous urban/ Phase II areas across the Commonwealth. The EPA Phase II guidance encourages cooperation and partnerships and we would urge MHD to increase its efforts to coordinate with Phase II communities. The proposed work affords many opportunities to increase joint efforts. For instance, the technical group established by MHD has central and regional Highway staff but there are neither representatives from Phase II communities nor individuals from the general public and advocacy groups. Both of these groups would be excellent partners as they have a direct connection to their local resource areas and can provide additional perspective on problems, approaches and challenges. We would strongly urge MHD consider having an expanded technical group or form an additional citizen's or technical advisory group which would allow local communities, NGOs and other concerned individuals to participate in a more prescribed manner. We also note

there are sections of highways not under the direct care of MHD and the caretakers of these roadways need to be involved in the planning and decision making so their efforts will meet and match MHD standards.

The MHD has instituted a number of in-house and outreach training programs as part of its compliance with the six minimum controls. These trainings are important tools to educate people not only on correct actions but also to explain the underlying reasons for improving how we manage, design, and maintain our roadways. In some instances training is being offered to MHD employees but it is unclear if these same trainings will be offered and even required of contractors and others. We would particularly like to see all concerns working on new construction or redevelopment be thoroughly trained in addition to all individuals charged with salt, sand and other deicing chemical application and handling. It is not stated but it appears MHD contracts out most of these services. Are all vehicles used in deicing, even those belonging to contractors, calibrated each season and inspected? If not, this should be a requirement of all contracts in addition to required training for applicators.

Also in relation to deicing, does the MHD manual address the loading of trucks with salt, sand or other chemicals? Given the activity in a yard during a storm, the traffic and the possibility of spills this aspect of deicing material management is significant. We would also like to encourage all deicing materials be covered if not placed within buildings. Sedimentation is a serious problem in many of our rivers- destroying important spawning, feeding and nursery areas and piles of sand in a yard increase the likelihood of increased sedimentation.

The new requirement for SWPPPs to be prepared as a part of all construction bids is admirable. We have received innumerable calls from advocates and seen many lapses in construction site good housekeeping, materials management and erosion control over the years. Having all contractors responsible for creating a sound prevention plan and adhering to all aspects of this plan is a huge gain. What is equally important is sufficient oversight of and incentives to follow the plans. While we understand the limited resources of state agencies, this is an important part of preventing problems in our waterways. We would like to see real penalties in place should a contractor fail to follow the SWPPP including dismissal for repeated or egregious noncompliance and a moratorium, of some length, from bidding on state contracts. Without oversight and penalties there will be less incentive to truly adhere to the plan.

We are pleased the MHD will require mapping on new and most redevelopment projects. We would like to know which redevelopment projects will not have to comply. We would also like to recommend the MHD mapping focus on priority areas when possible. We also find it unacceptable that there may be new discharges to impaired waters or sensitive receptors. Does MHD have an extensive alternatives analysis protocol in place to make sure all other possible methods are used to avoid any new discharges and especially new discharges to any outstanding or impaired water? We are especially concerned about any new or existing discharge which may adversely impact temperature regimes. The Commonwealth has lost many of its cold water

streams and most best management practices do little if anything to mediate temperature.

We would like to suggest an additional category be included on the Environmental Site Data Form. The State has three federal Wild and Scenic Rivers and two state designated Scenic Rivers. These are truly outstanding waters with important environmental and cultural characteristics and deserve additional consideration.

The work being done and proposed by MHD has many pro-active aspects but it does falter slightly in covering preemptive erosion control. We would like to see more language in construction bid packages and SWPPP requirements to prevent erosion as a hard and fast rule. This will be a cost effective approach since preventing erosion not only prevents impacts to receiving waters it also eliminates the need to remediate a problem.

It is unfortunate MHD is allowed to dispose of street sweepings on vegetated rights of way. Given the level of embedness seen downstream of outfalls, keeping street sweeping sands, silts and fines on site can only increase the load of sediment in runoff, decrease the time it takes to fill sumps, and increase the likelihood of suspension of fine grains into the air which may deposit in adjacent resource areas. We would, at a minimum, hope MHD explores alternatives to this practice including preventive measures and avoid depositing street sweepings near sensitive or impaired waters and wetlands.

Finally we would like to have MHD include their annual report on their web page. Interested individuals will be able to access it easily enhancing outreach and education efforts.

We appreciate the opportunity to participate in the review of the Massachusetts Highway Department's NPDES Phase II permitting. The work undertaken by MHD is critical in the State's efforts to curb nonpoint source pollution and the rigor of the SWMP will aid in these efforts.

Kind regards,

Cindy Delpapa
Riverways Program
617/626-1545

Western New England College
SCHOOL OF LAW

FACULTY OFFICES

Jamison E. Colburn
Associate Professor of Law
(413) 782-1439

December 1, 2005

DEC 0 6 2005

Received
DEC 0 6 2005

Thelma Murphy
U.S. Environmental Protection Agency
Mail Code CIP
1 Congress St., Suite 1100
Boston, Massachusetts 02114-2023

Subject: Massachusetts Highway Department NPDES Phase II MS4 Notice of Intent Public Notice Number: MA-004-06

Dear Ms. Murphy:

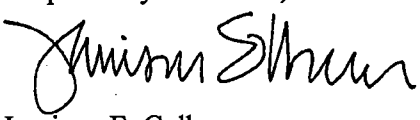
Having reviewed MassHighway's submitted Notice of Intent ("NOI") and the accompanying documentation, and Region I's MS4 general permit, I would like to request that EPA treat the MassHighway application to discharge as an individual NPDES permit. EPA has said that such petitions are welcome, *see* 40 C.F.R. § 122.28(b)(3)(i), but it has not specified so far as I am aware how they should be structured. Please accept this letter as my petition for an individual permitting process in this case and, as well, as my request for a public hearing in the matter of NOI No. MA-004-06.

EPA's duty under the Clean Water Act ("CWA") is to ensure that dischargers like MassHighway "reduce the[ir] discharge of pollutants to the maximum extent practicable, including management practices . . . and such other provisions as [EPA] determines appropriate. . . ." 33 U.S.C. § 1342(p)(3)(B). EPA's regulations provide that several grounds justify treating particular MS4 operators individually and I believe that this is an appropriate case. MassHighway's submitted NOI for the urbanized areas within the Connecticut River watershed demonstrate the magnitude of the potential for this discharger to negatively impact the receiving water bodies at issue. The Connecticut River between the Holyoke dam and the Connecticut state line (which falls within an applicable urbanized area) is a CWA § 303(d) listed water body. As such, it currently

requires a TMDL for suspended solids, among other pollutants. Without an individual permit for these discharges, the creation of any such TMDL—and the setting of appropriate load allocations and waste load allocations—will be exceedingly difficult. MassHighway's municipal separate storm sewer systems should constitute a "quantity" of pollutants that triggers the individual permitting option under 40 C.F.R. § 122.28(b)(3)(i)(G)(3).

Under the circumstances, it seems that EPA's obligation in administering the Clean Water Act is to regulate discharges like those MassHighway has reported in its Storm Water Management Program documentation and NOI the same way it regulates any other discharge with the potential to so significantly affect water quality in the receiving waters: through a CWA permit under CWA §§ 301 and 402.

Respectfully submitted,



Jamison E. Colburn
Associate Professor of Law

VIA EMAIL - 2/17/06
VIA USAS - 2/17/06 (POST) ✓

Mr. David P. Gray, P.E.
Office of Ecosystem Protection
U.S. Environmental Protection Agency, Region 1
One Congress Street, suite 1100, (CIP)
Boston, MA 02114-2023
gray.davidj@epa.gov

February 17, 2006

Re: Small MS4 Notice of Intent Submission by the Massachusetts Highway Department

Dear Mr. Gray:

As a citizen interested in improving the quality of the waters of Massachusetts I'd like to offer the following comments about the Massachusetts Highway Department Stormwater Management Plan ("MassHighway SWMP"). What concerns me most is the failure of the MassHighway SWMP to control the discharge of pollutants already known to cause impairment. The MassHighway SWMP fails to comply with the requirements of the NPDES General Permit for Stormwater discharges from Small Municipal Separate Storm Sewer Systems ("NPDES permit").

To comply with the NPDES permit the MassHighway SWMP must include a section describing how the program will control the discharge of "pollutants of concern" to impaired waters.[1] When I read the MassHighway SWMP there is no sense that any of the proposed control measures constitute a program to ensure that stormwater from highways does not contribute additional quantities of pollutants already known to cause violations of water quality standards to water bodies already identified as impaired.

All waters listed in "Category 5" in the *Massachusetts Year 2004 Integrated List of Waters* ("sec. 303(d) list") are impaired waters. Part I(C) of the NPDES permit requires that the SWMP include a section describing how the SWMP will ensure that stormwater discharges will not cause violations of water quality standards in these listed waters. The MassHighway SWMP addresses these discharges in Part 4.5 through:

- The development of an Environmental Site Data Form;
- The development of a Highway Runoff Contaminant Model;
- A Drainage Inventory in urban areas.

While each of these measures could improve water quality of stormwater discharges, they do not collectively *ensure* that discharges will not cause violations of water quality standards. This is because only one of the measures, the Drainage Inventory, addresses existing conditions.

The Environmental Site Data Form requires review of a road construction project for potential discharges to sec.303 (d) listed waters at the 25% design phase. The form only

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[1] Part I C. Discharges to Water Quality Impaired Waters

1. The permittee must determine whether storm water discharges from any part of the MS4 contribute, either directly or indirectly, to a 303(d) listed water body.
2. The storm water management program must include a section describing how the program will control the discharge of the pollutants of concern and ensure that the discharges will not cause an instream exceedance of the water quality standards. This discussion must specifically identify control measures and BMP's that will collectively control the discharge of the pollutant(s) of concern. Pollutant(s) of concern refer to the pollutant identified as causing the impairment

addresses planned conditions, so it cannot be viewed as a mechanism to ensure that current discharges meet permit condition.[2]

The Highway Runoff Contaminant Model will characterize the concentrations of a broad range of contaminants (e.g., nutrients, metals, hydrocarbons, and bacteria) found in highway runoff.[3] Modeling is not a substitute for control measures that ensure discharges will not violate water quality standards, which is what the NPDES permit requires.

This leaves is the Drainage Inventory as the mechanism to ensure that existing discharges comply with the permit. Part I(C) of the NPDES permit requires that the program will "identify control measures" that will collectively control the discharge of "pollutants of concern" to impaired waters. Unfortunately details about the drainage inventory are spread throughout the SWMP, making it difficult to draw conclusions about them. If the "Field Personnel Drainage Inventory Protocol" for BMP 3B and the "Drainage Inventory" for the IDDE program are elements of an integrated program this should be clarified. In order to comply with Part I(C) of the NPDES permit the program must:

- Identify drainage areas that contribute to impaired waters;
- Describe the control measures and BMP's that will control the discharge of pollutants of concern;
- Ensure that discharges do not cause violations of water quality standards.

MassHighway asserts that new programs are only proposed if the programs currently in place do not fully meet the minimum control measure requirements.[4] Control of discharges to impaired waters is an area where a new, more comprehensive, program is warranted because the minimum control measures in the SWMP fail to meet the NPDES permit requirements.

As a starting point if the program is to address discharges to impaired waters it must include all waters on the sec. 303(d) list; be they rural or urban waters. MassHighway must recognize that although jurisdiction of the Phase II Stormwater program was expanded to smaller *Municipalities* on the basis of location in an urban area, a state highway department is not a municipality. Part I (B)(1)(c) of the permit requires a "municipality" to be within urban area to be eligible for coverage. However, the NPDES permit distinguishes "highways and thoroughfares" as an independent category of MS4 for purposes of permit eligibility in the definitions that following Part I (B)(1). Part V, the "Transportation MS4 Storm Water Management Program" requirements of the NPDES permit are applicable to "state and county agencies who maintain roadways, highways and other thoroughfares," Part V makes no distinction between urban and rural areas, further reinforcing the view that ownership and control of "highways" is the criteria for inclusion of a discharge in the Phase II program and not location in an urban area.

Although a general permit is not a permit for each discharge point, unless the MassHighway SWMP makes a reasonable attempt to identify each discharge to a sec. 303(d) listed water and then describes the measures taken to ensure that those discharges do not violate water quality standards, it will not have met the requirements of the general permit. The piecemeal process for inventorying discharges to impaired waters described in the SWMP is not sufficient. The SWMP must include information about what pollutants the discharge contains,

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[2] The Environmental Site Data Form will also be employed for endangered species, historic property, TMDL, and priority resource area compliance. It would have been useful to see a draft version of the form attached to the MassHighway plan, as it will be used so heavily.

[3] MassHighway proposes to use the model to evaluate impacts to watersheds subject to TMDLs, although it seems it could also be used to evaluate the impact of highway runoff on water quality impaired areas for which TMDLs have not been developed

[4] MassHighway SWMP, sec. 1.1, page 9.

what control measures are being used, and some verification that water quality standards are not being violated by the discharge.

In my small corner of the world, where State Route 2 meets Route 16, how will the MassHighway SWMP address some very reasonable and foreseeable concerns? I live next to a waterbody, the Alewife Brook, that is impaired by metals and oil and grease- pollutants associated with highway runoff. Under the MassHighway SWMP when will highway drainage to the Alewife Brook be inventoried? What control measures have been implemented to ensure that no additional oil, grease, or metals are discharged to the Alewife Brook? How can MassHighway demonstrate that its stormwater discharges do not violate water quality standards for the Alewife Brook? No one at MassHighway could give an honest answer to any of these questions based on the current SWMP. Because the MassHighway SWMP fails to provide answers to such basic questions about discharges to impaired waters it should be revised prior to authorizing discharges pursuant to the NPDES permit.

I appreciate the opportunity to comment on the Massachusetts Highway Department's Stormwater Management Plan. I hope my comments are helpful. Feel free to contact me with any questions regarding these comments.

Sincerely,

David Stoff
88 Fairmont Street
Arlington, MA 02474
(781) 643-3411

Roger Frymire
<rramjet@verizon.net>
11/29/2005 08:46 PM

To Ann Herrick/R1/USEPA/US@EPA, "McCullough, Rick (MTA)" <Rick.Mccullough@state.ma.us>, Davidj Gray/R1/USEPA/US@EPA
cc
bcc
Subject MTA NOI comments

Ann -

Herewith please accept my comments on the Turnpike Authority's NOI and SWMP:

First, I would like to thank the Authority for its rapid response to a recent report I made of a high bacteria count at an outfall they share with CSX at the Allston Railyards. Although I have not heard an explanation nor resolution to this incident report, a new set of oil containment booms appearing at this outfall shows that their consultant is working in the correct vicinity.

My first comment on the NOI is equally applicable to MHD and DCR - both of whom I will comment separately.
This pertains to the Public input and Public participation requirement of the general permit.
Specifically to the authority's website and how it treats the topic of stormwater.

Compared to the MHD and DCR sites, the MTA website is lacking several essential elements.
First, Both their NOI and SWMP shopuld be posted on the website for the duration of the permit.
Second, all yearly reports should be posted on the website.
Third, a contact person with telephone # and e-mail address should be posted on the website.
Fourth, links to the MHD and DCR stormwater webpages should be posted on the website.
Fifth, tracking should be provided on the website for reported problems and their resolutions.

These three state roadway agencies have crossing, overlapping, and interlinked areas of responsibility, so any problem erroneously reported to the wrong agency should be transparently referred to the correct agency and tracked accordingly.

As Turnpike outfalls are mapped and inspected, I request that unique outfall identifiers be assigned to each outfall.
While most outfalls are immediately adjacent to and obviously part of the immediate Turnpike system, at least a few are quite remote from their Right-Of-Way. For these - Such as that at the CSX Allston Railyard and Hyde Brook in Newton, I request that the Authority post a sign on or at the outfall with the outfall ID and contact information such as a phone # to enable rapid public reporting of problems.

Lastly, I note that the Big Dig is now part of the MTA, so would ask that the NOI and SWMP be updated to include the City of Cambridge and all (at least 5) outfalls to the Millers River Charles Tributary under the Zakim Bridge.

thank you for your attention to these comments.
Sincerely,
Roger Frymire
22 Fairmont Avenue
Cambridge 02139-4423
617-492-0180
ramjet@alum.mit.edu

Roger Frymire
<rramjet@verizon.net>
11/29/2005 10:10 PM

To Ann Herrick/R1/USEPA/US@EPA, Robert.Boone@state.ma.us, Henry.Barbaro@state.ma.us, Davidj Gray/R1/USEPA/US@EPA
cc "Nancy Hammet(t)" <Nancy@mysticriver.org>
bcc
Subject MHD NOI comments

Ann -

Herewith please accept my comments on the Massachusttes Highway Department's NOI and SWMP:

First, I would like to thank the MHD for posting both these documents on the MHD environmental webpage.
I note also that BMP 1-C3 in the MHD NOI calls for annual evaluation and revision of this webpage.
Suggested are the following revisions:

All annual reports should also be posted on this webpage. I especially would like to track annual progress on compliance with BMP 3B-2 - mapping of all field discharges.
Links to the MHD and DCR stormwater webpages should be posted on the website.
While deep in the posted documents are names and contact info for MHD personnel responsible for stormwater compliance; these names, #'s and e-mail addresses should be pulled out and made accessible on the top level of this webpage for public reporting of perceived problems.
Lastly, tracking should be provided on the website for reported problems and their resolutions.

These three state roadway agencies [MHD, MTA, and DCR] have crossing, overlapping, and interlinked areas of responsibility, so any problem erroneously reported to the wrong agency should be transparently referred to the correct agency and tracked accordingly.

I believe BMP 3D should be expanded significantly. Instead of 20 outfalls yearly checked under your IDDE program, I suggest 20 in each of the five MHD districts would be more reasonable. Also, the listed start date of March 2008 needs to be accelerated to immediately.

On this topic I refer MHD to online reports of bacterial samples from December, 2004 and March, 2005 which show significant bacterial concentrations in outfalls from Routes 1 and 145 in Revere.
The outfall from under Route 145 is to Sales Creek at the East end of the Shaws supermarket parking lot, and has the site identifier SAC145 with samples #986 and #954. Multiple problem outfalls exist from a short stretch of Route 1 on the South side of the road to Mill Creek just West of Rt16. These sample sites are identified as REVx10, REVx06, REVx11, and REVx07 with associated sample numbers 955, 956, 957, and 958.
This data is all online on the Mystic River Watershed Association Website at the URL's:
March 29, 2005
and
December 7, 2004

Maps of the sites sampled are also included in the referenced Excel files on separate worksheets.

For additional information or any help I might provide in tracking the causes of these bacteria concentrations, call or e-mail me anytime.

thank you for your attention to these comments.

Sincerely,

Roger Frymire
22 Fairmont Avenue
Cambridge 02139-4423
617-492-0180
ramjet@alum.mit.edu

Roger Frymire
<rramjet@verizon.net>
11/30/2005 01:14 PM

To Ann Herrick/R1/USEPA/US@EPA, Robert.Lowell@state.ma.us, Davidj Gray/R1/USEPA/US@EPA
cc
bcc
Subject DCR NOI comments

History: This message has been forwarded.

Ann -

Please accept these comments on the DCR's NOI and SWMP:

I congratulate DCR on having the most useful stormwater website of the three state roadway agencies under review (DCR, MTA, and MHD).
With both NOI and SWMP available, as well as contact information for the acting Stormwater manager, there is a good start here towards meeting the public's needs.
Further items I suggest be added here are links to the other two state agencies mentioned, since areas of responsibility often overlap and abut;
yearly reports as required by the NPDES permit;
and a direct link to a method for reporting potential problems to the DCR, with a tracking mechanism for response and resolution.

These three state roadway agencies have crossing, overlapping, and interlinked areas of responsibility, so any problem erroneously reported to the wrong agency should be transparently referred to the correct agency and tracked accordingly.

I have noticed concerted efforts in recent months to clean out catch basins on DCR roadways and bridges, and have seen DCR vehicles cruising the parkways in heavy rainstorms to note problem areas of flooding and ponding. While at least a start, these efforts are far from the complete survey and problem resolution required. While now empty, many catch basins need completely rebuilt laterals before functioning as more than simple drywells. While ponding may identify many of these basin-draining problems, grates on sloping sections of road will fill up then simply have water flow past to overload the next basin along the road.

Bridge drains are a special case to note. A large part of the overwhelming bridge deterioration problem admitted by the DCR stems from water damage due to non-functioning drains. The first picture attached to this comment letter shows a catch basin on the downstream Boston side of the River Street Bridge to Cambridge. For years this basin was full to the road surface with sand, until recent cleaning. Now it is acting as a dry well, leaching water and salt into the structure of the bridge and hastening its deterioration. Even without ponding in evidence, ALL bridge drain laterals need to be checked and cleared. Coincidentally, this is adjacent to where a leaky high-pressure gas main thru the bridge recently had to be repaired.

While at this Bridge, take a look at the seawall in front of the Hotel. This granite wall is supported by a wooden plank on wooden pile foundation. Due to River basin water levels being often lowered by DCR dam operations below the level of this foundation, the wood is beginning to rot and there is evidence in a split along the asphalt bike path that the wall is beginning to tilt over to fall into the Charles. Two other Basin seawalls share this construction technique and potential problem: North end of the Broad Canal - where a secton of wall has already collapsed; and Cambridge Parkway downstream of the Broad Canal - The Cambridge wooden CSO outfall CAM017 is a part of this foundation and could be blocked if the seawall above collapses into it.

When cleaning bridge drains, please do not neglect pedestrian bridges. The Weeks footbridge has totally clogged drains so the water cascading off it has buckled the approach steps into an unsafe condition, and is creating erosion features to the river on both sides of both ends. The pedestrian bridge over Mem Drive to Magazine Beach is frequently iced

over due to poor drainage in the winter, leading people to cross at street level even though deaths regularly occur here...

BMP's 1-5 and 1-6 for signing no wake and speed limits on the Charles will be of little use unless there is Enforcement. Wakes are a cause of heavy erosion and the signs alone will not stop this source of sediment to the river. Also, these efforts need to be extended to the Mystic River and other similar areas controlled by DCR.

For BMP 3-1, I question that all known outfalls have been located. I have reviewed outfall lists for the Charles and Alewife which MDC provided to EPA in response to section '308 letters last decade. On Alewife Brook, there is a DCR outfall midway between those listed as #9(6) and # 7(6). On the Charles, Each time a DCR project has come before the Cambridge Con Comm in recent memory, the engineering drawings have shown outfalls and locations not identified on the Charles river outfall compendium. One example of this is just downstream of the River Street Bridge - where the only functioning DCR outfall in this stretch of river matches nothing on the list either in size or location. My second attachment to these comments, an excel file of water quality sampling results also shows noticeably high bacterial levels at this outfall. Other outfalls with dry-weather flows which may deserve IDDE attention include two which were mapped properly - MEM-8 and MEM-18. If there is a new mapping which has discarded these old outfall IDs, I can be contacted for the precise locations.

For BMP 3-4, while conducting your drainage infrastructure inventory, please note the huge number of outfalls where the headwall has fallen into the river, become detached, etc. since this has led to large instances of shore erosion around and behind the headwalls. Many of these need re-building and the shoreline needs restoration to its original extent. Behind the Magazine Beach Pool, a long cooncrete headwall is almost 15' out in the river. At low water levels a line of rip rap parallels the shore this far out, showing where the original park's extent has eroded off several acres into the river. This is also very noticeable by the Harvard B-school.

For BMP 6-13, I ask that this Annual Drainage Infrastructure Assessment Report be made public on your stormwater website. Similarly for 6-14, the Catch Basin repair and Discharge Pipe cleaning Assessment.

While DCR's maintenace backlog is already many years long,I request that some attention be paid to the 36" pipe at the downstream(N) end of Dilboy Field to Alewife Brook. Mulitple sections of pipe have already fallen into the brook and a large channel is eroded back to the current pipe end. But this pipe section is tilting and being undercut so needs stabilization soon. Also, this pipe is another subject for IDDE analysis.

On the NE shore of Leverett Pond along the Riverway is my next pipe of interest. My third attachment shows a confluence of two outfall pipes here cutting an open channel to the pond. This diagram from the Muddy project shows both these pipes as 12", though by my observation one is 15". Unfortunately, no owner has been determined for these outfalls, and I have found objectionable levels of fecal bacteria in tests here. Proximity to the Riverway might imply one or both are DCR pipes, and if so please add them to your IDDE program.

My last attached picture is of a pipe I saw and smelled flowing to Alewife Brook from Dolboy Pool on 7/30 of this year. While not specifically a stormwater problem, I hope both DCR and EPA will consider this comment seriously. I saw many Herring fingerlings that day upstream from this point, but I saw none the rest of the way down Alewife Brook. I believe the intense odor of Chlorine I received from this pipe may indicate that this pipe was creating a problem for fish in Alewife Brook. I wonder if this is a permissible release of chlorinated water, and whether this occurs similarly at other of the many DCR pool facilities?

Thak you for considering these comments.
Sincerely,
Roger Frymire
22 Fairmont Avenue

Cambridge 02139-4423
617-492-0180
ramjet@alum.mit.edu

HS SEP 15 2005.xls

Western New England College
SCHOOL OF LAW

FACULTY OFFICES

Jamison E. Colburn
Associate Professor of Law
(413) 782-1439

December 1, 2005

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Received
DEC 0 6 2005

Thelma Murphy
U.S. Environmental Protection Agency
Mail Code CIP
1 Congress St., Suite 1100
Boston, Massachusetts 02114-2023

Subject: Massachusetts Highway Department NPDES Phase II MS4 Notice of Intent Public Notice Number: MA-004-06

Dear Ms. Murphy:

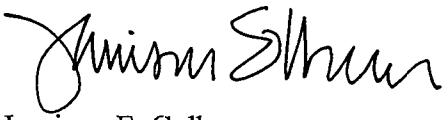
Having reviewed MassHighway's submitted Notice of Intent ("NOI") and the accompanying documentation, and Region I's MS4 general permit, I would like to request that EPA treat the MassHighway application to discharge as an individual NPDES permit. EPA has said that such petitions are welcome, *see* 40 C.F.R. § 122.28(b)(3)(i), but it has not specified so far as I am aware how they should be structured. Please accept this letter as my petition for an individual permitting process in this case and, as well, as my request for a public hearing in the matter of NOI No. MA-004-06.

EPA's duty under the Clean Water Act ("CWA") is to ensure that dischargers like MassHighway "reduce the[ir] discharge of pollutants to the maximum extent practicable, including management practices . . . and such other provisions as [EPA] determines appropriate. . . ." 33 U.S.C. § 1342(p)(3)(B). EPA's regulations provide that several grounds justify treating particular MS4 operators individually and I believe that this is an appropriate case. MassHighway's submitted NOI for the urbanized areas within the Connecticut River watershed demonstrate the magnitude of the potential for this discharger to negatively impact the receiving water bodies at issue. The Connecticut River between the Holyoke dam and the Connecticut state line (which falls within an applicable urbanized area) is a CWA § 303(d) listed water body. As such, it currently

requires a TMDL for suspended solids, among other pollutants. Without an individual permit for these discharges, the creation of any such TMDL—and the setting of appropriate load allocations and waste load allocations—will be exceedingly difficult. MassHighway's municipal separate storm sewer systems should constitute a "quantity" of pollutants that triggers the individual permitting option under 40 C.F.R. § 122.28(b)(3)(i)(G)(3).

Under the circumstances, it seems that EPA's obligation in administering the Clean Water Act is to regulate discharges like those MassHighway has reported in its Storm Water Management Program documentation and NOI the same way it regulates any other discharge with the potential to so significantly affect water quality in the receiving waters: through a CWA permit under CWA §§ 301 and 402.

Respectfully submitted,



Jamison E. Colburn
Associate Professor of Law