



# KOPELMAN AND PAIGE, P.C.

*The Leader in Municipal Law*

101 Arch Street  
Boston, MA 02110  
T: 617.556.0007  
F: 617.654.1735  
www.k-plaw.com

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March 11, 2011

**Jeffrey T. Blake**  
[jblake@k-plaw.com](mailto:jblake@k-plaw.com)

BY HAND

BY ELECTRONIC MAIL [renahan.kate@epa.gov](mailto:renahan.kate@epa.gov)

EPA—Region 1  
Attn: Kate Renahan  
Office of the Regional Administrator  
5 Post Office Square, Suite 100  
Mail Code: ORA01-1  
Boston, MA 02109-3912

Subject: Comments on the 2010 Massachusetts Interstate, Merrimack and South Coastal Watersheds Small MS4 NPDES Draft General Permit.

Dear Ms. Renahan:

The following comments on the 2010 Massachusetts Interstate, Merrimack, and South Coastal Small MS4 NPDES draft general permit (the “Permit”) are submitted on behalf of the Town of Abington (pop. 6,799),<sup>1</sup> Town of Acushnet (pop. 10,161), Town of Boxborough (pop. 4,868), Town of Burlington (pop. 22,876), Town of Carver (pop. 11,163), Town of Chelmsford (pop. 33,858), Town of Dennis (pop. 15,973), Town of Douglas (pop. 7,045), Town of Eastham (pop. 5,453), Town of Freetown (pop. 8,472), Town of Groton (pop. 9,547), Town of Groveland (pop. 6,038), Town of Hadley (pop. 4,793), City of Haverhill (pop. 58,969), Town of Lakeville (pop. 9,821), Town of Lancaster (pop. 7,380), City of Leominster (pop. 41,303), Town of Lunenburg (pop. 9,401), Town of Mattapoisett (pop. 6,268), Town of Millbury (pop. 12,784), City of Newburyport (pop. 17,189), Town of Northborough (pop. 14,013), Town of Northbridge (pop. 13,182), Town of Oxford (pop. 13,352), Town of Pembroke (pop. 16,927), Town of Plymouth (pop. 51,701), Town of Rehoboth (pop. 10,172), Town of Sandwich (pop. 20,136), Town of Sturbridge (pop. 7,837), Town of Templeton (pop. 6,799), Town of Townsend (pop. 9,198), Town of Upton (pop. 5,642), Town of Wareham (pop. 20,335), Town of Webster (pop. 16,415), Town of Westminster (pop. 6,907) and the Town of Westport (pop. 14,185) (the “Municipalities”).<sup>2</sup>

As an initial matter, the Municipalities recognize and share the EPA’s goals and objectives in eliminating pollution in the Commonwealth’s waterways and recognize that that stormwater management is an important factor in eliminating and cleaning up the waterways. All of the communities that have joined in submitting these comments have an excellent track record of

<sup>1</sup> Population estimates are based on information publicly available through the Massachusetts Department of Housing and Community Development.

<sup>2</sup> Please note that certain of the Municipalities have provided additional comments under separate cover, the within comments are in addition to not a substitute for the other comments already submitted.

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compliance with prior permits and take their role as stewards of the environment extremely seriously. However, while the goals and objectives of the Permit may be laudable, the Municipalities object to the means by which the EPA is attempting to achieve them. As will be discussed in greater detail below, there are numerous provisions in the Permit that unduly shift the burden of obtaining the EPA's goals and objectives to the Municipalities. This burden shifting would be unwarranted and troublesome in prosperous economic times, but in these uncertain economic times it is simply unacceptable. As a result, the Municipalities request that the EPA withdraw the draft Permit and take additional time to work with all of the stakeholders in this matter to craft a permit that properly recognizes the Municipalities' role in preventing degradation of the Commonwealth's waterways as well as the role of private stakeholders.

The Municipalities object to the Permit for the following reasons.

A. The Compliance with the Permit Conditions and Requirements is Cost Prohibitive

1. As a general observation, it is important to note that the Municipalities have an overall concern with increased Permit expectations and obligations. Earlier this year, the Massachusetts Legislature announced that local aid to cities and towns will be reduced for the coming Fiscal Year and further cuts are likely. This reduction follows significant reductions for the last two Fiscal Years. In addition to dramatic decreases in state aid, property values and other taxable spending by residents remains extremely low. As a result, cities and towns have to balance their budgets with record-low revenues and have to reduce staffing in order to stay afloat. Of course, these drastic reductions in state aid reflect the weakened state of the economy generally, and the loss of income by individual homeowners and ratepayers. This overall weakness not only constrains tax revenue, but also makes imposition of new fees and charges all but impossible. Therefore, in light of the present state of the world, national, state, and local economies and the resulting municipal budget cuts and staffing reduction, these increased expectations and obligations will place a burden on the Municipalities that will force a choice of compliance with the proposed Permit conditions or the provision of essential municipal services. The provision of both is not an economically feasible option.

2. As an example of the cost-prohibitive nature of the Permit conditions, as indicated in comments by other permittees and acknowledged by EPA at the Public Hearing, the cost for sampling and laboratory testing for 25% of the outfalls as required by the Permit (Section 3.0 et seq.) is approximately \$70,000-\$500,000 for communities with 20 to 600 outfalls. Other sources estimate that it will cost \$60 per capita, per year to comply with the requirements of the draft Permit. Costs for compliance with the other conditions of the Permit, e.g. labor and consumable supplies required to develop and distribute public education materials, conduct site investigations, develop the data and mapping, to inventory and inspect municipal facilities, inspect and enforce construction activities, review site plans for proposed new development or redevelopment projects, and develop and implement reports, policies and ordinances make compliance with the Permit economically

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impossible for the Municipalities in today's economic environment. Indeed, according to information on the EPA website, the Municipalities contain almost 32,000 acres of regulated impervious area. If remediation costs an average of \$25,000 per impervious acre, the total cost to these Municipalities approaches \$1 billion.

3. Section 1.10(a)(b) requires the Municipalities to develop a written Stormwater Management Plan (SWMP) within 120 days of the effective date to the Permit. This deadline is too stringent and fails to take into account the reality of having to coordinate with numerous municipal departments and consultants at the time where financial resources are scarce. This requirement should be amended to allow significantly more time to complete and submit the SWMP.

4. Section 1.10(c) of the Permit "encourages" the permittee to maintain an adequate funding source for the implementation of the program. While the language of this section appears to be directory and not mandatory, it is vague and does not adequately provide the Municipalities with guidance for compliance with this provision. Moreover, to the extent that the language is mandatory, in all likelihood the Municipalities will be in violation of the Permit upon its effective date due to the timing of municipal funding. Municipal budgets are established at least 6 months prior to the end of a fiscal year. Fiscal Year 2011 budgets have already been established and adopted and Fiscal Year 2012 budgets will be established and adopted prior to the issuance of the final permit. The Permit was only recently released and still does not provide the necessary detail for the Municipalities to make long term financial projections. Even if the Permit did contain the necessary detail, the budgets for the first year Permit term will already be established.

5. Furthermore, the requirement that the Municipalities maintain a "consistent source of revenue" is not achievable. Unlike public water and sewer systems which are funded through user fees, stormwater systems costs may only be passed on to the citizens through property taxes or by adopting ordinances and bylaws, a process that is both lengthy and uncertain. With no independent source of revenue, stormwater budgets must be established annually by Town Meeting or City Council appropriation. Municipal officials cannot control how the voters will choose to spend limited resources in a given year. In these economic times it is difficult to see where the necessary funding would be obtained. In the short term, funding at least for the first year permit cycle will be unavailable as budgets will have been set and approved by Town Meeting or City action.

6. In this economic climate the Municipalities are struggling to maintain public roads, sidewalks, schools, teachers, fire and police personnel and other critical infrastructure and personnel requirements. Without financial assistance from the EPA and DEP, the diversion of funds for compliance with permit conditions such as requiring the monitoring and enforcing of dog waste bylaws and requiring personnel to monitor dumpster covers is simply too onerous and expensive and should be significantly scaled back to reflect the severe economic realities of today. Additionally,

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and significantly, the numerous conditions in the Permit that require extensive expenditures of funds by the Municipalities amount to an unfunded mandate by the state and federal government.

B. Numerous Conditions and Requirements of the Permit are Vague

7. The Municipalities object to numerous conditions and requirements of the permit because they are vague in that the conditions and requirements fail to include specific, measurable quantitative standards to determine compliance with the Permit or inform the Municipalities of what is required of them, making it difficult, if not impossible to determine compliance. Such vague permit conditions and requirements also unlawfully allow the EPA or DEP unfettered discretion to determine which communities are in compliance and which communities are not, essentially leaving the determination to whichever EPA or DEP enforcing authority is charged with reviewing the reports submitted by the Municipalities. This may result in uneven and disparate enforcement and indefinite expansion and manipulation of the Municipalities' obligations. The Municipalities' vagueness objections include, but are not limited to, the following provisions:

8. 2.3.2.2 (d) is vague and does not provide the Municipalities with any notice as to what is required of them in order to comply with this section. Specifically the phrase “[t]o the extent consistent with law and EPA policy” leaves unfettered discretion to EPA to indefinitely expand and manipulate this condition.

9. Section 2.3.3 (b) is similarly vague, requiring permittees to “demonstrate to the satisfaction of MassDEP . . . .” This vague language and lack of specific criteria for compliance leaves the Municipalities with no guidance for compliance and MassDEP unfettered discretion to determine compliance. The condition should provide specific criteria for compliance so that the Municipalities can meaningfully comment on this requirement during the comment period.

10. Section 2.3.3(c) is vague and vests in both EPA and MassDEP unfettered and unappealable discretion to add requirements above and beyond those found in the Permit even if all of the conditions found in Section 2.3.3 are met. This condition should be struck from the Permit and clear criteria should be established so that the Municipalities can know, going forward, what will be required to comply with the Permit.

11. Section 2.4.4.8 (c) requires the Municipalities to designate catchments as problem catchments. However, the criteria for establishing a “problem catchment” is vague and could result in either requiring the Municipalities to check every catchment or miss a catchment because the Municipalities did not characterize the catchment as “highly suspect” since that term is not defined in the Permit. The term “highly suspect” should be defined and specific criteria for establishing a catchment as highly suspect should be provided in the Permit so that the Municipalities have an opportunity to comment on the criteria.

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C. The Timeline Outlined in the Permit is Unrealistic

12. The many “milestones” described in the Permit cannot realistically be met. The requirements should be reduced to reflect a more realistic set of achievable milestones in light of the considerable other requirements of the Permit, including data gather and testing.

D. Compliance with Certain Permit Conditions is Impossible

13. Section 2.4.4.8 in some respects is impossible for the Municipalities to comply with. This section requires that the “permittee has adequate legal authority to accomplish the following tasks: prohibit illicit discharges; investigate suspected illicit discharges . . . including discharges from properties not owned or controlled by the MS4 . . .” The United States and Massachusetts Constitutions limit the extent to which government officials can enter private property without the permission of the property owner, and state law further limits the authority of the Municipalities to regulate certain entities and uses such as agricultural uses. The Municipalities cannot be required to violate the constitutional rights of its citizens a condition of a permit making this provision legally impossible for the Municipalities to comply with.

14. Likewise, Section 2.4.4.4 requires the permittee to “implement measures to control [non-stormwater discharges] so they are no longer significant contributors of pollutants or eliminate [them].” In many instances, this is an impossible condition for the Municipalities to comply with, there are numerous circumstances where a municipality simple does not have the legal authority to prevent non-stormwater discharges.

15. Finally, the IDDE program outlined in Section 2.4.4.8 is far too ambitious in its requirements in light of the other conditions in the Permit. The systemic procedure for locating and removing illicit connections will require significant resources thereby diverting valuable man hours and resources at a time when municipalities are forced to reduce their labor forces and not increase them.

E. EPA has Exceeded its Authority in Issuing this Permit

16. Section 2.1.1 requires that discharges not cause or contribute to an exceedance of water quality standards. Section 2.4 requires that the discharge of pollutants be reduced to the maximum extent practicable (MEP). These directives appear to be in conflict. MEP is the statutory standard that establishes the level of pollution reductions that MS4 operators must achieve. Application of pollution controls to the MEP may not assure that discharges do not cause or contribute to an exceedance of water quality standards. Since MEP is the statutory standard for MS4s it should apply throughout the Permit and be the governing standard to determine compliance.

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F. The Permit Will Cause Undue Financial Burden On the Municipalities

17. Section 2.4.7.1 (ii) requires the municipalities to provide “pet waste baggies” and install signs along with “increased patrol for violators.” This requirement will add significant costs to the already depleted municipal budgets.

18. Section 2.4.7.1 (c) requires that the “permittee shall ensure that all floor drains are not connected to the MS4.” This condition will require municipalities to expend significant resources to determine where drains that have been in place for many years empty. In light of the requirements in the first sentence of this section, this added expense is unnecessary.

19. Section 2.4.7.1 (d) requires inspection of all catch basins twice per year. This requirement will entail the expenditure of additional man hours and resources at a time when municipalities are reducing their staffing and not increasing it.

20. Section 2.4.7.1 (d)(iv) requires street sweeping twice per year. This requirement will require the expenditure of additional man hours and resources at a time when municipalities are reducing their staffing and not increasing it.

21. Section 2.4.7.1 (vii) requires annual inspections of all permittee-owned stormwater structures. This requirement will require the expenditure of additional man hours and resources at a time when municipalities are reducing their staffing and not increasing it.

22. Section 2.4.7.2 requires that “the permittee shall select, design, install and implement the best available control measures to minimize or eliminate pollutants in the stormwater discharge from permittee owned facilities.” Because this requirement fails to take into account the myriad of facilities owned and operated by municipalities and fails to establish a priority for implementing the best available control measures, the municipalities could be required to expend significant amounts of scarce resources in a very short time frame (one year) without the assurance that the benefit will have a rational relationship to the cost of the measure.

23. Additionally, due to the nature of municipal finance, the one year deadline for compliance with this condition may not be possible if the design and installation requires a third party vendor. Specifically, G.L. c. 30B requires adherence to a mandatory, time consuming procurement process before awarding of public contracts.

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24. Section 3.0 requires the monitoring and testing of all permittee owned outfalls. As indicated in Section A.2 of this Comment, this requirement alone will place such a significant financial burden on the municipalities that compliance will be practically impossible.

G. Concerning Section 2.0 Non Numeric Effluent Limitations

25. This section should be re-titled “Effluent Limitations,” as many of the limits imposed by this section are numeric.

H. Concerning 2.1.1.1. c The “Cause or Contribute” Provision

26. This section requires permittees to develop plans for remediation of discharges that “cause or contribute” to an exceedance of a water quality standard. At a minimum, this should be rewritten to clarify that only discharges that cause or contribute to a **violation** of a water quality standard are covered by this provision. It is possible to exceed a water quality standard, without causing or contributing to a violation. For example, a discharge could contain copper at a level above its CCC, but only if that concentration is above the CCC for 4 days would it actually be a violation of the standard.

27. This clause is impractical because permittees are not equipped to determine if their discharges “cause or contribute” to exceedances in the following circumstances:

Where there are non-numeric standards applicable to the waterbody. For these standards, the permittee has no way of determining if a discharge contains pollutants in quantities that would cause or contribute to exceedances, as the standards are, by definition, subjective.

Where the receiving waters are known to require a TMDL such waters invariably represent complicated environmental settings. In some cases a discharge may contain a pollutant in a concentration above a numeric criterion, but until the TMDL is completed, the appropriate level of control for the MS4 discharge is unknown.

28. This clause should explicitly exclude existing discharges to receiving waters that have been assessed to meet designated uses.

I. Concerning Section 2.2.1.d Limits on Phosphorus

29 The Permit is based on a misinterpretation of the various TMDLs referenced in the permit, when it requires each community to achieve the specific percentage reduction in phosphorus identified in the TMDL. The community level phosphorus loadings presented in the TMDLs were

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developed based on land uses in the communities and export coefficients (pounds per unit of time) associated with those land uses. By knowing the different types of land uses and export coefficients, it is possible to estimate the phosphorus loading from that community. However, this does not mean that that EPA or DEP knows how much phosphorus comes from the community MS4; to the extent that the phosphorus comes from a property not a tributary to an MS4, that phosphorus is not the responsibility of the community under its ownership of the MS4. It may be either the responsibility of the owner of the storm sewer, or it may represent overland flow to the receiving water, and thus represent a non point phosphorus source. Thus, the requirements of appendix G-1 should be modified to reflect the phosphorus load reductions required from the MS4's, and not from the community as a whole.

30. Phosphorus limits should be expressed as a combined mass loading, where such loadings are known.

31. The limits on phosphorus discharge are expressed in the permit in terms of percent reduction from some baseline level, usually the loading based on the loads existing at the time of development of the TMDL. For those sources where the actual TMDL mass loading rates used to develop the TMDL are known, the permit should specify the mass loading rate, rather than a percent reduction. This will eliminate any confusion as to the baseline level, and will accommodate a more holistic evaluation of compliance with phosphorus reduction goals. For example, a community might attempt to meet its phosphorus reduction goal by maximizing phosphorous reductions at one site, rather than achieving the same level of phosphorous reduction at all sites. In this case, the percent reduction requirement may not always be met, even though the overall goal will have been met. Some might argue that the permittee is not in compliance with its permit for the outfall with lower percentage reduction.

32. Table G-1 could create confusion where it indicates that the Flint Pond and Lake Quinsigamond TMDLs require a 52 % reduction in storm flow. The TMDLs require a 52 % reduction in phosphorus. This should be clarified.

J. Concerning Section 2.2.1.e Long Island Sound TMDL Nitrogen Limits

A. The Nitrogen Limits Should Be Struck In Their Entirety.

33. The draft permit imposes nitrogen restriction on discharges tributary to Long Island Sound. These restrictions include a 10% reduction in nitrogen from existing levels, and a requirement to limit nitrogen such that they are "maintained, or decreased". See 2.2.1.e, appendix G-2, and part 2.4.2.1.1(c)(i),(ii). These limitations are based on the assumption that the approved TMDL requires these limitations.

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34. Such an assumption is incorrect. Although the approved TMDL references a 10% reduction in total nitrogen loads for out-of-basin sources, EPA's approval letter of the TMDL, and the TMDL itself are clear that these represent assumptions made for the purpose of determining that there is "reasonable assurance" that the nonpoint source load reductions are achievable, and therefore that the detailed in-basin source reductions are appropriate<sup>3</sup>. The relevant portions of documents associated with the approved TMDL supporting this position are as follows:

35. EPA's Approval letter of the TMDL indicates the following:

B. Phase IV Nonpoint Source Reductions

The TMDL identifies load allocations for out-of-basin nitrogen loads (i.e., tributary loads) that would be achieved through the implementation of Phase IV reduction targets. For nonpoint sources, the Phase IV targets include a 10 percent reduction in urban and agricultural loads throughout the Long Island Sound basin north of Connecticut, and an 18 percent reduction in atmospheric nitrogen loads. These reductions are based on the clear role that these nonpoint sources have on water quality in Long Island Sound.

Some public comments on the draft TMDL questioned whether states have the authority to assign allocations to sources in other states. *In this case, EPA is not approving the out-of-basin nitrogen reductions as formal allocations but rather as reasonable assumptions on which the inbasin reductions are based.* EPA believes that states have some flexibility to make assumptions about improvements in water quality beyond their jurisdictions. If they base a TMDL on such assumptions, states must clearly explain why the assumptions are reasonable. In this case, the states estimated 10 percent reduction in urban and agricultural nonpoint source loads is reasonable for the same reasons that were identified for the 10 percent reduction to the in-basin urban and agricultural loads. These reasons are detailed in the Reasonable Assurances section of this review. The estimated 18 percent reduction in atmospheric nitrogen loads is reasonable because it was taken from EPA estimates of the effect of implementation of CAA controls and its enforceable requirements, similar to the in-basin reductions of atmospheric nitrogen loads. EPA believes that these estimates of future reductions make sense. Moreover, as discussed in the Reasonable Assurance section below, EPA is committed to working with the three northern states to address nitrogen loads affecting Long Island Sound through their nonpoint source management programs. EPA TMDL approval letter, p. 9 (emphasis supplied).

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<sup>3</sup> If the TMDL could not prove "reasonable assurance" for the out of basin sources, then the in-basin reductions would need to be greater than presented in the TMDL.

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36. The TMDL, in discussing the implementation plan for the TMDL says:

Achieving reductions in point and nonpoint source loads from states north of Connecticut will require increased coordination and exchange of technical information between the Long Island Sound Management Conference and those states. Some reductions in nonpoint source nitrogen loads are anticipated through the ongoing implementation of state nonpoint source management, stormwater permitting, and animal feeding operation (AFO) permitting programs. However, it will be necessary to conduct additional monitoring and assessment to better determine the relative importance of point and nonpoint sources, as well as the role of natural attenuation as the distance from Long Island Sound increases. Based on this assessment, the *TMDL revision scheduled for 2003 will describe a framework for managing these out-of-basin sources and a schedule for implementing Phase IV nitrogen reduction actions*. Because Phase III and IV overlap and are interrelated, Phase IV nitrogen reductions should be initiated as soon as interstate agreements on specific implementation actions are established. Several steps have been identified to assess and achieve nitrogen reductions from out-of-basin sources (Table 12). Long Island Sound TMDL, p. 45 (emphasis supplied).

37. Until the TMDL Revision has been developed, subjected to public review, and approved by the Agency, it is premature to include any limits on nitrogen in this permit based on the TMDL. All requirements associated with nitrogen control must be struck from the permit.

K. Concerning Section 2.2.1.f and g Regarding Bacteria TMDL's

38. The Permit expresses limits on pathogens in stormwater discharges for the Shawsheen River and Palmer River using the Commonwealth's old fecal coliform requirements for primary contact recreation. However, fecal coliform densities are no longer used as the measure of bacteriological contamination in these waters and for these uses under the Massachusetts water quality standards. The proper organism is E. Coli for freshwater. Thus, there is no basis for including fecal coliform standards in this permit.

A. All Percent Reduction Limits for Pathogens Should be Struck from the Permit

39. The percentage reduction requirements for pathogens contained in the Permit are based on calculations contained in the TMDL. Those calculations were based on the reduction in pathogen densities in the receiving water necessary to meet water quality standards. This is not a calculation of a "maximum daily load," which is what the TMDL regulations require. Thus, the percentage reduction limits for pathogens should be struck from the permit.

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40. Moreover, the observed concentrations in the receiving waters represent a variety of sources ranging from combined sewer overflows to privately owned storm drains to animal wastes. Even if percentage reduction was some form of a “load,” the proper way to allocate this “load” would be to identify the relative sources, and assign both waste load allocations and load allocations to the various sources, as specified by the TMDL regulations. This process would more properly assign the responsibility for source reductions.

**B. All Numeric Limits on Fecal Coliform Should be Struck from the Permit**

41. The numeric limits on fecal coliform are imposed as a result of the approved Buzzards Bay, Mt Hope Bay, the Palmer River, Cape Cod and Shawsheen River TMDLs, among others. However, the approved TMDLs are flawed because they fail to identify the maximum daily load which the water body can tolerate and then to provide load allocations and waste load allocations as established by the TMDL regulations. Rather, the TMDLs simply decide that if all discharges meet the water quality standards, the receiving water will then be protected. This line of logic is inconsistent with the entire regulatory scheme established under the Clean Water Act. If all discharges meet water quality standards, not only would there be no need for a TMDL, there would be no need for technology based effluent limits, or water quality based effluent limits that vary according to the dilution of the discharge in the receiving water. All discharges everywhere would simply need to meet water quality standards.

42. The basic rationale for this line of improper logic was presented in the Total Maximum Daily Loads of Bacteria for the Neponset River Basin which states:

**43. FECAL COLIFORM TMDL**

Loading Capacity. The pollutant loading that a waterbody can safely assimilate is expressed as either mass-per-time, toxicity or some other appropriate measure (40 C.F.R. § 130.2(i)). Typically, TMDLs are expressed as total maximum daily loads. However, MADEP believes it is appropriate to express bacteria TMDLs in terms of concentration because the fecal coliform standard is also expressed in terms of the concentration of organisms per 100 ml. Since source concentrations may not be directly added, the previous equation does not apply. To ensure attainment with Massachusetts’ water quality standards for bacteria, all sources (at their point of discharge to the receiving water) must be equal to or less than the standard. Expressing the TMDL in terms of daily loads is difficult to interpret given the very high numbers of bacteria and the magnitude of the allowable load is dependent on flow conditions and, therefore, will vary as flow rates change. For example, a very high number of bacteria are allowable if the volume of water that transports the bacteria is high too. Conversely, a relatively low number of bacteria may exceed water quality standard if flow rates are low.

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For all the above reasons the TMDL is simply set equal to the standard and may be expressed as follows:

$TMDL = \text{Fecal Coliform Standard} = WLA(p1) = LA(n1) = WLA(p2) = \text{etc.}$

Where:

$WLA(p1)$  = allowable concentration for point source category (1)

$LA(n1)$  = allowable concentration for nonpoint source category (1)

$WLA(p2)$  = allowable concentration for point source category (2) etc.

44. For Class B surface waters the fecal coliform TMDL includes two components: (1) the geometric mean of a representative set of fecal coliform samples shall not exceed 200 organisms per 100 ml; and (2) no more than 10 % of the samples shall exceed 400 organisms per 100 ml. For Class SB surface Waters the fecal coliform TMDL is more restrictive to protect the shellfish use goal and also includes two components: (1) the geometric mean of a representative set of fecal coliform samples shall not exceed 88 organisms per 100 ml; and (2) no more than 10 % of the samples shall exceed 260 organisms per 100 ml. The goal to attain water quality standards at the point of discharge is environmentally protective, and offers a practical means to identify and evaluate the effectiveness of control measures. In addition, this approach establishes clear objectives that can be easily understood by the public and individuals responsible for monitoring activities. Also, the goal of attaining standards at the point of discharge minimizes human health risks associated with exposure to pathogens because it does not consider losses due to die-off and settling that are known to occur.

45. This logic is faulty for a variety of reasons, including the following:

a. The fact that the standard is expressed as a concentration does not justify the use of concentration alone in establishing the “load.” Virtually all numeric water quality standards are established in terms of concentrations, but TMDL’s are expressly designed to measure the loading that a water body can safely assimilate, expressed as a mass per unit time. In the case of these bacteria TMDL’s, it would have been appropriate to use the number of organisms per unit of time as the proper metric. EPA provides several example pathogen TMDL’s on its website that approach pathogen total load development in this manner.

b. The statement is wrong when it says that source concentrations may not be added. It is quite common to “add” the sources using numerical simulation models to develop the assimilative capacity of the receiving water. EPA and the New England Interstate Water Pollution Control Commission have developed that kind of model for the lower Charles River which was published as Appendix B to the final pathogen TMDL for the Charles River, and is a technique used in the

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example pathogen TMDL's on EPA's website.

c. The statement is wrong when it says that all sources must be at or below the standard to ensure compliance with standard. As a practical matter, to the extent that any source is below the standard, then other sources may be above the standard, and the standard may still be met. In addition, bacteria undergo natural reduction in the receiving waters due to die-off, settling and other factors. As a result, waters that may be initially contaminated becomes less contaminated over time, and can serve to offset the input of discharges that are in excess of the standard. All of these factors are amenable to analysis and simulation through numerical models. Indeed, simulation model described in Appendix B of the Charles River Pathogen TMDL clearly showed that implementation of stormwater controls at levels far above the 200/100 ml standard was effective in significantly reducing the distribution of water quality violations.

d. The statement is wrong when it claims that the limits represent a practical means for assessing the effectiveness of control measures. Since the requirement is for a geometric mean to be lower than 200 organisms per 100 ml, and not more than 10 % to be lower than 400 organisms per 100 ml, a person can only know if compliance is being achieved if they have the entire sampling dataset available to them. This is hardly more effective for assessing compliance than any other limitation, or more easily understood by the general public. For example, it is quite possible to have a single discharge with a concentration of 100,000 coliform per 100ml – but if less than 10 % of the discharges from this source are over 400/100 ml, or the geometric mean of all samples is over 200 per 100 ml, the single discharge does not constitute a violation.

e. The statement is correct when it says that the goal of meeting water quality standards at the point of discharge is environmentally protective. But in the context of a TMDL this is irrelevant – the purpose of a TMDL is to develop the assimilative capacity of the receiving water. The fact that a pollutant discharged at the water quality standard (or indeed if the proposal were to require no coliform in the discharge) is environmentally protective is not material and cannot be used to justify a TMDL limit.

46. The communities realize that development of tools necessary to establish proper total maximum daily loads will be neither simple nor inexpensive. But, by the same token, compliance with these arbitrary standards will be far more costly. More work on the basic pathogen sources, and controls needs to be done to justify the expenditures necessary to comply with these requirements.

L. Concerning Section 2.2.1 g Nitrogen limits for discharges to Cape Cod/Buzzard Bay Waters

47. The description in Appendix G, table G4 usually characterizes this as “negligible”, and includes a footnote that says this means that the nitrogen from the MS4 is less than 2%. This appears

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to be a slight mischaracterization of what the TMDL says. The TMDL says that stormwater usually percolates into the ground; and that on the whole, stormwater constitutes a very small fraction of the nitrogen load. The TMDL makes no estimate of a nitrogen waste load allocation associated with MS4's. It appears that there is no specific load allocation for stormwater, either. Perhaps the best way to characterize the TMDL limitation in these situations is "NA".

48. The permit requires that communities identify those sources of nitrogen discharging to the impaired waters listed in table G-4. A pollution budget for these waters has already been done as part of the Mass Estuaries Project, and so this requirement appears unnecessary. In addition, taken literally, the requirement would essentially require detailed sampling of a number of sources that are not related to the MS4 – groundwater, atmospheric deposition, overland flow, etc. This would likely be very expensive, and is beyond the scope of what should be included in an MS4 permit. If the purpose of this requirement is to establish some understanding of the nitrogen loads from the MS4, that can be accomplished by the testing required under section 3.0 of the permit.

49. Table G-4 is in error when it says that there is a nutrient TMDL for the Bay (presumably Mount Hope Bay) and Palmer River for Swansea. There is no nutrient TMDL for these waters.

M. Adoption of Any and All other Comments Submitted during the Comment Period of this Permit

50. The Municipalities hereby adopt any and all other comments submitted on behalf of any municipality to the EPA in response to its request for comments as if actually set forth herein together with any and all documentary support for said comments.

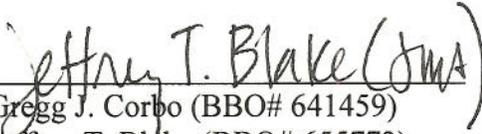
**KOPELMAN AND PAIGE, P.C.**

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If you have any questions regarding this matter please do not hesitate to contact me or Attorney Gregg J. Corbo.

THE MUNICIPALITIES

By their attorneys,

  
\_\_\_\_\_  
Gregg J. Corbo (BBO# 641459)  
Jeffrey T. Blake (BBO# 655773)  
Kopelman and Paige, P.C.  
101 Arch Street, 12<sup>th</sup> Floor  
Boston, MA 02110  
[gcorbo@k-plaw.com](mailto:gcorbo@k-plaw.com)  
[jblake@k-plaw.com](mailto:jblake@k-plaw.com)

JTB/ja

cc: Municipalities  
Governor Patrick  
John Gall, CDM  
Senator John Kerry  
Senator Scott Brown  
Congressman Frank  
Congressman Keating  
Congressman Lynch  
Congressman McGovern  
Congressman Neal  
Congressman Olver  
Congressman Tierney  
Congresswoman Tsongas