



Charles River Watershed Association

February 5, 2007

Linda M. Murphy, Director
Office of Ecosystem Protection, MA Unit
U.S. EPA
One Congress Street, Suite-1100
Boston, Massachusetts 02114

Re. MBTA Commuter Rail Maintenance Facility (CRMF), draft NPDES Permit No. MA0003590, 2007 Reissuance

Dear Ms. Murphy,

Charles River Watershed Association (CRWA) and Conservation Law Foundation (CLF) jointly submit the following comments on the above-captioned draft NPDES permit, authorizing Massachusetts Bay Transportation Authority (MBTA) and Massachusetts Bay Commuter Railroad Company (MBCR), with Boston and Maine Corporation, City of Somerville and Commonwealth of Massachusetts Department of Conservation and Recreation (DCR) as co-permittees, to discharge stormwater to the Millers River from the facility located at the MBTA Commuter Rail Maintenance Facility (CRMF).

CRWA and CLF recognize that this draft Permit is a significant improvement from past permits especially because of the inclusion of several parties who are contributing flow to this site. Unfortunately, the draft Permit still does not establish sufficient requirements to ensure that stormwater discharges from this outfall will not cause or contribute to a violation of the Massachusetts Surface Water Quality Standards (MA WQS). The MA WQS are intended to achieve and maintain numeric and narrative water quality criteria and to fully protect existing and designated uses. (*See* 314 CMR 4.01(4)). As the Clean Water Act requires that an NPDES permit meet the state water quality standards, this draft Permit must be significantly modified in order to comply with federal and state law (*See* 33 U.S.C. §1311(b)(1)(C); 40 CFR 122.4(d); 314 CMR 3.11(3)).

Background

Once a tributary nearly 6 miles in length, the open portion of the Millers River today is a short, 1000-foot channel that drains directly into the Charles River Lower Basin. While the Millers River is not specifically listed in the MA WQS, it is an inland water, and therefore is designated a Class B High Quality Water. Class B waters are designated as “a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions and for primary and secondary contact recreation... [and.] shall have consistently good aesthetic

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value,” (See 314 CMR 4.05(3)(b)). Specifically, the Class B waters must meet a number of criteria, including dissolved oxygen, temperature, pH, bacteria, solids, color and turbidity, oil and grease and taste and color. *Id.*

The Millers River is a significantly impaired waterbody that frequently fails to meet water quality standards during wet weather events. Wet weather water quality sampling events conducted by CRWA, Roger Frymire (a citizen volunteer), EPA Region 1 staff, and the permittee have shown the Millers River to be in violation of pathogen standards, and to exceed the “level of concern” for metals, phosphorus, and dissolved oxygen (DO). It appears that the discharge may also violate the temperature requirements of the MA WQS, as discharges may not be more than 2.8°C higher than ambient water temperatures in the Millers River (see 314 CMR 4.05(b)(2)(a)). In addition, visual observations in the Millers River during wet weather events have confirmed the presence of oil sheens, floatables, visible sediment plumes, and high volumes of easily suspended fine organic bedded sediments. Stormwater discharges are clearly responsible for these frequent violations of water quality standards, as well as the enormous accumulation of sediments that are presumably toxic based upon the land uses in the drainage area.

The Millers River has a number of stormdrain outfalls in addition to that from the CRMF, including those owned by Boston Sand and Gravel, the City of Boston and the Massachusetts Central Artery/Third Harbor Tunnel (CA/T) project. The outfall from the CRMF, however, is the most significant outfall to the Millers River: it contributes stormwater from by far the largest and most diverse drainage area, and its current stormwater management program is completely out of date and is in violation of current regulatory standards.

Discharges to the Millers River rapidly move through the short, straight channel and discharge directly into the Charles River. Multiple efforts are underway to improve conditions in the Millers River, including the construction of wetlands along portions of its banks, and improvements to a number of the existing stormwater outfalls. The Millers River drains directly into the Charles River Lower Basin, which is also an impaired waterbody, and is the focus of a large scale, multi-sector clean-up effort spearheaded by EPA Region 1.

Drainage System

As CRWA and CLF’s own investigations and efforts to address water quality, flooding and CSO problems have made clear, and the information in the EPA Fact Sheet confirms, drainage problems in the area tributary to this outfall are severe, persistent and complex. In its filings, the MBTA has failed to identify many basic facts about the existing infrastructure and the areas that drain to it. The current drainage infrastructure is clearly inadequate both in terms of size and capacity, and in terms of water quality controls.

The MBTA’s failure to address the problems in the Millers River drainage area has contributed to ongoing pollution of the Millers and Charles Rivers, and to the failure of drainage infrastructure at times in the City of Somerville. Since it is evident that not all of the flow from this drainage area actually reaches the Millers River, flows from this drainage area are likely contributing unauthorized stormwater flows into the Massachusetts Water Resources Authority (MWRA) combined sewer system.

In the 1990's, the MBTA, in an effort to reduce flooding problems on its own tracks, designed a large drainage infrastructure improvement plan, some elements of which have been completed in the past decade. However, it failed to complete the critical downstream elements of the plan, leaving in place an antiquated water quality treatment facility with inadequate flow capacity, partially blocked discharge culverts, and no adequate maintenance or monitoring provisions. The MBTA's failure to complete this project has been widely criticized, even by EPA itself:

Neither B&M nor MBTA fulfilled their drainage promises. As a result, stormwater from a large portion of Somerville and from the North Terminal Area ponds on site, flooding the Msgr. O'Brien highway and causing CSO backflows in Somerville. This impedes efforts by Somerville to separate about 100 acres of combined sewer area, and frustrates efforts by BWSC to separate about 100 acres of combined sewer area.¹

Since 1995, millions of dollars have been spent by private entities and municipalities to improve stormwater discharges, and to clean up the Charles River. Yet, throughout this period, the MBTA has failed to invest sufficiently in the Millers River stormwater drainage infrastructure to protect the Millers and Charles rivers, to prevent combined sewer backflows into Somerville, and to prevent surface flooding on the MBTA's own and adjacent properties.

In order for EPA to issue a final Permit for this stormwater outfall that complies with the Clean Water Act and MA WQS, a number of modifications to the draft Permit are needed.

Permit Modifications

1) Part I. A. 1. Effluent Limits

This table should be modified to include numeric limits for bacteria, iron, Total Magnesium, Manganese, and Total Phosphorus as the reported data shows discharges exceeding the "level of concern" for these pollutants.

- The maximum daily limit for TSS should be reduced to 30 mg/L given the ease of achieving high treatment levels for TSS and the significant problems with accumulated sediments in the receiving waters.
- A maximum daily limit for total phosphorus should be set at the EPA's Nutrient Criteria for total phosphorus, 0.0238 mg/L.²
- A maximum daily limit for iron should be set at 1.0 mg/L in accordance with EPA's national water quality criteria.³
- Temperature should be monitored and reported to ensure that the discharge does not exceed ambient temperatures by more than 2.8°C. Thermal and phosphorus loading are of particular concern given the widespread *Microcystis* blue-green algae outbreak on the Lower Basin last summer.

¹ *Next Steps*, Charles River Report Card, May, 2005, US EPA Region 1. Available at <http://www.epa.gov/region1/charles2005/nextsteps.html>

² EPA, 2000. Ambient Water Quality Criteria Recommendations – Rivers and Streams in Nutrient Ecoregion XIV. EPA 822-B-00-022. EPA, Office of Water. Washington, D.C.

³ EPA, 2002. National Recommended Water Quality Criteria: 2002. EPA-822-R-02-047. EPA, Office of Water, Office of Science and Technology. Washington DC.

- The bacteria effluent limit should be modified to reflect recent changes in state law. Specifically, Massachusetts has switched its pathogen indicator for more harmful pathogens from fecal coliform to E. coli. The new standard states “the geometric mean of E. coli samples taken within the most recent six months shall not exceed 126 colonies per 100 ml typically based on a minimum of five samples and no single sample shall exceed 235 colonies per 100 ml....” (See 314 CMR 4.05(3)(b)(4)). The permit should include these numeric effluent limits.
 - The numeric limits should also reflect anticipated pathogen Total Maximum Daily Load (TMDL) requirements. The permit should clearly require compliance with this and any additional TMDL requirements.
- 2) Part I. A. 1. a. should be revised to reflect the requirements of the Clean Water Act, and should read: “The discharge shall not cause *or contribute to* a violation...” (italics added).
 - 3) Part I. B. A “reopener clause” should apply to all permittees and co-permittees and to all aspects of the Permit.⁴ In light of past failures by MBTA, and the City of Somerville, to complete drainage studies and reports on schedule, and the failure of the MBTA to complete major elements of a drainage program upgrade, EPA should specifically condition the permit upon completion of the required evaluation within one year, and clarify that the MBTA’s failure to do so may constitute a revocation of the permit.
 - 4) Part I. B. A clause should be added clarifying that, if the evaluation studies determine that it is necessary to modify the operation of the infrastructure either upstream or downstream of the oil/water separator, to make changes to the outfall itself, to reroute the discharge to another additional location, or make any additional significant modifications to the overall design and function of the outfall (for example to handle adequately the total volume of flow discharging from the site), then implementation of such a plan will be a requirement of this permit.
 - 5) Part I. B. 1. MBTA/MBCR must, in order to comply with the requirements set out in this draft Permit, and to meet the requirements of the Clean Water Act, develop and implement a plan to remove potentially contaminated sediments from the triple culvert from the oil/water separator to the outfall. The study for devising the plan should include an alternatives analysis to determine how to best accomplish this, or whether there are other preferred alternatives to drain the facility. Implementation of the plan should be required under the revised Storm Water Pollution Prevention Plan (SWPPP) to be completed following the study.
 - 6) Part I. B. 1. MBTA/MBCR must, in order to comply with the requirements set out in this draft Permit, and to meet the requirements of the Clean Water Act, replace the existing oil/water separator. The current facility fails to meet any current standards for Best Management Practices for the control of oil and grease, is inaccessible, and does not allow for automated water quality sample collection. Replacement of the existing oil/water separator should be required under the revised SWPPP to be completed within one year of the completion of the study.
 - 7) Part I. B. 1., 2. and 3. The scope of work for the studies/evaluations for all three parties should be expanded to include a revised SWPPP as a final product. The Fact Sheet

⁴ The draft Permit does contain a “reopener” clause in Part I.A.3, but it should be explicit that it applies to the “Collection System and Facility Evaluation Studies” and the “Storm Water Pollution Prevention Plan Requirement” as well as the limitations and monitoring requirements.

indicates that it is EPA's intent to have the permittees and co-permittees prepare interim SWPPPs, which will be modified based upon the results of the studies/evaluations. The SWPPPs should be designed to treat pollutants of concern, should specify the design and location of proposed BMPs, and should include a maintenance plan.

- 8) Part I. C. 2. This section should be modified to require the preparation and submission of a new SWPPP following the completion of the studies undertaken under Part I. B.
- 9) Part I. C. 3. This section should be modified to reflect the requirements detailed in the Section 8 of the Fact Sheet, including the installation of booms in the Millers River.

CRWA and CLF appreciate the opportunity to submit comments on this draft Permit. In sum, the draft Permit must be revised as described in these comments to ensure compliance with Massachusetts Surface Water Quality Standards and the Clean Water Act.

Sincerely,

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Cc: MBTA
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