



## Memorandum

To: DCR Stormwater Section  
10 Park Plaza  
Boston, MA 02116

Date: 6/26/2024

Project #: 15722.00

From: Sarah Nalven  
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Re: Nutrient Source Identification Report Implementation Update –  
Permit Year 6

### Introduction

The purpose of this memo is to provide a summary of best management practice (BMP) crediting and implementation status in watersheds for which DCR has developed Nutrient Source Identification Reports (NSIRs). Per the National Pollutant Discharge Elimination System General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts (MS4 Permit), DCR must complete a Nitrogen or Phosphorus Source Identification Report for discharges to water quality limited waterbodies and their tributaries where nitrogen or phosphorus, respectively, is the cause of the impairment.<sup>1</sup> DCR has developed these reports, collectively referred to as NSIRs, for the following watersheds:

- › Mystic River
- › Merrimack River
- › Mount Hope Bay
- › Outer New Bedford Harbor
- › Blackstone River
- › Mother Brook
- › Ten Mile River
- › Proctor Brook
- › Long Island Sound

NSIR requirements for tributaries to the waterbodies listed above are met within one of the above watershed-wide NSIR documents.

### BMP Crediting

The MS4 Permit requires tracking of structural BMPs already existing or installed in the MS4 area within NSIR watersheds as well as estimation of the nitrogen or phosphorus removal by the BMP consistent with Attachment 3 to Appendix F.<sup>1</sup> In Permit Year 5, as part of development of NSIRs, VHB fulfilled this requirement. In Permit Year 6, VHB reviewed BMPs mapped in DCR's GIS database between February 16, 2023 and January 31, 2024 in NSIR watersheds in order to account for additional nitrogen or phosphorus removal. No new MS4-creditable BMPs were mapped in these watersheds during this timeframe. DCR will continue to complete an annual review of newly mapped BMPs in NSIR watersheds to account for additional reduction of load to the NSIR impaired waters.

<sup>1</sup> The MS4 Permit's Appendix H Sections I.1.b and II.1.b include this requirement; nitrogen is discussed in Section I and phosphorus in Section II.

## BMP Implementation

Additionally, the MS4 Permit requires DCR to install a minimum of one structural BMP as a demonstration project within six years of the permit effective date.<sup>2</sup> To date DCR has installed demonstration BMPs in six NSIR watersheds and plans to implement demonstration BMPs in the remaining three NSIR watersheds by the end of 2024 (Table 1).

DCR must also provide a listing of planned structural BMPs and a schedule for implementation. DCR must install the remainder of the structural BMPs in accordance with the developed implementation plan and schedule.<sup>2</sup> For most NSIR watersheds, DCR's implementation plan consists of installing one BMP per watershed per MS4 Permit term (Table 2).

**Table 1. PY6 Demonstration BMP Status**

NSIR Watershed	Demonstration BMP Status
Mystic River	Constructed
Merrimack River	Constructed
Mount Hope Bay	Constructed
Outer New Bedford Harbor	Constructed
Blackstone River	Constructed
Mother Brook	Constructed
Ten Mile River	In Construction (George Spatcher Pool)
Proctor Brook	Design Complete; Construction imminent (McVann O'Keefe Rink)
Long Island Sound	Design Complete; Construction planned for fall 2024 (Chicopee State Park)

<sup>2</sup> The MS4 Permit's Appendix H Sections I.1.c and II.1.c include this requirement; nitrogen is discussed in Section I and phosphorus in Section II.

**Table 2. NSIR Watershed BMP Implementation Plan**

NSIR Watershed	BMP Installation Plan
Mystic River	Construct at least 1 BMP in the next permit term.
Merrimack River	Construct at least 1 BMP in the next permit term.
Mount Hope Bay	Construct at least 1 BMP in the next permit term.
Outer New Bedford Harbor	Construct at least 1 BMP in the next permit term.
Blackstone River	Construct at least 1 BMP in the next permit term. (DCR has received a SNEP grant to construct a pilot BMP in Lake Quinsigamond State Park. This may be constructed in the next permit term depending on timing of the renewed MS4 Permit effective date and of BMP construction.)
Mother Brook	Construct BMPs opportunistically. (Factory Hill Playground improvements may include BMP(s).)
Ten Mile River	Construct at least 1 BMP in the next permit term.
Proctor Brook	Construct at least 1 BMP in the next permit term.
Long Island Sound	Construct at least 1 BMP in the next permit term. (DCR investigating the possibility of installing BMPs at Robinson State Park. These may be constructed in the next permit term depending on timing of the renewed MS4 Permit effective date and of BMP construction.)