



Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

Comprehensive Review of Revised Water Management Act Permit Requirements, July 1, 2017

Description of the M\$4CASTER™ Model and Reference Documents

The MS4 costs presented in Table 9.7 – Stormwater Recharge – MS4 Requirements were estimated using Comprehensive Environmental Inc. (CEI) proprietary M\$4CASTER™ model¹. This model was developed to assist communities estimating MS4 NPDES Phase II Stormwater Program costs in Massachusetts. The model considers each of the 150+ Performance Action Items in the new permit and combines them into approximately 25 individual implementation items to provide budget data for overall costs. The model also takes into consideration community-specific data, such as the number of catch basins and outfalls, MS4 program configuration, and work performed to date.

The Model helps with the following:

- Run “Wat If” scenarios to reduce costs;
- Community specific input for custom cost estimates;
- Summary of major program components
- Schedule for implementation by year; and
- Incorporate work completed to date into the cost matrix.

The reference documents for Tables 9.7 – Stormwater Recharge – MS4 Requirements include PDF displays of the work and cost breakdown for each of the MS4 requirements: 6 minimum measures, NOI and SWMP. These tables display how the cost ranges were determined for each requirement. The requirements are broken down into tasks which are then broken down into low and high ranges for one-time costs, annual/ongoing costs, and total costs/hours for rural, suburban, and urban communities.

The purpose of these PDF's is to provide a detailed background on how the cost ranges for each MS4 requirement are calculated. The brief description of each requirement is provided on Table 9.7 of the *Comprehensive Review of Revised Water Management Act Permit Requirements*, July 1, 2017.

¹ CEI developed a tutorial video on how the M\$4CASTER™ Model works, accessible at <http://ceiengineers.com/services/npdes-ms4-services/cei-s-m-4caster/>