

Summary of Revisions to the Stormwater Management Guidebook

On January 31, 2020, the Department of Energy and Environment (DOEE) adopted a revised Stormwater Management Guidebook (SWMG). DOEE proposed a draft of the SWMG for public comment between February 15, 2019 and April 1, 2019. DOEE updated and expanded the SWMG to be consistent with recent regulatory amendments, found at <https://doee.dc.gov/swregs>. DOEE has also updated and expanded the SWMG to incorporate technical changes to stormwater best management practice (BMP) design standards and to clarify existing guidelines and processes. These updates also include changes that DOEE published as Errata and Clarifications in 2014 and 2017, found at <https://doee.dc.gov/proposedstormwaterrule>. Finally, DOEE made changes related to feedback received during the public comment period.

1. Errata and Clarifications

DOEE has previously published Errata and Clarifications in 2014 and 2017. These have been incorporated into the SWMG, and are not considered changes. These changes may be found at <https://doee.dc.gov/proposedstormwaterrule>. The Errata and Clarifications are primarily found within:

- a. Chapter 2, “Minimum Control Requirements”
- b. Chapter 3.2, “Green Roofs”
- c. Chapter 3.6, “Bioretention”
- d. Figure 5.4, “Declaration of Covenants template”
- e. Appendix O, “Geotechnical Information Requirements for Underground BMPs”

2. Proposed Regulatory Amendments

DOEE has updated and expanded the SWMG to be consistent with the final regulatory amendments. The updates to the SWMG that are related to the regulatory amendments are primarily found within:

- a. Chapter 2, “Minimum Control Requirements”
- b. Chapter 6, “Use of Off-Site Retention by Regulated Sites”
- c. Appendix A.3, “Design Examples”
- d. Appendix E, “Relief from Extraordinarily Difficult Site Conditions”
- e. Appendix W, “Definitions”

3. Clarifications of Existing Processes and Rules

DOEE has updated and expanded the SWMG to provide clarity regarding existing processes and rules. These changes to the SWMG do not reflect new review requirements. These clarifications are primarily found within:

- a. Chapter 5, “Administration of Stormwater Management Rules”
- b. Chapter 6, “Use of Off-Site Retention by Regulated Sites”

- c. Chapter 7, “Generation, Certification, Trading, and Retirement of Stormwater Retention Credits”
- d. Appendix A, “Compliance Calculations and Design Examples”
- e. Appendix U, “Site Drainage Area and BMP Design Diagrams”

4. Changes to BMP Design Specifications

DOEE proposes to change the calculations in Chapter 3 of the SWMG that are used to determine infiltration rates, storage volumes, and retention volumes. These changes are proposed based on stakeholder feedback and the best available science to ensure BMPs function effectively and are receiving appropriate retention credit. In particular, changes have been proposed to:

- a. Throughout: Clarification that the K_{sat} value is DOEE standard for calculating the drawdown period of infiltrating BMPs.
- b. Section 3.2.4, “Green Roof Design Criteria”:
 - i. Introduced new paragraphs on rock wool and contributing drainage area.
 - ii. Modified default water retention values for green roof soil media and retention/drainage layers.
 - iii. Modified solar panel spacing requirements from the version published in the 2017 Errata.
- c. Section 3.2.8, “Green Roof Stormwater Compliance Calculations”: irrigated green roofs are an accepted Total Suspended Solids treatment practice.
- d. Section 3.4.8, “Impervious Surface Disconnection Stormwater Compliance Calculations”: Increased retention value for practices which discharge to pervious areas with soils of hydraulic soil group A or B.
- e. Section 3.5.8, “Permeable Pavement Stormwater Compliance Calculations”: increased retention value of standard permeable pavement from 4.5 cubic feet per 100 square feet of practice to 5 cubic feet per 100 square feet of practice.
- f. Section 3.6.5, “Bioretention Design Criteria”: Noted that the mulch layer can be included with the filter media depth, and the choker stone layer can be included with the gravel depth when calculating the storage volume in Equation 3.5.
- g. Section 3.14, “Tree Planting and Preservation”:
 - i. Added new BMP categories for small tree plantings and preservation as well as Special and Heritage Tree preservation.
 - ii. Expanded the list of landscape professionals which can conduct a tree inventory.
 - iii. Updated matured spread requirement to 40 feet to match GAR requirements.

5. Changes to Appendix M

Appendix M governs rainwater harvesting treatment requirements. Previously, Appendix M was titled, “Tiered Risk Assessment Management: Water Quality End Use Standards”. It has been overhauled and is now titled, “Rainwater Harvesting Treatment and Management Requirements”. The new appendix discusses treatment requirements in terms of a risk-based framework and streamlines the guidance for meeting those requirements. The appendix also discusses submission guidelines for the accompanying

design report and provides design examples. Guidance closely matches a large, recently-released report that is generally considered in-line with current best practices in rainwater harvesting treatment.

6. Changes resulting from feedback during the public comment period

DOEE incorporated both internal and external feedback into several sections of the SWMG. These changes are discussed in DOEE's response to public comments document, which can be found at <https://doee.dc.gov/swguidebook>. DOEE also provided a copy of the SWMG that shows changes made between the draft 2019 version issued for public comment and the final 2020 version, which can be found at <https://doee.dc.gov/proposedstormwaterrule>. Most notably, changes were made in the following sections:

- a. Section 2.2, "Regulated Site Definition and Examples"
- b. Section 2.11, "Additional Stormwater Management Requirements"
- c. Section 2.12, "Exemptions"
- d. New Section 2.13, "Practicable Process"
- e. Section 3.2.1, "Green Roof Feasibility Criteria",
 - i. Roof Access
 - ii. Contributing Drainage Area
- f. Section 3.2.4, "Green Roof Design Criteria"
 - i. Structural Capacity of the Roof
 - ii. Leak Detection System
 - iii. Green Roof Sizing
 - iv. Irrigation and Storage Volume
- g. Section 3.14, "Tree Planting and Preservation"
 - i. Guidance for when a tree preservation plan must be prepared
 - ii. Inclusion of deer protection fencing
- h. Section 6.3, "Off-Site Retention via Stormwater Retention Credits"
- i. Section 7.2, "Eligibility Requirements"
- j. New Appendix C, "Practicable Process"
- k. Appendix I, "Acceptable Hydrologic Methods and Models"
- l. New Appendix V, "Examples of Regulated Activities"
- m. Appendix Y, "Definitions":
 - i. Critical Root Zone
 - ii. Drought Condition
 - iii. Land-disturbing activity
- n. Throughout:
 - i. Allowable level of fines in reservoir gravel for BMPs
 - ii. Storage and drawdown equations no longer divide the K_{sat} value by two
 - iii. Appendix names, figure numbers, and equation numbers are reassigned their letters and numbers.