

# Errata for the 2019 SWMMWW

This page contains errata for the **2019 Stormwater Management Manual for Western Washington** (*The 2019 SWMMWW, Ecology Publication No. 19-10-021*).

Ecology has made these corrections in the interactive online version of the 2019 SWMMWW. Ecology has not made these corrections in the PDF publication, due to the changes to page numbers that would result.

## Errata released January 2022

1. I-C.4 Wetland Hydroperiod Protection, page 188:

Revise the last sentence on this page as follows:

Additional guidance, as well as an ~~exeel~~ Excel template to assist with the calculations to verify compliance with Method 1 is provided in I-C.5 Wetland Hydroperiod Data Collection and Evaluation Procedures.

2. I-C.5 Wetland Hydroperiod Data Collection and Evaluation Procedures, page 192:

Revise the last sentence on this page as follows:

Ecology has provided an ~~exeel~~ Excel template to assist with the calculations in the steps below. The ~~exeel~~ Excel template may be downloaded ~~form~~ from the interactive online version of the manual.

*\*\*The Excel template referenced in the above text has also been updated with this set of errata. The updates to the Excel template consist of edits to the instructions and changes to the display of calculated values and intermediate steps.*

3. BMP C123: Plastic Covering, page 299:

Revise the first bullet on this page as follows:

Plastic sheeting shall have a minimum thickness of ~~0.06 millimeters~~ 6 mil.

4. II-2.4 Preparing Construction SWPPPs, page 258:

Revise the web address for the Construction SWPPP Template as follows:

~~<https://ecology.wa.gov/Asset-Collections/Doc-Assets/Water-quality/Water-Quality-Permits/Stormwater-General-Permits/Construction-Stormwater-General-Permit/NEW-SWPPP>~~

<https://fortress.wa.gov/ecy/ezshare/wq/permits/CSWGP-SWPPP-Template.docx>

5. BMP T7.30: Bioretention, page 776:

Revise the notes in Figure V-5.12 as follows:

**Notes:**

~~1. Scarify subgrade 3" min. before bioretention soil installation~~

~~2. Compact BSM to 85% per ASTM 1577~~

Note: See **BMP T7.30: Bioretention** for further details regarding design, installation, and maintenance of bioretention.

6. BMP T7.30: Bioretention, page 777:

Revise the notes in Figure V-5.13 as follows:

**Notes:**

~~1. Scarify subgrade 3" min. before BSM installation~~

~~2. Compact BSM to 85% per ASTM 1577~~

1. See **BMP T7.30: Bioretention** for further details regarding design, installation, and maintenance of bioretention.

~~3.~~ 2. Minimum 6" to discourage fines from entering the underdrain from the BSM. Maximum 12" to prevent unnecessary BMP depth from encroaching into the seasonal high ground water.

~~4.~~ 3. If depth to the seasonal high ground water allows, this distance may be larger.

~~5.~~ 4. When an underdrain is used, the design must ensure that the seasonal high ground water does not encroach into the BMP (including the mineral aggregate layer surrounding the underdrain pipe).

Revise the callout within Figure V-5.13 as follows:

6" to 12" (see note ~~3~~ 2)

Revise the callout within Figure V-5.13 as follows:

6" (see note ~~4~~ 3)

7. BMP T7.30: Bioretention, page 778:

Revise the notes in Figure V-5.14 as follows:

**Notes:**

~~1. Scarify subgrade 3" min. before bioretention soil installation~~

~~2. Compact BSM to 85% per ASTM 1577~~

Note: See **BMP T7.30: Bioretention** for further details regarding design, installation, and maintenance of bioretention.

8. BMP T7.30: Bioretention, page 780:

Revise the second sentence of the last paragraph as follows:

If a project proponent wishes to use a bioretention BMP even though one of the infeasibility criteria within this section are met, they may propose a functional design to the local government.

9. BMP T7.30: Bioretention, page 797:

Revise the first subheading on this page as follows:

Orifice and Other Flow Control ~~sStructures~~ Structures

10. BMP T8.10: Basic Sand Filter Basin, page 808:

Revise the second sentence of the third paragraph as follows:

This ensures the sand filter is treating 91% ~~ed of~~ the runoff volume.

11. BMP T7.40: Compost-Amended Vegetated Filter Strip, page 844:

Revise the first sentence of the fourth bullet as follows:

The final soil ~~mixt mix~~ should have a minimum organic content of 5% by dry weight per ASTM Designation D 2974 (Standard Test Method for Moisture, Ash and Organic Matter of Peat and Other Organic Soils) (~~Tackett, 2004~~).

*\*\*This erratum removes the citation for (Tackett, 2004) because neither Ecology nor the author in the citation (Tackett) could definitively determine what document was intended to be cited. Furthermore, the information provided immediately prior to the citation is already established in **BMP T5.13: Post-Construction Soil Quality and Depth**.*

12. This erratum covers corrections that were made to the 2014 SWMMWW as part of an errata in January of 2015. When creating the 2019 SWMMWW, Ecology mistakenly carried forward the original 2014 SWMMWW text, rather than the text that had been corrected with the errata in January 2015. This erratum serves to correct this text in the 2019 SWMMWW, as it was corrected in the 2014 SWMMWW.

The following explanation was provided for these changes as part of the January 2015 errata:

*"This erratum requires deletion of newly added definitions from the glossary. These definitions were new definitions included in the 2013-2018 Phase I & II Municipal Stormwater Permits, and Ecology added the definitions to the 2014 SWMMWW for consistency. After publication, Ecology realized that these definitions might cause confusion within the context of the manual. The new definitions in the Permits apply to the mapping requirements in the Permit, which is not a requirement covered within the manual."*

Make the following changes within the Glossary of the 2019 SWMMWW:

- Glossary, page 1044:  
Delete the definition for "**Discharge point**".
- Glossary, page 1069:

Delete the definition for "**Outfall**".

- Glossary, page 1075:

Replace the definition for "**Receiving waterbody or receiving waters**" with the following:

Bodies of water or surface water systems to which surface runoff is discharged via a point source of stormwater or via sheet flow. Ground water to which surface runoff is directed by infiltration.

*\*\*Note that this reverts the definition to the definition used in the 2012 SWMMWW.*

## **Errata released January 22, 2020**

1. Executive Summary of the 2019 Revisions, page 8:

Revise item 7 as follows:

7. **Concrete Washout BMPs**: BMP C151: Concrete Handling and BMP C154: Concrete Washout Area ~~has~~ have been updated to clarify that auxiliary concrete truck components and small concrete handling equipment may be washed into formed areas awaiting concrete pour, while concrete truck drums must be washed either off-site or into a concrete washout area.

2. III-2.3 Single Event Hydrograph Method, page 458:

Revise the bottom-left cell as follows:

All ~~Permeable~~ Permeable Pavement Types (with underlying perforated drain pipes to collect stormwater)

3. S440 BMPs for Pet Waste, page 601:

Revise the second subheading as follows:

~~Reommended~~ Recommended **Operational BMPs for Recreation Areas and Multi-Family Properties**

4. Appendix IV-B: Management of Street Waste Solids and Liquids, page 638:

Revise the second paragraph as follows:

Based on test results, street waste ~~te~~ could contain contaminants at concentrations that would require either disposal at a permitted solid waste disposal facility, or treatment at a permitted solid waste handling facility for use.

5. BMP T5.15: Permeable Pavements, page 750:

Revise the fifth bullet as follows:

Where seasonal high ground water or an underlying impermeable/low permeable layer would create saturated conditions within one foot of the bottom of the permeable pavement BMP. The bottom of the permeable permeable pavement BMP is the bottom of the lowest layer that has been designed to be part of the BMP, such as the lowest gravel base course or a sand layer used for treatment below the permeable pavement.

6. BMP T7.30: Bioretention, page 799:

Revise the first sentence of the paragraph prior to the "Installation Criteria" subheading as follows:

For bioretention with slide side slopes of 3H:1V or flatter, infiltration through the side slope areas can be significant.

7. \*\* The following errata documents a change outside of Ecology's Publication No. 19-10-021 (The 2019 SWMMWW). Ecology is documenting the change here for transparency. \*\*

*Where:* 2019 Interactive Online SWMMWW > Additional Resources > Approval Status of Continuous Simulation Models

Revise the text under the "WVHM Approval Status" subheading as follows:

Ecology anticipates releasing newer versions of WVHM2012 with updates such as bug fixes and other corrections. Any new releases will be posted at the following web-site:

<https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Stormwater-manuals/Western-Washington-Hydrology-Model>

WVHM2012 Version 4.2.16 (or later) is approved for use in demonstrating compliance with the 2019 - 2024 Phase I and Western Washington Phase II Municipal Stormwater Permit requirements.

Revise the text under the "MGSFlood Approval Status" subheading as follows:

MGS Engineering is in the process of incorporating the bioretention algorithm into MGSFlood, and have indicated that they will be seeking Ecology approval.

At this time, MGSFlood is not approved for use in modeling BMP T7.30: Bioretention. MGSFlood Version 4.49 is approved for other modeling scenarios, using either the gage data or the 158 year synthetic precipitation time series.

MGS Engineering may release newer versions of MGSFlood. However, the newer versions will not be reviewed by Ecology until a version is released that incorporates the bioretention algorithm.