DEPARTMENT OF ECOLOGY State of Washington

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Errata Sheet for the 2014 SWMMWW

This page contains errata for the **2012 Stormwater Management Manual for Western Washington, as Amended in December 2014 (The 2014 SWMMWW)**. Ecology's publication page for the 2014 SWMMWW is at the following address:

https://apps.ecology.wa.gov/publications/SummaryPages/1410055.html

Ecology has made these corrections in the interactive online version of the 2014 SWMMWW. Ecology has not made these corrections to the PDF publication, due to the changes to page numbers that would result.

Errata as of November 2021

1. Volume I, Page D-4: Revise the third paragraph as follows:

   "4. The hydrologic functions of the wetland can be improved as outlined in questions 3,4,5 of Chart 4 and questions 2,3,4 of Chart 5 in ~~the "Guide for Selecting Mitigation Sites Using a Watershed Approach," (available here: http://www.ecy.wa.gov/biblio/0906032.html)~~ *Selecting Wetland Mitigation Sites Using a Watershed Approach* (Ecology, 2009); or the wetland is part of a priority restoration plan that achieves restoration goals identified in a Shoreline Master Program or other local or regional watershed plan."

2. Volume I, Page R-1: Add the following reference after (Booth et al., 1997):

   "(Ecology, 2009)

   Ecology (Washington State Department of Ecology), *Selecting Wetland Mitigation Sites Using a Watershed Approach*, Publication Number 09-06-032, December 2009."

   Note that the interactive online version of the 2014 SWMMWW now includes the option to view this reference document.

Errata as of July 31, 2015

1. Volume I, Page G-9: Revise the first sentence of the "Constructed Wetland" definition as follows:

"Those wetlands intentionally ~~createdon~~ created on sites that are not wetlands for the primary purpose of wastewater or stormwater treatment and managed as such."

2. Volume III, Page 3-98: Revise the formatting of the second paragraph as follows:

   "Please refer to BMP T5.14A in Chapter 5 of Volume V for further design guidance for rain gardens.

   Projects subject to Minimum Requirements #1 - #9:"

   Note the paragraph has been revised into two separate paragraphs.

3. Volume III, Page 3-100: Revise the first sentence of the sixth paragraph as follows:

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

4. Volume IV, Table of Contents: Revise the following title in the Table of Contents, under Chapter 2 as follows:

   "S406 BMPs for Streets/Highways~~/Applicable BMPs~~"

5. Volume IV, Pages 2-4 to 2-5: Revise the last sentence of Page 2-4 as follows:

   "(See also record keeping at the end of this section and ~~S406~~ S426 BMPs for Spills of Oil and Hazardous Substances)"

6. Volume IV, Page 2-9: Revise the tenth bullet as follows:

   "Apply source control BMPs given in this chapter for other activities conducted at the marina, boat yard, shipyard, or port facility (S409 BMPs for Fueling at Dedicated Stations, S431 BMPs for Washing and Steam Cleaning Vehicle/Equipment/Building Structures, and ~~S406~~ S426 BMPs for Spills of Oil and Hazardous Substances).

7. Volume IV, Page 2-20: Revise the last sentence of the second bullet as follows:

   "Clean up spills and dispose of materials off-site in accordance with ~~S406~~ S426 BMPs for Spills of Oil and Hazardous Substances."

8. Volume IV, Page 2-28: Revise the third bullet as follows:

   "Prepare and implement an Emergency Spill Cleanup Plan for the facility (See ~~S406~~ S426 BMPs for Spills of Oil and Hazardous Substances) which includes the following BMPs:"

9. Volume IV, Page 2-28: Revise the second sub-bullet under the third bullet as follows:

   "Retain and maintain an appropriate oil spill cleanup kit on-site for rapid cleanup of material spills. (See ~~S406~~ S426 BMPs for Spills of Oil and Hazardous Substances)."

10. Volume IV, Page 2-38: Revise the sixth bullet as follows:

    "~~S406~~ S426 BMPs for Spills of Oil and Hazardous Substances"

11. Volume IV, Page G-13: Revise Note (1) of Table G.9 as follows:

> "Data from King County's Renton Facility (data from 1998 – ~~199~~ 1999) and the City of Portland's Inverness Site (data from 1999 – 2001); detention times not provided.")

12. Volume V, Page 2-2: Revise the last paragraph as follows:

> "An analysis of the proposed land use(s) of the project should also be used to determine the stormwater pollutants of concern. ~~Table 2.2.1 lists the pollutants of concern from various land uses. Refer to this table for examples of treatment options after determining whether "basic," "enhanced," or "phosphorus" treatment requirements apply to the project. You make those decisions in the steps below.~~"

Errata as of March 13, 2015

1. Revise the page numbers in the Table of Contents to reflect the page number corrections below, and similar page number errors within the Table of Contents only. See the revised document for full details.

Note that Ecology has updated both the Ecology publication page and DES (the printer) with this erratum. Copies of the 2014 SWMMWW downloaded from Ecology's publication page or ordered from DES after March 13, 2015 will have this change incorporated for the reader's benefit.

2. Volume II, Chapter 4: Replace the page numbers labeled "Res-1" through "Res-128" with "4-1" through "4-128".

Note that Ecology has updated both the Ecology publication page and DES (the printer) with this erratum. Copies of the 2014 SWMMWW downloaded from Ecology's publication page or ordered from DES after March 13, 2015 will have this change incorporated for the reader's benefit.

3. Volume II, Resource Materials: Replace the page numbers labeled "Res-129" through "Res-130" with "Res-1" through "Res-2".

Note that Ecology has updated both the Ecology publication page and DES (the printer) with this erratum. Copies of the 2014 SWMMWW downloaded from Ecology's publication page or ordered from DES after March 13, 2015 will have this change incorporated for the reader's benefit.

4. Volume III, Page 3-100: Revise the second sentence of the sixth paragraph as follows:

> "Where side slopes are 3H:1V or flatter, bioretention can be ~~molded~~ modeled allowing infiltration through the side slope areas to the native soil."

5. Volume V, Page 4-64: Delete this "intentionally left blank" page. This page has been deleted due to layout when printing. The previous pages are 11x17. When the 11x17 pages are printed double sided, page 4-64 is unnecessary.

Note that Ecology has updated both the Ecology publication page and DES (the printer) with this erratum. Copies of the 2014 SWMMWW downloaded from Ecology's publication page or ordered from DES after March 13, 2015 will have this change incorporated for the reader's benefit.

6. Volume V, Page 8-16: Revise the first sentence of the eighth paragraph as follows:

   "Thus, the Overflow and Underdrain design flow can be calculated by ~~increased~~ increasing the 2 year return interval peak flow by the ~~ration~~ ratio of the 95% runoff volume (water quality design volume for this BMP, Large Sand Filter) and the 91% runoff volume (water quality design volume for BMP T8.10 Basic Sand Filter Basin)."

7. Volume V, Page 8-36: Delete the figure on this page labeled "Figure 8.5.4 – Media filter drain underdrain installation"

Errata as of January 30, 2015

1. 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 requirement in the permit, which is not a requirement covered within the manual.

   Ecology has therefore decided to make the following changes to the Glossary of the 2014 SWMMWW, contained in Appendix I-G:

   - Volume I, Page G-11: Delete the definition for **"Discharge Point"**.
   - Volume I, Page G-32: Delete the definition for **"Outfall"**.
   - Volume I, Page G-36: 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 in the 2014 SWMMWW to the definition used in the 2012 SWMMWW.*

2. Volume III, Page 3-70: Revise the second paragraph as follows:

   "In the Detailed Approach (Section 3.3.8), the design infiltration rate is derived by applying correction factors and additional equations to the measured (initial) Ksat. Verification testing of the completed facility is strongly encouraged. (See ~~Site Suitability Criterion # 7 Verification Testing~~ Step 11 of the Detailed Approach, Section 3.3.8)"

3. Volume III, Page 3-88: Revise the "Verification of Performance" Section as follows:

"During the first 1-2 years of operation verification testing (~~specified in SSC-9~~ See Step 11 of the Detailed Approach, Section 3.3.8) is strongly recommended, along with a maintenance program that results in achieving expected performance levels. Operating and maintaining ground water monitoring wells (specified in Section 3.3.7 - Site Suitability Criteria) is also strongly encouraged."

4. Volume III, Page C-8: Revise the fourth paragraph as follows:

"Before using this guidance to estimate infiltration losses, the designer should have sufficient information to know whether adequate depth to a seasonal high ground water table, or other infiltration barrier (such as bedrock) is available. ~~The minimum depth necessary is 3 feet as measured from the bottom of the base materials.~~ Where the seasonal high ground water or an underlying impermeable/low permeable layer would create saturated conditions within one foot of the bottom of the lowest gravel base course, permeable pavement is considered infeasible. "

5. Volume IV, Page 2-30, Figures 2.2.4 and 2.2.5: Swap these two drawings, without swapping the figure titles.

6. Volume V, Page 3-7: Revise the footnote of Table 3.4.1 as follows:

"The media must be a type approved for basic or enhanced treatment use by Ecology. See Chapter 12 for ~~approved media filters~~ more information on approved media filters."

7. Volume V, Page 6-1 and 6-2: Revise the "Design Criteria" Section of BMP T6.10 as follows:

"~~1. A presettling basin shall be designed with a wetpool. The treatment volume shall be at least 30 percent of the total volume of runoff from the 6-month, 24-hour storm event.~~

~~2~~ 1. A presettling basin shall be designed with a wetpool. The treatment volume shall be at least 30 percent of the total volume of runoff from the 6-month, 24-hour storm event.

~~3~~ 2. If the runoff in the Presettling Basin will be in direct contact with the soil, it must be lined per the liner requirement in Section 4.4.

~~4~~ 3. The Presettling Basin shall conform to the following:

a) The length-to-width ratio shall be at least 3:1. Berms or baffles may be used to lengthen the flowpath.

b) The minimum depth shall be 4 feet; the maximum depth shall be 6 feet.

~~5~~ 4. Inlets and outlets shall be designed to minimize velocity and reduce turbulence. Inlet and outlet structures should be located at extreme ends of the basin in order to maximize particle-settling opportunities."

8. Volume V, Page 7-15: Revise the first sentence on this page as follows:

"Option 1: If using the Bioretention Soil Mix recommended herein, the WWHM assumes a default infiltration rate of 12 inches per hour (~~15.24~~30.48 cm/hr)"