

Changes to the 2016 Thurston County Drainage Design and Erosion Control Manual

General Changes Applicable Manual Wide			
General		Changed Minimum Requirements to Core Requirements	To be consistent with other local jurisdictions
General		Edited to make language active instead of passive	Improve usability of the manual
General		Edited language to match 2015 Pierce County Stormwater Manual (PCM), the Department of Ecology 2012 Stormwater Manual for Western Washington (SWMMWW), and the NPDES Permit (Permit).	NPDES permit requirement
General		Removed language that isn't relevant to designers.	Improve usability of the manual
General		Moved text to improve readability or sequencing. (Substantial changes are called out in the applicable section.)	Improve usability of the manual
General		Editorial changes to improve clarity	Make manual less confusing and more direct
General		Changed "impervious surfaces" to "hard surfaces"	Comply with changes in the definitions
General		Updated phone numbers, web site addresses, and other references	Improve usability of the manual
General		Deleted superfluous language that was editorial in nature and didn't denote any regulatory or design guidance	Improve usability of the manual
Preface and Table of Contents			
Chapter	Section	Change	Reason for Change
General		Moved Table of Contents; Introduction; Overview of Manual Content; Related Plans, Permits, and Manuals; and Glossary from Volume I to create an introductory volume.	Improve usability of the manual.
II	Glossary	Change definitions to match definitions in the PCM and Permit	Permit requirement
Volume I			
Chapter	Section	Change	Reason for Change
1 (old)	Various	Moved introduction and glossary to the Preface and Table of Contents.	Improve usability of the manual.
2	2.1	Removed Basin and Watershed Planning from Core Requirements (formerly Minimum Requirement #9)	This work is done by the county and not developers. Did add language to check Thurston County website for any

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			basin or watershed requirements that may affect proposed project.
2	2.2.3	Deleted Oil and Gas Field Activities	These types of projects are rare in Thurston County and can be dealt with on a case by case basis.
2	2.3	Replaced flow charts for determining Core Requirements	Updates needed to comply with Core Requirement #5 changes and from dropping Core Requirement #9
2	2.3.2.1	Deleted "Complete Site Retrofit Requirements"	Deleted this section because the County wants to encourage redevelopment instead of greenfield development and this requirement is more stringent than the Ecology requirements.
2	2.4.5	Moved text describing downstream analysis to Core Requirement #11, Off Site Analysis and Mitigation	The language relates to downstream analysis and improvements rather than maintaining existing discharge locations.
2	2.4.6	Added flow chart, text, and table to show new requirements for meeting the low impact development (LID) requirements in Core Requirement #5 including 2 lists of required LID BMPs.	Manual equivalency.
2	2.4.8.1.1	Dropped the requirement to match the average annual infiltration volume.	With the new LID requirements this requirements is no longer applicable.
2	2.4.8.3	Moved text describing projects discharging directly to salt water bodies.	Text moved to "applicability section" of the Core Requirement
2	2.4.9.5	Hydroperiod analysis text deleted.	New hydroperiod analysis requirement added to the modeling section in Volume III.
2	N/A	Deleted Minimum Requirement #9: Basin	This work is done by the county and not developers. Did add language to check Thurston County website for any basin or watershed requirements that may affect proposed project.
3	3.4	Added Table 3.1 which shows the submittal requirements graphically	Improve manual usability and clarity
4	4.2	Updated flow charts	Improve manual usability and clarity
4	4.2	Updated text to match flow charts	Improve manual usability and clarity
4	4.2.4	Deleted guidance on using LID BMPs	LID BMPs are now required if feasible.
Appendix	I-A	Moved Glossary to Preface volume	Improve manual usability and clarity

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Appendix	I-B	Deleted worksheet and refer reader to the Thurston County Drainage Manual website	Document available as an Excel spreadsheet that can be filled out and submitted for review. This document is changed as needed.
Appendix	I-C	Deleted worksheet and refer reader to the Thurston County Drainage Manual website	Document available as document that can be filled out and submitted for review. This document is changed as needed.
Appendix	I-D	Deleted worksheet and refer reader to the Thurston County Drainage Manual website	Document available as a document that can be filled out and submitted for review. This document is changed as needed.
Appendix	I-E	Deleted worksheet and refer reader to the Thurston County Drainage Manual website	Document available as a document that can be filled out and submitted for review. This document is changed as needed.
Appendix	I-G	Deleted worksheet and refer reader to the Thurston County Drainage Manual website	Document available as a document that can be filled out and submitted for review. This document is changed as needed.

Volume II

<u>Chapter</u>	<u>Section</u>	<u>Change</u>	<u>Reason for Change</u>
1	1.5.2	Updated compliance language	Manual equivalency.
2	2.3.2	Added BMPs C231:Brush Barrier and C232:Gravel Filter Berm	Manual equivalency.
2	2.3.2	Added requirements to Element #5: Stabilize Soils	Manual equivalency.
2	2.3.2	Added requirements to Element #9: Control Pollutants	Manual equivalency.
2	2.3.2	Added BMPs C203: Water Bars and C236: Vegetative Filters	Manual equivalency.
2	2.3.2	Added requirements to Element #11: Maintain BMPs	Manual equivalency.
2	2.3.2	Added requirements and deleted others regarding BMP inspection and monitoring to Element #12: Manage the Project	Manual equivalency.
2	2.3.2	Edited language in 5. <i>Narrative Discussion</i> to reflect 13 Elements	Manual equivalency.
2	2.4.4	Added to list of requirements to be shown on site and grading plans	Manual equivalency.
2	2.4.6	Added to list of requirements to be shown on detail and cross-section sheets	Manual equivalency.
2	2.5	Added <i>Construction SWPP Checklist</i>	Manual equivalency.

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3	3.1	Deleted BMP C100: Preservation of Upper Soil Structure (Native Topsoil) Formerly BMP C252	Redundant since it's the same as BMP LID.02, in addition, it's not in <i>Stormwater Management Manual for Western Washington (SWMMWW)</i>
3	BMP C101	Moved language to improve flow, added text to match SWMMWW, changed plant care language to reflect current best practices	Manual equivalency and update best practices
3	BMP C105	Edited language to match SWMMWW	Manual equivalency
3	BMP C120	Edited language to match SWMMWW	Manual equivalency
3	BMP C121	Edited language to clarify compost and mulch requirements and specifications	Manual equivalency
3	BMP C125	Edited language to clarify <i>Design and Installation Specifications</i> and <i>Maintenance Standards</i>	Manual equivalency
3	BMP C151	Edited language to clarify <i>Design and Installation Specifications</i>	Manual equivalency
3	BMP C154	BMP C154: Concrete Washout Area is an new BMP in the 2012 SWMMWW	Manual equivalency
3	BMP C160	Deleted BMP C160: Certified Erosion and Sediment Control Lead	This BMP pertains to trainers which the County does not administer
3	BMP C161	Deleted BMP C161: Payment of Erosion Control Work	This was deleted from the SWMMWW
3	BMP C180	Deleted BMP C180: Small Project Construction Stormwater Pollution Prevention	Covered in other sections
3	BMP C220	Rock Sock Drop Inlet Protection BMP deleted and replaced by Block and Gravel Drop Inlet Protection, added other options per the SWMMWW	Manual equivalency
3	BMP C231	Added BMP C231: Brush Barrier	Manual equivalency
3	BMP C232	Added BMP C232: Gravel Filter Berm	Manual equivalency
3	BMP C236	Added BMP C236: Vegetative Filtration	Manual equivalency

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3	3.3	Added Low Impact Development BMPs section to ensure that LID BMPs and sites are protected during construction	Manual equivalency
Appendix	II-B	Deleted material that appears elsewhere in the manual or that was deleted in the SWMMWW	Manual usability and equivalency
Volume III			
<u>Chapter</u>	<u>Section</u>	<u>Change</u>	<u>Reason for Change</u>
2	2.1	Added language to clarify methodology to design conveyance systems.	Manual equivalency
2	2.1	Deleted language that is no longer necessary due to addition of Thurston County data to the WWHM	Adding specific Thurston County data to the WWHM makes the requirement non applicable
2	2.1.1	Deleted Hydrologic Analysis of LID BMPs section	The new version of WWHM has modules to model these BMPs so it is no longer necessary.
3	3.7.3	Deleted pipe specifications and referenced <i>WSDOT Standard Specifications 9-05</i> and the <i>WSDOT Hydraulics Manual</i>	The language was taken from the WSDOT manuals originally and this avoids conflicts if WSDOT changes the standards in the future
3	3.7.6	Added criteria for pipes in the intertidal zone	Clarify design guidelines to avoid pipe damage
3	3.8.2	Moved to Section 3.7.6	Manual usability
Appendix	III-A	Added Small-Scale Pilot Infiltration Test	Manual equivalency
Appendix	III-A	Deleted ASTM Gradation Testing	Deleted from the Pierce County manual and the method was withdrawn by ASTM so it's no longer valid
Appendix	III-B	Deleted Hydrograph Routing	Deleted in the SWMMWW and the Pierce County manual, manual equivalency
Appendix	III-D	New appendix that consolidates the LID infeasibility criteria in one place	Manual equivalency
Volume IV			
<u>Chapter</u>	<u>Section</u>	<u>Change</u>	<u>Reason for Change</u>
1	1.2	Updated applicability section to clarify who this volume applies to and reference others to the SWMMWW	Manual equivalency
1	1.6	Added explanation to clarify "required" BMPs as opposed to "suggested" BMPs	Manual equivalency
4	A2.2	Added guidance for discharges to local sewer system	Manual equivalency

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4	A3.2	Deleted language regarding cleaning of concrete mixing equipment or vehicles and replaced it with a reference to Volume II	Manual usability
4	A4.2	Deleted required and suggested BMPs	BMPs not included in the SWMMWW nor the Pierce County manual, deleted for manual equivalency
4	A7.7	Added requirements for discharge from pools, spas, hot tubs and fountains	Manual equivalency
5	5.2, S.9	Added language to clarify Thurston County standards on catch basin cleaning thresholds	Thurston County requires cleaning when sediments reach 60% of sump depth
Appendix	IV-C	Updated Road Maintenance Materials Liquids section to reflect changed discharge of catch basin decant liquids	Manual equivalency

Volume V

<u>Chapter</u>	<u>Section</u>	<u>Change</u>	<u>Reason for Change</u>
2	2.1.1.5	Language added to require permanent signing and fencing guidance	Manual equivalency
2	2.1.2.1	Added guidance to determine applicability	Manual equivalency
2	2.1.2.4.1	Added hydrologic modeling credit guidance	Manual equivalency
2	2.1.2.5.2	Added new topsoil requirements	Manual equivalency
2	2.1.3.4.1	Added guidance for permeable pavement use	Manual equivalency
2	2.2.1.9.1	Updated verification of performance requirements	Manual equivalency
2	2.2.2.1	Updated applicability section requirements	Manual equivalency
2	2.2.5	Major re-write of the bioretention facilities BMP for equivalency and clarity	Manual equivalency
2	2.2.6	Major re-write of the permeable pavement BMP for equivalency and clarity	Manual equivalency
2	2.2.7	Added requirements and guidance to the applicability (2.2.7.1) and flow credit (2.2.7.4.1) sections	Manual equivalency
2	2.2.7.5.1.f	Revised vegetation section to reflect new guidance	Manual equivalency
2	2.2.8	Added guidance for meeting Core Requirements #5, 6, and 7, and applicability. Clarified applicability and guidance for use on single family residences. Updated design guidelines.	Manual equivalency
2	2.2.9.5.1	Revised contributing area restrictions	Manual equivalency

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2	2.2.9.5.2	Revised requirements pertaining to preventing channelized flows	Manual equivalency
2	2.2.11	Added new BMP LID.14 Tree Planting and Tree Retention (for Flow Control Credit)	Manual equivalency
2	2.2.12	Added new BMP LID.15 Minimal Excavation Foundation Systems (aka, Pin Pile Foundations)	Manual equivalency
3	3.1.5	Updated verification of performance section to reflect new language in the SWMMWW	Manual equivalency
3	3.2.1.7.1	Added requirement for installation of a crest gage and design stage/storage/discharge expected for target storms	Manual equivalency
3	3.2.2.1	Added guidance in applicability section for meeting Core Requirements #5, 6, and 7	Manual equivalency
3	IN.04	Deleted BMP IN.04 Bio-Infiltration Swales	This BMP is now included in 2.2.5 LID.08
5	BF.05	Deleted BMP BF.05 Narrow Area Filter Strip	Manual equivalency, BMP no longer allowed by Ecology
6	6.1.2.2	Added language regarding siting wet ponds within 10,000 of an airport	Guidance to check FAA requirements
Appendix	V-C	Replaced all maintenance checklist with checklists from the Pierce County Manual	Manual equivalency
Appendix	V-E	Updated Horizontal Clearance setbacks for infiltration facilities to match Thurston County codes	Match code requirements